



# Catalog



## DRN.. Gearmotors (IE3)



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## 1 Introduction

### 1.1 The SEW-EURODRIVE group of companies

#### 1.1.1 Global presence

Driving the world – with innovative drive solutions for all industries and for every application. Products and systems from SEW-EURODRIVE are used all over the world. Be it in the automotive, building materials, food and beverage, or metal-processing industry – the decision to use drive technology "made by SEW-EURODRIVE" means you get reliable products and a safe investment.

SEW-EURODRIVE's products and services can be found in all the important industries of our era. We also demonstrate this presence with subsidiaries and production plants all over the world, as well as with our service, which we see as an integrative part of our portfolio that extends SEW-EURODRIVE's high quality standards.

#### 1.1.2 Always the right drive solution

With the broad product range of SEW-EURODRIVE, which also includes mechatronic drive units, frequency inverters, controllers, software and communication in addition to the tried-and-tested modular system for gearmotors, it is possible to implement the perfect drive solution for every application.

##### **Gear units and motors**

Using the modular system, gearmotors can be individually assembled according to the required speed and torque ranges, the available space and the ambient conditions. Gear units and gearmotors offering a unique and finely graduated power range and the best economic prerequisites to face any drive challenge.

Motors by SEW-EURODRIVE can be mounted directly or via adapter to SEW-EURODRIVE gear units. They meet all global requirements in terms of energy efficiency and technical regulations. A wide range of options and accessories ensures high flexibility for adjusting the motor to the requirements of the user and the application.

##### **Inverters**

MOVITRAC®, MOVIDRIVE® and MOVIAxis® inverter series enhance the gearmotors, forming a combination that blends in perfectly with the existing range of SEW-EURODRIVE systems.

##### **Modular automation system**

With its trademark MOVI-C®, SEW-EURODRIVE launches a new generation of drive and automation technology. MOVI-C® is the modular automation system that allows for the highest level of system and machine automation. It comprises drive technology, motion control, control technology, and visualization.

MOVIDRIVE® modular is the modular application inverter for all types of applications, ranging from simple open-loop speed control to servo drives with kinematic model. MOVIDRIVE® modular can be supplemented by connecting MOVIDRIVE® system single-axis units. These possess functionalities comparable to those of axis modules, but have their own line connection. Especially in the upper power range, MOVIDRIVE® system complements the modular application inverter.

MOVIDRIVE® modular and MOVIDRIVE® system are intended for operation at the MOVI-C® CONTROLLER, the controller from SEW-EURODRIVE. They offer a powerful clock-synchronous connection via the integrated EtherCAT®/SBus<sup>PLUS</sup> communication interface. Other EtherCAT® stations from SEW-EURODRIVE or other manufacturers can be controlled and diagnosed by the MOVI-C® CONTROLLER.

The MOVISUITE® engineering software with its unique operating philosophy is above all MOVI-C® hardware and software components. MOVISUITE® was developed with a focus on systematically shortening the startup time and covers the entire engineering process, from planning to diagnostics.

### Decentralized drive technology

For economical, decentralized installations, SEW-EURODRIVE offers components from decentralized drive technology, such as MOVIMOT®, the gearmotor with integrated frequency inverter, or MOVI-SWITCH®, the gearmotor with integrated switching and protection function. SEW-EURODRIVE hybrid cables have been designed specifically to ensure cost-effective solutions, independent of the philosophy behind or the size of the system.

The decentralized drive technology portfolio is complemented by the DRC.. electronic motor, the MOVIGEAR® mechatronic drive system, the MOVIFIT® decentralized drive controller, the MOVIPRO® decentralized drive, positioning, and application controller, as well as MOVITRANS® system components for contactless energy transfer.

The MOVI-DPS® smart energy management system enhances the modular product range of SEW-EURODRIVE. With MOVI-DPS®, SEW-EURODRIVE offers the perfect combination: Conserving resources and reducing costs.

MOVI-DPS® allows for stable power grids, no power failures, and consequently reliable system availability. MOVI-DPS® is convincing in both, mobile and stationary applications. In addition, MOVI-DPS® can be combined with other systems, such as the MOVITRANS® contactless energy transfer system, resulting in further important synergy effects.

### Industrial gear units

Power, quality, and sturdy design combined into one standard product: Industrial gear units from SEW-EURODRIVE realize major movements at high torque levels. The modular concept will once again provide optimum adaptation of industrial gear units to meet a wide range of different applications.

### Individual system solutions with MAXOLUTION®

MAXOLUTION® from SEW-EURODRIVE provides individual system solutions in all areas of system and machine automation. From electromechanical drives, controllers and communication to visualization and the MOVITRANS® contactless energy transfer system and even a comprehensive service portfolio, MAXOLUTION® offers all modules required to design customer-specific solutions for machines and systems.

MAXOLUTION® combines individual products of the proven modular system with innovative system components to form individual system solutions that perfectly match the requirements of the specific application – "powered by SEW-EURODRIVE".

### Safe – flexible – effective: safetyDRIVE

Guaranteeing the safety of all employees and preventing work accidents while ensuring trouble-free production processes are demands placed on all production areas. safetyDRIVE, the comprehensive safety concept, allows you to implement your machines "safely" in accordance with the currently valid guidelines. With controllers that meet the respective requirement of the safety categories or performance levels and that monitor instead of shut down.

All of our drive and frequency inverters provide the function that safely stops the electrical power to the motor (STO). The MOVISAFE® components complete the product range – integrated into the inverter as option cards or modular as safety modules. The decentralized MOVIFIT® and MOVIPRO® drive controllers with integrated safety functions are ready for use in decentralized installations.

The functionally safe motor options allow for implementing safety functions in safety-related applications. Safety encoders are used to implement safety functions with respect to speed, direction of rotation, standstill, and relative position. Safety brakes can implement safety functions with respect to decelerating and stopping.

### 1.1.3 Your ideal partner

Its global presence, extensive product portfolio and wide range of services make SEW-EURODRIVE the ideal partner for the machinery and plant construction industry when it comes to providing drive systems for demanding drive tasks in all industries and applications.

For detailed information on the entire product range of SEW-EURODRIVE, refer to our website [www.sew-eurodrive.com](http://www.sew-eurodrive.com). The website provides information about components, system solutions, services, and industries. Online Support provides access to a wide range of documents and tools such as the product configurator and various selection aids, as well as all documentation available for download in various languages.



## 1.2 Documentation

### 1.2.1 Content of this publication

This "DRN.. Gearmotors (IE3)" catalog describes the following product groups from SEW-EURODRIVE in detail:

- DRN.. helical gearmotors
- DRN.. parallel-shaft helical gearmotors
- DRN.. helical-bevel gearmotors
- DRN.. helical-worm gearmotors
- DRN.. SPIROPLAN® gearmotors

### 1.2.2 Additional documentation

In addition to this "DRN.. Gearmotors (IE3)" catalog, you can order or download other documents from the SEW-EURODRIVE homepage. The complete range of technical documentation is available in various languages for download from the web at [www.sew-eurodrive.com](http://www.sew-eurodrive.com).

### Catalogs

- Gear unit
- AC motors
- DRS../DR2S.. gearmotors (IE1)

### Drive Engineering – Practical Implementation

For detailed documentation about the entire topic of electrical drive technology, refer to the "Drive Engineering – Practical Implementation" documentation series:

- Project planning manual – Project Planning for Controlled and Non-Controlled Drives
- EMC in Drive Engineering – Basic Theoretical Principles and EMC-Compliant Installation in Practice
- Efficient Plant Automation with Mechatronic Drive Solutions

## 1.3 Product names and trademarks

All product names included in this documentation are trademarks or registered trademarks of the respective titleholders.

## 1.4 Copyright notice

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## 2 Product description

### 2.1 Product features

#### 2.1.1 Operating temperatures

Gear units and gearmotors from SEW-EURODRIVE can be operated in a wide ambient temperature range.

#### Gear units

The following standard temperature ranges are permitted for filling the gear units according to the lubricant table:

Gear unit	Filled with	Permitted standard temperature range
<b>K..19 – K..49</b>	CLP PG VG460	-20 °C to +40 °C
<b>K..37 – K..187</b> <b>RX.57 – RX.107</b> <b>R.07 – R.167</b> <b>F..27 – F..157</b>	CLP(CC) VG220	-15 °C to +40 °C
<b>S..37 – S..97</b>	CLP(CC) VG680	0 °C to +40 °C
<b>S..37p – S..97p</b>	CLP PG VG460	-20 °C to +40 °C
<b>W..10 – W..30</b>	CLP PG VG460	-20 °C to +40 °C
<b>W..19 – W..59</b>	CLP PG VG220	-25 °C to +40 °C

The rated data of the gear units and gearmotors specified in the catalog refer to an ambient temperature of +25 °C.

### INFORMATION



For information on churning losses and thermal rating, refer to chapter "Churning losses and thermal rating" (→ 65).

Gear units from SEW-EURODRIVE can be operated outside the standard temperature range if project planning is adapted to ambient temperatures from as low as up to -40 °C in the intensive cooling range up to +60 °C. Project planning must take special operating conditions into account and adapt the drive to the ambient conditions by selecting suitable lubricants and seals.

SEW-EURODRIVE recommends thermal project planning for the drives in general and offers to perform the project planning.

#### Motors

Motors of the DRN.. product family by SEW-EURODRIVE are designed for use in a temperature range from -20 °C to +40 °C.

This expands the standardized temperature range required by IEC 60034.

Using the motors outside the above temperature range is possible with some special adjustments. Contact SEW-EURODRIVE in this case.

## INFORMATION



If the drive is to be operated on a frequency inverter, you must also consider the project planning notes of the inverter and take into account the thermal effects of inverter operation.

### 2.1.2 Installation altitude

Due to the low air density at high installation altitudes, heat dissipation on the surface of motors and gear units decreases. The rated data listed in the catalog applies to a maximum installation altitude of 1000 m above sea level. Installation altitudes > 1000 m above sea level must be taken into account for the project planning of gear units and gearmotors.

### 2.1.3 Power and torque

The power and torque ratings refer to mounting position M1 and similar mounting positions in which the input stage is not completely submerged in oil. In addition, the gearmotors are assumed to be standard versions with standard lubrication and under normal ambient conditions.

### 2.1.4 Speeds

The quoted output speeds of the gearmotors are recommended values. You can calculate the rated output speed based on the rated motor speed and the gear unit reduction ratio. Please note that the actual output speed depends on the motor load and the supply system conditions.

### 2.1.5 Noise

The noise levels of all SEW-EURODRIVE gear units, motors and gearmotors are well within the maximum permitted noise levels set forth in the VDI guideline 2159 for gear units and IEC 60034 for motors.

### 2.1.6 Painting

The gear units, motors and gearmotors from SEW-EURODRIVE are painted as follows:

Gear unit	Painting
R..-, F..-, K..-, S..-, W.. gear units	blue/gray RAL7031

**Exception:** SPIROPLAN® W..10DR2S5 gearmotors have an aluminum housing and are supplied unpainted as standard.

Special paintings are available on request.

### 2.1.7 Surface and anti-corrosion protection

If required, all gear units, motors and gearmotors from SEW-EURODRIVE can also be supplied with surface protection for applications in extremely humid and chemically aggressive environments.

### 2.1.8 Heat dissipation and accessibility

Make sure to maintain adequate distance in the axial and radial direction when installing gearmotors/geared brakemotors to the driven machine. The distance is necessary for air circulation for the heat dissipation, for maintenance of the brake and of the MOVIMOT® inverter, if installed.

Please also observe to the notes in the motor dimension sheets in the "AC Motors" catalog.

### 2.1.9 Weights

Please note that the weight information shown in the catalogs only applies to the gear units and gearmotors without lubricant. The weight varies according to gear unit design and gear unit size. The lubricant fill depends on the mounting position, which is the reason that no universally applicable information can be provided. For recommended lubricant fill quantities depending on the mounting position, refer to the chapter "Lubricant fill quantities" (→ 142). For the exact weight, refer to the quotation or the order confirmation.

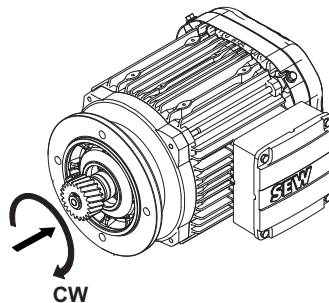
### 2.1.10 Directions of rotation

#### Direction of rotation of the motor shaft

In accordance with the standard IEC 60034-8 defined as standard:

Clockwise (CW) direction of rotation when looking onto the pinion shaft end of the motor.

Prerequisite: Connection U1-V1-W1

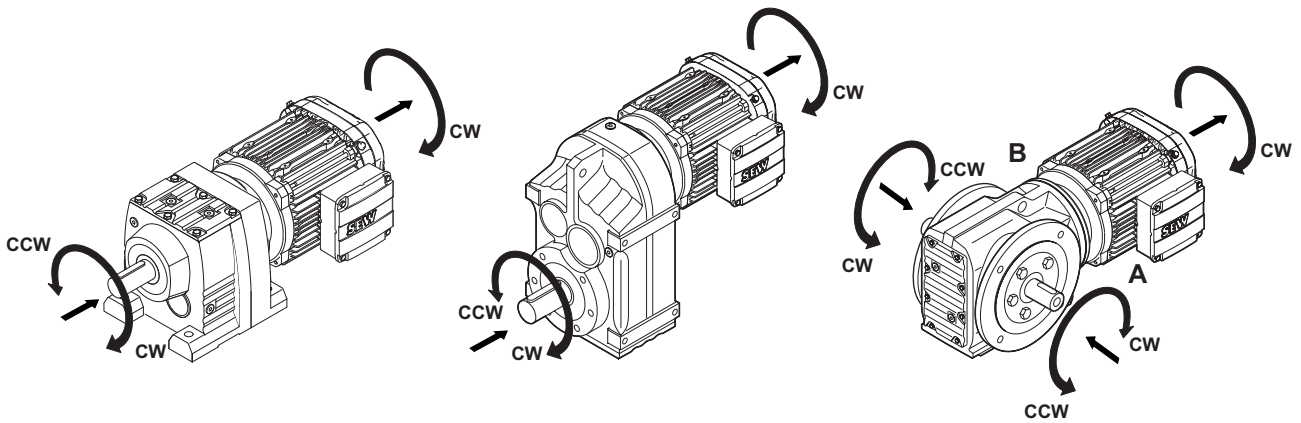


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#### Direction of rotation of the output shaft

The standard direction of rotation when looking onto the output shaft of the gear unit:

- CW (clockwise)  
Clockwise direction of rotation
- CCW (counterclockwise)  
Counterclockwise direction of rotation



Direction of rotation of the gear unit

INFORMATION



Shaft position A, B, or AB (shaft output at both ends) is possible for K.. helical-bevel gear units, S.. helical-worm gear units, and SPIROPLAN® W gear units.

The direction of rotation is indicated according to the shaft position when looking onto the output end A or B or onto A and B respectively.

Series	Size	Gear unit stages	Shaft position	Standard direction of rotation when looking onto the output shaft <sup>1)</sup>
RX..	57 – 107	1		CCW
R..	07 – 167	2		CW
		3		CCW
F..	27 – 157	2		CW
		3		CCW

1) CW = clockwise; CCW = counterclockwise.

Series	Size	Gear unit stages	Shaft position	Standard direction of rotation when looking onto the output shaft <sup>1)</sup>	
				View of output end A	View of output end B
K..	19 – 49	2	A	CW	
			AB	CW	CCW
			B		CCW
K..	37 – 187	3	A	CCW	
			AB	CCW	CW
			B		CCW
S..	37 – 97	2	A	CW	
			AB	CW	CCW
			B		CCW

Series	Size	Gear unit stages	Shaft position	Standard direction of rotation when looking onto the output shaft <sup>1)</sup>	
				View of output end A	View of output end B
W..	10 – 30	1	A	CCW	
			AB	CCW	CW
			B		CW
W..	19 – 59	2	A	CW	
			AB	CW	CCW
			B		CCW
		3	A	CCW	
			AB	CCW	CW
			B		CW

1) CW = clockwise; CCW = counterclockwise.

### 2.1.11 Backlash reduction

Helical, parallel-shaft helical and helical-bevel gear units with reduced backlash (only K..7) are available as of gear unit size 37.

The rotational clearance of these gear units is considerably less than that of the standard designs so that positioning tasks can be solved with great precision. The rotational clearance is specified in angular minutes in the chapter "Geometrically possible combinations". The rotational clearance for the output shaft is specified without load (max. 1% of the rated output torque); the gear unit input end is blocked. The specified values have a tolerance of  $\pm 2$  angular minutes. For further information, refer to chapter "Reduced backlash gear unit design /R" (→ 148).

### 2.1.12 Multi-stage gearmotors

You can achieve particularly low output speeds by using compound gear units or compound gearmotors. This requires a helical gear unit on the input end as a second gear unit.

It may be necessary to limit the maximum motor torque to match the maximum permitted output torque of the gear unit.

### 2.1.13 Gear units and gearmotors for agitators and mixers

A special design variant of the helical gear, parallel-shaft and helical-bevel gear units are gear units and gearmotors equipped with an extended output bearing hub (RM../FM../FAM../KM.. and KAM..). These units are designed especially for agitator and mixer applications and allow for high bending moments as well as overhung and axial loads. The remaining data corresponds to that of standard gear units and gearmotors. For further information on gear unit and gearmotor designs for agitators and mixers, refer to chapter "Agitator designs" (→ 28).

### 2.1.14 SPIROPLAN® gearmotors

SPIROPLAN® gearmotors are robust, single- and two-stage, right-angle gearmotors with SPIROPLAN® gearing. The difference compared to helical-worm gear units is the material combination of the steel-on-steel gearing, the special tooth meshing relation, and the aluminum housing. As a result, SPIROPLAN® right-angle gearmotors are wear-free and lightweight.

The particularly short design and the aluminum housing make for very compact and lightweight drive solutions.

The wear-free gearing and the life-long lubrication facilitate long periods of maintenance-free operation. The identical hole spacing in the foot and face as well as the same shaft height to both makes for a number of mounting options.

On request, SPIROPLAN® right-angle gearmotors can be equipped with a torque arm.

### 2.1.15 Brakemotors

On request, motors and gearmotors can be supplied with an integrated mechanical brake. The SEW-EURODRIVE brake is an electromagnetic disk brake with a DC coil that releases electrically and brakes using spring force. Due to its operating principle, the brake is applied if the power fails. It meets the basic safety requirements. The brake can also be released mechanically if equipped with manual brake release. Included in the delivery is either an automatic disengaging hand lever or an adjustable setscrew. The brake is controlled by a brake control that is installed in either the motor wiring space or the control cabinet.

A characteristic feature of the brakes is their extremely short design. The brake bearing end shield is a part of both the motor and the brake. The integrated construction of the SEW-EURODRIVE brakemotor permits particularly compact and sturdy solutions.




### 2.1.16 International markets







Market access is contingent to local approvals in many countries. Additional laws, regulations and market conventions must be adhered to. Experience has shown that an identification of the product is required together with certification. This is realized at SEW-EURODRIVE with one or several logos on the main nameplate, with additional labels on the motor, or by providing the relevant certificates.

The countries listed below, for example, have special requirements for motors. The country-specific requirements apply to the motor in general, the efficiency or to the explosion protection. For further details, refer to the relevant motor catalogs.

Some countries, such as the states of the European Union impose certain requirements regarding the gear unit. The relevant marking is attached to the gear unit if these requirements are met.

Contact SEW-EURODRIVE, if required.

	CE mark to state compliance with European Directives (see EC declaration of conformity).
	ATEX mark to state compliance with the European Directive 2014/34/EU.
	UR logo to confirm that UL (Underwriters Laboratory) is informed about the registered components; register number by UL: E189357

	<p>The UKCA mark states the compliance with the following British guidelines:</p> <ul style="list-style-type: none"> <li>• Low Voltage Directive S.I. 2016/1101<sup>1)</sup></li> <li>• EMC S. I. 2016/1091</li> <li>• Machinery Safety S. I. 2008/1597</li> <li>• Directive S. I. 2012/3032 for limiting the use of certain hazardous substances in electrical and electronic equipment</li> <li>• Ecodesign Regulation S. I. 2019/539</li> </ul>
	<p>CSA mark to confirm the market conformity of the Canadian Standard Association (CSA)</p>
	<p>EAC mark (EurAsian Conformity)</p> <p>Confirms compliance with the technical regulations of the economic and customs union of Russia, Belarus, Kazakhstan, Armenia.</p>
	<p>CEL mark to represent the energy efficiency in the Chinese grade classification.</p>
	<p>The UA.TR mark declares conformity with the technical regulations of Ukraine.</p>
	<p>CMIM logo to confirm compliance with technical regulations of the country Morocco.</p>

1) For products with functional safety, the requirements from the Low Voltage Directive are fulfilled by the Machinery Safety S.I. 2008/1597.

### 2.1.17 Components on the input side

The following components on the input end are available for the gear units from SEW-EURODRIVE:

- **Input shaft assemblies** with input shaft end, optionally with
  - Centering shoulder
  - Backstop
  - Motor platform
- **Adapters**
  - For mounting IEC or NEMA motors with the option of a backstop
  - For mounting servomotors with a square flange
  - With safety slipping coupling optionally with speed monitor or slip monitor
  - With hydraulic start-up coupling, also with disk brake or backstop

Refer to the "Gear Units" catalog for more information.



### 2.1.18 Swing base

A swing base is a drive unit consisting of helical-bevel gear unit, hydraulic start-up coupling, and electric motor. The complete arrangement is mounted to a torsionally rigid mounting rail.

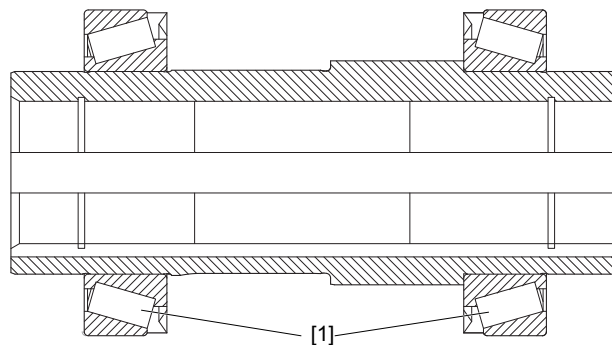
Motor swings are available with the following optional accessories:

- Torque arm
- Mechanical thermal monitoring device
- Contactless thermal monitoring device

Contact SEW-EURODRIVE for additional information.

### 2.1.19 Reinforced hollow shaft bearing

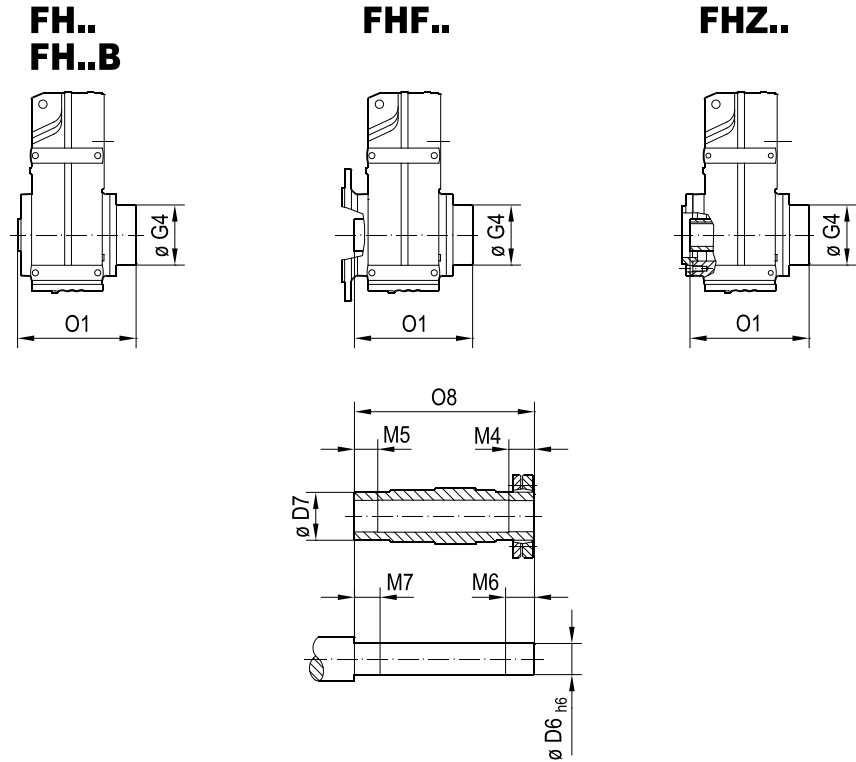
With the reinforced hollow shaft bearing, the standard deep groove ball bearings are replaced with tapered roller bearings. This measure enables considerably higher overhung and axial loads and at the same time an increased service life of the bearings. Contact SEW-EURODRIVE for additional information.



[1] Tapered roller bearing

#### Gear unit dimensions with reinforced bearings

With the exception of the FH.87 and FH.97 gear units, the dimensions of the gear units with reinforced bearings are identical to those of the gear units with standard bearings. The following figure shows the differing dimensions of FH.87 and FH.97 gear units with reinforced bearings:



Type	Dimensions in mm								
	D6	D7	G4	M4	M5	M6	M7	O1	O8
FH.87	Ø 65 <sub>h6</sub>	Ø 85	Ø 163	41	40	46	45	312.5	299.5
FH.97	Ø 75 <sub>h6</sub>	Ø 95	Ø 184	55	50	60	55	382.5	367

## 2.2 Corrosion and surface protection

### 2.2.1 General information

For motor and gear unit operation in aggressive environments, SEW-EURODRIVE optionally offers the following preventive measure:

- KS corrosion protection for motors
- Surface protection OS for motors and gear units

For motors, optimum protection is offered by a combination of KS corrosion protection and OS surface protection.

Optional preventive measures are also available for the output shafts.

### 2.2.2 KS corrosion protection

KS corrosion protection for motors comprises the following measures:

- All retaining screws that are loosened during operation are made of stainless steel.
- The nameplates are made of stainless steel.
- Various motor parts have a surface coating.
- The flange contact surfaces and shaft ends are treated with a temporary rust preventive.
- For brakemotors, additional measures are performed.

A sticker labeled "KORROSIONSSCHUTZ" (corrosion protection) on the fan guard indicates that special treatment has been applied.

## INFORMATION


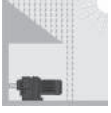





The following motor options are not available with KS corrosion protection:

- Forced cooling fan /V
- Shaft-centered encoders /ES, /ES7, /EG, /EG7, /EV7, /AS, /AS7, /AG, /AG7, /AV7

## 2.2.3 OS surface protection

As an option for standard surface protection, motors and gear units are also available with OS1 to OS4 surface protection. The special measure "Z" is also available in addition. Special measure "Z" means that large contour recesses are filled with rubber before painting.

Surface protection <sup>1)2)</sup>	Ambient conditions	Sample applications
Standard 	Suitable for machines and systems in buildings and rooms indoors with neutral atmospheres. Based on corrosivity category <sup>3)</sup> : • C1 (negligible)	<ul style="list-style-type: none"> <li>• Machines and systems in the automotive industry</li> <li>• Transport systems in logistics</li> <li>• Conveyor belts at airports</li> </ul>
OS1 	Suitable for environments prone to condensation and atmospheres with low humidity or contamination, such as applications outdoors under roof or with protection device. Based on corrosivity category <sup>3)</sup> : • C2 (low)	<ul style="list-style-type: none"> <li>• Systems in saw mills</li> <li>• Hall gates</li> <li>• Agitators and mixers</li> </ul>
OS2 	Suited for environments with high humidity or moderate atmospheric contamination, such as applications outdoors subject to direct weathering. Based on corrosivity category <sup>3)</sup> : • C3 (moderate)	<ul style="list-style-type: none"> <li>• Applications in amusement parks</li> <li>• Cable cars and chairlifts</li> <li>• Applications in gravel plants</li> <li>• Systems in nuclear power plants</li> </ul>
OS3 	Suitable for environments with high humidity and occasionally severe atmospheric and chemical contamination. Occasionally acidic or caustic wet cleaning. Also for applications in coastal areas with moderate salt load. Based on corrosivity category <sup>3)</sup> : • C4 (high)	<ul style="list-style-type: none"> <li>• Sewage treatment plants</li> <li>• Port cranes</li> <li>• Mining applications</li> </ul>
OS4 	Suitable for environments with permanent humidity and severe atmospheric or chemical contamination. Regular acidic and caustic wet cleaning, also with chemical cleaning agents. Based on corrosivity category <sup>3)</sup> : • C5-1 (very high)	<ul style="list-style-type: none"> <li>• Drives in malting plants</li> <li>• Wet areas in the beverage industry</li> <li>• Conveyor belts in the food industry</li> </ul>

1) Motors/brakemotors in degree of protection IP56 or IP66 are only available with OS2, OS3, or OS4 surface protection.

2) Gearmotors with OS2 – OS4 surface protection are only offered in combination with KS corrosion protection for motors.

3) According to ISO 12944-2, classification of ambient conditions

#### 2.2.4 Special protection measures

For operation under severe environmental impact or for particularly demanding applications special preventive measures for the output shafts of the gear units or gearmotors are optionally available, see also chapter "Sealing systems" (→ 22).

Measure	Protection principle	Suitable for
Output shaft made of stainless steel	Surface protection with high-quality material	Particularly demanding applications with regard to corrosion

#### 2.2.5 NOCO® fluid

As standard, SEW-EURODRIVE supplies NOCO® fluid corrosion protection and lubricant with every hollow-shaft gear unit. Use NOCO® fluid when installing gear units with hollow shafts. Using this fluid can help prevent possible contact corrosion and makes it easier to disassemble the drive at a later time. NOCO® fluid is also suitable for protecting machined metal surfaces that do not have corrosion protection such as parts of shaft ends or flanges. You can order NOCO® fluid also in larger quantities from SEW-EURODRIVE.

Batch size	Packaging type	Part number
5.5 g	Sachet	09107819
100 g	Tube	03253147
1 kg	Tub	09107827

NOCO® fluid is food grade according to NSF-H1. You can recognize the food compatibility of NOCO® fluid by the NSF-H1 designation on the packaging.

## 2.3 Sealing systems

SEW-EURODRIVE offers sealing systems suitable for different ambient conditions and applications:

### 2.3.1 Input seals

Sealing system	Recommended use	Sealing system design	Recommended maintenance interval	Material
<b>NBR</b> Standard sealing system	<ul style="list-style-type: none"> <li>Speeds up to 1800 min<sup>-1</sup></li> <li>Temperature range from -40 °C to +80 °C</li> </ul>	Oil seal according to Fig. 1	≈ 10000 h	High-quality NBR (acrylonitrile butadiene rubber) <sup>1)</sup>
<b>FKM</b> Sealing system for increased rotational speeds and/or increased temperatures	<ul style="list-style-type: none"> <li>Speeds up to 4500 min<sup>-1</sup></li> <li>Temperature range from -25 °C to +115 °C</li> <li>S3 operation (high switching frequencies)</li> </ul>	Oil seal with optimization based on Fig. 1	≈ 10000 h	High-quality FKM (fluorocarbon rubber) <sup>1)</sup>
<b>Premium Sine Seal</b> Premium sealing system for longer service life	<ul style="list-style-type: none"> <li>Speeds up to 4500 min<sup>-1</sup></li> <li>Temperature range from -25 °C to +115 °C</li> <li>S3 operation (high switching frequencies)</li> <li>Extended maintenance interval</li> <li>Especially recommended with GearOil by SEW-EURODRIVE</li> </ul>	Premium Sine Seal according to Fig. 2	≈ 20000 h	High-quality FKM (fluorocarbon rubber) <sup>1)</sup>

Sealing system	Recommended use	Sealing system design	Recommended maintenance interval	Material
<b>Premium Sine Seal LV</b> Sealing system to avoid current passage	<ul style="list-style-type: none"> <li>• Speeds up to 4500 min<sup>-1</sup></li> <li>• Temperature range from -25 °C to +115 °C</li> <li>• S3 operation (high switching frequencies)</li> <li>• Current passage in the motor bearings</li> <li>• Especially recommended with GearOil by SEW-EURODRIVE</li> </ul>	Premium Sine Seal with electrically conductive properties based on fig. 3	≈ 10000 h	High-quality FKM (fluorocarbon rubber) <sup>1)</sup> , fleece with electrically conductive properties

1) According to SEW-EURODRIVE specification 97 118 \_\_15.

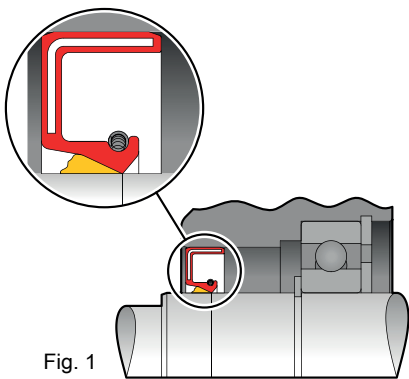


Fig. 1

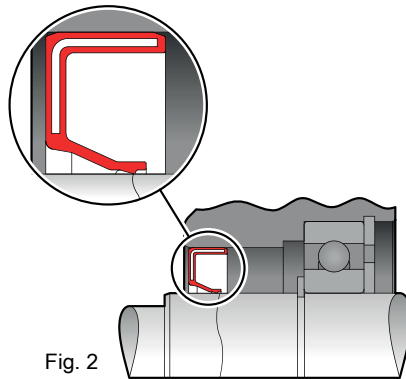


Fig. 2

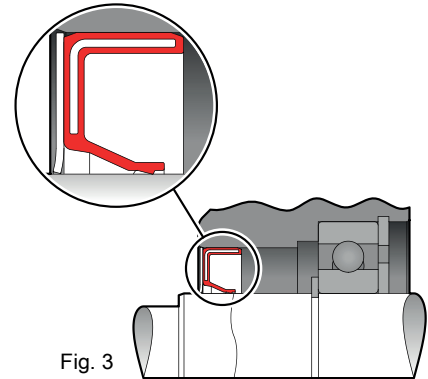


Fig. 3

## 2.3.2 Output seals

Sealing system	Recommended use	Sealing system design	Recommended maintenance interval	Material
<b>NBR</b> Standard sealing system	<ul style="list-style-type: none"> <li>• Temperature range from -40 °C to +80 °C</li> <li>• Moderate ambient conditions</li> </ul>	Oil seal with dust lip according to Fig. 4	≈ 10000 h	High-quality NBR (acrylonitrile butadiene rubber) <sup>1)</sup>
<b>FKM</b> Sealing system for elevated temperatures	<ul style="list-style-type: none"> <li>• Temperature range from -25 °C to +115 °C</li> <li>• S3 operation (high switching frequencies)</li> <li>• Moderate ambient conditions</li> </ul>	Oil seal with dust lip according to Fig. 4	≈ 10000 h	High-quality FKM (fluorocarbon rubber) <sup>1)</sup>
<b>NBR/FKM</b> Combination seal – premium sealing system for longer service life, especially at low temperatures	<ul style="list-style-type: none"> <li>• Temperature range from -40 °C to +80 °C</li> <li>• Moderate ambient conditions</li> <li>• Extended maintenance interval</li> <li>• Especially recommended with GearOil by SEW-EURODRIVE</li> </ul>	Combination seal comprising NBR oil seal with dust lip and FKM sine seal according to Fig. 5	≈ 20000 h	High-quality NBR in combination with high-quality FKM (fluorocarbon rubber) <sup>1)</sup>
<b>FKM/FKM</b> Combination seal – premium sealing system for longer service life at elevated temperatures	<ul style="list-style-type: none"> <li>• Temperature range from -25 °C to +115 °C</li> <li>• S3 operation (high switching frequencies)</li> <li>• Moderate ambient conditions</li> <li>• Extended maintenance interval</li> <li>• Especially recommended with GearOil by SEW-EURODRIVE</li> </ul>	Combination seal comprising FKM oil seal with dust lip and FKM sine seal according to Fig. 5	≈ 20000 h	High-quality FKM (fluorocarbon rubber) <sup>1)</sup>



Sealing system	Recommended use	Sealing system design	Recommended maintenance interval	Material
<p><b>FKM + fleece</b></p> <p>On request: Sealing system for very demanding ambient conditions</p>	<ul style="list-style-type: none"> <li>• Temperature range from -25 °C to +115 °C</li> <li>• S3 operation (high switching frequencies)</li> <li>• Abrasive and damp ambient conditions</li> </ul>	Oil seal with dust lip and fleece disk based on Fig. 6	≈ 10000 h	High-quality FKM (fluorocarbon rubber) <sup>1)</sup> + special fleece

1) According to SEW-EURODRIVE specification 97 118 \_\_15.

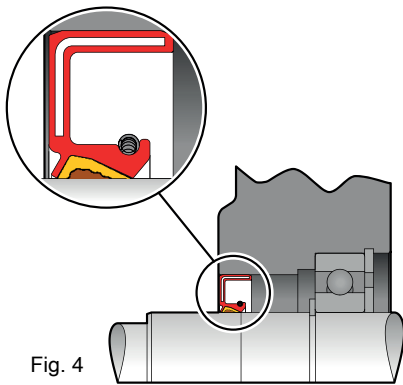


Fig. 4

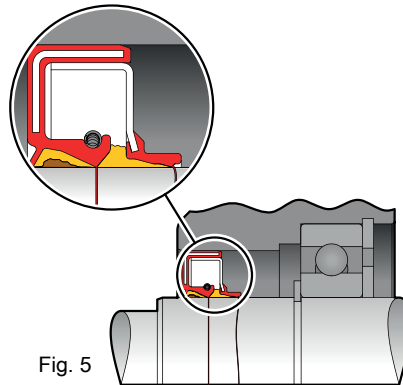


Fig. 5

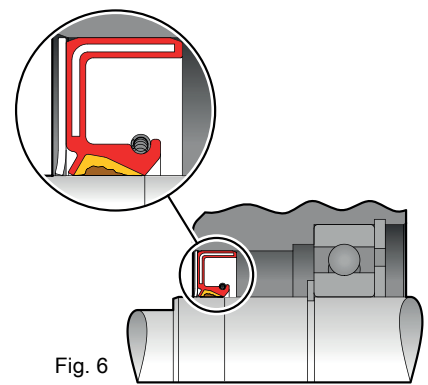


Fig. 6

9007234804807435

## 2.4 Extended storage

### 2.4.1 Design

SEW-EURODRIVE recommends the "extended storage" gear unit design for storage periods longer than 9 months. A VCI anti-corrosion agent (volatile corrosion inhibitors) is added to the lubricant of these gear units. Please note that this VCI anti-corrosion agent is only effective in a temperature range of -25 °C to +50 °C. The flange contact surfaces and shaft ends are also treated with an anti-corrosion agent. As standard, the gear unit with "extended storage" option will be supplied with OS1 surface protection. Instead of OS1, you can order OS2, OS3 or OS4.

### INFORMATION



To prevent the VCI anti-corrosion agent from evaporating, the gear units in "extended storage" design must remain tightly sealed until startup.

The gear units come with the oil fill according to the specified mounting position (M1 – M6). Always check the oil level before you take the gear unit into operation.

## 2.4.2 Storage conditions for long-term storage

Observe the storage conditions specified in the following table for extended storage:

Climate zone	Packaging <sup>1)</sup>	Storage <sup>2)</sup>	Storage duration
Temperate (Europe, USA, Canada, China and Russia, excluding tropical zones)	<ul style="list-style-type: none"> <li>Packed in containers</li> <li>With desiccant and moisture indicator sealed in the plastic wrap</li> </ul>	<ul style="list-style-type: none"> <li>Under roof</li> <li>Protected against rain and snow</li> <li>Vibration-free</li> </ul>	Up to 4 years with regular inspection of the packaging and humidity indicator (rel. humidity < 50%)
	Open	<ul style="list-style-type: none"> <li>Under roof and enclosed at constant temperature and atmospheric humidity (5 °C &lt; <math>\vartheta</math> &lt; 50 °C, relative humidity &lt; 50%)</li> <li>No sudden temperature variations</li> <li>Controlled ventilation with filter (free from dust and dirt)</li> <li>No aggressive vapors</li> <li>No shocks</li> </ul>	2 years or more with regular inspections <ul style="list-style-type: none"> <li>Check for cleanness and mechanical damage during the inspection</li> <li>Check corrosion protection</li> </ul>
Tropical (Asia, Africa, Central and South America, Australia, New Zealand excluding temperate zones)	<ul style="list-style-type: none"> <li>Packed in containers</li> <li>With desiccant and moisture indicator sealed in the plastic wrap</li> <li>Protected against insect damage and mildew by chemical treatment</li> </ul>	<ul style="list-style-type: none"> <li>Under roof</li> <li>Protected against rain and snow</li> <li>Vibration-free</li> </ul>	Up to 3 years with regular inspection of the packaging and humidity indicator (rel. humidity < 50%)
	Open	<ul style="list-style-type: none"> <li>Under roof and enclosed at constant temperature and atmospheric humidity (5 °C &lt; <math>\vartheta</math> &lt; 50 °C, &lt; 50% relative humidity)</li> <li>No sudden temperature variations</li> <li>Controlled ventilation with filter (free from dust and dirt)</li> <li>No aggressive vapors</li> <li>No shocks</li> <li>Protected against insect damage</li> </ul>	2 years or more with regular inspections <ul style="list-style-type: none"> <li>Check for cleanness and mechanical damage during the inspection</li> <li>Check corrosion protection</li> </ul>

1) Packaging must be carried out by an experienced company using packaging material specifically suited for the application.


2) SEW-EURODRIVE recommends storing the gear units according to the mounting position.

## 2.5 Condition monitoring

### 2.5.1 /DUO10A oil aging sensor

The DUO10A diagnostic unit consists of a temperature sensor and the actual evaluation unit. The service life curves of the oil grades common in SEW-EURODRIVE gear units are stored in the evaluation unit. SEW-EURODRIVE can customize any oil grade in the diagnostic unit. Standard parameterization is performed directly on the evaluation unit. During operation, the evaluation unit uses the oil temperature to continuously calculate the remaining service life in days until the next oil change. The remaining service life is displayed directly on the evaluation unit. When the service life has expired, a binary signal can be sent to a higher-level system and evaluated or visualized in the system.

Using the DUO10A diagnostic unit, the system operator no longer replaces the oil within predefined intervals, but can adapt the replacement interval individually to the actual load. The benefits are reduced maintenance and service costs and increased system availability.


For the technical data and part numbers of the DUO10A oil aging sensor, refer to chapter "Information on oil aging sensor /DUO10A" (→  208).

### 2.5.2 /DUV40A vibration monitoring system

The DUV40A vibration monitoring system is used to detect damage of gear units and gearmotors at an early stage (e.g. bearing damage or imbalances). Permanent broadband frequency-selective monitoring of the gearmotor is used for this purpose. Apart from the vibration analysis, additional measured values of up to 3 signal encoders can be detected, recorded and analyzed. The additional signals can be used as reference values for signal analysis e.g. to trigger event-based measuring tasks. After the analysis and, depending on alarm limits defined during rated operation of the drive (teach-in mode), the system can switch outputs and display the alarm state using LEDs.

The SmartWeb software is used to configure and visualize the DUV40A system. If you use several DUV40A systems, you can control them via the SmartUtility Light software centrally from one PC (this software is included in the scope of delivery).

If you purchase the full version of the SmartUtility, you can analyze measurement data in the SmartUtility Viewer and download configurations or upload them onto other devices.

For information on the scope of delivery, part number and technical data, refer to chapter "Information on the /DUV40A vibration monitoring system" (→  210).

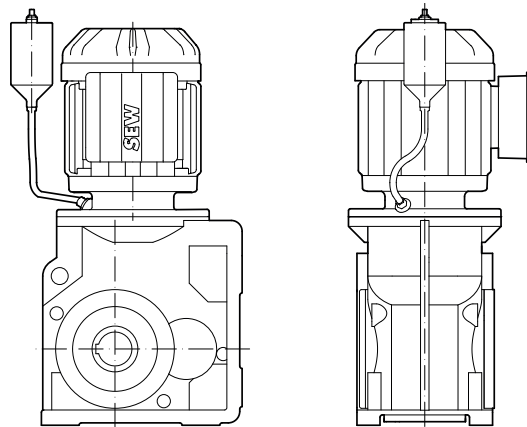
## 2.6 Oil expansion tank

The oil fill level for gear units in mounting position M4 is set due to technical reasons. In case of unfavorable circumstances, oil may leak from the breather valve of these gear units. Use an oil expansion tank to reliably prevent oil from leaking. The oil expansion tank provides additional space for the lubricant to expand.

SEW-EURODRIVE recommends using an oil expansion tank for gear units and gearmotors in mounting position M4, in the following cases:

- For input speeds > 2000 min<sup>-1</sup>
- For sizes 77 – 97 and input speeds > 1800 min<sup>-1</sup>
- For gear units and gearmotors from size 107

The following figure shows the oil expansion tank mounted to a gear unit.



35706841483

The oil expansion tank is delivered as an assembly kit for mounting onto the gearmotor. In case of limited space or of gear units without motor, the oil expansion tank can also be mounted to nearby machine parts.

## INFORMATION



Transverse acceleration is not permitted for gear units with expansion tanks with fixed piping for third-part motors and for servomotors.

For further information, contact your SEW-EURODRIVE sales representative.

## 2.7 Agitator designs

All gear units in agitator design are equipped with an extended bearing hub especially suitable for mixing and agitating applications. Agitator gear units are based on 3 proven standard gear unit series by SEW-EURODRIVE. Almost any agitating, mixing, blending or kneading application from a wide range of industries is covered by one of the agitator designs of the gear unit.

For project planning, please contact SEW-EURODRIVE.

### Advantages of agitator gear units:

- FEM-optimized housing and a special agitator flange for particularly high permitted overhung loads
- No additional bearing for the agitator shaft required
- Shaft and flange dimensions are compatible with standard dimensions.
- Many options and design variants for optimal adaptation to the application
- Gear units/gearmotors also available in explosion-protected design
- Global service provided by SEW-EURODRIVE

	Helical gear units RM.. series (2 and 3 stages)	Parallel-shaft helical gear units FM../FAM.. series (2 and 3 stages)	Helical-bevel gear units KM../KAM.. series (3-stage)
Sizes	57 / 67 / 77 / 87 / 97 / 107 / 127 / 137 / 147 / 167	67 / 77 / 87 / 97 / 107 / 127 / 157	67 / 77 / 87 / 97 / 107 / 127 / 157

	Helical gear units RM.. series (2 and 3 stages)	Parallel-shaft helical gear units FM../FAM.. series (2 and 3 stages)	Helical-bevel gear units KM../KAM.. series (3-stage)
Gear unit ratio $i$	4.29 – 289.74	3.87 – 281.71	5.20 – 197.37
Maximum output torque in Nm	450 – 20000	820 – 20000	820 – 20000
Maximum permitted output overhung load in N	4000 – 120000	35000 – 135000	20000 – 135000

**Available options:**

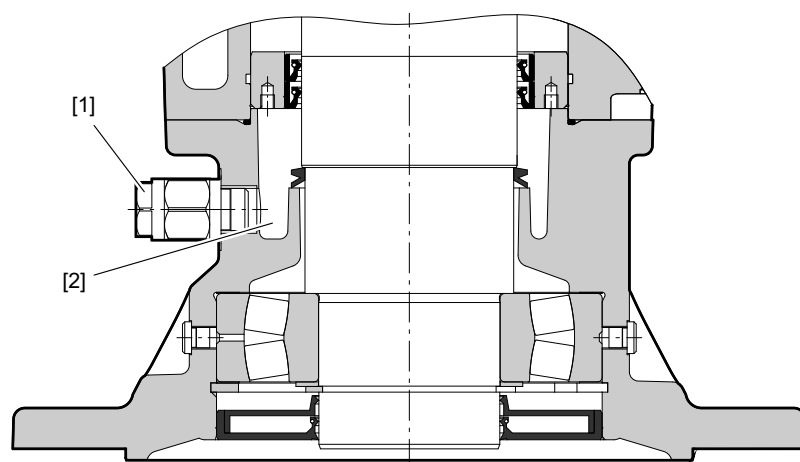
- Double oil seal on the output end for additional protection against leakage
- Grease nipple for relubrication of output shaft bearings
- The gear units use series housings and series gearing components. The special flange is bolted to the output end of the standard gear unit.
- Energy efficiency classes IE1 – IE4 for gearmotors
- Motor power range of 0.12 to 200 kW
- Motor adapter AMS.. for mounting IEC and NEMA motors

**Also available for the FM../FAM... and KM../KAM.. series:**

- Reinforced bearings also opposite the output end. These increase the permitted overhung load, particularly for high output speeds and low gear ratios.
- Drywell design with leak sensor prevents the product from being contaminated by leaking lubricant.

**2.7.1 Drywell with oil sight glass****INFORMATION**

The following specifications apply to gear units in agitator design with oil sight glass in mounting position M4 for FM.., FAM and in mounting position M5A, M6B for KM.., KAM..



The oil sight glass [1] makes it possible to visually check if gear unit oil has accumulated in the collecting space [2] of the output flange.

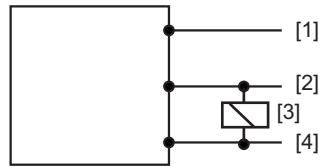
#### 2.7.2 Leak sensor (Drywell design) with the agitator design

A Drywell design with level sensor is optionally available for FM.., FAM.., KM.. and KAM.. agitator drives.

One of the two following sensors is used, depending on the gear unit size:

##### Level sensor for sizes 67 – 97

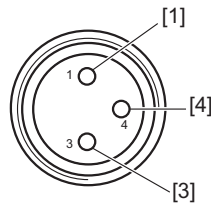
###### Electrical connection



23527583115

- [1] DC 12 V – 32 V
- [2] Output
- [3] Load
- [4] 0 V

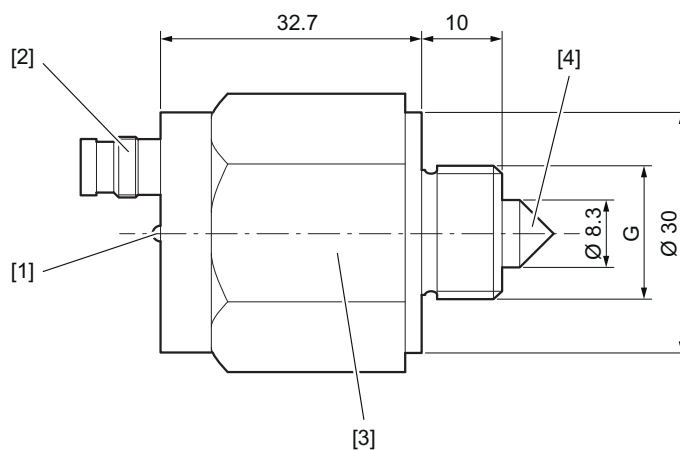
###### Pin assignment



23527590411

- [1] DC 12 V – 32 V
- [4] Output
- [3] Load

###### Dimensions



23563256075

- [1] LED function indicator
- [2] M8×1 circular connector; 3-pin (alternatively cable connection)
- [3] Wrench size: 30
- [4] Glass prism

**Technical data**

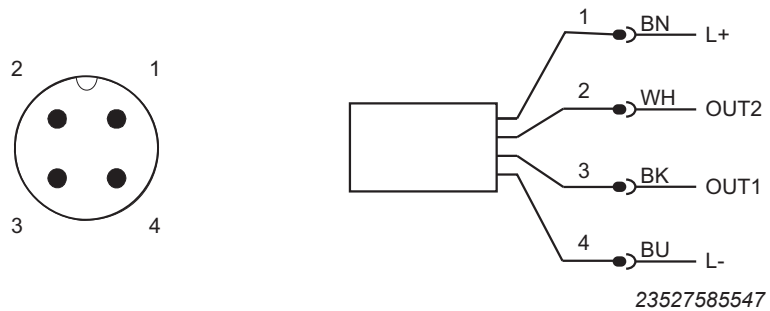
Measuring accuracy	± 0.5 mm
Minimum distance of the glass tip to an opposite surface	≥ 10 mm
Mounting position	Any
Optical display of the switching status	1 LED
Process connection	Male thread G 3/8", G 1/2" or M12 × 1

For more information, please contact SEW-EURODRIVE.

**Level sensor for sizes 107 – 157**

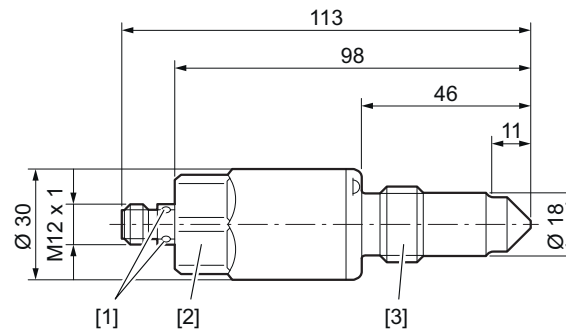
**Electrical connection**

M12 plug-in connector:



OUT1: Switching output/IO link/teach  
OUT2: Switching output

**Dimensions**



23563253643

- [1] LED
- [2] Tightening torque 20 – 25 Nm
- [3] G 1/2

Tightening torque 20 – 25 Nm

**Technical Data**

- Plug-in connection
- Process connection G 1/2 A

- Gold-plated contacts
- 2 switching outputs



### 3 Overview of types and type designations

#### 3.1 Designs and options – R..-, F..-, K..-, S..-, W.. gear units

Below, there is an overview of type designations for R..-, F..-, K..-, S..-, and W.. gear units and their options.

##### 3.1.1 Helical gear units

Designation	Description
RX..	Single-stage foot-mounted design, output shaft with key
RXF..	Single-stage B5 flange-mounted design, output shaft with key
R..	Foot-mounted design, output shaft with key
R..F	Foot- and B5 flange-mounted design, output shaft with key
RF..	B5 flange-mounted design, output shaft with key
RZ..	B14 flange-mounted design, output shaft with key
RM..	B5 flange-mounted design with extended bearing hub, output shaft with key

##### 3.1.2 Parallel-shaft helical gear units

Designation	Description
F..	Foot-mounted design, output shaft with key
FA..B	Foot-mounted design, hollow shaft with keyway
FH..B	Foot-mounted design, hollow shaft with shrink disk
FV..B	Foot-mounted design, splined hollow shaft to DIN 5480
FF..	B5 flange-mounted design, output shaft with key
FAF..	B5 flange-mounted design, hollow shaft with keyway
FHF..	B5 flange-mounted design, hollow shaft with shrink disk
FVF..	B5 flange-mounted design, splined hollow shaft to DIN 5480
FA..	Hollow shaft with keyway
FH..	Hollow shaft with shrink disk
FT..	Hollow shaft with TorqLOC® hollow shaft mounting system
FV..	Splined hollow shaft to DIN 5480
FZ..	B14 flange-mounted design, output shaft with key
FAZ..	B14 flange-mounted design, hollow shaft with keyway
FHZ..	B14 flange-mounted design, hollow shaft with shrink disk
FVZ..	B14 flange-mounted design, splined hollow shaft to DIN 5480
FM..	B5 flange-mounted design with extended bearing hub, output shaft with key
FAM..	B5 flange-mounted design with extended bearing hub, hollow shaft with keyway

## 3.1.3 Helical-bevel gear units

Designation	
K..	Foot-mounted design, output shaft with key
KA..B	Foot-mounted design, hollow shaft with keyway
KAF..B	B5 flange-mounted design, foot-mounted design, hollow shaft with keyway
KF..B	B5 flange-mounted design, foot-mounted design, output shaft with key
KH..B	Foot-mounted design, hollow shaft with shrink disk
KHF..B	B5 flange-mounted design, foot-mounted design, hollow shaft with shrink disk
KV..B	Foot-mounted design, splined hollow shaft to DIN 5480
KF..	B5 flange-mounted design, output shaft with key
KAF..	B5 flange-mounted design, hollow shaft with keyway
KHF..	B5 flange-mounted design, hollow shaft with shrink disk
KVF..	B5 flange-mounted design, splined hollow shaft to DIN 5480
KA..	Hollow shaft with keyway
KH..	Hollow shaft with shrink disk
KT..	Hollow shaft with TorqLOC® hollow shaft mounting system
KV..	Splined hollow shaft according to DIN 5480
KZ..	B14 flange-mounted design, output shaft with key
KAZ..	B14 flange-mounted design, hollow shaft with keyway
KHZ..	B14 flange-mounted design, hollow shaft with shrink disk
KVZ..	B14 flange-mounted design, splined hollow shaft to DIN 5480
KM..	B5 flange-mounted design with extended bearing hub, output shaft with key
KAM..	B5 flange-mounted design with extended bearing hub, hollow shaft with keyway

## 3.1.4 Helical-worm gear units

Designation	Description
S..	Foot-mounted design, output shaft with key
SF..	B5 flange-mounted design, output shaft with key
SAF..	B5 flange-mounted design and hollow shaft with keyway
SHF..	B5 flange-mounted design and hollow shaft with shrink disk
SA..	Hollow shaft with keyway
SH..	Hollow shaft with shrink disk
ST..	Hollow shaft with TorqLOC® hollow shaft mounting system
SAZ..	B14 flange-mounted design and hollow shaft with keyway

Designation	Description
SHZ..	B14 flange-mounted design and hollow shaft with shrink disk

### 3.1.5 SPIROPLAN® gear units

Designation	Description
W..	Foot-mounted design, output shaft with key
WF..	B5 flange-mounted design, output shaft with key
WAF..	B5 flange-mounted design and hollow shaft with keyway
WA..	Hollow shaft with keyway
WHF..	B5 flange-mounted design and hollow shaft with shrink disk
WH..	Hollow shaft with shrink disk
WT..	Hollow shaft with TorqLOC® hollow shaft mounting system

The size W..59 shown in this catalog will be available from the 3rd quarter of 2022.

### 3.1.6 Options

R, F, and K..7 gear units:

Designation	Description
/R	Reduced backlash

K, S and W gear units:

Designation	Description
/T	With torque arm

F gear units:

Designation	Description
/G	With rubber buffer

### 3.1.7 Condition monitoring

Designation	Description
/DUO	Diagnostic Unit Oil = Oil aging sensor
/DUV40A	Diagnostic Unit Vibration = Vibration sensor

# 3 Overview of types and type designations

Versions and options for the DRN.. motor series

## 3.2 Versions and options for the DRN.. motor series

The type designations of the motor series DRN.. and the designs and options are listed in the following tables.

### 3.2.1 Designation of the DRN.. motors

The following table shows the types of AC motors:

Designation	
DR2S..	Standard motor, standard efficiency IE1 (2nd generation)
DRN..	Energy-efficient motor, Premium Efficiency IE3
56 – 315	Nominal sizes: 56, 63, 71, 80, 90, 100, 112, 132, 160, 180, 200, 225, 250, 280, 315
K, S, MK, MS, M, MC, ME, LS, LM, L, LC, H	Lengths
R, Q P, I B	Power designation (identification of motors with the same size but with different power)
2, 4, 6, 8, 4/2, 8/2, 8/4	Number of poles

### 3.2.2 Motor design

Code in the type designation	Description	Size
/FI	IEC foot-mounted motor	63MS – 315
/F.A, /F.B	Universal foot-mounted motor	71MS – 132S
/F.A, /F.B	(/F.A = motor feet enclosed in delivery, /F.B = motor feet mounted at the factory)	225 – 315
/FIA	Motor feet included loose	225 – 315
/FIB	Motor feet installed at the factory	225 – 315
/FF	IEC flange-mounted motor with through bores	63 – 315
/FE	IEC flange-mounted motor with through bores and IEC feet	63 – 315
/FT	IEC flange-mounted motor with threads	63 – 100
/FY	IEC flange-mounted motor with thread and IEC feet	63 – 100
/FC	C-face flange-mounted motor, dimensions in inches	63 – 160
/FG	Integral motor, as stand-alone motor	56 – 315
/FM	Integral motor with IEC feet	63 – 315
/FL	Flange-mounted motor (deviating from IEC)	63 – 315
/FK	Flange-mounted motor (deviating from IEC) with feet	63 – 280

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### 3.2.3 Oil seals

#### Material

Code in the type designation	Description	Size
None	Oil seal made of NBR	56 – 315
None	FKM oil seal	56 – 315

#### Design

Code in the type designation	Description	Size
None	PSS - Premium Sine Seal	56 – 315

### 3.2.4 Bearings

Code in the type designation	Description	Size
/NIB	Current-insulated rolling bearings (B-side, NDE)	200L – 315
/ERF	Reinforced bearings (A-side, DE) with roller bearing	250 – 315
/NS	Relubrication device	225 – 315

### 3.2.5 Winding

#### Thermal class

Code in the type designation	Description	Size
None	Thermal class B	56 – 315
None	Thermal class F	56 – 315
None	Thermal class H	63 – 315

#### Insulation

Code in the type designation	Description	Size
/RI	Reinforced winding insulation	63 – 315
/RI2	Reinforced winding insulation with increased resistance against partial discharge	112 – 315

## 3.2.6 Condition monitoring

## Thermal monitoring

Code in the type designation	Description	Size
/TF	Temperature sensor (PTC thermistor or PTC resistor)	56 – 315
/TH	Thermostat (bimetallic switch)	56 – 315
/PK	PT1000 sensor	63 – 315
/PT	PT100 sensor	63 – 315
/PI		56 – 315

## Brake

Code in the type designation	Description	Size
/DUE	Diagnostic Unit Eddy Current = function/wear monitoring for BE1 to BE122 brake	80 – 315

## Vibration

Code in the type designation	Description	Size
None	Preparation for accommodating SPM measuring nipples	112 – 315

## 3.2.7 Connection

## Terminal board

Code in the type designation	Description	Size
None	Terminal board – 6 terminals	63 – 315
None	Terminal board – 12 terminals	71 – 280

## Cage clamp terminals

Code in the type designation	Description	Size
/KCC	6-pole terminal strip with cage clamp contacts	71 – 132S
/KC1	C1 profile-compliant connection of the electrified monorail system drive (according to VDI guideline 3643)	71 – 132S
/KCW	6-pole series terminal	71 – 132S

**Integrated plug connector**

Code in the type designation	Description	Size
/IS	Integrated plug connector with terminal block in upper part of terminal box	63 – 132S
/ISU	Integrated plug connector without terminal block in upper part of terminal box	63 – 132S

**Mounted plug connector**

Code in the type designation	Description	Size
/ASE.	Mounted Han® 10ES plug connector on terminal box with single locking latch (cage clamp contacts on the motor side)	63 – 132M
/ASB.	Mounted Han® 10ES plug connector on terminal box with double locking latch (cage clamp contacts on the motor side)	63 – 132M
/ACE.	Mounted Han® 10E plug connector on terminal box with single locking latch (crimp contacts on the motor side)	63 – 132S
/ACB.	Mounted Han® 10E plug connector on terminal box with double locking latch (crimp contacts on the motor side)	63 – 132S
/AME.	Mounted Han® Modular 10B plug connector on terminal box with single locking latch (crimp contacts on the motor side)	63 – 132M
/ABE.	Mounted Han® Modular 10B plug connector on terminal box with single locking latch (crimp contacts on the motor side)	71 – 225
/ADE.	Mounted Han® Modular 10B plug connector on terminal box with single locking latch (crimp contacts on the motor side)	71 – 225
/AKE.	Mounted Han® Modular 10B plug connector on terminal box with single locking latch (crimp contacts on the motor side)	132M – 225
/AMB.	Mounted Han® Modular 10B plug connector on terminal box with double locking latch (crimp contacts on the motor side)	63 – 132M
/ABB.	Mounted Han® Modular 10B plug connector on terminal box with double locking latch (crimp contacts on the motor side)	71 – 225
/ADB.	Mounted Han® Modular 10B plug connector on terminal box with double locking latch (crimp contacts on the motor side)	71 – 225
/AKB.	Mounted Han® Modular 10B plug connector on terminal box with double locking latch (crimp contacts on the motor side)	132M – 225
/AND.	Harting Han® Q8/0, single locking latch	56 – 132M
/IV	Other industrial plug connectors according to customer specifications	56 – 225

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### 3.2.8 Ventilation

#### Fan guard design

Code in the type designation	Description	Size
None	Noise-reducing fan guard made of plastic	56 – 90
None	Steel fan guard	63 – 315
/LN	Noise-reducing fan guard	100L – 132S

#### Type of ventilation

Code in the type designation	Description	Size
None	Fan-cooled	56 – 315
/V	Forced cooling fan	71 – 315
/U	Non-ventilated (without fan)	63 – 315
/OL	Non-ventilated (closed B-side)	63 – 132S

#### Fan

Code in the type designation	Description	Size
None	Fan made of plastic	56 – 315
/AL	Aluminum fan	63 – 315
/Z	Additional inertia mass (flywheel fan)	63 – 132

### 3.2.9 Brake and backstop

#### Brake

Code in the type designation	Description	Size
/BE.. <sup>1)</sup>	Spring-loaded brake with specification of size	56 – 315
BG1Z	Integrated brake control with MOVILINK® DDI interface and brake diagnostics as well as brake wear detection	71 – 180

1) Optionally available as safety brake

#### Brake options

Code in the type designation	Description	Size
HR	Manual brake release, re-engaging	56 – 315
HF	Manual brake release, lockable	63 – 315



**Backstop**

Code in the type designation	Description	Size
/RS	Backstop	63 – 315

**3.2.10 Encoder**

**Built-in encoders**

Code in the type designation	Description	Size
/EI7C <sup>1)</sup>	Built-in incremental encoder with HTL interface, 24 periods	63 – 132S
/EI76	Built-in incremental encoder with HTL interface and 6/2/1 period(s)	71 – 132S
/EI72		71 – 132S
/EI71		71 – 132S
/EI8R	Built-in incremental encoder with TTL interface and 1024 periods (4096 increments)	71 – 132S
/EI8C	Built-in incremental encoder with HTL interface and 1024 periods (4096 increments)	71 – 132S
/EI8Z	Built-in incremental encoder with MOVILINK® DDI interface (13 bit incremental)	71 – 132S

1) Optional for sizes 71MS – 132S available as safety encoder

**Add-on encoders**

Code in the type designation	Description	Size
/EK8S <sup>1)</sup>	Add-on encoder with sin/cos interface	71 – 315
/EV8S		71 – 280
/EK8R	Add-on encoder with TTL(RS422) interface	71 – 315
/EV8R		71 – 280
/EK8C	Add-on encoder with HTL interface	71 – 315
/EV8C		71 – 280
/EK8Z	Add-on incremental encoder with MOVILINK® DDI interface (18 bit incremental)	71 – 180
/AK8W <sup>1)</sup>	Add-on absolute encoder with sin/cos and RS485 interface (multi-turn)	71 – 315
/AV8W		71 – 280
/AK8Y <sup>1)</sup>	Add-on absolute encoder with sin/cos and SSI interface (multi-turn)	71 – 315
/AV8Y		71 – 280
/AK8H	Add-on absolute encoder with sin/cos and RS485 interface and HIPERFACE® protocol	71 – 315
/AV8H		71 – 280
/AK8Z	Add-on absolute encoder with MOVILINK® DDI interface (18 bit incremental, 16 bit multi-turn)	71 – 180

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# 3

## Overview of types and type designations

Versions and options for the DRN.. motor series

Code in the type designation	Description	Size
/EG7S <sup>1)</sup>	Add-on encoder with sin/cos interface	132M – 280M
/ES7S <sup>1)</sup>		80MS – 132S
/EV7S		80MS – 280M
/EH7S		315S – 315H
/ES7R	Add-on encoder with TTL(RS422) interface	80MS – 132S
/EG7R		132M – 280M
/EV7R		80MS – 280M
/EH7R		315S – 315H
/AS7W <sup>1)</sup>	Add-on absolute encoder with sin/cos and RS485 interface (multi-turn)	80MS – 132S
/AG7W <sup>1)</sup>		132M – 280M
/AV7W		80MS – 280M
/AS7Y <sup>1)</sup>	Add-on absolute encoder with sin/cos and SSI interface (multi-turn)	80MS – 132S
/AG7Y <sup>1)</sup>		132M – 280M
/AV7Y		80MS – 280M
/AH7Y		315S – 315H
/ES7C	Add-on encoder with HTL interface	80MS – 132S
/EG7C		132M – 280M
/EV7C		80MS – 280M
/EH7C		315S – 315H
/EH7T	Add-on encoder with TTL(RS422) interface	315S – 315H

1) Optionally available as safety encoder

### Encoder mounting adapters

Code in the type designation	Description	Size
/EG7A	Mounting adapter for encoders from the SEW-EURODRIVE portfolio	132M – 280
/EV7A		80MS – 280M
/EH7A		315
/EK8A		71 – 315
/XV8A		71 – 280M
/XV.A	Mounting adapter for third-party encoders	80MS – 280M
/XH1.	Mounted third-party encoder	80MS – 132S
/XV..		80MS – 280M

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### 3.2.11 Digital motor integration

#### Interfaces

Code in the type designation	Description	Size
/DI	MOVILINK® DDI	71 – 180LS

#### Mounted plug connector

Code in the type designation	Description	Size
/KD1	M23 hybrid plug connector (cable cross section 1.5 mm <sup>2</sup> – 4 mm <sup>2</sup> )	71 – 180
/KD	Hybrid cable gland M25/M32 (cable cross section 1.5 mm <sup>2</sup> – 10 mm <sup>2</sup> )	132M – 180 <sup>1)</sup>
/KDB	M40 hybrid plug connector (cable cross section 6 mm <sup>2</sup> – 10 mm <sup>2</sup> )	112 – 180
/KDD	Power cable gland and M23 signal connector (MOVILINK® DDI)	132M-180 <sup>1)</sup>

1) Size 71-132S in preparation

#### Built-in encoder

Code in the type designation	Description	Size
/EI8Z	Incremental encoder with DDI interface and 1024 periods (4096 increments)	

#### Add-on encoders

Code in the type designation	Description	Size
/EK8Z	Incremental encoder with DDI interface and 1024 periods (4096 increments)	
/AK8Z	Absolute encoder with DDI interface (multi-turn)	

#### Brake rectifier

Code in the type designation	Description	Size
/BG1Z		

## 3.2.12 Plug connectors

Code in the type designation	Description	Size
/IS	Integrated plug connector with terminal block in upper part of terminal box	63MS – 132S
/ISU	Integrated plug connector without terminal block in upper part of terminal box	63MS – 132S
/ASE.	Mounted Han® 10ES plug connector on terminal box with single locking latch (cage clamp contacts on the motor side)	63MS – 132M
/ASB.	Mounted Han® 10ES plug connector on terminal box with double locking latch (cage clamp contacts on the motor side)	63MS – 132M
/ACE.	Mounted Han® 10E plug connector on terminal box with single locking latch (crimp contacts on the motor side)	63MS – 132S
/ACB.	Han® plug connector mounted on terminal box with double locking latch (crimp contacts on motor end)	63MS – 132S
/AME.	Han® Modular 10B plug connector mounted on terminal box with single locking latch (crimp contacts on motor end)	63MS – 132M
/ABE.		71MS – 225M
/ADE.		71MS – 225M
/AKE.		132M – 225M
/AMB.	Han® Modular 10B plug connector mounted on terminal box with double locking latch (crimp contacts on motor end)	63MS – 132M
/ABB.		71MS – 225M
/ADB.		71MS – 225M
/AKB.		132M – 225M
/AND.	Harting Han® Q8/0, single locking latch	56M – 132M
/IV	Other industrial plug connectors according to customer specifications	56M – 225M

## 3.2.13 Other motor designs

Code in the type designation	Description	Size
/2W	Second shaft end at motor	63 – 315
None	Motor design according to recommendation VE01 of the VIK (Verband der Industriellen Energie- und Kraftwirtschaft e.V. – Association of Energy and Power Generation Industry)	63 – 315

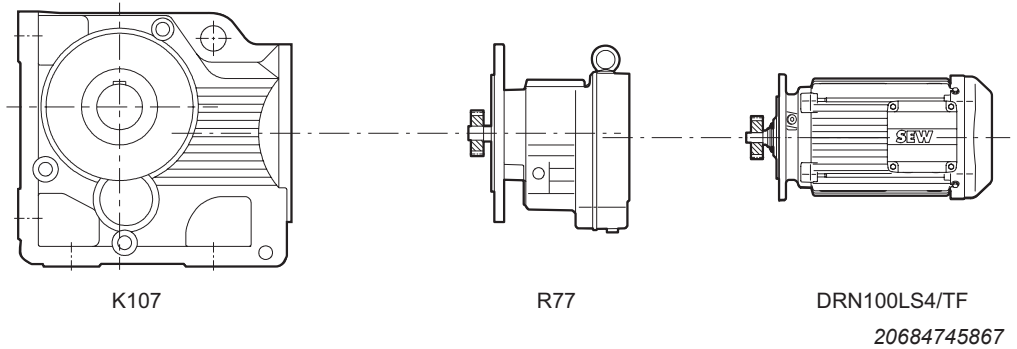
### 3.3 Type designation of a DRN.. gearmotor

The type designation of the gearmotor starts from the component on the output end.

For instance, a multi-stage helical-bevel gearmotor with temperature sensor in the motor winding has the following type designation:

Example: K107R77 DRN100LS4 /TF		
Gear unit type	K	1st gear unit
Size	107	
Gear unit type	R	2nd gear unit
Size	77	
Motor series	DR	Motor
Product line	N	
Size	100LS	
Number of poles	4	
Motor option temperature sensor	/TF	Option

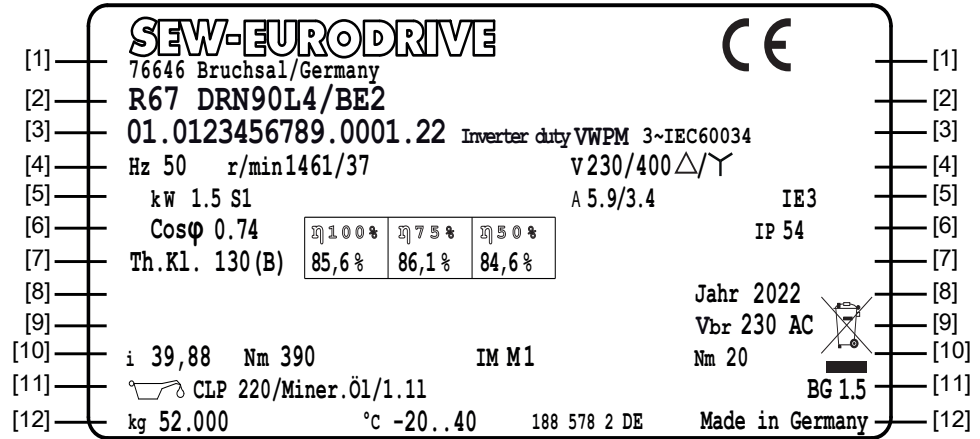
Example: DRN.. gearmotor



### 3.4 DRN.. gearmotor nameplates

The following figures show examples of the nameplates of a DRN.. gearmotor.

Nameplate 1



18014423934358283

Line	Information
[1]	• Manufacturer, address, CE mark
[2]	• Type designation
[3]	• Serial number • Suitability for inverter operation • Number of phases and underlying rating and performance standard
[4]	• Rated frequency • Rated speed of the motor / speed of the gear unit output shaft • Nominal voltage
[5]	• Rated power and operating mode • Rated current • Energy efficiency class according to IEC 60034-30-1
[6]	• Power factor • Efficiency after capacity utilization of 100%, 75%, and 50% • Degree of protection according to IEC 60034-5
[7]	• Thermal class
[8]	• Year of manufacture
[9]	• Brake voltage • Waste disposal according to WEEE Directive
[10]	• Gear unit ratio • Output torque • Mounting position • Nominal braking torque
[11]	• Oil type and oil fill volume • Brake control

Line	Information
[12]	<ul style="list-style-type: none"> <li>• Gearmotor weight</li> <li>• Permitted ambient temperature of the motor</li> <li>• Nameplate number</li> <li>• Country of manufacture</li> </ul>

**Nameplate 2**



18014432148567307

The QR code on the product gives you quick access to the digital services from SEW-EURODRIVE.

In addition to being able to enter the QR code with the camera of your mobile device or an appropriate app, you can also use the "Product ID Plus" app from SEW-EURODRIVE. After scanning, you will see the technical data to identify the product directly.

In addition, the search for product-specific spare parts and documentation, as well as fault diagnostics and direct service requests are simple and fast.

# 3 Overview of types and type designations

Gearmotor types

## 3.5 Gearmotor types

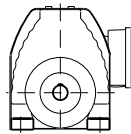
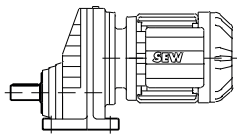
### INFORMATION



The designs described in this chapter refer to DRN.. gearmotors from SEW-EURODRIVE. They also apply to gear units without motors.

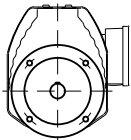
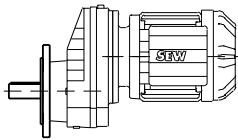
### 3.5.1 Helical gearmotors

The following designs of helical gearmotors are available:



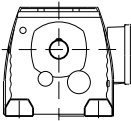
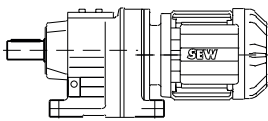
#### **RX..DRN..**

Single-stage, helical gearmotor in foot-mounted design



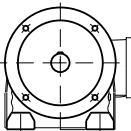
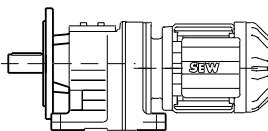
#### **RXF..DRN..**

Single-stage helical gearmotor in B5 flange-mounted design



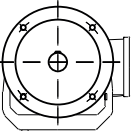
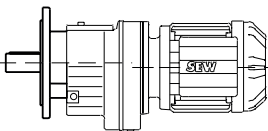
#### **R..DRN..**

Helical gearmotor in foot-mounted design



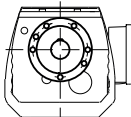
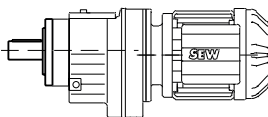
#### **R..F DRN..**

Helical gearmotor in foot-mounted and B5 flange-mounted design



#### **RF..DRN..**

Helical gearmotor in B5 flange-mounted design

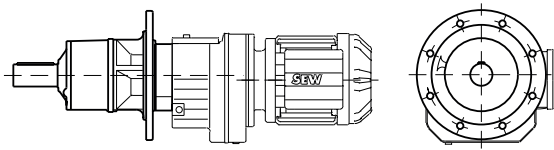


#### **RZ..DRN..**

Helical gearmotor in B14 flange-mounted design

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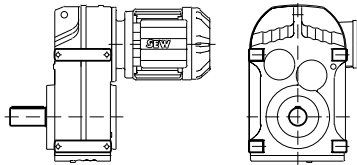


**RM..DRN..**

Helical gearmotor in B5 flange-mounted design with extended bearing hub

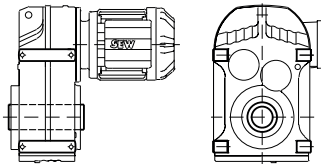
**3.5.2 Parallel-shaft helical gearmotors**

The following designs of parallel-shaft helical gearmotors are available:



**F..DRN..**

Parallel-shaft helical gearmotor in foot-mounted design

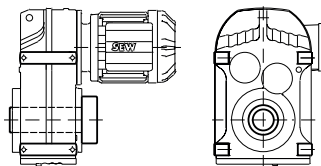


**FA..B DRN..**

Parallel-shaft helical gearmotor in foot-mounted design with hollow shaft

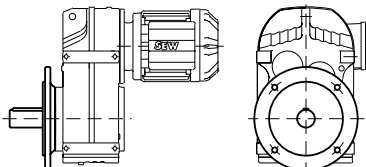
**FV..B DRN..**

Parallel-shaft helical gearmotor in foot-mounted design with splined hollow shaft to DIN 5480



**FH..B DRN..**

Parallel-shaft helical gearmotor in foot-mounted design with hollow shaft and shrink disk



**FF..DRN..**

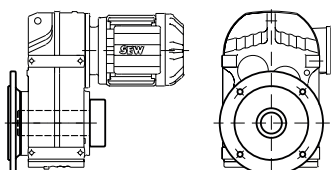
Parallel-shaft helical gearmotor in B5 flange-mounted design

**FAF..DRN..**

Parallel-shaft helical gearmotor in B5 flange-mounted design with hollow shaft

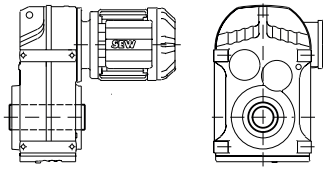
**FVF..DRN..**

Parallel-shaft helical gearmotor in B5 flange-mounted design with splined hollow shaft to DIN 5480



**FHF..DRN..**

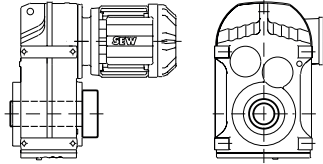
Parallel-shaft helical gearmotor in B5 flange-mounted design with hollow shaft and shrink disk

**FA..DRN..**

Parallel-shaft helical gearmotor with hollow shaft

**FV..DRN..**

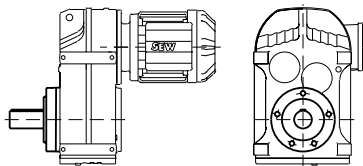
Parallel-shaft helical gearmotor with splined hollow shaft according to DIN 5480

**FH..DRN..**

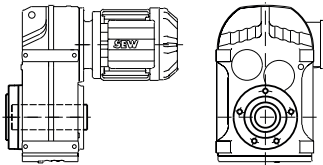
Parallel-shaft helical gearmotor with hollow shaft and shrink disk

**FT..DRN..**

Parallel-shaft helical gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system

**FZ..DRN..**

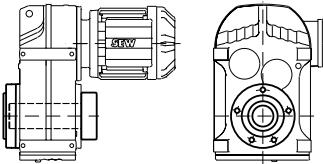
Parallel-shaft helical gearmotor in B14 flange-mounted design

**FAZ..DRN..**

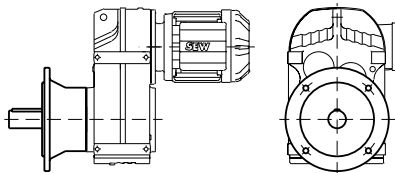
Parallel-shaft helical gearmotor in B14 flange-mounted design with hollow shaft

**FVZ..DRN..**

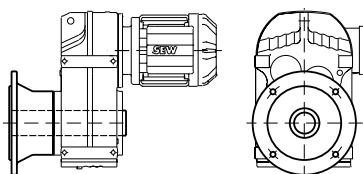
Parallel-shaft helical gearmotor in B14 flange-mounted design with splined hollow shaft to DIN 5480

**FHZ..DRN..**

Parallel-shaft helical gearmotor in B14 flange-mounted design with hollow shaft and shrink disk

**FM.. DRN..**

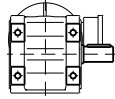
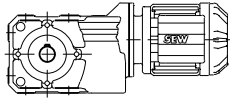
Parallel-shaft helical gearmotor in B5 flange-mounted design with extended bearing hub, output shaft with key

**FAM.. DRN..**

Parallel-shaft helical gearmotor in B5 flange-mounted design with extended bearing hub and hollow shaft

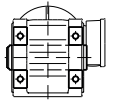
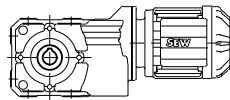
3.5.3 Helical-bevel gearmotors, gear unit sizes K..19 and K..29

The following designs of helical-bevel gearmotors with gear units of size K..19 and K..29 are available:



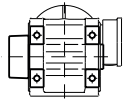
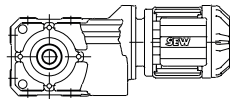
**K19 DRN.., K29 DRN..**

Helical-bevel gearmotor in foot-mounted design



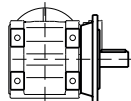
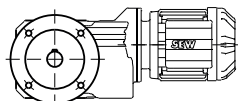
**KA19B DRN.., KA29B DRN..**

Helical-bevel gearmotor in foot-mounted design with hollow shaft



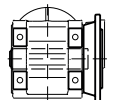
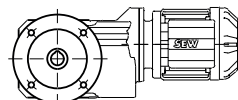
**KH19B DRN.., KH29B DRN..**

Helical-bevel gearmotor in foot-mounted design with hollow shaft and shrink disk



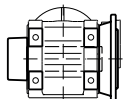
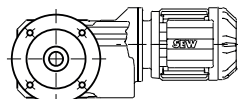
**KF19B DRN.., KF29B DRN..**

Foot-mounted helical-bevel gearmotor in B5 flange-mounted design



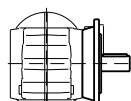
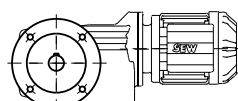
**KAF19B DRN.., KAF29B DRN..**

Foot-mounted helical-bevel gearmotor in B5 flange-mounted design with hollow shaft



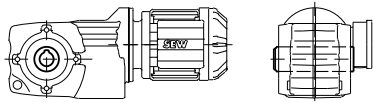
**KHF19B DRN.., KHF29B DRN..**

Foot-mounted helical-bevel gearmotor in B5 flange-mounted design with hollow shaft and shrink disk



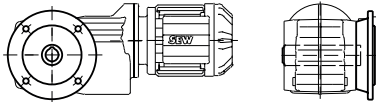
**KF19 DRN.., KF29 DRN..**

Helical-bevel gearmotor in B5 flange-mounted design



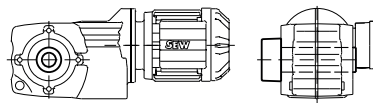
#### **KA19 DRN.., KA29 DRN..**

Helical-bevel gearmotor with hollow shaft



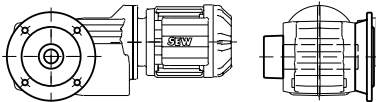
#### **KAF19 DRN.., KAF29 DRN..**

Helical-bevel gearmotor in B5 flange-mounted design with hollow shaft



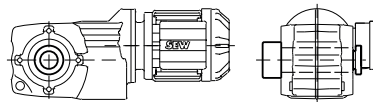
#### **KH19 DRN.., KH29 DRN..**

Helical-bevel gearmotor with hollow shaft and shrink disk



#### **KHF19 DRN.., KHF29 DRN..**

Helical-bevel gearmotor in B5 flange-mounted design with hollow shaft and shrink disk

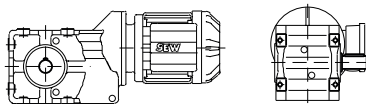


#### **KT19 DRN.., KT29 DRN..**

Helical-bevel gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system

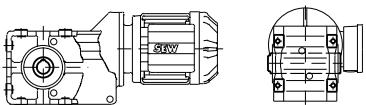
### 3.5.4 Helical-bevel gearmotors, gear unit sizes K..39 and K..49

The following designs of helical-bevel gearmotors with gear units of sizes K..39 and K..49 are available:



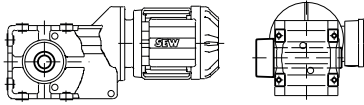
#### **K39 DRN.., K49 DRN..**

Helical-bevel gearmotor in foot-mounted design



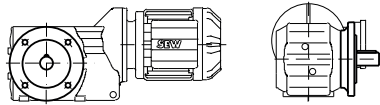
#### **KA39B DRN.., KA49B DRN..**

Helical-bevel gearmotor in foot-mounted design



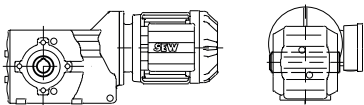
**KH39B DRN.., KH49B DRN..**

Helical-bevel gearmotor in foot-mounted design with hollow shaft and shrink disk



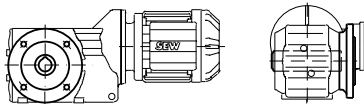
**KF39 DRN.., KF49 DRN..**

Helical-bevel gearmotor in B5 flange-mounted design



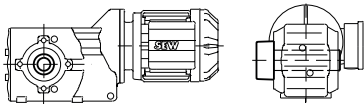
**KA39 DRN.., KA49 DRN..**

Helical-bevel gearmotor with hollow shaft



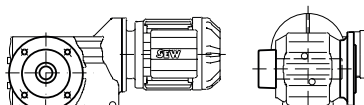
**KAF39 DRN.., KAF49 DRN..**

Helical-bevel gearmotor in B5 flange-mounted design with hollow shaft



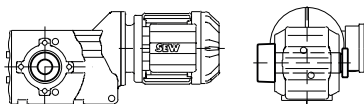
**KH39 DRN.., KH49 DRN..**

Helical-bevel gearmotor with hollow shaft and shrink disk



**KHF39 DRN.., KHF49 DRN..**

Helical-bevel gearmotor in B5 flange-mounted design with hollow shaft and shrink disk

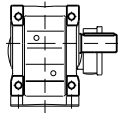
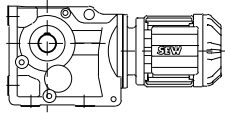


**KT39 DRN.., KT49 DRN..**

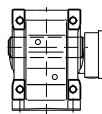
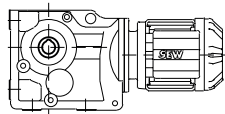
Helical-bevel gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system

## 3.5.5 Helical-bevel gearmotors, gear unit sizes K..7

The following designs of helical-bevel gearmotors with gear units of size K..7 are available:

**K..7 DRN..**

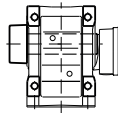
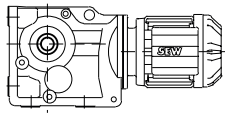
Helical-bevel gearmotor in foot-mounted design

**KA..7B DRN..**

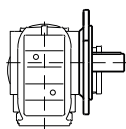
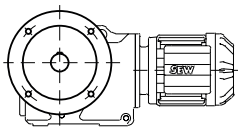
Helical-bevel gearmotor in foot-mounted design with hollow shaft

**KV..7B DRN..**

Helical-bevel gearmotor in foot-mounted design with splined hollow shaft according to DIN 5480

**KH..7B DRN..**

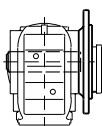
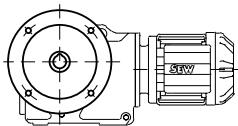
Helical-bevel gearmotor in foot-mounted design with hollow shaft and shrink disk

**KF..7 DRN..**

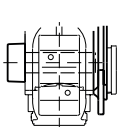
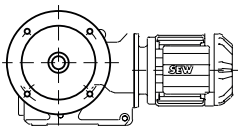
Helical-bevel gearmotor in B5 flange-mounted design

**KAF..7 DRN..**

Helical-bevel gearmotor in B5 flange-mounted design with hollow shaft

**KVF..7 DRN..**

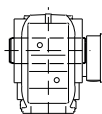
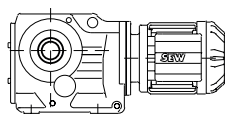
Helical-bevel gearmotor in B5 flange-mounted design with splined hollow shaft to DIN 5480

**KHf..7 DRN..**

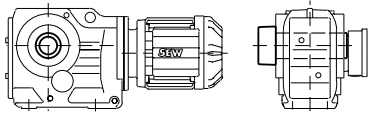
Helical-bevel gearmotor in B5 flange-mounted design with hollow shaft and shrink disk

**KA..7 DRN..**

Helical-bevel gearmotor with hollow shaft

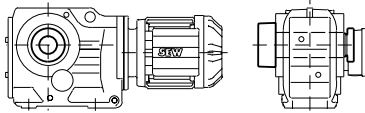
**KV..7 DRN..**

Helical-bevel gearmotor with hollow shaft and splined hollow shaft according to DIN 5480



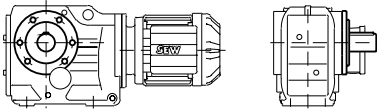
**KH..7 DRN..**

Helical-bevel gearmotor with hollow shaft and shrink disk



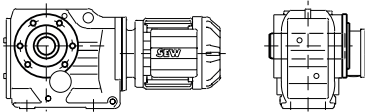
**KT..7 DRN..**

Helical-bevel gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system



**KZ..7 DRN..**

Helical-bevel gearmotor in B14 flange-mounted design

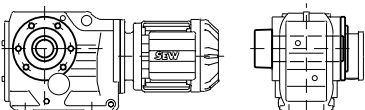


**KAZ..7 DRN..**

Helical-bevel gearmotor in B14 flange-mounted design with hollow shaft

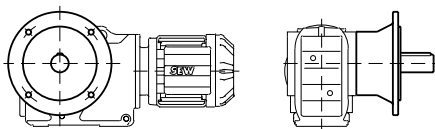
**KVZ..7 DRN..**

Helical-bevel gearmotor in B14 flange-mounted design with splined hollow shaft to DIN 5480



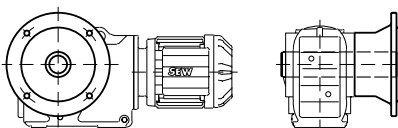
**KHZ..7 DRN..**

Helical-bevel gearmotor in B14 flange-mounted design with hollow shaft and shrink disk



**KM..7 DRN..**

Helical-bevel gearmotor in B5 flange-mounted design with extended bearing hub, output shaft with key

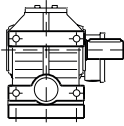
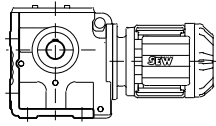


**KAM..7 DRN..**

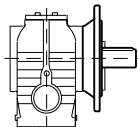
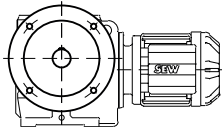
Helical-bevel gearmotor in B5 flange-mounted design with extended bearing hub and hollow shaft

## 3.5.6 Helical-worm gearmotors

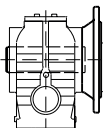
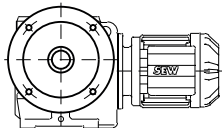
The following designs of helical-worm gearmotors are available:

**S..DRN..**

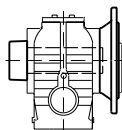
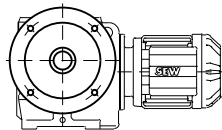
Helical-worm gearmotor in foot-mounted design

**SF..DRN..**

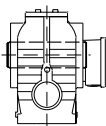
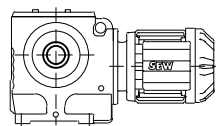
Helical-worm gearmotor in B5 flange-mounted design

**SAF..DRN..**

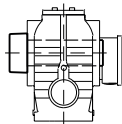
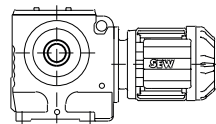
Helical-worm gearmotor in B5 flange-mounted design with hollow shaft

**SHF..DRN..**

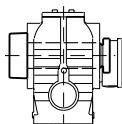
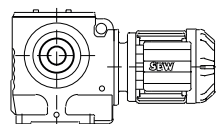
Helical-worm gearmotor in B5 flange-mounted design with hollow shaft and shrink disk

**SA..DRN..**

Helical-worm gearmotor with hollow shaft

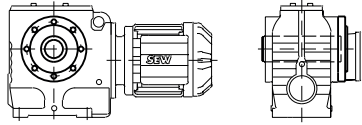
**SH..DRN..**

Helical-worm gearmotor with hollow shaft and shrink disk

**ST..DRN..**

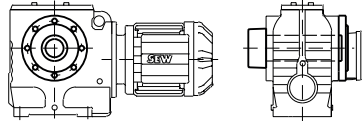
Helical-worm gearmotor with hollow shaft and TorqLOC<sup>®</sup> hollow shaft mounting system





**SAZ..DRN..**

Helical-worm gearmotor in B14 flange-mounted design with hollow shaft

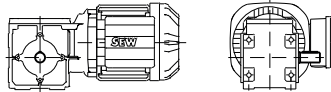


**SHZ..DRN..**

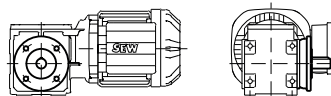
Helical-worm gearmotor in B14 flange-mounted design with hollow shaft and shrink disk

### 3.5.7 SPIROPLAN® gearmotors, gear unit sizes W..10, W..20, W..30

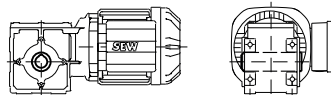
The following designs of SPIROPLAN® gearmotors with gear units in sizes W..10, W..20, and W..30 are available:



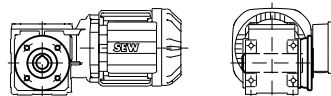
**W10 DRN.., W20 DRN.., W30 DRN..,**  
Foot-mounted SPIROPLAN® gearmotor



**WF10 DRN.., WF20 DRN.., WF30 DRN..**  
SPIROPLAN® gearmotor in B5 flange  
mounted design



**WA10 DRN.., WA20 DRN.., WA30 DRN..**  
SPIROPLAN® gearmotor with hollow shaft

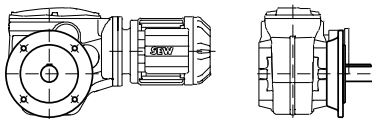


**WAF10 DRN.., WAF20 DRN.., WAF30  
DRN..**  
SPIROPLAN® gearmotor in B5 flange-  
mounted design with hollow shaft

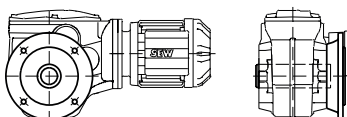
### 3.5.8 SPIROPLAN® gearmotors, gear unit size W..9

The following designs of SPIROPLAN® gearmotors of sizes W..9 are available:

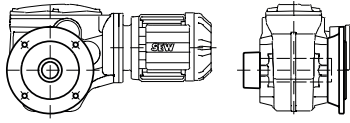
The size W..59 shown in this catalog will be available from the 3rd quarter of 2022.



**WF.9 DRN..**  
SPIROPLAN® gearmotor in B5 flange mounted  
design

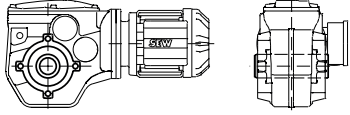


**WAF.9 DRN..**  
SPIROPLAN® gearmotor in B5 flange-mounted  
design with hollow shaft



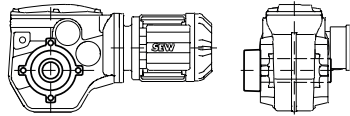
**WHF.9 DRN..**

SPIROPLAN® gearmotor in B5 flange-mounted design with hollow shaft and shrink disk



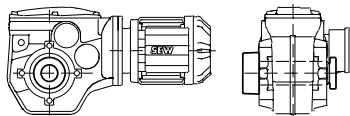
**WA.9 DRN..**

SPIROPLAN® gearmotor with hollow shaft



**WH.9 DRN..**

SPIROPLAN® gearmotor with hollow shaft and shrink disk



**WT.9 DRN..**

SPIROPLAN® gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system

## 4 Project planning for drives

### 4.1 Additional publications

For more detailed information about the project planning for drives, refer to the website of SEW-EURODRIVE where you can order or download the following documentations.

- Drive Engineering – Practical Implementation
  - EMC in Drive Engineering – Basic Theoretical Principles and EMC-Compliant Installation in Practice
  - Efficient Plant Automation with Mechatronic Drive Solutions
- Manuals
  - Project Planning for BE.. Brakes
  - Project Planning for Drives

### 4.2 Drive and gear unit selection data

Determining application data

To select the proper drive, you first need the data (weight, speed, setting range, etc.) of the machine to be driven. This data helps determine the required power, torque and speed. Refer to the documentation "Drive Engineering – Practical Implementation, Project Planning" or the SEW-Workbench project planning software for assistance.

Selecting the correct drive

Calculate the power, rotational speed, torque, and overhung load of the drive. Observe all mechanical requirements. The suitable drive can then be determined.

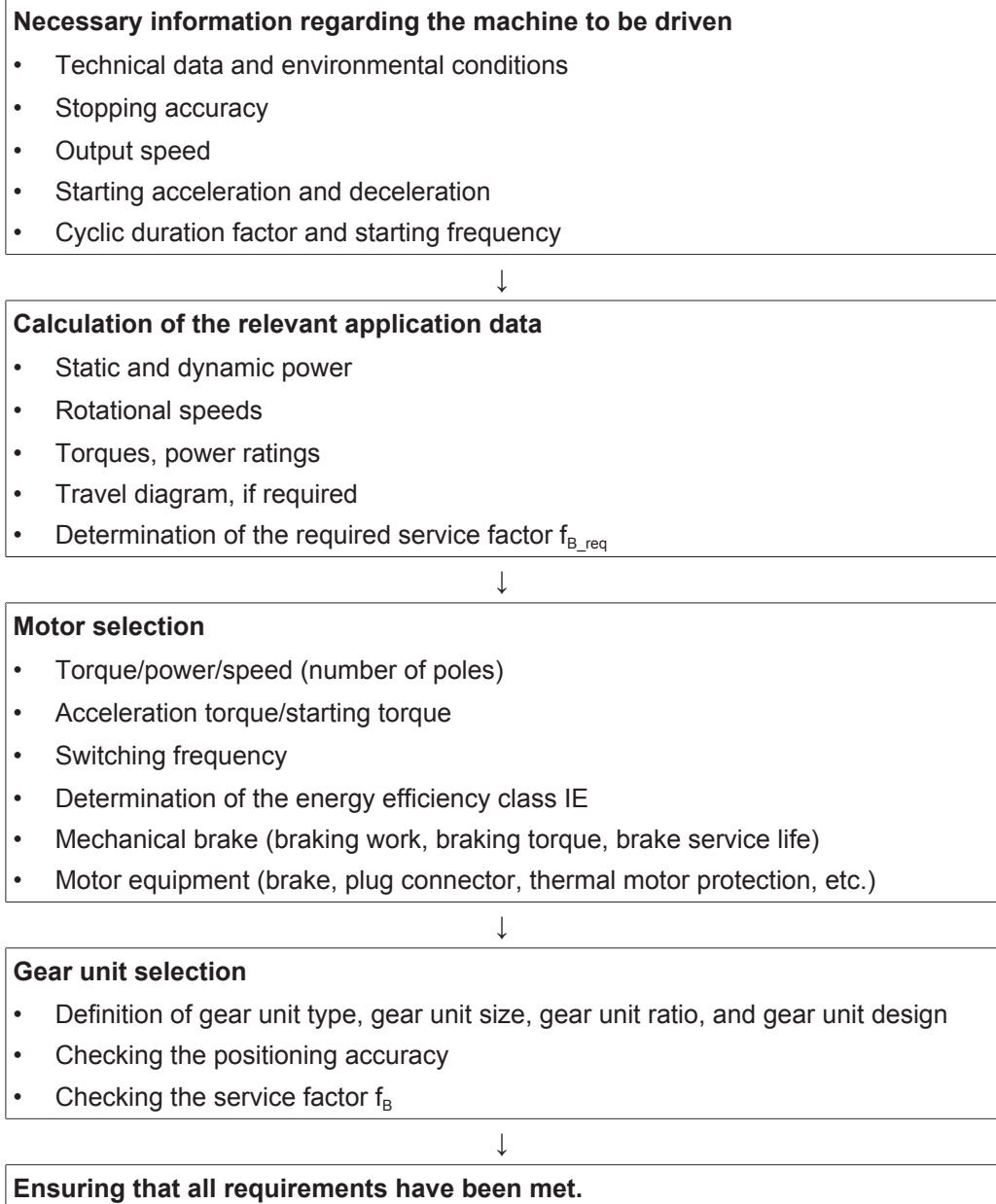
Application data required for project planning:

Designation	Meaning	Unit
$n_{amin}$	Minimum output speed	min <sup>-1</sup>
$n_{amax}$	Maximum output speed	min <sup>-1</sup>
$P_a$ at $N_{amax}$	Output power at maximum output speed	kW
$P_a$ at $N_{amin}$	Output power at minimum output speed	kW
$M_a$ at $N_{amax}$	Output torque at maximum output speed	Nm
$M_a$ at $N_{amin}$	Output torque at minimum output speed	Nm
$F_{Aa}$	Axial load (tension and compression) on the output shaft	N
$F_{Ra}$	Overhung load acting on the output shaft	N
$J_L$	Mass moment of inertia to be driven	10 <sup>-4</sup> kgm <sup>2</sup>
R, F, K, S, W M1 - M6	Mounting position and required gear unit type, see chapter "Gear unit mounting positions" (→ 79) and "Project planning notes R, F, K, S, W gear units" (→ 64)	-
IP..	Required degree of protection	-
$T_{amb}$	Ambient temperature	°C
h	Installation altitude	m above sea level
S., ..% cdf	Duty type and cyclic duration factor cdf – the exact load cycle can be entered instead	-
Z	Switching frequency – or exact load cycle can be specified	h <sup>-1</sup>
$f_{line}$	Line frequency	Hz
$U_{Mot}$	Motor operating voltage	V
$V_B$	Brake operating voltage	V
$M_{B req}$	Required braking torque	Nm
For inverter operation: required control mode and setting range		

### 4.3 Project planning procedure for DR.. gearmotors

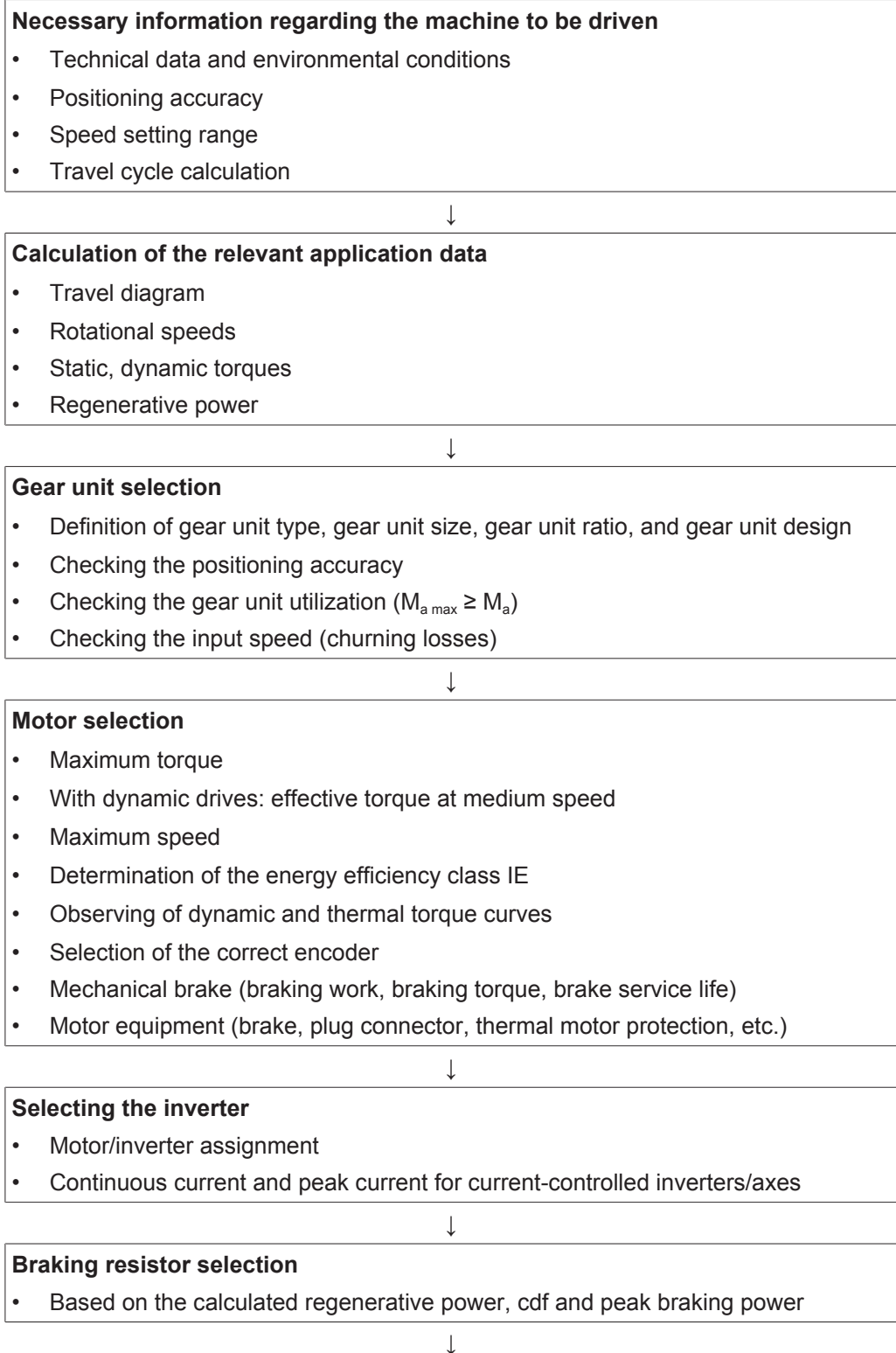
#### 4.3.1 Drive selection – non-controlled operation

The following flow diagram illustrates the project planning procedure for a non-controlled drive. The drive consists of a gearmotor operated on the grid.



#### 4.3.2 Drive selection – controlled operation

The following flow diagram illustrates the project planning procedure for a positioning drive. The drive consists of a gearmotor that is powered by an inverter.



**Options**

- EMC measures
- Operation/communication
- Additional functions



**Ensuring that all requirements have been met.**

## 4.4 Project planning notes – R., F., K., S., W.. gear units

### 4.4.1 Efficiency of gear units

#### General information

The efficiency of the gear units is mainly determined by the gearing and bearing friction as well as by churning losses. Keep in mind that the starting efficiency of a gear unit is always less than its efficiency at operating speed. This factor is particularly true for helical-worm and SPIROPLAN® right-angle gear units.

#### INFORMATION



For information on churning losses and thermal rating, refer to chapter "Churning losses and thermal rating" (→ 65).

#### R, F, K gear units

Depending on the number of gear stages, the gearing efficiency of helical, parallel-shaft and helical-bevel gear units is up to 96% (3-stage), 97% (2-stage) and 98% (1-stage).

#### S and W gear units

The gearing in helical-worm and SPIROPLAN® gear units produces a high proportion of sliding friction. This is the reason why these gear units have higher tooth friction losses and lower efficiency than R, F or K gear units.

Other factors influencing the efficiency:

- Gear ratio of the helical-worm or SPIROPLAN® stage
- Input speed
- Ambient temperature

Helical-worm gear units from SEW-EURODRIVE are helical gear/worm combinations that are significantly more efficient than plain worm gear units; see chapter "Technical data S..37" (→ 879) and subsequent chapters.

The efficiency may reach  $\eta < 0.5$  if the helical-worm gear stage has a very high gear ratio.

#### Self-locking

Retrodriving torque in helical-worm gear units produces an efficiency of  $\eta' = 2 - 1/\eta$ , which is significantly less favorable than the forward efficiency  $\eta$ . The helical-worm gear unit is statically self-locking if the forward efficiency is  $\eta \leq 0.5$ . Contact SEW-EURODRIVE if you want to make technical use of the braking effect of self-locking characteristics.

#### INFORMATION



Note that the self-locking effect of helical-worm gear units is not permitted as the sole safety function for hoists.

#### Run-in phase

The tooth flanks of new helical-worm and SPIROPLAN® gear units of the W..0 series are not yet completely smooth. This makes for a greater friction angle and less efficiency during the run-in phase than during later operation. This effect intensifies with increasing gear ratio.



During the running-in phase, the nominal efficiency of the gear unit is reduced by the respective value in the following tables.

	Worm	
	i range	$\eta$ reduction
1-start	approx. 50 – 280	approx. 12%
2-start	approx. 20 – 75	approx. 6%
3-start	approx. 20 – 90	approx. 3%
5-start	approx. 6 – 25	approx. 3%
6-start	approx. 7 – 25	approx. 2%

SPIROPLAN® W..10 to W..30	
i range	$\eta$ reduction
approx. 35 – 75	approx. 15%
approx. 20 – 35	approx. 10%
approx. 10 – 20	approx. 8%
approx. 8	approx. 5%
approx. 6	approx. 3%

The run-in phase usually lasts 48 hours. Helical-worm gear units achieve their nominal efficiency values when the following conditions have been met:


- The gear unit has been completely run-in.
- The gear unit has reached nominal operating temperature.
- The recommended lubricant has been filled.
- The gear unit is operating in the nominal load range.

### Churning losses and thermal rating

\* (→  X)

Churning losses may occur with the following conditions. They must be considered during the thermal check:

- A mounting position where the first gear unit stage is fully immersed in the lubricant. The respective mounting positions of the gear units are marked with \* in chapter "Mounting position sheets".
- A high mean input speed and consequently a high circumferential speed of the gear wheels of the input gear stage.

If one or both of these conditions apply, determine the requirements from the application and the corresponding operating conditions (see chapter "Data for calculating the thermal rating" (→  66)) and consult SEW-EURODRIVE. SEW-EURODRIVE can calculate the thermal rating based on the actual operating conditions. The thermal rating of the gear unit can be increased by appropriate measures, such as by using a synthetic lubricant with higher thermal endurance properties.

### INFORMATION



To reduce churning losses to a minimum, use gear units, preferably in the M1 mounting position.

*Data for calculating the thermal rating*

The following information is required for calculating the thermal rating:

**Gear unit type and design:**

- Gear unit ratio  $i$
- Mean input speed  $n_{em}$  or mean output speed  $n_{am}$  each in  $\text{min}^{-1}$
- Effective motor torque  $M_{eff}$  in Nm
- Input motor power  $P_{Mot}$  in kW
- Mounting position M1 – M6 or pivoting angle

**Installation site:**

- Ambient temperature  $T_{amb}$  in °C
- Installation altitude
- In small, closed rooms or in large rooms (halls) or outdoors

**Installation situation:**

- Space-critical or well ventilated
- Steel base or concrete base

## 4.5 Service factor

### 4.5.1 Service factor $f_B$

The method for determining the maximum permitted continuous torque  $M_{a,max}$  and using this value to derive the service factor  $f_B = M_{a,max}/M_a$  is not defined in a standard and varies greatly from manufacturer to manufacturer. With a service factor  $f_B = 1$ , gear units by SEW-EURODRIVE in any case offer an extremely high level of safety and reliability in the fatigue strength range (With exception of: Low temperatures and wear of the worm gear with helical-worm gear units). The service factor may differ from specifications of other gear unit manufacturers. If in doubt, contact SEW-EURODRIVE.

For the service factor, refer to the order confirmation and the selection tables in the gearmotor catalogs from SEW-EURODRIVE™ (→ 216).

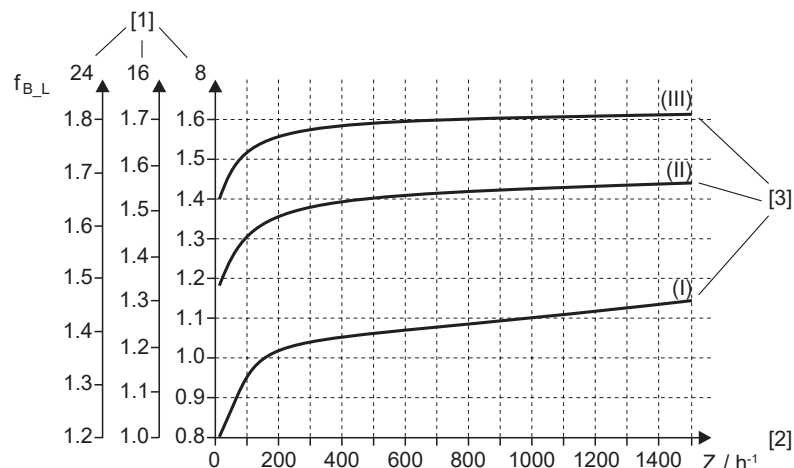
### 4.5.2 Required service factor $f_{B,req}$

The operating conditions are considered in order to determine the required service factor  $f_{B,req}$  for the gearmotor selection. Decisive factors are the requirements of the driven machine, as well as the ambient temperature and gear unit type, if applicable.

The service factor  $f_{B,req}$  results from other service factors described in the following chapters.

### 4.5.3 Application service factor

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the application service factor  $f_{B,L}$ . The service factor is determined according to the daily operating time and the switching frequency  $Z$ . Three load classifications are taken into account depending on the mass acceleration factor. You can read the service factor applicable to your application from the following diagram.



- [1] Service factor  $f_{B,L}$  in relation to the daily operating time in hours/day  
 [2] Switching frequency  $Z$ : The cycles include all starting and braking procedures as well as changeovers from low to high speed and vice versa.  
 [3] Curves for load classification I, II and III

Definition of the load classification

The following 3 load classifications are distinguished:

- Load classification I: Uniform, almost no shock load, permitted mass acceleration factor  $\leq 0.2$

- Load classification II: Non-uniform, moderate shock load, permitted mass acceleration factor  $\leq 3$
- Load classification III: Very non-uniform, severe shock load, permitted mass acceleration factor  $\leq 10$

Mass moment of inertia ratio

The mass moment of inertia ratio is calculated as follows:

$$f_a = \frac{J_x}{J_{Mot}}$$

9007223243041803

$f_a$  = Mass moment of inertia ratio

$J_x$  = Load moment of inertia, reduced to motor shaft

$[J_{Lx}] = \text{kgm}^2$

$J_{mot}$  = Motor moment of inertia

$[J_{Mot}] = \text{kgm}^2$

The motor moment of inertia  $J_{Mot}$  is the mass moment of inertia of the motor and, if installed, the brake and the flywheel fan (Z fan).

The load moment of inertia  $J_x$  includes the mass moments of inertia of the driven machine and the gear unit, reduced to the motor shaft.

Reducing the mass moment of inertia to the motor shaft

The calculation for scaling down to motor speed is performed using the following formula:

$$J_x = J_L \times \left( \frac{1}{i_G} \right)^2$$

9007223243044747

$J_x$  = Load moment of inertia, reduced to motor shaft

$[J_{Lx}] = \text{kgm}^2$

$J_L$  = Mass moment of inertia with reference to the output speed of the gear unit

$[J_L] = \text{kgm}^2$

$i_G$  = Gear unit ratio

Service factors  $f_{B,L} > 1.8$  may be required with large mass acceleration factors ( $> 10$ ), high levels of backlash in the transmission elements or large overhung loads. Contact SEW-EURODRIVE in such cases.

#### 4.5.4 Service factor at low temperatures

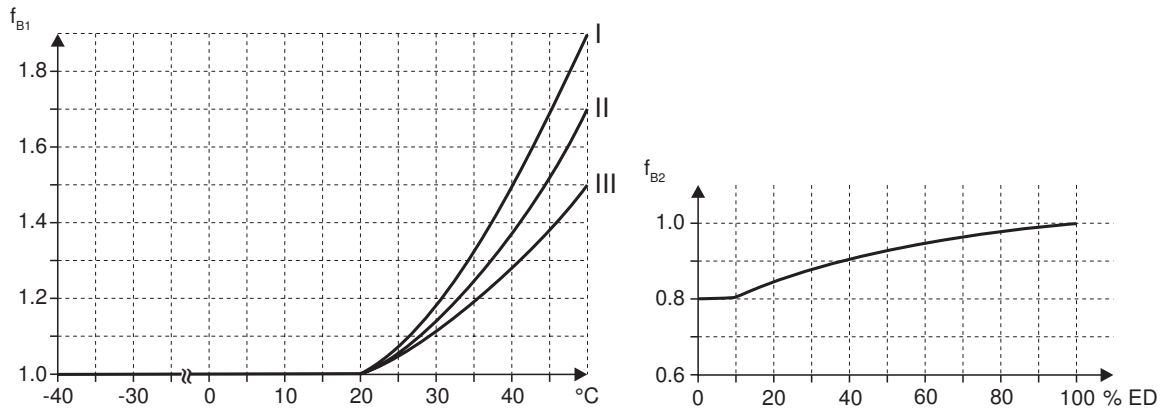
At an ambient temperature of  $< -30$  °C, observe the additional service factor  $f_{B3} = 1.2$ .

#### 4.5.5 Service factors for helical-worm gear units

In case of helical-worm gear units, the following 2 service factors must be observed:

- $f_{B1}$  = Service factor based on ambient temperature
- $f_{B2}$  = Service factor from cyclic duration factor

The additional service factors  $f_{B1}$  and  $f_{B2}$  can be determined by referring to the diagram below. For  $f_{B1}$ , the load classification is taken into account in the same way as for  $f_{B\_L}$ . The following diagram shows the additional service factors  $f_{B1}$  and  $f_{B2}$ :



9007224163363851

Cyclic duration factor

$$ED = \frac{t_L}{60} \times 100$$

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ED = Cyclic duration factor  
 $t_L$  = Time under load

[cdf] = %  
 [ $t_{L\_tot}$ ] = min h<sup>-1</sup>

4.5.6 Conditions for selecting gear units based on the service factor

The determined required service factor  $f_{B\_req}$  must be smaller than or equal to the service factor according to the selection tables (see chapter "Structure of the selection tables", (→ 216)).

$$f_{B\_req} \leq f_B$$

$$F_{B\_L} \times [f_{B1} \times f_{B2} \times f_{B3}] \leq f_B$$

or

$$M_a \leq f_{B\_req} \leq M_{amax}$$

$$M_a \times F_{B\_L} \times [f_{B1} \times f_{B2} \times f_{B3}] \leq M_{amax}$$

The service factors in square brackets are only taken into account for specific conditions regarding the application and ambient conditions. Else, the value is 1.

- $f_B$  = Service factor
  - $f_{B\_req}$  = Required service factor
  - $f_{B\_L}$  = Application service factor based on load classification and switching frequency
  - $f_{B3}$  = Low temperature service factor, only applies to ambient temperatures of < -30 °C
  - $f_{B1}$  = Service factor for helical-worm gear units only, based on ambient temperature
  - $f_{B2}$  = Service factor for helical-worm gear units only, based on cdf
  - $M_a$  = Gearmotor output torque ( $M_{Mot} \times i_G$ )
  - $M_{a\_max}$  = Maximum permitted output torque
- [ $M_a$ ] = Nm  
 [ $M_{a\_max}$ ] = Nm

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### Additional requirements for selecting gear units based on the service factor

When special ambient or application-related conditions need to be observed, additional requirements on gear unit selection based on the service factor need to be adhered to:

- SPIROPLAN® gearmotors with food grade oil:
  - W..10 – W..30:  $f_B \geq 1.0$
- Gear units and compound gear units in combination with explosion-protected motors:  $f_B \geq 1.0$

#### 4.5.7 Examples

- An application with mass acceleration factor 2.5 (load classification II), operating time 14 hours/day (read off at 16 h/day (→ 67)) and 300 cycles/h produce a service factor  $f_{B\_L} = 1.5$  as shown in the figure. The  $f_B$  value of the required gearmotor must therefore be  $\geq 1.5$ .

If the gearmotor is intended for operation at  $-35\text{ °C}$ , the following applies:

$$f_{B\_req} = f_{B\_L} \times f_{B3} = 1.5 \times 1.2 = 1.8$$

The gearmotor to be selected now requires an  $f_B$  value of  $\geq 1.8$ .

- The gearmotor with service factor  $f_{B\_L} = 1.5$  of the previous example is to be a helical-worm gearmotor, and the ambient temperature is  $40\text{ °C}$ :

$$\rightarrow f_{B1} = 1.36 \text{ (read off at load classification II (→ 68))}$$

$$\text{Time under load} = 40 \text{ min/h} \rightarrow \text{cdf} = 66.67\% \rightarrow f_{B2} = 0.95$$

The required service factor is:

$$f_{B\_req} = f_{B\_L} \times f_{B1} \times f_{B2} = 1.5 \times 1.36 \times 0.95 = 1.94$$

The selected helical-worm gearmotor requires a service factor  $f_B \geq 1.94$ .

## 4.6 Overhung and axial loads of R.., F.., K.., S.., and W.. gear units

### 4.6.1 Determining the overhung load

When determining the resulting overhung load, the type of transmission element mounted on the shaft end must be considered. The following transmission element factors  $f_z$  must be considered for various transmission elements.

Transmission element	Transmission element factor $f_z$	Comments
Gear wheels	1.15	< 17 teeth
Sprockets	1.40	< 13 teeth
Sprockets	1.25	< 20 teeth
Narrow V-belt pulleys	1.75	Consider influence of pre-tension force
Flat belt pulleys	2.50	Consider influence of pre-tension force
Toothed belt pulleys	1.50	Consider influence of pre-tension force
Gear rack pinion, pre-tensioned	2.00	Consider influence of pre-tension force
Gear rack pinion, not pre-tensioned	1.15	< 17 teeth

Transmission element factor at low temperatures

For temperatures < -30 °C, observe a transmission element factor  $f_{z1} = 1.2$ .

The overhung load exerted on the motor or gear shaft is calculated as follows:

$$F_R = \frac{M_{\max} \times 2000}{d_0} \times f_z \times f_{z1}$$

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$F_R$  = Overhung load

$[F_R] = \text{N}$

$M_{\max}$  = Torque

$[M_{\max}] = \text{Nm}$

$f_z$  = Transmission element factor

$f_{z1}$  = Transmission element factor  $f_{z1} = 1.2$  for ambient temperatures < -30 °C.

For ambient temperatures  $\geq -30$  °C,  $f_{z1} = 1$

$d_0$  = Overhung load determined by diameter of installed transmission element

$[d] = \text{mm}$

### 4.6.2 Permitted overhung load $F_{Ra}$

The following important information refers to the overhung load value  $F_{Ra}$  in the relevant tables of this catalog:

$F_{Ra}$  is calculated from the nominal bearing service life  $L_{10h}$  (according to ISO 281). For special operating conditions, the permitted overhung loads can be determined based on the modified bearing service life  $L_{na}$ . Consult SEW-EURODRIVE in this case.

The permitted overhung load is influenced by the direction of rotation and the force application angle. The values  $F_{Ra}$  listed in the catalog are based on the least favorable conditions.

The permitted overhung loads  $F_{Ra}$  for the output shafts of foot-mounted gear units with a solid shaft are listed in the selection tables for gearmotors. For other designs, please contact SEW-EURODRIVE.

# 4

## Project planning for drives

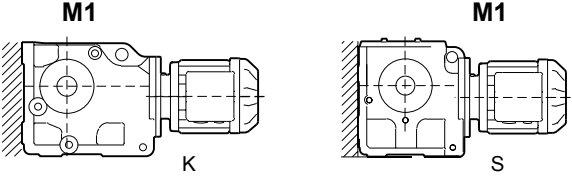
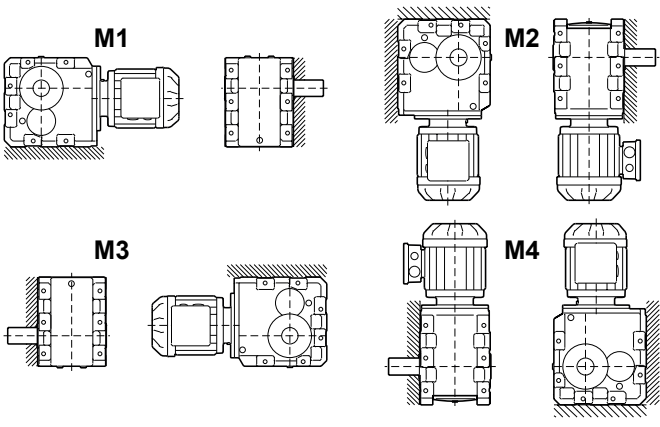
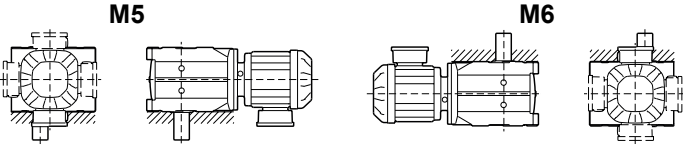
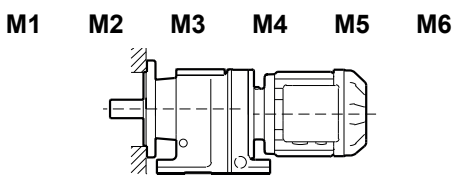
Overhung and axial loads of R..-, F..-, K..-, S..-, and W.. gear units

The overhung load data refers to a force application at the center of the output shaft  $0.5 \times l$ . With right-angle gear units, the application point is assumed to be at the A-side.

For gear units with hollow shaft and key (shaft-mounted design), the values refer to force application to the front end of the hollow shaft.

### Reduced permitted overhung load

The following table shows the cases in which the overhung load must be limited:

Mounting surface	Gear unit	Mounting position	Restriction
	K37 – K157 S37 – S97	M1	Maximally 50% of the overhung load $F_{Ra}$ specified in the selection tables is permitted in the case of mounting at the front-end (shaded areas).
	K167 K187	M1 M2 M3 M4	No reduction when the unit is mounted using the gray-shaded feet. A maximum of 50% of the overhung load $F_{Ra}$ specified in the selection tables is permitted in the case of deviating mounting.
	K167 K187	M5 M6	No reduction when the unit is mounted using the gray-shaded feet. In case of deviating mounting, contact SEW-EURODRIVE.
	R07F – R87F	M1 – M6	For all foot-mounted/flange-mounted gear units (R..F..) with torque transmission via the flange connection, a maximum of 50% of the overhung load $F_{Ra}$ specified in the selection tables is permitted.

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#### 4.6.3 Higher permitted overhung loads

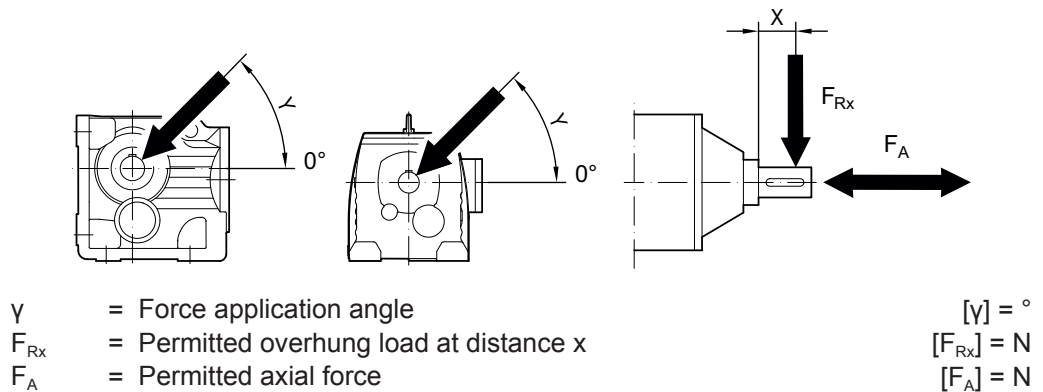
Precisely considering the force application angle  $\gamma$  and the direction of rotation makes it possible to achieve a higher overhung load than listed in the selection tables.

Furthermore, higher output shaft loads are permitted if heavy duty bearings are installed, especially with R, F and K gear units.

Contact SEW-EURODRIVE in such cases.

#### 4.6.4 Definition of the force application

Force application is defined according to the following figure:



#### 4.6.5 Permitted axial forces

If there is no overhung load, then an axial load  $F_A$  (tension or compression) amounting to 50% of the overhung load given in the selection tables is permitted. This condition applies to the following gearmotors:

- Helical gearmotors except for R..127.. to R..167..
- Parallel-shaft helical and helical-bevel gearmotors with solid shaft except for F97...
- Helical-worm gearmotors with solid shaft

### INFORMATION



Contact SEW-EURODRIVE for all other gear unit designs and in the event of significantly greater axial loads or combinations of overhung load and axial load.

# 4 Project planning for drives

Overhung and axial loads of R..-, F..-, K..-, S..-, and W.. gear units

## 4.6.6 Input side: Overhung load conversion for off-center force application

### INFORMATION



Contact SEW-EURODRIVE with regard to the project planning of gear units with input shaft assemblies and off-center force application.

## 4.6.7 Output side: Overhung load conversion for off-center force application

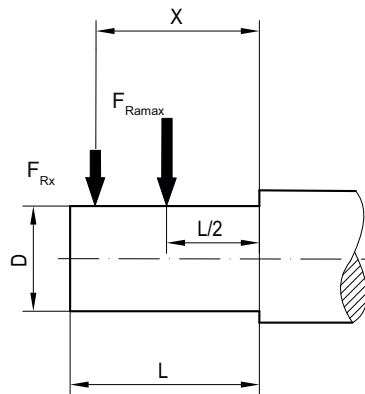
The permitted overhung loads must be calculated according to the selection tables using the following formulas in the event of force application to areas other than the center of the shaft end. The smaller of the two values  $F_{Rb}$  (according to bearing service life) and  $F_{Rw}$  (according to shaft strength) is the permitted value for the overhung load at distance  $x$ . Note that the calculations apply to  $M_{amax}$ . The permitted overhung load values  $F_{Ramax}$  specified in the data tables apply to force application at  $0.5 \times l$  (solid shaft).

The following conditions must be met:

$$F_{Rb} \text{ according to bearing service life: } F_{Rb} = F_{Ramax} \times \frac{a}{b+x}$$

$$F_{Rw} \text{ according to shaft strength: } F_{Rw} = \frac{c}{f+x}$$

$F_{Rx}$	Permitted overhung load at distance $x$	$[F_{Rx}] = N$
$F_{Ramax}$	Permitted overhung load	$[F_{Ramax}] = N$
$x$	Distance from the shaft shoulder to the force application point	$[x] = mm$
$a, b, f$	Gear unit constants for overhung load conversion	$[a, b, f] = mm$
$c$	Gear unit constant for overhung load conversion	$[c] = Nmm$



### Gear unit constants for overhung load conversion

Gear unit type	a mm	b mm	c Nmm	f mm	d mm	l mm
RX57	43.5	23.5	$1.51 \times 10^5$	34.2	20	40
RX67	52.5	27.5	$2.42 \times 10^5$	39.7	25	50

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Gear unit type	a mm	b mm	c Nmm	f mm	d mm	l mm
RX77	60.5	30.5	$1.95 \times 10^5$	0	30	60
RX87	73.5	33.5	$7.69 \times 10^5$	48.9	40	80
RX97	86.5	36.5	$1.43 \times 10^6$	53.9	50	100
RX107	102.5	42.5	$2.47 \times 10^6$	62.3	60	120
R07	72.0	52.0	$4.67 \times 10^4$	11	20	40
R17	88.5	68.5	$6.53 \times 10^4$	17	20	40
R27	106.5	81.5	$1.56 \times 10^5$	11.8	25	50
R37	118	93	$1.24 \times 10^5$	0	25	50
R47	137	107	$2.44 \times 10^5$	15	30	60
R57	147.5	112.5	$3.77 \times 10^5$	18	35	70
R67	168.5	133.5	$2.65 \times 10^5$	0	35	70
R77	173.7	133.7	$3.97 \times 10^5$	0	40	80
R87	216.7	166.7	$8.47 \times 10^5$	0	50	100
R97	255.5	195.5	$1.06 \times 10^6$	0	60	120
R107	285.5	215.5	$2.06 \times 10^6$	0	70	140
R127	311	226	$4.93 \times 10^6$	0	90	170
R137	343.5	258.5	$4.58 \times 10^6$	0	90	170
R147	402	297	$8.65 \times 10^6$	33	110	210
R167	450	345	$1.26 \times 10^7$	0	120	210
F27	109.5	84.5	$1.13 \times 10^5$	0	25	50
F37	123.5	98.5	$1.07 \times 10^5$	0	25	50
F47	153.5	123.5	$1.40 \times 10^5$	0	30	60
F57	170.7	135.7	$2.70 \times 10^5$	0	35	70
F67	181.3	141.3	$4.12 \times 10^5$	0	40	80
F77	215.8	165.8	$7.87 \times 10^5$	0	50	100
F87	263	203	$1.06 \times 10^6$	0	60	120
F97	350	280	$2.09 \times 10^6$	0	70	140
F107	373.5	288.5	$4.23 \times 10^6$	0	90	170
F127	442.5	337.5	$9.45 \times 10^6$	0	110	210
F157	512	407	$1.05 \times 10^7$	0	120	210
K19	103.7	83.7	$8.66 \times 10^4$	0	20	40
K29	124.5	99.5	$1.26 \times 10^5$	0	25	50
K37	123.5	98.5	$1.30 \times 10^5$	0	25	50
K39	155.5	125.5	$2.25 \times 10^5$	0	30	60
K47	153.5	123.5	$1.40 \times 10^5$	0	30	60
K49	183.5	148.5	$2.63 \times 10^5$	0	35	70

# 4

## Project planning for drives

Overhung and axial loads of R..-, F..-, K..-, S..-, and W.. gear units

Gear unit type	a mm	b mm	c Nmm	f mm	d mm	l mm
K57	169.7	134.7	$2.70 \times 10^5$	0	35	70
K67	181.3	141.3	$4.12 \times 10^5$	0	40	80
K77	215.8	165.8	$7.69 \times 10^5$	0	50	100
K87	252	192	$1.64 \times 10^6$	0	60	120
K97	319	249	$2.80 \times 10^6$	0	70	140
K107	373.5	288.5	$5.53 \times 10^6$	0	90	170
K127	443.5	338.5	$8.31 \times 10^6$	0	110	210
K157	509	404	$1.18 \times 10^7$	0	120	210
K167	621.5	496.5	$1.88 \times 10^7$	0	160	250
K187	720.5	560.5	$3.04 \times 10^7$	0	190	320
S37	118.5	98.5	$6.0 \times 10^4$	0	20	40
S47	130	105	$1.33 \times 10^5$	0	25	50
S57	150	120	$2.14 \times 10^5$	0	30	60
S67	184	149	$3.04 \times 10^5$	0	35	70
S77	224	179	$5.26 \times 10^5$	0	45	90
S87	281.5	221.5	$1.68 \times 10^6$	0	60	120
S97	326.3	256.3	$2.54 \times 10^6$	0	70	140

Values for designs not listed are available on request.

## 4.7 Multi-stage gearmotors

### 4.7.1 General information

You can achieve particularly low output speeds by using compound gear units or compound gearmotors. This means an additional second gear unit, usually a helical gear unit, is installed in front of the gear unit or between gear unit and motor.

The resulting total reduction ratio might make protecting the gear unit from high output torques necessary.

### 4.7.2 Limiting the motor power

Reduce the maximum output motor power according to the maximum permitted output torque on the gear unit ( $M_{a\_max}$ ). For this purpose, you first have to determine the maximum permitted motor torque ( $M_{Mot\_max}$ ).

You can calculate the maximum permitted motor torque as follows:

Maximum permitted motor torque

$$M_{Mot} = \frac{M_{amax}}{i_{tot} \times \eta_{tot}}$$

$M_{Mot}$	Maximum permitted motor torque	$[M_{Mot}] = \text{Nm}$
$M_{amax}$	Maximum permitted output torque	$[M_{amax}] = \text{Nm}$
$i_{tot}$	Total gear unit ratio	$[i_{tot}] = 1$
$\eta_{tot}$	Overall efficiency	$[\eta_{tot}] = \%$

Use this maximum permitted motor torque  $M_{Mot}$  and the load diagram of the motor to determine the associated value for the motor current.

Take appropriate measures to prevent the continuous current consumption of the motor from exceeding the pre-determined value for the motor torque  $M_{Mot}$ . An appropriate measure would be to set the tripping current of the motor protection switch to this maximum current value. A motor circuit breaker offers the option to bridge a brief overload, for example, during the startup phase of the motor. A suitable measure for inverter drives is to limit the output current of the inverter according to the determined motor current.

### 4.7.3 Checking brake torques

If you use a compound gear unit brakemotor, you have to limit the braking torque ( $M_B$ ) according to the maximum permitted motor torque  $M_{Mot}$ . The maximum permitted braking torque is 200%  $M_{Mot}$ .

Maximum braking torque

$$M_B \leq 200\% M_{Mot}$$

$M_B$	Maximum braking torque in Nm
$M_{Mot}$	Maximum permitted motor torque in Nm

If you have questions regarding the approved switching frequency of compound gear unit brake motors, please contact SEW-EURODRIVE.

## 4.7.4 Preventing blocking

Blockage on the output side of the double gear unit or multi-stage gearmotor is not permitted. The reason is that indeterminable torques and uncontrolled overhung and axial loads may occur. The gear units may suffer irreparable damage as a result.

### INFORMATION



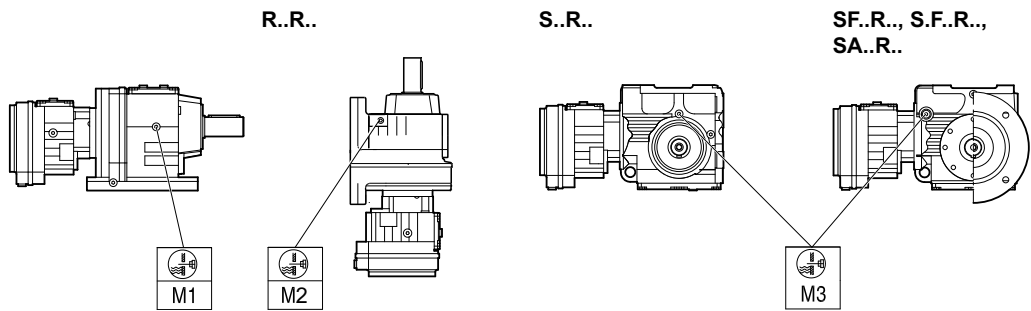
Contact SEW-EURODRIVE if blockages of the double gear unit or multi-stage gearmotor cannot be avoided due to the application.

## 4.7.5 Position of the oil level plug of compound gear units


To ensure sufficient lubrication of the first gear unit (larger gear unit) in the case of compound gear units, the following gear units have a higher oil level in the specified mounting positions:

- Helical gear unit type R..R in mounting position M1 and M2
- Helical-worm gear unit type S..R in mounting position M3

The oil level plugs are located at the following positions, deviating from the specifications on the mounting position sheets:



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Symbol	Meaning
	Oil level plug

## 4.8 Project planning notes – Motor

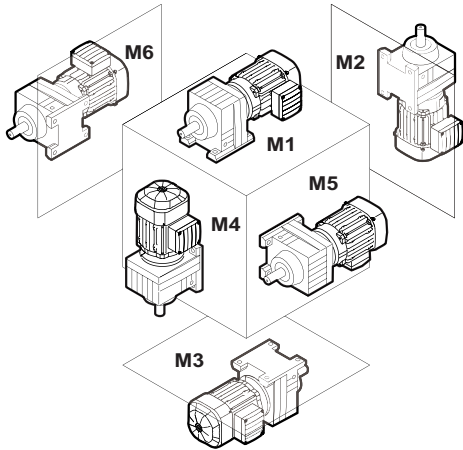
### 4.8.1 Inverter operation

AC motors from SEW-EURODRIVE can be operated with inverters. If motors at the frequency inverter are operated at speeds  $> 1800 \text{ min}^{-1}$ , SEW-EURODRIVE recommends using shaft seals made of FKM (fluorocarbon rubber) on the A and B sides of the motor.

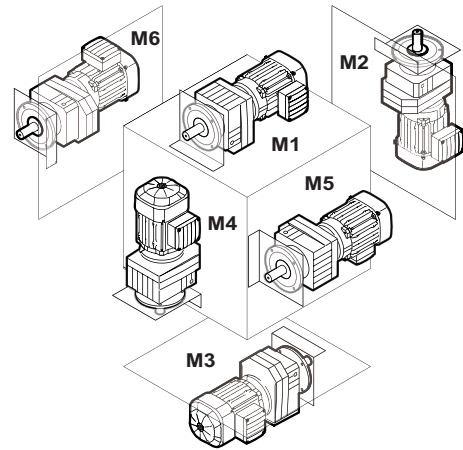
## 5 Gear unit mounting positions and order information

### 5.1 General mounting position information for R.., F.., K.., S.., W.. gear units

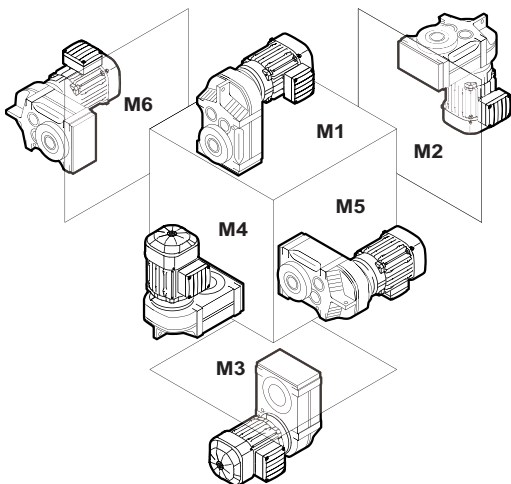
The following illustration shows the SEW-EURODRIVE mounting positions M1 – M6:



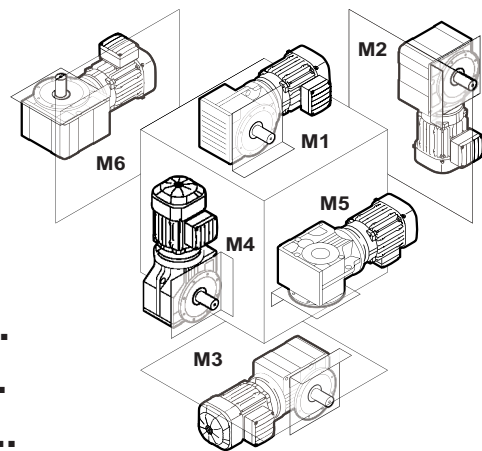
**R..**



**F..**



**K..  
S..  
W..**



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**5.1.1 Change of mounting position**

Observe the following information when you operate the gearmotor in a mounting position other than the one indicated in the order:

- Adjust the lubricant fill quantity to the changed mounting position.
- Adjust the position of the breather valve.
- When changing the mounting position to M4: Contact SEW-EURODRIVE. Depending on the drive's operating mode, an oil expansion tank might be necessary (see chapter "Oil expansion tank").
- For helical-bevel gearmotors: Contact SEW-EURODRIVE if you want to change to mounting position M5 or M6.
- For helical-worm gearmotors: Contact SEW-EURODRIVE if you want to change to mounting position M2 or M3.
- For helical gearmotors: Contact SEW-EURODRIVE if you want to change to mounting position M2.
- If you change the mounting position to a mounting position that requires more oil, SEW-EURODRIVE recommends to perform a thermal check/project planning again.

**5.1.2 Gear units in pivoted mounting position (dynamic)**

The dynamic pivoted mounting position is available on request for gear units of the types R..7, F..7, K..7, K..9, S..7 and SPIROPLAN® W..9.

In the pivoted mounting position, the gear units are delivered with the maximum required oil fill quantity and sealed with oil screw plugs. The gear unit can be pivoted during operation to the mounting positions required by the customer.

**5.1.3 Gear unit in pivoted mounting position (stationary)**

The stationary pivoted mounting position is available for all gear units of the type R..7, F..7, K..7, K..9, S..7 and SPIROPLAN® W..9.

In the stationary pivoted mounting position, the gear units are delivered with the oil fill quantity required for this pivoted mounting position and sealed with oil screw plugs. For gear units with stationary pivoted mounting position, replace the highest screw plug with the supplied breather valve before startup.

**5.1.4 Universal mounting position M0**

SPIROPLAN® gear units W10.. – W30.. are available in universal mounting position M0. Because of their compact size, they are fully enclosed and do not have a breather valve. You can use them in any M1 – M6 mounting position without having to adapt the gear unit.

All W10.. to W30.. gear units of a certain size have the same oil fill quantity.

**5.1.5 Mounting position MX**

Mounting position MX is available for all gear units of sizes R..7, F..7, K..7, K..9, S..7 and SPIROPLAN® W..9.

Before startup, make adjustments dependent on the mounting position for gear units in mounting position MX.



In the mounting position MX, the gear units are delivered with the maximum required oil fill quantity and sealed with oil screw plugs. A breather valve is included with each drive. The oil fill volume must be adapted according to the mounting position of the gear unit (see chapter "Lubricant fill quantities" (→ 142)). Customers will also have to mount the enclosed breather valve at the proper location depending on the mounting position, see chapter "Mounting position sheets" (→ 90).

**Compound gear units in MX mounting position**

In MX mounting position, both gear units (primary and subsequent gear unit) are in the same mounting position.

**5.1.6 Variable mounting position**

The variable mounting position is available on request for gear units of the types R..7, F..7, K..7, K..9, S..7 and SPIROPLAN® W..9.

Before startup, make adjustments dependent on the mounting position for gear units in the variable mounting position. It is not necessary to adjust the oil fill quantity.

In the variable mounting position, the gear units are delivered with the maximum required oil fill quantity of the mentioned mounting positions and sealed with oil screw plugs. A breather valve is included if necessary. The enclosed breather valve must be mounted in the proper location depending on the mounting position, see chapter "Mounting position sheets" (→ 90).

**5.1.7 Position of breather valve/oil drain plug in motor flange**

As shown in the mounting position sheets in chapter "Mounting position sheets" (→ 90), the position of the breather valve and oil drain plug depends on the mounting position of the gear unit.

The following table shows the position of the breather valve and the oil drain plug depending on the mounting position:

Mounting position	Breather valve position	Oil drain plug position
M1, M3, M5, M6	In the gear unit housing	In the gear unit housing
M4	<b>In the motor flange</b>	In the gear unit housing
M2	In the gear unit housing	<b>In the motor flange</b>

If the breather valve (M4 mounting position) or the oil drain plug (M2 mounting position) is positioned in the motor flange, the position depends on the terminal box position.

**INFORMATION**



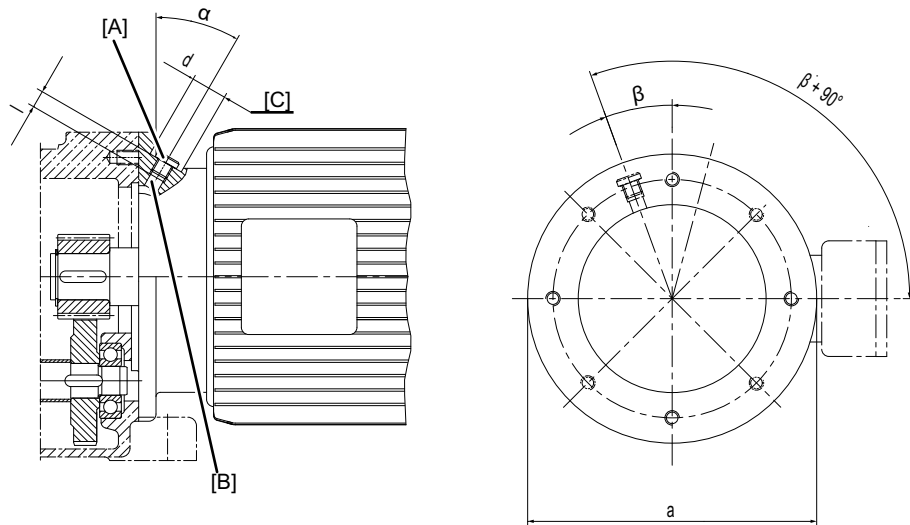
The position of the breather valve / oil drain plug in the mounting position sheets in chapter "Mounting position sheets" (→ 90) always refers to the standard terminal box position 0°. Note that the position of the breather valve/oil drain plug is changed depending on the possible terminal box positions (90°, 180°, 270°).

# 5

## Gear unit mounting positions and order information

General mounting position information for R..-, F..-, K..-, S..-, W.. gear units

The following illustration shows the exact position of the breather valve/oil drain plug in the motor flange.



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- [A] Position of breather valve/oil drain plug
- [B] Continuous core drilling
- [C] Counterbored bore
- [α] Drill angle
- [d] Diameter of countersinking
- [l] Thread length
- [a] Flange diameter
- [β] Position angle

### Dimension tables

The following tables contain the dimensions regarding the position of the breather valve and the oil drain plug depending on the motor size.

Motor	a in mm	α in °	β in °	Thread designation	Ø d in mm	l in mm	
DR2S56	105	0	45	M10×1	–	10	
DRN63	105	0	45	M10×1	–	10	
	120				15		
	160	200	30	22.5	M12x1.5	18	12
DRN71	105	0	45	M10×1	–	10	
	120				15		
	160				200		30
	250	90	M22x1.5	28	14		
	300	90	M22x1.5	28	14		
DRN80	105	0	45	M10×1	–	10	
	120	15	22.5		15		
	160	30		M12x1.5	18	12	
	200			M12x1.5	18	12	
	250			M22x1.5	28	14	
300	90	M22x1.5		28	14		
DRN90	120	30	22.5	M10×1	15	12	
	160			M12x1.5	15	16	
	200				18	12	
	250				18	12	
	300			M22x1.5	28	12	

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Motor	a in mm	$\alpha$ in °	$\beta$ in °	Thread designation	$\varnothing d$ in mm	l in mm		
<b>DRN100</b>	120	30	22.5	M10×1	15	10		
	160					M12x1.5	18	12
	200							
	250							
	300							
	350			M22x1.5	28	14		
<b>DRN112M DRN132S</b>	160	30	22.5	M10×1	15	10		
	200					M12x1.5	18	12
	250							
	300							
	350							
	400	45		M22x1.5	28	14		
450	10							
<b>DRN132M/L</b>	160	30	22.5	M10×1	15	10		
	200	15				M12x1.5	18	14
	250	30						
	300			12				
	350			14				
	400	75		M22x1.5	28	13		
	450					16		
	550	90		M33×2	40	16		
		M42×2	50			18		
<b>DRN160</b>	200			30	22.5	M10×1	15	17
	250	M12x1.5	18					15
	300							
	350					M22x1.5	28	12
	400							
	450	16						
	550		90	M33×2		40	16	
		M42×2	50		17			
<b>DRN180</b>	250			30	22.5	M12x1.5	18	15
	300	M22x1.5	28					
	350							
	400							
	450					16		
	550	90	M33×2				40	16
		M42×2		50	17			
<b>DRN200</b>	250		30		22.5	M12x1.5	18	15
	300	M22x1.5		28				
	350							
	400							
	450					16		
	550	90		M33×2			40	16
		M42×2	50		19			
<b>DRN225</b>	300			30	22.5	M22x1.5	28	15
	350	14						
	400		16					
	450	M33×2	40			17		
	550					M42×2	50	29
<b>DRN250 DRN280</b>	350	15	22.5	M22x1.5	28			14
	400		21					
	450		22.5	M33×2	40	16		
	550							
<b>DRN315</b>	450	30	22.5	M33×2	40	30		
	550		11.25			M42×2	50	20

## 5.2 Order information

### INFORMATION



The following order information is required for R, F, K, S, and W gear units or gearmotors in addition to the mounting position to precisely determine the drive design.

This information is also required for gearmotors that do not depend on a particular mounting position.

#### 5.2.1 Order information for all gear units and gearmotors

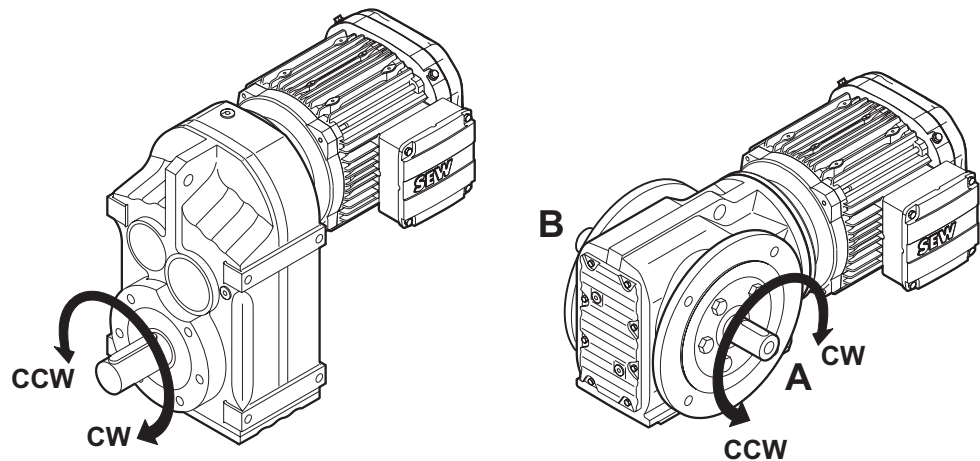
Observe the following notes for all gear units and gearmotors from SEW-EURODRIVE.

#### Output direction of rotation with backstop

The purpose of a backstop is to prevent unwanted directions of rotation. During operation, the backstop permits rotation only in the specified direction. If the drive has an RS backstop, you have to indicate the direction of rotation of the output for the drive.

The direction of rotation is specified as viewed onto the output shaft (LSS):

- CW rotation
- CCW rotation



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In right-angle gear units, you also have to indicate whether the direction of rotation is given looking onto the A or B-side.

The permitted direction of rotation is indicated by a direction arrow on the housing:



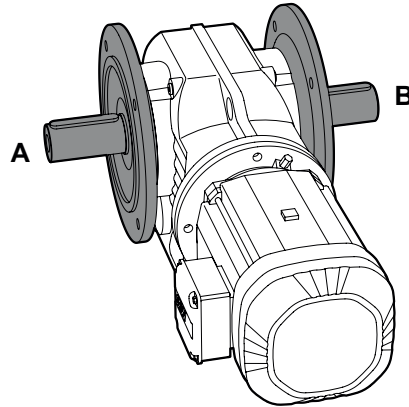
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A replacement label is enclosed for the customer.

#### Position of the output shaft and the output flange

In right-angle gear units, you also have to indicate the position of the output shaft and the output flange:

- A or B or AB

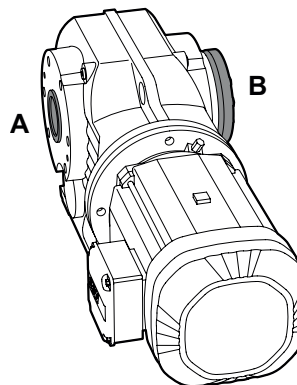


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**Position of the output end in right-angle gear units**

In shaft-mounted, right-angle gear units with a shrink disk, you also have to indicate whether the A or B-side is the output end. In the figure below, the A-side is the output end. The shrink disk is located opposite the output end.

In shaft-mounted, right-angle gear units, the designation "output end" is equivalent to the designation "position of the output shaft" used for right-angle gear units with solid shaft.



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**INFORMATION**



For the permitted mounting surfaces (= hatched area), refer to the mounting position sheets (see chapter "Mounting position sheets").

**5.2.2 Position of motor terminal box and cable entry**

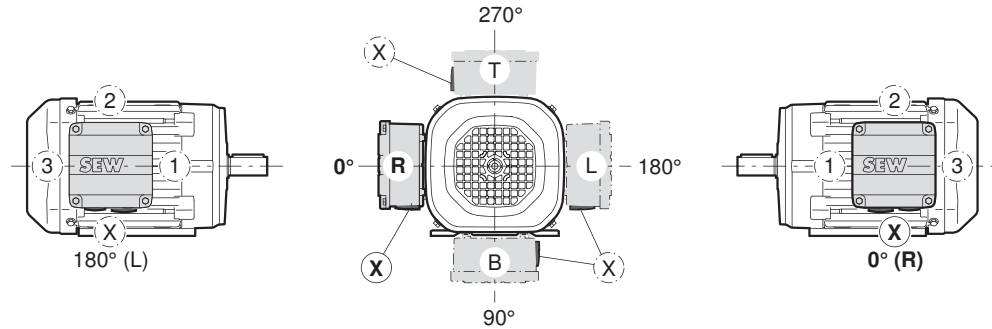
The position of the motor terminal box has so far been indicated with 0°, 90°, 180° or 270° as viewed onto the fan guard (= B-side), see also the following figure. A change in the standard DIN EN 60034 specifies that the following designations will have to be used for terminal box positions for foot-mounted motors in the future:

- As viewed onto the output shaft = A-side
- Designation as R (right), B (bottom), L (left) and T (top)

This new designation applies to foot-mounted motors without a gear unit in mounting position B3 (= M1). For gearmotors, the previous designation is maintained. The following figure shows both designations. Where the mounting position of the motor changes, R, B, L and T are rotated accordingly. In motor mounting position B8 (= M3), T is at the bottom.

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The position of the cable entry can be selected as well. "X" (= normal position), "1", "2" or "3" are possible, as shown in following figure.



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Unless indicated otherwise, you will receive the terminal box type 0° with "X" cable entry. SEW-EURODRIVE recommends selecting cable entry "2" with mounting position M3.

## INFORMATION



Only cable entries "X" and "2" are possible for DR2S56.. and DRN63.. motors. Exception: This limitation does not apply with IS plug connectors.

## INFORMATION



When the **terminal box is in the 90° (B) position**, check to see if the gearmotor has to be supported.

### Software support

Not all cable entry positions X, 1, 2, 3 and terminal box positions 0°(R), 90°(B), 180°(L), 270°(T) are possible in any case. Some additional features for the motor require a connection inside the terminal box, which means this terminal box is larger than the standard terminal box due to the normative air gaps and creepage distances. The dimension sheets only depict the standard terminal box.

Dimensions not listed in the dimension sheets are available on the SEW-EURODRIVE website via the respective CAD data.

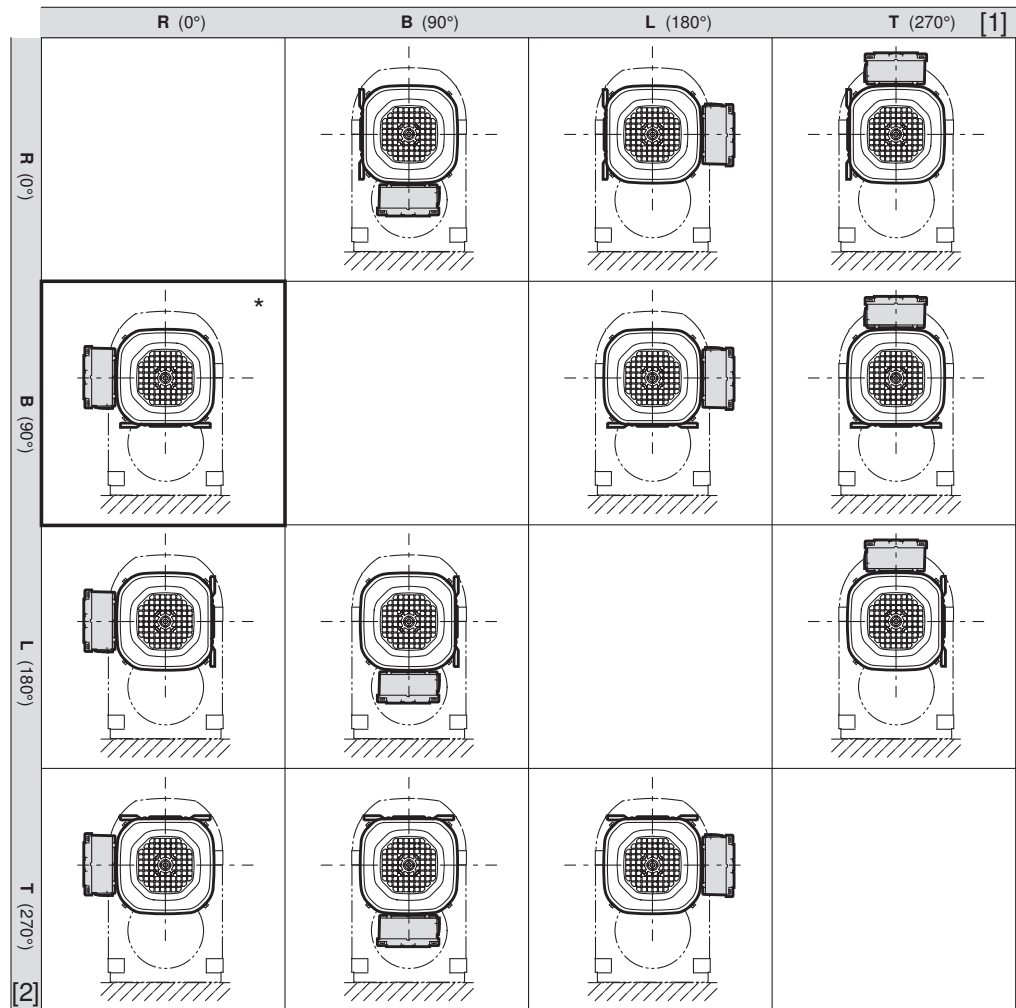
### 5.2.3 Sample orders

Type (examples)	Mounting position	Shaft position	Flange position	Terminal box position	Cable entry position	Output direction of rotation
K47 DRN71M4/RS	M2	A	-	0°	"X"	Right
SF77 DR2S90L4	M6	AB	AB	90°	"3"	-
KA97/II2GD EDRN132M4/2GD	M4	B	-	270°	"2"	-
KH107 DRN160M4	M1	A	-	180°	"3"	-
KAF67AM90	M3	A	B	-	-	-
K47 DRE90MJ4	M2	A	-	0°	"X"	-
R67 DR2S80M4	M1	-	-	90°	"X"	-
KA29/II2GD EDRN90L4/3G	M4	B	-	270°	"2"	-

5.2.4 Position motor terminal box and foot for gearmotors with motor option /FM

With gearmotors, the motor is designed as flange-mounted motor for mounting to gear units. It is also possible to provide the motor with feet that can be used for customer components. The load values of the feet are available from SEW-EURODRIVE on request. The position of the foot must be specified in the order.

The following figure shows the possible positions of the terminal box and the feet for gearmotors with motor option /FM.



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[1] Terminal box positions      [2] Foot positions

\*) If not specified otherwise in the order, the gearmotor is delivered with foot position B (90°) and terminal box position R (0°).

**INFORMATION**



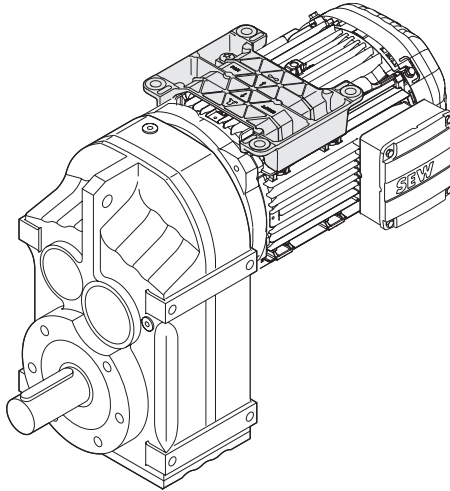
For motors in size 63 the foot is always positioned at 90° and the terminal box at 270°.

**INFORMATION**



The foot on the motor is not suited to attach a complete gearmotor.

Example: Gearmotor with motor option /FM:



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Order information on mounting position of the complete drive, foot positions, terminal box and cable entry:

Mounting position entire drive:	M1
Terminal box position:	R (0°)
Cable entry:	X
Foot position:	T (270°)



5.3 Key to the mounting position sheets

**INFORMATION**



The positions of the breather valve, oil level plug, and oil drain plug specified in the mounting position sheets are binding and comply with the assembly specifications.

The motors are only depicted symbolically on the mounting position sheets.

**INFORMATION**



**For gear units with solid shaft:** The displayed shaft is always on the A-side.

**For shaft-mounted gear units:** The shaft with dashed lines represents the customer shaft. The output end (= output shaft position) is always shown on the A-side.

**INFORMATION**



SPIROPLAN® gearmotors W..10, W..20 and W..30 are independent of the mounting position. However, mounting positions M1 to M6 are also shown for SPIROPLAN® gearmotors to assist you in working with this documentation.

**INFORMATION**



SPIROPLAN® gearmotors W..10 to W..30 cannot be equipped with breather valves, oil level plugs or oil drain plugs.

The SPIROPLAN®W..9 gearmotors are only equipped with a breather valve in mounting position M4.

**INFORMATION**



Some gear units can be supplied in mounting position M0. In this case, the gear unit is delivered in a universal mounting position and can be adjusted to various mounting positions by the customer. It may be necessary to contact SEW-EURODRIVE.

5.3.1 Symbols used

The following table shows the symbols used in the mounting position sheets.

Symbol	Meaning
	Breather valve
	Oil level plug
	Oil drain plug

# 5 Gear unit mounting positions and order information

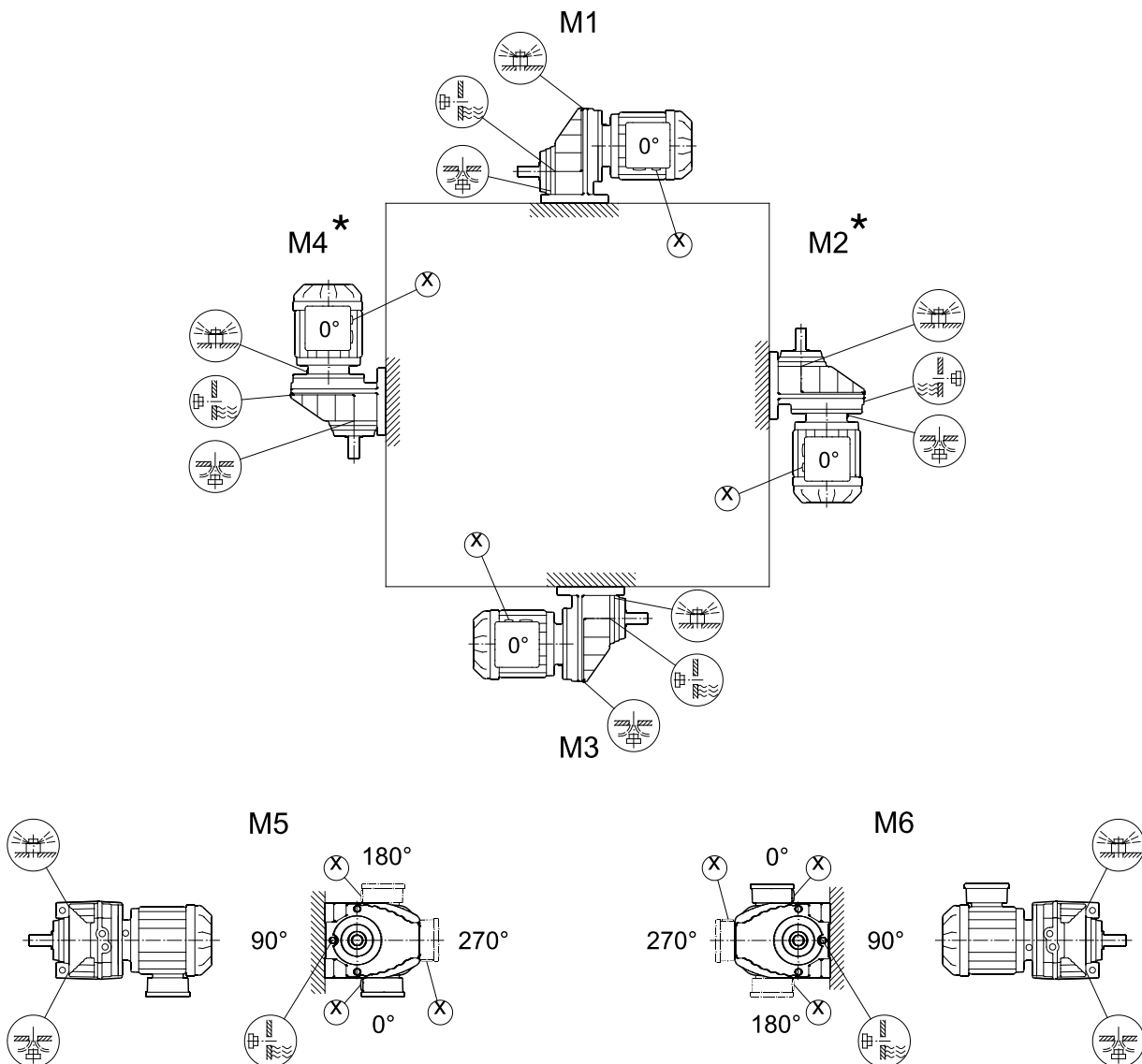
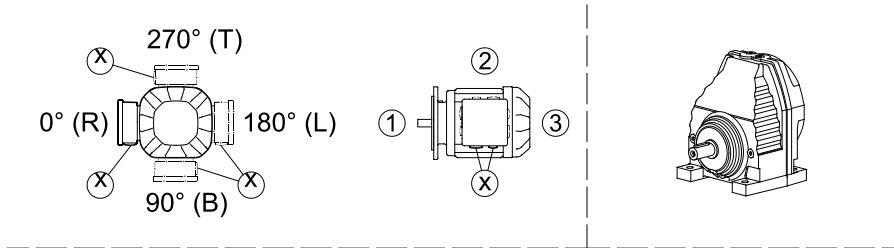
Mounting position sheets

## 5.4 Mounting position sheets

### 5.4.1 Mounting positions of helical gear units

RX57 – RX107

04 043 03 00

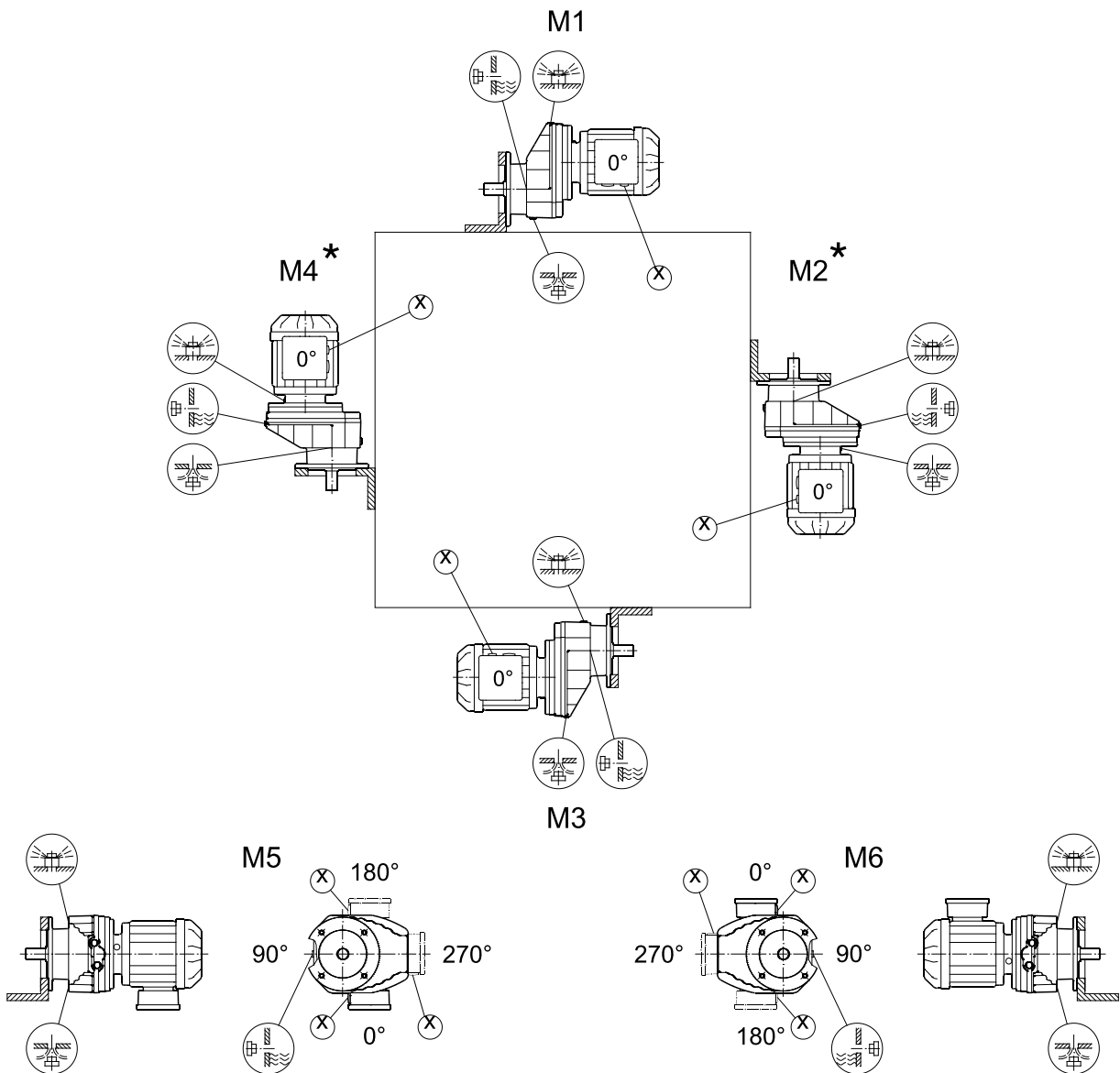
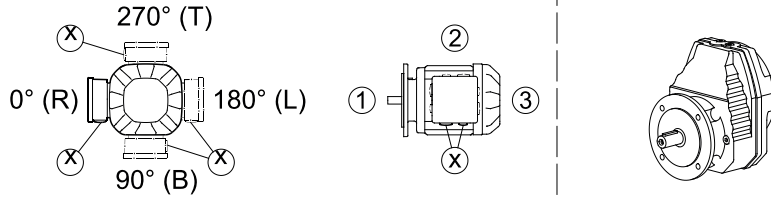


\* (→ 65)

26883198/EN – 04/2022

RXF57 – RXF107

04 044 03 00



\* (→ 65)

26883198/EN – 04/2022

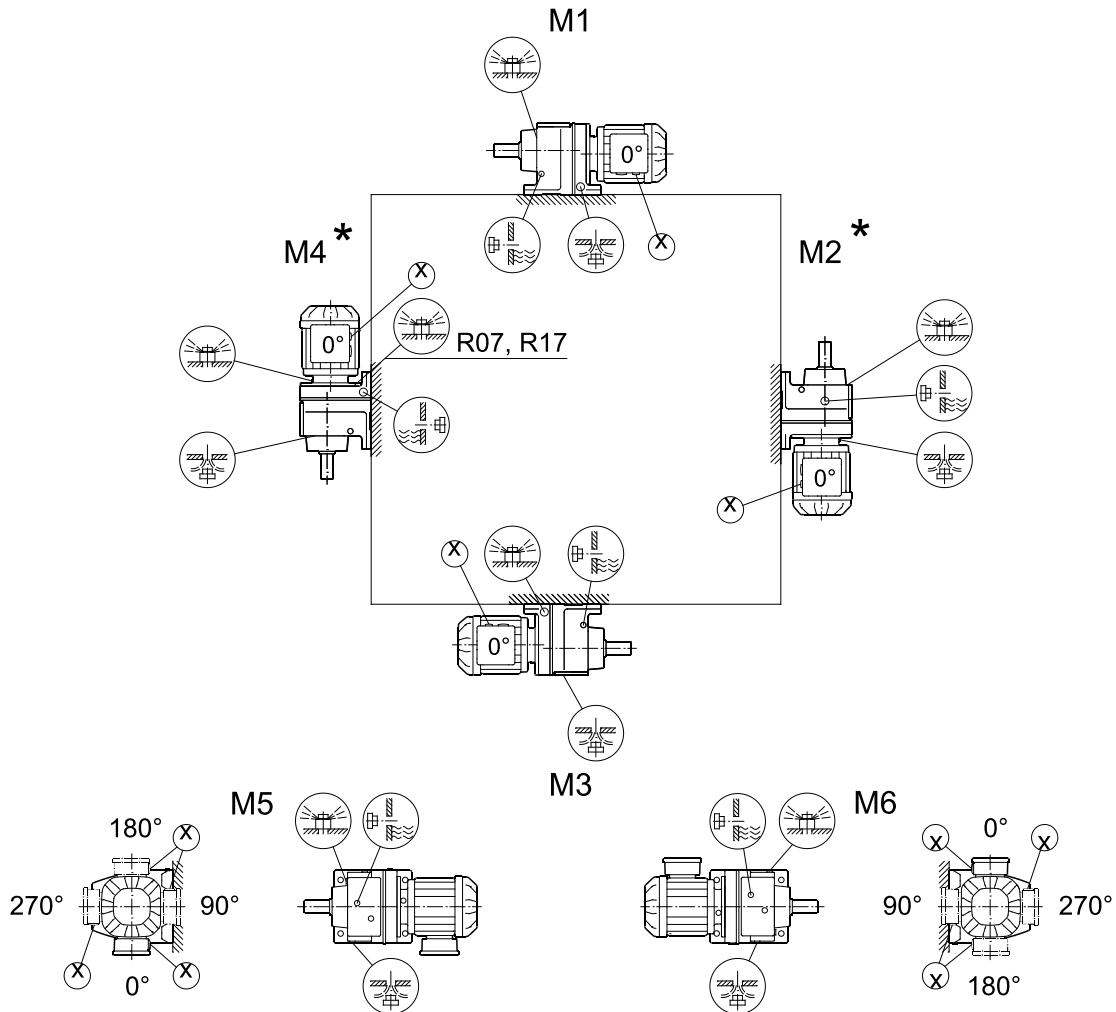
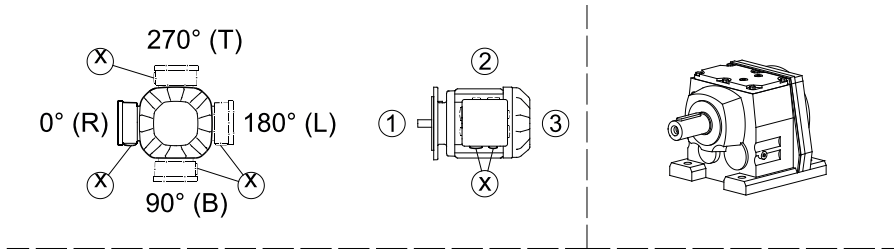
# 5

## Gear unit mounting positions and order information

Mounting position sheets

R07 – R167

04 040 04 00



R07		M1, M2, M3, M5, M6
R17, R27		M1, M3, M5, M6
R07, R17, R27		
R47, R57		M5

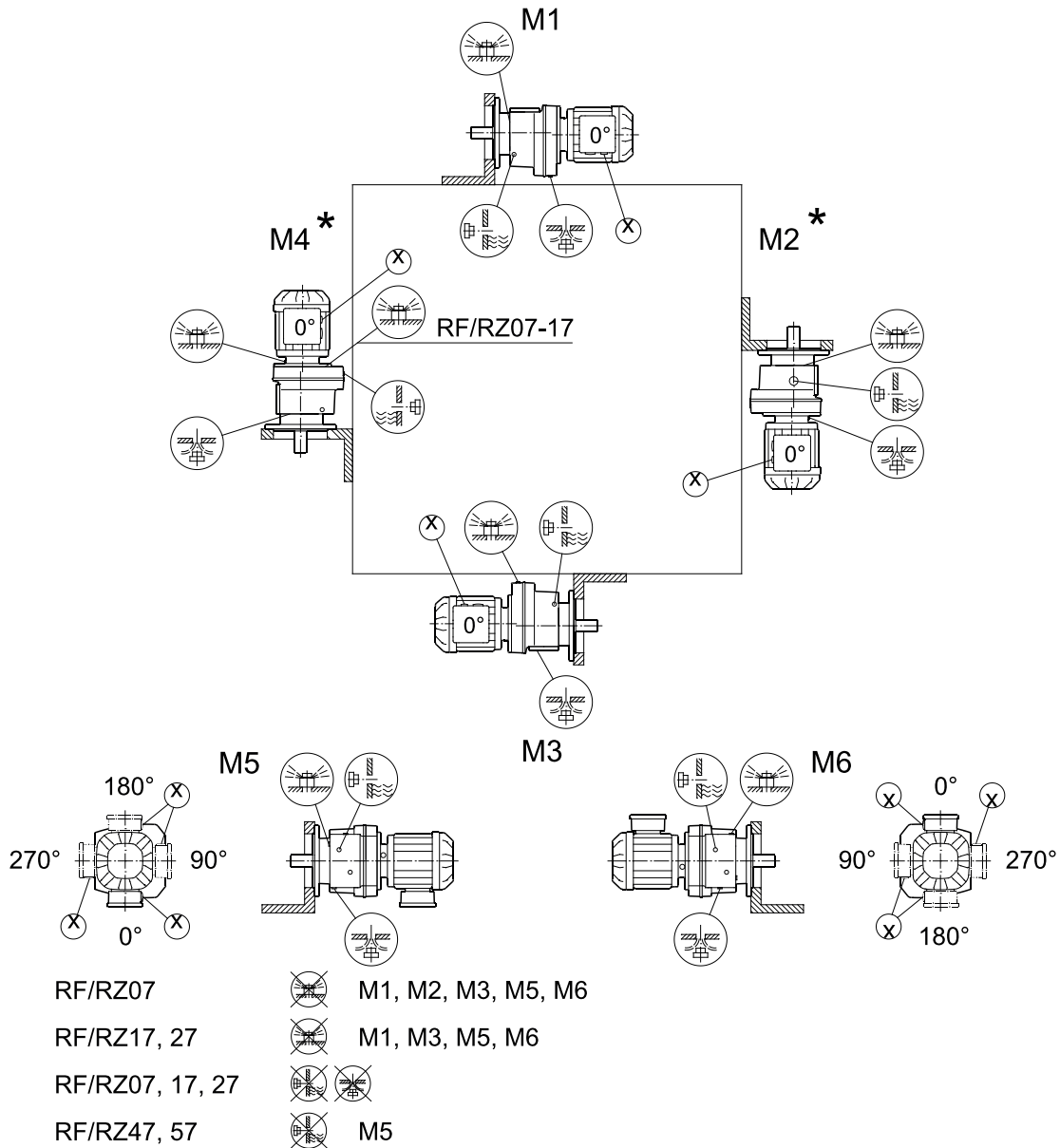
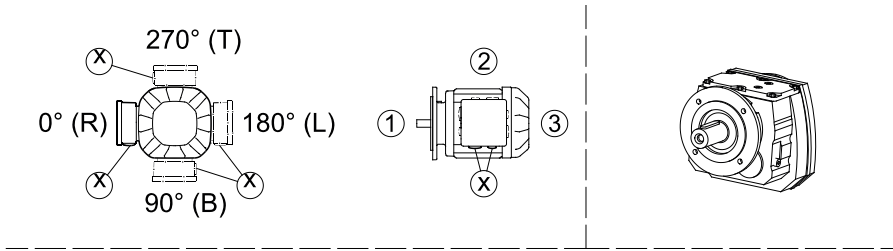
\* (→ 65)

Observe the information in chapter "Overhung and axial loads of R..-, F..-, K..-, S..-, and W.. gear units" (→ 71).

26883198/EN – 04/2022

RF07 – RF167, RZ07 – RZ87, RM57 – RM167

04 041 04 00



\* (→ 65)

26883198/EN – 04/2022

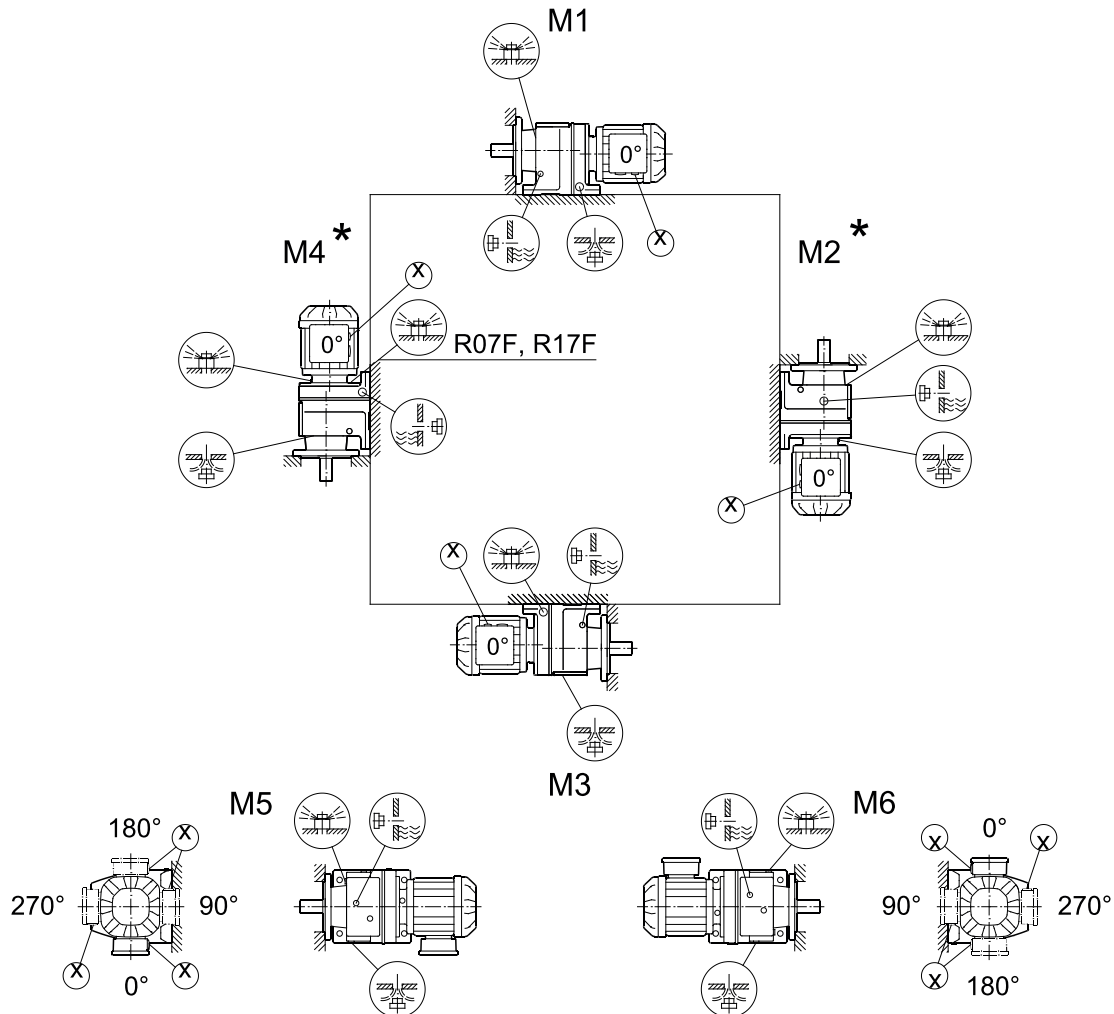
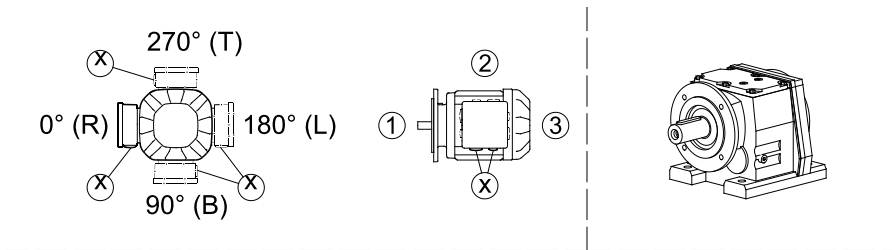
# 5

## Gear unit mounting positions and order information

Mounting position sheets

R07F – R87F

04 042 04 00



R07F	M1, M2, M3, M5, M6
R17F, R27F	M1, M3, M5, M6
R07F, R17F, R27F	M1, M2, M3, M5, M6
R47F, R57F	M5

\* (→ 65)

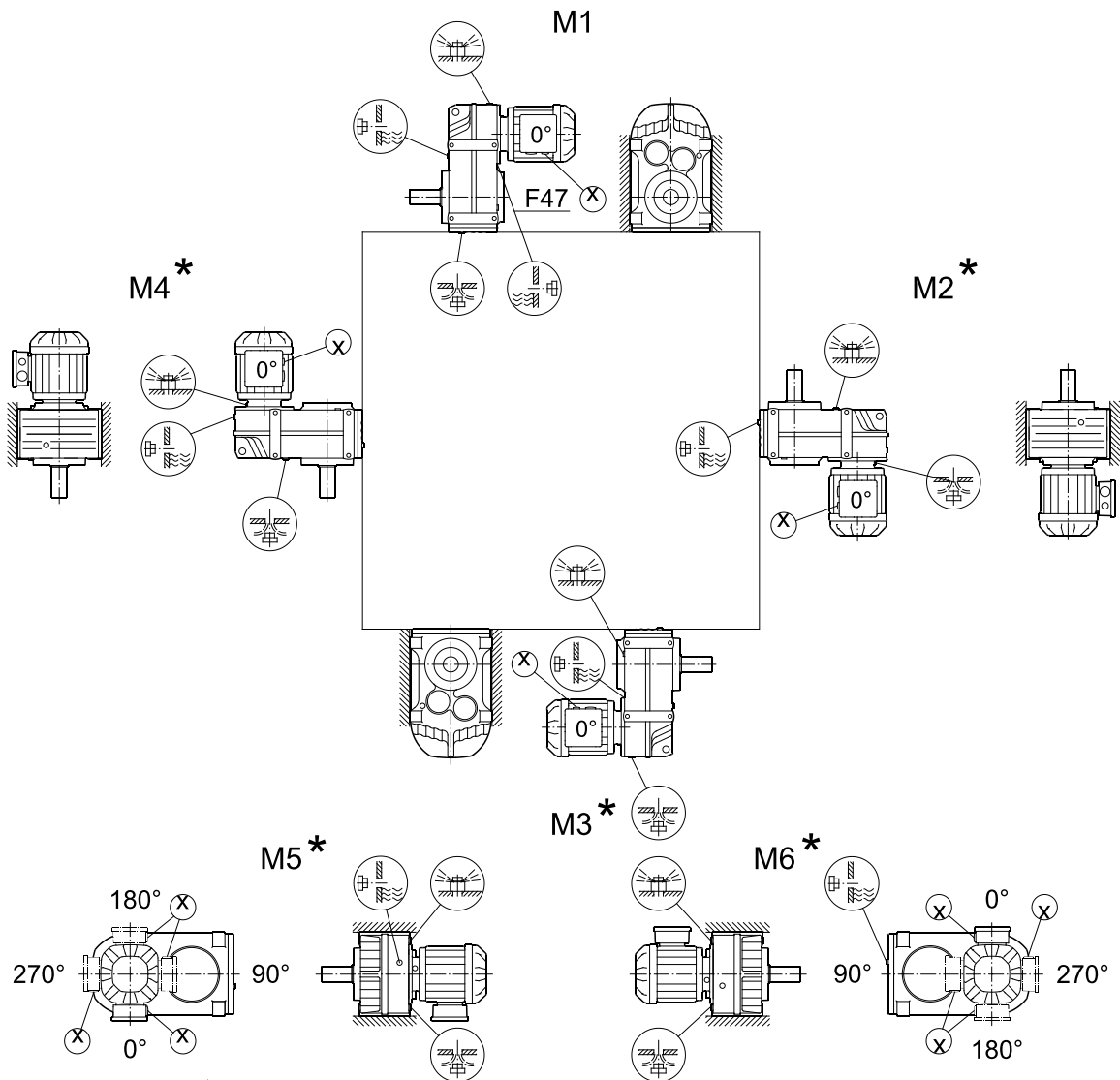
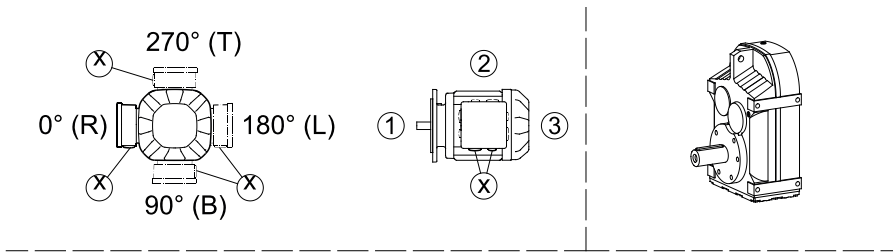
Observe the information in chapter "Overhung and axial loads of R.., F.., K.., S.., and W.. gear units" (→ 71).

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5.4.2 Mounting positions of parallel-shaft helical gear units

F/FA..B/FH27B – 157B, FV27B – 107B

42 042 04 00



- F..27 M1, M3, M5, M6
- F..27 M1 - M6
- F..27 M1, M3, M5, M6

\* (→ 65)

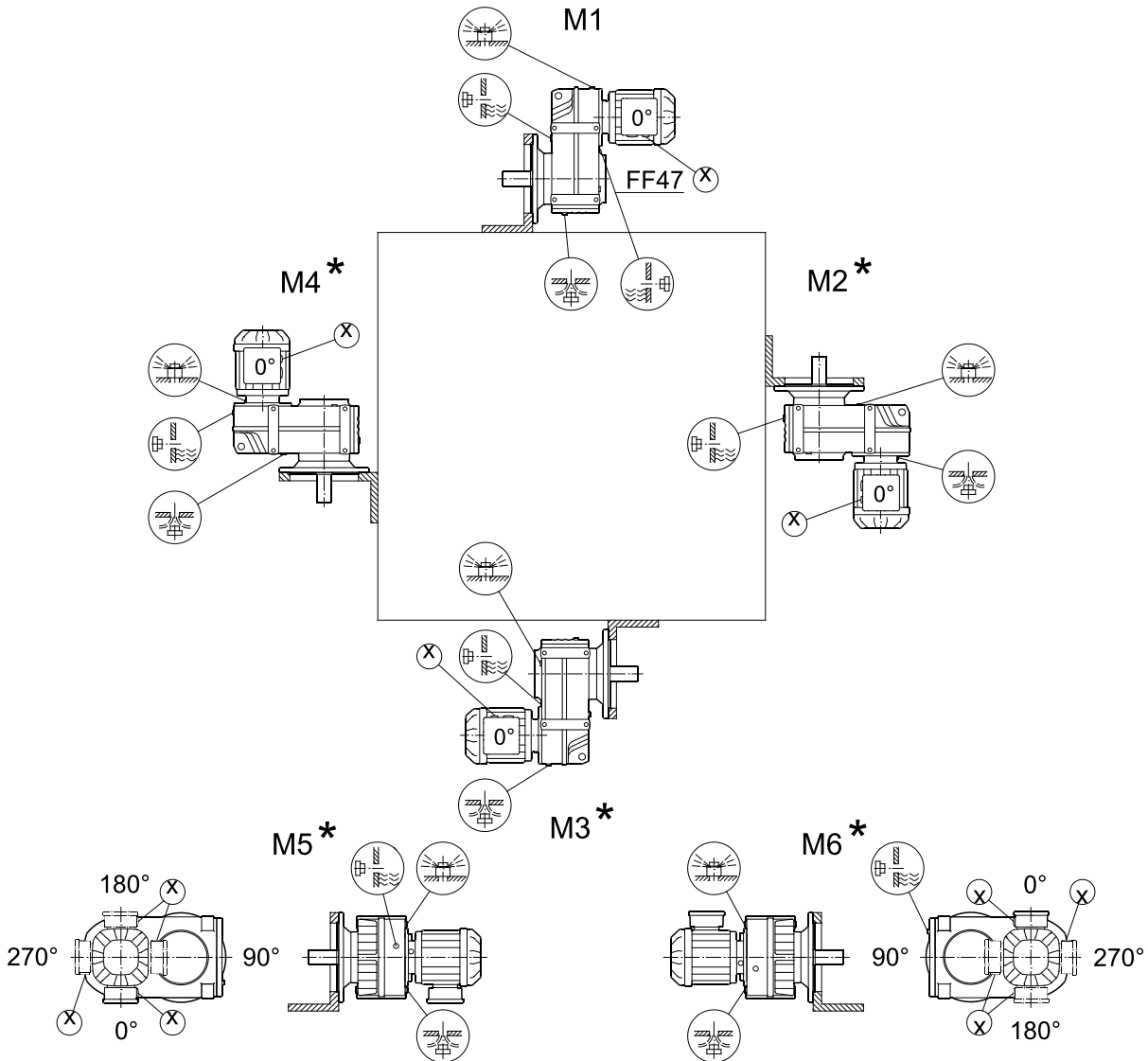
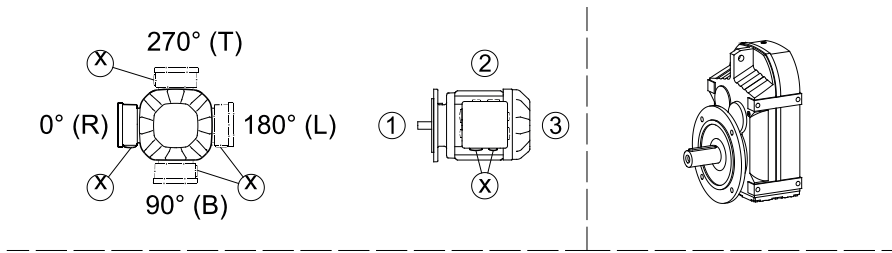
26883198/EN – 04/2022

# 5 Gear unit mounting positions and order information

Mounting position sheets

FF/FAF/FHF/FZ/FAZ/FHZ27 – 157, FVF/FVZ27 – 107, FM/FAM67 – 157

42 043 04 00



- F..27 M1, M3, M5, M6
- F..27 M1 - M6
- F..27 M1, M3, M5, M6

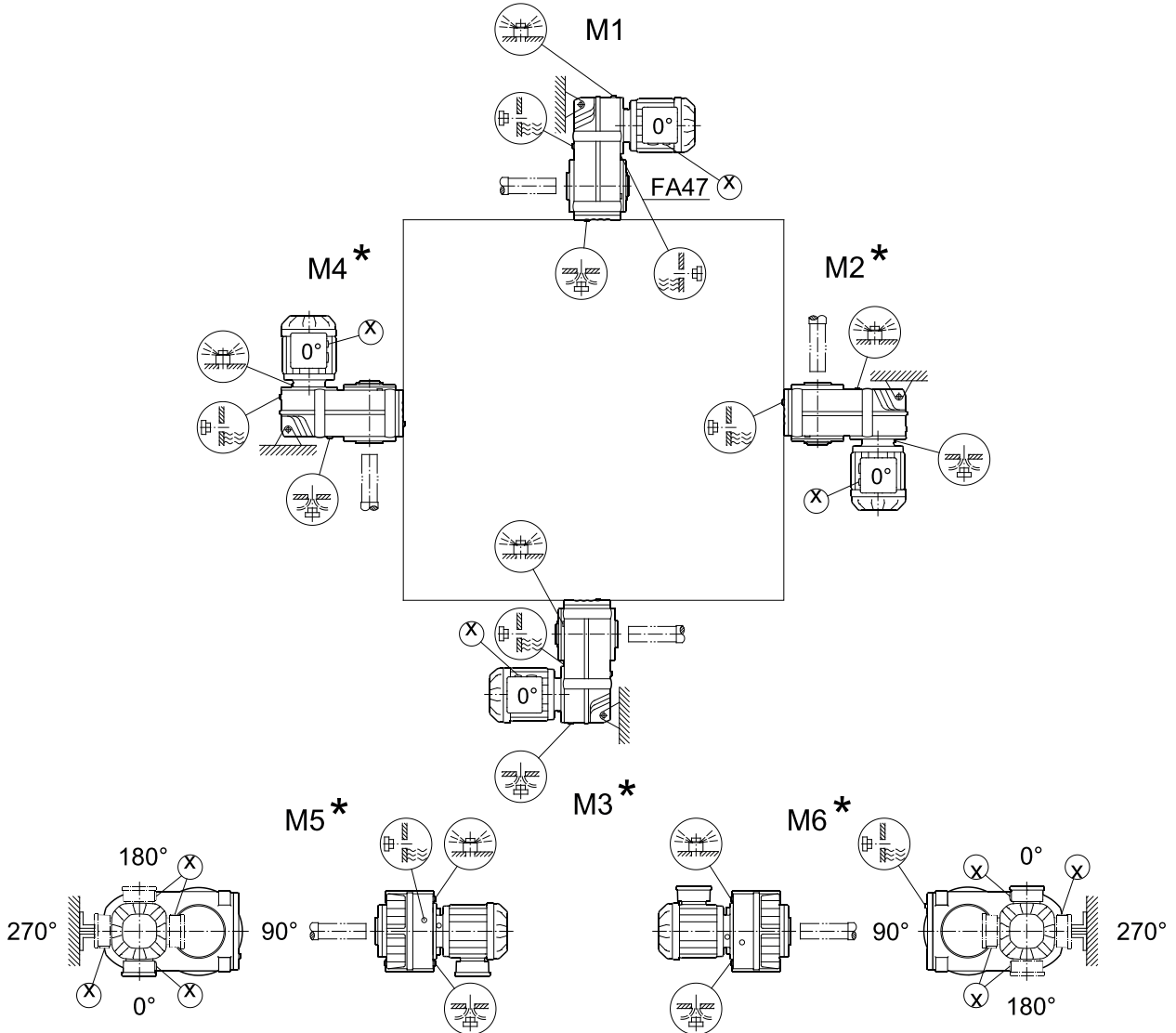
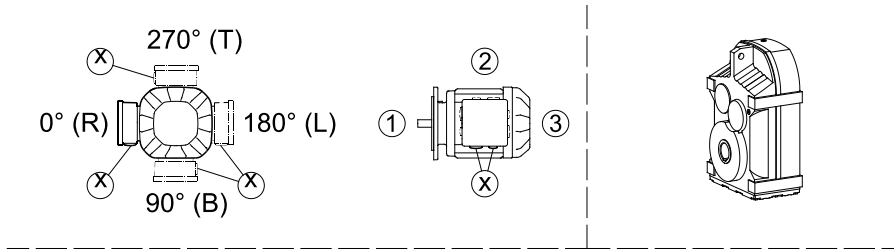
\* (→ 65)

26883198/EN – 04/2022



FA/FH27 – 157, FV27 – 107, FT37 – 157

42 044 04 00



- F..27  M1, M3, M5, M6
- F..27  M1 - M6
- F..27  M1, M3, M5, M6

\* (→ 65)

26883198/EN – 04/2022

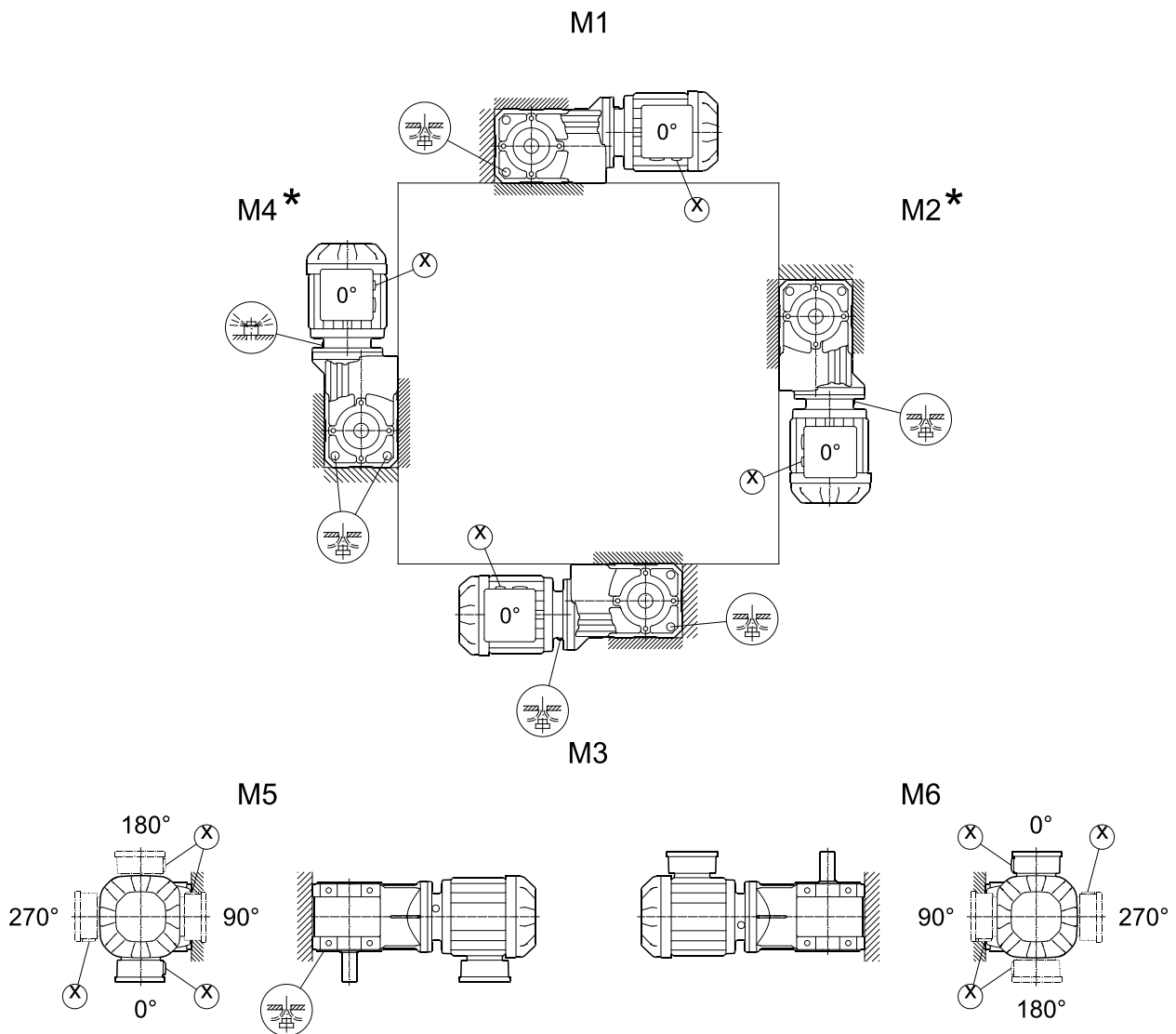
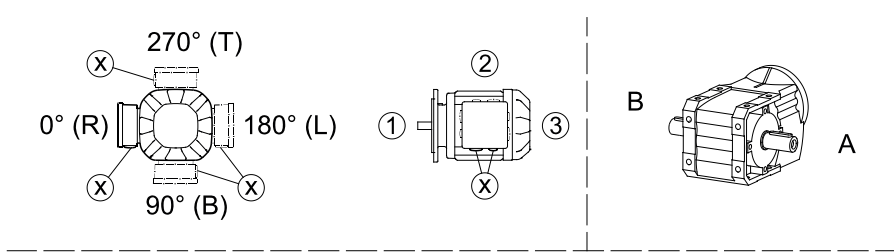
# 5 Gear unit mounting positions and order information

Mounting position sheets

## 5.4.3 Mounting positions of helical-bevel gear units

K/KA..B/KH19B – 29B

33 023 00 15



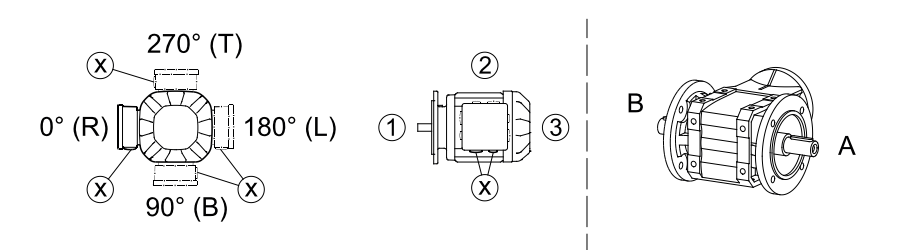
\* (→ 65)

Observe the information in chapter "Overhung and axial loads of R.., F.., K.., S.., and W.. gear units" (→ 71).

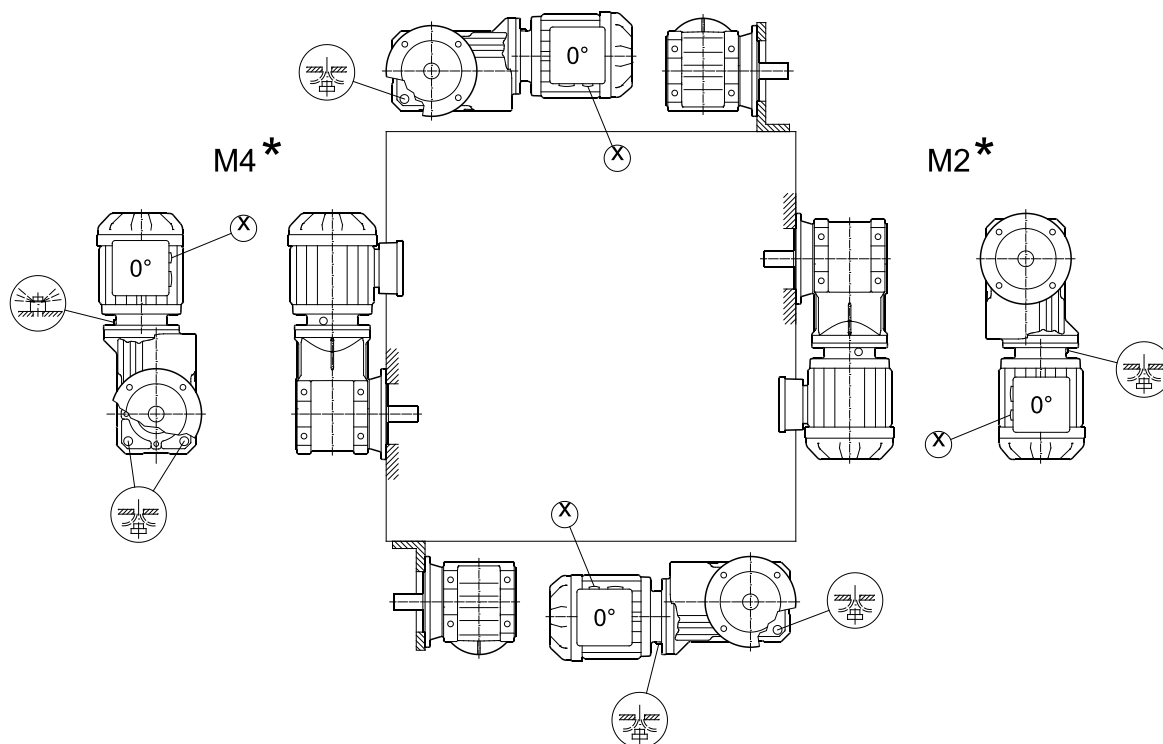
26883198/EN – 04/2022

KF..B/KAF..B/KHF19B – 29B

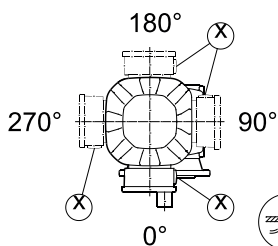
33 024 00 15



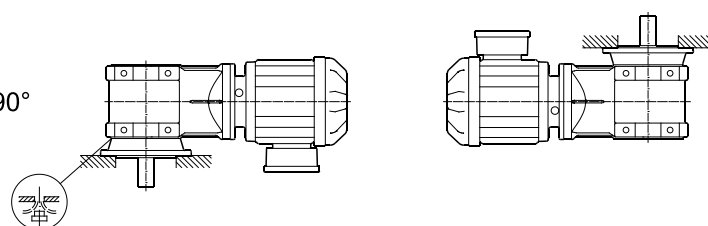
M1



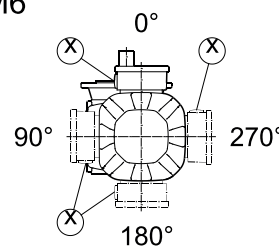
M5



M3



M6



\* (→ 65)

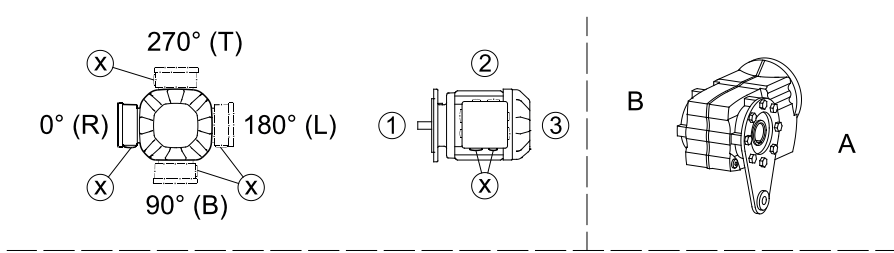
Observe the information in chapter "Overhung and axial loads of R.., F.., K.., S.., and W.. gear units" (→ 71).

# 5 Gear unit mounting positions and order information

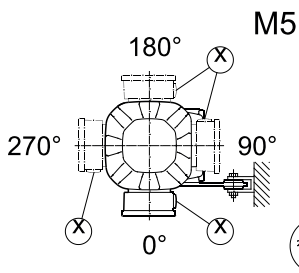
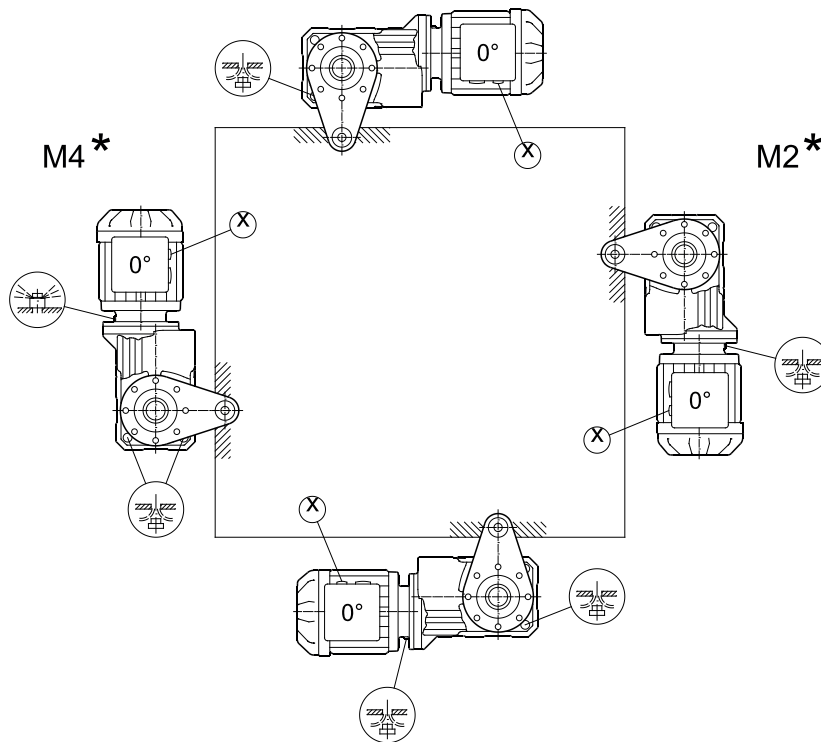
Mounting position sheets

KA..B/KH19B – 29B

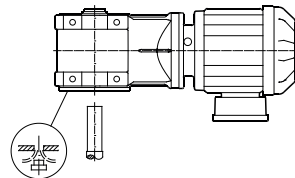
33 025 00 15



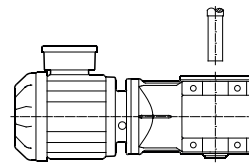
M1



M5



M3



M6

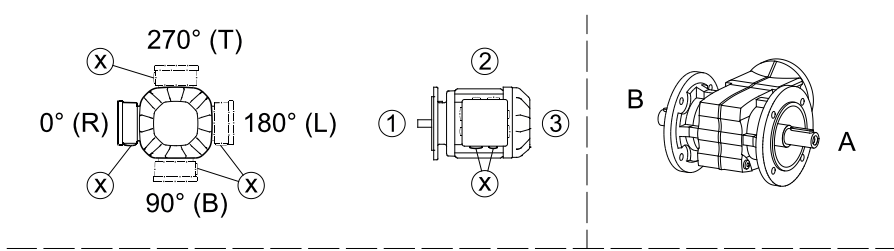
\* (→ 65)

Observe the information in chapter "Overhung and axial loads of R.., F.., K.., S.., and W.. gear units" (→ 71).

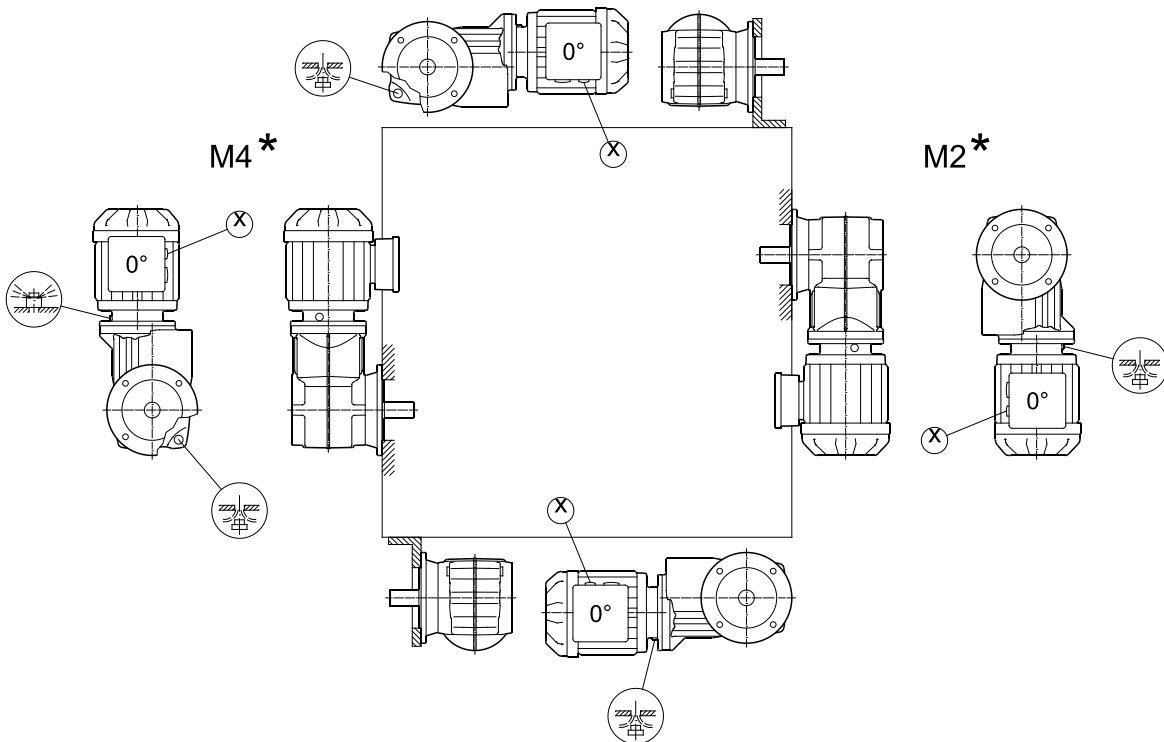
26883198/EN – 04/2022

KF/KAF/KHF19 – 29

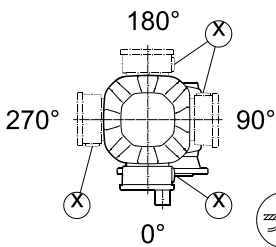
33 026 00 15



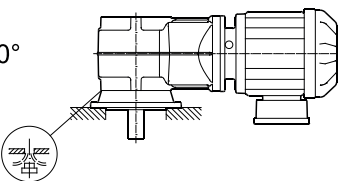
M1



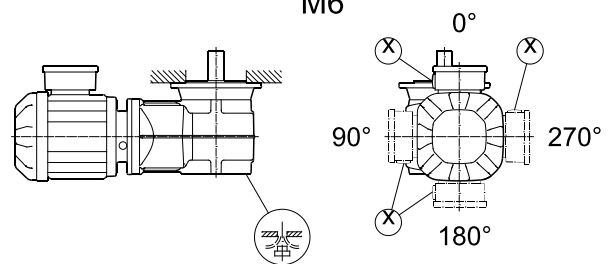
M5



M3



M6



\* (→ 65)

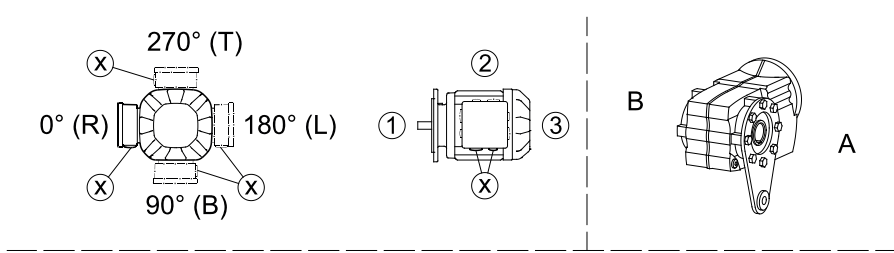
Observe the information in chapter "Overhung and axial loads of R.., F.., K.., S.., and W.. gear units" (→ 71).

# 5 Gear unit mounting positions and order information

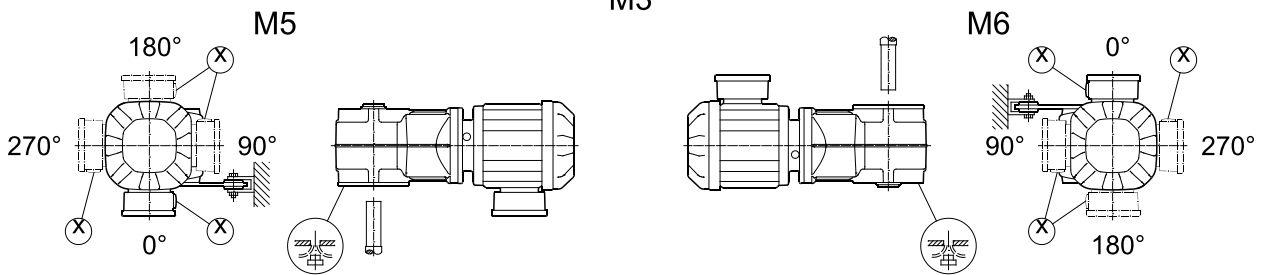
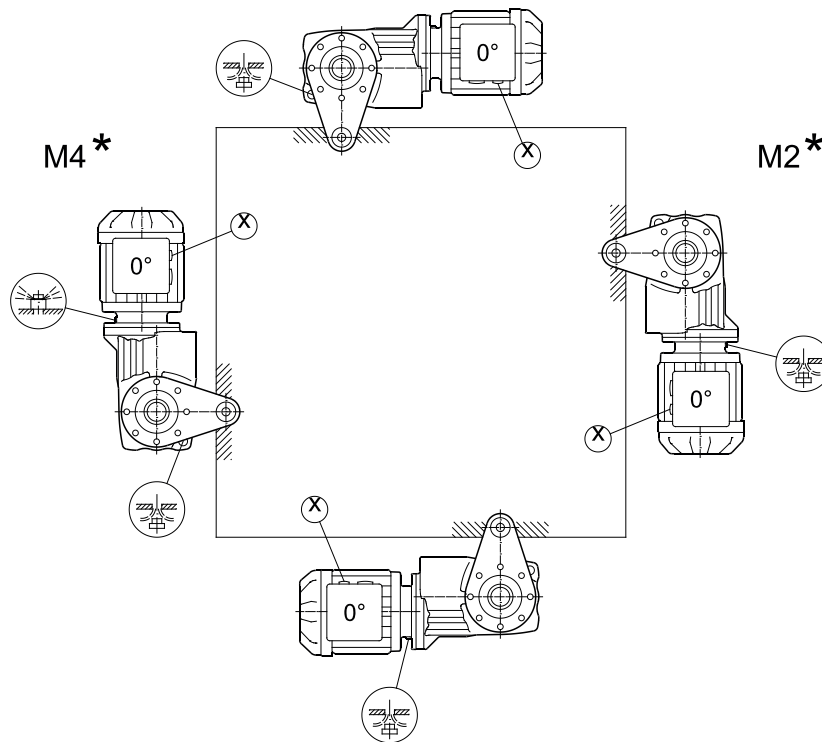
Mounting position sheets

KA/KH/KT19 – 29

33 027 00 15



M1

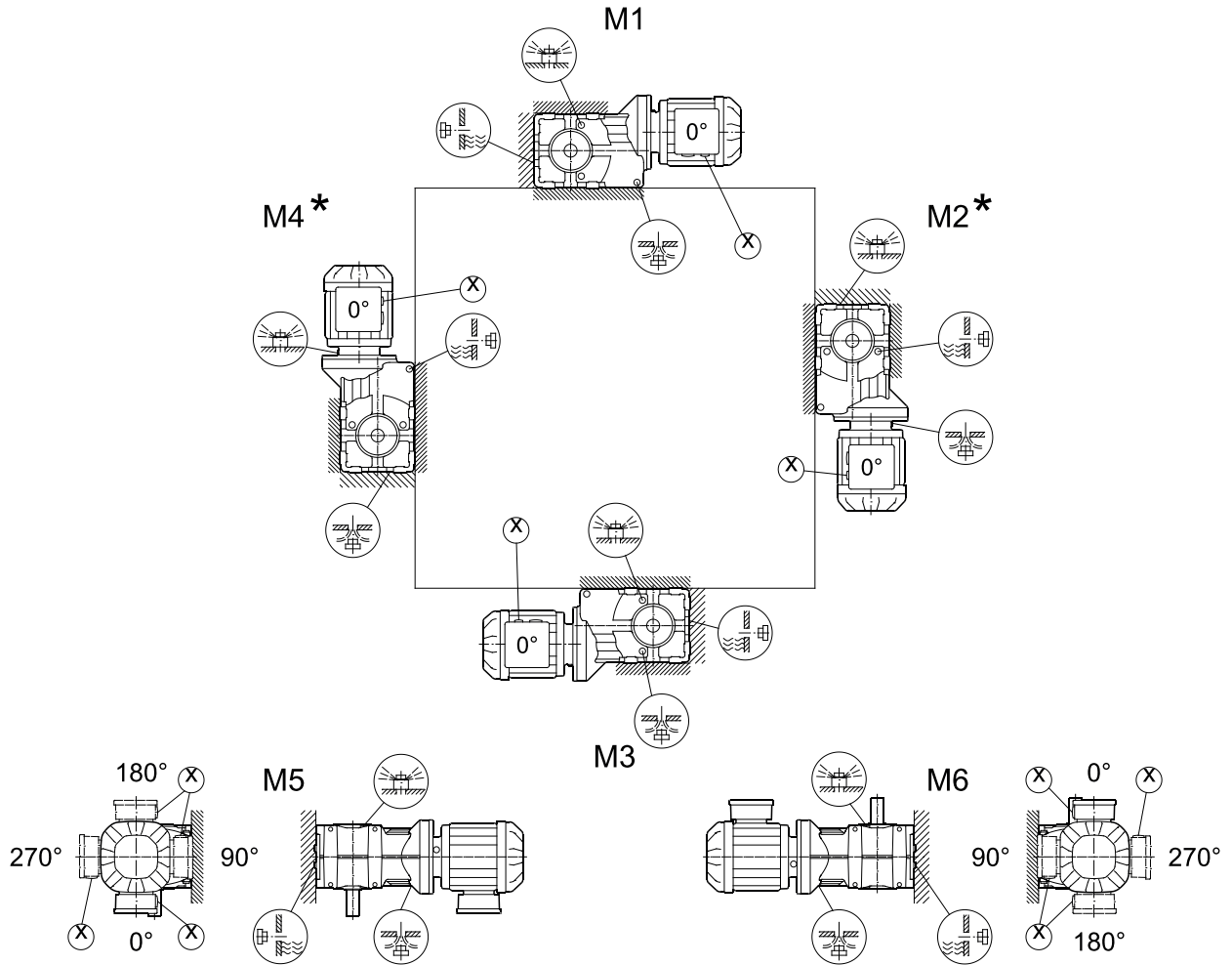
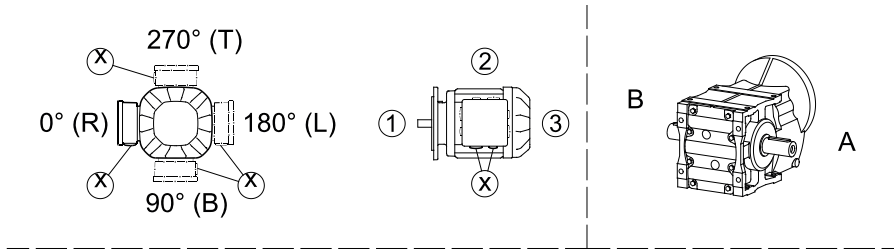


\* (→ 65)

26883198/EN – 04/2022

K/KA..B39 – 49

33 092 03 14



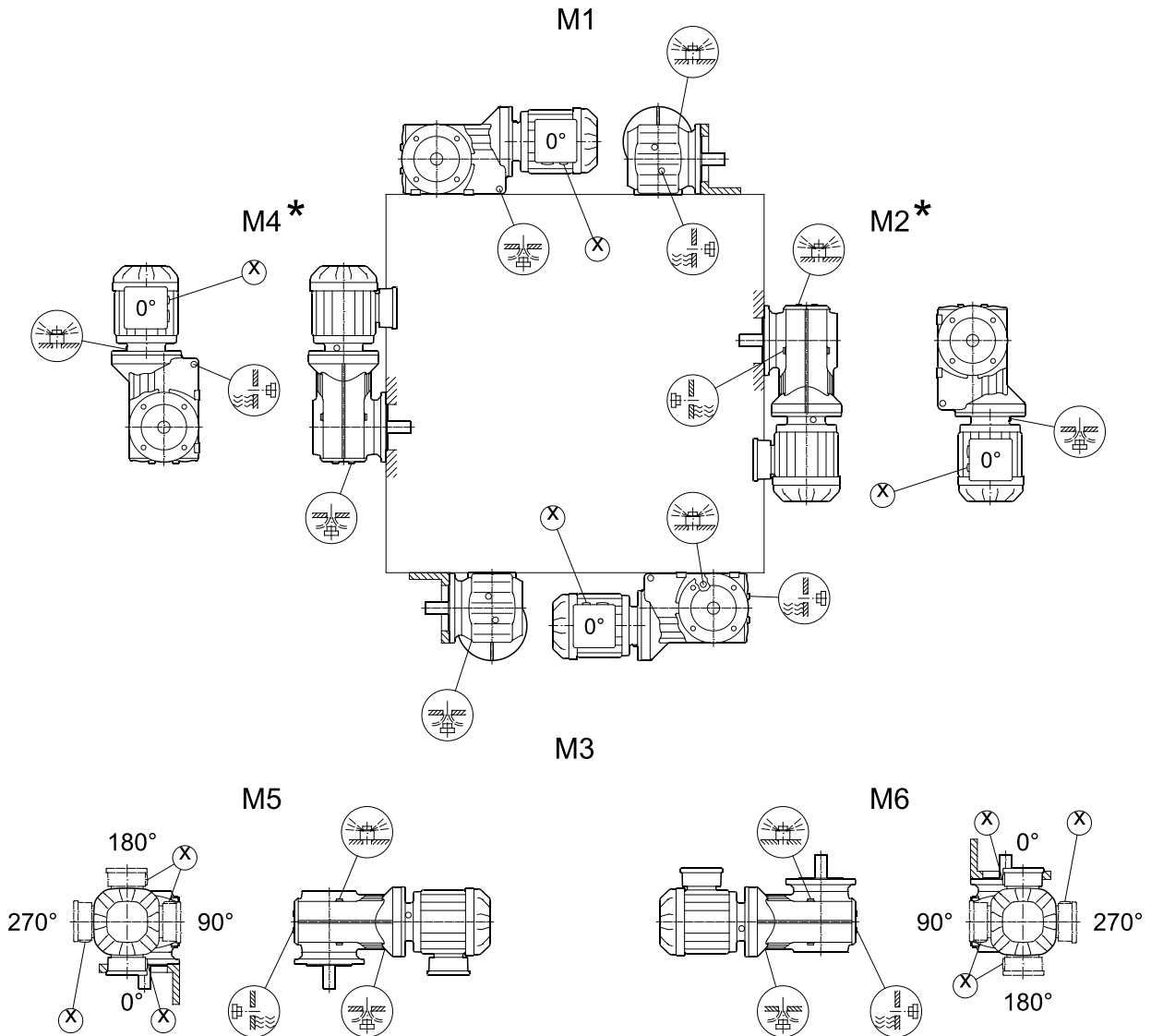
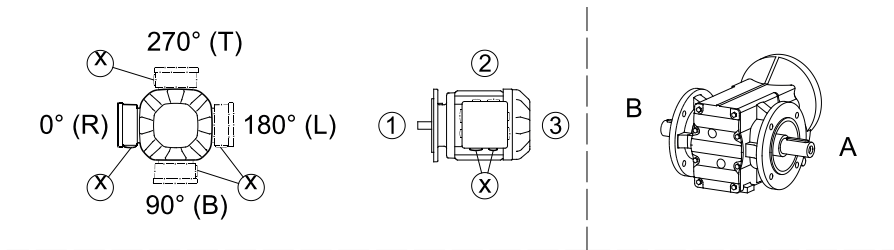
\* (→ 65)

# 5 Gear unit mounting positions and order information

Mounting position sheets

KF/KAF/KHF39 – 49

33 093 01 14



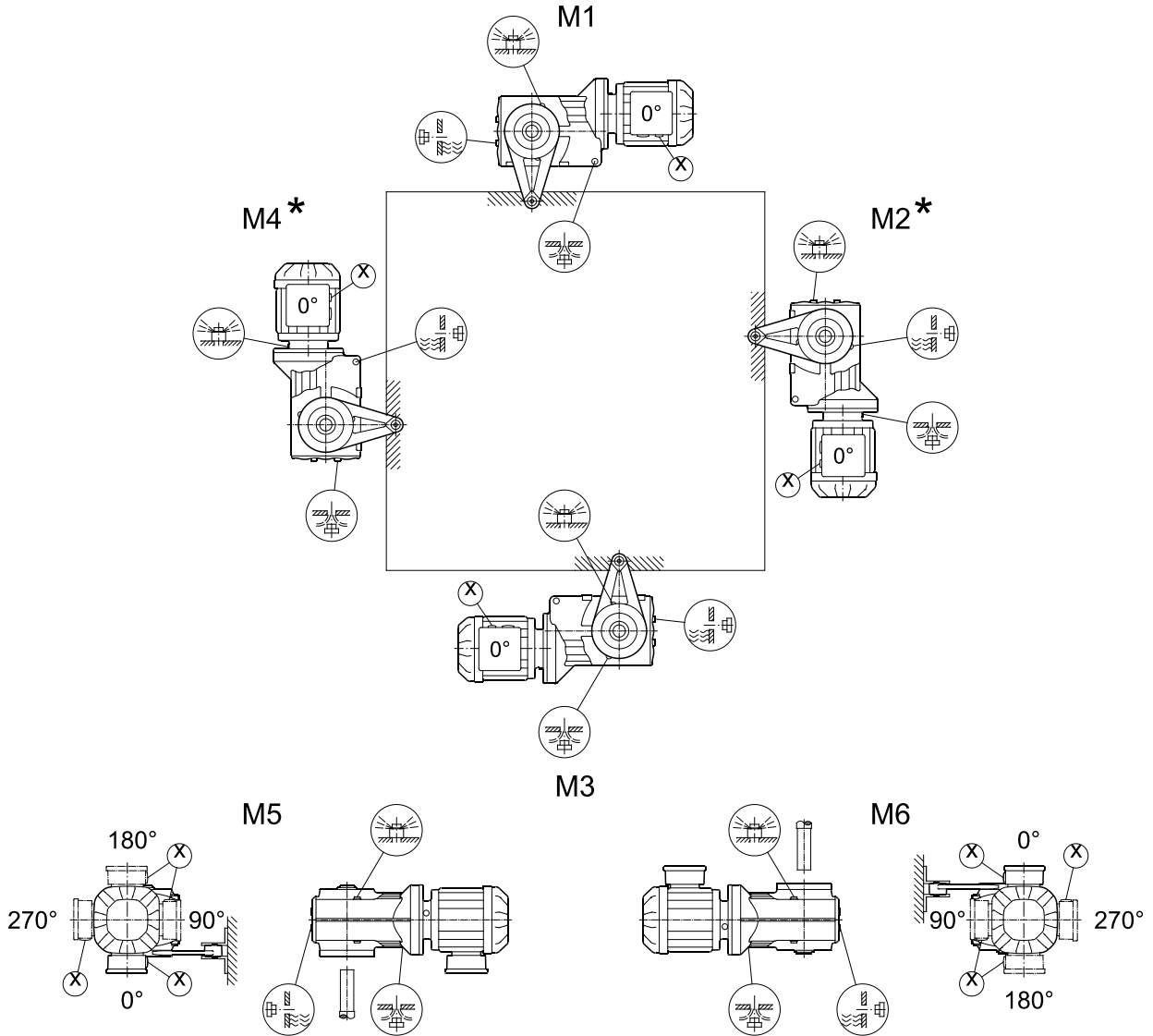
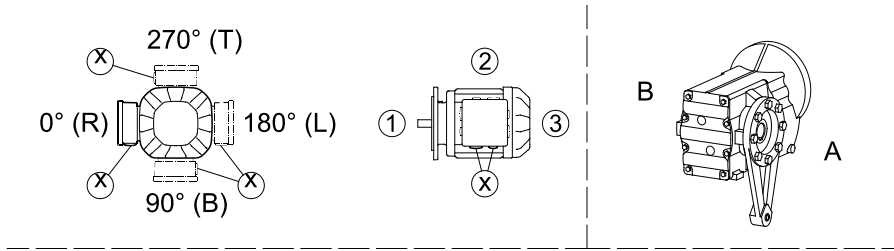
\* (→ 65)

26883198/EN – 04/2022



KA/KH/KT39 – 49

33 094 01 14



\* (→ 65)

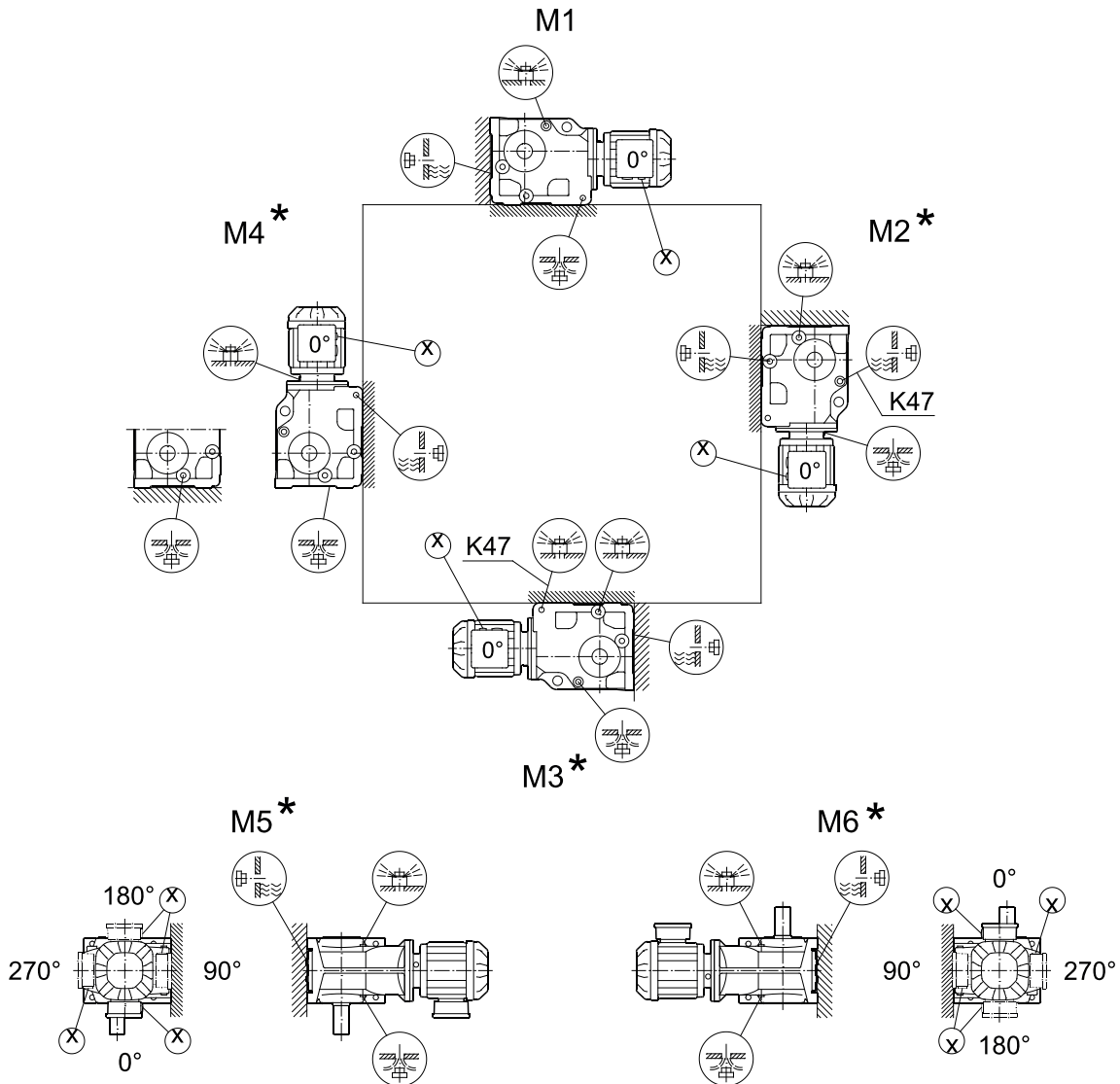
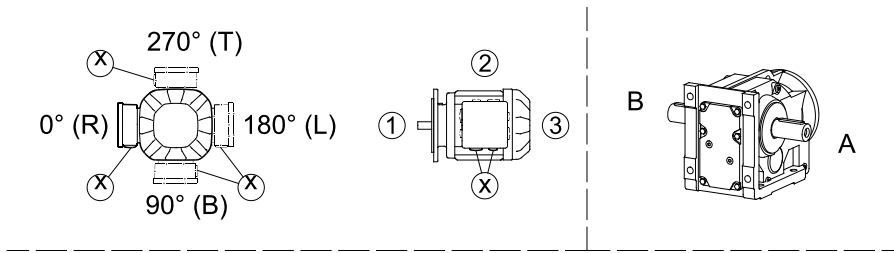
26883198/EN – 04/2022

# 5 Gear unit mounting positions and order information

Mounting position sheets

K37 – 157, KA..B/KH47B – 157B, KV47B – 107B

34 025 05 00



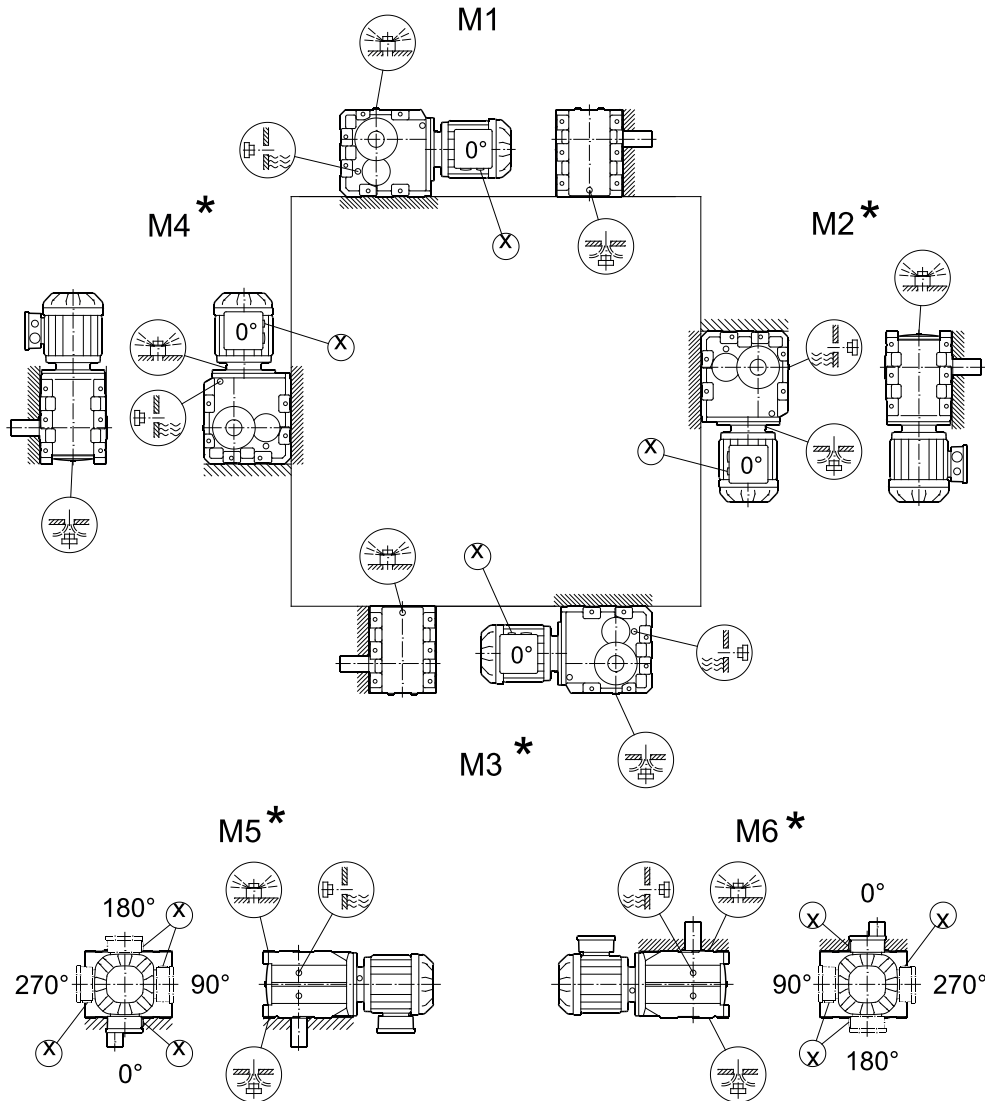
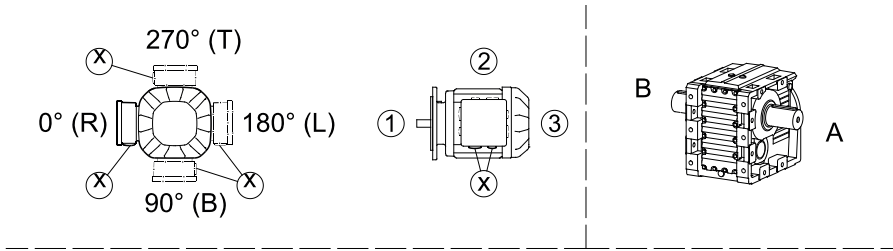
\* (→ 65)

Observe the information in chapter "Overhung and axial loads of R.-, F.-, K.-, S.-, and W.- gear units" (→ 71).

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K167 – 187, KH167B – 187B

34 026 05 00



\* (→ 65)

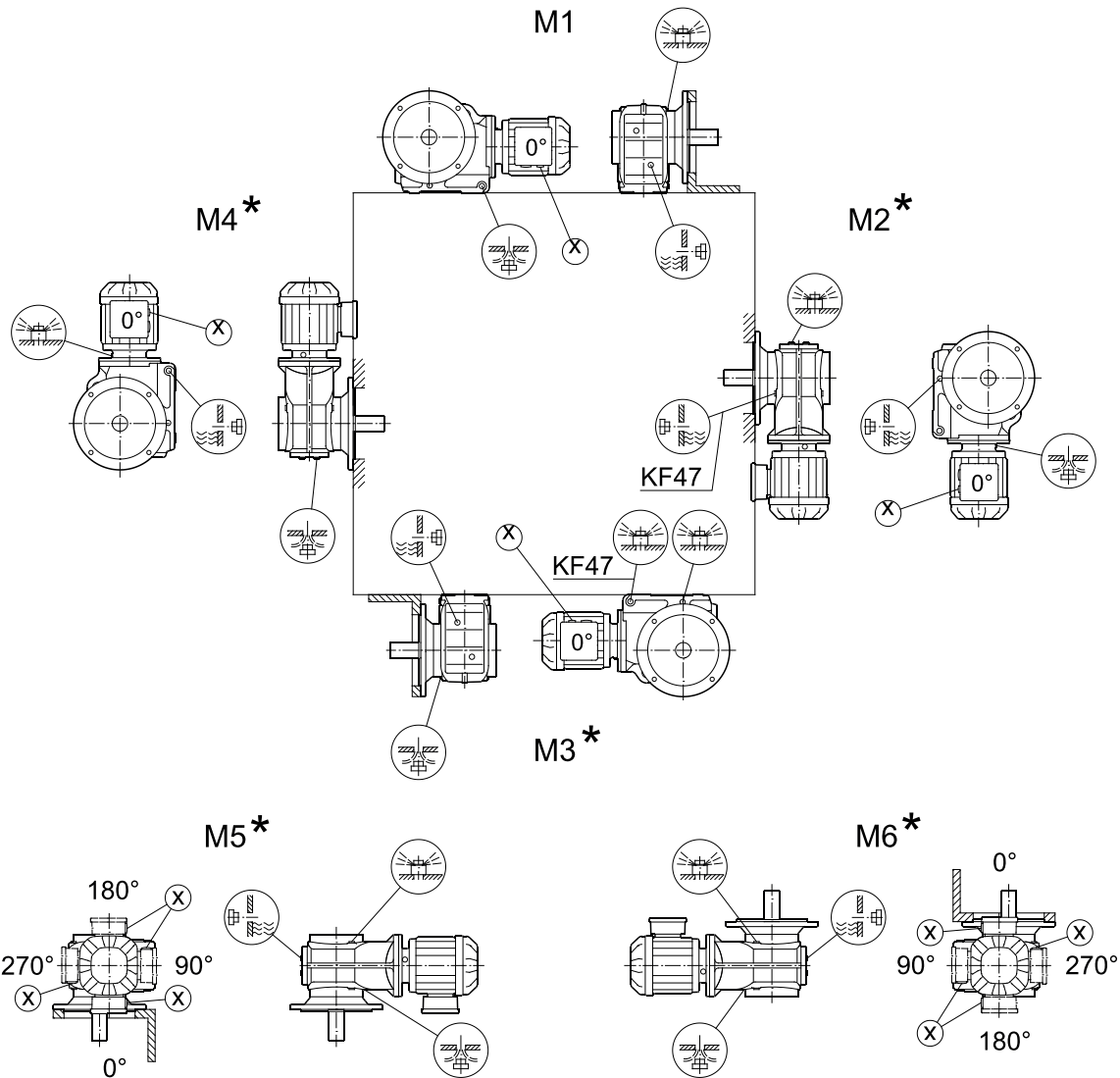
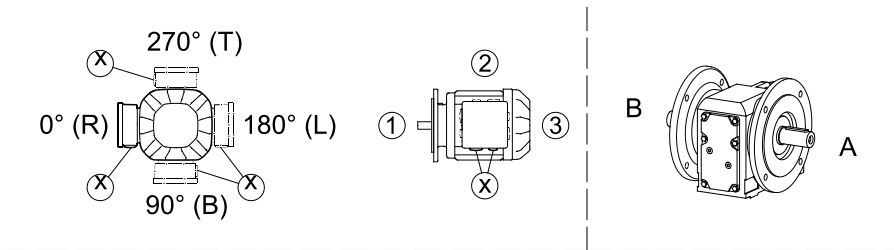
Observe the information in chapter "Overhung and axial loads of R.., F.., K.., S.., and W.. gear units" (→ 71).

# 5 Gear unit mounting positions and order information

Mounting position sheets

KF/KAF/KHF/KZ/KAZ/KHZ37 – 157, KVF/KVZ37 – 107, KM/KAM67 – 157

34 027 04 00

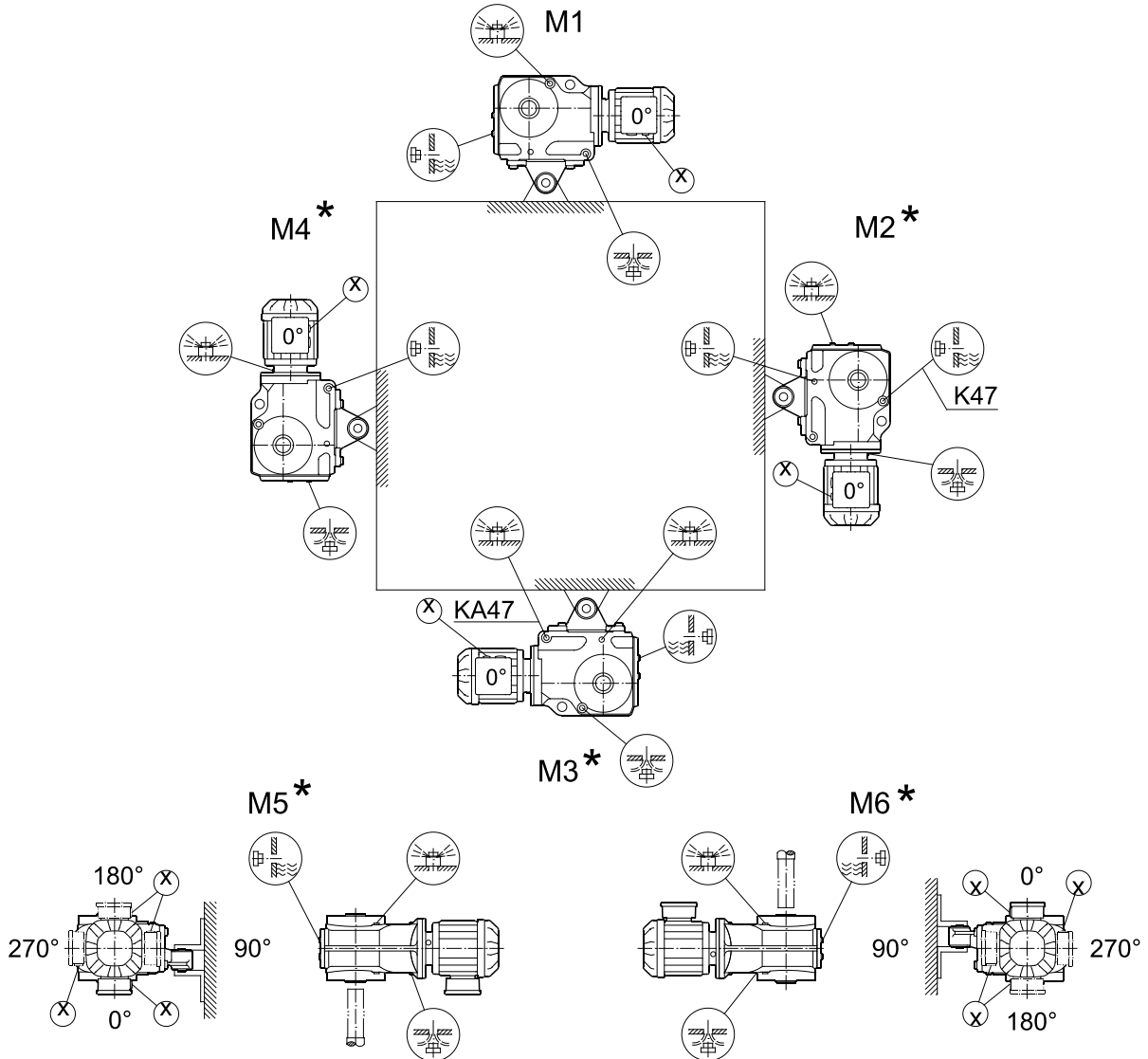
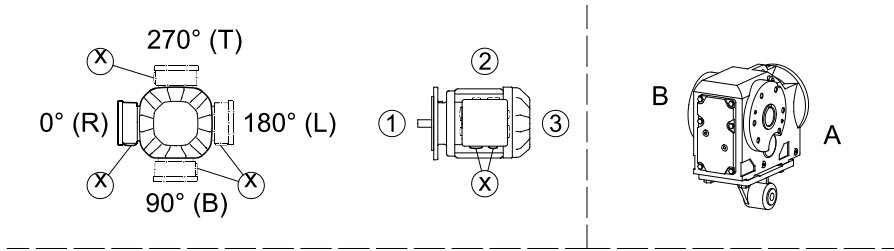


\* (→ 65)

26883198/EN – 04/2022

KA/KH37 – 157, KV37 – 107, KT37 – 157

39 025 05 00



\* (→ 65)

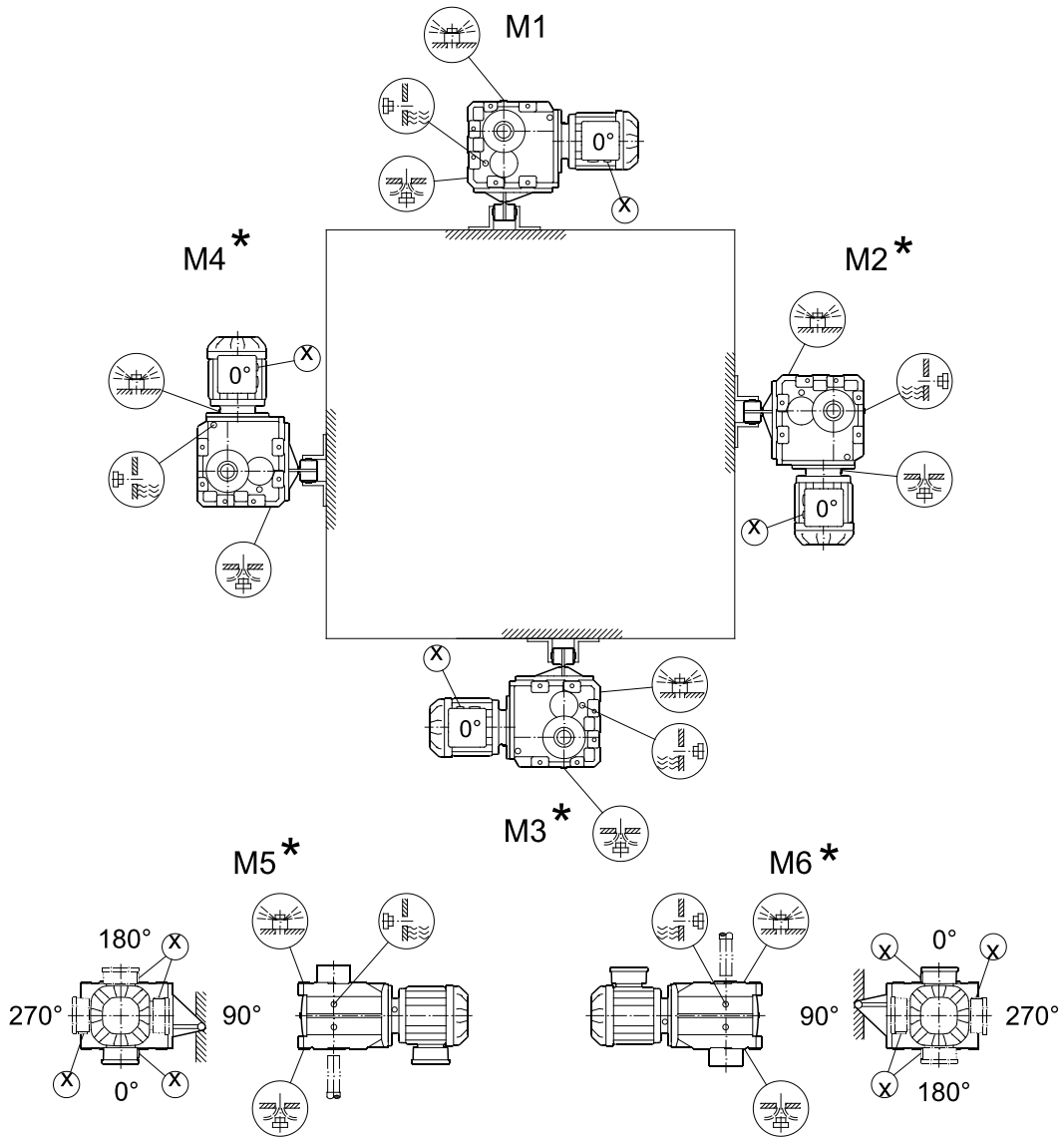
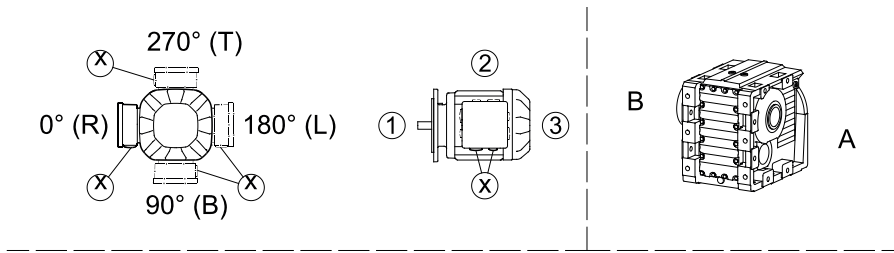
26883198/EN – 04/2022

# 5 Gear unit mounting positions and order information

Mounting position sheets

KH167 – 187

39 026 05 00



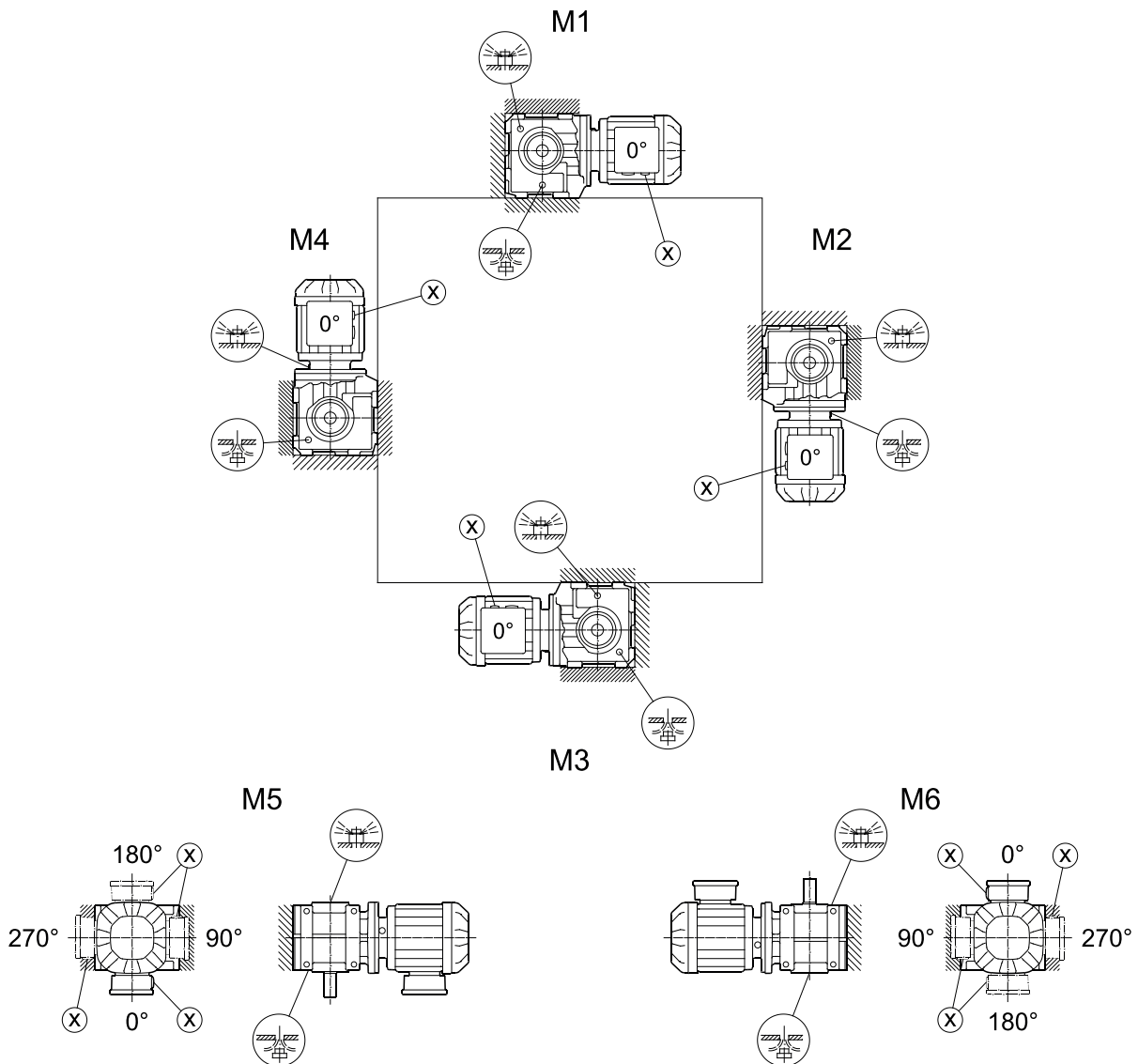
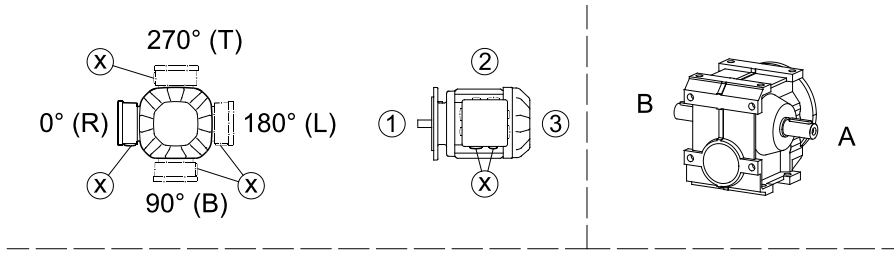
\* (→ 65)

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5.4.4 Mounting positions of helical-worm gear units

S37

05 025 05 00



Observe the notes in chapter "Overhung and axial loads of R.., F.., K.., S.., and W.. gear units" (→ 71).

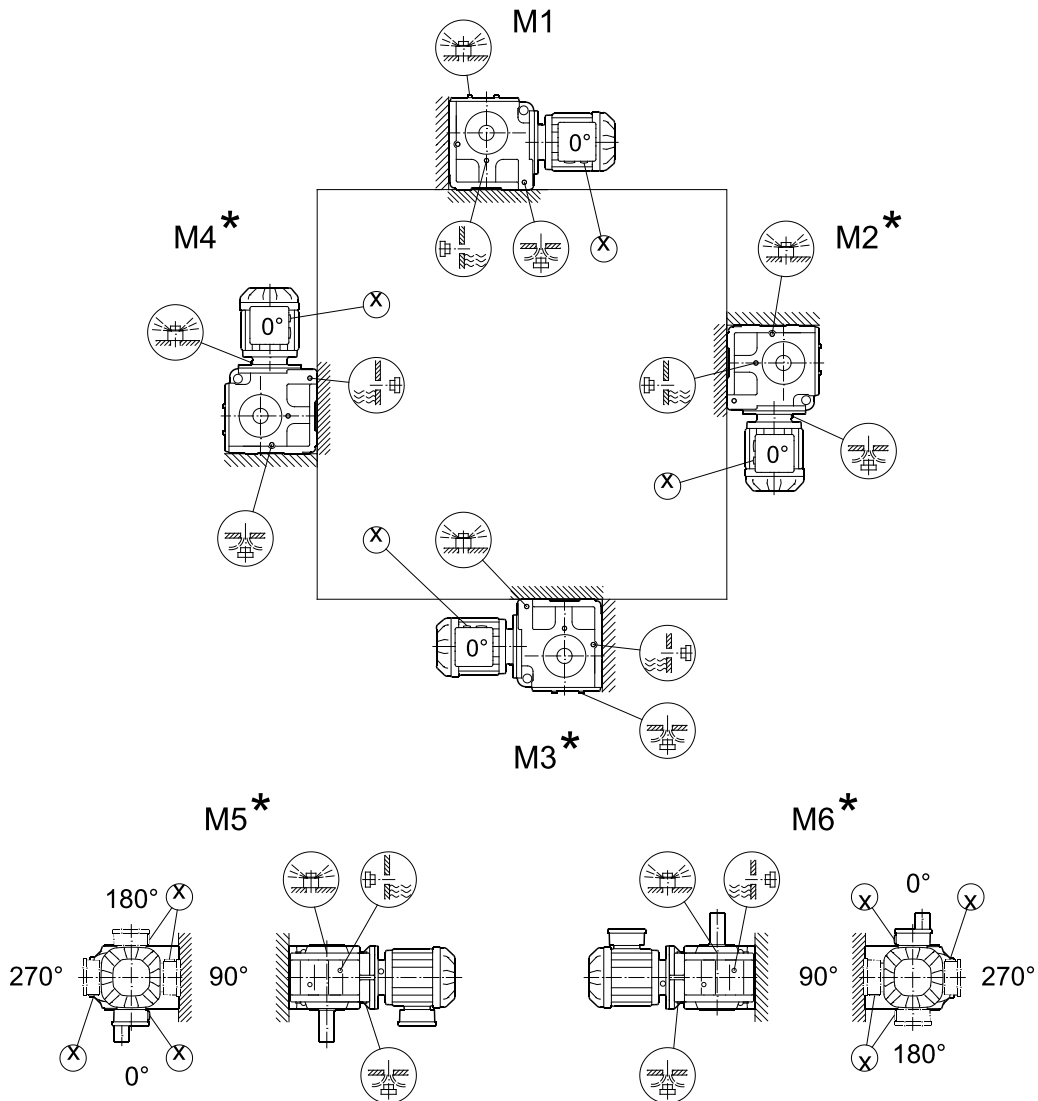
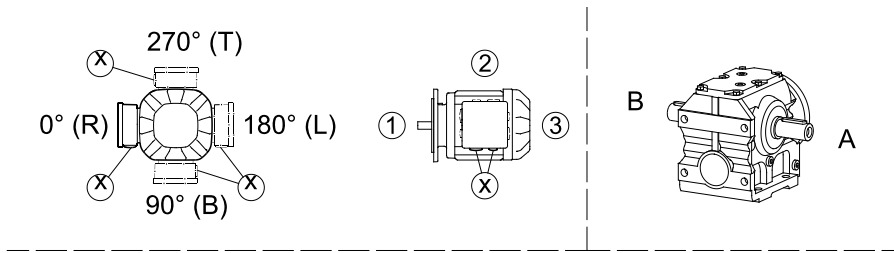
26883198/EN – 04/2022

# 5 Gear unit mounting positions and order information

Mounting position sheets

S47 – S97

05 026 04 00



\* (→ 65)

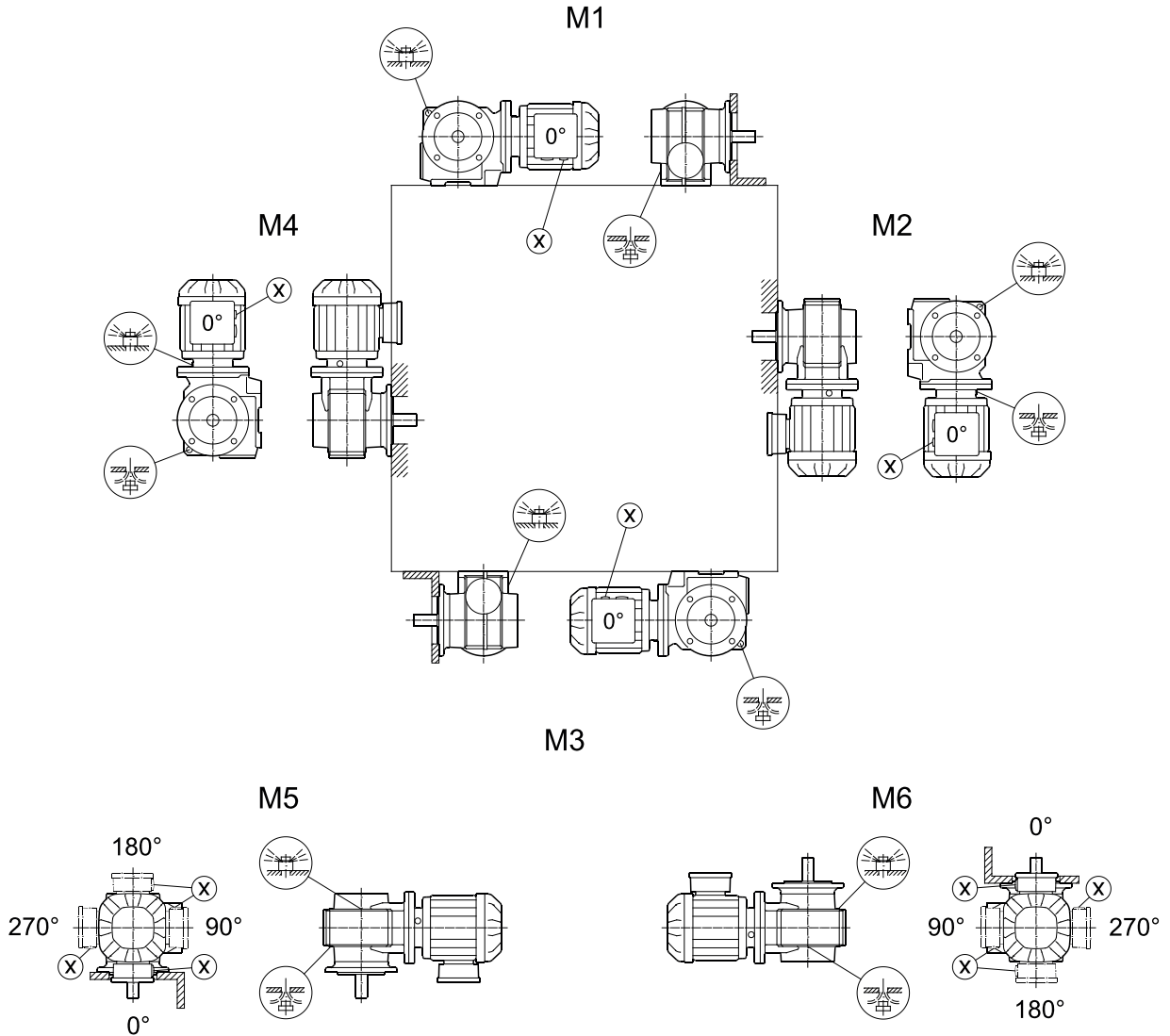
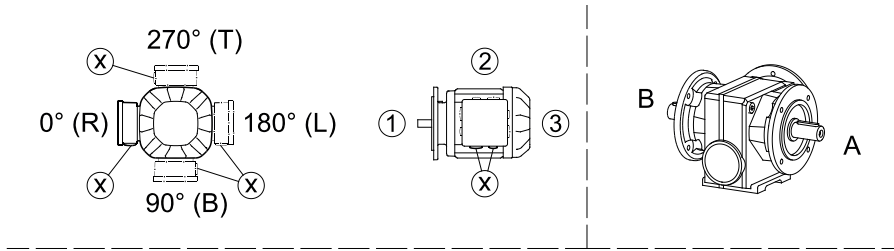
Observe the notes in chapter "Overhung and axial loads of R.., F.., K.., S.., and W.. gear units" (→ 71).

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SF/SAF/SHF37

05 027 05 00



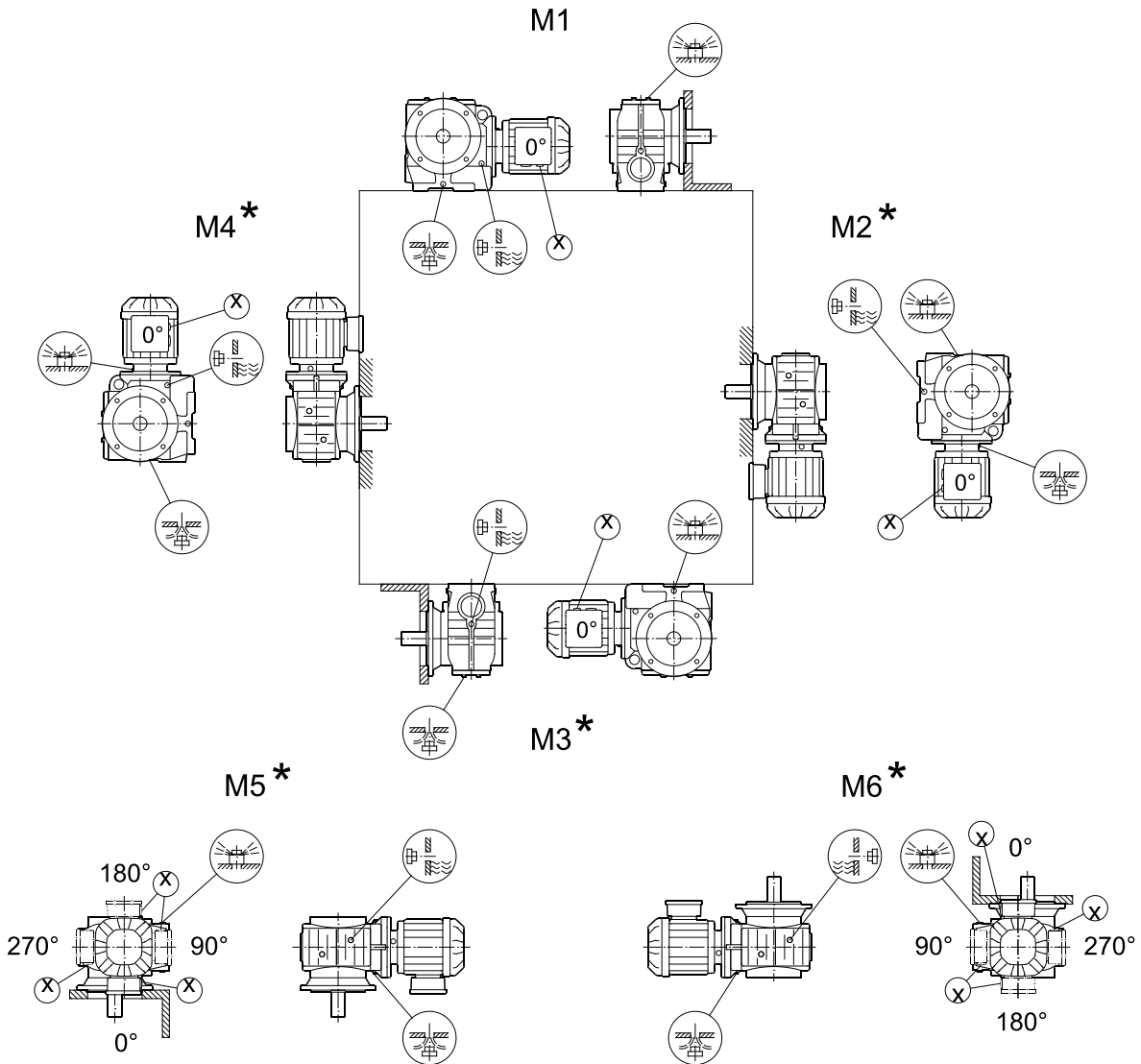
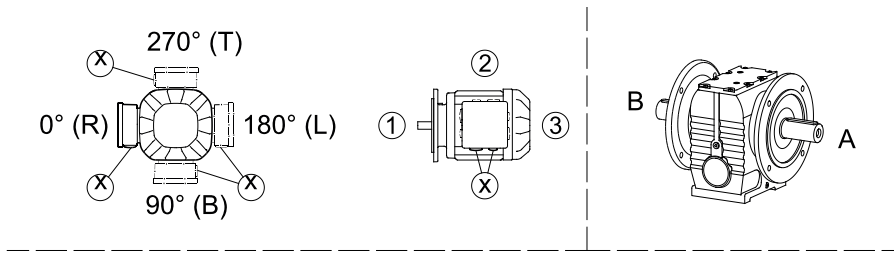
26883198/EN – 04/2022

# 5 Gear unit mounting positions and order information

Mounting position sheets

SF/SAF/SHF/SAZ/SHZ47 – 97

05 028 04 00

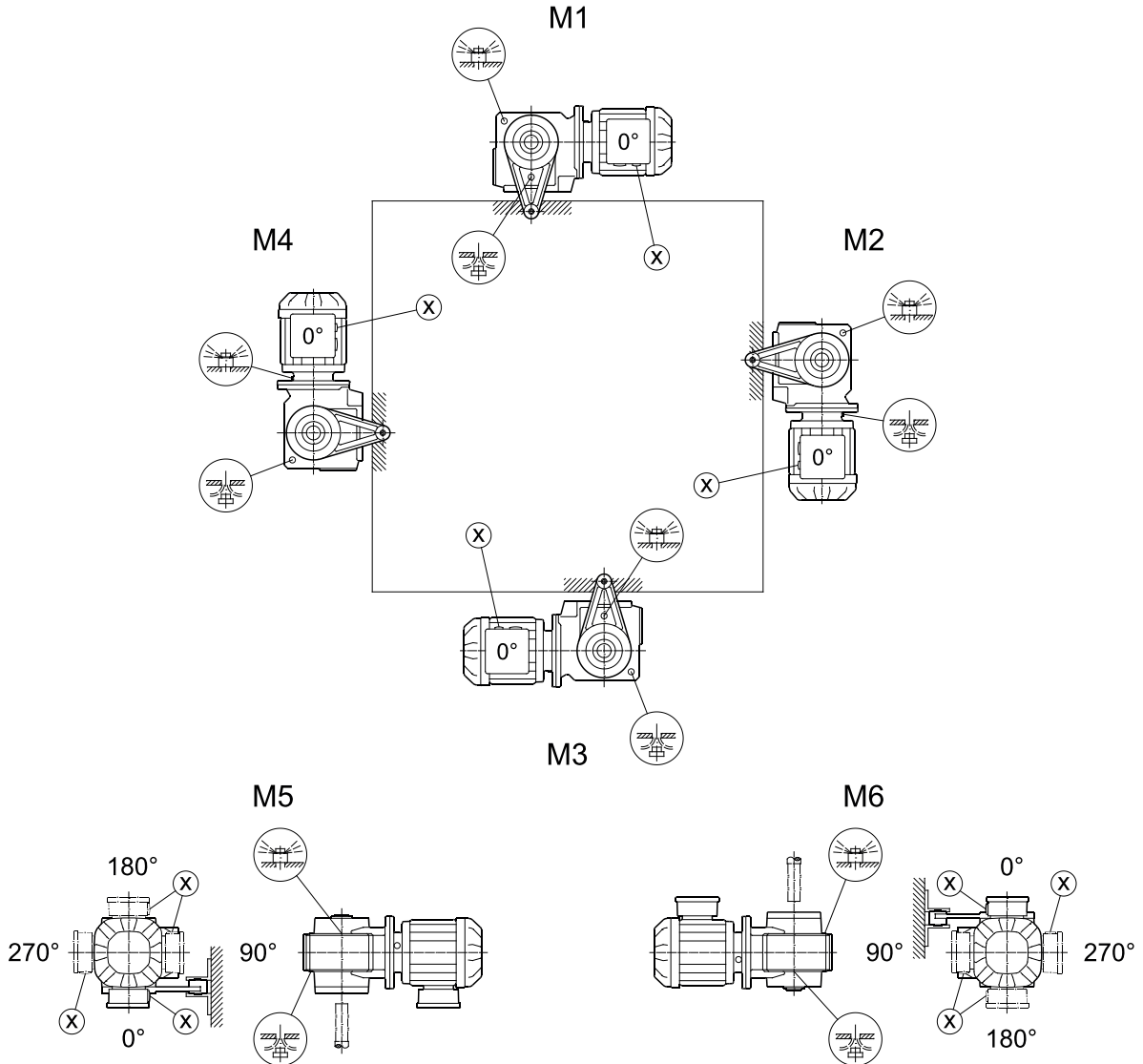
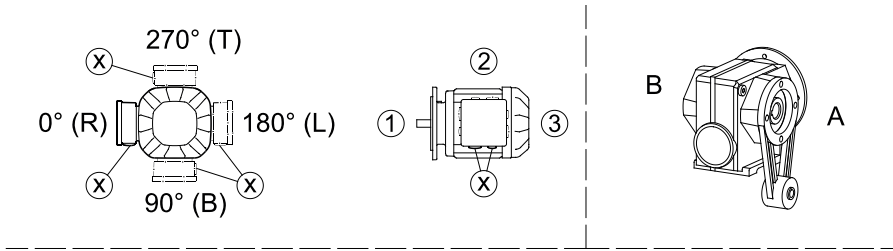


\* (→ 65)

26883198/EN – 04/2022

SA/SH/ST37

28 020 06 00



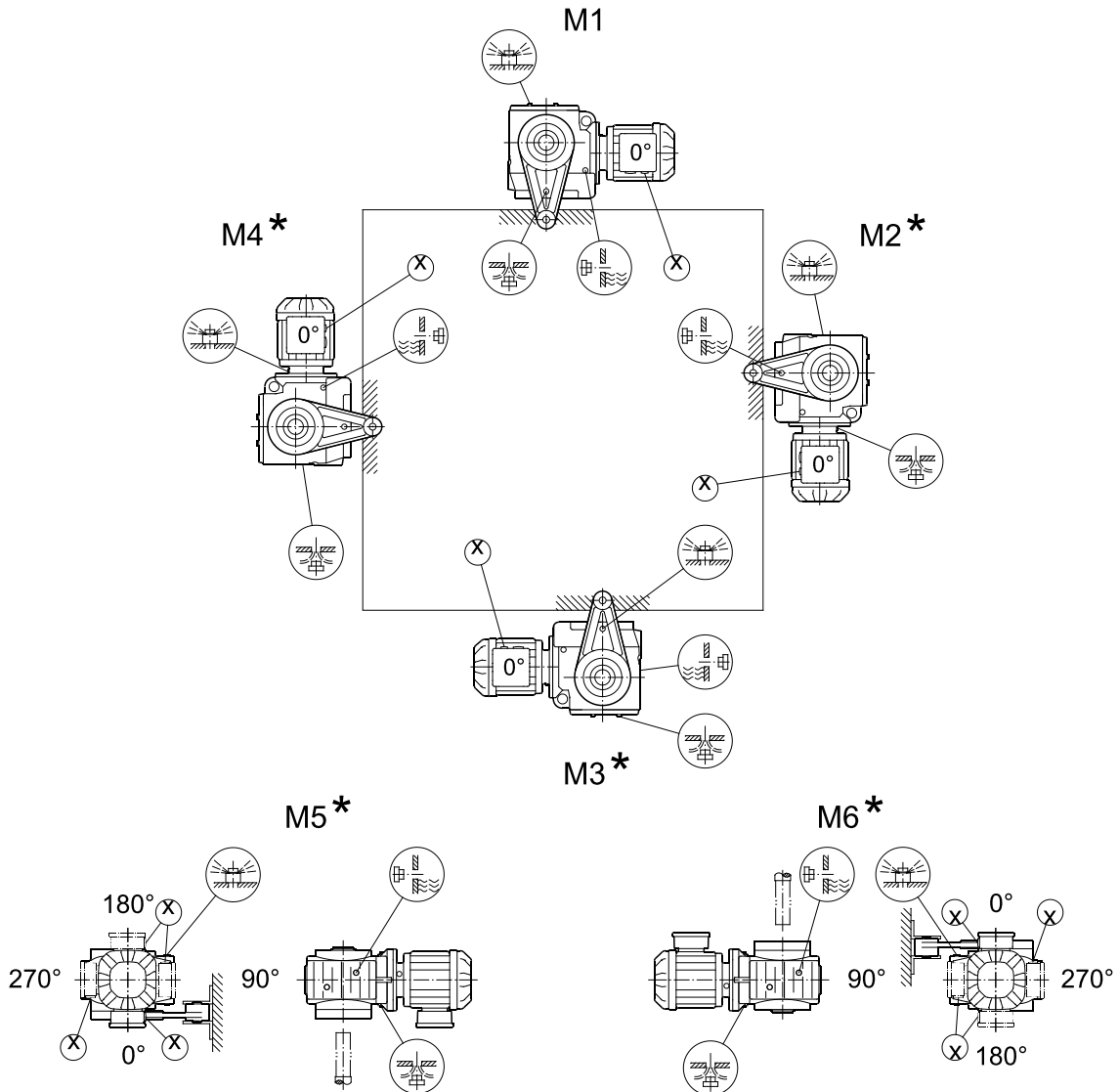
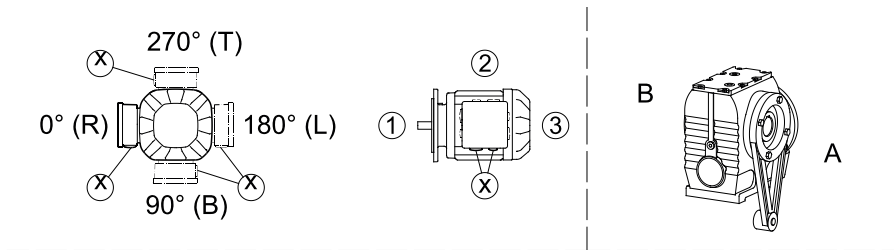
26883198/EN – 04/2022

# 5 Gear unit mounting positions and order information

Mounting position sheets

SA/SH/ST47 – 97

28 021 04 00



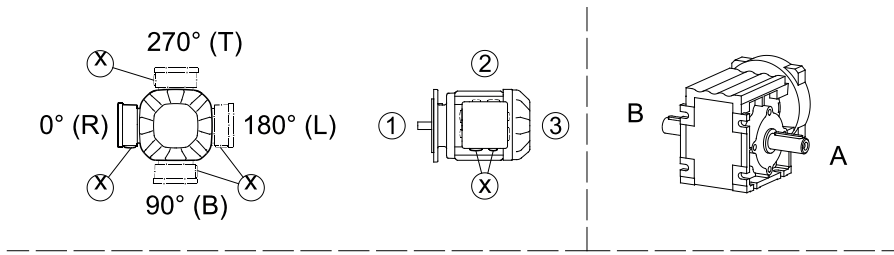
\* (→ 65)

26883198/EN – 04/2022

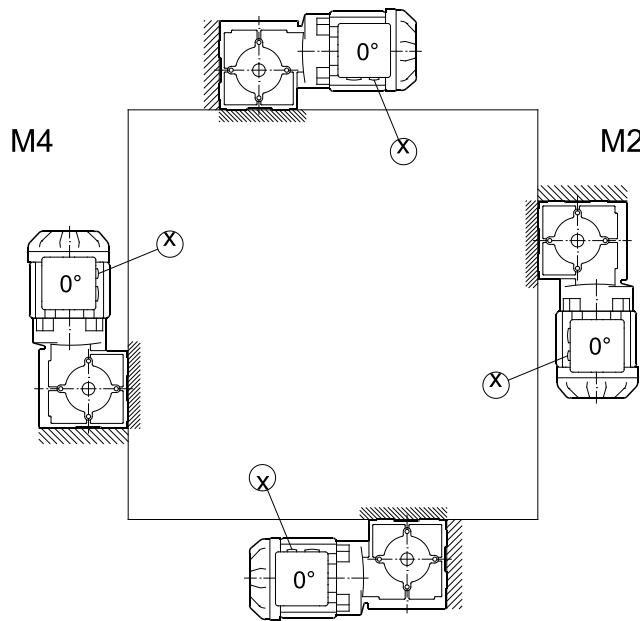
5.4.5 Mounting positions of SPIROPLAN® gear units

W10 – 30

20 001 02 02

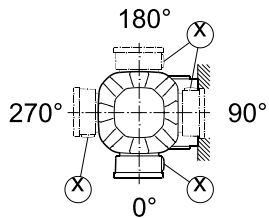


M1

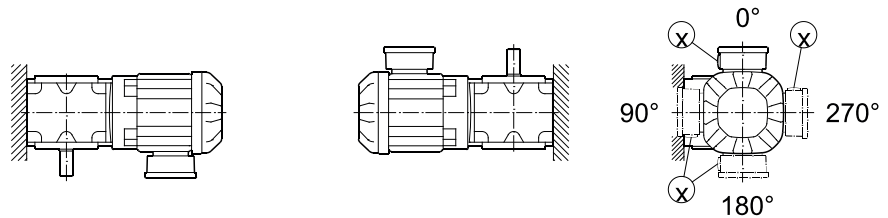


M3

M5



M6



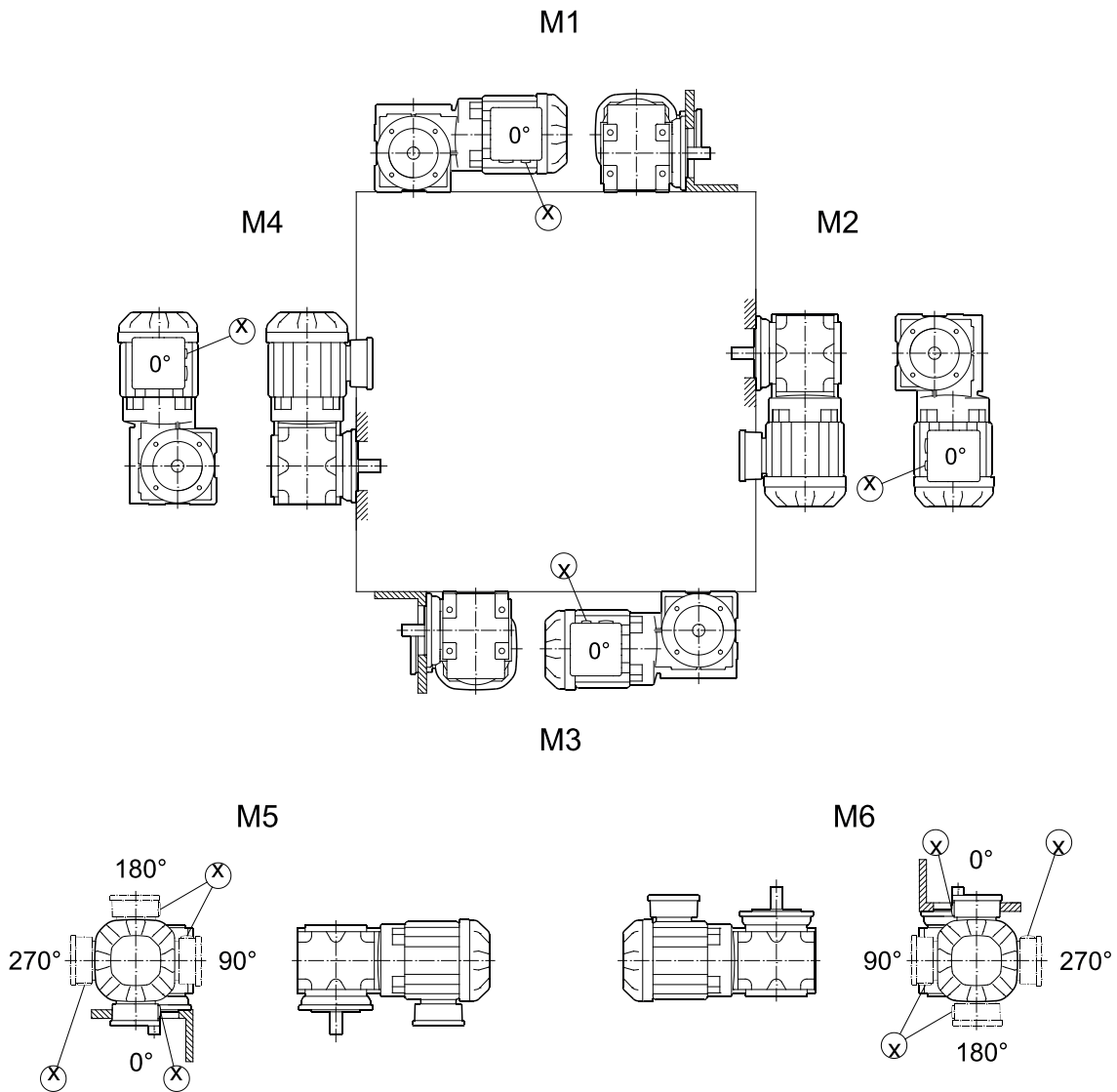
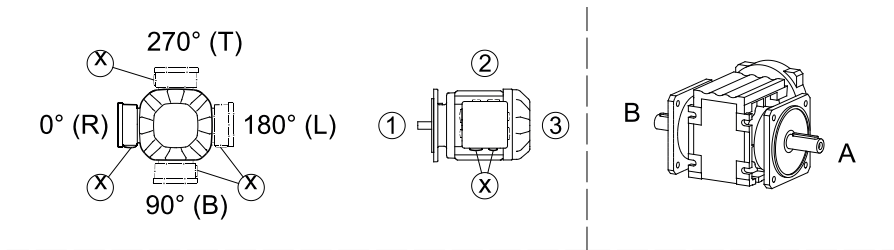
26883198/EN – 04/2022

# 5 Gear unit mounting positions and order information

Mounting position sheets

WF10-30

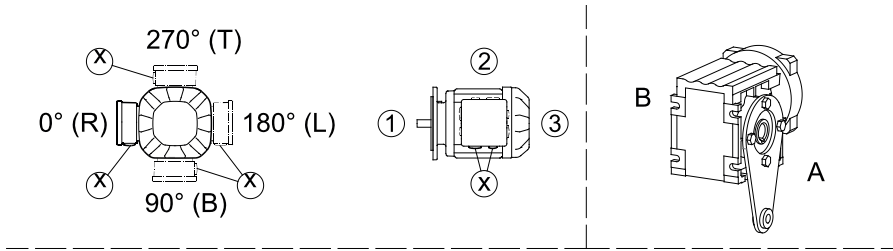
20 002 02 02



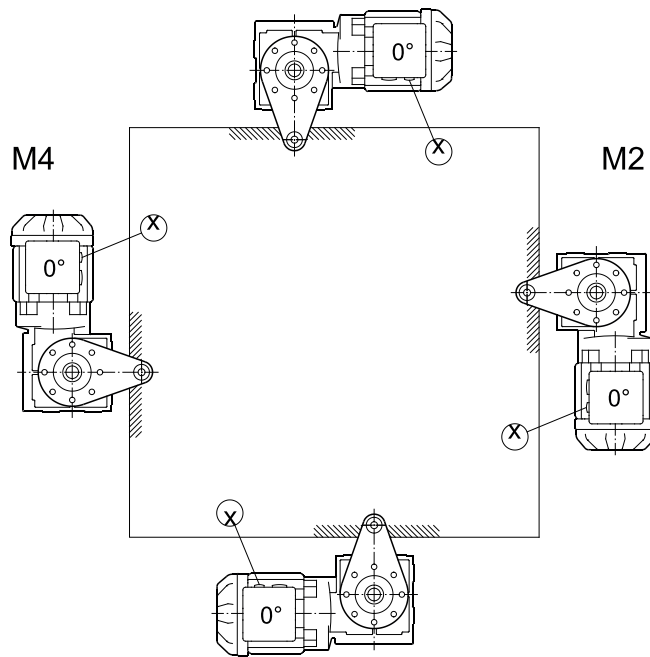
26883198/EN – 04/2022

WA10-30

20 003 03 02

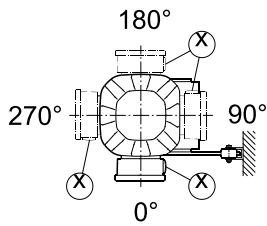


M1

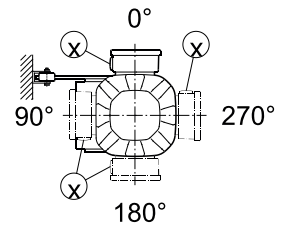


M3

M5



M6

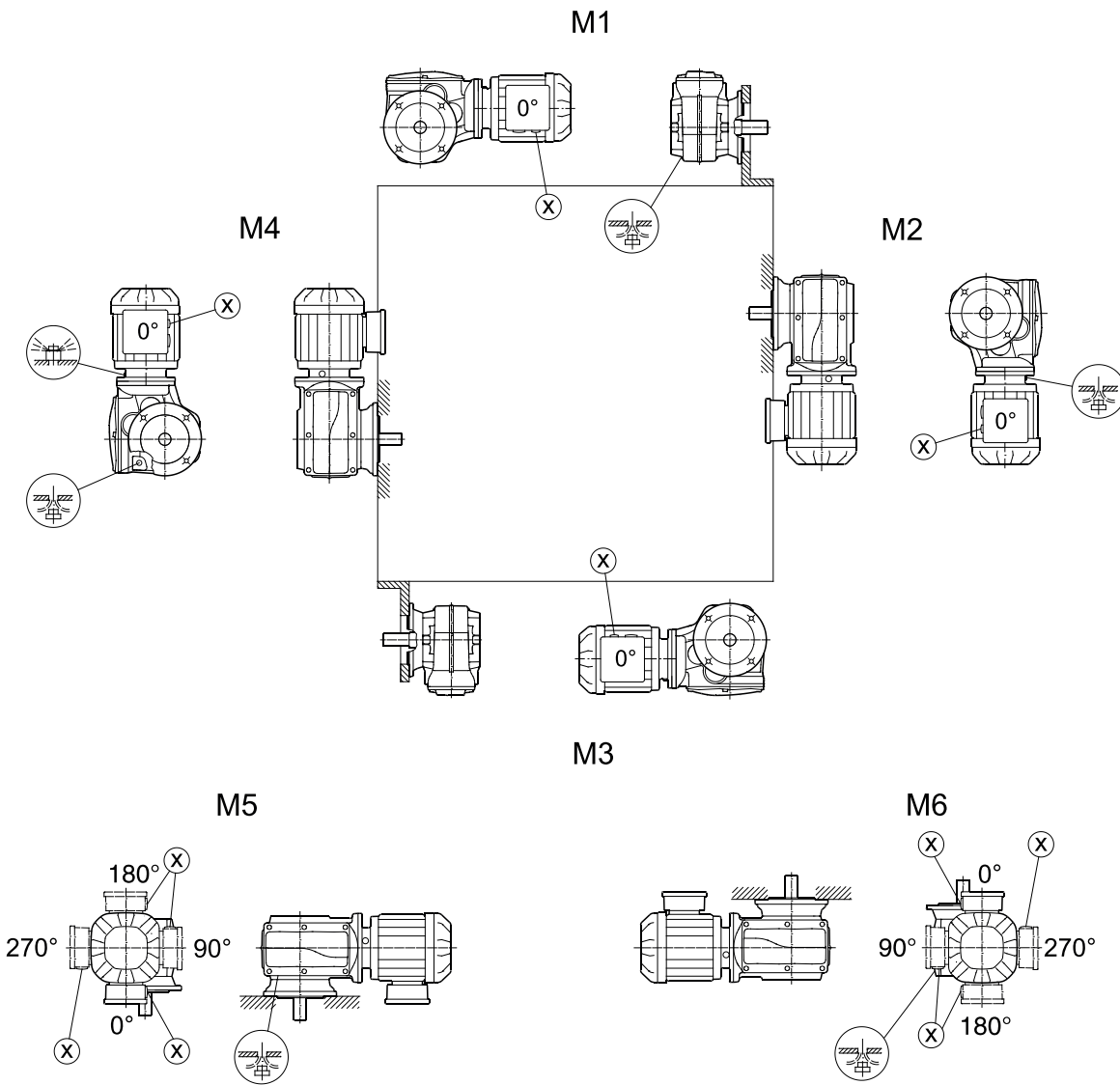
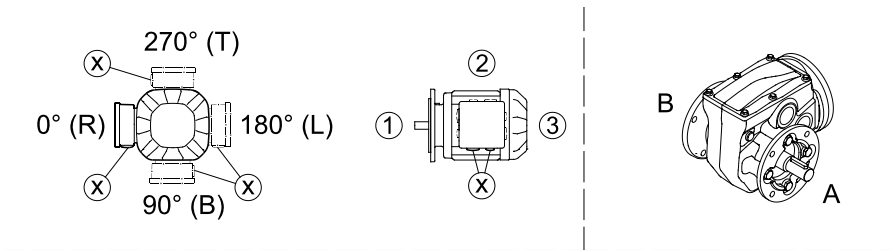


# 5 Gear unit mounting positions and order information

Mounting position sheets

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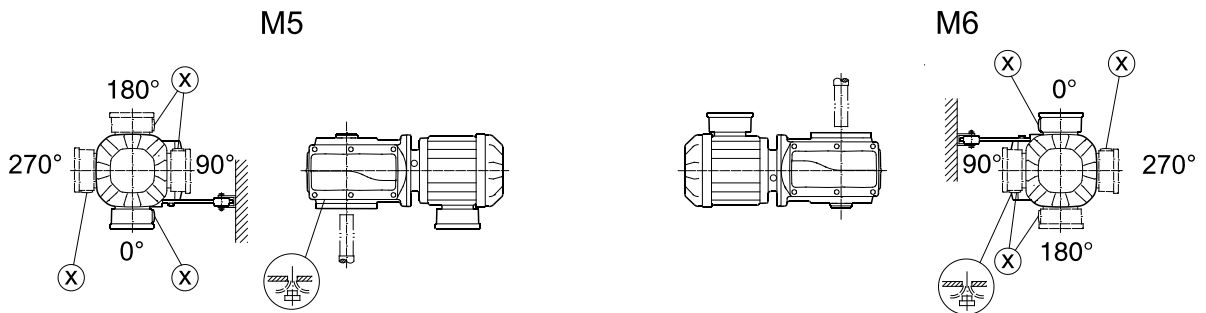
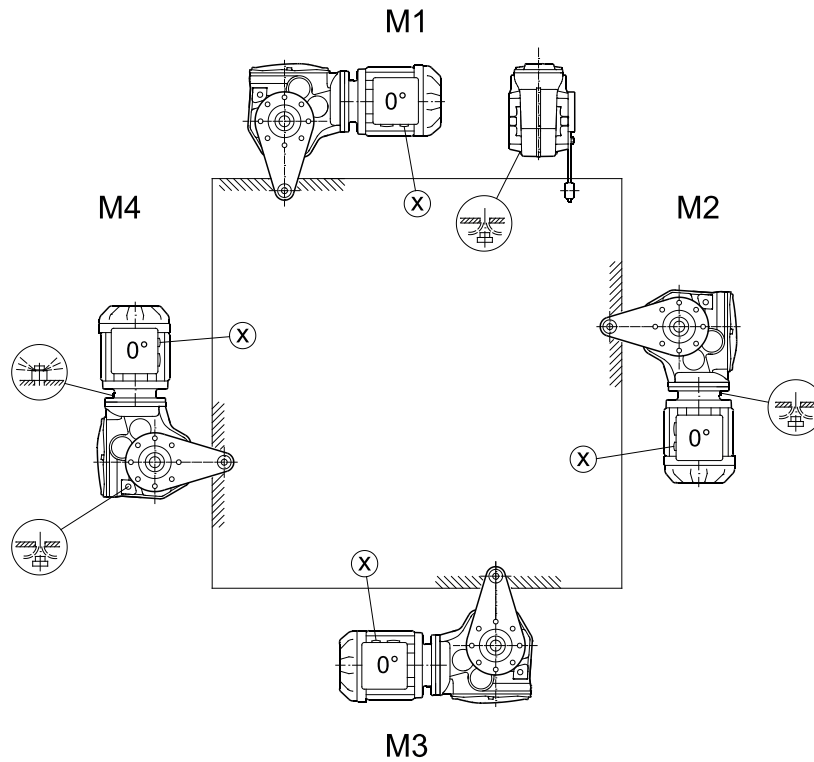
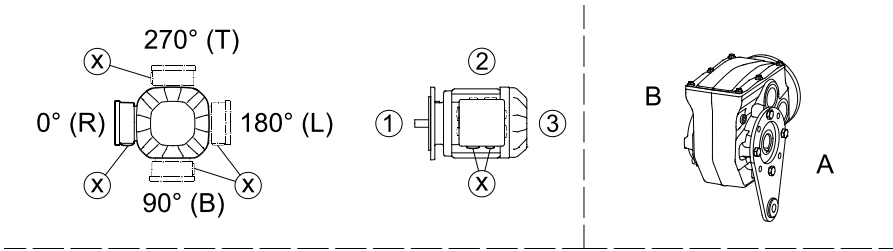
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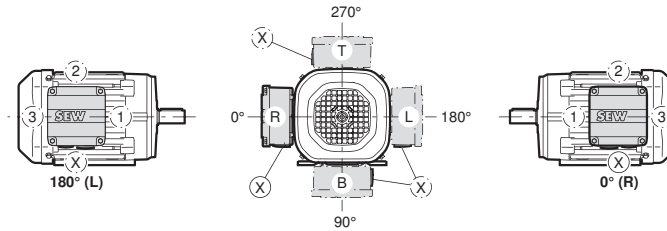
# 5

## Gear unit mounting positions and order information

Mounting positions of AC motors

### 5.5 Mounting positions of AC motors

#### 5.5.1 Motor terminal box position and cable entry



8670476811

#### 5.5.2 Mounting positions

<b>B3</b> 	<b>B6</b> 	<b>B7</b> 
<b>B8</b> 	<b>V5</b> 	<b>V6</b> 
<b>B5</b> 	<b>V1</b> 	<b>V15</b> 
<b>B35</b> 	<b>V3</b> 	<b>V36</b> 
<b>B14</b> 	<b>V18</b> 	<b>V17</b> 
<b>B34</b> 	<b>V19</b> 	<b>V37</b> 
<b>B65</b> 	<b>B75</b> 	<b>B85</b> 

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## 6 Design and operating notes

### 6.1 Lubricants

Unless a special arrangement is made, SEW-EURODRIVE supplies the drives with a lubricant fill adapted for the specific gear unit and mounting position. The decisive factor is the mounting position specified when ordering the drive. If you change the mounting position later, you must adapt the lubricant fill quantity accordingly.

#### 6.1.1 GearOil by SEW-EURODRIVE – lubricant for gear units



With decades of experience in gear unit development and construction, as well as numerous customer applications, SEW-EURODRIVE has extensive tribological knowledge. On this basis and in accordance with long-term test runs, SEW-EURODRIVE has developed a special formulation for its own premium gear oil: GearOil by SEW-EURODRIVE – the optimum protection for SEW-EURODRIVE gear units.

By using high-quality base materials and additives as well as the appropriate logistics, SEW-EURODRIVE ensures the highest level of quality.

GearOil by SEW-EURODRIVE increases the performance of the gear unit, regardless of whether it is a standard, servo, or industrial gear unit. The premium gear oil reduces the friction between gear wheels by creating a very good lubrication film. This increases the service life of lubricant and wear parts, such as seals and bearings. The high damage load stage of the mineral lubricants GearOil Base (damage load stage 14) improves protection against pitting of the gearing. At the same time, GearOil increases the efficiency of the gear unit and protects against corrosion and harmful foaming of the oil. The "self-cleaning" properties of the lubricants prevent deposits as they bind water and dirt particles.

Optionally, you can select GearOil by SEW-EURODRIVE as the initial filling for the gear units and gearmotors. The premium gear oil can be ordered in can or barrel containers for service and maintenance purposes. GearOil by SEW-EURODRIVE can be stored for up to 6 years in unopened containers.

Refer to the following table for the quantities that can be ordered as well as for the corresponding part numbers:

<b>GearOil Base</b>	<b>Can 1 liter</b>	<b>Can 5 liters</b>	<b>Can 20 liters</b>	<b>Barrel 205 liters</b>	<b>IBC 1000 liters</b>
GearOil Base 150 E1			03287866	03287742	03096750
GearOil Base 220 E1	03044130	03044084	03287858	03287734	03096688
GearOil Base 320 E1			03287831	03287726	03096742
GearOil Base 460 E1			03287823	03287718	03096734
GearOil Base 680 E1			03287815	03287696	03096726
GearOil Base 680 S E1	03044432		03287807	03287688	03096718

<b>GearOil Poly</b>	<b>Can 1 liter</b>	<b>Can 5 liters</b>	<b>Can 20 liters</b>	<b>Barrel 205 liters</b>
GearOil Poly 150 E1		03099296		03099172
GearOil Poly 220 E1	03044211	03099288		03099164

<b>GearOil Poly</b>	<b>Can 1 liter</b>	<b>Can 5 liters</b>	<b>Can 20 liters</b>	<b>Barrel 205 liters</b>
GearOil Poly 460 E1		03099261		03099148
GearOil Poly 460 W E1		03096599	03287750	03287645
GearOil Poly 150 H1 E1		03099253		03099121
GearOil Poly 220 H1 E1		03099237	03099180	03099113
GearOil Poly 460 H1 E1	03044165	03287076	03288099	03287068

<b>GearOil Synth</b>	<b>Can 1 liter</b>	<b>Can 5 liters</b>	<b>Can 20 liters</b>	<b>Barrel 205 liters</b>
GearOil Synth 150 E1		03042545	03042413	03042308
GearOil Synth 220 E1	03044270	03042537	03042405	03042294
GearOil Synth 320 E1		03042529	03042391	03042286
GearOil Synth 460 E1		03042510	03042383	03042278
GearOil Synth 680 E1		03042502	03042375	03042251
GearOil Synth 220 H1 E1		03042596	03042464	03042340
GearOil Synth 460 H1 E1	03044319	03042588	03042456	03042332

 = Lubricant suitable for the food and feed industry

For further information on the use of GearOil lubricants and their essential technical properties, please refer to the lubricant tables, see chapter "Lubricant table" (→ 126). Technical data sheets and safety data sheets are available from SEW-EURODRIVE on request.



### 6.1.2 Grease by SEW-EURODRIVE – lubricant for rolling bearings

<b>Lubricant</b>	<b>Cartridge 500 g</b>
Grease HL2 E1	03041476
Grease HL2 H1 E1	03041484

### 6.1.3 Bearing greases

The gear unit rolling bearings are given a factory-fill with the greases listed below. SEW-EURODRIVE recommends re-greasing the rolling bearings with a grease filling at the same time as changing the oil.

This table shows the lubricants recommended by SEW-EURODRIVE:

Operating range	Ambient temperature	Manufacturer	Type
Standard	-40 °C to +80 °C	SEW-EURODRIVE	Grease HL 2 E1 <sup>1)</sup>
		Fuchs	Renolit CX-TOM 15 <sup>1)</sup>
		Klüber	Petamo GHY 133 N
 <sup>2)</sup>	-40 °C to +40 °C	SEW-EURODRIVE	Grease HL 2 H1 E1
		Bremer & Leguil	Cassida Grease GTS 2
 <sup>3)</sup>	-20 °C to +40 °C	Fuchs	Plantogel 2S

1) Bearing grease based on semi-synthetic base oil.

2) Lubricant for the food processing industry.

3) Readily biodegradable lubricant for environmentally sensitive areas.

## INFORMATION



The following grease quantities are required:

- **For fast-running bearings (gear unit input side):** Fill the cavities between the rolling elements one-third full with grease.
- **For slow-running bearings (gear unit output side):** Fill the cavities between the rolling elements two-thirds full with grease.

## 6.1.4 Lubricant table


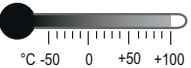

**NOTICE**

Damage to the gear unit due to improper lubricants.

Possible damage to property.

- The oil viscosity and type (mineral/synthetic) to be used are determined by SEW-EURODRIVE specifically for each order. This information is noted in the order confirmation and on the gear unit's nameplate. If you use other lubricants for the gear units and/or use the lubricants at temperatures outside the recommended temperature range, SEW-EURODRIVE does not assume liability.
- The lubricant recommendation in the lubricant table in no way represents a guarantee regarding the quality of the lubricant delivered by each respective supplier. Each lubricant manufacturer is responsible for the quality of their product.
- Do not mix synthetic lubricants.
- Do not mix synthetic lubricants and mineral lubricants.
- Oils of the same viscosity class from different manufacturers do not have the same characteristics. In particular, the minimally and maximally permitted oil bath temperatures are manufacturer-specific. These temperatures are specified in the lubricant tables.
- The values specified in the lubricant tables apply as of the time of printing of this document. The data of the lubricants is subject to dynamic change on the part of the lubricant manufacturers. For the latest information about the lubricants, visit: [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants).

## Information on the table structure

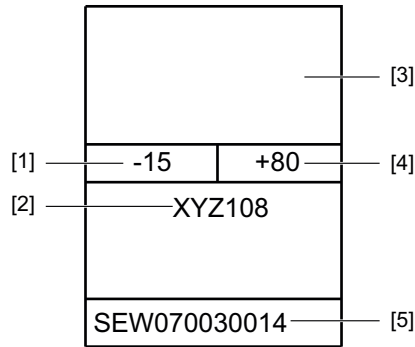
[1]	[2]			[3]
R.. 				ISO, SAE NLGI
	-15	+40		VG 460
-25	+30	CLP HC - NSF H1 - PSS		VG 220
			[4]	[5]

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- [1] Gear unit type
- [2] Ambient temperature range
- [3] Viscosity class
- [4] Note on special approvals
- [5] Lubricant type

The specified ambient temperatures are guide values for selecting a suitable lubricant. The exact upper and lower temperature limits for project planning are specified in the table with the respective trade name. Bear in mind during project planning that the viscosity increases at low temperatures and that this might influence the starting behavior.

**Information on the various lubricants**



- [1] Lowest oil sump temperature in °C, **going below this value during operation is not permitted**
- [2] Trade name
- [3] Manufacturer
- [4] Highest oil sump temperature in °C. The service life will be considerably reduced when this temperature is exceeded. Adhere to the lubricant change intervals in chapter "Current lubricant change intervals" in the operating instructions.
- [5] Approvals regarding compatibility of the lubricant with approved oil seals

**Lubricant compatibility with oil seals**

Approval	Explanation
SEW07004__13:	A lubricant especially recommended with regard to compatibility with the approved oil seals. The lubricant exceeds the state-of-the-art requirements regarding elastomer compatibility.

**Approved application temperature range of the oil seals**

In the low temperature range, oil seals can withstand shaft deflections (e. g. through overhung load) only to a limited extent. Especially avoid or limit pulsating or changing radial displacements of the shaft. Contact SEW-EURODRIVE, if required.

Oil seal material class	Permitted oil sump temperature
NBR	-40 °C to +80 °C
FKM	-25 °C to +115 °C
FKM-PSS	-25 °C to +115 °C

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**Limitations of use** of oil seals with the specific lubricant are described in the following table:

Material class		Manufacturer		Material		
S	1	NBR	1	Freudenberg	72 NBR 902	
			2	Trelleborg	4NV11	
	2	FKM	1	Freudenberg	1	75 FKM 585
						2
			2	Trelleborg	1	VCBVR
			3	SKF	1	FKM 00934

**Examples:**







**S11:** Only the elastomer 72NBR902 of the Freudenberg company meets the requirements of the approval in conjunction with the specific lubricant.

**S2:** Only the elastomer FKM meets the requirements of the approval in conjunction with the specific lubricant.



**Key**

The following table shows the abbreviations and symbols used in the lubricant table and explains what they mean:

Abbreviation/symbol	Meaning
	Synthetic lubricant (marked gray)
	Mineral lubricant
CLP	Mineral oil
CLP PG	Polyglycol (PG)
CLP HC	Synthetic hydrocarbons – polyalphaolefins (PAO)
E	Ester-based oil
	Lubricant for the food processing industry and feed industry. Oils are NSF-H1 registered and compliant in accordance with FDA 21 CFR § 178.3570
	Lubricants with particularly reduced CO2 footprint (cradle-to-gate) with sustainable raw materials
	Lubricants with slight bio-degradability for environmentally sensitive areas (> 60% according to OECD 301 or according to appendix A of EPA 2013 VGP)
	Lubricant suitable for explosion-protected gear units and gearmotors
1)	Helical-worm gear units with CLP-PG: Contact SEW-EURODRIVE.
2)	Low-viscosity grease
3)	With appropriate measures, the gear units can be operated at ambient temperatures as low as -40 °C. Contact SEW-EURODRIVE.
Oil seal	Oil seal
Premium Sine Seal	Oil seal of the Premium Sine Seal type. The addendum "PSS" for the lubricant type indicates compatibility with the sealing system.

#### Lubricant table for R..., F..., and K..7 gear units

The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

R... RES K..7 KES HK.. F..	[3] -50 0 +50 +100 °C	[1]	[2]	ISO,SAE NLGI	SEW EURODRIVE	D Inhaber & Legiti	Castrol	FUCHS	Mobil	KILBEROIL LUBRICATION	Shell	SINOPEC	TOTAL
KES	+40	[4]	CLP	VG 220	GearOil Base 220 E1/US1/CN1/BR1 SEW070040313		Optigear BM 220	Renolin CLP 220 Plus SEW070040313	Mobilgear 600 XP 220 SEW070040013	Kilberoil GEM 1-220 N	Shell Omala SG 220	AP-SGO 220 SEW070040313	Cater EP 220
				VG 150	GearOil Base 150 E1/US1/CN1/BR1 SEW070040313		Optigear BM 150	Renolin CLP150 Plus SEW070040313	Mobilgear 600 XP 150 SEW070040013	Kilberoil GEM 1-150 N	Shell Omala SG 150	AP-SGO 150 SEW070040313	Cater EP 150
KES	+30	[4]	CLP PSS	VG 220	GearOil Base 220 E1/US1/CN1/BR1 SEW070040313			Renolin CLP 220 Plus SEW070040313	Mobilgear 600 XP 220 SEW070040013			AP-SGO 220 SEW070040313	
				VG 150	GearOil Base 150 E1/US1/CN1/BR1 SEW070040313			Renolin CLP150 Plus SEW070040313	Mobilgear 600 XP 150 SEW070040013			AP-SGO 150 SEW070040313	

[1] Note on special approvals

[2] Oil type

[3] Ambient temperature range

[4] Standard

The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

[3] °C	[1]	[2]	ISO,SAE ILGI	SEW EURODRIVE		D Dreher & Leguit	Castrol	FUCHS	Mobil®	KLOPPER LUBRICATION	Shell	SINOPEC	TOTAL
				-25	+115								
[4] -25	⊕	CLP PG	VG 220	GearOil Poly 220 E1	GearOil Poly 220 E1	Optigear Synthetic 800/220	Renolin PG220	Mobil Glycole 220	Klübersynth GH 6-220	Shell Omala S4 WE 220			Cater SY 220
				SEW070040313	SEW070040313								
[4] -30	⊕	CLP PG (PSS)	VG 150	GearOil Poly 150 E1	GearOil Poly 150 E1				Klübersynth GH 6-150				
				SEW070040313	SEW070040313								
[4] -25	⊕	CLP PG (PSS)	VG 220	GearOil Poly 220 E1	GearOil Poly 220 E1				Klübersynth GH 6-220				
				SEW070040313	SEW070040313								
[4] -30	⊕	CLP PG (PSS)	VG 150	GearOil Poly 150 E1	GearOil Poly 150 E1				Klübersynth UHI 6-150				
				SEW070040313	SEW070040313								
[4] -25	⊕	CLP PG NSF H1 (PSS)	VG 220	GearFluid Poly 220 E1	GearFluid Poly 220 E1				Klübersynth UHI 6-220				
				SEW070040313	SEW070040313								
[4] -25	⊕	CLP PG NSF H1 (PSS)	VG 220	GearOil Poly 220 H1 E1	GearOil Poly 220 H1 E1				Klübersynth UHI 6-220				
				SEW070040313	SEW070040313								
[4] -20	⊕	CLP PG NSF H1 (PSS)	VG 460	GearOil Poly 460 H1 E1	GearOil Poly 460 H1 E1				Klübersynth UHI 6-460				
				SEW070040313	SEW070040313								
[4] -30	⊕	CLP PG NSF H1 (PSS)	VG 150	GearOil Poly 150 H1 E1	GearOil Poly 150 H1 E1				Klübersynth UHI 6-50				
				SEW070040313	SEW070040313								

R.: RES  
K.: K..7  
KES  
HK..

F.:



[1] Note on special approvals  
[2] Oil type

[3] Ambient temperature range  
[4] Standard

The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

[3] °C -50 0 +50 +100	[1]	[2]	ISO SAE NLGI	SEW EURODRIVE	b remer & leguit	Castrol	FUCHS	Mobil®	KILIBERSYN MACHINEN	Shell	SINOPEC	TOTAL
[4] -25	[3]	[2]	VG 220	GearOil Synth 220 E1/US1			Renolin Unisyn CLP220	Mobil SHC 630	Kilibersynth GEM 4-220 N	Shell Omala S4 GX 220		Cater SH 220
[4] -30	[3]	[2]	VG 150	GearOil Synth 150 E1/US1			Renolin Unisyn CLP150	Mobil SHC 629	Kilibersynth GEM 4-150 N	Shell Omala S4 GX 150		Cater SH 150
[4] -35	[3]	[2]	VG 68				Renolin Unisyn CLP68	Mobil SHC 626		Shell Omala S4 GX 68		
[4] -40	[3]	[2]	VG 32				Renolin Unisyn OL32	Mobil SHC 624				Daenis SH 32
[4] -25	[3]	[2]	VG 220	GearOil Synth 220 E1/US1				Mobil SHC 630				
[4] -30	[3]	[2]	VG 150	GearOil Synth 150 E1/US1				Mobil SHC 629				

[1] Note on special approvals  
[2] Oil type

[3] Ambient temperature range  
[4] Standard

The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

[3]	[1]	[2]	ISO SAE NLGI	SEW EURODRIVE	bremner & legull	Castrol	FUCHS	Mobil	KLÜBER LUBRICATION	Shell	SINOPEC	TOTAL
[3] °C -50 0 +50 +100	[1]	[2] CLP HC NSF H1	VG 460	GearOil Synth 460 H1 E1/US1 SEW070040313	Cassida Fluid GL 460 SEW070040313	Optileb GT 460 SEW070040313	Cassida Fluid GL 460		Klüberoil 4UH1-460 N			
			VG 220	GearOil Synth 220 H1 E1/US1 SEW070040313	Cassida Fluid GL 220 SEW070040313	Optileb GT 220 SEW070040313	Cassida Fluid GL 220		Klüberoil 4UH1-220 N			
			VG 68		Cassida Fluid HF 68 SEW070040313	Optileb HY 68 SEW070040313	Cassida Fluid HF 68		Klüberoil 4UH1-68 N			
			VG 32		Cassida Fluid HF 32 SEW070040313	Optileb HY 32 SEW070040313	Cassida Fluid HF 32		KlüberSummit HySynFG32			
[4] °C -15 +40	[1]	[2] CLP HC NSF H1 (PSS)	VG 460	GearOil Synth 460 H1 E1/US1 SEW070040313	Cassida Fluid GL 460 SEW070040313	Optileb GT 460 SEW070040313	Cassida Fluid GL 460					
			VG 220	GearOil Synth 220 H1 E1/US1 SEW070040313	Cassida Fluid GL 220 SEW070040313	Optileb GT 220 SEW070040313	Cassida Fluid GL 220					
			VG 460				Plantogear 460 S S2					
			VG 320				Plantogear 320 S S2		Klüberbio EG2-320 S2			

R.: RES  
 K.: 7 KES  
 HK.:   
 F.:

[1] Note on special approvals  
 [2] Oil type

[3] Ambient temperature range  
 [4] Standard

#### Lubricant table for K..9 gear units

The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

		[3]	[1]	[2]	ISO,SAE NLGI	SEW EURODRIVE									K.9	
															[4]	[4]
					VG 460	GearOil Poly 460 E1 SEW/070040313										
					VG 680											
					VG 220	GearOil Poly 220 E1 SEW/070040313										
					VG 150	GearOil Poly 150 E1 SEW/070040313										
					VG 220	GearFluid Poly 220 E1 SEW/070040313										
					VG 460	GearOil Poly 460 H1 E1 SEW/070040313										
					VG 680											
					VG 220	GearOil Poly 220 H1 E1 SEW/070040313										
					VG 150	GearOil Poly 150 H1 E1 SEW/070040313										

[1] Note on special approvals

[2] Oil type






[3] Ambient temperature range

[4] Standard

Lubricant table for S.. gear units

The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

S.. HS.. 	[3] °C -50 0 +50 +100	[1]	[2]	ISO,SAE NLGI	SEW EURODRIVE	b Iremer & leguit							
	[4] 0		CLP	VG 680	SEW GearOil Base 680 S E1 SEW070040313		Optigear BM 680	Renolin CLP 680 Plus SEW070040313	Mobilgear 600 XP 680 SEW070040313	Kilberoil GEM 1-680 N	Shell Omala SG 680	AP-SGO 680 SEW070040313	Carter EP 680
	-20			VG 150	SEW GearOil Base 150 E1/US1GN1BR1 SEW070040313		Optigear BM150	Renolin CLP 150 Plus SEW070040313	Mobilgear 600 XP 150 SEW070040313	Kilberoil GEM 1-150 N	Shell Omala SG 150	AP-SGO 150 SEW070040313	Carter EP 150
	[4] 0		CLP (PSS)	VG 680	SEW GearOil Base 680 S E1 SEW070040313			Renolin CLP 680 Plus SEW070040313	Mobilgear 600 XP 680 SEW070040313			AP-SGO 680 SEW070040313	
	-20			VG 150	SEW GearOil Base 150 E1/US1GN1BR1 SEW070040313			Renolin CLP 150 Plus SEW070040313	Mobilgear 600 XP 150 SEW070040313			AP-SGO 150 SEW070040313	

[1] Note on special approvals

[2] Oil type

[3] Ambient temperature range

[4] Standard

The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

[3]	[4]	[1]	[2]	ISO,SAE NLGI	SEW EURODRIVE	b bremer & leguit	Castrol	FUCHS	Mobil	KLOBER LUBRICATION	Shell	SINOPEC	TOTAL
-20	+80	[Ex]	CLP PG (PSS)	VG 460 <sup>(1)</sup>			Optigear-Synthetic 800/220	Renolin PG 220	Mobile Glypoyle 220	Klibersyth GH 6-460	Shell Omala S4 WE 220		Carter SY 220
-25	+60	[Ex]	CLP PG (PSS)	VG 220 <sup>(1)</sup>						Klibersyth GH 6-220			
-30	+40	[Ex]	CLP PG (PSS)	VG 150 <sup>(1)</sup>						Klibersyth GH 6-150			
[4]	+80			VG 460 <sup>(1)</sup>						Klibersyth GH 6-460			
[4]	+60			VG 220 <sup>(1)</sup>						Klibersyth GH 6-220			
[4]	+40			VG 150 <sup>(1)</sup>						Klibersyth GH 6-150			
[4]	+70	[Ex]	CLP PG NSF H1 (PSS)	VG 460						Klibersyth UH1 6-460			
[4]	+40	[Ex]	CLP PG NSF H1 (PSS)	VG 220						Klibersyth UH1 6-220			
[4]	+20	[Ex]	CLP PG NSF H1 (PSS)	VG 150						Klibersyth UH1 6-150			




[1] Note on special approvals  
[2] Oil type

[3] Ambient temperature range  
[4] Standard



The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→  127).

[3]	[1]	[2]	ISO/SAE NLGI	SEW EURODRIVE	inemer & leguil	Castrol	FUCHS	Mobil®	KLÜBER LUBRICATION	Shell	SINOPEC	TOTAL
°C -50 0 +50 +100	[4] -15	CLP HC	VG 460				Renolin Unisyn CLP 460	Mobil SHC 634	Klübersynth GEM 4-460 N	Shell Omala S4 GX 460		Carter SH 460
			VG 150 <sup>3)</sup>				Renolin Unisyn CLP 150	Mobil SHC 629	Klübersynth GEM 4-150 N	Shell Omala S4 GX 150		Carter SH 150
			VG 68				Renolin Unisyn CLP 68	Mobil SHC 626		Shell Omala S4 GX 68		
			VG 32				Renolin Unisyn OL 32	Mobil SHC 624				Dacnis SH 32
	[4] -15	CLP HC (PSS)	VG 460					Mobil SHC 634				
	[4] -30		VG 150 <sup>3)</sup>					Mobil SHC 629				



[1] Note on special approvals  
[2] Oil type

[3] Ambient temperature range  
[4] Standard

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Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

[3]	[1]	[2]	ISO/SAE NLGI	SEW EURODRIVE	bremser & leguit	Castrol	FUCHS	Mobil	ELMOR LUBRICATION	Shell	SINOPEC	TOTAL
		CLP HC NSF H1	VG 460		-15   +85 Cassida Fluid GL 460	-15   +90 Optileb GT 460	-15   +85 Cassida Fluid GL 460		-15   +80 Klüberoil 4UH1-460 N			
					-25   +75 Cassida Fluid GL 220	SEW070040313 -25   +70 Optileb GT 220	-25   +75 Cassida Fluid GL 220		-25   +70 Klüberoil 4UH1-220 N			
			VG 68		-35   +40 Cassida Fluid HF 68	SEW070040313 -40   +40 Optileb HY 68	-35   +40 Cassida Fluid HF 68		-35   +40 Klüberoil 4UH1-68 N			
			VG 32		-40   +25 Cassida Fluid HF 32	-40   +20 Optileb HY 32	-40   +25 Cassida Fluid HF 32		-40   +25 KlüberSummit Hysyn PG 32			
[4]		CLP HC NSF H1 (PSS)	VG 460		-15   +85 Cassida Fluid GL 460	-15   +90 Optileb GT 460	-15   +85 Cassida Fluid GL 460					
					-25   +75 Cassida Fluid GL 220	SEW070040313 -25   +70 Optileb GT 220	-25   +75 Cassida Fluid GL 220					
			VG 460				-15   +95 Plantogear 460 S					
		E	VG 320				S2 -20   +85 Plantogear 320 S		-20   +85 Klüberolio EG2-320			
							S2					

[1] Note on special approvals  
 [2] Oil type

[3] Ambient temperature range  
 [4] Standard

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Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

<p>[3]</p>	<p>[1]</p>	<p>[2]</p>	<p>ISO,SAE NLGI</p>	<p><b>SEW EURODRIVE</b></p>	<p>bremner &amp; leguitt</p>	<p><b>Castrol</b></p>	<p><b>FUCHS</b></p>	<p><b>Mobil</b></p>	<p><b>KALBERER LUBRICATION</b></p>	<p><b>Shell</b></p>	<p><b>SINOPEC</b></p>	<p><b>TOTAL</b></p>	<p>S.7p </p>								
														<p>VG 460<sup>1)</sup></p>	<p>GearOil Poly 460 E1 SEW070040313</p>	<p>VG 220<sup>1)</sup></p>	<p>GearOil Poly 220 E1 SEW070040313</p>	<p>VG 150<sup>1)</sup></p>	<p>GearOil Poly 150 E1 SEW070040313</p>	<p>VG 220</p>	<p>GearFluid Poly 220 E1 SEW070040313</p>
														<p>-20</p>	<p>+115</p>	<p>-25</p>	<p>+100</p>	<p>-30</p>	<p>+85</p>	<p>-25</p>	<p>+100</p>
														<p>CLP Pg (PSS)</p>	<p>CLP Pg (PSS)</p>						











[1] Note on special approvals  
[2] Oil type

[3] Ambient temperature range  
[4] Standard

#### Lubricant table for W.. gear units

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Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

 W.. HW..	[4]	-20 -30 -40	+60 +20 +10	[1]	  	[2]	CLP PG CLP PG NSF H1 (PSS) CLP PG NSF H1 (PSS)	ISO, SAE NLGI	VG 460 VG 460 VG 150 <sup>1)</sup> SAE 75W/90 (-VG 100)	SEW EURODRIVE	+115 GearOil Poly 460 W E1 SEW070040313 +115 GearOil Poly 460 H1 E1 SEW070040313 +65 GearOil Poly 150 H1 E1 SEW070040313	b iremer & leguit				-20 +115 Klüberynth UH1 6-460 -30 +65 Klüberynth UH1 6-150					

[1] Information regarding special approvals

[2] Oil type

[3] Ambient temperature range

[4] Standard

The lubricant table is valid on the day this document is published. Refer to [www.sew-eurodrive.de/lubricants](http://www.sew-eurodrive.de/lubricants) for the latest tables.

Observe the thermal limit of the oil seal material, see chapter "Lubricant compatibility with oil seals" (→ 127).

	[3]	[1]	[2]	ISO SAE NLGI	SEW EURODRIVE	Castrol	FUCHS	Mobil	KLÜBER LUBRICATION	Shell	SINOPEC	TOTAL	
	°C -50 0 +50 +100 [4] -25 +60	[1]	CLP PG (PSS)	VG 220	GearOil Poly 220 E1 SEW070040313	+100 -25	+115 -20	+115 -20	+85 -30	+100 -25	+80 -25	+110 -20	+65 -30
					GearOil Poly 460 E1 SEW070040313								
	+40	[1]	CLP PG (PSS)	VG 150	GearOil Poly 150 HI E1 SEW070040313	+100 -25	+85 -30	+85 -30	+85 -30	+100 -25	+80 -25	+110 -20	+65 -30
					GearFluid Poly 220 E1 SEW070040313								
	+60	[1]	CLP PG (PSS)	VG 220	GearOil Poly 220 HI E1 SEW070040313	+100 -25	+80 -25	+80 -25	+80 -25	+100 -25	+80 -25	+110 -20	+65 -30
					GearOil Poly 460 HI E1 SEW070040313								
	+70	[1]	CLP PG NSF H1 (PSS)	VG 460	GearOil Poly 460 HI E1 SEW070040313	+100 -25	+85 -30	+85 -30	+85 -30	+100 -25	+80 -25	+110 -20	+65 -30
					GearOil Poly 150 HI E1 SEW070040313								
	+20	[1]	CLP PG NSF H1 (PSS)	VG 150	GearOil Poly 150 HI E1 SEW070040313	+100 -25	+85 -30	+85 -30	+85 -30	+100 -25	+80 -25	+110 -20	+65 -30
					GearOil Poly 460 HI E1 SEW070040313								

[1] Information regarding special approvals  
 [2] Oil type

[3] Ambient temperature range  
 [4] Standard

## 6.1.5 Lubricant fill quantities

**INFORMATION**

The specified fill quantities are **guide values**. The exact values vary depending on the number of gear stages and gear ratio. Check the **oil level plug for the exact oil quantity**.

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**INFORMATION**

Unless a special arrangement is made, SEW-EURODRIVE supplies the drives with a lubricant fill adapted for the specific mounting position. The mounting position (see chapter "Gear unit mounting positions and order information" (→ 79)) must therefore be specified in the drive order.

When the mounting position is changed, the lubricant fill quantity must be adapted accordingly (see the following chapters). Consequently, a mounting position may only be **changed** after consultation with SEW-EURODRIVE, **otherwise your rights to claim under limited warranty no longer apply**.

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The following tables show guide values for lubricant fill quantities in relation to the mounting position M1 – M6.

## Helical (R) gear units

R..., R...F

Gear unit	Fill quantity in liters					
	M1 <sup>1)</sup>	M2 <sup>1)</sup>	M3 <sup>1)</sup>	M4	M5	M6
R07	0.12	0.20				
R17	0.25	0.55	0.35	0.55	0.35	0.40
R27	0.25/0.40	0.70	0.50	0.70	0.50	
R37	0.30/0.95	0.85	0.95	1.05	0.75	0.95
R47	0.70/1.50	1.60	1.50	1.65	1.50	
R57	0.80/1.70	1.90	1.70	2.10	1.70	
R67	1.10/2.30	2.40	2.80	2.90	1.80	2.00
R77	1.20/3.00	3.30	3.60	3.80	2.50	3.40
R87	2.30/6.0	6.5/8.1	7.4/7.2	7.4	6.4	6.6
R97	4.60/9.8	11.7		13.4	11.3	11.7
R107	6.0/13.7	16.3	16.9	19.2	13.2	15.9
R127	6.4/17	18.3	18.2	22.0	16.8	17.9
R137	10.0/25.0	28.0	29.5	31.5	25.0	
R147	15.4/40.0	46.5	48.0	52.0	39.5	41.0
R167	27.0/70.0	82.0	78.0	88.0	66.0	69.0

1) The larger gear unit of compound gear units must be filled with the larger oil quantity.

RF..., RM..., RZ..

Gear unit	Fill quantity in liters					
	M1 <sup>1)</sup>	M2 <sup>1)</sup>	M3	M4	M5	M6
RF07	0.12	0.20				
RF17	0.25	0.55	0.35	0.55	0.35	0.40
RF27	0.25/0.40	0.70	0.50	0.70	0.50	
RF37	0.35/0.95	0.90	0.95	1.05	0.75	0.95
RF47	0.65/1.50	1.60	1.50	1.65	1.50	
RF57	0.80/1.70	1.80	1.70	2.00	1.70	
RF67	1.20/2.50	2.50/3.2	2.70	2.80	1.90	2.10
RF77	1.20/2.60	3.10/4.0	3.30	3.60	2.40	3.00
RF87	2.40/6.0	6.5/8.2	7.3	7.4	6.4	6.5
RF97	5.1/10.2	11.9	11.2	14.0	11.2	11.8
RF107	6.3/14.9	15.9	17.0	19.2	13.1	15.9
RF127	6.6/16.0	18.3	18.2	21.4	15.9	17.0
RF137	9.5/25.0	27.0	29.0	32.5	25.0	
RF147	16.4/42.0	47.0	48.0	52.0	42.0	
RF167	26.0/70.0	82.0	78.0	88.0	65.0	71.0

1) The larger gear unit of compound gear units must be filled with the larger oil quantity.

RX..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
RX57	0.60	0.80	1.30		0.90	
RX67	0.80		1.70	1.40	1.10	
RX77	1.10	1.50	2.60	2.70	1.60	
RX87	1.70	2.50	4.80		2.90	
RX97	2.10	3.40	7.4	7.0	4.80	
RX107	3.90	5.6	11.6	11.9	7.7	

RXF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
RXF57	0.50	0.80	1.10		0.70	
RXF67	0.70	0.80	1.50	1.40	1.00	

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
RXF77	0.90	1.30	2.40	2.00	1.60	
RXF87	1.60	1.95	4.90	3.95	2.90	
RXF97	2.10	3.70	7.1	6.3	4.80	
RXF107	3.10	5.7	11.2	9.3	7.2	

## Parallel shaft helical (F) gear units

F., FA..B, FH..B, FV..B

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
F..27	0.60	0.80	0.65	0.70	0.60	
F..37	0.95	1.25	0.70	1.25	1.00	1.10
F..47	1.50	1.80	1.10	1.90	1.50	1.70
F..57	2.25	3.15	1.65	3.15	2.40	2.50
F..67	2.70	3.80	1.90	3.80	2.90	3.20
F..77	5.90	7.30	4.30	8.00	6.00	6.30
F..87	11.0	13.1	7.70	14.0	10.9	11.1
F..97	18.8	22.7	12.6	25.5	18.6	20.2
F..107	24.5	32.0	19.5	37.5	27.0	
F..127	40.5	54.5	34.0	61.0	46.3	47.0
F..157	74.0	106.5	63.0	110.0	88.5	80.5

FF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
FF27	0.60	0.80	0.65	0.70	0.60	
FF37	1.00	1.25	0.70	1.30	1.00	1.10
FF47	1.60	1.85	1.10	1.90	1.50	1.70
FF57	2.30	3.05	1.70	3.10	2.30	2.40
FF67	2.70	3.80	1.90	3.80	2.90	3.20
FF77	5.90	7.30	4.30	8.10	6.00	6.30
FF87	11.0	13.3	7.80	14.3	11.1	11.3
FF97	19.3	22.7	12.6	25.9	19.0	20.7
FF107	25.5	32.0	19.5	38.5	18.6	28.0
FF127	41.5	55.5	34.0	63.0	45.0	49.0
FF157	77.0	107.5	64.0	111.0	89.5	81.5

FA.., FH.., FV.., FAF.., FAZ.., FHF.., FZ.., FHZ.., FVF.., FVZ.., FT.., FM.., FAM..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
F..27	0.60	0.80	0.65	0.70	0.60	
F..37	0.95	1.25	0.70	1.25	1.00	1.10
F..47	1.50	1.80	1.10	1.90	1.50	1.70
F..57	2.40	3.10	1.70	3.15	2.40	2.50
F..67	2.70	3.80	1.90	3.80	2.90	3.20
F..77	5.90	7.30	4.30	8.00	6.00	6.30
F..87	11.0	13.1	7.70	14.0	10.9	11.1
F..97	18.8	22.7	12.6	25.5	18.6	20.2
F..107	24.5	32.0	19.5	37.5	27.0	
F..127	39.0	54.5	34.0	61.0	45.0	46.5
F..157	73.0	105.5	62.0	109.0	87.5	79.5



## Helical-bevel (K) gear units

## INFORMATION



All K..19 and K..29 gear units have a universal mounting position, which means that K..19 and K..29 gear units of the same design are filled with the same oil quantity independent of the mounting position. An exception to this is the M4 mounting position.

K.., KA..B, KH..B, KV..B

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
K..19		0.40		0.45		0.40
K..29		0.70		0.85		0.70
K..39	0.86	1.65	1.55	2.10	1.55	1.30
K..49	1.65	3.35	2.80	4.20	3.15	2.75
K..37	0.50	1.00		1.25	0.95	
K..47	0.80	1.30	1.50	2.00	1.60	
K..57	1.10	2.20		2.80	2.30	2.10
K..67	1.10	2.40	2.60	3.45	2.60	
K..77	2.20	4.10	4.40	5.80	4.20	4.40
K..87	3.70	8.20	8.90	10.90	8.20	
K..97	7.0	14.0	15.70	20.0	15.70	15.50
K..107	10.0	21.0	25.50	33.50	24.0	
K..127	19.0	41.50	44.0	54.0	40.0	41.0
K..157	31.0	65.0	68.0	90.0	62.0	63.0
K..167	33.0	97.0	109.0	127.0	89.0	86.0
K..187	53.0	156.0	174.0	207.0	150.0	147.0

KF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
KF19		0.40		0.45		0.40
KF29		0.70		0.85		0.70
KF39	0.86	1.65	1.55	2.10	1.55	1.30
KF49	1.65	3.35	2.80	4.20	3.15	2.75
KF37	0.50	1.10		1.40	1.00	
KF47	0.80	1.30	1.70	2.20	1.60	
KF57	1.20	2.20	2.40	3.15	2.50	2.30
KF67	1.10	2.40	2.80	3.70	2.70	
KF77	2.10	4.10	4.40	5.90	4.50	
KF87	3.70	8.30	9.2	11.90	8.60	8.50
KF97	7.0	14.70	17.30	21.50	15.70	16.50
KF107	10.0	21.90	26.0	35.10	25.40	25.30
KF127	19.0	41.50	46.0	55.0	41.0	
KF157	31.0	66.0	69.0	92.0	63.0	

KA.., KH.., KV.., KAF.., KHF.., KVF.., KZ.., KAZ.., KHZ.., KVZ.., KT.., KM.., KAM..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
K..19		0.40		0.45		0.40
K..29		0.70		0.85		0.70
K..39	0.86	1.65	1.55	2.10	1.55	1.30
K..49	1.65	3.35	2.80	4.20	3.15	2.75
K..37	0.50	1.00		1.30	1.00	
K..47	0.80	1.30	1.60	2.0	1.60	
K..57	1.20	2.20	2.40	3.15	2.70	2.40

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
K..67	1.10	2.40	2.70	3.70	2.60	
K..77	2.10	4.10	4.60	5.90	4.40	
K..87	3.70	8.40	9.0	11.10	8.2	
K..97	7.0	14.70	15.70	20.0	15.70	
K..107	10.0	20.80	24.5	32.4	24.5	24.3
K..127	19.0	41.50	43.0	52.0	40.0	
K..157	31.0	65.0	68.0	90.0	62.0	63.0
K..167	33.0	97.0	109.0	127.0	89.0	86.0
K..187	53.0	156.0	174.0	207.0	150.0	147.0

### Helical-worm (S) gear units

S..

Gear unit	Fill quantity in liters					
	M1	M2	M3 <sup>1)</sup>	M4	M5	M6
S37	0.25	0.40	0.50	0.55	0.40	
S47	0.35	0.80	0.70/0.90	1.00	0.80	
S57	0.50	1.20	1.00/1.20	1.35	1.30	
S67	1.00	2.00	2.20/3.10	3.10	2.60	2.60
S77	1.90	4.20	3.70/5.4	5.9	4.40	
S87	3.30	8.1	6.9/10.4	11.3	8.4	
S97	6.8	15.0	13.4/18.0	21.8	17.0	

1) The larger gear unit of compound gear units must be filled with the larger oil quantity.

SF..

Gear unit	Fill quantity in liters										
	M1	M2	M3 <sup>1)</sup>	M4		M5			M6		
				Output A/B	A + B	A	B	A + B	A	B	A + B
SF37	0.25	0.40	0.50	0.55	0.6	0.4	0.4	0.4	0.4	0.4	0.4
SF47	0.40	0.90	0.90/1.05	1.10	1.15	1.0	0.9	1.0	0.9	1.0	1.0
SF57	0.50	1.20	1.00/1.50	1.50	1.55	1.4	1.4	1.4	1.4	1.4	1.4
SF67	1.00	2.20	2.30/3.00	3.20	3.5	2.7	2.6	2.7	2.6	2.7	2.7
SF77	1.90	4.10	3.90/5.8	6.5	7.2	4.9	4.6	4.9	4.6	4.9	4.9
SF87	3.80	8.0	7.1/10.1	12.0	13.2	9.1	8.2	9.1	8.2	9.1	9.1
SF97	7.4	15.0	13.8/18.8	23.1	25.2	18.0	17.0	18.0	17.0	18.0	18.0

1) The larger gear unit of compound gear units must be filled with the larger oil quantity.

SA.., SH.., SAF.., SHZ.., SAZ.., SHF.., ST..

Gear unit	Fill quantity in liters					
	M1	M2	M3 <sup>1)</sup>	M4	M5	M6
S..37	0.25	0.40	0.50		0.40	
S..47	0.40	0.80	0.70/0.90	1.05	0.80	
S..57	0.50	1.10	1.00/1.50	1.45	1.20	
S..67	1.00	2.00	1.80/2.60	2.90	2.50	
S..77	1.80	3.90	3.60/5.0	5.8	4.50	
S..87	3.80	7.4	6.0/8.7	10.8	8.0	
S..97	7.0	14.0	11.4/16.0	21.0	15.7	

1) The larger gear unit of compound gear units must be filled with the larger oil quantity.

## SPIROPLAN® (W) gear units

## INFORMATION



SPIROPLAN® gear units W..10 to W..30 have a universal mounting position, which means that gear units of the same design are filled with the same oil quantity independent of the mounting position.

WF.., WA.., WAF.., WH.., WHF.., WT..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
W..10				2	3	
W..19		0.34		0.6	0.54	0.54
W..20				0.24		
W..29		0.54		0.93	0.78	0.72
W..30				0.40		
W..39		0.85		1.5	1.35	1.25
W..49		1.39		2.41	2.19	2.15
W..59		2.0		3.49	3.2	3.0

## 6.2 Gear unit venting

## INFORMATION



Dirt and dust in the environment may affect the function of the breather valves. Contact SEW-EURODRIVE regarding alternative venting systems, if required.

### 6.3 Reduced backlash gear unit design /R

Helical, parallel-shaft helical and helical-bevel gear units with reduced backlash are available as of gear unit size 37. The rotational clearance of these gear units is considerably less than that of the standard designs so that positioning tasks can be solved with great precision. The rotational clearance is specified in angular minutes in the chapter "Geometrically possible combinations". The rotational clearance for the output shaft is specified without load (max. 1% of the rated output torque); the gear unit input side is blocked. The specified values have a tolerance of  $\pm 2$  angular minutes.

(→ 216)

The reduced backlash design is available for the following gear units:

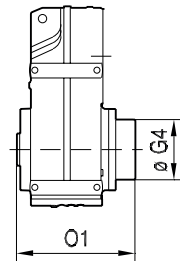
- Helical gear units (R), sizes 37 to 167
- Parallel-shaft helical gear units (F), sizes 37 to 157
- Helical-bevel gear units (only K..7) in gear unit sizes 37 to 187

The dimensions of the reduced backlash variants correspond to the dimensions of the standard designs, except for parallel-shaft helical gear units FH.87 and FH.97 with reduced backlash.

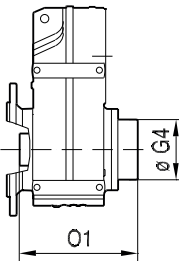
The following figure shows the dimensions of the FH.87 and FH.97 gear units with reduced backlash:

**42 020 00 09**

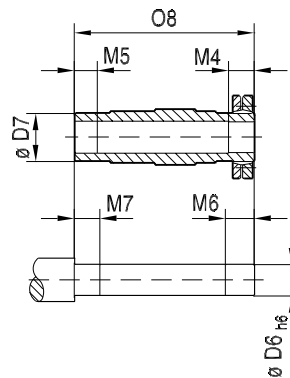
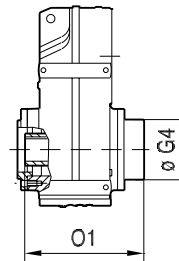
**FH../R  
FH..B/R**



**FHF../R**



**FHZ../R**



9007205899247883

Type	Dimensions in mm								
	D6	D7	G4	M4	M5	M6	M7	O1	O8
FH.87/R	$\varnothing 65_{h6}$	$\varnothing 85$	$\varnothing 163$	41	40	46	45	312.5	299.5
FH.97/R	$\varnothing 75_{h6}$	$\varnothing 95$	$\varnothing 184$	55	50	60	55	382.5	367

## 6.4 Assembly/disassembly of gear units with hollow shaft and key

### INFORMATION



Use the supplied NOCO® fluid for mounting. The fluid prevents contact corrosion and facilitates subsequent disassembly.

### INFORMATION



The key dimension L12 is specified for the customer and depends on the application requirements and the used materials.

See the following figure "Customer shaft with contact shoulder [A] and without contact shoulder [B]."

### INFORMATION



When dimensioning the keyed connection, take into account that the hollow shaft of the gear unit (hub) is made of the material C45R(1.1201).

SEW-EURODRIVE recommends **2 options for mounting** gear units with hollow shaft and key onto the input shaft of the driven machine (= customer shaft):

- Mounting using supplied fastening parts
- Mounting/dismounting using the SEW-EURODRIVE assembly and disassembly kit

The following sections describe the two options.

### 6.4.1 Mounting using supplied fastening parts

The following fastening parts are provided as standard:

- Retaining screw with washer [2]
- Retaining ring [3]

#### Note the following information concerning the customer shaft:

- The installation length of the customer shaft with contact shoulder [A] must be "L8" - 1 mm.
- The installation length of the customer shaft without contact shoulder [B] must equal "L8".

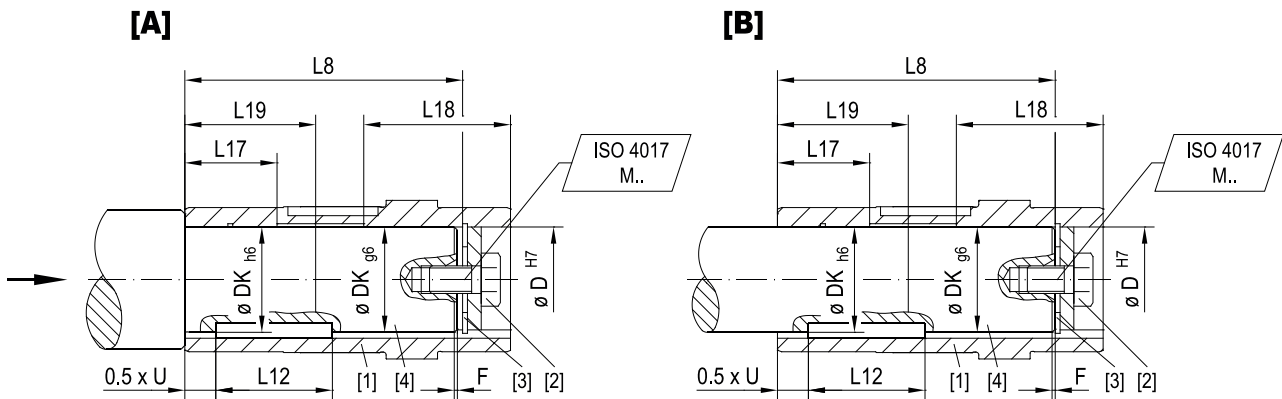
# 6

## Design and operating notes

Assembly/disassembly of gear units with hollow shaft and key

The following figure shows the customer shaft with contact shoulder [A] and without contact shoulder [B].

00 001 02 02



27021619247083659

- D Hollow shaft diameter
- DK Customer shaft diameter
- F Shaft end chamfer
- L8 Customer shaft length
- L12 Key length
- L17 Cylinder section length with dimension H7
- L18 Cylinder section length with dimension H7
- L19 Depending on the insertion side of the customer shaft, the dimension L19 should be > L17 or > L18
- U Key width
- [1] Hollow shaft
- [2] Retaining screw with washer
- [3] Retaining ring
- [4] Customer shaft

Dimensions and tightening torques MS for retaining screw [2] for standard gear units:

Gear unit type	D <sup>H7</sup> mm	DK mm	F mm	L8 mm	L17 mm	L18 mm	U mm	MS Nm	ISO 4017 M..
FA..27	25	1	89	30	30	8	20	M10 × 25	
FA..37, KA..37	30	1	105	39	45	8	20	M10 × 25	
FA..47, KA..47	35	1	132	45	52	10	20	M12 × 30	
FA..57, KA..57	40	1	142	50	60	12	40	M16 × 40	
FA..67, KA..67	40	1	156	50	60	12	40	M16 × 40	
FA..77, KA..77	50	1	183	65	75	14	40	M16 × 45	
FA..87, KA..87	60	1	210	75	90	18	80	M20 × 50	
FA..97, KA..97	70	2	270	90	105	20	80	M20 × 50	
FA..107, KA..107	90	2	313	110	125	25	200	M24 × 60	
FAM67, KAM67	40	1	278	50	60	12	40	M16 × 40	
FAM77, KAM77	50	1	309	65	75	14	40	M16 × 45	
FAM87, KAM87	60	1	363	75	90	18	80	M20 × 50	
FAM97, KAM97	70	2	422	90	105	20	80	M20 × 50	

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Gear unit type	D <sup>H7</sup> mm	DK mm	F mm	L8 mm	L17 mm	L18 mm	U mm	MS Nm	ISO 4017 M..
FAM107, KAM107	90		2	473	110	125	25	200	M24 × 60
KA..19	20		1	92	28	30	6	8	M6 × 16
KA..29	25		1	107	30	38	8	20	M10 × 25
KA..29	30		1	107	35	35	8	20	M10 × 25
KA..39	30		1	137	35	45	8	20	M10 × 25
KA..39	35		1	137	35	45	10	20	M12 × 30
KA..49	35		1	160	35	45	10	20	M12 × 30
KA..49	40		1	154	35	45	12	40	M16 × 40
SA..37	20		1	104	40	40	6	8	M6 × 16
SA..47	25		1	105	38	38	8	20	M10 × 25
SA..47	30		1	105	39	45	8	20	M10 × 25
SA..57	30		1	132	39	45	8	20	M10 × 25
SA..57	35		1	132	45	52	10	20	M12 × 30
SA..67	40		1	144	50	60	12	40	M16 × 40
SA..67	45		1	144	50	60	14	40	M16 × 40
SA..77	50		1	180	63	75	14	40	M16 × 45
SA..77	60		1	180	72	90	18	80	M20 × 50
SA..87	60		1	220	75	90	18	80	M20 × 50
SA..87	70		2	220	90	105	20	80	M20 × 50
SA..97	70		2	260	90	105	20	80	M20 × 50
SA..97	90		2	255	110	125	25	200	M24 × 60
WA..10	16		0.5	69	24	24	5	8	M5 × 12
WA..19	18		1	84	27	27	6	8	M6 × 16
WA..19	20		1	84	26	30	6	8	M6 × 16
WA..20	18		1	84	24	27	6	8	M6 × 16
WA..29	20		1	92	28	30	6	8	M6 × 16
WA..29	25		0.5	92	28	30	8	20	M10 × 25
WA..29	30		0.5	92	28	30	8	20	M10 × 25
WA..30	20		1	105	30	30	6	8	M6 × 16
WA..39	25		1	107	30	38	8	20	M10 × 25
WA..39	30		1	107	30	38	8	20	M10 × 25
WA..49	30		1	137	35	45	8	20	M10 × 25
WA..49	35		1	137	35	45	10	20	M12 × 30
WA..59	35		1	160	35	45	10	20	M12 × 30
WA..59	40		1	154	35	45	12	40	M16 × 40

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## 6.4.2 Assembly/disassembly with SEW-EURODRIVE assembly and disassembly kit

## Assembly

You can use the optional assembly/disassembly kit for mounting. The kit can be ordered for the respective gear unit types by quoting the part numbers in the table below. The scope of delivery includes:

- Spacer tube for installation without contact shoulder [5]
- Retaining screw for assembly [2]
- Forcing washer for disassembly [7]
- Fixed nut for disassembly [8]

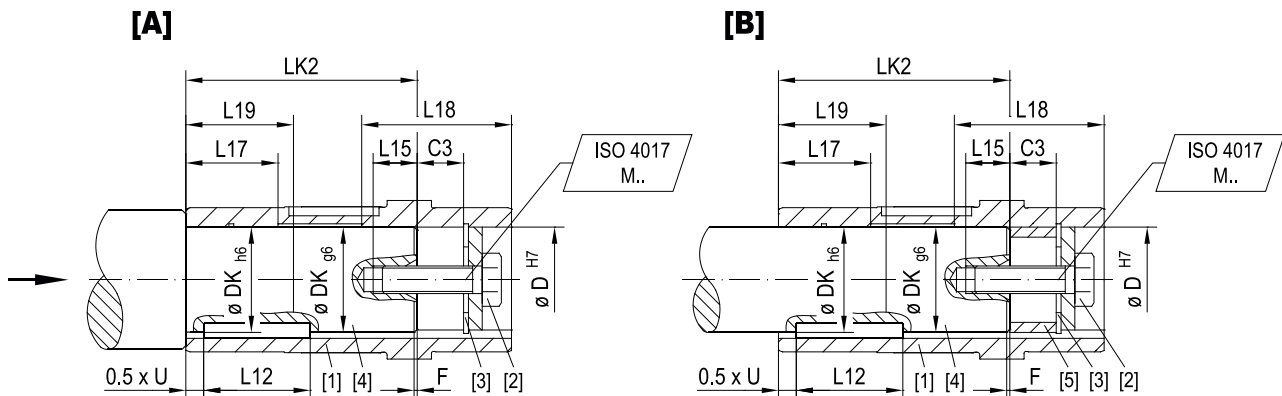
The short retaining screw delivered as standard is not required.

**Note the following information concerning the customer shaft:**

- The installation length of the customer shaft must be LK2. **Do not use the spacer tube if the customer shaft has a contact shoulder [A].**
- The installation length of the customer shaft must be LK2. Use the **spacer tube if the customer shaft has no contact shoulder [B].**

The following figure shows the customer shaft with contact shoulder [A] and without contact shoulder [B].

00 002 02 02



54043199837413003

C3	Indentation fixed nut and forcing washer
D	Hollow shaft diameter
DK	Customer shaft diameter
F	Shaft end chamfer
L8	Customer shaft length
L12	Key length
L15	Thread depth of customer shaft
L17	Cylinder section length with dimension H7
L18	Cylinder section length with dimension H7
L19	Depending on the insertion side of the customer shaft, the dimension L19 should be > L17 or > L18
LK2	Length of the customer shaft when using the optional assembly/disassembly kit
U	Key width
[1]	Hollow shaft
[2]	Retaining screw with washer
[3]	Retaining ring
[4]	Customer shaft
[5]	Spacer tube



Dimensions, tightening torque MS and part numbers for retaining screw [2]:

Type	C3 mm	D <sup>H7</sup> mm	DK mm	L15 mm	L17 mm	L18 mm	LK2 mm	U mm	MS Nm	ISO 4017 M..	Part number of the as- sembly/disassembly kit
FA..27	16	25	22	30	30	73	8	20	M10 × 35	06436846	
FA..37	16	30	22	39	45	89	8	20	M10 × 35	06436854	
FA..47	18	35	28	45	52	114	10	20	M12 × 45	06436862	
FA..57	18	40	36	50	60	124	12	40	M16 × 50	06436870	
FA..67	18	40	36	50	60	138	12	40	M16 × 50	06436870	
FA..77	18	50	36	65	75	165	14	40	M16 × 50	06436897	
FA..87	22	60	42	75	90	188	18	80	M20 × 60	06436900	
FA..97	22	70	42	90	105	248	20	80	M20 × 60	06436919	
FA..107	26	90	50	110	125	287	25	200	M24 × 70	06436927	
FA..127	26	100	50	120	150	347	28	200	M24 × 70	06436935	
FA..157	26	120	50	180	180	434	32	200	M24 × 70	06436943	
FAM67	18	40	36	50	60	260	12	40	M16 × 50	06436870	
FAM77	18	50	36	65	75	291	14	40	M16 × 50	06436897	
FAM87	22	60	42	75	90	341	18	80	M20 × 60	06436900	
FAM97	22	70	42	90	105	400	20	80	M20 × 60	06436919	
FAM107	26	90	50	110	125	447	25	200	M24 × 70	06436927	
FAM127	26	100	50	120	150	527	28	200	M24 × 70	06436935	
FAM157	26	120	50	180	180	665	32	200	M24 × 70	06436943	
KA..19	12	20	16	28	30	80	6	8	M6 × 25	06436838	
KA..29	16	25	22	30	38	91	8	20	M10 × 35	06436846	
KA..29	16	30	22	35	35	91	8	20	M10 × 35	06436854	
KA..37	16	30	22	39	45	89	8	20	M10 × 35	06436854	
KA..39	16	30	22	35	45	121	8	20	M10 × 35	06436854	
KA..39	18	35	28	35	45	119	10	20	M12 × 45	06436862	
KA..47	18	35	28	45	52	114	10	20	M12 × 45	06436862	
KA..49	18	35	28	35	45	142	10	20	M12 × 45	06436862	
KA..49	18	40	36	35	45	136	12	40	M16 × 50	06436870	
KA..57	18	40	36	50	60	124	12	40	M16 × 50	06436870	
KA..67	18	40	36	50	60	138	12	40	M16 × 50	06436870	
KA..77	18	50	36	65	75	165	14	40	M16 × 50	06436897	
KA..87	22	60	42	75	90	188	18	80	M20 × 60	06436900	
KA..97	22	70	42	90	105	248	20	80	M20 × 60	06436919	
KA..107	26	90	50	110	125	287	25	200	M24 × 70	06436927	
KA..127	26	100	50	120	150	347	28	200	M24 × 70	06436935	
KA..157	26	120	50	180	180	434	32	200	M24 × 70	06436943	

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## Design and operating notes

Assembly/disassembly of gear units with hollow shaft and key

Type	C3 mm	D <sup>H7</sup> mm	DK mm	L15 mm	L17 mm	L18 mm	LK2 mm	U mm	MS Nm	ISO 4017 M..	Part number of the as- sembly/disassembly kit
KAM77	18	50	36	65	75	291	14	40	40	M16 × 50	06436897
KAM67	18	40	36	50	60	260	12	40	40	M16 × 50	06436870
KAM87	22	60	42	75	90	341	18	80	80	M20 × 60	06436900
KAM97	22	70	42	90	105	400	20	80	80	M20 × 60	06436919
KAM107	26	90	50	110	125	447	25	200	200	M24 × 70	06436927
KAM127	26	100	50	120	150	527	28	200	200	M24 × 70	06436935
KAM157	26	120	50	180	180	665	32	200	200	M24 × 70	06436943
SA..37	12	20	16	40	40	92	6	8	8	M6 × 25	06436838
SA..47	16	25	22	38	38	89	8	20	20	M10 × 35	06436846
SA..47	16	30	22	39	45	89	8	20	20	M10 × 35	06436854
SA..57	16	30	22	39	45	116	8	20	20	M10 × 35	06436854
SA..57	18	35	28	45	52	114	10	20	20	M12 × 45	06436862
SA..67	18	40	36	50	60	126	12	40	40	M16 × 50	06436870
SA..67	18	45	36	50	60	126	14	40	40	M16 × 50	06436889
SA..77	18	50	36	63	75	165	14	40	40	M16 × 50	06436897
SA..77	22	60	42	72	90	158	18	80	80	M20 × 60	06436900
SA..87	22	60	42	75	90	198	18	80	80	M20 × 60	06436900
SA..87	22	70	42	90	105	198	20	80	80	M20 × 60	06436919
SA..97	22	70	42	90	105	238	20	80	80	M20 × 60	06436919
SA..97	26	90	50	110	125	229	25	200	200	M24 × 70	06436927
WA..10	11	16	12.5	24	24	58	5	8	8	M5 × 50	06437125
WA..19	12	18	16	27	27	72	6	8	8	M6 × 25	0643682X
WA..19	12	20	16	26	30	72	6	8	8	M6 × 25	06436838
WA..20	12	18	16	27	27	72	6	8	8	M6 × 25	0643682X
WA..20	12	20	16	26	30	72	6	8	8	M6 × 25	06436838
WA..29	12	20	16	28	30	80	6	8	8	M6 × 16	06436838
WA..29	16	25	22	28	30	91	8	20	20	M10 × 35	06436846
WA..29	16	30	22	28	30	76	8	20	20	M10 × 35	06436854
WA..30	12	20	16	30	30	93	6	8	8	M6 × 25	06436838
WA..39	16	25	22	30	38	91	8	20	20	M10 × 35	06436846
WA..39	16	30	22	35	35	91	8	20	20	M10 × 35	06436854
WA..49	16	30	22	35	45	121	8	20	20	M10 × 35	06436854
WA..49	18	35	28	35	45	119	10	20	20	M12 × 45	06436862
WA..59	18	35	28	35	45	142	10	20	20	M12 × 45	06436862
WA..59	18	40	36	35	45	136	12	40	40	M16 × 50	06436870

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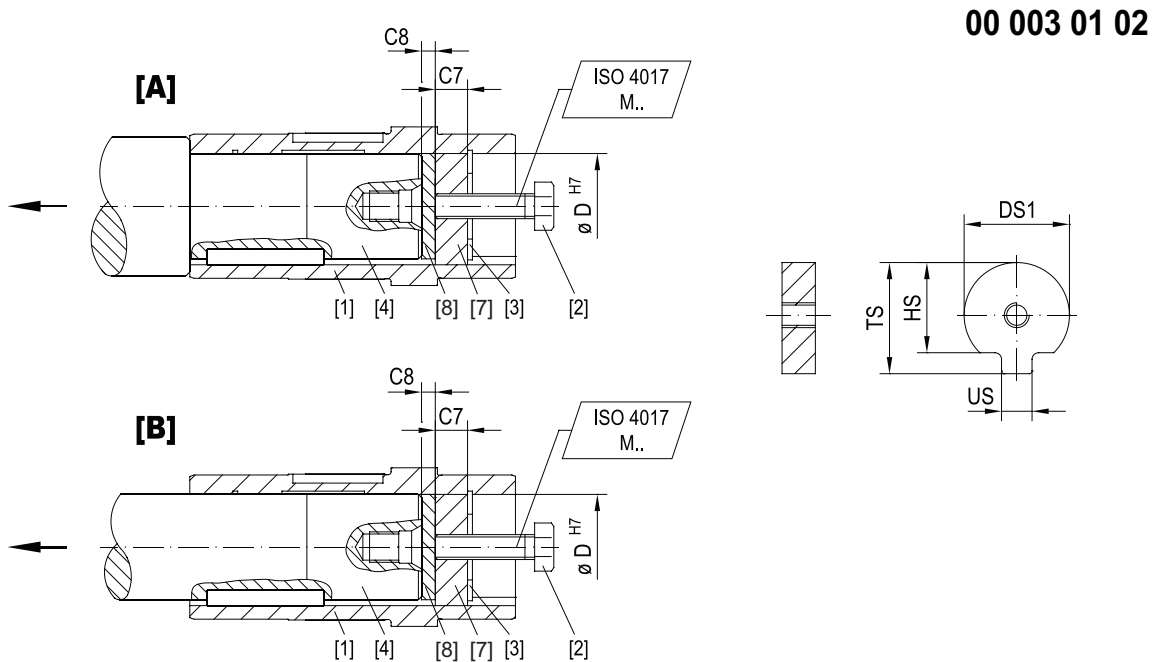
Disassembly

INFORMATION



The depicted assembly kit for attaching the customer shaft is a recommendation by SEW-EURODRIVE.

- Always check whether this design can compensate the present axial loads.
- In particular applications (e.g. mounting agitator shafts), a different design may have to be used to secure the shaft axially. You can use your own devices to secure the shaft axially if it can be ensured that the designs do not cause potential ignition sources according to ISO 80079-36 and -37 (e.g. impact sparks).



00 003 01 02

54043204711118091

- C7 Width of fixed nut
- C8 Width of forcing washer
- D Hollow shaft diameter
- DS1 Diameter of fixed nut
- HS Height 1 fixed nut
- TS Height 2 fixed nut
- US Base width of fixed nut
- [1] Hollow shaft
- [2] Retaining screw
- [3] Retaining ring
- [4] Customer shaft
- [7] Fixed nut for disassembly
- [8] Forcing washer

Dimensions and part numbers of the assembly/disassembly kit:

Gear unit	$D^{H7}$ mm	C8 mm	C7 mm	HS mm	US mm	TS mm	DS1 mm	ISO 4017 M..	Part number of the as- sembly/disassembly kit
WA..10	16	5	5	12	4.5	18	15.7	M5 × 50	06437125
WA..19, WA..20	18	5	6	13.5	5.5	20.5	17.7	M6 × 25	0643682X

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## Design and operating notes

Assembly/disassembly of gear units with hollow shaft and key

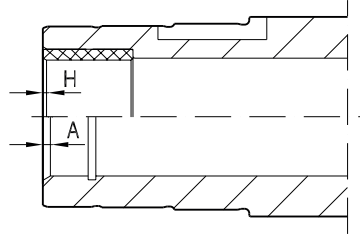
Gear unit	D <sup>H7</sup> mm	C8 mm	C7 mm	HS mm	US mm	TS mm	DS1 mm	ISO 4017 M..	Part number of the as- sembly/disassembly kit
KA..19, SA..37, WA..19, WA..20, WA..29, WA..30	20	5	6	15.5	5.5	22.5	19.7	M6 × 25	06436838
FA..27, KA..29, SA..47, WA..29, WA..39	25	5	10	20	7.5	28	24.7	M10 × 35	06436846
FA..37, KA..29, KA..37, KA..39, SA..47, SA..57, WA..29, WA..39, WA..49	30	5	10	25	7.5	33	29.7	M10 × 35	06436854
FA..47, KA..39, KA..47, KA..49, SA..57, WA..49, WA..59	35	5	12	29	9.5	38	34.7	M12 × 45	06436862
FA..57, KA..57, FA..67, KA..49, KA..67, SA..67, WA..59	40	5	12	34	11.5	41.9	39.7	M16 × 50	06436870
SA..67	45	5	12	38.5	13.5	48.5	44.7	M16 × 50	06436889
FA..77, KA..77, SA..77	50	5	12	43.5	13.5	53.5	49.7	M16 × 50	06436897
FA..87, KA..87, SA..77, SA..87	60	5	16	56	17.5	64	59.7	M20 × 60	06436900
FA..97, KA..97, SA..87, SA..97	70	5	16	65.5	19.5	74.5	69.7	M20 × 60	06436919
FA..107, KA..107, SA..97	90	5	20	80	24.5	95	89.7	M24 × 70	06436927
FA..127, KA..127	100	5	20	89	27.5	106	99.7	M24 × 70	06436935
FA..157, KA..157	120	5	20	107	31	127	119.7	M24 × 70	06436943

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## 6.5 Gear units with hollow shaft

### 6.5.1 Chamfers on hollow shafts

The following figure shows the chamfers of parallel-shaft helical, helical-bevel, helical-worm and SPIROPLAN® gear units with hollow shaft:



Dimension table for the chamfers of the F, K, S, and W gear units:

Gear unit	Design	
	with hollow shaft (A)	with hollow shaft and shrink disk (H)
W..10	1.5 × 30°	-
W..19, W..20, W..30	2 × 30°	-
F..27	2 × 30°	0.5 × 45°
K..19, W..29	2 × 30°	0.5 × 45°
K..29, W..39	2 × 30°	0.5 × 45°
F../K../S..37	2 × 30°	0.5 × 45°
K..39, W..49	2 × 30°	0.5 × 45°
F../K../S..47	2 × 30°	0.5 × 45°
K..49, W..59	2 × 30°	0.5 × 45°
S..57	2 × 30°	0.5 × 45°
F../K..57	2 × 30°	0.5 × 45°
F../K../S..67	2 × 30°	0.5 × 45°
F../K../S..77	2 × 30°	0.5 × 45°
F../K../S..87	3 × 30°	0.5 × 45°
F../K../S..97	3 × 30°	0.5 × 45°
F../K..107	3 × 30°	0.5 × 45°
F../K..127	5 × 30°	0.5 × 45°
F../K..157	5 × 30°	0.5 × 45°
KH167	-	0.5 × 45°
KH187	-	0.5 × 45°

**6.5.2 Special motor/gear unit combinations**

Please note for parallel-shaft helical gearmotors with hollow shaft (FA..B, FV..B, FH..B, FAF, FVF, FHF, FA, FV, FH, FT, FAZ, FVZ, FHZ):

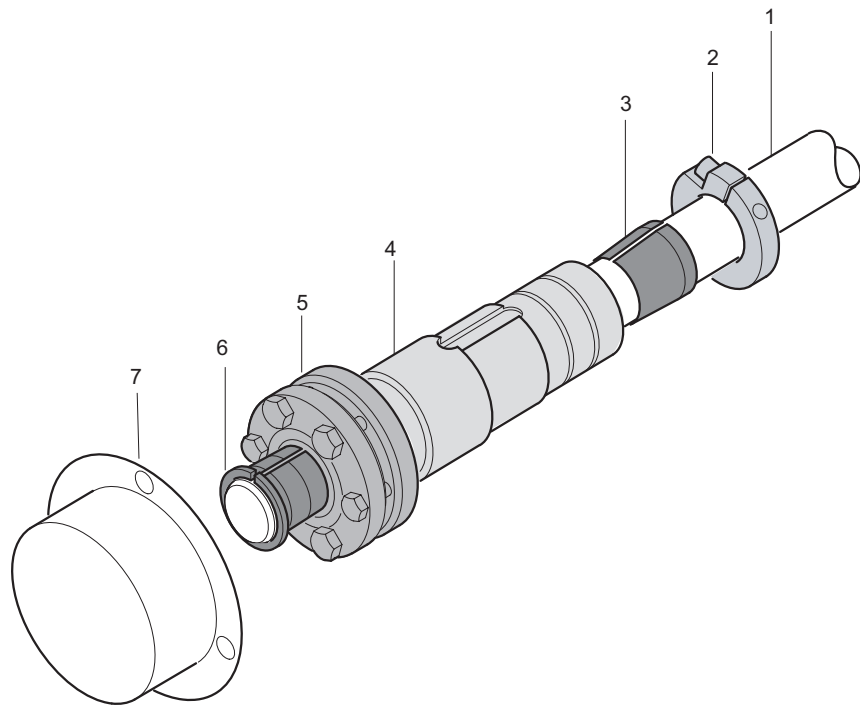
- If you are using a customer shaft pushed through on the motor end, there may be a collision when a "small gear unit" is used in combination with a "large motor."
- Check the motor dimension AC to decide whether there will be a collision with a pushed-through customer shaft.

## 6.6 TorqLOC® mounting system for gear units with hollow shaft

### 6.6.1 TorqLOC® description

The TorqLOC® hollow shaft mounting system is used for achieving a non-positive connection between the customer shaft and the hollow shaft in the gear unit. This makes the TorqLOC® hollow shaft mounting system an alternative to the previous hollow shaft with shrink disk, hollow shaft with key, and splined hollow shaft.

The TorqLOC® hollow shaft mounting system consists of the following components:



4309625867

- [1] Customer shaft
- [2] Clamping ring
- [3] Conical bronze bushing
- [4] Hollow shaft in gear unit
- [5] Shrink disk
- [6] Conical steel bushing
- [7] Fixed safety cover

### 6.6.2 Advantages of TorqLOC®

The TorqLOC® hollow shaft mounting system is characterized by the following advantages:

- Cost saving as the customer shaft can be made from drawn material up to quality h11.
- Cost saving because different customer shaft diameters can be realized with one hollow shaft diameter and different bushings.
- Simple installation as there is no need to accommodate any shaft connections.
- Simple removal even after many hours of operation as the formation of contact corrosion has been reduced and the conical connections can easily be released.

**6.6.3 Technical data of TorqLOC®**

The TorqLOC® hollow shaft mounting system is approved for output torques of 80 Nm to 20 000 Nm.

The following gear units are available with TorqLOC® hollow shaft mounting system:

- Parallel-shaft helical gear units in gear unit sizes 37 to 157 (FT37 – FT157).
- Helical-bevel gear units in gear unit sizes 37 to 157 (KT37 – KT157), 19 to 49 (KT19 – KT49).
- Helical-worm gear units in gear unit sizes 37 to 97 (ST37 – ST97).
- SPIROPLAN® gear units in size 29 – 59 (WT.9)

**Available options**

The following options are available for gear units with TorqLOC® hollow shaft mounting system:

- For helical-bevel, worm and SPIROPLAN® gear units (KT..., ST..., WT.9...): "Torque arm" option (../T).
- For parallel-shaft helical gear units (FT...): "Rubber buffer" option (../G).

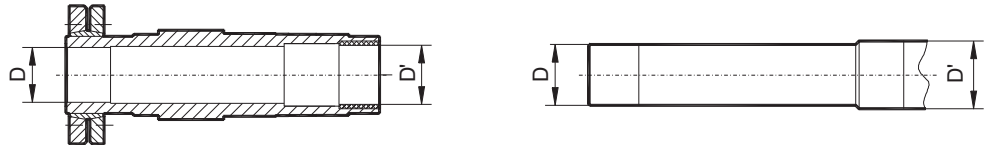


## 6.7 Shouldered hollow shaft option with shrink disk

The following gear units with a hollow shaft and shrink disk also have the option of the larger bore diameter D':

- Parallel-shaft helical gear units FH/FHF/FHZ37 – 157
- Helical-bevel gear units KH/KHF/KHZ37 – 157
- Helical-worm gear units SH/SHF47 – 97

D' = D as standard.



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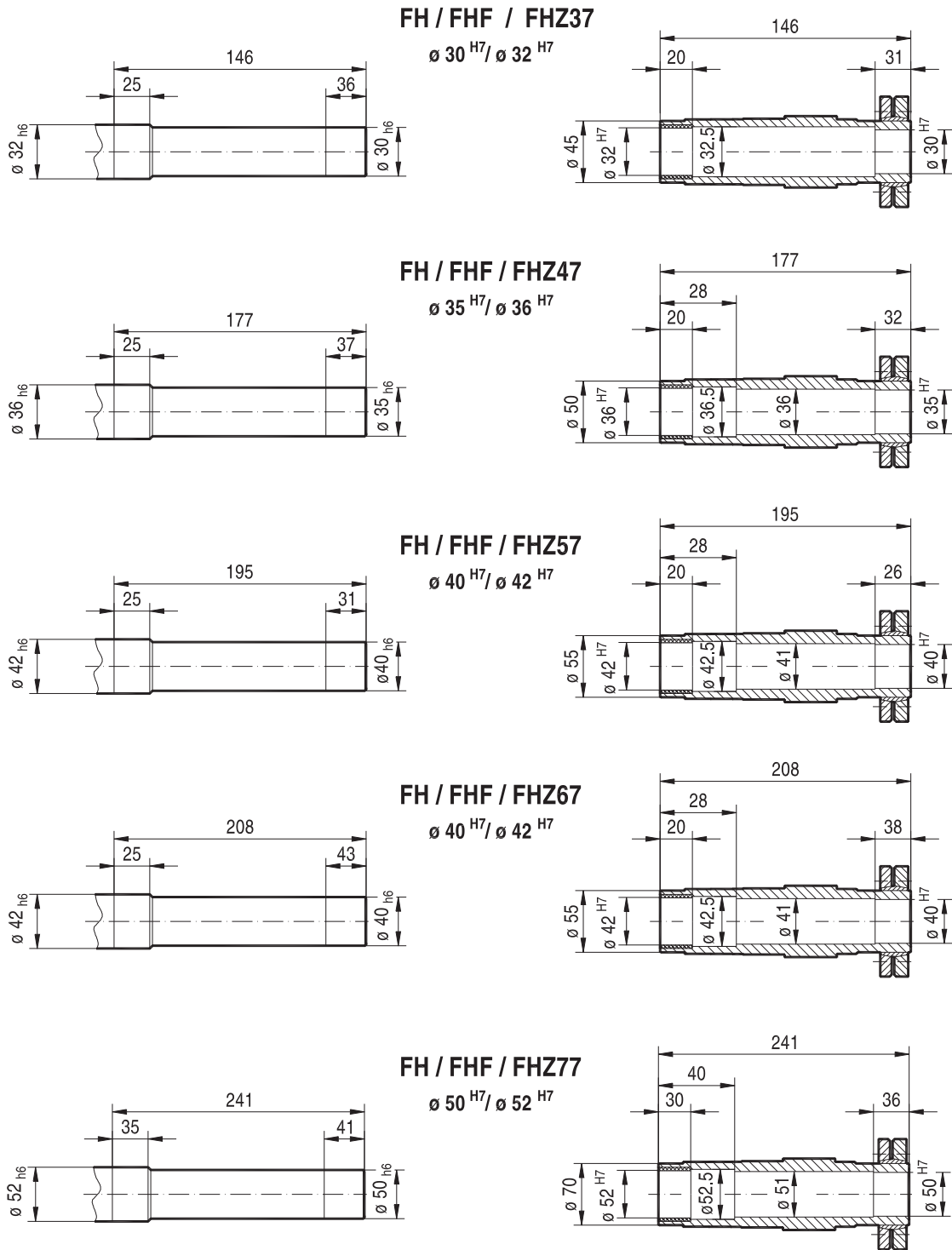
Gear unit	Bore diameter D/ optionally D' mm
FH/FHF/FHZ37, KH/KHF/KHZ37, SH/SHF/SHZ47	30/32
FH/FHF/FHZ47, KH/KHF/KHZ47, SH/SHF/SHZ57	35/36
FH/FHF/FHZ57, KH/KHF/KHZ57	40/42
FH/FHF/FHZ67, KH/KHF/KHZ67, SH/SHF/SHZ67	40/42
FH/FHF/FHZ77, KH/KHF/KHZ77, SH/SHF/SHZ77	50/52
FH/FHF/FHZ87, KH/KHF/KHZ87, SH/SHF/SHZ87	65/66
FH/FHF/FHZ97, KH/KHF/KHZ97, SH/SHF/SHZ97	75/76
FH/FHF/FHZ107, KH/KHF/KHZ107	95/96
FH/FHF/FHZ127, KH/KHF/KHZ127	105/106
FH/FHF/FHZ157, KH/KHF/KHZ157	125/126

Diameter D/D' must be specified when ordering gear units with a shouldered hollow shaft (optional bore diameter D').

### 6.7.1 Sample order

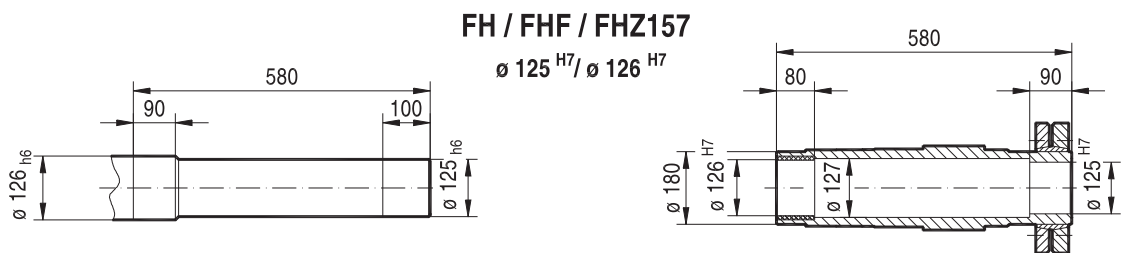
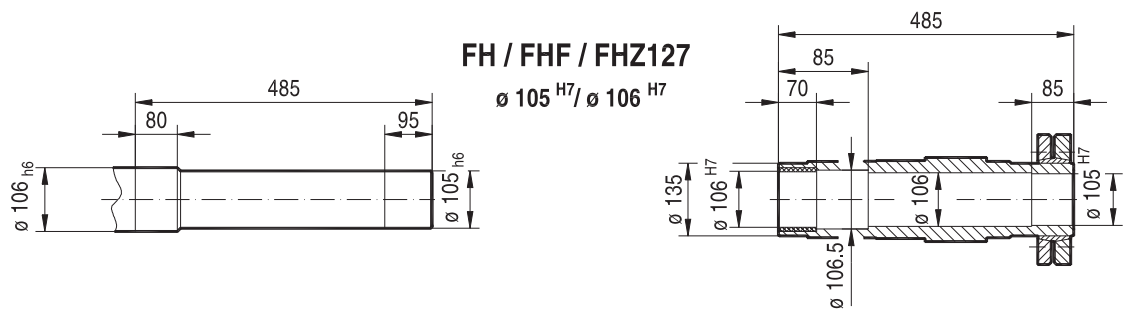
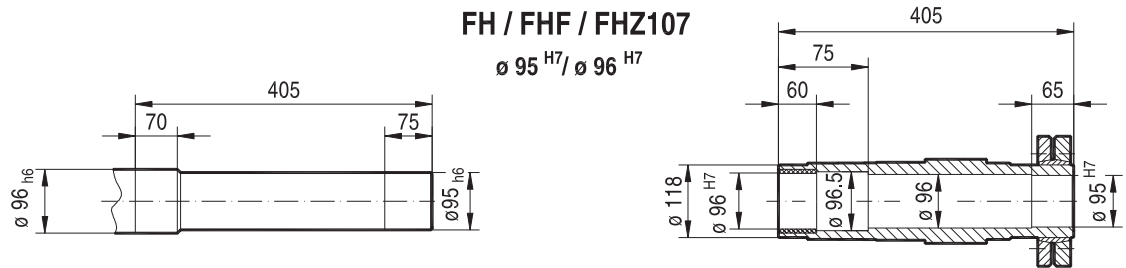
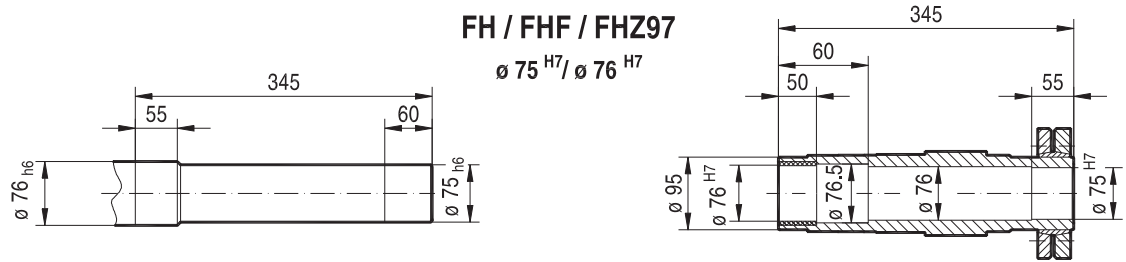
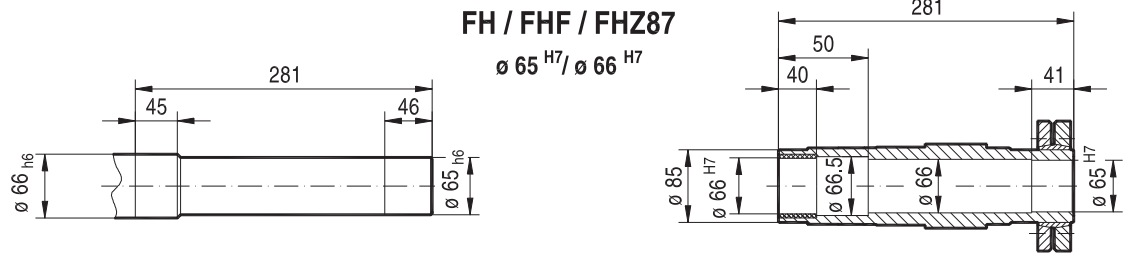
FH37 DRN80M4 with hollow shaft 30/32 mm

#### 6.7.2 Parallel-shaft helical gear units with shouldered hollow shaft (dimensions in mm):



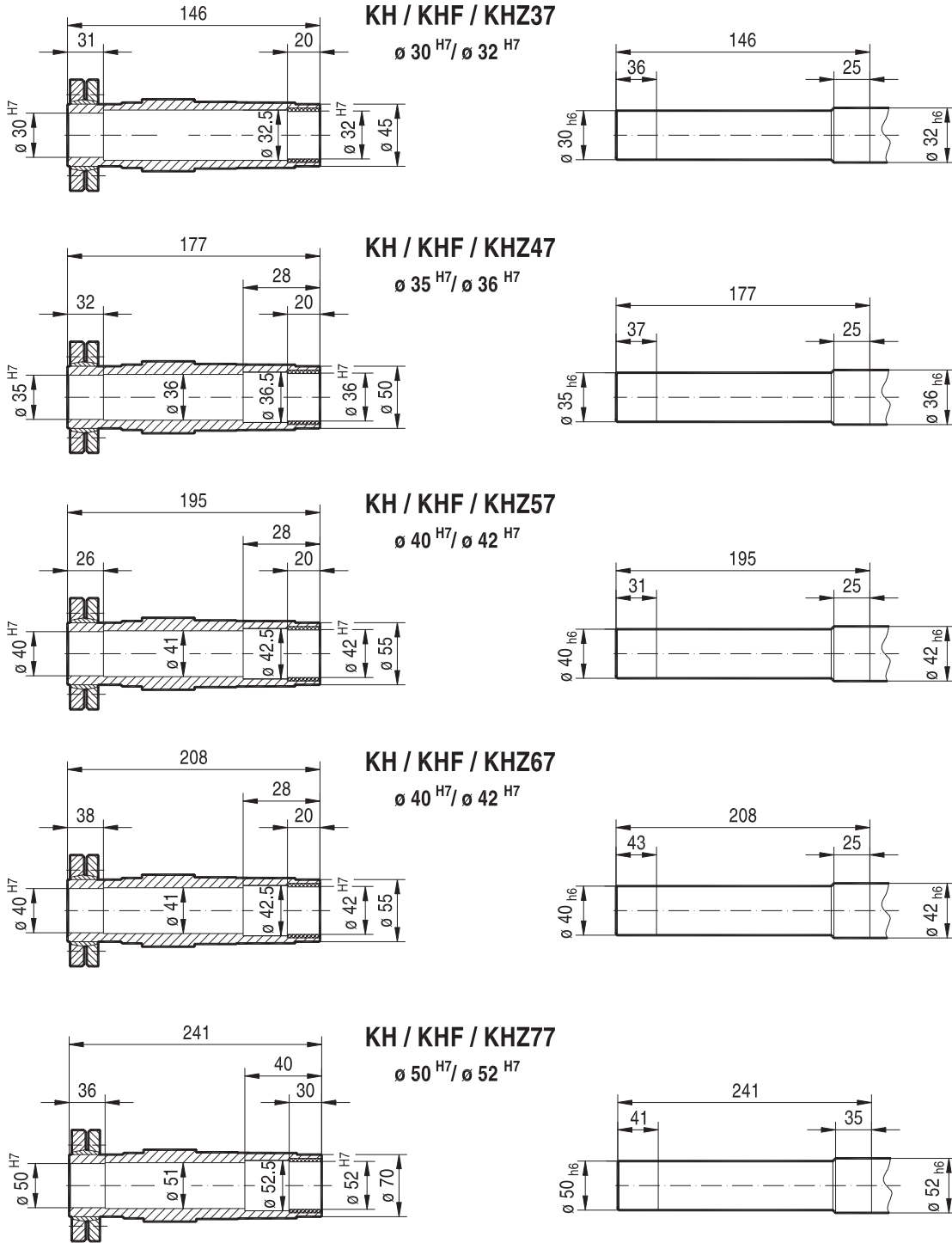
4987059083

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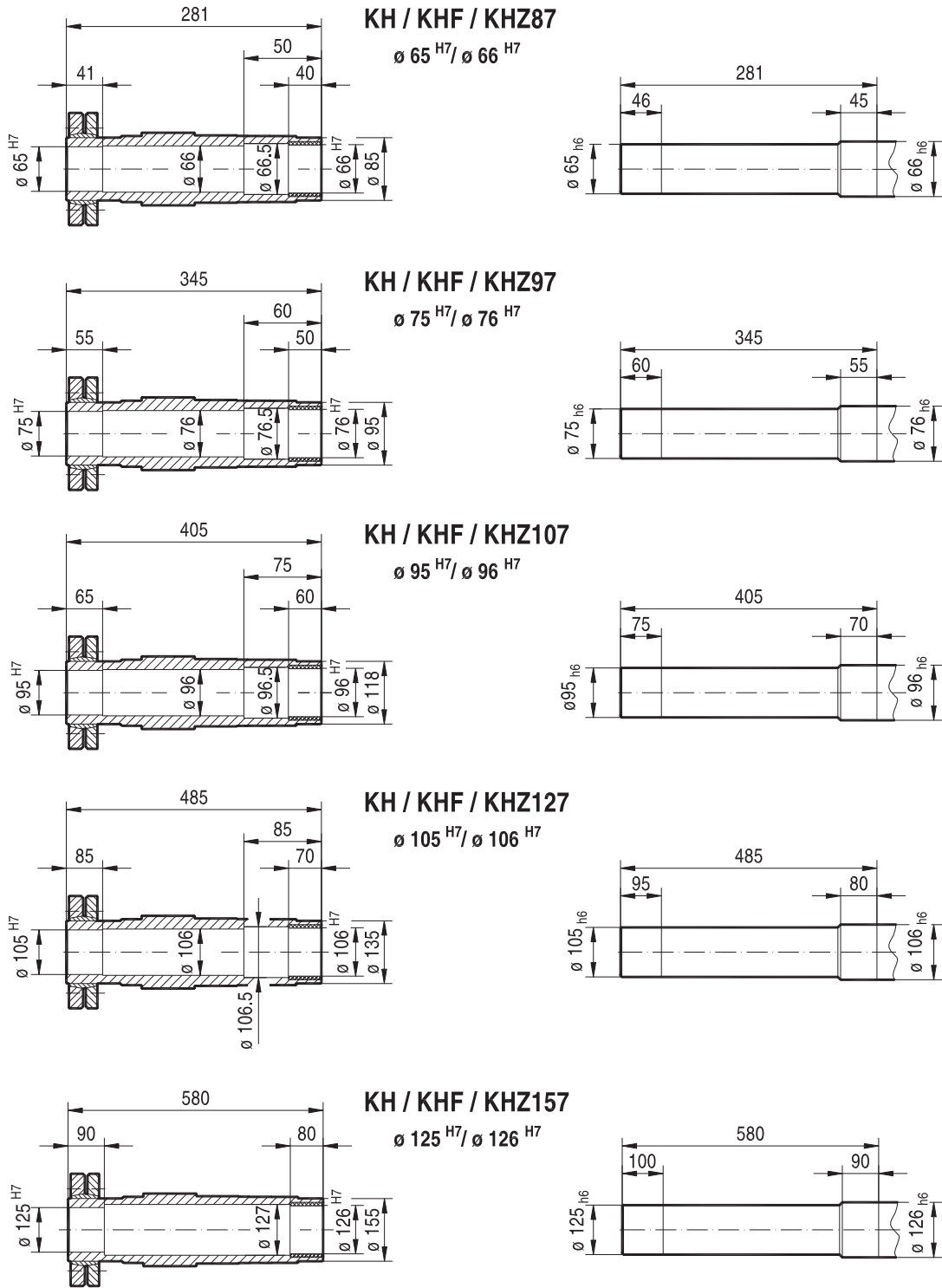


4987060747

#### 6.7.3 Helical-bevel gear units with shouldered hollow shaft (dimensions in mm):

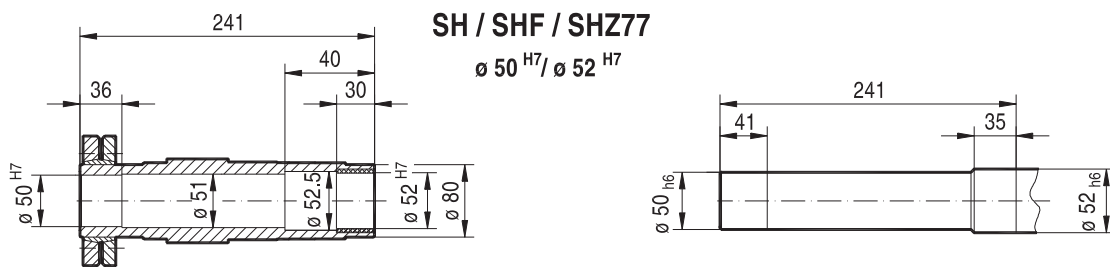
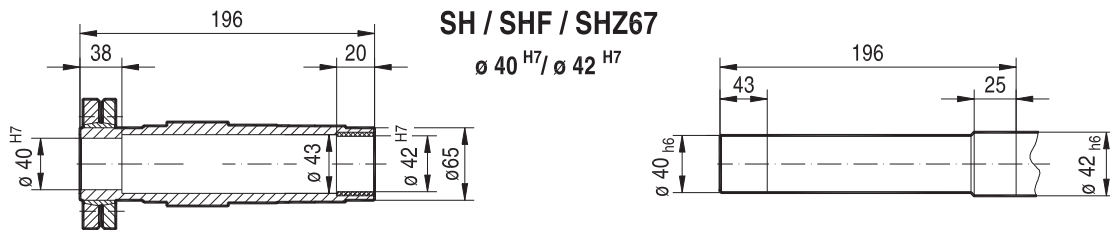
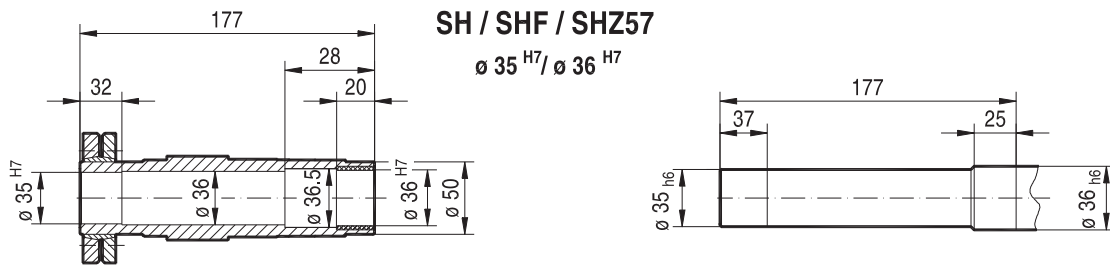
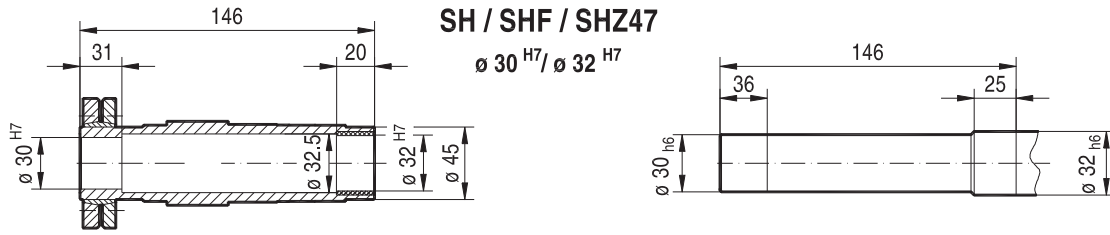


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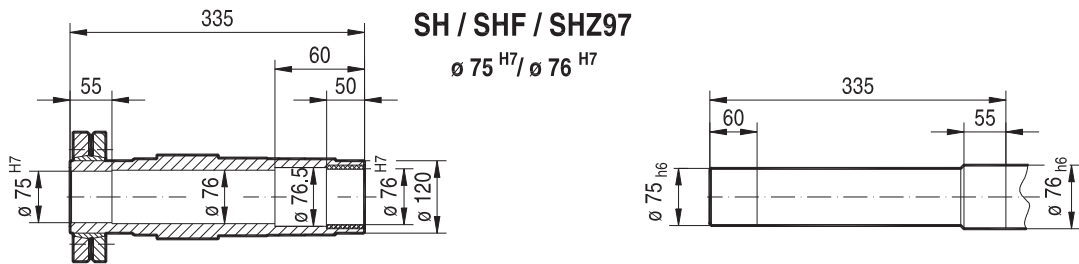
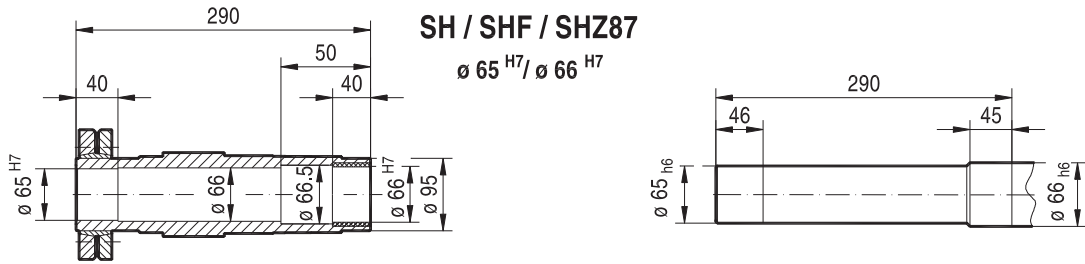


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#### 6.7.4 Helical-worm gear units with shouldered hollow shaft (dimensions in mm):



4987067787



4987069451

## 6.8 Notes on stainless shrink disk or output shaft

Before using a stainless steel shrink disk or stainless steel output shaft, check if the ambient conditions, used chemicals and cleaning agents are compatible with the stainless steel material. For information on the material, refer to the order confirmation.

## 6.9 Adapter for mounting IEC and NEMA motors

### 6.9.1 Description of AMS.. adapter

AMS.. adapters are used for mounting motors according to IEC standard or NEMA (type C or TC) to SEW-EURODRIVE helical gear units, parallel-shaft helical gear units, helical-bevel and helical-worm gear units and SPIROPLAN® gear units.

Adapters are available for sizes 63 to 280 for IEC motors. Adapters are available for sizes 56 to 365 for NEMA motors.

The designation of the adapter size corresponds to the respective IEC or NEMA motor size.

Torque is transmitted between the motor and the gear unit via a positive and impact resistant claw coupling. Vibrations and shocks occurring during operation are effectively attenuated by an inserted polyurethane girth gear.

The following options are available for the AMS.. adapters:

#### **AMS.. adapter with Drain Hole (DH)**

The Drain Hole option is only available for the M4 mounting position. It is recommended if moisture or liquids (water) can enter the adapter space due to external influences. The design provides 4 drain holes around the circumference of the spacer ring for this case. Incoming liquids encounter the installed oil flinger, which transports the liquids to the outside due to rotary motion. The medium can run off to the outside through the drainage slope when in idle state.

#### **AMS.. adapter with backstop (RS)**

If the application requires only one permitted direction of rotation, the AMS.. adapter can be configured with an integrated backstop. Backstops with centrifugal lift-off sprags are used. The advantage of this design is that the sprags move around inside the backstop without making contact above a certain speed (lift-off speed). This means the backstops operate wear-free, without losses, maintenance-free and are suited for high speeds.

The backstop is completely integrated in the adapter.

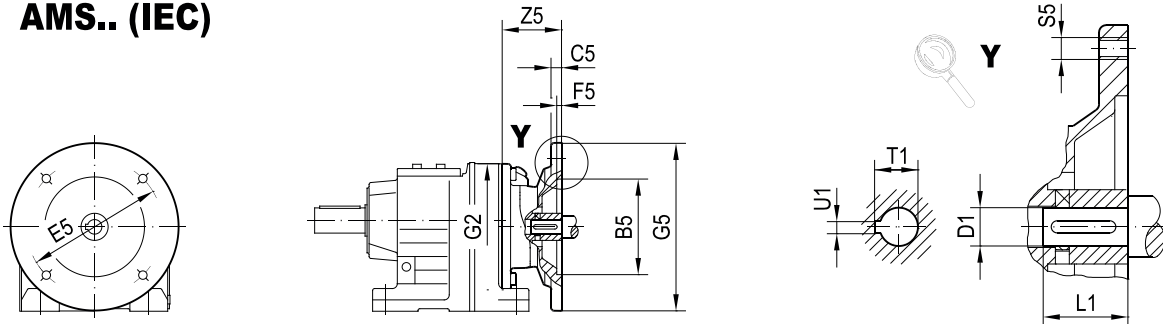


6.9.2 Dimension sheets of the AMS.. adapters

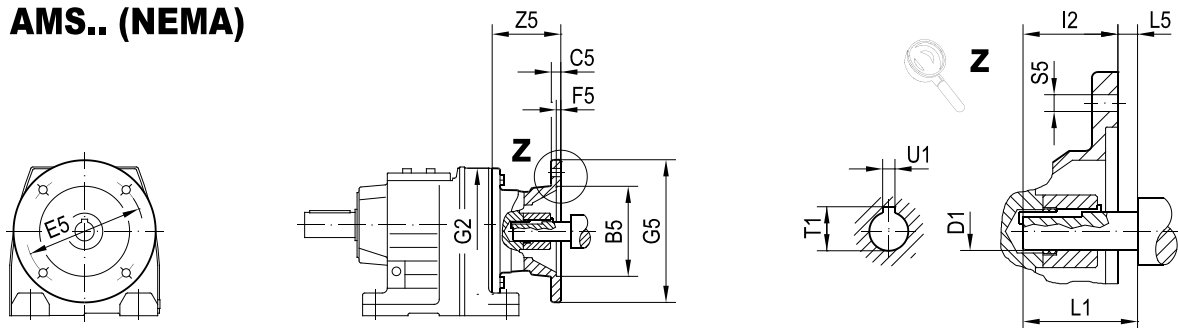
Key

01 196 00 20

**AMS.. (IEC)**



**AMS.. (NEMA)**



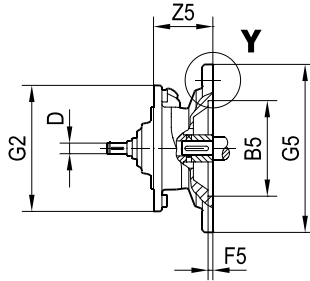
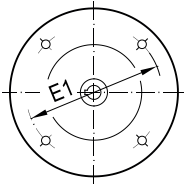
35485603339

- B5 Center bore diameter
- C5 Flange thickness
- D1 Coupling bore diameter
- E5 Hole circle diameter
- F5 Centering depth
- G2 Gear unit input end flange diameter
- G5 Adapter flange diameter
- I2 Maximum insertion depth in adapter
- L1 Shaft end length (motor)
- L5 Shaft collar length to flange surface
- S5 Tapped hole
- T1 Keyway depth
- U1 Keyway width
- Z5 Adapter length

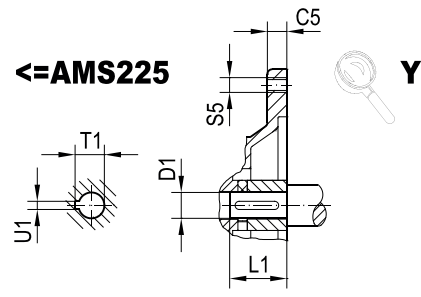
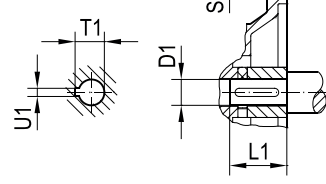
#### Adapters for mounting IEC motors

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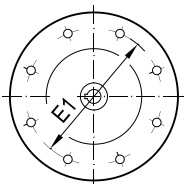
#### ≤AMS200



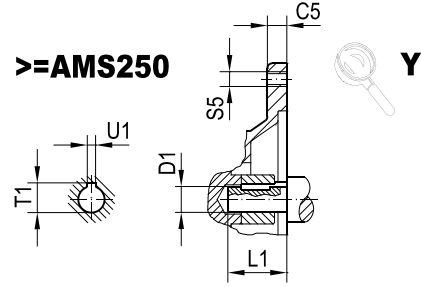
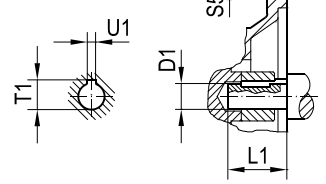
#### ≤AMS225



#### ≥AMS225



#### ≥AMS250

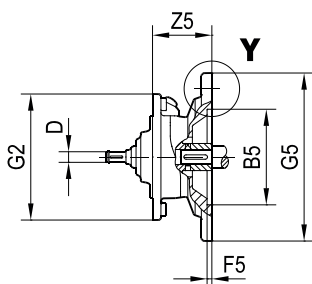
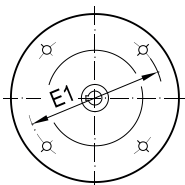


Gear unit type	Adapter type	Dimensions in mm												
		B5	C5	D	D1	E5	F5	G2	G5	L1	S5	T1	U1	Z5 <sup>1)</sup>
R..07, R..17 W..19	AMS63 <sup>2)</sup>	95	10	10	11	115	3.5	105	140	23	M8	12.8	4	56.5
	AMS71 <sup>2)</sup>	110	10	10	14	130	4	105	160	30	M8	16.3	5	56.5
	AMS80 <sup>2)</sup>	130	12	12	19	165	4.5	105	200	40	M10	21.8	6	73.5
R..27, R..37 F..27, F..37, F..47 K..19, K..29, K..37 S..37, S..47, S..57 S..37p, S..47p, S..57p W..29, W..39	AMS63	95	10	10	11	115	3.5	120	140	23	M8	12.8	4	56.5
	AMS71 <sup>3)</sup>	110	10	10	14	130	4	120	160	30	M8	16.3	5	56.5
	AMS80 <sup>2)3)</sup>	130	12	12	19	165	4.5	120	200	40	M10	21.8	6	73.5
	AMS90 <sup>2)3)</sup>	130	12	14	24	165	4.5	120	200	50	M10	27.3	8	86.5
RX..57, RX..67 R..47, R..57, R..67 F..57, F..67 K..39, K..47, K..57, K..67 S..67, S..67p W..49, W..59	AMS63	95	10	10	11	115	3.5	160	140	23	M8	12.8	4	50
	AMS71	110	10	10	14	130	4	160	160	30	M8	16.3	5	50
	AMS80 <sup>3)</sup>	130	12	12	19	165	4.5	160	200	40	M10	21.8	6	67
	AMS90 <sup>3)</sup>	130	12	14	24	165	4.5	160	200	50	M10	27.3	8	80
	AMS100 <sup>2)3)</sup>	180	15	16	28	215	5	160	250	60	M12	31.3	8	108.5
	AMS112 <sup>2)3)</sup>	180	15	18	28	215	5	160	250	60	M12	31.3	8	108.5
RX..77 R..77 F..77 K..49, K..77 S..77, S..77p	AMS132S/M <sup>2)</sup>	230	16	22	38	265	5	160	300	80	M12	41.3	10	134
	AMS63	95	10	10	11	115	3.5	200	140	23	M8	12.8	4	44
	AMS71	110	10	10	14	130	4	200	160	30	M8	16.3	5	44
	AMS80	130	12	12	19	165	4.5	200	200	40	M10	21.8	6	60
	AMS90	130	12	14	24	165	4.5	200	200	50	M10	27.3	8	73
	AMS100 <sup>2)</sup>	180	15	16	28	215	5	200	250	60	M12	31.3	8	100.5
	AMS112 <sup>2)</sup>	180	15	18	28	215	5	200	250	60	M12	31.3	8	100.5
AMS132S/M <sup>2)3)</sup>	230	16	22	38	265	5	200	300	80	M12	41.3	10	126	
AMS132ML <sup>2)3)</sup>	230	16	28	38	265	5	200	300	80	M12	41.3	10	126	

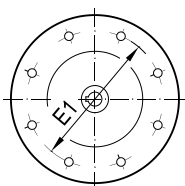
- 1) For the dimensions Z5 for the RS and DH options, refer to the "Gear units" catalog.
- 2) Check dimension 1/2 G5 because the component may protrude beyond the foot mounting surface when mounted on an R, K, S or W foot-mounted gear unit.
- 3) For F..37/47/57/77, the adapter length Z5 may change depending on the gear unit design.

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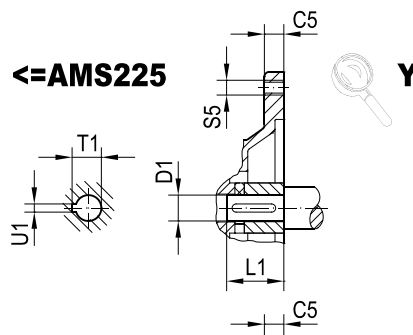
≤AMS200



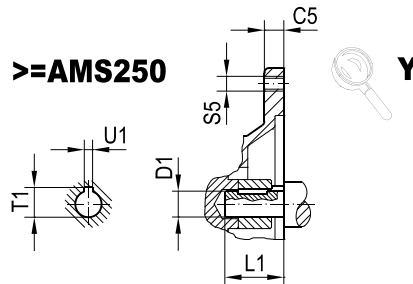
≥AMS225



≤AMS225



≥AMS250



Gear unit type	Adapter type	Dimensions in mm												
		B5	C5	D	D1	E5	F5	G2	G5	L1	S5	T1	U1	Z5 <sup>1)</sup>
RX..87 R..87 F..87 K..87 S..87 <sup>2)</sup> , S..87p <sup>2)</sup>	AMS80	130	12	12	19	165	4.5	250	200	40	M10	21.8	6	55
	AMS90	130	12	14	24	165	4.5	250	200	50	M10	27.3	8	68
	AMS100	180	15	16	28	215	5	250	250	60	M12	31.3	8	95.5
	AMS112	180	15	18	28	215	5	250	250	60	M12	31.3	8	95.5
	AMS132S/M	230	16	22	38	265	5	250	300	80	M12	41.3	10	121
	AMS132ML	230	16	28	38	265	5	250	300	80	M12	41.3	10	121
	AMS160	250	18	28	42	300	6	250	350	110	M16	45.3	12	184
RX..97 <sup>3)</sup> R..97 <sup>3)</sup> F..97 K..97 S..97, S..97p	AMS180	250	18	32	48	300	6	250	350	110	M16	51.8	14	184
	AMS100	180	15	16	28	215	5	300	250	60	M12	31.3	8	90.5
	AMS112	180	15	18	28	215	5	300	250	60	M12	31.3	8	90.5
	AMS132S/M	230	16	22	38	265	5	300	300	80	M12	41.3	10	116
	AMS132ML	230	16	28	38	265	5	300	300	80	M12	41.3	10	116
	AMS160	250	18	28	42	300	6	300	350	110	M16	45.3	12	179
	AMS180	250	18	32	48	300	6	300	350	110	M16	51.8	14	179
RX..107 R..107, R..127 F..107 K..107	AMS200	300	20	38	55	350	7	300	400	110	M16	59.3	16	240
	AMS225	350	22	38	60	400	7	300	450	140	M16	64.4	18	255
	AMS100	180	15	16	28	215	5	350	250	60	M12	31.3	8	84.5
	AMS112	180	15	18	28	215	5	350	250	60	M12	31.3	8	84.5
	AMS132S/M	230	16	22	38	265	5	350	300	80	M12	41.3	10	110
	AMS132ML	230	16	28	38	265	5	350	300	80	M12	41.3	10	110
	AMS160	250	18	28	42	300	6	350	350	110	M16	45.3	12	173
R..137	AMS180	250	18	32	48	300	6	350	350	110	M16	51.8	14	173
	AMS200	300	20	38	55	350	7	350	400	110	M16	59.3	16	234
	AMS225	350	22	38	60	400	7	350	450	140	M16	64.4	18	249
	AMS132S/M	230	16	22	38	265	5	400	300	80	M12	41.3	10	103
	AMS132ML	230	16	28	38	265	5	400	300	80	M12	41.3	10	103

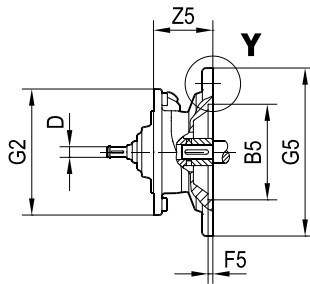
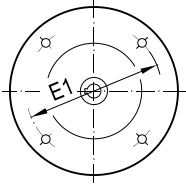
1) For the dimensions Z5 for the RS and DH options, refer to the "Gear units" catalog.

2) Not with AMS180.

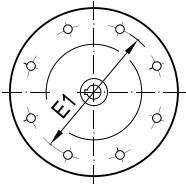
3) Not with AMS225.

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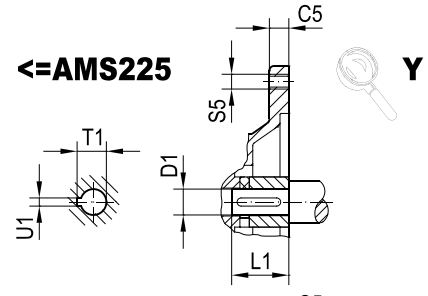
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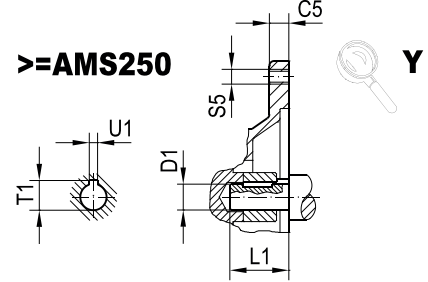
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**<=AMS225**



**>=AMS250**

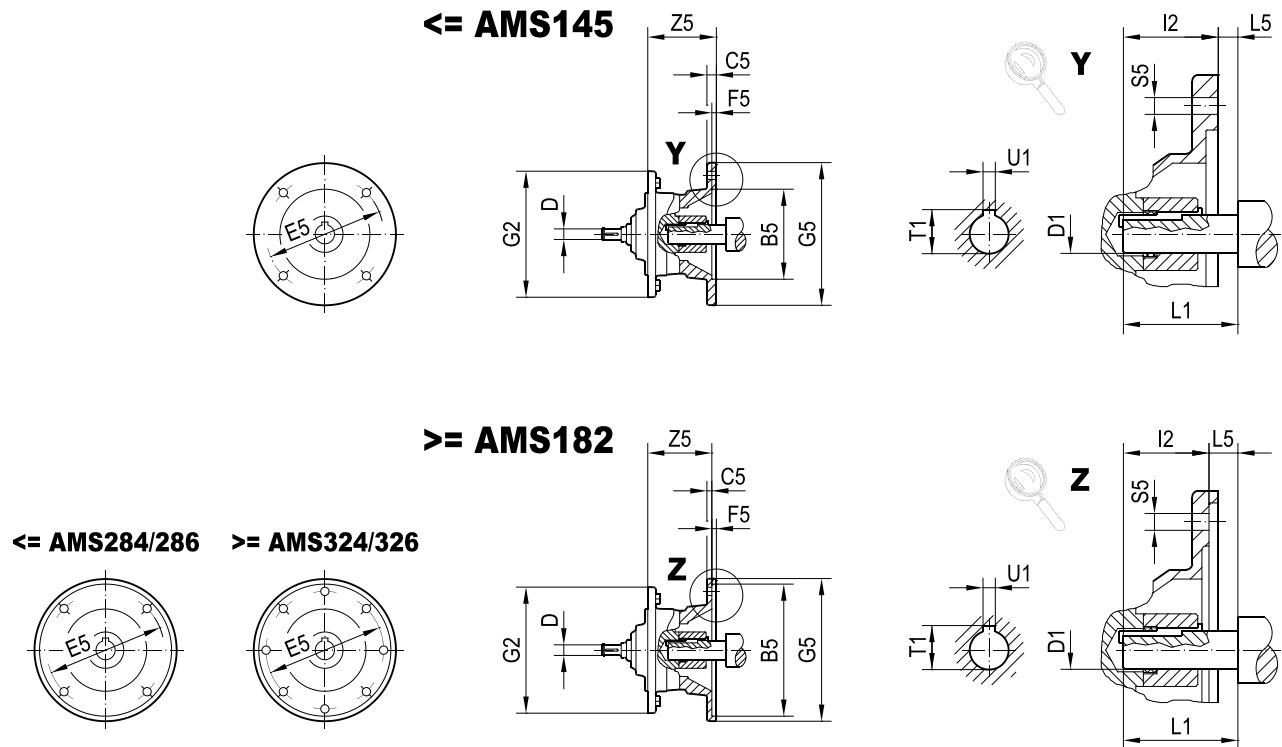


Gear unit type	Adapter type	Dimensions in mm												
		B5	C5	D	D1	E5	F5	G2	G5	L1	S5	T1	U1	Z5 <sup>1)</sup>
R..147 F..127 K..127	AMS132S/M	230	16	22	38	265	5	450	300	80	M12	41.3	10	95
	AMS132ML	230	16	28	38	265	5	450	300	80	M12	41.3	10	95
	AMS160	250	18	28	42	300	6	450	350	110	M16	45.3	12	158
	AMS180	250	18	32	48	300	6	450	350	110	M16	51.8	14	158
	AMS200	300	20	38	55	350	7	450	400	110	M16	59.3	16	219
	AMS225	350	22	38	60	400	7	450	450	140	M16	64.4	18	234
	AMS250	450	25	48	65	500	7	450	550	140	M16	69.4	18	297.5
R..167 F..157 K..157, K..187	AMS280	450	25	48	75	500	7	450	550	140	M16	79.9	20	297.5
	AMS160	250	18	28	42	300	6	550	350	110	M16	45.3	12	150
	AMS180	250	18	32	48	300	6	550	350	110	M16	51.8	14	150
	AMS200	300	20	38	55	350	7	550	400	110	M16	59.3	16	211
	AMS225	350	22	38	60	400	7	550	450	140	M16	64.4	18	226
	AMS250	450	25	48	65	500	7	550	550	140	M16	69.4	18	289.5
	AMS280	450	25	48	75	500	7	550	550	140	M16	79.9	20	289.5

1) For the dimensions Z5 for the RS and DH options, refer to the "Gear units" catalog.

Adapters for mounting NEMA motors

23 002 01 21



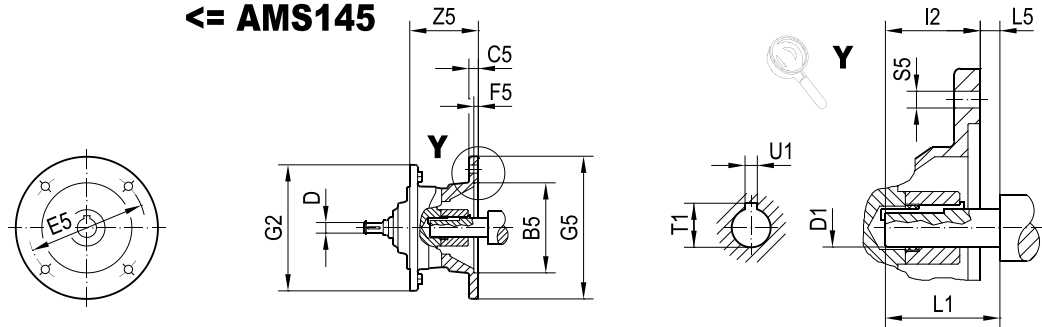
Gear unit type	Adapter type	Dimensions in mm														
		B5	C5	D	D1	E5	F5	G2	G5	I2	L1	L5	S5	T1	U1	Z5 <sup>1)</sup>
R..07 R..17 W..19	AMS56	114.3	11	10	15.875	149.2	4.5	105	170	52.3	48	-4.6	10.5	18.1	4.76	81.4
R..27, R..37 F..27, F..37, F..47 K..19, K..29, K..37 K..19, K..29, K..37 S..37, S..47, S..57 S..37p, S..47p, S..57p W..29, W..39	AMS56	114.3	11	10	15.875	149.2	4.5	120	170	52.3	48	-4.6	10.5	18.1	4.76	81.4
	AMS143	114.3	12	12	22.225	149.2	4.5	120	170	53.9	57	3.3	10.5	24.7	4.76	93.6
	AMS145	114.3	12	14	22.225	149.2	4.5	120	170	53.9	57	3.3	10.5	24.7	4.76	93.6
RX..57, RX..67 R..47, R..57, R..67 F..57, F..67 K..39, K..47, K..57, K..67 S..67, S..67p W..49, W..59	AMS56	114.3	11	10	15.875	149.2	4.5	160	170	52.3	48	-4.6	10.5	18.1	4.76	74.9
	AMS143	114.3	12	12	22.225	149.2	4.5	160	170	53.9	57	3.3	10.5	24.7	4.76	87.1
	AMS145	114.3	12	14	22.225	149.2	4.5	160	170	53.9	57	3.3	10.5	24.7	4.76	87.1
	AMS182	215.9	10	16	28.575	184.0	5	160	228	66.6	70	3.3	15	31.7	6.35	114.1
	AMS184	215.9	10	18	28.575	184.0	5	160	228	66.6	70	3.3	15	31.7	6.35	114.1
	AMS213/215	215.9	11	22	34.925	184.0	5	160	228	79.3	86	6.6	15	38.7	7.94	138.5
RX..77 R..77 F..77 K..49, K..77 S..77, S..77p	AMS56	114.3	11	10	15.875	149.2	4.5	200	170	52.3	48	-4.6	10.5	18.1	4.76	67.9
	AMS143	114.3	12	12	22.225	149.2	4.5	200	170	53.9	57	3.3	10.5	24.7	4.76	80.1
	AMS145	114.3	12	14	22.225	149.2	4.5	200	170	53.9	57	3.3	10.5	24.7	4.76	80.1
	AMS182	215.9	10	16	28.575	184.0	5	200	228	66.6	70	3.3	15	31.7	6.35	106.1
	AMS184	215.9	10	18	28.575	184.0	5	200	228	66.6	70	3.3	15	31.7	6.35	106.1
	AMS213/215	215.9	11	22	34.925	184.0	5	200	228	79.3	86	6.6	15	38.7	7.94	130.5

1) For the dimensions Z5 for the RS and DH options, refer to the "Gear units" catalog.

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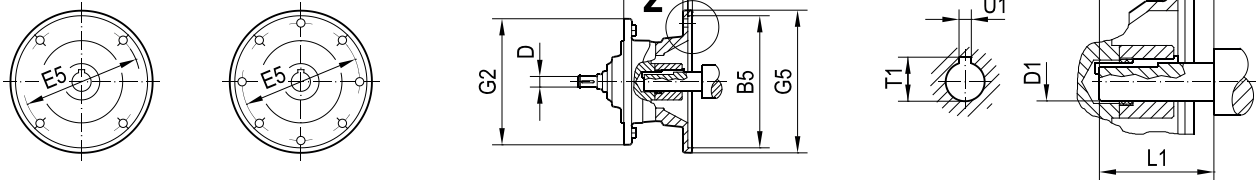
#### <= AMS145



#### >= AMS182

#### <= AMS284/286

#### >= AMS324/326



Gear unit type	Adapter type	Dimensions in mm														
		B5	C5	D	D1	E5	F..5	G2	G5	I2	L1	L5	S5	T1	U1	Z5 <sup>1)</sup>
RX..87 R..87 F..87 K..87 S..87 <sup>2)</sup> , S..87p <sup>2)</sup>	AMS143	114.3	12	12	22.225	149.2	4.5	250	170	53.9	57	3.3	10.5	24.7	4.76	75.1
	AMS145	114.3	12	14	22.225	149.2	4.5	250	170	53.9	57	3.3	10.5	24.7	4.76	75.1
	AMS182	215.9	10	16	28.575	184.0	5	250	228	66.6	70	3.3	15	31.7	6.35	101.1
	AMS184	215.9	10	18	28.575	184.0	5	250	228	66.6	70	3.3	15	31.7	6.35	101.1
	AMS213/215	215.9	11	22	34.925	184.0	5	250	228	79.3	86	6.6	15	38.7	7.94	125.5
	AMS254/256	215.9	12	28	41.275	184.0	5	250	228	95.3	102	6.4	15	45.8	9.53	184.9
	AMS284/286	266.7	15	32	47.625	228.6	5	250	286	111.3	117	6.1	15	53.4	12.7	191.5
RX..97 <sup>3)</sup> R..97 <sup>3)</sup> F..97 K..97 S..97, S..97p	AMS182	215.9	10	16	28.575	184.0	5	300	228	66.6	70	3.3	15	31.7	6.35	96.1
	AMS184	215.9	10	18	28.575	184.0	5	300	228	66.6	70	3.3	15	31.7	6.35	96.1
	AMS213/215	215.9	11	22	34.925	184.0	5	300	228	79.3	86	6.6	15	38.7	7.94	120.5
	AMS254/256	215.9	12	28	41.275	184.0	5	300	228	95.3	102	6.4	15	45.8	9.53	179.9
	AMS284/286	266.7	15	32	47.625	228.6	5	300	286	111.3	117	6.1	15	53.4	12.7	186.5
	AMS324/326	317.5	17	38	53.975	279.4	5	300	356	127.0	133	6.4	17.5	60.0	12.7	252.4
	AMS364/365	317.5	17	38	60.325	279.4	5	300	356	142.8	149	6.6	17.5	67.6	15.88	252.4
RX..107 R..107, R..127 F..107 K..107	AMS182	215.9	10	16	28.575	184.0	5	350	228	66.6	70	3.3	15	31.7	6.35	90.1
	AMS184	215.9	10	18	28.575	184.0	5	350	228	66.6	70	3.3	15	31.7	6.35	90.1
	AMS213/215	215.9	11	22	34.925	184.0	5	350	228	79.3	86	6.6	15	38.7	7.94	114.5
	AMS254/256	215.9	12	28	41.275	184.0	5	350	228	95.3	102	6.4	15	45.8	9.53	173.9
	AMS284/286	266.7	15	32	47.625	228.6	5	350	286	111.3	117	6.1	15	53.4	12.7	180.5
	AMS324/326	317.5	17	38	53.975	279.4	5	350	356	127.0	133	6.4	17.5	60.0	12.7	246.4
	AMS364/365	317.5	17	38	60.325	279.4	5	350	356	142.8	149	6.6	17.5	67.6	15.88	246.4

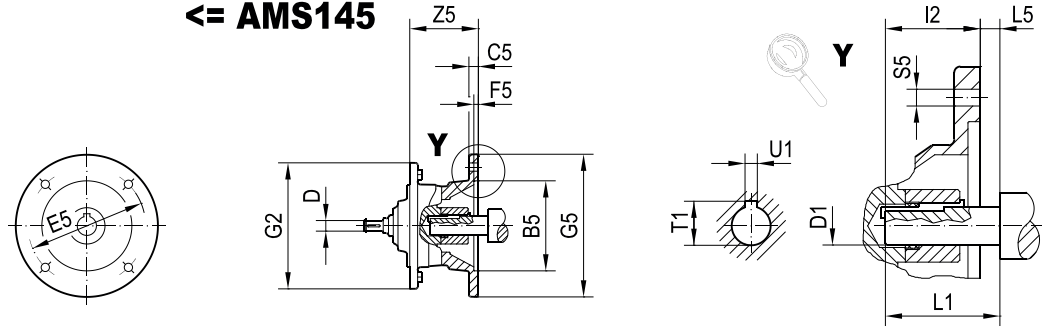
1) For the dimensions Z5 for the RS and DH options, refer to the "Gear units" catalog.

2) Not with AMS284/286.

3) Not with AMS364/365.

23 002 01 21

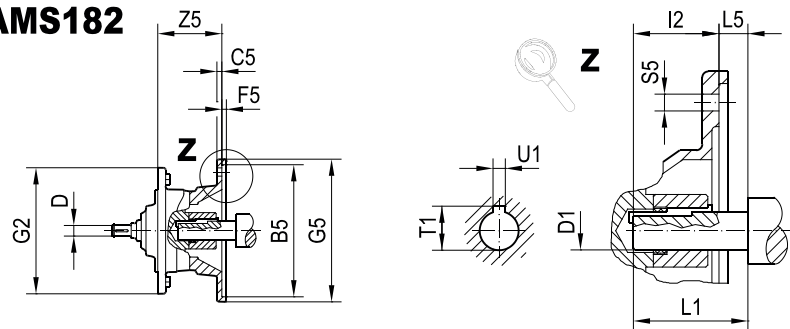
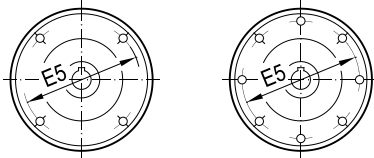
**<= AMS145**



**>= AMS182**

**<= AMS284/286**

**>= AMS324/326**



Gear unit type	Adapter type	Dimensions in mm														
		B5	C5	D	D1	E5	F5	G2	G5	I2	L1	L5	S5	T1	U1	Z5 <sup>1)</sup>
R..137	AMS213/215	215.9	11	22	34.925	184.0	5	400	228	79.3	86	6.6	15	38.7	7.94	107.5
	AMS254/256	215.9	12	28	41.275	184.0	5	400	228	95.3	102	6.4	15	45.8	9.53	166.9
	AMS284/286	266.7	15	32	47.625	228.6	5	400	286	111.3	117	6.1	15	53.4	12.7	173.5
	AMS324/326	317.5	17	38	53.975	279.4	5	400	356	127.0	133	6.4	17.5	60.0	12.7	239.4
	AMS364/365	317.5	17	38	60.325	279.4	5	400	356	142.8	149	6.6	17.5	67.6	15.88	239.4
R..147 F..127 K..127	AMS213/215	215.9	11	22	34.925	184.0	5	450	228	79.3	86	6.6	15	38.7	7.94	99.5
	AMS254/256	215.9	12	28	41.275	184.0	5	450	228	95.3	102	6.4	15	45.8	9.53	158.9
	AMS284/286	266.7	15	32	47.625	228.6	5	450	286	111.3	117	6.1	15	53.4	12.7	165.5
	AMS324/326	317.5	17	38	53.975	279.4	5	450	356	127.0	133	6.4	17.5	60.0	12.7	231.4
	AMS364/365	317.5	17	38	60.325	279.4	5	450	356	142.8	149	6.6	17.5	67.6	15.88	231.4
R..167 F..157 K..157, K..167, K..187	AMS254/256	215.9	12	28	41.275	184.0	5	550	228	95.3	102	6.4	15	45.8	9.53	150.9
	AMS284/286	266.7	15	32	47.625	228.6	5	550	286	111.3	117	6.1	15	53.4	12.7	157.5
	AMS324/326	317.5	17	38	53.975	279.4	5	550	356	127.0	133	6.4	17.5	60.0	12.7	223.4
	AMS364/365	317.5	17	38	60.325	279.4	5	550	356	142.8	149	6.6	17.5	67.6	15.88	223.4

1) For the dimensions Z5 for the RS and DH options, refer to the "Gear units" catalog.

## 6.10 Adapter for mounting servomotors

### 6.10.1 AQS.. adapter description

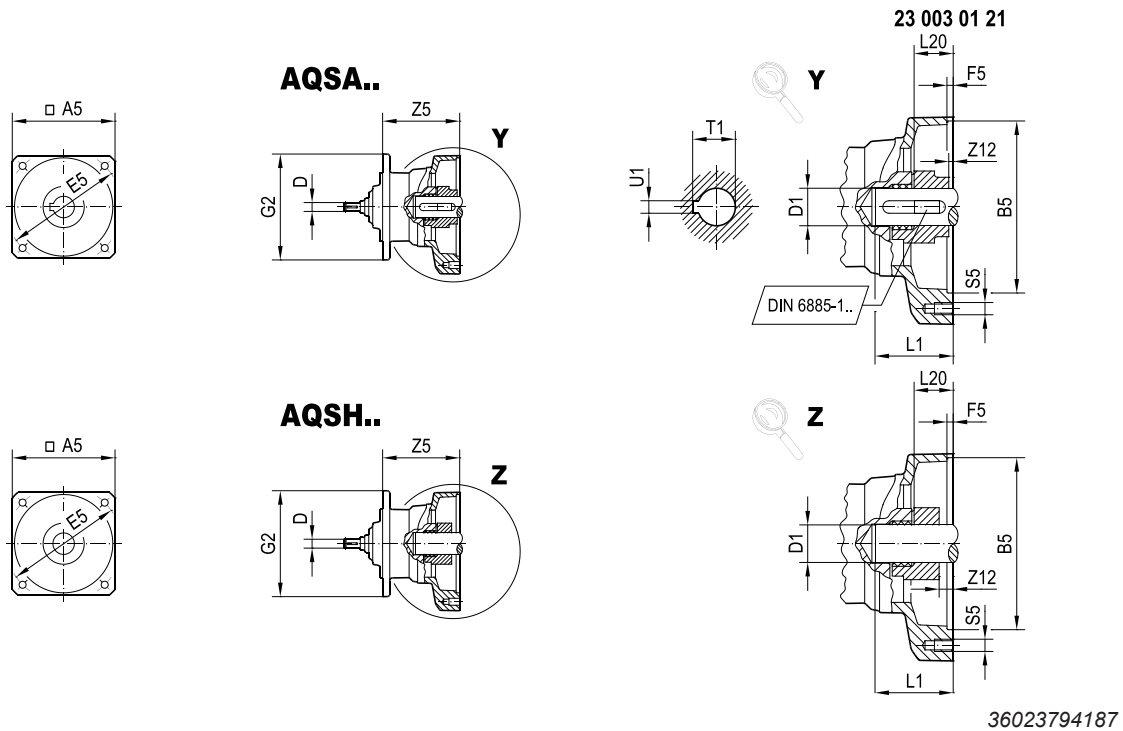
An adapter with square flange is used for mounting servomotors to R, F, K, S, and W.9 gear units.

The torque is transmitted via a claw coupling. Possible vibrations and shocks occurring during operation are effectively attenuated and dissipated by an inserted polyurethane girth gear.

The coupling half on the motor side is available with a clamping ring hub (non-positive, for smooth motor shafts) in the AQSH.. design as well as with a keyway (positive) in the AQSA.. design.

### 6.10.2 Dimension sheets for AQS.. adapters

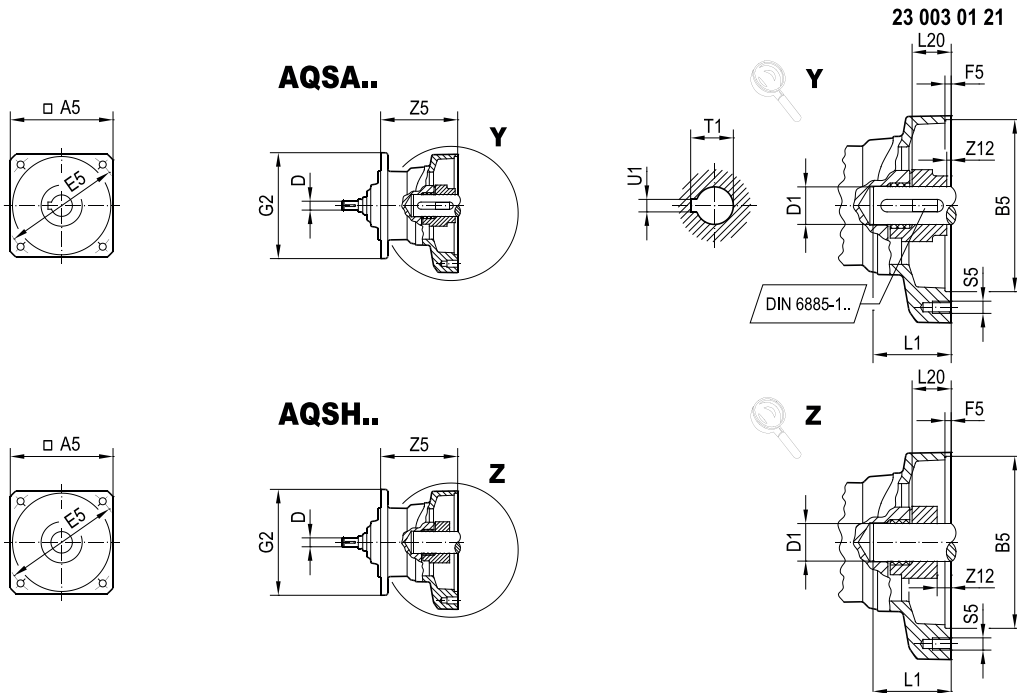
#### Key



- A5 Square dimension
- B5 Centering diameter
- D1 Coupling bore diameter
- E5 Hole circle diameter
- F5 Centering depth
- G2 Gear unit input end flange diameter
- L1 Maximum insertion depth of the motor
- L20 Distance between flange contact surface and claw base of the coupling
- S5 Tapped hole
- T1 Keyway depth
- U1 Keyway width
- Z12 Distance from flange contact surface – coupling



Adapters for mounting servomotors

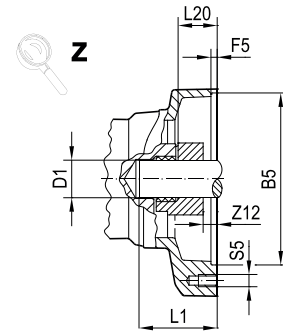
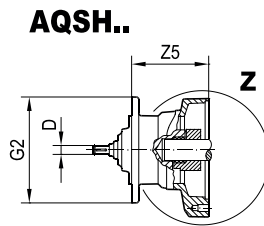
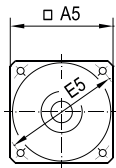
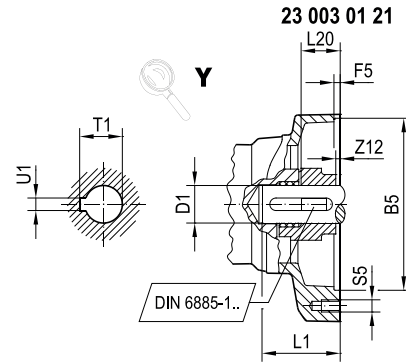
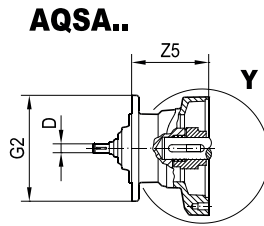
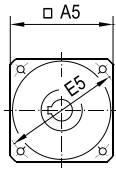


D1	T1	U1	AQS..							
			50/1 50/2	80/1 80/2 80/3 80/4 80/5	100/1 100/2 100/3 100/4 100/5	115/1 115/2 115/3 115/4 115/5	140/1 140/2 140/3 140/4 140/5 140/6	160/1	190/1 190/2 190/3 190/4 190/5	190/6
mm	mm	mm								
8 <sup>1)</sup>	-	-	X							
9	10.4	3	X							
11	12.8	4		X						
14	16.3	5		X	X					
16	18.3	5			X					
19	21.8	6			X	X				
22 <sup>1)</sup>	-	-				X				
24	27.3	8				X	X			
28	31.3	8					X	X	X	
32	35.3	10					X	X	X	
35	38.3	10						X <sup>1)</sup>	X <sup>1)</sup>	X
38	41.3	10						X	X	

1) Terminal connection only (AQSH).

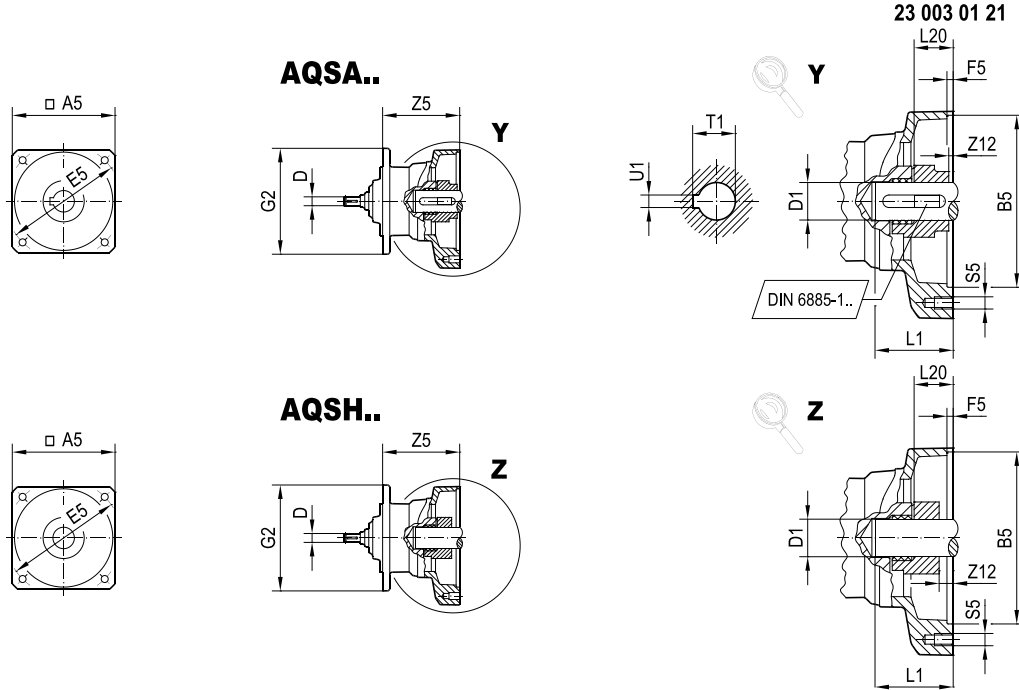
# 6 Design and operating notes

## Adapter for mounting servomotors



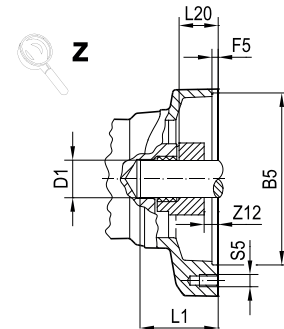
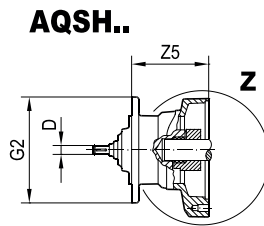
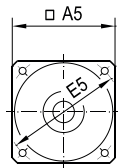
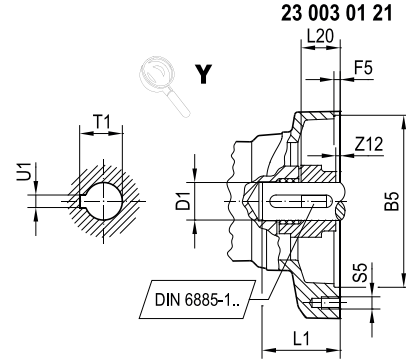
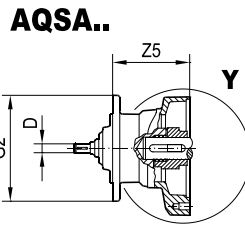
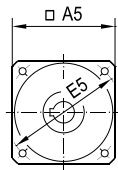
Gear unit type	Adapter type	Dimensions in mm													
		D1	L20	DIN 6885-1 (AQSA)	A5	B5	D	E5	F5	G2	L1	S5	Z5	Z12	
														AQSA	AQSH
R..07, R..17 W..19	AQS. 50/1	8 K7 <sup>1)</sup>	14	–	40	30	10	46	2.5	105	25	M4 × 7	52.5	0	4
	AQS. 50/2	9 H7	14	A3 × 3 × 12	55	40	10	63	2.5	105	25	M4 × 7	52.5	0	4
	AQS. 80/1	11 H7 14 H7	18 18	B4 × 4 × 10 B5 × 5 × 10	73	60	10/12	75	3.5	105	31	M5 × 8	56.5	0	6
	AQS. 80/2				73	60	10/12	75	3.5	105	31	M5 × 8	56.5	0	6
	AQS. 80/3				82	50	10/12	95	3.5	105	31	M6 × 10	56.5	0	6
	AQS. 80/4				60	50	10/12	70	3.5	105	31	M5 × 8	56.5	0	6
	AQS. 80/5				75	60	10/12	90	3.5	105	31	M6 × 10	56.5	0	6
	AQS. 100/1	14 H7 16 H7 19 H7	20 20 20	B5 × 5 × 12 B5 × 5 × 12 B6 × 6 × 12	94	80	10/12	100	4	105	45	M6 × 10	73.7	0	6
	AQS. 100/2				105	95	10/12	115	4	105	45	M8 × 12	73.7	0	6
	AQS. 100/3				94	80	10/12	100	4	105	45	M6 × 10	73.7	0	6
	AQS. 100/4				105	95	10/12	115	4	105	45	M8 × 12	73.7	0	6
	AQS. 100/5				19 H7		B6 × 6 × 7	94	70	10/12	90	4	105	45	M6 × 10

1) Only clamp connection (AQSH).



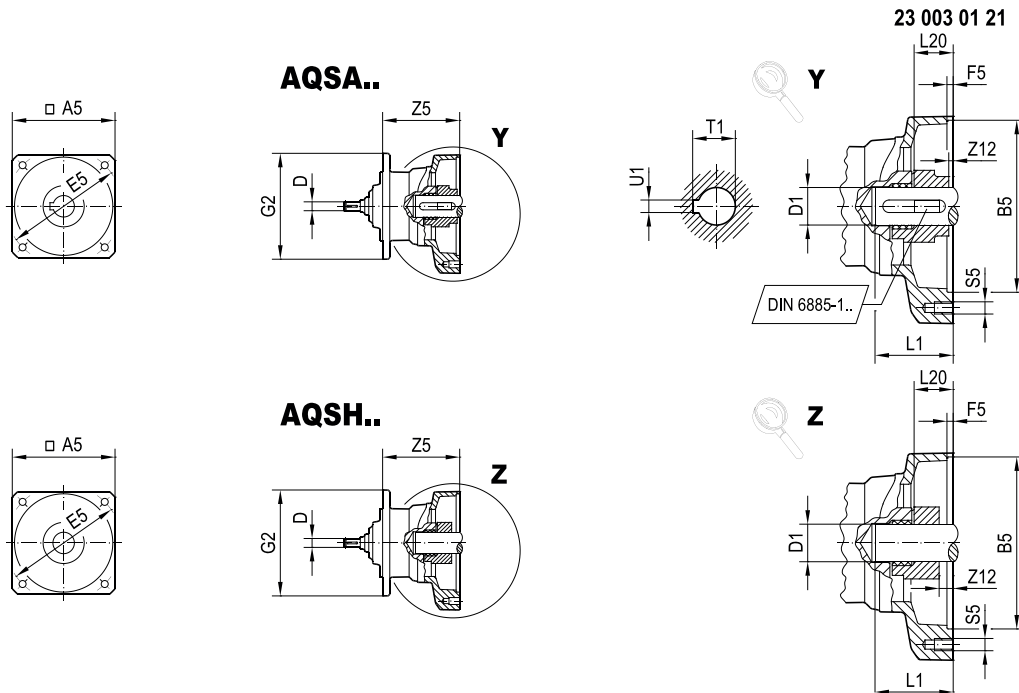
Gear unit type	Adapter type	Dimensions in mm													
		D1	L20	DIN 6885-1 (AQSA)	A5	B5	D	E5	F5	G2	L1	S5	Z5	Z12	
														AQSA	AQSH
R..27, R..37 F..27, F..37, F..47 K..19, K..29, K..37 S..37, S..47, S..57 S..37p, S..47p, S..57p W..29, W..39	AQS. 50/1	8 K7 <sup>1)</sup>	14	–	40	30	10	46	2.5	120	25	M4 × 7	52.5	0	4
	AQS. 50/2	9 H7	14	A3 × 3 × 12	55	40	10	63	2.5	120	25	M4 × 7	52.5	0	4
	AQS. 80/1	11 H7 14 H7	18 18	B4 × 4 × 10 B5 × 5 × 10	73	60	10/12	75	3.5	120	31	M5 × 8	56.5	0	6
	AQS. 80/2				73	60	10/12	75	3.5	120	31	M5 × 8	56.5	0	6
	AQS. 80/3				82	50	10/12	95	3.5	120	31	M6 × 10	56.5	0	6
	AQS. 80/4				60	50	10/12	70	3.5	120	31	M5 × 8	56.5	0	6
	AQS. 80/5				75	60	10/12	90	3.5	120	31	M6 × 10	56.5	0	6
	AQS. 100/1	14 H7 16 H7 19 H7	20 20 20	B5 × 5 × 12 B5 × 5 × 12 B6 × 6 × 12	94	80	10/12/14/16	100	4	120	45	M6 × 10	73.7	0	6
	AQS. 100/2				105	95	10/12/14/16	115	4	120	45	M8 × 12	73.7	0	6
	AQS. 100/3				94	80	10/12/14/16	100	4	120	45	M6 × 10	73.7	0	6
	AQS. 100/4				105	95	10/12/14/16	115	4	120	45	M8 × 12	73.7	0	6
	AQS. 100/5				19 H7		B6 × 6 × 7	94	70	10/12	90	4	105	45	M6 × 10
	AQS. 115/1	19 H7 22 H7 <sup>1)</sup> 24 H7	25 31 25	B6 × 6 × 10 – B8 × 7 × 12	115	95	10/12/14/16	130	5	120	50	M8 × 14.5	86.25	0	9
	AQS. 115/2				115	110	10/12/14/16	130	5	120	50	M8 × 14.5	86.25	0	9
	AQS. 115/3				115	110	10/12/14/16	130	5	120	50	M8 × 14.5	86.25	0	9
	AQS. 115/4				130	110	10/12/14/16	145	6.5	120	58	M8 × 14.5	92.25	6	15
	AQS. 115/5				115	95	10/12/14/16	115	5	120	50	M8 × 14.5	86.25	0	9
	AQS. 140/1	24 H7 28 H7 32 H7	30 30 30	B8 × 7 × 20 B8 × 7 × 20 B10 × 8 × 18	140	110	16	165	5	120	60	M10 × 20	108.9	0	8
	AQS. 140/2				140	130	16	165	5	120	60	M10 × 20	108.9	0	8
	AQS. 140/3				140	130	16	165	5	120	60	M10 × 20	108.9	0	8
AQS. 140/4	140				130	16	165	5	120	60	M10 × 20	108.9	0	8	
AQS. 140/5	190				180	16	215	5	120	60	M12 × 22	108.9	0	8	

1) Only clamp connection (AQSH).



Gear unit type	Adapter type	Dimensions in mm													
		D1	L20	DIN 6885-1 (AQA)	A5	B5	D	E5	F5	G2	L1	S5	Z5	Z12	
														AQSA	AQSH
RX..57, RX..67 R..47, R..57, R..67 F..57, F..67 K..39, K..47, K..57, K..67 S..67, S..67p W..49, W..59	AQS. 80/1	11 H7 14 H7	18 18	B4 × 4 × 10 B5 × 5 × 10	73	60	10/12	75	3.5	160	31	M5 × 8	50	0	6
	AQS. 80/2				73	60	10/12	75	3.5	160	31	M5 × 8	50	0	6
	AQS. 80/3				82	50	10/12	95	3.5	160	31	M6 × 10	50	0	6
	AQS. 80/4				60	50	10/12	70	3.5	160	31	M5 × 8	50	0	6
	AQS. 80/5				75	60	10/12	90	3.5	160	31	M6 × 10	50	0	6
	AQS. 100/1	14 H7 16 H7 19 H7	20 20 20	B5 × 5 × 12 B5 × 5 × 12 B6 × 6 × 12	94	80	10/12/14/16	100	4	160	45	M6 × 10	67.2	0	6
	AQS. 100/2				105	95	10/12/14/16	115	4	160	45	M8 × 12	67.2	0	6
	AQS. 100/3				94	80	10/12/14/16	100	4	160	45	M6 × 10	67.2	0	6
	AQS. 100/4				105	95	10/12/14/16	115	4	160	45	M8 × 12	67.2	0	6
	AQS. 100/5	19 H7		B6 × 6 × 7	94	70	10/12	90	4	105	45	M6 × 10	73.7	0	6
	AQS. 115/1	19 H7 22 H7 <sup>1)</sup> 24 H7	25 31 25	B6 × 6 × 10 — B8 × 7 × 12	115	95	10/12/14/16	130	5	160	50	M8 × 14.5	79.75	0	9
	AQS. 115/2				115	110	10/12/14/16	130	5	160	50	M8 × 14.5	79.75	0	9
	AQS. 115/3				115	110	10/12/14/16	130	5	160	50	M8 × 14.5	79.75	0	9
	AQS. 115/4				130	110	10/12/14/16	145	6.5	160	58	M8 × 14.5	85.75	6	15
	AQS. 115/5				115	95	10/12/14/16	115	5	160	50	M8 × 14.5	79.75	0	9
	AQS. 140/1	24 H7 28 H7 32 H7	30 30 30	B8 × 7 × 20 B8 × 7 × 20 B10 × 8 × 18	140	110	16/18/22	165	5	160	60	M10 × 20	108.4	0	8
	AQS. 140/2				140	130	16/18/22	165	5	160	60	M10 × 20	108.4	0	8
	AQS. 140/3				140	130	16/18/22	165	5	160	60	M10 × 20	108.4	0	8
	AQS. 140/4				140	130	16/18/22	165	5	160	60	M10 × 20	108.4	0	8
	AQS. 140/5				190	180	16/18/22	215	5	160	60	M12 × 22	108.4	0	8
	AQS. 140/6				140	130	22	165	5	160	80	M10 × 20	108.4	0	8
	AQS. 160/1	28 H7 32 H7 35 H7 <sup>1)</sup> 38 H7	34 34 34 34	B8 × 7 × 25 B10 × 8 × 20 — B10 × 8 × 20	163	155	16/18/22	190	5	160	60	M10 × 20	133.8	0	8
	AQS. 190/1	28 H7 32 H7 35 H7 <sup>1)</sup> 38 H7	34 34 34 34	B8 × 7 × 25 B10 × 8 × 20 — B10 × 8 × 20	190	130	22	215	5	160	80	M12 × 22	133.8	0	8
	AQS. 190/2				190	180	22	215	5	160	80	M12 × 22	133.8	0	8
	AQS. 190/3				190	180	22	215	5	160	80	M12 × 22	133.8	0	8
	AQS. 190/4				180	114.3	22	200	5	160	80	M12 × 22	133.8	0	8
AQS. 190/5	240				230	22	265	5	160	80	M12 × 22	133.8	0	8	
AQS. 190/6	35 H7				53	B10 × 8 × 20	180	114.3	22	200	5	160	100	M12 × 22	152.8

1) Only clamp connection (AQSH).

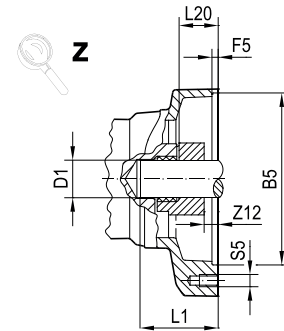
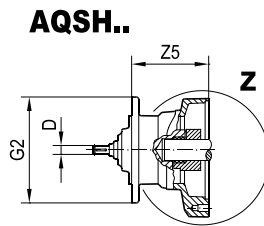
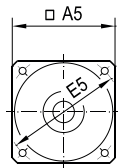
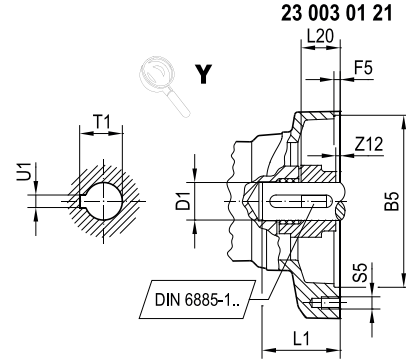
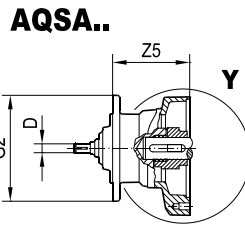
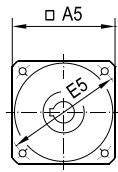


Gear unit type	Adapter type	Dimensions in mm													
		D1	L20	DIN 6885-1 (AQSA)	A5	B5	D	E5	F5	G2	L1	S5	Z5	Z12	
														AQSA	AQSH
RX..77 R..77 F..77 K..49 K..77 S..77, S..77p	AQS. 80/1	11 H7 14 H7	18 18	B4 × 4 × 10 B5 × 5 × 10	73	60	10/12	75	3.5	200	31	M5 × 8	44	0	6
	AQS. 80/2				73	60	10/12	75	3.5	200	31	M5 × 8	44	0	6
	AQS. 80/3				82	50	10/12	95	3.5	200	31	M6 × 10	44	0	6
	AQS. 80/4				60	50	10/12	70	3.5	200	31	M5 × 8	44	0	6
	AQS. 80/5				75	60	10/12	90	3.5	200	31	M6 × 10	44	0	6
	AQS. 100/1	14 H7 16 H7 19 H7	20 20 20	B5 × 5 × 12 B5 × 5 × 12 B6 × 6 × 12	94	80	10/12/14/16	100	4	200	45	M6 × 10	60.2	0	6
	AQS. 100/2				105	95	10/12/14/16	115	4	200	45	M8 × 12	60.2	0	6
	AQS. 100/3				94	80	10/12/14/16	100	4	200	45	M6 × 10	60.2	0	6
	AQS. 100/4				105	95	10/12/14/16	115	4	200	45	M8 × 12	60.2	0	6
	AQS. 100/5				94	70	10/12/14/16	90	4	200	45	M6 × 10	60.2	0	6
	AQS. 115/1	19 H7 22 H7 <sup>1)</sup> 24 H7	25 31 25	B6 × 6 × 10 — B8 × 7 × 12	115	95	10/12/14/16	130	5	200	50	M8 × 14.5	72.75	0	9
	AQS. 115/2				115	110	10/12/14/16	130	5	200	50	M8 × 14.5	72.75	0	9
	AQS. 115/3				115	110	10/12/14/16	130	5	200	50	M8 × 14.5	72.75	0	9
	AQS. 115/4				130	110	10/12/14/16	145	6.5	200	58	M8 × 14.5	78.75	6	15
	AQS. 115/5				115	95	10/12/14/16	115	5	200	50	M8 × 14.5	72.75	0	9
	AQS. 140/1	24 H7 28 H7 32 H7	30 30 30	B8 × 7 × 20 B8 × 7 × 20 B10 × 8 × 18	140	110	16/18/22	165	5	200	60	M10 × 20	100.4	0	8
	AQS. 140/2				140	130	16/18/22	165	5	200	60	M10 × 20	100.4	0	8
	AQS. 140/3				140	130	16/18/22	165	5	200	60	M10 × 20	100.4	0	8
	AQS. 140/4				140	130	16/18/22	165	5	200	60	M10 × 20	100.4	0	8
	AQS. 140/5				190	180	16/18/22	215	5	200	60	M12 × 22	100.4	0	8
	AQS. 140/6				140	130	22	165	5	200	80	M10 × 20	100.4	0	8
	AQS. 160/1	28 H7 32 H7 35 H7 <sup>1)</sup> 38 H7	34 34 34 34	B8 × 7 × 25 B10 × 8 × 20 — B10 × 8 × 20	163	155	16/18/22	190	5	200	60	M10 × 20	125.8	0	8
	AQS. 190/1	28 H7 32 H7 35 H7 <sup>1)</sup> 38 H7	34 34 34 34	B8 × 7 × 25 B10 × 8 × 20 — B10 × 8 × 20	190	130	22/28	215	5	200	80	M12 × 22	125.8	0	8
	AQS. 190/2				190	180	22/28	215	5	200	80	M12 × 22	125.8	0	8
	AQS. 190/3				190	180	22/28	215	5	200	80	M12 × 22	125.8	0	8
	AQS. 190/4				180	114.3	22/28	200	5	200	80	M12 × 22	125.8	0	8
	AQS. 190/5				240	230	22/28	265	5	200	80	M12 × 22	125.8	0	8
	AQS. 190/6				35 H7	53	B10 × 8 × 20	180	114.3	22/28	200	5	200	100	M12 × 22

1) Only clamp connection (AQSH).

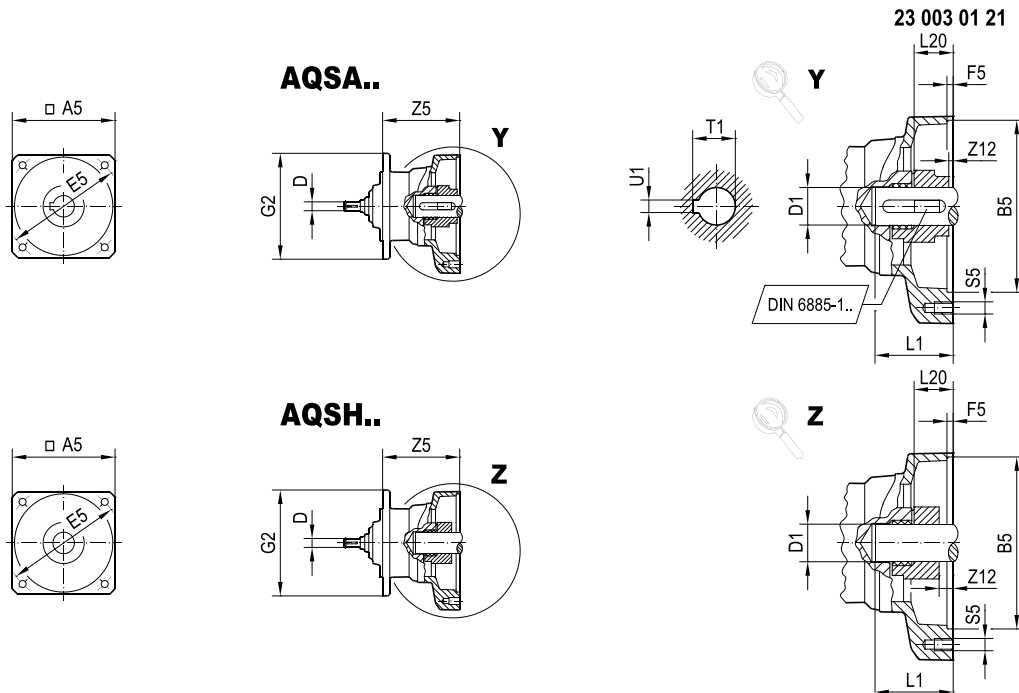
# 6 Design and operating notes

## Adapter for mounting servomotors



Gear unit type	Adapter type	Dimensions in mm													
		D1	L20	DIN 6885-1 (AQSA)	A5	B5	D	E5	F5	G2	L1	S5	Z5	Z12	
														AQSA	AQSH
RX..87 R..87 F..87 K..87 S..87, S..87p	AQS. 100/1				94	80	12/14/16	100	4	250	45	M6 × 10	55.2	0	6
	AQS. 100/2	14 H7	20	B5 × 5 × 12	105	95	12/14/16	115	4	250	45	M8 × 12	55.2	0	6
	AQS. 100/3	16 H7	20	B5 × 5 × 12	94	80	12/14/16	100	4	250	45	M6 × 10	55.2	0	6
	AQS. 100/4	19 H7	20	B6 × 6 × 12	105	95	12/14/16	115	4	250	45	M8 × 12	55.2	0	6
	AQS. 100/5				94	70	12/14/16	90	4	250	45	M6 × 10	55.2	0	6
	AQS. 115/1				115	95	12/14/16	130	5	250	50	M8 × 14.5	67.75	0	9
	AQS. 115/2	19 H7	25	B6 × 6 × 10	115	110	12/14/16	130	5	250	50	M8 × 14.5	67.75	0	9
	AQS. 115/3	22 H7 <sup>1)</sup>	31	—	115	110	12/14/16	130	5	250	50	M8 × 14.5	67.75	0	9
	AQS. 115/4	24 H7	25	B8 × 7 × 12	130	110	12/14/16	145	6.5	250	58	M8 × 14.5	73.75	6	15
	AQS. 115/5				115	95	12/14/16	115	5	250	50	M8 × 14.5	67.75	0	9
	AQS. 140/1				140	110	16/18/22	165	5	250	60	M10 × 20	95.4	0	8
	AQS. 140/2				140	130	16/18/22	165	5	250	60	M10 × 20	95.4	0	8
	AQS. 140/3	24 H7	30	B8 × 7 × 20	140	130	16/18/22	165	5	250	60	M10 × 20	95.4	0	8
	AQS. 140/4	28 H7	30	B8 × 7 × 20	140	130	16/18/22	165	5	250	60	M10 × 20	95.4	0	8
	AQS. 140/5	32 H7	30	B10 × 8 × 18	190	180	16/18/22	215	5	250	60	M12 × 22	95.4	0	8
	AQS. 140/6				140	130	22	165	5	250	80	M10 × 20	95.4	0	8
	AQS. 160/1	28 H7 32 H7 35 H7 <sup>1)</sup> 38 H7	34 34 34 34	B8 × 7 × 25 B10 × 8 × 20 — B10 × 8 × 20	163	155	16/18/22	190	5	250	60	M10 × 20	120.8	0	8
	AQS. 190/1				190	130	22/28	215	5	250	80	M12 × 22	120.8	0	8
	AQS. 190/2	28 H7	34	B8 × 7 × 25	190	180	22/28	215	5	250	80	M12 × 22	120.8	0	8
	AQS. 190/3	32 H7	34	B10 × 8 × 20	190	180	22/28	215	5	250	80	M12 × 22	120.8	0	8
	AQS. 190/4	35 H7 <sup>1)</sup>	34	—	190	180	22/28	215	5	250	80	M12 × 22	120.8	0	8
	AQS. 190/5	38 H7	34	B10 × 8 × 20	180	114.3	22/28	200	5	250	80	M12 × 22	120.8	0	8
	AQS. 190/6				240	230	22/28	265	5	250	80	M12 × 22	120.8	0	8
	AQS. 190/6	35 H7	53	B10 × 8 × 20	180	114.3	22/28	200	5	250	100	M12 × 22	139.8	5	27

1) Only clamp connection (AQSH).

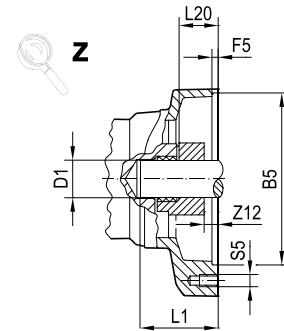
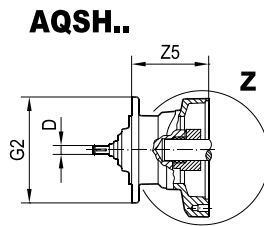
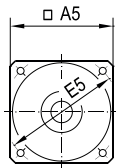
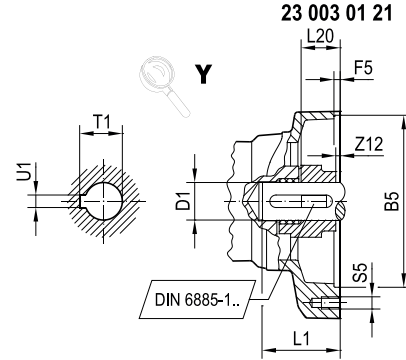
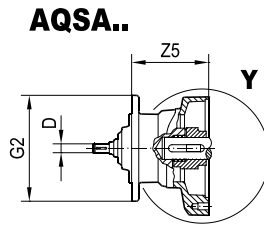
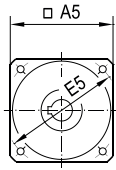


Gear unit type	Adapter type	Dimensions in mm													
		D1	L20	DIN 6885-1 (AQSA)	A5	B5	D	E5	F5	G2	L1	S5	Z5	Z12	
														AQSA	AQSH
RX..97 R..97 F..97 K..97 S..97, S..97p	AQS. 140/1				140	110	16/18/22	165	5	300	60	M10 × 20	90.4	0	8
	AQS. 140/2				140	130	16/18/22	165	5	300	60	M10 × 20	90.4	0	8
	AQS. 140/3	24 H7	30	B8 × 7 × 20	140	130	16/18/22	165	5	300	60	M10 × 20	90.4	0	8
	AQS. 140/4	28 H7	30	B8 × 7 × 20	140	130	16/18/22	165	5	300	60	M10 × 20	90.4	0	8
	AQS. 140/5	32 H7	30	B10 × 8 × 18	190	180	16/18/22	215	5	300	60	M12 × 22	90.4	0	8
	AQS. 140/6				140	130	22	165	5	300	80	M10 × 20	90.4	0	8
	AQS. 160/1	28 H7	34	B8 × 7 × 25	163	155	16/18/22	190	5	300	60	M10 × 20	115.8	0	8
		32 H7	34	B10 × 8 × 23											
		35 H7 <sup>1)</sup>	34	–											
		38 H7	34	B10 × 8 × 23											
	AQS. 190/1				190	130	22/28	215	5	300	80	M12 × 22	115.8	0	8
	AQS. 190/2	28 H7	34	B8 × 7 × 25	190	180	22/28	215	5	300	80	M12 × 22	115.8	0	8
	AQS. 190/3	32 H7	34	B10 × 8 × 20	190	180	22/28	215	5	300	80	M12 × 22	115.8	0	8
	AQS. 190/4	35 H7 <sup>1)</sup>	34	–	180	114.3	22/28	200	5	300	80	M12 × 22	115.8	0	8
	AQS. 190/5	38 H7	34	B10 × 8 × 20	240	230	22/28	265	5	300	80	M12 × 22	115.8	0	8
	AQS. 190/6	35 H7	53	B10 × 8 × 20	180	114.3	22/28	200	5	300	100	M12 × 22	134.8	5	27
RX..107 R..107 R..127 F..107 K..107	AQS. 140/1				140	110	16/18/22	165	5	350	60	M10 × 20	84.4	0	8
	AQS. 140/2				140	130	16/18/22	165	5	350	60	M10 × 20	84.4	0	8
	AQS. 140/3	24 H7	30	B8 × 7 × 20	140	130	16/18/22	165	5	350	60	M10 × 20	84.4	0	8
	AQS. 140/4	28 H7	30	B8 × 7 × 20	140	130	16/18/22	165	5	350	60	M10 × 20	84.4	0	8
	AQS. 140/5	32 H7	30	B10 × 8 × 18	190	180	16/18/22	215	5	350	60	M12 × 22	84.4	0	8
	AQS. 140/6				140	130	22	165	5	350	80	M10 × 20	84.4	0	8
	AQS. 160/1	28 H7	34	B8 × 7 × 25	163	155	16/18/22	190	5	350	60	M10 × 20	109.8	0	8
		32 H7	34	B10 × 8 × 20											
		35 H7 <sup>1)</sup>	34	–											
		38 H7	34	B10 × 8 × 20											
	AQS. 190/1				190	130	22/28	215	5	350	80	M12 × 22	109.8	0	8
	AQS. 190/2	28 H7	34	B8 × 7 × 25	190	180	22/28	215	5	350	80	M12 × 22	109.8	0	8
	AQS. 190/3	32 H7	34	B10 × 8 × 20	190	180	22/28	215	5	350	80	M12 × 22	109.8	0	8
	AQS. 190/4	35 H7 <sup>1)</sup>	34	–	180	114.3	22/28	200	5	350	80	M12 × 22	109.8	0	8
	AQS. 190/5	38 H7	34	B10 × 8 × 20	240	230	22/28	265	5	350	80	M12 × 22	109.8	0	8
	AQS. 190/6	35 H7	53	B10 × 8 × 20	180	114.3	22/28	200	5	350	100	M12 × 22	128.8	5	27

1) Only clamp connection (AQSH).

# 6 Design and operating notes

## Adapter for mounting servomotors



Gear unit type	Adapter type	Dimensions in mm													
		D1	L20	DIN 6885-1 (AQSA)	A5	B5	D	E5	F5	G2	L1	S5	Z5	Z12	
														AQSA	AQSH
R..137	AQS. 190/1				190	130	22/28	215	5	400	80	M12 × 22	102.8	0	8
	AQS. 190/2	28 H7	34	B8 × 7 × 25	190	180	22/28	215	5	400	80	M12 × 22	102.8	0	8
	AQS. 190/3	32 H7	34	B10 × 8 × 20	190	180	22/28	215	5	400	80	M12 × 22	102.8	0	8
	AQS. 190/4	35 H7 <sup>1)</sup>	34	—	190	180	22/28	215	5	400	80	M12 × 22	102.8	0	8
	AQS. 190/5	38 H7	34	B10 × 8 × 20	180	114.3	22/28	200	5	400	80	M12 × 22	102.8	0	8
	AQS. 190/6	38 H7	34	B10 × 8 × 20	240	230	22/28	265	5	400	80	M12 × 22	102.8	0	8
R..147 F..127 K..127	AQS. 190/1				190	130	22/28	215	5	450	80	M12 × 22	94.8	0	8
	AQS. 190/2	28 H7	34	B8 × 7 × 25	190	180	22/28	215	5	450	80	M12 × 22	94.8	0	8
	AQS. 190/3	32 H7	34	B10 × 8 × 20	190	180	22/28	215	5	450	80	M12 × 22	94.8	0	8
	AQS. 190/4	35 H7 <sup>1)</sup>	34	—	190	180	22/28	215	5	450	80	M12 × 22	94.8	0	8
	AQS. 190/5	38 H7	34	B10 × 8 × 20	180	114.3	22/28	200	5	450	80	M12 × 22	94.8	0	8
	AQS. 190/6	38 H7	34	B10 × 8 × 20	240	230	22/28	265	5	450	80	M12 × 22	94.8	0	8
	AQS. 190/6	35 H7	53	B10 × 8 × 20	180	114.3	22/28	200	5	450	100	M12 × 22	113.8	5	27

1) Only clamp connection (AQSH).



## 6.11 Gear unit mounting

Strength class of the screws

Always mount gearmotors using screws of strength class 8.8. The gearmotors in flange-mounted design and in foot/flange-mounted design listed in the following table are an exception. Always use screws of strength class 10.9 for these gearmotors. Use suitable washers.

Gear unit	Flange Ø mm	Strength class of the screws
RF37/R37F SF37p	120	10.9
RF47/R47F	140	
RF57/R57F	160	
SF67p	200	
FF/FAF77 KF/KAF77 SF77p	250	
FM/FAM67, FM/FAM77 KM/KAM67, KM/KAM77	300	
FM/FAM87 KM/KAM87 SF87p	350	
FM/FAM97 KM/KAM97	400	
RF147 FM/FAM107 KM/KAM107	450	
RF167 FM/FAM127 KM/KAM127	550	
FM/FAM157 KM/KAM157	660	
RZ37 – RZ87	60ZR – 130ZR	

## 6.12 Torque arms

**NOTICE**

Danger due to static overdetermination if gear units with foot (e.g. KA19/29B, KA127/157B or FA127/157B) are mounted both via the torque arm and via the foot plate.

Risk of injuries and damage to property can occur.

- The simultaneous use of the foot plates and the torque arm, especially for the KA.9B/T version, is not permitted.
- Attach the KA.9B/T design only via the torque arm.
- Attach the K.9 or KA.9B design only via the foot plate.
- If you want to use foot plates and torque arms for mounting, contact SEW-EURODRIVE.

**INFORMATION**

Note that torque arms are always mounted on the output end.

## 6.12.1 Standard torque arms

The following table lists the part numbers of all galvanized steel or gray cast iron torque arms available for shipment:

Gear unit	Size			
	19	29	39	49
KA, KH, KT	10684115	10684107	10682279	06442439

Gear unit	Size					
	27	37	47	57	67	77
KA, KH, KV, KT	-	6434258	6434282	6434312	6434312	6434347
SA, SH, ST	-	1269941	6442374	6442404	6442439	6442463
FA, FH, FV, FT Rubber buffer (2 pieces)	0133485	0133485	0133485	0133485	0133485	0133493

Gear unit	Size				
	87	97	107	127	157
KA, KH, KV, KT	6434371	6434401	6434436	6432948	-
SA, SH, ST	6442498	6442528	-	-	-
FA, FH, FV, FT Rubber buffer (2 pieces)	0133493	0133507	0133507	0133515	0133477

Gear unit	Size			
	10	19	20	29
WA, WH, WT	10610219	01680730	1680730	10684115

Gear unit	Size			
	30	39	49	59
WA, WH, WT	1680110	10684107	29226015	29226430

**6.12.2 Stainless steel torque arm**

Torque arms made of stainless steel are available for K..19/29 and SPIROPLAN® gear units. Suitable retaining screws made of stainless steel are included in the delivery in a bag.

Gear unit	Size	
	19	29
KA, KH, KT	10638008	10638016

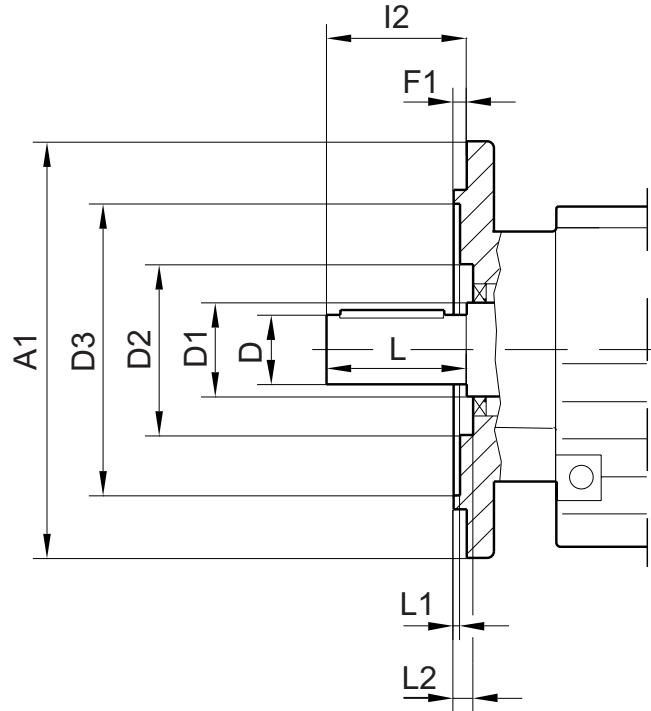
Gear unit	Size			
	10	19	20	29
WA, WH, WT	10638024	10638032	10638032	10638008

Gear unit	Size			
	30	39	49	59
WA, WH, WT	10638040	10638016	18762611	18762638

**6.12.3 Torque arms for KH167.., KH187..**

As standard, torque arms are not available for gear unit sizes KH167.. and KH187... Consult SEW-EURODRIVE if you need torque arms for these gear units.

#### 6.13 Flange contours of RF.. and R..F gear units

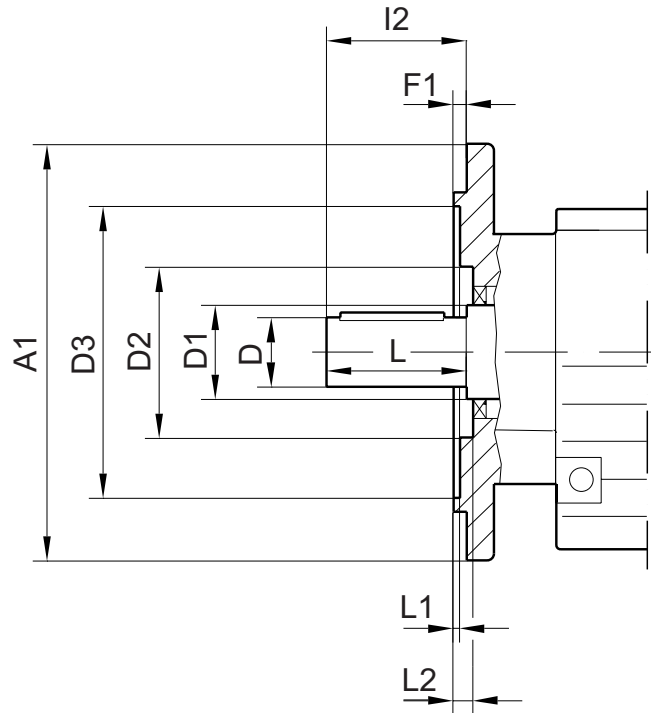


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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm											
	A1	D	D1	D2		D3	F1	I2	L	L1		L2
				RF	R..F					RF	R..F	
RF07, R07F	120	20	22	38	38	72	3	40	40	2	2	6
	140 <sup>1)</sup>	20	22	38	–	85	3	40	40	2	–	6
	160 <sup>1)</sup>	20	22	38	–	100	3.5	40	40	2.5	–	6.5
RF17, R17F	120	20	25	46	46	65	3	40	40	1	1	5
	140	20	25	46	–	78	3	40	40	1	–	5
	160 <sup>1)</sup>	20	25	46	–	95	3.5	40	40	1	–	6
RF27, R27F	120	25	30	54	54	66	3	50	50	1	1	6
	140	25	30	54	–	79	3	50	50	3	–	7
	160	25	30	54	–	92	3.5	50	50	3	–	7
RF37, R37F	120	25	35	60	63	70	3	50	50	5	4	7
	160	25	35	60	–	96	3.5	50	50	1	–	7.5
	200 <sup>1)</sup>	25	35	60	–	119	3.5	50	50	1	–	7.5
RF47, R47F	140	30	35	72	64	82	3	60	60	4	1	6
	160	30	35	72	–	96	3.5	60	60	0.5	–	6.5
	200	30	35	72	–	116	3.5	60	60	0.5	–	6.5
RF57, R57F	160	35	40	76	75	96	3.5	70	70	4	2.5	5
	200	35	40	76	–	116	3.5	70	70	0	–	5
	250 <sup>1)</sup>	35	40	76	–	160	4	70	70	0.5	–	5.5
RF67, R67F	200	35	50	90	90	118	3.5	70	70	2	4	7
	250	35	50	90	–	160	4	70	70	1	–	7.5

1) The flange contour protrudes from under the base surface.



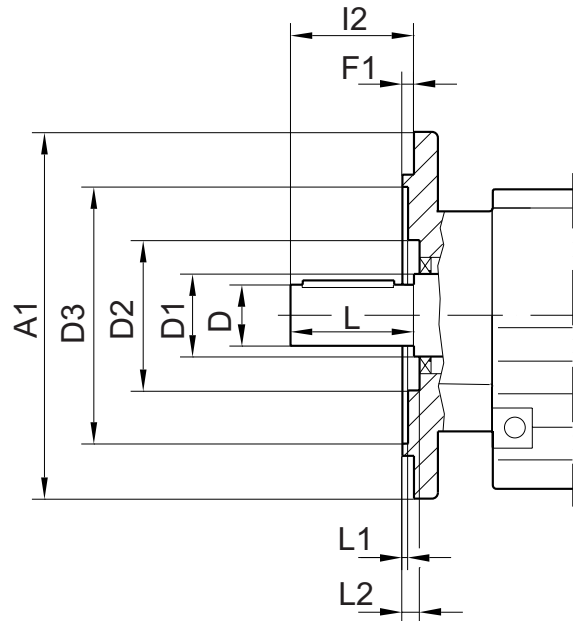
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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm											
	A1	D	D1	D2		D3	F1	I2	L	L1		L2
				RF	R..F					RF	R..F	
RF77, R77F	250	40	52	112	100	160	4	80	80	0.5	2.5	7
	300 <sup>1)</sup>	40	52	112	–	210	4	80	80	0.5	–	7
RF87, R87F	300	50	62	123	122	210	4	100	100	0	1.5	8
	350	50	62	123	–	226	5	100	100	1	–	9
RF97	350	60	72	136	–	236	5	120	120	0	–	9
	450	60	72	136	–	320	5	120	120	0	–	9
RF107	350	70	82	157	–	232	5	140	140	0	–	11
	450	70	82	186	–	316	5	140	140	0	–	11
RF127	450	90	108	180	–	316	5	170	170	0	–	10
RF137	450	90	108	180	–	316	5	170	170	0	–	10
	550	90	108	180	–	416	5	170	170	0	–	10
RF147	450	110	125	210	–	316	5	210	210	0	–	10
	550	110	125	210	–	416	5	210	210	0	–	10
RF167	550	120	145	290	–	416	5	210	210	1	–	10
	660	120	145	290	–	517	6	210	210	2	–	11

1) The flange contour protrudes from under the base surface.

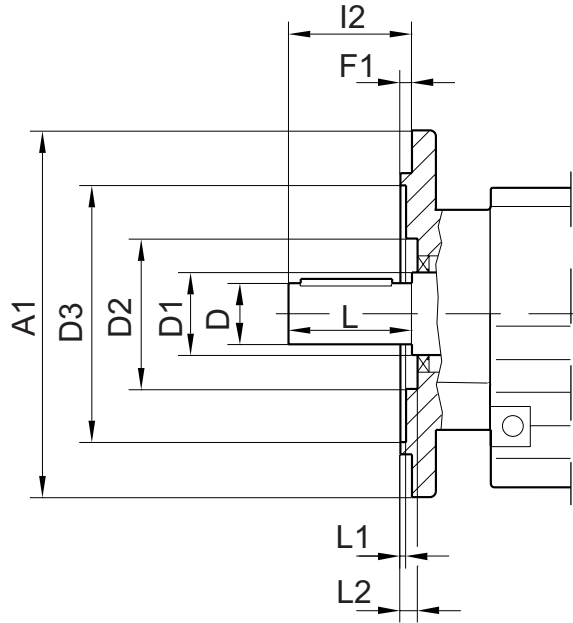
## 6.14 Flange contours of FF..., KF..., SF... and WF... gear units



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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm									
	A1	D	D1	D2	D3	F1	I2	L	L1	L2
FF27	160	25	40	66	96	3.5	50	50	3	18.5
FF37	160	25	30	70	94	3.5	50	50	2	6
FF47	200	30	40	72	115	3.5	60	60	3.5	7.5
FF57	250	35	40	84	155	4	70	70	4	9
FF67	250	40	50	84	155	4	80	80	4	9
FF77	300	50	55	82	205	4	100	100	5	9
FF87	350	60	65	115	220	5	120	120	5	9
FF97	450	70	75	112	320	5	140	140	8	10
FF107	450	90	100	159	318	5	170	170	16	9
FF127	550	110	118	-	420	5	210	210	10	-
FF157	660	120	135	190	520	6	210	210	8	14
KF19	120	20	25	-	70	2.5	40	40	-	11.5
	160	20	25	-	100	2.5	40	40	-	11.5
KF29	160	25	30	-	109	3.5	50	50	-	6.5
	200	25	30	-	115	3.5	50	50	-	6.5
KF37	160	25	30	70	94	3.5	50	50	2	6
KF39	160	30	39	68	96	3.5	60	60	13.5	23.5
KF47	200	30	40	72	115	3.5	60	60	3.5	7.5
KF49	200	35	49	76	115	3.5	70	70	24.5	28
KF57	250	35	40	84	155	4	70	70	4	9
KF67	250	40	50	84	155	4	80	80	4	9
KF77	300	50	55	82	205	4	100	100	5	9
KF87	350	60	65	115	220	5	120	120	5	9
KF97	450	70	75	112	320	5	140	140	8	10
KF107	450	90	100	159	318	5	170	170	16	9
KF127	550	110	118	-	420	5	210	210	10	-
KF157	660	120	135	190	520	6	210	210	8	14

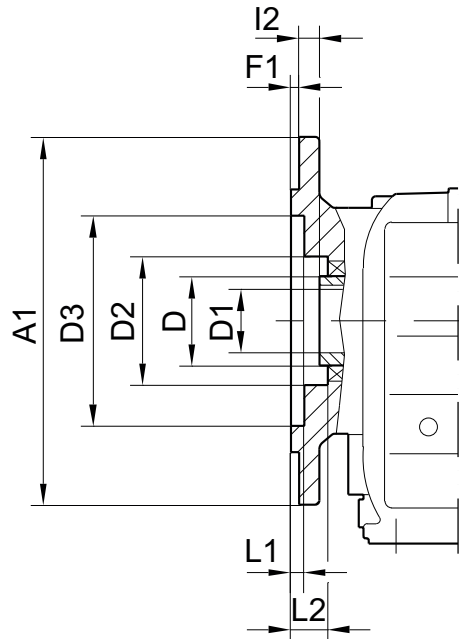


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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm									
	A1	D	D1	D2	D3	F1	I2	L	L1	L2
SF37	120	20	25	-	68	3	40	40	6	-
	160	20	25	-	96	3.5	40	40	5.5	-
SF47	160	25	30	70	94	3.5	50	50	2	6
SF57	200	30	40	72	115	3.5	60	60	3.5	7.5
SF67	200	35	45	-	115	3.5	70	70	8.5	-
SF77	250	45	55	108	160	4	90	90	8	9
SF87	350	60	65	130	220	5	120	120	6	10
SF97	450	70	75	150	320	5	140	140	8.5	10
WF10	80	16	25	-	39	2.5	40	40	30	-
	120	16	25	39	74	3	40	40	5	30
WF19	110	20	30	44	53	-4	40	40	27	35
	120	20	30	-	45	2.5	40	40	37.5	-
WF20	110	20	30	44	53	-4	40	40	27	35
	120	20	30	-	45	2.5	40	40	37.5	-
WF29	120	20	25	-	70	2.5	40	40	-	11.5
	160	20	25	-	100	2.5	40	40	-	11.5
WF30	120	20	30	48	63	2.5	40	40	18	27
	160	20	30	48	63	2.5	40	40	33	42
WF39	160	25	30	-	109	3.5	50	50	-	6.5
	200	25	30	-	115	3.5	50	50	-	6.5
WF49	160	30	39	-	97	3.5	60	60	15.3	23.5
WF59	200	35	49	76	115	3.5	70	70	16	25

## 6.15 Flange contours of FAF..., KAF..., SAF.. and WAF.. gear units

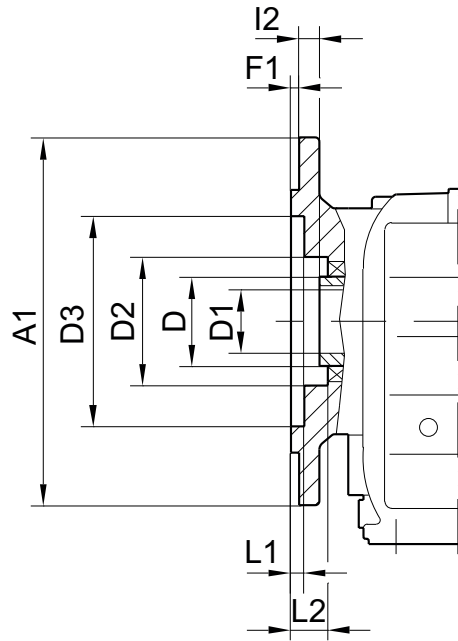


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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm								
	A1	D	D1	D2	D3	F1	I2	L1	L2
FAF27	160	40	25	66	96	3.5	20	3	18.5
FAF37	160	45	30	62	94	3.5	24	2	30
FAF47	200	50	35	70	115	3.5	25	3.5	31.5
FAF57	250	55	40	76	155	4	23.5	4	31
FAF67	250	55	40	76	155	4	23	4	31
FAF77	300	70	50	95	205	4	37	5	45
FAF87	350	85	60	120	220	5	30	5	39
FAF97	450	95	70	135	320	5	41.5	5.5	51
FAF107	450	118	90	224	320	5	41	16	52
FAF127	550	135	100	185	420	5	51	6	63
FAF157	660	155	120	200	520	6	60	10	74
KAF19	120	30	20	60	70	2.5	25	9	25.5
	160	30	20	60	100	2.5	25	9	25.5
KAF29	160	40	25 / 30	-	105	3.5	33.5	-	6.5
	200	40	25 / 30	-	118	3.5	33.5	-	6.5
KAF39	160	50	30 / 35	68	96	3.5	24.5	10	27
KAF37	160	45	30	62	94	3.5	24	2	30
KAF47	200	50	35	70	115	3.5	25	3.5	8.5
KAF49	200	55	35 / 40	76	115	3.5	32.5	16	34.5
KAF57	250	55	40	76	155	4	23.5	4	31
KAF67	250	55	40	76	155	4	23	4	31
KAF77	300	70	50	95	205	4	37	5	45
KAF87	350	85	60	120	220	5	30	5	39
KAF97	450	95	70	135	320	5	41.5	5.5	51
KAF107	450	118	90	224	320	5	41	16	52
KAF127	550	135	100	185	420	5	51	6	63
KAF157	660	155	120	200	520	6	60	10	74





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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm								
	A1	D	D1	D2	D3	F1	I2	L1	L2
SAF37	120	35	20	-	68	3	15	6	-
	160	35	20	-	96	3.5	15	5.5	-
SAF47	160	45	30 / 25	62	94	3.5	24	2	30
SAF57	200	50	35 / 30	70	115	3.5	25	3.5	31.5
SAF67	200	65	45 / 40	91	115	3.5	42.5	4	48.5
SAF77	250	80	60 / 50	112	164	4	45.5	5	53.5
SAF87	350	95	70 / 60	131	220	5	52.5	6	62.5
SAF97	450	120	90 / 70	160	320	5	60	6.5	69
WAF10	80	25	16	-	39	2.5	23	30	-
	120	25	16	39	74	3	23	5	30
WAF19	110	30	18 / 20	45	53	-4	30	27	35
	120	30	18 / 20	-	45	2.5	30	37.5	-
WAF20	110	30	18 / 20	45	53	-4	30	27	35
	120	30	18 / 20	-	45	2.5	30	37.5	-
WAF29	120	30	20	60	70	2.5	25	9	25.5
	160	30	20	60	100	2.5	25	9	25.5
WAF30	120	30	20	48	63	2.5	19.5	18	27
	160	30	20	48	63	2.5	34.5	22	42
WAF39	160	40	25 / 30	-	105	3.5	33.5	-	6.5
	200	40	25 / 30	-	118	3.5	33.5	-	6.5
WAF49	160	50	30 / 35	-	97	3.5	24.5	15.3	23.5
WAF59	200	55	35 / 40	76	115	3.5	32.5	16	25

## 6.16 Optional output shafts

The available output shafts for the gear units and gearmotors are shown below. For the standard shaft dimensions, refer to the dimension sheets. Optional shafts are available on request. Further shaft dimensions are available on request.

### 6.16.1 R, RF, RZ, R..F helical gear units

R, RF, RZ, R..F helical gear units									
Gear unit size	07	17	27	37	47	57	67	77	87
Solid shaft in mm	20×40 <sup>1)</sup> 16×40	20×40 <sup>1)2)</sup> 16×40	25×50 <sup>1)2)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup>	35×70 <sup>1)2)</sup>	35×70 <sup>1)2)</sup> 40×80	40×80 <sup>1)2)</sup>	50×100 <sup>1)2)</sup>
Solid shaft in inches	0.75×1.57 <sup>1)</sup>	0.75×1.57 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.25×2.36 <sup>1)</sup>	1.375×2.76 <sup>1)</sup>	1.375×2.76 <sup>1)</sup>	1.625×3.15 <sup>1)</sup>	2.125×3.94 <sup>1)</sup>

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

R, RF helical gear units						
Gear unit size	97	107	127	137	147	167
Solid shaft in mm	60×120 <sup>1)2)</sup>	70×140 <sup>1)2)</sup>	90×170 <sup>2)</sup>	90×170 <sup>1)2)</sup>	110×210 <sup>1)2)</sup>	120×210
Solid shaft in inches	2.375×4.72 <sup>1)</sup>	2.875×5.51	3.25×6.69	3.25×6.69	4.375×8.27	4.75×8.27

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

### 6.16.2 F series parallel-shaft helical gear units

F series parallel-shaft helical gear units						
Gear unit size	27	37	47	57	67	77
Solid shaft in mm	25×50 <sup>1)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup> 35×70 <sup>1)2)</sup>	35×70 <sup>1)</sup>	40×80 <sup>1)2)</sup> 35×70	50×100 <sup>1)2)</sup> 45×90 <sup>1)2)</sup>
Solid shaft in mm 2nd shaft end	25×50	25×50	30×60 <sup>1)2)</sup> 35×70 <sup>1)</sup>	35×70 <sup>2)</sup>	40×80 <sup>1)2)</sup>	50×100 <sup>1)2)</sup>
Solid shaft in inches	1×1.97 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.25×2.36 <sup>1)</sup> 1.375×2.76	1.375×2.76 <sup>1)</sup>	1.625×3.15 <sup>1)</sup> 1.375×2.76	2×3.94 <sup>1)</sup> 1.75×3.54
Solid shaft in inches 2nd shaft end	-	-	1.25×2.36	-	1.625×3.15	2×3.94

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

F series parallel-shaft helical gear units					
Gear unit size	87	97	107	127	157
Solid shaft in mm	60×120 <sup>1)2)</sup>	70×140 <sup>1)</sup>	90×170	110×210	120×210
Solid shaft in mm 2nd shaft end	60×120 <sup>1)2)</sup>	70×140	90×170 <sup>1)2)</sup>	110×210 <sup>2)</sup>	-
Solid shaft in inches	2.375×4.72 <sup>1)</sup>	2.875×5.51 <sup>1)</sup>	3.625×6.69	4.375×8.27	4.75×8.27
Solid shaft in inches 2nd shaft end	-	-	3.625×6.69	4.375×8.27	-

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

### 6.16.3 FF series parallel-shaft helical gear units

FF series parallel-shaft helical gear units						
Gear unit size	27	37	47	57	67	77
Solid shaft in mm	25×50 <sup>1)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup> 35×70 <sup>1)</sup>	35×70 <sup>1)2)</sup>	40×80 <sup>1)2)</sup> 35×70	50×100 <sup>1)2)</sup> 45×90
Solid shaft in inches	1×1.97 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.25×2.76 <sup>1)</sup> 1.375×2.76	1.375×2.76 <sup>1)</sup>	1.625×3.15 <sup>1)</sup> 1.375×2.76	2×3.94 <sup>1)</sup> 1.75×3.54

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

FF series parallel-shaft helical gear units					
Gear unit size	87	97	107	127	157
Solid shaft in mm	60×120 <sup>1)</sup>	70×140 <sup>1)</sup>	90×170	110×210	120×210 <sup>2)</sup>
Solid shaft in inches	2.375×4.72 <sup>1)</sup>	2.875×5.51 <sup>1)</sup>	3.625×6.69	4.375×8.27	4.75×8.27

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

### 6.16.4 FZ series parallel-shaft helical gear units

FZ series parallel-shaft helical gear units						
Gear unit size	27	37	47	57	67	77
Solid shaft in mm	25×50 <sup>1)</sup>	25×50	30×60 35×70	35×70	40×80	50×100

1) Optional stainless steel X17CrNi16-2+QT900.

FZ series parallel-shaft helical gear units					
Gear unit size	87	97	107	127	157
Solid shaft in mm	60×120	70×140	90×170 <sup>1)</sup>	110×210	120×210

1) Optional stainless steel X17CrNi16-2+QT900.

### 6.16.5 FA, FAF, FAZ parallel-shaft helical gear units

FA, FAF, FAZ parallel-shaft helical gear units						
Gear unit size	27	37	47	57	67	77
Hollow shaft in mm	25 <sup>1)</sup>	25 <sup>1)</sup> 30 <sup>1)</sup>	30 <sup>1)2) 3)</sup> 35 <sup>1)2)3)</sup>	40 <sup>1)2)3)</sup>	40 <sup>1)2)3)</sup>	50 <sup>1)2)3)</sup>
Hollow shaft in inches	1 <sup>1)</sup>	1.25 <sup>1)</sup>	1.188 1.25 <sup>1)</sup> 1.375 <sup>1)</sup>	1.438 1.5 <sup>1)</sup>	1.438 1.5 <sup>1)</sup>	1.938 2 <sup>1)</sup>

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional with reinforced bearings.

3) Optional stainless steel X17CrNi16-2+QT900 with reinforced bearings.

FA, FAF, FAZ parallel-shaft helical gear units					
Gear unit size	87	97	107	127	157
Hollow shaft in mm	60 <sup>1)2)3)</sup>	70 <sup>1)2)3)</sup>	80 <sup>1)2)3)</sup> 90 <sup>1)2)3)</sup>	100 <sup>1)2)3)</sup>	120 <sup>1)</sup>
Hollow shaft in inches	2.375 <sup>1)</sup> 2.438	2.75 <sup>1)</sup> 2.938	3.25 3.438 3.625	4	4.5

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional with reinforced bearings.

3) Optional stainless steel X17CrNi16-2+QT900 with reinforced bearings.

### 6.16.6 FH, FHF, FHZ parallel-shaft helical gear units

FH, FHF, FHZ parallel-shaft helical gear units						
Gear unit size	27	37	47	57	67	77
Hollow shaft in mm	25 <sup>1)</sup>	30 <sup>1)</sup> 30/32 <sup>1)</sup>	35 <sup>1)2)3)</sup> 35/36 <sup>1)2)3)</sup>	40 <sup>1)2)3)</sup> 40/42 <sup>1)2)3)</sup>	40 <sup>1)2)3)</sup> 40/42 <sup>1)2)3)</sup>	50 <sup>1)2)3)</sup> 50/52 <sup>1)2)3)</sup>

- 1) Optional stainless steel X17CrNi16-2+QT900.
- 2) Optional with reinforced bearings.
- 3) Optional stainless steel X17CrNi16-2+QT900 with reinforced bearings.

FH, FHF, FHZ parallel-shaft helical gear units					
Gear unit size	87	97	107	127	157
Hollow shaft in mm	65 <sup>1)2)3)</sup> 65/66 <sup>1)2)3)</sup>	75 <sup>1)2)3)</sup> 75/76 <sup>1)2)3)</sup>	95 <sup>1)2)3)</sup> 95/96 <sup>1)2)3)</sup>	105 <sup>1)2)3)</sup> 105/106 <sup>1)2)3)</sup>	125 <sup>1)</sup> 125/126

- 1) Optional stainless steel X17CrNi16-2+QT900.
- 2) Optional with reinforced bearings.
- 3) Optional stainless steel X17CrNi16-2+QT900 with reinforced bearings.

### 6.16.7 FV, FVF, FVZ parallel-shaft helical gear units

FV, FVF, FVZ parallel-shaft helical gear units								
Gear unit size	37	47	57	67	77	87	97	107
Hollow shaft	N30	N35	N35	N45	N50	N65 <sup>1)</sup>	N70	N85
Splined hollow shaft								

- 1) Optional stainless steel X17CrNi16-2+QT900.

### 6.16.8 FT parallel-shaft helical gear units

FT parallel-shaft helical gear units					
Gear unit size	37	47	57	67	77
Hollow shaft in mm	25 <sup>1)</sup>	25	35 <sup>1)</sup>	35 <sup>1)</sup>	40
With TorqLOC®		30 <sup>1)</sup>	38 <sup>1)</sup>	38 <sup>1)</sup>	45
With TorqLOC® Plus	30 <sup>1)</sup>	35 <sup>1)</sup>	40 <sup>1)</sup>	40 <sup>1)</sup>	50 <sup>1)</sup>
					51
Hollow shaft in inches	1 <sup>1)</sup>	1.188 <sup>1)</sup>	1,375 <sup>1)</sup>	1,375 <sup>1)</sup>	1,625 <sup>1)</sup>
With TorqLOC®		1.25 <sup>1)</sup>	1,438 <sup>1)</sup>	1,438 <sup>1)</sup>	1.688
With TorqLOC® Plus	1.188 <sup>1)</sup>	1.375 <sup>1)</sup>	1.5 <sup>1)</sup>	1.5 <sup>1)</sup>	1.75 <sup>1)</sup>
	1.25 <sup>1)</sup>	1.438 <sup>1)</sup>	1,625 <sup>1)</sup>	1,625 <sup>1)</sup>	1,938 <sup>1)</sup>
				1.688	2 <sup>1)</sup>

- 1) Optional stainless steel X17CrNi16-2+QT900.

FT parallel-shaft helical gear units					
Gear unit size	87	97	107	127	157
Hollow shaft in mm	50	60	80 <sup>1)</sup>	90	110 <sup>1)</sup>
With TorqLOC®	51 <sup>1)</sup>	62 <sup>1)</sup>	85 <sup>1)</sup>	95 <sup>1)</sup>	120
With TorqLOC® Plus	55	65	90 <sup>1)</sup>	100 <sup>1)</sup>	125 <sup>1)</sup>
	60 <sup>1)</sup>	70 <sup>1)</sup>	92 <sup>1)</sup>	105 <sup>1)</sup>	127 <sup>1)</sup>
	62 <sup>1)</sup>	75 <sup>1)</sup>	95 <sup>1)</sup>		
	65 <sup>1)</sup>				
Hollow shaft in inches	1.938 <sup>1)</sup>	2.438 <sup>1)</sup>	3.25 <sup>1)</sup>	3,438 <sup>1)</sup>	4,438 <sup>1)</sup>
With TorqLOC®	2 <sup>1)</sup>	2.75 <sup>1)</sup>	3,438 <sup>1)</sup>	3.75 <sup>1)</sup>	4.5 <sup>1)</sup>
With TorqLOC® Plus	2.375 <sup>1)</sup>	2.938 <sup>1)</sup>	3,625 <sup>1)</sup>	3,938 <sup>1)</sup>	4,938 <sup>1)</sup>
	2.438 <sup>1)</sup>		3.75 <sup>1)</sup>	4 <sup>1)</sup>	5 <sup>1)</sup>
				4,188 <sup>1)</sup>	

- 1) Optional stainless steel X17CrNi16-2+QT900.

## 6.16.9 K series helical-bevel gear unit

K series helical-bevel gear unit								
Gear unit size	19	29	39	49	37	47	57	67
Solid shaft in mm	20×40 <sup>1)2)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup>	35×70 <sup>1)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup> 35×70 <sup>1)2)</sup>	35×70 <sup>1)2)</sup>	40×80 <sup>1)2)</sup> 35×70
Solid shaft in mm 2nd shaft end	20×40 <sup>1)</sup>	25×50 <sup>1)</sup>	30×60 <sup>1)2)</sup>	35×70 <sup>1)2)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup> 35×70 <sup>1)</sup>	35×70 <sup>1)2)</sup>	40×80 <sup>1)2)</sup> 35×70
Solid shaft in inches	0.75×1.57 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1×1.97 <sup>1)</sup> 1.25×2.36 <sup>1)</sup>	1.375×2.76 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.25×2.36 <sup>1)</sup> 1.375×2.76	1.375×2.76 <sup>1)</sup>	1.375×2.76 1.625×3.15 <sup>1)</sup>
Solid shaft in inches 2nd shaft end	0.75×1.57 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.25×2.36 <sup>1)</sup>	1.375×2.76 <sup>1)</sup>	1×1.97	1.25×2.36 1.375×2.76	1.375×2.76	1.625×3.15 1.375×2.76

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

K series helical-bevel gear units								
Gear unit size	77	87	97	107	127	157	167	187
Solid shaft in mm	50×100 <sup>1)2)</sup> 45×90 <sup>1)2)</sup>	60×120 <sup>1)2)</sup>	70×140 <sup>1)2)</sup>	90×170 <sup>1)2)</sup>	110×210 <sup>1)</sup>	120×210 <sup>2)</sup>	160×250 <sup>2)</sup> 140×250	190×320 <sup>2)</sup> 160×300
Solid shaft in mm 2nd shaft end	50×100 <sup>1)2)</sup> 45×90	60×120 <sup>1)2)</sup>	70×140 <sup>2)</sup>	90×170 <sup>1)2)</sup>	110×210 <sup>2)</sup>	120×210 <sup>2)</sup>	160×250	190×320 <sup>2)</sup>
Solid shaft in inches	2×3.94 <sup>1)</sup> 1.75 × 3.54	2.375×4.72 <sup>1)</sup>	2.875×5.51 <sup>1)</sup>	3.625×6.69	4.375×8.27	4.75×8.27	6.25×9.84	7.5×12.6
Solid shaft in inches 2nd shaft end	2×3.94 1.75 × 3.54	2.375×4.72	2.875×5.51	3.625×6.69	4.375×8.27	4.75×8.27	6.25×9.84	7.5×12.6

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

## 6.16.10 KF helical-bevel gear units

KF helical-bevel gear units							
Gear unit size	19	29	39	49	37	47	57
Solid shaft in mm	20×40 <sup>1)</sup>	25×50 <sup>1)</sup>	30×60 <sup>1)</sup>	35×70 <sup>1)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup> 35×70 <sup>1)</sup>	35×70 <sup>1)2)</sup>
Solid shaft in mm 2nd shaft end	-	-	-	-	25 × 50 <sup>1)</sup>	30 × 60	35 × 70
Solid shaft in inches	0.75×1.57 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1×1.97 <sup>1)</sup> 1.25×2.36 <sup>1)</sup>	1.375×2.76 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.25×2.76 <sup>1)</sup>	1.375×2.76 <sup>1)</sup>

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

KF helical-bevel gear units							
Gear unit size	67	77	87	97	107	127	157
Solid shaft in mm	40×80 <sup>1)2)</sup> 35×70	50×100 <sup>1)2)</sup> 45×90	60×120 <sup>1)2)</sup>	70×140 <sup>1)2)</sup>	90×170 <sup>2)</sup>	110×210	120×210 <sup>2)</sup>
Solid shaft in mm 2nd shaft end	40×80 35×70	50×100 <sup>1)</sup>	60×120	70×140 <sup>2)</sup>	90×170	110×210	-
Solid shaft in inches	1.625×3.15 <sup>1)</sup> 1.375×2.76	2×3.94 <sup>1)</sup> 1.75×3.54	2.375×4.72 <sup>1)</sup>	2.875×5.51 <sup>1)</sup>	3.625×6.69	4.375×8.27	4.75×8.27

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

## 6.16.11 KZ helical-bevel gear units

KZ helical-bevel gear units					
Gear unit size	37	47	57	67	77
Solid shaft in mm	25×50	30×60 35×70	35×70	40×80	50×100

KF helical-bevel gear units					
Gear unit size	87	97	107	127	157
Solid shaft in mm	60×120	70×140	90×170 <sup>1)</sup>	110×210	120×210

1) Optional stainless steel X17CrNi16-2+QT900.

## 6.16.12 KA, KAF, KAZ helical-bevel gear units

KA, KAF, KAZ helical-bevel gear units							
Gear unit size	19	29	39	49	37	47	57
Hollow shaft in mm	20 <sup>1)</sup>	25 <sup>1)</sup> 30 <sup>1)</sup>	30 <sup>1)</sup> 35 <sup>1)</sup>	35 <sup>1)</sup> 40 <sup>1)</sup>	25 <sup>1)</sup> 30 <sup>1)</sup>	30 <sup>1)2)3)</sup> 35 <sup>1)2)3)</sup>	40 <sup>1)2)3)</sup>
Hollow shaft in inches	0.75 <sup>1)</sup>	1 <sup>1)</sup>	1.25 <sup>1)</sup> 1.375 <sup>1)</sup>	1.375 <sup>1)</sup> 1.5 <sup>1)</sup>	1.25 <sup>1)</sup>	1.188 1.25 <sup>1)</sup> 1.375 <sup>1)</sup>	1.438 1.5 <sup>1)</sup>

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional with reinforced bearings.

3) Optional stainless steel X17CrNi16-2+QT900 with reinforced bearings.

KA, KAF, KAZ helical-bevel gear units							
Gear unit size	67	77	87	97	107	127	157
Hollow shaft in mm	40 <sup>1)2)3)</sup>	50 <sup>1)2)3)</sup>	60 <sup>1)2)3)</sup>	70 <sup>1)2)3)</sup>	80 <sup>1)2)3)</sup> 90 <sup>1)2)3)</sup>	100 <sup>1)2)3)</sup>	120 <sup>1)</sup>
Hollow shaft in inches	1.438 1.5 <sup>1)</sup>	1.938 2 <sup>1)</sup>	2.375 <sup>1)</sup> 2.438	2.75 <sup>1)</sup> 2.938	3.25 3.438 3.625	4 <sup>2)</sup>	4.5

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional with reinforced bearings.

3) Optional stainless steel X17CrNi16-2+QT900 with reinforced bearings.

## 6.16.13 KH, KHF, KHZ helical-bevel gear units

KH, KHF, KHZ helical-bevel gear units								
Gear unit size	19	29	39	49	37	47	57	67
Hollow shaft in mm	20 <sup>1)</sup>	25 <sup>1)</sup>	35 <sup>1)</sup>	40 <sup>1)</sup>	30 <sup>1)</sup> 30/32 <sup>1)</sup>	35 <sup>1)2)3)</sup> 35/36 <sup>1)2)3)</sup>	40 <sup>1)2)3)</sup> 40/42 <sup>1)2)3)</sup>	40 <sup>1)2)3)</sup> 40/42 <sup>1)2)3)</sup>

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional with reinforced bearings.

3) Optional stainless steel X17CrNi16-2+QT900 with reinforced bearings.

KH, KHF, KHZ helical-bevel gear units								
Gear unit size	77	87	97	107	127	157	167	187
Hollow shaft in mm	50 <sup>1)2)3)</sup> 50/52 <sup>1)2)3)</sup>	65 <sup>1)2)3)</sup> 65/66 <sup>1)2)3)</sup>	75 <sup>1)2)3)</sup> 75/76 <sup>1)2)3)</sup>	95 <sup>1)2)3)</sup> 95/96 <sup>1)2)3)</sup>	105 <sup>1)2)3)</sup> 105/106 <sup>1)2)3)</sup>	125 <sup>1)</sup> 125/126	135/140 <sup>1)</sup>	155/160 <sup>1)</sup> 135/140

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional with reinforced bearings.

3) Optional stainless steel X17CrNi16-2+QT900 with reinforced bearings.

**6.16.14 KV, KVF, KVZ helical-bevel gear units**

KV, KVF, KVZ helical-bevel gear units								
Gear unit size	37	47	57	67	77	87	97	107
Splined hollow shaft	N30	N35	N35	N45	N50	N65 <sup>1)</sup>	N70	N85

1) Optional stainless steel X17CrNi16-2+QT900.

**6.16.15 KT helical-bevel gear units**

KT helical-bevel gear units							
Gear unit size	19	29	39	49	37	47	57
Hollow shaft in mm with TorqLOC <sup>®</sup>	20 <sup>1)</sup>	25 <sup>1)</sup>	30 <sup>1)</sup>	35 <sup>1)</sup>	25 <sup>1)</sup>	25	35 <sup>1)</sup>
with TorqLOC <sup>®</sup> Plus			35 <sup>1)</sup>	40 <sup>1)</sup>	30 <sup>1)</sup>	30 <sup>1)</sup>	38 <sup>1)</sup>
Hollow shaft in inch with TorqLOC <sup>®</sup>	0,625 <sup>1)</sup>	0,984 <sup>1)</sup>	1,188 <sup>1)</sup>	1,25	1 <sup>1)</sup>	1,188 <sup>1)</sup>	1,375 <sup>1)</sup>
with TorqLOC <sup>®</sup> Plus	0,688 <sup>1)</sup>	1 <sup>1)</sup>	1,25 <sup>1)</sup>	1,375 <sup>1)</sup>	1,188 <sup>1)</sup>	1,25 <sup>1)</sup>	1,438 <sup>1)</sup>
	0,75 <sup>1)</sup>		1,375 <sup>1)</sup>	1,5 <sup>1)</sup>	1,25 <sup>1)</sup>	1,375 <sup>1)</sup>	1,5 <sup>1)</sup>
			1,438 <sup>1)</sup>	1,625 <sup>1)</sup>		1,438 <sup>1)</sup>	1,625 <sup>1)</sup>
				1,688			

1) Optional stainless steel X17CrNi16-2+QT900.

KT helical-bevel gear units							
Gear unit size	67	77	87	97	107	127	157
Hollow shaft in mm with TorqLOC <sup>®</sup>	35 <sup>1)</sup>	40	50	60	80 <sup>1)</sup>	90	110 <sup>1)</sup>
with TorqLOC <sup>®</sup> Plus	38 <sup>1)</sup>	42	51 <sup>1)</sup>	62 <sup>1)</sup>	85 <sup>1)</sup>	95 <sup>1)</sup>	120
	40 <sup>1)</sup>	45	55	65	90 <sup>1)</sup>	100 <sup>1)</sup>	125 <sup>1)</sup>
		50 <sup>1)</sup>	60 <sup>1)</sup>	70 <sup>1)</sup>	92 <sup>1)</sup>	105 <sup>1)</sup>	127 <sup>1)</sup>
		51	62 <sup>1)</sup>	75 <sup>1)</sup>	95 <sup>1)</sup>		
			65 <sup>1)</sup>				
Hollow shaft in inch with TorqLOC <sup>®</sup>	1,375 <sup>1)</sup>	1,625 <sup>1)</sup>	1,938 <sup>1)</sup>	2,438 <sup>1)</sup>	3,25 <sup>1)</sup>	3,438 <sup>1)</sup>	4,438 <sup>1)</sup>
with TorqLOC <sup>®</sup> Plus	1,438 <sup>1)</sup>	1,688	2 <sup>1)</sup>	2,438 <sup>1)</sup>	3,438 <sup>1)</sup>	3,75 <sup>1)</sup>	4,5 <sup>1)</sup>
	1,5 <sup>1)</sup>	1,75 <sup>1)</sup>	2,375 <sup>1)</sup>	2,75 <sup>1)</sup>	3,625 <sup>1)</sup>	3,938 <sup>1)</sup>	4,938 <sup>1)</sup>
	1,625 <sup>1)</sup>	1,938 <sup>1)</sup>	2,438 <sup>1)</sup>	2,938 <sup>1)</sup>	4 <sup>1)</sup>	4,188 <sup>1)</sup>	5 <sup>1)</sup>
	1,688	2 <sup>1)</sup>			3,75 <sup>1)</sup>		

1) Optional stainless steel X17CrNi16-2+QT900.

**6.16.16 S series helical-worm gear units**

S series helical-worm gear units							
Gear unit size	37	47	57	67	77	87	97
Solid shaft in mm	20×40 <sup>1)2)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup>	35×70 <sup>1)2)</sup> 40×80 <sup>1)</sup>	45×90 <sup>1)2)</sup> 50×100 <sup>1)</sup>	60×120 <sup>1)</sup>	70×140 <sup>1)</sup>
Solid shaft in mm 2nd shaft end	20×40 <sup>1)2)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup>	35×70 <sup>1)2)</sup> 40×80	45×90 <sup>1)</sup> 50×100	60×120	70×140 <sup>1)</sup>
Solid shaft in inches	0.75×1.57 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.25×2.36 <sup>1)</sup>	1.375×2.76 <sup>1)</sup> 1.625×3.15	1.75×3.54 <sup>1)</sup> 2×3.94	2.375×4.72 <sup>1)</sup>	2.875×5.51 <sup>1)</sup>
Solid shaft in inches 2nd shaft end	0.75×1.57	1×1.97	1.25×2.36	1.375×2.76 1.625×3.15	1.75×3.54 2×3.94	2.375×4.72	2.875×5.51

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

## 6.16.17 SF helical-worm gear units

SF helical-worm gear units							
Gear unit size	37	47	57	67	77	87	97
Solid shaft in mm	20×40 <sup>1)2)</sup>	25×50 <sup>1)2)</sup>	30×60 <sup>1)2)</sup>	35×70 <sup>1)2)</sup> 40×80 <sup>1)</sup>	45×90 <sup>1)2)</sup> 50×100 <sup>1)</sup>	60×120 <sup>1)</sup>	70×140 <sup>1)</sup>
Solid shaft in mm 2nd shaft end	20×40 <sup>1)</sup>	25×50 <sup>1)</sup>	30×60	35×70	45×90	60×120	70×140
Solid shaft in inches	0.75×1.57 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.25×2.36 <sup>1)</sup>	1.375×2.76 <sup>1)</sup> 1.625×3.15	1.75×3.54 <sup>1)</sup> 2×3.94	2.375×4.72 <sup>1)</sup>	2.875×5.51 <sup>1)</sup>

1) Optional stainless steel X17CrNi16-2+QT900.

2) Optional solid shaft without key (smooth).

## 6.16.18 SA, SAF, SAZ helical-worm gear units

SA, SAF, SAZ helical-worm gear units							
Gear unit size	37	47	57	67	77	87	97
Hollow shaft in mm	20 <sup>1)</sup>	25 <sup>1)</sup> 30 <sup>1)</sup>	30 <sup>1)</sup> 35 <sup>1)</sup>	40 <sup>1)</sup> 45 <sup>1)</sup>	50 <sup>1)</sup> 60 <sup>1)</sup>	60 <sup>1)</sup> 70 <sup>1)</sup>	70 <sup>1)</sup> 90 <sup>1)</sup>
Hollow shaft in inches	0.75 <sup>1)</sup>	1.25 <sup>1)</sup>	1.188 1.25 <sup>1)</sup> 1.375 <sup>1)</sup>	1.5 <sup>1)</sup>	2 <sup>1)</sup>	2.375 <sup>1)</sup>	2.75 <sup>1)</sup>

1) Optional stainless steel X17CrNi16-2+QT900.

## 6.16.19 SH, SHF, SHZ helical-worm gear units

SH, SHF, SHZ helical-worm gear units							
Gear unit size	37	47	57	67	77	87	97
Hollow shaft in mm	20 <sup>1)</sup>	30 <sup>1)</sup> 30/32 <sup>1)</sup>	35 <sup>1)</sup> 35/36 <sup>1)</sup>	40 <sup>1)</sup> 40/42	50 <sup>1)</sup> 50/52	65 <sup>1)</sup> 65/66	75 <sup>1)</sup> 75/76

1) Optional stainless steel X17CrNi16-2+QT900.

## 6.16.20 ST helical-worm gear units

ST helical-worm gear units							
Gear unit size	37	47	57	67	77	87	97
Hollow shaft in mm	16 <sup>1)</sup>	25 <sup>1)</sup>	25	35 <sup>1)</sup>	40	50	60
With TorqLOC®	19 <sup>1)</sup>	30 <sup>1)</sup>	30 <sup>1)</sup>	38 <sup>1)</sup>	45	51 <sup>1)</sup>	62 <sup>1)</sup>
With TorqLOC® Plus	20 <sup>1)</sup>	30 <sup>1)</sup>	35 <sup>1)</sup>	40 <sup>1)</sup>	50 <sup>1)</sup>	60 <sup>1)</sup>	70 <sup>1)</sup>
					51 <sup>1)</sup>	62 <sup>1)</sup>	75 <sup>1)</sup>
					65 <sup>1)</sup>	65 <sup>1)</sup>	
Hollow shaft in inches	0.625 <sup>1)</sup>	1 <sup>1)</sup>	1.188 <sup>1)</sup>	1.375 <sup>1)</sup>	1.625 <sup>1)</sup>	1.938 <sup>1)</sup>	2.438 <sup>1)</sup>
With TorqLOC®	0.688 <sup>1)</sup>	1.188 <sup>1)</sup>	1.25 <sup>1)</sup>	1.438 <sup>1)</sup>	1.688	2 <sup>1)</sup>	2.75 <sup>1)</sup>
With TorqLOC® Plus	0.75 <sup>1)</sup>	1.25 <sup>1)</sup>	1.375 <sup>1)</sup>	1.625 <sup>1)</sup>	1.75 <sup>1)</sup>	2.375 <sup>1)</sup>	2.938 <sup>1)</sup>
			1.438 <sup>1)</sup>	1.688	1.938 <sup>1)</sup>	2.438 <sup>1)</sup>	
					2 <sup>1)</sup>		

1) Optional stainless steel X17CrNi16-2+QT900.



**6.16.21 SPIROPLAN® gear units W10, W20, W30**

W series SPIROPLAN® gear units			
Gear unit size	10	20	30
Solid shaft in mm	14×30 16×40	20×40 <sup>1)2)</sup>	20×40 <sup>1)2)</sup>
Solid shaft in mm 2nd shaft end	16×40	20×40 <sup>1)</sup>	20×40 <sup>1)2)</sup>
Solid shaft in inches	0.625×1.57	0.75×1.57 <sup>1)</sup>	0.75×1.57 <sup>1)</sup>
Solid shaft in inches 2nd shaft end	0.625×1.57	0.75×1.57	0.75×1.57

- 1) Optional stainless steel X17CrNi16-2+QT900.  
2) Optional solid shaft without key (smooth).

**6.16.22 SPIROPLAN® gear units WF**

SPIROPLAN® gear units WF								
Gear unit size	10	20	30	19	29	39	49	59
Solid shaft in mm	16×40 <sup>1)</sup>	20×40 <sup>1)</sup>	20×40 <sup>1)</sup>	20×40 <sup>1)</sup>	20×40 <sup>1)</sup>	25×50 <sup>1)</sup>	30×60 <sup>1)</sup>	35×70 <sup>1)</sup>
Solid shaft in mm 2nd shaft end	20×40	20×40	20×40	20×40	-	-	-	-
Solid shaft in inches	0.625×1.57	0.75×1.57	0.75×1.57	0.75×1.57	0.75×1.57 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1×1.97 <sup>1)</sup>	1.375×2.76 <sup>1)</sup>

- 1) Optional stainless steel X17CrNi16-2+QT900.

**6.16.23 SPIROPLAN® gear units WA, WAF**

SPIROPLAN® gear units WA, WAF								
Gear unit size	10	20	30	19	29	39	49	59
Hollow shaft in mm	14 16 <sup>1)</sup>	18 <sup>1)</sup> 20 <sup>1)</sup>	20 <sup>1)</sup>	18 <sup>1)</sup> 20 <sup>1)</sup>	20 <sup>1)</sup> 25 30	25 <sup>1)</sup> 30 <sup>1)</sup>	30 <sup>1)</sup> 35 <sup>1)</sup>	35 <sup>1)</sup> 40 <sup>1)</sup>
Hollow shaft in inches	0.625	0.75 <sup>1)</sup>	0.75 <sup>1)</sup>	0.75 <sup>1)</sup>	0.75 <sup>1)</sup>	1 <sup>1)</sup>	1.25 <sup>1)</sup> 1.375 <sup>1)</sup>	1.375 <sup>1)</sup> 1.5 <sup>1)</sup>

- 1) Optional stainless steel X17CrNi16-2+QT900.

**6.16.24 SPIROPLAN® gear units WH, WHF**

SPIROPLAN® gear units WH, WHF				
Gear unit size	29	39	49	59
Hollow shaft in mm	20 <sup>1)</sup>	25 <sup>1)</sup>	35 <sup>1)</sup>	40 <sup>1)</sup>

- 1) Optional stainless steel X17CrNi16-2+QT900.

**6.16.25 SPIROPLAN® gear units WT**

SPIROPLAN® gear units WT				
Gear unit size	29	39	49	59
Hollow shaft in mm	16 <sup>1)</sup>			
With TorqLOC®	19 <sup>1)</sup>	25 <sup>1)</sup>	30 <sup>1)</sup>	35 <sup>1)</sup>
With TorqLOC® Plus	20 <sup>1)</sup>		35 <sup>1)</sup>	40 <sup>1)</sup>
Hollow shaft in inches	0.625 <sup>1)</sup>	0,984 <sup>1)</sup>	1,188 <sup>1)</sup>	1.25
With TorqLOC®	0.688 <sup>1)</sup>	1 <sup>1)</sup>	1.25 <sup>1)</sup>	1,375 <sup>1)</sup>
With TorqLOC® Plus	0.75 <sup>1)</sup>		1,375 <sup>1)</sup>	1.5 <sup>1)</sup>
			1,438 <sup>1)</sup>	1,625 <sup>1)</sup>
				1.688

- 1) Optional stainless steel X17CrNi16-2+QT900.

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## 6.17 Safety covers

### 6.17.1 Rotating safety cover

The following gear unit types with hollow shaft and shrink disk are equipped with a rotating safety cover as standard:

Gear unit type	Sizes
KH..	19 – 49 and 37 – 97
FH.., SH..	37 – 97
WH..	29 – 59

Should you require a fixed plastic or metal safety cover for safety reasons, refer to the part numbers in the following chapters.

### 6.17.2 High fixed plastic safety cover

The following gear unit types with hollow shaft and shrink disk are equipped with a high fixed plastic safety cover as standard:

Gear unit type	Sizes
FH..	27 and 107 – 127
KH..	107 – 127

Should you require a high fixed plastic safety cover for other gear unit types or sizes due to safety reasons, refer to the part numbers in the following chapters.

### 6.17.3 Fixed sheet metal safety cover

The following gear unit types with hollow shaft and shrink disk are equipped with a fixed sheet metal safety cover as standard:

Gear unit type	Sizes
KH..	157, 167 and 187
FH..	157
FT.., KT.., ST.., WT.. (with TorqLOC® hollow shaft mounting system)	All available sizes
Explosion-protected gear units FH.., KH.., SH.., WH..	All available sizes

Should you require a fixed sheet metal safety cover for other gear unit types or sizes, the part numbers required to order the cover can be found in the following chapter.

**6.17.4 Flat fixed plastic safety cover**

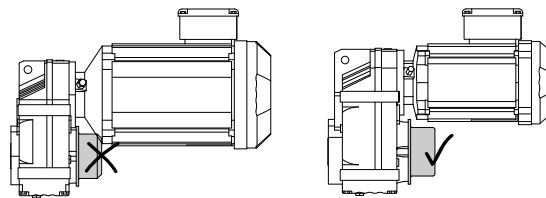
The following gear unit types with hollow shaft can optionally be equipped with a flat fixed plastic safety cover:

Gear unit type	Sizes
FA., FV..	27 – 97
KA..	19 – 49 and 37 – 97
KV..	37 – 97
SA..	37 – 97
WA..	10 – 30 and 19 – 59

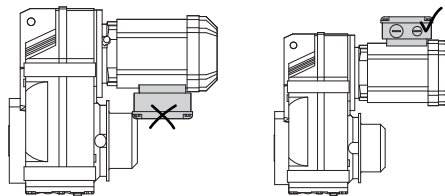
Should you require a flat fixed plastic safety cover for these gear unit types due to safety reasons, refer to the part numbers in the following chapters.

**6.17.5 Motor mounting sizes and terminal box position with fixed safety cover**

The size of the attached motor may be limited by the use of a high fixed safety cover for parallel-shaft helical gear units.



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**INFORMATION**



SEW-EURODRIVE recommends the terminal box position  $\neq 90^\circ$  for parallel-shaft helical gear units with high safety cover to simplify assembly and maintenance.

If necessary, check the configuration in the product configurator on the SEW-EURODRIVE website.

**High fixed plastic safety cover**

The following table shows the maximum possible motor mounting sizes, depending on the gear unit size, for a high fixed plastic safety cover:

Gear unit size	F..37	F..47	F..57	F..67	F..77	F..87	F..97
Maximum possible motor mounting sizes	71M	80M	90L	112M	132L	160L	180L

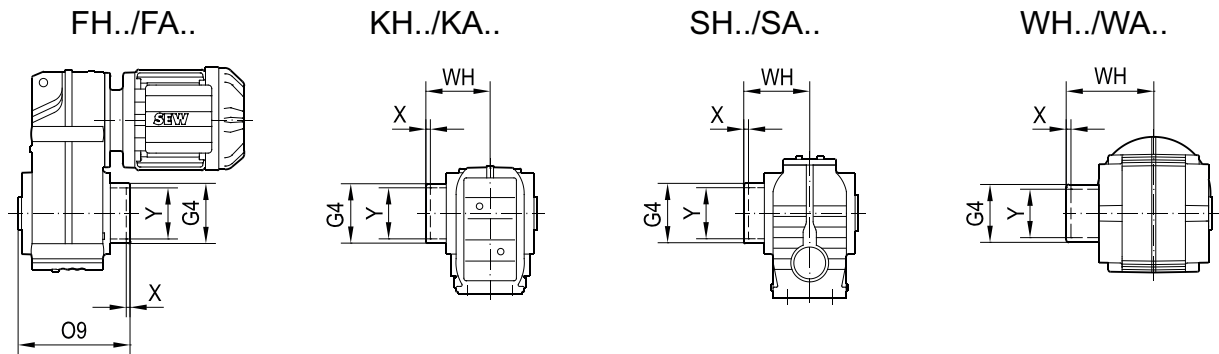
**Fixed sheet metal safety cover**

The following table shows the maximum possible motor sizes, depending on the gear unit size, for a high fixed sheet metal safety cover:

<b>Gear unit size</b>	<b>F..37</b>	<b>F..47</b>	<b>F..57</b>	<b>F..67</b>	<b>F..77</b>	<b>F..87</b>	<b>F..97</b>
Maximum possible motor mounting sizes	71M	71M	80M	100L	132L	160L	180L

6.17.6 Part numbers and dimensions for high fixed plastic covers

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Parallel-shaft helical gearmotors	FH/FA ..27	FH/FA ..37	FH/FA ..47	FH/FA ..57	FH/FA ..67	FH/FA ..77	FH/FA ..87	FH/FA ..97
Part number	06435319	6435130	6435149	6435157	6435157	6435165	6435173	6435181
G4 in mm	58	78	88	100	100	121	164	185
O9 in mm	134	157	188.5	207.5	221.5	255	295	363.5
X in mm	0.8	2	4.5	7.5	6	6	4	6.5
Y in mm	56	75	83	83	93	114	159	174

Helical-bevel gearmotors	KH/KA ..19	KH/KA ..29
Part number	10684158	10684166
G4 in mm	62	68
WH in mm	83	90
X in mm	2	4
Y in mm	50	60

Helical-bevel gearmotors <sup>1)</sup>	KH/KA ..37	KH/KA ..47	KH/KA ..57	KH/KA ..67	KH/KA ..77	KH/KA ..87	KH/KA ..97
Part number	6435130	6435149	6435157	6435157	6435165	6435173	6435181
G4 in mm	78	88	100	100	121	164	185
WH in mm	95	111.5	122.5	129	147	172	210.5
X in mm	0	1.5	5.5	3	1	2	4.5
Y in mm	75	83	83	93	114	159	174

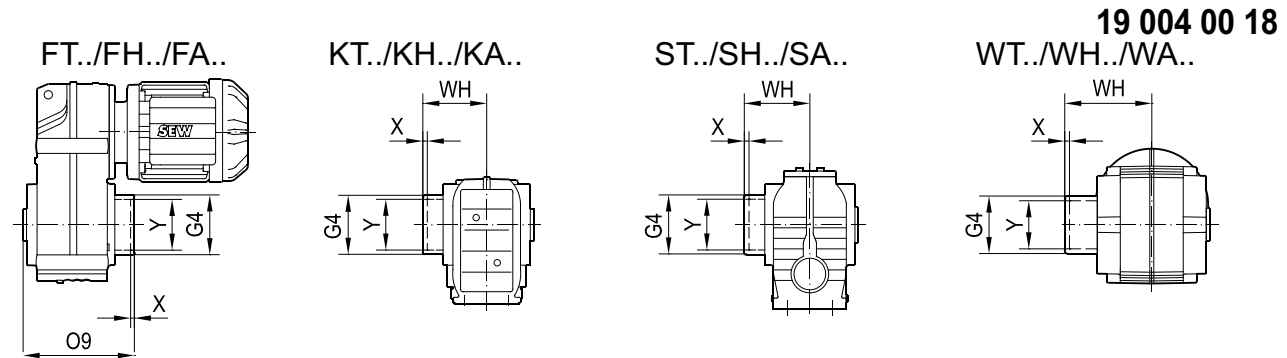
1) Not possible for helical-bevel gear units with hollow shaft in foot-mounted design (KH..B and KA..B).

Helical-worm gearmotors	SH/SA ..37	SH/SA ..47	SH/SA ..57	SH/SA ..67	SH/SA ..77	SH/SA ..87	SH/SA ..97
Part number	6435122	6435130	6435149	6435157	6435165	6435173	6435181
G4 in mm	59	78	88	100	121	164	185
WH in mm	88	95	111.5	123	147	176	204.5
X in mm	1	0	1.5	3	1	0	0.5
Y in mm	53	75	83	93	114	159	174

SPIROPLAN® gearmotors	WH/WA ..29	WH/WA ..39
Part number	10684158	10684166
G4 in mm	62	68
WH in mm	83	90
X in mm	2	4
Y in mm	50	60

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## 6.17.7 Part numbers and dimensions for fixed sheet metal covers



Parallel-shaft helical gearmotors	FT./FH/FA ..37	FT./FH/FA ..47	FT./FH/FA ..57	FT./FH/FA ..67	FT./FH/FA ..77	FT./FH/FA ..87	FT./FH/FA ..97	FT./FH/FA ..107	FT./FH/FA ..127	FT./FH/FA ..157
Part number	0643584X	06435858	06435866	06435866	06435874	06435882	06435890	06421814	06421822	06421830
G4 in mm	81	90	101	101	124	165	200	196	229	275
O9 in mm	166	199	222	236	285	322	382	421	502	605
X in mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Y in mm	78	87	98	98	121	162	197	193	226	272

Helical-bevel gearmotors	KH/KA ..19	KT..19	KH/KA ..29	KT..29	KT/KH/KA ..39	KT/KH/KA ..49
Part number	10686320	29225299	10686339	29225086	10682651	10682964
G4 in mm	60	61	68	70	86	97
WH in mm	84.5	87	91.5	98.5	117.5	138
X in mm	1.5	1.5	1.5	1.5	1	1
Y in mm	50	58	60	67	84	95

Helical-bevel gearmotors <sup>1)</sup>	KT/KH/ KA ..37	KT/KH/ KA ..47	KT/KH/ KA ..57	KT/KH/ KA ..67	KT/KH/ KA ..77	KT/KH/ KA ..87	KT/KH/ KA ..97	KT/KH/ KA ..107	KT/KH/ KA ..127	KT/KH/ KA ..157
Part number	0643584X	06435858	06435866	06435866	06435874	06435882	06435890	06421814	06421822	06421879
G4 in mm	81	90	101	101	124	165	200	196	229	275
WH in mm	104	122	137	143	177	229	382	246	297	375
X in mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Y in mm	78	87	98	98	121	162	197	193	226	272

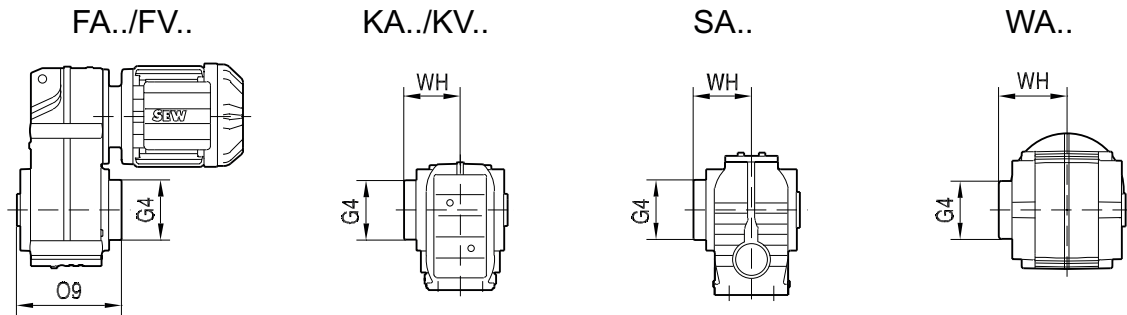
1) Not possible for helical-bevel gear units with hollow shaft in foot-mounted design (KH..B and KA..B).

Helical-worm gearmotors	ST/SH/SA ..37	ST/SH/SA ..47	ST/SH/SA ..57	ST/SH/SA ..67	ST/SH/SA ..77	ST/SH/SA ..87	ST/SH/SA ..97
Part number	06444768	0643584X	06435858	06435866	06435874	06435882	06435882
G4 in mm	64	81	90	101	124	165	165
WH in mm	98	104	122	137	177	203	223
X in mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Y in mm	61	78	87	98	121	162	162

SPIROPLAN® gearmotors	WH/WA ..29	WT ..29	WH/WA ..39	WT ..39	WT/WH/ WA ..49	WT/WH/ WA ..59
Part number	10686320	29225299	10686339	29225086	29225612	29226147
G4 in mm	60	61	68	70	87	97
WH in mm	84.5	87	91.5	98	119	138
X in mm	1.5	1.5	1.5	1.5	1.5	1.0
Y in mm	50	58	60	67	84	95

6.17.8 Part numbers and dimensions for flat fixed plastic covers

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Parallel-shaft helical gearmotors	FA/FV..27	FA/FV..37	FA/FV..47	FA/FV..57	FA/FV..67	FA/FV..77	FA/FV..87	FA/FV..97
Part number	10688684	10688293	10688390	10688498	10688498	10688595	10688692	10688781
G4 in mm	57.4	80.4	80.4	84.7	84.7	117.4	147.5	187.4
O9 in mm	111	134	163	179	193	223	251	313

Helical-bevel gearmotors	KA ..19	KA ..29	KA ..39	KA ..49
Part number	10688684	10688293	10688498	10688498
G4 in mm	57.4	80.4	84.7	84.7
WH in mm	63.2	73.5	90	102

Helical-bevel gearmotors <sup>1)</sup>	KA/KV..37	KA/KV..47	KA/KV..57	KA/KV..67	KA/KV..77	KA/KV..87	KA/KV..97
Part number	10688293	10688390	10688498	10688498	10688595	10688692	10688781
G4 in mm	80.4	80.4	84.7	84.7	117.4	147.5	187.4
WH in mm	72.5	87	95	101.5	116	131	161

1) Not possible for helical-bevel gear units with hollow shaft in foot-mounted design (KH..B and KA..B)

Helical-worm gearmotors	SA ..37	SA..47	SA ..57	SA..67	SA..77	SA.. 87	SA..97
Part number	10687890	10688293	10688390	10688498	10688595	10688692	10688781
G4 in mm	57.4	80.4	80.4	84.7	117.4	147.5	187.4
WH in mm	68	72.5	87	95.5	116	135	155

SPIROPLAN® gearmotors	WA..10	WA..19	WA..20	WA ..29	WA..30	WA ..39	WA ..49	WA ..59
Part number	10687998	10687998	10687998	10688684	10688099	10688293	10690794	10690794
G4 in mm	42.4	42.4	42.4	57.4	57.4	80.4	87.4	87.4
WH in mm	51	58.5	58.5	63.2	69	73.5	90	102

## 6.18 Technical data of condition monitoring




### 6.18.1 Information on oil aging sensor /DUO10A

#### Technical data

	Technical data		
Preset oil grades	OIL1	CLP mineral oil	$T_{\max} = 100\text{ °C}$
		Biodegradable oil	$T_{\max} = 100\text{ °C}$
	OIL2	CLP HC synthetic oil	$T_{\max} = 130\text{ °C}$
		CLP PAO oil	$T_{\max} = 130\text{ °C}$
	OIL3	CLP PG polyglycol	$T_{\max} = 130\text{ °C}$
OIL4	Food grade oil	$T_{\max} = 100\text{ °C}$	
Switch outputs	1: Early warning (time to next oil change can be set to between 2 and 100 days) 2: Main alarm (time to oil change 0 days) 3: Exceeded temperature $T_{\max}$ 4: DUO10A is ready for operation		
Permitted oil temperature	-40 °C – +130 °C		
Permitted temperature sensor	PT1000		
EMC	IEC1000-4-2/3/4/6		
Ambient temperature	-25 °C – +70 °C		
Operating voltage	DC 18 – 28 V		
Current consumption for DC 24 V	< 90 mA		
Protection class	III		
Degree of protection	IP67 (optionally IP69K)		
Housing materials	Evaluation unit: V2A, EPDM/X, PBT, FPM Temperature sensor: V4A		
Electrical connection	Evaluation unit: M12 plug connector PT1000 temperature sensor: M12 plug connector		



Designations and part numbers

Designation	Description	Part number
 DUO10A	Evaluation unit (basic device)	13438751
DUO10A-PUR-M12-5m	5 m PUR cable with 1 connector	13438778
DUO10A-PVC-M12-5m	5 m PVC cable with 1 connector	13438786
DUO10A	Angle bracket	13438808
DUO10A D = 34	Mounting clamp	13438794
 W4843 PT1000	PT1000 temperature sensor	13438816
W4843_4x0.34-2m-PUR	2 m PUR cable for PT1000 <sup>1)</sup>	13438824
W4843_4x0.34-2m-PVC	2 m PVC cable for PT1000 <sup>2)</sup>	13438832
 DUO10A	Protection cap (for aseptic design, IP69K)	13439022

1) PUR cables are particularly suited for use in oil-contaminated environments.

2) PVC cables are particularly suited for use in moist environments.

Mounting to standard gear units (R, F, K,S)

Adapter for mounting the PT1000 temperature sensor in screw plug bores:

Complete adapter for PT1000 sensor	Part number
M10 × 1	13439030
M12 × 1.5	13439049
M22 × 1.5	13439057
M33 × 2	13439065

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Complete adapter for PT1000 sensor	Part number
M42 × 2	13439073

Mounting base for installing the diagnostic unit at the gear unit with an angle bracket:

Mounting base with sealing ring	Part number
M10 × 1	13434411
M12 × 1.5	13438271
M22 × 1.5	13438298
M33 × 2	13438301
M42 × 2	13438328

### 6.18.2 Information on the /DUV40A vibration monitoring system

#### Scope of delivery

- Vibration SmartCheck unit with integrated SmartWeb software
- Vibration SmartCheck and SmartWeb documentation on CD-ROM
- SmartUtility Light software with user documentation on CD-ROM

#### Technical data

DUV40A (Diagnostic Unit Vibration)	
Housing	Glass fiber reinforced plastic
Fastening	Hexagon socket head screw M6 × 45 Contact surface on the machine: 25 mm Ø
Current consumption	< 200 mA at 24 V
Ambient temperature	-20 to +70 °C
Internal operating temperature	-20 to +85 °C
Voltage supply	DC 11 – 32 V or Power over Ethernet (PoE) based on 802.3af Mode A
Size	44 mm × 57 mm × 55 mm
Weight	Approx. 210 g
Degree of protection	IP 67
Operating system	Embedded Linux
Software	SmartWeb (Mozilla Firefox ESR 38 (recommended), Internet Explorer 11, Internet Explorer 9 not recommended due to performance reasons) Vibration SmartUtility Light or optionally Vibration SmartUtility Languages: German, English, Chinese, Spanish, and French
Internal sensor technology	
Vibration	Acceleration sensor (piezoelectric sensor) Frequency range 0.8 Hz to 10 kHz Measuring range ±50 g

Internal sensor technology	
Temperature	Measuring range -20 to +70 °C
Measurement	
Measurement functions	Acceleration Speed and distance by integration System temperature Process parameters (e.g. speed, load, pressure)
Diagnostic methods	Time signal, envelope, spectrum and trend analysis, rotational speed and frequency tracking
Characteristic values (time and frequency range)	
Defined characteristic values	DIN/ISO 10816
Calculated characteristic values	RMS, frequency selected RMS, direct component, peak, peak to peak, crest factor, Wellhausen count, carpet level, condition monitoring Other user-defined characteristic values are available.
Signal processor	
Frequency resolution	1600, 3200, 6400, or 12800 lines
Measurement resolution	24-bit (A/D converter)
Frequency range	0.8 Hz – 10 kHz
Low passes	50 Hz – 10 kHz (50 Hz, 100 Hz, 200 Hz, 500 Hz, 1 kHz, 2 kHz, 5 kHz, 10 kHz)
High passes (only envelope)	750 Hz, 1 kHz, 2 kHz (other filters on request)
Memory	
Program and data	64 MB RAM, 128 MB flash
Inputs and outputs	
Inputs	<b>2 analog inputs</b> (0 – 10 V / 0 – 24 V / 0 – 20 mA / 4 – 20 mA), frequency range 0 – 500 Hz, 12-bit <b>1 digital input</b> (0 – 30 V, 0.1 Hz – 1 kHz)
Outputs	<b>1 analog output</b> (0 – 10 V / -20 mA / 4 – 20 mA), 12-bit <b>1 switching output</b> (open collector, max. 1 A, 28 V)
Interfaces	
Control elements	2 capacitive pushbuttons (learning mode, alarm reset, restart, factory settings)
Display elements	1 LED to display status and alarm 1 LED to acknowledge the pushbuttons 2 LEDs to display communication
Communication	Ethernet 100 Mb/s OPC UA (server) available with additional license
Electrical connections	3 polarity reversal-protected M12 plug connectors for supply, input/outputs and Ethernet

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## Part numbers

	Description	Part number
Sensor	DUV40A (Diagnostic Unit Vibration)	19175892
Cables	Voltage supply cable 8-pin for SmartCheck 5 m; M12(B) <-> open end	19179596
Cables	Ethernet cable for SmartCheck 5 m; M12 <-> RJ45	19179618
Cables	I/O cable 8-pin for SmartCheck 5 m; M12(St) <-> open end	19179626
Cables	Power/Ethernet/I-O signals in 10 m and 20 m	

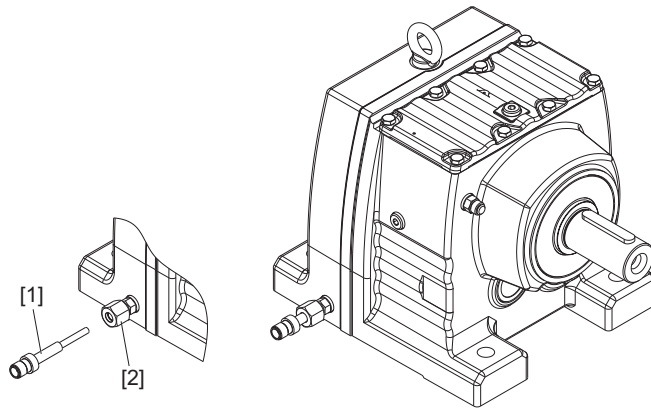
	Description	Part number
Base for mounting on standard gear units (R, F, K, and S gear units)	Mounting base with sealing ring M10 × 1	20593422
	Mounting base with sealing ring M12 × 1.5	20593430
	Mounting base with sealing ring M22 × 1.5	20593449
	Mounting base with sealing ring M33 × 2	20593457
	Mounting base with sealing ring M42 × 2	20593465

	Description	Part number
Base for mounting on industrial gear units	Mounting base with sealing ring G3/4"	20593384
	Mounting base with sealing ring G1"	20593392
	Mounting base with sealing ring G1 1/4"	20593406
	Mounting base with sealing ring G1 1/2"	20593414

	Description	Part number
Base for mounting on standard motors	Mounting base M5	21014175
	Mounting base M6	21014167
	Mounting base M8	20593503
	Mounting base M10	21014248
	Mounting base M12	20593473
	Mounting base M16	20593481
	Mounting base M20	20593511

### 6.19 PT1000 temperature sensor

The optional PT1000 temperature sensor (part number 13438816) is used for continuously measuring the oil temperature of the gear unit.



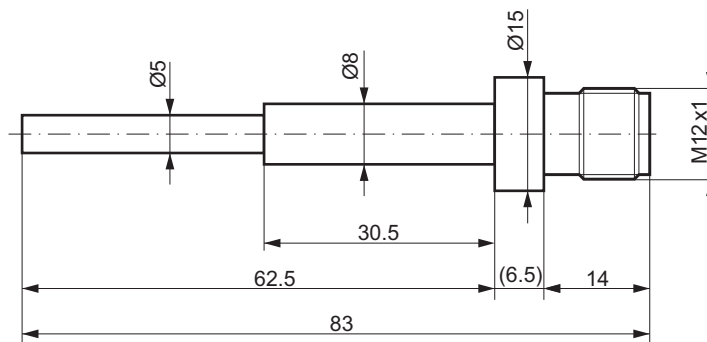
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- [1] Temperature sensor
- [2] Adapter screw fitting

The temperature sensor [1] is delivered in mounted condition. It is attached to the gear unit by means of an adapter screw fitting [2] in the corresponding screw plug bore.

For using the temperature sensor in potentially explosive areas, observe the corresponding information in the "Explosion-Protected Gear Units" assembly and operating instructions (Mechanical installation → Optional equipment).

#### 6.19.1 PT1000 dimension drawing



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#### 6.19.2 PT1000 technical data

Technical data	Value
Rod length	62.5 mm
Measuring range	-40 – 130 °C
Permitted oil temperature	-40 – 130 °C
Accuracy	± (PT1000 + 0.2 K)
Measuring element	1 × PT1000 to DIN EN 60751, class B, 4-wire connection
Dynamic response T05/T09 (s)	3/8 to DIN EN 60751

Technical data	Value
Ambient temperature	-25 – 80 °C
Degree of protection, protection class	IP67, III
Housing materials	V4A (1.4404)
Materials in contact with the medium	V4A (1.4404)
Port	M12 plug-in connection; gold-plated contacts

## 7 Important information on selection tables and dimension drawings

### 7.1 Possible geometrical combinations

#### 7.1.1 Structure of the combination tables

These tables show geometrically possible combinations of single-speed gear units and AC (brake) motors. Please contact SEW-EURODRIVE for information on pole-changing AC (brake) motors.

The output speed  $n_a$ , the maximum output torque  $M_{amax}$ , the permitted overhung load  $F_{Ra}$  at maximum output torque (valid for foot-mounted gear units with solid shaft), the torsion angle  $\varphi$  (/R), and the gear unit ratio are specified for input speed  $n_e = 1400 \text{ min}^{-1}$  for each combination.

Only if a value is specified for the torsion angle  $\varphi_{(/R)}$ , is the gear unit with this gear unit ratio available with "reduced backlash (/R)" option. The numerical value specifies the rotational clearance of the reduced backlash version in angular minutes ' (tolerance:  $\pm 2$  angular minutes).

R77, $n_e = 1400 \text{ min}^{-1}$						820Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(/R)}$	$i$	DRN 63MS 63M 71MS ...	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L
7.2	820	9920	7	195.24*							
8.4	820	9920	7	166.59							




Gear unit ratio: A value marked with \* indicates finite gear unit ratio.


No data (-): The reduced backlash option (/R) is not possible for this  $i$  value.  
Numerical value given: Reduced backlash option is possible. The numerical value is the torsion angle in angular minutes.

Permitted overhung load at maximum output torque  $M_{amax}$   
The value refers to the foot-mounted gear unit design with solid shaft

Maximum output torque of the gear unit

Output speed of the gear unit

 Combination with the motor in the header is possible

 Combination with the motor in the header is not possible

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Number of stages of the gear ratios (1, 2 or 3 stages). Helical gear units (R) – with the exception of single-stage RX gear units – and parallel-shaft helical gear units (F) as well as SPIROPLAN® gear units W..9 are 2- or 3-stage gear units depending on the gear unit ratio.

# 7 Important information on selection tables and dimension drawings

## Selection tables for gearmotors

The RX helical, helical-bevel, helical-worm and SPIROPLAN® W..0 gear units have a defined number of stages:

- RX helical gear units: RX.. always 1-stage
- Helical-bevel gear units: K..7 always 3-stage, K..9 always 2-stage
- Helical-worm gear units: always 2-stage
- SPIROPLAN® gear units: W..10 to W..30 always 1-stage, W..37 and W..47 always 2-stage



Stages of the compound gear unit ratios (2-2, 3-3, 2-3 or 3-2 stages). The number of stages of the primary gear unit (= small gear unit) is given on the right; the number of stages of the output gear unit (= large gear unit) is given on the left. The primary gear unit of the compound gear unit is always a helical gear unit.

## 7.2 Selection tables for gearmotors

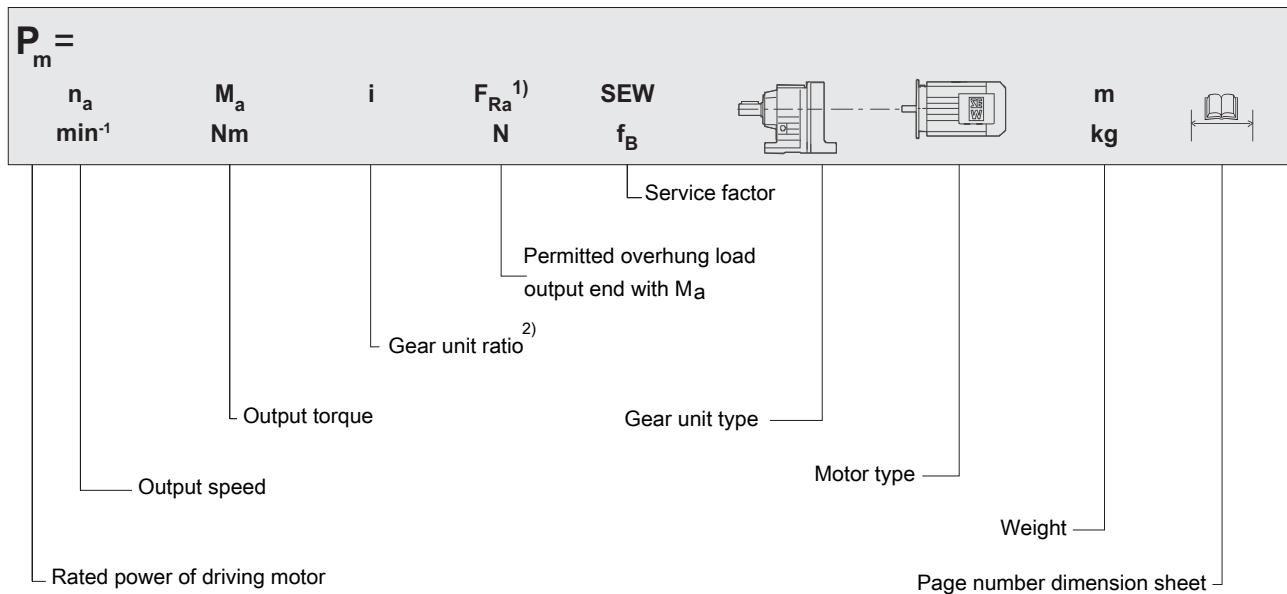
### 7.2.1 Structure of the selection tables

The two figures below illustrate the structure of the selection tables for gearmotors.

There are two types of selection tables:

1. For standard output speeds, sorted by the rated power  $P_m$  of the driving motor in kW.
2. For extremely low output speeds, always compound gearmotors sorted by the maximum permitted output torque  $M_{amax}$  in Nm.

**Table for standard output speeds:**



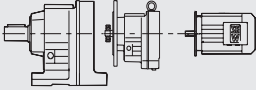

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<sup>1)</sup> Overhung load for foot-mounted gear units with solid shaft; overhung loads for other design types upon request

<sup>2)</sup> A value marked with \* indicates finite gear unit ratio.



Table for extremely low output speeds (compound gearmotors):

$M_{a \max}$ Nm	$n_a$ min <sup>-1</sup>	$i$	$F_{Ra}^{1)}$ N		$m$ kg	
Maximum permitted output torque	Output speed	Gear unit ratio (*: finite gear unit ratio)	Permitted overhung at output end with $M_a$ load	Gear unit types  Motor type	Mass	Page number dimension sheet

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<sup>1)</sup> Overhung load for foot-mounted gear units with solid shaft; overhung loads for other design types upon request

**INFORMATION**



In drives for particularly low output speeds (multi-stage gearmotors), the motor power must be limited to the maximum permitted output torque of the gear unit.

### 7.3 Dimension sheet information

#### 7.3.1 Tolerances

##### Shaft heights

The following tolerances apply to the indicated dimensions:

$h \leq 250 \text{ mm} \rightarrow -0.5 \text{ mm}$

$h > 250 \text{ mm} \rightarrow -1 \text{ mm}$

**Foot-mounted gear units:** Check the mounted motor because it might project below the mounting surface.

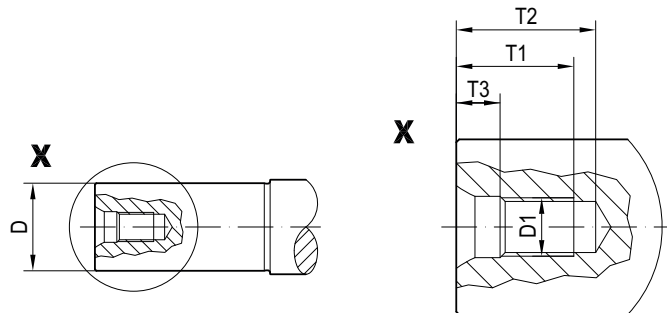
##### Shaft ends

Diameter tolerance:

$\varnothing \leq 50 \text{ mm} \rightarrow \text{ISO k6}$

$\varnothing > 50 \text{ mm} \rightarrow \text{ISO m6}$

Center holes according to DIN 332, shape DR:



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D	D1	T1 +2/0	T2 min	T3 +1/0
13 < D ≤ 16	M5	12.5	17	4
16 < D ≤ 21	M6	16	21	5
21 < D ≤ 24	M8	19	25	6
24 < D ≤ 30	M10	22	30	7.5
30 < D ≤ 38	M12	28	37	9.5
38 < D ≤ 50	M16	36	45	12
50 < D ≤ 85	M20	42	53	15
85 < D ≤ 130	M24	50	63	18
130 < D ≤ 225	M30	63	85	20

Keys: according to DIN 6885 (domed type)

Keyway width to ISO N9

**Hollow shafts**

Diameter tolerance:

∅ → ISO H7 measured with plug gauge

Keys: according to DIN 6885 (domed type)

Exception: Key for WA.37 with shaft ∅ 25 mm and for KA.29 with shaft ∅ 30 mm according to DIN 6885-3 (low form)

Keyway width to ISO JS9

**Multiple-spline shafts**

D<sub>m</sub> Measuring roller diameter

M<sub>e</sub> Check size

The fit of the hollow shafts with splined hollow shaft is 9H.

The assumed fit of the customer shaft in the dimension sheets of the catalog is 7d.

The fit pair 9H/7d specified in the dimension sheets is a clearance fit. Depending on the application requirements, it is the customer's responsibility to choose another fit pair and to manufacture the customer shaft accordingly.

**Flanges**

Centering shoulder tolerance:

∅ ≤ 230 mm (flange sizes A120 – A300) → ISO j6

∅ > 230 mm (flange sizes A350 – A660) → ISO h6

For helical gear units, SPIROPLAN® gear units, AC (brake) motors and explosion-protected AC (brake) motors, up to 3 different flange dimensions are available per size. The mountable flange for each size can be found in the respective dimension sheets.

**7.3.2 Eyebolts, lifting eyes**

R07 – R27 helical gear units, K..167 – K..187 helical-bevel gear units, motors up to DRN90 and SPIROPLAN® gearmotors W..10 – W..30 are delivered without special transportation fixtures. All other gear units and motors are equipped with cast-on lifting eyes, screw-on lifting eyes, or screw-on eyebolts.

Gear unit/motor type	Screw-on		Cast-on Lifting eyes
	Lifting eyebolts	Lifting eyes	
R..37 – R..57	—	X	—
R..67 – R..167	X	—	—
RX57/RX67	—	X	—
RX77 – RX107	X	—	—
F..27 – F..157	—	—	X
K..19 – K..49	—	X	—
K..37 – K..157	—	—	X
S..37/S47	—	X	—
S..47 – S..97	—	—	X

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Gear unit/motor type	Screw-on		Cast-on Lifting eyes
	Lifting eyebolts	Lifting eyes	
W..19 – W..59	—	X	—
≥ DRN100L	X	—	—

Legend: —not available, X available

### 7.3.3 Breather valves

The gear unit dimension drawings always show the screw plugs. The corresponding screw plug is replaced by an activated breather valve at the factory depending on the ordered mounting position M1 to M6. The result may be slightly altered contour dimensions.

### 7.3.4 Shrink disk connection

In order to non-positively transfer the torques stated in the catalog in case of gear units with hollow shaft and shrink disk connection, observe the following peripheral conditions in addition to the information on the respective dimension sheet when dimensioning the customer shaft:

- Surface roughness  $R_z \leq 16 \mu\text{m}$
- Elastic limit of the customer shaft material  $R_e$  and/or  $R_{p0.2} \geq 305 \text{ N/mm}^2$
- Design of the customer shaft as solid shaft

For customer shafts designed as hollow shaft, contact SEW-EURODRIVE.

### 7.3.5 Splined hollow shaft

FV.. hollow shaft gear unit sizes 27 to 107, and KV.. sizes 37 to 107 are supplied with splining according to standard DIN 5480.

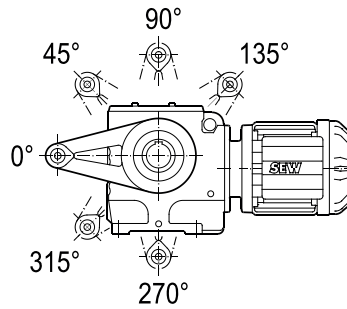
### 7.3.6 Rubber buffer for FA/FH/FV/FT

The depictions on the dimension sheets show the rubber buffers for FA/FH/FV/FT gear units in loose state. Preload rubber buffer by the indicated value  $\Delta L$ . The characteristic curve of spring for the rubber buffer is available upon request from SEW-EURODRIVE.

### 7.3.7 Position of the torque arm

The following illustration shows the possible torque arm positions for helical-worm gear units, 2-stage K..9 helical-bevel gear units, and SPIROPLAN® gear units with the respective angles.

Exceptions: The 135° position is only possible for the SPIROPLAN® W..59 gear unit.  
For SPIROPLAN® W..29 and W..39 gear units, the 90° position is not possible.



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For more information about torque arms, refer to the respective dimension sheets of the gearmotors:

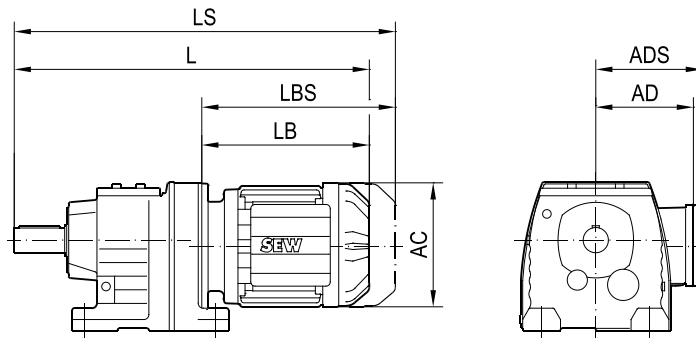
Gearmotor	Dimension sheets on page
Helical-bevel gearmotors	(→ 661)
Helical-worm gearmotors	(→ 844)
SPIROPLAN® gearmotors	(→ 975)

# 7 Important information on selection tables and dimension drawings

Dimension sheet information

## 7.3.8 Gearmotor dimension drawings

The dimension drawings of the gearmotors are described below:



36907376651

- L Total length of gearmotor
- LB Length of motor
- LBS Length of brakemotor
- LS Total length of gearmotor including brake
- AC Diameter of motor
- AD Center of motor shaft to top part of terminal box
- ADS Center of brakemotor shaft to top part of terminal box

### INFORMATION



The motor dimensions may change when installing motor options. Refer to the dimension drawings of the motor options in the "AC Motors" catalog.

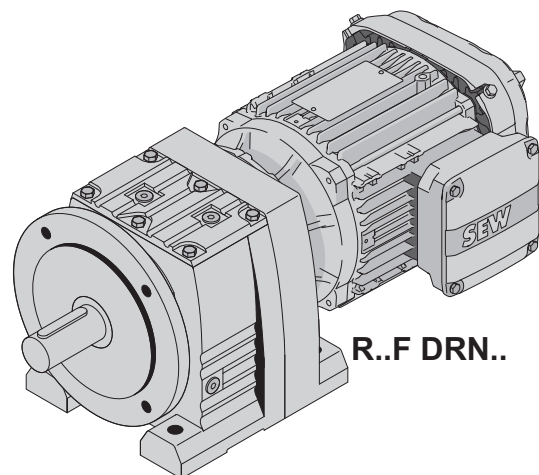
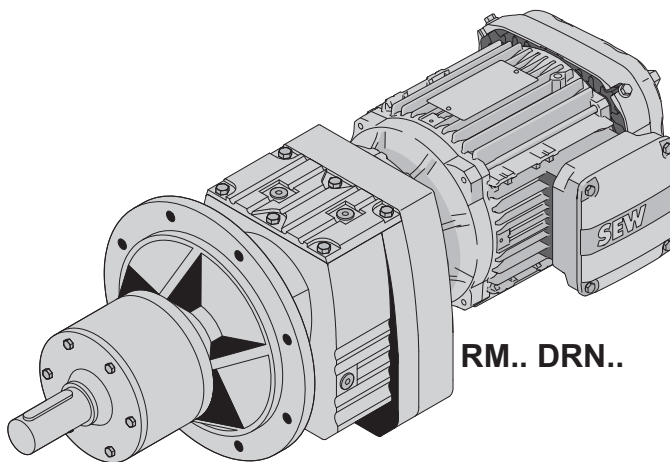
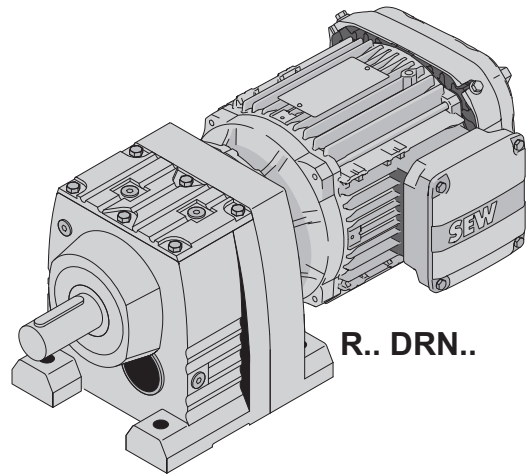
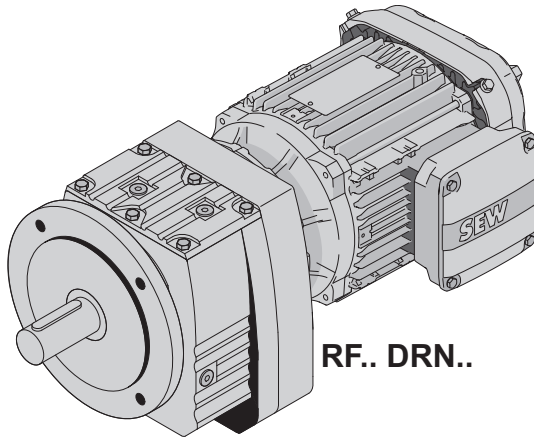
### INFORMATION



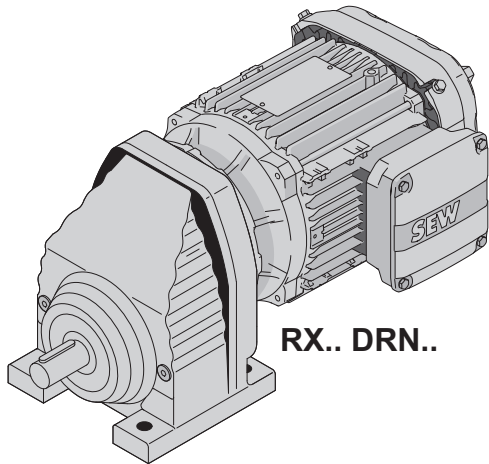
The terminal box dimensions in special designs might vary from the standard.

## 8 Helical gearmotors

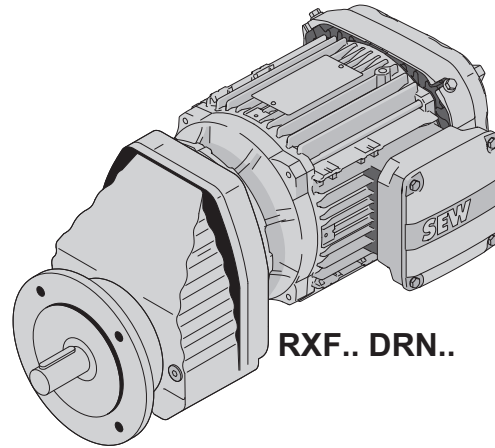
### 8.1 R..DRN.. designs



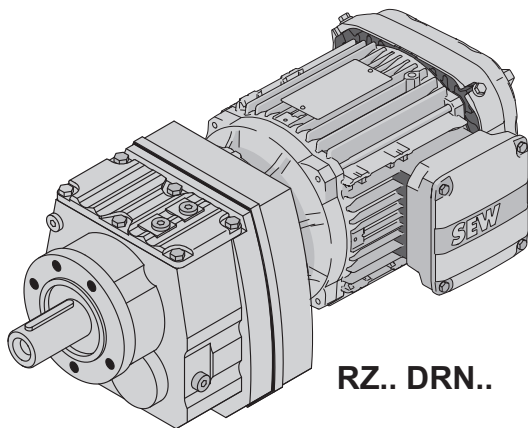
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RX.. DRN..



RXF.. DRN..





RZ.. DRN..


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8.2 Possible geometrical combinations of R..DRN..


<b>RX57, n<sub>e</sub> = 1400 min<sup>-1</sup></b>						<b>69 Nm</b>					
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	
 1											
255	39	3100	-	5.50*							
276	36	3030	-	5.07							
322	68	2640	-	4.35							
369	69	2480	-	3.79							
394	69	2420	-	3.55*							
446	65	2320	-	3.14							
481	67	2170	-	2.91							
530	69	1810	-	2.64*							
591	69	1500	-	2.37							
686	69	1070	-	2.04							
729	69	880	-	1.92*							
848	69	430	-	1.65							
946	68	112	-	1.48							
1075	63	132	-	1.30							


<b>RX67, n<sub>e</sub> = 1400 min<sup>-1</sup></b>						<b>134 Nm</b>					
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	
 1											
231	43	4000	-	6.07							
270	75	3580	-	5.18							
309	82	3350	-	4.53							
326	80	3300	-	4.30*							
371	87	3090	-	3.77							
438	100	2800	-	3.20*							
484	106	2640	-	2.89							
551	118	2000	-	2.54							
583	123	1530	-	2.40*							
686	134	230	-	2.04							
753	126	225	-	1.86							
870	114	245	-	1.61							
1000	104	205	-	1.40*							

<b>RX77, n<sub>e</sub> = 1400 min<sup>-1</sup></b>						<b>215 Nm</b>					
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L
 1											
175	57	6330	-	8.00*							
187	53	6200	-	7.47							


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RX77, $n_e = 1400 \text{ min}^{-1}$					215 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
218	103	5600	-	6.41							
249	110	5300	-	5.63							
262	103	5240	-	5.35*							
296	123	4890	-	4.73							
347	143	4490	-	4.04*							
378	153	4280	-	3.70							
431	182	3140	-	3.25*							
455	193	2490	-	3.08*							
519	215	1030	-	2.70							
576	215	425	-	2.43							
657	200	360	-	2.13							
745	187	255	-	1.88*							
838	173	240	-	1.67							
986	155	240	-	1.42							

RX87, $n_e = 1400 \text{ min}^{-1}$					405 Nm								
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L
 1													
162	139	7890	-	8.65									
183	149	7500	-	7.63									
194	140	7380	-	7.20*									
217	192	6860	-	6.45									
252	225	6330	-	5.56*									
276	250	5990	-	5.07									
311	290	5520	-	4.50*									
370	305	5050	-	3.78									
402	405	2810	-	3.48									
453	405	2030	-	3.09									
507	405	1200	-	2.76*									
565	405	470	-	2.48									
651	385	42	-	2.15									
725	355	185	-	1.93									
875	315	74	-	1.60*									
1005	290	74	-	1.39									


RX97, $n_e = 1400 \text{ min}^{-1}$					595 Nm								
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S
 1													
170	225	9570	-	8.23									
196	260	8960	-	7.16*									
213	300	8510	-	6.56									
242	420	7650	-	5.79									
285	395	7240	-	4.91									



RX97, $n_e = 1400 \text{ min}^{-1}$					595 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L
310	595	6210	-	4.52								
347	595	5450	-	4.04								
385	595	4610	-	3.64*								
424	595	3820	-	3.30								
479	595	2890	-	2.92								
530	595	2020	-	2.64								
625	595	545	-	2.24*								
714	570	19	-	1.96								
854	505	51	-	1.64								
986	455	132	-	1.42								

RX107, $n_e = 1400 \text{ min}^{-1}$					830 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	
 1											
211	460	9660	-	6.63*							
250	455	9040	-	5.61							
270	695	7780	-	5.19							
301	695	7380	-	4.65							
333	830	6140	-	4.20*							
367	830	5260	-	3.81							
414	830	4190	-	3.38							
456	830	3300	-	3.07							
530	830	1850	-	2.64*							
609	830	760	-	2.30							
718	765	420	-	1.95							
819	705	345	-	1.71							
972	645	315	-	1.44							

R07, $n_e = 1400 \text{ min}^{-1}$					50 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
 3							
18	50	1510	-	78.24			
20	50	1510	-	71.47			
23	50	1510	-	60.32			
27	50	1510	-	51.52			
29	50	1470	-	47.78			
32	50	1420	-	44.16			
34	50	1380	-	41.31			
35	50	1370	-	40.34			
36	50	1340	-	38.51			
41	50	1270	-	34.05			
48	50	1190	-	29.08			
52	50	1150	-	26.97			

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R07, $n_e = 1400 \text{ min}^{-1}$					50 Nm		
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
60	50	1080	-	23.32			
64	50	1040	-	21.73			
 2							
76	50	960	-	18.31			
84	50	920	-	16.73			
99	50	850	-	14.12			
116	50	790	-	12.06			
125	50	760	-	11.18			
145	50	710	-	9.67			
155	50	685	-	9.01			
178	49	645	-	7.85			
187	43	595	-	7.48			
205	43	535	-	6.83			
243	40	530	-	5.76			
285	37	530	-	4.92			
306	36	520	-	4.57			
354	34	505	-	3.95			
380	33	500	-	3.68			
436	31	495	-	3.21			

R17, $n_e = 1400 \text{ min}^{-1}$					85 Nm		
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	
					63MS 63M 71MS 71M 80MK	80M	
 3							
17	85	1770	-	81.64			
20	85	1770	-	70.39			
21	85	1770	-	65.61			
24	85	1770	-	57.35			
26	85	1770	-	53.76			
30	85	1770	-	47.44			
32	85	1770	-	44.18			
36	85	1770	-	38.61			
39	85	1770	-	36.20			
44	85	1770	-	31.94			
49	85	1770	-	28.32			
58	85	1650	-	24.07			
 2							
55	85	1680	-	25.23			
60	85	1620	-	23.15			
71	85	1500	-	19.71			
82	85	1400	-	16.99			
88	85	1350	-	15.84			
101	85	1270	-	13.84			
108	85	1230	-	12.98			

R17, $n_e = 1400 \text{ min}^{-1}$					85 Nm	
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M
122	81	1180	-	11.45		
138	77	1140	-	10.15		
162	72	1090	-	8.63		
185	56	1040	-	7.55		
199	55	1010	-	7.04		
228	54	950	-	6.15		
243	53	930	-	5.76		
275	51	890	-	5.09		
310	48	870	-	4.51		
366	45	820	-	3.83		

R27, $n_e = 1400 \text{ min}^{-1}$					130 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L



3

10	130	4230	-	135.09				
11	130	4230	-	123.91				
13	130	4230	-	105.49				
15	130	4230	-	90.96				
17	130	4230	-	84.78				
19	130	4230	-	74.11				
20	130	4180	-	69.47				
23	130	3980	-	61.30				
25	130	3840	-	55.87				
29	130	3630	-	48.17				
31	130	3530	-	44.90				
36	130	3350	-	39.25				
38	130	3260	-	36.79				
43	130	3100	-	32.47				
49	130	2950	-	28.78				
57	130	2760	-	24.47				











2


49	130	2940	-	28.37				
54	130	2840	-	26.09				
63	130	2660	-	22.32				
72	130	2510	-	19.35				
77	130	2440	-	18.08				
90	130	2290	-	15.63				
105	130	2140	-	13.28*				
118	129	1980	-	11.86				
138	122	1890	-	10.13				
149	122	900	-	9.41				
172	116	870	-	8.16				
183	112	900	-	7.63*				
212	106	880	-	6.59				

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R27, $n_e = 1400 \text{ min}^{-1}$					130 Nm			
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
250	99	880	-	5.60*				
280	95	860	-	5.00*				
328	87	920	-	4.27				
350	85	900	-	4.00*				
415	79	900	-	3.37				

R27R17, $n_e = 1400 \text{ min}^{-1}$					130 Nm			
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M	
					 3  3			
0.16	130	4230	-	8612				
0.19	130	3320	-	7425				
0.20	130	4230	-	6921				
0.23	130	4230	-	6050				
0.27	130	3320	-	5217				
0.30	130	4230	-	4661				
0.34	130	3320	-	4073				
0.40	130	4230	-	3516				
0.44	130	4230	-	3160				
0.51	130	4230	-	2763				
0.58	130	4230	-	2414				
0.66	130	4230	-	2110				
0.75	130	4230	-	1862				
0.86	130	3320	-	1625				
0.98	130	4230	-	1434				
1.1	130	4230	-	1254				
					 2  3			
0.77	130	4230	-	1822				
0.89	130	4230	-	1580				
0.96	130	4230	-	1464				
1.1	130	4230	-	1270				
1.3	130	4230	-	1100				
1.4	130	4230	-	972				
1.7	130	4230	-	840				
1.9	130	4230	-	741				
2.1	130	4230	-	654				
2.5	130	4230	-	566				
2.8	130	4230	-	499				
					 3  2			
1.3	130	4230	-	1101				
1.5	130	4230	-	962				
1.7	130	3320	-	848				
1.9	130	3320	-	743				
2.2	130	4230	-	649				
2.5	130	4230	-	567				

<b>R27R17, n<sub>e</sub> = 1400 min<sup>-1</sup></b>					<b>130 Nm</b>		
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
2.8	130	4230	-	509			
3.2	130	4230	-	432			
3.6	130	4230	-	387			
4.1	130	3320	-	339			
4.7	130	3320	-	296			
5.4	130	4230	-	259			
6.1	130	4230	-	229			
7.0	130	4230	-	200			
7.9	130	3320	-	177			
8.4	130	4230	-	166			
9.3	130	4230	-	150			
9.9	130	4230	-	141			
11	130	3320	-	124			
13	130	4230	-	110			
15	130	4230	-	94			
 2  2							
3.2	130	4230	-	440			
3.7	130	4230	-	381			
4.3	130	4230	-	329			
4.8	130	4230	-	290			
5.5	130	4230	-	256			
6.2	130	4230	-	227			
6.9	130	4230	-	203			
7.8	130	4230	-	179			
9.0	130	4230	-	156			
10	130	4230	-	135			
12	130	4230	-	118			
13	130	4230	-	104			
16	130	4230	-	90			


<b>R37, n<sub>e</sub> = 1400 min<sup>-1</sup></b>					<b>200 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
 3								
10	200	4940	8	134.82				
11	200	4940	8	123.66				
13	200	4940	8	105.28				
15	200	4940	8	90.77				
17	200	4940	8	84.61				
19	200	4940	8	73.96				
20	200	4940	8	69.33				
23	200	4940	9	61.18				
25	200	4940	9	55.76				
29	200	4940	9	48.08				
31	200	4940	9	44.81				





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## Helical gearmotors





Possible geometrical combinations of R..DRN..

R37, $n_e = 1400 \text{ min}^{-1}$					200 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L
36	200	4760	9	39.17				
38	200	4540	9	36.72				
43	200	4120	9	32.40				
49	200	3740	9	28.73				
57	200	3240	9	24.42				
 2								
49	200	3690	8	28.32				
54	185	3860	8	26.03				
63	200	2970	8	22.27				
73	200	2570	8	19.31				
78	200	2390	8	18.05				
90	200	2010	8	15.60				
106	190	1880	8	13.25				
118	183	1810	8	11.83				
138	170	1820	9	10.11				
148	167	1760	9	9.47				
176	156	1720	9	7.97				
210	144	1000	13	6.67				
247	142	760	13	5.67				
277	135	790	13	5.06				
324	126	820	13	4.32				
346	122	840	14	4.05				
411	112	900	14	3.41				

R37R17, $n_e = 1400 \text{ min}^{-1}$					200 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	$i$	DR2S 56M	DRN 63MS 63M 71MS 71M 80MK	DRN 80M	
 3  3								
0.16	200	4940	9	8595				
0.19	200	4940	9	7411				
0.20	200	4940	9	6907				
0.23	200	4940	9	6038				
0.27	200	4940	9	5206				
0.30	200	4940	9	4651				
0.34	200	4940	9	4065				
0.38	200	4940	10	3658				
0.44	200	4940	10	3154				
0.51	200	4940	10	2757				
0.58	200	4940	10	2409				
0.66	200	4940	10	2106				
0.75	200	4940	10	1856				
0.86	200	4940	10	1622				
0.98	200	4940	10	1431				
1.1	200	4940	10	1251				
 2  3								

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R37R17, $n_e = 1400 \text{ min}^{-1}$					200 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
0.77	200	4940	9	1818			
0.89	200	4940	9	1576			
1.0	200	4940	9	1359			
1.1	200	4940	9	1267			
1.3	200	4940	10	1098			
1.4	200	4940	9	970			
1.7	200	4940	10	839			
1.9	200	4940	10	740			
2.1	200	4940	9	653			
2.4	200	4940	9	577			
2.8	200	4940	10	498			
 3  2							
1.3	200	4940	10	1099			
1.5	200	4940	9	960			
1.7	200	4940	9	847			
1.9	200	4940	9	741			
2.2	200	4940	9	647			
2.5	200	4940	10	566			
2.8	200	4940	10	508			
3.2	200	4940	9	431			
3.6	200	4940	10	387			
4.1	200	4940	10	338			
4.7	200	4940	10	296			
5.4	200	4940	10	259			
6.1	200	4940	10	228			
7.0	200	4940	10	199			
8.1	200	4940	11	172			
9.3	200	4940	11	150			
11	200	4940	11	130			
11	200	4940	10	124			
13	200	4940	11	110			
15	200	4940	11	94			
 2  2							
3.2	200	4940	9	439			
3.7	200	4940	9	378			
4.3	200	4940	9	328			
4.8	200	4940	9	289			
5.3	200	4940	10	265			
6.2	200	4940	9	226			
6.9	200	4940	10	202			
7.8	200	4940	10	179			
9.0	200	4940	9	156			
10	200	4940	10	135			
11	200	4940	10	127			
13	200	4940	10	104			
16	200	4940	10	90			

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## Helical gearmotors

Possible geometrical combinations of R..DRN..

R47, $n_e = 1400 \text{ min}^{-1}$					300 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S
 3										
7.9	300	5420	7	176.88						
8.6	300	5420	7	162.94						
10	300	5420	7	139.99						
11	300	5420	7	121.87						
12	300	5420	7	114.17						
14	300	5420	7	100.86						
15	300	5420	7	93.68						
16	300	5420	7	84.90						
18	300	5420	7	76.23						
20	300	5420	8	68.54						
22	300	5420	8	64.21						
25	300	5420	8	56.73						
27	300	5350	8	52.69						
29	300	5140	8	47.75						
33	300	4930	8	42.87						
38	300	4630	8	36.93						
40	300	4520	8	34.73						
47	300	4240	8	29.88						
52	300	4050	8	26.70						
59	300	3840	8	23.59						
 2										
41	240	4680	7	33.79						
45	220	4610	7	31.12						
52	300	4050	7	26.74						
60	300	3820	7	23.28						
64	300	3710	7	21.81						
73	295	3530	7	19.27						
78	290	3390	7	17.89						
86	275	3350	7	16.22						
96	265	3230	7	14.56						
112	250	3080	8	12.54						
119	245	3020	8	11.79						
138	230	2880	8	10.15						
154	220	2780	8	9.07						
175	205	2690	8	8.01						
180	163	2720	10	7.76*						
201	159	2620	10	6.96						
233	156	2470	10	6.00						
248	155	2410	10	5.64*						
289	150	2280	11	4.85						
323	146	2190	12	4.34						
366	144	2080	12	3.83						

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R47R37, n <sub>e</sub> = 1400 min <sup>-1</sup>					300 Nm			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L
 3  3								
0.10	300	5420	8	13598				
0.11	300	5420	8	12472				
0.13	300	5420	8	10619				
0.15	300	5420	8	9155				
0.16	300	5420	8	8534				
0.19	300	5420	8	7460				
0.20	300	5420	8	6993				
0.23	300	5420	8	6171				
0.25	300	5420	8	5624				
0.29	300	5420	8	4849				
0.31	300	5420	8	4520				
0.35	300	5420	8	3951				
0.38	300	5420	8	3704				
0.43	300	5420	8	3268				
0.48	300	5420	8	2898				
0.57	300	5420	8	2463				
 2  3								
0.54	300	5420	8	2598				
0.59	300	5420	8	2383				
0.69	300	5420	8	2029				
0.80	300	5420	8	1749				
0.86	300	5420	8	1630				
0.98	300	5420	8	1425				
1.0	300	5420	8	1336*				
1.2	300	5420	8	1179				
1.3	300	5420	8	1074				
1.5	300	5420	8	927				
1.6	300	5420	8	863				
1.9	300	5420	8	755				
2.0	300	5420	8	708				
2.2	300	5420	8	624				
2.5	300	5420	8	554				
3.0	300	5420	8	471				
 3  2								
0.49	300	5420	8	2856				
0.53	300	5420	8	2625				
0.62	300	5420	8	2246				
0.72	300	5420	8	1948				
0.77	300	5420	8	1821				
0.89	300	5420	8	1573				
1.2	300	5420	8	1193				
1.4	300	5420	8	1020				
1.5	300	5420	8	955				
1.7	300	5420	8	804				
2.1	300	5420	8	673				
2.4	300	5420	8	572				
2.7	300	5420	8	510				



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## Helical gearmotors





Possible geometrical combinations of R..DRN..

R47R37, $n_e = 1400 \text{ min}^{-1}$					300 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
3.2	300	5420	8	436				
3.4	300	5420	8	408				
4.1	300	5420	8	344				
 2  2								
2.6	300	5420	8	546				
2.8	300	5420	8	502				
3.3	300	5420	8	429				
3.8	300	5420	8	372				
4.0	300	5420	8	348				
4.7	300	5420	8	301				
5.5	300	5420	8	255				
6.1	300	5420	8	228				
7.2	300	5420	8	195				
7.7	300	5420	8	182				
9.1	300	5420	8	154				
11	300	5420	9	129				
13	300	5420	9	109				
14	300	5420	9	98				






R57, $n_e = 1400 \text{ min}^{-1}$					450 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3										
7.5	450	7100	7	186.89						
8.1	450	7100	7	172.17						
9.5	450	7100	7	147.92						
11	450	7100	7	128.77						
12	450	7100	7	120.63						
13	450	7100	7	106.58						
14	450	7100	7	98.99						
16	450	7100	7	89.71						
17	450	7100	7	80.55						
20	450	7100	8	69.23						
22	450	6980	8	64.85						
24	450	6630	8	57.29						
26	450	6430	8	53.22						
29	450	6170	8	48.23						
32	450	5900	8	43.30						
38	450	5530	8	37.30*						
40	450	5390	8	35.07						
46	450	5040	8	30.18						
52	450	4800	8	26.97						
 2										
53	450	4750	7	26.31						

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R57, $n_e = 1400 \text{ min}^{-1}$					450 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
56	450	4640	7	24.99*						
64	450	4370	7	21.93						
75	450	4050	7	18.60*						
83	450	3860	7	16.79						
95	435	3690	7	14.77*						
100	430	3610	7	13.95*						
118	405	3430	7	11.88						
130	390	3330	8	10.79						
150	370	3180	8	9.35						
155	375	2010	9	9.06						
176	355	2020	9	7.97						
186	350	1950	9	7.53						
218	335	1770	9	6.41						
241	320	1820	10	5.82						
277	305	1730	10	5.05						
319	280	1900	11	4.39						


R57R37, $n_e = 1400 \text{ min}^{-1}$					450 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 132S 132M	
 3  3										
0.10	450	7100	8	14369						
0.12	450	7100	8	12095						
0.13	450	7100	8	10860						
0.15	450	7100	8	9445						
0.17	450	7100	8	8480						
0.19	450	7100	8	7312						
0.21	450	7100	8	6521						
0.25	450	7100	8	5585						
0.28	450	7100	8	4928						
0.32	450	7100	8	4378						
0.36	450	7100	8	3873						
0.42	450	7100	8	3344						
0.48	450	7100	8	2907						
0.55	450	7100	8	2567						
0.62	450	7100	8	2244						
0.71	450	7100	8	1967						
 2  3										
0.47	450	7100	8	2957						
0.56	450	7100	8	2508						
0.61	450	7100	8	2309						
0.70	450	7100	8	1991						
0.79	450	7100	8	1768						
0.92	450	7100	8	1520						
1.0	450	7100	8	1342*						

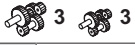
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<b>R57R37, <math>n_e = 1400 \text{ min}^{-1}</math></b>					<b>450 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
1.2	450	7100	8	1164				
1.4	450	7100	8	1027				
1.6	450	7100	8	894				
1.7	450	7100	8	805				
2.0	450	7100	8	683				
2.3	450	7100	8	603				
2.6	450	7100	8	534				
3.1	450	7100	8	454				
3.4	450	7100	8	410				
 3  2								
0.81	450	7100	8	1732				
0.90	450	7100	8	1555				
1.0	450	7100	8	1399				
1.2	450	7100	8	1189				
1.4	450	7100	8	1034				
1.8	450	7100	8	782				
2.1	450	7100	8	678				
2.3	450	7100	8	604				
2.6	450	7100	8	537				
3.0	450	7100	9	471				
3.9	450	7100	9	357				
4.4	450	7100	9	319				
5.1	450	7100	9	273				
5.8	450	7100	9	241				
6.5	450	7100	9	215				
7.5	450	7100	9	187				
8.5	450	7100	9	164				
9.9	450	7100	9	142				
 2  2								
3.9	450	7100	8	359				
4.3	450	7100	8	324				
4.8	450	7100	8	290				
5.3	450	7100	8	262				
5.7	450	7100	8	246*				
6.4	450	7100	8	220*				
7.4	450	7100	8	188				
8.8	450	7100	8	159				
9.6	450	7100	8	146				
10	450	7100	8	134				
 3								
7.0	600	7560	7	199.81				

<b>R67, <math>n_e = 1400 \text{ min}^{-1}</math></b>					<b>600 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3										
7.0	600	7560	7	199.81						

R67, $n_e = 1400 \text{ min}^{-1}$					600 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
7.6	600	7560	7	184.07						
8.9	600	7560	7	158.14						
10	600	7560	7	137.67						
11	600	7560	7	128.97						
12	600	7560	7	113.94						
13	600	7560	7	105.83						
15	600	7560	7	95.91						
16	600	7560	7	86.11						
19	600	7560	7	74.17						
20	600	7560	7	69.75						
23	600	7560	7	61.26						
25	600	7560	7	56.89						
27	600	7560	8	51.56						
30	600	7560	8	46.29						
35	580	7790	8	39.88*						
37	570	7900	8	37.50						
43	540	8210	8	32.27						
49	520	8400	8	28.83						
 2										
50	540	8210	6	28.13						
52	540	8210	6	26.72						
60	560	8010	7	23.44						
70	600	7560	7	19.89						
78	590	7330	7	17.95						
89	560	7130	7	15.79						
94	550	6980	7	14.91						
110	520	6640	7	12.70						
121	500	6500	7	11.54						
140	470	6220	7	10.00						
161	440	5960	7	8.70*						
180	380	5830	9	7.79						
190	370	5790	9	7.36*						
223	330	5590	9	6.27						
246	310	5450	10	5.70						
284	290	5210	10	4.93						
326	270	5000	10	4.29						





R67R37, $n_e = 1400 \text{ min}^{-1}$					600 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L
 3								
0.09	600	7560	7	15361				
0.11	600	7560	7	12931				
0.12	600	7560	7	11996				

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## Helical gearmotors



Possible geometrical combinations of R..DRN..

<b>R67R37, n<sub>e</sub> = 1400 min<sup>-1</sup></b>					<b>600 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.14	600	7560	7	10097				
0.15	600	7560	7	9066				
0.18	600	7560	7	7816				
0.21	600	7560	7	6732				
0.23	600	7560	7	5970				
0.27	600	7560	7	5268				
0.30	600	7560	8	4680				
0.34	600	7560	7	4136				
0.39	600	7560	7	3566				
0.45	600	7560	7	3125				
0.51	600	7560	8	2745				
0.58	600	7560	7	2403				
 2  3								
0.52	600	7560	8	2682				
0.57	600	7560	8	2460				
0.67	600	7560	8	2094				
0.78	600	7560	8	1805				
0.86	600	7560	8	1629				
0.95	600	7560	8	1471				
1.0	600	7560	8	1379				
1.3	600	7560	8	1109				
1.5	600	7560	8	956				
1.6	600	7560	8	891				
1.9	600	7560	8	730				
2.2	600	7560	8	644				
2.5	600	7560	8	571				
2.9	600	7560	8	486				
 3  2								
0.66	600	7560	7	2136				
0.76	600	7560	7	1852				
0.85	600	7560	7	1652				
0.98	600	7560	7	1432				
1.1	600	7560	7	1259				
1.3	600	7560	8	1106				
1.7	600	7560	8	836				
1.9	600	7560	7	750				
2.2	600	7560	7	646				
2.4	600	7560	7	574				
2.8	600	7560	7	495				
3.2	600	7560	8	438				
3.6	600	7560	7	388				
4.1	600	7560	8	344				
4.8	600	7560	7	294				
5.4	600	7560	8	261				
6.0	600	7560	8	234				
7.0	600	7560	8	200				
8.0	600	7560	8	176				
8.9	600	7560	8	158				

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R67R37, $n_e = 1400 \text{ min}^{-1}$					600 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L
 2  2								
3.2	600	7560	8	443				
3.6	600	7560	8	384				
3.9	600	7560	8	359				
4.5	600	7560	8	310				
5.3	600	7560	8	264*				
6.0	600	7560	8	235				
7.0	600	7560	8	201				
7.7	600	7560	8	181				
8.8	600	7560	8	159				

R77, $n_e = 1400 \text{ min}^{-1}$					820 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L
 3											
7.2	820	9920	7	195.24*							
8.4	820	9920	7	166.59							
9.6	820	9920	7	145.67							
10	820	9920	7	138.39							
12	820	9920	7	121.42							
14	820	9920	7	102.99							
15	820	9920	7	92.97							
17	820	9920	7	81.80							
18	820	9920	7	77.24							
21	820	9920	7	65.77							
24	820	9920	8	57.68							
27	820	9920	8	52.07							
31	820	9920	8	45.81							
32	820	9920	8	43.26							
38	820	9920	8	36.83							
42	820	9920	8	33.47							
48	820	9920	8	29.00							
55	780	10100	8	25.23							
 2											
60	820	8870	7	23.37							
65	820	8250	7	21.43							
74	780	7980	7	18.80							
79	780	7620	7	17.82*							
90	740	7390	7	15.60							
100	720	7050	7	14.05							
114	690	6740	7	12.33							
129	660	6490	7	10.88							
145	630	6300	7	9.64							
163	630	4110	8	8.59							

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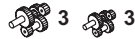
# 8

## Helical gearmotors

Possible geometrical combinations of R..DRN..

R77, $n_e = 1400 \text{ min}^{-1}$					820 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
181	610	3940	8	7.74						
206	580	3850	8	6.79						
234	540	3990	8	5.99*						
264	510	3990	9	5.31*						

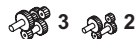
R77R37, $n_e = 1400 \text{ min}^{-1}$					820 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L



0.09	820	9920	7	16370				
0.09	820	9920	7	15015				
0.10	820	9920	7	13885				
0.11	820	9920	7	12783				
0.13	820	9920	7	11021				
0.14	820	9920	7	9788				
0.16	820	9920	7	8714				
0.18	820	9920	7	7617				
0.21	820	9920	7	6770				
0.24	820	9920	7	5838				
0.27	820	9920	7	5184				
0.31	820	9920	7	4470				
0.35	820	9920	8	3999				
0.40	820	9920	7	3488				
0.46	820	9920	8	3053				
0.52	820	9920	7	2671				






0.44	820	9920	7	3151				
0.48	820	9920	7	2890				
0.57	820	9920	7	2460				
0.66	820	9920	7	2121				
0.71	820	9920	7	1977				
0.81	820	9920	7	1728				
0.86	820	9920	7	1620				
0.98	820	9920	7	1430				
1.1	820	9920	7	1303				
1.2	820	9920	7	1124				
1.3	820	9920	7	1047				
1.5	820	9920	7	915				
1.6	820	9920	7	858				
1.8	820	9920	7	757				
2.1	820	9920	7	671				
2.5	820	9920	7	571				




0.60	820	9920	7	2345				
0.68	820	9920	7	2070				

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<b>R77R37, n<sub>e</sub> = 1400 min<sup>-1</sup></b>					<b>820 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN		DRN	
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.77	820	9920	7	1822				
0.89	820	9920	7	1580				
1.0	820	9920	7	1394				
1.1	820	9920	7	1218				
1.3	820	9920	7	1084*				
1.5	820	9920	8	940				
1.7	820	9920	7	821				
1.9	820	9920	7	731				
2.2	820	9920	8	646				
2.5	820	9920	8	560				
2.9	820	9920	8	488				
3.2	820	9920	8	436				
3.8	820	9920	7	373				
4.3	820	9920	8	327				
4.8	820	9920	8	289				
5.4	820	9920	8	260				
6.2	820	9920	7	224				
7.1	820	9920	8	197				
8.3	820	9920	9	169				
9.4	820	9920	8	149				
 2  2								
2.7	820	9920	7	520				
3.1	820	9920	7	451				
3.3	820	9920	7	422				
3.8	820	9920	7	365				
4.5	820	9920	7	310*				
5.1	820	9920	7	276				
5.9	820	9920	7	236				
6.3	820	9920	7	221				
7.5	820	9920	7	186				

<b>R87, n<sub>e</sub> = 1400 min<sup>-1</sup></b>					<b>1550 Nm</b>									
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L	
 3														
5.7	1550	16900	6	246.54										
6.5	1550	16900	6	216.54										
6.8	1550	16900	6	205.71										
7.7	1550	16900	6	181.77										
9.0	1550	16900	6	155.34										
9.8	1550	16900	6	142.41										
11	1550	16900	6	124.97										
12	1550	16900	6	118.43*										
14	1550	16900	6	103.65										
15	1550	16900	6	93.38										
17	1550	16900	6	81.92										

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R87, $n_e = 1400 \text{ min}^{-1}$					1550 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L	
19	1550	16900	7	72.57										
22	1550	15800	7	63.68*										
23	1550	15200	7	60.35*										
27	1550	13500	7	52.82										
29	1550	12300	7	47.58										
34	1550	10800	7	41.74										
38	1550	9470	7	36.84*										
43	1550	8220	7	32.66*										
50	1500	7370	7	27.88										
 2														
41	1500	9480	6	34.40*										
45	1550	7820	6	31.40										
50	1550	6640	6	27.84*										
60	1550	5000	6	23.40										
65	1500	4970	6	21.51										
73	1440	4800	6	19.10										
82	1390	4580	6	17.08*										
91	1340	4450	6	15.35										
105	1280	4220	6	13.33										
117	1230	4120	6	11.93										
141	1180	3520	7	9.90*										
153	1210	99	7	9.14*										
170	1160	225	7	8.22										
196	1070	820	7	7.13										
219	1020	970	7	6.39										
264	910	1710	7	5.30*										

R87R57, $n_e = 1400 \text{ min}^{-1}$					1550 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3										
0.08	1550	16900	7	17452						
0.09	1550	16900	7	15310						
0.10	1550	16900	7	13813						
0.12	1550	16900	7	12025						
0.13	1550	16900	7	10549						
0.15	1550	16900	7	9244						
0.17	1550	16900	7	8109						
0.20	1550	16900	7	7038						
0.23	1550	16900	7	6174						
0.26	1550	16900	7	5449						
0.29	1550	16900	8	4831						
0.33	1550	16900	8	4206						
0.37	1550	16900	7	3744						
0.43	1550	16900	8	3233						
0.49	1550	16900	7	2873						
0.56	1550	16900	7	2518						

R87R57, $n_e = 1400 \text{ min}^{-1}$					1550 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
0.63	1550	16900	7	2209						
0.71	1550	16900	7	1961						
1.4	1550	16900	7	994						
1.6	1550	16900	8	881						
 2  3										
0.35	1550	16900	7	4020						
0.38	1550	16900	7	3703						
0.44	1550	16900	7	3182						
0.51	1550	16900	7	2770						
0.54	1550	16900	7	2595						
0.66	1550	16900	7	2129						
0.73	1550	16900	7	1930						
0.81	1550	16900	7	1733						
0.94	1550	16900	7	1489						
1.0	1550	16900	7	1395						
1.1	1550	16900	7	1232						
1.2	1550	16900	7	1145						
1.4	1550	16900	7	1037						
1.5	1550	16900	7	931						
1.7	1550	16900	7	802*						
1.9	1550	16900	7	754						
2.2	1550	16900	7	649						
2.4	1550	16900	7	580						
 3  2										
0.81	1550	16900	7	1737						
0.92	1550	16900	7	1524						
1.1	1550	16900	7	1303						
1.2	1550	16900	7	1143						
1.4	1550	16900	7	1008						
1.6	1550	16900	7	885						
1.8	1550	16900	7	776						
2.0	1550	16900	7	685*						
2.3	1550	16900	7	599						
2.7	1550	16900	7	525						
3.1	1550	16900	8	456*						
3.5	1550	16900	7	398						
4.0	1550	16900	8	352						
4.6	1550	16900	8	305						
5.2	1550	16900	7	268						
5.9	1550	16900	8	236*						
6.7	1550	16900	7	209*						
 2  2										
2.6	1550	16900	7	538						
3.0	1550	16900	7	472						
3.5	1550	16900	7	400						
3.9	1550	16900	7	361						
4.7	1550	16900	7	300						
5.5	1550	16900	7	256						

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R87R57, $n_e = 1400 \text{ min}^{-1}$					1550 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
6.0	1550	16900	7	232						
7.2	1550	16900	7	195						







R97, $n_e = 1400 \text{ min}^{-1}$					3000 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L	DRN 180M 180L	DRN 200L 225S	



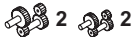



4.8	3000	19800	6	289.74									
5.5	3000	19800	6	255.71									
5.8	3000	19800	6	241.25									
6.5	3000	19800	6	216.28									
7.5	3000	19800	6	186.30									
8.2	3000	19800	6	170.02									
9.3	3000	19800	6	150.78									
11	3000	19800	6	126.75									
12	3000	19800	6	116.48									
14	3000	19800	6	103.44									
15	3000	19800	6	92.48									
17	3000	19800	6	83.15									
19	3000	18000	6	72.17									
21	3000	16300	7	65.21									
23	3000	14800	7	59.92									
26	3000	12900	7	53.21									
29	3000	11100	7	47.58									
33	3000	9480	7	42.78									
38	3000	7410	7	37.13									
42	2890	7160	7	33.25									
51	2670	7260	7	27.58									



44	2560	10600	6	32.05									
51	2560	8380	6	27.19									
56	2830	4140	6	25.03									
63	2720	4060	6	22.37									
70	2610	4110	6	20.14									
77	2500	4270	6	18.24									
87	2400	4130	6	16.17									
96	2300	4240	6	14.62									
113	2190	3850	6	12.39									
129	2090	3720	6	10.83									
151	2030	-	6	9.29									
167	2030	-	6	8.39									
197	2000	-	6	7.12									
225	1890	-	6	6.21									
269	1780	-	7	5.20									
311	1630	-	7	4.50*									

R97R57, $n_e = 1400 \text{ min}^{-1}$					3000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
 3  3										
0.06	3000	19800	6	21769						
0.07	3000	19800	6	19332						
0.08	3000	19800	6	17230						
0.09	3000	19800	6	14999						
0.11	3000	19800	6	13320						
0.13	3000	19800	6	11156						
0.14	3000	19800	6	10030						
0.16	3000	19800	6	8706						
0.18	3000	19800	6	7692						
0.21	3000	19800	6	6708						
0.24	3000	19800	7	5931						
0.27	3000	19800	7	5161						
0.31	3000	19800	7	4559						
0.35	3000	19800	6	4004						
0.40	3000	19800	6	3481						
 2  3										
0.30	3000	19800	7	4678						
0.32	3000	19800	7	4309						
0.38	3000	19800	7	3702						
0.46	3000	19800	7	3019						
0.52	3000	19800	7	2668						
0.62	3000	19800	7	2245						
0.69	3000	19800	7	2016						
0.81	3000	19800	7	1733						
0.86	3000	19800	7	1623						
0.98	3000	19800	7	1434						
1.2	3000	19800	7	1207						
1.3	3000	19800	7	1084						
1.5	3000	19800	7	934						
1.6	3000	19800	7	878						
1.9	3000	19800	7	755						
 3  2										
0.46	3000	19800	6	3065						
0.51	3000	19800	6	2722						
0.61	3000	19800	6	2311						
0.67	3000	19800	6	2078						
0.77	3000	19800	6	1823						
0.88	3000	19800	6	1583						
1.0	3000	19800	6	1396						
1.1	3000	19800	6	1228						
1.3	3000	19800	7	1069						
1.5	3000	19800	7	938						
1.7	3000	19800	6	824						
1.9	3000	19800	6	737						
2.2	3000	19800	7	632						
2.5	3000	19800	7	560						
2.9	3000	19800	6	484						

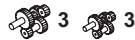
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<b>R97R57, <math>n_e = 1400 \text{ min}^{-1}</math></b>					<b>3000 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
3.2	3000	19800	7	431						
3.7	3000	19800	7	379						
4.2	3000	19800	7	336						
4.7	3000	19800	7	296						
5.6	3000	19800	7	249						
6.0	3000	19800	7	234						
6.7	3000	19800	7	209						
 2  2										
2.2	3000	19800	6	625						
2.6	3000	19800	6	549						
3.0	3000	19800	6	466						
3.3	3000	19800	6	420						
3.8	3000	19800	7	370						
4.0	3000	19800	7	349						
4.7	3000	19800	7	297						
5.2	3000	19800	7	270						
6.2	3000	19800	7	227						
<b>R107, <math>n_e = 1400 \text{ min}^{-1}</math></b>					<b>4300 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L	DRN 180M 180L	DRN 200L 225S 225M
5.6	4300	29500	7	251.15						
6.1	4300	29500	7	229.95						
6.9	4300	29500	7	203.16						
8.1	4300	29500	7	172.34						
8.8	4300	29500	7	158.68						
9.9	4300	29500	7	141.83						
11	4300	29500	7	127.68						
12	4300	29500	7	115.63						
14	4300	29500	7	102.53						
15	4300	29500	7	92.70						
18	4300	29500	8	78.57						
19	4300	29500	8	72.88						
21	4300	29200	8	65.60*						
24	4300	28000	8	59.41						
27	4300	26600	8	52.68						
29	4300	25500	8	47.63						
35	4300	23800	8	40.37*						
40	4300	22400	8	35.26						
47	4300	20700	8	29.49						
 3										
 2										
45	4300	21100	7	30.77						
51	4300	20100	7	27.58						
56	4300	19200	7	24.90*						
62	4300	18300	7	22.62						



R107, $n_e = 1400 \text{ min}^{-1}$						4300 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	
70	4300	17300	7	20.07							
77	4300	16600	7	18.21							
89	4300	15400	7	15.65							
102	4300	14400	7	13.66							
121	4300	13300	7	11.59							
138	4300	12400	8	10.13							
164	4300	11300	8	8.56							
178	2970	13800	9	7.86							
210	2970	12800	9	6.66							
241	2970	12100	9	5.82							
285	2900	11300	10	4.92							

R107R77, $n_e = 1400 \text{ min}^{-1}$						4300 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L



0.07	4300	29500	8	20018							
0.08	4300	29500	8	17080							
0.09	4300	29500	8	14936							
0.11	4300	29500	8	12829							
0.12	4300	29500	8	11256							
0.15	4300	29500	8	9547							
0.16	4300	29500	8	8618							
0.18	4300	29500	8	7583							
0.21	4300	29500	8	6743							
0.24	4300	29500	8	5914							
0.27	4300	29500	8	5168							
0.32	4300	29500	8	4435							
0.36	4300	29500	8	3896							
0.41	4300	29500	8	3432							
0.46	4300	29500	8	3039							
0.52	4300	29500	8	2688							
0.60	4300	29500	8	2339							







0.36	4300	29500	8	3918							
0.42	4300	29500	8	3343							
0.46	4300	29500	8	3034							
0.53	4300	29500	8	2653							
0.61	4300	29500	8	2280							
0.68	4300	29500	8	2067							
0.83	4300	29500	8	1693							
0.90	4300	29500	8	1550							
1.00	4300	29500	8	1407							
1.2	4300	29500	8	1209							
1.3	4300	29500	8	1055							
1.5	4300	29500	8	919							
1.7	4300	29500	8	815							

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## Helical gearmotors

Possible geometrical combinations of R..DRN..

R107R77, $n_e = 1400 \text{ min}^{-1}$					4300 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
2.0	4300	29500	8	717							
2.2	4300	29500	9	626							
2.7	4300	29500	8	528							
 3  2											
0.70	4300	29500	8	1987							
0.77	4300	29500	8	1827							
0.88	4300	29500	8	1599							
1.0	4300	29500	8	1400*							
1.1	4300	29500	8	1226							
1.3	4300	29500	8	1104							
1.5	4300	29500	8	939							
1.7	4300	29500	8	822							
2.3	4300	29500	8	614							
2.6	4300	29500	8	544							
2.8	4300	29500	8	492							
3.4	4300	29500	8	417							
3.8	4300	29500	8	369							
4.3	4300	29500	8	323							
4.9	4300	29500	8	285							
5.5	4300	29500	8	253							
6.5	4300	29500	8	214*							
7.5	4300	29500	8	187							
 2  2											
3.0	4300	29500	8	469							
3.3	4300	29500	8	426							
3.7	4300	29500	8	377							
4.3	4300	29500	8	325							
4.9	4300	29500	8	284							
5.5	4300	29500	8	256							
6.4	4300	29500	8	220							
7.3	4300	29500	8	193							
8.1	4300	29500	8	172							

R127, $n_e = 1400 \text{ min}^{-1}$					6000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M
 3											
5.3	6000	43000	6	262.65							
5.8	6000	43000	6	240.48							
6.6	6000	43000	6	212.46							
7.8	6000	43000	6	180.23							
8.4	6000	43000	6	165.95							
9.4	6000	43000	6	148.33							
10	6000	43000	6	133.53							
12	6000	43000	6	120.92							
13	6000	43000	6	107.23							

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**R127,  $n_e = 1400 \text{ min}^{-1}$  6000 Nm**

$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M
14	6000	43000	6	96.95							
16	6000	43000	7	85.26							
17	6000	43000	6	82.17							
18	6000	43000	7	76.21							
20	6000	43000	7	68.61*							
23	6000	43000	7	62.13							
25	6000	43000	7	55.09							
28	6000	43000	7	49.81							
33	6000	43000	7	42.22*							
38	5730	43000	7	36.88							
45	5380	43000	7	30.84							



44	6000	43000	6	32.18							
49	6000	43000	6	28.84							
54	6000	43000	6	26.04*							
59	6000	43000	6	23.65							
67	6000	43000	6	20.98							
74	6000	43000	6	19.04							
86	6000	43000	6	16.37*							
98	6000	43000	6	14.29							
116	5940	43000	6	12.12							
132	5700	43000	6	10.59							
156	5420	41400	7	8.96							
158	3930	43000	8	8.85							
186	3930	42400	8	7.51							
213	3930	40200	8	6.56							
252	3930	37600	8	5.55							

**R127R77,  $n_e = 1400 \text{ min}^{-1}$  6000 Nm**

$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
0.07	6000	43000	7	20936							
0.08	6000	43000	7	17863							
0.09	6000	43000	7	15620							
0.10	6000	43000	7	14123							
0.10	6000	43000	7	13417							
0.12	6000	43000	7	11772							
0.14	6000	43000	7	9985							
0.16	6000	43000	7	9013							
0.16	6000	43000	7	8771							
0.17	6000	43000	7	8282							
0.18	6000	43000	7	7639							
0.20	6000	43000	7	7053							
0.21	6000	43000	7	6722							
0.22	6000	43000	7	6347							
0.23	6000	43000	7	6185							







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## Helical gearmotors

Possible geometrical combinations of R..DRN..

R127R77, $n_e = 1400 \text{ min}^{-1}$					6000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
0.25	6000	43000	7	5592							
0.30	6000	43000	7	4740							
0.32	6000	43000	7	4441							
0.35	6000	43000	7	3949							
0.37	6000	43000	7	3764							
0.39	6000	43000	7	3571							
0.45	6000	43000	7	3110							
0.50	6000	43000	7	2812							
0.59	6000	43000	7	2383							
0.72	6000	43000	8	1934							
0.76	6000	43000	8	1835							
0.90	6000	43000	8	1555							
0.97	6000	43000	8	1444							
1.1	6000	43000	8	1224							
 2  3											
0.40	6000	43000	7	3495							
0.46	6000	43000	7	3056							
0.48	6000	43000	7	2903							
0.55	6000	43000	7	2547							
0.65	6000	43000	7	2161							
0.72	6000	43000	7	1951							
0.82	6000	43000	7	1716							
0.86	6000	43000	7	1620							
1.0	6000	43000	7	1380							
1.2	6000	43000	7	1210							
1.5	6000	43000	7	961							
1.8	6000	43000	7	773							
2.3	6000	43000	7	608							
 3  2											
0.56	6000	43000	7	2506							
0.62	6000	43000	7	2266							
0.69	6000	43000	7	2016							
0.73	6000	43000	7	1920							
0.77	6000	43000	7	1823							
0.84	6000	43000	7	1673							
0.91	6000	43000	7	1545							
0.93	6000	43000	7	1512							
1.1	6000	43000	7	1322							
1.1	6000	43000	7	1282							
1.2	6000	43000	7	1195							
1.2	6000	43000	8	1164							
1.4	6000	43000	7	1034							
1.4	6000	43000	7	1013							
1.4	6000	43000	8	987							
1.5	6000	43000	8	936							
1.5	6000	43000	7	935							
1.7	6000	43000	7	830							
1.8	6000	43000	8	794							

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R127R77, $n_e = 1400 \text{ min}^{-1}$					6000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
1.8	6000	43000	7	792							
1.8	6000	43000	8	777							
1.9	6000	43000	7	750							
2.1	6000	43000	8	659							
2.2	6000	43000	7	642							
2.2	6000	43000	7	636							
2.3	6000	43000	8	614							
2.4	6000	43000	7	581							
2.7	6000	43000	8	521							
2.8	6000	43000	7	492							
2.9	6000	43000	8	480							
3.4	6000	43000	8	407							
3.6	6000	43000	8	386							
4.7	6000	43000	8	298							
5.5	6000	43000	8	253							
 2  2											
2.9	6000	43000	7	490							
3.6	6000	43000	7	394							
4.3	6000	43000	7	327							
5.4	6000	43000	7	259							
6.9	6000	43000	7	202							
8.6	6000	43000	7	162							
11	6000	43000	7	126							


R137, $n_e = 1400 \text{ min}^{-1}$					8000 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN
					132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M
 3									
6.3	8000	53400	6	222.60*					
7.4	8000	53400	6	188.45					
8.0	8000	53400	7	174.40*					
9.0	8000	53400	7	156.31					
9.9	8000	53400	7	141.12*					
11	8000	53400	7	128.18					
12	8000	53400	7	113.72					
14	8000	53400	7	103.20*					
16	8000	53400	7	88.70*					
17	8000	53400	7	80.91*					
19	8000	53400	7	73.49					
21	8000	53400	7	65.20					
24	8000	53400	7	59.17*					
28	8000	53400	7	50.86*					
32	8000	53400	7	44.39					
37	8000	53400	7	37.65					
43	8000	53400	7	32.91					
50	7680	54100	7	27.83					





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## Helical gearmotors


Possible geometrical combinations of R..DRN..

R137, $n_e = 1400 \text{ min}^{-1}$					8000 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN
					132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M
 2									
47	7780	53900	6	29.57*					
58	8000	49400	6	24.12					
64	8000	47100	6	22.00*					
74	8000	43500	6	19.04*					
83	8000	40600	6	16.80*					
96	8000	37300	6	14.51					
109	8000	34700	6	12.83					
130	8000	31100	7	10.79					
161	7840	27600	7	8.71					
184	5110	39000	8	7.59					
219	5110	35900	9	6.38					
272	4600	34500	9	5.15					

R137R77, $n_e = 1400 \text{ min}^{-1}$					8000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
 3  3											
0.06	8000	53400	7	22203*							
0.07	8000	53400	7	18945							
0.08	8000	53400	7	16566							
0.09	8000	53400	7	14777							
0.11	8000	53400	7	12921							
0.12	8000	53400	7	11712							
0.13	8000	53400	7	10573*							
0.16	8000	53400	7	8784							
0.19	8000	53400	7	7479							
0.21	8000	53400	7	6559							
0.24	8000	53400	7	5834							
0.27	8000	53400	7	5116							
0.31	8000	53400	7	4464							
0.36	8000	53400	7	3928*							
0.41	8000	53400	7	3454							
0.47	8000	53400	7	2993							
 2  3											
0.30	8000	53400	7	4709*							
0.35	8000	53400	7	4018							
0.40	8000	53400	7	3514							
0.42	8000	53400	7	3338							
0.48	8000	53400	7	2929							
0.56	8000	53400	7	2484							
0.62	8000	53400	7	2242*							
0.75	8000	53400	7	1863							
0.88	8000	53400	7	1586							
1.0	8000	53400	7	1391							
1.1	8000	53400	7	1256							

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<b>R137R77, <math>n_e = 1400 \text{ min}^{-1}</math></b>					<b>8000 Nm</b>						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
1.3	8000	53400	7	1105							
1.3	8000	53400	7	1043							
1.6	8000	53400	7	888							
2.0	8000	53400	7	699							
2.3	8000	53400	7	609							
 3  2											
0.53	8000	53400	7	2658							
0.58	8000	53400	7	2412							
0.68	8000	53400	7	2073*							
0.76	8000	53400	7	1839*							
0.88	8000	53400	7	1598							
1.0	8000	53400	7	1397							
1.1	8000	53400	7	1226*							
1.3	8000	53400	7	1090*							
1.5	8000	53400	7	951							
1.7	8000	53400	7	831							
1.9	8000	53400	7	730							
2.2	8000	53400	7	629							
2.5	8000	53400	7	560							
2.9	8000	53400	7	490*							
3.3	8000	53400	7	428							
3.7	8000	53400	7	381							
4.3	8000	53400	7	323							
4.8	8000	53400	7	291							
5.5	8000	53400	7	255*							
6.3	8000	53400	7	223							
7.1	8000	53400	7	197*							
8.0	8000	53400	7	175							
 2  2											
2.5	8000	53400	7	564							
2.7	8000	53400	7	517							
3.1	8000	53400	7	453*							
3.7	8000	53400	7	376							
4.1	8000	53400	7	339							
4.7	8000	53400	7	297							


<b>R147, <math>n_e = 1400 \text{ min}^{-1}</math></b>					<b>13000 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M
 3								
8.6	13000	62700	6	163.31				
9.5	13000	62700	6	146.91				
12	13000	62700	6	119.86				
13	13000	62700	6	109.31				
15	13000	62700	6	94.60*				
17	13000	62700	6	83.47				





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## Helical gearmotors

Possible geometrical combinations of R..DRN..



R147, $n_e = 1400 \text{ min}^{-1}$					13000 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M
19	13000	62700	6	72.09				
21	13000	62700	6	66.99				
23	13000	62700	6	61.09				
26	13000	62700	6	52.87				
30	13000	62700	6	46.65				
35	13000	62700	6	40.29				
39	13000	62700	6	35.64				
47	13000	62700	6	29.95				
58	11900	64700	6	24.19				
 2								
68	12000	64600	6	20.44				
78	10500	67000	6	18.04				
90	13000	62700	6	15.64				
101	12600	63400	6	13.91				
117	13000	60400	6	11.99				
144	13000	54400	6	9.74				
169	13000	49900	6	8.26				
193	8670	58400	8	7.25				
238	8670	53200	8	5.89				
280	8670	49300	8	5.00				


R147R77, $n_e = 1400 \text{ min}^{-1}$					13000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
 3  3											
0.06	13000	62700	6	23401							
0.07	13000	62700	6	21342							
0.08	13000	62700	6	18210							
0.09	13000	62700	6	15923							
0.10	13000	62700	6	14075							
0.11	13000	62700	6	12344							
0.13	13000	62700	6	11143							
0.14	13000	62700	6	9743							
0.17	13000	62700	6	8443							
0.19	13000	62700	6	7307							
0.22	13000	62700	6	6447							
0.25	13000	62700	6	5568							
0.28	13000	62700	6	4926							
0.32	13000	62700	7	4325							
0.37	13000	62700	6	3754							
0.42	13000	62700	6	3302							
0.48	13000	62700	6	2898							
 3  2											
0.55	13000	62700	6	2555							
0.63	13000	62700	6	2211							
0.72	13000	62700	6	1951							

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R147R77, $n_e = 1400 \text{ min}^{-1}$					13000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
0.82	13000	62700	6	1705							
0.91	13000	62700	6	1536							
1.1	13000	62700	6	1329							
1.2	13000	62700	6	1166							
1.4	13000	62700	6	1029							
1.6	13000	62700	6	889							
1.8	13000	62700	6	784							
2.0	13000	62700	6	695							
2.3	13000	62700	6	619							
2.5	13000	62700	6	558							
2.9	13000	62700	6	489							
3.4	13000	62700	7	415							

R147R87, $n_e = 1400 \text{ min}^{-1}$					13000 Nm								
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L
 3  2													
2.6	13000	62700	6	533									
3.0	13000	62700	7	462									
3.3	13000	62700	7	426									
3.8	13000	62700	7	368									
4.3	13000	62700	7	326									
5.0	13000	62700	7	280									
5.7	13000	62700	7	247									
6.5	13000	62700	7	214									
7.4	13000	62700	7	189									
8.8	13000	62700	7	159									

R167, $n_e = 1400 \text{ min}^{-1}$					20000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M	315S 315M	315L 315H
 3										
6.1	20000	120000	6	229.71						
7.5	20000	120000	6	186.93*						
9.1	20000	120000	6	153.07						
10	20000	120000	6	139.98						
11	20000	120000	6	121.81*						
13	20000	120000	6	107.49						
15	20000	120000	6	93.19						
17	20000	120000	6	82.91*						
19	20000	120000	6	73.70*						
21	20000	120000	6	67.40						
24	20000	120000	6	58.65						
27	20000	120000	6	51.76						
31	20000	120000	6	44.87						

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R167, $n_e = 1400 \text{ min}^{-1}$					20000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M	315S 315M	315L 315H
35	20000	120000	6	39.92						
41	20000	120000	6	34.41						
50	20000	119500	6	27.96						
59	18800	114400	6	23.71						



30	9460	120000	5	46.00						
37	10200	120000	5	37.74						
46	11700	120000	5	30.71						
57	16400	120000	6	24.57						
64	20000	107100	6	21.85						
74	20000	100600	6	19.03						
82	20000	95400	6	16.98						
97	19700	89300	6	14.48						
117	19000	83300	6	11.99						
137	18500	77500	6	10.24						

R167R97, $n_e = 1400 \text{ min}^{-1}$					20000 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S	
0.05	20000	120000	6	27001										
0.06	20000	120000	6	22482										
0.07	20000	120000	6	20002*										
0.08	20000	120000	6	17361										
0.09	20000	120000	6	15446										
0.10	20000	120000	6	14051										
0.12	20000	120000	6	11812										
0.13	20000	120000	6	10509										
0.15	20000	120000	6	9631										
0.18	20000	120000	6	7749										
0.20	20000	120000	6	6894										
0.23	20000	120000	6	6077										
0.26	20000	120000	6	5407										
0.30	20000	120000	6	4650										
0.34	20000	120000	6	4129										
0.38	20000	120000	6	3692										
0.45	20000	120000	6	3099										









0.53	20000	120000	6	2657*										
0.60	20000	120000	6	2333										
0.67	20000	120000	6	2085										
0.75	20000	120000	6	1877										
0.84	20000	120000	6	1670*										
0.97	20000	120000	6	1438										
1.1	20000	120000	6	1279										
1.2	20000	120000	6	1123										
1.4	20000	120000	6	999										
1.6	20000	120000	6	861										



0.53	20000	120000	6	2657*										
0.60	20000	120000	6	2333										
0.67	20000	120000	6	2085										
0.75	20000	120000	6	1877										
0.84	20000	120000	6	1670*										
0.97	20000	120000	6	1438										
1.1	20000	120000	6	1279										
1.2	20000	120000	6	1123										
1.4	20000	120000	6	999										
1.6	20000	120000	6	861										

R167R97, $n_e = 1400 \text{ min}^{-1}$					20000 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S	
1.8	20000	120000	6	760										
2.1	20000	120000	6	656										
2.4	20000	120000	6	579										
2.8	20000	120000	6	503										
3.2	20000	120000	6	432										
3.7	20000	120000	6	376										
4.2	20000	120000	6	335										
4.6	20000	120000	7	303										
5.0	20000	120000	6	279										

R167R107, $n_e = 1400 \text{ min}^{-1}$					20000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M
 2  3										
0.38	20000	120000	6	3637						
0.42	20000	120000	6	3330						
0.51	20000	120000	6	2757						
0.57	20000	120000	6	2436						
0.61	20000	120000	6	2298						
0.68	20000	120000	6	2066						
0.76	20000	120000	6	1849						
0.84	20000	120000	6	1674						
0.94	20000	120000	6	1485						
1.0	20000	120000	6	1342						
1.1	20000	120000	6	1229						
1.3	20000	120000	6	1111						
1.5	20000	120000	6	950						
1.6	20000	120000	6	860						
1.8	20000	120000	6	763						
2.0	20000	120000	6	690						
2.4	20000	120000	6	585						
2.7	20000	120000	6	511						
 3  2										
4.0	20000	120000	6	349						
4.7	20000	120000	6	295						
5.2	20000	120000	6	270						
6.1	20000	120000	6	229						
7.0	20000	120000	6	200						
8.3	20000	120000	6	169						
 2  2										
3.1	20000	120000	6	446						
3.5	20000	120000	6	399						
3.9	20000	120000	6	361						
4.3	20000	120000	6	328						
4.8	20000	120000	6	291						
5.3	20000	120000	6	264						
6.2	20000	120000	6	227						
7.1	20000	120000	6	198						

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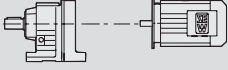

# 8

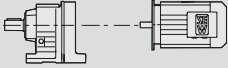

## Helical gearmotors

Possible geometrical combinations of R..DRN..

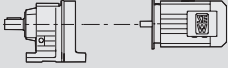

<b>R167R107, <math>n_e = 1400 \text{ min}^{-1}</math></b>					<b>20000 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	$i$	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L	DRN 180M 180L	DRN 200L 225S 225M
8.3	20000	120000	6	168						

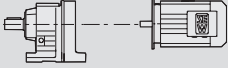

8.3 R..DRN.. selection tables in kW

<b>P<sub>m</sub> = 0.09 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
18	48	78.24	1260	1.05						
19	44	71.47	1290	1.10						
23	37	60.32	1340	1.35						
27	32	51.52	1380	1.55						
29	29	47.78	1400	1.70						
31	27	44.16	1420	1.80						
33	25	41.31	1430	1.95	R	07	DR2S	56MR4	5.8	365
34	25	40.34	1440	2.0	RF	07	DR2S	56MR4	5.8	366
36	23	38.51	1440	2.1						
41	21	34.05	1460	2.4						
47	18	29.08	1440	2.8						
51	16	26.97	1410	3.0						
59	14	23.32	1350	3.4						
63	13	21.73	1320	3.7						
75	11	18.31	1260	4.4						
82	10	16.73	1230	4.8						
98	8.0	14.12	1170	5.7						
114	7.0	12.06	1120	6.7						
123	6.0	11.18	1090	7.2						
143	6.0	9.67	1040	8.3						
153	5.0	9.01	1020	8.9						
176	4.0	7.85	980	10	R	07	DR2S	56MR4	5.7	365
185	4.0	7.48	970	9.2	RF	07	DR2S	56MR4	5.7	366
202	4.0	6.83	940	10						
239	3.0	5.76	890	11						
280	3.0	4.92	850	12						
302	2.0	4.57	830	13						
350	2.0	3.95	790	14						
375	2.0	3.68	775	14						
430	2.0	3.21	740	16						


<b>P<sub>m</sub> = 0.12 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.06	13300	21342	62000	1.00						
0.08	11300	18210	65700	1.15						
0.09	9920	15923	67900	1.30						
0.10	8770	14075	69400	1.50						
0.11	7640	12344	70700	1.70	R	147R77	DRN	63MS4	420	404
0.12	6730	11143	71600	1.95	RF	147R77	DRN	63MS4	430	404
0.14	6030	9743	72200	2.1	RM	147R77	DRN	63MS4	600	404
0.16	4830	8443	73000	2.7						
0.19	4180	7307	73400	3.1						
0.21	3690	6447	73700	3.5						
0.25	3180	5568	73900	4.1						
0.11	8050	12921	53300	1.00						
0.12	7250	11712	54900	1.10						
0.13	6390	10573	56400	1.25						
0.16	5020	8784	58400	1.60	R	137R77	DRN	63MS4	290	404
0.18	4090	7479	59400	1.95	RF	137R77	DRN	63MS4	310	404
0.21	4060	6559	59400	1.95	RM	137R77	DRN	63MS4	425	404
0.24	3190	5834	60200	2.5						
0.27	3160	5116	60200	2.5						

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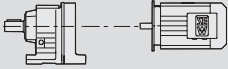

<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.12	7330	11772	43000	0.80						
0.14	6180	9985	43000	0.95						
0.15	5450	9013	43000	1.10						
0.16	5100	8771	43000	1.20						
0.17	4740	8282	43000	1.25						
0.18	4620	7639	43000	1.30						
0.20	3860	7053	43000	1.55						
0.21	3910	6722	43000	1.55	R	127R77	DRN	63MS4	260	404
0.22	3630	6347	43000	1.65	RF	127R77	DRN	63MS4	270	404
0.22	3830	6185	43000	1.55	RM	127R77	DRN	63MS4	365	404
0.25	3460	5592	43000	1.75						
0.29	2930	4740	43000	2.0						
0.31	2580	4441	43000	2.3						
0.35	2160	3949	43000	2.8						
0.37	2190	3764	43000	2.7						
0.39	1950	3571	43000	3.1						
0.44	1560	3110	43000	3.9						
0.39	2200	3495	43000	2.7	R	127R77	DRN	63MS4	245	404
0.45	1920	3056	43000	3.1	RF	127R77	DRN	63MS4	265	404
0.48	1830	2903	43000	3.3	RM	127R77	DRN	63MS4	360	404
0.54	1600	2547	43000	3.7						
0.55	1570	2506	43000	3.8	R	127R77	DRN	63MS4	260	404
					RF	127R77	DRN	63MS4	270	404
					RM	127R77	DRN	63MS4	365	404
0.18	4410	7583	28800	0.95						
0.20	3690	6743	32400	1.15						
0.23	3660	5914	32500	1.15	R	107R77	DRN	63MS4	200	404
0.27	2820	5168	35500	1.50	RF	107R77	DRN	63MS4	210	404
0.31	2530	4435	36100	1.70	RM	107R77	DRN	63MS4	295	404
0.35	2260	3896	36500	1.90						
0.45	1880	3039	36900	2.3						
0.35	2470	3918	36200	1.75						
0.41	2100	3343	36600	2.0	R	107R77	DRN	63MS4	195	404
0.45	1910	3034	36900	2.2	RF	107R77	DRN	63MS4	200	404
0.52	1670	2653	37100	2.6	RM	107R77	DRN	63MS4	290	404
0.61	1430	2280	37300	3.0						
0.67	1290	2067	37400	3.3						
0.30	3050	4559	17700	1.00	R	97R57	DRN	63MS4	130	404
0.34	2560	4004	18200	1.15	RF	97R57	DRN	63MS4	145	404
0.40	2270	3481	21700	1.30	RM	97R57	DRN	63MS4	195	404
0.29	3230	4678	4840	0.95						
0.32	2980	4309	20400	1.00						
0.37	2560	3702	23700	1.15	R	97R57	DRN	63MS4	125	404
0.46	2080	3019	26100	1.45	RF	97R57	DRN	63MS4	145	404
0.52	1800	2668	27100	1.65	RM	97R57	DRN	63MS4	195	404
0.61	1480	2245	27700	2.0						
0.68	1300	2016	27900	2.3						
0.80	1190	1733	28000	2.5						
0.45	2120	3065	23400	1.40						
0.51	1880	2722	26200	1.60						
0.60	1590	2311	27500	1.90	R	97R57	DRN	63MS4	130	404
0.66	1430	2078	27700	2.1	RF	97R57	DRN	63MS4	145	404
0.76	1230	1823	28000	2.4	RM	97R57	DRN	63MS4	195	404
0.87	1070	1583	28200	2.8						
0.99	900	1396	28300	3.3						
1.1	770	1228	28400	3.9						
0.48	1760	2873	9380	0.90	R	87R57	DRN	63MS4	86	404
0.70	1300	1961	18500	1.20	RF	87R57	DRN	63MS4	93	404
					RM	87R57	DRN	63MS4	125	404
0.53	1780	2595	15000	0.85	R	87R57	DRN	63MS4	85	404
0.65	1430	2129	17700	1.10	RF	87R57	DRN	63MS4	92	404
0.72	1270	1930	18600	1.20	RM	87R57	DRN	63MS4	120	404
0.80	1120	1733	19300	1.40						

<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.79	1140	1737	18400	1.35						
0.91	1000	1524	19800	1.55						
1.1	810	1303	20000	1.90	R	87R57	DRN	63MS4	85	404
1.2	710	1143	20000	2.2	RF	87R57	DRN	63MS4	92	404
1.6	580	885	20000	2.6	RM	87R57	DRN	63MS4	120	404
1.8	510	776	20000	3.0						
2.0	450	685	20000	3.4						
2.3	360	599	20000	4.3						
1.1	930	1303	8660	0.85	R	77R37	DRN	63MS4	45	404
1.2	795	1124	10100	1.05	RF	77R37	DRN	63MS4	51	404
1.3	740	1047	10600	1.10	RM	77R37	DRN	63MS4	76	404
1.5	635	915	11300	1.30						
1.1	820	1218	9910	1.00						
1.3	740	1084	10600	1.10	R	77R37	DRN	63MS4	46	404
1.5	660	940	11200	1.25	RF	77R37	DRN	63MS4	52	404
1.7	520	821	12000	1.55	RM	77R37	DRN	63MS4	77	404
1.9	475	731	12200	1.70						
2.1	455	646	12300	1.80						
2.6	375	520	12600	2.2	R	77R37	DRN	63MS4	45	404
3.1	320	451	12700	2.5	RF	77R37	DRN	63MS4	51	404
3.3	300	422	12800	2.7	RM	77R37	DRN	63MS4	76	404
3.8	255	365	12900	3.2						
1.6	625	891	7190	0.95						
1.9	505	730	8530	1.20	R	67R37	DRN	63MS4	40	404
2.1	440	644	9060	1.35	RF	67R37	DRN	63MS4	43	404
2.4	385	571	9430	1.55	RM	67R37	DRN	63MS4	59	404
2.8	320	486	9790	1.85						
1.6	590	836	7670	1.00						
1.8	490	750	8630	1.20	R	67R37	DRN	63MS4	41	404
2.1	440	646	9050	1.35	RF	67R37	DRN	63MS4	44	404
2.4	400	574	9330	1.50	RM	67R37	DRN	63MS4	60	404
2.8	340	495	9660	1.75						
3.1	285	438	9940	2.1						
1.8	550	782	4650	0.80						
2.0	455	678	6980	1.00						
2.3	410	604	7260	1.10	R	57R37	DRN	63MS4	34	404
2.6	370	537	7400	1.20	RF	57R37	DRN	63MS4	38	404
2.9	325	471	7550	1.35	RM	57R37	DRN	63MS4	50	404
3.9	240	357	7760	1.85						
4.3	215	319	7820	2.1						
3.8	255	359	7730	1.75						
4.3	230	324	7790	1.95	R	57R37	DRN	63MS4	33	404
4.8	200	290	7840	2.2	RF	57R37	DRN	63MS4	37	404
5.3	184	262	7880	2.4	RM	57R37	DRN	63MS4	49	404
5.6	170	246	7900	2.6						
6.3	150	220	7930	3.0						
2.7	340	510	3910	0.85						
3.2	285	436	5300	1.05	R	47R37	DRN	63MS4	29	404
3.4	265	408	5590	1.10	RF	47R37	DRN	63MS4	29	404
4.0	215	344	5780	1.35						
2.8	365	502	3020	0.80						
3.2	310	429	4680	0.95						
3.7	265	372	5580	1.10						
4.0	245	348	5670	1.20	R	47R37	DRN	63MS4	28	404
4.6	210	301	5810	1.40	RF	47R37	DRN	63MS4	29	404
5.4	176	255	5920	1.70						
6.0	155	228	5980	1.95						
7.1	129	195	6040	2.3						
4.1	225	338	3490	0.90						
4.7	210	296	3900	0.95						
5.3	184	259	4680	1.10	R	37R17	DRN	63MS4	18	404
6.0	162	228	5300	1.25	RF	37R17	DRN	63MS4	19	404
6.9	140	199	5550	1.40						
8.0	122	172	5680	1.65						

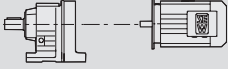

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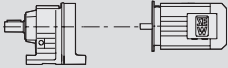

<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
4.2	235	328	3160	0.85						
4.8	200	289	4100	1.00						
5.2	192	265	4450	1.05	<b>R</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	17	404
6.1	156	226	5410	1.30	<b>RF</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	19	404
6.8	143	202	5520	1.40						
7.7	125	179	5660	1.60						
6.0	158	229	2790	0.80						
6.9	138	200	3320	0.95	<b>R</b>	<b>27R17</b>	<b>DRN</b>	<b>63MS4</b>	12	404
7.8	120	177	3770	1.05	<b>RF</b>	<b>27R17</b>	<b>DRN</b>	<b>63MS4</b>	12	404
8.3	116	166	3900	1.10						
6.1	156	227	2830	0.85						
6.8	143	203	3170	0.90	<b>R</b>	<b>27R17</b>	<b>DRN</b>	<b>63MS4</b>	11	404
7.7	125	179	3660	1.05	<b>RF</b>	<b>27R17</b>	<b>DRN</b>	<b>63MS4</b>	11	404
8.8	105	156	4020	1.25						
4.5	255	195.24*	12900	3.2	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>63M6</b>	38	386
5.2	215	166.59	13000	3.7	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>63M6</b>	44	387
6.0	191	145.67	13000	4.3	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>63M6</b>	69	387
4.3	260	199.81	10000	2.3						
4.7	240	184.07	10100	2.5	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>63M6</b>	31	383
5.5	205	158.14	10200	2.9	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>63M6</b>	34	384
6.3	181	137.67	10300	3.3						
6.8	169	128.97	10300	3.5	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>63M6</b>	50	384
7.6	150	113.94	10400	4.0						
6.9	165	199.81	10300	3.6	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>63MS4</b>	30	383
7.5	152	184.07	10400	3.9	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>63MS4</b>	33	384
					<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>63MS4</b>	49	384
4.7	245	186.89	7760	1.85						
5.0	225	172.17	7800	2.0						
5.9	194	147.92	7860	2.3	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	24	380
6.8	169	128.77	7900	2.6	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	27	381
7.2	158	120.63	7920	2.8	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	39	381
8.2	140	106.58	7940	3.2						
8.8	130	98.99	7950	3.5						
7.4	155	186.89	7920	2.9	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>63MS4</b>	23	380
8.0	142	172.17	7940	3.1	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>63MS4</b>	27	381
9.3	122	147.92	7960	3.7	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>63MS4</b>	39	381
11	106	128.77	7980	4.2						
4.9	230	176.88	5730	1.30						
5.3	210	162.94	5800	1.40	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>63M6</b>	19	377
6.2	184	139.99	5900	1.65	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>63M6</b>	19	378
7.1	160	121.87	5970	1.85						
7.8	146	176.88	6000	2.0						
8.5	135	162.94	6030	2.2						
9.9	116	139.99	6070	2.6	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>63MS4</b>	18	377
11	101	121.87	6100	3.0	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>63MS4</b>	18	378
12	94	114.17	6100	3.2						
14	83	100.86	6120	3.6						
15	77	93.68	6130	3.9						
6.5	177	134.82	4870	1.15						
7.0	162	123.66	5290	1.25						
8.3	138	105.28	5560	1.45	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>63M6</b>	15	374
9.6	119	90.77	5700	1.65	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>63M6</b>	17	375
10	111	84.61	5750	1.80						
12	97	73.96	5830	2.0						
10	111	134.82	5750	1.80						
11	102	123.66	5800	1.95						
13	87	105.28	5880	2.3	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>63MS4</b>	14	374
15	75	90.77	5930	2.6	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>63MS4</b>	16	375
16	70	84.61	5950	2.9						
19	61	73.96	5980	3.3						
7.0	163	123.91	2660	0.80						
8.2	138	105.49	3300	0.95	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>63M6</b>	9.3	371
9.6	119	90.96	3800	1.10	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>63M6</b>	9.2	372
10	111	84.78	3990	1.15						
12	97	74.11	4060	1.35						

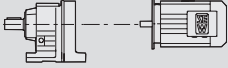



<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>			<b>m</b> <b>kg</b>			
10	112	135.09	3990	1.15						
11	102	123.91	4040	1.25						
13	87	105.49	4110	1.50						
15	75	90.96	4170	1.70						
16	70	84.78	4200	1.85						
19	61	74.11	4240	2.1	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>63MS4</b>	8.4	371
20	57	69.47	4260	2.2	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>63MS4</b>	8.4	372
23	50	61.30	4290	2.5						
25	46	55.87	4280	2.8						
29	40	48.17	4090	3.2						
31	37	44.90	4000	3.5						
11	107	81.64	-	0.80						
12	92	70.39	1250	0.90	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>63M6</b>	8.9	368
13	86	65.61	1680	1.00	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>63M6</b>	8.8	369
15	75	57.35	2300	1.15						
16	70	53.76	2400	1.20						
18	62	47.44	2460	1.35						
17	67	81.64	2420	1.25						
20	58	70.39	2490	1.45						
21	54	65.61	2500	1.55						
24	47	57.35	2500	1.80						
26	44	53.76	2500	1.90						
29	39	47.44	2500	2.2	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>63MS4</b>	8.1	368
31	36	44.18	2500	2.3	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>63MS4</b>	8.0	369
36	32	38.61	2430	2.6						
38	30	36.20	2390	2.8						
43	26	31.94	2310	3.2						
49	23	28.32	2230	3.6						
57	19	24.07	2130	4.2						
23	50	60.32	1250	1.00						
27	42	51.52	1300	1.15						
29	39	47.78	1330	1.25						
31	36	44.16	1350	1.35						
33	34	41.31	1370	1.45						
34	33	40.34	1370	1.50	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>63MS4</b>	6.9	365
36	31	38.51	1380	1.55	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>63MS4</b>	6.9	366
41	28	34.05	1410	1.75						
47	24	29.08	1390	2.1						
51	22	26.97	1360	2.2						
59	19	23.32	1320	2.6						
63	18	21.73	1290	2.8						
75	15	18.31	1230	3.3						
82	13	16.73	1200	3.6						
98	11	14.12	1150	4.3						
114	10	12.06	1100	5.0						
123	9.0	11.18	1070	5.4						
143	8.0	9.67	1030	6.2						
153	7.0	9.01	1010	6.7						
176	6.0	7.85	970	7.5	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>63MS4</b>	6.8	365
185	6.0	7.48	950	6.9	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>63MS4</b>	6.8	366
202	5.0	6.83	930	7.6						
239	4.0	5.76	880	8.4						
280	4.0	4.92	840	9.1						
302	3.0	4.57	820	9.5						
350	3.0	3.95	785	10						
375	3.0	3.68	765	11						
430	2.0	3.21	735	12						
227	5.0	6.07	4260	8.5						
267	4.0	5.18	4050	17	<b>RX</b>	<b>67</b>	<b>DRN</b>	<b>63MS4</b>	16	355
305	3.0	4.53	3870	22	<b>RXF</b>	<b>67</b>	<b>DRN</b>	<b>63MS4</b>	20	356
321	3.0	4.30*	3810	22						


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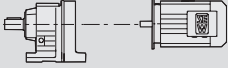

<b>P<sub>m</sub> = 0.12 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
251	4.0	5.50*	3360	8.5						
272	4.0	5.07	3270	8.6						
317	3.0	4.35	3120	19						
364	3.0	3.79	2980	22						
389	2.0	3.55*	2910	23						
440	2.0	3.14	2800	25	RX	57	DRN	63MS4	14	353
474	2.0	2.91	2730	28	RXF	57	DRN	63MS4	16	354
523	2.0	2.64*	2640	31						
582	1.0	2.37	2550	35						
676	1.0	2.04	2430	41						
719	1.0	1.92*	2380	43						
835	1.0	1.65	2260	50						

<b>P<sub>m</sub> = 0.18 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
0.10	14200	14075	59000	0.90						
0.11	12400	12344	63700	1.05						
0.12	11000	11143	66100	1.15						
0.14	9840	9743	68000	1.30						
0.16	8130	8443	70200	1.60	R	147R77	DRN	63M4	420	404
0.19	7030	7307	71300	1.85	RF	147R77	DRN	63M4	430	404
0.21	6200	6447	72000	2.1	RM	147R77	DRN	63M4	600	404
0.25	5360	5568	72700	2.4						
0.28	4900	4926	73000	2.6						
0.32	4200	4325	73400	3.1						
0.37	3730	3754	73700	3.5						
0.42	3210	3302	73900	4.0						
0.16	8460	8784	52000	0.95						
0.18	7010	7479	55300	1.15						
0.21	6620	6559	56000	1.20	R	137R77	DRN	63M4	290	404
0.24	5470	5834	57800	1.45	RF	137R77	DRN	63M4	315	404
0.27	5160	5116	58200	1.55	RM	137R77	DRN	63M4	425	404
0.31	4290	4464	59200	1.85						
0.35	3780	3928	59700	2.1						
0.29	4830	4709	58600	1.65						
0.34	4120	4018	59400	1.95	R	137R77	DRN	63M4	280	404
0.39	3600	3514	59900	2.2	RF	137R77	DRN	63M4	305	404
0.41	3420	3338	60000	2.3	RM	137R77	DRN	63M4	415	404
0.47	3000	2929	60300	2.7						
0.19	6610	7053	43000	0.90						
0.20	6530	6722	43000	0.90						
0.22	6110	6347	43000	1.00						
0.22	6240	6185	43000	0.95						
0.25	5640	5592	43000	1.05						
0.29	4780	4740	43000	1.25						
0.31	4320	4441	43000	1.40						
0.35	3700	3949	43000	1.60	R	127R77	DRN	63M4	260	404
0.37	3660	3764	43000	1.65	RF	127R77	DRN	63M4	270	404
0.39	3340	3571	43000	1.80	RM	127R77	DRN	63M4	365	404
0.44	2770	3110	43000	2.2						
0.49	2500	2812	43000	2.4						
0.58	2120	2383	43000	2.8						
0.71	1880	1934	43000	3.2						
0.75	1720	1835	43000	3.5						
0.88	1450	1555	43000	4.1						
0.39	3580	3495	43000	1.65						
0.45	3130	3056	43000	1.90						
0.47	2980	2903	43000	2.0						
0.54	2610	2547	43000	2.3	R	127R77	DRN	63M4	245	404
0.64	2200	2161	43000	2.7	RF	127R77	DRN	63M4	265	404
0.70	1960	1951	43000	3.0	RM	127R77	DRN	63M4	360	404
0.80	1680	1716	43000	3.5						
0.85	1580	1620	43000	3.8						

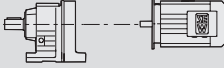

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.55	2560	2506	43000	2.3						
0.61	2310	2266	43000	2.6						
0.68	1980	2016	43000	3.0						
0.72	1960	1920	43000	3.1	R	127R77	DRN	63M4	260	404
0.75	1790	1823	43000	3.3	RF	127R77	DRN	63M4	270	404
0.82	1580	1673	43000	3.8	RM	127R77	DRN	63M4	365	404
0.89	1520	1545	43000	3.9						
0.91	1430	1512	43000	4.2						
0.31	4270	4435	29600	1.00	R	107R77	DRN	63M4	205	404
0.35	3780	3896	32000	1.15	RF	107R77	DRN	63M4	210	404
0.45	3060	3039	34700	1.40	RM	107R77	DRN	63M4	295	404
0.35	4020	3918	30900	1.05						
0.41	3430	3343	33400	1.25	R	107R77	DRN	63M4	195	404
0.45	3110	3034	34600	1.40	RF	107R77	DRN	63M4	205	404
0.52	2720	2653	35800	1.60	RM	107R77	DRN	63M4	290	404
0.60	2330	2280	36400	1.85						
0.67	2110	2067	36600	2.0						
0.69	2000	1987	36800	2.1						
0.75	1780	1827	37000	2.4	R	107R77	DRN	63M4	200	404
0.86	1510	1599	37200	2.8	RF	107R77	DRN	63M4	210	404
0.98	1360	1400	37300	3.1	RM	107R77	DRN	63M4	295	404
1.1	1160	1226	37500	3.7						
0.52	2860	2668	21900	1.05						
0.61	2370	2245	24700	1.25						
0.68	2100	2016	26000	1.45						
0.79	1880	1733	26800	1.60						
0.85	1750	1623	27200	1.70	R	97R57	DRN	63M4	125	404
0.96	1530	1434	27600	1.95	RF	97R57	DRN	63M4	145	404
1.1	1270	1207	27900	2.4	RM	97R57	DRN	63M4	195	404
1.3	1130	1084	28100	2.6						
1.5	950	934	28300	3.1						
1.6	890	878	28300	3.4						
1.8	750	755	28400	4.0						
0.51	2950	2722	13500	1.00	R	97R57	DRN	63M4	130	404
0.59	2500	2311	18900	1.20	RF	97R57	DRN	63M4	145	404
0.66	2250	2078	21900	1.35	RM	97R57	DRN	63M4	195	404
0.92	1610	1489	16400	0.95						
0.99	1510	1395	17200	1.05						
1.1	1320	1232	18300	1.15	R	87R57	DRN	63M4	86	404
1.2	1220	1145	18900	1.25	RF	87R57	DRN	63M4	93	404
1.3	1090	1037	19400	1.40	RM	87R57	DRN	63M4	120	404
1.5	970	931	19900	1.60						
1.7	820	802	20000	1.90						
0.90	1600	1524	11700	0.95						
1.1	1320	1303	15800	1.15	R	87R57	DRN	63M4	86	404
1.2	1160	1143	18100	1.35	RF	87R57	DRN	63M4	93	404
1.6	930	885	20000	1.65	RM	87R57	DRN	63M4	125	404
1.8	810	776	20000	1.90						
1.6	930	858	8720	0.90	R	77R37	DRN	63M4	46	404
1.8	810	757	9950	1.00	RF	77R37	DRN	63M4	52	404
2.0	715	671	10800	1.15	RM	77R37	DRN	63M4	77	404
2.4	600	571	11500	1.35						
1.7	840	821	9650	0.95						
1.9	765	731	10400	1.05						
2.1	710	646	10800	1.15						
2.5	615	560	11400	1.30	R	77R37	DRN	63M4	47	404
2.8	525	488	12000	1.55	RF	77R37	DRN	63M4	53	404
3.1	465	436	12200	1.75	RM	77R37	DRN	63M4	78	404
3.7	400	373	12500	2.0						
4.2	350	327	12600	2.3						
4.8	315	289	12800	2.6						
2.4	610	571	7430	1.00	R	67R37	DRN	63M4	41	404
2.8	510	486	8470	1.15	RF	67R37	DRN	63M4	44	404
					RM	67R37	DRN	63M4	60	404

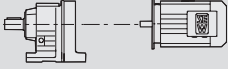

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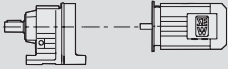

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.4	625	574	7220	0.95						
2.8	540	495	8200	1.10						
3.1	455	438	8920	1.30	<b>R</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	42	404
3.5	405	388	9290	1.45	<b>RF</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	45	404
4.0	375	344	9490	1.60	<b>RM</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	61	404
4.7	300	294	9870	2.0						
5.3	275	261	9980	2.1						
3.0	475	454	6560	0.95	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	34	404
3.4	430	410	7180	1.05	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	38	404
					<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	50	404
2.9	510	471	5880	0.85						
3.9	385	357	7360	1.15	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	35	404
4.3	340	319	7510	1.30	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	39	404
5.0	285	273	7660	1.55	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	51	404
5.7	245	241	7760	1.80						
6.4	220	215	7810	2.0						
3.8	400	359	7300	1.10						
4.2	360	324	7440	1.25						
4.7	320	290	7570	1.40	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	34	404
5.2	285	262	7660	1.55	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	38	404
5.6	265	246	7710	1.65	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	50	404
6.2	235	220	7780	1.90						
7.3	200	188	7850	2.2						
8.7	168	159	7900	2.7						
4.6	330	301	4200	0.90						
5.4	275	255	5510	1.10	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	29	404
6.0	245	228	5680	1.20	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	29	404
7.1	205	195	5820	1.45						
6.9	215	199	3700	0.90	<b>R</b>	<b>37R17</b>	<b>DRN</b>	<b>63M4</b>	18	404
8.0	190	172	4510	1.05	<b>RF</b>	<b>37R17</b>	<b>DRN</b>	<b>63M4</b>	20	404
9.2	165	150	5220	1.20						
6.8	220	202	3550	0.90	<b>R</b>	<b>37R17</b>	<b>DRN</b>	<b>63M4</b>	18	404
7.7	196	179	4340	1.00	<b>RF</b>	<b>37R17</b>	<b>DRN</b>	<b>63M4</b>	20	404
8.8	167	156	5150	1.20						
9.8	150	141	3000	0.85						
11	132	124	3470	1.00	<b>R</b>	<b>27R17</b>	<b>DRN</b>	<b>63M4</b>	13	404
12	119	110	3820	1.10	<b>RF</b>	<b>27R17</b>	<b>DRN</b>	<b>63M4</b>	12	404
15	99	94	4050	1.30						
10	145	135	3130	0.90						
12	132	118	3460	1.00	<b>R</b>	<b>27R17</b>	<b>DRN</b>	<b>63M4</b>	12	404
13	115	104	3920	1.10	<b>RF</b>	<b>27R17</b>	<b>DRN</b>	<b>63M4</b>	12	404
15	99	90	4050	1.30						
4.7	365	195.24*	12600	2.2						
5.5	310	166.59	12800	2.6	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>71MS6</b>	38	386
6.3	270	145.67	12900	3.0	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>71MS6</b>	44	387
6.6	255	138.39	12900	3.1	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>71MS6</b>	69	387
7.5	225	121.42	13000	3.6						
7.0	240	195.24*	12900	3.4						
8.2	205	166.59	13000	3.9	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>63M4</b>	38	386
9.4	182	145.67	13000	4.5	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>63M4</b>	44	387
9.9	173	138.39	13000	4.7	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>63M4</b>	69	387
4.6	375	199.81	9490	1.60						
5.0	345	184.07	9660	1.75						
5.8	295	158.14	9900	2.0						
6.7	255	137.67	10100	2.3						
7.1	240	128.97	10100	2.5	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	31	383
8.0	210	113.94	10200	2.8	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	34	384
8.7	198	105.83	10300	3.0	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	50	384
9.5	180	95.91	10300	3.3						
11	161	86.11	10400	3.7						
12	139	74.17	10400	4.3						
13	131	69.75	10400	4.6						

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
6.9	245	199.81	10100	2.4						
7.5	230	184.07	10200	2.6						
8.7	197	158.14	10300	3.0	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>63M4</b>	31	383
10.0	172	137.67	10300	3.5	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>63M4</b>	34	384
11	161	128.97	10400	3.7	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>63M4</b>	50	384
12	142	113.94	10400	4.2						
13	132	105.83	10400	4.5						
4.9	350	186.89	7480	1.30	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>71MS6</b>	25	380
5.3	320	172.17	7560	1.40	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>71MS6</b>	28	381
6.2	275	147.92	7690	1.60	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>71MS6</b>	40	381
7.1	240	128.77	7770	1.85						
7.6	225	120.63	7800	2.0						
7.4	230	186.89	7790	1.95						
8.0	215	172.17	7820	2.1	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>63M4</b>	24	380
9.3	184	147.92	7880	2.4	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>63M4</b>	27	381
11	160	128.77	7910	2.8	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>63M4</b>	39	381
11	150	120.63	7930	3.0						
13	133	106.58	7950	3.4						
14	123	98.99	7960	3.6						
15	112	89.71	7970	4.0						
7.8	220	176.88	5780	1.35						
8.4	200	162.94	5840	1.45	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>63M4</b>	19	377
9.8	175	139.99	5930	1.70	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>63M4</b>	19	378
11	152	121.87	5990	1.95						
12	142	114.17	6010	2.1						
14	126	100.86	6050	2.4						
15	117	93.68	6070	2.6						
16	106	84.90	6090	2.8						
18	95	76.23	6100	3.1						
7.4	230	123.66	3330	0.85	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>71MS6</b>	16	374
8.7	197	105.28	4300	1.00	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>71MS6</b>	17	375
10	170	90.77	5070	1.15						
11	158	84.61	5390	1.25						
10	168	134.82	5130	1.20						
11	154	123.66	5430	1.30	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>63M4</b>	15	374
13	131	105.28	5620	1.50	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>63M4</b>	17	375
15	113	90.77	5740	1.75						
16	105	84.61	5780	1.90						
19	92	73.96	5860	2.2						
20	86	69.33	5880	2.3						
22	76	61.18	5930	2.6						
25	69	55.76	5950	2.9						
29	60	48.08	5890	3.3						
11	154	123.91	2880	0.85						
13	131	105.49	3490	1.00	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>63M4</b>	9.3	371
15	113	90.96	3960	1.15	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>63M4</b>	9.2	372
16	105	84.78	4020	1.25						
19	92	74.11	4090	1.40						
20	86	69.47	4110	1.50						
22	76	61.30	4160	1.70						
25	69	55.87	4170	1.85						
29	60	48.17	4000	2.2						
31	56	44.90	3920	2.3						
35	49	39.25	3770	2.6						
37	45	36.79	3700	2.8						
42	40	32.47	3560	3.2						
48	35	28.78	3440	3.6						
56	30	24.47	3270	4.2						
48	35	28.37	3420	3.7	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>63M4</b>	9.0	371
53	32	26.09	3340	4.0	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>63M4</b>	8.9	372
62	27	22.32	3180	4.7						
71	24	19.35	3050	5.4						
76	22	18.08	2980	5.8						
88	19	15.63	2850	6.7						
104	16	13.28*	2710	7.8						

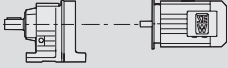

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<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
17	102	81.64	485	0.85						
20	87	70.39	1580	0.95						
21	82	65.61	1950	1.05						
24	71	57.35	2390	1.20						
26	67	53.76	2420	1.25						
29	59	47.44	2420	1.45	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>63M4</b>	8.9	368
31	55	44.18	2390	1.55	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>63M4</b>	8.8	369
36	48	38.61	2320	1.75						
38	45	36.20	2280	1.90						
43	39	31.94	2210	2.1						
49	35	28.32	2150	2.4						
57	30	24.07	2060	2.8						
54	31	25.23	2080	2.7	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>63M4</b>	8.6	368
59	28	23.15	2040	2.9	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>63M4</b>	8.5	369
70	24	19.71	1950	3.5						
81	21	16.99	1870	4.0						
29	59	47.78	1180	0.85						
31	55	44.16	1210	0.90						
33	51	41.31	1240	0.95						
34	50	40.34	1240	1.00						
36	48	38.51	1260	1.05	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>63M4</b>	7.8	365
40	42	34.05	1300	1.15	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>63M4</b>	7.8	366
47	36	29.08	1300	1.40						
51	33	26.97	1280	1.50						
59	29	23.32	1240	1.70						
63	27	21.73	1220	1.85						
75	22	18.31	1180	2.2						
82	20	16.73	1150	2.4						
97	17	14.12	1100	2.8						
114	15	12.06	1060	3.3						
123	13	11.18	1040	3.6						
142	12	9.67	1000	4.1						
153	11	9.01	980	4.4						
175	9.0	7.85	940	5.0	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>63M4</b>	7.6	365
184	9.0	7.48	930	4.6	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>63M4</b>	7.6	366
201	8.0	6.83	910	5.0						
239	7.0	5.76	860	5.5						
279	6.0	4.92	830	6.0						
301	5.0	4.57	810	6.3						
348	4.0	3.95	775	6.9						
374	4.0	3.68	755	7.2						
429	4.0	3.21	725	7.7						
244	7.0	11.18	860	7.1						
282	6.0	9.67	820	8.2						
302	5.0	9.01	800	8.8						
347	4.0	7.85	775	9.9						
364	4.0	7.48	765	9.1						
399	4.0	6.83	740	10.0	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>63MS2</b>	6.8	365
473	3.0	5.76	705	11	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>63MS2</b>	6.8	366
553	3.0	4.92	670	12						
597	2.0	4.57	655	12						
690	2.0	3.95	625	14						
741	2.0	3.68	610	14						
850	2.0	3.21	585	15						
151	11	6.07	4860	3.8	<b>RX</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	18	355
177	9.0	5.18	4610	7.7	<b>RXF</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	22	356
202	8.0	4.53	4410	9.6						
213	8.0	4.30*	4340	9.9						

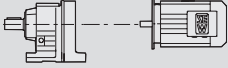

<b>P<sub>m</sub> = 0.18 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
227	7.0	6.07	4250	5.7						
266	6.0	5.18	4040	12						
304	5.0	4.53	3860	14						
320	5.0	4.30*	3800	15						
364	4.0	3.77	3640	18	RX	67	DRN	63M4	17	355
430	4.0	3.20*	3450	25	RXF	67	DRN	63M4	21	356
476	3.0	2.89	3340	29						
541	3.0	2.54	3200	37						
573	3.0	2.40*	3140	41						
673	2.0	2.04	2980	52						
166	10	5.50*	3820	3.8	RX	57	DRN	71MS6	15	353
181	9.0	5.07	3720	3.8	RXF	57	DRN	71MS6	17	354
210	8.0	4.35	3540	8.3						
241	7.0	3.79	3390	9.7						
250	6.0	5.50*	3350	5.7						
271	6.0	5.07	3260	5.7						
316	5.0	4.35	3110	12						
363	4.0	3.79	2970	15						
387	4.0	3.55*	2910	16						
438	3.0	3.14	2790	17	RX	57	DRN	63M4	15	353
472	3.0	2.91	2720	18	RXF	57	DRN	63M4	16	354
521	3.0	2.64*	2640	21						
580	2.0	2.37	2540	23						
673	2.0	2.04	2420	27						
716	2.0	1.92*	2380	29						
832	2.0	1.65	2260	33						

<b>P<sub>m</sub> = 0.25 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.05	33800	27001	120000	0.60	R	167R97	DRN	71MS4	750	405
0.06	28200	22482	120000	0.70	RF	167R97	DRN	71MS4	760	405
0.07	25100	20002	120000	0.80	RM	167R97	DRN	71MS4	950	405
0.08	21700	17361	120000	0.90						
0.14	13900	9743	60700	0.95						
0.17	11600	8443	65200	1.10						
0.19	10000	7307	67700	1.30						
0.22	8890	6447	69200	1.45						
0.25	7680	5568	70600	1.70	R	147R77	DRN	71MS4	420	404
0.29	6950	4926	71400	1.85	RF	147R77	DRN	71MS4	430	404
0.32	6000	4325	72200	2.2	RM	147R77	DRN	71MS4	600	404
0.37	5300	3754	72700	2.5						
0.43	4580	3302	73200	2.8						
0.48	3990	2898	73500	3.2						
0.24	7900	5834	53600	1.00	R	137R77	DRN	71MS4	290	404
0.27	7300	5116	54800	1.10	RF	137R77	DRN	71MS4	315	404
0.31	6160	4464	56800	1.30	RM	137R77	DRN	71MS4	425	404
0.36	5420	3928	57900	1.50						
0.30	6820	4709	55700	1.15						
0.35	5820	4018	57300	1.35	R	137R77	DRN	71MS4	280	404
0.40	5090	3514	58300	1.55	RF	137R77	DRN	71MS4	305	404
0.42	4830	3338	58600	1.65	RM	137R77	DRN	71MS4	415	404
0.48	4240	2929	59300	1.90						
0.53	3830	2658	59600	2.1						
0.58	3480	2412	60000	2.3						
0.68	2990	2073	60300	2.7	R	137R77	DRN	71MS4	290	404
0.76	2560	1839	60600	3.1	RF	137R77	DRN	71MS4	310	404
1.0	1990	1397	60900	4.0	RM	137R77	DRN	71MS4	425	404
1.1	1720	1226	61100	4.6						

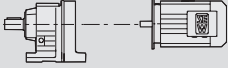

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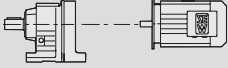

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.30	6760	4740	43000	0.90						
0.32	6170	4441	43000	0.95						
0.36	5350	3949	43000	1.10						
0.37	5230	3764	43000	1.15						
0.39	4830	3571	43000	1.25						
0.45	4060	3110	43000	1.45	R	127R77	DRN	71MS4	260	404
0.50	3670	2812	43000	1.65	RF	127R77	DRN	71MS4	270	404
0.59	3110	2383	43000	1.90	RM	127R77	DRN	71MS4	365	404
0.73	2680	1934	43000	2.2						
0.77	2480	1835	43000	2.4						
0.90	2100	1555	43000	2.9						
0.97	1890	1444	43000	3.2						
1.1	1600	1224	43000	3.7						
0.40	5060	3495	43000	1.20						
0.46	4420	3056	43000	1.35						
0.48	4200	2903	43000	1.45						
0.55	3690	2547	43000	1.65	R	127R77	DRN	71MS4	245	404
0.65	3120	2161	43000	1.90	RF	127R77	DRN	71MS4	265	404
0.72	2780	1951	43000	2.1	RM	127R77	DRN	71MS4	360	404
0.82	2410	1716	43000	2.5						
0.87	2260	1620	43000	2.6						
1.0	1890	1380	43000	3.2						
1.2	1740	1210	43000	3.4						
0.56	3620	2506	43000	1.65						
0.62	3270	2266	43000	1.85						
0.70	2830	2016	43000	2.1						
0.73	2770	1920	43000	2.2						
0.77	2560	1823	43000	2.3						
0.84	2290	1673	43000	2.6	R	127R77	DRN	71MS4	260	404
0.91	2170	1545	43000	2.8	RF	127R77	DRN	71MS4	270	404
0.93	2070	1512	43000	2.9	RM	127R77	DRN	71MS4	365	404
1.1	1750	1322	43000	3.4						
1.1	1750	1282	43000	3.4						
1.2	1580	1195	43000	3.8						
1.2	1680	1164	43000	3.6						
1.4	1420	987	43000	4.2						
0.46	4330	3039	29300	1.00	R	107R77	DRN	71MS4	205	404
					RF	107R77	DRN	71MS4	210	404
					RM	107R77	DRN	71MS4	300	404
0.46	4390	3034	28900	1.00	R	107R77	DRN	71MS4	195	404
					RF	107R77	DRN	71MS4	205	404
					RM	107R77	DRN	71MS4	290	404
0.71	2830	1987	35400	1.50						
0.77	2550	1827	36100	1.70						
0.88	2190	1599	36600	1.95	R	107R77	DRN	71MS4	200	404
1.0	1950	1400	36800	2.2	RF	107R77	DRN	71MS4	210	404
1.1	1680	1226	37100	2.6	RM	107R77	DRN	71MS4	295	404
1.5	1310	939	37400	3.3						
1.7	1120	822	37500	3.8						
0.81	2610	1733	23400	1.15	R	97R57	DRN	71MS4	125	404
0.87	2440	1623	24400	1.25	RF	97R57	DRN	71MS4	145	404
					RM	97R57	DRN	71MS4	195	404
0.77	2720	1823	16300	1.10						
0.89	2360	1583	20500	1.25						
1.0	2040	1396	24300	1.45						
1.1	1770	1228	27200	1.70	R	97R57	DRN	71MS4	130	404
1.3	1610	1069	27500	1.85	RF	97R57	DRN	71MS4	145	404
1.5	1400	938	27800	2.1	RM	97R57	DRN	71MS4	195	404
1.7	1190	824	28000	2.5						
1.9	1060	737	28200	2.8						
2.2	910	632	28300	3.3						
1.2	1700	1145	15800	0.90	R	87R57	DRN	71MS4	86	404
1.4	1530	1037	17000	1.00	RF	87R57	DRN	71MS4	93	404
1.5	1360	931	18100	1.15	RM	87R57	DRN	71MS4	125	404
1.8	1160	802	19100	1.35						

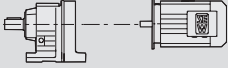



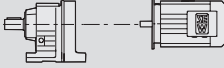

<b>P<sub>m</sub> = 0.25 kW</b>									<b>m</b>	
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>kg</b>		
1.2	1640	1143	11200	0.95						
1.6	1300	885	18400	1.20						
1.8	1140	776	19200	1.35						
2.0	1010	685	19800	1.55	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	87	404
2.4	850	599	20000	1.80	<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	94	404
2.7	745	525	20000	2.1	<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	125	404
3.1	655	456	20000	2.4						
5.2	375	268	20000	4.1						
2.5	840	571	9700	0.95	<b>R</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	47	404
					<b>RF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	53	404
					<b>RM</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	78	404
2.5	850	560	9580	0.95						
2.9	730	488	10700	1.10						
3.2	650	436	11200	1.25						
3.8	555	373	11800	1.45	<b>R</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	48	404
4.3	490	327	12100	1.65	<b>RF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	53	404
4.9	435	289	12300	1.90	<b>RM</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	78	404
5.4	385	260	12500	2.1						
6.3	325	224	12700	2.5						
3.6	570	388	7890	1.05						
4.1	520	344	8390	1.15						
4.8	425	294	9150	1.40						
5.4	385	261	9400	1.55	<b>R</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	42	404
6.0	345	234	9640	1.70	<b>RF</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	45	404
7.0	295	200	9900	2.0	<b>RM</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	61	404
8.0	255	176	10100	2.4						
8.9	225	158	10200	2.6						
3.7	590	384	7630	1.00						
3.9	550	359	8070	1.10						
4.5	475	310	8790	1.25	<b>R</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	41	404
5.3	400	264	9330	1.50	<b>RF</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	45	404
6.0	355	235	9600	1.70	<b>RM</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	60	404
7.0	300	201	9880	2.0						
7.7	270	181	10000	2.2						
4.4	475	319	6620	0.95						
5.2	400	273	7300	1.10						
5.8	350	241	7480	1.30						
6.5	310	215	7590	1.45	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	36	404
7.5	275	187	7690	1.65	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	39	404
8.6	235	164	7780	1.90	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	51	404
9.9	205	142	7840	2.2						
4.3	500	324	6130	0.90						
4.8	440	290	7130	1.00	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	35	404
5.4	400	262	7300	1.10	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	38	404
5.7	370	246	7400	1.20	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	50	404
6.4	330	220	7540	1.35						
6.2	340	228	3900	0.85						
7.2	290	195	5210	1.05	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>71MS4</b>	30	404
7.7	270	182	5560	1.10	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>71MS4</b>	30	404
9.1	225	154	5760	1.35						
9.4	225	150	3430	0.85						
11	194	130	4400	1.05	<b>R</b>	<b>37R17</b>	<b>DRN</b>	<b>71MS4</b>	19	404
11	184	124	4670	1.10	<b>RF</b>	<b>37R17</b>	<b>DRN</b>	<b>71MS4</b>	20	404
13	163	110	5260	1.20						
15	139	94	5560	1.45						
10	200	135	4160	1.00						
11	196	127	4330	1.00	<b>R</b>	<b>37R17</b>	<b>DRN</b>	<b>71MS4</b>	19	404
14	159	104	5370	1.25	<b>RF</b>	<b>37R17</b>	<b>DRN</b>	<b>71MS4</b>	20	404
16	138	90	5570	1.45						
4.7	505	195.24*	12000	1.60	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>71M6</b>	40	386
5.5	430	166.59	12400	1.90	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>71M6</b>	45	387
6.3	380	145.67	12600	2.2	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>71M6</b>	70	387

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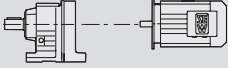

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
7.2	330	195.24*	12700	2.5						
8.4	280	166.59	12800	2.9	R	77	DRN	71MS4	38	386
9.7	245	145.67	12900	3.3	RF	77	DRN	71MS4	44	387
10	235	138.39	13000	3.5	RM	77	DRN	71MS4	69	387
12	205	121.42	13000	4.0						
4.6	520	199.81	8390	1.15						
5.0	480	184.07	8750	1.25						
5.8	410	158.14	9250	1.45	R	67	DRN	71M6	32	383
6.7	355	137.67	9580	1.65	RF	67	DRN	71M6	36	384
7.1	335	128.97	9700	1.80	RM	67	DRN	71M6	51	384
8.0	295	113.94	9900	2.0						
8.7	275	105.83	9990	2.2						
7.0	335	199.81	9690	1.75						
7.6	310	184.07	9820	1.90						
8.9	265	158.14	10000	2.2						
10	230	137.67	10100	2.6	R	67	DRN	71MS4	31	383
11	215	128.97	10200	2.7	RF	67	DRN	71MS4	34	384
12	193	113.94	10300	3.1	RM	67	DRN	71MS4	50	384
13	179	105.83	10300	3.3						
15	162	95.91	10400	3.7						
16	146	86.11	10400	4.1						
4.9	485	186.89	6390	0.90						
5.3	445	172.17	7110	1.00						
6.2	385	147.92	7360	1.15	R	57	DRN	71M6	26	380
7.1	335	128.77	7520	1.35	RF	57	DRN	71M6	29	381
7.6	310	120.63	7590	1.45	RM	57	DRN	71M6	41	381
8.6	275	106.58	7690	1.60						
9.2	255	98.99	7730	1.75						
7.5	315	186.89	7580	1.40						
8.2	290	172.17	7650	1.55						
9.5	250	147.92	7750	1.80						
11	215	128.77	7820	2.1						
12	200	120.63	7840	2.2	R	57	DRN	71MS4	25	380
13	181	106.58	7880	2.5	RF	57	DRN	71MS4	28	381
14	168	98.99	7900	2.7	RM	57	DRN	71MS4	40	381
16	152	89.71	7920	3.0						
17	136	80.55	7940	3.3						
20	117	69.23	7960	3.8						
7.9	300	176.88	4980	1.00						
8.6	275	162.94	5540	1.10						
10	235	139.99	5710	1.25						
12	205	121.87	5830	1.45						
12	193	114.17	5870	1.55						
14	171	100.86	5940	1.75						
15	159	93.68	5970	1.90	R	47	DRN	71MS4	19	377
17	144	84.90	6010	2.1	RF	47	DRN	71MS4	20	378
18	129	76.23	6040	2.3						
20	116	68.54	6070	2.6						
22	109	64.21	6080	2.8						
25	96	56.73	6100	3.1						
27	89	52.69	6110	3.4						
29	81	47.75	5940	3.7						
10	225	134.82	3420	0.85						
11	210	123.66	3950	0.95						
13	178	105.28	4840	1.10						
15	154	90.77	5430	1.30						
17	143	84.61	5520	1.40						
19	125	73.96	5660	1.60						
20	117	69.33	5710	1.70	R	37	DRN	71MS4	16	374
23	103	61.18	5800	1.90	RF	37	DRN	71MS4	17	375
25	94	55.76	5840	2.1						
29	81	48.08	5740	2.5						
31	76	44.81	5630	2.6						
36	66	39.17	5410	3.0						
38	62	36.72	5310	3.2						
43	55	32.40	5110	3.6						


<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
17	144	84.78	3160	0.90						
19	125	74.11	3640	1.05						
20	118	69.47	3850	1.10						
23	104	61.30	4030	1.25						
25	94	55.87	4010	1.35						
29	81	48.17	3860	1.60	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>71MS4</b>	9.8	371
31	76	44.90	3790	1.70	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>71MS4</b>	9.8	372
36	66	39.25	3650	1.95						
38	62	36.79	3590	2.1						
43	55	32.47	3460	2.4						
49	48	28.78	3350	2.7						
57	41	24.47	3200	3.1						
50	48	28.37	3340	2.7						
54	44	26.09	3260	2.9						
63	37	22.32	3110	3.4						
73	32	19.35	2980	4.0						
78	30	18.08	2920	4.2						
90	26	15.63	2800	4.9						
106	22	13.28*	2660	5.8						
118	20	11.86	2570	6.4						
139	17	10.13	2450	7.1	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>71MS4</b>	9.6	371
149	15	9.41	2380	7.6	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>71MS4</b>	9.5	372
172	13	8.16	2280	8.4						
184	12	7.63*	2230	8.6						
213	11	6.59	2130	9.5						
251	9.0	5.60*	2020	10						
281	8.0	5.00*	1950	11						
329	7.0	4.27	1860	12						
351	6.0	4.00*	1820	13						
417	5.0	3.37	1720	14						
24	97	57.35	890	0.85						
26	91	53.76	1350	0.95						
30	80	47.44	2030	1.05						
32	75	44.18	2220	1.15						
36	65	38.61	2170	1.30	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>71MS4</b>	9.4	368
39	61	36.20	2140	1.40	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>71MS4</b>	9.4	369
44	54	31.94	2090	1.55						
50	48	28.32	2040	1.75						
58	40	24.07	1960	2.1						
56	42	25.23	1990	2.0						
61	39	23.15	1950	2.2						
71	33	19.71	1870	2.5						
83	28	16.99	1800	2.9	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>71MS4</b>	9.2	368
89	26	15.84	1770	3.2	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>71MS4</b>	9.1	369
102	23	13.84	1710	3.6						
108	22	12.98	1680	3.9						
123	19	11.45	1620	4.2						
41	57	34.05	1190	0.85						
48	49	29.08	1190	1.00						
52	45	26.97	1180	1.10	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>71MS4</b>	8.3	365
60	39	23.32	1150	1.25	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>71MS4</b>	8.3	366
65	36	21.73	1140	1.35						

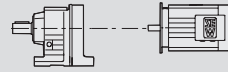
<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
77	31	18.31	1110	1.60						
84	28	16.73	1090	1.75						
100	23	14.12	1050	2.1						
117	20	12.06	1010	2.4						
126	19	11.18	990	2.6						
145	16	9.67	960	3.0						
156	15	9.01	940	3.3						
179	13	7.85	910	3.7	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>71MS4</b>	8.2	365
188	12	7.48	900	3.4	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>71MS4</b>	8.2	366
206	11	6.83	880	3.7						
244	9.0	5.76	840	4.1						
285	8.0	4.92	800	4.4						
308	7.0	4.57	785	4.6						
356	6.0	3.95	755	5.1						
382	6.0	3.68	740	5.3						
438	5.0	3.21	710	5.7						
246	9.0	11.18	840	5.2						
285	8.0	9.67	800	6.0						
306	7.0	9.01	785	6.4						
351	6.0	7.85	755	7.2						
368	6.0	7.48	745	6.6						
403	5.0	6.83	725	7.3	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>63M2</b>	7.6	365
478	5.0	5.76	690	8.0	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>63M2</b>	7.6	366
560	4.0	4.92	660	8.7						
603	3.0	4.57	645	9.1						
698	3.0	3.95	615	9.9						
749	3.0	3.68	605	10						
859	2.0	3.21	580	11						
151	15	6.07	4830	2.7	<b>RX</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	19	355
177	13	5.18	4590	5.5	<b>RXF</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	23	356
202	11	4.53	4390	6.9						
213	11	4.30*	4320	7.1						
232	10	6.07	4210	4.2						
271	8.0	5.18	4000	8.5						
310	7.0	4.53	3820	11						
327	7.0	4.30*	3760	11						
372	6.0	3.77	3600	14	<b>RX</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	18	355
439	5.0	3.20*	3420	18	<b>RXF</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	22	356
486	4.0	2.89	3300	22						
553	4.0	2.54	3170	27						
585	4.0	2.40*	3110	30						
688	3.0	2.04	2950	39						
166	14	5.50*	3790	2.7	<b>RX</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	16	353
181	13	5.07	3700	2.7	<b>RXF</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	18	354
210	11	4.35	3520	6.0						
241	9.0	3.79	3370	7.0						
255	9.0	5.50*	3310	4.2						
277	8.0	5.07	3220	4.2						
323	7.0	4.35	3070	9.2						
371	6.0	3.79	2930	11						
396	6.0	3.55*	2870	11						
448	5.0	3.14	2760	12	<b>RX</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	15	353
482	4.0	2.91	2690	14	<b>RXF</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	17	354
532	4.0	2.64*	2610	15						
593	4.0	2.37	2520	17						
688	3.0	2.04	2400	20						
732	3.0	1.92*	2350	21						
850	2.0	1.65	2240	25						

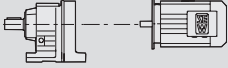

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.05	53900	27001	-	0.35						
0.06	44800	22482	-	0.45						
0.07	39900	20002	52000	0.50						
0.08	34600	17361	120000	0.60	<b>R</b>	<b>167R97</b>	<b>DRN</b>	<b>71M4</b>	750	405
0.09	30800	15446	120000	0.65	<b>RF</b>	<b>167R97</b>	<b>DRN</b>	<b>71M4</b>	760	405
0.10	28000	14051	120000	0.70	<b>RM</b>	<b>167R97</b>	<b>DRN</b>	<b>71M4</b>	960	405
0.12	23400	11812	120000	0.85						
0.13	20800	10509	120000	0.95						
0.15	19200	9631	120000	1.05						
0.19	15500	7307	43700	0.85						
0.22	13600	6447	61200	0.95						
0.25	11800	5568	64900	1.10	<b>R</b>	<b>147R77</b>	<b>DRN</b>	<b>71M4</b>	425	404
0.29	10600	4926	66900	1.25	<b>RF</b>	<b>147R77</b>	<b>DRN</b>	<b>71M4</b>	430	404
0.33	9210	4325	68800	1.40	<b>RM</b>	<b>147R77</b>	<b>DRN</b>	<b>71M4</b>	600	404
0.38	8080	3754	70200	1.60						
0.43	7030	3302	71300	1.85						
0.49	6140	2898	72100	2.1						
0.32	9470	4464	41400	0.85	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	290	404
0.36	8330	3928	52500	0.95	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	315	404
					<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	425	404
0.35	8840	4018	50300	0.90						
0.40	7730	3514	53900	1.05	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	280	404
0.42	7340	3338	54700	1.10	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	305	404
0.48	6440	2929	56300	1.25	<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	415	404
0.57	5450	2484	57800	1.45						
0.63	4880	2242	58500	1.65						
0.53	5830	2658	57300	1.35						
0.59	5290	2412	58000	1.50	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	290	404
0.68	4550	2073	58900	1.75	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	315	404
0.77	3940	1839	59500	2.0	<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>71M4</b>	425	404
1.0	3040	1397	60300	2.6						
1.1	2640	1226	60600	3.0						
1.3	2370	1090	60700	3.4						
1.5	2070	951	60900	3.9						
0.46	6370	3110	43000	0.95						
0.50	5760	2812	43000	1.05	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	260	404
0.59	4880	2383	43000	1.25	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	275	404
0.73	4120	1934	43000	1.45	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	370	404
0.77	3840	1835	43000	1.55						
0.91	3260	1555	43000	1.85						
0.98	2960	1444	43000	2.0						
1.2	2510	1224	43000	2.4						
0.46	6720	3056	43000	0.90						
0.49	6380	2903	43000	0.95	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	245	404
0.56	5600	2547	43000	1.05	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	265	404
0.65	4740	2161	43000	1.25	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	360	404
0.73	4250	1951	43000	1.40						
0.82	3700	1716	43000	1.60						
0.87	3480	1620	43000	1.70						
1.0	2920	1380	43000	2.0						
1.2	2650	1210	43000	2.3						
1.5	2070	961	43000	2.9						
1.8	1640	773	43000	3.7						

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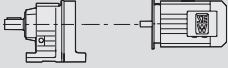

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.56	5500	2506	43000	1.10						
0.62	4970	2266	43000	1.20						
0.70	4340	2016	43000	1.40						
0.74	4210	1920	43000	1.40						
0.78	3930	1823	43000	1.55						
0.85	3540	1673	43000	1.70						
0.92	3330	1545	43000	1.80						
0.94	3200	1512	43000	1.85						
1.1	2740	1322	43000	2.2	R	127R77	DRN	71M4	260	404
1.1	2710	1282	43000	2.2	RF	127R77	DRN	71M4	270	404
1.2	2480	1195	43000	2.4	RM	127R77	DRN	71M4	365	404
1.2	2550	1164	43000	2.4						
1.4	2100	1013	43000	2.9						
1.4	2160	987	43000	2.8						
1.5	2020	936	43000	3.0						
1.7	1740	830	43000	3.4						
1.8	1710	794	43000	3.5						
1.8	1640	777	43000	3.6						
1.9	1570	750	43000	3.8						
0.68	4530	2067	28100	0.95						
0.84	3690	1693	32400	1.15	R	107R77	DRN	71M4	200	404
0.91	3320	1550	33800	1.30	RF	107R77	DRN	71M4	205	404
1.0	3020	1407	34900	1.40	RM	107R77	DRN	71M4	290	404
1.2	2590	1209	36000	1.65						
1.3	2260	1055	36500	1.90						
0.71	4330	1987	29300	1.00						
0.77	3920	1827	31400	1.10						
0.88	3390	1599	33600	1.25	R	107R77	DRN	71M4	205	404
1.0	3000	1400	34900	1.45	RF	107R77	DRN	71M4	210	404
1.1	2600	1226	36000	1.65	RM	107R77	DRN	71M4	300	404
1.5	2010	939	36800	2.1						
1.7	1740	822	37000	2.5						
1.2	2690	1207	23000	1.10	R	97R57	DRN	71M4	130	404
1.3	2400	1084	24600	1.25	RF	97R57	DRN	71M4	145	404
					RM	97R57	DRN	71M4	195	404
1.0	3090	1396	11900	0.95						
1.1	2700	1228	16600	1.10						
1.3	2410	1069	24500	1.25						
1.5	2100	938	26000	1.40						
1.7	1810	824	27100	1.65	R	97R57	DRN	71M4	130	404
1.9	1620	737	27500	1.85	RF	97R57	DRN	71M4	145	404
2.2	1380	632	27800	2.2	RM	97R57	DRN	71M4	200	404
3.3	950	431	28300	3.1						
3.7	830	379	28400	3.6						
4.2	745	336	28400	4.0						
1.8	1760	802	15300	0.90	R	87R57	DRN	71M4	87	404
1.9	1650	754	16200	0.95	RF	87R57	DRN	71M4	95	404
2.2	1400	649	17800	1.10	RM	87R57	DRN	71M4	125	404
1.8	1730	776	15500	0.90						
2.1	1520	685	17100	1.00						
2.4	1290	599	16200	1.20	R	87R57	DRN	71M4	88	404
2.7	1130	525	18500	1.35	RF	87R57	DRN	71M4	95	404
3.1	990	456	19800	1.55	RM	87R57	DRN	71M4	125	404
5.3	580	268	20000	2.7						
6.0	510	236	20000	3.0						
2.6	1220	538	18800	1.25	R	87R57	DRN	71M4	87	404
3.0	1070	472	19500	1.45	RF	87R57	DRN	71M4	94	404
3.5	900	400	20000	1.70	RM	87R57	DRN	71M4	125	404
3.9	810	361	20000	1.90						

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
3.8	830	373	9740	1.00						
4.3	735	327	10600	1.10						
4.9	650	289	11200	1.25	<b>R</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	49	404
5.5	580	260	11600	1.40	<b>RF</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	55	404
6.3	490	224	12100	1.65	<b>RM</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	80	404
7.2	430	197	12400	1.90						
8.4	375	169	12600	2.2						
9.5	330	149	12700	2.5						
4.8	645	294	6700	0.95	<b>R</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	44	404
5.4	580	261	7730	1.05	<b>RF</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	47	404
6.0	525	234	8350	1.15	<b>RM</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	62	404
7.1	445	200	9020	1.35						
3.2	1090	289.74	28100	2.7	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>80MK6</b>	110	392
3.7	960	255.71	28300	3.1	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>80MK6</b>	125	393
3.9	910	241.25	28300	3.3	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>80MK6</b>	180	393
4.3	810	216.28	28400	3.7						
3.8	930	246.54	20000	1.65	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>80MK6</b>	68	389
4.3	810	216.54	20000	1.90	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>80MK6</b>	75	390
4.5	775	205.71	20000	2.0	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>80MK6</b>	105	390
5.1	685	181.77	20000	2.3						
6.0	585	155.34	20000	2.6						
6.6	535	142.41	20000	2.9						
5.6	625	166.59	11400	1.30	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	42	386
6.4	550	145.67	11800	1.50	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	48	387
6.8	520	138.39	12000	1.55	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	73	387
7.2	485	195.24*	12100	1.70						
8.5	415	166.59	12400	1.95	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>71M4</b>	40	386
9.7	360	145.67	12600	2.2	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>71M4</b>	45	387
10	345	138.39	12700	2.4	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>71M4</b>	70	387
12	300	121.42	12800	2.7						
14	255	102.99	12900	3.2						
15	230	92.97	13000	3.5						
5.9	595	158.14	7590	1.00	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	35	383
6.8	520	137.67	8400	1.15	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	38	384
7.2	485	128.97	8690	1.25	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	54	384
8.2	430	113.94	9130	1.40						
7.1	495	199.81	8590	1.20						
7.7	455	184.07	8910	1.30						
8.9	390	158.14	9370	1.50						
10	340	137.67	9670	1.75						
11	320	128.97	9780	1.85	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	32	383
12	280	113.94	9950	2.1	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	36	384
13	260	105.83	10000	2.3	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	51	384
15	235	95.91	10100	2.5						
16	215	86.11	10200	2.8						
19	185	74.17	10300	3.2						
20	174	69.75	10300	3.4						
23	152	61.26	10400	3.9						
25	142	56.89	10400	4.2						
7.3	485	128.77	6410	0.90	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	28	380
7.8	455	120.63	7000	1.00	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	32	381
8.8	400	106.58	7300	1.10	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	44	381
9.4	370	98.99	7400	1.20						

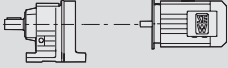



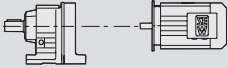

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>			<b>m</b> <b>kg</b>			
7.6	465	186.89	6790	0.95						
8.2	425	172.17	7190	1.05						
9.6	365	147.92	7420	1.20						
11	320	128.77	7570	1.40						
12	300	120.63	7630	1.50						
13	265	106.58	7720	1.70						
14	245	98.99	7760	1.80	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	26	380
16	220	89.71	7810	2.0	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	29	381
18	200	80.55	7850	2.2	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	41	381
20	172	69.23	7900	2.6						
22	161	64.85	7910	2.8						
25	143	57.29	7700	3.1						
27	132	53.22	7540	3.4						
29	120	48.23	7320	3.7						
10	345	139.99	3770	0.85						
12	300	121.87	4880	1.00						
12	285	114.17	5360	1.05						
14	250	100.86	5650	1.20						
15	230	93.68	5730	1.30						
17	210	84.90	5810	1.40						
19	190	76.23	5880	1.60	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	21	377
21	171	68.54	5940	1.75	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	21	378
22	160	64.21	5970	1.85						
25	141	56.73	6020	2.1						
27	131	52.69	5940	2.3						
30	119	47.75	5780	2.5						
33	107	42.87	5610	2.8						
38	92	36.93	5370	3.2						
41	86	34.73	5280	3.5						
42	84	33.79	5230	2.8	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	20	377
45	77	31.12	5110	2.8	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	20	378
53	66	26.74	4880	4.5						
61	58	23.28	4680	5.2						
65	54	21.81	4590	5.5						
16	225	90.77	3480	0.90						
17	210	84.61	3920	0.95						
19	184	73.96	4670	1.10						
20	173	69.33	5000	1.15						
23	152	61.18	5450	1.30						
25	139	55.76	5560	1.45	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>71M4</b>	17	374
29	120	48.08	5550	1.65	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>71M4</b>	18	375
32	111	44.81	5440	1.80						
36	97	39.17	5250	2.0						
39	91	36.72	5160	2.2						
44	80	32.40	4980	2.5						
49	71	28.73	4810	2.8						
58	60	24.42	4590	3.3						
50	70	28.32	4790	2.8	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>71M4</b>	17	374
54	65	26.03	4680	2.9	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>71M4</b>	18	375
64	55	22.27	4470	3.6						
73	48	19.31	4280	4.2						
78	45	18.05	4200	4.4						
91	38	15.60	4020	5.1						
107	33	13.25	3820	5.7						
120	29	11.83	3690	6.2						
23	153	61.30	2930	0.85						
25	139	55.87	3280	0.95						
29	120	48.17	3660	1.10						
32	112	44.90	3600	1.15	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	11	371
36	98	39.25	3490	1.35	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	11	372
38	91	36.79	3430	1.40						
44	81	32.47	3330	1.60						
49	71	28.78	3230	1.80						
58	61	24.47	3090	2.1						

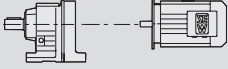



<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
50	70	28.37	3220	1.85						
54	65	26.09	3140	2.0						
63	55	22.32	3020	2.3						
73	48	19.35	2900	2.7	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	11	371
78	45	18.08	2840	2.9	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	11	372
91	39	15.63	2730	3.3						
107	33	13.28*	2600	3.9						
37	96	38.61	970	0.90						
39	90	36.20	1420	0.95	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>71M4</b>	11	368
44	79	31.94	1900	1.05	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>71M4</b>	11	369
50	70	28.32	1870	1.20						
59	60	24.07	1820	1.40						
56	63	25.23	1840	1.35						
61	57	23.15	1810	1.45						
72	49	19.71	1750	1.75						
83	42	16.99	1700	2.0						
89	39	15.84	1680	2.1						
102	34	13.84	1620	2.5						
109	32	12.98	1600	2.6						
124	28	11.45	1550	2.8	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>71M4</b>	10	368
139	25	10.15	1510	3.0	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>71M4</b>	10	369
164	21	8.63	1450	3.3						
187	18	7.55	1360	3.0						
201	17	7.04	1340	3.1						
230	15	6.15	1290	3.5						
245	14	5.76	1270	3.7						
278	12	5.09	1230	4.0						
314	11	4.51	1190	4.3						
369	9.0	3.83	1140	4.7						
77	45	18.31	990	1.10						
85	41	16.73	980	1.20						
100	35	14.12	960	1.40						
117	30	12.06	940	1.65						
127	27	11.18	920	1.80						
146	24	9.67	900	2.1						
157	22	9.01	890	2.2						
180	19	7.85	860	2.5	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>71M4</b>	9.4	365
189	18	7.48	860	2.3	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>71M4</b>	9.4	366
207	17	6.83	840	2.5						
245	14	5.76	800	2.8						
287	12	4.92	775	3.0						
310	11	4.57	760	3.2						
358	9.0	3.95	730	3.5						
385	9.0	3.68	715	3.6						
441	8.0	3.21	690	3.9						
291	12	9.67	770	4.1						
312	11	9.01	755	4.4						
358	9.0	7.85	730	5.0						
376	9.0	7.48	720	4.6						
411	8.0	6.83	705	5.0						
487	7.0	5.76	670	5.5	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>71MS2</b>	8.2	365
571	6.0	4.92	640	6.0	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>71MS2</b>	8.2	366
615	5.0	4.57	625	6.3						
712	4.0	3.95	600	6.8						
764	4.0	3.68	590	7.1						
876	4.0	3.21	565	7.7						
181	19	5.18	4520	3.8	<b>RX</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	21	355
207	17	4.53	4330	4.8	<b>RXF</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	25	356
217	16	4.30*	4260	4.9						
248	14	3.77	4080	6.1						

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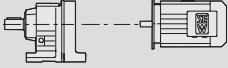

<b>P<sub>m</sub> = 0.37 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
233	15	6.07	4160	2.8						
273	12	5.18	3960	5.8						
313	11	4.53	3790	7.3						
329	10	4.30*	3730	7.5						
375	9.0	3.77	3580	9.2	RX	67	DRN	71M4	19	355
442	7.0	3.20*	3390	13	RXF	67	DRN	71M4	23	356
490	7.0	2.89	3280	15						
557	6.0	2.54	3150	19						
590	5.0	2.40*	3090	21						
692	5.0	2.04	2930	26						
215	16	4.35	3460	4.1	RX	57	DRN	80MK6	19	353
247	14	3.79	3310	4.8	RXF	57	DRN	80MK6	21	354
263	13	3.55*	3240	5.1						
257	13	5.50*	3270	2.8						
279	12	5.07	3190	2.9						
325	10	4.35	3040	6.3						
373	9.0	3.79	2900	7.3						
399	8.0	3.55*	2840	7.8						
451	7.0	3.14	2740	8.3	RX	57	DRN	71M4	16	353
486	7.0	2.91	2670	9.2	RXF	57	DRN	71M4	18	354
536	6.0	2.64*	2590	10						
597	5.0	2.37	2500	12						
693	5.0	2.04	2380	14						
737	4.0	1.92*	2330	14						
856	4.0	1.65	2220	17						

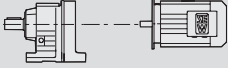

<b>P<sub>m</sub> = 0.55 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.15	29600	9631	120000	0.65						
0.24	18600	6077	120000	1.05	R	167R97	DRN	80MK4	760	405
0.27	16500	5407	120000	1.20	RF	167R97	DRN	80MK4	760	405
0.31	14000	4650	120000	1.40	RM	167R97	DRN	80MK4	960	405
0.35	12200	4129	120000	1.65						
0.54	8270	2657	120000	2.4						
0.62	7150	2333	120000	2.8						
0.69	6270	2085	120000	3.2						
1.0	4480	1438	120000	4.5	R	167R97	DRN	80MK4	750	405
1.1	3980	1279	120000	5.0	RF	167R97	DRN	80MK4	760	405
1.3	3440	1123	120000	5.8	RM	167R97	DRN	80MK4	950	405
1.4	3060	999	120000	6.5						
1.7	2640	861	120000	7.6						
1.9	2350	760	120000	8.5						
0.29	15900	4926	37500	0.80						
0.33	13800	4325	60800	0.95	R	147R77	DRN	80MK4	425	404
0.38	12100	3754	64300	1.05	RF	147R77	DRN	80MK4	435	404
0.43	10600	3302	66900	1.25	RM	147R77	DRN	80MK4	600	404
0.50	9280	2898	68800	1.40						
0.56	8400	2555	69800	1.55						
0.65	7270	2211	71100	1.80						
0.74	6410	1951	71900	2.0	R	147R77	DRN	80MK4	425	404
0.84	5480	1705	72600	2.4	RF	147R77	DRN	80MK4	435	404
0.93	4910	1536	73000	2.6	RM	147R77	DRN	80MK4	600	404
1.1	4250	1329	73400	3.1						
1.2	3690	1166	73700	3.5						
0.58	8170	2484	53000	1.00	R	137R77	DRN	80MK4	285	404
					RF	137R77	DRN	80MK4	305	404
					RM	137R77	DRN	80MK4	420	404

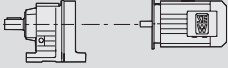

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.54	8740	2658	50800	0.90						
0.59	7930	2412	53500	1.00						
0.69	6820	2073	55700	1.15						
0.78	5960	1839	57100	1.35						
0.90	5110	1598	58300	1.55	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>80MK4</b>	295	404
1.0	4570	1397	58900	1.75	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>80MK4</b>	315	404
1.2	3980	1226	59500	2.0	<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>80MK4</b>	425	404
1.3	3560	1090	59900	2.2						
1.5	3110	951	60300	2.6						
1.7	2650	831	60600	3.0						
0.74	6210	1934	43000	0.95	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	265	404
0.78	5830	1835	43000	1.05	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	275	404
0.92	4940	1555	43000	1.20	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	370	404
0.99	4520	1444	43000	1.35						
1.2	3830	1224	43000	1.55						
0.66	7100	2161	43000	0.85						
0.74	6380	1951	43000	0.95						
0.84	5580	1716	43000	1.05						
0.89	5250	1620	43000	1.15	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	250	404
1.0	4430	1380	43000	1.35	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	270	404
1.2	3980	1210	43000	1.50	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	365	404
1.5	3120	961	43000	1.90						
1.9	2480	773	43000	2.4						
2.4	1920	608	43000	3.1						
0.71	6550	2016	43000	0.90						
0.75	6310	1920	43000	0.95						
0.79	5920	1823	43000	1.00						
0.86	5370	1673	43000	1.10						
0.93	5020	1545	43000	1.20						
0.95	4860	1512	43000	1.25						
1.1	4180	1322	43000	1.45						
1.1	4120	1282	43000	1.45						
1.2	3780	1195	43000	1.60						
1.2	3830	1164	43000	1.55	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	265	404
1.4	3210	1013	43000	1.85	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	275	404
1.4	3240	987	43000	1.85	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	370	404
1.5	3040	936	43000	1.95						
1.7	2650	830	43000	2.3						
1.8	2580	794	43000	2.3						
1.9	2490	777	43000	2.4						
1.9	2400	750	43000	2.5						
2.2	2110	659	43000	2.8						
2.3	2030	636	43000	3.0						
2.3	1940	614	43000	3.1						
2.8	1640	521	43000	3.6						
2.9	1630	490	43000	3.7	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	245	404
					<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	265	404
					<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	365	404
1.0	4550	1407	28000	0.95						
1.2	3910	1209	31400	1.10						
1.4	3420	1055	33500	1.25	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	200	404
1.6	2980	919	35000	1.45	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	205	404
1.8	2660	815	35900	1.60	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	295	404
2.0	2330	717	36400	1.85						
2.3	2030	626	36700	2.1						
1.0	4530	1400	28100	0.95						
1.2	3940	1226	31300	1.10	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	205	404
1.3	3530	1104	33000	1.20	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	210	404
1.5	3040	939	34800	1.40	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	300	404
1.8	2640	822	36000	1.65						

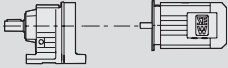

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<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.7	2710	824	16400	1.10						
1.9	2420	737	19800	1.25						
2.3	2080	632	26100	1.45						
2.6	1800	560	27100	1.65						
3.0	1570	484	27500	1.90	<b>R</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	135	404
3.3	1420	431	27700	2.1	<b>RF</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	150	404
3.8	1240	379	28000	2.4	<b>RM</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	200	404
4.3	1110	336	28100	2.7						
4.8	970	296	28200	3.1						
5.8	810	249	28400	3.7						
2.7	1710	525	10200	0.90						
3.1	1490	456	17300	1.05	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	90	404
3.6	1290	398	18500	1.20	<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	98	404
4.1	1140	352	19200	1.35	<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	125	404
4.7	980	305	19900	1.55						
3.0	1590	472	16600	0.95	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	89	404
3.6	1340	400	18200	1.15	<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	96	404
4.0	1210	361	18900	1.30	<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	125	404
5.2	930	276	8710	0.90						
6.1	790	236	10200	1.05	<b>R</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	50	404
6.5	740	221	10600	1.10	<b>RF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	56	404
7.7	620	186	11400	1.30	<b>RM</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	81	404
3.3	1570	289.74	27500	1.90	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>90SR6</b>	120	392
3.8	1390	255.71	27800	2.2	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>90SR6</b>	135	393
4.0	1310	241.25	27900	2.3	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>90SR6</b>	185	393
4.5	1170	216.28	28000	2.5						
5.0	1060	289.74	28200	2.8	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>80MK4</b>	110	392
5.6	930	255.71	28300	3.2	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>80MK4</b>	125	393
6.0	880	241.25	28300	3.4	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>80MK4</b>	180	393
6.6	790	216.28	28400	3.8						
3.9	1340	246.54	15600	1.15						
4.5	1170	216.54	17900	1.30	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	77	389
4.7	1110	205.71	18800	1.40	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	84	390
5.3	980	181.77	19900	1.55	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	115	390
6.2	840	155.34	20000	1.85						
5.8	900	246.54	20000	1.70						
6.6	790	216.54	20000	1.95						
7.0	750	205.71	20000	2.1						
7.9	665	181.77	20000	2.3	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>80MK4</b>	68	389
9.2	565	155.34	20000	2.7	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>80MK4</b>	75	390
10	520	142.41	20000	3.0	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>80MK4</b>	105	390
11	455	124.97	20000	3.4						
12	430	118.43*	20000	3.6						
14	375	103.65	20000	4.1						
8.6	605	166.59	11500	1.35						
9.8	530	145.67	11900	1.55						
10	505	138.39	12000	1.60						
12	440	121.42	12300	1.85	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	42	386
14	375	102.99	12600	2.2	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	48	387
15	340	92.97	12700	2.4	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	73	387
18	295	81.80	12800	2.7						
19	280	77.24	12800	2.9						
22	240	65.77	12900	3.4						
9.1	575	158.14	7800	1.05						
10	500	137.67	8550	1.20						
11	470	128.97	8820	1.25						
13	415	113.94	9220	1.45						
14	385	105.83	9420	1.55	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	35	383
15	350	95.91	9630	1.70	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	38	384
17	315	86.11	9810	1.90	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	54	384
19	270	74.17	10000	2.2						
21	255	69.75	10100	2.4						
23	220	61.26	10200	2.7						
25	205	56.89	10200	2.9						

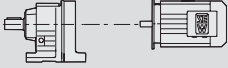

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
12	440	120.63	7140	1.00						
13	390	106.58	7340	1.15						
14	360	98.99	7440	1.25						
16	325	89.71	7550	1.35						
18	290	80.55	7640	1.55						
21	250	69.23	7740	1.80	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	28	380
22	235	64.85	7670	1.90	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	32	381
25	205	57.29	7420	2.1	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	44	381
27	194	53.22	7280	2.3						
30	176	48.23	7090	2.5						
33	158	43.30	6880	2.8						
38	136	37.30*	6600	3.3						
41	128	35.07	6480	3.5						
55	96	26.31	5960	4.7	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	27	380
57	91	24.99*	5870	4.9	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	31	381
65	80	21.93	5650	5.6	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	43	381
77	68	18.60*	5380	6.6						
15	340	93.68	3940	0.85						
17	310	84.90	4730	0.95						
19	275	76.23	5510	1.10						
21	250	68.54	5660	1.20						
22	235	64.21	5720	1.30						
25	205	56.73	5800	1.45	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	23	377
27	192	52.69	5690	1.55	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	23	378
30	174	47.75	5550	1.70						
33	156	42.87	5400	1.90						
39	135	36.93	5190	2.2						
41	127	34.73	5100	2.4						
48	109	29.88	4890	2.7						
54	97	26.74	4740	3.1	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	22	377
62	85	23.28	4560	3.5	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	23	378
66	79	21.81	4470	3.8						
23	220	61.18	3560	0.90						
26	200	55.76	4120	1.00						
30	175	48.08	4920	1.15						
32	164	44.81	5170	1.20						
37	143	39.17	5010	1.40	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	19	374
39	134	36.72	4930	1.50	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	21	375
44	118	32.40	4780	1.70						
50	105	28.73	4630	1.90						
59	89	24.42	4430	2.2						
64	81	22.27	4320	2.5						
74	70	19.31	4160	2.8						
80	66	18.05	4080	3.0	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	19	374
92	57	15.60	3910	3.5	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	20	375
108	48	13.25	3730	3.9						
121	43	11.83	3610	4.2						
37	143	39.25	3180	0.90						
39	134	36.79	3210	0.95						
44	118	32.47	3130	1.10	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>80MK4</b>	13	371
50	105	28.78	3050	1.25	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>80MK4</b>	13	372
59	89	24.47	2940	1.45						

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
64	81	22.32	2870	1.60						
74	70	19.35	2770	1.85						
79	66	18.08	2730	1.95						
92	57	15.63	2630	2.3						
108	48	13.28*	2520	2.7						
121	43	11.86	2440	3.0						
142	37	10.13	2330	3.3						
152	34	9.41	2260	3.5	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>80MK4</b>	13	371
176	29	8.16	2170	3.9	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>80MK4</b>	13	372
188	27	7.63*	2130	4.0						
218	24	6.59	2040	4.4						
256	20	5.60*	1950	4.8						
287	18	5.00*	1880	5.2						
336	15	4.27	1800	5.6						
359	14	4.00*	1760	5.8						
426	12	3.37	1670	6.4						
53	99	53.76	680	0.85	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>71M2</b>	11	368
60	88	47.44	1560	0.95	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>71M2</b>	11	369
64	82	44.18	1600	1.05						
73	71	38.61	1580	1.20						
73	72	19.71	1580	1.20						
84	62	16.99	1550	1.35						
91	57	15.84	1530	1.45						
104	50	13.84	1500	1.70						
111	47	12.98	1480	1.80						
125	41	11.45	1450	1.95						
141	37	10.15	1410	2.1	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>80MK4</b>	13	368
166	31	8.63	1370	2.3	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>80MK4</b>	12	369
190	27	7.55	1280	2.0						
204	25	7.04	1260	2.1						
233	22	6.15	1220	2.4						
249	21	5.76	1200	2.5						
282	18	5.09	1170	2.7						
318	16	4.51	1140	2.9						
374	14	3.83	1090	3.2						
327	16	8.63	1160	4.5	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>71M2</b>	10	368
374	14	7.55	1090	4.0	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>71M2</b>	10	369
402	13	7.04	1070	4.2						
459	11	6.15	1030	4.7						
154	34	18.31	800	1.45						
169	31	16.73	795	1.60						
200	26	14.12	775	1.90						
234	22	12.06	755	2.2						
253	20	11.18	745	2.4						
292	17	9.67	725	2.8						
313	16	9.01	710	3.0						
360	14	7.85	690	3.4	<b>R</b>	<b>07</b>	<b>DRN</b>	<b>71M2</b>	9.4	365
378	13	7.48	685	3.1	<b>RF</b>	<b>07</b>	<b>DRN</b>	<b>71M2</b>	9.4	366
414	12	6.83	670	3.4						
490	10	5.76	645	3.7						
574	9.0	4.92	620	4.0						
619	8.0	4.57	605	4.2						
715	7.0	3.95	585	4.6						
768	6.0	3.68	570	4.8						
881	5.0	3.21	550	5.2						
187	28	5.18	4410	2.7	<b>RX</b>	<b>67</b>	<b>DRN</b>	<b>90SR6</b>	29	355
213	24	4.53	4230	3.3	<b>RXF</b>	<b>67</b>	<b>DRN</b>	<b>90SR6</b>	33	356
225	23	4.30*	4160	3.4						
256	20	3.77	4000	4.2						

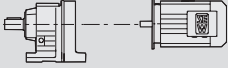

<b>P<sub>m</sub> = 0.55 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
277	18	5.18	3900	4.0						
317	16	4.53	3740	5.0						
334	15	4.30*	3680	5.1						
380	13	3.77	3530	6.3						
448	11	3.20*	3350	8.5						
497	10	2.89	3240	10	RX	67	DRN	80MK4	21	355
565	9.0	2.54	3110	13	RXF	67	DRN	80MK4	25	356
598	8.0	2.40*	3050	14						
702	7.0	2.04	2900	18						
773	6.0	1.86	2810	19						
892	5.0	1.61	2680	19						
222	23	4.35	3370	2.9						
255	20	3.79	3230	3.4	RX	57	DRN	90SR6	27	353
272	19	3.55*	3160	3.6	RXF	57	DRN	90SR6	29	354
308	17	3.14	3040	3.8						
332	15	2.91	2980	4.2						
330	15	4.35	2990	4.3						
379	13	3.79	2860	5.0						
404	12	3.55*	2800	5.3						
458	11	3.14	2700	5.7						
493	10	2.91	2630	6.3						
544	9.0	2.64*	2550	7.1	RX	57	DRN	80MK4	19	353
605	8.0	2.37	2470	8.0	RXF	57	DRN	80MK4	21	354
703	7.0	2.04	2350	9.2						
747	7.0	1.92*	2300	9.8						
869	6.0	1.65	2200	11						
972	5.0	1.48	2120	13						
1100	4.0	1.30	2040	13						

<b>P<sub>m</sub> = 0.75 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.19	31500	7749	120000	0.65						
0.21	28000	6894	120000	0.70						
0.24	26000	6077	120000	0.75	R	167R97	DRN	80M4	760	405
0.27	23100	5407	120000	0.85	RF	167R97	DRN	80M4	770	405
0.31	19700	4650	120000	1.00	RM	167R97	DRN	80M4	960	405
0.35	17300	4129	120000	1.15						
0.39	15200	3692	120000	1.30						
0.54	11500	2657	120000	1.75						
0.62	10000	2333	120000	2.0						
0.69	8850	2085	120000	2.3						
0.77	7850	1877	120000	2.5						
0.86	6980	1670	120000	2.9	R	167R97	DRN	80M4	760	405
1.0	6250	1438	120000	3.2	RF	167R97	DRN	80M4	760	405
1.1	5560	1279	120000	3.6	RM	167R97	DRN	80M4	960	405
1.3	4830	1123	120000	4.1						
1.4	4300	999	120000	4.7						
1.7	3700	861	120000	5.4						
1.9	3290	760	120000	6.1						
0.44	14600	3302	54700	0.90	R	147R77	DRN	80M4	430	404
0.50	12800	2898	63000	1.00	RF	147R77	DRN	80M4	435	404
					RM	147R77	DRN	80M4	600	404
0.56	11500	2555	65300	1.10						
0.65	10000	2211	67800	1.30						
0.74	8830	1951	69300	1.45	R	147R77	DRN	80M4	430	404
0.84	7590	1705	70700	1.70	RF	147R77	DRN	80M4	435	404
0.94	6810	1536	71500	1.90	RM	147R77	DRN	80M4	600	404
1.1	5890	1329	72300	2.2						
1.2	5130	1166	72900	2.5						
0.77	8340	1863	52500	0.95	R	137R77	DRN	80M4	285	404
0.91	7060	1586	55300	1.15	RF	137R77	DRN	80M4	310	404
1.0	6290	1391	56600	1.25	RM	137R77	DRN	80M4	420	404
1.1	5660	1256	57500	1.40						

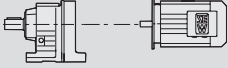

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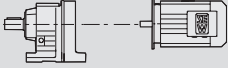

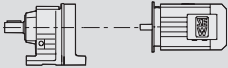

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>0.69</b>	9380	2073	43000	0.85						
<b>0.78</b>	8230	1839	52900	0.95						
<b>0.90</b>	7080	1598	55200	1.15						
<b>1.0</b>	6300	1397	56600	1.25	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>80M4</b>	295	404
<b>1.2</b>	5500	1226	57800	1.45	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>80M4</b>	320	404
<b>1.3</b>	4910	1090	58500	1.65	<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>80M4</b>	430	404
<b>1.5</b>	4290	951	59200	1.85						
<b>1.7</b>	3680	831	59800	2.2						
<b>2.0</b>	3210	730	60200	2.5						
<b>0.93</b>	6840	1555	43000	0.90	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	265	404
<b>1.0</b>	6280	1444	43000	0.95	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	280	404
<b>1.2</b>	5320	1224	43000	1.15	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	375	404
<b>0.89</b>	7250	1620	43000	0.85						
<b>1.0</b>	6140	1380	43000	1.00	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	250	404
<b>1.2</b>	5470	1210	43000	1.10	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	270	404
<b>1.5</b>	4310	961	43000	1.40	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	370	404
<b>1.9</b>	3440	773	43000	1.75						
<b>2.4</b>	2680	608	43000	2.2						
<b>0.86</b>	7440	1673	43000	0.80						
<b>0.93</b>	6930	1545	43000	0.85						
<b>0.95</b>	6730	1512	43000	0.90						
<b>1.1</b>	5820	1322	43000	1.05						
<b>1.1</b>	5700	1282	43000	1.05						
<b>1.2</b>	5260	1195	43000	1.15						
<b>1.2</b>	5270	1164	43000	1.15						
<b>1.4</b>	4490	1034	43000	1.35						
<b>1.4</b>	4460	1013	43000	1.35						
<b>1.5</b>	4460	987	43000	1.35						
<b>1.5</b>	4200	936	43000	1.45						
<b>1.5</b>	4060	935	43000	1.50						
<b>1.7</b>	3680	830	43000	1.65	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	265	404
<b>1.8</b>	3560	794	43000	1.70	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	275	404
<b>1.8</b>	3440	792	43000	1.75	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	375	404
<b>1.9</b>	3450	777	43000	1.75						
<b>1.9</b>	3320	750	43000	1.80						
<b>2.2</b>	2930	659	43000	2.0						
<b>2.2</b>	2810	642	43000	2.1						
<b>2.3</b>	2820	636	43000	2.1						
<b>2.4</b>	2700	614	43000	2.2						
<b>2.5</b>	2540	581	43000	2.4						
<b>2.8</b>	2290	521	43000	2.6						
<b>2.9</b>	2150	492	43000	2.8						
<b>3.0</b>	2080	480	43000	2.9						
<b>3.5</b>	1760	407	43000	3.4						
<b>3.7</b>	1700	386	43000	3.5						
<b>2.9</b>	2240	490	43000	2.7	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	250	404
<b>3.6</b>	1790	394	43000	3.4	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	270	404
					<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	365	404
<b>1.4</b>	4720	1055	25800	0.90	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	205	404
<b>1.6</b>	4120	919	30400	1.05	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	210	404
<b>1.8</b>	3670	815	32500	1.15	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	300	404
<b>1.5</b>	4200	939	30000	1.00						
<b>1.8</b>	3650	822	32500	1.20	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	210	404
<b>3.9</b>	1630	369	37100	2.6	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	215	404
<b>4.5</b>	1420	323	37300	3.0	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	305	404
<b>2.3</b>	2860	632	21900	1.05						
<b>2.6</b>	2500	560	24100	1.20						
<b>3.0</b>	2170	484	25700	1.40						
<b>3.3</b>	1960	431	26500	1.55	<b>R</b>	<b>97R57</b>	<b>DRN</b>	<b>80M4</b>	135	404
<b>3.8</b>	1710	379	27300	1.75	<b>RF</b>	<b>97R57</b>	<b>DRN</b>	<b>80M4</b>	155	404
<b>4.3</b>	1520	336	27600	1.95	<b>RM</b>	<b>97R57</b>	<b>DRN</b>	<b>80M4</b>	205	404
<b>4.9</b>	1340	296	27900	2.2						
<b>5.8</b>	1110	249	28100	2.7						



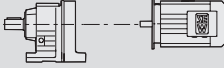

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
3.6	1780	398	15100	0.85						
4.1	1580	352	16700	1.00	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	94	404
4.7	1360	305	18100	1.15	<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	100	404
5.4	1200	268	18900	1.30	<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	130	404
6.1	1060	236	19600	1.45						
4.0	1660	361	16100	0.95	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	92	404
4.8	1370	300	18100	1.15	<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	100	404
5.6	1160	256	19100	1.35	<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	130	404
3.7	1910	255.71	25900	1.55	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>90S6</b>	120	392
4.0	1800	241.25	27100	1.65	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>90S6</b>	135	393
4.4	1610	216.28	27500	1.85	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>90S6</b>	185	393
5.0	1440	289.74	27700	2.1						
5.6	1270	255.71	27900	2.4	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>80M4</b>	115	392
6.0	1190	241.25	28000	2.5	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>80M4</b>	130	393
6.7	1070	216.28	28200	2.8	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>80M4</b>	180	393
7.7	920	186.30	28300	3.2						
8.5	840	170.02	28400	3.5						
4.4	1620	216.54	11500	0.95	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	77	389
4.7	1530	205.71	12700	1.00	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	84	390
5.3	1360	181.77	15300	1.15	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	115	390
6.2	1160	155.34	18100	1.35	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	77	389
6.7	1060	142.41	19500	1.45	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	84	390
					<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	115	390
5.8	1220	246.54	18800	1.25						
6.7	1070	216.54	19500	1.45						
7.0	1020	205.71	19700	1.50						
7.9	900	181.77	20000	1.70	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	72	389
9.3	770	155.34	20000	2.0	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	79	390
10	705	142.41	20000	2.2	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	110	390
12	620	124.97	20000	2.5						
12	585	118.43*	20000	2.6						
14	515	103.65	20000	3.0						
15	460	93.38	20000	3.3						
8.6	820	166.59	9840	1.00	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	46	386
9.9	720	145.67	10700	1.15	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	51	387
10	685	138.39	11000	1.20	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	76	387
12	600	121.42	11500	1.35						
14	510	102.99	12000	1.60						
15	460	92.97	12200	1.75						
18	405	81.80	12500	2.0	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	46	386
19	380	77.24	12500	2.1	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	51	387
22	325	65.77	12700	2.5	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	76	387
25	285	57.68	12800	2.9						
28	255	52.07	12900	3.2						
31	225	45.81	13000	3.6						
33	215	43.26	13000	3.8						
11	640	128.97	7030	0.95						
13	565	113.94	7940	1.05						
14	525	105.83	8340	1.15						
15	475	95.91	8780	1.25						
17	425	86.11	9150	1.40	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	38	383
19	365	74.17	9530	1.65	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	41	384
21	345	69.75	9650	1.75	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	57	384
24	300	61.26	9860	1.95						
25	280	56.89	9960	2.1						
28	255	51.56	10100	2.3						
31	230	46.29	10200	2.6						
14	530	106.58	5570	0.85						
15	490	98.99	6910	0.90						
16	445	89.71	7120	1.00	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	32	380
18	400	80.55	7300	1.10	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	35	381
21	340	69.23	7460	1.30	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	47	381
22	320	64.85	7360	1.40						
25	280	57.29	7150	1.60						

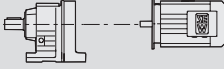

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<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
27	260	53.22	7020	1.70						
30	235	48.23	6850	1.90						
33	215	43.30	6670	2.1	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	32	380
39	185	37.30*	6410	2.4	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	35	381
41	174	35.07	6310	2.6	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	47	381
48	150	30.18	6060	3.0						
53	134	26.97	5870	3.4						
55	130	26.31	5830	3.4	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	31	380
58	124	24.99*	5750	3.6	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	34	381
66	109	21.93	5540	4.1	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	46	381
77	92	18.60*	5280	4.9						
21	340	68.54	4530	0.90	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	26	377
22	315	64.21	5310	0.95	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	27	378
25	280	56.73	5510	1.05						
27	260	52.69	5430	1.15						
30	235	47.75	5320	1.25						
34	210	42.87	5180	1.40						
39	183	36.93	5000	1.65	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	26	377
41	172	34.73	4930	1.75	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	27	378
48	148	29.88	4740	2.0						
54	132	26.70	4610	2.3						
61	117	23.59	4460	2.6						
54	132	26.74	4610	2.3						
62	115	23.28	4440	2.6						
66	108	21.81	4360	2.8	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	26	377
75	95	19.27	4220	3.1	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	26	378
80	89	17.89	4130	3.3						
89	80	16.22	4020	3.4						
30	235	48.08	3630	0.85	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	23	374
32	220	44.81	4490	0.90	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	24	375
37	194	39.17	4760	1.05						
39	182	36.72	4690	1.10						
44	161	32.40	4570	1.25	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	23	374
50	142	28.73	4440	1.40	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	24	375
59	121	24.42	4280	1.65						
65	110	22.27	4180	1.80						
75	96	19.31	4030	2.1						
80	89	18.05	3960	2.2						
92	77	15.60	3810	2.6	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	22	374
109	65	13.25	3640	2.9	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	24	375
122	58	11.83	3530	3.1						
142	50	10.11	3380	3.4						
152	47	9.47	3310	3.5						
50	143	28.78	2860	0.90	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>80M4</b>	17	371
59	121	24.47	2770	1.05	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>80M4</b>	17	372
65	111	22.32	2720	1.15						
74	96	19.35	2640	1.35						
80	89	18.08	2610	1.45						
92	77	15.63	2520	1.65						
108	66	13.28*	2430	1.95						
121	58	11.86	2360	2.2						
142	50	10.13	2260	2.4	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>80M4</b>	16	371
153	46	9.41	2180	2.6	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>80M4</b>	16	372
177	40	8.16	2110	2.9						
189	37	7.63*	2070	3.0						
218	32	6.59	1990	3.2						
257	27	5.60*	1900	3.5						
288	24	5.00*	1840	3.8						

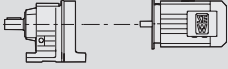

<b>P<sub>m</sub> = 0.75 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
73	98	19.71	840	0.85						
85	84	16.99	1380	1.00						
91	78	15.84	1380	1.10						
104	68	13.84	1370	1.25						
111	64	12.98	1360	1.30						
126	56	11.45	1340	1.40						
142	50	10.15	1320	1.55						
167	42	8.63	1280	1.70	R	17	DRN	80M4	16	368
191	37	7.55	1190	1.50	RF	17	DRN	80M4	15	369
205	34	7.04	1180	1.55						
234	30	6.15	1150	1.75						
250	28	5.76	1140	1.85						
283	25	5.09	1110	2.0						
319	22	4.51	1080	2.1						
376	19	3.83	1040	2.4						
249	28	11.45	1180	2.8						
281	25	10.15	1150	3.0						
331	21	8.63	1110	3.3						
378	18	7.55	1040	3.0						
406	17	7.04	1030	3.1	R	17	DRN	80MS2	16	368
464	15	6.15	990	3.5	RF	17	DRN	80MS2	15	369
495	14	5.76	980	3.7						
561	12	5.09	950	4.0						
633	11	4.51	920	4.2						
745	9.0	3.83	880	4.7						
211	33	4.53	4180	2.4	RX	67	DRN	90S6	29	355
223	32	4.30*	4120	2.5	RXF	67	DRN	90S6	33	356
254	28	3.77	3960	3.1						
299	23	3.20*	3760	4.2						
278	25	5.18	3850	2.9						
318	22	4.53	3700	3.6						
335	21	4.30*	3640	3.7						
382	18	3.77	3490	4.6						
450	15	3.20*	3320	6.3	RX	67	DRN	80M4	25	355
498	14	2.89	3210	7.4	RXF	67	DRN	80M4	29	356
567	12	2.54	3080	9.3						
600	11	2.40*	3030	10						
705	10	2.04	2880	13						
775	9.0	1.86	2790	14						
895	8.0	1.61	2660	14						
253	28	3.79	3180	2.4	RX	57	DRN	90S6	27	353
270	26	3.55*	3120	2.6	RXF	57	DRN	90S6	29	354
305	23	3.14	3010	2.8						
329	21	2.91	2940	3.1						
362	19	2.64*	2860	3.5						
331	21	4.35	2940	3.1						
380	18	3.79	2820	3.7						
406	17	3.55*	2760	3.9						
459	15	3.14	2660	4.2						
494	14	2.91	2600	4.6						
545	13	2.64*	2520	5.3	RX	57	DRN	80M4	22	353
608	11	2.37	2440	5.8	RXF	57	DRN	80M4	24	354
705	10	2.04	2330	6.8						
750	9.0	1.92*	2280	7.2						
872	8.0	1.65	2180	8.4						
975	7.0	1.48	2100	9.3						
1105	6.0	1.30	2020	9.7						
<b>P<sub>m</sub> = 1.1 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.31	29400	4650	120000	0.70	R	167R97	DRN	90S4	760	405
0.35	25900	4129	120000	0.75	RF	167R97	DRN	90S4	770	405
0.39	22900	3692	120000	0.85	RM	167R97	DRN	90S4	970	405

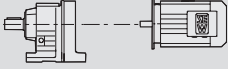

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<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.55	17100	2657	120000	1.15						
0.62	14900	2333	120000	1.35						
0.70	13200	2085	120000	1.50						
0.78	11800	1877	120000	1.70						
0.87	10500	1670	120000	1.90	R	167R97	DRN	90S4	760	405
1.0	9290	1438	120000	2.1	RF	167R97	DRN	90S4	770	405
1.1	8270	1279	120000	2.4	RM	167R97	DRN	90S4	960	405
1.3	7200	1123	120000	2.8						
1.5	6410	999	120000	3.1						
1.7	5520	861	120000	3.6						
1.9	4900	760	120000	4.1						
0.66	14600	2211	54200	0.90						
0.75	12900	1951	62700	1.00						
0.85	11100	1705	65900	1.15						
0.95	10000	1536	67700	1.30	R	147R77	DRN	90S4	435	404
1.1	8700	1329	69500	1.50	RF	147R77	DRN	90S4	440	404
1.2	7600	1166	70700	1.70	RM	147R77	DRN	90S4	610	404
1.4	6670	1029	71600	1.95						
1.6	5790	889	72400	2.2						
1.9	5080	784	72900	2.5						
2.1	4490	695	73300	2.9						
1.1	9230	1391	45500	0.85	R	137R77	DRN	90S4	290	404
1.2	8320	1256	52600	0.95	RF	137R77	DRN	90S4	315	404
1.3	7290	1105	54800	1.10	RM	137R77	DRN	90S4	425	404
1.4	6870	1043	55600	1.15						
1.6	5830	888	57300	1.35						
1.0	9250	1397	45200	0.85						
1.2	8090	1226	53200	1.00						
1.3	7210	1090	55000	1.10						
1.5	6300	951	56600	1.25	R	137R77	DRN	90S4	300	404
1.8	5440	831	57800	1.45	RF	137R77	DRN	90S4	325	404
2.0	4750	730	58700	1.70	RM	137R77	DRN	90S4	435	404
2.3	4060	629	59400	1.95						
2.6	3670	560	59800	2.2						
3.0	3160	490	60200	2.5						
1.5	6340	961	43000	0.95	R	127R77	DRN	90S4	255	404
1.9	5070	773	43000	1.20	RF	127R77	DRN	90S4	275	404
2.4	3960	608	43000	1.50	RM	127R77	DRN	90S4	375	404
1.4	6680	1034	43000	0.90						
1.4	6600	1013	43000	0.90						
1.5	6550	987	43000	0.90						
1.6	6180	936	43000	0.95						
1.6	6040	935	43000	1.00						
1.8	5430	830	43000	1.10						
1.8	5240	794	43000	1.15						
1.8	5110	792	43000	1.15						
1.9	5100	777	43000	1.20						
1.9	4910	750	43000	1.20						
2.2	4320	659	43000	1.40	R	127R77	DRN	90S4	270	404
2.3	4170	642	43000	1.45	RF	127R77	DRN	90S4	280	404
2.3	4160	636	43000	1.45	RM	127R77	DRN	90S4	380	404
2.4	4000	614	43000	1.50						
2.5	3770	581	43000	1.60						
2.8	3390	521	43000	1.75						
3.0	3190	492	43000	1.90						
3.0	3100	480	43000	1.95						
3.6	2630	407	43000	2.3						
3.8	2520	386	43000	2.4						
4.9	1930	298	43000	3.1						
5.8	1640	253	43000	3.6						
3.0	3290	490	43000	1.80	R	127R77	DRN	90S4	255	404
3.7	2630	394	43000	2.3	RF	127R77	DRN	90S4	275	404
4.5	2170	327	43000	2.8	RM	127R77	DRN	90S4	370	404
5.6	1700	259	43000	3.5						


<b>P<sub>m</sub> = 1.1 kW</b>															
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>						
<b>2.0</b>	4730	717	25600	0.90	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	210	404					
					<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	215	404					
					<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	305	404					
<b>2.4</b>	3980	614	31100	1.10	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	215	404					
<b>2.7</b>	3510	544	33100	1.20											
<b>3.0</b>	3180	492	34300	1.35											
<b>3.5</b>	2690	417	35900	1.60											
<b>4.0</b>	2410	369	36300	1.80											
<b>4.5</b>	2100	323	36700	2.0											
<b>5.1</b>	1850	285	36900	2.3											
<b>5.8</b>	1630	253	37100	2.6											
<b>3.4</b>	2870	431	21800	1.05	<b>R</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	140	404					
											<b>3.8</b>	2510	379	24000	1.20
											<b>4.3</b>	2240	336	25400	1.35
											<b>4.9</b>	1960	296	26500	1.55
											<b>5.8</b>	1640	249	27400	1.80
											<b>6.2</b>	1530	234	27600	1.95
											<b>7.0</b>	1360	209	27800	2.2
<b>5.4</b>	1770	268	15200	0.90	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	100	404					
					<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	105	404					
					<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	404					
<b>6.2</b>	1560	236	16800	1.00	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	105	404					
					<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	105	404					
					<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	404					
<b>7.0</b>	1360	209	18100	1.15	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	99	404					
					<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	105	404					
					<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	404					
<b>5.7</b>	1710	256	15700	0.90	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	99	404					
					<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	105	404					
					<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	404					
<b>6.3</b>	1550	232	16900	1.00	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	105	404					
					<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	105	404					
					<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	404					
<b>7.5</b>	1310	195	18400	1.20	<b>R</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	404					
					<b>RF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	404					
					<b>RM</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	404					
<b>4.4</b>	2370	216.28	20500	1.25	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	120	392					
					<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	140	393					
					<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	190	393					
<b>5.1</b>	2040	186.30	24300	1.45	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	120	392					
											<b>6.0</b>	1740	241.25	27300	1.70
											<b>6.7</b>	1560	216.28	27600	1.90
											<b>7.8</b>	1340	186.30	27900	2.2
											<b>8.6</b>	1220	170.02	28000	2.4
											<b>9.7</b>	1080	150.78	28100	2.8
											<b>11</b>	910	126.75	28300	3.3
											<b>12</b>	840	116.48	28400	3.6
<b>6.7</b>	1560	216.54	16800	1.00	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	77	389					
					<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	84	390					
					<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	115	390					
<b>7.1</b>	1480	205.71	17400	1.05	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	84	390					
					<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	84	390					
					<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	115	390					
<b>8.0</b>	1310	181.77	18400	1.20	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	77	389					
					<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	84	390					
					<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	115	390					
<b>9.4</b>	1120	155.34	19300	1.40	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	77	389					
											<b>10</b>	1020	142.41	19700	1.50
											<b>12</b>	900	124.97	20000	1.70
											<b>12</b>	850	118.43*	20000	1.80
											<b>14</b>	745	103.65	20000	2.1
											<b>16</b>	670	93.38	20000	2.3
											<b>18</b>	590	81.92	20000	2.6
											<b>20</b>	520	72.57	20000	3.0
											<b>23</b>	455	63.68*	20000	3.4
											<b>24</b>	435	60.35*	20000	3.6
											<b>28</b>	380	52.82	20000	4.1
<b>12</b>	870	121.42	9360	0.95	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	50	386					
					<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	56	387					
					<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	81	387					
<b>14</b>	740	102.99	10600	1.10	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	56	387					
					<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	56	387					
					<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	81	387					
<b>16</b>	670	92.97	11100	1.20	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	81	387					
					<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	81	387					
					<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	81	387					
<b>18</b>	590	81.80	11600	1.40	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	50	386					
											<b>19</b>	555	77.24	11800	1.45
											<b>22</b>	470	65.77	12200	1.75
											<b>25</b>	415	57.68	12400	1.95
											<b>28</b>	375	52.07	12600	2.2
											<b>32</b>	330	45.81	12700	2.5
											<b>34</b>	310	43.26	12800	2.6
											<b>40</b>	265	36.83	12900	3.1
											<b>43</b>	240	33.47	12900	3.4

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<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
17	620	86.11	7290	0.95						
20	535	74.17	8260	1.10						
21	500	69.75	8550	1.20						
24	440	61.26	9050	1.35						
26	410	56.89	9270	1.45	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	45	383
28	370	51.56	9510	1.60	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	48	384
31	330	46.29	9720	1.80	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	64	384
36	285	39.88*	9940	2.0						
39	270	37.50	10000	2.1						
45	230	32.27	10200	2.3						
50	205	28.83	10200	2.5						
52	200	28.13	10100	2.7	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	44	383
54	192	26.72	10000	2.8	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	47	384
62	169	23.44	9620	3.3	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	63	384
73	143	19.89	9160	4.2						
21	495	69.23	6720	0.90	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	38	380
22	465	64.85	6800	0.95	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	41	381
25	410	57.29	6660	1.10	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	53	381
27	380	53.22	6560	1.15						
30	345	48.23	6440	1.30						
34	310	43.30	6290	1.45	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	38	380
39	265	37.30*	6090	1.65	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	41	381
41	250	35.07	6000	1.80	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	53	381
48	215	30.18	5790	2.1						
54	194	26.97	5630	2.3						
55	189	26.31	5600	2.4						
58	180	24.99*	5530	2.5	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	37	380
66	158	21.93	5340	2.8	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	40	381
78	134	18.60*	5110	3.4	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	52	381
87	121	16.79	4970	3.7						
30	340	47.75	4310	0.85						
34	305	42.87	4810	0.95						
39	265	36.93	4680	1.15	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	33	377
42	250	34.73	4620	1.20	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	33	378
49	215	29.88	4480	1.40						
54	192	26.70	4370	1.55						
62	170	23.59	4250	1.75						
62	168	23.28	4240	1.80						
67	157	21.81	4170	1.90						
76	139	19.27	4040	2.1						
81	129	17.89	3970	2.2						
90	117	16.22	3870	2.4	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	32	377
100	105	14.56	3760	2.5	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	32	378
116	90	12.54	3620	2.8						
123	85	11.79	3550	2.9						
143	73	10.15	3410	3.1						
160	65	9.07	3300	3.4						
45	230	32.40	3040	0.85						
51	205	28.73	3410	0.95	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	28	374
60	176	24.42	3800	1.15	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	30	375
75	139	19.31	3810	1.45						
81	130	18.05	3750	1.55	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	28	374
93	112	15.60	3630	1.80	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	30	375
110	95	13.25	3490	2.0						
123	85	11.83	3390	2.1						
144	72	10.11	3260	2.3						
154	68	9.47	3200	2.4	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	28	374
182	57	7.97	3060	2.7	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	30	375
218	48	6.67	2890	3.0						
257	40	5.67	2760	3.5						
288	36	5.06	2670	3.7						

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
75	139	19.35	2420	0.95						
80	130	18.08	2400	1.00						
93	112	15.63	2340	1.15						
110	95	13.28*	2270	1.35						
123	85	11.86	2220	1.50						
144	73	10.13	2140	1.65						
155	67	9.41	2060	1.80						
178	58	8.16	1990	1.95	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>90S4</b>	22	371
191	55	7.63*	1960	2.0	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>90S4</b>	22	372
221	47	6.59	1900	2.2						
260	40	5.60*	1820	2.5						
291	36	5.00*	1770	2.6						
341	30	4.27	1700	2.8						
364	28	4.00*	1670	2.9						
432	24	3.37	1600	3.2						
215	48	13.28*	1950	2.7						
241	43	11.86	1890	3.0						
282	37	10.13	1820	3.3						
304	34	9.41	1750	3.5						
351	29	8.16	1690	3.9						
375	28	7.63*	1660	4.0	<b>R</b>	<b>27</b>	<b>DRN</b>	<b>80M2</b>	16	371
434	24	6.59	1590	4.4	<b>RF</b>	<b>27</b>	<b>DRN</b>	<b>80M2</b>	16	372
511	20	5.60*	1520	4.8						
572	18	5.00*	1480	5.2						
670	15	4.27	1410	5.5						
715	14	4.00*	1380	5.8						
849	12	3.37	1320	6.4						
145	72	19.71	1140	1.15						
168	62	16.99	1140	1.35						
181	58	15.84	1130	1.45						
207	50	13.84	1120	1.65						
220	47	12.98	1110	1.80						
250	42	11.45	1090	1.95						
282	37	10.15	1070	2.1	<b>R</b>	<b>17</b>	<b>DRN</b>	<b>80M2</b>	16	368
331	31	8.63	1040	2.3	<b>RF</b>	<b>17</b>	<b>DRN</b>	<b>80M2</b>	15	369
379	27	7.55	960	2.0						
407	25	7.04	950	2.1						
465	22	6.15	930	2.4						
496	21	5.76	920	2.5						
562	18	5.09	900	2.7						
634	16	4.51	870	2.9						
746	14	3.83	840	3.2						
258	40	5.63	5610	2.7	<b>RX</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	41	357
272	38	5.35*	5520	2.7	<b>RXF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	43	358
308	34	4.73	5320	3.6						
254	41	3.77	3880	2.1	<b>RX</b>	<b>67</b>	<b>DRN</b>	<b>90L6</b>	34	355
					<b>RXF</b>	<b>67</b>	<b>DRN</b>	<b>90L6</b>	38	356
321	32	4.53	3620	2.5						
338	31	4.30*	3560	2.6						
386	27	3.77	3430	3.2						
455	23	3.20*	3260	4.3						
504	20	2.89	3160	5.1						
572	18	2.54	3040	6.4	<b>RX</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	31	355
606	17	2.40*	2980	7.1	<b>RXF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	35	356
712	14	2.04	2840	9.1						
783	13	1.86	2750	9.4						
904	11	1.61	2630	9.8						
1040	10	1.40*	2510	10						
305	34	3.14	2930	1.90	<b>RX</b>	<b>57</b>	<b>DRN</b>	<b>90L6</b>	32	353
362	28	2.64*	2790	2.4	<b>RXF</b>	<b>57</b>	<b>DRN</b>	<b>90L6</b>	34	354

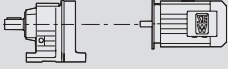

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<b>P<sub>m</sub> = 1.1 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
384	27	3.79	2750	2.5						
410	25	3.55*	2700	2.7						
464	22	3.14	2600	2.9						
499	21	2.91	2540	3.2						
551	19	2.64*	2470	3.6						
614	17	2.37	2390	4.0	RX	57	DRN	90S4	29	353
713	14	2.04	2280	4.7	RXF	57	DRN	90S4	30	354
758	13	1.92*	2240	5.0						
881	11	1.65	2140	5.8						
986	10	1.48	2060	6.4						
1115	9.0	1.30	1990	6.7						

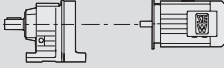

  

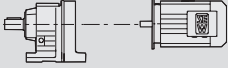

<b>P<sub>m</sub> = 1.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.55	23600	2657	120000	0.85						
0.63	20600	2333	120000	0.95						
0.70	18300	2085	120000	1.10						
0.78	16300	1877	120000	1.20						
0.87	14500	1670	120000	1.35	R	167R97	DRN	90L4	760	405
1.0	12700	1438	120000	1.55	RF	167R97	DRN	90L4	770	405
1.1	11300	1279	120000	1.75	RM	167R97	DRN	90L4	970	405
1.3	9930	1123	120000	2.0						
1.5	8840	999	120000	2.3						
1.7	7620	861	120000	2.6						
1.9	6750	760	120000	3.0						
3.4	3770	426	73700	3.5	R	147R87	DRN	90L4	455	404
4.0	3250	368	73900	4.0	RF	147R87	DRN	90L4	465	404
					RM	147R87	DRN	90L4	630	404
0.86	15300	1705	45900	0.85						
0.95	13700	1536	61000	0.95						
1.1	11900	1329	64700	1.10						
1.2	10400	1166	67100	1.25						
1.4	9180	1029	68900	1.40	R	147R77	DRN	90L4	435	404
1.6	7950	889	70400	1.65	RF	147R77	DRN	90L4	445	404
1.9	6990	784	71300	1.85	RM	147R77	DRN	90L4	610	404
2.1	6180	695	72100	2.1						
2.4	5570	619	72500	2.3						
2.6	5010	558	72900	2.6						
1.4	9410	1043	42400	0.85	R	137R77	DRN	90L4	295	404
1.6	7990	888	53400	1.00	RF	137R77	DRN	90L4	320	404
2.1	6260	699	56600	1.30	RM	137R77	DRN	90L4	430	404
2.4	5430	609	57800	1.45						
1.3	9870	1090	32900	0.80						
1.5	8610	951	51300	0.95						
1.8	7460	831	54500	1.05						
2.0	6520	730	56200	1.25						
2.3	5590	629	57600	1.45	R	137R77	DRN	90L4	305	404
2.6	5040	560	58400	1.60	RF	137R77	DRN	90L4	325	404
3.0	4360	490	59100	1.85	RM	137R77	DRN	90L4	440	404
3.4	3800	428	59700	2.1						
3.8	3430	381	60000	2.3						
4.5	2910	323	60400	2.8						
1.9	6950	773	43000	0.85	R	127R77	DRN	90L4	260	404
2.4	5440	608	43000	1.10	RF	127R77	DRN	90L4	280	404
					RM	127R77	DRN	90L4	375	404



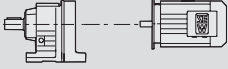

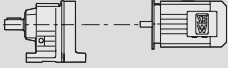

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.8	7450	830	43000	0.80						
1.8	7170	794	43000	0.85						
1.8	7040	792	43000	0.85						
1.9	6990	777	43000	0.85						
1.9	6740	750	43000	0.90						
2.2	5920	659	43000	1.00						
2.3	5730	642	43000	1.05						
2.3	5710	636	43000	1.05	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	275	404
2.4	5490	614	43000	1.10	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	285	404
2.5	5180	581	43000	1.15	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	380	404
2.8	4650	521	43000	1.30						
3.0	4390	492	43000	1.35						
3.0	4270	480	43000	1.40						
3.6	3620	407	43000	1.65						
3.8	3460	386	43000	1.75						
4.9	2660	298	43000	2.2						
5.8	2250	253	43000	2.7						
3.0	4500	490	43000	1.35						
3.7	3600	394	43000	1.65	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	260	404
4.5	2980	327	43000	2.0	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	280	404
5.7	2340	259	43000	2.6	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	375	404
7.2	1820	202	43000	3.3						
2.8	4720	528	25800	0.90	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	210	404
					<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	220	404
					<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	305	404
2.7	4840	544	21300	0.90						
3.0	4380	492	29000	1.00	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	220	404
3.5	3710	417	32300	1.15	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	225	404
4.0	3310	369	33900	1.30	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	310	404
4.5	2890	323	35300	1.50						
3.1	4300	469	29400	1.00	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	210	404
					<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	215	404
					<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	305	404
4.3	3050	336	17400	1.00						
4.9	2680	296	23000	1.10	<b>R</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	145	404
5.9	2250	249	25300	1.35	<b>RF</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	165	404
6.2	2100	234	26000	1.45	<b>RM</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	215	404
7.0	1870	209	26800	1.60						
3.8	3740	251.15	32200	1.15						
4.2	3420	229.95	33400	1.25						
4.7	3020	203.16	34900	1.40	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>100L6</b>	190	394
5.6	2560	172.34	36100	1.65	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>100L6</b>	195	395
6.1	2360	158.68	36300	1.80	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>100L6</b>	285	395
6.8	2110	141.83	36600	2.0						
5.7	2500	255.71	24000	1.20						
6.1	2360	241.25	24800	1.25						
6.8	2120	216.28	25900	1.40						
7.8	1820	186.30	27000	1.65						
8.6	1660	170.02	27400	1.80	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	120	392
9.7	1470	150.78	27700	2.0	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	140	393
12	1240	126.75	28000	2.4	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	190	393
13	1140	116.48	28100	2.6						
14	1010	103.44	28200	3.0						
16	900	92.48	28300	3.3						
8.0	1780	181.77	15100	0.85						
9.4	1520	155.34	17100	1.00	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	80	389
10	1390	142.41	17900	1.10	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	87	390
12	1220	124.97	18800	1.25	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	115	390
12	1160	118.43*	19200	1.35						
14	1010	103.65	19800	1.55						

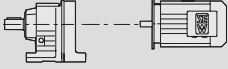

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<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
16	910	93.38	20000	1.70						
18	800	81.92	20000	1.95						
20	710	72.57	20000	2.2						
23	620	63.68*	20000	2.5	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	80	389
24	590	60.35*	20000	2.6	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	87	390
28	515	52.82	20000	3.0	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	115	390
31	465	47.58	20000	3.3						
35	405	41.74	20000	3.8						
40	360	36.84*	19400	4.3						
16	910	92.97	8980	0.90	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	54	386
18	800	81.80	10100	1.00	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	59	387
19	755	77.24	10500	1.10	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	84	387
22	640	65.77	11300	1.25						
25	565	57.68	11700	1.45						
28	510	52.07	12000	1.60						
32	445	45.81	12300	1.85	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	54	386
34	420	43.26	12400	1.95	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	59	387
40	360	36.83	12600	2.3	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	84	387
44	325	33.47	12700	2.5						
50	280	29.00	12400	2.9						
58	245	25.23	11900	3.1						
62	225	23.37	11600	3.6	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	52	386
68	210	21.43	11400	3.9	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	58	387
78	184	18.80	10900	4.2	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	83	387
24	600	61.26	7550	1.00						
26	555	56.89	8030	1.10						
28	505	51.56	8530	1.20	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	48	383
32	450	46.29	8960	1.30	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	51	384
37	390	39.88*	9390	1.50	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	67	384
39	365	37.50	9530	1.55						
45	315	32.27	9810	1.70						
51	280	28.83	9960	1.85						
52	275	28.13	9890	1.95						
55	260	26.72	9760	2.1	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	47	383
62	225	23.44	9410	2.4	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	50	384
73	194	19.89	8980	3.1	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	66	384
81	176	17.95	8720	3.4						
27	520	53.22	5900	0.85	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	41	380
30	470	48.23	5980	0.95	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	45	381
34	420	43.30	5880	1.05	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	57	381
39	365	37.30*	5730	1.25						
42	340	35.07	5670	1.30	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	41	380
48	295	30.18	5500	1.50	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	45	381
54	260	26.97	5380	1.70	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	57	381
56	255	26.31	5350	1.75						
58	245	24.99*	5290	1.85						
67	215	21.93	5130	2.1	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	40	380
79	182	18.60*	4930	2.5	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	44	381
87	164	16.79	4810	2.7	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	56	381
99	144	14.77*	4650	3.0						
105	136	13.95*	4580	3.1						
123	116	11.88	4390	3.5						
40	360	36.93	3260	0.85						
42	340	34.73	4290	0.90	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	36	377
49	290	29.88	4190	1.00	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	36	378
55	260	26.70	4110	1.15						
62	230	23.59	4020	1.30						

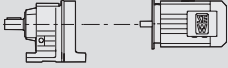

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
63	225	23.28	4010	1.30						
67	210	21.81	3960	1.40						
76	188	19.27	3860	1.55						
82	175	17.89	3800	1.65						
90	159	16.22	3710	1.75						
100	142	14.56	3620	1.85						
116	122	12.54	3490	2.0						
124	115	11.79	3440	2.1						
144	99	10.15	3310	2.3	R	47	DRN	90L4	35	377
161	88	9.07	3210	2.5	RF	47	DRN	90L4	35	378
182	78	8.01	3110	2.6						
188	76	7.76*	3040	2.1						
210	68	6.96	2950	2.3						
244	58	6.00	2830	2.6						
259	55	5.64*	2780	2.8						
301	47	4.85	2670	3.1						
337	42	4.34	2590	3.4						
381	37	3.83	2500	3.8						
76	189	19.31	2760	1.05	R	37	DRN	90L4	31	374
81	176	18.05	2930	1.15	RF	37	DRN	90L4	33	375
94	152	15.60	3230	1.30						
110	129	13.25	3320	1.45						
123	116	11.83	3240	1.60						
145	99	10.11	3130	1.70						
154	92	9.47	3080	1.80						
183	78	7.97	2950	2.0	R	37	DRN	90L4	31	374
219	65	6.67	2800	2.2	RF	37	DRN	90L4	33	375
258	55	5.67	2680	2.6						
289	49	5.06	2600	2.7						
338	42	4.32	2490	3.0						
361	39	4.05	2450	3.1						
429	33	3.41	2330	3.4						
218	65	13.25	2830	2.9	R	37	DRN	90S2	28	374
244	58	11.83	2740	3.1	RF	37	DRN	90S2	30	375
286	50	10.11	2630	3.4						
305	46	9.47	2580	3.5						
362	39	7.97	2460	3.9						
93	153	15.63	1780	0.85						
110	130	13.28*	2080	1.00						
123	116	11.86	2060	1.10						
144	99	10.13	2010	1.25						
179	79	8.16	1870	1.45	R	27	DRN	90L4	25	371
192	74	7.63*	1850	1.50	RF	27	DRN	90L4	25	372
222	64	6.59	1800	1.65						
261	54	5.60*	1740	1.80						
292	49	5.00*	1700	1.95						
342	41	4.27	1640	2.1						
365	39	4.00*	1610	2.2						
434	33	3.37	1540	2.4						
243	58	11.86	1810	2.2						
285	50	10.13	1750	2.4						
354	40	8.16	1620	2.9						
378	37	7.63*	1600	3.0						
438	32	6.59	1540	3.2	R	27	DRN	90S2	22	371
515	27	5.60*	1480	3.6	RF	27	DRN	90S2	22	372
577	24	5.00*	1430	3.8						
676	21	4.27	1370	4.1						
722	19	4.00*	1350	4.3						
856	16	3.37	1290	4.7						

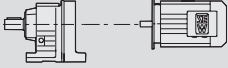

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<b>P<sub>m</sub> = 1.5 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
259	55	5.63	5520	2.0						
273	52	5.35*	5440	1.95						
309	46	4.73	5240	2.6						
362	39	4.04*	4990	3.6						
394	36	3.70	4860	4.2	RX	77	DRN	90L4	44	357
450	31	3.25*	4670	5.7	RXF	77	DRN	90L4	46	358
474	30	3.08*	4590	6.4						
542	26	2.70	4400	8.1						
602	23	2.43	4260	9.0						
323	44	4.53	3540	1.85						
340	42	4.30*	3490	1.90						
387	36	3.77	3360	2.4						
457	31	3.20*	3200	3.2						
506	28	2.89	3100	3.7	RX	67	DRN	90L4	34	355
575	24	2.54	2990	4.7	RXF	67	DRN	90L4	38	356
609	23	2.40*	2940	5.2						
715	20	2.04	2790	6.7						
787	18	1.86	2710	6.9						
908	15	1.61	2590	7.2						
1045	13	1.40*	2480	7.6						
386	37	3.79	2670	1.85						
412	34	3.55*	2620	2.0						
466	30	3.14	2540	2.1						
502	28	2.91	2480	2.4						
553	25	2.64*	2410	2.7						
616	23	2.37	2340	3.0	RX	57	DRN	90L4	32	353
716	20	2.04	2240	3.5	RXF	57	DRN	90L4	34	354
761	18	1.92*	2200	3.7						
884	16	1.65	2100	4.3						
990	14	1.48	2030	4.7						
1120	12	1.30	1960	4.9						
<b>P<sub>m</sub> = 2.2 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
0.40	47900	3637	-	0.40						
0.44	43800	3330	-	0.45						
0.53	36300	2757	120000	0.55	R	167R107	DRN	100LS4	820	405
0.60	32100	2436	120000	0.60	RF	167R107	DRN	100LS4	820	405
0.63	30200	2298	120000	0.65	RM	167R107	DRN	100LS4	1020	405
0.70	27200	2066	120000	0.75						
0.78	24100	1849	120000	0.85						
0.87	21700	1674	120000	0.90						
0.47	39400	3099	69300	0.50	R	167R97	DRN	100LS4	770	405
					RF	167R97	DRN	100LS4	780	405
					RM	167R97	DRN	100LS4	970	405
0.70	27500	2085	120000	0.75						
0.77	24600	1877	120000	0.80						
0.87	21900	1670	120000	0.90						
1.0	19100	1438	120000	1.05	R	167R97	DRN	100LS4	770	405
1.1	17000	1279	120000	1.15	RF	167R97	DRN	100LS4	780	405
1.3	14800	1123	120000	1.35	RM	167R97	DRN	100LS4	970	405
1.4	13200	999	120000	1.50						
1.7	11400	861	120000	1.75						
1.9	10100	760	120000	2.0						
2.2	8460	656	120000	2.4						
2.7	6980	533	71300	1.85						
3.1	6010	462	72200	2.2	R	147R87	DRN	100LS4	460	404
3.4	5650	426	72500	2.3	RF	147R87	DRN	100LS4	470	404
3.9	4880	368	73000	2.7	RM	147R87	DRN	100LS4	640	404
4.5	4310	326	73400	3.0						

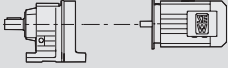

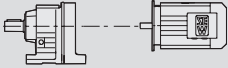

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.2	15500	1166	42600	0.85						
1.4	13700	1029	61200	0.95						
1.6	11800	889	64800	1.10						
1.9	10400	784	67100	1.25	<b>R</b>	<b>147R77</b>	<b>DRN</b>	<b>100LS4</b>	440	404
2.1	9240	695	68800	1.40	<b>RF</b>	<b>147R77</b>	<b>DRN</b>	<b>100LS4</b>	450	404
2.3	8300	619	70000	1.55	<b>RM</b>	<b>147R77</b>	<b>DRN</b>	<b>100LS4</b>	620	404
2.6	7470	558	70900	1.75						
3.0	6540	489	71800	2.0						
2.1	9340	699	43700	0.85	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>100LS4</b>	300	404
2.4	8110	609	53100	1.00	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>100LS4</b>	325	404
					<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>100LS4</b>	435	404
2.0	9740	730	35900	0.80						
2.3	8360	629	52400	0.95						
2.6	7510	560	54400	1.05						
3.0	6520	490	56200	1.25	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>100LS4</b>	310	404
3.4	5690	428	57500	1.40	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>100LS4</b>	330	404
3.8	5110	381	58300	1.55	<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>100LS4</b>	445	404
4.5	4330	323	59200	1.85						
5.0	3900	291	59600	2.0						
5.7	3410	255	60000	2.3						
6.5	2980	223	60400	2.7						
2.8	6950	521	43000	0.85						
2.9	6560	492	43000	0.90						
3.0	6390	480	43000	0.95	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	280	404
3.6	5410	407	43000	1.10	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	290	404
3.8	5160	386	43000	1.15	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	385	404
4.9	3980	298	43000	1.50						
5.7	3370	253	43000	1.80						
3.0	6690	490	43000	0.90						
3.7	5360	394	43000	1.10						
4.4	4440	327	43000	1.35	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	260	404
5.6	3490	259	43000	1.70	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	285	404
7.2	2720	202	43000	2.2	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	380	404
8.9	2200	162	43000	2.7						
12	1690	126	43000	3.5						
4.5	4320	323	29300	1.00	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	220	404
5.1	3800	285	31900	1.15	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	230	404
5.7	3360	253	33700	1.30	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	315	404
6.8	2850	214	35400	1.50						
4.5	4410	325	28800	0.95	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	215	404
					<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	220	404
					<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	310	404
6.9	2790	209	22300	1.05	<b>R</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	150	404
					<b>RF</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	165	404
					<b>RM</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	220	404
5.5	3800	262.65	43000	1.60						
6.0	3480	240.48	43000	1.70						
6.8	3070	212.46	43000	1.95						
8.1	2610	180.23	43000	2.3	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>100LS4</b>	240	396
8.7	2400	165.95	43000	2.5	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>100LS4</b>	250	397
9.8	2140	148.33	43000	2.8	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>100LS4</b>	345	397
11	1930	133.53	43000	3.1						
12	1750	120.92	43000	3.4						
14	1550	107.23	43000	3.9						
4.8	4380	203.16	29000	1.00	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>112M6</b>	200	394
5.7	3720	172.34	32300	1.15	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>112M6</b>	205	395
6.1	3420	158.68	33500	1.25	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>112M6</b>	295	395
6.9	3060	141.83	34700	1.40						
5.8	3630	251.15	32600	1.20	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	185	394
6.3	3330	229.95	33800	1.30	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	190	395
7.1	2940	203.16	35100	1.45	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	275	395

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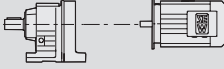

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
8.4	2490	172.34	36200	1.70						
9.1	2290	158.68	36400	1.85						
10	2050	141.83	36700	2.1	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	185	394
11	1840	127.68	36900	2.3	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	190	395
13	1670	115.63	37100	2.6	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	275	395
14	1480	102.53	37200	2.9						
16	1340	92.70	37400	3.2						
6.7	3130	216.28	13800	0.95	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	125	392
7.8	2690	186.30	22900	1.10	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	145	393
8.5	2460	170.02	24300	1.20	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	195	393
9.6	2180	150.78	25600	1.35						
11	1830	126.75	27000	1.65						
12	1680	116.48	27400	1.80						
14	1490	103.44	27600	2.0						
16	1330	92.48	27900	2.2	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	125	392
17	1200	83.15	28000	2.5	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	145	393
20	1040	72.17	28200	2.9	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	195	393
22	940	65.21	27500	3.2						
24	860	59.92	26800	3.5						
27	770	53.21	25900	3.9						
30	685	47.58	25000	4.3						
12	1810	124.97	13900	0.85						
12	1710	118.43*	15700	0.90	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	85	389
14	1500	103.65	17300	1.05	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	92	390
16	1350	93.38	18200	1.15	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	120	390
18	1180	81.92	19000	1.30						
20	1050	72.57	19600	1.45						
23	920	63.68*	20000	1.70						
24	870	60.35*	20000	1.75	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	85	389
27	765	52.82	20000	2.0	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	92	390
30	685	47.58	20000	2.2	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	120	390
35	600	41.74	19700	2.6						
39	530	36.84*	19000	2.9						
44	470	32.66*	18400	3.3						
42	495	34.40*	18700	3.0						
46	450	31.40	18200	3.4	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	83	389
52	400	27.84*	17500	3.8	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	90	390
62	335	23.40	16700	4.6	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	120	390
67	310	21.51	16200	4.8						
22	950	65.77	7900	0.85	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	58	386
25	830	57.68	9770	1.00	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	64	387
28	750	52.07	10500	1.10	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	88	387
32	660	45.81	11200	1.25						
34	625	43.26	11400	1.30						
39	530	36.83	11900	1.55	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	58	386
43	485	33.47	12100	1.70	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	64	387
50	420	29.00	12000	1.95	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	88	387
57	365	25.23	11600	2.1						
62	335	23.37	11400	2.4						
68	310	21.43	11100	2.6	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	57	386
77	270	18.80	10700	2.9	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	62	387
81	255	17.82*	10500	3.0	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	87	387
93	225	15.60	10100	3.3						
103	200	14.05	9830	3.5						
36	575	39.88*	7820	1.00	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	52	383
39	540	37.50	8180	1.05	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	55	384
45	465	32.27	8850	1.15	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	71	384
50	415	28.83	9220	1.25						

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
62	335	23.44	9070	1.65						
73	285	19.89	8700	2.1						
81	260	17.95	8470	2.3						
92	225	15.79	8180	2.5						
97	215	14.91	8050	2.5	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	51	383
114	183	12.70	7700	2.8	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	54	384
126	167	11.54	7500	3.0	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	70	384
145	144	10.00	7190	3.2						
167	126	8.70*	6910	3.5						
186	112	7.79	6700	3.4						
39	540	37.30*	5120	0.85	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	45	380
41	505	35.07	5100	0.90	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	48	381
48	435	30.18	5010	1.05	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	60	381
54	390	26.97	4940	1.15						
66	315	21.93	4780	1.40						
78	265	18.60*	4630	1.65						
86	240	16.79	4540	1.85						
98	210	14.77*	4420	2.0	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	44	380
104	200	13.95*	4360	2.1	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	48	381
122	172	11.88	4210	2.4	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	60	381
134	156	10.79	4110	2.5						
155	135	9.35	3970	2.7						
160	131	9.06	3950	2.9						
182	115	7.97	3820	3.1						
132	158	21.93	4120	2.8	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>90L2</b>	40	380
156	134	18.60*	3960	3.4	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>90L2</b>	44	381
173	121	16.79	3860	3.7	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>90L2</b>	56	381
197	106	14.77*	3730	4.1						
208	100	13.95*	3680	4.3						
75	275	19.27	3540	1.05						
89	230	16.22	3450	1.15						
100	210	14.56	3380	1.25						
116	181	12.54	3290	1.40						
123	170	11.79	3250	1.45						
143	147	10.15	3140	1.55						
160	131	9.07	3070	1.65	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	39	377
181	116	8.01	2980	1.75	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	39	378
187	112	7.76*	2890	1.45						
208	100	6.96	2820	1.60						
242	86	6.00	2720	1.80						
257	81	5.64*	2680	1.90						
299	70	4.85	2580	2.1						
334	62	4.34	2510	2.3						
378	55	3.83	2430	2.6						
151	139	19.27	3110	2.1						
179	117	16.22	2980	2.3						
200	105	14.56	2910	2.5	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>90L2</b>	35	377
232	90	12.54	2800	2.8	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>90L2</b>	35	378
246	85	11.79	2760	2.9						
286	73	10.15	2650	3.1						
320	65	9.07	2570	3.4						
363	57	8.01	2490	3.5						
93	225	15.60	1180	0.90	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>100LS4</b>	35	374
109	192	13.25	1740	1.00	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>100LS4</b>	37	375
123	171	11.83	2060	1.05						
143	146	10.11	2410	1.15						
153	137	9.47	2530	1.20						
182	115	7.97	2790	1.35						
217	96	6.67	2500	1.50	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>100LS4</b>	35	374
256	82	5.67	2550	1.75	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>100LS4</b>	37	375
287	73	5.06	2490	1.85						
336	62	4.32	2400	2.0						
358	58	4.05	2360	2.1						
425	49	3.41	2260	2.3						

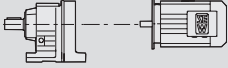

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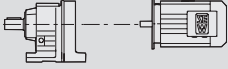

<b>P<sub>m</sub> = 2.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
186	112	15.60	2770	1.75	R	37	DRN	90L2	31	374
219	95	13.25	2680	2.0	RF	37	DRN	90L2	33	375
245	85	11.83	2610	2.1						
287	73	10.11	2520	2.3						
307	68	9.47	2480	2.4						
364	57	7.97	2370	2.7						
436	48	6.67	2240	3.0	R	37	DRN	90L2	31	374
513	40	5.67	2150	3.5	RF	37	DRN	90L2	33	375
574	36	5.06	2080	3.7						
672	31	4.32	1990	4.0						
718	29	4.05	1960	4.2						
852	24	3.41	1860	4.5						
143	146	10.13	1180	0.85						
220	95	6.59	1180	1.10	R	27	DRN	100LS4	29	371
259	81	5.60*	1430	1.20	RF	27	DRN	100LS4	29	372
290	72	5.00*	1570	1.30						
340	61	4.27	1530	1.40						
362	57	4.00*	1510	1.45						
430	48	3.37	1460	1.60						
219	96	13.28*	1700	1.35						
245	85	11.86	1680	1.50	R	27	DRN	90L2	25	371
287	73	10.13	1630	1.65	RF	27	DRN	90L2	25	372
441	47	6.59	1450	2.2						
519	40	5.60*	1400	2.4						
581	36	5.00*	1360	2.6						
680	30	4.27	1320	2.8						
726	28	4.00*	1290	2.9						
862	24	3.37	1240	3.2						
307	68	4.73	5140	1.80						
359	58	4.04*	4910	2.4	RX	77	DRN	100LS4	48	357
392	53	3.70	4780	2.9	RXF	77	DRN	100LS4	50	358
446	47	3.25*	4600	3.9						
471	44	3.08*	4530	4.3						
538	39	2.70	4350	5.5						
597	35	2.43	4210	6.1						
681	30	2.13	4040	6.5						
771	27	1.88*	3890	6.9						
870	24	1.67	3740	7.2						
1020	20	1.42	3560	7.5						
384	54	3.77	3250	1.60						
453	46	3.20*	3110	2.2	RX	67	DRN	100LS4	38	355
502	41	2.89	3020	2.5	RXF	67	DRN	100LS4	42	356
570	36	2.54	2920	3.2						
604	34	2.40*	2870	3.5						
710	29	2.04	2740	4.5						
781	26	1.86	2660	4.7						
901	23	1.61	2550	4.9						
1035	20	1.40*	2440	5.1						
462	45	3.14	2430	1.45						
549	38	2.64*	2330	1.80	RX	57	DRN	100LS4	36	353
612	34	2.37	2260	2.0	RXF	57	DRN	100LS4	37	354
710	29	2.04	2170	2.3						
755	27	1.92*	2130	2.5						
878	23	1.65	2040	2.9						
982	21	1.48	1980	3.2						
1110	18	1.30	1910	3.3						
<b>P<sub>m</sub> = 3.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.98	26300	1485	120000	0.75	R	167R107	DRN	100L4	820	405
1.1	23600	1342	120000	0.85	RF	167R107	DRN	100L4	830	405
1.2	21800	1229	120000	0.90	RM	167R107	DRN	100L4	1030	405
1.3	19600	1111	120000	1.00						




<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.0	26100	1438	120000	0.75						
1.1	23200	1279	120000	0.85						
1.3	20300	1123	120000	1.00						
1.5	18100	999	120000	1.10	<b>R</b>	<b>167R97</b>	<b>DRN</b>	<b>100L4</b>	780	405
1.7	15600	861	120000	1.30	<b>RF</b>	<b>167R97</b>	<b>DRN</b>	<b>100L4</b>	780	405
1.9	13800	760	120000	1.45	<b>RM</b>	<b>167R97</b>	<b>DRN</b>	<b>100L4</b>	980	405
2.2	11600	656	120000	1.70						
2.9	8940	503	120000	2.2						
2.7	9590	533	68400	1.35						
3.1	8260	462	70000	1.55	<b>R</b>	<b>147R87</b>	<b>DRN</b>	<b>100L4</b>	470	404
3.4	7730	426	70600	1.70	<b>RF</b>	<b>147R87</b>	<b>DRN</b>	<b>100L4</b>	475	404
4.0	6680	368	71600	1.95	<b>RM</b>	<b>147R87</b>	<b>DRN</b>	<b>100L4</b>	640	404
4.5	5910	326	72300	2.2						
5.2	5010	280	72900	2.6						
1.6	16200	889	33300	0.80	<b>R</b>	<b>147R77</b>	<b>DRN</b>	<b>100L4</b>	445	404
1.9	14200	784	58900	0.90	<b>RF</b>	<b>147R77</b>	<b>DRN</b>	<b>100L4</b>	455	404
2.1	12600	695	63400	1.05	<b>RM</b>	<b>147R77</b>	<b>DRN</b>	<b>100L4</b>	620	404
2.4	11300	619	65700	1.15						
2.6	10100	558	67500	1.25						
3.0	8910	490	50000	0.90						
3.4	7780	428	53800	1.05	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>100L4</b>	315	404
3.8	6970	381	55400	1.15	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>100L4</b>	340	404
4.5	5910	323	57200	1.35	<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>100L4</b>	450	404
5.0	5320	291	58000	1.50						
5.7	4650	255	58800	1.70						
6.5	4070	223	59400	1.95						
2.8	9600	517	38900	0.85	<b>R</b>	<b>137R77</b>	<b>DRN</b>	<b>100L4</b>	305	404
3.2	8410	453	52200	0.95	<b>RF</b>	<b>137R77</b>	<b>DRN</b>	<b>100L4</b>	330	404
					<b>RM</b>	<b>137R77</b>	<b>DRN</b>	<b>100L4</b>	440	404
3.6	7400	407	43000	0.80	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	285	404
3.8	7040	386	43000	0.85	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	295	404
4.9	5430	298	43000	1.10	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	395	404
5.8	4600	253	43000	1.30						
3.7	7320	394	43000	0.80						
4.5	6050	327	43000	1.00	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	270	404
5.6	4770	259	43000	1.25	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	290	404
7.2	3720	202	43000	1.60	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	385	404
9.0	3000	162	43000	2.0						
12	2310	126	43000	2.6						
5.8	4600	253	27700	0.95	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	230	404
6.8	3900	214	31500	1.10	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	235	404
7.8	3400	187	33500	1.25	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	325	404
5.7	4730	256	25600	0.90	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	225	404
					<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	230	404
					<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	315	404
5.5	5160	262.65	43000	1.15						
6.0	4730	240.48	43000	1.25						
6.8	4180	212.46	43000	1.45						
8.1	3540	180.23	43000	1.70						
8.8	3260	165.95	43000	1.85	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>100L4</b>	245	396
9.8	2910	148.33	43000	2.1	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>100L4</b>	260	397
11	2620	133.53	43000	2.3	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>100L4</b>	355	397
12	2370	120.92	43000	2.5						
14	2100	107.23	43000	2.8						
15	1900	96.95	43000	3.1						
17	1670	85.26	43000	3.6						
18	1610	82.17	43000	3.7						
6.1	4660	158.68	27300	0.90	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>132S6</b>	210	394
6.9	4170	141.83	30100	1.05	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>132S6</b>	215	395
7.6	3750	127.68	32100	1.15	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>132S6</b>	305	395

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<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
6.3	4520	229.95	28200	0.95						
7.2	3990	203.16	31000	1.10						
8.4	3390	172.34	33600	1.25						
9.2	3120	158.68	34500	1.40						
10	2790	141.83	35600	1.55	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>100L4</b>	190	394
11	2510	127.68	36200	1.70	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>100L4</b>	195	395
13	2270	115.63	36500	1.90	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>100L4</b>	285	395
14	2010	102.53	36800	2.1						
16	1820	92.70	37000	2.4						
19	1540	78.57	35500	2.8						
20	1430	72.88	34800	3.0						
9.7	2960	150.78	21000	1.00						
11	2490	126.75	24100	1.20						
12	2290	116.48	25100	1.30						
14	2030	103.44	26200	1.45						
16	1810	92.48	27100	1.65						
18	1630	83.15	27400	1.85	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	135	392
20	1410	72.17	27500	2.1	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	150	393
22	1280	65.21	26700	2.3	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	200	393
24	1170	59.92	26100	2.5						
27	1040	53.21	25300	2.9						
31	930	47.58	24500	3.2						
34	840	42.78	23800	3.6						
39	730	37.13	22800	4.1						
44	650	33.25	22100	4.4						
16	1830	93.38	12100	0.85	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	92	389
18	1610	81.92	16500	0.95	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	99	390
20	1420	72.57	17700	1.10	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	130	390
23	1250	63.68*	18700	1.25						
24	1180	60.35*	19000	1.30						
28	1030	52.82	19700	1.50						
31	930	47.58	19800	1.65	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	92	389
35	820	41.74	19200	1.90	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	99	390
40	720	36.84*	18500	2.1	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	130	390
45	640	32.66*	17900	2.4						
52	545	27.88	17200	2.7						
42	675	34.40*	18200	2.2						
46	615	31.40	17700	2.5	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	90	389
52	545	27.84*	17200	2.8	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	97	390
62	460	23.40	16300	3.4	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	125	390
68	420	21.51	15900	3.5						
76	375	19.10	15400	3.8						
85	335	17.08*	14900	4.1						
95	300	15.35	14400	4.4						
32	900	45.81	9090	0.90	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	65	386
34	850	43.26	9620	0.95	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	71	387
40	720	36.83	10700	1.15	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	96	387
44	655	33.47	11200	1.25						
50	570	29.00	11600	1.45	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	65	386
58	495	25.23	11200	1.55	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	71	387
					<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	96	387
62	455	23.37	11000	1.80						
68	420	21.43	10700	1.95						
77	365	18.80	10400	2.1						
82	350	17.82*	10200	2.2						
93	305	15.60	9870	2.4	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	64	386
104	275	14.05	9600	2.6	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	70	387
118	240	12.33	9250	2.9	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	94	387
134	210	10.88	8930	3.1						
151	189	9.64	8620	3.3						
169	169	8.59	8400	3.7						
188	152	7.74	8140	4.0						
214	133	6.79	7830	4.3						

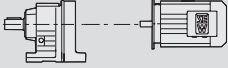

<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
62	460	23.44	8660	1.20						
73	390	19.89	8350	1.55						
81	350	17.95	8150	1.65	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	58	383
92	310	15.79	7900	1.80	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	61	384
98	290	14.91	7790	1.85	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	77	384
115	245	12.70	7470	2.1						
126	225	11.54	7290	2.2						
146	196	10.00	7010	2.4						
54	530	26.97	4430	0.85	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	52	380
					<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	56	381
					<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	68	381
66	430	21.93	4360	1.05	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	51	380
78	365	18.60*	4280	1.25	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	55	381
87	330	16.79	4220	1.35	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	67	381
99	290	14.77*	4140	1.50						
104	270	13.95*	4100	1.55						
123	230	11.88	3980	1.75						
135	210	10.79	3900	1.85						
156	183	9.35	3790	2.0	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	51	380
161	178	9.06	3780	2.1	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	55	381
183	156	7.97	3670	2.3	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	67	381
193	148	7.53	3620	2.4						
227	126	6.41	3480	2.7						
250	114	5.82	3400	2.8						
289	99	5.05	3270	3.1						
332	86	4.39	3160	3.2						
132	215	21.93	3920	2.1	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>100LM2</b>	51	380
156	184	18.60*	3790	2.4	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>100LM2</b>	55	381
172	166	16.79	3700	2.7	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>100LM2</b>	67	381
196	146	14.77*	3600	3.0	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>100LM2</b>	51	380
207	138	13.95*	3550	3.1	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>100LM2</b>	55	381
244	117	11.88	3410	3.4	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>100LM2</b>	67	381
268	106	10.79	3330	3.6						
90	315	16.22	2210	0.85	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>100L4</b>	46	377
100	285	14.56	2650	0.90	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>100L4</b>	46	378
116	245	12.54	3040	1.00						
123	230	11.79	3020	1.05						
143	199	10.15	2950	1.15						
161	178	9.07	2890	1.25						
182	157	8.01	2820	1.30						
188	152	7.76*	2720	1.05	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>100L4</b>	46	377
209	137	6.96	2660	1.15	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>100L4</b>	46	378
243	118	6.00	2590	1.30						
258	110	5.64*	2550	1.40						
300	95	4.85	2470	1.55						
336	85	4.34	2410	1.70						
380	75	3.83	2340	1.90						
245	116	11.79	2650	2.1						
285	100	10.15	2560	2.3						
319	89	9.07	2490	2.5						
361	79	8.01	2410	2.6						
373	76	7.76*	2350	2.1	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>100LM2</b>	46	377
416	68	6.96	2290	2.3	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>100LM2</b>	46	378
483	59	6.00	2200	2.6						
513	55	5.64*	2170	2.8						
596	48	4.85	2080	3.1						
667	42	4.34	2020	3.4						
755	37	3.83	1950	3.8						
144	198	10.11	920	0.85	<b>R</b>	<b>37</b>	<b>DRN</b>	<b>100L4</b>	42	374
154	186	9.47	1140	0.90	<b>RF</b>	<b>37</b>	<b>DRN</b>	<b>100L4</b>	44	375
183	156	7.97	1610	1.00						

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<b>P<sub>m</sub> = 3.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
218	131	6.67	1350	1.10						
257	111	5.67	1700	1.25						
288	99	5.06	1900	1.35	R	37	DRN	100L4	42	374
337	85	4.32	2110	1.50	RF	37	DRN	100L4	44	375
360	79	4.05	2180	1.55						
427	67	3.41	2160	1.65						
286	100	10.11	2380	1.70	R	37	DRN	100LM2	42	374
306	93	9.47	2360	1.80	RF	37	DRN	100LM2	44	375
363	78	7.97	2270	2.0						
434	66	6.67	2150	2.2						
511	56	5.67	2070	2.5						
572	50	5.06	2020	2.7	R	37	DRN	100LM2	42	374
670	42	4.32	1940	3.0	RF	37	DRN	100LM2	44	375
715	40	4.05	1900	3.0						
849	33	3.41	1820	3.3						
260	110	5.60*	455	0.90	R	27	DRN	100L4	37	371
291	98	5.00*	695	0.95	RF	27	DRN	100L4	37	372
341	84	4.27	970	1.05						
364	78	4.00*	1070	1.10						
432	66	3.37	1280	1.20						
439	65	6.59	1290	1.60						
517	55	5.60*	1320	1.80						
579	49	5.00*	1290	1.90	R	27	DRN	100LM2	37	371
678	42	4.27	1250	2.1	RF	27	DRN	100LM2	37	372
724	39	4.00*	1240	2.1						
859	33	3.37	1190	2.4						
226	127	6.45	7050	1.50	RX	87	DRN	100L4	72	359
262	109	5.56*	6760	2.1	RXF	87	DRN	100L4	77	360
287	99	5.07	6580	2.5						
324	88	4.50*	6350	3.3						
385	74	3.78	6030	4.1						
308	93	4.73	5000	1.30	RX	77	DRN	100L4	55	357
360	79	4.04*	4780	1.80	RXF	77	DRN	100L4	57	358
393	72	3.70	4670	2.1						
448	63	3.25*	4500	2.9						
473	60	3.08*	4430	3.2						
386	74	3.77	3120	1.15						
455	62	3.20*	3000	1.60						
504	56	2.89	2920	1.85						
573	50	2.54	2820	2.4	RX	67	DRN	100L4	45	355
607	47	2.40*	2780	2.6	RXF	67	DRN	100L4	49	356
713	40	2.04	2660	3.3						
784	36	1.86	2590	3.5						
905	31	1.61	2480	3.6						
1040	27	1.40*	2380	3.8						
464	61	3.14	2310	1.05						
552	51	2.64*	2220	1.35						
614	46	2.37	2160	1.50						
713	40	2.04	2080	1.70	RX	57	DRN	100L4	43	353
758	37	1.92*	2050	1.85	RXF	57	DRN	100L4	45	354
881	32	1.65	1970	2.1						
986	29	1.48	1910	2.3						
1115	25	1.30	1850	2.5						

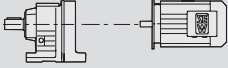

  

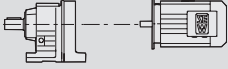

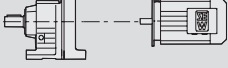

<b>P<sub>m</sub> = 4.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
1.3	26300	1111	120000	0.75	R	167R107	DRN	112M4	830	405
1.5	22700	950	120000	0.90	RF	167R107	DRN	112M4	840	405
1.7	20500	860	120000	0.95	RM	167R107	DRN	112M4	1030	405

<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.43	77300	6894	-	0.25						
0.49	70100	6077	-	0.30	R	167R97	DRN	112M2	790	405
0.55	62300	5407	-	0.30	RF	167R97	DRN	112M2	790	405
0.63	53400	4650	-	0.35	RM	167R97	DRN	112M2	990	405
0.71	47000	4129	-	0.40						
0.80	41700	3692	-	0.50						
1.5	24100	999	120000	0.85						
1.7	20800	861	120000	0.95	R	167R97	DRN	112M4	780	405
1.9	18400	760	120000	1.10	RF	167R97	DRN	112M4	790	405
2.2	15600	656	120000	1.30	RM	167R97	DRN	112M4	990	405
2.9	11900	503	120000	1.65						
3.9	8970	376	120000	2.2						
4.4	7980	335	120000	2.5						
1.1	31300	2657	120000	0.65						
1.3	27100	2333	120000	0.75	R	167R97	DRN	112M2	780	405
1.4	24000	2085	120000	0.85	RF	167R97	DRN	112M2	790	405
1.6	21400	1877	120000	0.95	RM	167R97	DRN	112M2	990	405
1.8	19100	1670	120000	1.05						
2.0	16900	1438	120000	1.20						
2.3	15000	1279	120000	1.35						
2.6	13000	1123	120000	1.55						
3.0	11600	999	120000	1.70						
3.4	10000	861	120000	2.0						
3.9	8870	760	120000	2.2						
2.8	12800	533	63000	1.00						
3.2	11000	462	66200	1.20	R	147R87	DRN	112M4	475	404
3.4	10300	426	67300	1.25	RF	147R87	DRN	112M4	485	404
4.0	8900	368	69200	1.45	RM	147R87	DRN	112M4	650	404
4.5	7870	326	70400	1.65						
5.2	6700	280	71600	1.95						
5.9	5910	247	72300	2.2						
6.9	5110	214	72900	2.5						
7.8	4520	189	73200	2.9						
9.2	3790	159	73600	3.4						
2.4	15000	619	49400	0.85	R	147R77	DRN	112M4	455	404
2.6	13500	558	61500	0.95	RF	147R77	DRN	112M4	465	404
3.0	11800	489	64800	1.10	RM	147R77	DRN	112M4	630	404
3.5	10000	415	67700	1.30						
3.8	9280	381	44800	0.85						
4.5	7870	323	53700	1.00	R	137R77	DRN	112M4	325	404
5.0	7080	291	55200	1.15	RF	137R77	DRN	112M4	350	404
5.8	6190	255	56700	1.30	RM	137R77	DRN	112M4	460	404
6.5	5420	223	57900	1.45						
3.9	9260	376	45100	0.85	R	137R77	DRN	112M4	315	404
4.3	8340	339	52500	0.95	RF	137R77	DRN	112M4	340	404
4.9	7300	297	54800	1.10	RM	137R77	DRN	112M4	450	404
4.9	7240	298	43000	0.85	R	127R77	DRN	112M4	295	404
5.8	6130	253	43000	1.00	RF	127R77	DRN	112M4	305	404
					RM	127R77	DRN	112M4	400	404
5.7	6350	259	43000	0.95	R	127R77	DRN	112M4	280	404
7.2	4960	202	43000	1.20	RF	127R77	DRN	112M4	300	404
9.0	3990	162	43000	1.50	RM	127R77	DRN	112M4	395	404
12	3080	126	43000	1.95						
7.8	4530	187	28100	0.95	R	107R77	DRN	112M4	240	404
					RF	107R77	DRN	112M4	245	404
					RM	107R77	DRN	112M4	330	404
7.6	4740	193	25200	0.90	R	107R77	DRN	112M4	230	404
8.5	4240	172	29800	1.00	RF	107R77	DRN	112M4	240	404
					RM	107R77	DRN	112M4	325	404
4.3	8780	222.60*	50600	0.90						
5.1	7430	188.45	54500	1.10	R	137	DRN	132S6	295	398
5.5	6880	174.40*	55600	1.15	RF	137	DRN	132S6	320	399
6.2	6160	156.31	56800	1.30	RM	137	DRN	132S6	430	399
6.9	5560	141.12*	57700	1.45						

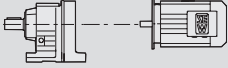

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<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
7.5	5050	128.18	58300	1.60	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>132S6</b>	295	398
8.5	4480	113.72	59000	1.80	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>132S6</b>	320	399
9.4	4070	103.20*	59400	1.95	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>132S6</b>	430	399
11	3500	88.70*	59900	2.3						
5.6	6850	262.65	43000	0.90						
6.1	6270	240.48	43000	0.95						
6.9	5540	212.46	43000	1.10						
8.1	4700	180.23	43000	1.30						
8.8	4320	165.95	43000	1.40						
9.9	3870	148.33	43000	1.55						
11	3480	133.53	43000	1.70	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>112M4</b>	255	396
12	3150	120.92	43000	1.90	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>112M4</b>	265	397
14	2790	107.23	43000	2.1	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>112M4</b>	360	397
15	2520	96.95	43000	2.4						
17	2220	85.26	43000	2.7						
18	2140	82.17	43000	2.8						
19	1980	76.21	43000	3.0						
21	1790	68.61*	43000	3.4						
24	1620	62.13	43000	3.7						
8.5	4490	172.34	28400	0.95						
9.2	4140	158.68	30300	1.05						
10	3700	141.83	32400	1.15						
11	3330	127.68	33800	1.30						
13	3010	115.63	34900	1.45	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>112M4</b>	200	394
14	2670	102.53	35900	1.60	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>112M4</b>	205	395
16	2410	92.70	36200	1.80	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>112M4</b>	295	395
19	2050	78.57	34600	2.1						
20	1900	72.88	33900	2.3						
22	1710	65.60*	33000	2.5						
25	1550	59.41	32100	2.8						
28	1370	52.68	31000	3.1						
13	3030	116.48	18300	1.00						
14	2690	103.44	22900	1.10						
16	2410	92.48	24500	1.25						
18	2160	83.15	25700	1.40						
20	1880	72.17	26500	1.60	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	140	392
22	1700	65.21	25800	1.75	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	160	393
24	1560	59.92	25300	1.90	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	210	393
28	1380	53.21	24600	2.2						
31	1240	47.58	23800	2.4						
34	1110	42.78	23200	2.7						
39	960	37.13	22300	3.1						
44	860	33.25	21600	3.3						
46	830	32.05	21400	3.1						
54	705	27.19	20400	3.6	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	140	392
58	650	25.03	20000	4.3	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	155	393
65	580	22.37	19300	4.7	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	205	393
73	525	20.14	18700	5.0						
23	1660	63.68*	13700	0.95	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	100	389
24	1570	60.35*	14300	1.00	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	110	390
28	1370	52.82	15500	1.10	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	140	390
31	1240	47.58	16300	1.25						
35	1080	41.74	17000	1.40	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	100	389
40	960	36.84*	17500	1.60	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	110	390
45	850	32.66*	17400	1.80	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	140	390
52	725	27.88	16700	2.1						
43	890	34.40*	17600	1.65						
47	810	31.40	17200	1.90						
53	725	27.84*	16700	2.1						
63	610	23.40	15900	2.5	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	99	389
68	560	21.51	15600	2.7	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	105	390
77	495	19.10	15100	2.9	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	135	390
86	445	17.08*	14600	3.1						
95	400	15.35	14200	3.3						
110	345	13.33	13600	3.7						
123	310	11.93	13200	4.0						

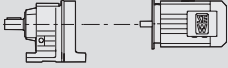

<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>40</b>	960	36.83	7260	0.85	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	74	386
<b>44</b>	870	33.47	9400	0.95	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	80	387
<b>50</b>	755	29.00	10500	1.10	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	105	387
<b>58</b>	655	25.23	10700	1.20						
<b>63</b>	605	23.37	10500	1.35						
<b>68</b>	555	21.43	10300	1.45						
<b>78</b>	490	18.80	10000	1.60						
<b>82</b>	460	17.82*	9880	1.70						
<b>94</b>	405	15.60	9560	1.80						
<b>104</b>	365	14.05	9310	1.95	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	73	386
<b>119</b>	320	12.33	9000	2.1	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	79	387
<b>135</b>	280	10.88	8700	2.3	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	105	387
<b>152</b>	250	9.64	8420	2.5						
<b>170</b>	220	8.59	8240	2.8						
<b>189</b>	200	7.74	8000	3.0						
<b>216</b>	177	6.79	7700	3.3						
<b>244</b>	156	5.99*	7420	3.5						
<b>276</b>	138	5.31*	7160	3.7						
<b>74</b>	515	19.89	7910	1.15						
<b>82</b>	465	17.95	7750	1.25						
<b>93</b>	410	15.79	7550	1.35						
<b>98</b>	385	14.91	7460	1.40						
<b>115</b>	330	12.70	7190	1.55						
<b>127</b>	300	11.54	7030	1.65	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>112M4</b>	67	383
<b>146</b>	260	10.00	6790	1.80	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>112M4</b>	70	384
<b>168</b>	225	8.70*	6550	1.95	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>112M4</b>	86	384
<b>188</b>	200	7.79	6390	1.85						
<b>199</b>	192	7.36*	6290	1.95						
<b>234</b>	163	6.27	6020	2.0						
<b>257</b>	148	5.70	5860	2.1						
<b>297</b>	128	4.93	5630	2.2						
<b>341</b>	112	4.29	5410	2.4						
<b>79</b>	485	18.60*	3680	0.95	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>112M4</b>	61	380
<b>87</b>	435	16.79	3820	1.05	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>112M4</b>	64	381
<b>99</b>	385	14.77*	3790	1.15	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>112M4</b>	76	381
<b>105</b>	360	13.95*	3770	1.20						
<b>123</b>	305	11.88	3700	1.30						
<b>136</b>	280	10.79	3650	1.40						
<b>157</b>	240	9.35	3560	1.50						
<b>162</b>	235	9.06	3570	1.60	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>112M4</b>	61	380
<b>184</b>	205	7.97	3480	1.70	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>112M4</b>	64	381
<b>194</b>	196	7.53	3440	1.80	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>112M4</b>	76	381
<b>228</b>	167	6.41	3330	2.0						
<b>251</b>	151	5.82	3260	2.1						
<b>290</b>	131	5.05	3160	2.3						
<b>333</b>	114	4.39	3050	2.4						
<b>144</b>	260	10.15	2070	0.85						
<b>161</b>	235	9.07	2450	0.95						
<b>183</b>	205	8.01	2630	1.00						
<b>210</b>	181	6.96	2470	0.90	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>112M4</b>	56	377
<b>244</b>	156	6.00	2420	1.00	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>112M4</b>	56	378
<b>260</b>	147	5.64*	2400	1.05						
<b>302</b>	126	4.85	2340	1.20						
<b>338</b>	113	4.34	2290	1.30						
<b>382</b>	99	3.83	2230	1.45						

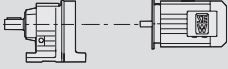

<b>P<sub>m</sub> = 4.0 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
182	210	16.22	2630	1.30						
202	188	14.56	2590	1.40						
235	162	12.54	2520	1.55						
250	152	11.79	2500	1.60						
290	131	10.15	2430	1.75						
325	117	9.07	2370	1.85						
368	103	8.01	2310	1.95	R	47	DRN	112M2	56	377
380	100	7.76*	2230	1.60	RF	47	DRN	112M2	56	378
423	90	6.96	2180	1.75						
492	77	6.00	2110	2.0						
523	73	5.64*	2080	2.1						
607	62	4.85	2010	2.4						
680	56	4.34	1950	2.6						
769	49	3.83	1890	2.9						
263	145	5.56*	6580	1.55	RX	87	DRN	112M4	81	359
289	132	5.07	6420	1.90	RXF	87	DRN	112M4	86	360
325	117	4.50*	6210	2.5						
387	98	3.78	5910	3.1						
362	105	4.04*	4630	1.35						
395	96	3.70	4530	1.60						
450	84	3.25*	4370	2.1						
475	80	3.08*	4310	2.4						
543	70	2.70	4150	3.1	RX	77	DRN	112M4	64	357
603	63	2.43	4030	3.4	RXF	77	DRN	112M4	67	358
687	55	2.13	3880	3.6						
779	49	1.88*	3740	3.8						
878	43	1.67	3620	4.0						
1030	37	1.42	3450	4.2						
458	83	3.20*	2860	1.20						
507	75	2.89	2790	1.40						
576	66	2.54	2710	1.80						
610	62	2.40*	2670	1.95	RX	67	DRN	112M4	55	355
716	53	2.04	2560	2.5	RXF	67	DRN	112M4	59	356
788	48	1.86	2500	2.6						
910	41	1.61	2400	2.7						
1045	36	1.40*	2310	2.9						
555	68	2.64*	1740	1.00						
618	61	2.37	1840	1.10						
717	53	2.04	1960	1.30						
762	50	1.92*	1950	1.40	RX	57	DRN	112M4	52	353
886	43	1.65	1880	1.60	RXF	57	DRN	112M4	54	354
992	38	1.48	1830	1.75						
1120	34	1.30	1780	1.85						
<b>P<sub>m</sub> = 5.5 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
1.9	25200	763	120000	0.80	R	167R107	DRN	132S4	840	405
2.1	22700	690	120000	0.90	RF	167R107	DRN	132S4	850	405
					RM	167R107	DRN	132S4	1040	405
1.9	25400	760	120000	0.80						
2.2	21700	656	120000	0.90						
2.5	19000	579	120000	1.05						
2.9	16600	503	120000	1.20	R	167R97	DRN	132S4	800	405
3.4	14100	432	120000	1.40	RF	167R97	DRN	132S4	800	405
3.9	12400	376	120000	1.60	RM	167R97	DRN	132S4	1000	405
4.4	11000	335	120000	1.80						
4.8	9930	303	120000	2.0						
5.2	9150	279	120000	2.2						




<b>P<sub>m</sub> = 5.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
3.2	15300	462	45900	0.85						
3.4	14200	426	59000	0.90						
4.0	12300	368	64000	1.05						
4.5	10900	326	66400	1.20	<b>R</b>	<b>147R87</b>	<b>DRN</b>	<b>132S4</b>	490	404
5.2	9300	280	68700	1.40	<b>RF</b>	<b>147R87</b>	<b>DRN</b>	<b>132S4</b>	495	404
5.9	8210	247	70100	1.60	<b>RM</b>	<b>147R87</b>	<b>DRN</b>	<b>132S4</b>	660	404
6.8	7090	214	71200	1.85						
7.7	6270	189	72000	2.1						
7.2	6860	202	43000	0.85	<b>R</b>	<b>127R77</b>	<b>DRN</b>	<b>132S4</b>	290	404
9.0	5520	162	43000	1.10	<b>RF</b>	<b>127R77</b>	<b>DRN</b>	<b>132S4</b>	310	404
12	4260	126	43000	1.40	<b>RM</b>	<b>127R77</b>	<b>DRN</b>	<b>132S4</b>	405	404
6.0	8790	163.31	69400	1.50	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>132L6</b>	450	400
6.6	7910	146.91	70400	1.65	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>132L6</b>	455	401
8.1	6450	119.86	71800	2.0	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>132L6</b>	620	401
8.9	5880	109.31	72300	2.2	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>132L6</b>	450	400
10	5090	94.60*	72900	2.5	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>132L6</b>	455	401
12	4490	83.47	73300	2.9	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>132L6</b>	620	401
5.6	9390	174.40*	42800	0.85						
6.2	8420	156.31	52200	0.95	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>132L6</b>	320	398
6.9	7600	141.12*	54200	1.05	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>132L6</b>	345	399
7.6	6900	128.18	55500	1.15	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>132L6</b>	455	399
8.6	6120	113.72	56800	1.30						
9.4	5550	103.20*	57700	1.45	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>132L6</b>	320	398
					<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>132L6</b>	345	399
					<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>132L6</b>	455	399
6.6	8000	222.60*	53400	1.00						
7.8	6770	188.45	55800	1.20	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>132S4</b>	295	398
8.4	6260	174.40*	56600	1.30	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>132S4</b>	320	399
9.3	5610	156.31	57600	1.40	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>132S4</b>	430	399
10	5070	141.12*	58300	1.60						
11	4600	128.18	58900	1.75						
13	4080	113.72	59400	1.95						
14	3700	103.20*	59800	2.2						
16	3180	88.70*	60200	2.5	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>132S4</b>	295	398
18	2900	80.91*	60400	2.8	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>132S4</b>	320	399
20	2640	73.49	60600	3.0	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>132S4</b>	430	399
22	2340	65.20	60800	3.4						
25	2120	59.17*	60900	3.8						
29	1820	50.86*	61000	4.4						
8.1	6470	180.23	43000	0.95						
8.8	5960	165.95	43000	1.00						
9.8	5330	148.33	43000	1.15						
11	4800	133.53	43000	1.25						
12	4340	120.92	43000	1.40						
14	3850	107.23	43000	1.55						
15	3480	96.95	43000	1.70	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>132S4</b>	265	396
17	3060	85.26	43000	1.95	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>132S4</b>	280	397
18	2950	82.17	43000	2.0	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>132S4</b>	375	397
19	2730	76.21	43000	2.2						
21	2460	68.61*	43000	2.4						
24	2230	62.13	43000	2.7						
27	1980	55.09	43000	3.0						
29	1790	49.81	43000	3.4						
35	1510	42.22*	43000	4.0						
11	4590	127.68	27800	0.95						
13	4150	115.63	30200	1.05						
14	3680	102.53	32400	1.15						
16	3330	92.70	33800	1.30						
19	2820	78.57	33400	1.50	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	210	394
20	2610	72.88	32800	1.65	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	215	395
22	2350	65.60*	31900	1.80	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	305	395
25	2130	59.41	31100	2.0						
28	1890	52.68	30200	2.3						
31	1710	47.63	29400	2.5						
36	1450	40.37*	28100	3.0						


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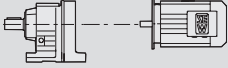

<b>P<sub>m</sub> = 5.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
18	2980	83.15	20000	1.00						
20	2590	72.17	22100	1.15						
22	2340	65.21	24600	1.30						
24	2150	59.92	24100	1.40						
27	1910	53.21	23500	1.55	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	155	392
31	1710	47.58	22900	1.75	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	170	393
34	1530	42.78	22400	1.95	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	220	393
39	1330	37.13	21600	2.2						
44	1190	33.25	21000	2.4						
53	990	27.58	20000	2.7						
46	1150	32.05	20800	2.2						
54	970	27.19	19900	2.6						
58	890	25.03	19500	3.1	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	150	392
65	800	22.37	18900	3.4	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	165	393
73	720	20.14	18300	3.6	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	220	393
80	655	18.24	17800	3.8						
90	580	16.17	17200	4.1						
31	1710	47.58	15700	0.90	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	110	389
35	1500	41.74	17300	1.05	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	120	390
40	1320	36.84*	17100	1.15	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	150	390
45	1170	32.66*	16600	1.30						
52	1000	27.88	16100	1.50						
52	1000	27.84*	16000	1.55						
62	840	23.40	15400	1.85						
68	770	21.51	15100	1.95						
76	685	19.10	14600	2.1						
86	610	17.08*	14200	2.3	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	110	389
95	550	15.35	13800	2.4	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	120	390
110	475	13.33	13300	2.7	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	150	390
122	425	11.93	12900	2.9						
148	355	9.90*	12200	3.3						
160	325	9.14*	12100	3.7						
178	295	8.22	11700	3.9						
205	255	7.13	11200	4.2						
78	675	18.80	9320	1.15	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	84	386
82	640	17.82*	9360	1.20	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	90	387
94	560	15.60	9110	1.30	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	115	387
104	505	14.05	8910	1.45						
119	440	12.33	8650	1.55						
134	390	10.88	8390	1.70						
152	345	9.64	8150	1.80	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	84	386
170	305	8.59	8030	2.0	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	90	387
189	275	7.74	7810	2.2	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	115	387
215	240	6.79	7530	2.4						
244	215	5.99*	7270	2.5						
275	190	5.31*	7030	2.7						
92	565	15.79	6720	1.00						
98	535	14.91	6980	1.05						
115	455	12.70	6790	1.15						
127	410	11.54	6660	1.20						
146	355	10.00	6470	1.30						
168	310	8.70*	6280	1.40	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	79	383
187	280	7.79	6150	1.35	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	82	384
199	260	7.36*	6070	1.40	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	98	384
233	225	6.27	5830	1.45						
257	200	5.70	5690	1.50						
296	177	4.93	5480	1.65						
340	154	4.29	5280	1.75						
337	155	8.70*	5280	2.8						
377	139	7.79	5140	2.7						
399	131	7.36*	5060	2.8	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>132S2</b>	79	383
468	112	6.27	4830	2.9	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>132S2</b>	82	384
515	101	5.70	4700	3.0	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>132S2</b>	98	384
595	88	4.93	4510	3.3						
684	76	4.29	4330	3.5						

<b>P<sub>m</sub> = 5.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>99</b>	530	14.77*	1860	0.80	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>132S4</b>	72	380
<b>105</b>	500	13.95*	2200	0.85	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>132S4</b>	76	381
<b>123</b>	425	11.88	3000	0.95	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>132S4</b>	88	381
<b>135</b>	385	10.79	3270	1.00						
<b>156</b>	335	9.35	3240	1.10						
<b>183</b>	285	7.97	3210	1.25						
<b>194</b>	270	7.53	3190	1.30	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>132S4</b>	72	380
<b>228</b>	230	6.41	3110	1.45	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>132S4</b>	76	381
<b>251</b>	205	5.82	3060	1.55	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>132S4</b>	88	381
<b>290</b>	181	5.05	2980	1.70						
<b>333</b>	157	4.39	2900	1.75						
<b>314</b>	167	9.35	2920	2.2						
<b>368</b>	142	7.97	2840	2.5						
<b>390</b>	134	7.53	2800	2.6	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>132S2</b>	72	380
<b>458</b>	114	6.41	2700	2.9	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>132S2</b>	76	381
<b>504</b>	104	5.82	2640	3.1	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>132S2</b>	88	381
<b>582</b>	90	5.05	2550	3.4						
<b>668</b>	78	4.39	2460	3.6						
<b>301</b>	174	4.85	1920	0.85	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>132S4</b>	67	377
<b>337</b>	155	4.34	2110	0.95	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>132S4</b>	67	378
<b>381</b>	137	3.83	2070	1.05						
<b>234</b>	220	12.54	1780	1.10						
<b>249</b>	210	11.79	1970	1.15						
<b>289</b>	181	10.15	2250	1.25						
<b>324</b>	162	9.07	2210	1.35						
<b>366</b>	143	8.01	2170	1.45	<b>R</b>	<b>47</b>	<b>DRN</b>	<b>132S2</b>	67	377
<b>489</b>	107	6.00	1990	1.45	<b>RF</b>	<b>47</b>	<b>DRN</b>	<b>132S2</b>	67	378
<b>520</b>	100	5.64*	1970	1.55						
<b>605</b>	86	4.85	1910	1.75						
<b>677</b>	77	4.34	1860	1.90						
<b>766</b>	68	3.83	1810	2.1						
<b>221</b>	235	6.63*	10400	1.95						
<b>260</b>	200	5.61	9920	2.3	<b>RX</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	150	363
<b>281</b>	186	5.19	9700	3.7	<b>RXF</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	165	364
<b>314</b>	167	4.65	9400	4.2						
<b>252</b>	205	5.79	8330	2.0						
<b>297</b>	176	4.91	7960	2.2						
<b>323</b>	162	4.52	7780	3.7						
<b>361</b>	145	4.04	7530	4.1						
<b>401</b>	130	3.64*	7310	4.5						
<b>443</b>	118	3.30	7100	5.0	<b>RX</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	115	361
<b>500</b>	105	2.92	6850	5.7	<b>RXF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	125	362
<b>553</b>	95	2.64	6650	6.3						
<b>652</b>	80	2.24*	6320	7.4						
<b>747</b>	70	1.96	6070	8.1						
<b>893</b>	58	1.64	5740	8.6						
<b>1030</b>	50	1.42	5490	8.9						
<b>325</b>	161	4.50*	6000	1.80						
<b>386</b>	135	3.78	5740	2.2						
<b>420</b>	124	3.48	5610	3.2						
<b>473</b>	110	3.09	5430	3.6	<b>RX</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	92	359
<b>529</b>	99	2.76*	5260	4.1	<b>RXF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	97	360
<b>589</b>	89	2.48	5100	4.5						
<b>678</b>	77	2.15	4900	5.0						
<b>450</b>	116	3.25*	4200	1.55						
<b>474</b>	110	3.08*	4140	1.75						
<b>542</b>	96	2.70	4010	2.2						
<b>602</b>	87	2.43	3900	2.5	<b>RX</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	76	357
<b>686</b>	76	2.13	3760	2.6	<b>RXF</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	78	358
<b>777</b>	67	1.88*	3640	2.8						
<b>877</b>	59	1.67	3520	2.9						
<b>1025</b>	51	1.42	3360	3.0						

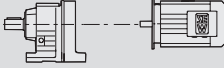

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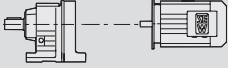

<b>P<sub>m</sub> = 5.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
575	91	2.54	2540	1.30						
609	86	2.40*	2510	1.45						
715	73	2.04	2420	1.80	RX	67	DRN	132S4	66	355
787	66	1.86	2370	1.90	RXF	67	DRN	132S4	70	356
908	57	1.61	2290	1.95						
1045	50	1.40*	2210	2.1						
716	73	2.04	725	0.95						
761	69	1.92*	810	1.00	RX	57	DRN	132S4	64	353
884	59	1.65	990	1.15	RXF	57	DRN	132S4	65	354
990	53	1.48	1060	1.30						
1120	46	1.30	1200	1.35						

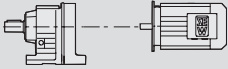

<b>P<sub>m</sub> = 7.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
2.5	26200	585	120000	0.75	R	167R107	DRN	132M4	860	405
2.9	22700	511	120000	0.90	RF	167R107	DRN	132M4	870	405
					RM	167R107	DRN	132M4	1060	405
3.3	20500	446	120000	1.00	R	167R107	DRN	132M4	850	405
					RF	167R107	DRN	132M4	860	405
					RM	167R107	DRN	132M4	1060	405
2.5	26000	579	120000	0.75						
2.9	22700	503	120000	0.90						
3.4	19400	432	120000	1.05	R	167R97	DRN	132M4	810	405
3.9	17000	376	120000	1.20	RF	167R97	DRN	132M4	820	405
4.4	15100	335	120000	1.30	RM	167R97	DRN	132M4	1020	405
4.8	13500	303	120000	1.45						
5.3	12500	279	120000	1.60						
4.5	14800	326	52300	0.90						
5.2	12600	280	63300	1.00						
5.9	11200	247	65900	1.15	R	147R87	DRN	132M4	510	404
6.9	9670	214	68200	1.35	RF	147R87	DRN	132M4	510	404
7.8	8550	189	69700	1.50	RM	147R87	DRN	132M4	680	404
9.2	7190	159	71200	1.80						
9.0	7510	162	43000	0.80	R	127R77	DRN	132M4	310	404
12	5800	126	43000	1.05	RF	127R77	DRN	132M4	330	404
					RM	127R77	DRN	132M4	425	404
4.3	16800	229.71	120000	1.20	R	167	DRN	160M6	730	402
5.2	13600	186.93*	120000	1.45	RF	167	DRN	160M6	730	403
					RM	167	DRN	160M6	930	403
6.4	11100	153.07	120000	1.80						
7.0	10200	139.98	120000	1.95						
8.0	8910	121.81*	120000	2.2						
9.1	7860	107.49	120000	2.5	R	167	DRN	160M6	730	402
11	6810	93.19	120000	2.9	RF	167	DRN	160M6	730	403
12	6060	82.91*	120000	3.3	RM	167	DRN	160M6	930	403
13	5390	73.70*	120000	3.7						
15	4930	67.40	120000	4.1						
6.0	11900	163.31	64600	1.10	R	147	DRN	160M6	480	400
6.7	10700	146.91	66700	1.20	RF	147	DRN	160M6	490	401
8.2	8760	119.86	69400	1.50	RM	147	DRN	160M6	660	401
9.0	7990	109.31	70300	1.65	R	147	DRN	160M6	480	400
10	6920	94.60*	71400	1.90	RF	147	DRN	160M6	490	401
12	6100	83.47	72100	2.1	RM	147	DRN	160M6	660	401
7.8	9190	188.45	46300	0.85						
8.4	8500	174.40*	51800	0.95	R	137	DRN	132M4	315	398
9.4	7620	156.31	54200	1.05	RF	137	DRN	132M4	335	399
10	6880	141.12*	55600	1.15	RM	137	DRN	132M4	445	399

<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
11	6250	128.18	56600	1.30						
13	5540	113.72	57700	1.45						
14	5030	103.20*	58400	1.60						
17	4320	88.70*	59200	1.85	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>132M4</b>	315	398
18	3940	80.91*	59600	2.0	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>132M4</b>	335	399
20	3580	73.49	59900	2.2	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>132M4</b>	445	399
23	3180	65.20	60200	2.5						
25	2880	59.17*	60400	2.8						
29	2480	50.86*	60700	3.2						
9.9	7230	148.33	43000	0.85						
11	6510	133.53	43000	0.90						
12	5890	120.92	43000	1.00						
14	5230	107.23	43000	1.15						
15	4720	96.95	43000	1.25						
17	4150	85.26	43000	1.45						
18	4000	82.17	43000	1.50	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	285	396
19	3710	76.21	43000	1.60	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	295	397
21	3340	68.61*	43000	1.80	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	390	397
24	3030	62.13	43000	2.0						
27	2680	55.09	43000	2.2						
29	2430	49.81	43000	2.5						
35	2050	42.22*	43000	2.9						
40	1790	36.88	43000	3.2						
48	1500	30.84	43000	3.6						
46	1570	32.18	43000	3.8	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	270	396
					<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	290	397
					<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	385	397
16	4520	92.70	28200	0.95						
19	3830	78.57	31600	1.10						
20	3550	72.88	31100	1.20						
22	3200	65.60*	30500	1.35	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	230	394
25	2890	59.41	29800	1.50	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	235	395
28	2570	52.68	29000	1.65	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	320	395
31	2320	47.63	28300	1.85						
36	1960	40.37*	27200	2.2						
42	1720	35.26	26200	2.5						
50	1430	29.49	25000	3.0						
48	1500	30.77	25300	2.9	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	220	394
53	1340	27.58	24600	3.2	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	230	395
59	1210	24.90*	23900	3.5	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	315	395
65	1100	22.62	23300	3.9						
24	2920	59.92	21500	1.05						
28	2590	53.21	22100	1.15	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	170	392
31	2320	47.58	21600	1.30	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	190	393
34	2080	42.78	21200	1.45	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	240	393
40	1810	37.13	20600	1.65						
44	1620	33.25	20100	1.80	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	170	392
53	1340	27.58	19200	2.0	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	190	393
					<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	240	393
46	1560	32.05	19900	1.65						
54	1320	27.19	19200	1.95	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	170	392
59	1220	25.03	18800	2.3	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	185	393
66	1090	22.37	18300	2.5	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	235	393
73	980	20.14	17800	2.7						
80	880	18.24	17300	2.8						
40	1790	36.84*	14700	0.85	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	130	389
45	1590	32.66*	15600	0.95	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	135	390
53	1360	27.88	15200	1.10	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	165	390

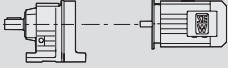

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<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
53	1350	27.84*	15200	1.15						
63	1140	23.40	14600	1.35						
68	1040	21.51	14400	1.45						
77	930	19.10	14000	1.55						
86	830	17.08*	13700	1.65						
96	745	15.35	12600	1.80						
110	650	13.33	12900	1.95	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	130	389
123	580	11.93	12500	2.1	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	135	390
148	480	9.90*	11900	2.4	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	165	390
161	445	9.14*	11800	2.7						
179	400	8.22	11500	2.9						
206	345	7.13	11000	3.1						
230	310	6.39	10700	3.3						
277	255	5.30*	10100	3.5						
78	910	18.80	5520	0.85						
82	860	17.82*	5910	0.90						
94	760	15.60	6760	0.95						
104	685	14.05	7300	1.05						
119	600	12.33	7850	1.15	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	100	386
135	530	10.88	7960	1.25	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	110	387
152	470	9.64	7770	1.35	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	135	387
171	415	8.59	7690	1.50						
190	375	7.74	7540	1.60						
216	330	6.79	7300	1.75						
245	290	5.99*	7060	1.85						
276	255	5.31*	6840	1.95						
116	615	12.70	4420	0.85						
127	560	11.54	5010	0.90						
147	485	10.00	5740	0.95						
169	420	8.70*	5900	1.05	<b>R</b>	<b>67</b>	<b>DRN</b>	<b>132M4</b>	97	383
188	380	7.79	5600	1.00	<b>RF</b>	<b>67</b>	<b>DRN</b>	<b>132M4</b>	100	384
199	355	7.36*	5760	1.05	<b>RM</b>	<b>67</b>	<b>DRN</b>	<b>132M4</b>	115	384
234	305	6.27	5570	1.10						
258	275	5.70	5450	1.10						
298	240	4.93	5270	1.20						
342	205	4.29	5100	1.30						
184	385	7.97	1120	0.90						
195	365	7.53	1410	0.95	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>132M4</b>	91	380
229	310	6.41	2120	1.05	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>132M4</b>	94	381
252	280	5.82	2470	1.15	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>132M4</b>	105	381
291	245	5.05	2750	1.25						
334	210	4.39	2700	1.30						
199	360	14.77*	2620	1.20						
210	340	13.95*	2800	1.25						
247	285	11.88	2770	1.40						
272	260	10.79	2750	1.50						
314	225	9.35	2700	1.60	<b>R</b>	<b>57</b>	<b>DRN</b>	<b>132S2</b>	72	380
368	194	7.97	2660	1.85	<b>RF</b>	<b>57</b>	<b>DRN</b>	<b>132S2</b>	76	381
390	183	7.53	2630	1.90	<b>RM</b>	<b>57</b>	<b>DRN</b>	<b>132S2</b>	88	381
458	156	6.41	2560	2.1						
504	142	5.82	2510	2.2						
582	123	5.05	2440	2.5						
669	107	4.39	2360	2.6						
222	320	6.63*	10000	1.40						
262	270	5.61	9620	1.65	<b>RX</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	165	363
283	250	5.19	9420	2.7	<b>RXF</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	185	364
316	225	4.65	9140	3.1						
350	200	4.20*	8890	4.0						
253	280	5.79	8030	1.50						
299	235	4.91	7700	1.65						
325	220	4.52	7530	2.7						
363	197	4.04	7310	3.0	<b>RX</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	135	361
403	177	3.64*	7110	3.4	<b>RXF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	140	362
445	160	3.30	6910	3.7						
502	142	2.92	6680	4.2						

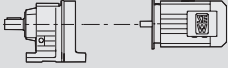

<b>P<sub>m</sub> = 7.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
326	215	4.50*	5720	1.30						
388	184	3.78	5500	1.65						
422	169	3.48	5380	2.4						
476	150	3.09	5230	2.7						
532	134	2.76*	5080	3.0	RX	87	DRN	132M4	110	359
592	121	2.48	4940	3.4	RXF	87	DRN	132M4	115	360
682	105	2.15	4750	3.7						
761	94	1.93	4610	3.8						
918	78	1.60*	4370	4.0						
1055	67	1.39	4200	4.3						
452	158	3.25*	3890	1.15						
477	150	3.08*	3910	1.30						
545	131	2.70	3800	1.65						
604	118	2.43	3710	1.80	RX	77	DRN	132M4	94	357
689	103	2.13	3600	1.90	RXF	77	DRN	132M4	96	358
781	91	1.88*	3490	2.0						
881	81	1.67	3380	2.1						
1030	69	1.42	3240	2.2						
578	124	2.54	1590	0.95						
612	117	2.40*	1700	1.05						
718	99	2.04	1890	1.35	RX	67	DRN	132M4	85	355
790	90	1.86	2000	1.40	RXF	67	DRN	132M4	89	356
913	78	1.61	2120	1.45						
1050	68	1.40*	2070	1.50						

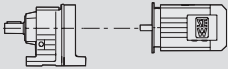

<b>P<sub>m</sub> = 9.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
3.7	22500	399	120000	0.90	R	167R107	DRN	132L4	860	405
4.1	20300	361	120000	1.00	RF	167R107	DRN	132L4	870	405
					RM	167R107	DRN	132L4	1070	405
3.4	23800	432	120000	0.85						
3.9	20900	376	120000	0.95	R	167R97	DRN	132L4	820	405
4.4	18600	335	120000	1.05	RF	167R97	DRN	132L4	830	405
4.9	16700	303	120000	1.20	RM	167R97	DRN	132L4	1020	405
5.3	15400	279	120000	1.30						
5.2	15500	280	42500	0.85						
6.0	13700	247	61100	0.95	R	147R87	DRN	132L4	510	404
6.9	11800	214	64800	1.10	RF	147R87	DRN	132L4	520	404
7.8	10500	189	67000	1.25	RM	147R87	DRN	132L4	690	404
9.3	8830	159	69300	1.45						
12	7120	126	43000	0.85	R	127R77	DRN	132L4	315	404
					RF	127R77	DRN	132L4	335	404
					RM	127R77	DRN	132L4	435	404
9.0	9760	163.31	68100	1.35	R	147	DRN	132L4	450	400
10	8770	146.91	69400	1.50	RF	147	DRN	132L4	455	401
12	7160	119.86	71200	1.80	RM	147	DRN	132L4	620	401
13	6530	109.31	71800	2.0						
16	5650	94.60*	72500	2.3	R	147	DRN	132L4	450	400
18	4980	83.47	73000	2.6	RF	147	DRN	132L4	455	401
20	4300	72.09	73400	3.0	RM	147	DRN	132L4	620	401
22	4000	66.99	73500	3.2						
9.4	9340	156.31	43800	0.85	R	137	DRN	132L4	320	398
10	8430	141.12*	52100	0.95	RF	137	DRN	132L4	345	399
11	7660	128.18	54100	1.05	RM	137	DRN	132L4	455	399
13	6790	113.72	55700	1.20						
14	6160	103.20*	56800	1.30						
17	5300	88.70*	58000	1.50						
18	4830	80.91*	58600	1.65	R	137	DRN	132L4	320	398
20	4390	73.49	59100	1.80	RF	137	DRN	132L4	345	399
23	3890	65.20	59600	2.0	RM	137	DRN	132L4	455	399
25	3530	59.17*	59900	2.3						
29	3030	50.86*	60300	2.6						
33	2650	44.39	60600	3.0						

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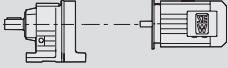

<b>P<sub>m</sub> = 9.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
12	7220	120.92	43000	0.85						
14	6400	107.23	43000	0.95						
15	5790	96.95	43000	1.05						
17	5090	85.26	43000	1.20						
18	4910	82.17	43000	1.20						
19	4550	76.21	43000	1.30	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	295	396
21	4100	68.61*	43000	1.45	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	305	397
24	3710	62.13	43000	1.60	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	400	397
27	3290	55.09	43000	1.80						
30	2970	49.81	43000	2.0						
35	2520	42.22*	43000	2.4						
40	2200	36.88	43000	2.6						
48	1840	30.84	43000	2.9						
46	1920	32.18	43000	3.1	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	275	396
51	1720	28.84	43000	3.5	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	300	397
56	1550	26.04*	43000	3.9	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	395	397
19	4690	78.57	26900	0.90						
20	4350	72.88	29200	1.00						
22	3920	65.60*	29200	1.10						
25	3550	59.41	28700	1.20	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	235	394
28	3140	52.68	28000	1.35	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	245	395
31	2840	47.63	27400	1.50	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	330	395
36	2410	40.37*	26400	1.80						
42	2100	35.26	25600	2.0						
50	1760	29.49	24500	2.4						
48	1830	30.77	24700	2.3						
53	1640	27.58	24000	2.6	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	230	394
59	1480	24.90*	23400	2.9	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	235	395
65	1350	22.62	22800	3.2	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	325	395
73	1190	20.07	22100	3.6						
28	3180	53.21	10800	0.95	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	180	392
31	2840	47.58	20600	1.05	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	195	393
34	2550	42.78	20200	1.15	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	250	393
40	2210	37.13	19800	1.35	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	180	392
44	1980	33.25	19300	1.45	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	195	393
53	1640	27.58	18600	1.60	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	250	393
59	1490	25.03	18200	1.90						
66	1330	22.37	17800	2.0						
73	1200	20.14	17300	2.2	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	175	392
81	1090	18.24	16900	2.3	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	195	393
91	960	16.17	16400	2.5	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	245	393
101	870	14.62	16000	2.6						
119	740	12.39	15300	3.0						
68	1280	21.51	13800	1.15						
77	1140	19.10	13500	1.25						
86	1020	17.08*	13200	1.35						
96	910	15.35	12900	1.45						
110	795	13.33	12500	1.60	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	135	389
123	710	11.93	12200	1.70	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	145	390
148	590	9.90*	11600	2.0	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	175	390
161	545	9.14*	11600	2.2						
179	490	8.22	11300	2.4						
206	425	7.13	10900	2.5						
230	380	6.39	10500	2.7						
105	830	14.05	4880	0.85	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	110	386
119	735	12.33	5730	0.95	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	115	387
135	650	10.88	6380	1.00	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	140	387
152	575	9.64	6880	1.10						
190	460	7.74	6370	1.30	<b>R</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	110	386
216	405	6.79	6770	1.45	<b>RF</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	115	387
245	355	5.99*	6890	1.50	<b>RM</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	140	387
277	315	5.31*	6690	1.60						

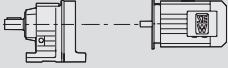



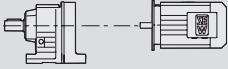

<b>P<sub>m</sub> = 9.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
283	310	5.19	9200	2.2						
316	275	4.65	8940	2.5						
350	250	4.20*	8710	3.3	RX	107	DRN	132L4	175	363
385	225	3.81	8490	3.6	RXF	107	DRN	132L4	190	364
434	200	3.38	8220	4.1						
325	270	4.52	7330	2.2						
364	240	4.04	7130	2.5						
404	215	3.64*	6940	2.7						
446	197	3.30	6760	3.0						
503	174	2.92	6550	3.4	RX	97	DRN	132L4	140	361
556	157	2.64	6370	3.8	RXF	97	DRN	132L4	150	362
656	133	2.24*	6080	4.4						
751	116	1.96	5850	4.9						
898	97	1.64	5560	5.2						
1040	84	1.42	5320	5.4						
423	205	3.48	5200	1.95						
476	184	3.09	5060	2.2						
533	164	2.76*	4930	2.5						
592	148	2.48	4800	2.7	RX	87	DRN	132L4	120	359
682	128	2.15	4630	3.0	RXF	87	DRN	132L4	125	360
762	115	1.93	4500	3.1						
919	95	1.60*	4270	3.3						
1055	83	1.39	4110	3.5						
605	145	2.43	3070	1.50						
690	127	2.13	3210	1.55	RX	77	DRN	132L4	100	357
782	112	1.88*	3300	1.65	RXF	77	DRN	132L4	105	358
882	99	1.67	3270	1.75						
1035	85	1.42	3140	1.80						

<b>P<sub>m</sub> = 11.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
4.2	22700	349	120000	0.90						
5.0	19100	295	120000	1.05						
5.5	17800	270	120000	1.10	R	167R107	DRN	160M4	900	405
6.4	15000	229	120000	1.35	RF	167R107	DRN	160M4	910	405
7.3	13000	200	120000	1.55	RM	167R107	DRN	160M4	1100	405
8.7	11000	169	120000	1.80						
4.5	22000	328	120000	0.90	R	167R107	DRN	160M4	900	405
5.1	19500	291	120000	1.05	RF	167R107	DRN	160M4	900	405
					RM	167R107	DRN	160M4	1100	405
3.9	25000	376	120000	0.80						
4.4	22200	335	120000	0.90	R	167R97	DRN	160M4	860	405
4.9	20000	303	120000	1.00	RF	167R97	DRN	160M4	860	405
5.3	18400	279	120000	1.10	RM	167R97	DRN	160M4	1060	405
6.0	16400	247	29500	0.80						
6.9	14200	214	59800	0.90	R	147R87	DRN	160M4	550	404
7.8	12500	189	63500	1.05	RF	147R87	DRN	160M4	560	404
9.3	10500	159	67000	1.25	RM	147R87	DRN	160M4	720	404
6.4	16300	229.71	120000	1.20	R	167	DRN	160M4	730	402
7.9	13300	186.93*	120000	1.50	RF	167	DRN	160M4	730	403
					RM	167	DRN	160M4	930	403
9.6	10900	153.07	120000	1.85						
11	9980	139.98	120000	2.0	R	167	DRN	160M4	730	402
12	8680	121.81*	120000	2.3	RF	167	DRN	160M4	730	403
14	7660	107.49	120000	2.6	RM	167	DRN	160M4	930	403
16	6640	93.19	120000	3.0						
18	5910	82.91*	120000	3.4						
9.0	11600	163.31	65200	1.10	R	147	DRN	160M4	480	400
10	10400	146.91	67100	1.25	RF	147	DRN	160M4	490	401
12	8540	119.86	69700	1.50	RM	147	DRN	160M4	660	401

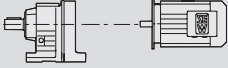

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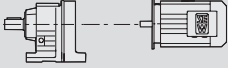

<b>P<sub>m</sub> = 11.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
13	7790	109.31	70500	1.65						
16	6740	94.60*	71600	1.95						
18	5950	83.47	72200	2.2	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>160M4</b>	480	400
20	5140	72.09	72900	2.5	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>160M4</b>	490	401
22	4770	66.99	73100	2.7	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>160M4</b>	660	401
24	4350	61.09	73300	3.0						
28	3770	52.87	73700	3.5						
10	10000	141.12*	27800	0.80						
11	9140	128.18	47100	0.90						
13	8100	113.72	53100	1.00						
14	7350	103.20*	54700	1.10						
17	6320	88.70*	56500	1.25						
18	5760	80.91*	57400	1.40	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>160M4</b>	355	398
20	5240	73.49	58100	1.55	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>160M4</b>	375	399
23	4640	65.20	58800	1.70	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>160M4</b>	485	399
25	4210	59.17*	59300	1.90						
29	3620	50.86*	59800	2.2						
33	3160	44.39	60200	2.5						
39	2680	37.65	60600	3.0						
45	2340	32.91	60800	3.4						
15	6910	96.95	43000	0.85						
17	6080	85.26	43000	1.00						
18	5850	82.17	43000	1.00						
19	5430	76.21	43000	1.10						
21	4890	68.61*	43000	1.25	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	325	396
24	4430	62.13	43000	1.35	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	335	397
27	3920	55.09	43000	1.55	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	435	397
30	3550	49.81	43000	1.70						
35	3010	42.22*	43000	2.0						
40	2620	36.88	43000	2.2						
48	2190	30.84	43000	2.5						
46	2290	32.18	43000	2.6	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	310	396
51	2050	28.84	43000	2.9	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	330	397
57	1850	26.04*	43000	3.2	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	425	397
62	1680	23.65	43000	3.6						
22	4670	65.60*	27200	0.90						
25	4230	59.41	27500	1.00						
28	3750	52.68	27000	1.15	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	270	394
31	3390	47.63	26500	1.25	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	275	395
36	2870	40.37*	25600	1.50	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	365	395
42	2510	35.26	24900	1.70						
50	2100	29.49	23900	2.0						
48	2190	30.77	24100	1.95						
53	1960	27.58	23500	2.2	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	265	394
59	1770	24.90*	22900	2.4	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	270	395
65	1610	22.62	22400	2.7	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	355	395
73	1430	20.07	21700	3.0						
81	1290	18.21	21200	3.3						
34	3050	42.78	17800	1.00	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	210	392
40	2640	37.13	18900	1.15	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	230	393
44	2370	33.25	18600	1.20	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	280	393
53	1960	27.58	18000	1.35						
59	1780	25.03	17600	1.60	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	210	392
66	1590	22.37	17200	1.70	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	225	393
73	1430	20.14	16900	1.80	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	275	393
81	1300	18.24	16500	1.90						
91	1150	16.17	16000	2.1						
101	1040	14.62	15600	2.2						
119	880	12.39	15000	2.5	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	210	392
136	770	10.83	14500	2.7	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	225	393
159	660	9.29	14200	3.1	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	275	393
175	595	8.39	13800	3.4						
207	505	7.12	13100	3.9						
237	440	6.21	12600	4.3						

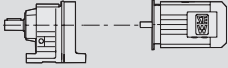

<b>P<sub>m</sub> = 11.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
68	1530	21.51	13200	1.00	R	87	DRN	160M4	170	389
77	1360	19.10	13000	1.05	RF	87	DRN	160M4	175	390
86	1210	17.08*	12700	1.15	RM	87	DRN	160M4	205	390
96	1090	15.35	12500	1.20						
111	950	13.33	12100	1.35						
123	850	11.93	11800	1.45						
149	705	9.90*	11300	1.65	R	87	DRN	160M4	170	389
161	650	9.14*	11400	1.85	RF	87	DRN	160M4	175	390
179	585	8.22	11100	2.0	RM	87	DRN	160M4	205	390
206	505	7.13	10700	2.1						
231	455	6.39	10400	2.2						
278	375	5.30*	9850	2.4						
135	775	10.88	4400	0.85	R	77	DRN	160M4	140	386
153	685	9.64	5130	0.90	RF	77	DRN	160M4	150	387
					RM	77	DRN	160M4	175	387
190	550	7.74	4740	1.10	R	77	DRN	160M4	140	386
217	480	6.79	5340	1.20	RF	77	DRN	160M4	150	387
246	425	5.99*	5800	1.25	RM	77	DRN	160M4	175	387
277	375	5.31*	6140	1.35						
284	370	5.19	8950	1.90						
317	330	4.65	8720	2.1						
351	295	4.20*	8510	2.8	RX	107	DRN	160M4	210	363
386	270	3.81	8300	3.0	RXF	107	DRN	160M4	225	364
435	240	3.38	8050	3.4						
480	215	3.07	7840	3.8						
558	188	2.64*	7530	4.4						
326	320	4.52	7120	1.85						
364	285	4.04	6940	2.1						
405	255	3.64*	6770	2.3						
447	235	3.30	6600	2.5						
504	205	2.92	6410	2.9	RX	97	DRN	160M4	175	361
557	188	2.64	6240	3.2	RXF	97	DRN	160M4	185	362
658	159	2.24*	5970	3.7						
753	139	1.96	5750	4.1						
900	116	1.64	5470	4.3						
1040	101	1.42	5240	4.5						
424	245	3.48	5000	1.65						
477	220	3.09	4890	1.85						
534	196	2.76*	4770	2.1						
594	176	2.48	4660	2.3	RX	87	DRN	160M4	150	359
684	153	2.15	4500	2.5	RXF	87	DRN	160M4	155	360
764	137	1.93	4380	2.6						
921	114	1.60*	4170	2.8						
1060	99	1.39	4020	2.9						
607	173	2.43	1980	1.25						
691	151	2.13	2220	1.30						
784	134	1.88*	2400	1.40	RX	77	DRN	160M4	135	357
884	118	1.67	2520	1.45	RXF	77	DRN	160M4	135	358
1035	101	1.42	2630	1.55						

<b>P<sub>m</sub> = 15.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
5.0	26300	295	120000	0.75						
5.5	24300	270	120000	0.80	R	167R107	DRN	160L4	920	405
6.4	20600	229	120000	0.95	RF	167R107	DRN	160L4	920	405
7.4	17900	200	120000	1.10	RM	167R107	DRN	160L4	1120	405
8.7	15100	169	120000	1.30						
5.1	26600	291	120000	0.75	R	167R107	DRN	160L4	910	405
5.6	24100	264	120000	0.85	RF	167R107	DRN	160L4	920	405
6.5	20700	227	120000	0.95	RM	167R107	DRN	160L4	1110	405
7.5	18000	198	120000	1.10						


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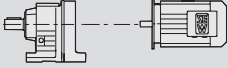

P <sub>m</sub> = 15.0 kW																																																																												
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg																																																																			
5.3	25200	279	120000	0.80	R	167R97	DRN	160L4	870	405																																																																		
					RF	167R97	DRN	160L4	880	405																																																																		
					RM	167R97	DRN	160L4	1070	405																																																																		
6.4	22300	229.71	120000	0.90	R	167	DRN	160L4	740	402																																																																		
					RF	167	DRN	160L4	750	403																																																																		
					RM	167	DRN	160L4	940	403																																																																		
7.9	18100	186.93*	120000	1.10	R	167	DRN	160L4	740	402																																																																		
					RF	167	DRN	160L4	750	403																																																																		
					RM	167	DRN	160L4	940	403																																																																		
9.6	14800	153.07	120000	1.35	R	167	DRN	160L4	740	402																																																																		
											RF	167	DRN	160L4	750	403																																																												
																	RM	167	DRN	160L4	940	403																																																						
																							11	13600	139.98	120000	1.45	R	167	DRN	160L4	740	402																																											
																																		12	11800	121.81*	120000	1.70	RF	167	DRN	160L4	750	403																																
																																													14	10400	107.49	120000	1.90	RM	167	DRN	160L4	940	403																					
																																																								16	9050	93.19	120000	2.2	R	167	DRN	160L4	740	402										
																																																																			18	8050	82.91*	120000	2.5	RF	167	DRN	160L4	750
20	7160	73.70*	120000	2.8	RM	167	DRN	160L4	940	403																																																																		
											22	6540	67.40	120000	3.0	R																																																												
9.0	15800	163.31	38500	0.80	R	147	DRN	160L4	495	400																																																																		
											10	14200	146.91	59000	0.90	RF	147	DRN	160L4	500	401																																																							
																						12	11600	119.86	65200	1.10	RM	147	DRN	160L4	670	401																																												
																																	13	10600	109.31	66900	1.20	R	147	DRN	160L4	495	400																																	
16	9190	94.60*	68900	1.40	R	147	DRN	160L4	495	400																																																																		
											18	8110	83.47	70200	1.60	RF	147	DRN	160L4	500	401																																																							
																						20	7000	72.09	71300	1.85	RM	147	DRN	160L4	670	401																																												
																																	22	6500	66.99	71800	2.0	R	147	DRN	160L4	495	400																																	
																																												24	5930	61.09	72300	2.2	RF	147	DRN	160L4	500	401																						
																																																							28	5130	52.87	72900	2.5	RM	147	DRN	160L4	670	401											
																																																																		32	4530	46.65	73200	2.9	R	147	DRN	160L4	495	400
17	8620	88.70*	51300	0.95	R	137	DRN	160L4	370	398																																																																		
											18	7860	80.91*	53700	1.00	RF	137	DRN	160L4	390	399																																																							
																						20	7140	73.49	55100	1.10	RM	137	DRN	160L4	500	399																																												
																																	23	6330	65.20	56500	1.25	R	137	DRN	160L4	370	398																																	
25	5740	59.17*	57400	1.40	RF	137	DRN	160L4	390	399																																																																		
											29	4940	50.86*	58500	1.60	RM	137	DRN	160L4	500	399																																																							
																						33	4310	44.39	59200	1.85	R	137	DRN	160L4	370	398																																												
																																	39	3650	37.65	59800	2.2	RF	137	DRN	160L4	390	399																																	
																																												45	3190	32.91	60200	2.5	RM	137	DRN	160L4	500	399																						
																																																							53	2700	27.83	60500	2.8	R	137	DRN	160L4	370	398											
																																																																		19	7400	76.21	43000	0.80	RF	127	DRN	160L4	355	397
21	6660	68.61*	43000	0.90	R	127	DRN	160L4	340	396																																																																		
											24	6030	62.13	43000	1.00	RF	127	DRN	160L4	355	397																																																							
																						27	5350	55.09	43000	1.10	RM	127	DRN	160L4	450	397																																												
																																	30	4840	49.81	43000	1.25	R	127	DRN	160L4	340	396																																	
																																												35	4100	42.22*	43000	1.45	RF	127	DRN	160L4	345	397																						
																																																							40	3580	36.88	43000	1.60	RM	127	DRN	160L4	440	397											
																																																																		48	2990	30.84	43000	1.80	R	127	DRN	160L4	325	396
51	2800	28.84	43000	2.1	R	127	DRN	160L4	325	396																																																																		
											57	2530	26.04*	43000	2.4	RF	127	DRN	160L4	345	397																																																							
																						62	2290	23.65	43000	2.6	RM	127	DRN	160L4	440	397																																												
																																	70	2030	20.98	43000	2.9	R	127	DRN	160L4	325	396																																	
																																												77	1850	19.04	43000	3.2	RF	127	DRN	160L4	345	397																						
																																																							90	1590	16.37*	43000	3.8	RM	127	DRN	160L4	440	397											
																																																																		31	4620	47.63	24400	0.95	R	107	DRN	160L4	285	394
42	3420	35.26	23400	1.25	RM	107	DRN	160L4	380	395																																																																		
											50	2860	29.49	22600	1.50	R	107	DRN	160L4	280	394																																																							
																						48	2990	30.77	22800	1.45	RF	107	DRN	160L4	285	395																																												
53	2680	27.58	22300	1.60	R	107	DRN	160L4	280	394																																																																		
											59	2410	24.90*	21800	1.80	RF	107	DRN	160L4	285	395																																																							
																						65	2190	22.62	21400	1.95	RM	107	DRN	160L4	375	395																																												
																																	73	1940	20.07	20800	2.2	R	107	DRN	160L4	280	394																																	
																																												81	1760	18.21	20400	2.4	RF	107	DRN	160L4	285	395																						
																																																							94	1520	15.65	19600	2.8	RM	107	DRN	160L4	375	395											
																																																																		108	1320	13.66	19000	3.2	R	107	DRN	160L4	280	394
59	2410	24.90*	21800	1.80	R	107	DRN	160L4	280	394																																																																		
											65	2190	22.62	21400	1.95	RF	107	DRN	160L4	285	395																																																							
																						73	1940	20.07	20800	2.2	RM	107	DRN	160L4	375	395																																												
																																	81	1760	18.21	20400	2.4	R	107	DRN	160L4	280	394																																	
																																												94	1520	15.65	19600	2.8	RF	107	DRN	160L4	285	395																						
																																																							108	1320	13.66	19000	3.2	RM	107	DRN	160L4	375	395											
																																																																		53	2680	27.58	22300	1.60	R	107	DRN	160L4	280	394
65	2190	22.62	21400	1.95	RM	107	DRN	160L4	375	395																																																																		
											73	1940	20.07	20800	2.2	R	107	DRN	160L4	280	394																																																							
																						81	1760	18.21	20400	2.4	RF	107	DRN	160L4	285	395																																												
																																	94	1520	15.65	19600	2.8	RM	107	DRN	160L4	375	395																																	
																																												108	1320	13.66	19000	3.2	R	107	DRN	160L4	280	394																						
																																																							53	2680	27.58	22300	1.60	RF	107	DRN	160L4	285	395											
																																																																		59	2410	24.90*	21800	1.80	RM	107	DRN	160L4	375	395

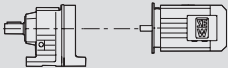

<b>P<sub>m</sub> = 15.0 kW</b>																
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>							
53	2680	27.58	16500	1.00	R	97	DRN	160L4	230	392						
					RF	97	DRN	160L4	245	393						
					RM	97	DRN	160L4	295	393						
59	2430	25.03	16300	1.15	R	97	DRN	160L4	225	392						
66	2170	22.37	16100	1.25		97	DRN	160L4			240	393				
73	1950	20.14	15800	1.35		97	DRN	160L4			295	393				
81	1770	18.24	15500	1.40		RF	97	DRN			160L4	240	393			
91	1570	16.17	15200	1.55		RF	97	DRN			160L4	240	393			
101	1420	14.62	14900	1.60		RM	97	DRN			160L4	295	393			
119	1200	12.39	14400	1.80		RF	97	DRN			160L4	240	393			
136	1050	10.83	13900	2.0		RF	97	DRN			160L4	240	393			
159	900	9.29	13800	2.2		RM	97	DRN			160L4	295	393			
176	810	8.39	13400	2.5		RF	97	DRN			160L4	240	393			
207	690	7.12	12800	2.9		RM	97	DRN			160L4	295	393			
237	600	6.21	12300	3.1	RF	97	DRN	160L4	240	393						
86	1650	17.08*	11600	0.85	R	87	DRN	160L4	185	389						
96	1490	15.35	11500	0.90	RF	87	DRN	160L4	190	390						
111	1290	13.33	11300	1.00	RF	87	DRN	160L4	190	390						
124	1150	11.93	11100	1.05	RM	87	DRN	160L4	220	390						
149	960	9.90*	10700	1.25	R	87	DRN	160L4	185	389						
161	880	9.14*	10900	1.35	RF	87	DRN	160L4	190	390						
179	795	8.22	10700	1.45	RF	87	DRN	160L4	190	390						
207	690	7.13	10300	1.55	RM	87	DRN	160L4	220	390						
231	620	6.39	10000	1.65	RF	87	DRN	160L4	220	390						
278	515	5.30*	9570	1.75	RF	87	DRN	160L4	220	390						
284	500	5.19	8420	1.40	RX	107	DRN	160L4	225	363						
317	450	4.65	8240	1.55												
351	405	4.20*	8080	2.0												
386	370	3.81	7910	2.2												
436	325	3.38	7690	2.5												
480	295	3.07	7520	2.8												
558	255	2.64*	7240	3.2												
640	220	2.30	6990	3.7												
754	189	1.95	6690	4.0												
863	166	1.71	6450	4.2												
1020	140	1.44	6150	4.6												
326	435	4.52	6650	1.35							RXF	107	DRN	160L4	240	364
365	390	4.04	6520	1.50							RXF	107	DRN	160L4	240	364
405	350	3.64*	6380	1.70							RXF	107	DRN	160L4	200	362
447	320	3.30	6250	1.85	RXF	107	DRN	160L4	200	362						
504	280	2.92	6100	2.1	RXF	107	DRN	160L4	190	361						
558	255	2.64	5960	2.3	RXF	107	DRN	160L4	190	361						
658	215	2.24*	5720	2.7	RXF	107	DRN	160L4	200	362						
753	190	1.96	5530	3.0	RXF	107	DRN	160L4	200	362						
901	159	1.64	5280	3.2	RXF	107	DRN	160L4	200	362						
1040	137	1.42	5080	3.3	RXF	107	DRN	160L4	200	362						
424	335	3.48	4310	1.20	RX	87	DRN	160L4	165	359						
477	295	3.09	4500	1.35												
534	265	2.76*	4420	1.50												
594	240	2.48	4340	1.70												
684	205	2.15	4220	1.85												
764	187	1.93	4130	1.90												
921	155	1.60*	3960	2.0												
1060	135	1.39	3830	2.1												
424	335	3.48	4310	1.20							RXF	87	DRN	160L4	170	360
477	295	3.09	4500	1.35							RXF	87	DRN	160L4	170	360

<b>P<sub>m</sub> = 18.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
7.4	22100	200	120000	0.90	R	167R107	DRN	180M4	940	405
					RF	167R107	DRN	180M4	950	405
					RM	167R107	DRN	180M4	1140	405
7.5	22200	198	120000	0.90	R	167R107	DRN	180M4	930	405
					RF	167R107	DRN	180M4	940	405
					RM	167R107	DRN	180M4	1130	405

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<b>P<sub>m</sub> = 18.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>7.9</b>	22300	186.93*	120000	0.90	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>180M4</b>	770	402
<b>9.7</b>	18200	153.07	120000	1.10	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>180M4</b>	770	403
<b>11</b>	16700	139.98	120000	1.20	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>180M4</b>	970	403
<b>12</b>	14500	121.81*	120000	1.35						
<b>14</b>	12800	107.49	120000	1.55	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>180M4</b>	770	402
<b>16</b>	11100	93.19	120000	1.80	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>180M4</b>	770	403
<b>18</b>	9910	82.91*	120000	2.0	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>180M4</b>	970	403
<b>20</b>	8800	73.70*	120000	2.3						
<b>22</b>	8050	67.40	120000	2.5						
<b>25</b>	7000	58.65	120000	2.9						
<b>12</b>	14300	119.86	58400	0.90	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>180M4</b>	520	400
<b>14</b>	13000	109.31	62500	1.00	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>180M4</b>	530	401
<b>16</b>	11300	94.60*	65800	1.15	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>180M4</b>	690	401
<b>18</b>	9970	83.47	67800	1.30						
<b>20</b>	8610	72.09	69600	1.50	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>180M4</b>	520	400
<b>22</b>	8000	66.99	70300	1.60	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>180M4</b>	530	401
<b>24</b>	7300	61.09	71000	1.80	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>180M4</b>	690	401
<b>28</b>	6310	52.87	71900	2.1						
<b>32</b>	5570	46.65	72500	2.3						
<b>37</b>	4810	40.29	73100	2.7						
<b>18</b>	9670	80.91*	37500	0.85	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	390	398
<b>20</b>	8780	73.49	50600	0.90	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	415	399
<b>23</b>	7790	65.20	53800	1.05	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	530	399
<b>25</b>	7070	59.17*	55200	1.15						
<b>29</b>	6070	50.86*	56900	1.30	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	390	398
<b>33</b>	5300	44.39	58000	1.50	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	415	399
<b>39</b>	4500	37.65	59000	1.80	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	530	399
<b>45</b>	3930	32.91	59600	2.0						
<b>53</b>	3320	27.83	60100	2.3						
<b>50</b>	3530	29.57*	59900	2.2	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	380	398
<b>61</b>	2880	24.12	60400	2.8	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	405	399
<b>67</b>	2620	22.00*	60600	3.0	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>180M4</b>	520	399
<b>78</b>	2270	19.04*	60800	3.5						
<b>88</b>	2000	16.80*	60900	4.0						
<b>24</b>	7420	62.13	43000	0.80	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	365	396
<b>27</b>	6580	55.09	43000	0.90	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	375	397
<b>30</b>	5950	49.81	43000	1.00	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	470	397
<b>35</b>	5040	42.22*	43000	1.20						
<b>40</b>	4400	36.88	43000	1.30						
<b>48</b>	3680	30.84	43000	1.45						
<b>57</b>	3110	26.04*	43000	1.95	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	345	396
<b>62</b>	2820	23.65	43000	2.1	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	370	397
<b>70</b>	2500	20.98	43000	2.4	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	465	397
<b>78</b>	2270	19.04	43000	2.6						
<b>90</b>	1950	16.37*	43000	3.1						
<b>103</b>	1700	14.29	43000	3.5						
<b>167</b>	1050	8.85	43000	3.7						
<b>37</b>	4820	40.37*	22100	0.90	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	305	394
<b>42</b>	4210	35.26	22000	1.00	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	310	395
<b>50</b>	3520	29.49	21500	1.20	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	400	395
<b>59</b>	2970	24.90*	20900	1.45	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	300	394
<b>65</b>	2700	22.62	20500	1.60	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	305	395
<b>74</b>	2390	20.07	20100	1.80	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	395	395
<b>81</b>	2170	18.21	19700	2.0						
<b>94</b>	1870	15.65	19000	2.3						
<b>108</b>	1630	13.66	18400	2.6						
<b>128</b>	1380	11.59	17700	3.1						
<b>146</b>	1210	10.13	17100	3.5						
<b>188</b>	930	7.86	16300	3.2						
<b>222</b>	795	6.66	15500	3.7						

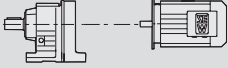

<b>P<sub>m</sub> = 18.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
73	2400	20.14	14900	1.10						
81	2180	18.24	14700	1.15						
91	1930	16.17	14400	1.25						
101	1740	14.62	14200	1.30						
119	1480	12.39	13800	1.50						
137	1290	10.83	13400	1.60	<b>R</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	245	392
159	1100	9.29	13400	1.85	<b>RF</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	265	393
176	1000	8.39	13100	2.0	<b>RM</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	315	393
208	850	7.12	12500	2.4						
238	740	6.21	12100	2.5						
284	620	5.20	11500	2.9						
328	535	4.50*	11100	3.0						
111	1590	13.33	10500	0.80						
124	1420	11.93	10400	0.85						
149	1180	9.90*	10200	1.00	<b>R</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	205	389
162	1090	9.14*	10500	1.10	<b>RF</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	215	390
180	980	8.22	10300	1.20	<b>RM</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	245	390
207	850	7.13	10000	1.25						
231	760	6.39	9750	1.35						
279	630	5.30*	9330	1.45						
352	500	4.20*	7700	1.65						
387	455	3.81	7560	1.80						
437	400	3.38	7390	2.0						
481	365	3.07	7240	2.3						
560	315	2.64*	6990	2.6	<b>RX</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	245	363
641	275	2.30	6770	3.0	<b>RXF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	260	364
756	230	1.95	6500	3.3						
865	200	1.71	6280	3.5						
1025	172	1.44	6000	3.7						
406	435	3.64*	6050	1.35						
448	390	3.30	5950	1.50						
506	345	2.92	5820	1.70						
559	315	2.64	5700	1.90	<b>RX</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	215	361
660	265	2.24*	5500	2.2	<b>RXF</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	220	362
755	230	1.96	5340	2.4						
903	195	1.64	5110	2.6						
1045	169	1.42	4930	2.7						
536	325	2.76*	3090	1.25						
596	295	2.48	3380	1.35						
686	255	2.15	3670	1.50	<b>RX</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	190	359
766	230	1.93	3850	1.55	<b>RXF</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	195	360
924	191	1.60*	3760	1.65						
1060	166	1.39	3660	1.75						

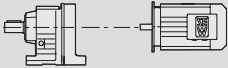

<b>P<sub>m</sub> = 22 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
8.7	22300	169	120000	0.90	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	950	405
					<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	960	405
					<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	1160	405
8.8	22400	168	120000	0.90	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	950	405
					<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	960	405
					<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	1150	405
9.7	21700	153.07	120000	0.90	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>180L4</b>	780	402
11	19900	139.98	120000	1.00	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>180L4</b>	790	403
12	17300	121.81*	120000	1.15	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>180L4</b>	980	403
14	15200	107.49	120000	1.30						
16	13200	93.19	120000	1.50						
18	11700	82.91*	120000	1.70						
20	10400	73.70*	120000	1.90	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>180L4</b>	780	402
22	9580	67.40	120000	2.1	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>180L4</b>	790	403
25	8340	58.65	120000	2.4	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>180L4</b>	980	403
29	7360	51.76	120000	2.7						
33	6380	44.87	120000	3.1						

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<b>P<sub>m</sub> = 22 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
14	15500	109.31	43100	0.85	R	147	DRN	180L4	530	400
16	13400	94.60*	61700	0.95	RF	147	DRN	180L4	540	401
18	11800	83.47	64800	1.10	RM	147	DRN	180L4	710	401
20	10200	72.09	67400	1.25						
22	9520	66.99	68400	1.35						
24	8680	61.09	69500	1.50						
28	7520	52.87	70800	1.75	R	147	DRN	180L4	530	400
32	6630	46.65	71700	1.95	RF	147	DRN	180L4	540	401
37	5730	40.29	72400	2.3	RM	147	DRN	180L4	710	401
41	5060	35.64	72900	2.6						
49	4260	29.95	73400	3.0						
23	9270	65.20	44900	0.85	R	137	DRN	180L4	410	398
25	8410	59.17*	52200	0.95	RF	137	DRN	180L4	430	399
29	7230	50.86*	54900	1.10	RM	137	DRN	180L4	540	399
33	6310	44.39	56500	1.25						
39	5350	37.65	58000	1.50	R	137	DRN	180L4	410	398
45	4680	32.91	58800	1.70	RF	137	DRN	180L4	430	399
53	3950	27.83	59500	1.95	RM	137	DRN	180L4	540	399
50	4200	29.57*	59300	1.85						
61	3430	24.12	60000	2.3	R	137	DRN	180L4	400	398
67	3120	22.00*	60200	2.6	RF	137	DRN	180L4	420	399
78	2700	19.04*	60500	3.0	RM	137	DRN	180L4	530	399
88	2380	16.80*	60700	3.4						
102	2060	14.51	60900	3.9	R	137	DRN	180L4	400	398
115	1820	12.83	61000	4.4	RF	137	DRN	180L4	420	399
					RM	137	DRN	180L4	530	399
30	7080	49.81	43000	0.85	R	127	DRN	180L4	380	396
35	6000	42.22*	43000	1.00	RF	127	DRN	180L4	390	397
40	5240	36.88	43000	1.10	RM	127	DRN	180L4	485	397
48	4380	30.84	43000	1.25						
57	3700	26.04*	43000	1.60						
62	3360	23.65	43000	1.80						
70	2980	20.98	43000	2.0						
78	2700	19.04	43000	2.2	R	127	DRN	180L4	365	396
90	2320	16.37*	43000	2.6	RF	127	DRN	180L4	385	397
103	2030	14.29	43000	3.0	RM	127	DRN	180L4	480	397
122	1720	12.12	43000	3.5						
139	1500	10.59	43000	3.8						
167	1250	8.85	43000	3.1						
197	1060	7.51	43000	3.7						
42	5010	35.26	11500	0.85	R	107	DRN	180L4	320	394
50	4190	29.49	20400	1.05	RF	107	DRN	180L4	330	395
					RM	107	DRN	180L4	415	395
59	3540	24.90*	20000	1.20	R	107	DRN	180L4	315	394
65	3210	22.62	19700	1.35	RF	107	DRN	180L4	320	395
74	2850	20.07	19300	1.50	RM	107	DRN	180L4	410	395
81	2590	18.21	19000	1.65						
94	2220	15.65	18400	1.95						
108	1940	13.66	17900	2.2						
127	1640	11.59	17300	2.6	R	107	DRN	180L4	315	394
146	1440	10.13	16800	3.0	RF	107	DRN	180L4	320	395
172	1210	8.56	16100	3.5	RM	107	DRN	180L4	410	395
188	1110	7.86	16000	2.7						
222	940	6.66	15300	3.1						
254	820	5.82	14800	3.6						
73	2860	20.14	14000	0.90	R	97	DRN	180L4	260	392
81	2590	18.24	13900	0.95	RF	97	DRN	180L4	280	393
91	2300	16.17	13700	1.05	RM	97	DRN	180L4	330	393
101	2080	14.62	13500	1.10						

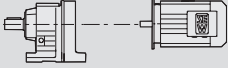



<b>P<sub>m</sub> = 22 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
119	1760	12.39	13200	1.25						
136	1530	10.83	12900	1.35						
159	1320	9.29	13100	1.55						
176	1190	8.39	12800	1.70	R	97	DRN	180L4	260	392
208	1010	7.12	12300	2.0	RF	97	DRN	180L4	280	393
238	880	6.21	11900	2.1	RM	97	DRN	180L4	330	393
284	735	5.20	11300	2.4						
328	640	4.50*	10900	2.5						
149	1400	9.90*	9630	0.85						
162	1300	9.14*	10100	0.95	R	87	DRN	180L4	220	389
180	1160	8.22	9940	1.00	RF	87	DRN	180L4	230	390
207	1010	7.13	9680	1.05	RM	87	DRN	180L4	260	390
231	900	6.39	9470	1.10						
279	750	5.30*	9100	1.20						
352	595	4.20*	7330	1.40						
387	540	3.81	7220	1.55						
436	480	3.38	7080	1.70						
481	435	3.07	6950	1.90						
559	375	2.64*	6740	2.2	RX	107	DRN	180L4	260	363
641	325	2.30	6550	2.5	RXF	107	DRN	180L4	280	364
756	275	1.95	6310	2.8						
865	240	1.71	6100	2.9						
1025	205	1.44	5860	3.1						
406	515	3.64*	5720	1.15						
448	465	3.30	5640	1.25						
505	415	2.92	5550	1.45						
559	375	2.64	5460	1.60	RX	97	DRN	180L4	230	361
659	315	2.24*	5290	1.85	RXF	97	DRN	180L4	235	362
755	275	1.96	5150	2.0						
903	230	1.64	4950	2.2						
1045	200	1.42	4780	2.3						
535	390	2.76*	1320	1.05						
595	350	2.48	1760	1.15						
686	305	2.15	2200	1.25	RX	87	DRN	180L4	205	359
766	270	1.93	2490	1.30	RXF	87	DRN	180L4	210	360
923	225	1.60*	2790	1.40						
1060	197	1.39	3060	1.45						

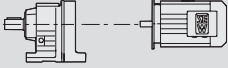

<b>P<sub>m</sub> = 30 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
12	23500	121.81*	120000	0.85	R	167	DRN	200L4	890	402
14	20800	107.49	120000	0.95	RF	167	DRN	200L4	900	403
16	18000	93.19	120000	1.10	RM	167	DRN	200L4	1090	403
18	16000	82.91*	120000	1.25						
20	14200	73.70*	120000	1.40						
22	13000	67.40	120000	1.55						
25	11300	58.65	120000	1.75						
29	10000	51.76	120000	2.0	R	167	DRN	200L4	890	402
33	8680	44.87	120000	2.3	RF	167	DRN	200L4	900	403
37	7720	39.92	120000	2.6	RM	167	DRN	200L4	1090	403
43	6660	34.41	120000	3.0						
53	5410	27.96	120000	3.7						
62	4580	23.71	120000	4.1						
18	16100	83.47	34200	0.80	R	147	DRN	200L4	640	400
21	13900	72.09	60600	0.95	RF	147	DRN	200L4	650	401
22	12900	66.99	62700	1.00	RM	147	DRN	200L4	820	401
24	11800	61.09	64900	1.10						
28	10200	52.87	67400	1.25						
32	9030	46.65	69100	1.45						
37	7790	40.29	70500	1.65	R	147	DRN	200L4	640	400
42	6890	35.64	71400	1.90	RF	147	DRN	200L4	650	401
49	5790	29.95	72400	2.2	RM	147	DRN	200L4	820	401
61	4680	24.19	73200	2.5						

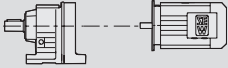

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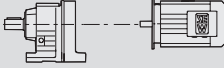

<b>P<sub>m</sub> = 30 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
72	3950	20.44	73600	3.0	R	147	DRN	200L4	630	400
82	3490	18.04	73800	3.0	RF	147	DRN	200L4	640	401
95	3020	15.64	74000	4.3	RM	147	DRN	200L4	810	401
29	9840	50.86*	33600	0.80						
33	8590	44.39	51400	0.95	R	137	DRN	200L4	510	398
39	7280	37.65	54800	1.10	RF	137	DRN	200L4	540	399
45	6370	32.91	56500	1.25	RM	137	DRN	200L4	650	399
53	5380	27.83	57900	1.45						
61	4660	24.12	58800	1.70	R	137	DRN	200L4	500	398
67	4250	22.00*	59200	1.90	RF	137	DRN	200L4	530	399
78	3680	19.04*	59800	2.2	RM	137	DRN	200L4	640	399
88	3250	16.80*	60200	2.5						
102	2800	14.51	59500	2.9	R	137	DRN	200L4	500	398
115	2480	12.83	58300	3.2	RF	137	DRN	200L4	530	399
137	2080	10.79	56600	3.8	RM	137	DRN	200L4	640	399
195	1460	7.59	53200	3.5						
232	1230	6.38	51200	4.1						
40	7130	36.88	43000	0.80	R	127	DRN	200L4	490	396
48	5970	30.84	43000	0.90	RF	127	DRN	200L4	500	397
					RM	127	DRN	200L4	600	397
71	4060	20.98	43000	1.50						
78	3680	19.04	43000	1.65						
90	3160	16.37*	43000	1.90						
104	2760	14.29	43000	2.2	R	127	DRN	200L4	470	396
122	2340	12.12	43000	2.5	RF	127	DRN	200L4	495	397
140	2050	10.59	43000	2.8	RM	127	DRN	200L4	590	397
165	1730	8.96	43000	3.1						
167	1710	8.85	43000	2.3						
197	1450	7.51	43000	2.7						
225	1270	6.56	43000	3.1						
267	1070	5.55	43000	3.7						
74	3880	20.07	17600	1.10						
81	3520	18.21	17400	1.20						
95	3020	15.65	17100	1.40	R	107	DRN	200L4	425	394
108	2640	13.66	16800	1.65	RF	107	DRN	200L4	430	395
128	2240	11.59	16300	1.90	RM	107	DRN	200L4	520	395
146	1960	10.13	15900	2.2						
173	1650	8.56	15300	2.6						
188	1520	7.86	15500	1.95						
222	1280	6.66	14800	2.3						
254	1120	5.82	14300	2.6						
301	950	4.92	13700	3.0						
101	2830	14.62	12000	0.80	R	97	DRN	200L4	370	392
119	2390	12.39	11900	0.90	RF	97	DRN	200L4	390	393
137	2090	10.83	11800	1.00	RM	97	DRN	200L4	440	393
159	1790	9.29	12300	1.15						
176	1620	8.39	12000	1.25						
208	1370	7.12	11700	1.45	R	97	DRN	200L4	370	392
238	1200	6.21	11300	1.55	RF	97	DRN	200L4	390	393
285	1000	5.20	10900	1.75	RM	97	DRN	200L4	440	393
329	870	4.50*	10500	1.85						
437	655	3.38	6370	1.25						
482	590	3.07	6300	1.40						
561	510	2.64*	6180	1.60	RX	107	DRN	200L4	370	363
642	445	2.30	6050	1.85	RXF	107	DRN	200L4	385	364
757	375	1.95	5870	2.0						
866	330	1.71	5710	2.1						
1025	275	1.44	5520	2.3						
506	565	2.92	3170	1.05						
560	510	2.64	3600	1.15						
661	430	2.24*	4090	1.35	RX	97	DRN	200L4	335	361
756	375	1.96	4480	1.50	RXF	97	DRN	200L4	345	362
904	315	1.64	4570	1.60						
1045	270	1.42	4450	1.65						

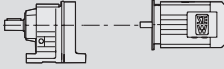

<b>P<sub>m</sub> = 37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
16	22200	93.19	120000	0.90						
18	19700	82.91*	120000	1.00						
20	17500	73.70*	120000	1.15						
22	16000	67.40	120000	1.25						
25	13900	58.65	120000	1.45	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>225S4</b>	920	402
29	12300	51.76	120000	1.60	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>225S4</b>	930	403
33	10600	44.87	120000	1.85	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>225S4</b>	1120	403
37	9510	39.92	120000	2.1						
43	8200	34.41	120000	2.4						
53	6660	27.96	120000	3.0						
48	7320	30.71	120000	1.60						
60	5850	24.57	120000	2.8	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>225S4</b>	910	402
68	5200	21.85	120000	3.8	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>225S4</b>	920	403
78	4530	19.03	120000	4.4	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>225S4</b>	1120	403
87	4040	16.98	120000	4.9						
22	15900	66.99	37000	0.80	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	670	400
24	14500	61.09	55600	0.90	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	680	401
28	12600	52.87	63400	1.05	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	850	401
32	11100	46.65	66100	1.15						
37	9600	40.29	68300	1.35	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	670	400
42	8490	35.64	69700	1.55	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	680	401
49	7140	29.95	71200	1.80	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	850	401
61	5760	24.19	72400	2.1						
73	4870	20.44	73000	2.5	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	660	400
82	4290	18.04	73400	2.4	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	670	401
95	3720	15.64	73700	3.5	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	840	401
107	3310	13.91	73900	3.8	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	660	400
					<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	670	401
					<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>225S4</b>	840	401
39	8970	37.65	49600	0.90	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	550	398
45	7840	32.91	53700	1.00	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	570	399
53	6630	27.83	56000	1.15	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	680	399
61	5750	24.12	57400	1.40	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	540	398
67	5240	22.00*	58100	1.55	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	560	399
78	4530	19.04*	57800	1.75	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	670	399
88	4000	16.80*	57300	2.0						
102	3450	14.51	56500	2.3						
115	3050	12.83	55700	2.6						
137	2570	10.79	54400	3.1	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	540	398
170	2070	8.71	52500	3.8	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	560	399
195	1800	7.59	51800	2.8	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>225S4</b>	670	399
232	1520	6.38	50000	3.4						
288	1220	5.15	47700	3.7						
71	5000	20.98	43000	1.20						
78	4540	19.04	43000	1.30						
91	3900	16.37*	43000	1.55						
104	3400	14.29	43000	1.75						
122	2880	12.12	43000	2.1	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>225S4</b>	500	396
140	2520	10.59	43000	2.3	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>225S4</b>	520	397
165	2130	8.96	43000	2.5	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>225S4</b>	620	397
167	2110	8.85	43000	1.85						
197	1790	7.51	43000	2.2						
226	1560	6.56	43000	2.5						
267	1320	5.55	43000	3.0						
74	4780	20.07	16100	0.90						
81	4340	18.21	16100	1.00						
95	3730	15.65	15900	1.15						
108	3250	13.66	15700	1.30						
128	2760	11.59	15400	1.55	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>225S4</b>	455	394
146	2410	10.13	15100	1.80	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>225S4</b>	460	395
173	2040	8.56	14700	2.1	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>225S4</b>	550	395
189	1870	7.86	15000	1.60						
222	1580	6.66	14400	1.85						
254	1380	5.82	14000	2.1						
301	1170	4.92	13400	2.5						

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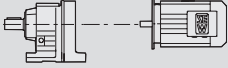

<b>P<sub>m</sub> = 37 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
438	800	3.38	4530	1.05						
483	730	3.07	5010	1.15						
561	625	2.64*	5580	1.30						
643	545	2.30	5610	1.50	RX	107	DRN	225S4	400	363
758	465	1.95	5480	1.65	RXF	107	DRN	225S4	420	364
868	405	1.71	5370	1.75						
1025	340	1.44	5220	1.85						

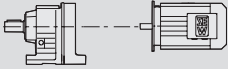

<b>P<sub>m</sub> = 45 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
18	24000	82.91*	120000	0.85						
20	21300	73.70*	120000	0.95	R	167	DRN	225M4	920	402
22	19500	67.40	120000	1.00	RF	167	DRN	225M4	930	403
25	17000	58.65	120000	1.20	RM	167	DRN	225M4	1120	403
29	15000	51.76	120000	1.35						
33	13000	44.87	120000	1.55						
37	11500	39.92	120000	1.75	R	167	DRN	225M4	920	402
43	9970	34.41	120000	2.0	RF	167	DRN	225M4	930	403
53	8100	27.96	120000	2.5	RM	167	DRN	225M4	1120	403
62	6870	23.71	120000	2.7						
48	8900	30.71	120000	1.30						
60	7120	24.57	120000	2.3	R	167	DRN	225M4	910	402
68	6330	21.85	120000	3.2	RF	167	DRN	225M4	920	403
78	5510	19.03	120000	3.6	RM	167	DRN	225M4	1120	403
87	4920	16.98	120000	4.1						
28	15300	52.87	46000	0.85						
32	13500	46.65	61600	0.95	R	147	DRN	225M4	670	400
37	11600	40.29	65100	1.10	RF	147	DRN	225M4	680	401
42	10300	35.64	67300	1.25	RM	147	DRN	225M4	850	401
49	8680	29.95	69500	1.50						
61	7010	24.19	71300	1.70						
73	5920	20.44	72300	2.0						
82	5220	18.04	72800	2.0	R	147	DRN	225M4	660	400
95	4530	15.64	73200	2.9	RF	147	DRN	225M4	670	401
107	4030	13.91	73500	3.1	RM	147	DRN	225M4	840	401
124	3470	11.99	73800	3.7						
204	2100	7.25	74300	4.1						
45	9540	32.91	40100	0.85	R	137	DRN	225M4	550	398
53	8060	27.83	51300	0.95	RF	137	DRN	225M4	570	399
					RM	137	DRN	225M4	680	399
61	6990	24.12	52500	1.15	R	137	DRN	225M4	540	398
67	6370	22.00*	53000	1.25	RF	137	DRN	225M4	560	399
78	5520	19.04*	53400	1.45	RM	137	DRN	225M4	670	399
88	4870	16.80*	53400	1.65						
102	4200	14.51	53100	1.90						
115	3720	12.83	52700	2.1						
137	3120	10.79	51900	2.6	R	137	DRN	225M4	540	398
170	2520	8.71	50500	3.1	RF	137	DRN	225M4	560	399
195	2200	7.59	50100	2.3	RM	137	DRN	225M4	670	399
232	1840	6.38	48600	2.8						
288	1490	5.15	46600	3.1						
71	6080	20.98	43000	1.00						
78	5520	19.04	43000	1.10						
91	4740	16.37*	43000	1.25						
104	4140	14.29	43000	1.45						
122	3510	12.12	43000	1.70	R	127	DRN	225M4	500	396
140	3070	10.59	43000	1.85	RF	127	DRN	225M4	520	397
165	2590	8.96	43000	2.1	RM	127	DRN	225M4	620	397
167	2560	8.85	43000	1.55						
197	2170	7.51	43000	1.80						
226	1900	6.56	43000	2.1						
267	1600	5.55	43000	2.4						

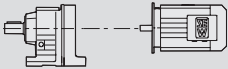

<b>P<sub>m</sub> = 45 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>			<b>m</b> <b>kg</b>			
95	4530	15.65	14600	0.95						
108	3960	13.66	14600	1.10						
128	3350	11.59	14400	1.30						
146	2930	10.13	14300	1.45	<b>R</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	455	394
173	2480	8.56	14000	1.75	<b>RF</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	460	395
189	2270	7.86	14400	1.30	<b>RM</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	550	395
222	1930	6.66	13900	1.55						
254	1680	5.82	13500	1.75						
301	1420	4.92	13000	2.0						
438	980	3.38	1450	0.85						
483	890	3.07	2160	0.95						
561	765	2.64*	3040	1.10	<b>RX</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	400	363
643	665	2.30	3700	1.25	<b>RXF</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	420	364
758	565	1.95	4250	1.35						
868	495	1.71	4590	1.40						
1025	415	1.44	4880	1.55						

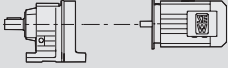

<b>P<sub>m</sub> = 55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>			<b>m</b> <b>kg</b>			
25	20700	58.65	120000	0.95						
29	18300	51.76	120000	1.10						
33	15900	44.87	120000	1.25	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1070	402
37	14100	39.92	120000	1.40	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1080	403
43	12100	34.41	120000	1.65	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1270	403
53	9900	27.96	120000	2.0						
62	8400	23.71	120000	2.2						
60	8700	24.57	120000	1.90	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1070	402
68	7740	21.85	120000	2.6	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1070	403
78	6740	19.03	120000	3.0	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1270	403
87	6010	16.98	120000	3.3	<b>R</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1070	402
102	5120	14.48	120000	3.8	<b>RF</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1070	403
124	4250	11.99	120000	4.5	<b>RM</b>	<b>167</b>	<b>DRN</b>	<b>250M4</b>	1270	403
32	16500	46.65	28000	0.80						
37	14200	40.29	58900	0.90	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	820	400
42	12600	35.64	63400	1.05	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	830	401
49	10600	29.95	66900	1.20	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	1000	401
61	8570	24.19	69700	1.40						
73	7240	20.44	71100	1.65	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	810	400
82	6390	18.04	71900	1.65	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	820	401
95	5540	15.64	72600	2.4	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	990	401
107	4930	13.91	73000	2.6						
124	4240	11.99	73400	3.1	<b>R</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	810	400
152	3450	9.74	73800	3.8	<b>RF</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	820	401
204	2560	7.25	74200	3.4	<b>RM</b>	<b>147</b>	<b>DRN</b>	<b>250M4</b>	990	401
252	2080	5.89	72400	4.2						
78	6740	19.04*	47800	1.20	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>250M4</b>	690	398
88	5950	16.80*	48500	1.35	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>250M4</b>	710	399
102	5140	14.51	48900	1.55	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>250M4</b>	820	399
115	4540	12.83	49000	1.75						
137	3820	10.79	48700	2.1	<b>R</b>	<b>137</b>	<b>DRN</b>	<b>250M4</b>	690	398
170	3080	8.71	48000	2.5	<b>RF</b>	<b>137</b>	<b>DRN</b>	<b>250M4</b>	710	399
195	2690	7.59	48100	1.90	<b>RM</b>	<b>137</b>	<b>DRN</b>	<b>250M4</b>	820	399
232	2260	6.38	46900	2.3						
288	1820	5.15	45200	2.5						
91	5800	16.37*	43000	1.05						
104	5060	14.29	43000	1.20						
122	4290	12.12	43000	1.40						
140	3750	10.59	43000	1.50	<b>R</b>	<b>127</b>	<b>DRN</b>	<b>250M4</b>	650	396
165	3170	8.96	43000	1.70	<b>RF</b>	<b>127</b>	<b>DRN</b>	<b>250M4</b>	670	397
167	3130	8.85	43000	1.25	<b>RM</b>	<b>127</b>	<b>DRN</b>	<b>250M4</b>	770	397
197	2660	7.51	43000	1.50						
226	2320	6.56	43000	1.70						
267	1960	5.55	43000	2.0						

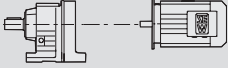

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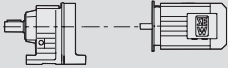

<b>P<sub>m</sub> = 75 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
29	25000	51.76	120000	0.80						
33	21600	44.87	120000	0.90	R	167	DRN	280S4	1120	402
37	19200	39.92	120000	1.05	RF	167	DRN	280S4	1130	403
43	16600	34.41	120000	1.20	RM	167	DRN	280S4	1320	403
53	13500	27.96	120000	1.50						
62	11400	23.71	120000	1.65						
60	11800	24.57	120000	1.40	R	167	DRN	280S4	1110	402
68	10500	21.85	120000	1.90	RF	167	DRN	280S4	1120	403
78	9190	19.03	120000	2.2	RM	167	DRN	280S4	1320	403
87	8200	16.98	120000	2.4	R	167	DRN	280S4	1110	402
102	6990	14.48	120000	2.8	RF	167	DRN	280S4	1120	403
124	5790	11.99	116600	3.3	RM	167	DRN	280S4	1320	403
145	4940	10.24	112700	3.7						
49	14400	29.95	56700	0.90	R	147	DRN	280S4	870	400
61	11600	24.19	65100	1.00	RF	147	DRN	280S4	880	401
					RM	147	DRN	280S4	1050	401
73	9870	20.44	68000	1.20	R	147	DRN	280S4	860	400
82	8710	18.04	69500	1.20	RF	147	DRN	280S4	870	401
95	7550	15.64	70800	1.70	RM	147	DRN	280S4	1040	401
107	6720	13.91	71600	1.85						
124	5790	11.99	72400	2.2	R	147	DRN	280S4	860	400
152	4700	9.74	73100	2.8	RF	147	DRN	280S4	870	401
179	3990	8.26	73500	3.3	RM	147	DRN	280S4	1040	401
204	3500	7.25	73100	2.5						
252	2840	5.89	70100	3.0						
297	2410	5.00	67600	3.6						

<b>P<sub>m</sub> = 90 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
37	23100	39.92	120000	0.85	R	167	DRN	280M4	1240	402
43	19900	34.41	120000	1.00	RF	167	DRN	280M4	1240	403
53	16200	27.96	120000	1.25	RM	167	DRN	280M4	1440	403
62	13700	23.71	120000	1.35						
68	12600	21.85	120000	1.60	R	167	DRN	280M4	1230	402
78	11000	19.03	120000	1.80	RF	167	DRN	280M4	1240	403
					RM	167	DRN	280M4	1430	403
87	9850	16.98	120000	2.0	R	167	DRN	280M4	1230	402
102	8400	14.48	117300	2.4	RF	167	DRN	280M4	1240	403
123	6960	11.99	113500	2.7	RM	167	DRN	280M4	1430	403
145	5940	10.24	110100	3.1						
95	9070	15.64	69000	1.45	R	147	DRN	280M4	970	400
106	8070	13.91	70200	1.55	RF	147	DRN	280M4	980	401
					RM	147	DRN	280M4	1150	401
124	6950	11.99	71400	1.85	R	147	DRN	280M4	970	400
152	5650	9.74	72500	2.3	RF	147	DRN	280M4	980	401
179	4790	8.26	73000	2.7	RM	147	DRN	280M4	1150	401
204	4200	7.25	70900	2.1						
251	3410	5.89	68300	2.5						
296	2890	5.00	66100	3.0						

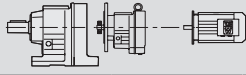

<b>P<sub>m</sub> = 110 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
43	24200	34.41	115800	0.80	R	167	DRN	315S4	1480	402
53	19700	27.96	117100	1.00	RF	167	DRN	315S4	1490	403
63	16700	23.71	116900	1.10	RM	167	DRN	315S4	1680	403
78	13400	19.03	115500	1.50	R	167	DRN	315S4/ERF/NS	1470	402
					RF	167	DRN	315S4/ERF/NS	1480	403
					RM	167	DRN	315S4/ERF/NS	1680	403

<b>P<sub>m</sub> = 110 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
88	11900	16.98	114300	1.65	R	167	DRN	315S4	1470	402
103	10200	14.48	112200	1.95	RF	167	DRN	315S4	1480	403
124	8460	11.99	109200	2.2	RM	167	DRN	315S4	1680	403
145	7220	10.24	106400	2.6						

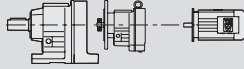

<b>P<sub>m</sub> = 132 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
53	23600	27.96	106500	0.85	R	167	DRN	315M4	1500	402
63	20000	23.71	107900	0.95	RF	167	DRN	315M4	1510	403
					RM	167	DRN	315M4	1700	403
78	16100	19.03	108300	1.25	R	167	DRN	315M4/ERF/NS	1490	402
88	14300	16.98	107800	1.40	RF	167	DRN	315M4/ERF/NS	1500	403
					RM	167	DRN	315M4/ERF/NS	1700	403
103	12200	14.48	106700	1.60	R	167	DRN	315M4	1490	402
124	10100	11.99	104700	1.85	RF	167	DRN	315M4	1500	403
145	8670	10.24	102600	2.1	RM	167	DRN	315M4	1700	403

<b>P<sub>m</sub> = 160 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
103	14800	14.48	99700	1.30	R	167	DRN	315L4	1630	402
124	12300	11.99	98900	1.55	RF	167	DRN	315L4	1630	403
145	10500	10.24	97600	1.75	RM	167	DRN	315L4	1830	403

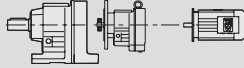

## 8.4 R..R..DRN.. selection tables for low output speeds in Nm

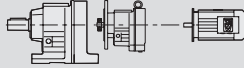

$M_{a \max} = 130 \text{ Nm}$								
$n_a$ $\text{min}^{-1}$	$i$	$F_{Ra}^{1)}$ N					m kg	
0.16	8612	3540						
0.19	7425	3540						
0.20	6921	3540						
0.23	6050	3540						
0.26	5217	3540						
0.30	4661	3540						
0.34	4073	3540						
0.39	3516	3540	R	27R17	DRN	63MS4	12	404
0.44	3160	3540	RF	27R17	DRN	63MS4	12	404
0.50	2763	3540						
0.57	2414	3540						
0.65	2110	3540						
0.74	1862	3540						
0.85	1625	3540						
0.96	1434	3540						
1.1	1254	3540						
0.76	1822	3540						
0.87	1580	3540						
0.94	1464	3540						
1.1	1270	3540						
1.2	1100	3540	R	27R17	DRN	63MS4	12	404
1.4	972	3540	RF	27R17	DRN	63MS4	12	404
1.6	840	3540						
1.9	741	3540						
2.1	654	3540						
2.4	566	3540						
2.8	499	3540						
1.2	1101	3540						
1.4	962	3540						
1.6	848	3540						
1.9	743	3540						
2.1	649	3540						
2.4	567	3540						
2.7	509	3540	R	27R17	DRN	63MS4	12	404
3.2	432	3540	RF	27R17	DRN	63MS4	12	404
3.6	387	3540						
4.1	339	3540						
4.7	296	3540						
5.3	259	3540						
6.0	229	3540						
6.9	200	3540						
7.8	177	3540						
8.3	166	3540	R	27R17	DRN	63M4	13	404
9.1	150	3540	RF	27R17	DRN	63M4	12	404
9.8	141	3540						
11	124	3540						
13	110	3540	R	27R17	DRN	71MS4	13	404
15	94	3540	RF	27R17	DRN	71MS4	13	404
3.1	440	3540						
3.6	381	3540						
4.2	329	3540						
4.8	290	3540	R	27R17	DRN	63MS4	11	404
5.4	256	3540	RF	27R17	DRN	63MS4	11	404
6.1	227	3540						
6.8	203	3540						
7.7	179	3540						
8.8	156	3540	R	27R17	DRN	63M4	12	404
10	135	3540	RF	27R17	DRN	63M4	12	404
12	118	3540						
13	104	3540	R	27R17	DRN	71MS4	13	404
16	90	3540	RF	27R17	DRN	71MS4	13	404



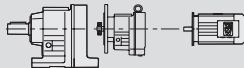

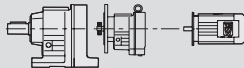

<b>M<sub>a max</sub> = 200 Nm</b>								
<b>n<sub>a</sub> min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup> N</b>					<b>m kg</b>	
0.16	8595	4240						
0.19	7411	4240						
0.20	6907	4240						
0.23	6038	4240						
0.27	5206	4240						
0.30	4651	4240						
0.34	4065	4240						
0.38	3658	4240	R	37R17	DRN	63MS4	18	404
0.44	3154	4240	RF	37R17	DRN	63MS4	19	404
0.50	2757	4240						
0.57	2409	4240						
0.66	2106	4240						
0.74	1856	4240						
0.85	1622	4240						
0.96	1431	4240						
1.1	1251	4240						
0.76	1818	4240						
0.88	1576	4240						
1.0	1359	4240						
1.1	1267	4240						
1.3	1098	4240	R	37R17	DRN	63MS4	18	404
1.4	970	4240	RF	37R17	DRN	63MS4	19	404
1.6	839	4240						
1.9	740	4240						
2.1	653	4240						
2.4	577	4240						
2.8	498	4240						
1.3	1099	4240						
1.4	960	4240						
1.6	847	4240						
1.9	741	4240						
2.1	647	4240	R	37R17	DRN	63MS4	18	404
2.4	566	4240	RF	37R17	DRN	63MS4	19	404
2.7	508	4240						
3.2	431	4240						
3.6	387	4240						
4.1	338	4240						
4.7	296	4240						
5.3	259	4240	R	37R17	DRN	63M4	18	404
6.0	228	4240	RF	37R17	DRN	63M4	20	404
6.9	199	4240						
8.2	172	4240	R	37R17	DRN	71MS4	19	404
9.4	150	4240	RF	37R17	DRN	71MS4	20	404
11	130	4240						
11	124	4240	R	37R17	DRN	71M4	20	404
13	110	4240	RF	37R17	DRN	71M4	22	404
15	94	4240						
3.1	439	4240						
3.6	378	4240	R	37R17	DRN	63MS4	17	404
4.2	328	4240	RF	37R17	DRN	63MS4	19	404
4.8	289	4240						
5.2	265	4240	R	37R17	DRN	63M4	18	404
6.1	226	4240	RF	37R17	DRN	63M4	20	404
6.8	202	4240						
7.9	179	4240	R	37R17	DRN	71MS4	19	404
9.0	156	4240	RF	37R17	DRN	71MS4	20	404
10	135	4240						
11	127	4240	R	37R17	DRN	71M4	20	404
14	104	4240	RF	37R17	DRN	71M4	21	404
16	90	4240						

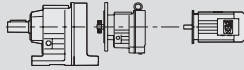

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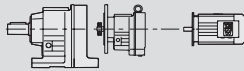

<b>M<sub>a max</sub> = 300 Nm</b>								
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>	
0.10	13598	4990						
0.11	12472	4990						
0.13	10619	4990						
0.15	9155	4990						
0.16	8534	4990						
0.18	7460	4990						
0.20	6993	4990						
0.22	6171	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	29	404
0.25	5624	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	29	404
0.28	4849	4990						
0.31	4520	4990						
0.35	3951	4990						
0.37	3704	4990						
0.42	3268	4990						
0.48	2898	4990						
0.56	2463	4990						
0.53	2598	4990						
0.58	2383	4990						
0.68	2029	4990						
0.79	1749	4990						
0.85	1630	4990						
0.97	1425	4990						
1.0	1336	4990						
1.2	1179	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	29	404
1.3	1074	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	29	404
1.5	927	4990						
1.6	863	4990						
1.8	755	4990						
1.9	708	4990						
2.2	624	4990						
2.5	554	4990						
2.9	471	4990						
0.48	2856	4990						
0.53	2625	4990						
0.61	2246	4990						
0.71	1948	4990						
0.76	1821	4990						
0.88	1573	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	29	404
1.2	1193	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	29	404
1.4	1020	4990						
1.4	955	4990						
1.7	804	4990						
2.0	673	4990						
2.4	572	4990						
2.7	510	4990						
3.1	436	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	29	404
3.4	408	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	29	404
4.0	344	4990						
2.5	546	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	28	404
2.8	502	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	29	404
3.2	429	4990						
3.7	372	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	29	404
4.0	348	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	29	404
4.6	301	4990						
5.5	255	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>71MS4</b>	30	404
6.2	228	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>71MS4</b>	30	404
7.3	195	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>71M4</b>	31	404
7.8	182	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>71M4</b>	31	404
9.2	154	4990						
11	129	4990	<b>R</b>	<b>47R37</b>	<b>DRN</b>	<b>80MK4</b>	33	404
13	109	4990	<b>RF</b>	<b>47R37</b>	<b>DRN</b>	<b>80MK4</b>	33	404
15	98	4990						

<b>M<sub>a max</sub> = 450 Nm</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>		
0.10	14369	7100							
0.11	12095	7100							
0.13	10860	7100							
0.15	9445	7100							
0.16	8480	7100							
0.19	7312	7100							
0.21	6521	7100							
0.25	5585	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	35	404	
0.28	4928	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	38	404	
0.32	4378	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	50	404	
0.36	3873	7100							
0.41	3344	7100							
0.47	2907	7100							
0.54	2567	7100							
0.61	2244	7100							
0.70	1967	7100							
0.47	2957	7100							
0.55	2508	7100							
0.60	2309	7100							
0.69	1991	7100							
0.78	1768	7100							
0.91	1520	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	34	404	
1.0	1342	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	37	404	
1.2	1164	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	49	404	
1.3	1027	7100							
1.5	894	7100							
1.7	805	7100							
2.0	683	7100							
2.3	603	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	34	404	
2.6	534	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	38	404	
3.0	454	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	50	404	
3.4	410	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	35	404	
			<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	38	404	
			<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	50	404	
0.80	1732	7100							
0.89	1555	7100							
0.99	1399	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	34	404	
1.2	1189	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	38	404	
1.3	1034	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	50	404	
1.8	782	7100							
2.0	678	7100							
2.3	604	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	35	404	
2.6	537	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	39	404	
2.9	471	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	51	404	
3.9	357	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	36	404	
4.4	319	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	39	404	
			<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	51	404	
5.2	273	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>71M4</b>	37	404	
5.9	241	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>71M4</b>	40	404	
6.6	215	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>71M4</b>	52	404	
7.7	187	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	39	404	
8.7	164	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	43	404	
10	142	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	55	404	
3.9	359	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	35	404	
4.3	324	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	38	404	
			<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	50	404	
4.9	290	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>71M4</b>	36	404	
5.4	262	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>71M4</b>	39	404	
5.7	246	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>71M4</b>	51	404	
6.4	220	7100							
7.6	188	7100	<b>R</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	38	404	
9.0	159	7100	<b>RF</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	42	404	
9.8	146	7100	<b>RM</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	54	404	

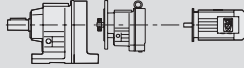

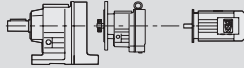

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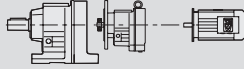

<b>M<sub>a max</sub> = 450 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
11	134	7100	R	57R37	DRN	80M4	42	404
			RF	57R37	DRN	80M4	45	404
			RM	57R37	DRN	80M4	57	404
<b>M<sub>a max</sub> = 600 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.09	15361	7560						
0.11	12931	7560						
0.12	11996	7560						
0.14	10097	7560						
0.15	9066	7560						
0.18	7816	7560						
0.20	6732	7560	R	67R37	DRN	63MS4	41	404
0.23	5970	7560	RF	67R37	DRN	63MS4	44	404
0.26	5268	7560	RM	67R37	DRN	63MS4	60	404
0.29	4680	7560						
0.33	4136	7560						
0.39	3566	7560						
0.44	3125	7560						
0.50	2745	7560						
0.57	2403	7560						
0.51	2682	7560						
0.56	2460	7560						
0.66	2094	7560						
0.76	1805	7560	R	67R37	DRN	63MS4	40	404
0.85	1629	7560	RF	67R37	DRN	63MS4	43	404
0.94	1471	7560	RM	67R37	DRN	63MS4	59	404
1.0	1379	7560						
1.2	1109	7560						
1.4	956	7560						
1.6	891	7560						
1.9	730	7560	R	67R37	DRN	63M4	41	404
2.1	644	7560	RF	67R37	DRN	63M4	44	404
2.4	571	7560	RM	67R37	DRN	63M4	60	404
2.9	486	7560	R	67R37	DRN	71MS4	42	404
			RF	67R37	DRN	71MS4	45	404
			RM	67R37	DRN	71MS4	61	404
0.65	2136	7560						
0.75	1852	7560						
0.84	1652	7560	R	67R37	DRN	63MS4	41	404
0.96	1432	7560	RF	67R37	DRN	63MS4	44	404
1.1	1259	7560	RM	67R37	DRN	63MS4	60	404
1.2	1106	7560						
1.6	836	7560	R	67R37	DRN	63M4	42	404
1.8	750	7560	RF	67R37	DRN	63M4	45	404
2.1	646	7560	RM	67R37	DRN	63M4	61	404
2.4	574	7560						
2.8	495	7560	R	67R37	DRN	71MS4	42	404
			RF	67R37	DRN	71MS4	45	404
			RM	67R37	DRN	71MS4	61	404
3.2	438	7560	R	67R37	DRN	71MS4	42	404
			RF	67R37	DRN	71MS4	45	404
			RM	67R37	DRN	71MS4	61	404
3.6	388	7560	R	67R37	DRN	71M4	44	404
4.1	344	7560	RF	67R37	DRN	71M4	47	404
4.8	294	7560	RM	67R37	DRN	71M4	62	404
5.5	261	7560	R	67R37	DRN	80MK4	46	404
6.1	234	7560	RF	67R37	DRN	80MK4	49	404
7.2	200	7560	RM	67R37	DRN	80MK4	65	404
8.2	176	7560	R	67R37	DRN	80M4	49	404
			RF	67R37	DRN	80M4	52	404
			RM	67R37	DRN	80M4	68	404
9.1	158	7560	R	67R37	DRN	71MS4	41	404
			RF	67R37	DRN	71MS4	45	404
			RM	67R37	DRN	71MS4	60	404

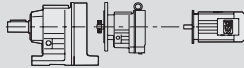

<b>M<sub>a max</sub> = 600 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
3.7	384	7560	R	67R37	DRN	71M4	43	404
3.9	359	7560	RF	67R37	DRN	71M4	46	404
4.6	310	7560	RM	67R37	DRN	71M4	62	404
5.4	264	7560						
6.1	235	7560	R	67R37	DRN	80MK4	45	404
7.1	201	7560	RF	67R37	DRN	80MK4	48	404
7.9	181	7560	RM	67R37	DRN	80MK4	64	404
9.1	159	7560	R	67R37	DRN	80M4	48	404
			RF	67R37	DRN	80M4	51	404
			RM	67R37	DRN	80M4	67	404

<b>M<sub>a max</sub> = 820 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
0.08	16370	9920						
0.09	15015	9920						
0.10	13885	9920						
0.11	12783	9920						
0.13	11021	9920						
0.14	9788	9920						
0.16	8714	9920						
0.18	7617	9920	R	77R37	DRN	63MS4	47	404
0.20	6770	9920	RF	77R37	DRN	63MS4	52	404
0.24	5838	9920	RM	77R37	DRN	63MS4	77	404
0.27	5184	9920						
0.31	4470	9920						
0.35	3999	9920						
0.40	3488	9920						
0.45	3053	9920						
0.52	2671	9920						
0.44	3151	9920						
0.48	2890	9920						
0.56	2460	9920						
0.65	2121	9920	R	77R37	DRN	63MS4	45	404
0.70	1977	9920	RF	77R37	DRN	63MS4	51	404
0.80	1728	9920	RM	77R37	DRN	63MS4	76	404
0.85	1620	9920						
0.97	1430	9920						
1.1	1303	9920						
1.2	1124	9920	R	77R37	DRN	63M4	46	404
1.3	1047	9920	RF	77R37	DRN	63M4	52	404
1.5	915	9920	RM	77R37	DRN	63M4	77	404
1.6	858	9920						
1.9	757	9920	R	77R37	DRN	71MS4	47	404
2.1	671	9920	RF	77R37	DRN	71MS4	53	404
2.5	571	9920	RM	77R37	DRN	71MS4	78	404
0.59	2345	9920						
0.67	2070	9920	R	77R37	DRN	63MS4	46	404
0.76	1822	9920	RF	77R37	DRN	63MS4	52	404
0.87	1580	9920	RM	77R37	DRN	63MS4	77	404
0.99	1394	9920						
1.1	1218	9920						
1.3	1084	9920	R	77R37	DRN	63M4	47	404
1.5	940	9920	RF	77R37	DRN	63M4	53	404
1.7	821	9920	RM	77R37	DRN	63M4	78	404
1.9	731	9920	R	77R37	DRN	71MS4	48	404
2.2	646	9920	RF	77R37	DRN	71MS4	53	404
2.5	560	9920	RM	77R37	DRN	71MS4	78	404
2.9	488	9920	R	77R37	DRN	71M4	49	404
3.2	436	9920	RF	77R37	DRN	71M4	55	404
3.8	373	9920	RM	77R37	DRN	71M4	80	404
4.4	327	9920	R	77R37	DRN	80MK4	51	404
5.0	289	9920	RF	77R37	DRN	80MK4	57	404
5.5	260	9920	RM	77R37	DRN	80MK4	82	404

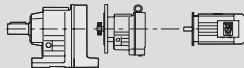

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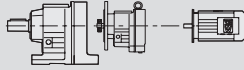

<b>M<sub>a max</sub> = 820 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
6.4	224	9920	R	77R37	DRN	80M4	55	404	
7.3	197	9920	RF	77R37	DRN	80M4	60	404	
			RM	77R37	DRN	80M4	85	404	
8.6	169	9920	R	77R37	DRN	90S4	60	404	
9.8	149	9920	RF	77R37	DRN	90S4	66	404	
			RM	77R37	DRN	90S4	91	404	
2.7	520	9920	R	77R37	DRN	71M4	48	404	
3.1	451	9920	RF	77R37	DRN	71M4	54	404	
3.4	422	9920	RM	77R37	DRN	71M4	79	404	
3.9	365	9920							
4.6	310	9920	R	77R37	DRN	80MK4	50	404	
5.2	276	9920	RF	77R37	DRN	80MK4	56	404	
			RM	77R37	DRN	80MK4	81	404	
6.1	236	9920	R	77R37	DRN	80M4	54	404	
6.5	221	9920	RF	77R37	DRN	80M4	59	404	
7.7	186	9920	RM	77R37	DRN	80M4	84	404	
<b>M<sub>a max</sub> = 1550 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
0.08	17452	12500							
0.09	15310	12500							
0.10	13813	12500							
0.11	12025	12500							
0.13	10549	12500							
0.15	9244	12500							
0.17	8109	12500	R	87R57	DRN	63MS4	86	404	
0.20	7038	16900	RF	87R57	DRN	63MS4	93	404	
0.22	6174	16900	RM	87R57	DRN	63MS4	125	404	
0.25	5449	16900							
0.29	4831	16900							
0.33	4206	16900							
0.37	3744	16900							
0.43	3233	16900							
0.48	2873	12500							
0.55	2518	12500	R	87R57	DRN	63M4	87	404	
0.62	2209	12500	RF	87R57	DRN	63M4	94	404	
0.70	1961	16900	RM	87R57	DRN	63M4	125	404	
1.4	994	16900	R	87R57	DRN	71M4	89	404	
1.6	881	16900	RF	87R57	DRN	71M4	96	404	
			RM	87R57	DRN	71M4	125	404	
0.34	4020	16900							
0.37	3703	16900	R	87R57	DRN	63MS4	85	404	
0.43	3182	16900	RF	87R57	DRN	63MS4	92	404	
0.50	2770	16900	RM	87R57	DRN	63MS4	120	404	
0.53	2595	16900							
0.65	2129	16900							
0.71	1930	16900	R	87R57	DRN	63M4	86	404	
0.79	1733	16900	RF	87R57	DRN	63M4	93	404	
0.92	1489	16900	RM	87R57	DRN	63M4	120	404	
1.0	1395	16900	R	87R57	DRN	71MS4	86	404	
1.1	1232	16900	RF	87R57	DRN	71MS4	93	404	
1.2	1145	16900	RM	87R57	DRN	71MS4	125	404	
1.4	1037	16900							
1.5	931	16900	R	87R57	DRN	71M4	87	404	
1.8	802	16900	RF	87R57	DRN	71M4	95	404	
1.9	754	16900	RM	87R57	DRN	71M4	125	404	
2.2	649	16900	R	87R57	DRN	80MK4	90	404	
2.5	580	16900	RF	87R57	DRN	80MK4	97	404	
			RM	87R57	DRN	80MK4	125	404	
0.79	1737	12500	R	87R57	DRN	63M4	86	404	
0.90	1524	12500	RF	87R57	DRN	63M4	93	404	
			RM	87R57	DRN	63M4	125	404	

<b>M<sub>a max</sub> = 1550 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
1.1	1303	12500	R	87R57	DRN	71MS4	87	404
1.2	1143	12500	RF	87R57	DRN	71MS4	94	404
			RM	87R57	DRN	71MS4	125	404
1.4	1008	12500	R	87R57	DRN	71M4	88	404
1.6	885	16900	RF	87R57	DRN	71M4	95	404
1.8	776	16900	RM	87R57	DRN	71M4	125	404
2.1	685	16900	R	87R57	DRN	80MK4	90	404
2.4	599	12500	RF	87R57	DRN	80MK4	98	404
2.7	525	12500	RM	87R57	DRN	80MK4	125	404
3.2	456	16900	R	87R57	DRN	80M4	94	404
3.6	398	16900	RF	87R57	DRN	80M4	100	404
4.1	352	16900	RM	87R57	DRN	80M4	130	404
4.8	305	16900	R	87R57	DRN	90S4	100	404
5.4	268	16900	RF	87R57	DRN	90S4	105	404
6.2	236	16900	RM	87R57	DRN	90S4	135	404
7.0	209	16900	R	87R57	DRN	90L4	105	404
			RF	87R57	DRN	90L4	110	404
			RM	87R57	DRN	90L4	140	404
2.7	538	16900	R	87R57	DRN	80MK4	89	404
3.0	472	16900	RF	87R57	DRN	80MK4	96	404
			RM	87R57	DRN	80MK4	125	404
3.6	400	16900	R	87R57	DRN	80M4	92	404
4.0	361	16900	RF	87R57	DRN	80M4	100	404
			RM	87R57	DRN	80M4	130	404
4.8	300	16900	R	87R57	DRN	90S4	99	404
5.7	256	16900	RF	87R57	DRN	90S4	105	404
6.3	232	16900	RM	87R57	DRN	90S4	135	404
7.5	195	16900	R	87R57	DRN	90L4	100	404
			RF	87R57	DRN	90L4	110	404
			RM	87R57	DRN	90L4	140	404

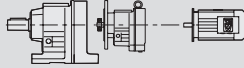

<b>M<sub>a max</sub> = 3000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.06	21769	13100						
0.07	19332	13100						
0.08	17230	13100						
0.09	14999	13100						
0.10	13320	13100						
0.12	11156	13100	R	97R57	DRN	63MS4	130	404
0.14	10030	13100	RF	97R57	DRN	63MS4	145	404
0.16	8706	13100	RM	97R57	DRN	63MS4	195	404
0.18	7692	13100						
0.21	6708	13100						
0.23	5931	19800						
0.27	5161	19800						
0.30	4559	19800						
0.34	4004	13100	R	97R57	DRN	63M4	130	404
0.40	3481	13100	RF	97R57	DRN	63M4	145	404
			RM	97R57	DRN	63M4	200	404
0.29	4678	19800	R	97R57	DRN	63MS4	125	404
			RF	97R57	DRN	63MS4	145	404
			RM	97R57	DRN	63MS4	195	404
0.32	4309	19800	R	97R57	DRN	63M4	125	404
0.37	3702	19800	RF	97R57	DRN	63M4	145	404
0.46	3019	19800	RM	97R57	DRN	63M4	195	404
0.53	2668	19800	R	97R57	DRN	71MS4	125	404
0.63	2245	19800	RF	97R57	DRN	71MS4	145	404
			RM	97R57	DRN	71MS4	195	404

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<b>M<sub>a max</sub> = 3000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
0.70	2016	19800	R	97R57	DRN	71M4	130	404
0.82	1733	19800	RF	97R57	DRN	71M4	145	404
0.87	1623	19800	RM	97R57	DRN	71M4	195	404
0.99	1434	19800						
1.2	1207	19800	R	97R57	DRN	80MK4	130	404
1.3	1084	19800	RF	97R57	DRN	80MK4	150	404
1.5	934	19800	RM	97R57	DRN	80MK4	200	404
1.6	878	19800	R	97R57	DRN	80M4	135	404
1.9	755	19800	RF	97R57	DRN	80M4	150	404
			RM	97R57	DRN	80M4	200	404
0.45	3065	13100	R	97R57	DRN	63M4	130	404
			RF	97R57	DRN	63M4	145	404
			RM	97R57	DRN	63M4	195	404
0.52	2722	13100	R	97R57	DRN	71MS4	130	404
0.61	2311	13100	RF	97R57	DRN	71MS4	145	404
0.68	2078	13100	RM	97R57	DRN	71MS4	195	404
0.78	1823	13100	R	97R57	DRN	71M4	130	404
0.89	1583	13100	RF	97R57	DRN	71M4	145	404
1.0	1396	13100	RM	97R57	DRN	71M4	200	404
1.2	1228	13100	R	97R57	DRN	80MK4	135	404
1.3	1069	19800	RF	97R57	DRN	80MK4	150	404
1.5	938	19800	RM	97R57	DRN	80MK4	200	404
1.8	824	13100	R	97R57	DRN	80M4	135	404
1.9	737	13100	RF	97R57	DRN	80M4	155	404
			RM	97R57	DRN	80M4	205	404
2.3	632	19800	R	97R57	DRN	90S4	140	404
2.6	560	19800	RF	97R57	DRN	90S4	160	404
3.0	484	13100	RM	97R57	DRN	90S4	210	404
3.4	431	19800	R	97R57	DRN	90L4	145	404
3.9	379	19800	RF	97R57	DRN	90L4	165	404
4.3	336	19800	RM	97R57	DRN	90L4	215	404
4.9	296	19800	R	97R57	DRN	100LS4	150	404
5.8	249	19800	RF	97R57	DRN	100LS4	165	404
6.2	234	19800	RM	97R57	DRN	100LS4	220	404
7.0	209	19800	R	97R57	DRN	100L4	155	404
			RF	97R57	DRN	100L4	175	404
			RM	97R57	DRN	100L4	225	404
2.3	625	19800	R	97R57	DRN	90S4	140	404
2.6	549	19800	RF	97R57	DRN	90S4	155	404
3.1	466	19800	RM	97R57	DRN	90S4	210	404
3.5	420	19800	R	97R57	DRN	90L4	140	404
4.0	370	19800	RF	97R57	DRN	90L4	160	404
4.2	349	19800	RM	97R57	DRN	90L4	210	404
4.9	297	19800	R	97R57	DRN	100LS4	145	404
5.4	270	19800	RF	97R57	DRN	100LS4	165	404
6.4	227	19800	RM	97R57	DRN	100LS4	215	404

<b>M<sub>a max</sub> = 4300 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
0.07	20018	29500						
0.08	17080	29500						
0.09	14936	29500						
0.11	12829	29500	R	107R77	DRN	63MS4	200	404
0.12	11256	29500	RF	107R77	DRN	63MS4	210	404
0.14	9547	29500	RM	107R77	DRN	63MS4	295	404
0.16	8618	29500						
0.18	7583	29500						
0.20	6743	29500	R	107R77	DRN	63M4	205	404
0.23	5914	29500	RF	107R77	DRN	63M4	210	404
0.27	5168	29500	RM	107R77	DRN	63M4	295	404



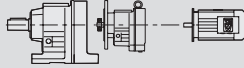

<b>M<sub>a max</sub> = 4300 Nm</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>		
<b>0.32</b>	4435	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	205	404	
<b>0.36</b>	3896	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	210	404	
<b>0.41</b>	3432	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	300	404	
<b>0.46</b>	3039	29500							
<b>0.53</b>	2688	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	205	404	
			<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	210	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	300	404	
<b>0.62</b>	2339	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	210	404	
			<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	215	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	305	404	
<b>0.36</b>	3918	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	195	404	
<b>0.42</b>	3343	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	205	404	
<b>0.46</b>	3034	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	290	404	
<b>0.53</b>	2653	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	200	404	
<b>0.62</b>	2280	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	205	404	
<b>0.68</b>	2067	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	290	404	
<b>0.85</b>	1693	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	200	404	
<b>0.93</b>	1550	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	205	404	
<b>1.0</b>	1407	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	295	404	
<b>1.2</b>	1209	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	205	404	
<b>1.4</b>	1055	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	210	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	300	404	
<b>1.6</b>	919	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	210	404	
<b>1.8</b>	815	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	215	404	
<b>2.0</b>	717	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	305	404	
<b>2.3</b>	626	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	210	404	
<b>2.8</b>	528	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	220	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	305	404	
<b>0.71</b>	1987	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	205	404	
			<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	210	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>71M4</b>	300	404	
<b>0.79</b>	1827	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	205	404	
<b>0.90</b>	1599	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	210	404	
<b>1.0</b>	1400	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	300	404	
<b>1.2</b>	1226	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	210	404	
<b>1.3</b>	1104	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	215	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>80M4</b>	305	404	
<b>1.6</b>	939	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	215	404	
<b>1.8</b>	822	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	220	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	310	404	
<b>2.4</b>	614	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	220	404	
<b>2.7</b>	544	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	225	404	
<b>3.0</b>	492	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	310	404	
<b>3.5</b>	417	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	220	404	
<b>3.9</b>	369	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	230	404	
<b>4.5</b>	323	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	315	404	
<b>5.1</b>	285	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	230	404	
<b>5.8</b>	253	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	235	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	325	404	
<b>6.8</b>	214	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>112M4</b>	240	404	
<b>7.8</b>	187	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>112M4</b>	245	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>112M4</b>	330	404	
<b>3.1</b>	469	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	210	404	
			<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	215	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	305	404	
<b>3.4</b>	426	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	215	404	
<b>3.8</b>	377	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	220	404	
<b>4.5</b>	325	29500	<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	310	404	
<b>5.1</b>	284	29500	<b>R</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	225	404	
<b>5.7</b>	256	29500	<b>RF</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	230	404	
			<b>RM</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	315	404	

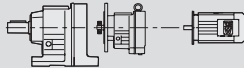

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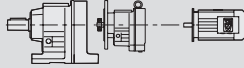

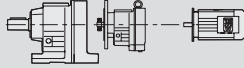

## Helical gearmotors

R..R..DRN.. selection tables for low output speeds in Nm

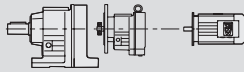

<b>M<sub>a max</sub> = 4300 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
6.7	220	29500	R	107R77	DRN	112M4	230	404
7.6	193	29500	RF	107R77	DRN	112M4	240	404
			RM	107R77	DRN	112M4	325	404
8.5	172	29500	R	107R77	DRN	132S4	245	404
			RF	107R77	DRN	132S4	250	404
			RM	107R77	DRN	132S4	335	404

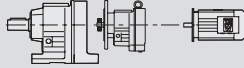

<b>M<sub>a max</sub> = 6000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
0.07	20936	43000						
0.08	17863	43000						
0.09	15620	43000	R	127R77	DRN	63MS4	260	404
0.10	14123	43000	RF	127R77	DRN	63MS4	270	404
0.10	13417	43000	RM	127R77	DRN	63MS4	365	404
0.12	11772	43000						
0.14	9985	43000						
0.15	9013	43000						
0.16	8771	43000						
0.17	8282	43000	R	127R77	DRN	63M4	260	404
0.18	7639	43000	RF	127R77	DRN	63M4	270	404
0.19	7053	43000	RM	127R77	DRN	63M4	365	404
0.20	6722	43000						
0.22	6347	43000						
0.22	6185	43000						
0.25	5592	43000	R	127R77	DRN	71MS4	260	404
0.30	4740	43000	RF	127R77	DRN	71MS4	270	404
0.32	4441	43000	RM	127R77	DRN	71MS4	365	404
0.36	3949	43000	R	127R77	DRN	71M4	260	404
0.38	3764	43000	RF	127R77	DRN	71M4	275	404
0.40	3571	43000	RM	127R77	DRN	71M4	370	404
0.46	3110	43000						
0.51	2812	43000	R	127R77	DRN	80MK4	265	404
0.60	2383	43000	RF	127R77	DRN	80MK4	275	404
0.74	1934	43000	RM	127R77	DRN	80MK4	370	404
0.78	1835	43000	R	127R77	DRN	80M4	265	404
0.93	1555	43000	RF	127R77	DRN	80M4	280	404
1.0	1444	43000	RM	127R77	DRN	80M4	375	404
1.2	1224	43000	R	127R77	DRN	90S4	270	404
			RF	127R77	DRN	90S4	285	404
			RM	127R77	DRN	90S4	380	404
0.40	3495	43000	R	127R77	DRN	71M4	245	404
0.46	3056	43000	RF	127R77	DRN	71M4	265	404
0.49	2903	43000	RM	127R77	DRN	71M4	360	404
0.56	2547	43000	R	127R77	DRN	80MK4	250	404
0.66	2161	43000	RF	127R77	DRN	80MK4	270	404
0.74	1951	43000	RM	127R77	DRN	80MK4	365	404
0.84	1716	43000	R	127R77	DRN	80M4	250	404
0.89	1620	43000	RF	127R77	DRN	80M4	270	404
1.0	1380	43000	RM	127R77	DRN	80M4	370	404
1.2	1210	43000	R	127R77	DRN	90S4	255	404
1.5	961	43000	RF	127R77	DRN	90S4	275	404
			RM	127R77	DRN	90S4	375	404
1.9	773	43000	R	127R77	DRN	90L4	260	404
			RF	127R77	DRN	90L4	280	404
			RM	127R77	DRN	90L4	375	404
2.4	608	43000	R	127R77	DRN	100LS4	265	404
			RF	127R77	DRN	100LS4	285	404
			RM	127R77	DRN	100LS4	380	404

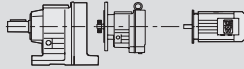

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<b>M<sub>a max</sub> = 6000 Nm</b>									
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg		
0.57	2506	43000	R	127R77	DRN	80MK4	265	404	
0.63	2266	43000	RF	127R77	DRN	80MK4	275	404	
0.71	2016	43000	RM	127R77	DRN	80MK4	370	404	
0.75	1920	43000							
0.79	1823	43000	R	127R77	DRN	80M4	265	404	
0.86	1673	43000	RF	127R77	DRN	80M4	275	404	
0.93	1545	43000	RM	127R77	DRN	80M4	375	404	
0.95	1512	43000							
1.1	1322	43000							
1.1	1282	43000							
1.2	1195	43000							
1.2	1164	43000	R	127R77	DRN	90S4	270	404	
1.4	1034	43000	RF	127R77	DRN	90S4	280	404	
1.4	1013	43000	RM	127R77	DRN	90S4	380	404	
1.5	987	43000							
1.6	936	43000							
1.6	935	43000							
1.8	830	43000	R	127R77	DRN	90L4	275	404	
1.8	794	43000	RF	127R77	DRN	90L4	285	404	
1.8	792	43000	RM	127R77	DRN	90L4	380	404	
1.9	777	43000							
1.9	750	43000							
2.2	659	43000							
2.3	642	43000							
2.3	636	43000	R	127R77	DRN	100LS4	280	404	
2.4	614	43000	RF	127R77	DRN	100LS4	290	404	
2.5	581	43000	RM	127R77	DRN	100LS4	385	404	
2.8	521	43000							
2.9	492	43000							
3.0	480	43000							
3.6	407	43000	R	127R77	DRN	100L4	285	404	
3.8	386	43000	RF	127R77	DRN	100L4	295	404	
3.8	386	43000	RM	127R77	DRN	100L4	395	404	
4.9	298	43000	R	127R77	DRN	112M4	295	404	
5.8	253	43000	RF	127R77	DRN	112M4	305	404	
5.8	253	43000	RM	127R77	DRN	112M4	400	404	
3.0	490	43000	R	127R77	DRN	100LS4	260	404	
3.0	490	43000	RF	127R77	DRN	100LS4	285	404	
3.0	490	43000	RM	127R77	DRN	100LS4	380	404	
3.7	394	43000	R	127R77	DRN	100L4	270	404	
4.5	327	43000	RF	127R77	DRN	100L4	290	404	
4.5	327	43000	RM	127R77	DRN	100L4	385	404	
5.7	259	43000	R	127R77	DRN	112M4	280	404	
5.7	259	43000	RF	127R77	DRN	112M4	300	404	
5.7	259	43000	RM	127R77	DRN	112M4	395	404	
7.2	202	43000	R	127R77	DRN	132S4	290	404	
7.2	202	43000	RF	127R77	DRN	132S4	310	404	
7.2	202	43000	RM	127R77	DRN	132S4	405	404	
9.0	162	43000	R	127R77	DRN	132M4	310	404	
9.0	162	43000	RF	127R77	DRN	132M4	330	404	
9.0	162	43000	RM	127R77	DRN	132M4	425	404	
12	126	43000	R	127R77	DRN	132L4	315	404	
12	126	43000	RF	127R77	DRN	132L4	335	404	
12	126	43000	RM	127R77	DRN	132L4	435	404	
<b>M<sub>a max</sub> = 8000 Nm</b>									
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg		
0.06	22203	53400	R	137R77	DRN	63MS4	290	404	
0.07	18945	53400	RF	137R77	DRN	63MS4	310	404	
0.08	16566	53400	RM	137R77	DRN	63MS4	425	404	
0.09	14777	53400							
0.11	12921	53400							

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<b>M<sub>a max</sub> = 8000 Nm</b>									
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg		
0.12	11712	53400	R	137R77	DRN	63M4	290	404	
0.13	10573	53400	RF	137R77	DRN	63M4	315	404	
0.16	8784	53400	RM	137R77	DRN	63M4	425	404	
0.19	7479	53400	R	137R77	DRN	71MS4	290	404	
0.21	6559	53400	RF	137R77	DRN	71MS4	315	404	
			RM	137R77	DRN	71MS4	425	404	
0.24	5834	53400	R	137R77	DRN	71M4	290	404	
0.28	5116	53400	RF	137R77	DRN	71M4	315	404	
0.32	4464	53400	RM	137R77	DRN	71M4	425	404	
0.36	3928	53400							
0.42	3454	53400	R	137R77	DRN	80MK4	295	404	
0.48	2993	53400	RF	137R77	DRN	80MK4	315	404	
			RM	137R77	DRN	80MK4	430	404	
0.30	4709	53400	R	137R77	DRN	71M4	280	404	
0.35	4018	53400	RF	137R77	DRN	71M4	305	404	
			RM	137R77	DRN	71M4	415	404	
0.41	3514	53400	R	137R77	DRN	80MK4	285	404	
0.43	3338	53400	RF	137R77	DRN	80MK4	305	404	
0.49	2929	53400	RM	137R77	DRN	80MK4	420	404	
0.58	2484	53400							
0.64	2242	53400	R	137R77	DRN	80M4	285	404	
0.77	1863	53400	RF	137R77	DRN	80M4	310	404	
			RM	137R77	DRN	80M4	420	404	
0.92	1586	53400	R	137R77	DRN	90S4	290	404	
1.1	1391	53400	RF	137R77	DRN	90S4	315	404	
1.2	1256	53400	RM	137R77	DRN	90S4	425	404	
1.3	1105	53400	R	137R77	DRN	90L4	295	404	
1.4	1043	53400	RF	137R77	DRN	90L4	320	404	
			RM	137R77	DRN	90L4	430	404	
1.6	888	53400	R	137R77	DRN	100LS4	300	404	
2.1	699	53400	RF	137R77	DRN	100LS4	325	404	
2.4	609	53400	RM	137R77	DRN	100LS4	435	404	
0.54	2658	53400	R	137R77	DRN	80MK4	295	404	
			RF	137R77	DRN	80MK4	315	404	
			RM	137R77	DRN	80MK4	425	404	
0.60	2412	53400	R	137R77	DRN	80M4	295	404	
0.69	2073	53400	RF	137R77	DRN	80M4	320	404	
0.78	1839	53400	RM	137R77	DRN	80M4	430	404	
0.91	1598	53400	R	137R77	DRN	90S4	300	404	
1.0	1397	53400	RF	137R77	DRN	90S4	325	404	
1.2	1226	53400	RM	137R77	DRN	90S4	435	404	
1.3	1090	53400	R	137R77	DRN	90L4	305	404	
1.5	951	53400	RF	137R77	DRN	90L4	325	404	
			RM	137R77	DRN	90L4	440	404	
1.7	831	53400	R	137R77	DRN	100LS4	310	404	
2.0	730	53400	RF	137R77	DRN	100LS4	330	404	
2.3	629	53400	RM	137R77	DRN	100LS4	445	404	
2.6	560	53400	R	137R77	DRN	100L4	315	404	
3.0	490	53400	RF	137R77	DRN	100L4	340	404	
			RM	137R77	DRN	100L4	450	404	
3.4	428	53400	R	137R77	DRN	112M4	325	404	
3.8	381	53400	RF	137R77	DRN	112M4	350	404	
			RM	137R77	DRN	112M4	460	404	
4.5	323	53400	R	137R77	DRN	132S4	335	404	
5.0	291	53400	RF	137R77	DRN	132S4	360	404	
5.7	255	53400	RM	137R77	DRN	132S4	470	404	
6.6	223	53400	R	137R77	DRN	132M4	355	404	
7.4	197	53400	RF	137R77	DRN	132M4	375	404	
			RM	137R77	DRN	132M4	490	404	
8.4	175	53400	R	137R77	DRN	132L4	360	404	
			RF	137R77	DRN	132L4	385	404	
			RM	137R77	DRN	132L4	495	404	

<b>M<sub>a max</sub> = 8000 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
2.6	564	53400	R	137R77	DRN	100L4	305	404	
2.8	517	53400	RF	137R77	DRN	100L4	330	404	
3.2	453	53400	RM	137R77	DRN	100L4	440	404	
3.9	376	53400	R	137R77	DRN	112M4	315	404	
4.3	339	53400	RF	137R77	DRN	112M4	340	404	
			RM	137R77	DRN	112M4	450	404	
4.9	297	53400	R	137R77	DRN	132S4	325	404	
			RF	137R77	DRN	132S4	350	404	
			RM	137R77	DRN	132S4	460	404	

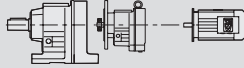

<b>M<sub>a max</sub> = 13000 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
0.06	23401	62700	R	147R77	DRN	63MS4	420	404	
0.06	21342	62700	RF	147R77	DRN	63MS4	430	404	
			RM	147R77	DRN	63MS4	600	404	
0.08	18210	62700	R	147R77	DRN	63M4	420	404	
0.09	15923	62700	RF	147R77	DRN	63M4	430	404	
0.10	14075	62700	RM	147R77	DRN	63M4	600	404	
0.11	12344	62700	R	147R77	DRN	71MS4	420	404	
0.13	11143	62700	RF	147R77	DRN	71MS4	430	404	
0.14	9743	62700	RM	147R77	DRN	71MS4	600	404	
0.17	8443	62700	R	147R77	DRN	71M4	425	404	
0.19	7307	62700	RF	147R77	DRN	71M4	430	404	
0.22	6447	62700	RM	147R77	DRN	71M4	600	404	
0.26	5568	62700	R	147R77	DRN	80MK4	425	404	
0.29	4926	62700	RF	147R77	DRN	80MK4	435	404	
0.33	4325	62700	RM	147R77	DRN	80MK4	600	404	
0.38	3754	62700	R	147R77	DRN	80M4	430	404	
0.44	3302	62700	RF	147R77	DRN	80M4	435	404	
			RM	147R77	DRN	80M4	600	404	
0.50	2898	62700	R	147R77	DRN	90S4	435	404	
			RF	147R77	DRN	90S4	440	404	
			RM	147R77	DRN	90S4	610	404	
0.57	2555	62700	R	147R77	DRN	90S4	435	404	
0.66	2211	62700	RF	147R77	DRN	90S4	440	404	
			RM	147R77	DRN	90S4	610	404	
0.75	1951	62700	R	147R77	DRN	90L4	435	404	
0.86	1705	62700	RF	147R77	DRN	90L4	445	404	
0.95	1536	62700	RM	147R77	DRN	90L4	610	404	
1.1	1329	62700	R	147R77	DRN	100LS4	440	404	
1.2	1166	62700	RF	147R77	DRN	100LS4	450	404	
1.4	1029	62700	RM	147R77	DRN	100LS4	620	404	
1.6	889	62700	R	147R77	DRN	100L4	445	404	
1.9	784	62700	RF	147R77	DRN	100L4	455	404	
			RM	147R77	DRN	100L4	620	404	
2.1	695	62700	R	147R77	DRN	112M4	455	404	
2.4	619	62700	RF	147R77	DRN	112M4	465	404	
2.6	558	62700	RM	147R77	DRN	112M4	630	404	
3.0	489	62700	R	147R77	DRN	132S4	470	404	
3.5	415	62700	RF	147R77	DRN	132S4	475	404	
			RM	147R77	DRN	132S4	640	404	
2.7	533	62700	R	147R87	DRN	132S4	490	404	
3.2	462	62700	RF	147R87	DRN	132S4	495	404	
3.4	426	62700	RM	147R87	DRN	132S4	660	404	
4.0	368	62700	R	147R87	DRN	132M4	510	404	
4.5	326	62700	RF	147R87	DRN	132M4	510	404	
			RM	147R87	DRN	132M4	680	404	
5.2	280	62700	R	147R87	DRN	132L4	510	404	
6.0	247	62700	RF	147R87	DRN	132L4	520	404	
			RM	147R87	DRN	132L4	690	404	

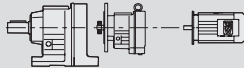

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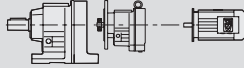

## Helical gearmotors

R..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 13000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
6.9	214	62700	R	147R87	DRN	160M4	550	404
			RF	147R87	DRN	160M4	560	404
			RM	147R87	DRN	160M4	720	404
7.8	189	62700	R	147R87	DRN	160L4	560	404
			RF	147R87	DRN	160L4	570	404
9.3	159	62700	RM	147R87	DRN	160L4	740	404

<b>M<sub>a max</sub> = 20000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
0.05	27001	120000	R	167R97	DRN	71MS4	750	405
			RF	167R97	DRN	71MS4	760	405
			RM	167R97	DRN	71MS4	950	405
0.06	22482	120000	R	167R97	DRN	71MS4	750	405
			RF	167R97	DRN	71MS4	760	405
			RM	167R97	DRN	71MS4	950	405
0.07	20002	120000	R	167R97	DRN	71MS4	750	405
			RF	167R97	DRN	71MS4	760	405
			RM	167R97	DRN	71MS4	950	405
0.08	17361	120000	R	167R97	DRN	71MS4	750	405
			RF	167R97	DRN	71MS4	760	405
			RM	167R97	DRN	71MS4	950	405
0.09	15446	120000	R	167R97	DRN	71M4	750	405
			RF	167R97	DRN	71M4	760	405
			RM	167R97	DRN	71M4	960	405
0.10	14051	120000	R	167R97	DRN	71M4	750	405
			RF	167R97	DRN	71M4	760	405
			RM	167R97	DRN	71M4	960	405
0.12	11812	120000	R	167R97	DRN	71M4	750	405
			RF	167R97	DRN	71M4	760	405
			RM	167R97	DRN	71M4	960	405
0.13	10509	120000	R	167R97	DRN	71M4	750	405
			RF	167R97	DRN	71M4	760	405
			RM	167R97	DRN	71M4	960	405
0.15	9631	120000	R	167R97	DRN	80MK4	760	405
			RF	167R97	DRN	80MK4	760	405
			RM	167R97	DRN	80MK4	960	405
0.19	7749	120000	R	167R97	DRN	80M4	760	405
			RF	167R97	DRN	80M4	770	405
			RM	167R97	DRN	80M4	960	405
0.21	6894	120000	R	167R97	DRN	80M4	760	405
			RF	167R97	DRN	80M4	770	405
			RM	167R97	DRN	80M4	960	405
0.24	6077	120000	R	167R97	DRN	80M4	760	405
			RF	167R97	DRN	80M4	770	405
			RM	167R97	DRN	80M4	960	405
0.27	5407	120000	R	167R97	DRN	80M4	760	405
			RF	167R97	DRN	80M4	770	405
			RM	167R97	DRN	80M4	960	405
0.31	4650	120000	R	167R97	DRN	90S4	760	405
			RF	167R97	DRN	90S4	770	405
			RM	167R97	DRN	90S4	970	405
0.35	4129	120000	R	167R97	DRN	90S4	760	405
			RF	167R97	DRN	90S4	770	405
			RM	167R97	DRN	90S4	970	405
0.39	3692	120000	R	167R97	DRN	90S4	760	405
			RF	167R97	DRN	90S4	770	405
			RM	167R97	DRN	90S4	970	405
0.47	3099	120000	R	167R97	DRN	100LS4	770	405
			RF	167R97	DRN	100LS4	780	405
			RM	167R97	DRN	100LS4	970	405
0.55	2657	120000	R	167R97	DRN	90L4	760	405
			RF	167R97	DRN	90L4	770	405
			RM	167R97	DRN	90L4	970	405
0.63	2333	120000	R	167R97	DRN	90L4	760	405
			RF	167R97	DRN	90L4	770	405
			RM	167R97	DRN	90L4	970	405
0.70	2085	120000	R	167R97	DRN	100LS4	770	405
			RF	167R97	DRN	100LS4	780	405
			RM	167R97	DRN	100LS4	970	405
0.77	1877	120000	R	167R97	DRN	100LS4	770	405
			RF	167R97	DRN	100LS4	780	405
			RM	167R97	DRN	100LS4	970	405
0.87	1670	120000	R	167R97	DRN	100LS4	770	405
			RF	167R97	DRN	100LS4	780	405
			RM	167R97	DRN	100LS4	970	405
1.0	1438	120000	R	167R97	DRN	100L4	780	405
			RF	167R97	DRN	100L4	780	405
			RM	167R97	DRN	100L4	980	405
1.1	1279	120000	R	167R97	DRN	100L4	780	405
			RF	167R97	DRN	100L4	780	405
			RM	167R97	DRN	100L4	980	405
1.3	1123	120000	R	167R97	DRN	100L4	780	405
			RF	167R97	DRN	100L4	780	405
			RM	167R97	DRN	100L4	980	405
1.5	999	120000	R	167R97	DRN	112M4	780	405
			RF	167R97	DRN	112M4	790	405
			RM	167R97	DRN	112M4	990	405
1.7	861	120000	R	167R97	DRN	112M4	780	405
			RF	167R97	DRN	112M4	790	405
			RM	167R97	DRN	112M4	990	405
1.9	760	120000	R	167R97	DRN	132S4	800	405
			RF	167R97	DRN	132S4	800	405
			RM	167R97	DRN	132S4	1000	405
2.2	656	120000	R	167R97	DRN	132S4	800	405
			RF	167R97	DRN	132S4	800	405
			RM	167R97	DRN	132S4	1000	405
2.5	579	120000	R	167R97	DRN	132M4	810	405
			RF	167R97	DRN	132M4	820	405
			RM	167R97	DRN	132M4	1020	405
2.9	503	120000	R	167R97	DRN	132M4	810	405
			RF	167R97	DRN	132M4	820	405
			RM	167R97	DRN	132M4	1020	405
3.4	432	120000	R	167R97	DRN	132L4	820	405
			RF	167R97	DRN	132L4	830	405
			RM	167R97	DRN	132L4	1020	405
3.9	376	120000	R	167R97	DRN	132L4	820	405
			RF	167R97	DRN	132L4	830	405
			RM	167R97	DRN	132L4	1020	405
4.4	335	120000	R	167R97	DRN	160M4	860	405
			RF	167R97	DRN	160M4	860	405
			RM	167R97	DRN	160M4	1060	405
4.9	303	120000	R	167R97	DRN	160M4	860	405
			RF	167R97	DRN	160M4	860	405
			RM	167R97	DRN	160M4	1060	405
5.3	279	120000	R	167R97	DRN	160L4	870	405
			RF	167R97	DRN	160L4	880	405
			RM	167R97	DRN	160L4	1070	405

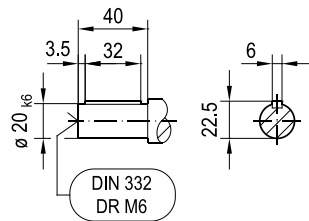
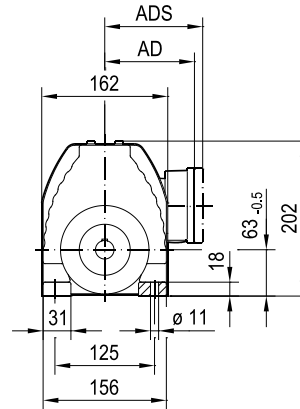
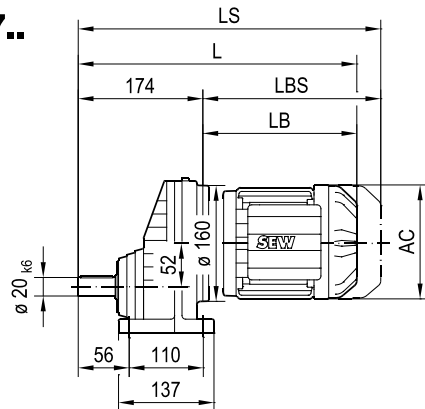
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<b>M<sub>a max</sub> = 20000 Nm</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>		
0.40	3637	120000							
0.44	3330	120000							
0.53	2757	120000							
0.60	2436	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>100LS4</b>	820	405	
0.63	2298	120000	<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>100LS4</b>	820	405	
0.70	2066	120000	<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>100LS4</b>	1020	405	
0.78	1849	120000							
0.87	1674	120000							
0.98	1485	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>100L4</b>	820	405	
1.1	1342	120000	<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>100L4</b>	830	405	
1.2	1229	120000	<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>100L4</b>	1030	405	
1.3	1111	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>112M4</b>	830	405	
1.5	950	120000	<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>112M4</b>	840	405	
1.7	860	120000	<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>112M4</b>	1030	405	
1.9	763	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>132S4</b>	840	405	
2.1	690	120000	<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>132S4</b>	850	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>132S4</b>	1040	405	
2.5	585	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>132M4</b>	860	405	
2.9	511	120000	<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>132M4</b>	870	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>132M4</b>	1060	405	
4.2	349	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>160M4</b>	900	405	
			<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>160M4</b>	910	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>160M4</b>	1100	405	
5.0	295	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>160L4</b>	920	405	
5.5	270	120000	<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>160L4</b>	920	405	
6.4	229	120000	<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>160L4</b>	1120	405	
7.4	200	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>180M4</b>	940	405	
			<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>180M4</b>	950	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>180M4</b>	1140	405	
8.7	169	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	950	405	
			<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	960	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	1160	405	
3.3	446	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>132M4</b>	850	405	
			<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>132M4</b>	860	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>132M4</b>	1060	405	
3.7	399	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>132L4</b>	860	405	
4.1	361	120000	<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>132L4</b>	870	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>132L4</b>	1070	405	
4.5	328	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>160M4</b>	900	405	
			<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>160M4</b>	900	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>160M4</b>	1100	405	
5.1	291	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>160L4</b>	910	405	
5.6	264	120000	<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>160L4</b>	920	405	
6.5	227	120000	<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>160L4</b>	1110	405	
7.5	198	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>180M4</b>	930	405	
			<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>180M4</b>	940	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>180M4</b>	1130	405	
8.8	168	120000	<b>R</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	950	405	
			<b>RF</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	960	405	
			<b>RM</b>	<b>167R107</b>	<b>DRN</b>	<b>180L4</b>	1150	405	

### 8.5 R..DRN.. dimension sheets in mm

01 004 00 14

#### RX57..

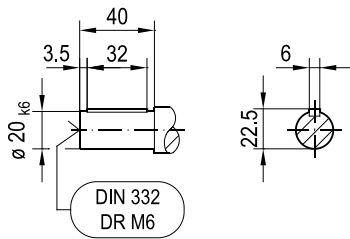
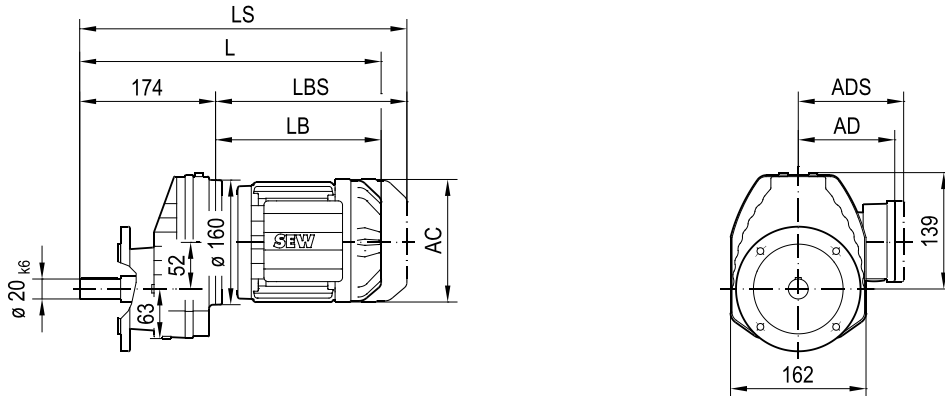


(-> 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	358	372	373	393	404	421	449	451	483	479	529	560	614	632
LS	414	428	441	461	485	502	530	544	576	573	623	672	726	770
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

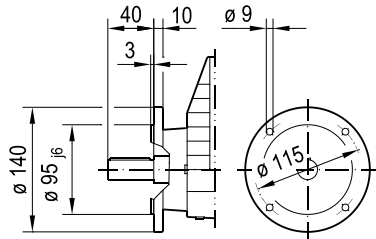


01 005 01 14

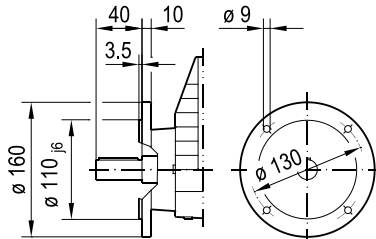
**RXF57..**



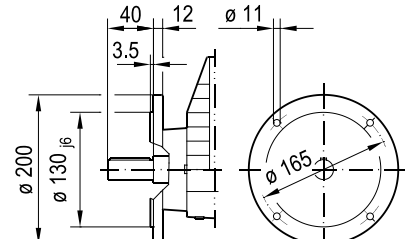
**$\phi 140$**



**$\phi 160$**



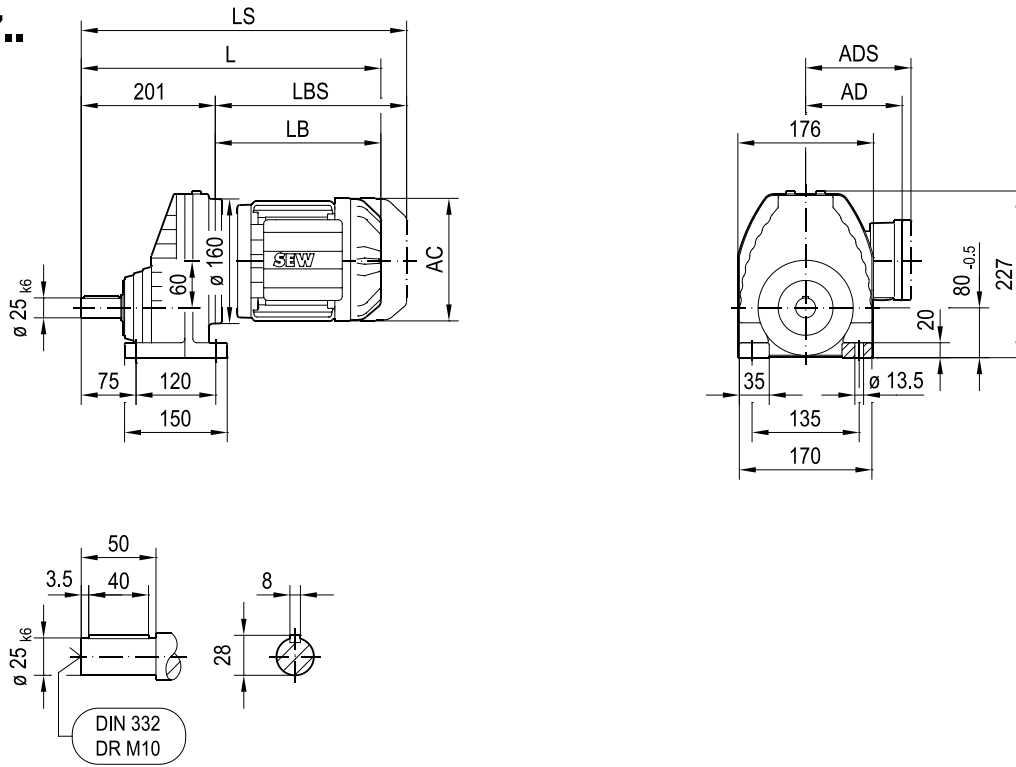
**$\phi 200$**



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(→ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	358	372	373	393	404	421	449	451	483	479	529	560	614	632
LS	414	428	441	461	485	502	530	544	576	573	623	672	726	770
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

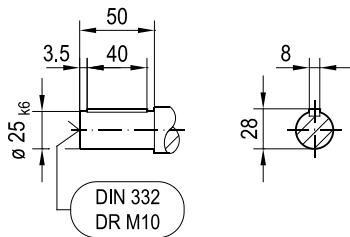
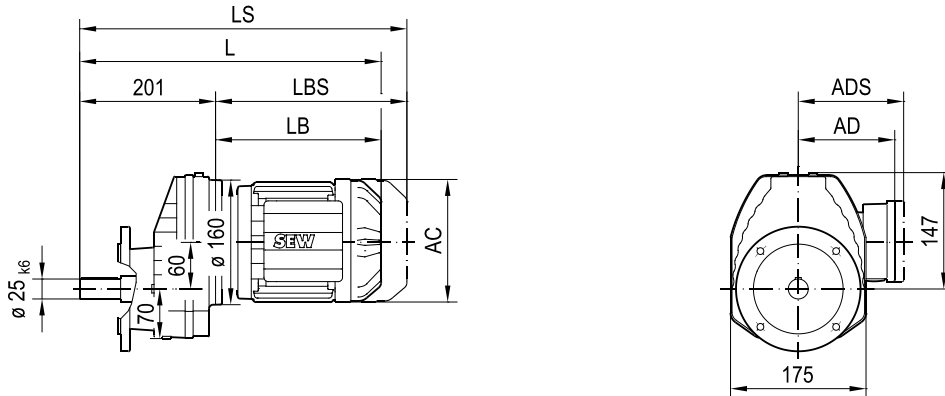
### RX67..



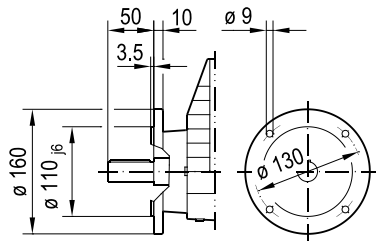
( $\rightarrow$ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	385	399	400	420	431	448	476	478	510	506	556	587	641	659
LS	441	455	468	488	512	529	557	571	603	600	650	699	753	797
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

01 007 00 14

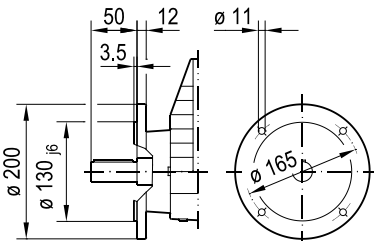
**RXF67..**



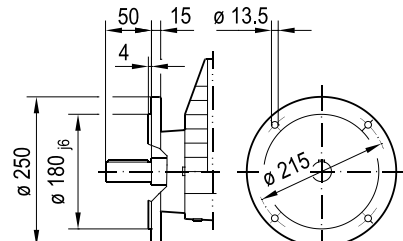
**ø 160**



**ø 200**



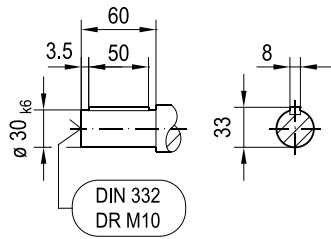
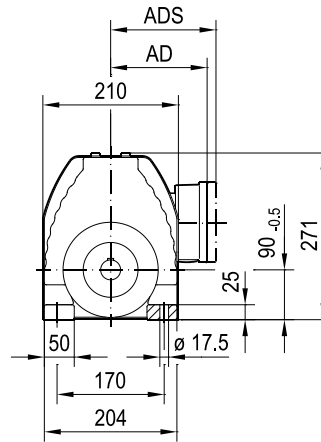
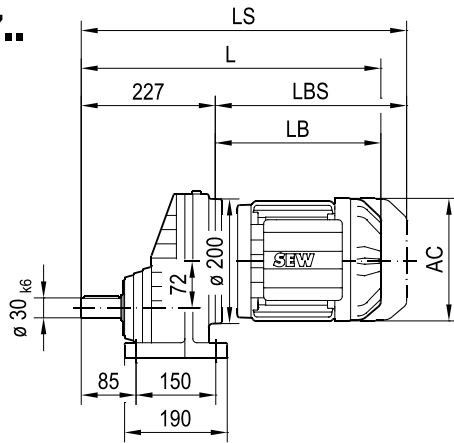
**ø 250**



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(-> 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	385	399	400	420	431	448	476	478	510	506	556	587	641	659
LS	441	455	468	488	512	529	557	571	603	600	650	699	753	797
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

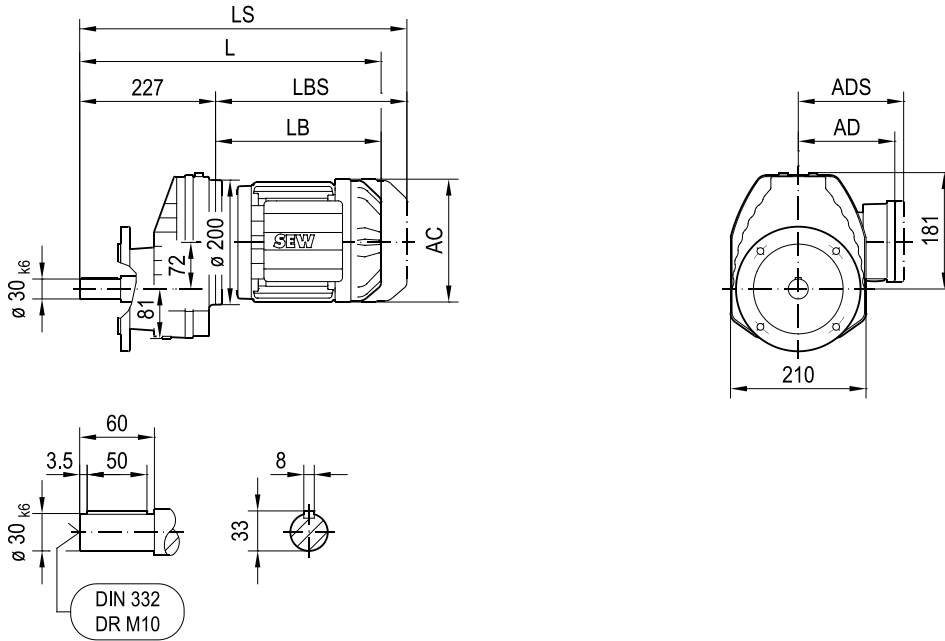
### RX77..



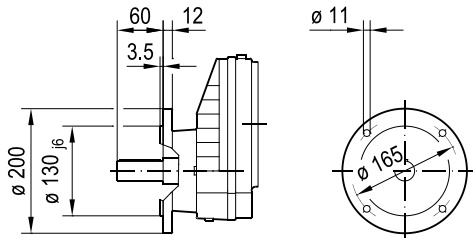
(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	419	439	450	467	495	497	529	525	575	606	656	674	700	766
LS	487	507	531	548	576	590	622	619	669	718	768	812	837	955
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

01 009 01 14

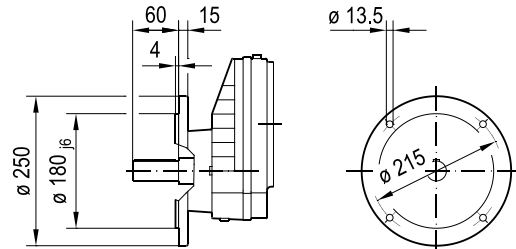
**RXF77..**



**ø 200**



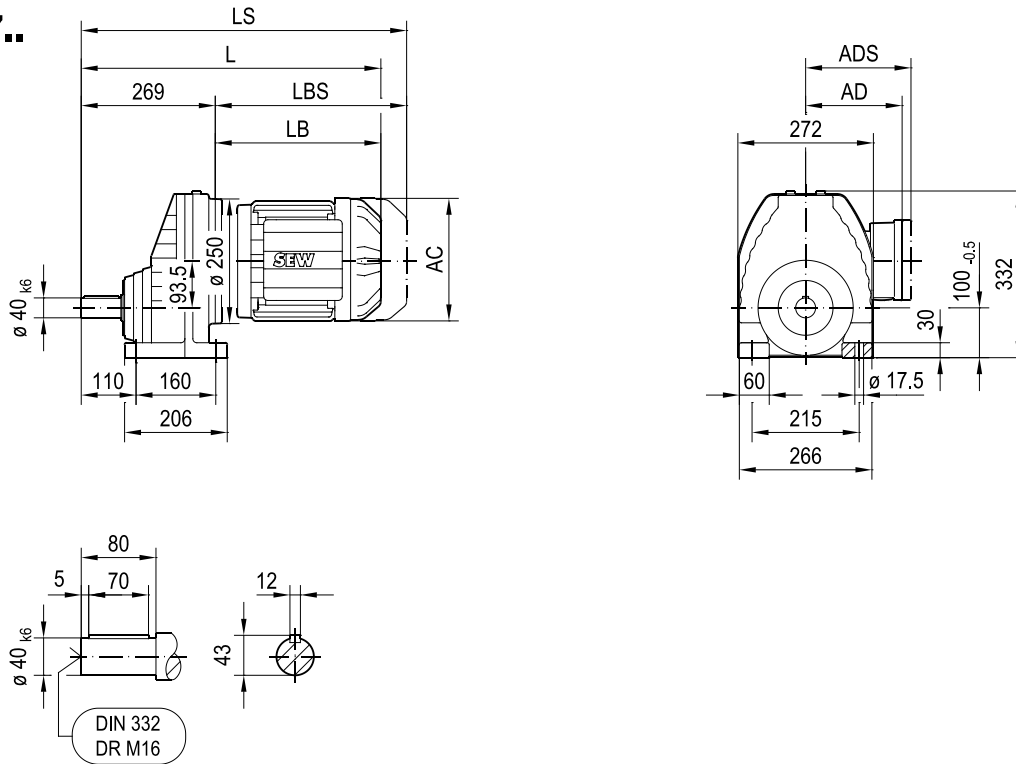
**ø 250**



(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	419	439	450	467	495	497	529	525	575	606	656	674	700	766
LS	487	507	531	548	576	590	622	619	669	718	768	812	837	955
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

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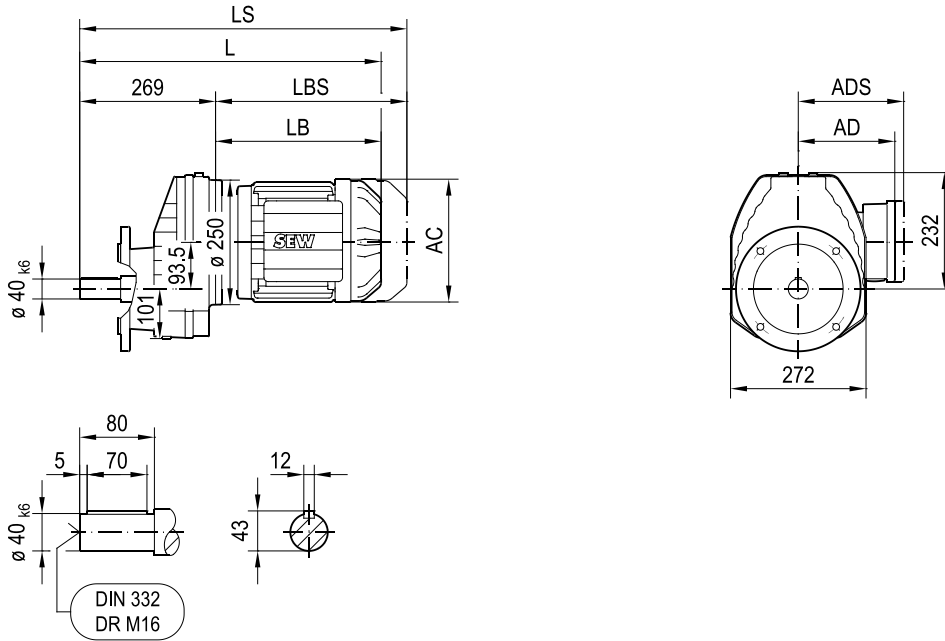
### RX87..



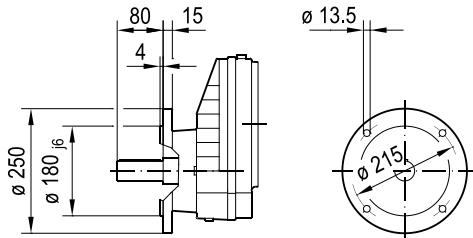
( $\rightarrow$ 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	487	532	534	566	562	612	643	693	711	737	803	826	936
LS	568	613	627	659	656	706	755	805	849	874	992	1015	1141
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

01 011 01 14

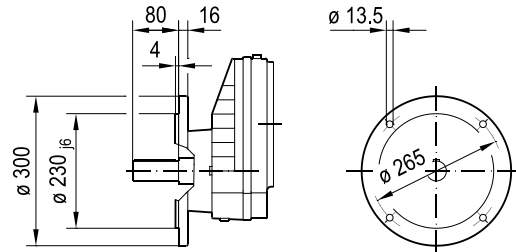
**RXF87..**



**ø 250**



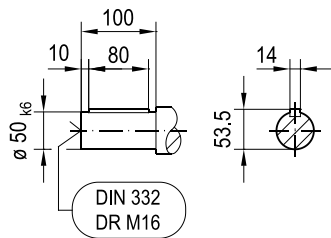
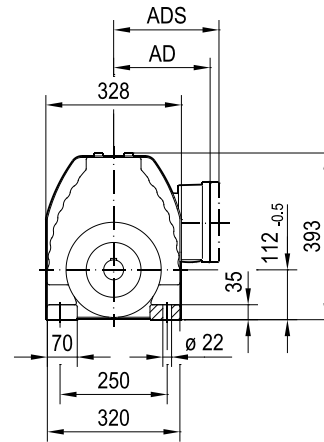
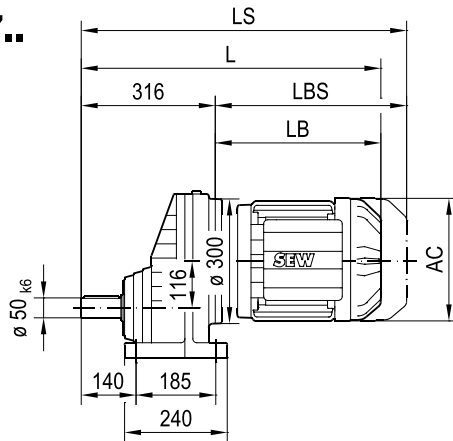
**ø 300**



(-> 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	487	532	534	566	562	612	643	693	711	737	803	826	936
LS	568	613	627	659	656	706	755	805	849	874	992	1015	1141
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

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### RX97..

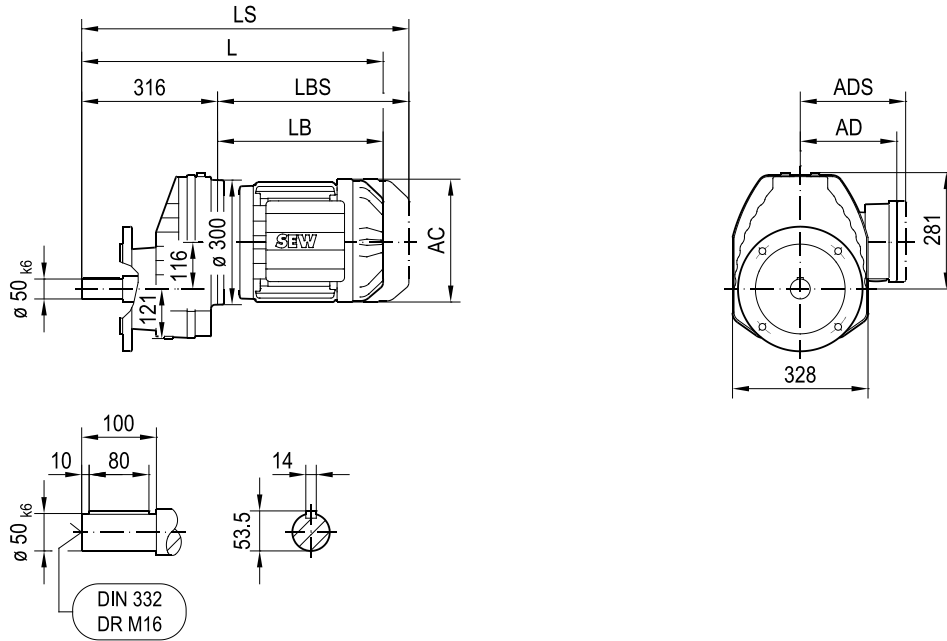


(-> 7.3)	DRN												
	80MK	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	150	150	158	158	172	172	228	228	253	268	283	305
L	529	576	608	604	654	685	735	753	779	845	868	978	952
LS	610	669	701	698	748	797	847	891	916	1034	1057	1183	1157
LB	213	260	292	288	338	369	419	437	463	529	552	662	636
LBS	294	353	385	382	432	481	531	575	600	718	741	867	841

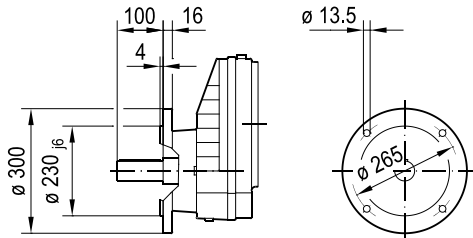


01 013 01 14

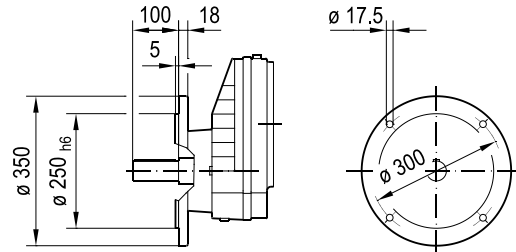
**RXF97..**



**ø 300**



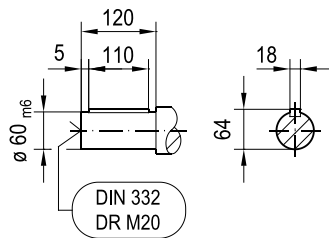
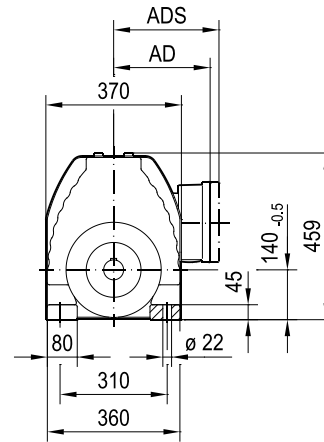
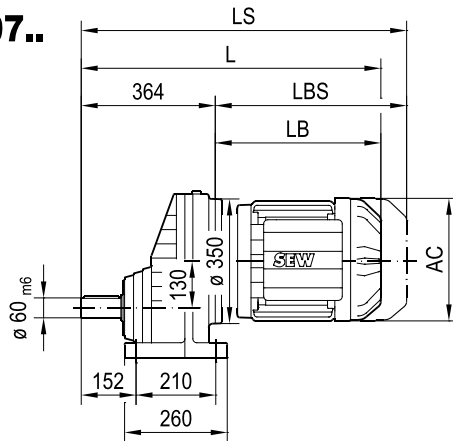
**ø 350**



(-> 7.3)	DRN												
	80MK	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	150	150	158	158	172	172	228	228	253	268	283	305
L	529	576	608	604	654	685	735	753	779	845	868	978	952
LS	610	669	701	698	748	797	847	891	916	1034	1057	1183	1157
LB	213	260	292	288	338	369	419	437	463	529	552	662	636
LBS	294	353	385	382	432	481	531	575	600	718	741	867	841

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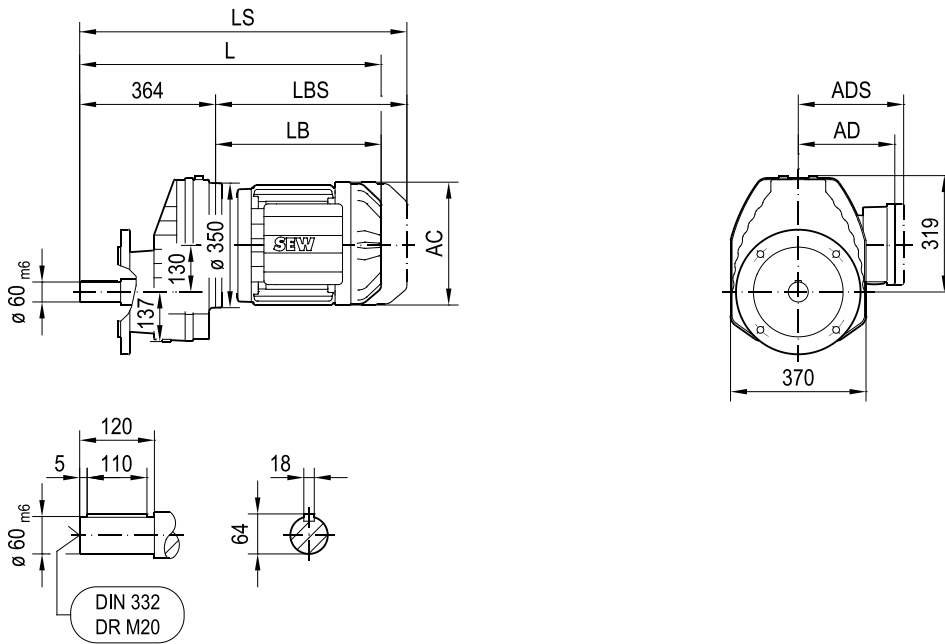
### RX107..



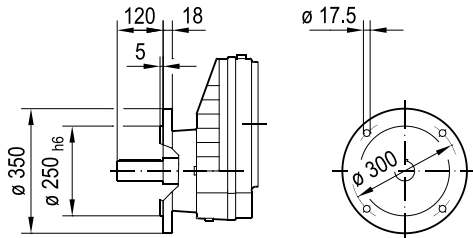
(-> 7.3)	DRN									
	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	221	221	261	261	314	357	394	434	495
AD	157	170	170	228	228	253	268	283	305	394
ADS	158	172	172	228	228	253	268	283	305	394
L	696	727	777	795	821	887	910	1020	994	1131
LS	790	839	889	933	958	1076	1099	1225	1199	1371
LB	332	363	413	431	457	523	546	656	630	767
LBS	426	475	525	569	594	712	735	861	835	1007

01 015 01 14

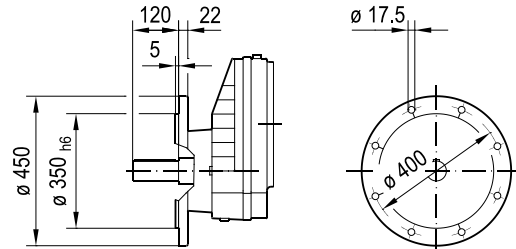
**RXF107..**



**ø 350**



**ø 450**

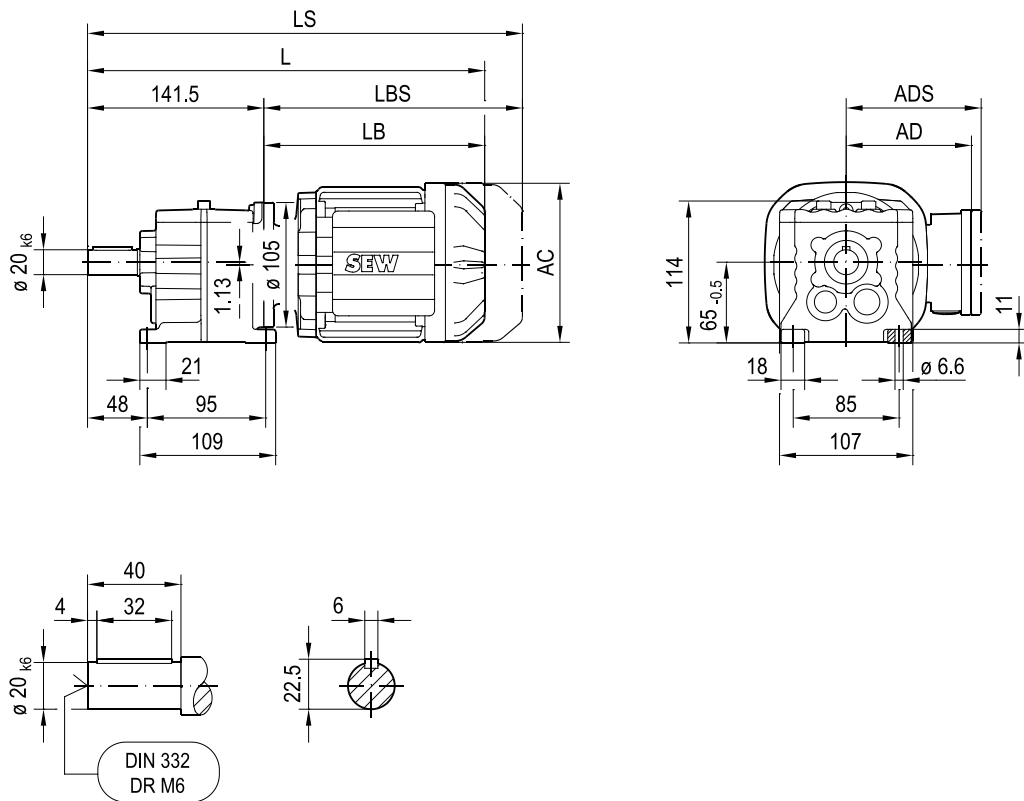


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( $\rightarrow$ 7.3)	DRN									
	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	221	221	261	261	314	357	394	434	495
AD	157	170	170	228	228	253	268	283	305	394
ADS	158	172	172	228	228	253	268	283	305	394
L	696	727	777	795	821	887	910	1020	994	1131
LS	790	839	889	933	958	1076	1099	1225	1199	1371
LB	332	363	413	431	457	523	546	656	630	767
LBS	426	475	525	569	594	712	735	861	835	1007

01 561 00 17

### R07..



### R07F..

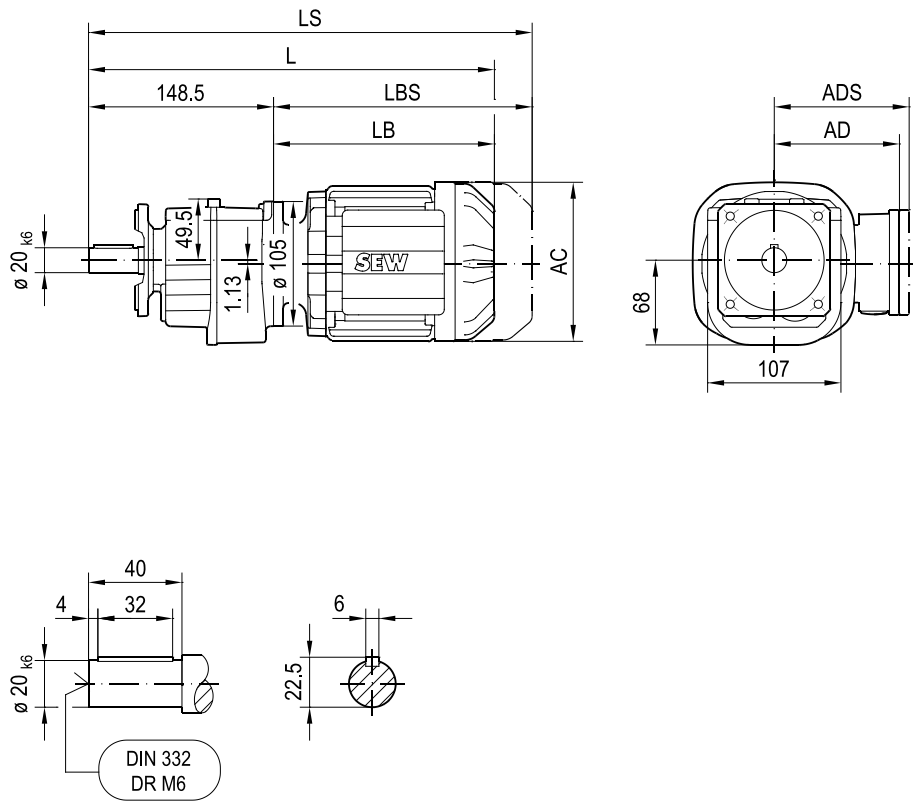


(-> 7.3)	DR2S		DRN						
	56..	63MS	63M	71MS	71M	80MK	80MS	80M	
AC	109	115	115	139	139	156	156	156	
AD	87	98	98	118	118	128	128	128	
ADS	87	98	98	129	129	139	139	139	
L	302	332	346	347	367	378	391	425	
LS	338	388	402	415	435	459	472	506	
LB	160	190	204	206	226	237	249	283	
LBS	196	246	260	273	293	318	330	364	

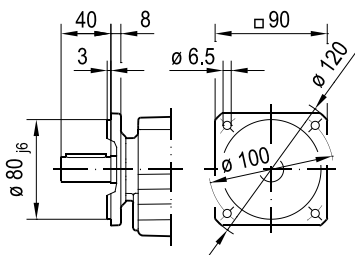
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01 562 00 17

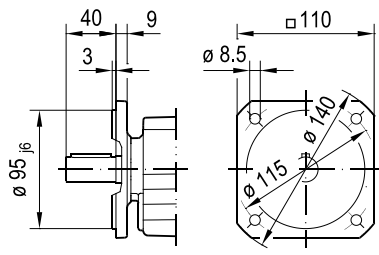
**RF07..**



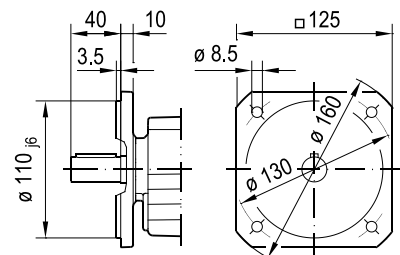
**$\varnothing 120$**



**$\varnothing 140$**



**$\varnothing 160$**

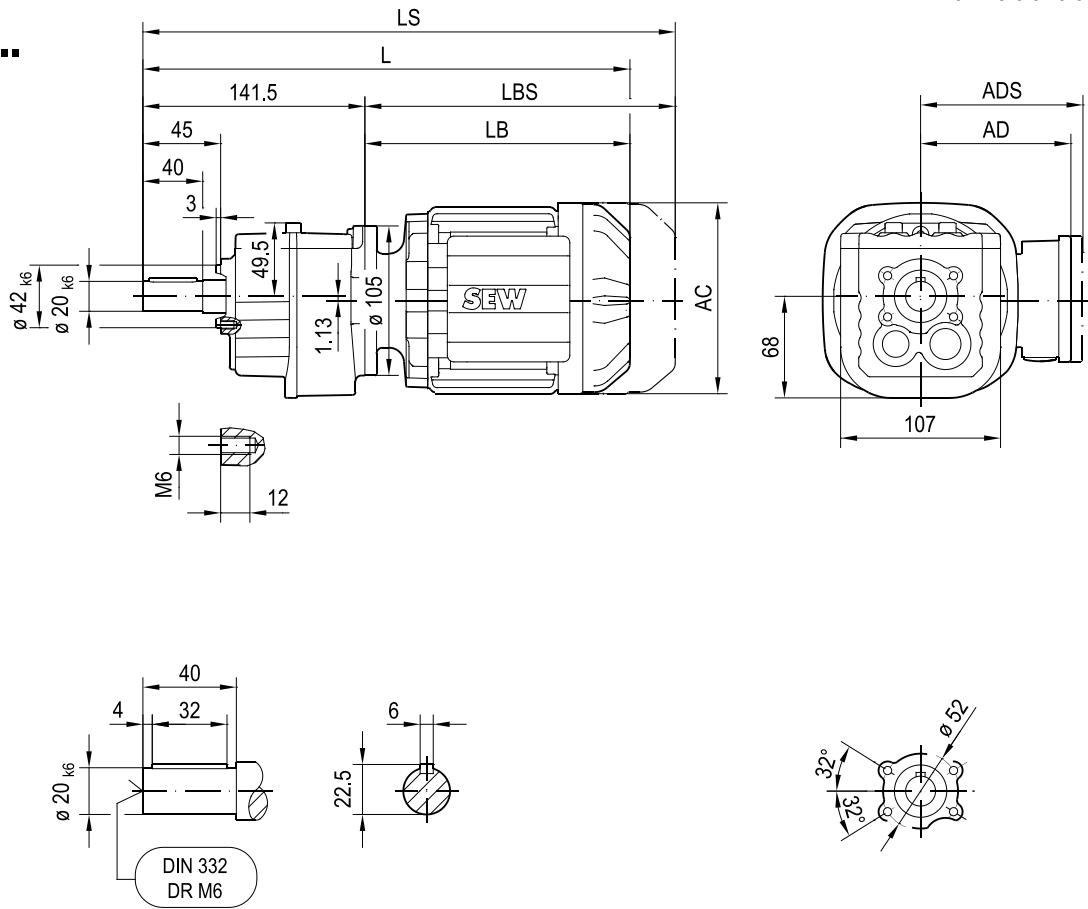


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( $\rightarrow$ 7.3)	DR2S				DRN				
	56..	63MS	63M	71MS	71M	80MK	80MS	80M	
AC	109	115	115	139	139	156	156	156	
AD	87	98	98	118	118	128	128	128	
ADS	87	98	98	129	129	139	139	139	
L	309	339	353	354	374	385	398	432	
LS	345	395	409	422	442	466	479	513	
LB	160	190	204	206	226	237	249	283	
LBS	196	246	260	273	293	318	330	364	

01 563 00 17

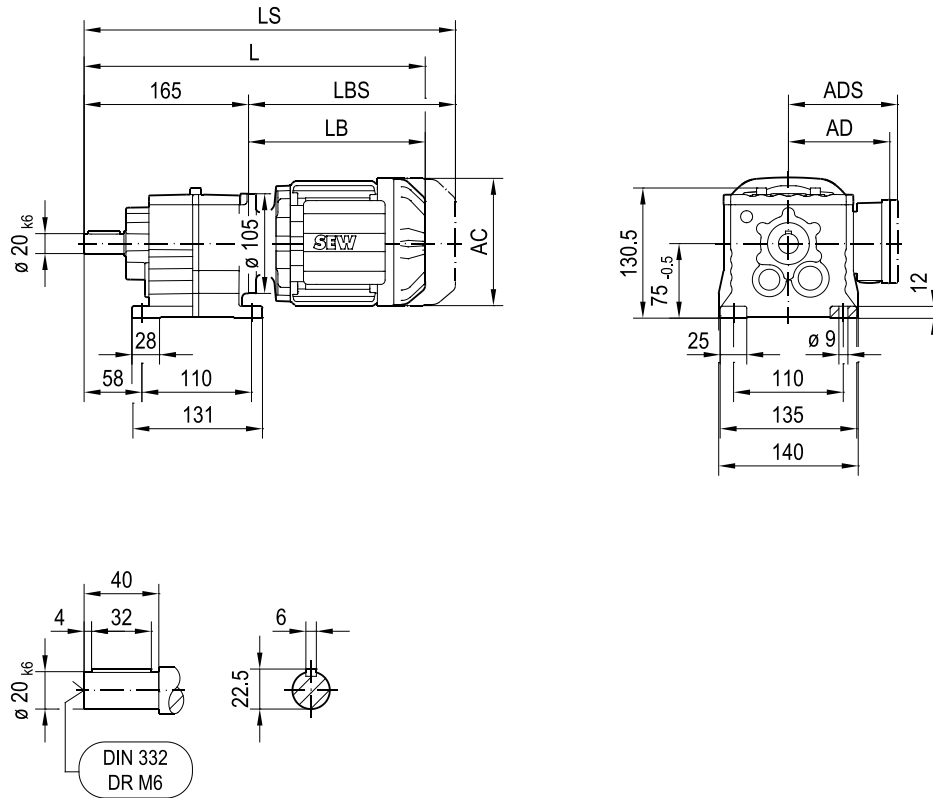
**RZ07..**



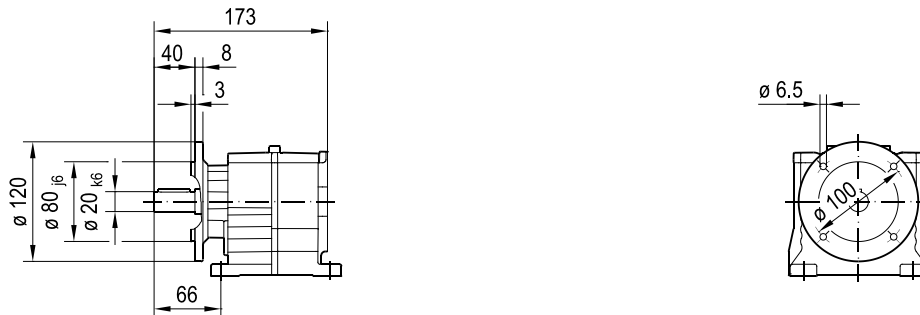
(→  7.3)	DR2S		DRN						
	56..	63MS	63M	71MS	71M	80MK	80MS	80M	
AC	109	115	115	139	139	156	156	156	
AD	87	98	98	118	118	128	128	128	
ADS	87	98	98	129	129	139	139	139	
L	302	332	346	347	367	378	391	425	
LS	338	388	402	415	435	459	472	506	
LB	160	190	204	206	226	237	249	283	
LBS	196	246	260	273	293	318	330	364	

01 564 01 17

**R17..**



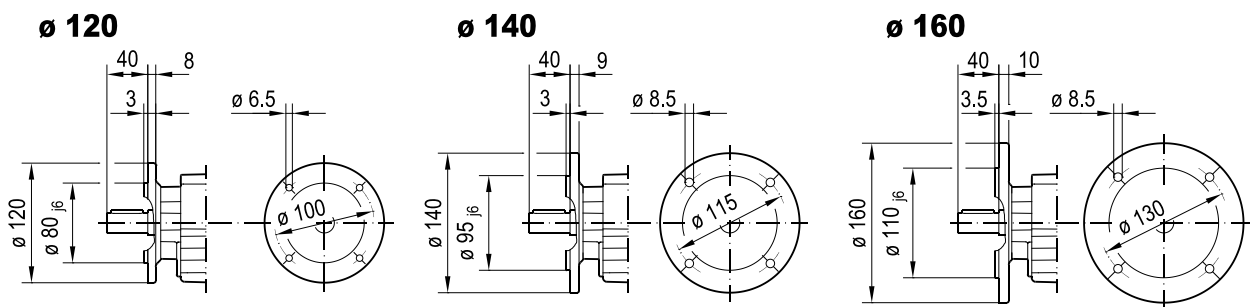
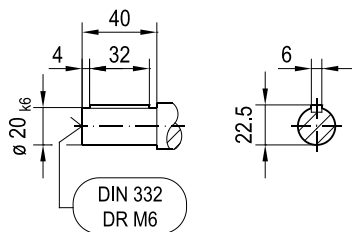
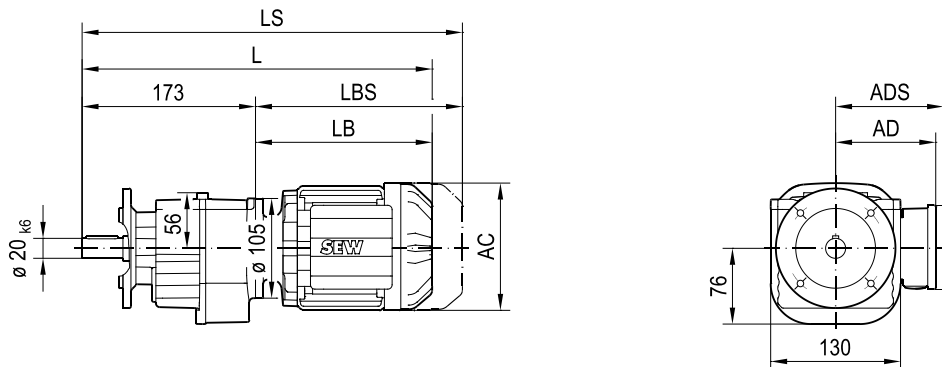
**R17F..**



(> 7.3)	DR2S		DRN						
	56..	63MS	63M	71MS	71M	80MK	80MS	80M	
AC	109	115	115	139	139	156	156	156	
AD	87	98	98	118	118	128	128	128	
ADS	87	98	98	129	129	139	139	139	
L	325	355	369	371	391	402	414	448	
LS	361	411	425	438	458	483	495	529	
LB	160	190	204	206	226	237	249	283	
LBS	196	246	260	273	293	318	330	364	

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### RF17..

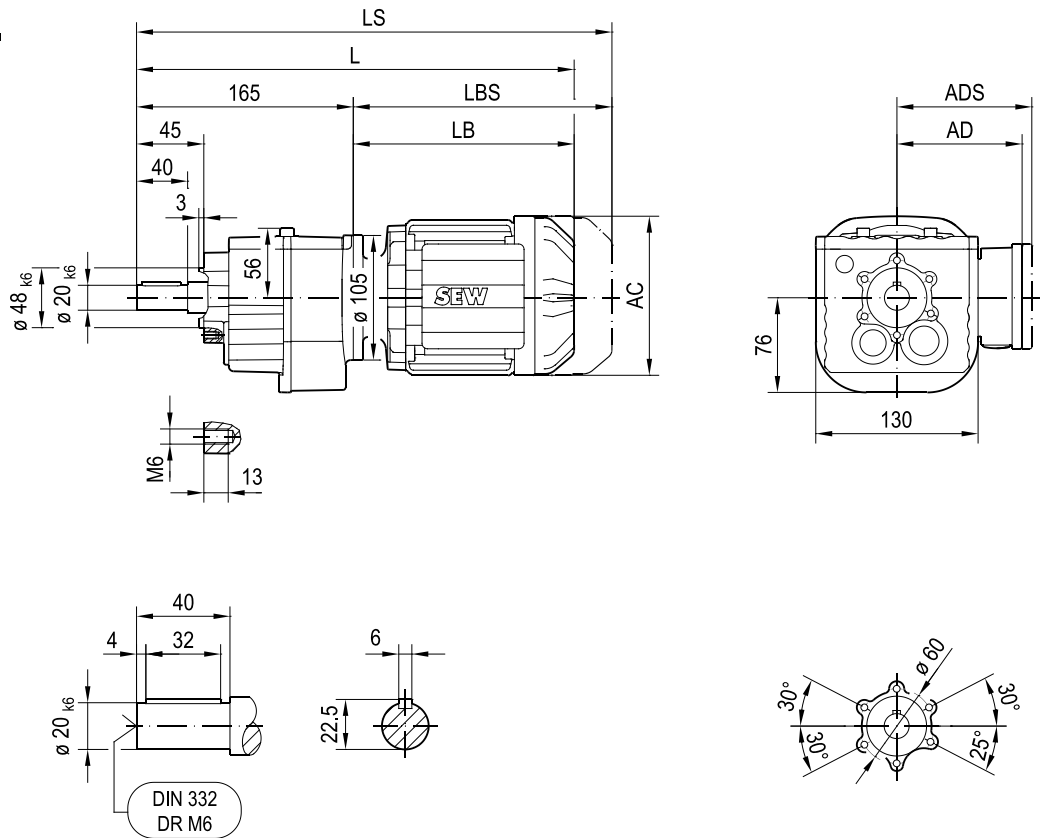


(-> 7.3)	DR2S		DRN						
	56..	63MS	63M	71MS	71M	80MK	80MS	80M	
AC	109	115	115	139	139	156	156	156	
AD	87	98	98	118	118	128	128	128	
ADS	87	98	98	129	129	139	139	139	
L	333	363	377	379	399	410	422	456	
LS	369	419	433	446	466	491	503	537	
LB	160	190	204	206	226	237	249	283	
LBS	196	246	260	273	293	318	330	364	



01 566 01 17

RZ17..

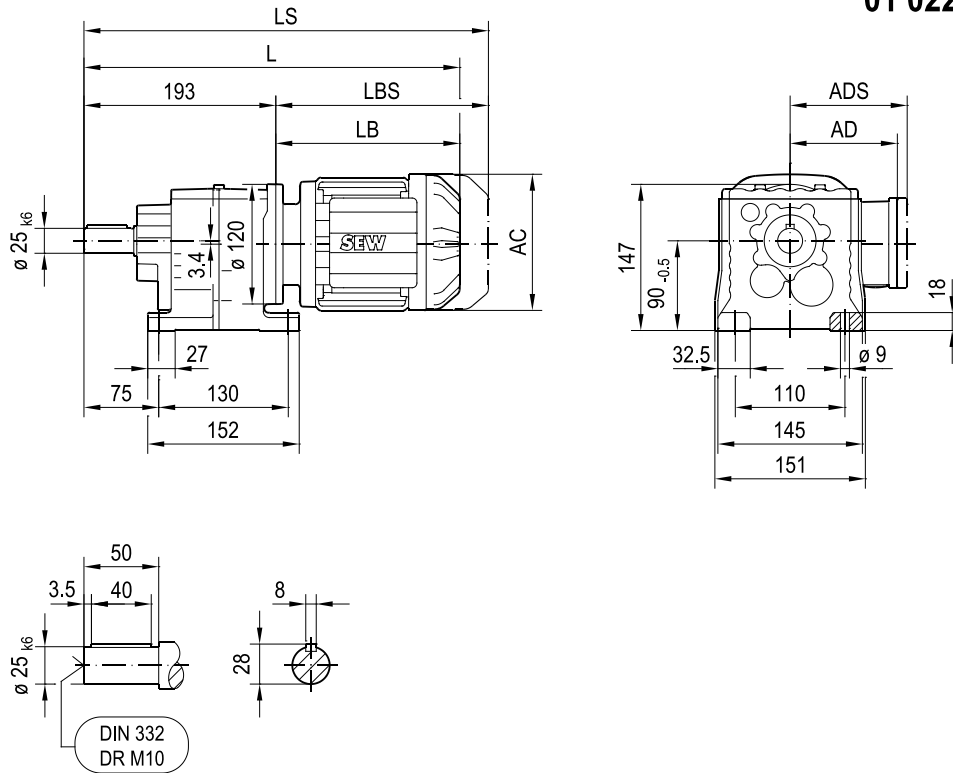


(-> 7.3)	DR2S				DRN				
	56..	63MS	63M	71MS	71M	80MK	80MS	80M	
AC	109	115	115	139	139	156	156	156	
AD	87	98	98	118	118	128	128	128	
ADS	87	98	98	129	129	139	139	139	
L	325	355	369	371	391	402	414	448	
LS	361	411	425	438	458	483	495	529	
LB	160	190	204	206	226	237	249	283	
LBS	196	246	260	273	293	318	330	364	

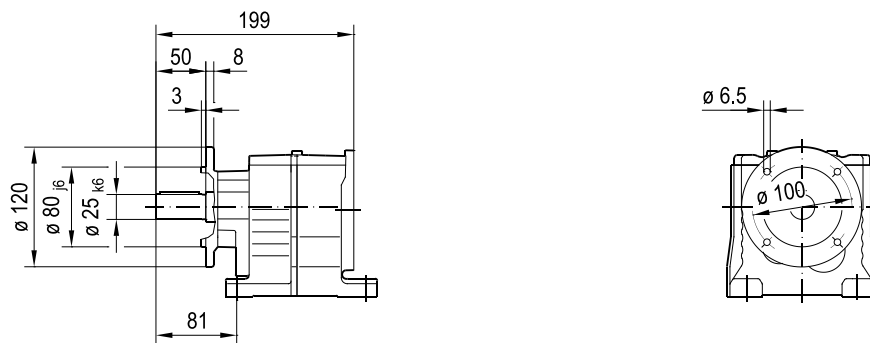
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01 022 01 14

### R27..



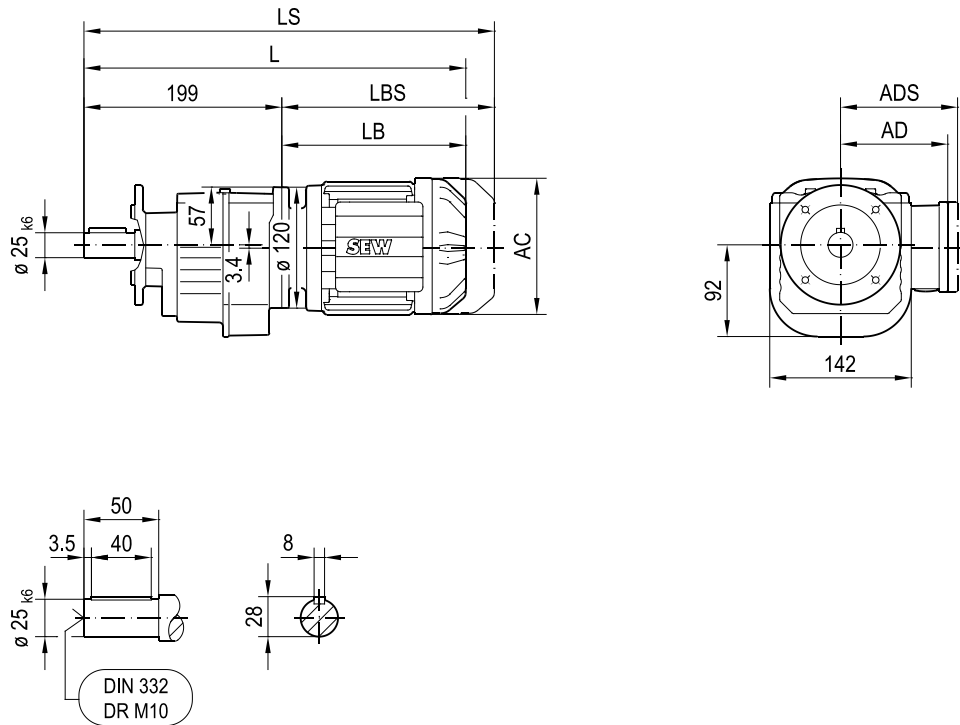
### R27F..



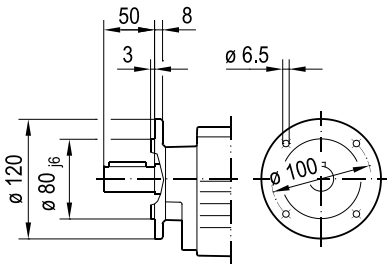
( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	383	397	399	419	430	447	475	476	508	507	557
LS	439	453	466	486	511	528	556	570	602	601	651
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

01 023 01 14

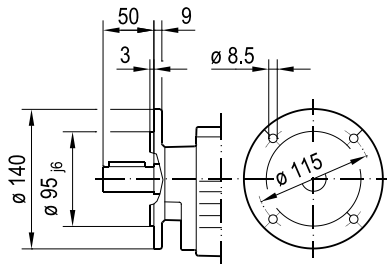
**RF27..**



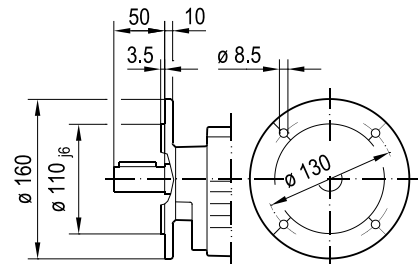
**$\varnothing 120$**



**$\varnothing 140$**



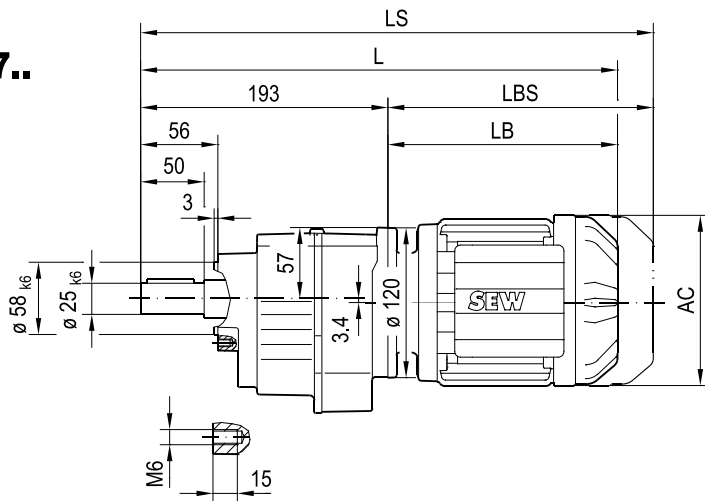
**$\varnothing 160$**



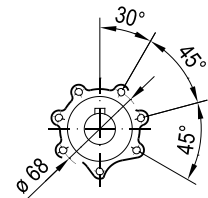
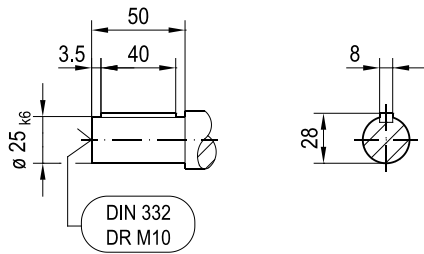
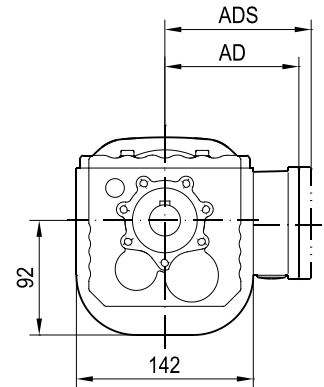
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(> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	389	403	405	425	436	453	481	482	514	513	563
LS	445	459	472	492	517	534	562	576	608	607	657
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

### RZ27..



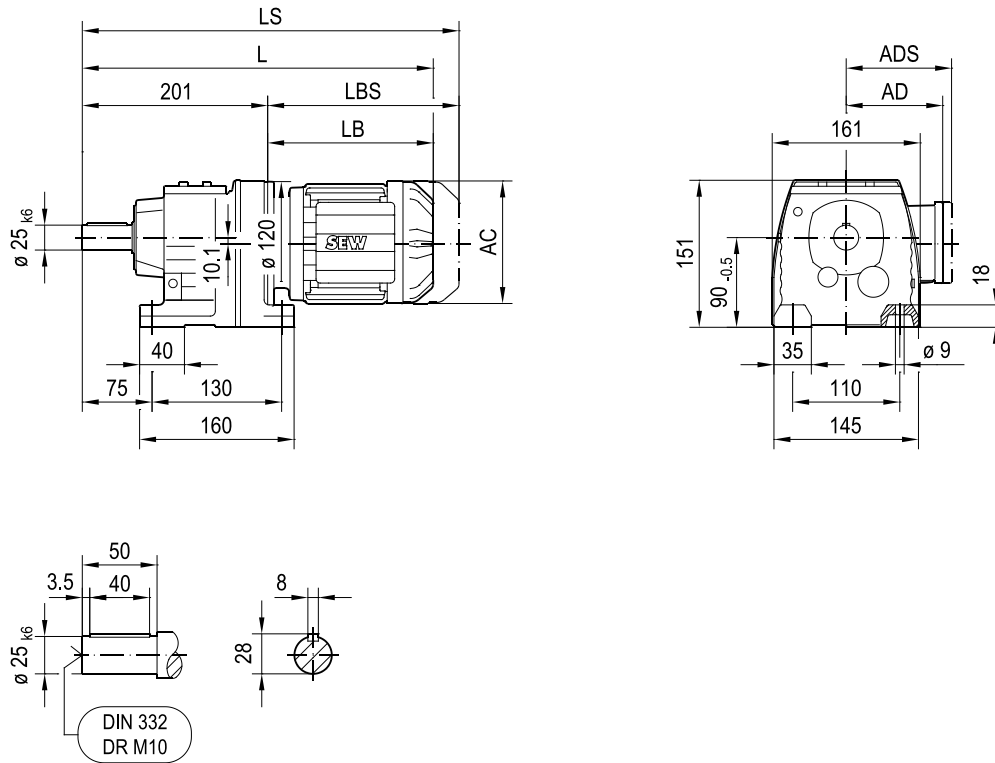
01 024 02 14



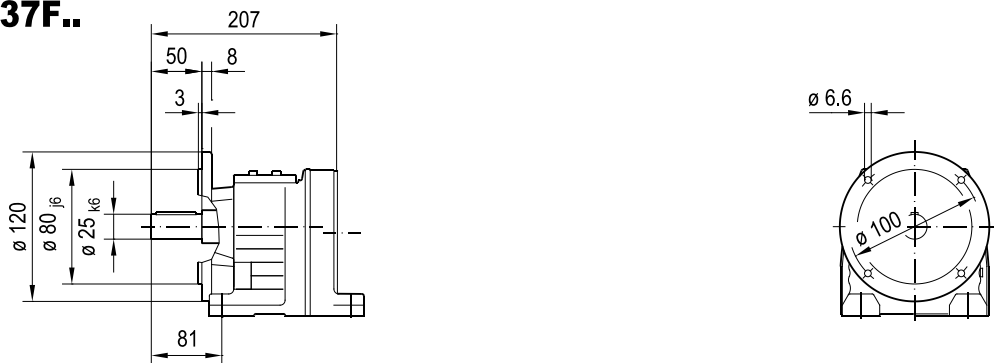
(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	383	397	399	419	430	447	475	476	508	507	557
LS	439	453	466	486	511	528	556	570	602	601	651
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

01 025 01 14

**R37..**



**R37F..**

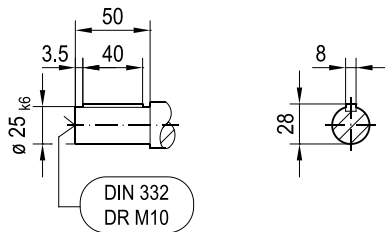
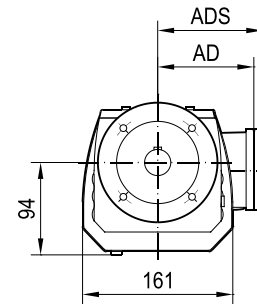
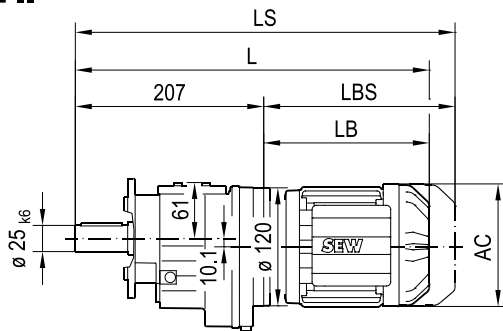


(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	391	405	407	427	438	455	483	484	516	515	565
LS	447	461	474	494	519	536	564	578	610	609	659
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

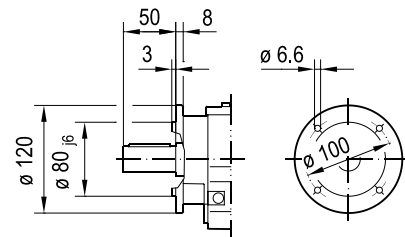
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01 026 01 14

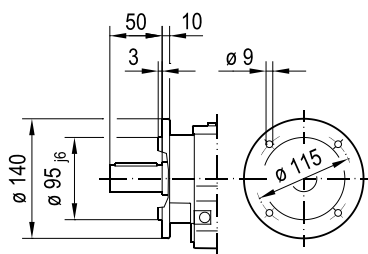
### RF37..



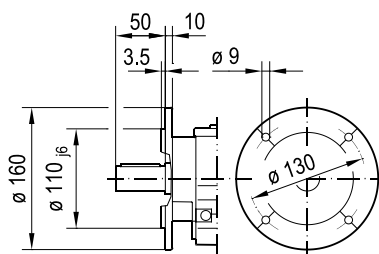
### ø 120



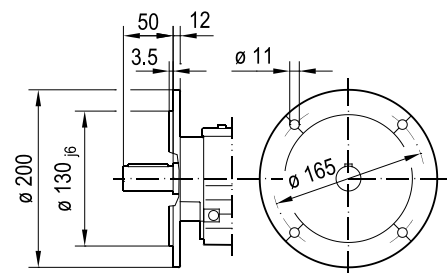
### ø 140



### ø 160



### ø 200

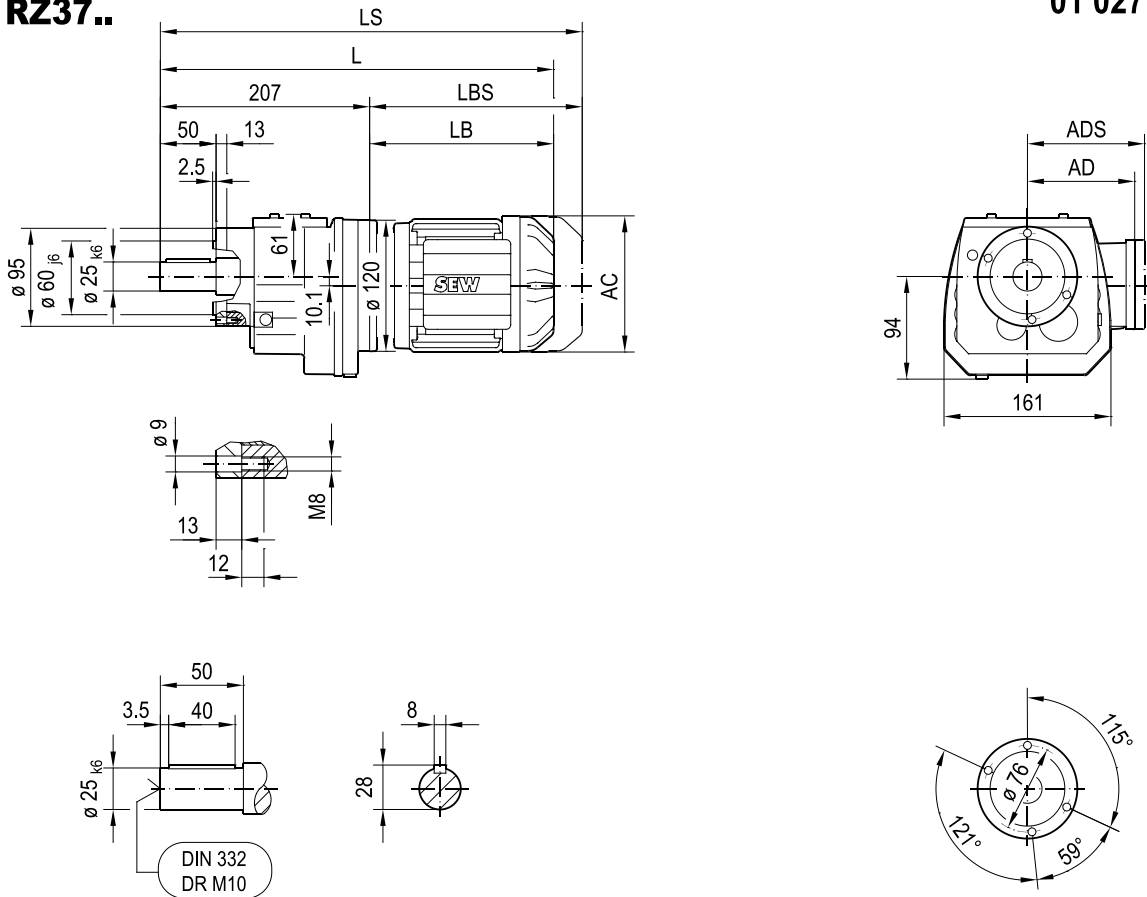


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	397	411	413	433	444	461	489	490	522	521	571
LS	453	467	480	500	525	542	570	584	616	615	665
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

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**RZ37..**

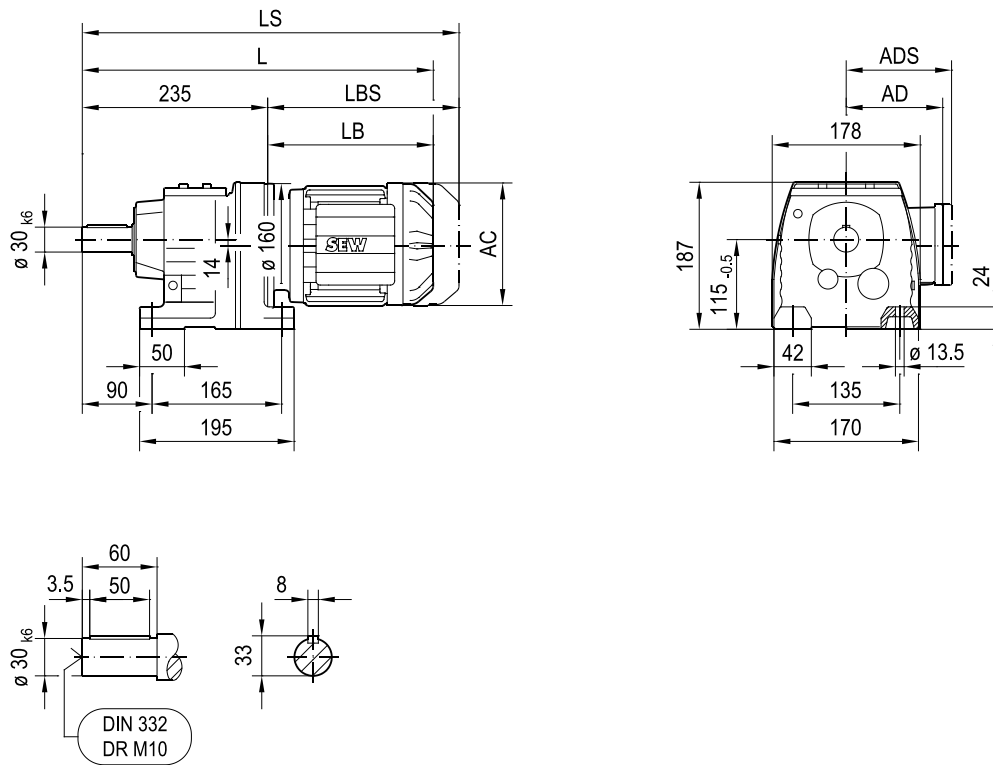
01 027 01 14



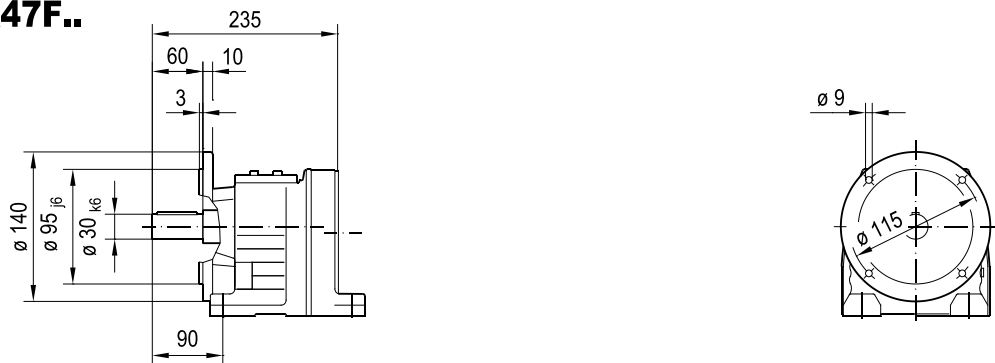
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( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	397	411	413	433	444	461	489	490	522	521	571
LS	453	467	480	500	525	542	570	584	616	615	665
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

### R47..



### R47F..

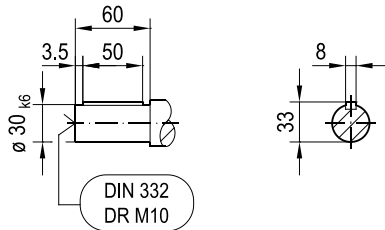
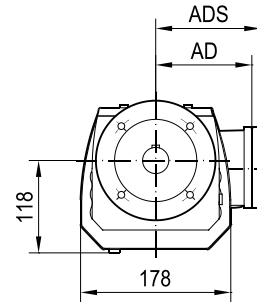
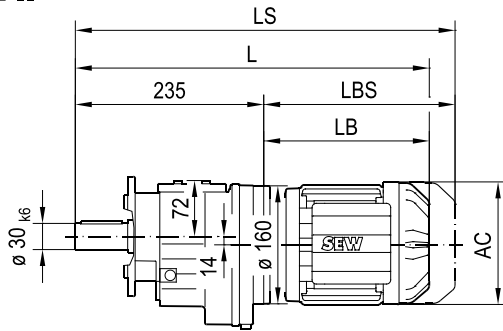


(> 7.3)	DRN												
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S
AC	115	115	139	139	156	156	156	179	179	197	197	221	221
AD	98	98	118	118	128	128	128	140	140	157	157	170	170
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172
L	419	433	434	454	465	482	510	512	544	540	590	621	675
LS	475	489	502	522	546	563	591	605	637	634	684	733	787
LB	184	198	199	219	230	247	275	277	309	305	355	386	440
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552

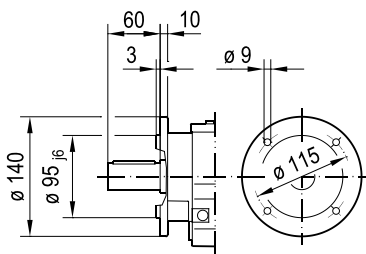


01 029 01 14

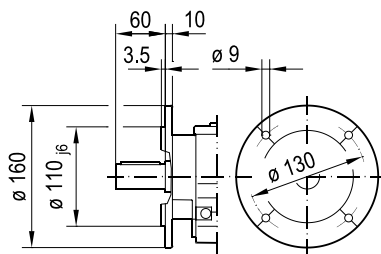
**RF47..**



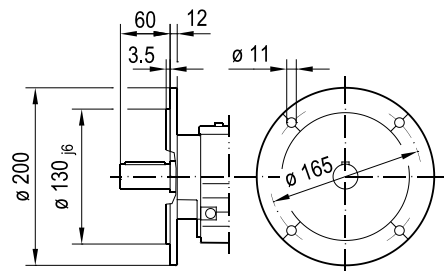
**ø 140**



**ø 160**



**ø 200**

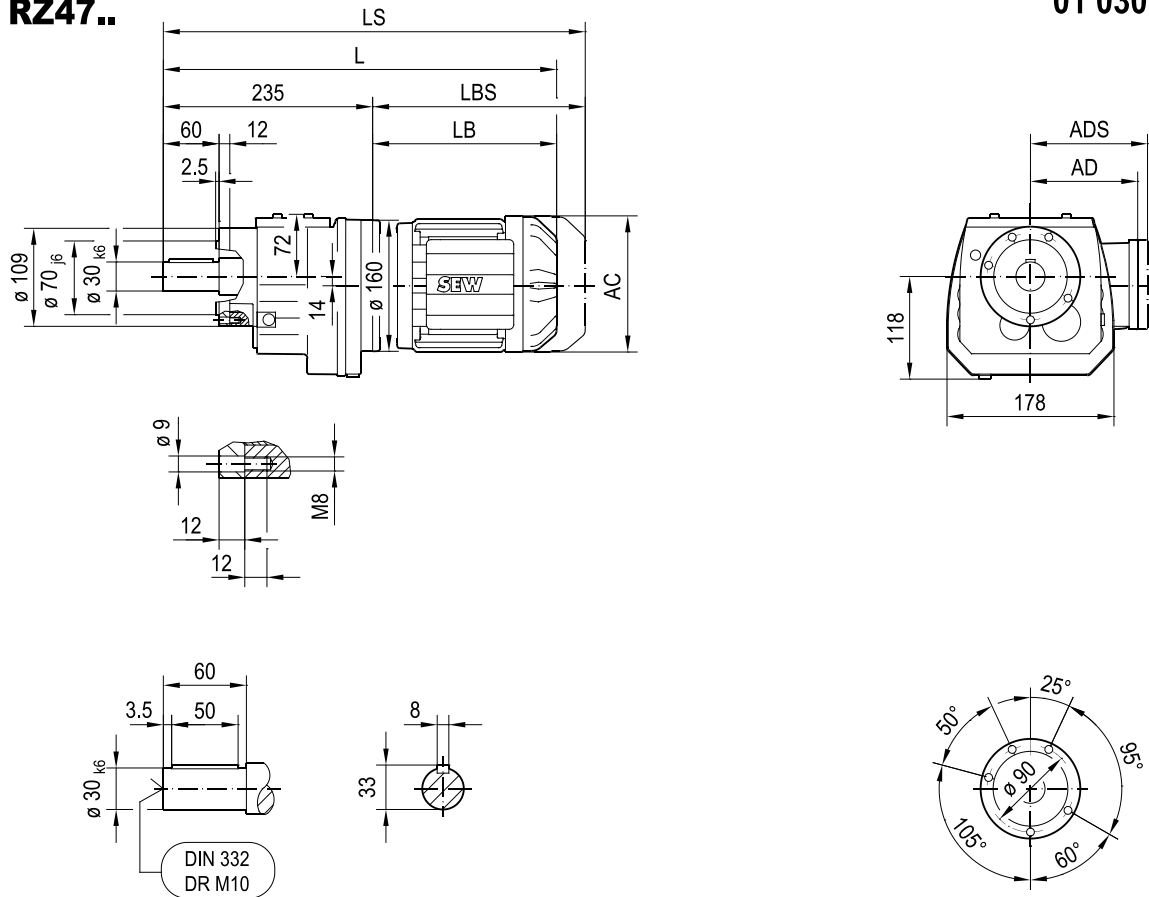


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(-> 7.3)	DRN												
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S
AC	115	115	139	139	156	156	156	179	179	197	197	221	221
AD	98	98	118	118	128	128	128	140	140	157	157	170	170
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172
L	419	433	434	454	465	482	510	512	544	540	590	621	675
LS	475	489	502	522	546	563	591	605	637	634	684	733	787
LB	184	198	199	219	230	247	275	277	309	305	355	386	440
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552

### RZ47..

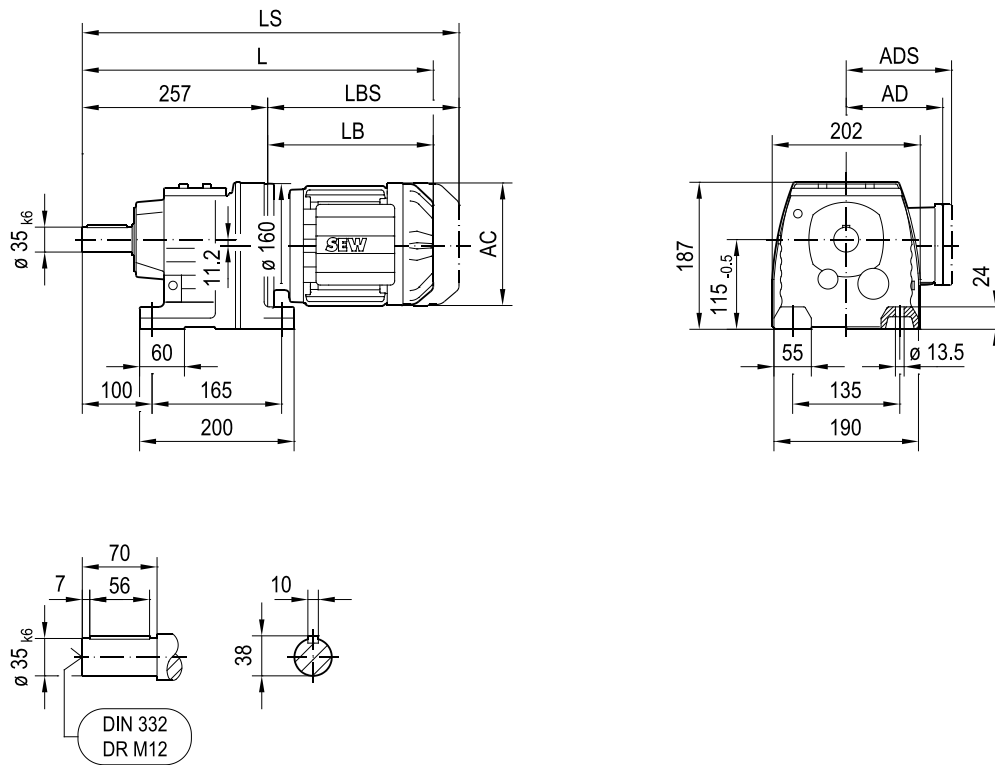
01 030 01 14



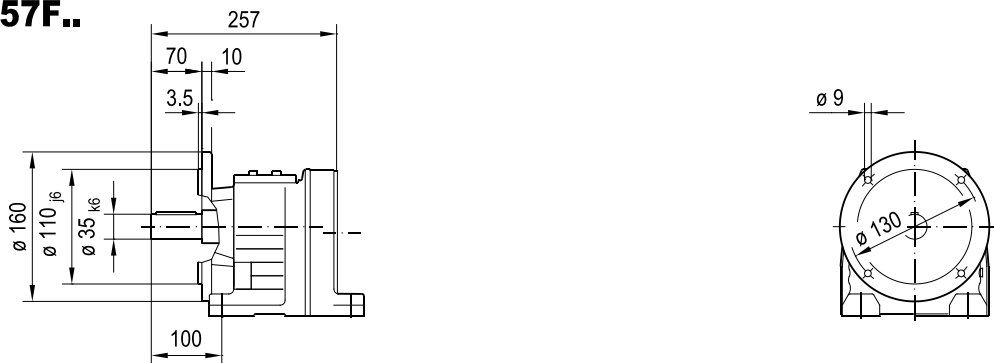
( $\rightarrow$ 7.3)	DRN												
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S
AC	115	115	139	139	156	156	156	179	179	197	197	221	221
AD	98	98	118	118	128	128	128	140	140	157	157	170	170
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172
L	419	433	434	454	465	482	510	512	544	540	590	621	675
LS	475	489	502	522	546	563	591	605	637	634	684	733	787
LB	184	198	199	219	230	247	275	277	309	305	355	386	440
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552

01 031 01 14

**R57..**



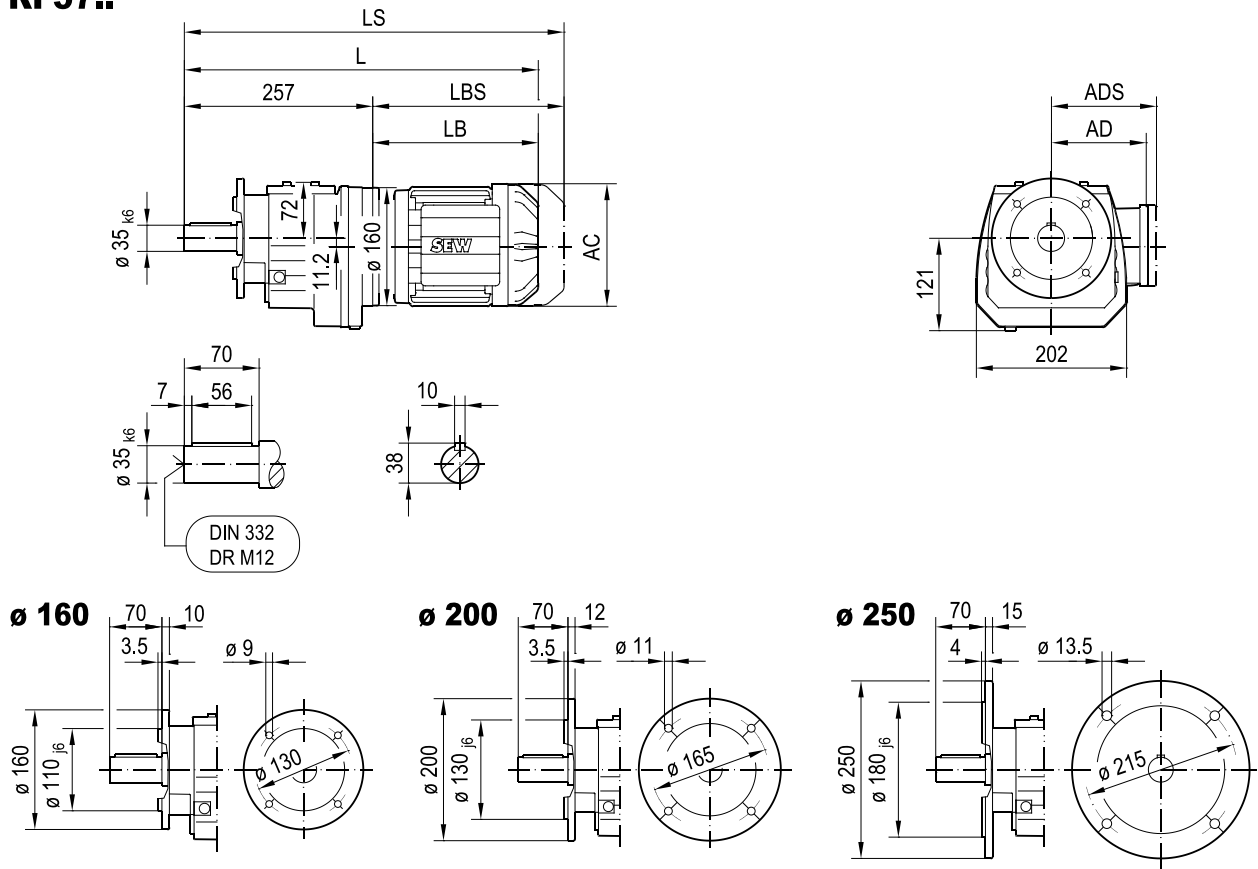
**R57F..**



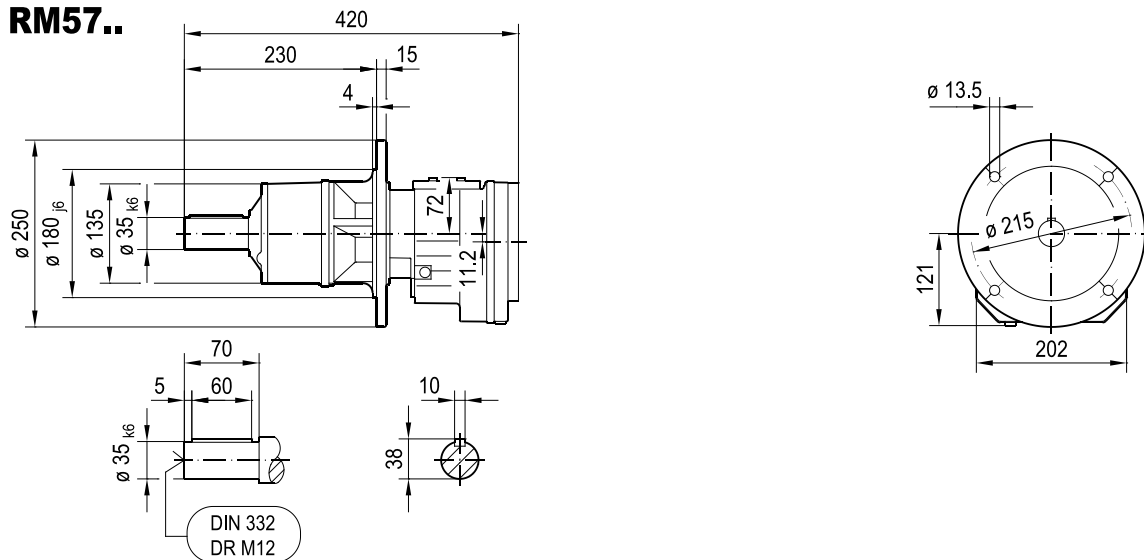
(-> 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	441	455	456	476	487	504	532	534	566	562	612	643	697	715
LS	497	511	524	544	568	585	613	627	659	656	706	755	809	853
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

### RF57..

01 032 01 14



### RM57..

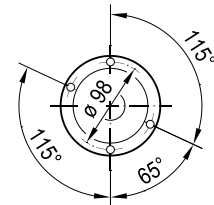
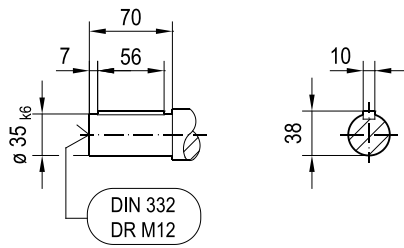
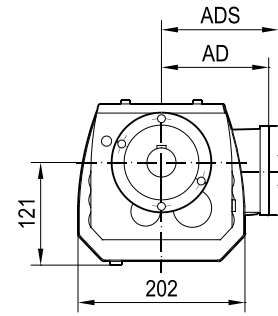
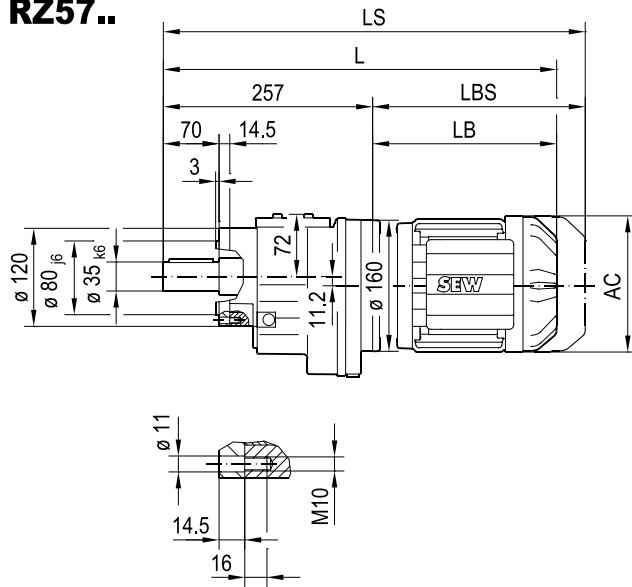


(→ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	441	455	456	476	487	504	532	534	566	562	612	643	697	715
LS	497	511	524	544	568	585	613	627	659	656	706	755	809	853
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

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**RZ57..**

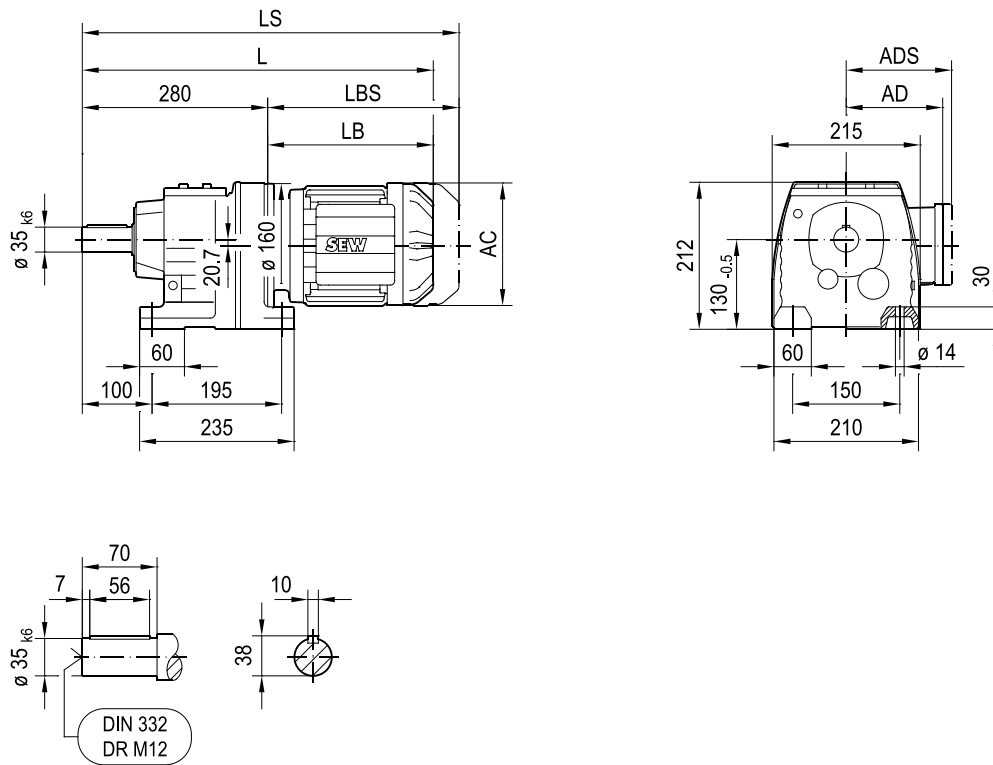
**01 033 01 14**



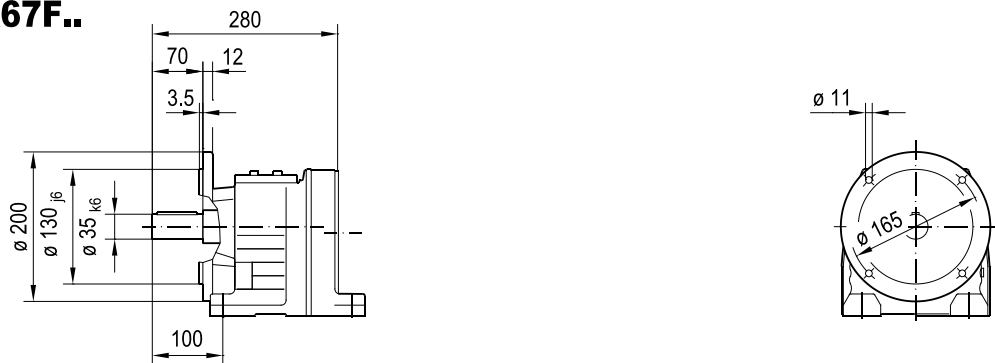
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(> 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	441	455	456	476	487	504	532	534	566	562	612	643	697	715
LS	497	511	524	544	568	585	613	627	659	656	706	755	809	853
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

### R67..



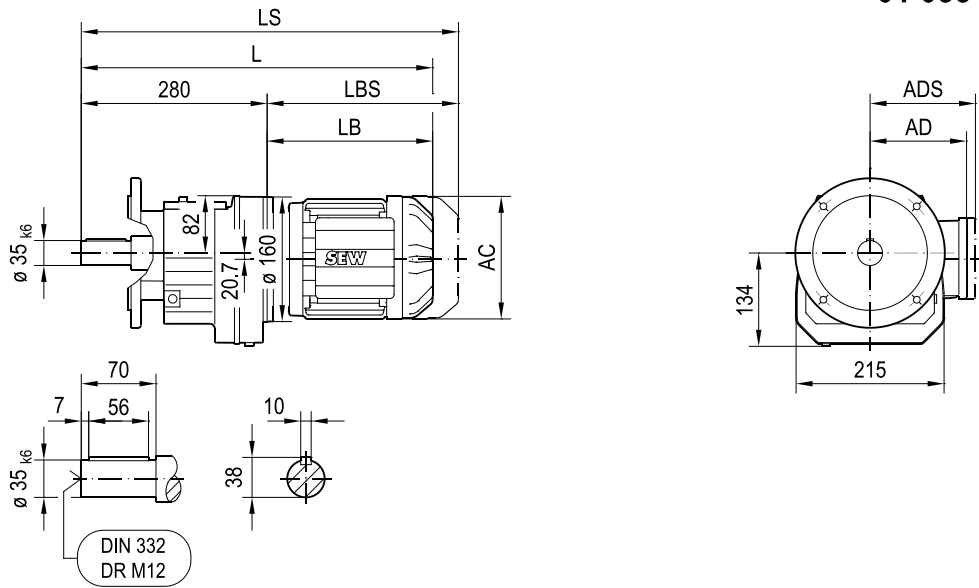
### R67F..



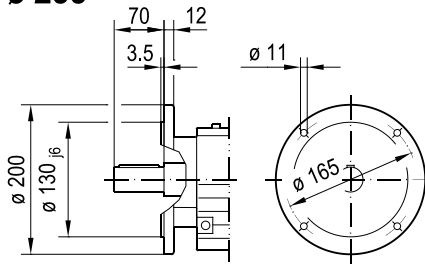
(-> 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	464	478	479	499	510	527	555	557	589	585	635	666	720	738
LS	520	534	547	567	591	608	636	650	682	679	729	778	832	876
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

01 035 01 14

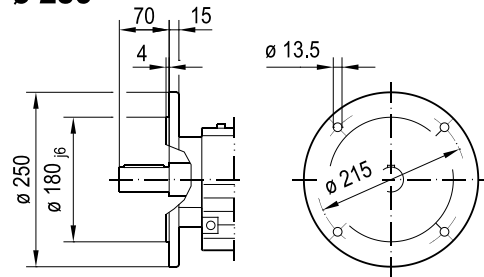
**RF67..**



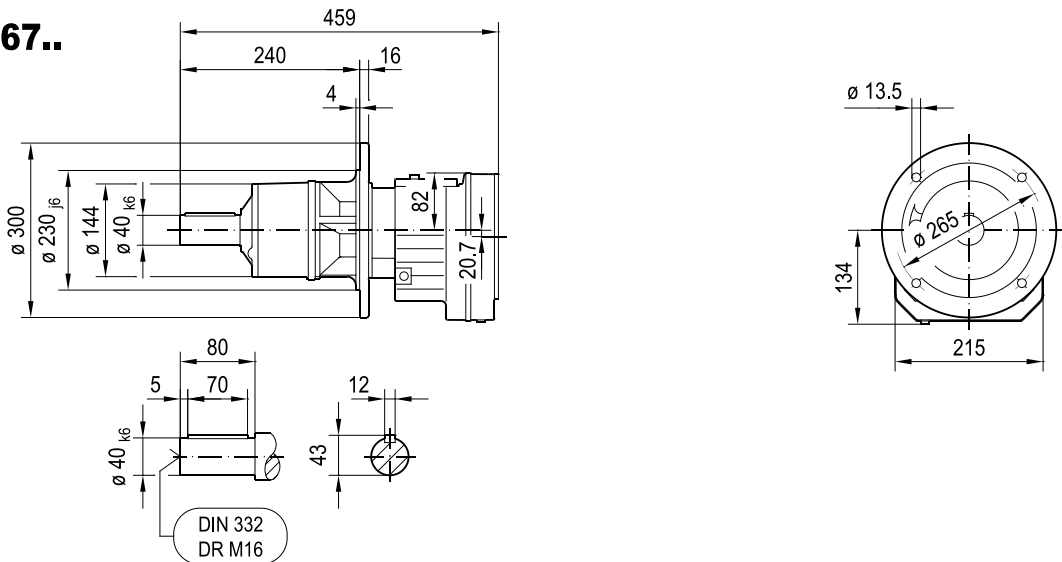
**ø 200**



**ø 250**



**RM67..**

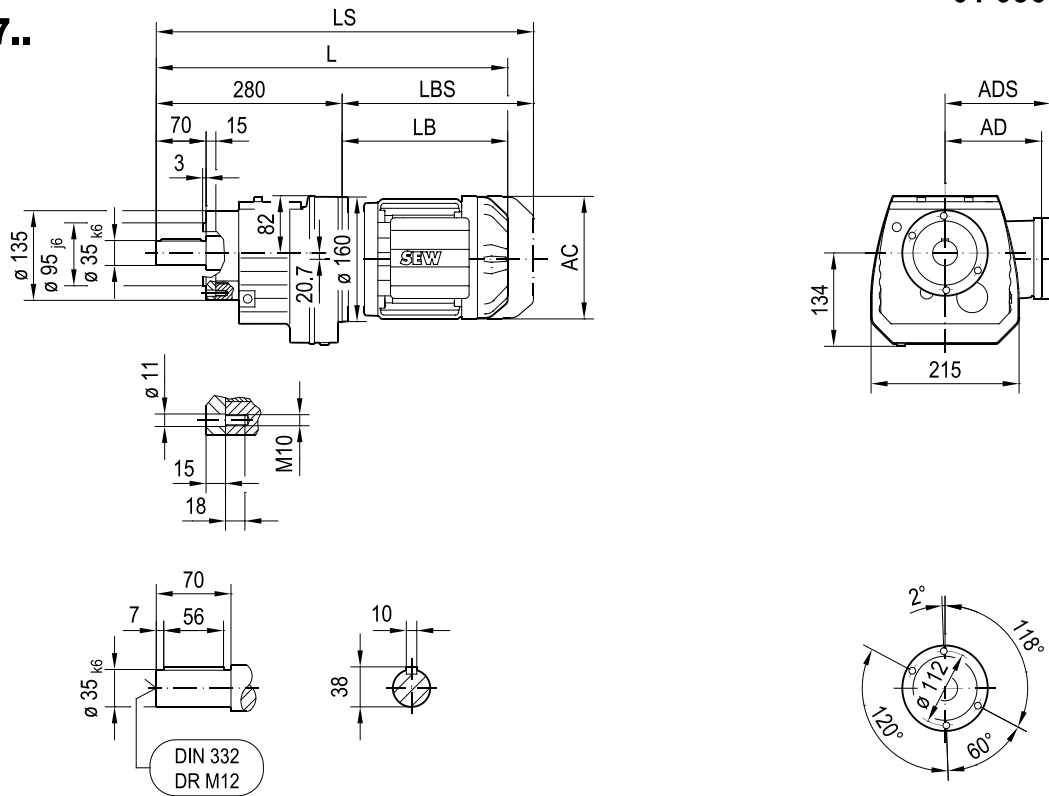


(→ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	464	478	479	499	510	527	555	557	589	585	635	666	720	738
LS	520	534	547	567	591	608	636	650	682	679	729	778	832	876
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

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01 036 01 14

**RZ67..**



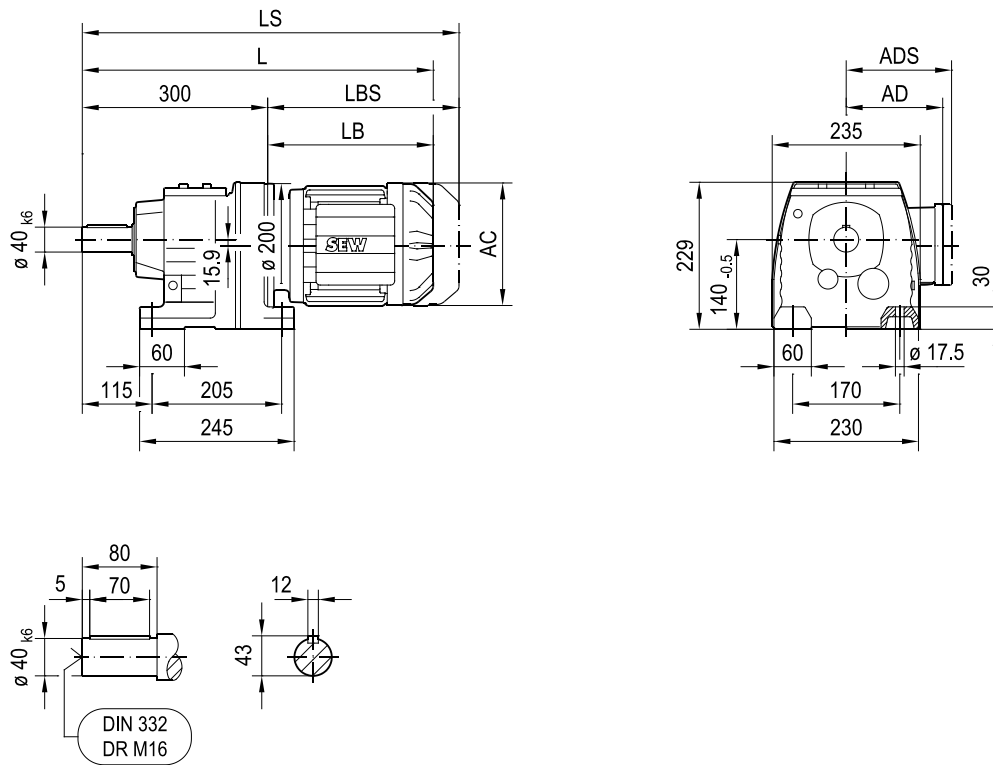
( $\rightarrow$ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	464	478	479	499	510	527	555	557	589	585	635	666	720	738
LS	520	534	547	567	591	608	636	650	682	679	729	778	832	876
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

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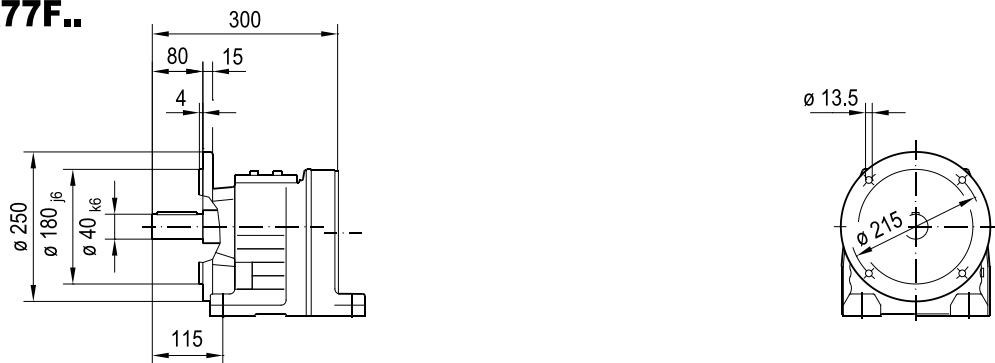


01 037 01 14

**R77..**



**R77F..**

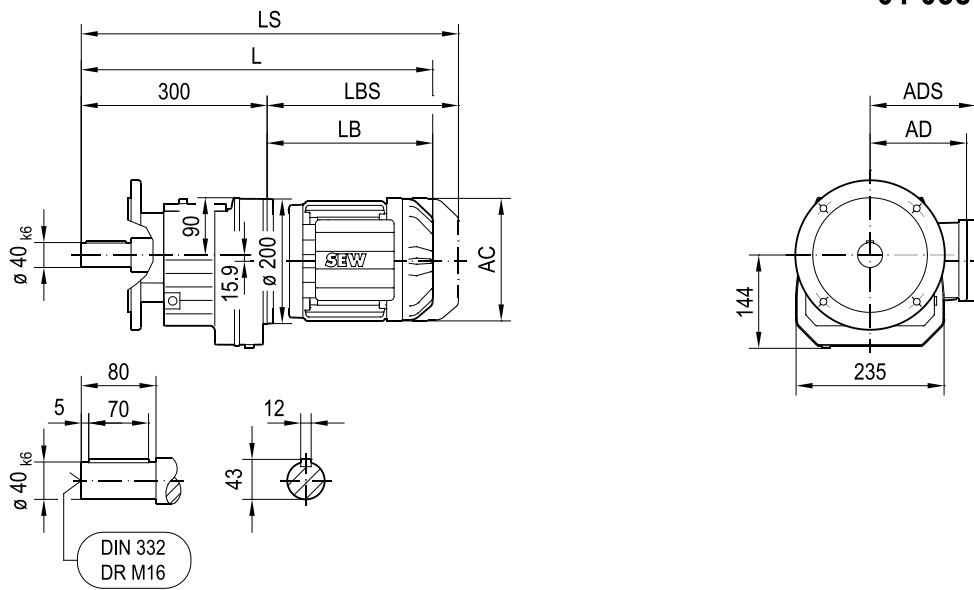


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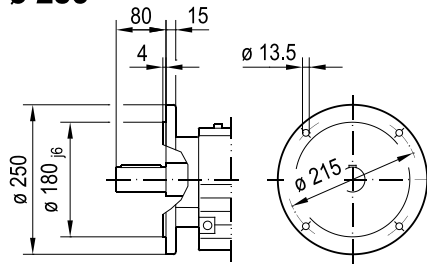
(> 7.3)	DRN														
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	115	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	98	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	491	492	512	523	540	568	570	602	598	648	679	729	747	773	839
LS	547	560	580	604	621	649	663	695	692	742	791	841	885	910	1028
LB	191	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	247	260	280	304	321	349	363	395	392	442	491	541	585	610	728

01 038 01 14

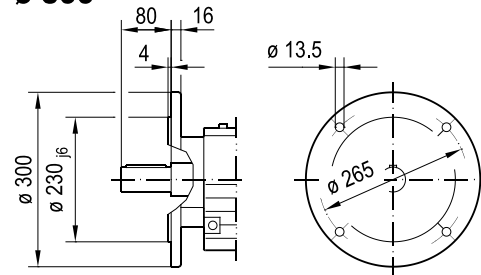
### RF77..



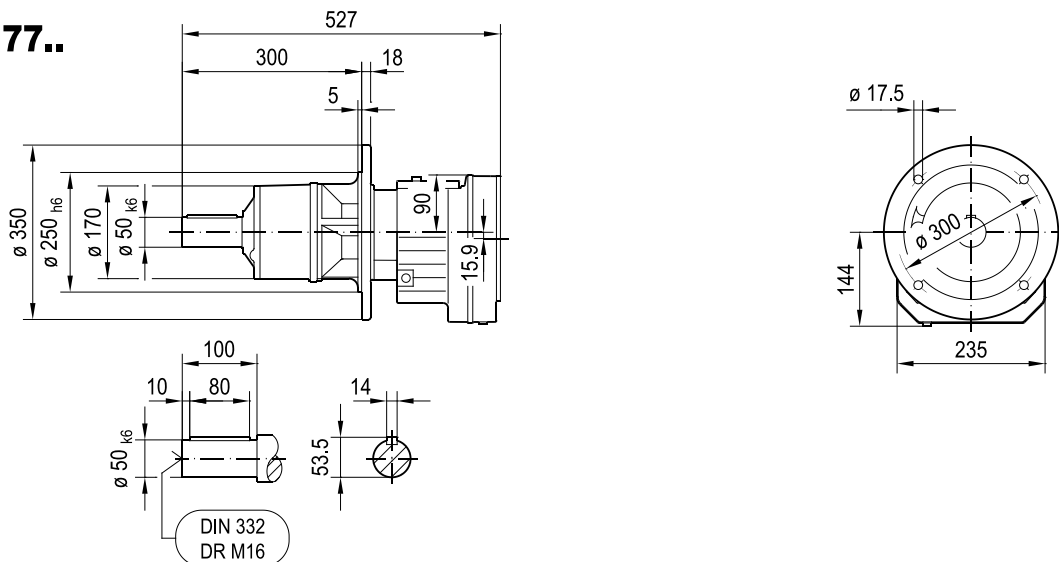
### $\varnothing 250$



### $\varnothing 300$



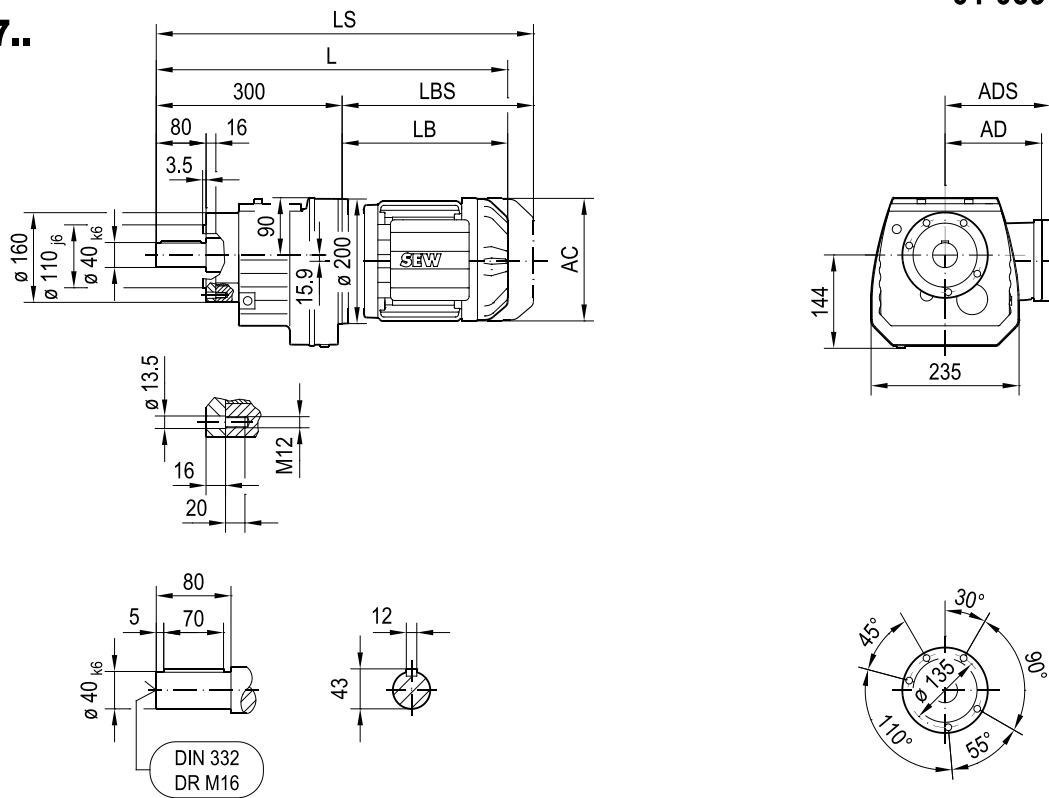
### RM77..



(→ 7.3)	DRN														
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	115	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	98	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	491	492	512	523	540	568	570	602	598	648	679	729	747	773	839
LS	547	560	580	604	621	649	663	695	692	742	791	841	885	910	1028
LB	191	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	247	260	280	304	321	349	363	395	392	442	491	541	585	610	728

01 039 01 14

RZ77..

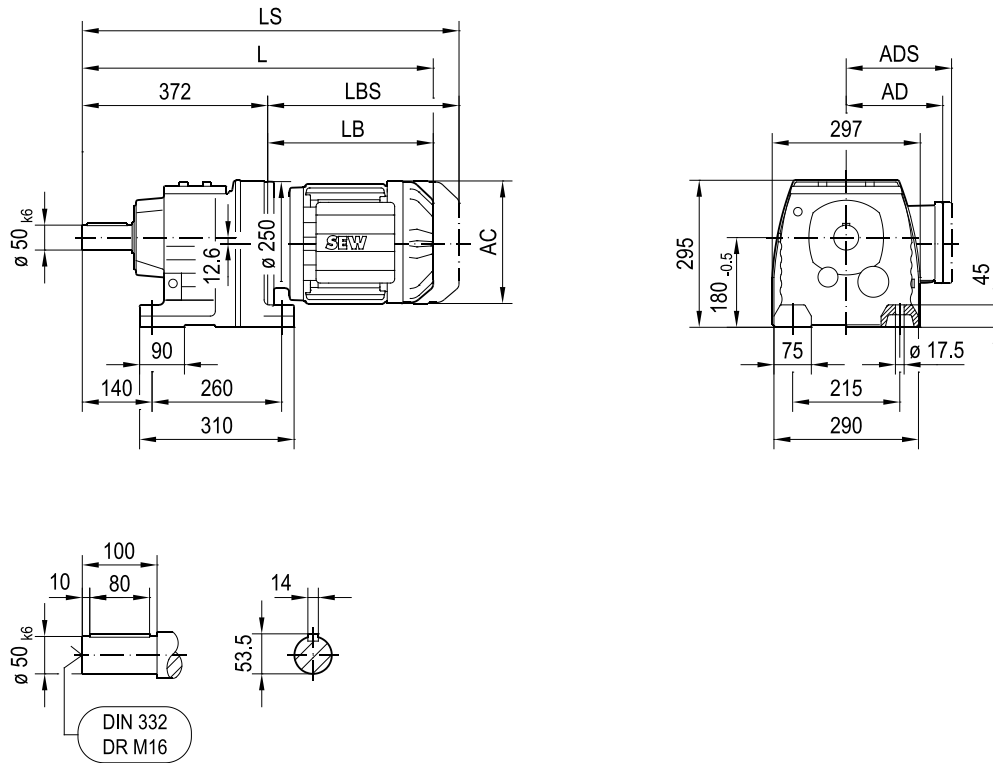


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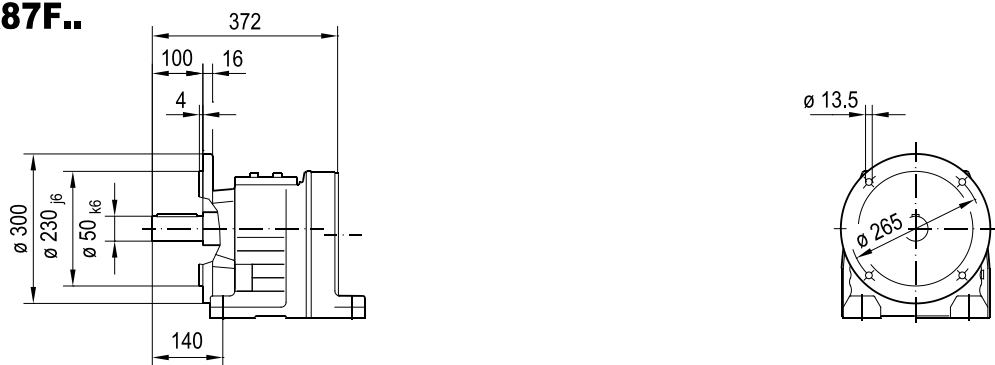
( $\rightarrow$ 7.3)	DRN														
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
<b>AC</b>	115	139	139	156	156	156	179	179	197	197	221	221	261	261	314
<b>AD</b>	98	118	118	128	128	128	140	140	157	157	170	170	228	228	253
<b>ADS</b>	98	129	129	139	139	139	150	150	158	158	172	172	228	228	253
<b>L</b>	491	492	512	523	540	568	570	602	598	648	679	729	747	773	839
<b>LS</b>	547	560	580	604	621	649	663	695	692	742	791	841	885	910	1028
<b>LB</b>	191	192	212	223	240	268	270	302	298	348	379	429	447	473	539
<b>LBS</b>	247	260	280	304	321	349	363	395	392	442	491	541	585	610	728

01 040 01 14

### R87..



### R87F..

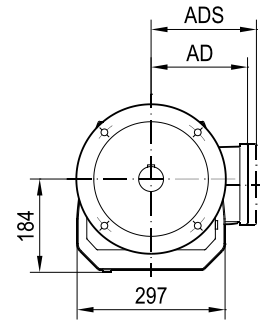
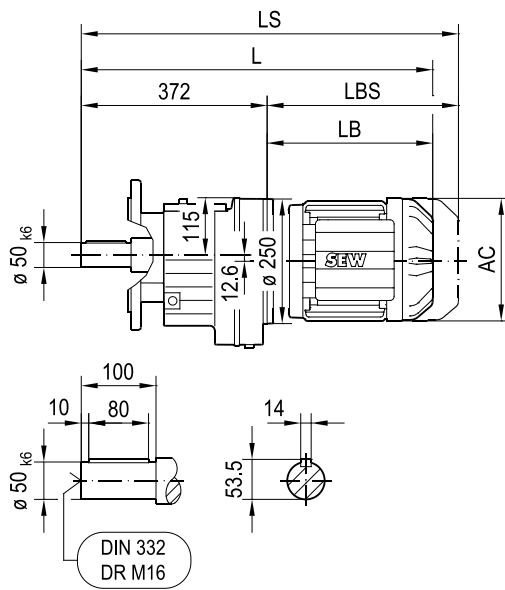


(-> 7.3)	DRN														
	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	139	156	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	118	128	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	129	139	139	139	150	150	158	158	172	172	228	228	253	268	283
L	579	590	607	635	637	669	665	715	746	796	814	840	906	929	1039
LS	647	671	688	716	730	762	759	809	858	908	952	977	1095	1118	1244
LB	207	218	235	263	265	297	293	343	374	424	442	468	534	557	667
LBS	275	299	316	344	358	390	387	437	486	536	580	605	723	746	872

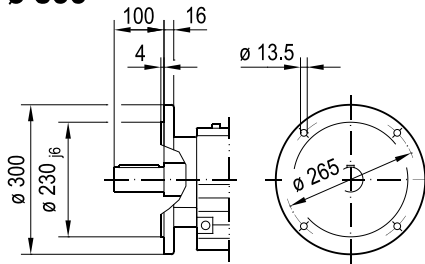
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01 041 01 14

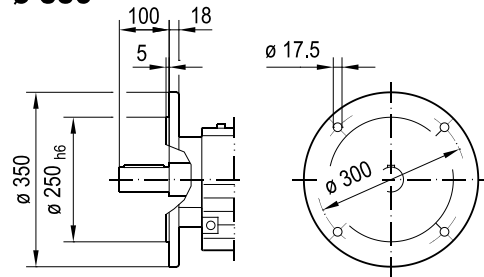
**RF87..**



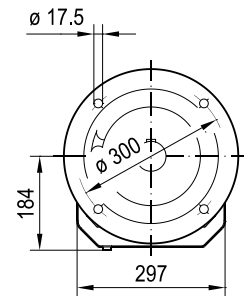
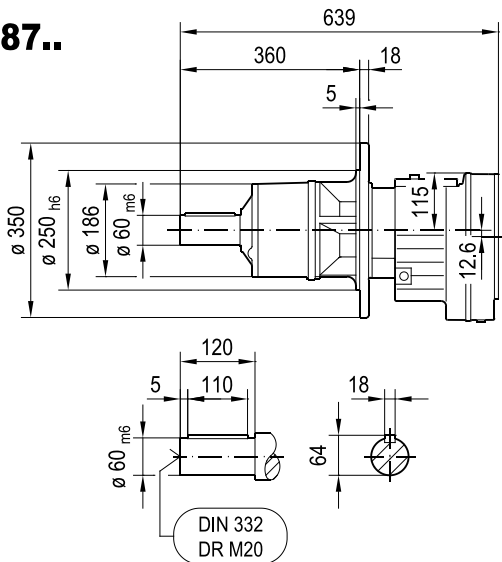
**ø 300**



**ø 350**



**RM87..**

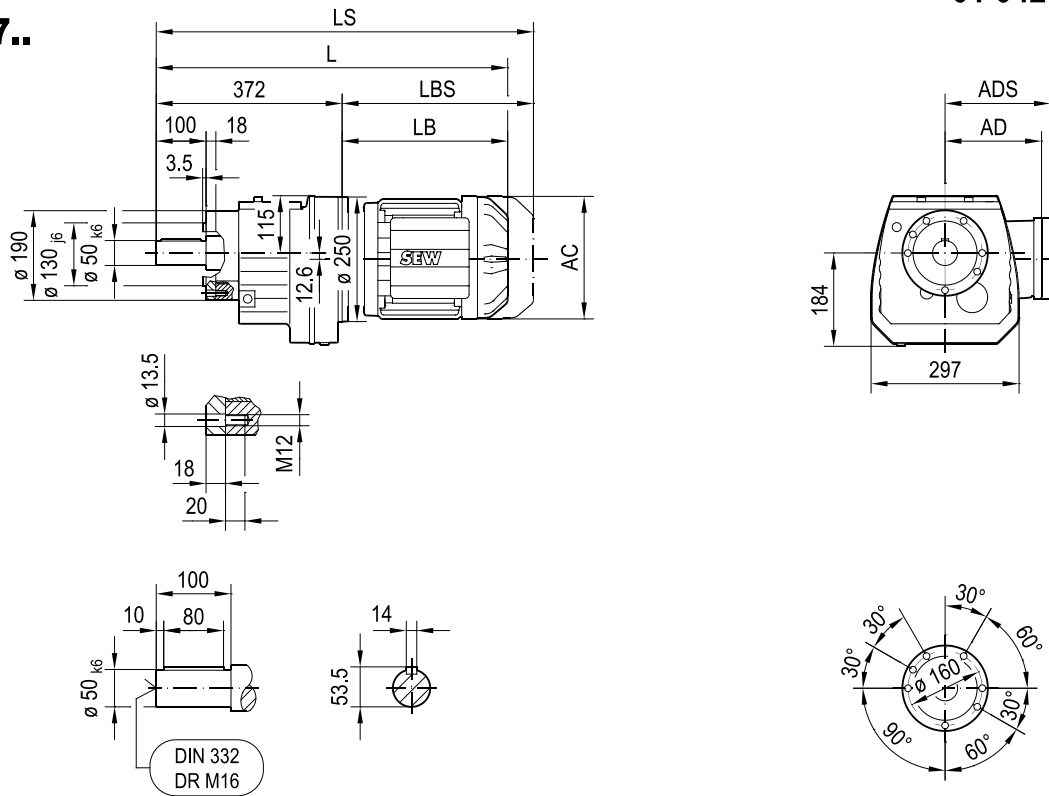


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(→ 7.3)	DRN														
	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	139	156	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	118	128	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	129	139	139	139	150	150	158	158	172	172	228	228	253	268	283
L	579	590	607	635	637	669	665	715	746	796	814	840	906	929	1039
LS	647	671	688	716	730	762	759	809	858	908	952	977	1095	1118	1244
LB	207	218	235	263	265	297	293	343	374	424	442	468	534	557	667
LBS	275	299	316	344	358	390	387	437	486	536	580	605	723	746	872

01 042 01 14

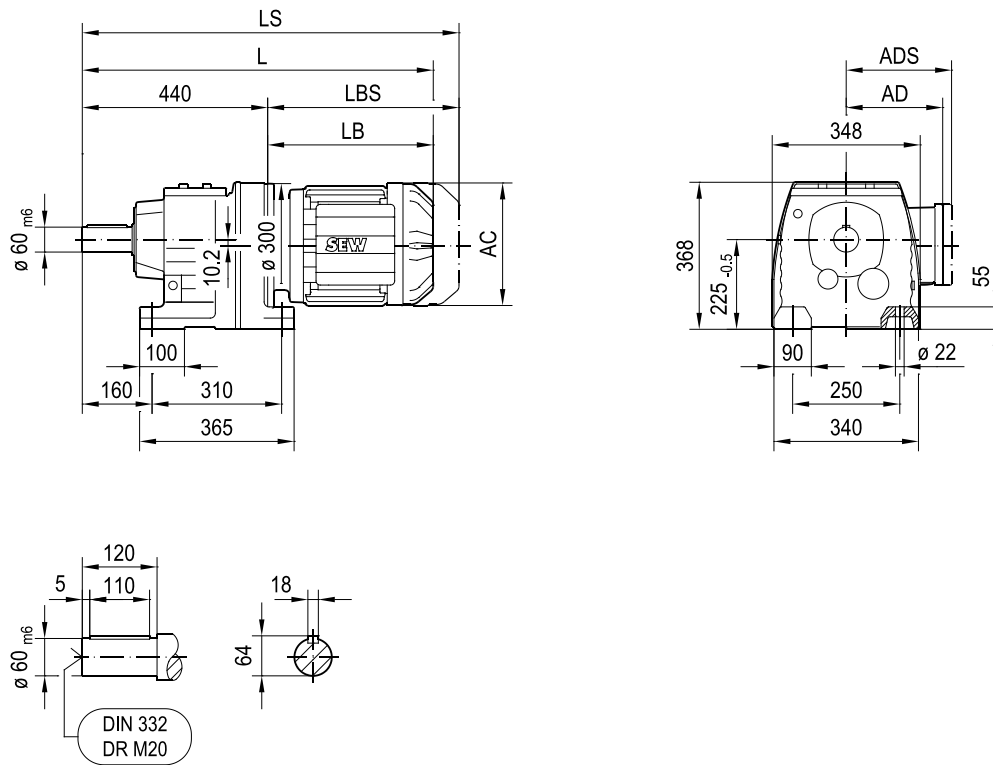
**RZ87..**



( $\rightarrow$ 7.3)	DRN														
	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	139	156	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	118	128	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	129	139	139	139	150	150	158	158	172	172	228	228	253	268	283
L	579	590	607	635	637	669	665	715	746	796	814	840	906	929	1039
LS	647	671	688	716	730	762	759	809	858	908	952	977	1095	1118	1244
LB	207	218	235	263	265	297	293	343	374	424	442	468	534	557	667
LBS	275	299	316	344	358	390	387	437	486	536	580	605	723	746	872

01 043 01 14

R97..

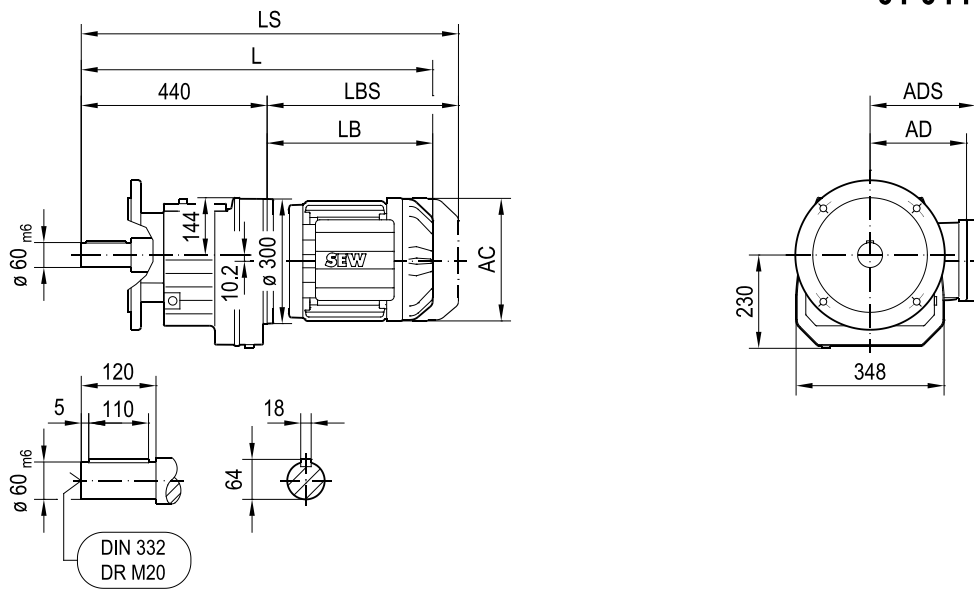


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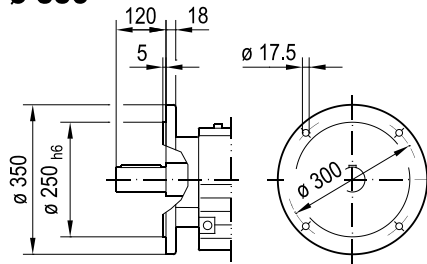
(→  7.3)	DRN														
	71M	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	139	156	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	118	128	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	129	139	139	150	150	158	158	172	172	228	228	253	268	283	305
L	642	653	698	700	732	728	778	809	859	877	903	969	992	1102	1076
LS	710	734	779	793	825	822	872	921	971	1015	1040	1158	1181	1307	1281
LB	202	213	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	270	294	339	353	385	382	432	481	531	575	600	718	741	867	841

01 044 01 14

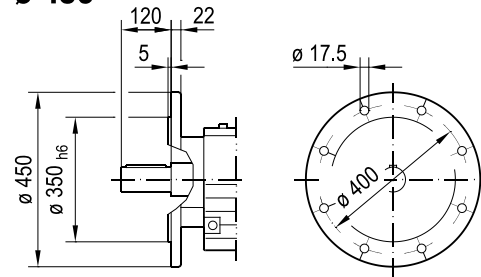
### RF97..



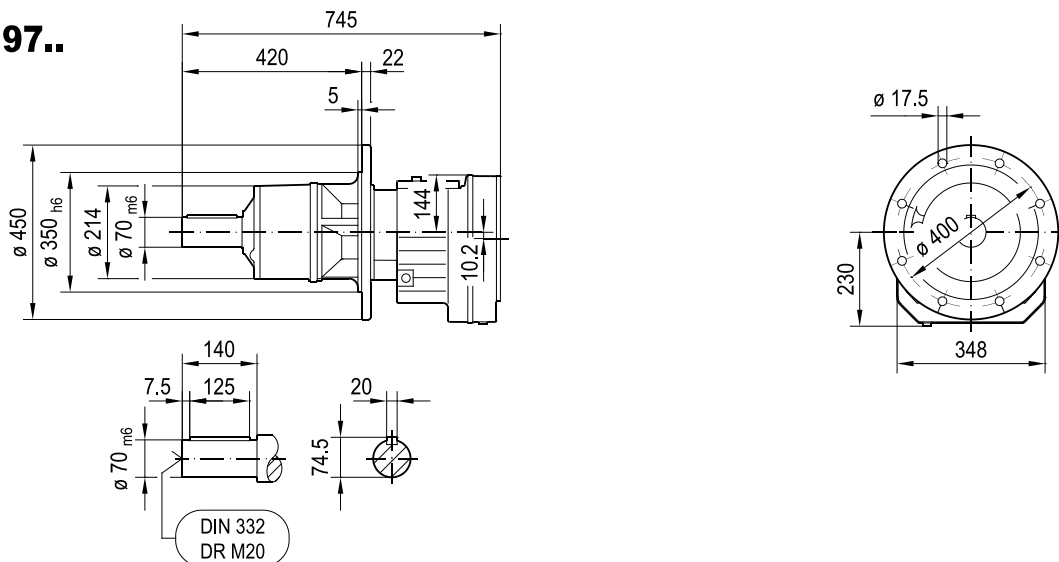
### ø 350



### ø 450



### RM97..



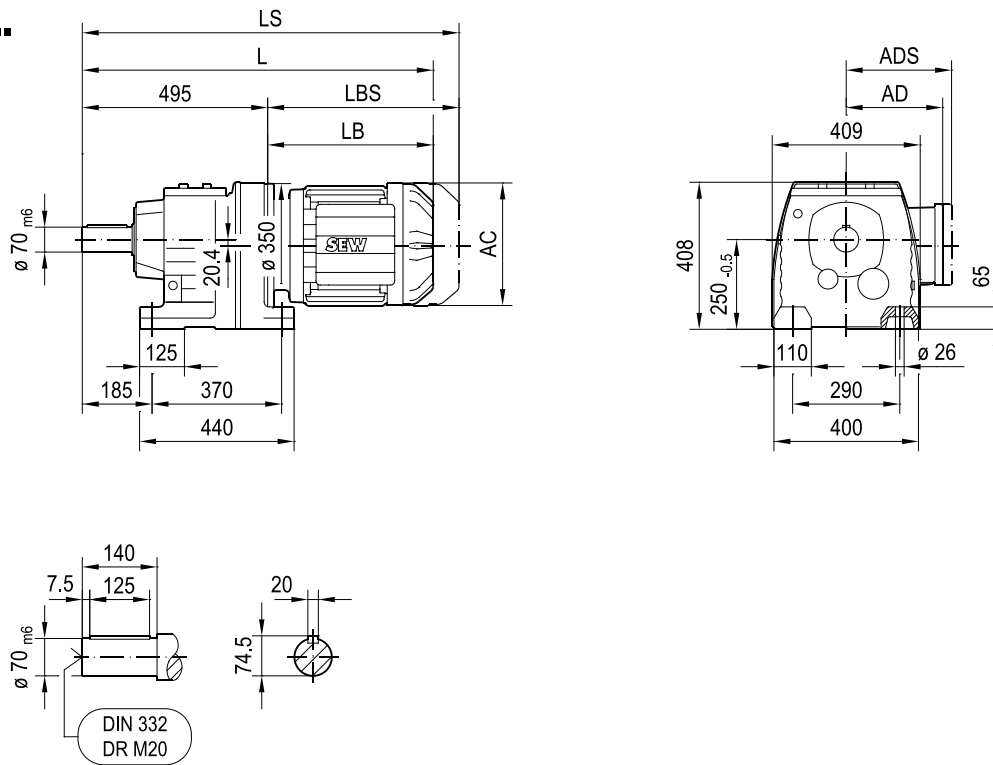
(→ 7.3)	DRN														
	71M	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	139	156	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	118	128	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	129	139	139	150	150	158	158	172	172	228	228	253	268	283	305
L	642	653	698	700	732	728	778	809	859	877	903	969	992	1102	1076
LS	710	734	779	793	825	822	872	921	971	1015	1040	1158	1181	1307	1281
LB	202	213	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	270	294	339	353	385	382	432	481	531	575	600	718	741	867	841

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01 045 01 14

**R107..**

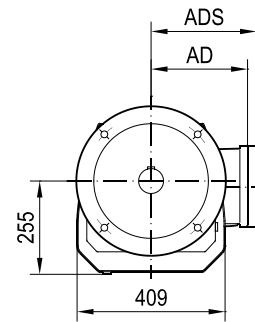
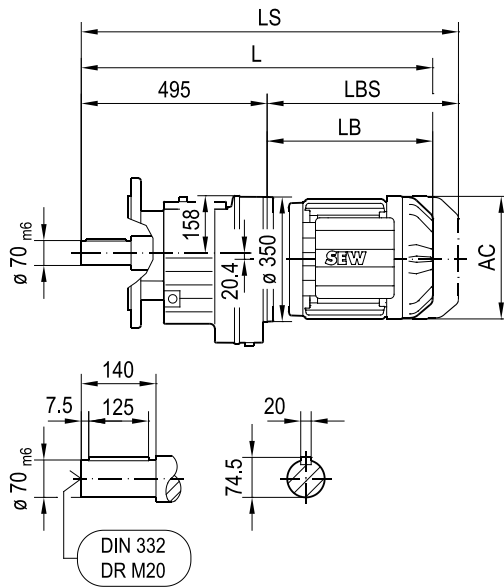


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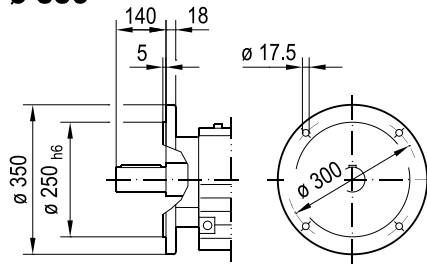
( $\rightarrow$ 7.3)	DRN									
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	197	197	221	221	261	261	314	357	394	434
AD	157	157	170	170	228	228	253	268	283	305
ADS	158	158	172	172	228	228	253	268	283	305
L	777	827	858	908	926	952	1018	1041	1151	1125
LS	871	921	970	1020	1064	1089	1207	1230	1356	1330
LB	282	332	363	413	431	457	523	546	656	630
LBS	376	426	475	525	569	594	712	735	861	835

01 046 01 14

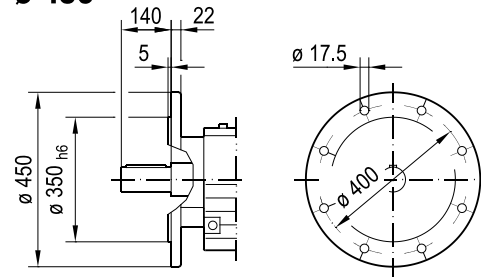
### RF107..



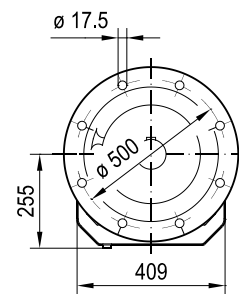
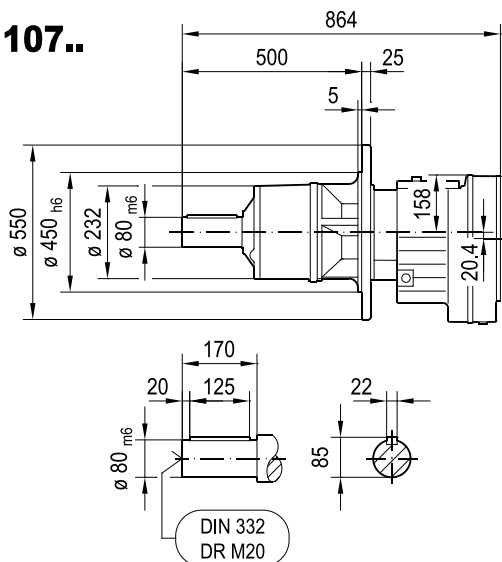
### ø 350



### ø 450



### RM107..

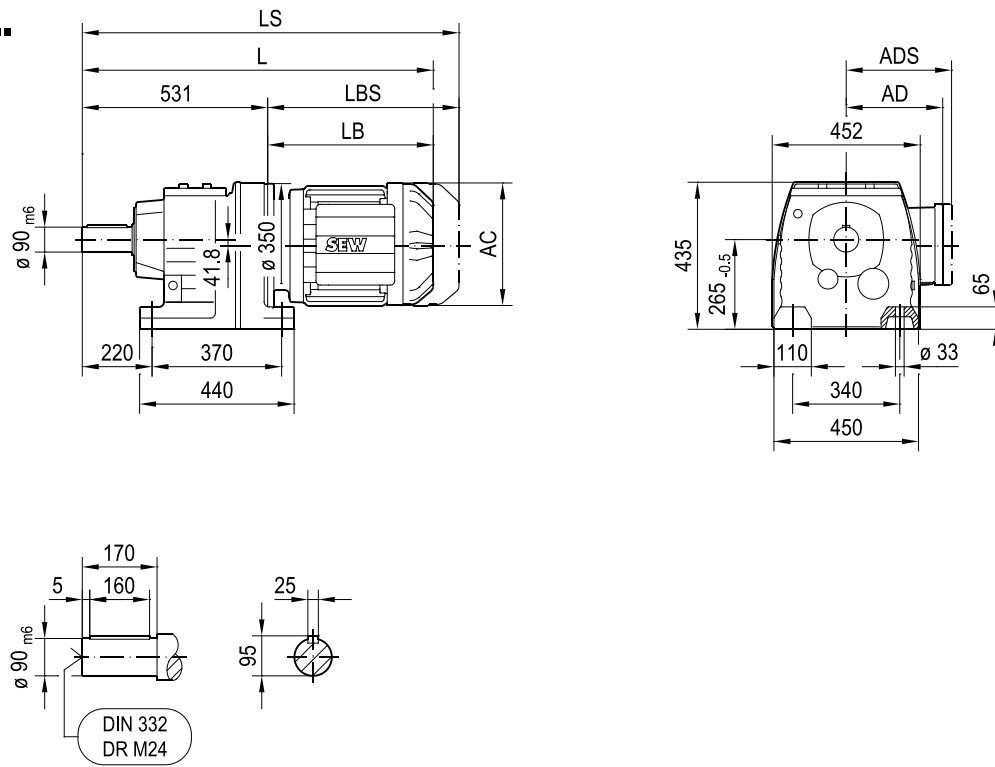


(-> 7.3)	DRN									
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	197	197	221	221	261	261	314	357	394	434
AD	157	157	170	170	228	228	253	268	283	305
ADS	158	158	172	172	228	228	253	268	283	305
L	777	827	858	908	926	952	1018	1041	1151	1125
LS	871	921	970	1020	1064	1089	1207	1230	1356	1330
LB	282	332	363	413	431	457	523	546	656	630
LBS	376	426	475	525	569	594	712	735	861	835

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01 147 01 15

**R127..**

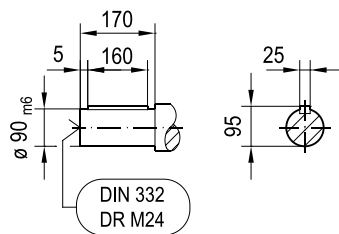
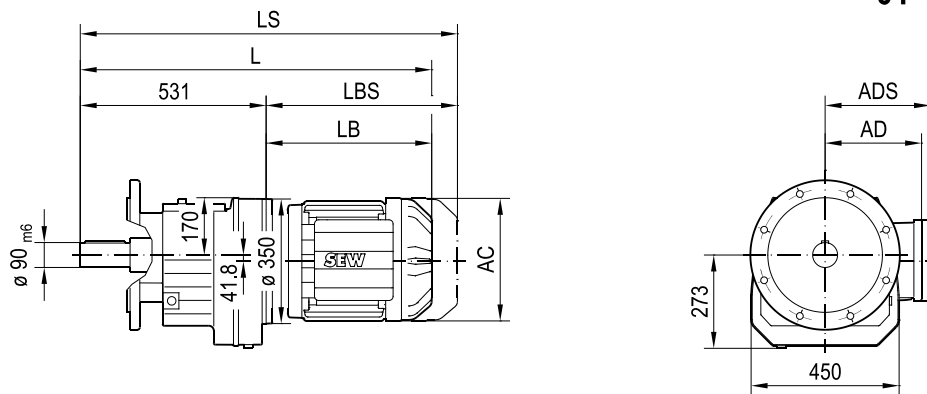


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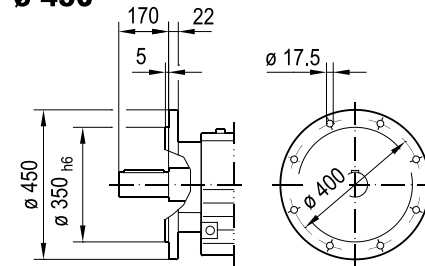
(→  7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	813	863	894	944	962	988	1054	1077	1187	1161	1298
LS	907	957	1006	1056	1100	1125	1243	1266	1392	1366	1538
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

01 148 01 15

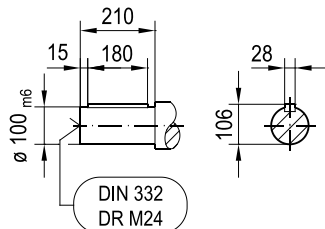
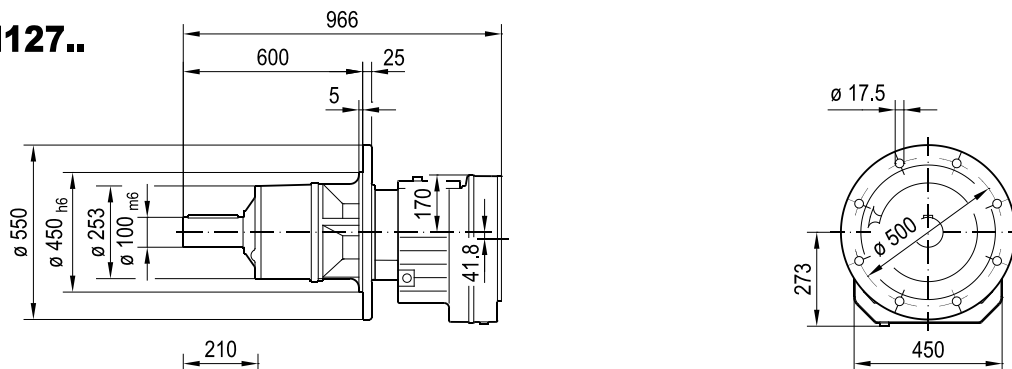
### RF127..



### ø 450



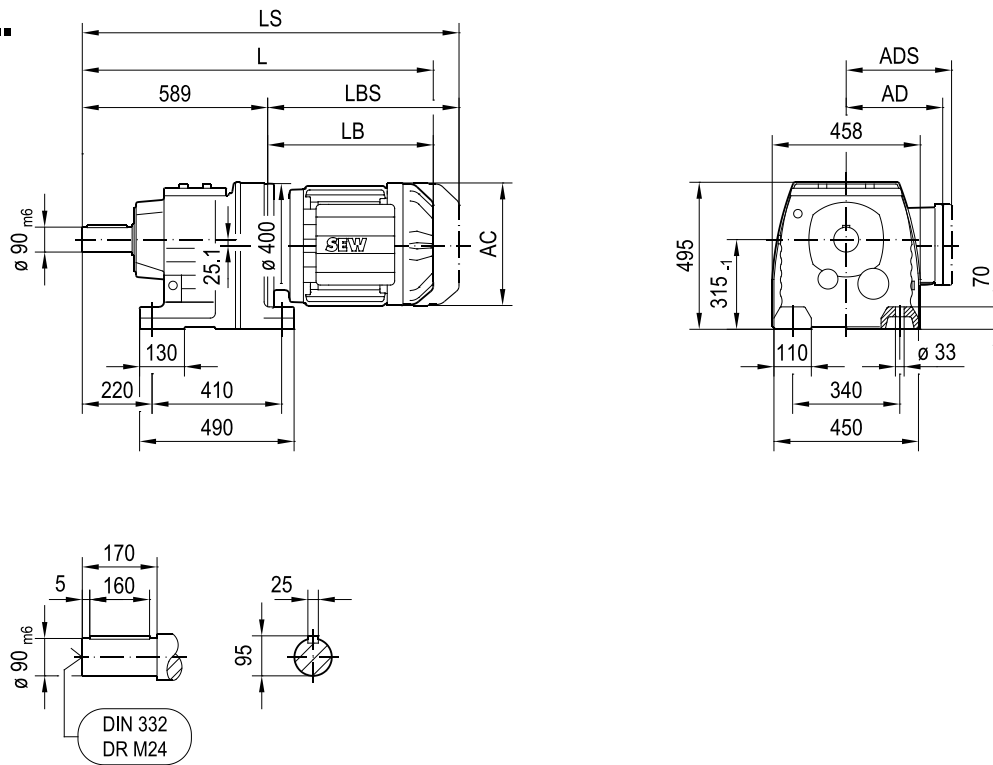
### RM127..



(-> 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	813	863	894	944	962	988	1054	1077	1187	1161	1298
LS	907	957	1006	1056	1100	1125	1243	1266	1392	1366	1538
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

01 047 01 14

**R137..**

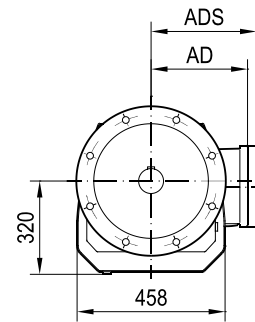
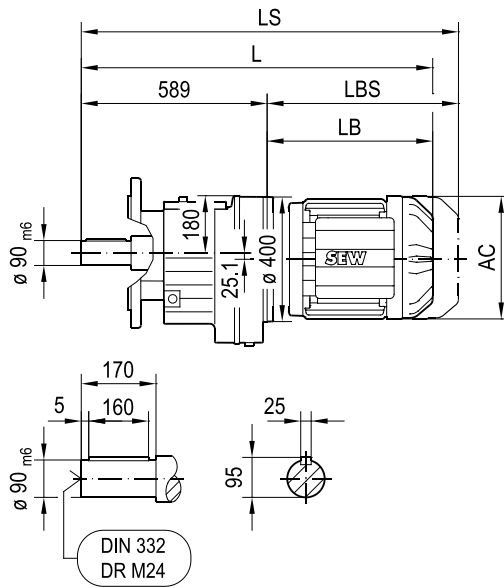


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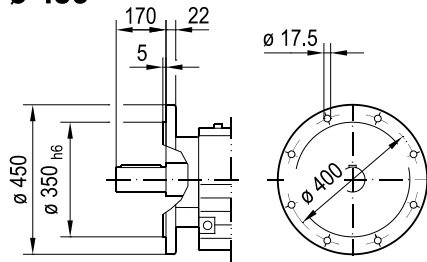
(-> 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	995	1013	1039	1105	1128	1238	1212	1349	1349	1444
LS	1107	1151	1176	1294	1317	1443	1417	1589	1589	1684
LB	406	424	450	516	539	649	623	760	760	855
LBS	518	562	587	705	728	854	828	1000	1000	1095

01 048 01 14

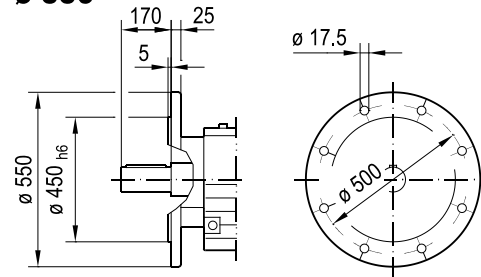
### RF137..



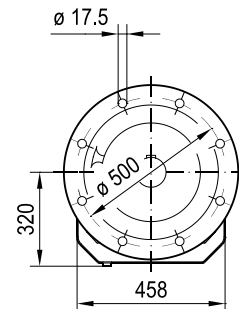
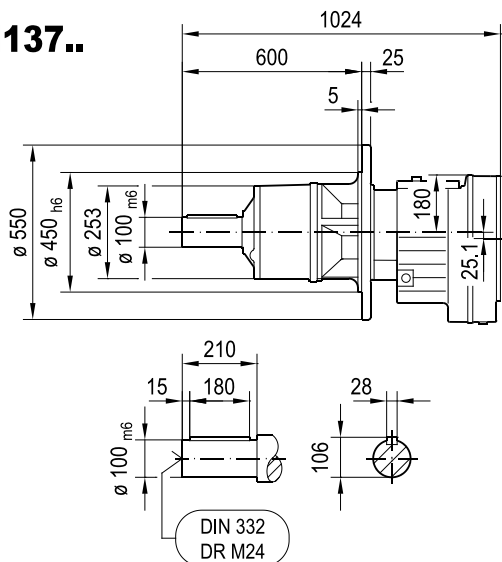
### ø 450



### ø 550



### RM137..

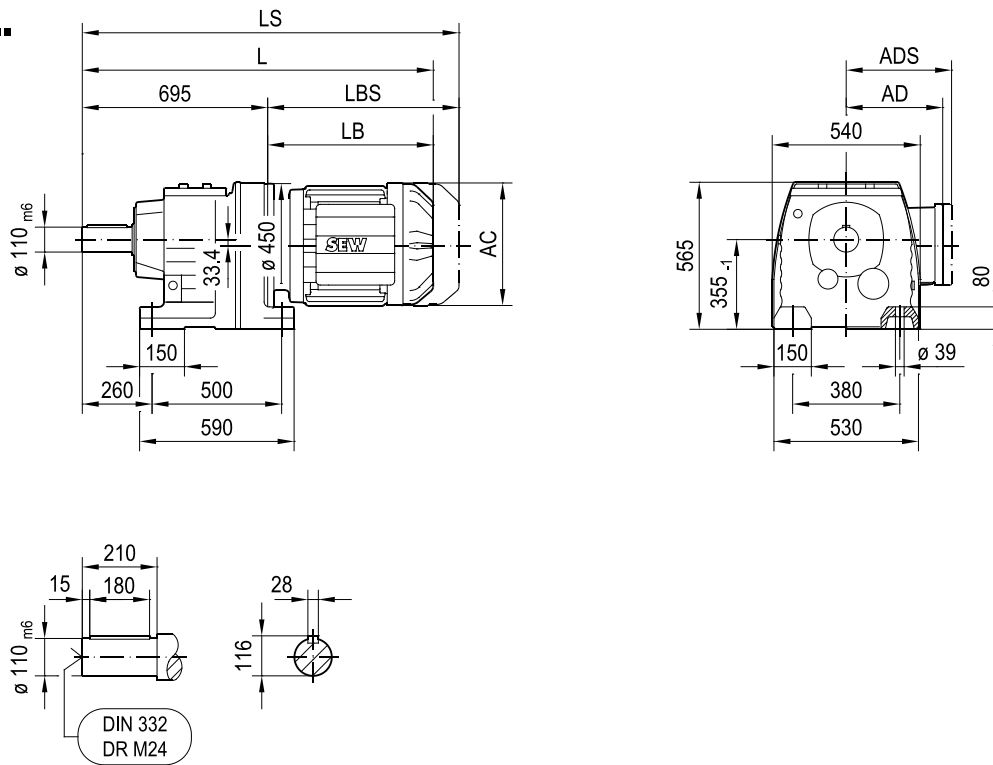


(-> 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	995	1013	1039	1105	1128	1238	1212	1349	1349	1444
LS	1107	1151	1176	1294	1317	1443	1417	1589	1589	1684
LB	406	424	450	516	539	649	623	760	760	855
LBS	518	562	587	705	728	854	828	1000	1000	1095

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01 049 01 14

**R147..**

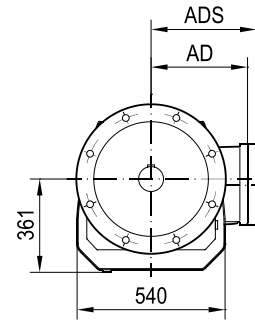
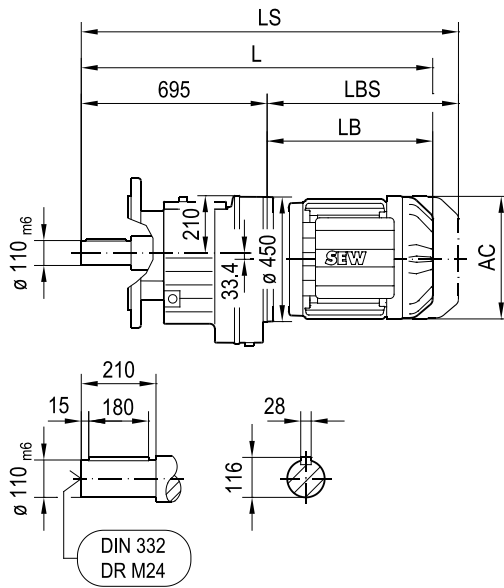


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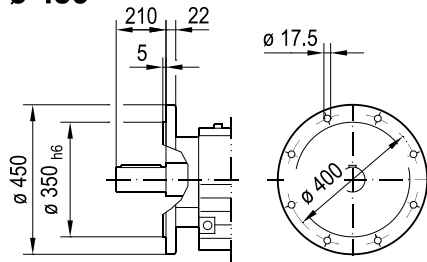
(> 7.3)	DRN							
	132L	160..	180..	200L	225..	250M	280S	280M
AC	261	314	357	394	434	495	495	495
AD	228	253	268	283	305	394	394	394
ADS	228	253	268	283	305	394	394	394
L	1137	1203	1226	1336	1310	1447	1447	1542
LS	1274	1392	1415	1541	1515	1687	1687	1782
LB	442	508	531	641	615	752	752	847
LBS	579	697	720	846	820	992	992	1087

01 050 01 14

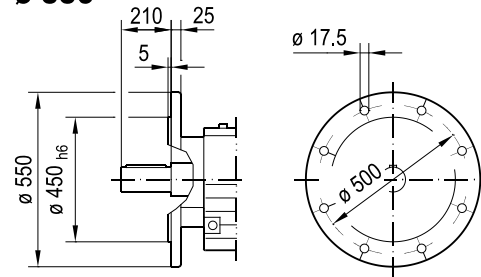
### RF147..



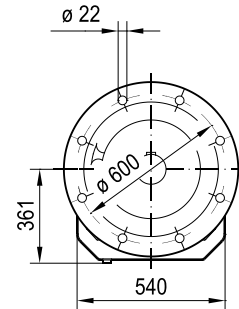
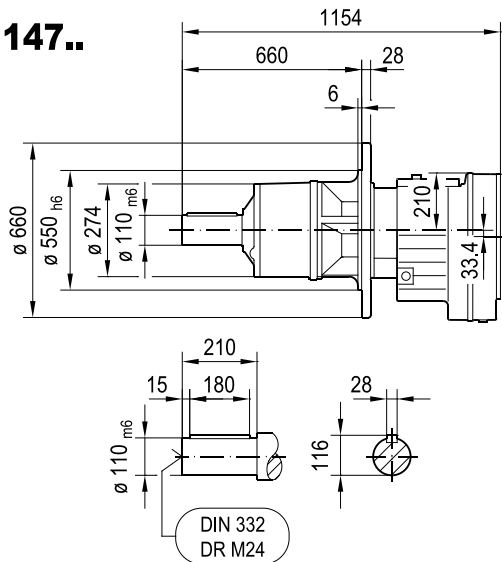
### ø 450



### ø 550



### RM147..



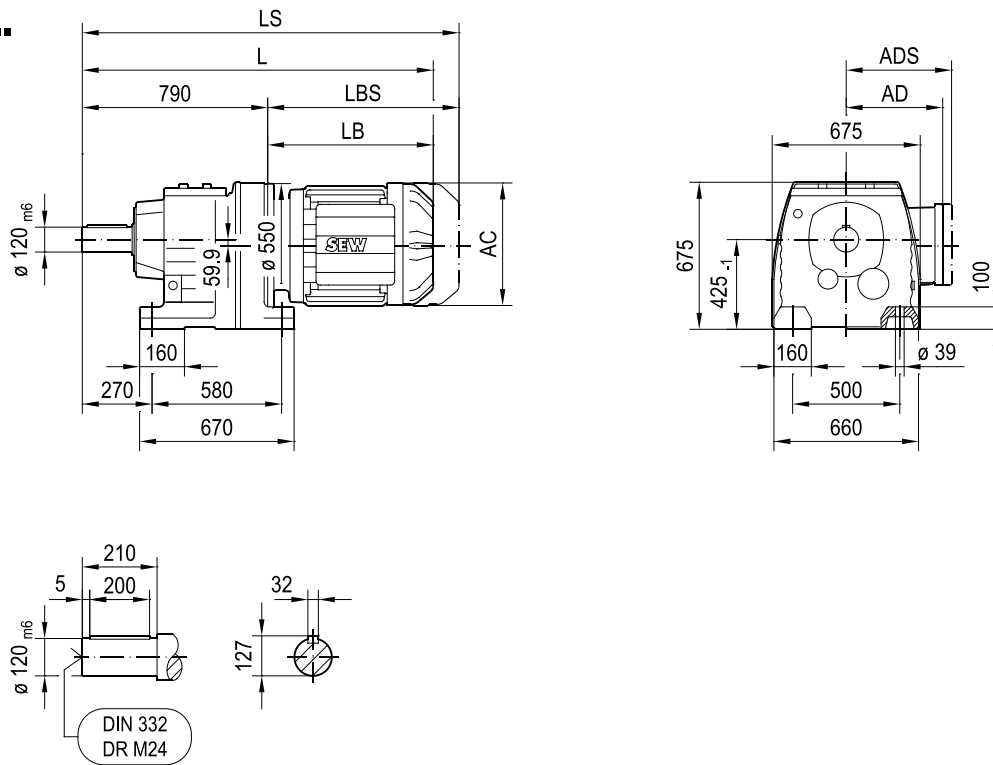
(-> 7.3)	DRN							
	132L	160..	180..	200L	225..	250M	280S	280M
AC	261	314	357	394	434	495	495	495
AD	228	253	268	283	305	394	394	394
ADS	228	253	268	283	305	394	394	394
L	1137	1203	1226	1336	1310	1447	1447	1542
LS	1274	1392	1415	1541	1515	1687	1687	1782
LB	442	508	531	641	615	752	752	847
LBS	579	697	720	846	820	992	992	1087

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01 051 01 14

**R167..**

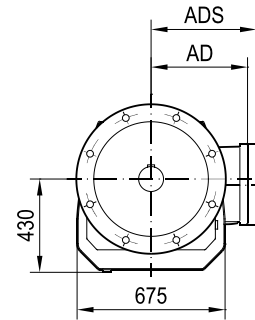
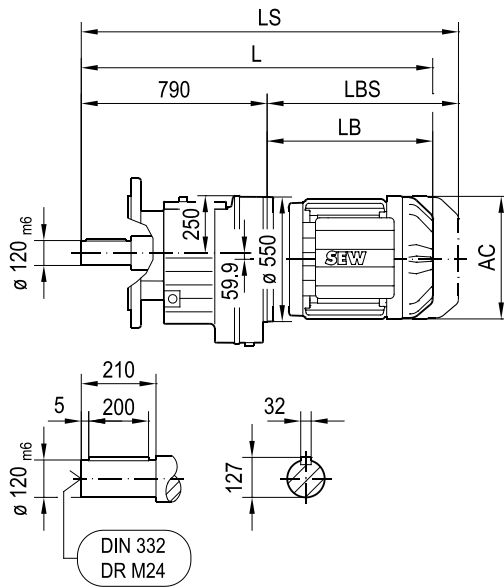


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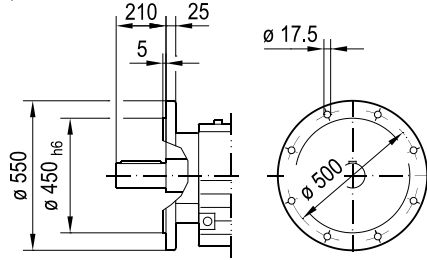
(> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1224	1290	1313	1423	1397	1534	1534	1629	1731	1861
LS	1361	1479	1502	1628	1602	1774	1774	1869	1982	2112
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

01 052 01 14

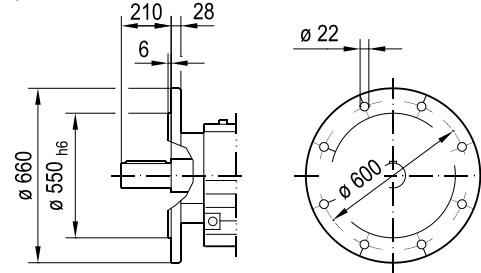
### RF167..



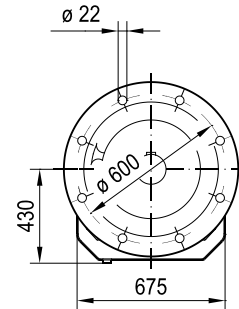
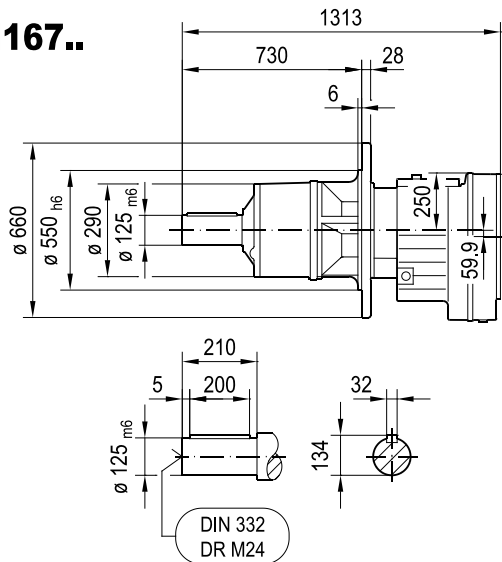
### ø 550



### ø 660



### RM167..

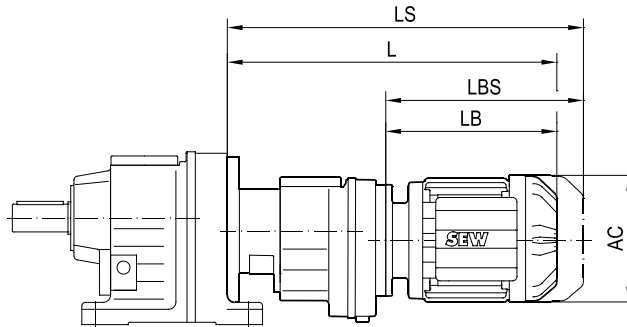


(-> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1224	1290	1313	1423	1397	1534	1534	1629	1731	1861
LS	1361	1479	1502	1628	1602	1774	1774	1869	1982	2112
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

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8.6 R..R..DRN.. dimension sheets in mm

01 066 01 21

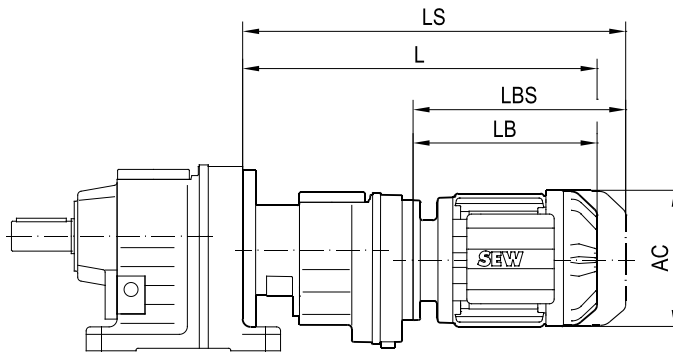


(7.3)	AC	L	LS	LB	LBS
R..27R17 DR2S56..	109	293	329	160	196
R..27R17 DRN63MS	115	323	379	190	246
R..27R17 DRN63M	115	337	393	204	260
R..27R17 DRN71MS	139	339	406	206	273
R..27R17 DRN71M	139	359	426	226	293
R..37R17 DR2S56..	109	293	329	160	196
R..37R17 DRN63MS	115	323	379	190	246
R..37R17 DRN63M	115	337	393	204	260
R..37R17 DRN71MS	139	339	406	206	273
R..37R17 DRN71M	139	359	426	226	293
R..37R17 DRN80MK	156	370	451	237	318
R..47R37 DRN63MS	115	355	411	190	246
R..47R37 DRN63M	115	369	425	204	260
R..47R37 DRN71MS	139	371	438	206	273
R..47R37 DRN71M	139	391	458	226	293
R..47R37 DRN80MK	156	402	483	237	318
R..47R37 DRN80M	156	447	528	282	363
R..57R37 DRN63MS	115	355	411	190	246
R..57R37 DRN63M	115	369	425	204	260
R..57R37 DRN71MS	139	371	438	206	273
R..57R37 DRN71M	139	391	458	226	293
R..57R37 DRN80MK	156	402	483	237	318
R..57R37 DRN80M	156	447	528	282	363
R..67R37 DRN63MS	115	355	411	190	246
R..67R37 DRN63M	115	369	425	204	260
R..67R37 DRN71MS	139	371	438	206	273
R..67R37 DRN71M	139	391	458	226	293
R..67R37 DRN80MK	156	402	483	237	318
R..67R37 DRN80M	156	447	528	282	363
R..67R37 DRN90S	179	448	542	283	377
R..77R37 DRN63MS	115	347	403	190	246
R..77R37 DRN63M	115	361	417	204	260
R..77R37 DRN71MS	139	363	430	206	273
R..77R37 DRN71M	139	383	450	226	293
R..77R37 DRN80MK	156	394	475	237	318
R..77R37 DRN80M	156	439	520	282	363
R..77R37 DRN90S	179	440	534	283	377
R..77R37 DRN90L	179	472	566	315	409
R..87R57 DRN63MS	115	411	467	184	240
R..87R57 DRN63M	115	425	481	198	254
R..87R57 DRN71MS	139	427	494	199	267
R..87R57 DRN71M	139	447	514	219	287
R..87R57 DRN80MK	156	458	539	230	311
R..87R57 DRN80M	156	503	584	275	356
R..87R57 DRN90S	179	504	598	277	370
R..87R57 DRN90L	179	536	630	309	402
R..87R57 DRN100L/LM	197	583	676	355	449
R..97R57 DRN63MS	115	406	462	184	240
R..97R57 DRN63M	115	420	476	198	254
R..97R57 DRN71MS	139	422	489	199	267
R..97R57 DRN71M	139	442	509	219	287

(7.3)	AC	L	LS	LB	LBS
R..97R57 DRN80MK	156	453	534	230	311
R..97R57 DRN80M	156	498	579	275	356
R..97R57 DRN90S	179	499	593	277	370
R..97R57 DRN90L	179	531	625	309	402
R..97R57 DRN100LS	197	528	621	305	399
R..97R57 DRN100L/LM	197	578	671	355	449
R..107R77 DRN63MS	115	424	480	177	233
R..107R77 DRN63M	115	438	494	191	247
R..107R77 DRN71MS	139	439	507	192	260
R..107R77 DRN71M	139	459	527	212	280
R..107R77 DRN80MK	156	470	551	223	304
R..107R77 DRN80M	156	515	596	268	349
R..107R77 DRN90S	179	517	610	270	363
R..107R77 DRN90L	179	549	642	302	395
R..107R77 DRN100LS	197	545	639	298	392
R..107R77 DRN100L/LM	197	595	689	348	442
R..107R77 DRN112M	221	626	738	379	491
R..107R77 DRN132S	221	676	788	429	541
R..127R77 DRN63MS	115	424	480	177	233
R..127R77 DRN63M	115	438	494	191	247
R..127R77 DRN71MS	139	439	507	192	260
R..127R77 DRN71M	139	459	527	212	280
R..127R77 DRN80MK	156	470	551	223	304
R..127R77 DRN80M	156	515	596	268	349
R..127R77 DRN90S	179	517	610	270	363
R..127R77 DRN90L	179	549	642	302	395
R..127R77 DRN100LS	197	545	639	298	392
R..127R77 DRN100L/LM	197	595	689	348	442
R..127R77 DRN112M	221	626	738	379	491
R..127R77 DRN132S	221	676	788	429	541
R..127R77 DRN132M	261	694	832	447	585
R..127R77 DRN132L	261	720	857	473	610
R..127R77 DRN160..	314	786	975	539	728
R..137R77 DRN63MS	115	417	473	177	233
R..137R77 DRN63M	115	431	487	191	247
R..137R77 DRN71MS	139	432	500	192	260
R..137R77 DRN71M	139	452	520	212	280
R..137R77 DRN80MK	156	463	544	223	304
R..137R77 DRN80M	156	508	589	268	349
R..137R77 DRN90S	179	510	603	270	363
R..137R77 DRN90L	179	542	635	302	395
R..137R77 DRN100LS	197	538	632	298	392
R..137R77 DRN100L/LM	197	588	682	348	442
R..137R77 DRN112M	221	619	731	379	491
R..137R77 DRN132S	221	669	781	429	541
R..137R77 DRN132M	261	687	825	447	585
R..137R77 DRN132L	261	713	850	473	610
R..147R77 DRN63MS	115	409	465	177	233
R..147R77 DRN63M	115	423	479	191	247
R..147R77 DRN71MS	139	424	492	192	260
R..147R77 DRN71M	139	444	512	212	280

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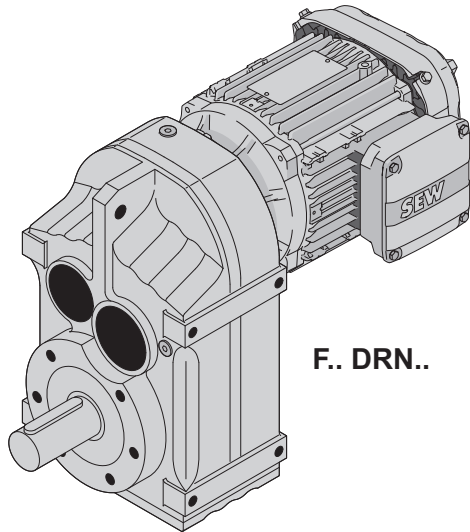
01 066 01 21



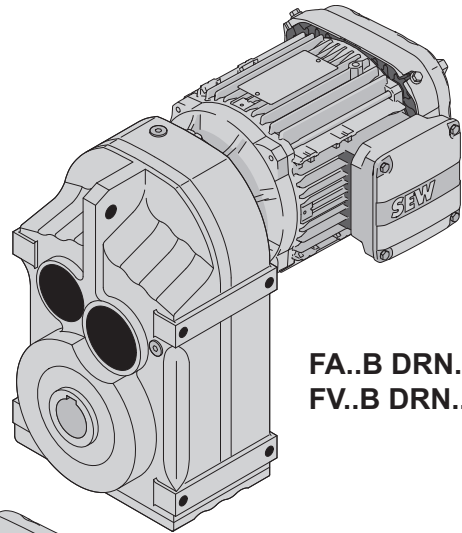
(IE3)	AC	L	LS	LB	LBS
R..147R77 DRN80MK	156	455	536	223	304
R..147R77 DRN80M	156	500	581	268	349
R..147R77 DRN90S	179	502	595	270	363
R..147R77 DRN90L	179	534	627	302	395
R..147R77 DRN100LS	197	530	624	298	392
R..147R77 DRN100L/LM	197	580	674	348	442
R..147R77 DRN112M	221	611	723	379	491
R..147R77 DRN132S	221	661	773	429	541
R..147R77 DRN132M	261	679	817	447	585
R..147R87 DRN90L	179	577	670	297	390
R..147R87 DRN100LS	197	573	667	293	387
R..147R87 DRN100L/LM	197	623	717	343	437
R..147R87 DRN112M	221	654	766	374	486
R..147R87 DRN132S	221	704	816	424	536
R..147R87 DRN132M	261	722	860	442	580
R..147R87 DRN132L	261	748	885	468	605
R..147R87 DRN160..	314	814	1003	534	723
R..147R87 DRN180..	357	837	1026	557	746
R..167R97 DRN71MS	139	507	575	182	250
R..167R97 DRN71M	139	527	595	202	270
R..167R97 DRN80MK	156	538	619	213	294
R..167R97 DRN80M	156	583	664	258	339
R..167R97 DRN90S	179	585	678	260	353
R..167R97 DRN90L	179	617	710	292	385
R..167R97 DRN100LS	197	613	707	288	382
R..167R97 DRN100L/LM	197	663	757	338	432
R..167R97 DRN112M	221	694	806	369	481
R..167R97 DRN132S	221	744	856	419	531
R..167R97 DRN132M	261	762	900	437	575
R..167R97 DRN132L	261	788	925	463	600
R..167R97 DRN160..	314	854	1043	529	718

## 9 Parallel-shaft helical gearmotors

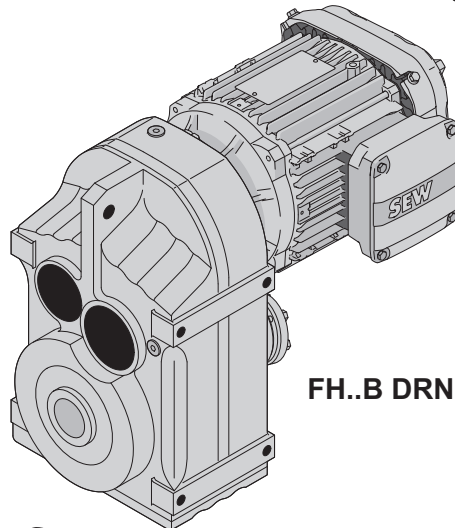
### 9.1 F..DRN.. designs



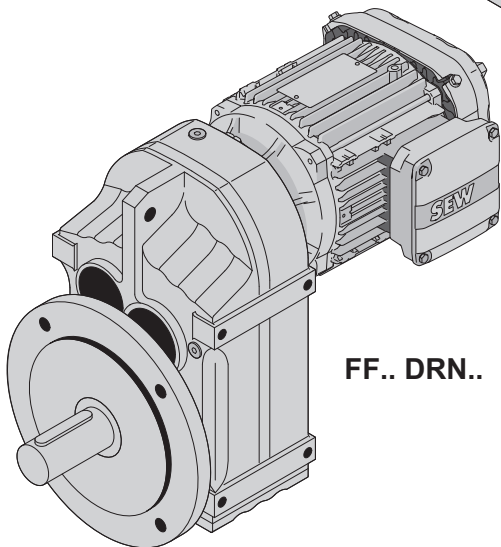
F.. DRN..



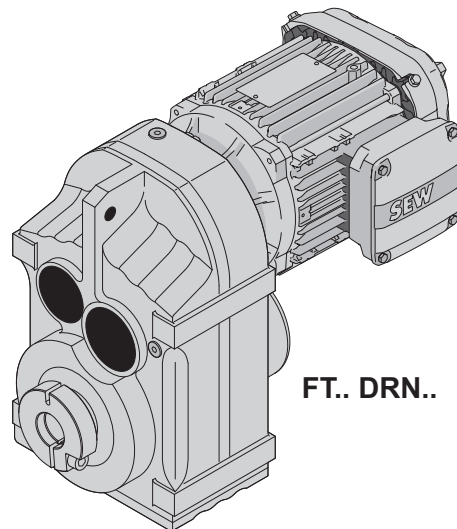
FA..B DRN..  
FV..B DRN..



FH..B DRN..



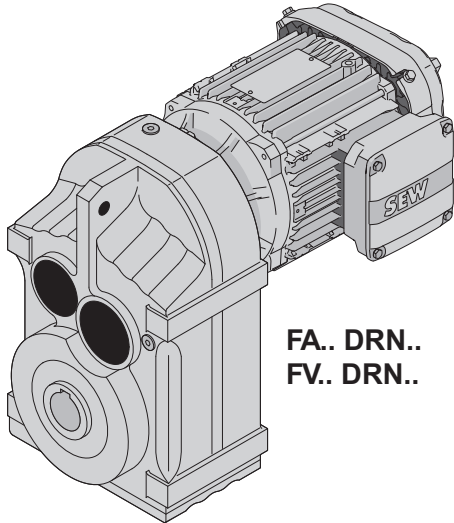
FF.. DRN..



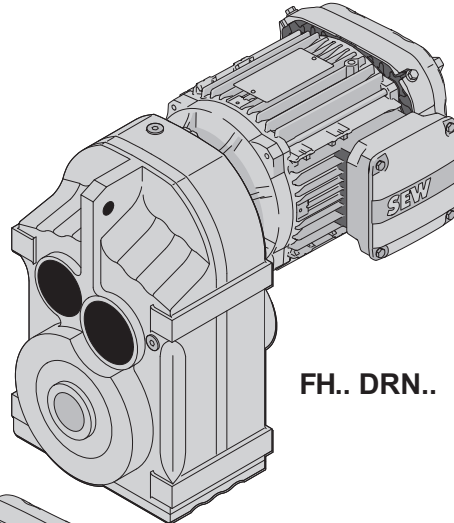
FT.. DRN..

27021611231691019

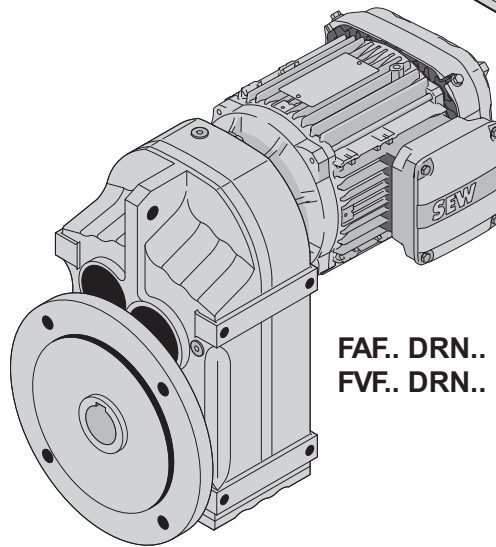
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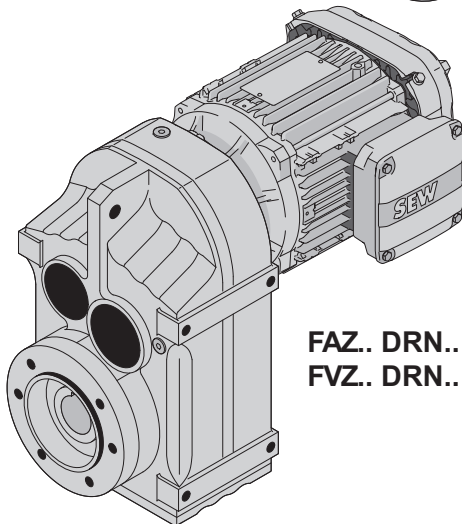
FA.. DRN..  
FV.. DRN..



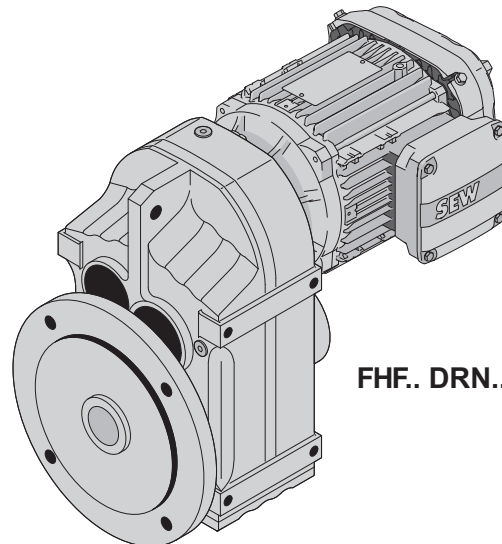
FH.. DRN..



FAF.. DRN..  
FVF.. DRN..



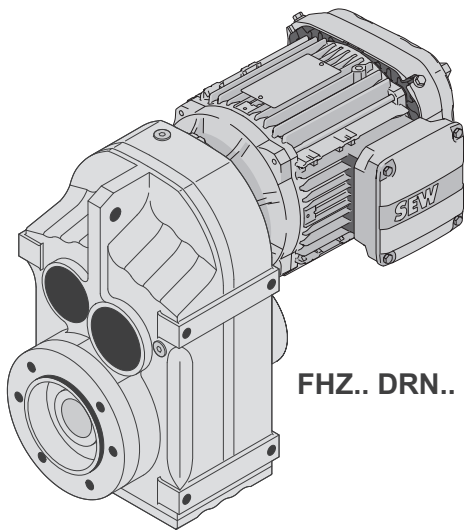
FAZ.. DRN..  
FVZ.. DRN..



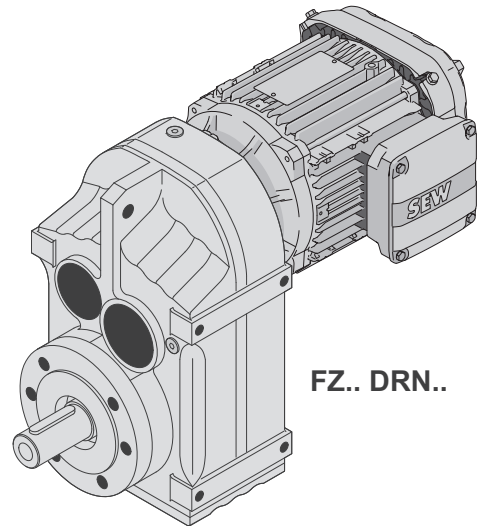
FHF.. DRN..

27021611231693579

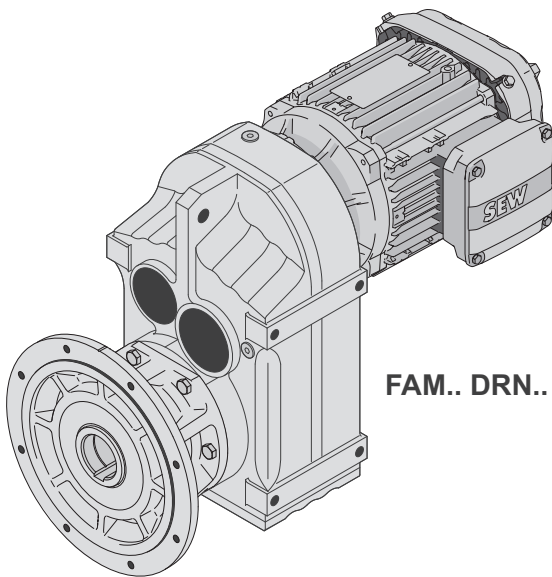
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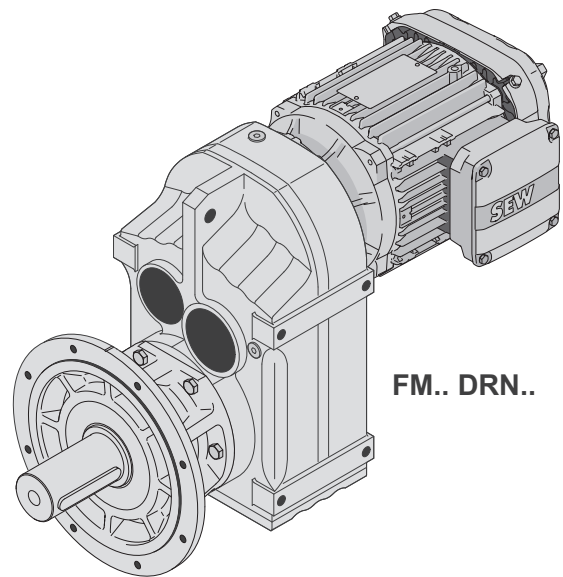
FHZ.. DRN..



FZ.. DRN..



FAM.. DRN..



FM.. DRN..



36028810486643851

# 9



## Parallel-shaft helical gearmotors

Possible geometrical combinations of F..DRN..

### 9.2 Possible geometrical combinations of F..DRN..







<b>F27, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>130 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L
 3								
9.9	130	4500	-	140.74				
11	130	4500	-	129.09				
13	130	4500	-	109.90				
15	130	4500	-	94.76				
16	130	4500	-	88.32				
18	130	4500	-	77.21				
19	130	4500	-	72.37				
22	130	4400	-	63.86				
25	130	4180	-	56.62				
28	130	3980	-	50.19				
30	130	3860	-	46.78				
34	130	3640	-	40.89				
37	130	3530	-	38.33				
41	130	3340	-	33.83				
 2								
47	130	3140	-	29.56				
52	130	3030	-	27.18				
60	130	2820	-	23.25				
69	130	2630	-	20.15				
74	130	2550	-	18.84				
86	130	2370	-	16.28				
101	130	2180	-	13.84				
113	130	2060	-	12.35				
133	130	1900	-	10.55				
142	130	1830	-	9.88				
149	130	1660	-	9.40				
172	123	1580	-	8.13				
203	114	1530	-	6.91				
227	109	1480	-	6.17				
266	100	1440	-	5.27				
284	96	1420	-	4.93				
337	87	1380	-	4.16				

<b>F27R17, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>130 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DR2S 56M	DRN 63MS 63M 71MS 71M 80MK	DRN 80M	
 3  3								
0.16	130	4500	-	8972				
0.18	130	4500	-	7736				
0.19	130	4500	-	7211				
0.22	130	4500	-	6303				

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F27R17, $n_e=1400 \text{ min}^{-1}$					130 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
0.26	130	4500	-	5435			
0.29	130	4500	-	4855			
0.33	130	4500	-	4243			
0.38	130	4500	-	3715			
0.43	130	4500	-	3247			
0.49	130	4500	-	2878			
0.56	130	4500	-	2515			
0.63	130	4500	-	2217			
 2  3							
0.74	130	4500	-	1898			
0.85	130	4500	-	1645			
0.92	130	4500	-	1525			
1.1	130	4500	-	1322			
1.2	130	4500	-	1146			
1.4	130	4500	-	1013			
1.6	130	4500	-	890			
1.8	130	4500	-	778			
2.1	130	4500	-	682			
2.3	130	4500	-	602			
2.7	130	4500	-	520			
 3  2							
0.72	130	4500	-	1948			
0.77	130	4500	-	1826			
0.87	130	4500	-	1610			
1.0	130	4500	-	1399			
1.1	130	4500	-	1230			
1.5	130	4500	-	948			
1.7	130	4500	-	829			
1.9	130	4500	-	731			
2.2	130	4500	-	633			
2.5	130	4500	-	551*			
2.9	130	4500	-	489			
3.3	130	4500	-	427			
3.7	130	4500	-	379			
4.3	130	4500	-	326			
4.9	130	4500	-	288			
5.6	130	4500	-	251			
6.3	130	4500	-	221			
8.1	130	4500	-	172			
9.2	130	4500	-	153			
11	130	4500	-	130			
 2  2							
3.1	130	4500	-	458			
3.5	130	4500	-	397			
4.1	130	4500	-	342			
4.6	130	4500	-	302			
5.3	130	4500	-	266			
5.9	130	4500	-	236			



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## Parallel-shaft helical gearmotors

Possible geometrical combinations of F..DRN..

F27R17, $n_e=1400 \text{ min}^{-1}$					130 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
6.6	130	4500	-	211			
7.5	130	4500	-	186			
9.9	130	4500	-	142			
11	130	4500	-	124			
13	130	4500	-	109			
15	130	4500	-	96			

F37, $n_e=1400 \text{ min}^{-1}$					200 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
 3								
11	200	4290	7	128.51				
12	200	4290	7	117.88				
14	200	4290	7	100.36				
16	200	4290	7	86.53				
17	200	4290	7	80.65				
20	200	4290	7	70.50				
21	200	4290	7	66.09				
24	200	4290	7	58.32				
26	200	4290	8	54.54				
27	200	4290	7	51.70				
30	200	4290	8	47.02				
32	200	4290	8	43.83				
37	200	4290	8	38.31				
39	200	4290	8	35.91				
44	200	4290	8	31.69				
50	200	4060	8	28.09				
59	200	3760	8	23.88				
 2								
59	200	3740	7	23.63				
68	200	3500	7	20.57				
73	200	3390	7	19.27				
82	200	3180	7	17.03				
89	200	3070	7	15.81				
98	200	2910	7	14.33				
109	200	2750	7	12.87				
126	190	2620	7	11.08				
134	185	2580	7	10.42				
156	175	2460	7	8.97				
175	170	2360	8	8.01				
188	145	2350	10	7.44				
208	140	2270	10	6.74				
231	135	2190	11	6.05				
269	125	2120	11	5.21				
286	120	2100	11	4.90				

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F37, $n_e=1400 \text{ min}^{-1}$					200 Nm			
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
332	110	2030	11	4.22				
371	105	1970	12	3.77				

F37R17, $n_e=1400 \text{ min}^{-1}$					200 Nm			
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN	
					56M	63MS 63M 71MS 71M 80MK	80M	



0.17	200	4290	7	8193				
0.20	200	4290	7	7064				
0.21	200	4290	7	6585				
0.24	200	4290	7	5756				
0.28	200	4290	8	4963				
0.32	200	4290	7	4434				
0.36	200	4290	8	3875				
0.41	200	4290	8	3392				
0.47	200	4290	8	2965				
0.54	200	4290	8	2587				
0.61	200	4290	8	2284				
0.70	200	4290	8	1997				
0.80	200	4290	8	1742				
0.91	200	4290	8	1545				



0.73	200	4290	8	1929				
0.83	200	4290	8	1679				
0.90	200	4290	8	1550				
1.0	200	4290	8	1356				
1.2	200	4290	8	1180				
1.3	200	4290	8	1044				
1.5	200	4290	8	914				
1.7	200	4290	8	808				
2.0	200	4290	9	698				
2.3	200	4290	8	616				
2.6	200	4290	8	544				
3.0	200	4290	9	466				
3.4	200	4290	9	411				
3.8	200	4290	9	364				





1.0	200	4290	8	1370				
1.2	200	4290	8	1198				
1.3	200	4290	8	1047				
1.5	200	4290	8	915				
1.7	200	4290	8	807				
2.0	200	4290	8	707				
2.3	200	4290	8	617				
2.6	200	4290	9	538				

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## Parallel-shaft helical gearmotors


Possible geometrical combinations of F..DRN..

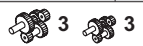


<b>F37R17, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>200 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	$i$	DR2S	DRN	DRN	
					56M	63MS 63M 71MS 71M 80MK	80M	
2.9	200	4290	9	477				
3.4	200	4290	9	412				
3.8	200	4290	9	365				
4.3	200	4290	9	322				
5.0	200	4290	9	278				
5.8	200	4290	9	242				
6.3	200	4290	9	221				
7.2	200	4290	9	195				
8.3	200	4290	10	168				
9.5	200	4290	10	147				
11	200	4290	9	127				
12	200	4290	9	121				
13	200	4290	10	108				
15	200	4290	10	91				
 2  2								
4.3	200	4290	8	326				
4.9	200	4290	8	285				
5.6	200	4290	8	250				
6.4	200	4290	9	219				
7.5	200	4290	9	186				
8.4	200	4290	9	167				
9.7	200	4290	8	145				
11	200	4290	9	129				
12	200	4290	8	118				
14	200	4290	9	98				
16	200	4290	9	87				

<b>F47, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>400 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	$i$	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
 3								
7.3	400	5920	7	190.76				
8.0	400	5920	7	175.38				
9.3	400	5920	7	150.06				
11	400	5920	7	130.07				
12	400	5920	7	121.57				
13	400	5920	7	105.09				
16	400	5920	7	89.29				
18	400	5920	7	79.72				
21	400	5920	7	68.09				
21	400	5920	7	65.36				
25	400	5920	7	56.49				
29	400	5920	7	48.00*				
33	400	5920	7	42.86				
38	400	5920	7	36.61				

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F47, $n_e=1400 \text{ min}^{-1}$					400 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
41	400	5920	7	34.29				
48	400	5790	7	28.88				
 2								
45	400	5920	6	30.86				
48	400	5830	6	29.32				
54	400	5460	6	25.72				
64	400	5030	6	21.82				
71	400	4770	6	19.70				
81	400	4450	6	17.33				
86	400	4320	6	16.36				
101	400	3950	7	13.93				
111	400	3740	7	12.66				
128	400	3440	7	10.97				
156	330	3250	8	8.96				
178	380	2630	9	7.88				
188	380	2530	9	7.44*				
221	350	2470	9	6.34				
243	340	2390	9	5.76				
281	320	2310	10	4.99				





F47R17, $n_e=1400 \text{ min}^{-1}$					400 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DR2S	DRN	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M	
 3								
0.11	400	5920	7	12251				
0.13	400	5920	7	10619				
0.14	400	5920	7	9846				
0.16	400	5920	7	8534				
0.19	400	5920	7	7460				
0.21	400	5920	7	6536				
0.24	400	5920	7	5746				
0.28	400	5920	7	5022				
0.32	400	5920	7	4401				
0.36	400	5920	7	3883				
0.41	400	5920	7	3443				
0.47	400	5920	7	2976				
0.53	400	5920	7	2629				
0.61	400	5920	8	2304				
0.69	400	5920	8	2033				
 2  3								
0.56	400	5920	7	2519				
0.58	400	5920	7	2394				
0.64	400	5920	7	2172				
0.69	400	5920	7	2025				
0.79	400	5920	7	1770				

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## Parallel-shaft helical gearmotors

Possible geometrical combinations of F..DRN..

F47R17, $n_e=1400 \text{ min}^{-1}$					400 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
0.89	400	5920	7	1576			
1.0	400	5920	7	1363			
1.2	400	5920	7	1192			
1.3	400	5920	7	1061			
1.5	400	5920	7	931			
1.7	400	5920	7	822			
2.0	400	5920	7	706			
2.3	400	5920	7	619			
 3  2							
0.78	400	5920	7	1785			
0.89	400	5920	7	1578			
1.0	400	5920	7	1364			
1.2	400	5920	7	1203			
1.3	400	5920	7	1049			
1.5	400	5920	7	918			
1.7	400	5920	7	809			
2.0	400	5920	7	700			
2.3	400	5920	8	622			
2.6	400	5920	8	543			
2.9	400	5920	8	475			
3.3	400	5920	8	419			
3.8	400	5920	8	370			
4.3	400	5920	8	324			
4.9	400	5920	8	288			
5.6	400	5920	8	249			
6.4	400	5920	8	218			
7.3	400	5920	8	193			
8.0	400	5920	8	175			
9.5	400	5920	9	147			
11	400	5920	9	130			
 2  2							
2.7	400	5920	7	524			
2.9	400	5920	7	489			
3.3	400	5920	7	427			
3.7	400	5920	7	381			
4.2	400	5920	7	334			
4.7	400	5920	7	295			
5.5	400	5920	7	253			
6.5	400	5920	7	217			
7.4	400	5920	7	190			
7.9	400	5920	7	178			
9.4	400	5920	7	149			
11	400	5920	8	131			

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F57, $n_e=1400 \text{ min}^{-1}$					600 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
 3										
7.0	600	9200	6	199.70						
7.6	600	9200	7	183.60						
8.9	600	9200	7	157.09						
10	600	9200	7	136.16						
11	600	9200	7	127.27						
13	600	9200	7	110.01						
15	600	9200	7	93.47						
17	600	9200	7	83.46						
19	600	9200	7	72.98						
21	600	9200	7	68.22						
24	600	9200	7	58.97						
28	600	9200	7	50.10						
31	600	9160	7	44.73						
37	600	8510	7	38.21						
39	600	8250	7	35.79						
46	590	7650	7	30.15						
 2										
35	290	10500	6	40.13						
41	500	8670	6	34.24						
47	545	7890	6	29.94						
49	535	7760	6	28.45						
56	575	7060	6	24.96						
66	600	6350	6	21.17						
73	600	6020	6	19.11						
83	600	5620	6	16.81						
88	600	5450	6	15.88						
104	600	4980	7	13.52						
114	600	4710	7	12.29						
132	600	4320	7	10.64						
150	420	4760	8	9.31						
171	420	4450	8	8.19						
181	420	4310	8	7.73						
213	420	3940	8	6.58						
234	420	3730	9	5.98						
270	415	3460	9	5.18						





F57R37, $n_e=1400 \text{ min}^{-1}$					600 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 132S 132M	
 3  3										
0.09	600	9200	7	14832						
0.10	600	9200	7	13604						
0.11	600	9200	7	12602						

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## Parallel-shaft helical gearmotors



Possible geometrical combinations of F..DRN..

F57R37, $n_e=1400 \text{ min}^{-1}$					600 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.12	600	9200	7	11252				
0.14	600	9200	7	9986				
0.16	600	9200	7	8787				
0.18	600	9200	7	7908				
0.20	600	9200	7	6913				
0.23	600	9200	7	6030				
0.26	600	9200	7	5289				
0.30	600	9200	7	4654				
0.34	600	9200	7	4060				
0.39	600	9200	7	3564				
0.44	600	9200	7	3161				
0.51	600	9200	7	2737				
0.58	600	9200	7	2409				
0.66	600	9200	8	2131				
0.76	600	9200	7	1840				
0.86	600	9200	7	1623				
0.97	600	9200	7	1439				
1.1	600	9200	8	1238				
 2  3								
0.49	600	9200	7	2854				
0.54	600	9200	7	2576				
0.62	600	9200	8	2266				
0.70	600	9200	7	2012				
0.78	600	9200	7	1791				
0.87	600	9200	7	1617				
0.98	600	9200	8	1422				
1.1	600	9200	8	1243				
1.3	600	9200	7	1066				
1.5	600	9200	7	949				
1.6	600	9200	7	856				
1.9	600	9200	7	749				
2.1	600	9200	8	658				
2.6	600	9200	7	549				
2.9	600	9200	8	483				
 3  2								
1.3	600	9200	7	1106				
1.4	600	9200	7	967				
1.6	600	9200	8	851				
1.9	600	9200	8	738				
2.2	600	9200	8	646				
2.5	600	9200	8	558				
2.8	600	9200	8	506				
3.1	600	9200	7	452				
3.6	600	9200	8	386				
4.1	600	9200	7	338				
5.5	600	9200	7	255				
7.0	600	9200	8	201				
7.7	600	9200	8	181				

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F57R37, $n_e=1400 \text{ min}^{-1}$					600 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
9.0	600	9200	8	155				
 2  2								
3.3	600	9200	7	426				
3.7	600	9200	7	382				
4.2	600	9200	7	330				
4.7	600	9200	7	298				
5.3	600	9200	7	262				
6.2	600	9200	7	226				
7.0	600	9200	7	200				
8.2	600	9200	8	170				
9.2	600	9200	7	152				
10	600	9200	8	134				

F67, $n_e=1400 \text{ min}^{-1}$					820 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3										
6.1	820	10300	6	228.99						
7.2	820	10300	6	195.39						
8.2	820	10300	6	170.85						
8.6	820	10300	6	162.31						
9.8	820	10300	6	142.40						
12	820	10300	6	120.79						
13	820	10300	6	109.04						
15	820	10300	6	95.94						
15	820	10300	6	90.59						
18	820	10300	7	79.76						
21	820	10300	7	67.65						
23	820	10300	7	61.07						
26	820	10300	7	53.73						
28	820	10300	7	50.74						
32	820	10300	7	43.20						
36	780	10700	7	39.26						
41	740	11000	7	34.01						
 2										
39	820	10300	6	36.30						
44	820	10300	6	32.08						
51	820	10300	6	27.41						
56	820	10300	6	25.13						
63	820	10300	6	22.05						
67	820	10300	6	20.90*						
77	820	10300	6	18.29						
85	820	10300	6	16.48						
97	820	10300	6	14.46						

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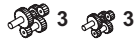
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## Parallel-shaft helical gearmotors

Possible geometrical combinations of F..DRN..

F67, $n_e=1400 \text{ min}^{-1}$					820 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
110	820	10300	6	12.76						
124	820	10300	6	11.31						
145	820	10300	7	9.66						
154	530	11400	8	9.08						
163	570	10900	9	8.60						
186	610	10100	9	7.53						
206	620	9660	9	6.78						
235	610	9200	9	5.95						
267	590	8850	9	5.25						
300	560	8590	10	4.66						
353	500	8390	10	3.97						

F67R37, $n_e=1400 \text{ min}^{-1}$					820 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L








0.07	820	10300	6	19199				
0.08	820	10300	6	17610				
0.09	820	10300	6	14992				
0.11	820	10300	6	12926				
0.12	820	10300	6	11480				
0.14	820	10300	6	10220				
0.16	820	10300	6	8933				
0.18	820	10300	6	7940				
0.20	820	10300	6	7096				
0.23	820	10300	6	6080				
0.26	820	10300	7	5341				
0.30	820	10300	7	4690				
0.34	820	10300	6	4091				
0.39	820	10300	7	3574				
0.45	820	10300	6	3133				
0.51	820	10300	6	2756				
0.57	820	10300	7	2439				



0.41	820	10300	6	3377				
0.48	820	10300	6	2912				
0.52	820	10300	6	2714				
0.59	820	10300	6	2372				
0.66	820	10300	7	2126				
0.75	820	10300	7	1859				
0.86	820	10300	7	1631				
0.97	820	10300	6	1437				
1.1	820	10300	6	1256				
1.2	820	10300	7	1126				
1.4	820	10300	7	984				

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F67R37, $n_e=1400 \text{ min}^{-1}$					820 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
1.6	820	10300	7	864				
1.9	820	10300	7	722				
2.2	820	10300	7	634				
2.6	820	10300	7	539				
 3  2								
0.66	820	10300	6	2106				
0.74	820	10300	6	1884				
0.86	820	10300	6	1635				
0.98	820	10300	6	1429				
1.1	820	10300	6	1271				
1.3	820	10300	6	1102				
1.4	820	10300	6	970				
1.6	820	10300	6	858				
1.9	820	10300	7	755				
2.2	820	10300	7	641				
2.4	820	10300	7	572				
2.8	820	10300	7	509				
3.2	820	10300	7	437				
3.6	820	10300	7	384				
4.1	820	10300	7	338				
4.6	820	10300	7	305				
5.4	820	10300	7	257				
6.1	820	10300	7	231				
6.8	820	10300	7	205				
8.0	820	10300	8	175				
 2  2								
2.8	820	10300	6	500				
3.1	820	10300	7	454				
3.6	820	10300	7	392				
4.2	820	10300	7	333				
4.7	820	10300	7	297				
5.4	820	10300	7	261				
5.9	820	10300	7	238				
7.0	820	10300	7	200				
8.0	820	10300	7	176				

F77, $n_e=1400 \text{ min}^{-1}$					1500 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
 3											
5.0	1500	15700	6	281.71							
5.3	1500	15700	6	262.93							
6.2	1500	15700	6	225.79							
7.1	1500	15700	6	198.31							
7.4	1500	15700	6	188.40							

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## Parallel-shaft helical gearmotors

Possible geometrical combinations of F..DRN..





F77, $n_e=1400 \text{ min}^{-1}$					1500 Nm						
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L
8.4	1500	15700	6	166.47							
9.8	1500	15700	6	142.27							
11	1500	15700	6	130.42							
12	1500	15700	6	114.45							
13	1500	15700	6	108.46*							
15	1500	15700	6	94.93							
16	1500	15700	6	85.52							
19	1500	15700	6	75.02							
19	1500	15700	6	72.50							
21	1500	15700	6	66.46							
24	1500	15700	6	58.32							
25	1500	15700	6	55.27							
29	1500	15700	6	48.37							
32	1500	15700	7	43.58							
37	1500	15700	6	38.23							
41	1500	15700	7	33.74							
47	1500	15700	7	29.91							
55	1450	16100	7	25.54							



38	1110	17900	5	36.58							
44	1380	16500	5	31.51							
49	1430	16200	5	28.75							
55	1500	15700	5	25.50*							
65	1500	15700	5	21.43							
71	1500	15700	6	19.70							
80	1500	15700	6	17.49							
90	1500	15700	6	15.64*							
100	1500	15700	6	14.06							
115	1500	14900	6	12.20							
128	1500	14200	6	10.93							
151	1080	13800	8	9.30							
169	1080	13100	8	8.26							
189	1080	12500	8	7.39							
211	1080	12000	8	6.64							
243	1080	11300	8	5.76							
271	1080	10700	8	5.16							
327	1010	10200	9	4.28							

F77R37, $n_e=1400 \text{ min}^{-1}$					1500 Nm			
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L
					3 3			
0.07	1500	15700	6	19180				
0.08	1500	15700	6	17593				
0.09	1500	15700	6	16128				

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F77R37, $n_e=1400 \text{ min}^{-1}$					1500 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L
0.09	1500	15700	6	14978				
0.10	1500	15700	6	13731				
0.12	1500	15700	6	12049				
0.13	1500	15700	6	11035				
0.14	1500	15700	6	9683				
0.17	1500	15700	6	8464				
0.19	1500	15700	6	7520				
0.21	1500	15700	7	6580				
0.24	1500	15700	6	5808				
0.28	1500	15700	7	5026				
0.32	1500	15700	7	4435				
0.37	1500	15700	7	3832				
0.41	1500	15700	7	3381				
0.47	1500	15700	7	2978				
0.54	1500	15700	7	2613				
0.61	1500	15700	7	2284				
0.69	1500	15700	7	2029				
 2  3								
0.28	1110	17900	6	4931				
0.31	1110	17900	6	4523				
0.36	1110	17900	6	3851				
0.42	1110	17900	6	3320				
0.45	1110	17900	6	3095				
0.52	1110	17900	6	2705				
0.55	1110	17900	6	2536				
0.63	1110	17900	6	2238				
0.69	1110	17900	6	2039				
0.80	1110	17900	6	1759				
0.85	1110	17900	6	1639				
0.98	1110	17900	6	1433				
1.0	1110	17900	6	1343				
1.2	1110	17900	6	1185				
1.3	1110	17900	6	1051				
1.6	1110	17900	6	893				
 3  2								
0.81	1500	15700	6	1728				
0.91	1500	15700	6	1544				
1.0	1500	15700	6	1354				
1.2	1500	15700	7	1200				
1.3	1500	15700	7	1053				
1.5	1500	15700	7	910				
1.7	1500	15700	6	810				
2.0	1500	15700	6	710				
2.3	1500	15700	6	615*				
2.6	1500	15700	6	538				
2.9	1500	15700	6	480				
3.4	1500	15700	7	413				
3.8	1500	15700	7	367				



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## Parallel-shaft helical gearmotors





Possible geometrical combinations of F..DRN..

F77R37, $n_e=1400 \text{ min}^{-1}$					1500 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN		DRN	
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
4.3	1500	15700	7	323				
5.0	1500	15700	7	280				
5.7	1500	15700	7	247				
6.3	1500	15700	7	221				
7.0	1500	15700	7	199				
 2  2								
1.7	1110	17900	6	815				
2.0	1110	17900	6	706				
2.1	1110	17900	6	660				
2.5	1110	17900	6	571				
2.9	1110	17900	6	485				
3.2	1110	17900	6	433				
3.8	1110	17900	6	370				
4.0	1110	17900	6	346				
4.8	1110	17900	6	292				

F87, $n_e=1400 \text{ min}^{-1}$					3000 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN		DRN		DRN		DRN		DRN	
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L	
 3														
5.2	3000	19800	7	270.68										
5.5	3000	19800	7	255.37										
6.1	3000	19800	7	228.93										
7.1	3000	19800	7	197.20										
7.8	3000	19800	7	179.97										
8.8	3000	19800	7	159.61										
10	3000	19800	7	134.16										
11	3000	19800	7	123.29										
13	3000	19800	8	109.49										
14	3000	19800	8	97.89										
16	3000	19800	8	88.01										
18	3000	19800	8	76.39										
20	3000	19600	8	68.40										
25	3000	17700	8	56.75										
28	2940	16800	8	50.36										
31	2820	16200	8	45.28										
36	2720	15400	8	39.30										
40	2610	14900	8	35.19										
48	2510	13800	8	29.20										
 2														
41	2610	14600	7	33.92										
49	2450	13900	7	28.78										
53	3000	11100	7	26.50										
59	3000	10300	7	23.68										
66	3000	9520	7	21.32*										
73	3000	8840	7	19.31										

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F87, $n_e=1400 \text{ min}^{-1}$					3000 Nm								
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L
82	3000	8040	7	17.12									
90	3000	7390	7	15.48									
107	3000	6370	7	13.12*									
122	3000	5580	8	11.46									
146	2880	5050	8	9.58									
169	1530	8890	7	8.29									
190	1530	8280	7	7.35									
211	1530	7790	7	6.65									
249	1530	7020	7	5.63									
285	1530	6430	8	4.92									
340	1460	5980	8	4.12									





F87R57, $n_e=1400 \text{ min}^{-1}$					3000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3  3										
0.06	3000	19800	8	23042						
0.07	3000	19800	8	20462						
0.08	3000	19800	8	18238						
0.09	3000	19800	8	15877						
0.10	3000	19800	8	14099						
0.11	3000	19800	8	12205						
0.13	3000	19800	8	10433						
0.15	3000	19800	8	9381						
0.17	3000	19800	8	8142						
0.20	3000	19800	8	7100						
0.22	3000	19800	8	6273						
0.25	3000	19800	8	5510						
0.28	3000	19800	8	4954						
0.33	3000	19800	8	4245						
0.38	3000	19800	8	3721						
 2  3										
0.28	3000	19800	8	4952						
0.31	3000	19800	8	4562						
0.36	3000	19800	8	3919						
0.40	3000	19800	8	3503						
0.44	3000	19800	8	3196						
0.49	3000	19800	8	2857						
0.55	3000	19800	8	2524						
0.66	3000	19800	8	2134						
0.73	3000	19800	8	1913*						
0.82	3000	19800	8	1717						
0.95	3000	19800	8	1476						
1.1	3000	19800	8	1278						
1.2	3000	19800	8	1142						
1.4	3000	19800	8	988						
1.6	3000	19800	8	883						

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## Parallel-shaft helical gearmotors

Possible geometrical combinations of F..DRN..


F87R57, $n_e=1400 \text{ min}^{-1}$					3000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
1.9	3000	19800	8	748						
 3  2										
0.43	3000	19800	8	3244						
0.49	3000	19800	8	2881						
0.54	3000	19800	8	2576						
0.64	3000	19800	8	2199						
0.73	3000	19800	8	1930						
0.82	3000	19800	8	1709						
0.94	3000	19800	8	1493						
1.1	3000	19800	8	1300						
1.2	3000	19800	8	1148						
1.4	3000	19800	8	1010						
1.6	3000	19800	8	887						
1.8	3000	19800	8	780						
2.1	3000	19800	8	674						
2.3	3000	19800	8	609						
2.7	3000	19800	8	515						
3.1	3000	19800	8	452						
4.1	3000	19800	8	345						
4.7	3000	19800	8	300						
5.6	3000	19800	8	249						
 2  2										
2.1	3000	19800	8	662						
2.4	3000	19800	8	592						
2.7	3000	19800	8	519						
3.0	3000	19800	8	468						
3.5	3000	19800	8	398						
4.0	3000	19800	8	350						
4.4	3000	19800	8	315*						
5.0	3000	19800	8	281						
5.8	3000	19800	8	240						
6.6	3000	19800	8	211						
7.3	3000	19800	8	193						

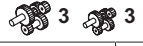
  

F97, $n_e=1400 \text{ min}^{-1}$					4300 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L	DRN 180M 180L	DRN 200L 225S
 3												
5.1	4300	29900	6	276.77								
5.5	4300	29900	6	253.41								
6.3	4300	29900	6	223.88								
7.4	4300	29900	6	189.92								
8.0	4300	29900	6	174.87								
9.0	4300	29900	6	156.30								
9.9	4300	29900	6	140.71								
11	4300	29900	6	127.42								

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F97, $n_e=1400 \text{ min}^{-1}$					4300 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S
12	4300	29900	6	112.99								
14	4300	29900	6	102.16								
14	4300	29900	7	97.58								
16	4300	29900	7	89.85								
16	4300	29900	6	86.59								
17	4300	29900	7	80.31								
19	4300	29900	6	75.63								
19	4300	29900	7	72.29								
21	4300	29000	7	65.47								
24	4300	27200	7	58.06								
27	4300	25800	7	52.49								
31	4300	23600	7	44.49								
36	4300	21900	7	38.86								
43	4300	19800	7	32.50								
 2												
32	3070	27600	6	43.28								
38	3070	25500	6	36.64								
41	4300	20300	6	33.91								
46	4300	19000	6	30.39								
51	4300	17900	6	27.44*								
56	4300	16800	6	24.92								
63	4300	15600	6	22.11								
70	4300	14600	6	20.07								
81	4300	13200	6	17.25*								
93	4300	11900	6	15.06								
110	4300	10500	6	12.77								
125	4100	10000	6	11.16								
155	2360	13400	9	9.06								
170	2360	12600	9	8.22								
198	2360	11500	9	7.07								
227	2250	11100	9	6.17								
268	2150	10400	9	5.23								
306	2050	9950	9	4.57								
362	1800	9960	9	3.87								

F97R57, $n_e=1400 \text{ min}^{-1}$					4300 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3										
0.05	4300	29900	7	29211						
0.05	4300	29900	7	26911						
0.06	4300	29900	7	23814						
0.07	4300	29900	7	20813						
0.08	4300	29900	7	18119*						
0.09	4300	29900	7	15472						
0.10	4300	29900	7	14022						
0.11	4300	29900	7	12324						

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## Parallel-shaft helical gearmotors

Possible geometrical combinations of F..DRN..

F97R57, $n_e=1400 \text{ min}^{-1}$					4300 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
0.13	4300	29900	7	10838						
0.15	4300	29900	7	9576						
0.17	4300	29900	7	8318						
0.19	4300	29900	7	7328						
0.22	4300	29900	7	6469						
0.25	4300	29900	7	5615						
0.28	4300	29900	7	4961*						
0.32	4300	29900	7	4333*						
2  3										
0.22	4300	29900	7	6338						
0.25	4300	29900	7	5680						
0.28	4300	29900	7	5016						
0.32	4300	29900	7	4367						
0.36	4300	29900	7	3914						
0.42	4300	29900	7	3357						
0.47	4300	29900	7	3009						
0.57	4300	29900	7	2448						
0.64	4300	29900	7	2199						
0.71	4300	29900	7	1971						
0.80	4300	29900	7	1741*						
0.95	4300	29900	7	1468						
1.1	4300	29900	7	1316						
1.2	4300	29900	7	1189*						
1.4	4300	29900	7	1023						
3  2										
0.36	4300	29900	7	3906						
0.42	4300	29900	7	3352						
0.48	4300	29900	7	2907						
0.55	4300	29900	7	2553						
0.62	4300	29900	7	2245						
0.71	4300	29900	7	1970						
0.81	4300	29900	7	1722						
0.92	4300	29900	7	1527						
1.1	4300	29900	7	1327						
1.2	4300	29900	7	1171*						
1.4	4300	29900	7	1022						
1.6	4300	29900	7	898						
1.8	4300	29900	7	784						
2.0	4300	29900	7	690						
2.3	4300	29900	7	605						
2.6	4300	29900	7	529						
3.0	4300	29900	7	467						
3.4	4300	29900	7	406						
3.9	4300	29900	7	363						
4.9	4300	29900	7	285						
5.7	4300	29900	7	245						
6.7	4300	29900	7	208						
7.2	4300	29900	7	195						

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F97R57, $n_e=1400 \text{ min}^{-1}$					4300 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
2  2										
1.6	4300	29900	7	892						
1.8	4300	29900	7	760						
2.1	4300	29900	7	667						
2.5	4300	29900	7	569						
2.7	4300	29900	7	510						
3.0	4300	29900	7	473*						
3.5	4300	29900	7	403						
3.9	4300	29900	7	361						
4.4	4300	29900	7	317						
5.1	4300	29900	7	275						
5.8	4300	29900	7	242						

F107, $n_e=1400 \text{ min}^{-1}$					7840 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L	DRN 180M 180L	DRN 200L 225S 225M	DRN 250M
3											
5.5	7680	49800	6	254.40*							
6.5	7680	49800	6	215.37							
7.0	7680	49800	6	199.31							
7.8	7680	49800	6	178.64							
8.7	7680	49800	6	161.28*							
9.6	7680	49800	6	146.49							
11	7680	49800	6	129.97							
12	7680	49800	6	117.94							
14	7680	49800	6	101.38*							
15	7680	49800	6	92.47*							
16	7680	49800	6	88.49							
17	7680	49800	6	83.99							
19	7680	49800	6	74.52							
21	7680	49800	6	67.62							
24	7680	47800	6	58.12*							
28	7680	45100	6	50.73							
33	7680	42000	6	43.03							
37	7680	39500	6	37.61							
44	7680	36500	6	31.80							
2											
41	7400	38300	6	33.79*							
51	7840	33300	6	27.57							
56	7840	31500	6	25.14							
64	7840	28800	6	21.76*							
73	7840	26500	6	19.20*							
84	7840	23900	6	16.58							
95	7680	22400	6	14.67							
114	7000	22600	6	12.33							
141	6500	21500	6	9.96							







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## Parallel-shaft helical gearmotors


Possible geometrical combinations of F..DRN..

F107, $n_e=1400 \text{ min}^{-1}$					7840 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M
144	4910	23500	7	9.69							
167	4800	22000	7	8.37							
189	4600	21300	7	7.40							
225	4600	19000	7	6.22							
278	4600	16400	7	5.03							

F107R77, $n_e=1400 \text{ min}^{-1}$					7840 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
 3  3											
0.06	7680	49800	6	25375*							
0.06	7680	49800	6	21652							
0.07	7680	49800	6	18933							
0.08	7680	49800	6	16888							
0.09	7680	49800	6	14767							
0.12	7680	49800	6	11348*							
0.14	7680	49800	6	10039							
0.16	7680	49800	6	8548							
0.18	7680	49800	6	7674							
0.21	7680	49800	6	6767							
0.24	7680	49800	6	5954							
0.27	7680	49800	6	5223							
0.31	7680	49800	7	4567							
0.35	7680	49800	6	3948							
0.40	7680	49800	6	3521							
 2  3											
0.26	7840	49400	6	5383*							
0.30	7840	49400	6	4593							
0.35	7840	49400	6	4016							
0.37	7840	49400	6	3815							
0.42	7840	49400	6	3347							
0.49	7840	49400	6	2839							
0.55	7840	49400	6	2563*							
0.62	7840	49400	6	2255							
0.66	7840	49400	6	2129							
0.77	7840	49400	6	1813							
0.88	7840	49400	6	1590							
0.97	7840	49400	6	1436							
1.1	7840	49400	6	1263							
1.2	7840	49400	6	1193							
1.4	7840	49400	6	1015							
1.5	7840	49400	6	923							
1.8	7840	49400	6	800							
2.0	7840	49400	6	696							
 3  2											
0.46	7680	49800	6	3037							

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F107R77, $n_e=1400 \text{ min}^{-1}$					7840 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
0.51	7680	49800	6	2756							
0.59	7680	49800	6	2369							
0.68	7680	49800	6	2068							
0.77	7680	49800	6	1826							
0.88	7680	49800	6	1597							
1.00	7680	49800	6	1401							
1.1	7680	49800	6	1243							
1.3	7680	49800	6	1087							
1.5	7680	49800	6	950							
1.7	7680	49800	6	834							
1.9	7680	49800	6	736							
2.2	7680	49800	6	640							
2.5	7680	49800	6	560							
2.9	7680	49800	6	489							
3.2	7680	49800	6	436							
3.8	7680	49800	7	370							
4.2	7680	49800	7	333							
4.8	7680	49800	7	291							
5.5	7680	49800	7	255							
6.2	7680	49800	7	225*							
7.4	7680	49800	7	190							
 2 											
2.2	7840	49400	6	644							
2.4	7840	49400	6	591							
2.7	7840	49400	6	518*							
2.9	7840	49400	6	491							
3.3	7840	49400	6	430							
3.6	7840	49400	6	387							
4.1	7840	49400	6	340							
4.7	7840	49400	6	300							
5.3	7840	49400	6	266							


F127, $n_e=1400 \text{ min}^{-1}$					12000 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN
					132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M
 3									
8.2	12000	90000	5	170.83					
9.1	12000	90000	5	153.67*					
11	12000	90000	5	125.37					
12	12000	88000	5	114.34					
14	12000	83000	5	98.95					
16	12000	79000	5	87.31*					
19	12000	74300	5	75.41*					
20	12000	72100	6	70.07					
22	12000	69400	6	63.91					
25	12000	65200	6	55.31					





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## Parallel-shaft helical gearmotors



Possible geometrical combinations of F..DRN..


F127, $n_e=1400 \text{ min}^{-1}$					12000 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN
					132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M
29	12000	61300	6	48.80					
33	12000	56800	6	42.15					
38	12000	53200	6	37.28					
45	12000	48300	6	31.33					
55	12000	42400	6	25.30					
 2									
52	8500	55300	5	26.86					
57	8500	53300	5	24.57					
65	12000	38000	5	21.38					
74	11000	38800	5	18.87					
86	11000	35400	5	16.36					
96	11000	32600	5	14.55					
112	10000	33300	5	12.54					
137	9500	30900	5	10.19					
158	7000	36400	7	8.86					
178	6000	37000	7	7.88					
206	7000	32200	7	6.80					
254	6000	31700	7	5.52					
299	6000	29500	7	4.68					

F127R77, $n_e=1400 \text{ min}^{-1}$					12000 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	
 3  3												
0.06	12000	90000	5	24478*								
0.06	12000	90000	5	22323								
0.07	12000	90000	5	19048								
0.08	12000	90000	5	16656								
0.10	12000	90000	6	14722*								
0.11	12000	90000	5	12912								
0.12	12000	90000	5	11656*								
0.14	12000	90000	6	10191								
0.16	12000	90000	5	8831								
0.18	12000	90000	6	7643								
0.21	12000	90000	6	6715								
0.24	12000	90000	6	5925								
0.27	12000	90000	6	5153								
0.31	12000	90000	6	4533								
0.36	12000	90000	6	3926								
0.41	12000	90000	6	3454								
0.46	12000	90000	6	3031								
 3  2												
0.52	12000	90000	5	2672								
0.59	12000	90000	5	2357*								
0.69	12000	90000	5	2038								
0.78	12000	90000	5	1784								

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F127R77, $n_e=1400 \text{ min}^{-1}$					12000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
0.87	12000	90000	5	1606							
1.0	12000	90000	6	1390							
1.1	12000	90000	6	1220							
1.3	12000	90000	5	1077							
1.5	12000	90000	6	930							
1.7	12000	90000	6	820							
1.9	12000	90000	6	727							
2.2	12000	90000	6	648							
2.6	12000	90000	6	549							
2.8	12000	90000	6	495							
3.3	12000	90000	6	428							
3.7	12000	90000	6	376							

F127R87, $n_e=1400 \text{ min}^{-1}$					12000 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L
 3  2												
2.9	12000	90000	6	483								
3.3	12000	90000	6	418								
3.7	12000	90000	6	374								
4.5	12000	90000	6	312								
4.8	12000	90000	6	293								
5.4	12000	90000	6	259								
6.3	12000	90000	6	223								
7.1	12000	90000	6	198								
8.4	12000	90000	6	166								


F157, $n_e=1400 \text{ min}^{-1}$					20000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M	315S 315M	315L 315H
 3										
5.2	20000	93800	5	267.43						
6.4	20000	93800	5	217.62*						
7.9	20000	93800	5	178.20*						
8.6	20000	93800	5	162.96						
9.9	20000	93800	5	141.80*						
11	20000	93800	5	125.14						
13	20000	93800	5	108.49						
15	20000	93800	5	96.53*						
16	20000	91800	5	85.80*						
18	20000	88300	5	78.46						
21	20000	83000	5	68.28*						
23	20000	78500	5	60.25						
27	20000	73600	5	52.24						
30	20000	69600	5	46.48*						





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## Parallel-shaft helical gearmotors

Possible geometrical combinations of F..DRN..

F157, $n_e=1400 \text{ min}^{-1}$					20000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M	315S 315M	315L 315H
35	20000	64900	5	40.06						
43	20000	58500	5	32.55						
51	20000	53800	5	27.60						
 2										
26	11000	92400	5	53.55						
32	11900	84000	5	43.94*						
39	13600	74100	5	35.75*						
49	19100	56600	5	28.60*						
55	20000	51500	5	25.43						
63	19900	48000	5	22.16						
71	19400	46100	5	19.77						
83	18700	43500	5	16.85						
100	17900	40700	5	13.96						
117	17300	38300	5	11.92						

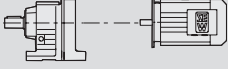

F157R97, $n_e=1400 \text{ min}^{-1}$					20000 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S	
 3  3														
0.04	20000	93800	5	31434										
0.05	20000	93800	5	26173										
0.06	20000	93800	5	23464										
0.07	20000	93800	5	20212										
0.08	20000	93800	5	17984*										
0.09	20000	93800	5	16358										
0.10	20000	93800	5	13751										
0.11	20000	93800	5	12235										
0.14	20000	93800	5	10033										
0.16	20000	93800	5	9021										
0.17	20000	93800	5	8026										
0.20	20000	93800	5	7075										
0.22	20000	93800	5	6295										
0.26	20000	93800	6	5404										
0.29	20000	93800	6	4831										
0.34	20000	93800	5	4130*										
0.39	20000	93800	5	3607										
0.44	20000	93800	5	3210										
0.50	20000	93800	6	2780										
0.97	20000	93800	6	1441										
 3  2														
0.58	20000	93800	5	2427										
0.64	20000	93800	5	2185										
0.72	20000	93800	5	1944*										
0.84	20000	93800	5	1674										
1.1	20000	93800	5	1308										
1.2	20000	93800	5	1169										
1.5	20000	93800	6	953										
1.7	20000	93800	6	845										

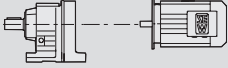

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<b>F157R97, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>20000 Nm</b>									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S	
1.8	20000	93800	6	764										
2.1	20000	93800	6	680										
2.4	20000	93800	6	576										
2.8	20000	93800	6	503										
3.1	20000	93800	6	446										
4.0	20000	93800	6	353										
4.6	20000	93800	6	302										
5.1	20000	93800	6	273										
6.0	20000	93800	6	232										
6.9	20000	93800	6	202										
7.1	20000	93800	6	197										

## 9.3 F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 0.12 kW</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>m</b> <b>kg</b>	
0.06	13900	22323	86700	0.85					
0.07	11800	19048	90000	1.00	FA	127R77	DRN	63MS4	425 563
0.08	10300	16656	90000	1.15	FAF	127R77	DRN	63MS4	465 563
0.09	9180	14722	90000	1.30	F	127R77	DRN	63MS4	460 563
0.11	7990	12912	90000	1.50	FF	127R77	DRN	63MS4	510 563
0.12	7040	11656	90000	1.70					
0.14	6310	10191	90000	1.90					
0.09	9200	14767	45500	0.85					
0.12	7070	11348	51400	1.10					
0.14	5740	10039	54600	1.35					
0.16	4670	8548	57000	1.65	FA	107R77	DRN	63MS4	275 563
0.18	4750	7674	56800	1.60	FAF	107R77	DRN	63MS4	295 563
0.20	4090	6767	58200	1.90	F	107R77	DRN	63MS4	290 563
0.23	3460	5954	59500	2.2	FF	107R77	DRN	63MS4	320 563
0.26	2990	5223	60400	2.6					
0.30	2840	4567	60700	2.7					
0.39	2120	3521	62000	3.6					
0.21	4140	6469	30300	1.05	FA	97R57	DRN	63MS4	185 563
0.25	3820	5615	31300	1.15	FAF	97R57	DRN	63MS4	205 563
0.28	3320	4961	32500	1.30	F	97R57	DRN	63MS4	190 563
0.32	2900	4333	33500	1.50	FF	97R57	DRN	63MS4	225 563
0.35	2690	3906	34000	1.60	FA	97R57	DRN	63MS4	185 563
0.41	2320	3352	34800	1.85	FAF	97R57	DRN	63MS4	205 563
0.47	1910	2907	35500	2.2	F	97R57	DRN	63MS4	190 563
0.54	1750	2553	35800	2.4	FF	97R57	DRN	63MS4	225 563
0.33	2760	4245	23800	1.10	FA	87R57	DRN	63MS4	120 563
0.37	2210	3721	25800	1.35	FAF	87R57	DRN	63MS4	130 563
					F	87R57	DRN	63MS4	125 563
					FF	87R57	DRN	63MS4	140 563
0.43	2240	3244	25700	1.35					
0.48	1990	2881	26500	1.50					
0.54	1780	2576	27100	1.70					
0.63	1510	2199	27800	2.0	FA	87R57	DRN	63MS4	115 563
0.72	1300	1930	28300	2.3	FAF	87R57	DRN	63MS4	130 563
0.81	1170	1709	28600	2.5	F	87R57	DRN	63MS4	125 563
0.92	1030	1493	28900	2.9	FF	87R57	DRN	63MS4	140 563
1.1	810	1300	29300	3.7					
1.2	740	1148	29500	4.0					
0.53	1820	2613	13000	0.80	FA	77R37	DRN	63MS4	66 563
0.60	1570	2284	15200	0.95	FAF	77R37	DRN	63MS4	72 563
0.68	1380	2029	16400	1.10	F	77R37	DRN	63MS4	69 563
					FF	77R37	DRN	63MS4	80 563
0.80	1180	1728	17500	1.25					
0.89	1090	1544	17900	1.40					
1.0	950	1354	18500	1.55	FA	77R37	DRN	63MS4	65 563
1.1	840	1200	18800	1.75	FAF	77R37	DRN	63MS4	72 563
1.3	740	1053	19100	2.0	F	77R37	DRN	63MS4	69 563
1.5	630	910	19400	2.4	FF	77R37	DRN	63MS4	80 563
1.7	525	810	19600	2.8					
1.9	460	710	19800	3.2					
0.97	960	1429	7070	0.85					
1.1	860	1271	9840	0.95					
1.2	725	1102	11100	1.15					
1.4	635	970	11700	1.30	FA	67R37	DRN	63MS4	43 563
1.6	560	858	12100	1.45	FAF	67R37	DRN	63MS4	49 563
1.8	490	755	12400	1.65	F	67R37	DRN	63MS4	46 563
2.1	415	641	12700	1.95	FF	67R37	DRN	63MS4	52 563
2.4	390	572	12800	2.1					
2.7	330	509	13000	2.5					
3.2	285	437	13000	2.9					

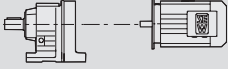

<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.6	610	851	9100	1.00						
1.9	520	738	9750	1.15	FA	57R37	DRN	63MS4	39	563
2.1	455	646	10200	1.30	FAF	57R37	DRN	63MS4	45	563
2.5	385	558	10600	1.55	F	57R37	DRN	63MS4	39	563
2.7	345	506	10900	1.75	FF	57R37	DRN	63MS4	46	563
3.0	295	452	11100	2.0						
3.2	310	426	11100	1.95	FA	57R37	DRN	63MS4	39	563
3.6	270	382	11300	2.2	FAF	57R37	DRN	63MS4	44	563
4.2	230	330	11500	2.6	F	57R37	DRN	63MS4	39	563
4.6	210	298	11500	2.9	FF	57R37	DRN	63MS4	45	563
5.3	185	262	11500	3.2						
2.5	385	543	6100	1.05	FA	47R17	DRN	63MS4	24	563
2.9	330	475	6740	1.20	FAF	47R17	DRN	63MS4	27	563
3.3	290	419	7150	1.40	F	47R17	DRN	63MS4	25	563
					FF	47R17	DRN	63MS4	28	563
2.6	380	524	6190	1.05						
2.8	350	489	6530	1.15	FA	47R17	DRN	63MS4	24	563
3.2	300	427	7020	1.30	FAF	47R17	DRN	63MS4	26	563
3.6	265	381	7310	1.50	F	47R17	DRN	63MS4	24	563
4.1	235	334	7550	1.70	FF	47R17	DRN	63MS4	27	563
4.7	205	295	7740	1.95						
5.5	171	253	7910	2.3						
4.3	215	322	3990	0.90	FA	37R17	DRN	63MS4	19	563
5.0	191	278	4400	1.05	FAF	37R17	DRN	63MS4	21	563
5.7	162	242	4750	1.25	F	37R17	DRN	63MS4	20	563
6.2	155	221	4820	1.30	FF	37R17	DRN	63MS4	22	563
4.2	235	326	3710	0.85						
4.8	200	285	4250	1.00	FA	37R17	DRN	63MS4	19	563
5.5	177	250	4590	1.15	FAF	37R17	DRN	63MS4	21	563
6.3	156	219	4820	1.30	F	37R17	DRN	63MS4	20	563
7.4	131	186	5040	1.50	FF	37R17	DRN	63MS4	22	563
8.3	118	167	5140	1.70						
6.2	154	221	4500	0.85	FA	27R17	DRN	63MS4	13	563
8.0	119	172	4500	1.10	FAF	27R17	DRN	63MS4	14	563
9.1	104	153	4500	1.25	F	27R17	DRN	63MS4	14	563
11	86	130	4500	1.50	FF	27R17	DRN	63MS4	15	563
6.5	149	211	4500	0.85						
7.4	130	186	4500	1.00	FA	27R17	DRN	63MS4	13	563
9.7	102	142	4500	1.25	FAF	27R17	DRN	63MS4	14	563
11	88	124	4500	1.45	F	27R17	DRN	63MS4	14	563
13	77	109	4500	1.70	FF	27R17	DRN	63MS4	14	563
14	67	96	4500	1.95						
3.8	300	228.99	13000	2.7	FA	67	DRN	63M6	33	516
4.5	255	195.39	13000	3.2	FAF	67	DRN	63M6	39	515
5.1	225	170.85	13000	3.6	F	67	DRN	63M6	36	514
5.4	210	162.31	13000	3.8	FF	67	DRN	63M6	42	515
6.1	187	142.40	13000	4.4						
4.4	260	199.70	11300	2.3	FA	57	DRN	63M6	29	510
4.7	240	183.60	11400	2.5	FAF	57	DRN	63M6	34	509
5.5	205	157.09	11500	2.9	F	57	DRN	63M6	29	508
6.4	179	136.16	11500	3.4	FF	57	DRN	63M6	36	509
6.8	167	127.27	11500	3.6						
6.9	165	199.70	11500	3.6	FA	57	DRN	63MS4	28	510
7.5	152	183.60	11500	3.9	FAF	57	DRN	63MS4	34	509
8.8	130	157.09	11500	4.6	F	57	DRN	63MS4	28	508
10	113	136.16	11500	5.3	FF	57	DRN	63MS4	35	509
4.6	250	190.76	7450	1.60						
5.0	230	175.38	7590	1.75						
5.8	197	150.06	7780	2.0	FA	47	DRN	63M6	22	504
6.7	171	130.07	7910	2.3	FAF	47	DRN	63M6	25	503
7.2	160	121.57	7960	2.5	F	47	DRN	63M6	23	502
8.3	138	105.09	8050	2.9	FF	47	DRN	63M6	26	503
9.7	117	89.29	8120	3.4						
11	105	79.72	8150	3.8						

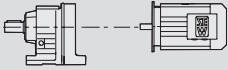

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# 9

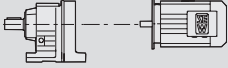

## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

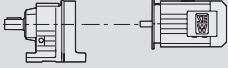

<b>P<sub>m</sub> = 0.12 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
7.2	158	190.76	7970	2.5	FA	47	DRN	63MS4	21	504
7.9	145	175.38	8020	2.8	FAF	47	DRN	63MS4	24	503
9.2	124	150.06	8100	3.2	F	47	DRN	63MS4	22	502
11	108	130.07	8150	3.7	FF	47	DRN	63MS4	25	503
6.8	169	128.51	4680	1.20	FA	37	DRN	63M6	17	498
7.4	155	117.88	4830	1.30	FAF	37	DRN	63M6	19	497
8.7	132	100.36	5030	1.50	F	37	DRN	63M6	17	496
10	113	86.53	5170	1.75	FF	37	DRN	63M6	19	497
11	106	80.65	5220	1.90						
11	106	128.51	5220	1.85	FA	37	DRN	63MS4	16	498
12	97	117.88	5270	2.0	FAF	37	DRN	63MS4	18	497
14	83	100.36	5340	2.4	F	37	DRN	63MS4	17	496
16	71	86.53	5390	2.8	FF	37	DRN	63MS4	19	497
17	66	80.65	5410	3.0						
7.9	144	109.90	4500	0.90	FA	27	DRN	63M6	11	493
9.2	124	94.76	4500	1.05	FAF	27	DRN	63M6	12	492
9.8	116	88.32	4500	1.10	F	27	DRN	63M6	11	491
11	101	77.21	4500	1.30	FF	27	DRN	63M6	12	492
9.8	116	140.74	4500	1.10						
11	107	129.09	4500	1.20						
13	91	109.90	4500	1.40						
15	78	94.76	4500	1.65						
16	73	88.32	4500	1.75						
18	64	77.21	4500	2.0	FA	27	DRN	63MS4	10	493
19	60	72.37	4500	2.2	FAF	27	DRN	63MS4	11	492
22	53	63.86	4500	2.5	F	27	DRN	63MS4	11	491
24	47	56.62	4500	2.8	FF	27	DRN	63MS4	11	492
28	41	50.19	4500	3.1						
30	38	46.78	4500	3.4						
34	33	40.89	4500	3.8						
36	31	38.33	4430	4.1						
41	28	33.83	4270	4.6						
47	24	29.56	4100	5.3						
51	22	27.18	4000	5.8						
59	19	23.25	3820	6.7						
68	16	20.15	3650	7.8						
73	15	18.84	3580	8.3						
85	13	16.28	3420	9.6						
100	11	13.84	3250	11						
112	10	12.35	3140	13	FA	27	DRN	63MS4	9.8	493
131	8.0	10.55	2990	15	FAF	27	DRN	63MS4	11	492
140	8.0	9.88	2920	16	F	27	DRN	63MS4	10	491
147	7.0	9.40	2870	17	FF	27	DRN	63MS4	11	492
170	6.0	8.13	2740	18						
200	5.0	6.91	2600	20						
224	5.0	6.17	2510	21						
262	4.0	5.27	2390	23						
280	4.0	4.93	2340	23						
332	3.0	4.16	2210	25						

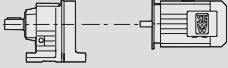

<b>P<sub>m</sub> = 0.18 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.11	13000	12912	88400	0.90						
0.12	11600	11656	90000	1.05	FA	127R77	DRN	63M4	425	563
0.13	10200	10191	90000	1.15	FAF	127R77	DRN	63M4	465	563
0.16	8500	8831	90000	1.40	F	127R77	DRN	63M4	465	563
0.18	7360	7643	90000	1.65	FF	127R77	DRN	63M4	510	563
0.20	6800	6715	90000	1.75						

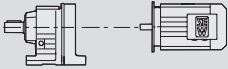

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<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.16	8010	8548	48900	0.95						
0.18	7750	7674	49600	1.00						
0.20	6730	6767	52200	1.15	FA	107R77	DRN	63M4	275	563
0.23	5790	5954	54500	1.35	FAF	107R77	DRN	63M4	295	563
0.26	5030	5223	56200	1.55	F	107R77	DRN	63M4	290	563
0.30	4630	4567	57100	1.65	FF	107R77	DRN	63M4	320	563
0.39	3500	3521	59400	2.2						
0.45	3100	3037	60200	2.5	FA	107R77	DRN	63M4	275	563
0.50	2810	2756	60700	2.7	FAF	107R77	DRN	63M4	295	563
0.58	2420	2369	61400	3.2	F	107R77	DRN	63M4	290	563
0.66	2110	2068	62000	3.6	FF	107R77	DRN	63M4	320	563
0.32	4590	4333	29000	0.95	FA	97R57	DRN	63M4	185	563
					FAF	97R57	DRN	63M4	205	563
					F	97R57	DRN	63M4	190	563
					FF	97R57	DRN	63M4	225	563
0.35	4230	3906	30100	1.00						
0.41	3640	3352	31700	1.20						
0.47	3060	2907	33200	1.40						
0.54	2760	2553	33800	1.55	FA	97R57	DRN	63M4	185	563
0.61	2430	2245	34500	1.75	FAF	97R57	DRN	63M4	205	563
0.70	2110	1970	35200	2.0	F	97R57	DRN	63M4	190	563
0.80	1870	1722	35600	2.3	FF	97R57	DRN	63M4	225	563
0.90	1660	1527	36000	2.6						
1.0	1360	1327	36500	3.2						
1.2	1270	1171	36600	3.4						
0.53	2800	2576	23700	1.05						
0.63	2380	2199	25200	1.25						
0.71	2070	1930	26200	1.45						
0.80	1850	1709	26900	1.60	FA	87R57	DRN	63M4	120	563
0.92	1620	1493	27500	1.85	FAF	87R57	DRN	63M4	130	563
1.1	1330	1300	28200	2.2	F	87R57	DRN	63M4	125	563
1.2	1190	1148	28500	2.5	FF	87R57	DRN	63M4	140	563
1.4	1030	1010	28900	2.9						
1.6	920	887	29100	3.2						
1.8	800	780	29400	3.8						
0.89	1700	1544	14200	0.90						
1.0	1490	1354	15800	1.00						
1.1	1320	1200	16800	1.15	FA	77R37	DRN	63M4	66	563
1.3	1150	1053	17600	1.30	FAF	77R37	DRN	63M4	73	563
1.5	990	910	18300	1.50	F	77R37	DRN	63M4	70	563
1.7	840	810	18800	1.75	FF	77R37	DRN	63M4	81	563
1.9	740	710	19100	2.0						
2.2	660	615	19400	2.3						
1.6	890	858	9530	0.90						
1.8	790	755	10600	1.05	FA	67R37	DRN	63M4	44	563
2.1	670	641	11500	1.20	FAF	67R37	DRN	63M4	50	563
2.4	615	572	11800	1.35	F	67R37	DRN	63M4	47	563
2.7	530	509	12200	1.55	FF	67R37	DRN	63M4	53	563
3.1	460	437	12600	1.80						
3.6	410	384	12800	2.0						
2.8	550	500	12200	1.50						
3.0	505	454	12400	1.60						
3.5	430	392	12700	1.90	FA	67R37	DRN	63M4	43	563
4.1	360	333	12900	2.2	FAF	67R37	DRN	63M4	49	563
4.6	320	297	13000	2.5	F	67R37	DRN	63M4	46	563
5.3	280	261	13000	2.9	FF	67R37	DRN	63M4	52	563
5.8	250	238	13000	3.2						
6.9	205	200	13000	3.9						
2.5	605	558	9120	1.00						
2.7	545	506	9600	1.10	FA	57R37	DRN	63M4	40	563
3.0	475	452	10100	1.25	FAF	57R37	DRN	63M4	46	563
3.6	405	386	10500	1.45	F	57R37	DRN	63M4	40	563
4.1	350	338	10800	1.70	FF	57R37	DRN	63M4	47	563

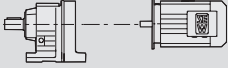

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<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
3.2	480	426	10100	1.25						
3.6	425	382	10400	1.40						
4.2	365	330	10800	1.65	FA	57R37	DRN	63M4	39	563
4.6	325	298	11000	1.80	FAF	57R37	DRN	63M4	45	563
5.2	290	262	11200	2.1	F	57R37	DRN	63M4	40	563
6.1	240	226	11400	2.5	FF	57R37	DRN	63M4	46	563
6.9	210	200	11500	2.8						
3.7	390	370	6010	1.00	FA	47R17	DRN	63M4	25	563
4.2	355	324	6440	1.10	FAF	47R17	DRN	63M4	28	563
4.8	310	288	6940	1.30	F	47R17	DRN	63M4	26	563
5.5	265	249	7340	1.50	FF	47R17	DRN	63M4	29	563
4.1	370	334	6320	1.10						
4.7	320	295	6830	1.25	FA	47R17	DRN	63M4	24	563
5.4	270	253	7290	1.45	FAF	47R17	DRN	63M4	27	563
6.3	240	217	7500	1.65	F	47R17	DRN	63M4	25	563
7.2	210	190	7710	1.90	FF	47R17	DRN	63M4	28	563
7.7	197	178	7780	2.0						
7.4	205	186	4200	0.95	FA	37R17	DRN	63M4	20	563
8.2	185	167	4490	1.10	FAF	37R17	DRN	63M4	22	563
9.4	163	145	4740	1.20	F	37R17	DRN	63M4	21	563
11	144	129	4930	1.40	FF	37R17	DRN	63M4	22	563
9.7	159	142	4500	0.80	FA	27R17	DRN	63M4	14	563
11	137	124	4500	0.95	FAF	27R17	DRN	63M4	15	563
13	120	109	4500	1.10	F	27R17	DRN	63M4	14	563
14	105	96	4500	1.25	FF	27R17	DRN	63M4	15	563
3.2	525	281.71	19600	2.8	FA	77	DRN	71MS6	57	524
3.5	490	262.93	19700	3.0	FAF	77	DRN	71MS6	64	522
4.0	420	225.79	19800	3.5	F	77	DRN	71MS6	61	521
					FF	77	DRN	71MS6	72	522
4.0	430	228.99	12700	1.90	FA	67	DRN	71MS6	33	516
4.7	365	195.39	12900	2.2	FAF	67	DRN	71MS6	40	515
5.4	320	170.85	13000	2.5	F	67	DRN	71MS6	36	514
					FF	67	DRN	71MS6	42	515
6.0	285	228.99	13000	2.9	FA	67	DRN	63M4	33	516
7.0	240	195.39	13000	3.4	FAF	67	DRN	63M4	39	515
8.1	210	170.85	13000	3.8	F	67	DRN	63M4	36	514
					FF	67	DRN	63M4	42	515
4.6	375	199.70	10700	1.60						
5.0	340	183.60	10900	1.75	FA	57	DRN	71MS6	30	510
5.8	295	157.09	11200	2.0	FAF	57	DRN	71MS6	35	509
6.7	255	136.16	11400	2.4	F	57	DRN	71MS6	30	508
7.2	235	127.27	11500	2.5	FF	57	DRN	71MS6	36	509
8.3	205	110.01	11500	2.9						
6.9	245	199.70	11400	2.4	FA	57	DRN	63M4	29	510
7.5	225	183.60	11500	2.6	FAF	57	DRN	63M4	34	509
8.8	196	157.09	11500	3.1	F	57	DRN	63M4	29	508
10	170	136.16	11500	3.5	FF	57	DRN	63M4	36	509
11	159	127.27	11500	3.8						
4.8	355	190.76	6460	1.10	FA	47	DRN	71MS6	22	504
5.2	325	175.38	6780	1.20	FAF	47	DRN	71MS6	25	503
6.1	280	150.06	7220	1.40	F	47	DRN	71MS6	23	502
7.0	240	130.07	7500	1.65	FF	47	DRN	71MS6	26	503
7.5	225	121.57	7600	1.75						
7.2	235	190.76	7540	1.70	FA	47	DRN	63M4	22	504
7.8	215	175.38	7660	1.80	FAF	47	DRN	63M4	25	503
9.2	187	150.06	7840	2.1	F	47	DRN	63M4	23	502
11	162	130.07	7950	2.5	FF	47	DRN	63M4	26	503
11	151	121.57	8000	2.6						
7.8	220	117.88	3960	0.90	FA	37	DRN	71MS6	18	498
9.1	188	100.36	4450	1.05	FAF	37	DRN	71MS6	19	497
11	162	86.53	4750	1.25	F	37	DRN	71MS6	18	496
11	151	80.65	4860	1.30	FF	37	DRN	71MS6	18	496
13	132	70.50	5030	1.50					20	497

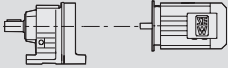

<b>P<sub>m</sub> = 0.18 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
11	160	128.51	4770	1.25						
12	147	117.88	4900	1.35						
14	125	100.36	5080	1.60	FA	37	DRN	63M4	17	498
16	108	86.53	5200	1.85	FAF	37	DRN	63M4	19	497
17	100	80.65	5250	2.0	F	37	DRN	63M4	17	496
20	88	70.50	5320	2.3	FF	37	DRN	63M4	19	497
21	82	66.09	5350	2.4						
24	72	58.32	5390	2.7						
13	137	109.90	4500	0.95						
15	118	94.76	4500	1.10						
16	110	88.32	4500	1.20						
18	96	77.21	4500	1.35						
19	90	72.37	4500	1.45	FA	27	DRN	63M4	11	493
22	79	63.86	4500	1.65	FAF	27	DRN	63M4	12	492
24	70	56.62	4500	1.85	F	27	DRN	63M4	11	491
27	62	50.19	4500	2.1	FF	27	DRN	63M4	12	492
29	58	46.78	4500	2.2						
34	51	40.89	4360	2.5						
36	47	38.33	4290	2.7						
41	42	33.83	4150	3.1						
47	36	29.56	4000	3.5						
51	33	27.18	3900	3.8						
59	29	23.25	3730	4.5						
68	25	20.15	3580	5.2						
73	23	18.84	3510	5.5						
84	20	16.28	3360	6.4						
99	17	13.84	3200	7.5						
111	15	12.35	3100	8.4	FA	27	DRN	63M4	11	493
130	13	10.55	2950	9.9	FAF	27	DRN	63M4	11	492
139	12	9.88	2890	11	F	27	DRN	63M4	11	491
146	11	9.40	2840	11	FF	27	DRN	63M4	12	492
169	10	8.13	2710	12						
199	8.0	6.91	2580	13						
223	7.0	6.17	2490	14						
261	6.0	5.27	2370	15						
279	6.0	4.93	2320	16						
331	5.0	4.16	2200	17						
335	5.0	8.13	2190	24						
395	4.0	6.91	2080	26	FA	27	DRN	63MS2	9.8	493
442	3.0	6.17	2000	28	FAF	27	DRN	63MS2	11	492
517	3.0	5.27	1900	30	F	27	DRN	63MS2	10	491
552	3.0	4.93	1860	31	FF	27	DRN	63MS2	11	492
656	2.0	4.16	1760	33						

<b>P<sub>m</sub> = 0.25 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.04	39400	31434	-	0.50						
0.05	32800	26173	-	0.60	FA	157R97	DRN	71MS4	770	563
0.06	29400	23464	-	0.70	FAF	157R97	DRN	71MS4	820	563
0.07	25300	20212	-	0.80	F	157R97	DRN	71MS4	790	563
0.08	22500	17984	74600	0.90	FF	157R97	DRN	71MS4	890	563
0.09	20500	16358	91900	0.95						
0.16	12100	8831	90000	1.00						
0.18	10500	7643	90000	1.15	FA	127R77	DRN	71MS4	425	563
0.21	9610	6715	90000	1.25	FAF	127R77	DRN	71MS4	465	563
0.24	8480	5925	90000	1.40	F	127R77	DRN	71MS4	465	563
0.27	7270	5153	90000	1.65	FF	127R77	DRN	71MS4	510	563
0.31	6290	4533	90000	1.90						
0.24	8270	5954	48200	0.95	FA	107R77	DRN	71MS4	275	563
0.27	7200	5223	51000	1.05	FAF	107R77	DRN	71MS4	295	563
0.31	6530	4567	52700	1.15	F	107R77	DRN	71MS4	295	563
0.40	4970	3521	56400	1.55	FF	107R77	DRN	71MS4	320	563

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<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.46	4380	3037	57600	1.75						
0.51	3980	2756	58500	1.95	FA	107R77	DRN	71MS4	275	563
0.59	3420	2369	59600	2.2	FAF	107R77	DRN	71MS4	295	563
0.68	2980	2068	60400	2.6	F	107R77	DRN	71MS4	290	563
0.88	2280	1597	61700	3.4	FF	107R77	DRN	71MS4	320	563
1.0	1970	1401	62200	3.9						
0.48	4290	2907	29900	1.00						
0.55	3840	2553	31200	1.10						
0.63	3380	2245	32400	1.25						
0.71	2940	1970	33400	1.45	FA	97R57	DRN	71MS4	185	563
0.82	2600	1722	34200	1.65	FAF	97R57	DRN	71MS4	205	563
0.92	2300	1527	34800	1.85	F	97R57	DRN	71MS4	190	563
1.1	1920	1327	35500	2.2	FF	97R57	DRN	71MS4	225	563
1.2	1760	1171	35800	2.4						
1.4	1540	1022	36200	2.8						
0.73	2880	1930	23400	1.05						
0.82	2570	1709	24500	1.15						
0.94	2250	1493	25600	1.35						
1.1	1880	1300	26800	1.60	FA	87R57	DRN	71MS4	120	563
1.2	1680	1148	27300	1.80	FAF	87R57	DRN	71MS4	130	563
1.4	1460	1010	27900	2.0	F	87R57	DRN	71MS4	125	563
1.6	1300	887	28300	2.3	FF	87R57	DRN	71MS4	140	563
1.8	1120	780	28700	2.6						
2.1	950	674	29100	3.1						
1.3	1600	1053	15000	0.95						
1.5	1370	910	16500	1.10						
1.7	1190	810	17500	1.25	FA	77R37	DRN	71MS4	67	563
2.0	1040	710	18100	1.45	FAF	77R37	DRN	71MS4	73	563
2.3	920	615	18600	1.65	F	77R37	DRN	71MS4	71	563
2.6	800	538	19000	1.85	FF	77R37	DRN	71MS4	81	563
2.9	715	480	19200	2.1						
3.4	605	413	19500	2.5						
2.5	850	572	9940	0.95	FA	67R37	DRN	71MS4	45	563
2.8	745	509	10900	1.10	FAF	67R37	DRN	71MS4	51	563
3.2	640	437	11600	1.25	F	67R37	DRN	71MS4	47	563
					FF	67R37	DRN	71MS4	53	563
2.8	765	500	10800	1.05						
3.1	695	454	11300	1.15	FA	67R37	DRN	71MS4	43	563
3.6	600	392	11900	1.35	FAF	67R37	DRN	71MS4	50	563
4.2	505	333	12400	1.60	F	67R37	DRN	71MS4	46	563
4.7	445	297	12600	1.85	FF	67R37	DRN	71MS4	52	563
5.4	390	261	12800	2.1						
5.9	350	238	13000	2.3						
3.6	570	386	9420	1.05	FA	57R37	DRN	71MS4	41	563
4.2	495	338	9940	1.20	FAF	57R37	DRN	71MS4	46	563
5.5	375	255	10700	1.60	F	57R37	DRN	71MS4	41	563
					FF	57R37	DRN	71MS4	47	563
3.7	585	382	9280	1.00						
4.2	505	330	9880	1.20	FA	57R37	DRN	71MS4	40	563
4.7	455	298	10200	1.30	FAF	57R37	DRN	71MS4	46	563
5.4	400	262	10600	1.50	F	57R37	DRN	71MS4	40	563
6.2	340	226	10900	1.75	FF	57R37	DRN	71MS4	47	563
7.0	295	200	11100	2.0						
8.3	250	170	11400	2.4						
5.6	370	249	6310	1.10	FA	47R17	DRN	71MS4	26	563
6.4	325	218	6780	1.20	FAF	47R17	DRN	71MS4	28	563
7.3	290	193	7150	1.40	F	47R17	DRN	71MS4	26	563
8.1	260	175	7360	1.50	FF	47R17	DRN	71MS4	30	563
5.5	380	253	6180	1.05						
6.5	335	217	6700	1.20	FA	47R17	DRN	71MS4	25	563
7.4	290	190	7130	1.35	FAF	47R17	DRN	71MS4	28	563
7.9	270	178	7280	1.45	F	47R17	DRN	71MS4	26	563
9.4	225	149	7610	1.75	FF	47R17	DRN	71MS4	29	563
11	199	131	7770	2.0						



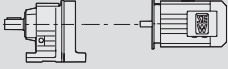

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
9.7	225	145	3880	0.90	FA	37R17	DRN	71MS4	21	563
11	199	129	4300	1.00	FAF	37R17	DRN	71MS4	22	563
12	182	118	4530	1.10	F	37R17	DRN	71MS4	21	563
14	150	98	4870	1.35	FF	37R17	DRN	71MS4	23	563
16	132	87	5030	1.50						
3.2	735	281.71	19200	2.0	FA	77	DRN	71M6	59	524
3.5	685	262.93	19300	2.2	FAF	77	DRN	71M6	65	522
4.0	585	225.79	19500	2.5	F	77	DRN	71M6	62	521
4.6	515	198.31	19700	2.9	FF	77	DRN	71M6	73	522
4.9	490	188.40	19700	3.0						
4.0	595	228.99	11900	1.35	FA	67	DRN	71M6	35	516
4.7	505	195.39	12400	1.60	FAF	67	DRN	71M6	41	515
5.4	445	170.85	12600	1.85	F	67	DRN	71M6	37	514
5.6	420	162.31	12700	1.95	FF	67	DRN	71M6	44	515
6.4	370	142.40	12900	2.2						
6.1	385	228.99	12800	2.1	FA	67	DRN	71MS4	33	516
7.2	330	195.39	13000	2.5	FAF	67	DRN	71MS4	40	515
8.2	290	170.85	13000	2.8	F	67	DRN	71MS4	36	514
8.7	275	162.31	13000	3.0	FF	67	DRN	71MS4	42	515
9.9	240	142.40	13000	3.4						
4.6	520	199.70	9780	1.15	FA	57	DRN	71M6	31	510
5.0	475	183.60	10100	1.25	FAF	57	DRN	71M6	36	509
5.8	405	157.09	10500	1.45	F	57	DRN	71M6	31	508
6.7	355	136.16	10800	1.70	FF	57	DRN	71M6	37	509
7.2	330	127.27	11000	1.80						
8.3	285	110.01	11200	2.1						
7.0	335	199.70	10900	1.75	FA	57	DRN	71MS4	30	510
7.7	310	183.60	11100	1.90	FAF	57	DRN	71MS4	35	509
8.9	265	157.09	11300	2.2	F	57	DRN	71MS4	30	508
10	230	136.16	11500	2.6	FF	57	DRN	71MS4	36	509
11	215	127.27	11500	2.8						
13	186	110.01	11500	3.2						
6.1	390	150.06	6040	1.00	FA	47	DRN	71M6	24	504
7.0	335	130.07	6670	1.20	FAF	47	DRN	71M6	26	503
7.5	315	121.57	6900	1.25	F	47	DRN	71M6	24	502
8.7	270	105.09	7280	1.45	FF	47	DRN	71M6	28	503
7.4	320	190.76	6830	1.25	FA	47	DRN	71MS4	22	504
8.0	295	175.38	7080	1.35	FAF	47	DRN	71MS4	25	503
9.4	250	150.06	7420	1.55	F	47	DRN	71MS4	23	502
11	220	130.07	7650	1.80	FF	47	DRN	71MS4	26	503
12	205	121.57	7730	1.95						
13	178	105.09	7880	2.2						
16	151	89.29	8000	2.6						
11	215	128.51	4010	0.90						
12	200	117.88	4290	1.00						
14	170	100.36	4670	1.15						
16	147	86.53	4900	1.35						
17	137	80.65	4990	1.45						
20	119	70.50	5130	1.65	FA	37	DRN	71MS4	18	498
21	112	66.09	5180	1.80	FAF	37	DRN	71MS4	19	497
24	99	58.32	5260	2.0	F	37	DRN	71MS4	18	496
26	92	54.54	5300	2.2	FF	37	DRN	71MS4	20	497
27	87	51.70	5320	2.3						
30	79	47.02	5360	2.5						
32	74	43.83	5380	2.7						
37	65	38.31	5420	3.1						
39	61	35.91	5440	3.3						
44	53	31.69	5460	3.7						

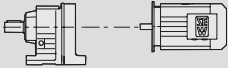

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# 9

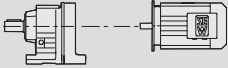

## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

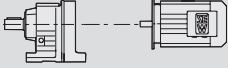

<b>P<sub>m</sub> = 0.25 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
18	131	77.21	4500	1.00						
19	122	72.37	4500	1.05						
22	108	63.86	4500	1.20						
25	96	56.62	4480	1.35	FA	27	DRN	71MS4	11	493
28	85	50.19	4370	1.50	FAF	27	DRN	71MS4	12	492
30	79	46.78	4300	1.65	F	27	DRN	71MS4	12	491
34	69	40.89	4170	1.85	FF	27	DRN	71MS4	13	492
37	65	38.33	4100	2.0						
42	57	33.83	3980	2.3						
48	50	29.56	3850	2.6						
52	46	27.18	3760	2.8						
60	39	23.25	3610	3.3						
70	34	20.15	3480	3.8						
75	32	18.84	3410	4.1						
86	27	16.28	3270	4.7						
102	23	13.84	3120	5.5						
114	20	12.35	3020	6.2	FA	27	DRN	71MS4	11	493
133	17	10.55	2890	7.2	FAF	27	DRN	71MS4	12	492
142	16	9.88	2830	7.7	F	27	DRN	71MS4	12	491
149	15	9.40	2770	8.1	FF	27	DRN	71MS4	13	492
173	13	8.13	2660	8.9						
203	11	6.91	2530	9.7						
228	10	6.17	2440	10						
267	8.0	5.27	2330	11						
285	8.0	4.93	2280	11						
338	7.0	4.16	2160	12						
339	7.0	8.13	2160	17						
399	5.0	6.91	2050	19	FA	27	DRN	63M2	11	493
447	5.0	6.17	1980	20	FAF	27	DRN	63M2	11	492
523	4.0	5.27	1890	22	F	27	DRN	63M2	11	491
558	4.0	4.93	1850	22	FF	27	DRN	63M2	12	492
663	3.0	4.16	1750	24						

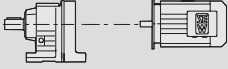

<b>P<sub>m</sub> = 0.37 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.05	62700	31434	-	0.30						
0.05	52200	26173	-	0.40						
0.06	46800	23464	-	0.45	FA	157R97	DRN	71M4	770	563
0.07	40300	20212	-	0.50	FAF	157R97	DRN	71M4	830	563
0.08	35900	17984	-	0.55	F	157R97	DRN	71M4	790	563
0.09	32600	16358	-	0.60	FF	157R97	DRN	71M4	890	563
0.10	27300	13751	-	0.75						
0.12	24300	12235	-	0.80						
0.21	14500	6715	85400	0.80						
0.24	12800	5925	88700	0.95						
0.27	11000	5153	90000	1.10	FA	127R77	DRN	71M4	430	563
0.31	9660	4533	90000	1.25	FAF	127R77	DRN	71M4	465	563
0.36	8450	3926	90000	1.40	F	127R77	DRN	71M4	465	563
0.41	7360	3454	90000	1.65	FF	127R77	DRN	71M4	510	563
0.47	6430	3031	90000	1.85						
0.47	6660	3037	52400	1.15						
0.51	6050	2756	53900	1.25	FA	107R77	DRN	71M4	275	563
0.60	5200	2369	55900	1.50	FAF	107R77	DRN	71M4	295	563
0.68	4540	2068	57300	1.70	F	107R77	DRN	71M4	295	563
0.89	3480	1597	59500	2.2	FF	107R77	DRN	71M4	320	563
0.72	4420	1970	29500	0.95						
0.82	3890	1722	31100	1.10						
0.93	3450	1527	32200	1.25	FA	97R57	DRN	71M4	185	563
1.1	2910	1327	33500	1.45	FAF	97R57	DRN	71M4	205	563
1.2	2640	1171	34100	1.60	F	97R57	DRN	71M4	195	563
1.4	2310	1022	34800	1.85	FF	97R57	DRN	71M4	225	563
1.6	1950	898	35500	2.2						

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<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.1	2850	1300	23500	1.05						
1.2	2540	1148	24600	1.20						
1.4	2220	1010	25700	1.35						
1.6	1960	887	26500	1.55	FA	87R57	DRN	71M4	120	563
1.8	1710	780	27200	1.75	FAF	87R57	DRN	71M4	135	563
2.1	1460	674	27900	2.0	F	87R57	DRN	71M4	125	563
2.3	1330	609	28200	2.2	FF	87R57	DRN	71M4	140	563
2.8	1120	515	28700	2.7						
3.1	990	452	29000	3.0						
1.8	1790	810	13300	0.85						
2.0	1570	710	15200	0.95						
2.3	1380	615	16500	1.10	FA	77R37	DRN	71M4	68	563
2.6	1210	538	17400	1.25	FAF	77R37	DRN	71M4	75	563
3.0	1070	480	18000	1.40	F	77R37	DRN	71M4	72	563
3.4	910	413	18600	1.65	FF	77R37	DRN	71M4	82	563
3.9	820	367	18900	1.80						
4.4	730	323	19200	2.0						
3.7	860	384	9900	0.95	FA	67R37	DRN	71M4	46	563
4.2	765	338	10800	1.05	FAF	67R37	DRN	71M4	52	563
4.7	685	305	11400	1.20	F	67R37	DRN	71M4	49	563
5.5	575	257	12000	1.40	FF	67R37	DRN	71M4	55	563
6.1	505	231	12400	1.60						
5.5	565	255	9440	1.05	FA	57R37	DRN	71M4	42	563
7.0	440	201	10300	1.35	FAF	57R37	DRN	71M4	47	563
7.8	400	181	10600	1.50	F	57R37	DRN	71M4	42	563
					FF	57R37	DRN	71M4	49	563
5.4	600	262	9190	1.00	FA	57R37	DRN	71M4	41	563
6.3	510	226	9830	1.15	FAF	57R37	DRN	71M4	47	563
7.1	450	200	10200	1.35	F	57R37	DRN	71M4	41	563
8.3	380	170	10700	1.55	FF	57R37	DRN	71M4	48	563
9.3	340	152	10900	1.75						
11	295	134	11100	2.0						
8.1	390	175	6000	1.00	FA	47R17	DRN	71M4	27	563
9.6	330	147	6750	1.20	FAF	47R17	DRN	71M4	30	563
11	290	130	7120	1.35	F	47R17	DRN	71M4	28	563
					FF	47R17	DRN	71M4	31	563
3.5	1020	270.68	28900	2.9	FA	87	DRN	80MK6	100	531
3.7	960	255.37	29000	3.1	FAF	87	DRN	80MK6	115	529
4.1	860	228.93	29200	3.5	F	87	DRN	80MK6	105	528
					FF	87	DRN	80MK6	120	529
4.1	850	225.79	18800	1.75	FA	77	DRN	80MK6	61	524
4.7	745	198.31	19100	2.0	FAF	77	DRN	80MK6	68	522
5.0	710	188.40	19200	2.1	F	77	DRN	80MK6	65	521
5.6	625	166.47	19400	2.4	FF	77	DRN	80MK6	76	522
6.6	535	142.27	19600	2.8						
5.0	700	281.71	19300	2.1	FA	77	DRN	71M4	59	524
5.4	655	262.93	19400	2.3	FAF	77	DRN	71M4	65	522
6.3	560	225.79	19600	2.7	F	77	DRN	71M4	62	521
7.1	495	198.31	19700	3.0	FF	77	DRN	71M4	73	522
4.8	735	195.39	11000	1.10	FA	67	DRN	80MK6	37	516
5.5	645	170.85	11600	1.25	FAF	67	DRN	80MK6	43	515
5.8	610	162.31	11800	1.35	F	67	DRN	80MK6	40	514
6.6	535	142.40	12200	1.50	FF	67	DRN	80MK6	46	515
7.7	455	120.79	12600	1.80						
6.2	570	228.99	12100	1.45	FA	67	DRN	71M4	35	516
7.2	485	195.39	12500	1.70	FAF	67	DRN	71M4	41	515
8.3	425	170.85	12700	1.90	F	67	DRN	71M4	37	514
8.7	405	162.31	12800	2.0	FF	67	DRN	71M4	44	515
9.9	355	142.40	13000	2.3						
12	300	120.79	13000	2.7						
6.0	590	157.09	9250	1.00	FA	57	DRN	80MK6	33	510
6.9	510	136.16	9820	1.15	FAF	57	DRN	80MK6	39	509
7.3	480	127.27	10100	1.25	F	57	DRN	80MK6	33	508
8.5	415	110.01	10500	1.45	FF	57	DRN	80MK6	40	509

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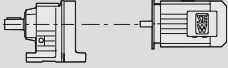

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
7.1	495	199.70	9930	1.20						
7.7	455	183.60	10200	1.30						
9.0	390	157.09	10600	1.55	<b>FA</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	31	510
10	340	136.16	10900	1.75	<b>FAF</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	36	509
11	315	127.27	11000	1.90	<b>F</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	31	508
13	270	110.01	11300	2.2	<b>FF</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	37	509
15	230	93.47	11500	2.6						
17	205	83.46	11500	2.9						
9.4	370	150.06	6260	1.05						
11	320	130.07	6820	1.25	<b>FA</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	24	504
13	260	105.09	7370	1.50	<b>FAF</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	26	503
16	220	89.29	7640	1.80	<b>F</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	24	502
18	199	79.72	7780	2.0	<b>FF</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	28	503
21	170	68.09	7920	2.4						
22	163	65.36	7950	2.5						
16	215	86.53	4050	0.95						
18	200	80.65	4270	1.00						
20	176	70.50	4600	1.15						
21	165	66.09	4730	1.20						
24	145	58.32	4920	1.35						
26	136	54.54	5000	1.45	<b>FA</b>	<b>37</b>	<b>DRN</b>	<b>71M4</b>	19	498
27	129	51.70	5060	1.55	<b>FAF</b>	<b>37</b>	<b>DRN</b>	<b>71M4</b>	20	497
30	117	47.02	5140	1.70	<b>F</b>	<b>37</b>	<b>DRN</b>	<b>71M4</b>	19	496
32	109	43.83	5200	1.85	<b>FF</b>	<b>37</b>	<b>DRN</b>	<b>71M4</b>	21	497
37	95	38.31	5280	2.1						
39	89	35.91	5310	2.2						
45	79	31.69	5270	2.5						
50	70	28.09	5110	2.9						
59	59	23.88	4900	3.4						
25	141	56.62	4060	0.90						
28	125	50.19	4000	1.05	<b>FA</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	13	493
30	116	46.78	3960	1.10	<b>FAF</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	13	492
35	102	40.89	3870	1.25	<b>F</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	13	491
37	95	38.33	3820	1.35	<b>FF</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	14	492
42	84	33.83	3730	1.55						
48	73	29.56	3630	1.75						
52	67	27.18	3560	1.90						
61	58	23.25	3440	2.2						
70	50	20.15	3320	2.6						
75	47	18.84	3270	2.8						
87	40	16.28	3150	3.2						
102	34	13.84	3020	3.8						
115	30	12.35	2930	4.2	<b>FA</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	12	493
134	26	10.55	2800	4.9	<b>FAF</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	13	492
143	24	9.88	2750	5.3	<b>F</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	13	491
150	23	9.40	2690	5.5	<b>FF</b>	<b>27</b>	<b>DRN</b>	<b>71M4</b>	14	492
174	20	8.13	2590	6.1						
205	17	6.91	2470	6.6						
229	15	6.17	2390	7.1						
269	13	5.27	2280	7.6						
287	12	4.93	2240	7.8						
340	10	4.16	2120	8.4						
346	10	8.13	2120	12						
407	8.0	6.91	2010	13	<b>FA</b>	<b>27</b>	<b>DRN</b>	<b>71MS2</b>	11	493
456	7.0	6.17	1940	14	<b>FAF</b>	<b>27</b>	<b>DRN</b>	<b>71MS2</b>	12	492
533	6.0	5.27	1850	15	<b>F</b>	<b>27</b>	<b>DRN</b>	<b>71MS2</b>	12	491
570	6.0	4.93	1820	15	<b>FF</b>	<b>27</b>	<b>DRN</b>	<b>71MS2</b>	13	492
676	5.0	4.16	1720	17						

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>0.20</b>	21600	7075	87400	0.90	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	770	563
<b>0.23</b>	19200	6295	96200	1.05	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	830	563
<b>0.27</b>	16000	5404	105500	1.25	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	790	563
<b>0.52</b>	8260	2780	119500	2.4	<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	900	563
<b>0.59</b>	7300	2427	120000	2.7	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	770	563
<b>0.86</b>	5210	1674	120000	3.8	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	820	563
<b>1.1</b>	4010	1308	120000	5.0	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	790	563
<b>1.2</b>	3510	1169	120000	5.7	<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	890	563
<b>0.37</b>	12700	3926	89100	0.95	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	430	563
<b>0.42</b>	11000	3454	90000	1.10	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	470	563
<b>0.47</b>	9700	3031	90000	1.25	<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	465	563
					<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	510	563
<b>0.61</b>	7790	2369	49500	1.00						
<b>0.69</b>	6800	2068	52100	1.15						
<b>0.79</b>	5840	1826	54400	1.30						
<b>0.90</b>	5220	1597	55800	1.45	<b>FA</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	280	563
<b>1.0</b>	4550	1401	57300	1.70	<b>FAF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	300	563
<b>1.1</b>	3970	1243	58500	1.95	<b>F</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	295	563
<b>1.3</b>	3550	1087	59300	2.2	<b>FF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	325	563
<b>1.5</b>	3030	950	60300	2.5						
<b>1.7</b>	2640	834	61000	2.9						
<b>2.2</b>	2050	640	62100	3.7						
<b>1.1</b>	4370	1327	29700	1.00						
<b>1.2</b>	3920	1171	31000	1.10						
<b>1.4</b>	3430	1022	32300	1.25						
<b>1.6</b>	2930	898	33500	1.45	<b>FA</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	190	563
<b>1.8</b>	2590	784	34200	1.65	<b>FAF</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	210	563
<b>2.1</b>	2250	690	34900	1.90	<b>F</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	195	563
<b>2.4</b>	1980	605	35400	2.2	<b>FF</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	230	563
<b>2.7</b>	1720	529	35900	2.5						
<b>3.1</b>	1520	467	36200	2.8						
<b>3.5</b>	1300	406	36600	3.3						
<b>4.0</b>	1170	363	36800	3.7						
<b>1.6</b>	2930	887	22000	1.00						
<b>1.8</b>	2560	780	24600	1.15	<b>FA</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	120	563
<b>2.1</b>	2200	674	25800	1.35	<b>FAF</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	135	563
<b>2.4</b>	2000	609	26400	1.50	<b>F</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	130	563
<b>2.8</b>	1690	515	27300	1.75	<b>FF</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	145	563
<b>3.2</b>	1480	452	27800	2.0						
<b>4.2</b>	1110	345	28700	2.7						
<b>3.0</b>	1600	480	15000	0.95	<b>FA</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	70	563
<b>3.5</b>	1360	413	16500	1.10	<b>FAF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	77	563
<b>3.9</b>	1220	367	17300	1.25	<b>F</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	74	563
<b>4.5</b>	1080	323	18000	1.40	<b>FF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	85	563
<b>5.6</b>	850	257	9970	0.95	<b>FA</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	48	563
<b>6.2</b>	760	231	10800	1.10	<b>FAF</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	54	563
<b>7.0</b>	680	205	11400	1.20	<b>F</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	51	563
<b>8.2</b>	575	175	12000	1.40	<b>FF</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	57	563
<b>3.6</b>	1470	270.68	27900	2.0	<b>FA</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	110	531
<b>3.8</b>	1380	255.37	28100	2.2	<b>FAF</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	120	529
<b>4.2</b>	1240	228.93	28400	2.4	<b>F</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	115	528
<b>4.9</b>	1070	197.20	28800	2.8	<b>FF</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	130	529
<b>5.4</b>	970	179.97	29000	3.1						
<b>4.3</b>	1220	225.79	17300	1.20	<b>FA</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	69	524
<b>4.9</b>	1070	198.31	18000	1.40	<b>FAF</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	76	522
<b>5.1</b>	1020	188.40	18200	1.45	<b>F</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	73	521
<b>5.8</b>	900	166.47	18700	1.65	<b>FF</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	84	522
<b>6.8</b>	770	142.27	19100	1.95						
<b>7.4</b>	705	130.42	19200	2.1						

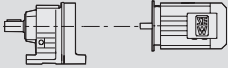

# 9

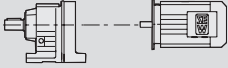

## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

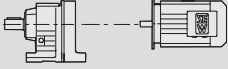

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
6.4	820	225.79	18900	1.80						
7.2	725	198.31	19200	2.1						
7.6	685	188.40	19300	2.2						
8.6	605	166.47	19500	2.5	FA	77	DRN	80MK4	61	524
10	520	142.27	19700	2.9	FAF	77	DRN	80MK4	68	522
11	475	130.42	19700	3.1	F	77	DRN	80MK4	65	521
13	415	114.45	19800	3.6	FF	77	DRN	80MK4	76	522
13	395	108.46*	19900	3.8						
15	345	94.93	19900	4.3						
7.3	715	195.39	11200	1.15						
8.4	625	170.85	11700	1.30						
8.8	590	162.31	11900	1.40						
10	520	142.40	12300	1.55	FA	67	DRN	80MK4	37	516
12	440	120.79	12700	1.85	FAF	67	DRN	80MK4	43	515
13	395	109.04	12800	2.0	F	67	DRN	80MK4	40	514
15	350	95.94	13000	2.3	FF	67	DRN	80MK4	46	515
16	330	90.59	13000	2.5						
18	290	79.76	13000	2.8						
9.1	570	157.09	9390	1.05						
11	495	136.16	9930	1.20						
11	465	127.27	10200	1.30						
13	400	110.01	10600	1.50	FA	57	DRN	80MK4	33	510
15	340	93.47	10900	1.75	FAF	57	DRN	80MK4	39	509
17	305	83.46	11100	1.95	F	57	DRN	80MK4	33	508
20	265	72.98	11300	2.2	FF	57	DRN	80MK4	40	509
21	245	68.22	11400	2.4						
24	215	58.97	11500	2.8						
14	380	105.09	6130	1.05						
16	325	89.29	6800	1.20						
18	290	79.72	7130	1.35						
21	245	68.09	7460	1.60	FA	47	DRN	80MK4	26	504
22	235	65.36	7530	1.65	FAF	47	DRN	80MK4	29	503
25	205	56.49	7730	1.95	F	47	DRN	80MK4	27	502
30	175	48.00*	7890	2.3	FF	47	DRN	80MK4	30	503
33	156	42.86	7980	2.5						
25	210	58.32	4090	0.95						
26	199	54.54	4300	1.00						
28	189	51.70	4440	1.05						
31	172	47.02	4650	1.15						
33	160	43.83	4780	1.25	FA	37	DRN	80MK4	21	498
37	140	38.31	4970	1.45	FAF	37	DRN	80MK4	23	497
40	131	35.91	5040	1.50	F	37	DRN	80MK4	22	496
45	115	31.69	4940	1.70	FF	37	DRN	80MK4	23	497
51	102	28.09	4820	1.95						
60	87	23.88	4640	2.3						
61	86	23.63	4630	2.3						
70	75	20.57	4480	2.7	FA	37	DRN	80MK4	21	498
74	70	19.27	4410	2.8	FAF	37	DRN	80MK4	22	497
84	62	17.03	4280	3.2	F	37	DRN	80MK4	21	496
100	52	14.33	4090	3.8	FF	37	DRN	80MK4	23	497
37	143	77.21	3410	0.90						
39	134	72.37	3390	0.95	FA	27	DRN	71M2	13	493
44	118	63.86	3340	1.10	FAF	27	DRN	71M2	13	492
50	105	56.62	3290	1.25	F	27	DRN	71M2	13	491
56	93	50.19	3230	1.40	FF	27	DRN	71M2	14	492

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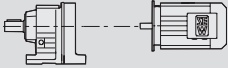

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
62	85	23.25	3180	1.55						
71	73	20.15	3100	1.75						
76	68	18.84	3060	1.90						
88	59	16.28	2970	2.2						
104	50	13.84	2860	2.6						
116	45	12.35	2790	2.9						
136	38	10.55	2680	3.4	FA	27	DRN	80MK4	15	493
145	36	9.88	2640	3.6	FAF	27	DRN	80MK4	15	492
153	34	9.40	2570	3.8	F	27	DRN	80MK4	15	491
177	29	8.13	2480	4.1	FF	27	DRN	80MK4	16	492
208	25	6.91	2380	4.5						
233	22	6.17	2310	4.8						
272	19	5.27	2210	5.2						
291	18	4.93	2170	5.3						
345	15	4.16	2070	5.7						
348	15	8.13	2060	8.1						
409	12	6.91	1970	8.9	FA	27	DRN	71M2	12	493
458	11	6.17	1900	9.5	FAF	27	DRN	71M2	13	492
536	9.0	5.27	1820	10	F	27	DRN	71M2	13	491
573	9.0	4.93	1780	10	FF	27	DRN	71M2	14	492
680	7.0	4.16	1690	11						



<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
0.14	41400	10033	-	0.50						
0.16	36700	9021	-	0.55						
0.18	32600	8026	-	0.60	FA	157R97	DRN	80M4	770	563
0.23	26900	6295	-	0.75	FAF	157R97	DRN	80M4	830	563
0.27	22600	5404	72400	0.90	F	157R97	DRN	80M4	790	563
0.30	19900	4831	93900	1.00	FF	157R97	DRN	80M4	900	563
0.35	16800	4130	103600	1.20						
0.52	11600	2780	114700	1.70						
0.59	10300	2427	116800	1.95						
0.66	9140	2185	118400	2.2						
0.74	8130	1944	119600	2.5						
0.86	7280	1674	120000	2.7	FA	157R97	DRN	80M4	770	563
1.1	5620	1308	120000	3.5	FAF	157R97	DRN	80M4	830	563
1.2	4960	1169	120000	4.0	F	157R97	DRN	80M4	790	563
1.5	3920	953	120000	5.1	FF	157R97	DRN	80M4	900	563
1.7	3400	845	120000	5.9						
3.2	1790	446	120000	11						
4.8	1210	302	120000	16						
0.48	13400	3031	87700	0.90	FA	127R77	DRN	80M4	435	563
					FAF	127R77	DRN	80M4	470	563
					F	127R77	DRN	80M4	470	563
					FF	127R77	DRN	80M4	520	563
0.54	12000	2672	90000	1.00						
0.61	10500	2357	90000	1.15	FA	127R77	DRN	80M4	435	563
0.71	9120	2038	90000	1.30	FAF	127R77	DRN	80M4	470	563
0.81	7940	1784	90000	1.50	F	127R77	DRN	80M4	470	563
0.90	7120	1606	90000	1.70	FF	127R77	DRN	80M4	510	563
0.79	8090	1826	48700	0.95						
0.90	7200	1597	51100	1.05						
1.0	6280	1401	53300	1.20	FA	107R77	DRN	80M4	280	563
1.2	5510	1243	55200	1.40	FAF	107R77	DRN	80M4	305	563
1.3	4900	1087	56500	1.55	F	107R77	DRN	80M4	300	563
1.5	4210	950	58000	1.80	FF	107R77	DRN	80M4	325	563
1.7	3670	834	59100	2.1						
2.2	2850	640	60700	2.7						
3.3	1940	436	62300	4.0						

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<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.4	4690	1022	26900	0.90						
1.6	4040	898	30600	1.05						
1.8	3560	784	31900	1.20	FA	97R57	DRN	80M4	190	563
2.1	3100	690	33100	1.40	FAF	97R57	DRN	80M4	215	563
2.4	2730	605	33900	1.55	F	97R57	DRN	80M4	200	563
2.7	2370	529	34700	1.80	FF	97R57	DRN	80M4	230	563
3.1	2090	467	35200	2.0						
3.5	1800	406	35700	2.4						
4.0	1620	363	36100	2.6						
2.1	3030	674	18400	1.00	FA	87R57	DRN	80M4	125	563
2.4	2750	609	23900	1.10	FAF	87R57	DRN	80M4	140	563
2.8	2320	515	25400	1.30	F	87R57	DRN	80M4	130	563
3.2	2040	452	26300	1.45	FF	87R57	DRN	80M4	145	563
4.2	1540	345	27700	1.95						
3.9	1670	367	14400	0.90	FA	77R37	DRN	80M4	74	563
4.5	1480	323	15800	1.00	FAF	77R37	DRN	80M4	80	563
5.2	1270	280	17000	1.15	F	77R37	DRN	80M4	77	563
					FF	77R37	DRN	80M4	88	563
3.5	2070	276.77	35300	2.1	FA	97	DRN	90S6	175	538
3.8	1890	253.41	35600	2.3	FAF	97	DRN	90S6	195	536
4.3	1670	223.88	36000	2.6	F	97	DRN	90S6	180	535
					FF	97	DRN	90S6	215	536
3.5	2020	270.68	26400	1.50	FA	87	DRN	90S6	110	531
3.8	1910	255.37	26700	1.55	FAF	87	DRN	90S6	120	529
4.2	1710	228.93	27300	1.75	F	87	DRN	90S6	115	528
4.8	1470	197.20	27900	2.0	FF	87	DRN	90S6	130	529
5.3	1340	179.97	28200	2.2	FA	87	DRN	90S6	110	531
6.0	1190	159.61	28600	2.5	FAF	87	DRN	90S6	120	529
					F	87	DRN	90S6	115	528
					FF	87	DRN	90S6	130	529
5.3	1340	270.68	28200	2.2	FA	87	DRN	80M4	105	531
5.6	1270	255.37	28400	2.4	FAF	87	DRN	80M4	115	529
6.3	1130	228.93	28700	2.6	F	87	DRN	80M4	110	528
					FF	87	DRN	80M4	125	529
4.8	1480	198.31	15800	1.00	FA	77	DRN	90S6	69	524
5.1	1400	188.40	16300	1.05	FAF	77	DRN	90S6	76	522
5.8	1240	166.47	17200	1.20	F	77	DRN	90S6	73	521
6.7	1060	142.27	18000	1.40	FF	77	DRN	90S6	84	522
7.3	970	130.42	18400	1.55	FA	77	DRN	90S6	69	524
					FAF	77	DRN	90S6	76	522
					F	77	DRN	90S6	73	521
					FF	77	DRN	90S6	84	522
6.4	1120	225.79	17800	1.35	FA	77	DRN	80M4	65	524
7.3	980	198.31	18400	1.50	FAF	77	DRN	80M4	71	522
7.6	930	188.40	18500	1.60	F	77	DRN	80M4	68	521
					FF	77	DRN	80M4	79	522
8.7	820	166.47	18900	1.80	FA	77	DRN	80M4	65	524
10	705	142.27	19200	2.1	FAF	77	DRN	80M4	71	522
11	645	130.42	19400	2.3	F	77	DRN	80M4	68	521
13	565	114.45	19600	2.6	FF	77	DRN	80M4	79	522
13	535	108.46*	19600	2.8						
8.4	840	170.85	10000	0.95	FA	67	DRN	80M4	41	516
8.9	800	162.31	10400	1.00	FAF	67	DRN	80M4	47	515
10	705	142.40	11200	1.15	F	67	DRN	80M4	43	514
12	600	120.79	11900	1.35	FF	67	DRN	80M4	49	515
13	540	109.04	12200	1.50						
15	475	95.94	12500	1.70	FA	67	DRN	80M4	41	516
16	450	90.59	12600	1.80	FAF	67	DRN	80M4	47	515
18	395	79.76	12800	2.1	F	67	DRN	80M4	43	514
21	335	67.65	13000	2.4	FF	67	DRN	80M4	49	515
24	300	61.07	13000	2.7						



<b>P<sub>m</sub> = 0.75 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
11	630	127.27	7950	0.95						
13	545	110.01	9590	1.10						
15	460	93.47	10200	1.30						
17	415	83.46	10500	1.45	FA	57	DRN	80M4	37	510
20	360	72.98	10800	1.65	FAF	57	DRN	80M4	42	509
21	335	68.22	10900	1.75	F	57	DRN	80M4	37	508
24	290	58.97	11200	2.0	FF	57	DRN	80M4	43	509
29	245	50.10	11400	2.4						
32	220	44.73	11300	2.7						
18	395	79.72	5970	1.00	FA	47	DRN	80M4	29	504
21	335	68.09	6680	1.20	FAF	47	DRN	80M4	32	503
22	325	65.36	6820	1.25	F	47	DRN	80M4	30	502
					FF	47	DRN	80M4	33	503
25	280	56.49	7220	1.40	FA	47	DRN	80M4	29	504
30	235	48.00*	7540	1.70	FAF	47	DRN	80M4	32	503
34	210	42.86	7700	1.90	F	47	DRN	80M4	30	502
39	182	36.61	7860	2.2	FF	47	DRN	80M4	33	503
42	170	34.29	7770	2.4						
50	143	28.88	7460	2.8						
31	230	47.02	3730	0.85	FA	37	DRN	80M4	24	498
33	215	43.83	4020	0.90	FAF	37	DRN	80M4	26	497
38	190	38.31	4420	1.05	F	37	DRN	80M4	25	496
40	178	35.91	4570	1.10	FF	37	DRN	80M4	27	497
45	157	31.69	4590	1.25						
51	139	28.09	4500	1.45						
61	117	23.63	4370	1.70	FA	37	DRN	80M4	24	498
70	102	20.57	4250	1.95	FAF	37	DRN	80M4	26	497
75	95	19.27	4200	2.1	F	37	DRN	80M4	25	496
85	84	17.03	4090	2.4	FF	37	DRN	80M4	27	497
100	71	14.33	3930	2.8						
112	64	12.87	3830	3.1						
62	115	23.25	2900	1.10						
71	100	20.15	2860	1.30						
76	93	18.84	2830	1.40						
88	80	16.28	2770	1.60						
104	68	13.84	2700	1.90						
117	61	12.35	2640	2.1	FA	27	DRN	80M4	18	493
136	52	10.55	2560	2.5	FAF	27	DRN	80M4	19	492
146	49	9.88	2520	2.6	F	27	DRN	80M4	19	491
153	46	9.40	2450	2.8	FF	27	DRN	80M4	19	492
177	40	8.13	2370	3.0						
208	34	6.91	2280	3.3						
234	30	6.17	2220	3.5						
273	26	5.27	2140	3.8						
292	24	4.93	2100	3.9						
346	20	4.16	2010	4.2						
351	20	8.13	2000	6.0						
413	17	6.91	1920	6.6	FA	27	DRN	80MS2	18	493
463	15	6.17	1860	7.0	FAF	27	DRN	80MS2	19	492
542	13	5.27	1780	7.6	F	27	DRN	80MS2	19	491
579	12	4.93	1740	7.8	FF	27	DRN	80MS2	19	492
687	10	4.16	1660	8.3						

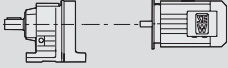

<b>P<sub>m</sub> = 1.1 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.30	30000	4831	-	0.65	FA	157R97	DRN	90S4	780	563
0.35	25400	4130	-	0.80	FAF	157R97	DRN	90S4	840	563
0.52	17400	2780	101800	1.15	F	157R97	DRN	90S4	800	563
					FF	157R97	DRN	90S4	900	563

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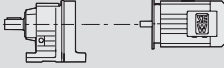

# 9

## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.60	15400	2427	107100	1.30						
0.67	13700	2185	110800	1.45						
0.75	12200	1944	113700	1.65						
0.87	10800	1674	116000	1.85	FA	157R97	DRN	90S4	770	563
1.1	8380	1308	119300	2.4	FAF	157R97	DRN	90S4	830	563
1.2	7420	1169	120000	2.7	F	157R97	DRN	90S4	790	563
1.5	5930	953	120000	3.4	FF	157R97	DRN	90S4	900	563
1.7	5180	845	120000	3.9						
3.3	2740	446	120000	7.3						
4.8	1850	302	120000	11						
0.71	13400	2038	87700	0.90						
0.82	11700	1784	90000	1.00	FA	127R77	DRN	90S4	440	563
0.91	10500	1606	90000	1.15	FAF	127R77	DRN	90S4	475	563
1.1	9100	1390	90000	1.30	F	127R77	DRN	90S4	475	563
1.2	7950	1220	90000	1.50	FF	127R77	DRN	90S4	520	563
1.4	7070	1077	90000	1.70						
1.2	8140	1243	48600	0.95						
1.3	7200	1087	51100	1.05	FA	107R77	DRN	90S4	285	563
1.5	6220	950	53500	1.25	FAF	107R77	DRN	90S4	310	563
1.8	5430	834	55300	1.40	F	107R77	DRN	90S4	305	563
2.0	4770	736	56800	1.60	FF	107R77	DRN	90S4	330	563
2.3	4200	640	58000	1.85						
2.1	4560	690	29100	0.95						
2.4	4010	605	30700	1.05	FA	97R57	DRN	90S4	195	563
2.8	3490	529	32100	1.25	FAF	97R57	DRN	90S4	220	563
3.1	3080	467	33100	1.40	F	97R57	DRN	90S4	205	563
3.6	2660	406	34100	1.60	FF	97R57	DRN	90S4	240	563
4.0	2390	363	34600	1.80						
3.2	3000	452	19600	1.00	FA	87R57	DRN	90S4	130	563
4.2	2270	345	25600	1.30	FAF	87R57	DRN	90S4	145	563
4.8	1960	300	26500	1.50	F	87R57	DRN	90S4	140	563
5.8	1630	249	27500	1.85	FF	87R57	DRN	90S4	155	563
3.5	3030	276.77	33200	1.40	FA	97	DRN	90L6	175	538
3.8	2780	253.41	33800	1.55	FAF	97	DRN	90L6	200	536
4.3	2450	223.88	34500	1.75	F	97	DRN	90L6	185	535
5.0	2080	189.92	35200	2.1	FF	97	DRN	90L6	215	536
5.5	1910	174.87	35500	2.2						
5.3	1990	276.77	35400	2.1	FA	97	DRN	90S4	175	538
5.7	1820	253.41	35700	2.4	FAF	97	DRN	90S4	195	536
6.5	1610	223.88	36100	2.7	F	97	DRN	90S4	180	535
					FF	97	DRN	90S4	215	536
4.2	2510	228.93	24800	1.20	FA	87	DRN	90L6	110	531
4.8	2160	197.20	25900	1.40	FAF	87	DRN	90L6	125	529
5.3	1970	179.97	26500	1.50	F	87	DRN	90L6	120	528
6.0	1750	159.61	27200	1.70	FF	87	DRN	90L6	135	529
5.4	1950	270.68	26600	1.55	FA	87	DRN	90S4	110	531
5.7	1840	255.37	26900	1.65	FAF	87	DRN	90S4	120	529
6.4	1650	228.93	27400	1.80	F	87	DRN	90S4	115	528
7.4	1420	197.20	28000	2.1	FF	87	DRN	90S4	130	529
8.1	1290	179.97	28300	2.3	FA	87	DRN	90S4	110	531
9.1	1150	159.61	28600	2.6	FAF	87	DRN	90S4	120	529
11	960	134.16	29000	3.1	F	87	DRN	90S4	115	528
12	890	123.29	29200	3.4	FF	87	DRN	90S4	130	529
7.3	1430	198.31	16200	1.05	FA	77	DRN	90S4	69	524
7.7	1360	188.40	16600	1.10	FAF	77	DRN	90S4	76	522
8.7	1200	166.47	17400	1.25	F	77	DRN	90S4	73	521
10	1020	142.27	18200	1.45	FF	77	DRN	90S4	84	522
11	940	130.42	18500	1.60						
13	820	114.45	18900	1.80	FA	77	DRN	90S4	69	524
13	780	108.46*	19000	1.90	FAF	77	DRN	90S4	76	522
15	685	94.93	19300	2.2	F	77	DRN	90S4	73	521
17	615	85.52	19500	2.4	FF	77	DRN	90S4	84	522
19	540	75.02	19600	2.8						

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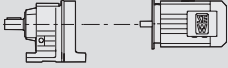

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
12	870	120.79	9820	0.95	FA	67	DRN	90S4	47	516
					FAF	67	DRN	90S4	53	515
					F	67	DRN	90S4	50	514
					FF	67	DRN	90S4	56	515
13	785	109.04	10600	1.05	FA	67	DRN	90S4	47	516
15	690	95.94	11300	1.20						
16	650	90.59	11600	1.25						
18	575	79.76	12000	1.40						
22	485	67.65	12500	1.70						
24	440	61.07	12700	1.85						
27	385	53.73	12900	2.1						
29	365	50.74	12900	2.2						
34	310	43.20	13000	2.6						
37	280	39.26	13000	2.8						
43	245	34.01	13000	3.0						
17	600	83.46	9180	1.00	FA	57	DRN	90S4	43	510
20	525	72.98	9740	1.15						
21	490	68.22	9980	1.20						
25	425	58.97	10400	1.40						
29	360	50.10	10800	1.65						
33	320	44.73	10600	1.85						
38	275	38.21	10300	2.2						
41	255	35.79	10100	2.3						
48	215	30.15	9720	2.7						
26	405	56.49	5680	1.00	FA	47	DRN	90S4	35	504
30	345	48.00*	6600	1.15	FAF	47	DRN	90S4	38	503
					F	47	DRN	90S4	36	502
34	305	42.86	6970	1.30	FF	47	DRN	90S4	39	503
					FA	47	DRN	90S4	35	504
40	260	36.61	7300	1.50	FAF	47	DRN	90S4	38	503
42	245	34.29	7210	1.60	F	47	DRN	90S4	36	502
50	205	28.88	6990	1.90	FF	47	DRN	90S4	39	503
47	220	30.86	7080	1.80	FA	47	DRN	90S4	34	504
50	210	29.32	7010	1.90	FAF	47	DRN	90S4	37	503
57	185	25.72	6820	2.1	F	47	DRN	90S4	35	502
67	157	21.82	6580	2.5	FF	47	DRN	90S4	38	503
74	142	19.70	6430	2.8						
46	225	31.69	3830	0.85	FA	37	DRN	90S4	30	498
52	200	28.09	3960	1.00	FAF	37	DRN	90S4	32	497
					F	37	DRN	90S4	31	496
61	172	23.88	3920	1.15	FF	37	DRN	90S4	33	497
71	148	20.57	3860	1.35	FA	37	DRN	90S4	30	498
76	139	19.27	3820	1.45	FAF	37	DRN	90S4	32	497
85	122	17.03	3760	1.65	F	37	DRN	90S4	31	496
102	103	14.33	3650	1.95	FF	37	DRN	90S4	32	497
113	92	12.87	3580	2.1						
131	80	11.08	3470	2.4						
140	75	10.42	3430	2.5						
162	64	8.97	3320	2.7						
72	145	20.15	2440	0.90	FA	27	DRN	90S4	24	493
77	136	18.84	2440	0.95						
89	117	16.28	2440	1.10						
105	99	13.84	2410	1.30						
118	89	12.35	2380	1.45						
138	76	10.55	2330	1.70						
147	71	9.88	2310	1.80						
155	67	9.40	2230	1.90						
179	58	8.13	2180	2.1						
211	49	6.91	2120	2.3						
236	44	6.17	2080	2.5						
276	38	5.27	2010	2.6						
295	35	4.93	1990	2.7						
350	30	4.16	1910	2.9						

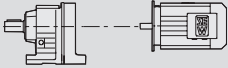

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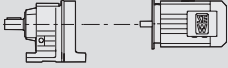

## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 1.1 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
352	29	8.13	1910	4.1						
414	25	6.91	1840	4.5	FA	27	DRN	80M2	18	493
464	22	6.17	1790	4.8	FAF	27	DRN	80M2	19	492
543	19	5.27	1720	5.2	F	27	DRN	80M2	19	491
580	18	4.93	1690	5.3	FF	27	DRN	80M2	19	492
688	15	4.16	1610	5.7						

<b>P<sub>m</sub> = 1.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.53	24100	2780	10800	0.85	FA	157R97	DRN	90L4	780	563
					FAF	157R97	DRN	90L4	840	563
					F	157R97	DRN	90L4	800	563
					FF	157R97	DRN	90L4	910	563
0.60	21300	2427	88800	0.95						
0.67	19000	2185	96900	1.05						
0.75	16900	1944	103200	1.20						
0.87	14800	1674	108300	1.35	FA	157R97	DRN	90L4	780	563
1.1	11500	1308	114800	1.75	FAF	157R97	DRN	90L4	840	563
1.2	10200	1169	116900	1.95	F	157R97	DRN	90L4	800	563
1.5	8250	953	119500	2.4	FF	157R97	DRN	90L4	900	563
1.7	7240	845	120000	2.8						
3.3	3820	446	120000	5.2						
4.8	2590	302	120000	7.7						
0.91	14400	1606	85700	0.85						
1.1	12400	1390	89500	0.95						
1.2	10900	1220	90000	1.10	FA	127R77	DRN	90L4	440	563
1.4	9690	1077	90000	1.25	FAF	127R77	DRN	90L4	480	563
1.6	8320	930	90000	1.45	F	127R77	DRN	90L4	480	563
1.8	7310	820	90000	1.65	FF	127R77	DRN	90L4	520	563
2.0	6460	727	90000	1.85						
2.2	5830	648	90000	2.1						
1.5	8530	950	47500	0.90						
1.8	7460	834	50400	1.05						
2.0	6560	736	52700	1.15	FA	107R77	DRN	90L4	290	563
2.3	5760	640	54600	1.35	FAF	107R77	DRN	90L4	310	563
2.6	4980	560	56300	1.55	F	107R77	DRN	90L4	305	563
3.0	4350	489	57700	1.75	FF	107R77	DRN	90L4	335	563
3.4	3920	436	58600	1.95						
4.0	3320	370	59800	2.3						
2.8	4780	529	23800	0.90	FA	97R57	DRN	90L4	200	563
3.1	4220	467	30100	1.00	FAF	97R57	DRN	90L4	220	563
3.6	3650	406	31700	1.20	F	97R57	DRN	90L4	210	563
4.0	3270	363	32700	1.30	FF	97R57	DRN	90L4	240	563
4.9	2700	300	24100	1.10	FA	87R57	DRN	90L4	135	563
					FAF	87R57	DRN	90L4	150	563
5.9	2240	249	25700	1.35	F	87R57	DRN	90L4	140	563
					FF	87R57	DRN	90L4	155	563
3.8	3790	254.40*	58800	2.0	FA	107	DRN	100L6	265	545
4.5	3210	215.37	60000	2.4	FAF	107	DRN	100L6	285	543
4.8	2970	199.31	60400	2.6	F	107	DRN	100L6	280	542
5.4	2660	178.64	61000	2.9	FF	107	DRN	100L6	305	543
3.5	4120	276.77	30400	1.05	FA	97	DRN	100L6	190	538
3.8	3770	253.41	31400	1.15	FAF	97	DRN	100L6	210	536
4.3	3330	223.88	32500	1.30	F	97	DRN	100L6	195	535
5.1	2830	189.92	33700	1.50	FF	97	DRN	100L6	230	536
5.5	2600	174.87	34200	1.65						
5.3	2710	276.77	34000	1.60	FA	97	DRN	90L4	175	538
5.8	2480	253.41	34400	1.75	FAF	97	DRN	90L4	200	536
6.5	2190	223.88	35000	1.95	F	97	DRN	90L4	185	535
7.7	1860	189.92	35600	2.3	FF	97	DRN	90L4	215	536
8.3	1710	174.87	35900	2.5						

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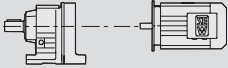

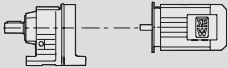

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
5.4	2650	270.68	24300	1.15	FA	87	DRN	90L4	110	531
5.7	2500	255.37	24800	1.20	FAF	87	DRN	90L4	125	529
6.4	2240	228.93	25700	1.35	F	87	DRN	90L4	120	528
7.4	1930	197.20	26600	1.55	FF	87	DRN	90L4	135	529
8.1	1760	179.97	27100	1.70	FA	87	DRN	90L4	110	531
9.2	1560	159.61	27700	1.90	FAF	87	DRN	90L4	125	529
11	1310	134.16	28300	2.3	F	87	DRN	90L4	120	528
13	1070	109.49	28800	2.8	FF	87	DRN	90L4	135	529
15	950	97.89	29100	3.1						
8.8	1630	166.47	14800	0.90	FA	77	DRN	90L4	73	524
10	1390	142.27	16400	1.10	FAF	77	DRN	90L4	79	522
11	1270	130.42	17000	1.15	F	77	DRN	90L4	76	521
13	1120	114.45	17800	1.35	FF	77	DRN	90L4	87	522
13	1060	108.46*	18100	1.40						
15	930	94.93	18600	1.60						
17	830	85.52	18900	1.80						
19	735	75.02	19200	2.0	FA	77	DRN	90L4	73	524
20	710	72.50	19200	2.1	FAF	77	DRN	90L4	79	522
22	650	66.46	19400	2.3	F	77	DRN	90L4	76	521
25	570	58.32	19600	2.6	FF	77	DRN	90L4	87	522
26	540	55.27	19600	2.8						
30	470	48.37	19700	3.2						
34	425	43.58	19800	3.5						
38	370	38.23	19900	4.0						
40	355	36.58	19900	3.1	FA	77	DRN	90L4	71	524
46	305	31.51	20000	4.5	FAF	77	DRN	90L4	78	522
					F	77	DRN	90L4	75	521
					FF	77	DRN	90L4	86	522
16	880	90.59	9650	0.90						
18	780	79.76	10600	1.05						
22	660	67.65	11500	1.25	FA	67	DRN	90L4	50	516
24	595	61.07	11900	1.35	FAF	67	DRN	90L4	56	515
27	525	53.73	12300	1.55	F	67	DRN	90L4	53	514
29	495	50.74	12400	1.65	FF	67	DRN	90L4	59	515
34	420	43.20	12700	1.95						
37	380	39.26	12900	2.0						
40	355	36.30	13000	2.3	FA	67	DRN	90L4	49	516
46	310	32.08	13000	2.6	FAF	67	DRN	90L4	55	515
53	265	27.41	13000	3.0	F	67	DRN	90L4	52	514
58	245	25.13	13000	3.3	FF	67	DRN	90L4	58	515
25	575	58.97	9370	1.05						
29	490	50.10	9980	1.20	FA	57	DRN	90L4	46	510
33	435	44.73	9940	1.35	FAF	57	DRN	90L4	52	509
38	370	38.21	9680	1.60	F	57	DRN	90L4	46	508
41	350	35.79	9560	1.70	FF	57	DRN	90L4	53	509
48	295	30.15	9240	2.0						
40	355	36.61	6460	1.10	FA	47	DRN	90L4	38	504
43	335	34.29	6600	1.20	FAF	47	DRN	90L4	41	503
51	280	28.88	6460	1.40	F	47	DRN	90L4	39	502
					FF	47	DRN	90L4	42	503
47	300	30.86	6520	1.30						
50	285	29.32	6480	1.40						
57	250	25.72	6360	1.60	FA	47	DRN	90L4	38	504
67	210	21.82	6190	1.85	FAF	47	DRN	90L4	40	503
74	193	19.70	6070	2.1	F	47	DRN	90L4	38	502
84	169	17.33	5920	2.4	FF	47	DRN	90L4	42	503
89	160	16.36	5850	2.5						
105	136	13.93	5650	2.9						

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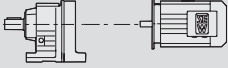

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## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 1.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
71	200	20.57	3410	1.00						
76	188	19.27	3410	1.05						
86	166	17.03	3390	1.20	FA	37	DRN	90L4	33	498
102	140	14.33	3340	1.40	FAF	37	DRN	90L4	35	497
114	126	12.87	3300	1.60	F	37	DRN	90L4	34	496
132	108	11.08	3230	1.75	FF	37	DRN	90L4	36	497
140	102	10.42	3200	1.80						
163	87	8.97	3120	2.0						
182	78	8.01	3060	2.2						
106	135	13.84	2090	0.95						
118	121	12.35	2090	1.05						
138	103	10.55	2090	1.25						
148	96	9.88	2080	1.35	FA	27	DRN	90L4	27	493
155	92	9.40	1990	1.40	FAF	27	DRN	90L4	28	492
180	79	8.13	1970	1.55	F	27	DRN	90L4	28	491
212	67	6.91	1940	1.70	FF	27	DRN	90L4	28	492
237	60	6.17	1920	1.80						
277	51	5.27	1880	1.95						
296	48	4.93	1860	2.0						
352	40	4.16	1800	2.1						
355	40	8.13	1800	3.0						
418	34	6.91	1740	3.3	FA	27	DRN	90S2	24	493
468	30	6.17	1700	3.6	FAF	27	DRN	90S2	25	492
548	26	5.27	1640	3.8	F	27	DRN	90S2	24	491
585	24	4.93	1620	3.9	FF	27	DRN	90S2	25	492
694	20	4.16	1550	4.2						
<b>P<sub>m</sub> = 2.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.40	45900	3607	-	0.45	FA	157R97	DRN	100LS4	780	563
0.45	40900	3210	-	0.50	FAF	157R97	DRN	100LS4	840	563
1.0	18100	1441	99700	1.10	F	157R97	DRN	100LS4	810	563
					FF	157R97	DRN	100LS4	910	563
0.66	28700	2185	-	0.70						
0.75	25500	1944	-	0.80						
0.87	22200	1674	80700	0.90						
1.1	17300	1308	102200	1.15						
1.2	15400	1169	107100	1.30						
1.5	12400	953	113300	1.60						
1.7	10900	845	115800	1.80	FA	157R97	DRN	100LS4	780	563
1.9	9850	764	117400	2.0	FAF	157R97	DRN	100LS4	840	563
2.1	8760	680	118900	2.3	F	157R97	DRN	100LS4	800	563
2.5	7350	576	120000	2.7	FF	157R97	DRN	100LS4	910	563
3.2	5790	446	120000	3.5						
4.8	3920	302	120000	5.1						
5.3	3520	273	120000	5.7						
6.3	2950	232	120000	6.8						
7.4	2500	197	120000	8.0						
1.4	14400	1077	85700	0.85						
1.6	12400	930	89600	0.95						
1.8	10900	820	90000	1.10	FA	127R77	DRN	100LS4	445	563
2.0	9670	727	90000	1.25	FAF	127R77	DRN	100LS4	485	563
2.2	8680	648	90000	1.40	F	127R77	DRN	100LS4	480	563
2.6	7360	549	90000	1.65	FF	127R77	DRN	100LS4	530	563
2.9	6620	495	90000	1.80						
3.4	5730	428	90000	2.1						
2.3	8580	640	47300	0.90						
2.6	7450	560	50400	1.05	FA	107R77	DRN	100LS4	295	563
3.0	6500	489	52800	1.20	FAF	107R77	DRN	100LS4	315	563
3.3	5840	436	54400	1.30	F	107R77	DRN	100LS4	310	563
3.9	4950	370	56400	1.55	FF	107R77	DRN	100LS4	340	563
4.3	4460	333	57500	1.70						

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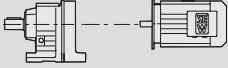

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>5.1</b>	3830	285	31200	1.10	<b>FA</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	205	563
<b>5.9</b>	3290	245	32600	1.30	<b>FAF</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	225	563
					<b>F</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	210	563
					<b>FF</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	245	563
<b>3.8</b>	5490	254.40*	55200	1.40	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>112M6</b>	270	545
<b>4.5</b>	4650	215.37	57100	1.65	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>112M6</b>	290	543
<b>4.9</b>	4300	199.31	57800	1.80	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>112M6</b>	290	542
<b>5.5</b>	3850	178.64	58700	2.0	<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>112M6</b>	315	543
<b>5.7</b>	3680	254.40*	59100	2.1	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	255	545
<b>6.7</b>	3120	215.37	60200	2.5	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	275	543
<b>7.3</b>	2880	199.31	60600	2.7	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	275	542
<b>8.1</b>	2580	178.64	61100	3.0	<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>100LS4</b>	300	543
<b>4.3</b>	4830	223.88	21700	0.90	<b>FA</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	195	538
<b>5.1</b>	4100	189.92	30500	1.05	<b>FAF</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	220	536
<b>5.6</b>	3770	174.87	31400	1.15	<b>F</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	205	535
<b>6.2</b>	3370	156.30	32400	1.25	<b>FF</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	235	536
<b>5.2</b>	4010	276.77	30700	1.05						
<b>5.7</b>	3670	253.41	31700	1.15						
<b>6.5</b>	3240	223.88	32700	1.35	<b>FA</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	180	538
<b>7.6</b>	2750	189.92	33900	1.55	<b>FAF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	200	536
<b>8.3</b>	2530	174.87	34300	1.70	<b>F</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	190	535
<b>9.3</b>	2260	156.30	34900	1.90	<b>FF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	220	536
<b>10</b>	2030	140.71	35300	2.1						
<b>11</b>	1840	127.42	35700	2.3						
<b>7.3</b>	2850	197.20	23500	1.05	<b>FA</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	115	531
<b>8.1</b>	2600	179.97	24400	1.15	<b>FAF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	130	529
<b>9.1</b>	2310	159.61	25500	1.30	<b>F</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	120	528
<b>11</b>	1940	134.16	26600	1.55	<b>FF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	140	529
<b>12</b>	1780	123.29	27100	1.70						
<b>13</b>	1580	109.49	27600	1.90						
<b>15</b>	1410	97.89	28000	2.1	<b>FA</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	115	531
<b>16</b>	1270	88.01	28400	2.4	<b>FAF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	130	529
<b>19</b>	1100	76.39	27700	2.7	<b>F</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	120	528
<b>21</b>	990	68.40	27000	3.0	<b>FF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	140	529
<b>26</b>	820	56.75	25700	3.6						
<b>29</b>	725	50.36	25000	4.0						
<b>32</b>	655	45.28	24300	4.3						
<b>13</b>	1650	114.45	14600	0.90	<b>FA</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	77	524
<b>13</b>	1570	108.46*	15200	0.95	<b>FAF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	83	522
<b>15</b>	1370	94.93	16500	1.10	<b>F</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	81	521
<b>17</b>	1230	85.52	17200	1.20	<b>FF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	91	522
<b>19</b>	1080	75.02	18000	1.40						
<b>22</b>	960	66.46	18400	1.55	<b>FA</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	77	524
<b>25</b>	840	58.32	18800	1.80	<b>FAF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	83	522
<b>26</b>	800	55.27	19000	1.85	<b>F</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	81	521
<b>30</b>	700	48.37	19300	2.1	<b>FF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	91	522
<b>33</b>	630	43.58	19400	2.4						
<b>40</b>	525	36.58	19600	2.1	<b>FA</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	75	524
<b>46</b>	455	31.51	19800	3.0	<b>FAF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	82	522
<b>50</b>	415	28.75	19800	3.4	<b>F</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	79	521
<b>57</b>	365	25.50*	19900	4.1	<b>FF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	90	522
<b>24</b>	880	61.07	9680	0.95						
<b>27</b>	775	53.73	10700	1.05	<b>FA</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	54	516
<b>29</b>	735	50.74	11000	1.10	<b>FAF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	60	515
<b>34</b>	625	43.20	11700	1.30	<b>F</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	57	514
<b>37</b>	565	39.26	12100	1.35	<b>FF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	63	515
<b>43</b>	490	34.01	12400	1.50						
<b>45</b>	460	32.08	12600	1.75						
<b>53</b>	395	27.41	12800	2.1	<b>FA</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	53	516
<b>58</b>	360	25.13	12900	2.2	<b>FAF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	59	515
<b>66</b>	315	22.05	13000	2.6	<b>F</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	55	514
<b>69</b>	300	20.90*	13000	2.7	<b>FF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	62	515
<b>79</b>	265	18.29	13000	3.1						

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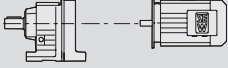

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## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

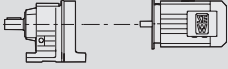

<b>P<sub>m</sub> = 2.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
32	645	44.73	6640	0.95	FA	57	DRN	100LS4	50	510
38	550	38.21	8640	1.10	FAF	57	DRN	100LS4	55	509
41	515	35.79	8590	1.15	F	57	DRN	100LS4	50	508
48	435	30.15	8430	1.35	FF	57	DRN	100LS4	57	509
58	360	24.96	8200	1.60	FA	57	DRN	100LS4	49	510
68	305	21.17	7980	1.95	FAF	57	DRN	100LS4	55	509
76	275	19.11	7820	2.2	F	57	DRN	100LS4	50	508
86	240	16.81	7630	2.5	FF	57	DRN	100LS4	56	509
91	230	15.88	7540	2.6						
56	370	25.72	5560	1.05						
66	315	21.82	5510	1.25						
74	285	19.70	5460	1.40	FA	47	DRN	100LS4	42	504
84	250	17.33	5390	1.60	FAF	47	DRN	100LS4	44	503
89	235	16.36	5350	1.70	F	47	DRN	100LS4	42	502
104	200	13.93	5220	2.0	FF	47	DRN	100LS4	46	503
115	183	12.66	5140	2.2						
132	158	10.97	5010	2.5						
162	129	8.96	4710	2.5						
101	205	14.33	2800	0.95						
113	186	12.87	2810	1.05						
131	160	11.08	2820	1.20						
139	151	10.42	2810	1.25						
162	129	8.97	2790	1.35	FA	37	DRN	100LS4	37	498
181	116	8.01	2760	1.45	FAF	37	DRN	100LS4	39	497
215	97	6.74	2620	1.45	F	37	DRN	100LS4	38	496
240	87	6.05	2580	1.55	FF	37	DRN	100LS4	40	497
278	75	5.21	2530	1.65						
296	71	4.90	2510	1.70						
344	61	4.22	2440	1.80						
385	54	3.77	2390	1.90						
178	117	16.28	1720	1.10						
210	100	13.84	1730	1.30						
235	89	12.35	1730	1.45						
275	76	10.55	1710	1.70	FA	27	DRN	90L2	27	493
294	71	9.88	1700	1.80	FAF	27	DRN	90L2	28	492
357	58	8.13	1610	2.1	F	27	DRN	90L2	28	491
421	49	6.91	1580	2.3	FF	27	DRN	90L2	28	492
471	44	6.17	1560	2.4						
552	38	5.27	1520	2.6						
589	35	4.93	1500	2.7						
699	30	4.16	1460	2.9						

<b>P<sub>m</sub> = 3.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
1.0	25100	1441	-	0.80	FA	157R97	DRN	100L4	790	563
					FAF	157R97	DRN	100L4	850	563
					F	157R97	DRN	100L4	810	563
					FF	157R97	DRN	100L4	920	563
1.1	23700	1308	39900	0.85						
1.2	21100	1169	89600	0.95						
1.5	17100	953	102800	1.15						
1.7	15000	845	107900	1.30						
1.9	13500	764	111100	1.45	FA	157R97	DRN	100L4	790	563
2.1	12000	680	114000	1.65	FAF	157R97	DRN	100L4	850	563
2.5	10100	576	117000	1.95	F	157R97	DRN	100L4	810	563
3.3	7970	446	119800	2.5	FF	157R97	DRN	100L4	920	563
4.8	5390	302	120000	3.7						
5.3	4850	273	120000	4.1						
6.3	4080	232	120000	4.9						
7.4	3460	197	120000	5.8						
2.0	13200	727	88100	0.90	FA	127R77	DRN	100L4	455	563
2.2	11800	648	90000	1.00	FAF	127R77	DRN	100L4	490	563
2.6	10000	549	90000	1.20	F	127R77	DRN	100L4	490	563
2.9	9040	495	90000	1.35	FF	127R77	DRN	100L4	530	563

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<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
3.3	7970	436	49000	0.95	FA	107R77	DRN	100L4	300	563
3.9	6760	370	52200	1.15	FAF	107R77	DRN	100L4	325	563
4.4	6080	333	53800	1.25	F	107R77	DRN	100L4	320	563
5.0	5320	291	55600	1.45	FF	107R77	DRN	100L4	345	563
3.8	7480	254.40*	50300	1.05	FA	107	DRN	132S6	285	545
4.5	6330	215.37	53200	1.20	FAF	107	DRN	132S6	305	543
4.9	5860	199.31	54300	1.30	F	107	DRN	132S6	300	542
5.5	5250	178.64	55700	1.45	FF	107	DRN	132S6	325	543
5.7	5000	254.40*	56300	1.55	FA	107	DRN	100L4	265	545
6.8	4230	215.37	57900	1.80	FAF	107	DRN	100L4	285	543
7.3	3920	199.31	58600	1.95	F	107	DRN	100L4	280	542
8.2	3510	178.64	59400	2.2	FF	107	DRN	100L4	305	543
9.0	3170	161.28*	60100	2.4						
6.5	4400	223.88	29600	1.00	FA	97	DRN	100L4	190	538
7.7	3730	189.92	31500	1.15	FAF	97	DRN	100L4	210	536
8.3	3440	174.87	32300	1.25	F	97	DRN	100L4	195	535
					FF	97	DRN	100L4	230	536
9.3	3070	156.30	33100	1.40						
10	2760	140.71	33800	1.55	FA	97	DRN	100L4	190	538
11	2500	127.42	34400	1.70	FAF	97	DRN	100L4	210	536
13	2220	112.99	35000	1.95	F	97	DRN	100L4	195	535
14	2010	102.16	35400	2.1	FF	97	DRN	100L4	230	536
16	1760	89.85	35800	2.4						
11	2630	134.16	24300	1.15	FA	87	DRN	100L4	125	531
12	2420	123.29	25100	1.25	FAF	87	DRN	100L4	135	529
13	2150	109.49	26000	1.40	F	87	DRN	100L4	130	528
					FF	87	DRN	100L4	145	529
15	1920	97.89	26700	1.55						
17	1730	88.01	26700	1.75	FA	87	DRN	100L4	125	531
19	1500	76.39	26100	2.0	FAF	87	DRN	100L4	135	529
21	1340	68.40	25500	2.2	F	87	DRN	100L4	130	528
26	1110	56.75	24600	2.7	FF	87	DRN	100L4	145	529
29	990	50.36	23900	3.0						
17	1680	85.52	14400	0.90	FA	77	DRN	100L4	84	524
19	1470	75.02	15900	1.00	FAF	77	DRN	100L4	91	522
22	1300	66.46	16900	1.15	F	77	DRN	100L4	88	521
					FF	77	DRN	100L4	98	522
25	1140	58.32	17700	1.30						
26	1080	55.27	18000	1.40	FA	77	DRN	100L4	84	524
30	950	48.37	18500	1.60	FAF	77	DRN	100L4	91	522
33	850	43.58	18800	1.75	F	77	DRN	100L4	88	521
38	750	38.23	19100	2.0	FF	77	DRN	100L4	98	522
40	715	36.58	19200	1.55						
46	615	31.51	19500	2.2	FA	77	DRN	100L4	83	524
51	565	28.75	19600	2.5	FAF	77	DRN	100L4	89	522
57	500	25.50*	19700	3.0	F	77	DRN	100L4	86	521
68	420	21.43	19800	3.6	FF	77	DRN	100L4	97	522
34	840	43.20	10000	0.95	FA	67	DRN	100L4	61	516
37	770	39.26	10700	1.00	FAF	67	DRN	100L4	67	515
43	665	34.01	11500	1.10	F	67	DRN	100L4	64	514
					FF	67	DRN	100L4	70	515
45	630	32.08	11700	1.30						
53	535	27.41	12200	1.50						
58	490	25.13	12400	1.65	FA	67	DRN	100L4	60	516
66	430	22.05	12700	1.90	FAF	67	DRN	100L4	66	515
70	410	20.90*	12800	2.0	F	67	DRN	100L4	63	514
80	355	18.29	12900	2.3	FF	67	DRN	100L4	69	515
88	320	16.48	13000	2.5						
101	280	14.46	13000	2.9						

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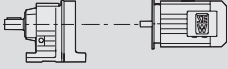

## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 3.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
58	490	24.96	7420	1.15						
69	415	21.17	7310	1.45						
76	375	19.11	7220	1.60	FA	57	DRN	100L4	56	510
87	330	16.81	7100	1.80	FAF	57	DRN	100L4	62	509
92	310	15.88	7040	1.90	F	57	DRN	100L4	57	508
108	265	13.52	6850	2.3	FF	57	DRN	100L4	63	509
119	240	12.29	6730	2.5						
137	205	10.64	6540	2.9						
74	385	19.70	4760	1.05						
84	340	17.33	4760	1.15	FA	47	DRN	100L4	49	504
89	320	16.36	4760	1.25	FAF	47	DRN	100L4	51	503
104	270	13.93	4720	1.45	F	47	DRN	100L4	50	502
115	245	12.66	4690	1.60	FF	47	DRN	100L4	53	503
133	215	10.97	4620	1.85						
163	176	8.96	4350	1.85						
131	215	11.08	2340	0.85						
140	205	10.42	2360	0.90						
162	176	8.97	2400	1.00						
182	157	8.01	2410	1.10	FA	37	DRN	100L4	44	498
216	132	6.74	2290	1.05	FAF	37	DRN	100L4	46	497
241	119	6.05	2290	1.15	F	37	DRN	100L4	45	496
279	102	5.21	2280	1.20	FF	37	DRN	100L4	47	497
297	96	4.90	2270	1.25						
345	82	4.22	2240	1.35						
386	74	3.77	2210	1.40						

<b>P<sub>m</sub> = 4.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.47	72600	6295	-	0.30	FA	157R97	DRN	112M2	800	563
0.55	61600	5404	-	0.30	FAF	157R97	DRN	112M2	860	563
0.61	54600	4831	-	0.35	F	157R97	DRN	112M2	820	563
0.71	46300	4130	-	0.45	FF	157R97	DRN	112M2	930	563
1.1	31600	2780	-	0.65						
1.5	22800	953	67600	0.85						
1.7	20100	845	93100	1.00						
1.9	18100	764	99700	1.10						
2.1	16100	680	105200	1.25	FA	157R97	DRN	112M4	800	563
2.5	13600	576	111000	1.45	FAF	157R97	DRN	112M4	860	563
3.3	10600	446	116300	1.85	F	157R97	DRN	112M4	820	563
4.8	7220	302	120000	2.8	FF	157R97	DRN	112M4	920	563
5.4	6500	273	120000	3.1						
6.3	5480	232	120000	3.6						
7.5	4650	197	120000	4.3						
1.2	28000	2427	-	0.70						
1.4	25000	2185	-	0.80						
1.5	22200	1944	81200	0.90						
1.8	19700	1674	94700	1.00	FA	157R97	DRN	112M2	800	563
2.2	15200	1308	107600	1.30	FAF	157R97	DRN	112M2	860	563
2.5	13400	1169	111300	1.50	F	157R97	DRN	112M2	820	563
3.1	10800	953	116000	1.85	FF	157R97	DRN	112M2	920	563
3.5	9470	845	118000	2.1						
6.6	5000	446	120000	4.0						
9.8	3380	302	120000	5.9						
2.7	13300	549	87800	0.90	FA	127R77	DRN	112M4	460	563
3.0	12000	495	90000	1.00	FAF	127R77	DRN	112M4	500	563
3.4	10400	428	90000	1.15	F	127R77	DRN	112M4	500	563
3.9	9120	376	90000	1.30	FF	127R77	DRN	112M4	540	563
4.4	8090	333	48700	0.95	FA	107R77	DRN	112M4	310	563
5.0	7070	291	51400	1.10	FAF	107R77	DRN	112M4	330	563
5.7	6200	255	53500	1.25	F	107R77	DRN	112M4	325	563
					FF	107R77	DRN	112M4	355	563

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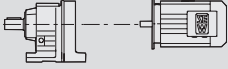

<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
5.8	6630	254.40*	52500	1.15						
6.8	5610	215.37	54900	1.35						
7.3	5200	199.31	55900	1.50						
8.2	4660	178.64	57000	1.65	FA	107	DRN	112M4	270	545
9.1	4200	161.28*	58000	1.85	FAF	107	DRN	112M4	290	543
10.0	3820	146.49	58800	2.0	F	107	DRN	112M4	290	542
11	3390	129.97	59600	2.3	FF	107	DRN	112M4	315	543
12	3070	117.94	60200	2.5						
14	2640	101.38*	61000	2.9						
8.4	4560	174.87	29100	0.95	FA	97	DRN	112M4	195	538
9.4	4070	156.30	30500	1.05	FAF	97	DRN	112M4	220	536
10	3670	140.71	31700	1.15	F	97	DRN	112M4	205	535
11	3320	127.42	32500	1.30	FF	97	DRN	112M4	235	536
13	2940	112.99	33400	1.45						
14	2660	102.16	34100	1.60	FA	97	DRN	112M4	195	538
15	2540	97.58	34300	1.70	FAF	97	DRN	112M4	220	536
16	2340	89.85	34700	1.85	F	97	DRN	112M4	205	535
18	2090	80.31	35200	2.0	FF	97	DRN	112M4	235	536
20	1880	72.29	35600	2.3						
22	1700	65.47	35900	2.5						
13	2850	109.49	23500	1.05	FA	87	DRN	112M4	135	531
15	2550	97.89	24600	1.15	FAF	87	DRN	112M4	145	529
17	2290	88.01	24500	1.30	F	87	DRN	112M4	140	528
					FF	87	DRN	112M4	155	529
19	1990	76.39	24100	1.50	FA	87	DRN	112M4	135	531
21	1780	68.40	23800	1.70	FAF	87	DRN	112M4	145	529
26	1480	56.75	23100	2.0	F	87	DRN	112M4	140	528
29	1310	50.36	22600	2.2	FF	87	DRN	112M4	155	529
32	1180	45.28	22200	2.4						
22	1730	66.46	13900	0.85	FA	77	DRN	112M4	93	524
25	1520	58.32	15600	1.00	FAF	77	DRN	112M4	100	522
26	1440	55.27	16100	1.05	F	77	DRN	112M4	97	521
30	1260	48.37	17100	1.20	FF	77	DRN	112M4	110	522
34	1130	43.58	17700	1.30						
38	990	38.23	18300	1.50	FA	77	DRN	112M4	93	524
43	880	33.74	18700	1.70	FAF	77	DRN	112M4	100	522
49	780	29.91	19000	1.90	F	77	DRN	112M4	97	521
57	665	25.54	19300	2.2	FF	77	DRN	112M4	110	522
46	820	31.51	18900	1.70	FA	77	DRN	112M4	92	524
51	750	28.75	19100	1.90	FAF	77	DRN	112M4	98	522
57	665	25.50*	19300	2.2	F	77	DRN	112M4	96	521
68	555	21.43	19600	2.7	FF	77	DRN	112M4	105	522
74	510	19.70	19700	2.9						
53	715	27.41	11200	1.15						
58	655	25.13	11600	1.25						
66	575	22.05	12000	1.45						
70	545	20.90*	12200	1.50						
80	475	18.29	12500	1.70						
89	425	16.48	12700	1.90						
101	375	14.46	12900	2.2						
115	330	12.76	13000	2.5	FA	67	DRN	112M4	69	516
129	295	11.31	13000	2.8	FAF	67	DRN	112M4	76	515
152	250	9.66	13000	3.2	F	67	DRN	112M4	72	514
161	235	9.08	12900	2.2	FF	67	DRN	112M4	78	515
170	220	8.60	12700	2.5						
194	196	7.53	12300	3.1						
216	176	6.78	12000	3.5						
246	155	5.95	11600	3.9						
279	137	5.25	11300	4.3						
314	121	4.66	10900	4.6						
368	103	3.97	10500	4.8						

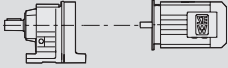

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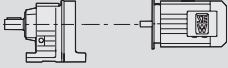

## Parallel-shaft helical gearmotors

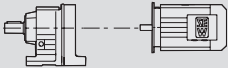

F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 4.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>			m kg			
69	550	21.17	6490	1.10						
77	495	19.11	6480	1.20						
87	435	16.81	6440	1.35						
92	410	15.88	6420	1.45						
108	350	13.52	6320	1.70						
119	320	12.29	6240	1.85	FA	57	DRN	112M4	66	510
138	275	10.64	6120	2.2	FAF	57	DRN	112M4	71	509
157	240	9.31	5820	1.75	F	57	DRN	112M4	66	508
179	210	8.19	5700	1.95	FF	57	DRN	112M4	73	509
189	200	7.73	5650	2.1						
222	171	6.58	5480	2.4						
245	156	5.98	5380	2.7						
282	135	5.18	5220	3.1						

<b>P<sub>m</sub> = 5.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>			m kg			
1.9	25200	764	-	0.80						
2.1	22400	680	76100	0.90						
2.5	18900	576	97200	1.05						
2.9	16500	503	104400	1.20						
3.3	14800	446	108500	1.35	FA	157R97	DRN	132S4	810	563
4.2	11500	353	114900	1.75	FAF	157R97	DRN	132S4	870	563
4.8	10000	302	117200	2.0	F	157R97	DRN	132S4	830	563
5.3	9040	273	118500	2.2	FF	157R97	DRN	132S4	940	563
6.3	7630	232	120000	2.6						
7.2	6630	202	120000	3.0						
7.4	6470	197	120000	3.1						
3.5	13900	418	86700	0.85						
3.9	12400	374	89600	0.95	FA	127R87	DRN	132S4	495	563
4.7	10300	312	90000	1.15	FAF	127R87	DRN	132S4	530	563
5.0	9730	293	90000	1.25	F	127R87	DRN	132S4	530	563
5.7	8590	259	90000	1.40	FF	127R87	DRN	132S4	570	563
6.5	7410	223	90000	1.60						
3.4	14300	428	85800	0.85	FA	127R77	DRN	132S4	475	563
3.9	12600	376	89300	0.95	FAF	127R77	DRN	132S4	510	563
					F	127R77	DRN	132S4	510	563
					FF	127R77	DRN	132S4	550	563
6.8	7740	215.37	49600	1.00	FA	107	DRN	132S4	285	545
7.3	7160	199.31	51200	1.05	FAF	107	DRN	132S4	305	543
8.2	6420	178.64	53000	1.20	F	107	DRN	132S4	300	542
9.1	5790	161.28*	54500	1.30	FF	107	DRN	132S4	325	543
10.0	5260	146.49	55700	1.45						
11	4670	129.97	57000	1.65						
12	4230	117.94	57900	1.80	FA	107	DRN	132S4	285	545
14	3640	101.38*	59100	2.1	FAF	107	DRN	132S4	305	543
16	3320	92.47*	59800	2.3	F	107	DRN	132S4	300	542
17	3180	88.49	60000	2.4	FF	107	DRN	132S4	325	543
17	3010	83.99	60400	2.5						
11	4580	127.42	29000	0.95	FA	97	DRN	132S4	210	538
13	4060	112.99	30600	1.05	FAF	97	DRN	132S4	230	536
14	3670	102.16	31700	1.15	F	97	DRN	132S4	215	535
					FF	97	DRN	132S4	250	536
15	3500	97.58	32100	1.25						
16	3220	89.85	32800	1.35						
17	3110	86.59	33100	1.40						
18	2880	80.31	33600	1.50	FA	97	DRN	132S4	210	538
19	2710	75.63	33900	1.60	FAF	97	DRN	132S4	230	536
20	2590	72.29	34200	1.65	F	97	DRN	132S4	215	535
22	2350	65.47	34700	1.85	FF	97	DRN	132S4	250	536
25	2080	58.06	34400	2.1						
28	1880	52.49	33700	2.3						

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<b>P<sub>m</sub> = 5.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
17	3160	88.01	11900	0.95	FA	87	DRN	132S4	145	531
19	2740	76.39	21200	1.10	FAF	87	DRN	132S4	155	529
21	2450	68.40	21200	1.20	F	87	DRN	132S4	150	528
26	2040	56.75	21000	1.45	FF	87	DRN	132S4	165	529
29	1810	50.36	20700	1.60	FA	87	DRN	132S4	145	531
32	1620	45.28	20500	1.75	FAF	87	DRN	132S4	155	529
37	1410	39.30	20100	1.95	F	87	DRN	132S4	150	528
42	1260	35.19	19700	2.1	FF	87	DRN	132S4	165	529
50	1040	29.20	19100	2.4						
43	1210	33.92	19600	2.1	FA	87	DRN	132S4	140	531
51	1030	28.78	19000	2.4	FAF	87	DRN	132S4	155	529
55	950	26.50	18700	3.1	F	87	DRN	132S4	145	528
62	850	23.68	18300	3.5	FF	87	DRN	132S4	160	529
30	1730	48.37	13900	0.85						
34	1560	43.58	15300	0.95	FA	77	DRN	132S4	105	524
38	1370	38.23	16500	1.10	FAF	77	DRN	132S4	110	522
43	1210	33.74	17400	1.25	F	77	DRN	132S4	110	521
49	1070	29.91	18000	1.40	FF	77	DRN	132S4	120	522
57	910	25.54	18600	1.60						
57	910	25.50*	18600	1.65						
68	770	21.43	19100	1.95	FA	77	DRN	132S4	105	524
74	705	19.70	19200	2.1	FAF	77	DRN	132S4	110	522
84	625	17.49	19400	2.4	F	77	DRN	132S4	105	521
93	560	15.64*	19600	2.7	FF	77	DRN	132S4	120	522
104	505	14.06	19200	3.0						
120	435	12.20	18500	3.4						
66	790	22.05	10500	1.05						
70	750	20.90*	10900	1.10						
80	655	18.29	11600	1.25						
89	590	16.48	11900	1.40						
101	515	14.46	12300	1.60						
115	455	12.76	12600	1.80						
129	405	11.31	12800	2.0	FA	67	DRN	132S4	81	516
151	345	9.66	12900	2.4	FAF	67	DRN	132S4	87	515
161	325	9.08	12400	1.60	F	67	DRN	132S4	84	514
170	305	8.60	12200	1.85	FF	67	DRN	132S4	90	515
194	270	7.53	11900	2.2						
215	240	6.78	11600	2.5						
246	210	5.95	11300	2.9						
278	188	5.25	11000	3.1						
314	167	4.66	10700	3.4						
368	142	3.97	10300	3.5						
87	600	16.81	5460	1.00						
92	570	15.88	5490	1.05						
108	485	13.52	5530	1.25						
119	440	12.29	5530	1.35	FA	57	DRN	132S4	77	510
137	380	10.64	5500	1.55	FAF	57	DRN	132S4	83	509
178	290	8.19	5180	1.45	F	57	DRN	132S4	78	508
189	275	7.73	5150	1.50	FF	57	DRN	132S4	84	509
222	235	6.58	5060	1.75						
244	215	5.98	4990	1.95						
282	186	5.18	4880	2.2						

<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.5	25900	576	-	0.75						
2.9	22500	503	74000	0.90						
3.3	20200	446	93000	1.00						
4.2	15800	353	106100	1.25	FA	157R97	DRN	132M4	830	563
4.9	13600	302	110900	1.45	FAF	157R97	DRN	132M4	890	563
5.4	12300	273	113500	1.60	F	157R97	DRN	132M4	850	563
6.3	10400	232	116600	1.90	FF	157R97	DRN	132M4	950	563
7.3	9080	202	118500	2.2						
7.5	8840	197	118800	2.3						

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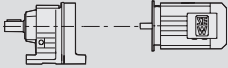

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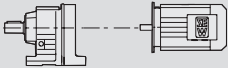

## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
4.7	14100	312	86300	0.85	FA	127R87	DRN	132M4	510	563
5.0	13200	293	88000	0.90	FAF	127R87	DRN	132M4	550	563
5.7	11700	259	90000	1.00	F	127R87	DRN	132M4	550	563
6.6	10100	223	90000	1.20	FF	127R87	DRN	132M4	590	563
7.4	8950	198	90000	1.35						
3.7	19500	267.43	95300	1.00						
4.5	15900	217.62*	105900	1.25						
5.5	13000	178.20*	112200	1.55						
6.0	11900	162.96	114200	1.70						
6.9	10300	141.80*	116700	1.95	FA	157	DRN	160M6	740	559
7.8	9150	125.14	118400	2.2	FAF	157	DRN	160M6	800	557
9.0	7930	108.49	119800	2.5	F	157	DRN	160M6	760	556
10	7060	96.53*	120000	2.8	FF	157	DRN	160M6	870	557
11	6270	85.80*	120000	3.2						
12	5740	78.46	120000	3.5						
14	4990	68.28*	120000	4.0						
16	4400	60.25	120000	4.5						
19	3820	52.24	118700	5.2						
5.7	12400	170.83	89500	0.95	FA	127	DRN	160M6	485	552
6.4	11200	153.67*	90000	1.05	FAF	127	DRN	160M6	520	550
7.8	9170	125.37	90000	1.30	F	127	DRN	160M6	520	549
8.6	8360	114.34	90000	1.45	FF	127	DRN	160M6	570	550
8.6	8330	170.83	90000	1.45	FA	127	DRN	132M4	445	552
9.6	7490	153.67*	90000	1.60	FAF	127	DRN	132M4	485	550
12	6110	125.37	90000	1.95	F	127	DRN	132M4	480	549
					FF	127	DRN	132M4	530	550
8.2	8710	178.64	47000	0.90	FA	107	DRN	132M4	300	545
9.1	7860	161.28*	49300	1.00	FAF	107	DRN	132M4	320	543
10	7140	146.49	51200	1.05	F	107	DRN	132M4	320	542
11	6340	129.97	53200	1.20	FF	107	DRN	132M4	345	543
12	5750	117.94	54600	1.35						
14	4940	101.38*	56400	1.55	FA	107	DRN	132M4	300	545
16	4510	92.47*	57400	1.70	FAF	107	DRN	132M4	320	543
17	4310	88.49	57800	1.80	F	107	DRN	132M4	320	542
17	4090	83.99	58200	1.85	FF	107	DRN	132M4	345	543
20	3630	74.52	59200	2.1						
22	3290	67.62	59800	2.3						
15	4760	97.58	24600	0.90						
16	4380	89.85	29600	1.00	FA	97	DRN	132M4	225	538
17	4220	86.59	30100	1.00	FAF	97	DRN	132M4	245	536
18	3910	80.31	31000	1.10	F	97	DRN	132M4	235	535
19	3680	75.63	31600	1.15	FF	97	DRN	132M4	265	536
20	3520	72.29	32000	1.20						
22	3190	65.47	32200	1.35						
25	2830	58.06	31700	1.50	FA	97	DRN	132M4	225	538
28	2560	52.49	31300	1.70	FAF	97	DRN	132M4	245	536
33	2170	44.49	30500	2.0	F	97	DRN	132M4	235	535
38	1890	38.86	29800	2.3	FF	97	DRN	132M4	265	536
45	1580	32.50	28800	2.7						
34	2110	43.28	30400	1.45	FA	97	DRN	132M4	220	538
40	1780	36.64	29500	1.70	FAF	97	DRN	132M4	240	536
43	1650	33.91	29000	2.6	F	97	DRN	132M4	225	535
48	1480	30.39	28400	2.9	FF	97	DRN	132M4	260	536
26	2760	56.75	18100	1.10						
29	2450	50.36	18200	1.20	FA	87	DRN	132M4	160	531
32	2200	45.28	18200	1.30	FAF	87	DRN	132M4	175	529
37	1910	39.30	18100	1.40	F	87	DRN	132M4	165	528
42	1710	35.19	17900	1.50	FF	87	DRN	132M4	185	529
50	1420	29.20	17600	1.75						

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<b>P<sub>m</sub> = 7.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
51	1400	28.78	17500	1.75						
55	1290	26.50	17400	2.3						
62	1150	23.68	17100	2.6	FA	87	DRN	132M4	160	531
69	1040	21.32*	16800	2.9	FAF	87	DRN	132M4	170	529
76	940	19.31	16500	3.2	F	87	DRN	132M4	165	528
86	830	17.12	16100	3.6	FF	87	DRN	132M4	180	529
95	755	15.48	15800	4.0						
44	1640	33.74	14700	0.90	FA	77	DRN	132M4	125	524
49	1450	29.91	16000	1.05	FAF	77	DRN	132M4	130	522
57	1240	25.54	17200	1.15	F	77	DRN	132M4	125	521
					FF	77	DRN	132M4	135	522
58	1240	25.50*	17200	1.20						
68	1040	21.43	18100	1.45						
75	960	19.70	18500	1.55						
84	850	17.49	18800	1.75						
94	760	15.64*	18900	1.95						
104	685	14.06	18500	2.2						
120	595	12.20	17900	2.5	FA	77	DRN	132M4	120	524
134	530	10.93	17500	2.8	FAF	77	DRN	132M4	130	522
158	450	9.30	16400	2.4	F	77	DRN	132M4	125	521
178	400	8.26	16000	2.7	FF	77	DRN	132M4	135	522
199	360	7.39	15600	3.0						
221	320	6.64	15300	3.3						
255	280	5.76	14800	3.8						
284	250	5.16	14400	4.3						
343	205	4.28	13700	4.8						

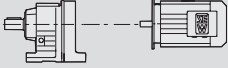

<b>P<sub>m</sub> = 9.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
4.2	19400	353	95600	1.05						
4.9	16800	302	103600	1.20	FA	157R97	DRN	132L4	840	563
5.4	15100	273	107700	1.30	FAF	157R97	DRN	132L4	890	563
6.3	12800	232	112600	1.55	F	157R97	DRN	132L4	860	563
7.3	11100	202	115500	1.80	FF	157R97	DRN	132L4	960	563
7.5	10800	197	116000	1.85						
5.7	14300	259	85800	0.85	FA	127R87	DRN	132L4	520	563
6.6	12400	223	89600	0.95	FAF	127R87	DRN	132L4	560	563
7.4	10900	198	90000	1.10	F	127R87	DRN	132L4	560	563
					FF	127R87	DRN	132L4	600	563
8.6	10200	170.83	90000	1.20	FA	127	DRN	132L4	455	552
9.6	9180	153.67*	90000	1.30	FAF	127	DRN	132L4	490	550
12	7490	125.37	90000	1.60	F	127	DRN	132L4	490	549
13	6830	114.34	90000	1.75	FF	127	DRN	132L4	540	550
15	5910	98.95	90000	2.0						
10	8750	146.49	46800	0.90	FA	107	DRN	132L4	310	545
11	7760	129.97	49600	1.00	FAF	107	DRN	132L4	330	543
12	7040	117.94	51500	1.10	F	107	DRN	132L4	325	542
14	6050	101.38*	53900	1.25	FF	107	DRN	132L4	355	543
16	5520	92.47*	55100	1.40						
18	5010	83.99	56300	1.55	FA	107	DRN	132L4	310	545
20	4450	74.52	57500	1.70	FAF	107	DRN	132L4	330	543
22	4040	67.62	58300	1.90	F	107	DRN	132L4	325	542
25	3470	58.12*	58000	2.2	FF	107	DRN	132L4	355	543
29	3030	50.73	56500	2.5						
18	4790	80.31	23100	0.90	FA	97	DRN	132L4	235	538
19	4520	75.63	29200	0.95	FAF	97	DRN	132L4	255	536
20	4320	72.29	29600	1.00	F	97	DRN	132L4	240	535
22	3910	65.47	29600	1.10	FF	97	DRN	132L4	275	536
25	3460	58.06	29500	1.25						
28	3130	52.49	29300	1.35	FA	97	DRN	132L4	235	538
33	2650	44.49	28800	1.60	FAF	97	DRN	132L4	255	536
38	2320	38.86	28300	1.85	F	97	DRN	132L4	240	535
45	1940	32.50	27500	2.2	FF	97	DRN	132L4	275	536

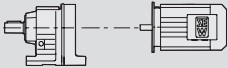

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## Parallel-shaft helical gearmotors

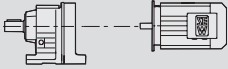

F..DRN.. selection tables in kW

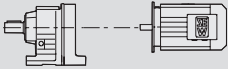

<b>P<sub>m</sub> = 9.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
43	2020	33.91	27700	2.1	FA	97	DRN	132L4	230	538
48	1810	30.39	27200	2.4	FAF	97	DRN	132L4	250	536
54	1630	27.44*	26700	2.6	F	97	DRN	132L4	235	535
59	1480	24.92	26200	2.9	FF	97	DRN	132L4	270	536
29	3000	50.36	16000	1.00	FA	87	DRN	132L4	170	531
32	2700	45.28	16300	1.05	FAF	87	DRN	132L4	185	529
37	2340	39.30	16400	1.15	F	87	DRN	132L4	175	528
42	2100	35.19	16400	1.25	FF	87	DRN	132L4	190	529
50	1740	29.20	16300	1.45						
55	1580	26.50	16200	1.90	FA	87	DRN	132L4	165	531
62	1410	23.68	16000	2.1	FAF	87	DRN	132L4	180	529
69	1270	21.32*	15900	2.4	F	87	DRN	132L4	175	528
76	1150	19.31	15600	2.6	FF	87	DRN	132L4	190	529
86	1020	17.12	15400	2.9						
95	920	15.48	15100	3.2						
112	780	13.12*	14600	3.8						
75	1170	19.70	17600	1.25						
84	1040	17.49	18100	1.45						
94	930	15.64*	18200	1.60						
105	840	14.06	17900	1.80						
120	725	12.20	17400	2.1	FA	77	DRN	132L4	130	524
135	650	10.93	17100	2.3	FAF	77	DRN	132L4	135	522
158	555	9.30	15900	1.95	F	77	DRN	132L4	135	521
178	490	8.26	15600	2.2	FF	77	DRN	132L4	145	522
199	440	7.39	15200	2.5						
221	395	6.64	14900	2.7						
255	340	5.76	14500	3.1						
285	305	5.16	14100	3.5						
343	255	4.28	13500	4.0						

<b>P<sub>m</sub> = 11.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
4.2	23200	353	55600	0.85						
4.9	20000	302	93500	1.00	FA	157R97	DRN	160M4	870	563
5.4	18100	273	99800	1.10	FAF	157R97	DRN	160M4	930	563
6.4	15300	232	107300	1.30	F	157R97	DRN	160M4	890	563
7.3	13300	202	111600	1.50	FF	157R97	DRN	160M4	1000	563
7.5	13000	197	112300	1.55						
6.6	14800	223	84800	0.80	FA	127R87	DRN	160M4	550	563
7.5	13100	198	88300	0.90	FAF	127R87	DRN	160M4	590	563
8.9	11000	166	90000	1.10	F	127R87	DRN	160M4	590	563
					FF	127R87	DRN	160M4	630	563
5.5	19000	267.43	96900	1.05						
6.8	15500	217.62*	106900	1.30						
8.3	12700	178.20*	112800	1.55						
9.0	11600	162.96	114800	1.70						
10	10100	141.80*	117100	2.0	FA	157	DRN	160M4	740	559
12	8920	125.14	118700	2.2	FAF	157	DRN	160M4	800	557
14	7730	108.49	120000	2.6	F	157	DRN	160M4	760	556
15	6880	96.53*	120000	2.9	FF	157	DRN	160M4	870	557
17	6110	85.80*	117500	3.3						
19	5590	78.46	115100	3.6						
22	4860	68.28*	111400	4.1						
8.6	12100	170.83	90000	1.00						
9.6	10900	153.67*	90000	1.10	FA	127	DRN	160M4	485	552
12	8940	125.37	90000	1.35	FAF	127	DRN	160M4	520	550
13	8150	114.34	90000	1.45	F	127	DRN	160M4	520	549
15	7050	98.95	90000	1.70	FF	127	DRN	160M4	570	550
17	6220	87.31*	90000	1.95						
20	5370	75.41*	88300	2.2						
12	8410	117.94	47800	0.90	FA	107	DRN	160M4	340	545
15	7220	101.38*	51000	1.05	FAF	107	DRN	160M4	365	543
					F	107	DRN	160M4	360	542
16	6590	92.47*	52600	1.15	FF	107	DRN	160M4	385	543

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<b>P<sub>m</sub> = 11.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
18	5980	83.99	54100	1.30						
20	5310	74.52	55600	1.45	FA	107	DRN	160M4	340	545
22	4820	67.62	56700	1.60	FAF	107	DRN	160M4	365	543
25	4140	58.12*	56200	1.85	F	107	DRN	160M4	360	542
29	3610	50.73	54900	2.1	FF	107	DRN	160M4	385	543
34	3060	43.03	53300	2.5						
44	2400	33.79*	50700	3.1	FA	107	DRN	160M4	330	545
53	1960	27.57	48500	4.0	FAF	107	DRN	160M4	355	543
59	1790	25.14	47500	4.4	F	107	DRN	160M4	350	542
					FF	107	DRN	160M4	375	543
22	4660	65.47	26900	0.90	FA	97	DRN	160M4	265	538
25	4140	58.06	27100	1.05	FAF	97	DRN	160M4	290	536
28	3740	52.49	27100	1.15	F	97	DRN	160M4	275	535
					FF	97	DRN	160M4	305	536
33	3170	44.49	26900	1.35	FA	97	DRN	160M4	265	538
38	2770	38.86	26700	1.55	FAF	97	DRN	160M4	290	536
45	2310	32.50	26200	1.85	F	97	DRN	160M4	275	535
					FF	97	DRN	160M4	305	536
43	2410	33.91	26300	1.80	FA	97	DRN	160M4	260	538
48	2160	30.39	25900	2.0	FAF	97	DRN	160M4	285	536
54	1950	27.44*	25500	2.2	F	97	DRN	160M4	270	535
59	1770	24.92	25200	2.4	FF	97	DRN	160M4	300	536
67	1570	22.11	24600	2.7						
37	2800	39.30	14600	0.95	FA	87	DRN	160M4	200	531
42	2500	35.19	14800	1.05	FAF	87	DRN	160M4	215	529
50	2080	29.20	15000	1.20	F	87	DRN	160M4	210	528
					FF	87	DRN	160M4	225	529
56	1880	26.50	15000	1.60						
62	1680	23.68	15000	1.80	FA	87	DRN	160M4	200	531
69	1520	21.32*	14900	1.95	FAF	87	DRN	160M4	210	529
76	1370	19.31	14800	2.2	F	87	DRN	160M4	205	528
86	1220	17.12	14600	2.5	FF	87	DRN	160M4	220	529
95	1100	15.48	14400	2.7						
112	930	13.12*	14000	3.2						
75	1400	19.70	16300	1.05						
84	1240	17.49	17200	1.20						
94	1110	15.64*	17600	1.35						
105	1000	14.06	17300	1.50						
121	870	12.20	16900	1.70	FA	77	DRN	160M4	160	524
135	775	10.93	16600	1.90	FAF	77	DRN	160M4	170	522
158	660	9.30	15400	1.65	F	77	DRN	160M4	165	521
178	585	8.26	15100	1.85	FF	77	DRN	160M4	175	522
199	525	7.39	14800	2.0						
222	470	6.64	14500	2.3						
256	410	5.76	14100	2.6						
285	365	5.16	13800	2.9						
344	305	4.28	13300	3.3						

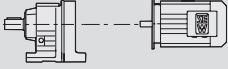

<b>P<sub>m</sub> = 15.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
5.4	24700	273	-	0.80	FA	157R97	DRN	160L4	880	563
6.4	20900	232	90200	0.95	FAF	157R97	DRN	160L4	940	563
7.3	18200	202	99400	1.10	F	157R97	DRN	160L4	900	563
7.5	17700	197	100900	1.10	FF	157R97	DRN	160L4	1010	563

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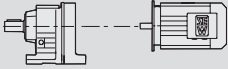

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## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 15.0 kW</b>									<b>m</b>	
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>kg</b>		
6.8	21100	217.62*	89500	0.95						
8.3	17300	178.20*	102200	1.15						
9.0	15800	162.96	106100	1.25						
10	13700	141.80*	110700	1.45						
12	12100	125.14	113800	1.65	<b>FA</b>	<b>157</b>	<b>DRN</b>	<b>160L4</b>	760	559
14	10500	108.49	116500	1.90	<b>FAF</b>	<b>157</b>	<b>DRN</b>	<b>160L4</b>	810	557
15	9380	96.53*	115600	2.1	<b>F</b>	<b>157</b>	<b>DRN</b>	<b>160L4</b>	780	556
17	8330	85.80*	113000	2.4	<b>FF</b>	<b>157</b>	<b>DRN</b>	<b>160L4</b>	880	557
19	7620	78.46	111000	2.6						
22	6630	68.28*	107800	3.0						
24	5850	60.25	104900	3.4						
12	12100	125.37	88900	1.00						
13	11100	114.34	88300	1.10	<b>FA</b>	<b>127</b>	<b>DRN</b>	<b>160L4</b>	500	552
15	9610	98.95	86900	1.25	<b>FAF</b>	<b>127</b>	<b>DRN</b>	<b>160L4</b>	540	550
17	8480	87.31*	85500	1.40	<b>F</b>	<b>127</b>	<b>DRN</b>	<b>160L4</b>	540	549
20	7320	75.41*	83700	1.65	<b>FF</b>	<b>127</b>	<b>DRN</b>	<b>160L4</b>	580	550
21	6800	70.07	82700	1.75						
16	8980	92.47*	46200	0.85	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	360	545
17	8590	88.49	47300	0.90	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	380	543
18	8160	83.99	48500	0.95	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	375	542
20	7240	74.52	51000	1.05	<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	400	543
22	6570	67.62	52700	1.15						
25	5640	58.12*	52200	1.35	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	360	545
29	4930	50.73	51400	1.55	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	380	543
34	4180	43.03	50300	1.85	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	375	542
39	3650	37.61	49300	2.1	<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	400	543
46	3090	31.80	47900	2.5						
44	3280	33.79*	48400	2.2	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	350	545
53	2670	27.57	46600	2.9	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	370	543
59	2440	25.14	45800	3.2	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	365	542
68	2110	21.76*	44400	3.7	<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>160L4</b>	390	543
33	4320	44.49	22900	1.00	<b>FA</b>	<b>97</b>	<b>DRN</b>	<b>160L4</b>	285	538
38	3770	38.86	23100	1.15	<b>FAF</b>	<b>97</b>	<b>DRN</b>	<b>160L4</b>	305	536
45	3150	32.50	23200	1.35	<b>F</b>	<b>97</b>	<b>DRN</b>	<b>160L4</b>	290	535
					<b>FF</b>	<b>97</b>	<b>DRN</b>	<b>160L4</b>	325	536
43	3290	33.91	23200	1.30						
48	2950	30.39	23200	1.45						
54	2660	27.44*	23000	1.60						
59	2420	24.92	22900	1.80	<b>FA</b>	<b>97</b>	<b>DRN</b>	<b>160L4</b>	275	538
67	2140	22.11	22600	2.0	<b>FAF</b>	<b>97</b>	<b>DRN</b>	<b>160L4</b>	300	536
73	1950	20.07	22400	2.2	<b>F</b>	<b>97</b>	<b>DRN</b>	<b>160L4</b>	285	535
85	1670	17.25*	21900	2.6	<b>FF</b>	<b>97</b>	<b>DRN</b>	<b>160L4</b>	315	536
98	1460	15.06	21400	2.9						
115	1240	12.77	20800	3.5						
132	1080	11.16	20200	3.8						
56	2570	26.50	12400	1.15						
62	2300	23.68	12600	1.30						
69	2070	21.32*	12800	1.45						
76	1870	19.31	12800	1.60						
86	1660	17.12	12900	1.80						
95	1500	15.48	12800	2.0	<b>FA</b>	<b>87</b>	<b>DRN</b>	<b>160L4</b>	215	531
112	1270	13.12*	12700	2.4	<b>FAF</b>	<b>87</b>	<b>DRN</b>	<b>160L4</b>	230	529
129	1110	11.46	12600	2.7	<b>F</b>	<b>87</b>	<b>DRN</b>	<b>160L4</b>	220	528
154	930	9.58	12300	3.1	<b>FF</b>	<b>87</b>	<b>DRN</b>	<b>160L4</b>	235	529
178	800	8.29	11700	1.90						
200	710	7.35	11500	2.1						
222	645	6.65	11300	2.4						
262	545	5.63	11000	2.8						
300	475	4.92	10700	3.2						
358	395	4.12	10300	3.6						

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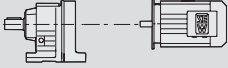

<b>P<sub>m</sub> = 18.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
7.3	22500	202	74900	0.90	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>180M4</b>	910	563
7.5	21900	197	86400	0.90	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>180M4</b>	960	563
					<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>180M4</b>	930	563
					<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>180M4</b>	1030	563
<b>8.3</b>	21200	178.20*	88900	0.95						
<b>9.1</b>	19400	162.96	95600	1.05						
<b>10</b>	16900	141.80*	103200	1.20						
<b>12</b>	14900	125.14	108200	1.35						
<b>14</b>	12900	108.49	112300	1.55	<b>FA</b>	<b>157</b>	<b>DRN</b>	<b>180M4</b>	780	559
<b>15</b>	11500	96.53*	111200	1.75	<b>FAF</b>	<b>157</b>	<b>DRN</b>	<b>180M4</b>	840	557
<b>17</b>	10200	85.80*	109100	1.95	<b>F</b>	<b>157</b>	<b>DRN</b>	<b>180M4</b>	800	556
<b>19</b>	9370	78.46	107400	2.1	<b>FF</b>	<b>157</b>	<b>DRN</b>	<b>180M4</b>	910	557
<b>22</b>	8160	68.28*	104700	2.5						
<b>25</b>	7200	60.25	102100	2.8						
<b>28</b>	6240	52.24	99200	3.2						
<b>45</b>	3890	32.55	89100	5.1						
<b>13</b>	13600	114.34	82200	0.90						
<b>15</b>	11800	98.95	81600	1.00						
<b>17</b>	10400	87.31*	80900	1.15	<b>FA</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	520	552
<b>20</b>	9010	75.41*	79700	1.35	<b>FAF</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	560	550
<b>21</b>	8370	70.07	79000	1.45	<b>F</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	560	549
<b>23</b>	7630	63.91	78000	1.55	<b>FF</b>	<b>127</b>	<b>DRN</b>	<b>180M4</b>	600	550
<b>27</b>	6610	55.31	76300	1.80						
<b>30</b>	5830	48.80	74800	2.1						
<b>20</b>	8900	74.52	46400	0.85	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	380	545
<b>22</b>	8080	67.62	48700	0.95	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	400	543
<b>25</b>	6940	58.12*	48700	1.10	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	395	542
<b>29</b>	6060	50.73	48400	1.25	<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	425	543
<b>34</b>	5140	43.03	47700	1.50	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	380	545
<b>39</b>	4490	37.61	47000	1.70	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	400	543
<b>46</b>	3800	31.80	45900	2.0	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	395	542
					<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	425	543
<b>44</b>	4030	33.79*	46300	1.85	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	370	545
<b>54</b>	3290	27.57	44900	2.4	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	390	543
<b>59</b>	3000	25.14	44200	2.6	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	385	542
<b>68</b>	2600	21.76*	43100	3.0	<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>180M4</b>	415	543
<b>38</b>	4640	38.86	20100	0.95	<b>FA</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	305	538
<b>45</b>	3880	32.50	20600	1.10	<b>FAF</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	325	536
					<b>F</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	310	535
					<b>FF</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	345	536
<b>54</b>	3270	27.44*	20900	1.30						
<b>59</b>	2970	24.92	20900	1.45						
<b>67</b>	2640	22.11	20900	1.65	<b>FA</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	300	538
<b>74</b>	2390	20.07	20800	1.80	<b>FAF</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	320	536
<b>86</b>	2060	17.25*	20500	2.1	<b>F</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	305	535
<b>98</b>	1790	15.06	20200	2.4	<b>FF</b>	<b>97</b>	<b>DRN</b>	<b>180M4</b>	340	536
<b>116</b>	1520	12.77	19700	2.8						
<b>132</b>	1330	11.16	19300	3.1						
<b>69</b>	2540	21.32*	10900	1.20						
<b>77</b>	2300	19.31	11100	1.30						
<b>86</b>	2040	17.12	11400	1.45						
<b>95</b>	1850	15.48	11500	1.60						
<b>113</b>	1560	13.12*	11600	1.90						
<b>129</b>	1360	11.46	11600	2.2	<b>FA</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	235	531
<b>154</b>	1140	9.58	11500	2.5	<b>FAF</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	250	529
<b>178</b>	990	8.29	10900	1.55	<b>F</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	245	528
<b>201</b>	870	7.35	10800	1.75	<b>FF</b>	<b>87</b>	<b>DRN</b>	<b>180M4</b>	260	529
<b>222</b>	790	6.65	10700	1.95						
<b>262</b>	670	5.63	10400	2.3						
<b>300</b>	585	4.92	10200	2.6						
<b>359</b>	490	4.12	9890	3.0						

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## Parallel-shaft helical gearmotors

F..DRN.. selection tables in kW

<b>P<sub>m</sub> = 22 kW</b>									<b>m</b>	
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>kg</b>		
9.1	23100	162.96	59000	0.85						
10	20100	141.80*	93200	1.00						
12	17700	125.14	100800	1.10						
14	15400	108.49	107100	1.30						
15	13700	96.53*	106800	1.45						
17	12200	85.80*	105200	1.65	<b>FA</b>	<b>157</b>	<b>DRN</b>	<b>180L4</b>	790	559
19	11100	78.46	103900	1.80	<b>FAF</b>	<b>157</b>	<b>DRN</b>	<b>180L4</b>	850	557
22	9710	68.28*	101600	2.1	<b>F</b>	<b>157</b>	<b>DRN</b>	<b>180L4</b>	820	556
25	8570	60.25	99400	2.3	<b>FF</b>	<b>157</b>	<b>DRN</b>	<b>180L4</b>	920	557
28	7420	52.24	96800	2.7						
32	6610	46.48*	94600	3.0						
37	5690	40.06	91700	3.5						
45	4620	32.55	87600	4.3						
15	14000	98.95	76400	0.85						
17	12400	87.31*	76300	0.95						
20	10700	75.41*	75700	1.10	<b>FA</b>	<b>127</b>	<b>DRN</b>	<b>180L4</b>	540	552
21	9960	70.07	75300	1.20	<b>FAF</b>	<b>127</b>	<b>DRN</b>	<b>180L4</b>	580	550
23	9080	63.91	74600	1.30	<b>F</b>	<b>127</b>	<b>DRN</b>	<b>180L4</b>	580	549
27	7860	55.31	73400	1.55	<b>FF</b>	<b>127</b>	<b>DRN</b>	<b>180L4</b>	620	550
30	6940	48.80	72200	1.75						
35	5990	42.15	70600	2.0						
25	8260	58.12*	45200	0.95	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	395	545
29	7210	50.73	45300	1.05	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	415	543
34	6120	43.03	45100	1.25	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	410	542
					<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	440	543
39	5340	37.61	44700	1.45	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	395	545
46	4520	31.80	44000	1.70	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	415	543
					<b>F</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	410	542
					<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	440	543
44	4800	33.79*	44300	1.55	<b>FA</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	385	545
54	3920	27.57	43300	2.0	<b>FAF</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	405	543
59	3570	25.14	42700	2.2	<b>F</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	400	542
68	3090	21.76*	41800	2.5	<b>FF</b>	<b>107</b>	<b>DRN</b>	<b>180L4</b>	430	543
77	2730	19.20*	40900	2.9						
54	3900	27.44*	18700	1.10						
59	3540	24.92	18900	1.20						
67	3140	22.11	19100	1.35	<b>FA</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	315	538
74	2850	20.07	19200	1.50	<b>FAF</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	335	536
86	2450	17.25*	19100	1.75	<b>F</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	320	535
98	2140	15.06	19000	2.0	<b>FF</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	355	536
116	1810	12.77	18700	2.4						
132	1580	11.16	18400	2.6						
69	3030	21.32*	9030	1.00						
76	2740	19.31	9460	1.10						
86	2430	17.12	9870	1.25						
95	2200	15.48	10100	1.35						
113	1860	13.12*	10400	1.60	<b>FA</b>	<b>87</b>	<b>DRN</b>	<b>180L4</b>	255	531
129	1620	11.46	10600	1.85	<b>FAF</b>	<b>87</b>	<b>DRN</b>	<b>180L4</b>	265	529
154	1360	9.58	10600	2.1	<b>F</b>	<b>87</b>	<b>DRN</b>	<b>180L4</b>	260	528
178	1170	8.29	10100	1.30	<b>FF</b>	<b>87</b>	<b>DRN</b>	<b>180L4</b>	275	529
201	1040	7.35	10100	1.45						
222	940	6.65	10000	1.60						
262	800	5.63	9890	1.90						
300	695	4.92	9740	2.2						
359	585	4.12	9490	2.5						

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<b>P<sub>m</sub> = 30 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
14	21000	108.49	90100	0.95						
15	18600	96.53*	96900	1.05						
17	16600	85.80*	96400	1.20						
19	15100	78.46	95800	1.30						
22	13200	68.28*	94500	1.50	FA	157	DRN	200L4	900	559
25	11600	60.25	93200	1.70	FAF	157	DRN	200L4	960	557
28	10100	52.24	91400	2.0	F	157	DRN	200L4	920	556
32	8990	46.48*	89800	2.2	FF	157	DRN	200L4	1030	557
37	7750	40.06	87600	2.6						
45	6300	32.55	84200	3.2						
54	5340	27.60	81500	3.7						
20	14500	75.41*	64600	0.80						
21	13500	70.07	65700	0.90						
23	12300	63.91	66800	0.95	FA	127	DRN	200L4	650	552
27	10700	55.31	66700	1.10	FAF	127	DRN	200L4	690	550
30	9440	48.80	66300	1.25	F	127	DRN	200L4	680	549
35	8150	42.15	65500	1.45	FF	127	DRN	200L4	730	550
40	7210	37.28	64600	1.65						
47	6060	31.33	63200	2.0						
58	4890	25.30	61100	2.5						
55	5200	26.86	61700	1.65	FA	127	DRN	200L4	640	552
60	4750	24.57	60800	1.80	FAF	127	DRN	200L4	670	550
69	4130	21.38	59300	2.9	F	127	DRN	200L4	670	549
78	3650	18.87	57900	3.0	FF	127	DRN	200L4	720	550
34	8320	43.03	39200	0.90	FA	107	DRN	200L4	500	545
39	7280	37.61	39600	1.05	FAF	107	DRN	200L4	530	543
47	6150	31.80	39700	1.25	F	107	DRN	200L4	520	542
					FF	107	DRN	200L4	550	543
54	5330	27.57	39500	1.45						
59	4860	25.14	39300	1.60						
68	4210	21.76*	38800	1.85	FA	107	DRN	200L4	495	545
77	3710	19.20*	38300	2.1	FAF	107	DRN	200L4	520	543
89	3200	16.58	37500	2.4	F	107	DRN	200L4	510	542
101	2830	14.67	36900	2.7	FF	107	DRN	200L4	540	543
120	2380	12.33	35800	2.9						
149	1920	9.96	34400	3.4						
67	4280	22.11	15100	1.00						
74	3880	20.07	15500	1.10						
86	3330	17.25*	16000	1.30						
98	2910	15.06	16300	1.50						
116	2470	12.77	16400	1.75	FA	97	DRN	200L4	425	538
133	2160	11.16	16400	1.90	FAF	97	DRN	200L4	445	536
163	1750	9.06	15400	1.35	F	97	DRN	200L4	430	535
180	1590	8.22	15300	1.50	FF	97	DRN	200L4	465	536
209	1360	7.07	15100	1.70						
240	1190	6.17	14900	1.90						
283	1010	5.23	14600	2.1						
324	880	4.57	14300	2.3						

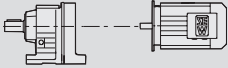

<b>P<sub>m</sub> = 37 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
15	23000	96.53*	63700	0.85						
17	20400	85.80*	88600	1.00						
19	18700	78.46	88700	1.05						
22	16200	68.28*	88400	1.25	FA	157	DRN	225S4	930	559
25	14300	60.25	87800	1.40	FAF	157	DRN	225S4	990	557
28	12400	52.24	86700	1.60	F	157	DRN	225S4	950	556
32	11000	46.48*	85600	1.80	FF	157	DRN	225S4	1060	557
37	9550	40.06	83900	2.1						
46	7750	32.55	81300	2.6						
54	6580	27.60	79000	3.0						

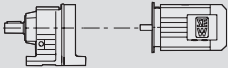

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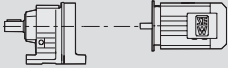

## Parallel-shaft helical gearmotors

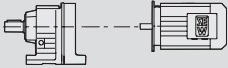

F..DRN.. selection tables in kW

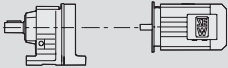

<b>P<sub>m</sub> = 37 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
27	13100	55.31	59200	0.90						
30	11600	48.80	60800	1.05	FA	127	DRN	225S4	680	552
35	10000	42.15	61100	1.20	FAF	127	DRN	225S4	720	550
40	8880	37.28	60700	1.35	F	127	DRN	225S4	720	549
47	7460	31.33	59900	1.60	FF	127	DRN	225S4	760	550
59	6030	25.30	58400	2.0						
55	6400	26.86	58900	1.35						
60	5850	24.57	58200	1.45						
69	5090	21.38	57000	2.4						
79	4490	18.87	55900	2.5	FA	127	DRN	225S4	670	552
91	3890	16.36	54500	2.8	FAF	127	DRN	225S4	710	550
102	3460	14.55	53300	3.2	F	127	DRN	225S4	700	549
118	2990	12.54	51800	3.3	FF	127	DRN	225S4	750	550
145	2420	10.19	49500	3.9						
167	2110	8.86	47700	3.3						
188	1870	7.88	46400	3.2						
54	6570	27.57	36200	1.20						
59	5990	25.14	36300	1.30						
68	5180	21.76*	36200	1.50						
77	4570	19.20*	36000	1.70						
89	3950	16.58	35600	2.0	FA	107	DRN	225S4	530	545
101	3490	14.67	35100	2.2	FAF	107	DRN	225S4	550	543
120	2930	12.33	34300	2.4	F	107	DRN	225S4	540	542
149	2370	9.96	33200	2.7	FF	107	DRN	225S4	570	543
153	2310	9.69	32400	2.1						
177	1990	8.37	31600	2.4						
200	1760	7.40	31000	2.6						
238	1480	6.22	30000	3.1						

<b>P<sub>m</sub> = 45 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
19	22700	78.46	70300	0.90						
22	19700	68.28*	81400	1.00						
25	17400	60.25	81600	1.15	FA	157	DRN	225M4	930	559
28	15100	52.24	81300	1.30	FAF	157	DRN	225M4	990	557
32	13400	46.48*	80800	1.50	F	157	DRN	225M4	950	556
37	11600	40.06	79800	1.70	FF	157	DRN	225M4	1060	557
46	9430	32.55	78000	2.1						
54	8000	27.60	76100	2.5						
30	14100	48.80	51600	0.85	FA	127	DRN	225M4	680	552
35	12200	42.15	54300	1.00	FAF	127	DRN	225M4	720	550
40	10800	37.28	55800	1.10	F	127	DRN	225M4	720	549
47	9080	31.33	56100	1.30	FF	127	DRN	225M4	760	550
59	7330	25.30	55400	1.65						
55	7780	26.86	55600	1.10						
60	7120	24.57	55200	1.20						
69	6190	21.38	54500	1.95						
79	5470	18.87	53600	2.0						
91	4740	16.36	52500	2.3	FA	127	DRN	225M4	670	552
102	4210	14.55	51600	2.6	FAF	127	DRN	225M4	710	550
118	3630	12.54	50300	2.8	F	127	DRN	225M4	700	549
145	2950	10.19	48300	3.2	FF	127	DRN	225M4	750	550
167	2560	8.86	46500	2.7						
188	2280	7.88	45400	2.6						
218	1970	6.80	44000	3.5						
268	1600	5.52	41900	3.8						

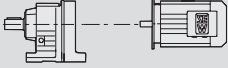

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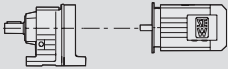

<b>P<sub>m</sub> = 45 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
54	7990	27.57	31500	1.00						
59	7290	25.14	32600	1.10						
68	6300	21.76*	33200	1.25						
77	5560	19.20*	33300	1.40						
89	4800	16.58	33300	1.65	FA	107	DRN	225M4	530	545
101	4250	14.67	33100	1.80	FAF	107	DRN	225M4	550	543
120	3570	12.33	32600	1.95	F	107	DRN	225M4	540	542
149	2880	9.96	31900	2.2	FF	107	DRN	225M4	570	543
153	2810	9.69	30900	1.75						
177	2420	8.37	30400	2.0						
200	2140	7.40	29800	2.1						
238	1800	6.22	29000	2.5						

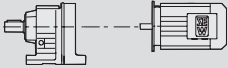

<b>P<sub>m</sub> = 55 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
25	21300	60.25	73800	0.95						
28	18500	52.24	74600	1.10	FA	157	DRN	250M4	1080	559
32	16400	46.48*	74800	1.20	FAF	157	DRN	250M4	1140	557
37	14100	40.06	74700	1.40	F	157	DRN	250M4	1110	556
46	11500	32.55	73800	1.75	FF	157	DRN	250M4	1210	557
54	9780	27.60	72600	2.0						
52	10100	28.60*	72900	1.90	FA	157	DRN	250M4	1080	559
58	9010	25.43	71900	2.2	FAF	157	DRN	250M4	1140	557
67	7850	22.16	70600	2.5	F	157	DRN	250M4	1100	556
75	7000	19.77	69400	2.8	FF	157	DRN	250M4	1210	557
88	5970	16.85	67500	3.1						
40	13200	37.28	47000	0.90	FA	127	DRN	250M4	830	552
47	11100	31.33	50000	1.10	FAF	127	DRN	250M4	870	550
59	8960	25.30	51600	1.35	F	127	DRN	250M4	870	549
					FF	127	DRN	250M4	910	550
69	7570	21.38	51300	1.60						
79	6680	18.87	50800	1.65	FA	127	DRN	250M4	820	552
91	5790	16.36	50100	1.90	FAF	127	DRN	250M4	850	550
102	5150	14.55	49400	2.1	F	127	DRN	250M4	850	549
118	4440	12.54	48400	2.2	FF	127	DRN	250M4	900	550
145	3610	10.19	46800	2.6						
167	3140	8.86	45100	2.2						
188	2790	7.88	44100	2.1						
218	2400	6.80	42900	2.9						
268	1950	5.52	41000	3.1						
317	1650	4.68	39600	3.6						

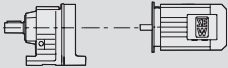

<b>P<sub>m</sub> = 75 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
32	22400	46.48*	62900	0.90	FA	157	DRN	280S4	1130	559
37	19300	40.06	64400	1.05	FAF	157	DRN	280S4	1190	557
46	15700	32.55	65400	1.25	F	157	DRN	280S4	1150	556
54	13300	27.60	65500	1.50	FF	157	DRN	280S4	1260	557
52	13800	28.60*	65500	1.40						
58	12200	25.43	65400	1.65	FA	157	DRN	280S4	1130	559
67	10700	22.16	64900	1.85	FAF	157	DRN	280S4	1190	557
75	9550	19.77	64300	2.0	F	157	DRN	280S4	1150	556
88	8140	16.85	63200	2.3	FF	157	DRN	280S4	1260	557
106	6740	13.96	61600	2.6						
124	5750	11.92	60100	3.0						
59	12200	25.30	40000	1.00	FA	127	DRN	280S4	880	552
					FAF	127	DRN	280S4	920	550
					F	127	DRN	280S4	910	549
					FF	127	DRN	280S4	960	550

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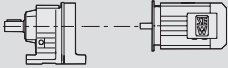

<b>P<sub>m</sub> = 75 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					<b>m</b> kg	
69	10300	21.38	43000	1.15						
79	9110	18.87	44400	1.20						
91	7900	16.36	45200	1.40						
102	7030	14.55	45000	1.55						
118	6060	12.54	44600	1.65	FA	127	DRN	280S4	870	552
145	4920	10.19	43700	1.95	FAF	127	DRN	280S4	900	550
167	4280	8.86	42200	1.65	F	127	DRN	280S4	900	549
188	3800	7.88	41600	1.55	FF	127	DRN	280S4	950	550
218	3280	6.80	40700	2.1						
268	2660	5.52	39300	2.2						
317	2260	4.68	38100	2.6						

<b>P<sub>m</sub> = 90 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					<b>m</b> kg	
37	23200	40.06	56600	0.85	FA	157	DRN	280M4	1250	559
46	18800	32.55	59100	1.05	FAF	157	DRN	280M4	1310	557
54	16000	27.60	60200	1.25	F	157	DRN	280M4	1270	556
					FF	157	DRN	280M4	1380	557
67	12800	22.16	60600	1.55	FA	157	DRN	280M4	1240	559
75	11400	19.77	60500	1.70	FAF	157	DRN	280M4	1300	557
88	9770	16.85	59900	1.90	F	157	DRN	280M4	1260	556
106	8100	13.96	58900	2.2	FF	157	DRN	280M4	1370	557
124	6910	11.92	57800	2.5						
59	14600	25.30	29600	0.80	FA	127	DRN	280M4	990	552
					FAF	127	DRN	280M4	1030	550
					F	127	DRN	280M4	1030	549
					FF	127	DRN	280M4	1070	550
91	9490	16.36	39900	1.15						
102	8440	14.55	41100	1.30						
118	7270	12.54	41800	1.35	FA	127	DRN	280M4	980	552
145	5910	10.19	41400	1.60	FAF	127	DRN	280M4	1020	550
167	5140	8.86	40100	1.35	F	127	DRN	280M4	1020	549
188	4570	7.88	39700	1.30	FF	127	DRN	280M4	1060	550
218	3940	6.80	39000	1.80						
268	3200	5.52	37900	1.85						
316	2710	4.68	36900	2.2						

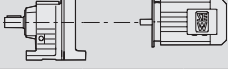

<b>P<sub>m</sub> = 110 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					<b>m</b> kg	
46	22900	32.55	50800	0.85	FA	157	DRN	315S4	1490	559
54	19400	27.60	53100	1.05	FAF	157	DRN	315S4	1550	557
					F	157	DRN	315S4	1510	556
					FF	157	DRN	315S4	1620	557
67	15600	22.16	54900	1.25	FA	157	DRN	315S4/ERF/NS	1490	559
					FAF	157	DRN	315S4/ERF/NS	1550	557
					F	157	DRN	315S4/ERF/NS	1510	556
					FF	157	DRN	315S4/ERF/NS	1610	557
75	13900	19.77	55400	1.40	FA	157	DRN	315S4	1490	559
88	11800	16.85	55600	1.55	FAF	157	DRN	315S4	1550	557
107	9850	13.96	55300	1.80	F	157	DRN	315S4	1510	556
125	8410	11.92	54700	2.1	FF	157	DRN	315S4	1610	557

<b>P<sub>m</sub> = 132 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					<b>m</b> kg	
67	18700	22.16	48700	1.05	FA	157	DRN	315M4/ERF/NS	1510	559
					FAF	157	DRN	315M4/ERF/NS	1570	557
75	16700	19.77	49800	1.15	F	157	DRN	315M4/ERF/NS	1530	556
					FF	157	DRN	315M4/ERF/NS	1630	557

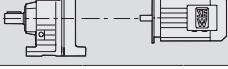



<b>P<sub>m</sub> = 132 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
88	14200	16.85	50900	1.30	<b>FA</b>	<b>157</b>	<b>DRN</b>	<b>315M4</b>	1510	559
107	11800	13.96	51400	1.50	<b>FAF</b>	<b>157</b>	<b>DRN</b>	<b>315M4</b>	1570	557
125	10000	11.92	51400	1.70	<b>F</b>	<b>157</b>	<b>DRN</b>	<b>315M4</b>	1530	556
					<b>FF</b>	<b>157</b>	<b>DRN</b>	<b>315M4</b>	1630	557

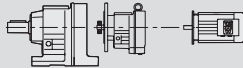

  

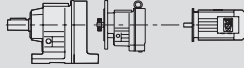

<b>P<sub>m</sub> = 160 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
88	17300	16.85	44800	1.10	<b>FA</b>	<b>157</b>	<b>DRN</b>	<b>315L4</b>	1640	559
106	14300	13.96	46400	1.25	<b>FAF</b>	<b>157</b>	<b>DRN</b>	<b>315L4</b>	1700	557
125	12200	11.92	47100	1.40	<b>F</b>	<b>157</b>	<b>DRN</b>	<b>315L4</b>	1660	556
					<b>FF</b>	<b>157</b>	<b>DRN</b>	<b>315L4</b>	1770	557

<b>P<sub>m</sub> = 200 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
88	21600	16.85	36200	0.85	<b>FA</b>	<b>157</b>	<b>DRN</b>	<b>315H4/ERF/NS</b>	1760	559
					<b>FAF</b>	<b>157</b>	<b>DRN</b>	<b>315H4/ERF/NS</b>	1820	557
					<b>F</b>	<b>157</b>	<b>DRN</b>	<b>315H4/ERF/NS</b>	1780	556
					<b>FF</b>	<b>157</b>	<b>DRN</b>	<b>315H4/ERF/NS</b>	1880	557
107	17900	13.96	39200	1.00	<b>FA</b>	<b>157</b>	<b>DRN</b>	<b>315H4</b>	1760	559
					<b>FAF</b>	<b>157</b>	<b>DRN</b>	<b>315H4</b>	1820	557
					<b>F</b>	<b>157</b>	<b>DRN</b>	<b>315H4</b>	1780	556
					<b>FF</b>	<b>157</b>	<b>DRN</b>	<b>315H4</b>	1880	557
125	15200	11.92	41000	1.15						

## 9.4 F..R..DRN.. selection tables for low output speeds in Nm

$M_{a \max} = 130 \text{ Nm}$									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
0.15	8972	4500							
0.18	7736	4500							
0.19	7211	4500							
0.22	6303	4500							
0.25	5435	4500	FA	27R17	DRN	63MS4	14	563	
0.28	4855	4500	FAF	27R17	DRN	63MS4	14	563	
0.33	4243	4500	F	27R17	DRN	63MS4	14	563	
0.37	3715	4500	FF	27R17	DRN	63MS4	15	563	
0.43	3247	4500							
0.48	2878	4500							
0.55	2515	4500							
0.62	2217	4500							
0.73	1898	4500							
0.84	1645	4500							
0.90	1525	4500							
1.0	1322	4500	FA	27R17	DRN	63MS4	13	563	
1.2	1146	4500	FAF	27R17	DRN	63MS4	14	563	
1.4	1013	4500	F	27R17	DRN	63MS4	14	563	
1.6	890	4500	FF	27R17	DRN	63MS4	15	563	
1.8	778	4500							
2.0	682	4500							
2.3	602	4500							
2.6	520	4500							
0.71	1948	4500							
0.76	1826	4500							
0.86	1610	4500							
0.99	1399	4500							
1.1	1230	4500							
1.5	948	4500							
1.7	829	4500	FA	27R17	DRN	63MS4	13	563	
1.9	731	4500	FAF	27R17	DRN	63MS4	14	563	
2.2	633	4500	F	27R17	DRN	63MS4	14	563	
2.5	551	4500	FF	27R17	DRN	63MS4	15	563	
2.8	489	4500							
3.2	427	4500							
3.6	379	4500							
4.2	326	4500							
4.8	288	4500							
5.5	251	4500							
6.2	221	4500							
8.0	172	4500	FA	27R17	DRN	63M4	14	563	
9.0	153	4500	FAF	27R17	DRN	63M4	15	563	
11	130	4500	F	27R17	DRN	63M4	15	563	
			FF	27R17	DRN	63M4	15	563	
3.0	458	4500							
3.5	397	4500							
4.0	342	4500	FA	27R17	DRN	63MS4	13	563	
4.6	302	4500	FAF	27R17	DRN	63MS4	14	563	
5.2	266	4500	F	27R17	DRN	63MS4	14	563	
5.8	236	4500	FF	27R17	DRN	63MS4	14	563	
6.5	211	4500							
7.4	186	4500							
9.7	142	4500	FA	27R17	DRN	63M4	14	563	
			FAF	27R17	DRN	63M4	15	563	
11	124	4500	F	27R17	DRN	63M4	14	563	
			FF	27R17	DRN	63M4	15	563	
13	109	4500	FA	27R17	DRN	71MS4	14	563	
			FAF	27R17	DRN	71MS4	15	563	
15	96	4500	F	27R17	DRN	71MS4	15	563	
			FF	27R17	DRN	71MS4	16	563	

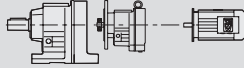

<b>M<sub>a max</sub> = 200 Nm</b>								
<b>n<sub>a</sub> min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup> N</b>					<b>m kg</b>	
0.17	8193	4290						
0.20	7064	4290						
0.21	6585	4290						
0.24	5756	4290						
0.28	4963	4290						
0.31	4434	4290	FA	37R17	DRN	63MS4	20	
0.36	3875	4290	FAF	37R17	DRN	63MS4	21	
0.41	3392	4290	F	37R17	DRN	63MS4	20	
0.47	2965	4290	FF	37R17	DRN	63MS4	22	
0.53	2587	4290						
0.60	2284	4290						
0.69	1997	4290						
0.79	1742	4290						
0.89	1545	4290						
0.72	1929	4290						
0.82	1679	4290						
0.89	1550	4290						
1.0	1356	4290						
1.2	1180	4290						
1.3	1044	4290	FA	37R17	DRN	63MS4	20	
1.5	914	4290	FAF	37R17	DRN	63MS4	21	
1.7	808	4290	F	37R17	DRN	63MS4	20	
2.0	698	4290	FF	37R17	DRN	63MS4	22	
2.2	616	4290						
2.5	544	4290						
3.0	466	4290						
3.4	411	4290						
3.8	364	4290						
1.0	1370	4290						
1.1	1198	4290						
1.3	1047	4290						
1.5	915	4290						
1.7	807	4290	FA	37R17	DRN	63MS4	19	
1.9	707	4290	FAF	37R17	DRN	63MS4	21	
2.2	617	4290	F	37R17	DRN	63MS4	20	
2.6	538	4290	FF	37R17	DRN	63MS4	22	
2.9	477	4290						
3.4	412	4290						
3.8	365	4290						
4.3	322	4290						
5.0	278	4290	FA	37R17	DRN	63M4	20	
5.7	242	4290	FAF	37R17	DRN	63M4	22	
6.2	221	4290	F	37R17	DRN	63M4	21	
7.1	195	4290	FF	37R17	DRN	63M4	23	
8.4	168	4290	FA	37R17	DRN	71MS4	21	
9.6	147	4290	FAF	37R17	DRN	71MS4	22	
			F	37R17	DRN	71MS4	21	
			FF	37R17	DRN	71MS4	23	
11	127	4290	FA	37R17	DRN	71M4	22	
12	121	4290	FAF	37R17	DRN	71M4	24	
13	108	4290	F	37R17	DRN	71M4	23	
15	91	4290	FF	37R17	DRN	71M4	24	
4.2	326	4290	FA	37R17	DRN	63MS4	19	
4.8	285	4290	FAF	37R17	DRN	63MS4	21	
			F	37R17	DRN	63MS4	20	
			FF	37R17	DRN	63MS4	22	
5.5	250	4290	FA	37R17	DRN	63M4	20	
6.3	219	4290	FAF	37R17	DRN	63M4	22	
7.4	186	4290	F	37R17	DRN	63M4	21	
			FF	37R17	DRN	63M4	22	
8.4	167	4290	FA	37R17	DRN	71MS4	21	
9.7	145	4290	FAF	37R17	DRN	71MS4	22	
			F	37R17	DRN	71MS4	21	
			FF	37R17	DRN	71MS4	23	

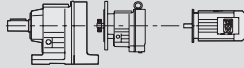

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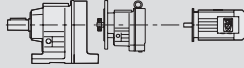

## Parallel-shaft helical gearmotors

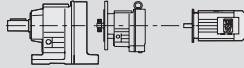

F..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 200 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
11	129	4290	FA	37R17	DRN	71M4	22	563
12	118	4290	FAF	37R17	DRN	71M4	23	563
14	98	4290	F	37R17	DRN	71M4	22	563
			FF	37R17	DRN	71M4	24	563
17	87	4290	FA	37R17	DRN	80MK4	24	563
			FAF	37R17	DRN	80MK4	26	563
			F	37R17	DRN	80MK4	25	563
			FF	37R17	DRN	80MK4	26	563

<b>M<sub>a max</sub> = 400 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.11	12251	5920						
0.13	10619	5920						
0.14	9846	5920						
0.16	8534	5920						
0.19	7460	5920						
0.21	6536	5920						
0.24	5746	5920	FA	47R17	DRN	63MS4	25	563
0.27	5022	5920	FAF	47R17	DRN	63MS4	27	563
0.31	4401	5920	F	47R17	DRN	63MS4	25	563
0.36	3883	5920	FF	47R17	DRN	63MS4	28	563
0.40	3443	5920						
0.46	2976	5920						
0.52	2629	5920						
0.60	2304	5920						
0.68	2033	5920						
0.55	2519	5920						
0.58	2394	5920						
0.64	2172	5920						
0.68	2025	5920						
0.78	1770	5920	FA	47R17	DRN	63MS4	24	563
0.88	1576	5920	FAF	47R17	DRN	63MS4	27	563
1.0	1363	5920	F	47R17	DRN	63MS4	25	563
1.2	1192	5920	FF	47R17	DRN	63MS4	28	563
1.3	1061	5920						
1.5	931	5920						
1.7	822	5920						
2.0	706	5920						
2.2	619	5920						
0.77	1785	5920						
0.87	1578	5920						
1.0	1364	5920	FA	47R17	DRN	63MS4	24	563
1.1	1203	5920	FAF	47R17	DRN	63MS4	27	563
1.3	1049	5920	F	47R17	DRN	63MS4	25	563
1.5	918	5920	FF	47R17	DRN	63MS4	28	563
1.7	809	5920						
2.0	700	5920						
2.2	622	5920						
2.5	543	5920	FA	47R17	DRN	63M4	25	563
2.9	475	5920	FAF	47R17	DRN	63M4	28	563
3.3	419	5920	F	47R17	DRN	63M4	26	563
			FF	47R17	DRN	63M4	29	563
3.8	370	5920	FA	47R17	DRN	71MS4	26	563
4.3	324	5920	FAF	47R17	DRN	71MS4	28	563
4.9	288	5920	F	47R17	DRN	71MS4	26	563
			FF	47R17	DRN	71MS4	30	563
5.7	249	5920	FA	47R17	DRN	71M4	27	563
6.5	218	5920	FAF	47R17	DRN	71M4	30	563
7.3	193	5920	F	47R17	DRN	71M4	28	563
			FF	47R17	DRN	71M4	31	563
8.2	175	5920	FA	47R17	DRN	80MK4	29	563
9.8	147	5920	FAF	47R17	DRN	80MK4	32	563
			F	47R17	DRN	80MK4	30	563
11	130	5920	FF	47R17	DRN	80MK4	33	563

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<b>M<sub>a max</sub> = 400 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
2.6	524	5920	FA	47R17	DRN	63M4	24	563	
2.8	489	5920	FAF	47R17	DRN	63M4	27	563	
3.2	427	5920	F	47R17	DRN	63M4	25	563	
3.6	381	5920	FF	47R17	DRN	63M4	28	563	
4.2	334	5920	FA	47R17	DRN	71MS4	25	563	
4.8	295	5920	FAF	47R17	DRN	71MS4	28	563	
			F	47R17	DRN	71MS4	26	563	
			FF	47R17	DRN	71MS4	29	563	
5.6	253	5920	FA	47R17	DRN	71M4	26	563	
6.5	217	5920	FAF	47R17	DRN	71M4	29	563	
7.5	190	5920	F	47R17	DRN	71M4	27	563	
8.0	178	5920	FF	47R17	DRN	71M4	30	563	
9.6	149	5920	FA	47R17	DRN	80MK4	28	563	
11	131	5920	FAF	47R17	DRN	80MK4	31	563	
			F	47R17	DRN	80MK4	29	563	
			FF	47R17	DRN	80MK4	32	563	

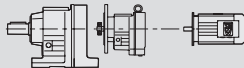

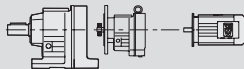

<b>M<sub>a max</sub> = 600 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.09	14832	9200							
0.10	13604	9200							
0.11	12602	9200							
0.12	11252	9200							
0.14	9986	9200							
0.16	8787	9200							
0.17	7908	9200							
0.20	6913	9200							
0.23	6030	9200							
0.26	5289	9200	FA	57R37	DRN	63MS4	39	563	
0.30	4654	9200	FAF	57R37	DRN	63MS4	45	563	
0.34	4060	9200	F	57R37	DRN	63MS4	40	563	
0.39	3564	9200	FF	57R37	DRN	63MS4	46	563	
0.44	3161	9200							
0.50	2737	9200							
0.57	2409	9200							
0.65	2131	9200							
0.75	1840	9200							
0.85	1623	9200							
0.96	1439	9200							
1.1	1238	9200							
0.48	2854	9200							
0.54	2576	9200							
0.61	2266	9200							
0.69	2012	9200	FA	57R37	DRN	63MS4	39	563	
0.77	1791	9200	FAF	57R37	DRN	63MS4	44	563	
0.85	1617	9200	F	57R37	DRN	63MS4	39	563	
0.97	1422	9200	FF	57R37	DRN	63MS4	45	563	
1.1	1243	9200							
1.3	1066	9200							
1.4	949	9200							
1.6	856	9200							
1.8	749	9200	FA	57R37	DRN	63M4	40	563	
2.1	658	9200	FAF	57R37	DRN	63M4	45	563	
			F	57R37	DRN	63M4	40	563	
			FF	57R37	DRN	63M4	46	563	
2.6	549	9200	FA	57R37	DRN	71MS4	40	563	
2.9	483	9200	FAF	57R37	DRN	71MS4	46	563	
			F	57R37	DRN	71MS4	40	563	
			FF	57R37	DRN	71MS4	47	563	
1.2	1106	9200	FA	57R37	DRN	63MS4	39	563	
1.4	967	9200	FAF	57R37	DRN	63MS4	45	563	
1.6	851	9200	F	57R37	DRN	63MS4	39	563	
			FF	57R37	DRN	63MS4	46	563	

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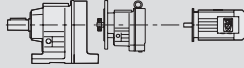

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## Parallel-shaft helical gearmotors

F..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 600 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
1.9	738	9200	FA	57R37	DRN	63M4	40	563
2.1	646	9200	FAF	57R37	DRN	63M4	46	563
2.5	558	9200	F	57R37	DRN	63M4	40	563
			FF	57R37	DRN	63M4	47	563
2.8	506	9200	FA	57R37	DRN	71MS4	41	563
			FAF	57R37	DRN	71MS4	46	563
3.1	452	9200	F	57R37	DRN	71MS4	41	563
			FF	57R37	DRN	71MS4	47	563
3.7	386	9200	FA	57R37	DRN	71M4	42	563
			FAF	57R37	DRN	71M4	47	563
4.2	338	9200	F	57R37	DRN	71M4	42	563
			FF	57R37	DRN	71M4	49	563
5.6	255	9200	FA	57R37	DRN	80MK4	44	563
			FAF	57R37	DRN	80MK4	50	563
7.1	201	9200	F	57R37	DRN	80MK4	44	563
7.9	181	9200	FF	57R37	DRN	80MK4	51	563
9.3	155	9200	FA	57R37	DRN	80M4	48	563
			FAF	57R37	DRN	80M4	53	563
			F	57R37	DRN	80M4	48	563
			FF	57R37	DRN	80M4	54	563
3.3	426	9200	FA	57R37	DRN	71MS4	40	563
			FAF	57R37	DRN	71MS4	46	563
			F	57R37	DRN	71MS4	40	563
			FF	57R37	DRN	71MS4	47	563
3.7	382	9200	FA	57R37	DRN	71M4	41	563
4.3	330	9200	FAF	57R37	DRN	71M4	47	563
4.8	298	9200	F	57R37	DRN	71M4	41	563
5.4	262	9200	FF	57R37	DRN	71M4	48	563
6.3	226	9200	FA	57R37	DRN	80MK4	43	563
			FAF	57R37	DRN	80MK4	49	563
7.2	200	9200	F	57R37	DRN	80MK4	44	563
			FF	57R37	DRN	80MK4	50	563
8.5	170	9200	FA	57R37	DRN	80M4	47	563
9.4	152	9200	FAF	57R37	DRN	80M4	52	563
11	134	9200	F	57R37	DRN	80M4	47	563
			FF	57R37	DRN	80M4	54	563
<b>M<sub>a max</sub> = 820 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.07	19199	10300						
0.08	17610	10300						
0.09	14992	10300						
0.11	12926	10300						
0.12	11480	10300						
0.14	10220	10300						
0.15	8933	10300						
0.17	7940	10300	FA	67R37	DRN	63MS4	43	563
0.19	7096	10300	FAF	67R37	DRN	63MS4	50	563
0.23	6080	10300	F	67R37	DRN	63MS4	46	563
0.26	5341	10300	FF	67R37	DRN	63MS4	52	563
0.29	4690	10300						
0.34	4091	10300						
0.39	3574	10300						
0.44	3133	10300						
0.50	2756	10300						
0.57	2439	10300						

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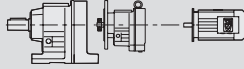

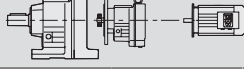

<b>M<sub>a max</sub> = 820 Nm</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>		
0.41	3377	10300							
0.47	2912	10300							
0.51	2714	10300							
0.58	2372	10300	FA	67R37	DRN	63MS4	42	563	
0.65	2126	10300	FAF	67R37	DRN	63MS4	48	563	
0.74	1859	10300	F	67R37	DRN	63MS4	45	563	
0.85	1631	10300	FF	67R37	DRN	63MS4	51	563	
0.96	1437	10300							
1.1	1256	10300							
1.2	1126	10300	FA	67R37	DRN	63M4	43	563	
1.4	984	10300	FAF	67R37	DRN	63M4	49	563	
1.6	864	10300	F	67R37	DRN	63M4	46	563	
			FF	67R37	DRN	63M4	52	563	
1.9	722	10300	FA	67R37	DRN	71MS4	44	563	
			FAF	67R37	DRN	71MS4	50	563	
2.2	634	10300	F	67R37	DRN	71MS4	46	563	
			FF	67R37	DRN	71MS4	52	563	
2.6	539	10300	FA	67R37	DRN	71M4	45	563	
			FAF	67R37	DRN	71M4	51	563	
			F	67R37	DRN	71M4	48	563	
			FF	67R37	DRN	71M4	54	563	
0.66	2106	10300	FA	67R37	DRN	63MS4	43	563	
0.73	1884	10300	FAF	67R37	DRN	63MS4	49	563	
0.84	1635	10300	F	67R37	DRN	63MS4	46	563	
0.97	1429	10300	FF	67R37	DRN	63MS4	52	563	
1.1	1271	10300							
1.2	1102	10300	FA	67R37	DRN	63M4	44	563	
1.4	970	10300	FAF	67R37	DRN	63M4	50	563	
1.6	858	10300	F	67R37	DRN	63M4	47	563	
			FF	67R37	DRN	63M4	53	563	
1.9	755	10300	FA	67R37	DRN	71MS4	45	563	
			FAF	67R37	DRN	71MS4	51	563	
2.2	641	10300	F	67R37	DRN	71MS4	47	563	
2.5	572	10300	FF	67R37	DRN	71MS4	53	563	
2.8	509	10300	FA	67R37	DRN	71M4	46	563	
3.2	437	10300	FAF	67R37	DRN	71M4	52	563	
3.7	384	10300	F	67R37	DRN	71M4	49	563	
			FF	67R37	DRN	71M4	55	563	
4.2	338	10300	FA	67R37	DRN	80MK4	48	563	
4.7	305	10300	FAF	67R37	DRN	80MK4	54	563	
5.6	257	10300	F	67R37	DRN	80MK4	51	563	
			FF	67R37	DRN	80MK4	57	563	
6.2	231	10300	FA	67R37	DRN	80M4	51	563	
			FAF	67R37	DRN	80M4	58	563	
7.0	205	10300	F	67R37	DRN	80M4	54	563	
			FF	67R37	DRN	80M4	60	563	
8.3	175	10300	FA	67R37	DRN	90S4	57	563	
			FAF	67R37	DRN	90S4	64	563	
			F	67R37	DRN	90S4	60	563	
			FF	67R37	DRN	90S4	66	563	
2.8	500	10300	FA	67R37	DRN	71M4	45	563	
3.1	454	10300	FAF	67R37	DRN	71M4	51	563	
3.6	392	10300	F	67R37	DRN	71M4	47	563	
			FF	67R37	DRN	71M4	53	563	
4.3	333	10300	FA	67R37	DRN	80MK4	47	563	
4.8	297	10300	FAF	67R37	DRN	80MK4	53	563	
5.5	261	10300	F	67R37	DRN	80MK4	50	563	
			FF	67R37	DRN	80MK4	56	563	
6.0	238	10300	FA	67R37	DRN	80M4	50	563	
			FAF	67R37	DRN	80M4	57	563	
7.2	200	10300	F	67R37	DRN	80M4	53	563	
			FF	67R37	DRN	80M4	59	563	

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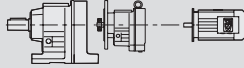

## Parallel-shaft helical gearmotors

F..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 820 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
8.3	176	10300	FA	67R37	DRN	90S4	56	563
			FAF	67R37	DRN	90S4	62	563
			F	67R37	DRN	90S4	59	563
			FF	67R37	DRN	90S4	65	563
<b>M<sub>a max</sub> = 1110 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.28	4931	17900						
0.31	4523	17900						
0.36	3851	17900						
0.42	3320	17900						
0.45	3095	17900	FA	77R37	DRN	63MS4	64	563
0.51	2705	17900	FAF	77R37	DRN	63MS4	71	563
0.54	2536	17900	F	77R37	DRN	63MS4	68	563
0.62	2238	17900	FF	77R37	DRN	63MS4	79	563
0.68	2039	17900						
0.78	1759	17900						
0.84	1639	17900						
0.96	1433	17900	FA	77R37	DRN	63M4	65	563
1.0	1343	17900	FAF	77R37	DRN	63M4	72	563
1.2	1185	17900	F	77R37	DRN	63M4	69	563
1.3	1051	17900	FF	77R37	DRN	63M4	80	563
1.6	893	17900	FA	77R37	DRN	71MS4	66	563
			FAF	77R37	DRN	71MS4	72	563
			F	77R37	DRN	71MS4	69	563
			FF	77R37	DRN	71MS4	80	563
1.7	815	17900	FA	77R37	DRN	71MS4	65	563
			FAF	77R37	DRN	71MS4	72	563
			F	77R37	DRN	71MS4	69	563
			FF	77R37	DRN	71MS4	80	563
2.0	706	17900	FA	77R37	DRN	71M4	67	563
2.1	660	17900	FAF	77R37	DRN	71M4	73	563
2.5	571	17900	F	77R37	DRN	71M4	70	563
			FF	77R37	DRN	71M4	81	563
3.0	485	17900	FA	77R37	DRN	80MK4	69	563
3.3	433	17900	FAF	77R37	DRN	80MK4	75	563
3.9	370	17900	F	77R37	DRN	80MK4	73	563
4.1	346	17900	FF	77R37	DRN	80MK4	83	563
4.9	292	17900	FA	77R37	DRN	80M4	72	563
			FAF	77R37	DRN	80M4	79	563
			F	77R37	DRN	80M4	76	563
			FF	77R37	DRN	80M4	87	563

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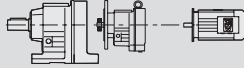



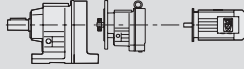

<b>M<sub>a max</sub> = 1500 Nm</b>							<b>m</b>	
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>				<b>kg</b>		
0.07	19180	15700						
0.08	17593	15700						
0.09	16128	15700						
0.09	14978	15700						
0.10	13731	15700						
0.11	12049	15700						
0.13	11035	15700						
0.14	9683	15700						
0.16	8464	15700	FA	77R37	DRN	63MS4	66	563
0.18	7520	15700	FAF	77R37	DRN	63MS4	72	563
0.21	6580	15700	F	77R37	DRN	63MS4	69	563
0.24	5808	15700	FF	77R37	DRN	63MS4	80	563
0.27	5026	15700						
0.31	4435	15700						
0.36	3832	15700						
0.41	3381	15700						
0.46	2978	15700						
0.53	2613	15700						
0.60	2284	15700						
0.68	2029	15700	FA	77R37	DRN	63M4	66	563
			FAF	77R37	DRN	63M4	73	563
			F	77R37	DRN	63M4	70	563
			FF	77R37	DRN	63M4	81	563
0.80	1728	15700	FA	77R37	DRN	63M4	66	563
			FAF	77R37	DRN	63M4	73	563
			F	77R37	DRN	63M4	70	563
			FF	77R37	DRN	63M4	81	563
0.89	1544	15700	FA	77R37	DRN	63M4	66	563
			FAF	77R37	DRN	63M4	73	563
			F	77R37	DRN	63M4	70	563
			FF	77R37	DRN	63M4	81	563
1.0	1354	15700	FA	77R37	DRN	71MS4	67	563
			FAF	77R37	DRN	71MS4	73	563
			F	77R37	DRN	71MS4	71	563
			FF	77R37	DRN	71MS4	81	563
1.2	1200	15700	FA	77R37	DRN	71MS4	67	563
			FAF	77R37	DRN	71MS4	73	563
			F	77R37	DRN	71MS4	71	563
			FF	77R37	DRN	71MS4	81	563
1.3	1053	15700	FA	77R37	DRN	71MS4	67	563
			FAF	77R37	DRN	71MS4	73	563
			F	77R37	DRN	71MS4	71	563
			FF	77R37	DRN	71MS4	81	563
1.6	910	15700	FA	77R37	DRN	71M4	68	563
			FAF	77R37	DRN	71M4	75	563
			F	77R37	DRN	71M4	72	563
			FF	77R37	DRN	71M4	82	563
1.8	810	15700	FA	77R37	DRN	71M4	68	563
			FAF	77R37	DRN	71M4	75	563
			F	77R37	DRN	71M4	72	563
			FF	77R37	DRN	71M4	82	563
2.0	710	15700	FA	77R37	DRN	71M4	68	563
			FAF	77R37	DRN	71M4	75	563
			F	77R37	DRN	71M4	72	563
			FF	77R37	DRN	71M4	82	563
2.3	615	15700	FA	77R37	DRN	80MK4	70	563
			FAF	77R37	DRN	80MK4	77	563
			F	77R37	DRN	80MK4	74	563
			FF	77R37	DRN	80MK4	85	563
2.7	538	15700	FA	77R37	DRN	80MK4	70	563
			FAF	77R37	DRN	80MK4	77	563
			F	77R37	DRN	80MK4	74	563
			FF	77R37	DRN	80MK4	85	563
3.0	480	15700	FA	77R37	DRN	80MK4	70	563
			FAF	77R37	DRN	80MK4	77	563
			F	77R37	DRN	80MK4	74	563
			FF	77R37	DRN	80MK4	85	563
3.5	413	15700	FA	77R37	DRN	80M4	74	563
			FAF	77R37	DRN	80M4	80	563
			F	77R37	DRN	80M4	77	563
			FF	77R37	DRN	80M4	88	563
3.9	367	15700	FA	77R37	DRN	80M4	74	563
			FAF	77R37	DRN	80M4	80	563
			F	77R37	DRN	80M4	77	563
			FF	77R37	DRN	80M4	88	563
4.5	323	15700	FA	77R37	DRN	90S4	80	563
			FAF	77R37	DRN	90S4	86	563
			F	77R37	DRN	90S4	83	563
			FF	77R37	DRN	90S4	94	563
5.2	280	15700	FA	77R37	DRN	90S4	80	563
			FAF	77R37	DRN	90S4	86	563
			F	77R37	DRN	90S4	83	563
			FF	77R37	DRN	90S4	94	563
5.9	247	15700	FA	77R37	DRN	90S4	80	563
			FAF	77R37	DRN	90S4	86	563
			F	77R37	DRN	90S4	83	563
			FF	77R37	DRN	90S4	94	563
6.6	221	15700	FA	77R37	DRN	90L4	83	563
			FAF	77R37	DRN	90L4	89	563
			F	77R37	DRN	90L4	86	563
			FF	77R37	DRN	90L4	97	563
7.3	199	15700	FA	77R37	DRN	90L4	83	563
			FAF	77R37	DRN	90L4	89	563
			F	77R37	DRN	90L4	86	563
			FF	77R37	DRN	90L4	97	563

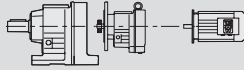

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## Parallel-shaft helical gearmotors

F..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 3000 Nm</b>								
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>	
0.06	23042	19800						
0.07	20462	19800						
0.08	18238	19800						
0.09	15877	19800						
0.10	14099	19800						
0.11	12205	19800	FA	87R57	DRN	63MS4	120	563
0.13	10433	19800	FAF	87R57	DRN	63MS4	130	563
0.15	9381	19800	F	87R57	DRN	63MS4	125	563
0.17	8142	19800	FF	87R57	DRN	63MS4	140	563
0.19	7100	19800						
0.22	6273	19800						
0.25	5510	19800						
0.28	4954	19800						
0.32	4245	19800	FA	87R57	DRN	63M4	120	563
0.37	3721	19800	FAF	87R57	DRN	63M4	130	563
			F	87R57	DRN	63M4	125	563
			FF	87R57	DRN	63M4	140	563
0.28	4952	19800	FA	87R57	DRN	63MS4	115	563
0.30	4562	19800	FAF	87R57	DRN	63MS4	130	563
			F	87R57	DRN	63MS4	120	563
			FF	87R57	DRN	63MS4	135	563
0.35	3919	19800	FA	87R57	DRN	63M4	115	563
0.39	3503	19800	FAF	87R57	DRN	63M4	130	563
0.43	3196	19800	F	87R57	DRN	63M4	120	563
0.48	2857	19800	FF	87R57	DRN	63M4	135	563
0.56	2524	19800	FA	87R57	DRN	71MS4	115	563
0.66	2134	19800	FAF	87R57	DRN	71MS4	130	563
			F	87R57	DRN	71MS4	120	563
			FF	87R57	DRN	71MS4	140	563
0.74	1913	19800	FA	87R57	DRN	71M4	120	563
0.82	1717	19800	FAF	87R57	DRN	71M4	130	563
0.96	1476	19800	F	87R57	DRN	71M4	125	563
			FF	87R57	DRN	71M4	140	563
1.1	1278	19800	FA	87R57	DRN	80MK4	120	563
1.3	1142	19800	FAF	87R57	DRN	80MK4	135	563
1.4	988	19800	F	87R57	DRN	80MK4	125	563
			FF	87R57	DRN	80MK4	140	563
1.6	883	19800	FA	87R57	DRN	80M4	125	563
1.9	748	19800	FAF	87R57	DRN	80M4	135	563
			F	87R57	DRN	80M4	130	563
			FF	87R57	DRN	80M4	145	563
0.42	3244	19800	FA	87R57	DRN	63M4	120	563
0.48	2881	19800	FAF	87R57	DRN	63M4	130	563
			F	87R57	DRN	63M4	125	563
			FF	87R57	DRN	63M4	140	563
0.55	2576	19800	FA	87R57	DRN	71MS4	120	563
0.64	2199	19800	FAF	87R57	DRN	71MS4	130	563
			F	87R57	DRN	71MS4	125	563
			FF	87R57	DRN	71MS4	140	563
0.73	1930	19800	FA	87R57	DRN	71M4	120	563
0.83	1709	19800	FAF	87R57	DRN	71M4	135	563
0.95	1493	19800	F	87R57	DRN	71M4	125	563
			FF	87R57	DRN	71M4	140	563
1.1	1300	19800	FA	87R57	DRN	80MK4	120	563
1.2	1148	19800	FAF	87R57	DRN	80MK4	135	563
1.4	1010	19800	F	87R57	DRN	80MK4	130	563
			FF	87R57	DRN	80MK4	145	563
1.6	887	19800	FA	87R57	DRN	80M4	125	563
1.9	780	19800	FAF	87R57	DRN	80M4	140	563
2.1	674	19800	F	87R57	DRN	80M4	130	563
			FF	87R57	DRN	80M4	145	563

<b>M<sub>a max</sub> = 3000 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
2.4	609	19800	FA	87R57	DRN	90S4	130	563	
2.8	515	19800	FAF	87R57	DRN	90S4	145	563	
3.2	452	19800	F	87R57	DRN	90S4	140	563	
			FF	87R57	DRN	90S4	155	563	
4.2	345	19800	FA	87R57	DRN	90L4	135	563	
			FAF	87R57	DRN	90L4	150	563	
			F	87R57	DRN	90L4	140	563	
			FF	87R57	DRN	90L4	155	563	
4.8	300	19800	FA	87R57	DRN	100LS4	140	563	
5.8	249	19800	FAF	87R57	DRN	100LS4	150	563	
			F	87R57	DRN	100LS4	145	563	
			FF	87R57	DRN	100LS4	160	563	
2.2	662	19800	FA	87R57	DRN	80M4	125	563	
			FAF	87R57	DRN	80M4	135	563	
			F	87R57	DRN	80M4	130	563	
			FF	87R57	DRN	80M4	145	563	
2.5	592	19800	FA	87R57	DRN	90S4	130	563	
2.8	519	19800	FAF	87R57	DRN	90S4	140	563	
3.1	468	19800	F	87R57	DRN	90S4	135	563	
			FF	87R57	DRN	90S4	150	563	
3.7	398	19800	FA	87R57	DRN	90L4	130	563	
4.2	350	19800	FAF	87R57	DRN	90L4	145	563	
			F	87R57	DRN	90L4	140	563	
			FF	87R57	DRN	90L4	155	563	
4.6	315	19800	FA	87R57	DRN	100LS4	135	563	
5.2	281	19800	FAF	87R57	DRN	100LS4	150	563	
6.0	240	19800	F	87R57	DRN	100LS4	140	563	
			FF	87R57	DRN	100LS4	155	563	
6.9	211	19800	FA	87R57	DRN	100L4	145	563	
7.5	193	19800	FAF	87R57	DRN	100L4	155	563	
			F	87R57	DRN	100L4	150	563	
			FF	87R57	DRN	100L4	165	563	

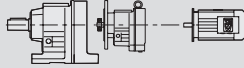

<b>M<sub>a max</sub> = 4300 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
0.05	29211	29900							
0.05	26911	29900							
0.06	23814	29900							
0.07	20813	29900							
0.08	18119	29900	FA	97R57	DRN	63MS4	185	563	
0.09	15472	29900	FAF	97R57	DRN	63MS4	205	563	
0.10	14022	29900	F	97R57	DRN	63MS4	190	563	
0.11	12324	29900	FF	97R57	DRN	63MS4	225	563	
0.13	10838	29900							
0.14	9576	29900							
0.17	8318	29900							
0.19	7328	29900							
0.21	6469	29900	FA	97R57	DRN	63M4	185	563	
0.24	5615	29900	FAF	97R57	DRN	63M4	205	563	
0.28	4961	29900	F	97R57	DRN	63M4	190	563	
0.32	4333	29900	FF	97R57	DRN	63M4	225	563	
0.22	6338	29900	FA	97R57	DRN	63MS4	180	563	
			FAF	97R57	DRN	63MS4	200	563	
			F	97R57	DRN	63MS4	185	563	
			FF	97R57	DRN	63MS4	220	563	
0.24	5680	29900	FA	97R57	DRN	63M4	180	563	
0.27	5016	29900	FAF	97R57	DRN	63M4	200	563	
0.31	4367	29900	F	97R57	DRN	63M4	185	563	
			FF	97R57	DRN	63M4	220	563	

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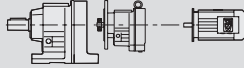

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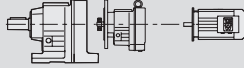

## Parallel-shaft helical gearmotors

F..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 4300 Nm</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>		
0.36	3914	29900	FA	97R57	DRN	71MS4	180	563	
0.42	3357	29900	FAF	97R57	DRN	71MS4	200	563	
0.47	3009	29900	F	97R57	DRN	71MS4	185	563	
			FF	97R57	DRN	71MS4	220	563	
0.58	2448	29900	FA	97R57	DRN	71M4	180	563	
0.64	2199	29900	FAF	97R57	DRN	71M4	200	563	
0.72	1971	29900	F	97R57	DRN	71M4	190	563	
			FF	97R57	DRN	71M4	220	563	
0.82	1741	29900	FA	97R57	DRN	80MK4	185	563	
0.98	1468	29900	FAF	97R57	DRN	80MK4	205	563	
1.1	1316	29900	F	97R57	DRN	80MK4	190	563	
			FF	97R57	DRN	80MK4	225	563	
1.2	1189	29900	FA	97R57	DRN	80M4	185	563	
1.4	1023	29900	FAF	97R57	DRN	80M4	210	563	
			F	97R57	DRN	80M4	195	563	
			FF	97R57	DRN	80M4	225	563	
0.36	3906	29900	FA	97R57	DRN	71MS4	185	563	
0.42	3352	29900	FAF	97R57	DRN	71MS4	205	563	
			F	97R57	DRN	71MS4	190	563	
			FF	97R57	DRN	71MS4	225	563	
0.49	2907	29900	FA	97R57	DRN	71M4	185	563	
0.55	2553	29900	FAF	97R57	DRN	71M4	205	563	
0.63	2245	29900	F	97R57	DRN	71M4	195	563	
0.72	1970	29900	FF	97R57	DRN	71M4	225	563	
0.83	1722	29900	FA	97R57	DRN	80MK4	190	563	
0.94	1527	29900	FAF	97R57	DRN	80MK4	210	563	
1.1	1327	29900	F	97R57	DRN	80MK4	195	563	
			FF	97R57	DRN	80MK4	230	563	
1.2	1171	29900	FA	97R57	DRN	80M4	190	563	
1.4	1022	29900	FAF	97R57	DRN	80M4	215	563	
			F	97R57	DRN	80M4	200	563	
			FF	97R57	DRN	80M4	230	563	
1.6	898	29900	FA	97R57	DRN	90S4	195	563	
1.9	784	29900	FAF	97R57	DRN	90S4	220	563	
2.1	690	29900	F	97R57	DRN	90S4	205	563	
			FF	97R57	DRN	90S4	240	563	
2.4	605	29900	FA	97R57	DRN	90L4	200	563	
2.8	529	29900	FAF	97R57	DRN	90L4	220	563	
			F	97R57	DRN	90L4	210	563	
			FF	97R57	DRN	90L4	240	563	
3.1	467	29900	FA	97R57	DRN	100LS4	205	563	
3.6	406	29900	FAF	97R57	DRN	100LS4	225	563	
4.0	363	29900	F	97R57	DRN	100LS4	210	563	
			FF	97R57	DRN	100LS4	245	563	
5.1	285	29900	FA	97R57	DRN	100L4	210	563	
6.0	245	29900	FAF	97R57	DRN	100L4	235	563	
			F	97R57	DRN	100L4	220	563	
			FF	97R57	DRN	100L4	250	563	
7.0	208	29900	FA	97R57	DRN	112M4	220	563	
7.5	195	29900	FAF	97R57	DRN	112M4	245	563	
			F	97R57	DRN	112M4	230	563	
			FF	97R57	DRN	112M4	260	563	
1.6	892	29900	FA	97R57	DRN	90S4	190	563	
1.9	760	29900	FAF	97R57	DRN	90S4	215	563	
2.2	667	29900	F	97R57	DRN	90S4	200	563	
			FF	97R57	DRN	90S4	230	563	
2.6	569	29900	FA	97R57	DRN	90L4	195	563	
2.9	510	29900	FAF	97R57	DRN	90L4	215	563	
3.1	473	29900	F	97R57	DRN	90L4	200	563	
			FF	97R57	DRN	90L4	235	563	
3.6	403	29900	FA	97R57	DRN	100LS4	200	563	
4.0	361	29900	FAF	97R57	DRN	100LS4	220	563	
4.6	317	29900	F	97R57	DRN	100LS4	205	563	
			FF	97R57	DRN	100LS4	240	563	

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<b>M<sub>a max</sub> = 4300 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
5.3	275	29900	FA	97R57	DRN	100L4	205	563
6.0	242	29900	FAF	97R57	DRN	100L4	225	563
			F	97R57	DRN	100L4	215	563
			FF	97R57	DRN	100L4	245	563

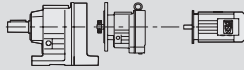

<b>M<sub>a max</sub> = 7680 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.05	25375	49800	FA	107R77	DRN	63MS4	275	563
0.06	21652	49800	FAF	107R77	DRN	63MS4	295	563
0.07	18933	49800	F	107R77	DRN	63MS4	290	563
0.08	16888	49800	FF	107R77	DRN	63MS4	320	563
0.09	14767	49800						
0.12	11348	49800	FA	107R77	DRN	63M4	275	563
0.14	10039	49800	FAF	107R77	DRN	63M4	295	563
0.16	8548	49800	F	107R77	DRN	63M4	290	563
0.18	7674	49800	FF	107R77	DRN	63M4	320	563
0.21	6767	49800	FA	107R77	DRN	71MS4	275	563
0.24	5954	49800	FAF	107R77	DRN	71MS4	295	563
			F	107R77	DRN	71MS4	295	563
			FF	107R77	DRN	71MS4	320	563
0.27	5223	49800	FA	107R77	DRN	71M4	275	563
0.31	4567	49800	FAF	107R77	DRN	71M4	300	563
0.36	3948	49800	F	107R77	DRN	71M4	295	563
			FF	107R77	DRN	71M4	320	563
0.41	3521	49800	FA	107R77	DRN	80MK4	280	563
			FAF	107R77	DRN	80MK4	300	563
			F	107R77	DRN	80MK4	295	563
			FF	107R77	DRN	80MK4	325	563
0.47	3037	49800	FA	107R77	DRN	80MK4	280	563
0.52	2756	49800	FAF	107R77	DRN	80MK4	300	563
0.61	2369	49800	F	107R77	DRN	80MK4	295	563
			FF	107R77	DRN	80MK4	325	563
0.70	2068	49800	FA	107R77	DRN	80M4	280	563
0.79	1826	49800	FAF	107R77	DRN	80M4	305	563
			F	107R77	DRN	80M4	300	563
			FF	107R77	DRN	80M4	325	563
0.91	1597	49800	FA	107R77	DRN	90S4	285	563
1.0	1401	49800	FAF	107R77	DRN	90S4	310	563
1.2	1243	49800	F	107R77	DRN	90S4	305	563
			FF	107R77	DRN	90S4	330	563
1.3	1087	49800	FA	107R77	DRN	90L4	290	563
1.5	950	49800	FAF	107R77	DRN	90L4	310	563
			F	107R77	DRN	90L4	305	563
			FF	107R77	DRN	90L4	335	563
1.7	834	49800	FA	107R77	DRN	100LS4	295	563
2.0	736	49800	FAF	107R77	DRN	100LS4	315	563
2.3	640	49800	F	107R77	DRN	100LS4	310	563
			FF	107R77	DRN	100LS4	340	563
2.6	560	49800	FA	107R77	DRN	100L4	300	563
3.0	489	49800	FAF	107R77	DRN	100L4	325	563
3.3	436	49800	F	107R77	DRN	100L4	320	563
			FF	107R77	DRN	100L4	345	563
4.0	370	49800	FA	107R77	DRN	112M4	310	563
4.4	333	49800	FAF	107R77	DRN	112M4	330	563
			F	107R77	DRN	112M4	325	563
			FF	107R77	DRN	112M4	355	563
5.0	291	49800	FA	107R77	DRN	132S4	320	563
5.7	255	49800	FAF	107R77	DRN	132S4	345	563
			F	107R77	DRN	132S4	340	563
			FF	107R77	DRN	132S4	365	563

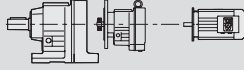

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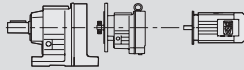

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## Parallel-shaft helical gearmotors

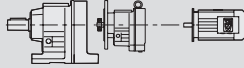

F..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 7680 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
6.5 7.7	225	49800	FA	107R77	DRN	132M4	340	563	
	190	49800	FAF	107R77	DRN	132M4	360	563	
			F	107R77	DRN	132M4	355	563	
			FF	107R77	DRN	132M4	385	563	

<b>M<sub>a max</sub> = 7840 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.26 0.31 0.35 0.37	5383	49400	FA	107R77	DRN	71M4	265	563	
	4593	49400	FAF	107R77	DRN	71M4	290	563	
	4016	49400	F	107R77	DRN	71M4	285	563	
	3815	49400	FF	107R77	DRN	71M4	310	563	
0.43 0.51 0.56	3347	49400	FA	107R77	DRN	80MK4	270	563	
	2839	49400	FAF	107R77	DRN	80MK4	290	563	
	2563	49400	F	107R77	DRN	80MK4	285	563	
			FF	107R77	DRN	80MK4	315	563	
0.64 0.68 0.79	2255	49400	FA	107R77	DRN	80M4	275	563	
	2129	49400	FAF	107R77	DRN	80M4	295	563	
	1813	49400	F	107R77	DRN	80M4	290	563	
			FF	107R77	DRN	80M4	315	563	
0.91 1.0 1.1 1.2	1590	49400	FA	107R77	DRN	90S4	280	563	
	1436	49400	FAF	107R77	DRN	90S4	300	563	
	1263	49400	F	107R77	DRN	90S4	295	563	
	1193	49400	FF	107R77	DRN	90S4	320	563	
1.4 1.6	1015	49400	FA	107R77	DRN	90L4	280	563	
	923	49400	FAF	107R77	DRN	90L4	300	563	
			F	107R77	DRN	90L4	300	563	
			FF	107R77	DRN	90L4	325	563	
1.8 2.1	800	49400	FA	107R77	DRN	100LS4	285	563	
	696	49400	FAF	107R77	DRN	100LS4	305	563	
			F	107R77	DRN	100LS4	300	563	
			FF	107R77	DRN	100LS4	330	563	
2.2 2.5	644	49400	FA	107R77	DRN	100LS4	285	563	
	591	49400	FAF	107R77	DRN	100LS4	305	563	
			F	107R77	DRN	100LS4	300	563	
			FF	107R77	DRN	100LS4	330	563	
2.8 3.0 3.4	518	49400	FA	107R77	DRN	100L4	290	563	
	491	49400	FAF	107R77	DRN	100L4	315	563	
	430	49400	F	107R77	DRN	100L4	310	563	
			FF	107R77	DRN	100L4	335	563	
3.8 4.3	387	49400	FA	107R77	DRN	112M4	300	563	
	340	49400	FAF	107R77	DRN	112M4	320	563	
			F	107R77	DRN	112M4	315	563	
			FF	107R77	DRN	112M4	345	563	
4.9 5.5	300	49400	FA	107R77	DRN	132S4	310	563	
	266	49400	FAF	107R77	DRN	132S4	335	563	
			F	107R77	DRN	132S4	330	563	
			FF	107R77	DRN	132S4	355	563	

<b>M<sub>a max</sub> = 12000 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.06 0.06	24478	90000	FA	127R77	DRN	63MS4	425	563	
	22323	90000	FAF	127R77	DRN	63MS4	465	563	
			F	127R77	DRN	63MS4	460	563	
			FF	127R77	DRN	63MS4	510	563	
0.07 0.08 0.09 0.11	19048	90000	FA	127R77	DRN	63M4	425	563	
	16656	90000	FAF	127R77	DRN	63M4	465	563	
	14722	90000	F	127R77	DRN	63M4	465	563	
	12912	90000	FF	127R77	DRN	63M4	510	563	

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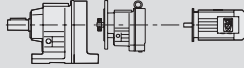

<b>M<sub>a max</sub> = 12000 Nm</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>		
<b>0.12</b>	11656	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>71MS4</b>	425	563	
<b>0.14</b>	10191	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>71MS4</b>	465	563	
<b>0.16</b>	8831	90000	<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>71MS4</b>	465	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>71MS4</b>	510	563	
<b>0.19</b>	7643	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	430	563	
<b>0.21</b>	6715	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	465	563	
<b>0.24</b>	5925	90000	<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	465	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>71M4</b>	510	563	
<b>0.28</b>	5153	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	430	563	
<b>0.32</b>	4533	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	470	563	
<b>0.37</b>	3926	90000	<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	465	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	510	563	
<b>0.42</b>	3454	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	435	563	
<b>0.48</b>	3031	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	470	563	
			<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	470	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	520	563	
<b>0.54</b>	2672	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	435	563	
			<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	470	563	
			<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	470	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>80M4</b>	510	563	
<b>0.62</b>	2357	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>90S4</b>	440	563	
<b>0.71</b>	2038	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>90S4</b>	475	563	
			<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>90S4</b>	475	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>90S4</b>	520	563	
<b>0.82</b>	1784	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	440	563	
<b>0.91</b>	1606	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	480	563	
<b>1.1</b>	1390	90000	<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	480	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	520	563	
<b>1.2</b>	1220	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	445	563	
<b>1.4</b>	1077	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	485	563	
<b>1.6</b>	930	90000	<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	480	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	530	563	
<b>1.8</b>	820	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	455	563	
<b>2.0</b>	727	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	490	563	
			<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	490	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	530	563	
<b>2.3</b>	648	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>112M4</b>	460	563	
<b>2.7</b>	549	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>112M4</b>	500	563	
<b>3.0</b>	495	90000	<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>112M4</b>	500	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>112M4</b>	540	563	
<b>3.4</b>	428	90000	<b>FA</b>	<b>127R77</b>	<b>DRN</b>	<b>132S4</b>	475	563	
<b>3.9</b>	376	90000	<b>FAF</b>	<b>127R77</b>	<b>DRN</b>	<b>132S4</b>	510	563	
			<b>F</b>	<b>127R77</b>	<b>DRN</b>	<b>132S4</b>	510	563	
			<b>FF</b>	<b>127R77</b>	<b>DRN</b>	<b>132S4</b>	550	563	
<b>3.0</b>	483	90000	<b>FA</b>	<b>127R87</b>	<b>DRN</b>	<b>132S4</b>	495	563	
<b>3.5</b>	418	90000	<b>FAF</b>	<b>127R87</b>	<b>DRN</b>	<b>132S4</b>	530	563	
<b>3.9</b>	374	90000	<b>F</b>	<b>127R87</b>	<b>DRN</b>	<b>132S4</b>	530	563	
			<b>FF</b>	<b>127R87</b>	<b>DRN</b>	<b>132S4</b>	570	563	
<b>4.7</b>	312	90000	<b>FA</b>	<b>127R87</b>	<b>DRN</b>	<b>132M4</b>	510	563	
<b>5.0</b>	293	90000	<b>FAF</b>	<b>127R87</b>	<b>DRN</b>	<b>132M4</b>	550	563	
			<b>F</b>	<b>127R87</b>	<b>DRN</b>	<b>132M4</b>	550	563	
			<b>FF</b>	<b>127R87</b>	<b>DRN</b>	<b>132M4</b>	590	563	
<b>5.7</b>	259	90000	<b>FA</b>	<b>127R87</b>	<b>DRN</b>	<b>132L4</b>	520	563	
<b>6.6</b>	223	90000	<b>FAF</b>	<b>127R87</b>	<b>DRN</b>	<b>132L4</b>	560	563	
			<b>F</b>	<b>127R87</b>	<b>DRN</b>	<b>132L4</b>	560	563	
			<b>FF</b>	<b>127R87</b>	<b>DRN</b>	<b>132L4</b>	600	563	
<b>7.5</b>	198	90000	<b>FA</b>	<b>127R87</b>	<b>DRN</b>	<b>160M4</b>	550	563	
			<b>FAF</b>	<b>127R87</b>	<b>DRN</b>	<b>160M4</b>	590	563	
			<b>F</b>	<b>127R87</b>	<b>DRN</b>	<b>160M4</b>	590	563	
			<b>FF</b>	<b>127R87</b>	<b>DRN</b>	<b>160M4</b>	630	563	
<b>8.9</b>	166	90000	<b>FA</b>	<b>127R87</b>	<b>DRN</b>	<b>160L4</b>	570	563	
			<b>FAF</b>	<b>127R87</b>	<b>DRN</b>	<b>160L4</b>	610	563	
			<b>F</b>	<b>127R87</b>	<b>DRN</b>	<b>160L4</b>	600	563	
			<b>FF</b>	<b>127R87</b>	<b>DRN</b>	<b>160L4</b>	650	563	

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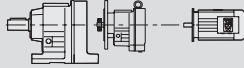

## Parallel-shaft helical gearmotors

F..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 20000 Nm</b>								
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>	
<b>0.05</b> <b>0.06</b>	31434	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	770	563
	26173	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	820	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	790	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	890	563
<b>0.06</b> <b>0.07</b> <b>0.08</b> <b>0.09</b>	23464	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	770	563
	20212	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	820	563
	17984	93800	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	790	563
	16358	93800	<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	890	563
<b>0.10</b> <b>0.12</b>	13751	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>71M4</b>	770	563
	12235	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>71M4</b>	830	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>71M4</b>	790	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>71M4</b>	890	563
<b>0.14</b> <b>0.16</b> <b>0.18</b>	10033	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>80M4</b>	770	563
	9021	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>80M4</b>	830	563
	8026	93800	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>80M4</b>	790	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>80M4</b>	900	563
<b>0.20</b>	7075	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	770	563
			<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	830	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	790	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	900	563
<b>0.23</b> <b>0.27</b>	6295	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>80M4</b>	770	563
	5404	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>80M4</b>	830	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>80M4</b>	790	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>80M4</b>	900	563
<b>0.30</b> <b>0.35</b>	4831	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	780	563
	4130	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	840	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	800	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	900	563
<b>0.40</b> <b>0.45</b>	3607	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	780	563
	3210	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	840	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	810	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	910	563
<b>0.53</b>	2780	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	780	563
			<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	840	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	800	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	910	563
<b>1.0</b>	1441	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>100L4</b>	790	563
			<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>100L4</b>	850	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>100L4</b>	810	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>100L4</b>	920	563
<b>0.60</b>	2427	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	780	563
			<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	840	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	800	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	900	563
<b>0.66</b> <b>0.75</b> <b>0.87</b>	2185	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	780	563
	1944	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	840	563
	1674	93800	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	800	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	910	563
<b>1.1</b> <b>1.2</b>	1308	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>100L4</b>	790	563
	1169	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>100L4</b>	850	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>100L4</b>	810	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>100L4</b>	920	563
<b>1.5</b> <b>1.7</b>	953	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>112M4</b>	800	563
	845	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>112M4</b>	860	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>112M4</b>	820	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>112M4</b>	920	563
<b>1.9</b> <b>2.1</b>	764	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>132S4</b>	810	563
	680	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>132S4</b>	870	563
			<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>132S4</b>	830	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>132S4</b>	940	563
<b>2.5</b> <b>2.9</b> <b>3.3</b>	576	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>132M4</b>	830	563
	503	93800	<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>132M4</b>	890	563
	446	93800	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>132M4</b>	850	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>132M4</b>	950	563

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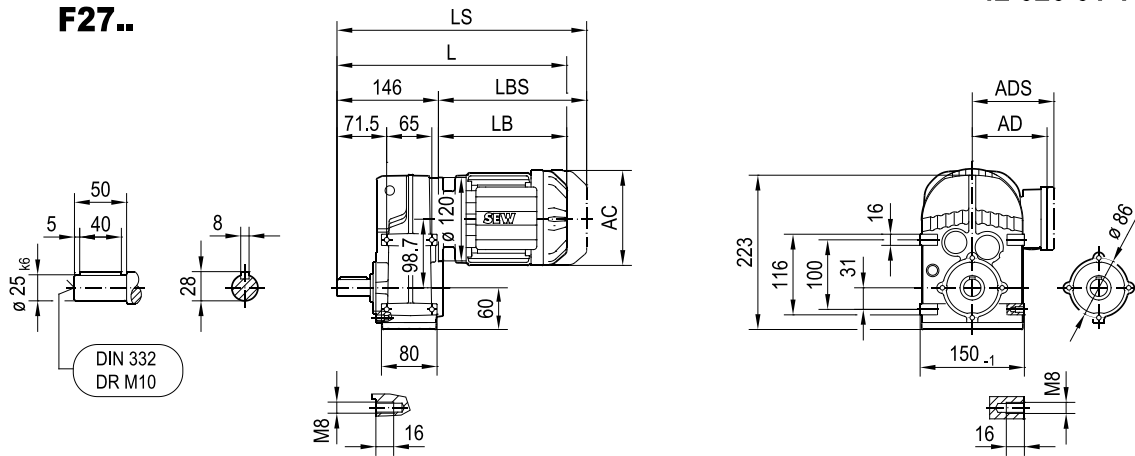


<b>M<sub>a max</sub> = 20000 Nm</b>								
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>	
<b>4.2</b> <b>4.9</b>	353	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>160M4</b>	870	563
			<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>160M4</b>	930	563
	302	93800	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>160M4</b>	890	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>160M4</b>	1000	563
<b>5.4</b> <b>6.4</b>	273	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>160L4</b>	880	563
			<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>160L4</b>	940	563
	232	93800	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>160L4</b>	900	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>160L4</b>	1010	563
<b>7.3</b> <b>7.5</b>	202	93800	<b>FA</b>	<b>157R97</b>	<b>DRN</b>	<b>180M4</b>	910	563
			<b>FAF</b>	<b>157R97</b>	<b>DRN</b>	<b>180M4</b>	960	563
	197	93800	<b>F</b>	<b>157R97</b>	<b>DRN</b>	<b>180M4</b>	930	563
			<b>FF</b>	<b>157R97</b>	<b>DRN</b>	<b>180M4</b>	1030	563

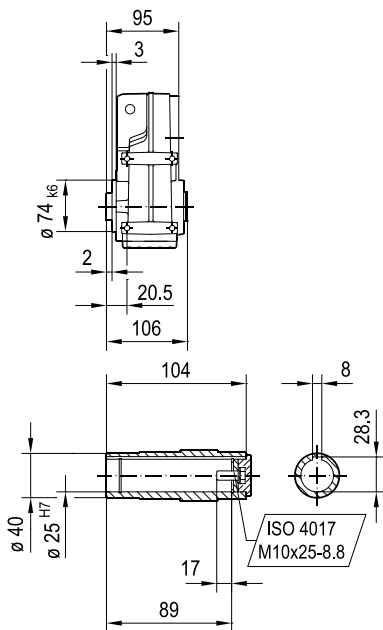
### 9.5 F..DRN.. dimension sheets in mm

42 020 01 14

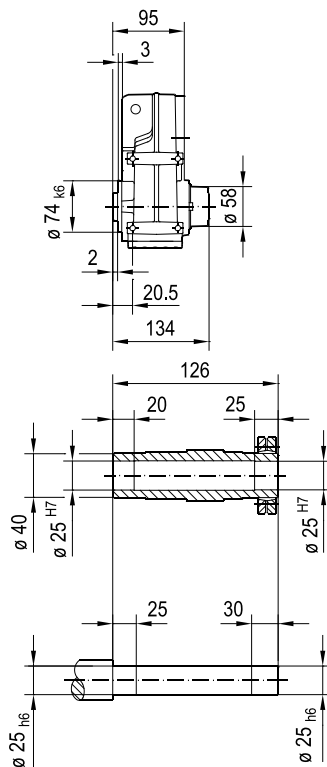
#### F27..



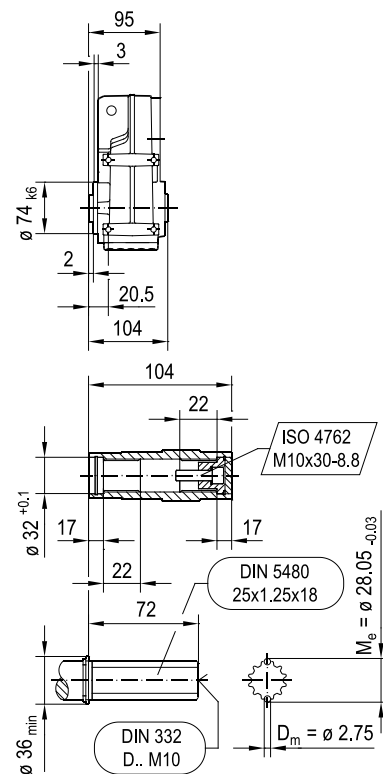
#### FA27B..



#### FH27B.. max. DR71..



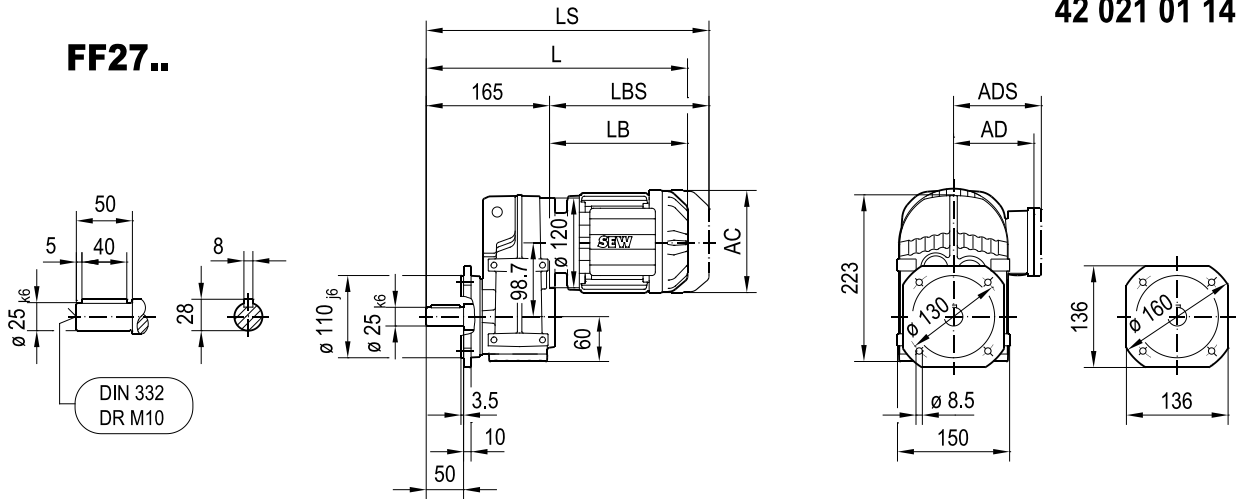
#### FV27B..



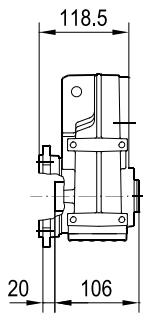
(-> 7.3)	DRN										
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AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	336	350	352	372	383	400	428	429	461	460	510
LS	392	406	419	439	464	481	509	523	555	554	604
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

42 021 01 14

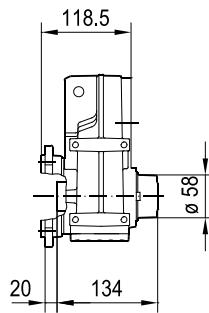
**FF27..**



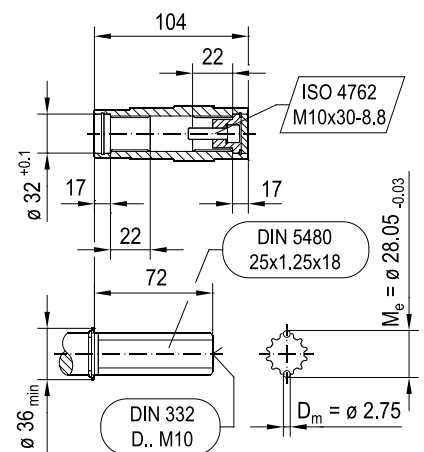
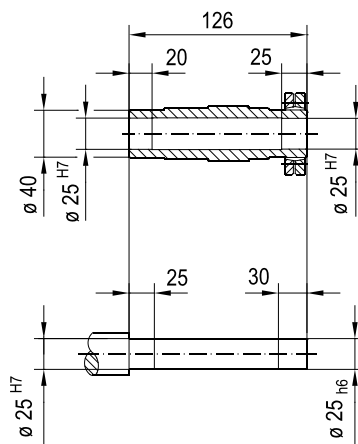
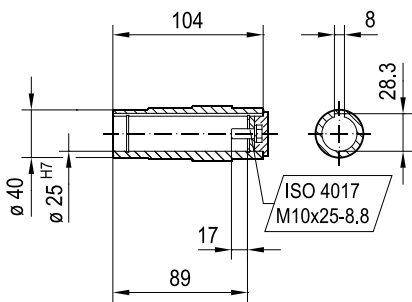
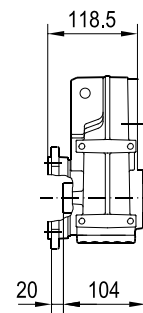
**FAF27..**



**FHF27..**  
max. DR71..



**FVF27..**

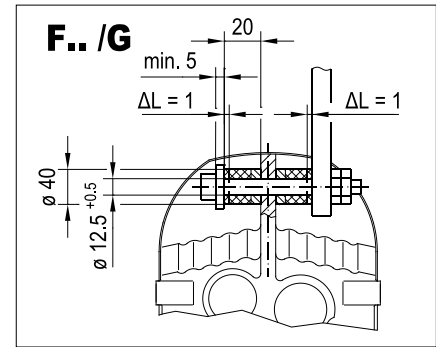
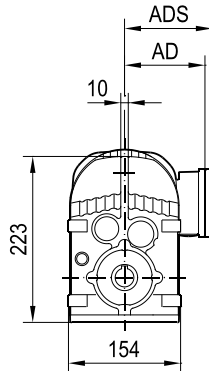
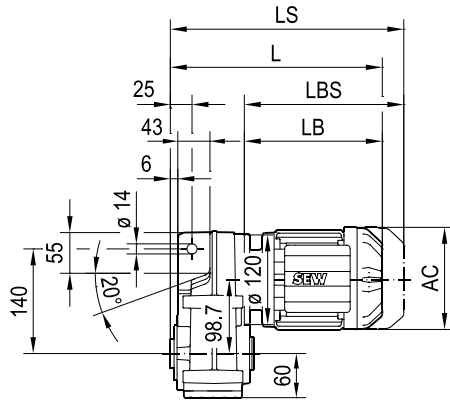


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	355	369	371	391	402	419	447	448	480	479	529
LS	411	425	438	458	483	500	528	542	574	573	623
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

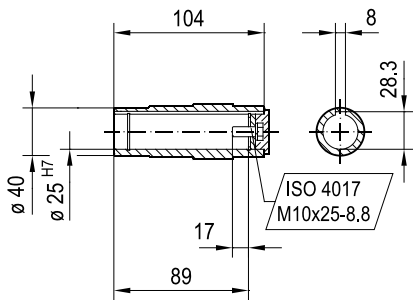
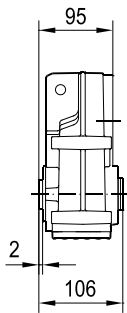
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42 022 01 14

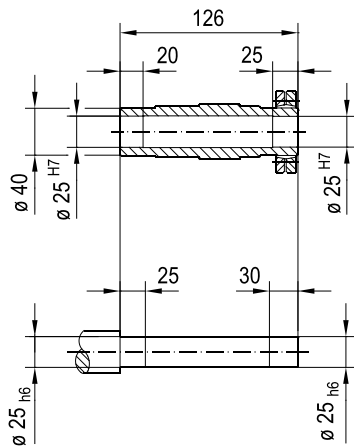
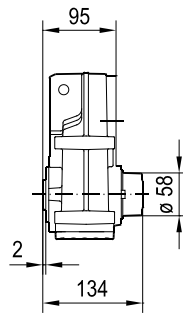
### FA27..



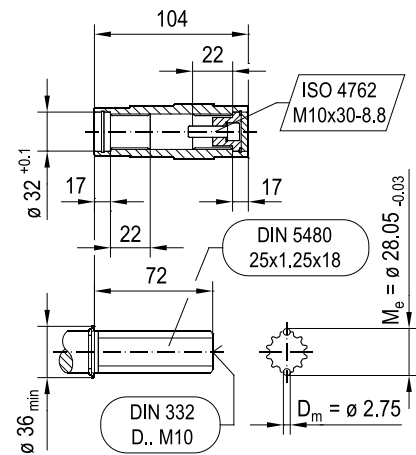
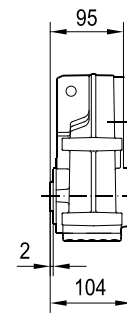
### FA27..



### FH27.. max. DR71..



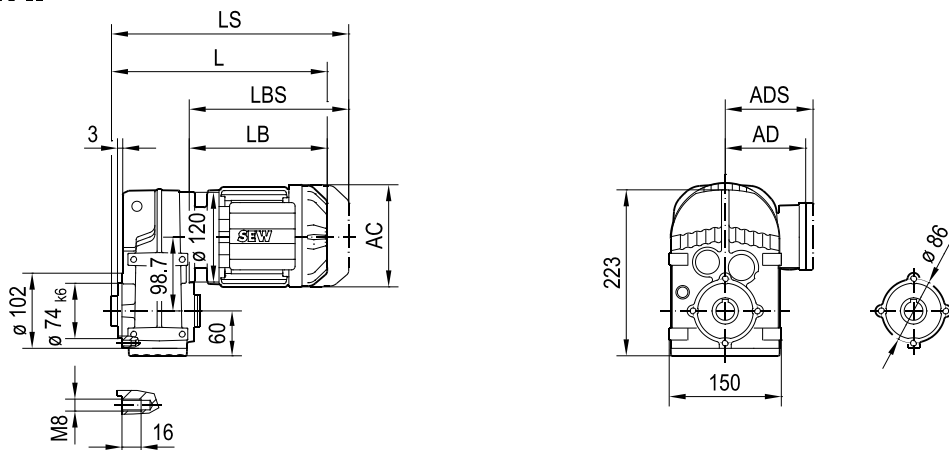
### FV27..



(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	285	299	301	321	332	349	377	378	410	409	459
LS	341	355	368	388	413	430	458	472	504	503	553
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

**FAZ27..**

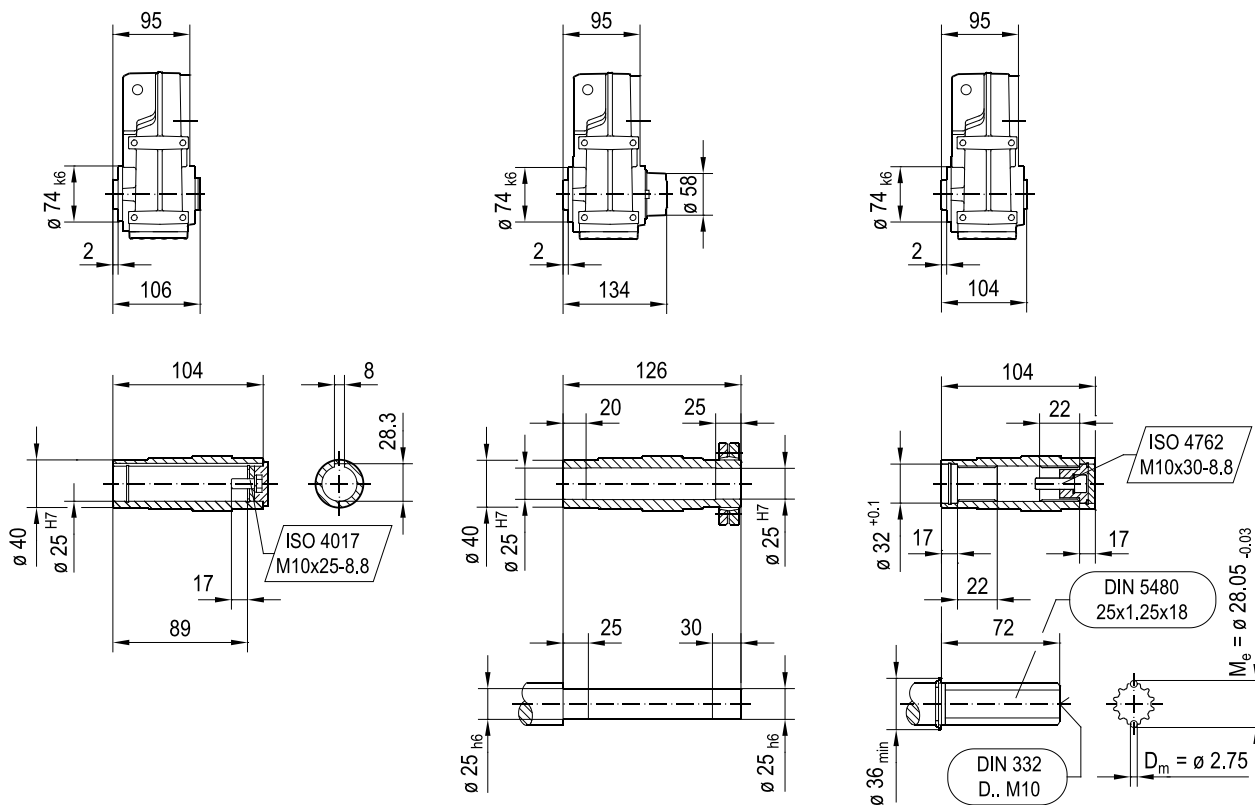
42 023 01 14



**FAZ27..**

**FHZ27..**  
max. DR71..

**FVZ27..**

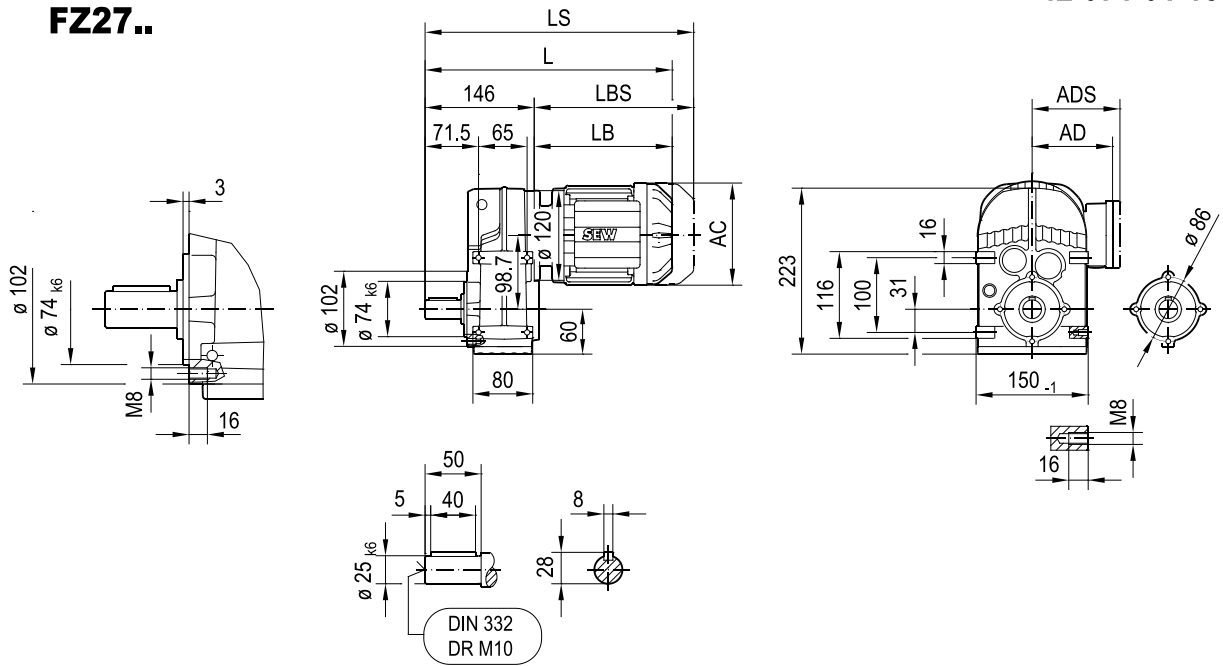


(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
<b>AC</b>	115	115	139	139	156	156	156	179	179	197	197
<b>AD</b>	98	98	118	118	128	128	128	140	140	157	157
<b>ADS</b>	98	98	129	129	139	139	139	150	150	158	158
<b>L</b>	285	299	301	321	332	349	377	378	410	409	459
<b>LS</b>	341	355	368	388	413	430	458	472	504	503	553
<b>LB</b>	190	204	206	226	237	254	282	283	315	314	364
<b>LBS</b>	246	260	273	293	318	335	363	377	409	408	458

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42 071 01 15

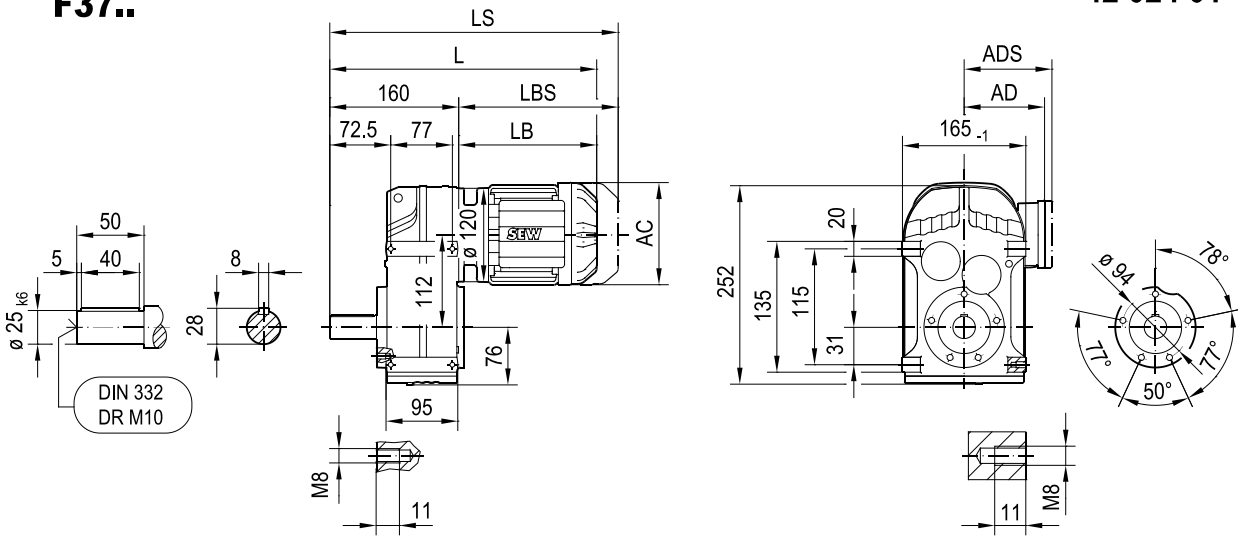
**FZ27..**



( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	336	350	352	372	383	400	428	429	461	460	510
LS	392	406	419	439	464	481	509	523	555	554	604
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

**F37..**

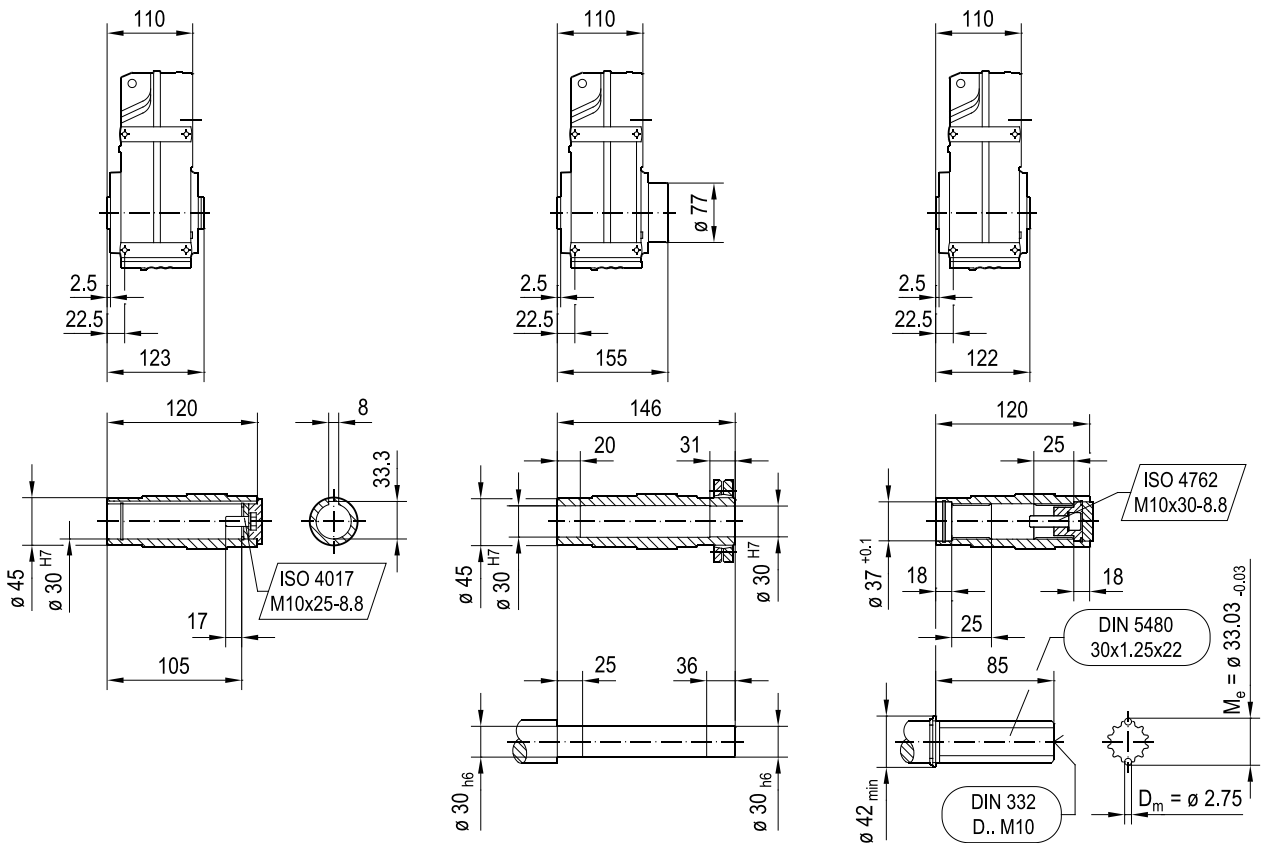
42 024 01 14



**FA37B..**

**FH37B..**  
max. DRN80M

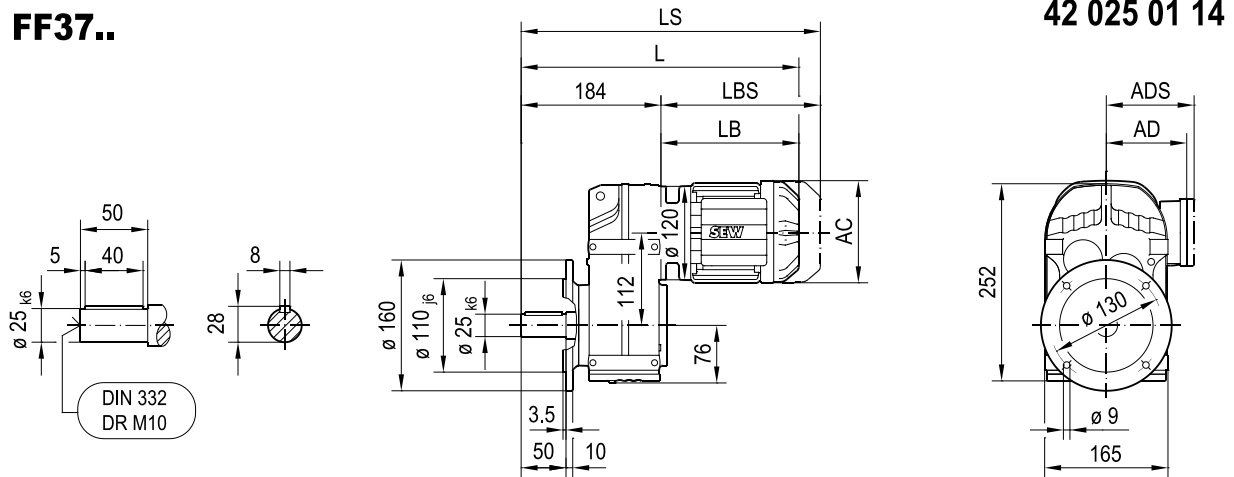
**FV37B..**



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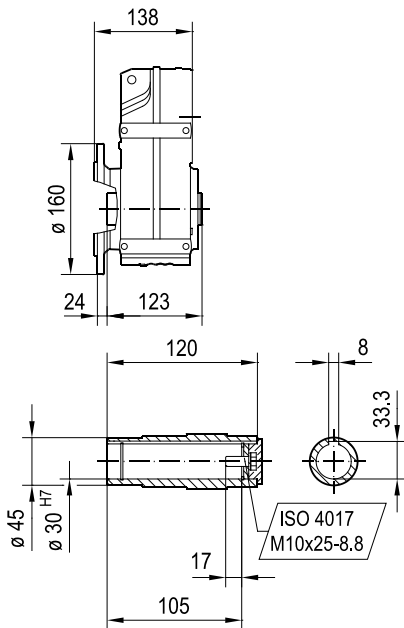
↳ 7.3	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/M
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	350	364	366	386	397	414	442	443	475	474	524
LS	406	420	433	453	478	495	523	537	569	568	618
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

### FF37..

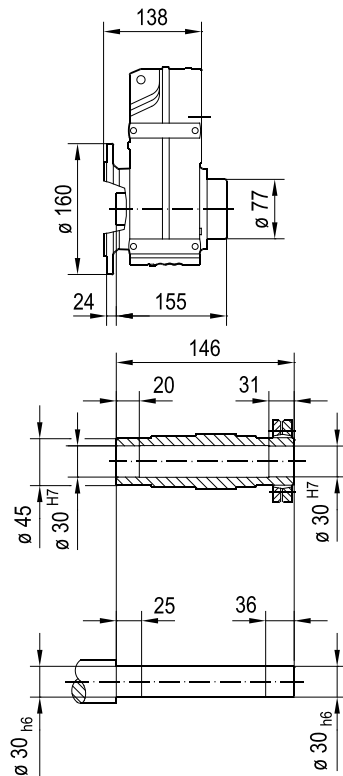


42 025 01 14

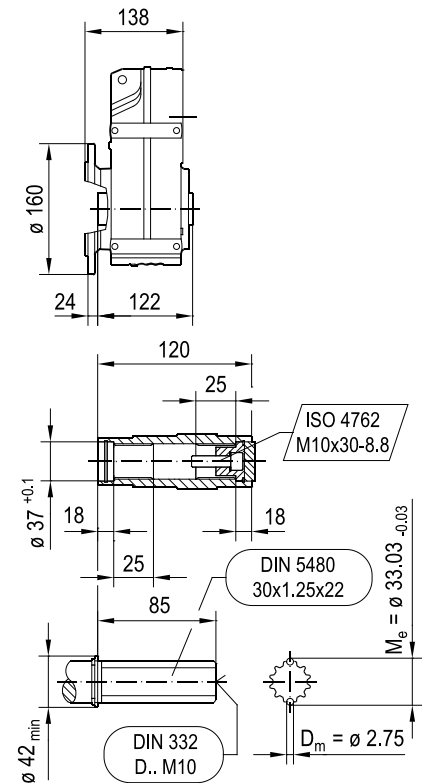
### FAF37..



### FHF37.. max. DRN80M



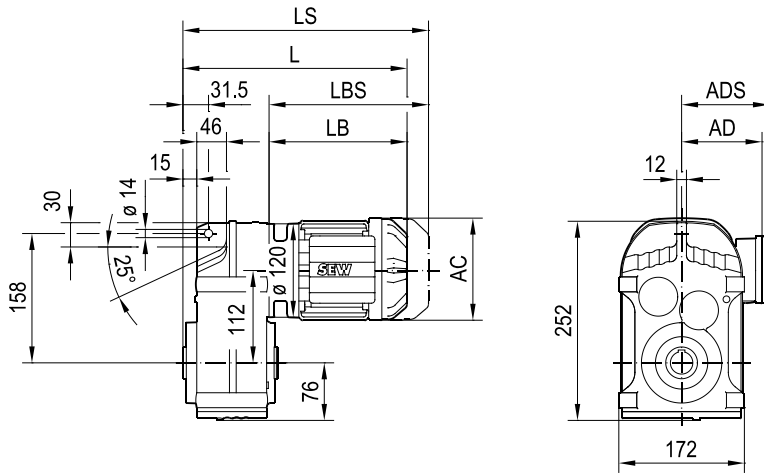
### FVF37..



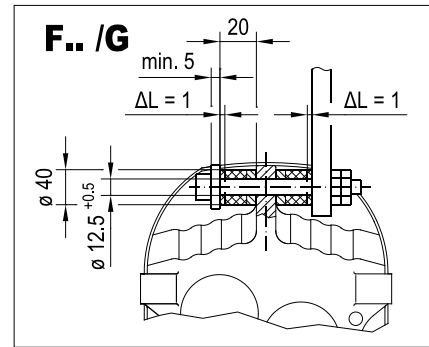
(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	374	388	390	410	421	438	466	467	499	498	548
LS	430	444	457	477	502	519	547	561	593	592	642
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458



**FA37..**



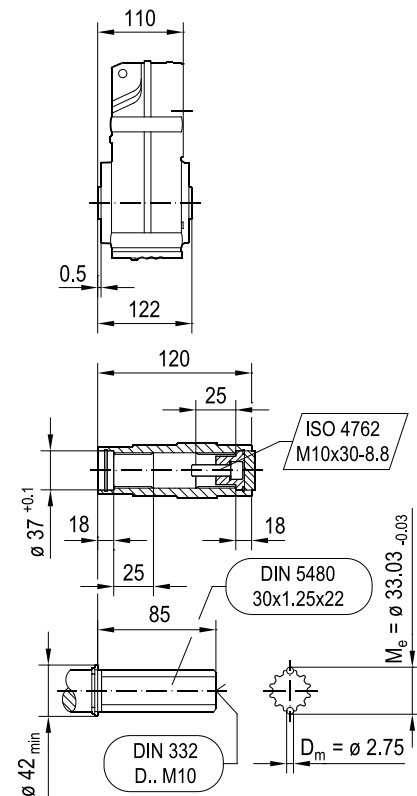
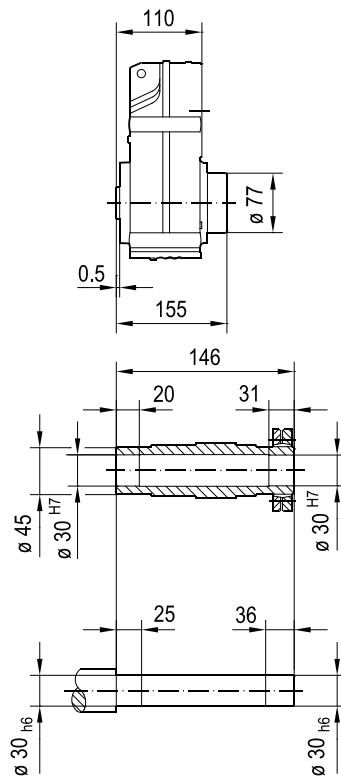
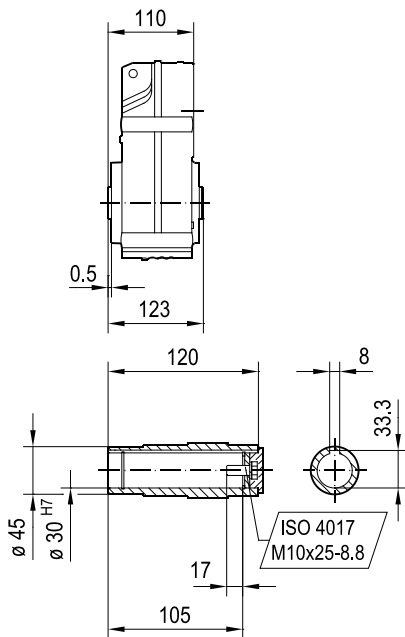
**42 026 01 14**



**FA37..**

**FH37..**  
max. DRN80M

**FV37..**

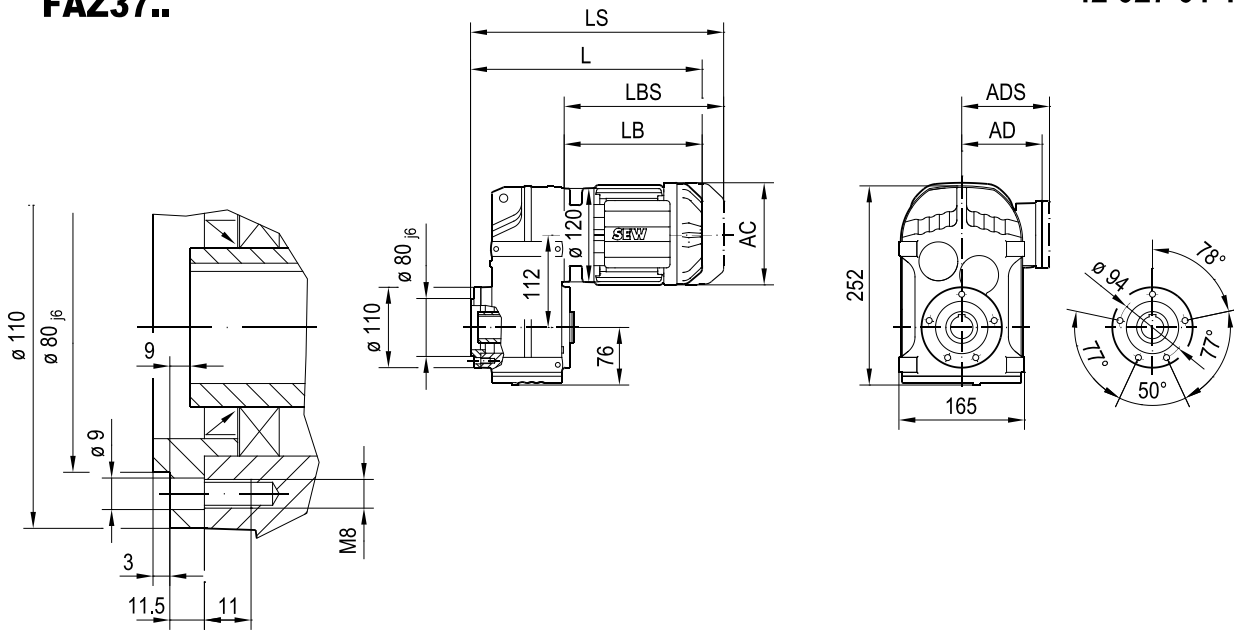


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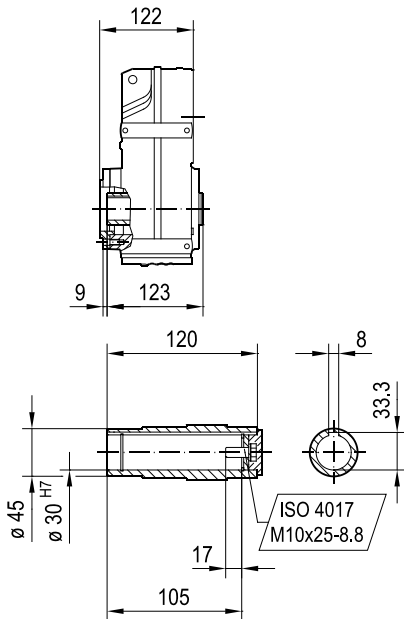
(\rightarrow 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/M
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	300	314	316	336	347	364	392	393	425	424	474
LS	356	370	383	403	428	445	473	487	519	518	568
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

42 027 01 14

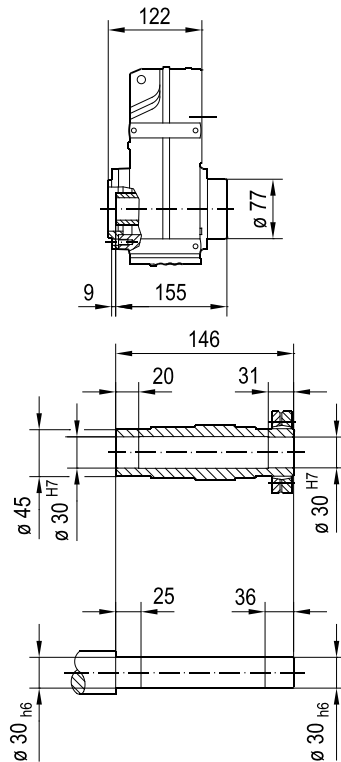
### FAZ37..



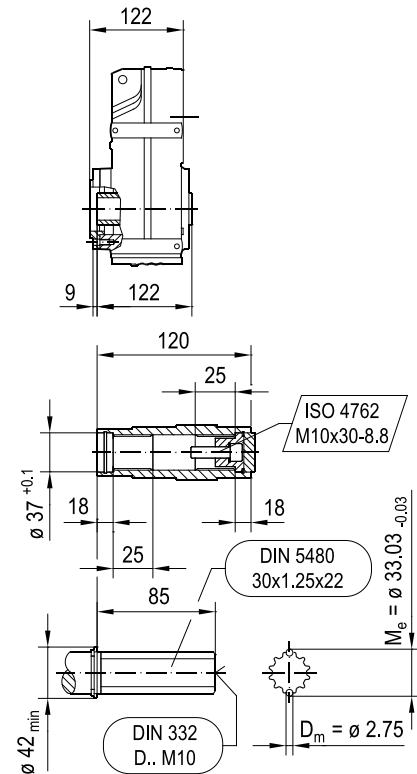
### FAZ37..



### FHZ37.. max. DRN80M



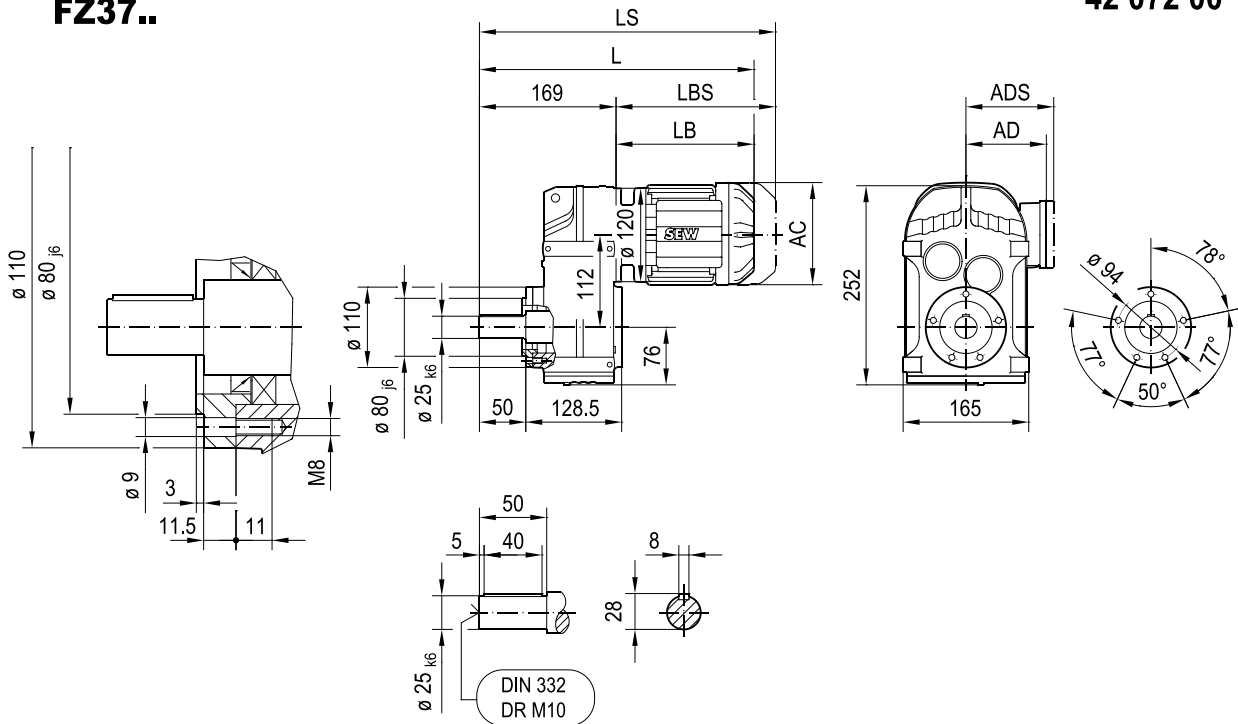
### FVZ37..



( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	312	326	328	348	359	376	404	405	437	436	486
LS	368	382	395	415	440	457	485	499	531	530	580
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

FZ37..

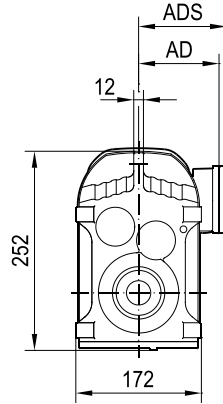
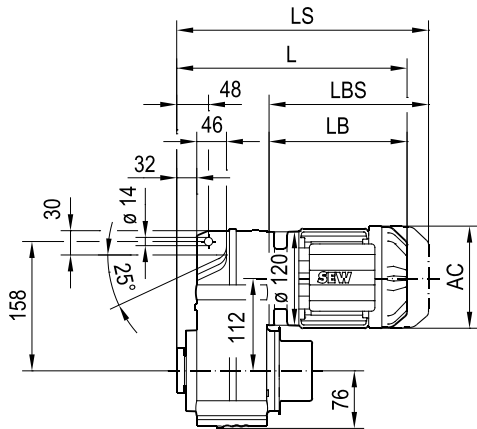
42 072 00 15



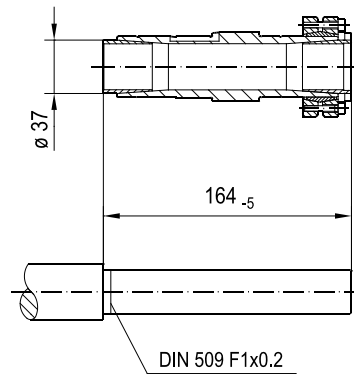
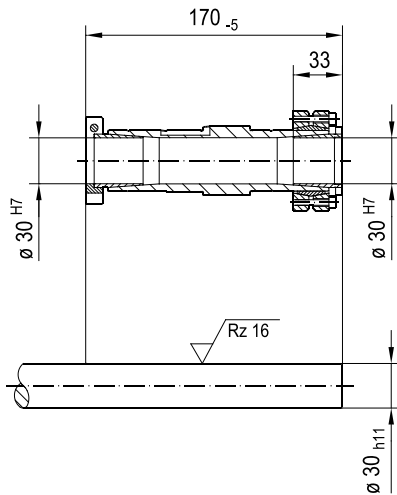
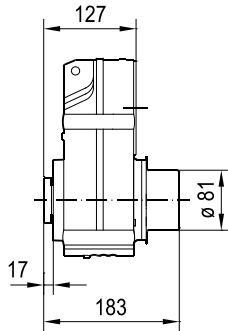
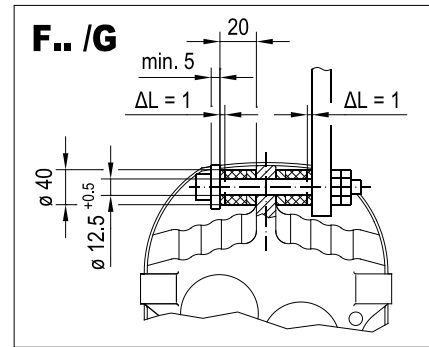
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(→  7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	359	373	375	395	406	423	451	452	484	483	533
LS	415	429	442	462	487	504	532	546	578	577	627
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

### FT37..



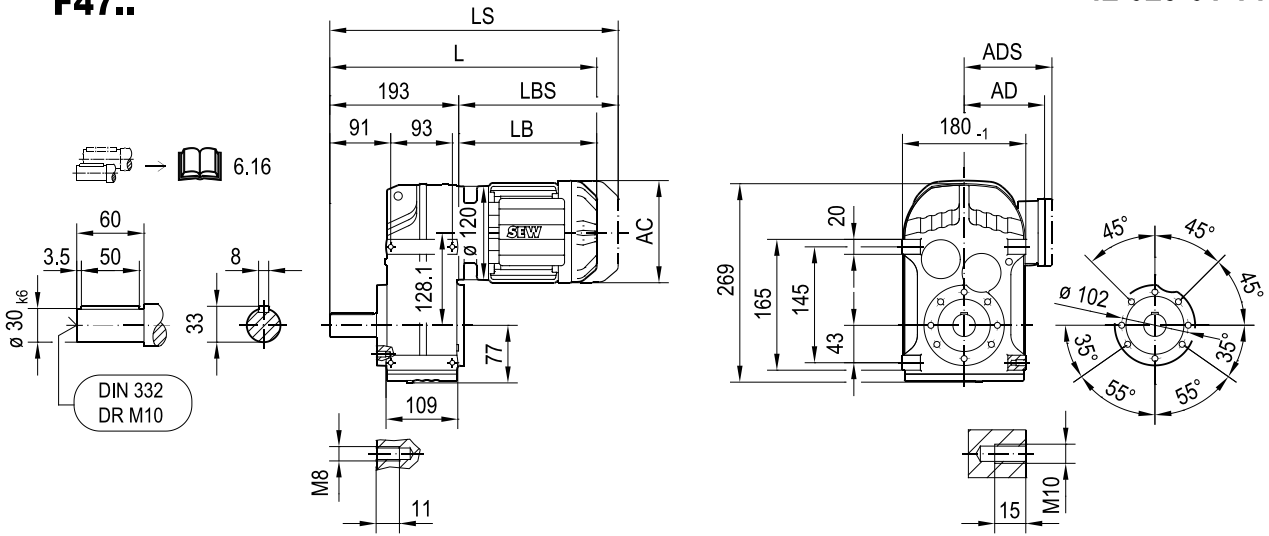
42 028 01 14



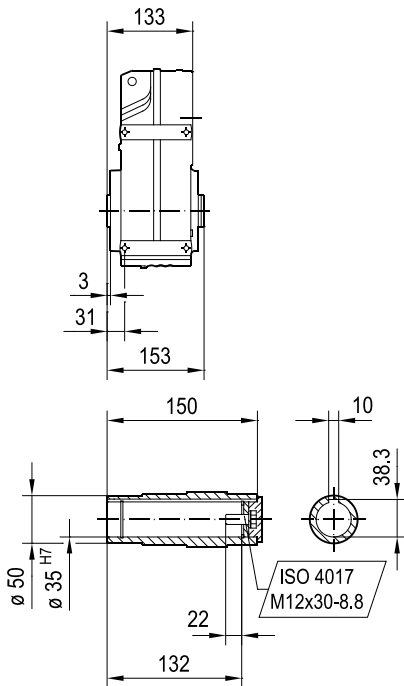
(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MS			
AC	115	115	139	139	156			
AD	98	98	118	118	128			
ADS	98	98	129	129	139			
L	317	331	333	353	381			
LS	373	387	400	420	462			
LB	190	204	206	226	254			
LBS	246	260	273	293	335			

42 029 01 14

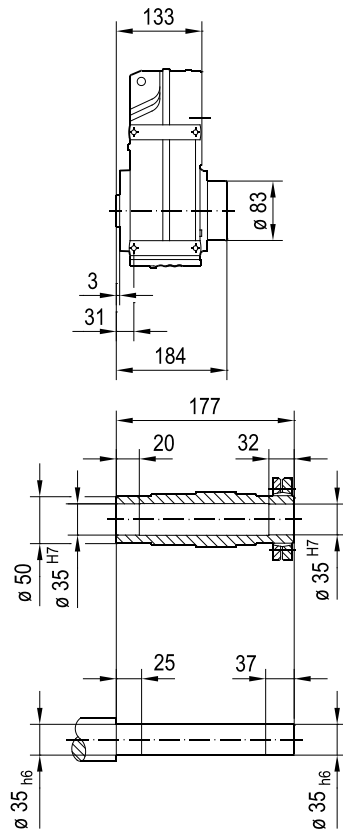
**F47..**



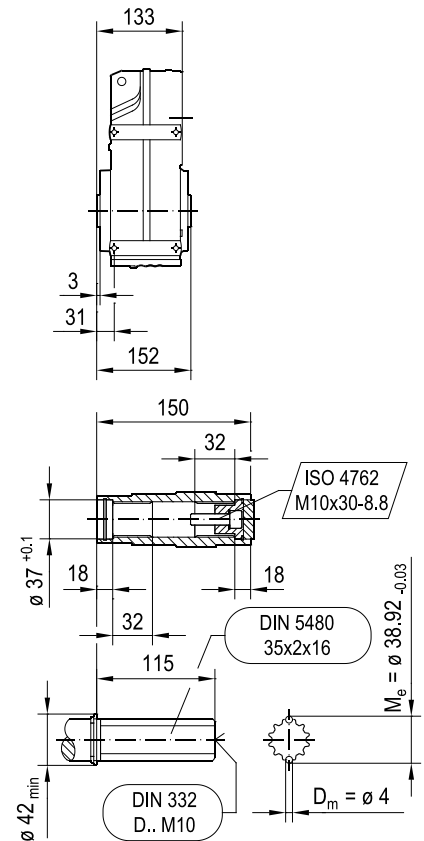
**FA47B..**



**FH47B..**



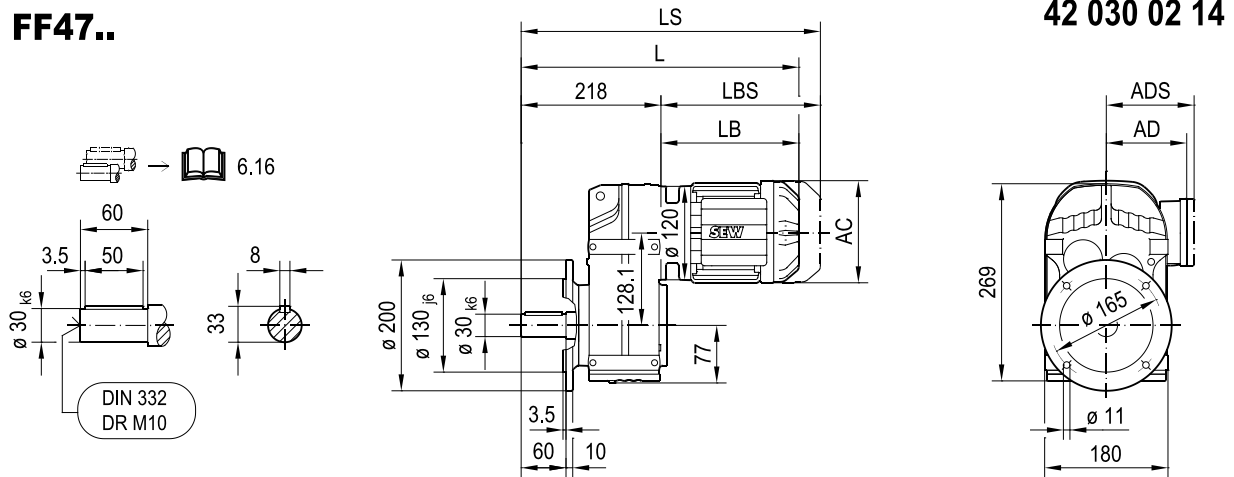
**FV47B..**



(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	383	397	399	419	430	447	475	476	508	507	557
LS	439	453	466	486	511	528	556	570	602	601	651
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

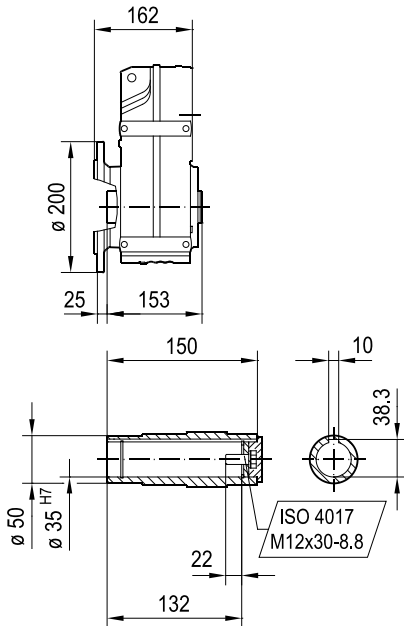
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### FF47..

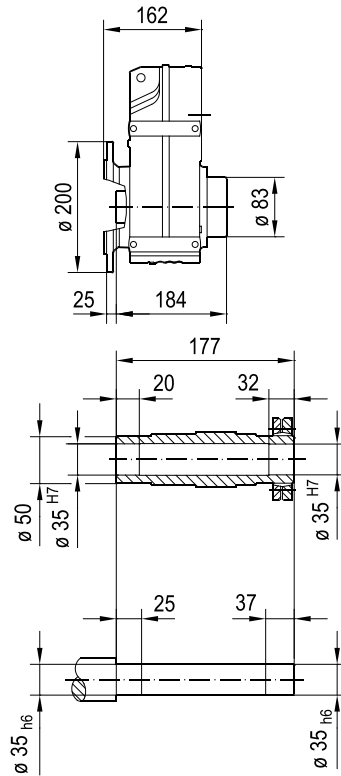


42 030 02 14

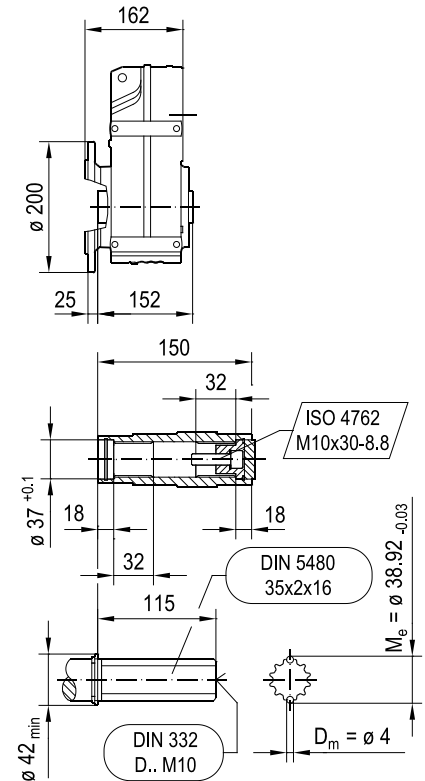
### FAF47..



### FHF47..



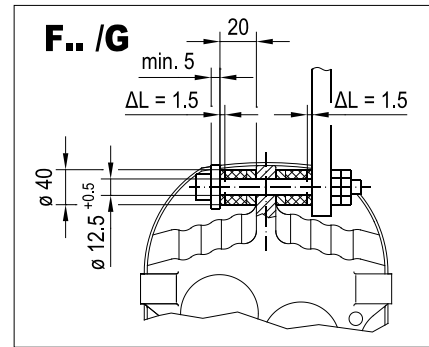
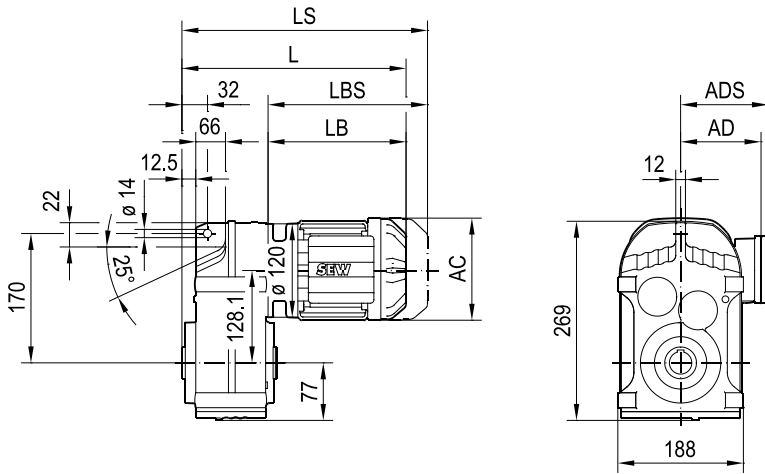
### FVF47..



(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	408	422	424	444	455	472	500	501	533	532	582
LS	464	478	491	511	536	553	581	595	627	626	676
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

**FA47..**

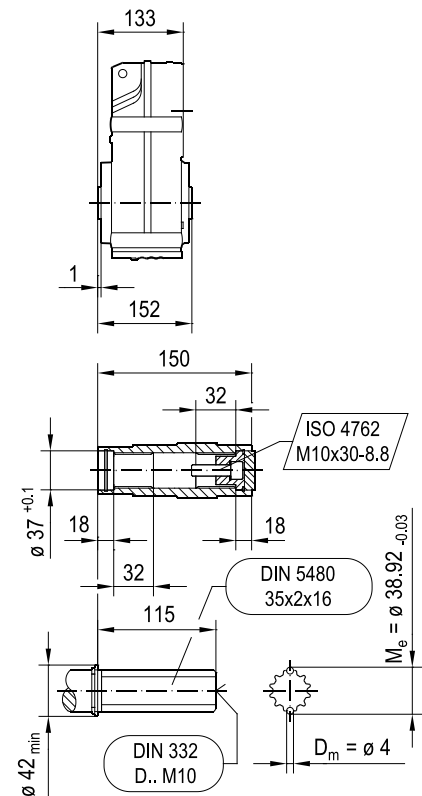
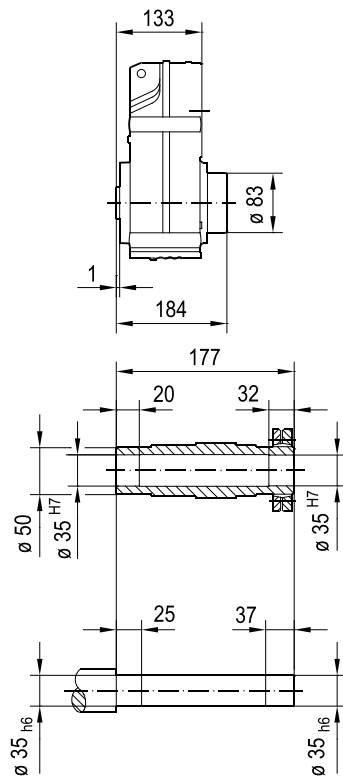
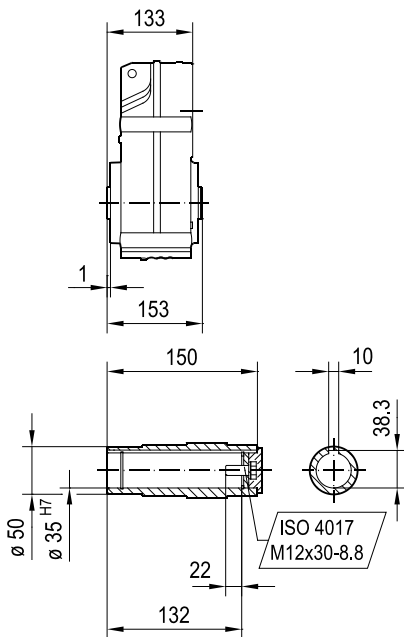
42 031 00 14



**FA47..**

**FH47..**

**FV47..**

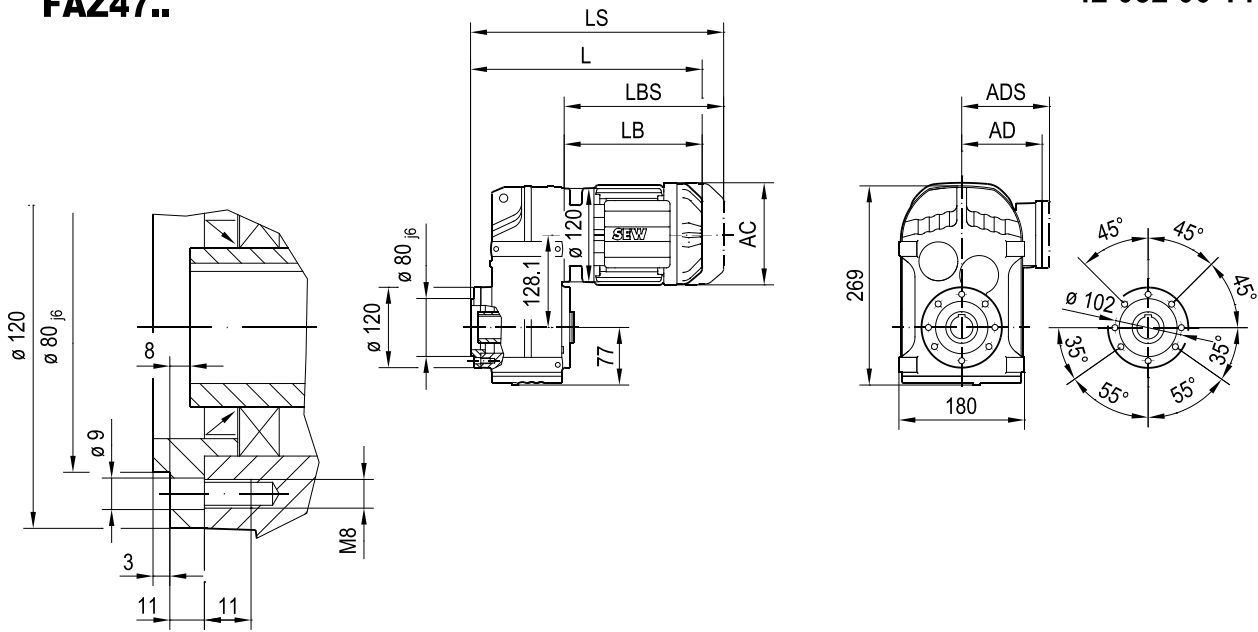


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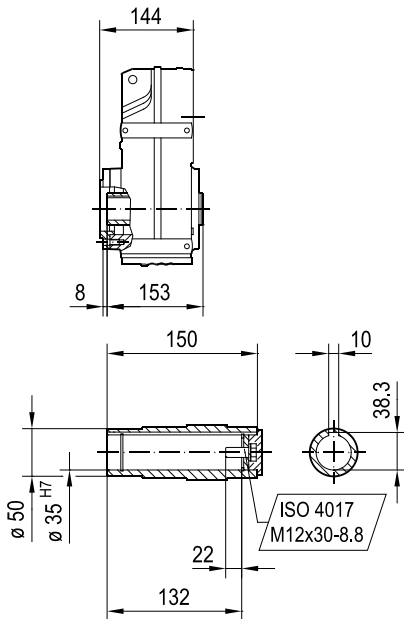
(→  7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	323	337	339	359	370	387	415	416	448	447	497
LS	379	393	406	426	451	468	496	510	542	541	591
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

42 032 00 14

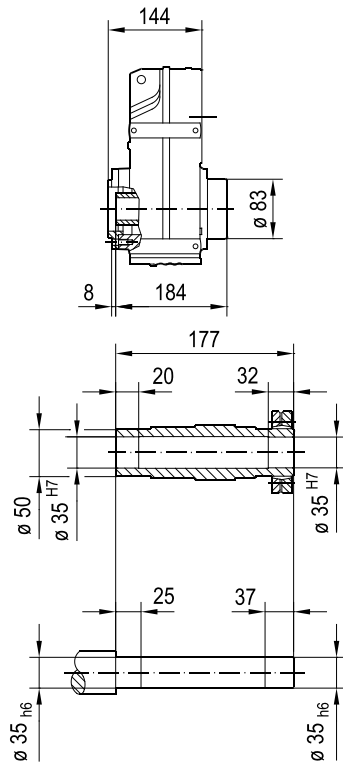
### FAZ47..



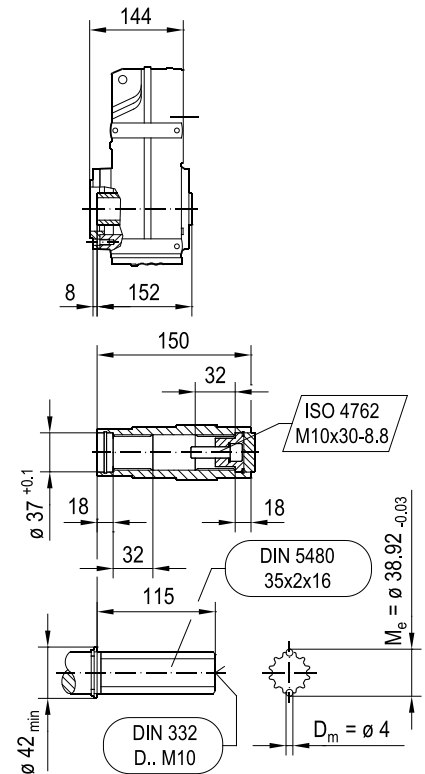
### FAZ47..



### FHZ47..



### FVZ47..

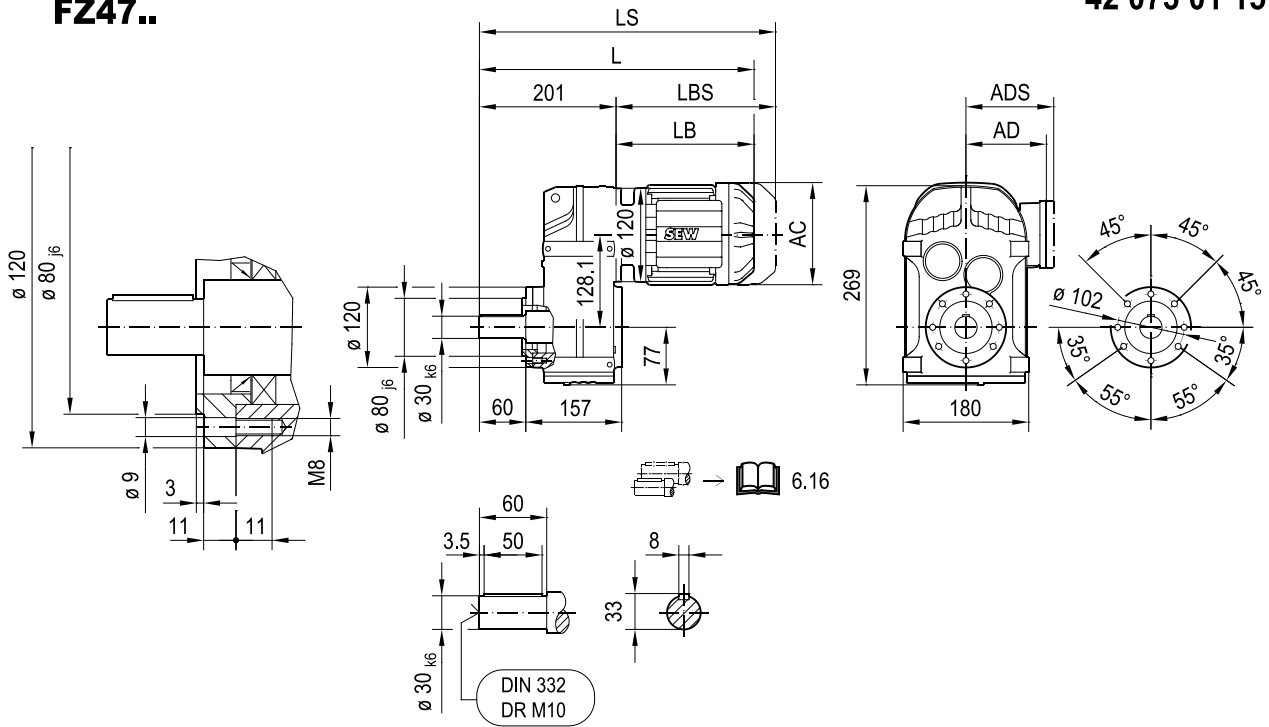


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	334	348	350	370	381	398	426	427	459	458	508
LS	390	404	417	437	462	479	507	521	553	552	602
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458



FZ47..

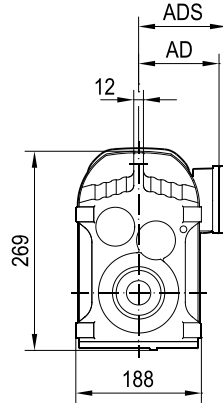
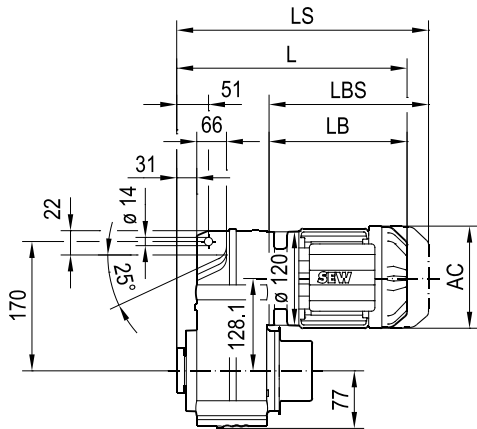
42 073 01 15



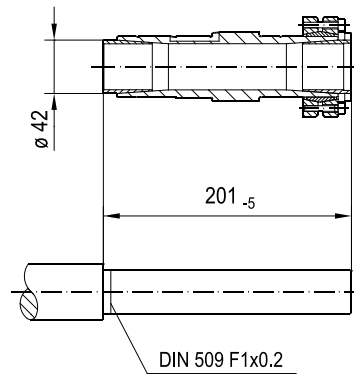
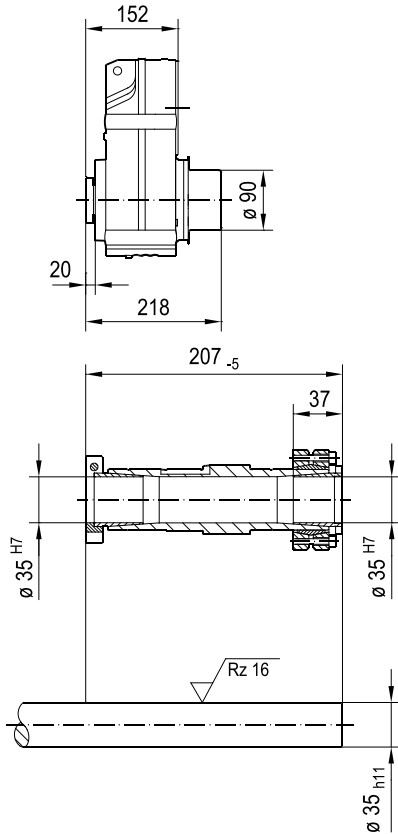
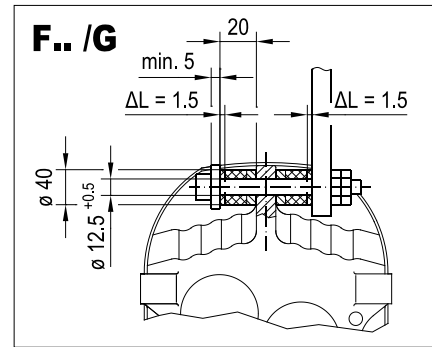
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(> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	391	405	407	427	438	455	483	484	516	515	565
LS	447	461	474	494	519	536	564	578	610	609	659
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

### FT47..



### 42 033 01 14



(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MS			
AC	115	115	139	139	156			
AD	98	98	118	118	128			
ADS	98	98	129	129	139			
L	342	356	358	378	406			
LS	398	412	425	445	487			
LB	190	204	206	226	254			
LBS	246	260	273	293	335			



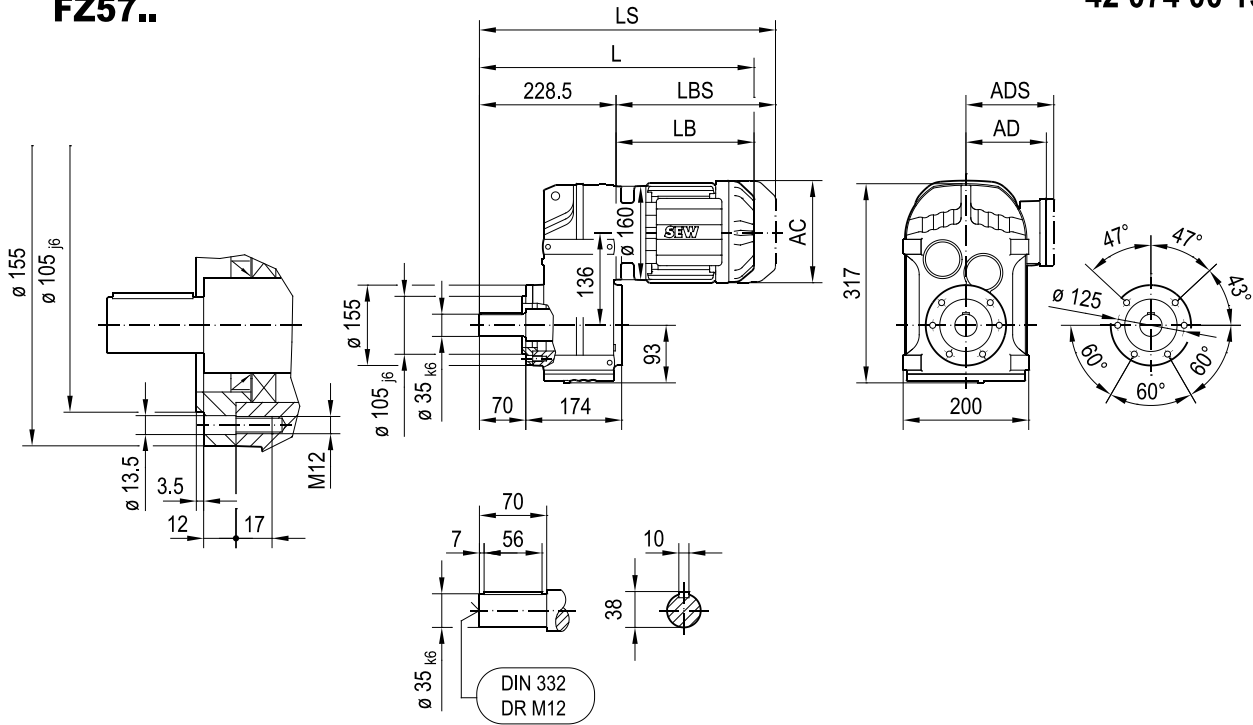






FZ57..

42 074 00 15

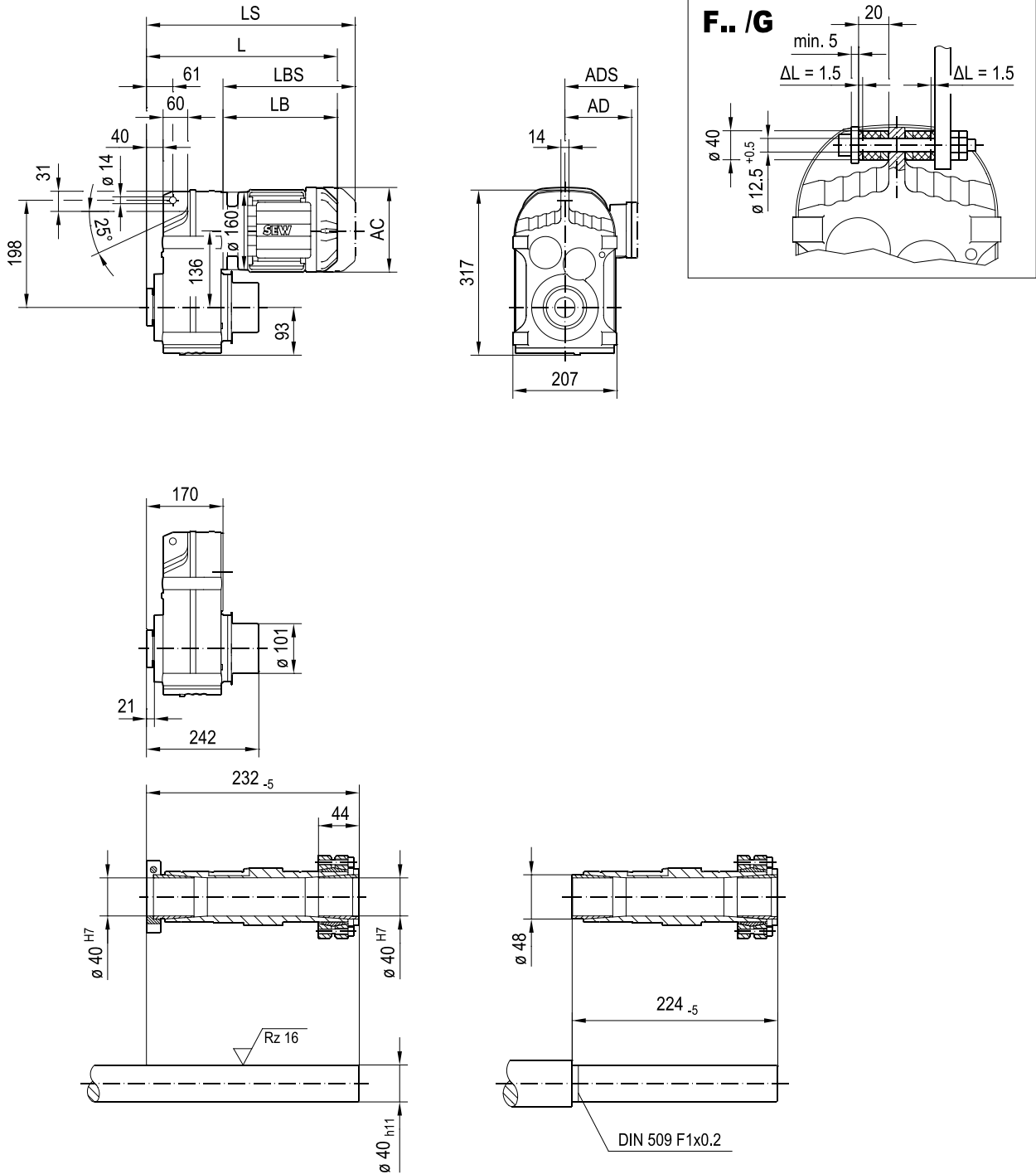


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(→  7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	412	426	428	448	459	476	504	505	537	534	584	615	669	687
LS	468	482	495	515	540	557	585	599	631	627	677	727	781	824
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

### FT57..

42 038 01 14

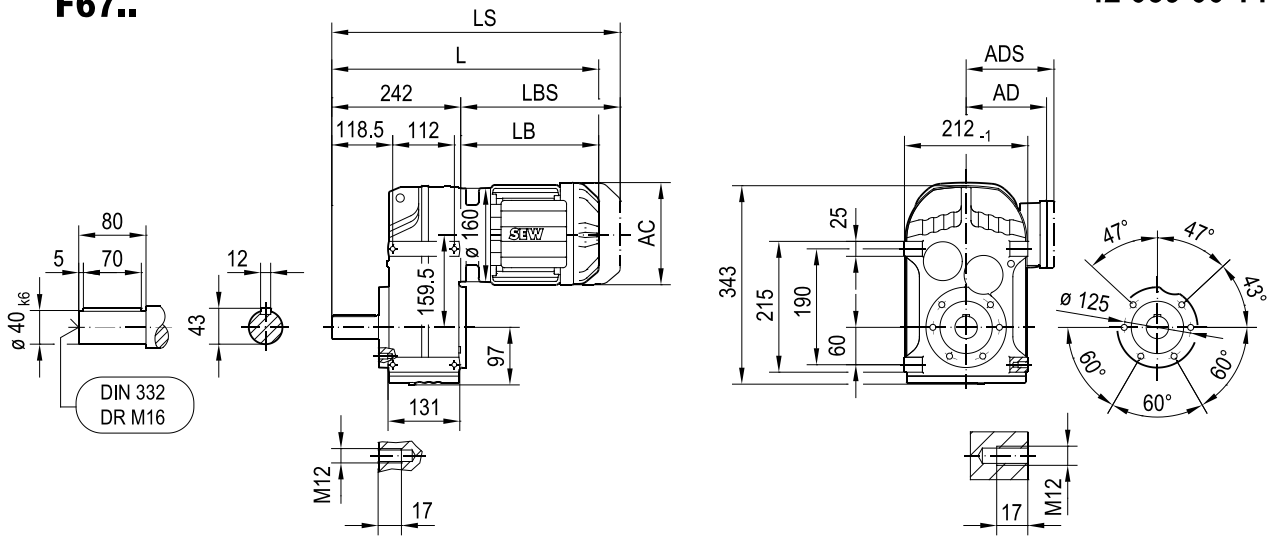


(-> 7.3)	DRN								
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	
AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	354	368	369	389	400	417	445	447	
LS	410	424	437	457	481	498	526	540	
LB	184	198	199	219	230	247	275	277	
LBS	240	254	267	287	311	328	356	370	

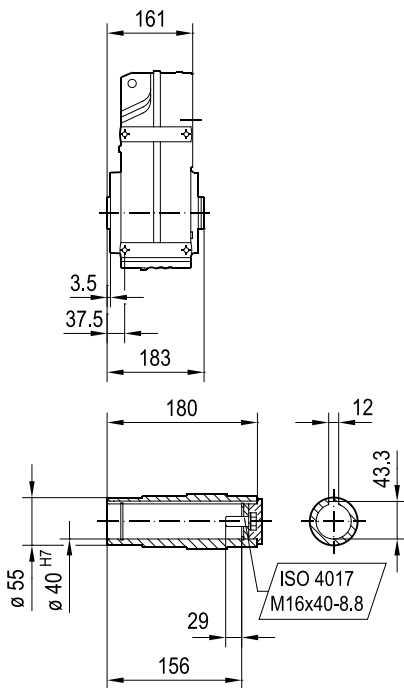


42 039 00 14

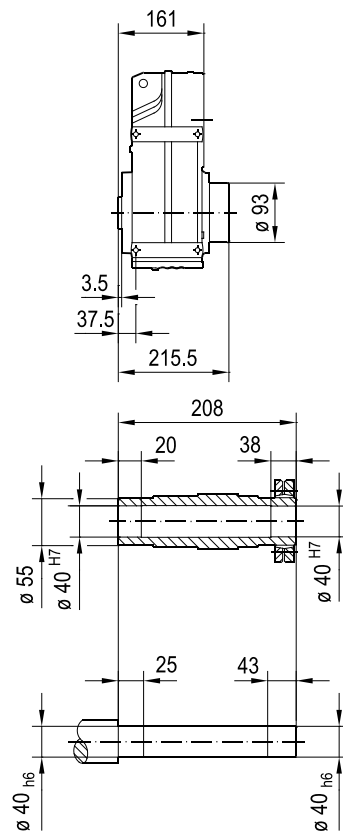
**F67..**



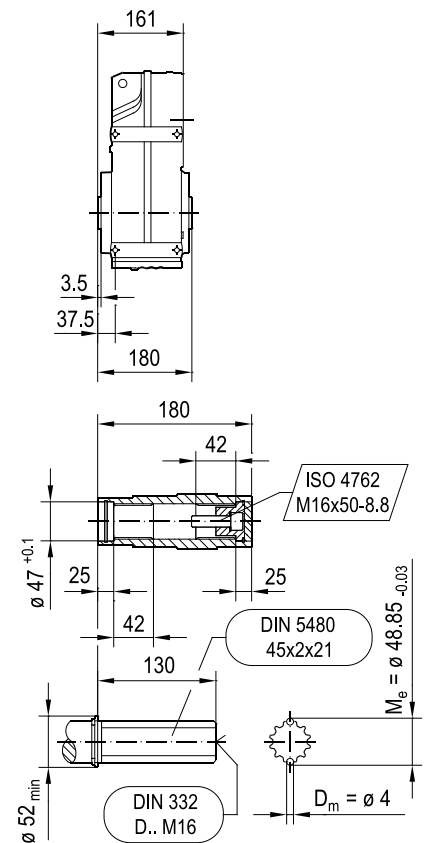
**FA67B..**



**FH67B..**  
max. DRN132S



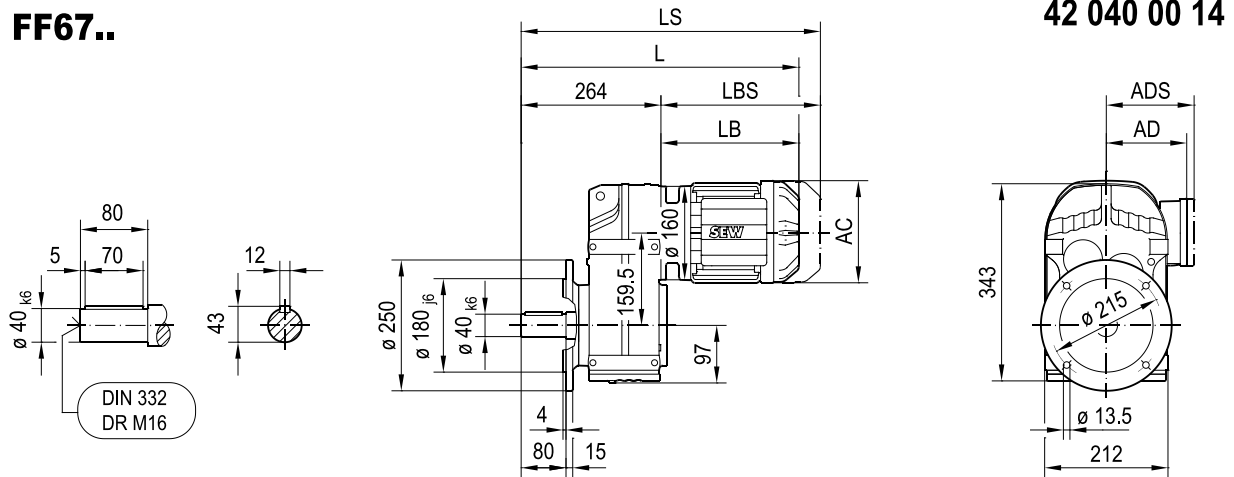
**FV67B..**



(→ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	440	441	461	472	489	517	519	551	547	597	628	682	700
LS	496	509	529	553	570	598	612	644	641	691	740	794	838
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

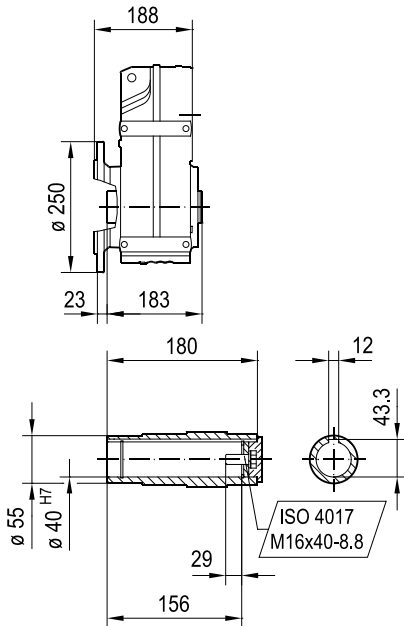
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### FF67..

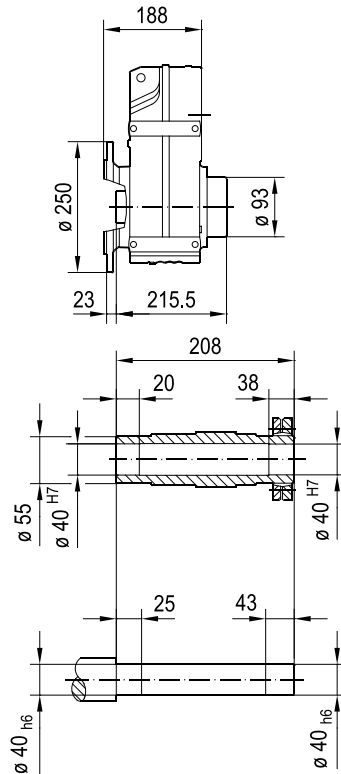


42 040 00 14

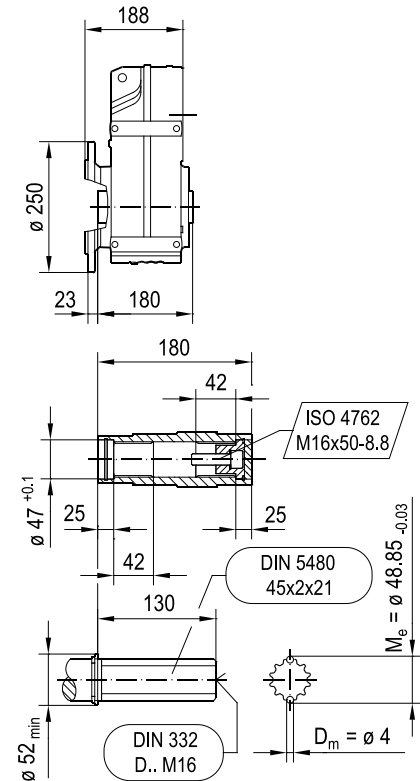
### FAF67..



### FHF67.. max. DRN132S



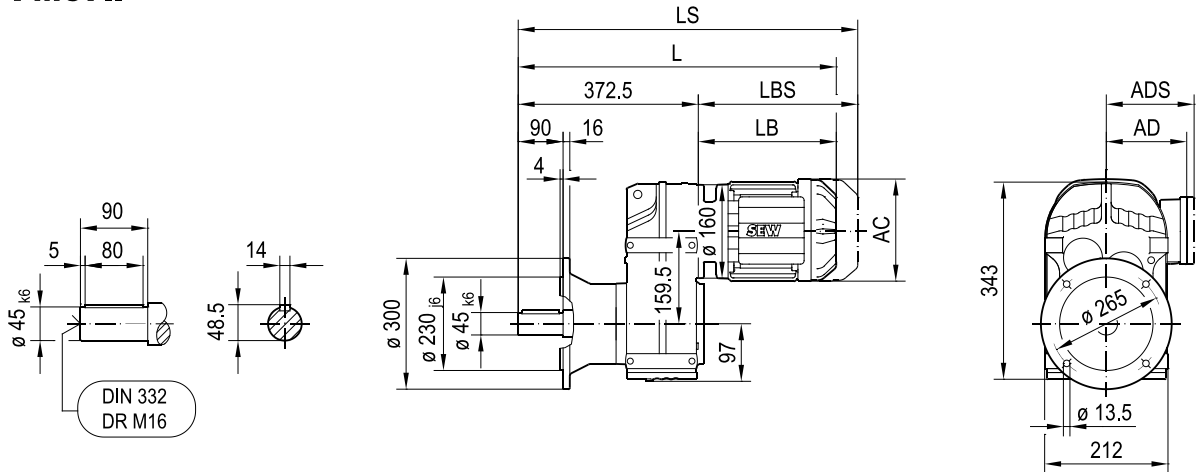
### FVF67..



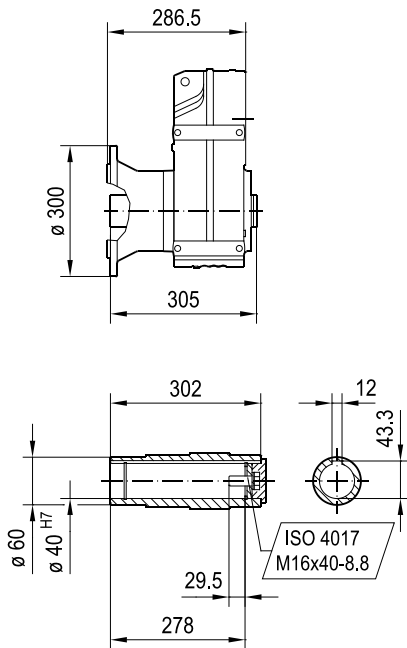
(→ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	462	463	483	494	511	539	541	573	569	619	650	704	722
LS	518	531	551	575	592	620	634	666	663	713	762	816	860
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

**FM67..**

42 112 00 17



**FAM67..**

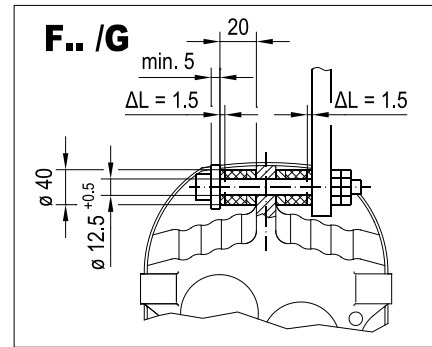
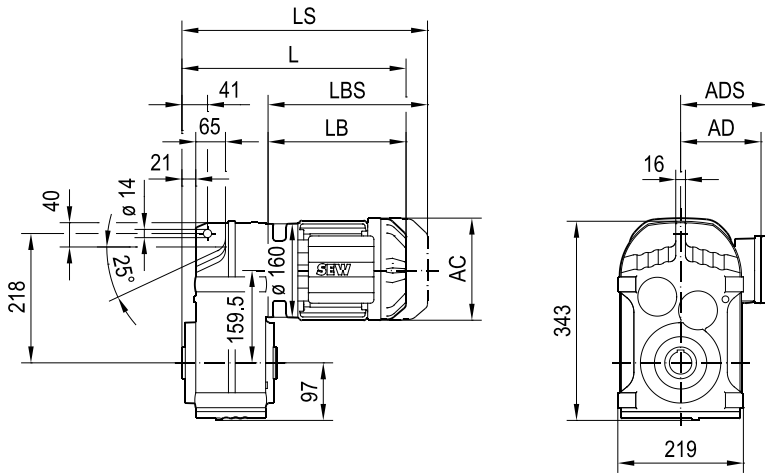


(→  7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	570	572	592	603	620	648	649	681	678	728	759	813	831
LS	626	639	659	684	701	729	743	775	771	821	871	925	968
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

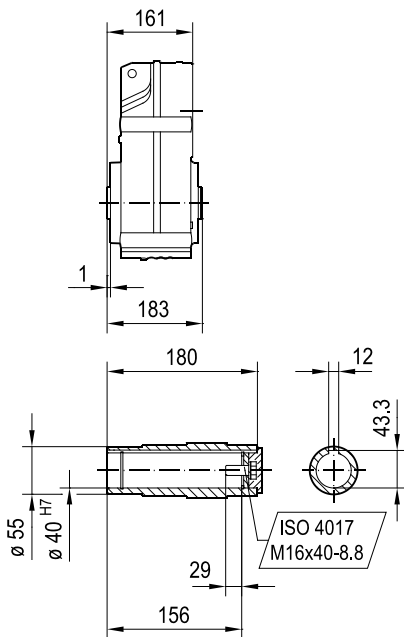
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42 041 00 14

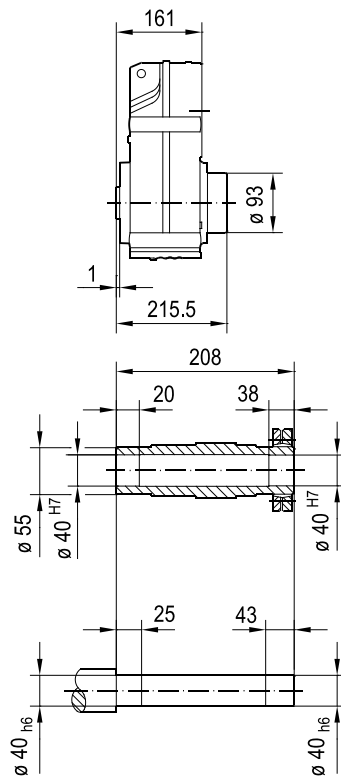
### FA67..



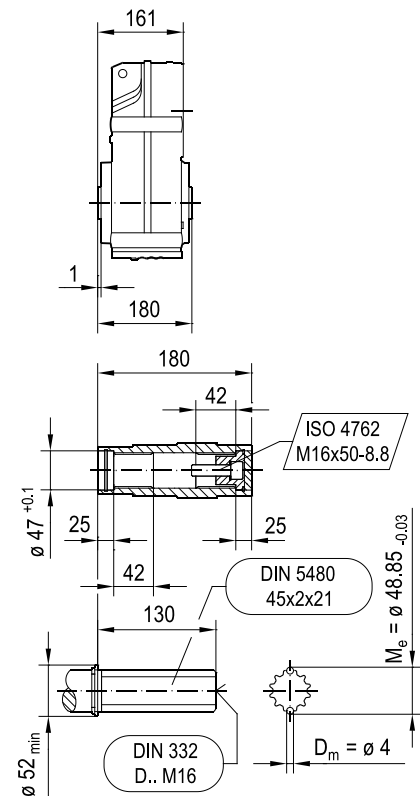
### FA67..



### FH67.. max. DRN132S



### FV67..

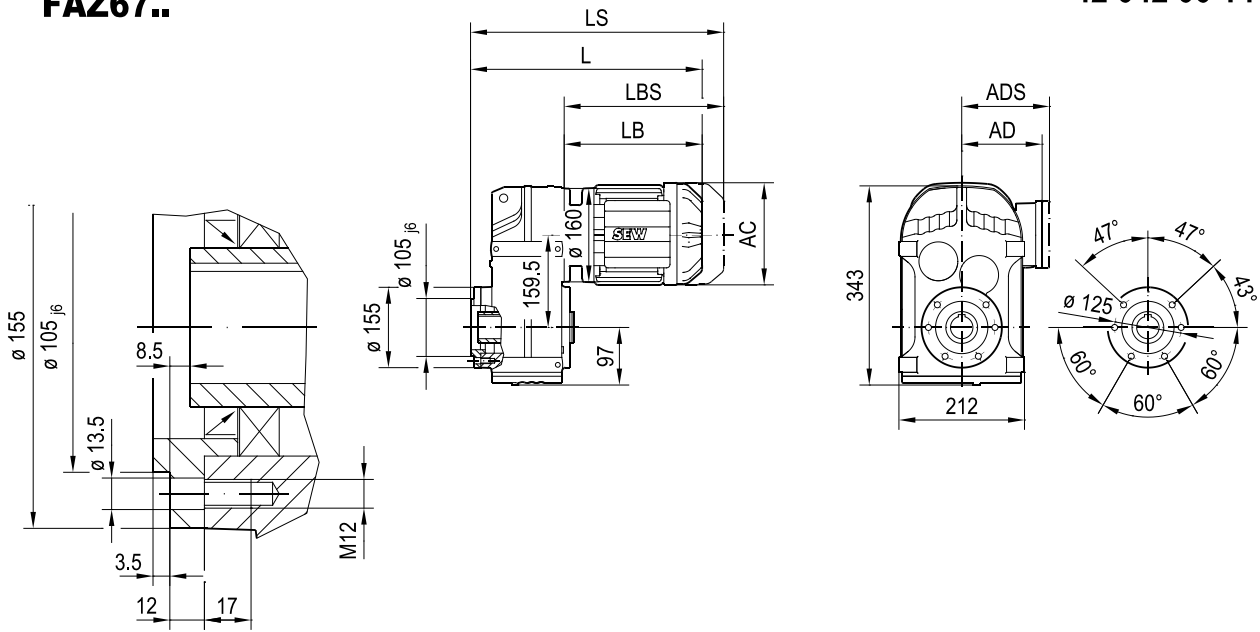


(-> 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	359	360	380	391	408	436	438	470	466	516	547	601	619
LS	415	428	448	472	489	517	531	563	560	610	659	713	757
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

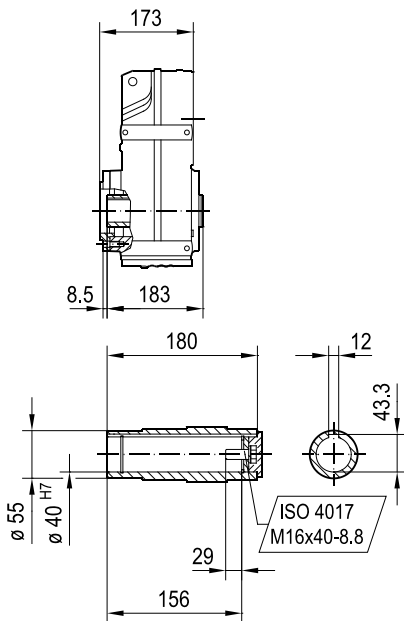
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42 042 00 14

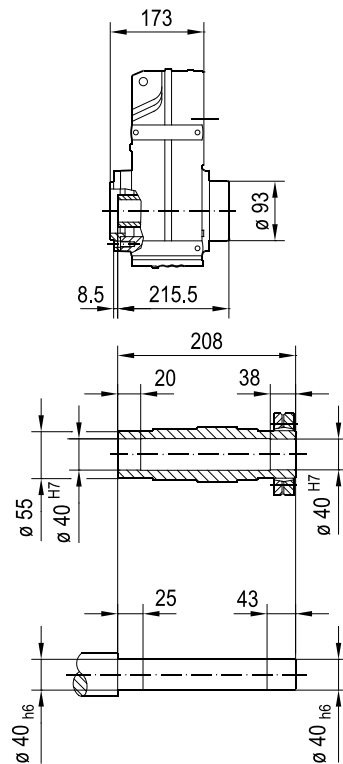
**FAZ67..**



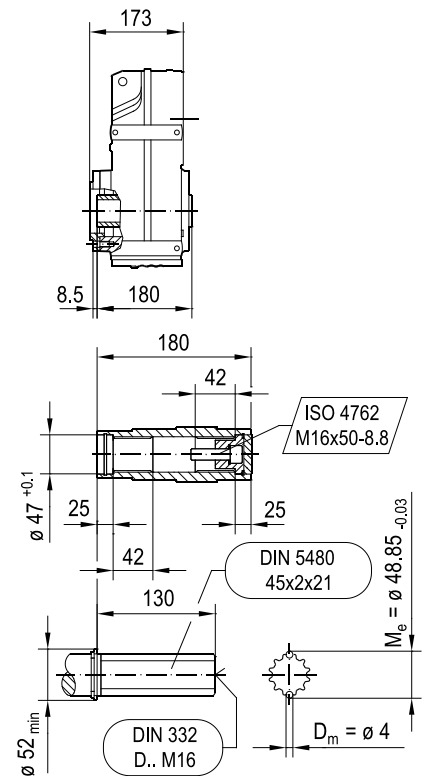
**FAZ67..**



**FHZ67..**  
max. DRN132S



**FVZ67..**

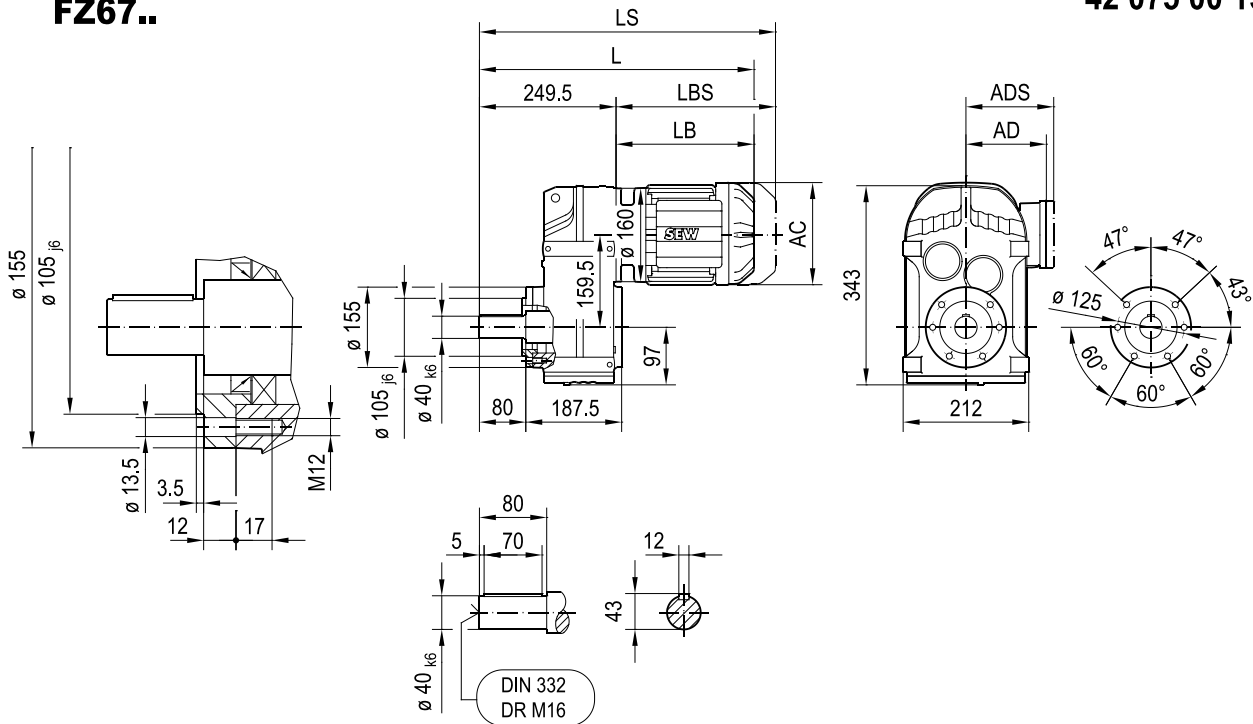


(→ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	371	372	392	403	420	448	450	482	478	528	559	613	631
LS	427	440	460	484	501	529	543	575	572	622	671	725	769
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

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### FZ67..

42 075 00 15

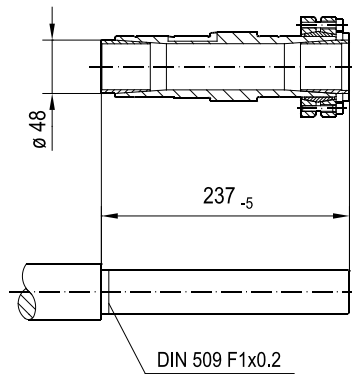
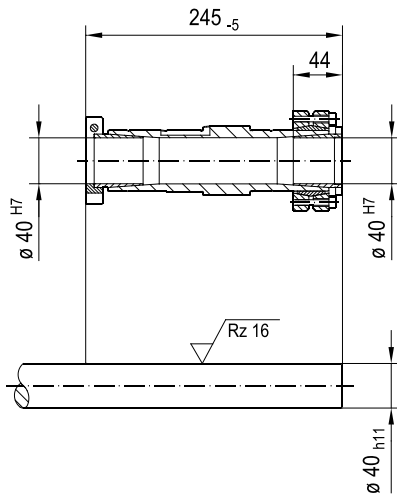
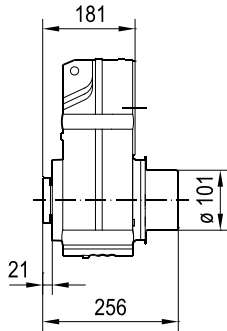
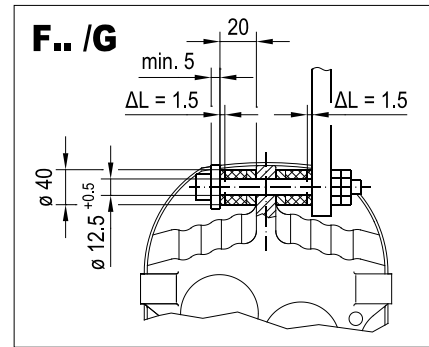
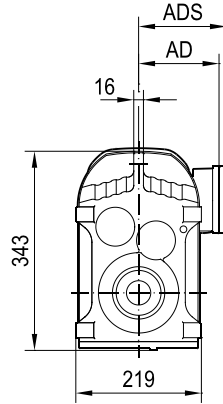
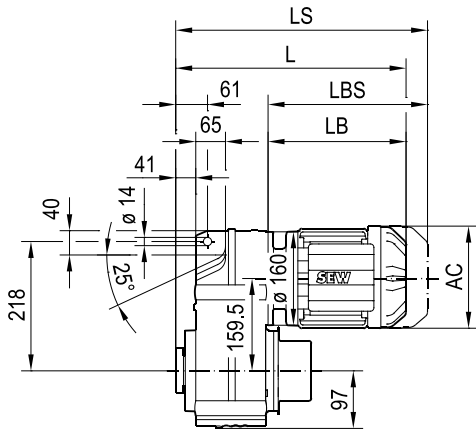


( $\rightarrow$ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	447	449	469	480	497	525	526	558	555	605	636	690	708
LS	503	516	536	561	578	606	620	652	648	698	748	802	845
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

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**FT67..**

**42 043 01 14**

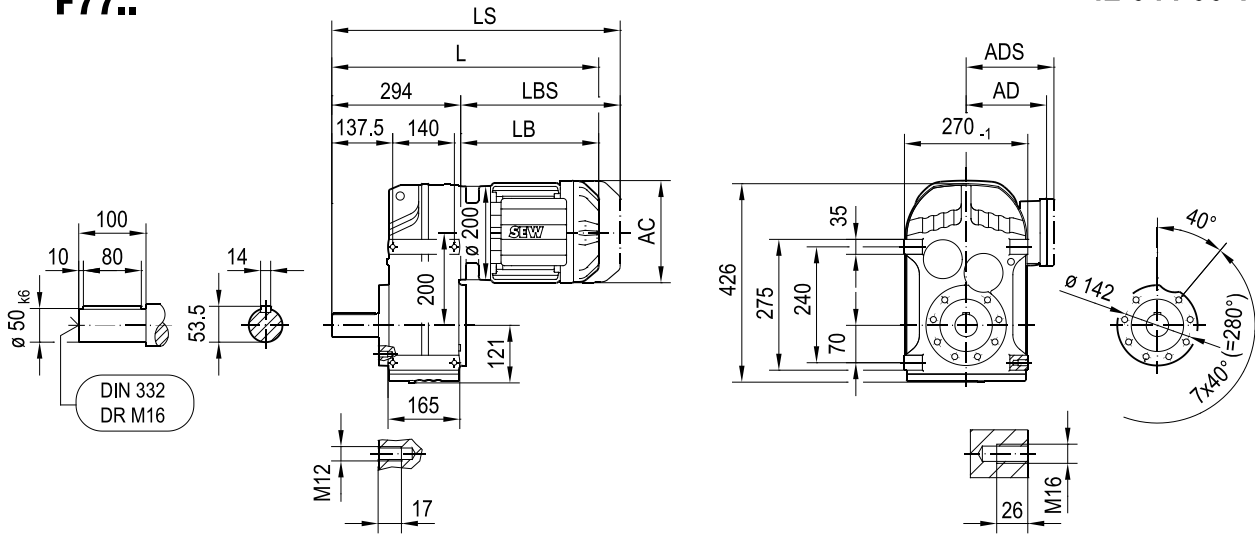


(-> 7.3)	DRN									
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	139	139	156	156	156	179	179	197	197
AD	98	118	118	128	128	128	140	140	157	157
ADS	98	129	129	139	139	139	150	150	158	158
L	379	380	400	411	428	456	458	490	486	536
LS	435	448	468	492	509	537	551	583	580	630
LB	198	199	219	230	247	275	277	309	305	355
LBS	254	267	287	311	328	356	370	402	399	449

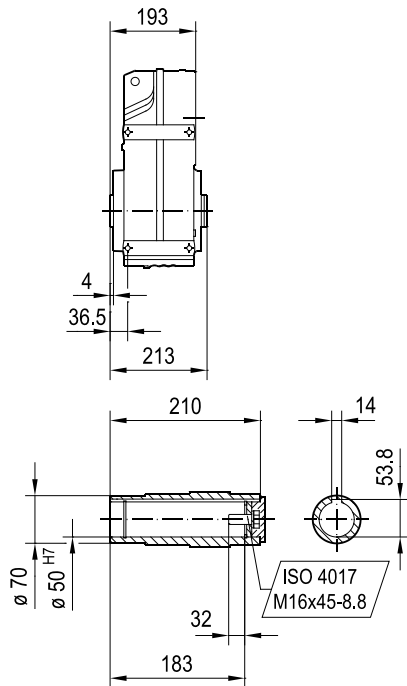
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42 044 00 14

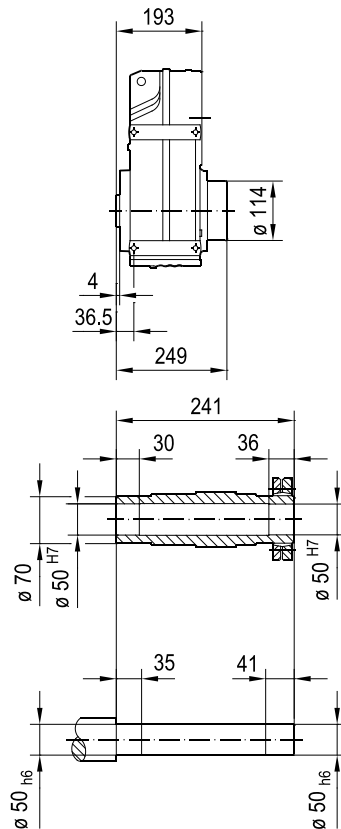
### F77..



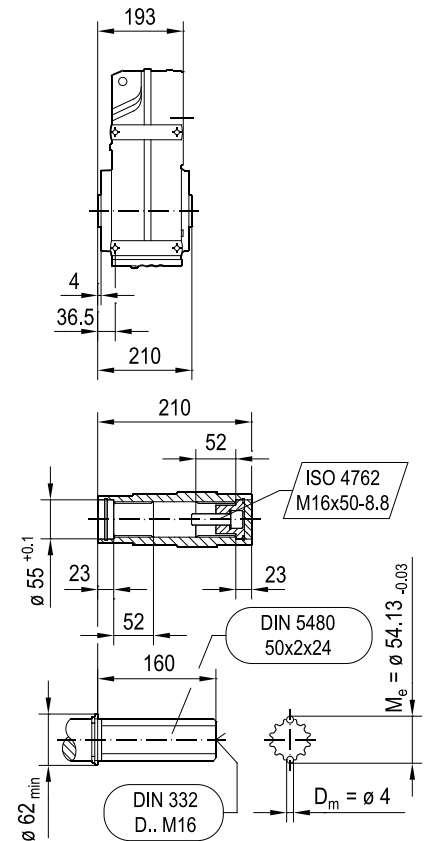
### FA77B..



### FH77B.. max. DRN132L



### FV77B..

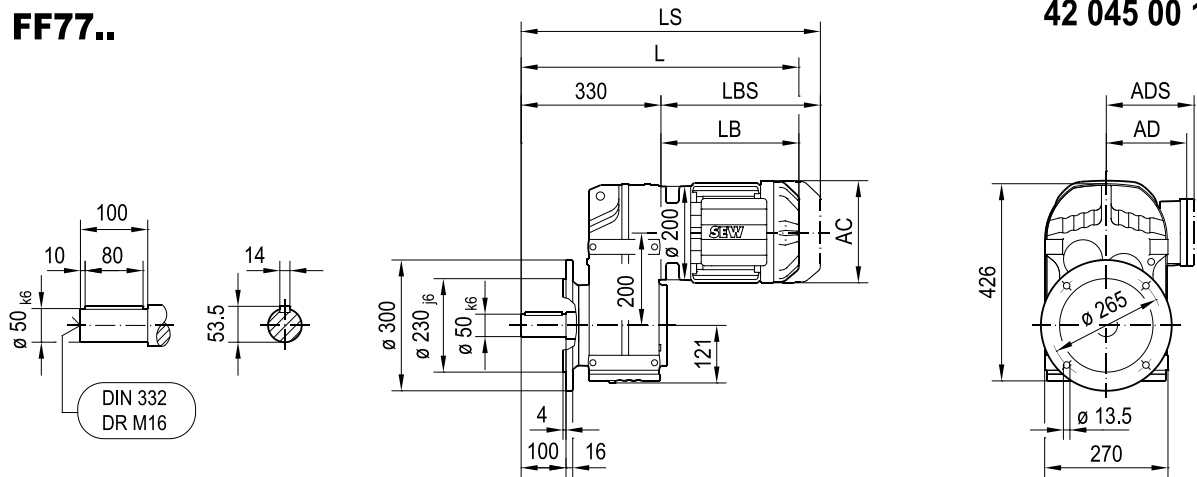


(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	486	506	517	534	562	564	596	592	642	673	723	741	767	833
LS	554	574	598	615	643	657	689	686	736	785	835	879	904	1022
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728



**FF77..**

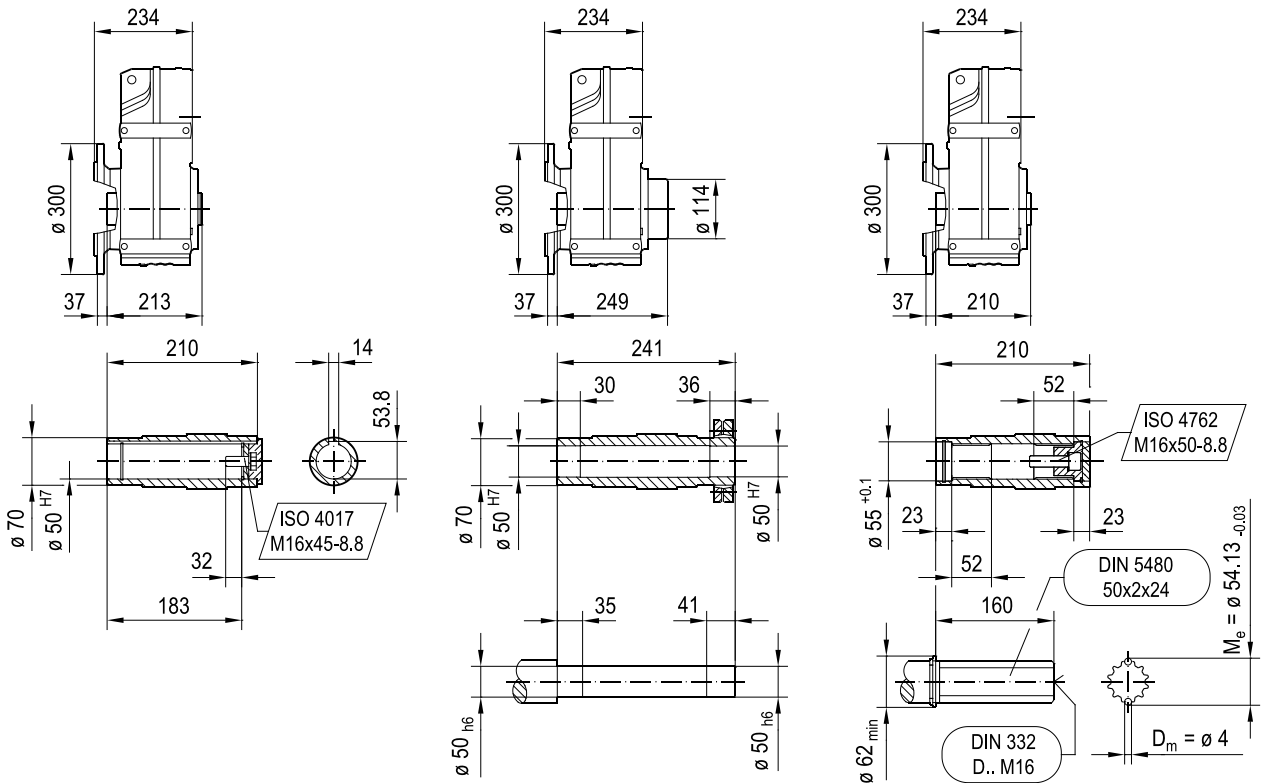
42 045 00 14



**FAF77..**

**FHF77..**  
max. DRN132L

**FVF77..**

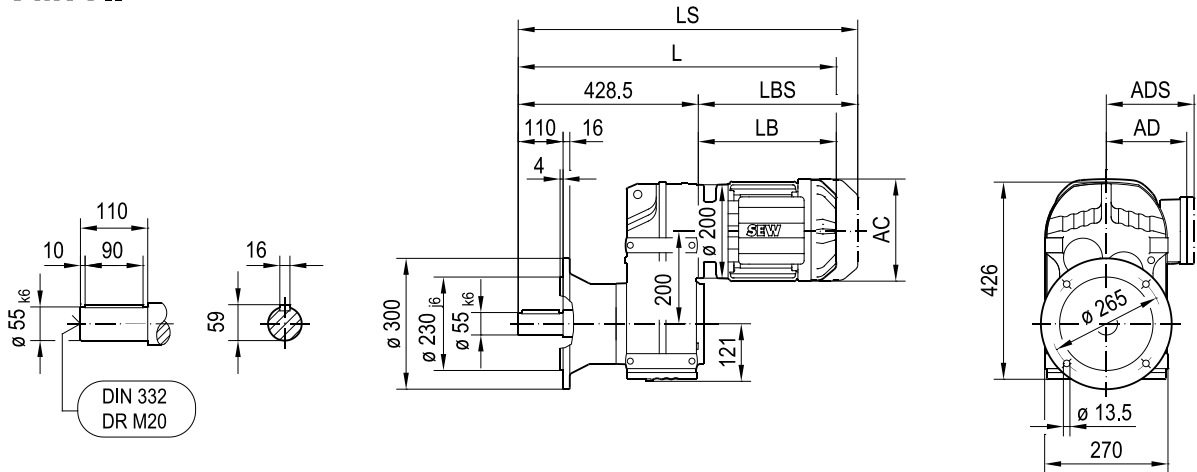


(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	522	542	553	570	598	600	632	628	678	709	759	777	803	869
LS	590	610	634	651	679	693	725	722	772	821	871	915	940	1058
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

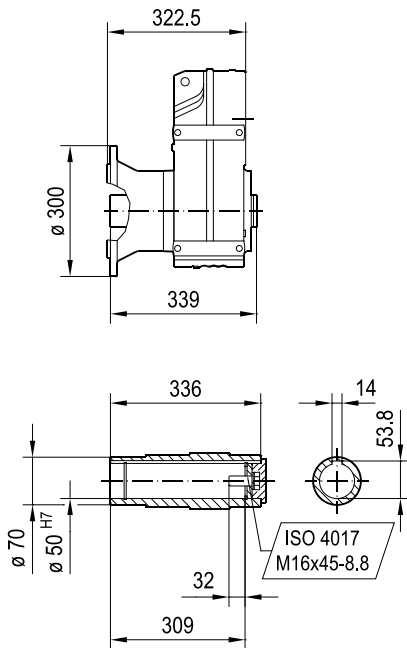
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### FM77..

42 113 01 17



### FAM77..

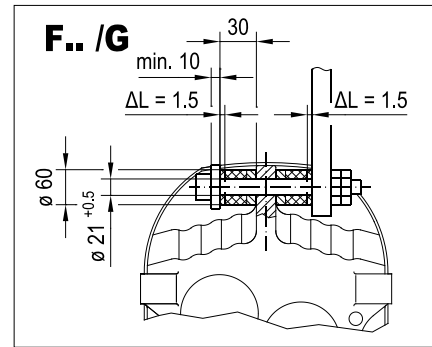
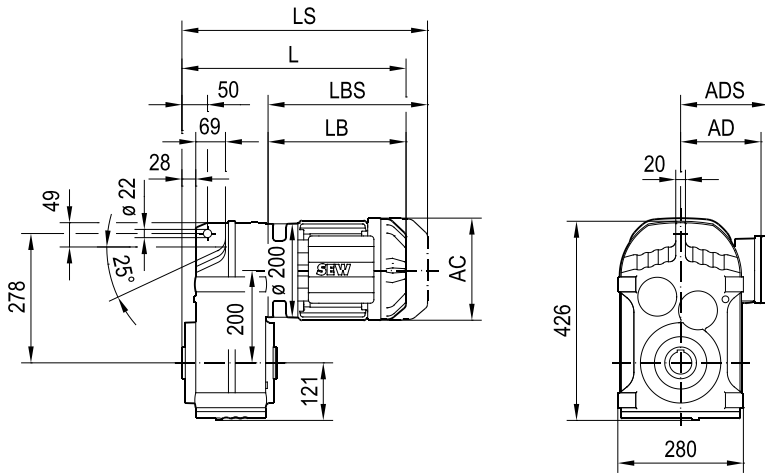


( $\rightarrow$ 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	621	641	652	669	697	698	730	727	777	808	858	876	901	968
LS	688	708	733	750	778	792	824	820	870	920	970	1013	1038	1157
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

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**FA77..**

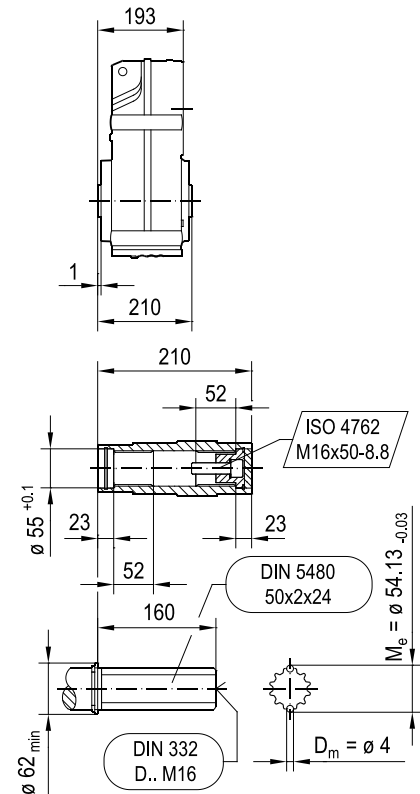
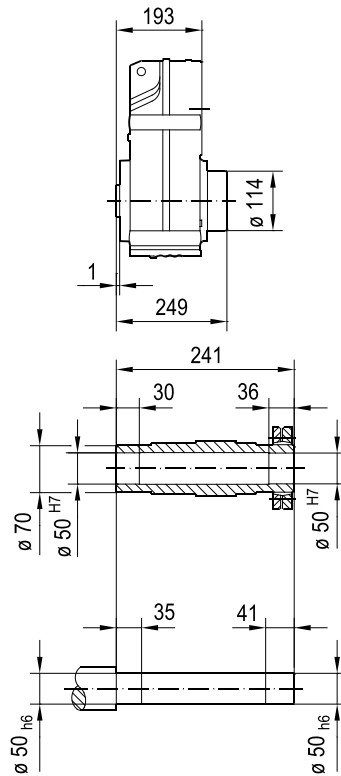
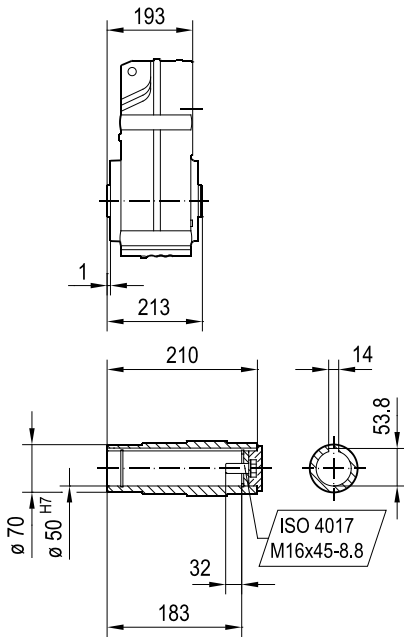
42 046 00 14



**FA77..**

**FH77..**  
max. DRN132L

**FV77..**

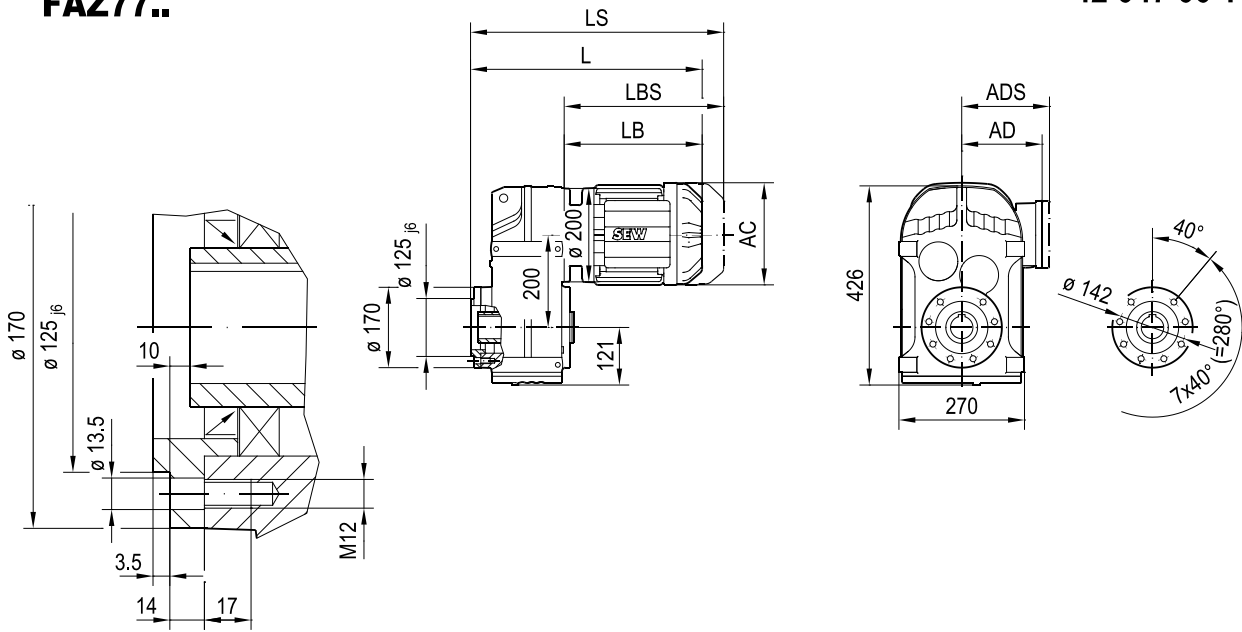


(→ 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	385	405	416	433	461	463	495	491	541	572	622	640	666	732
LS	453	473	497	514	542	556	588	585	635	684	734	778	803	921
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

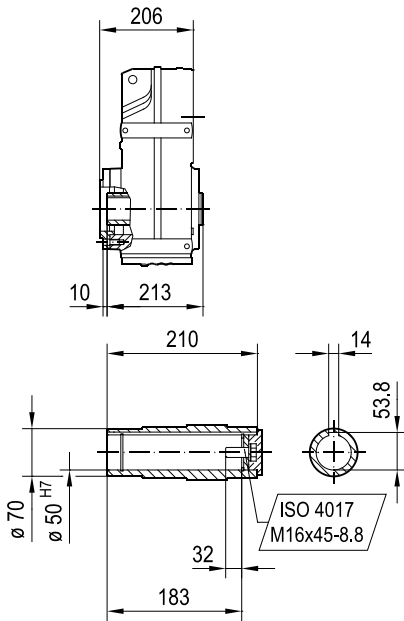
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42 047 00 14

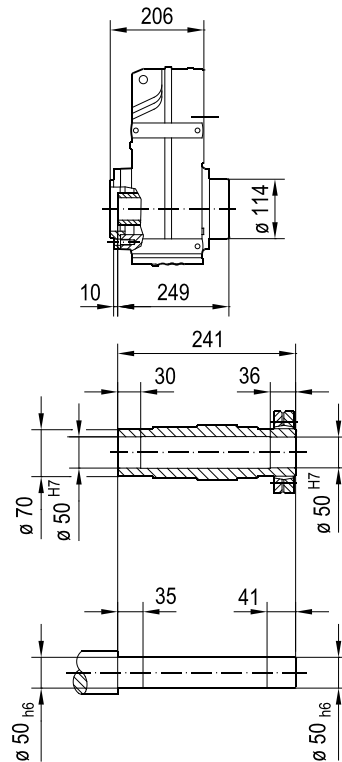
### FAZ77..



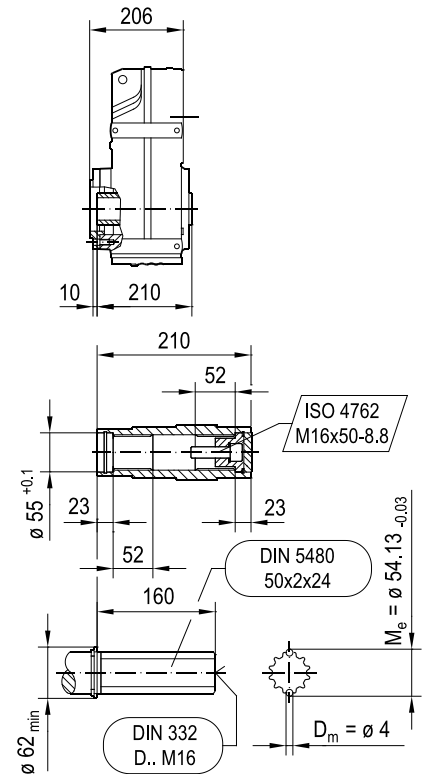
### FAZ77..



### FHZ77.. max. DRN132L



### FVZ77..

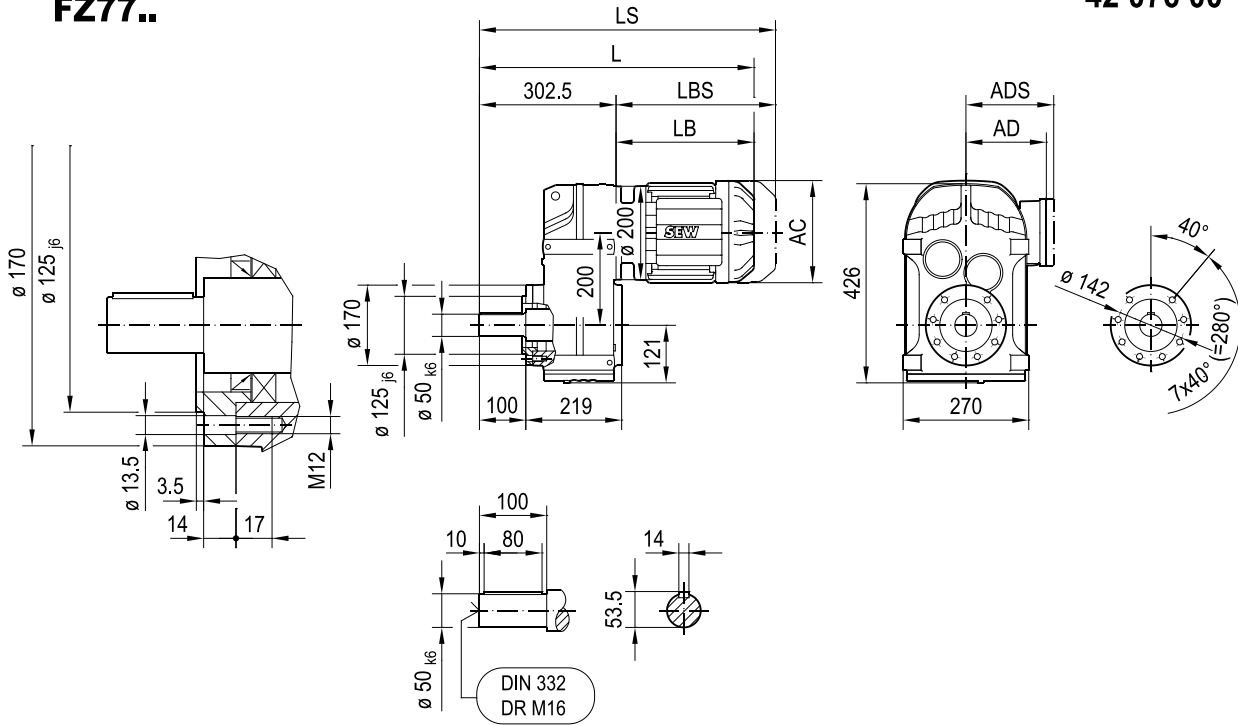


(→ 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	398	418	429	446	474	476	508	504	554	585	635	653	679	745
LS	466	486	510	527	555	569	601	598	648	697	747	791	816	934
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

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FZ77..

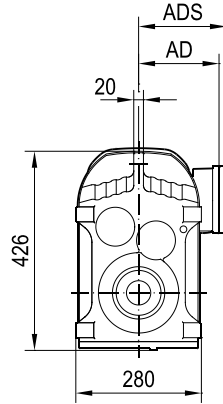
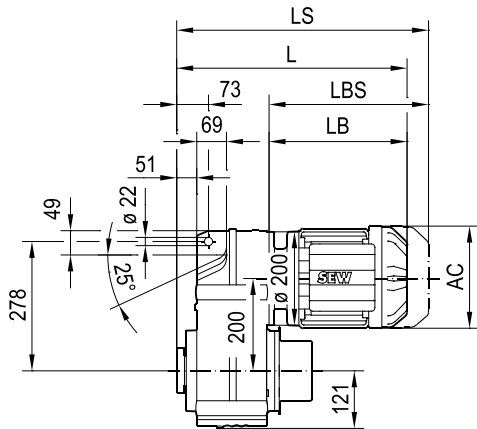
42 076 00 15



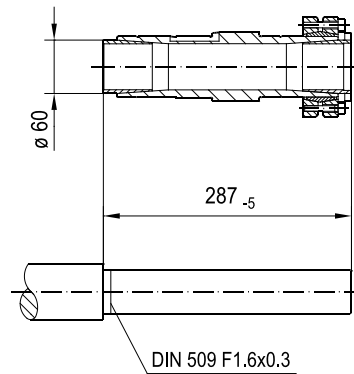
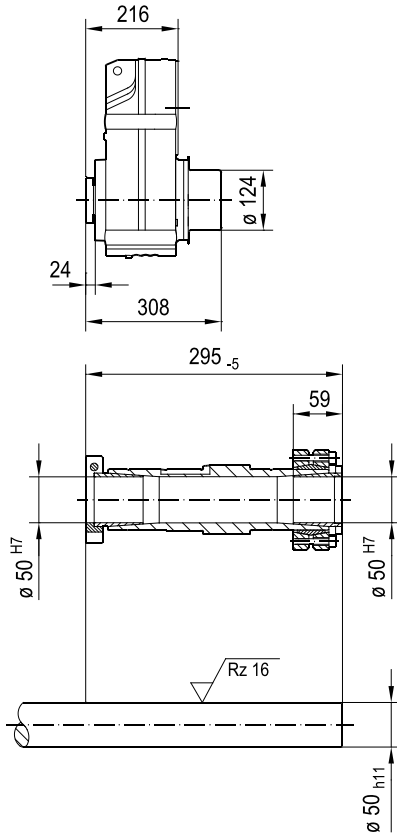
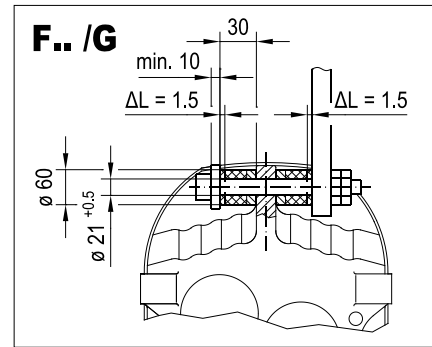
(→  7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	495	515	526	543	571	572	604	601	651	682	732	750	775	842
LS	562	582	607	624	652	666	698	694	744	794	844	887	912	1031
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

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### FT77..



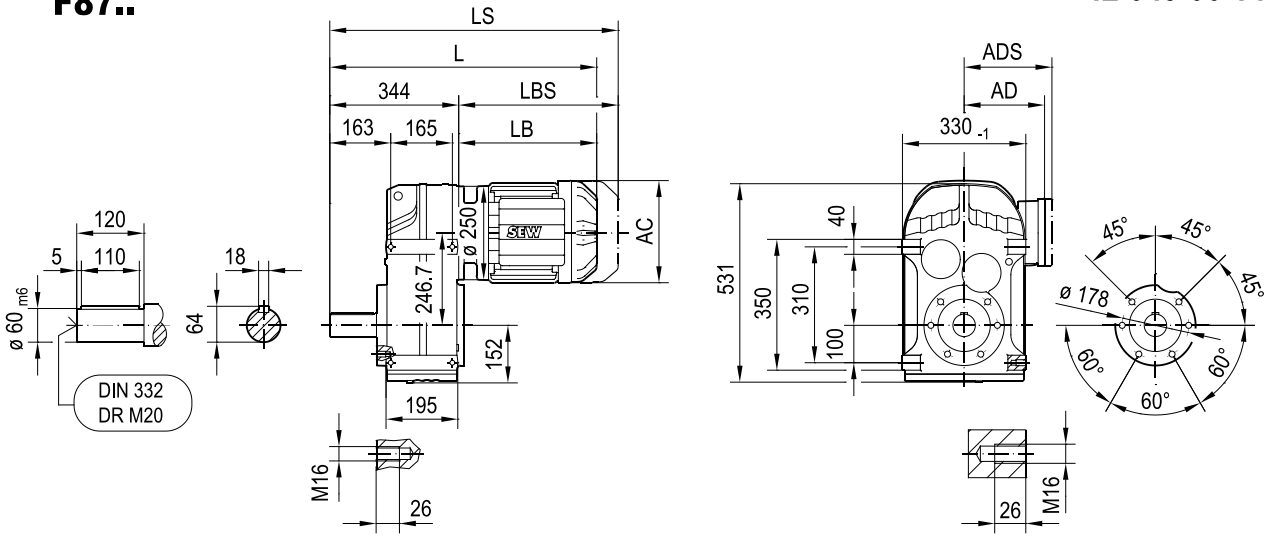
### 42 048 01 14



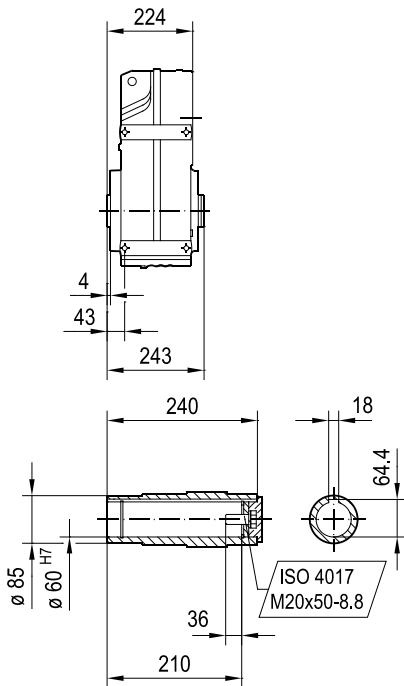
(-> 7.3)	DRN												
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L
AC	139	139	156	156	156	179	179	197	197	221	221	261	261
AD	118	118	128	128	128	140	140	157	157	170	170	228	228
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228
L	408	428	439	456	484	486	518	514	564	595	645	663	689
LS	476	496	520	537	565	579	611	608	658	707	757	801	826
LB	192	212	223	240	268	270	302	298	348	379	429	447	473
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610

42 049 00 14

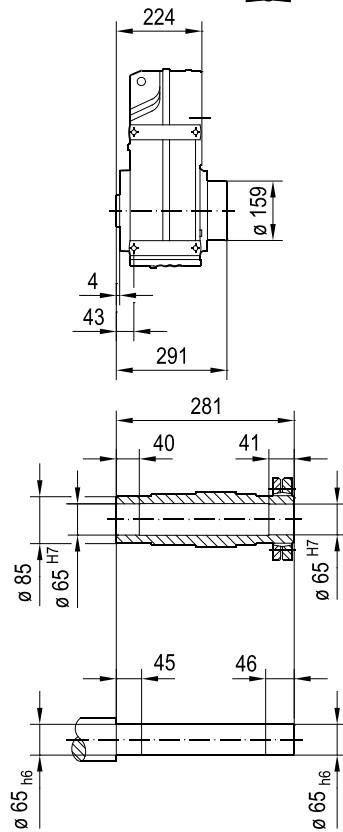
**F87..**



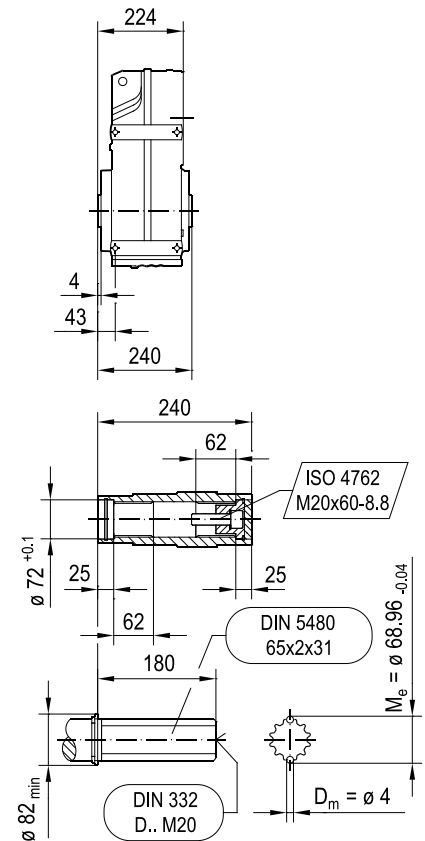
**FA87B..**



**FH87B..**  
**FH87B/R..**



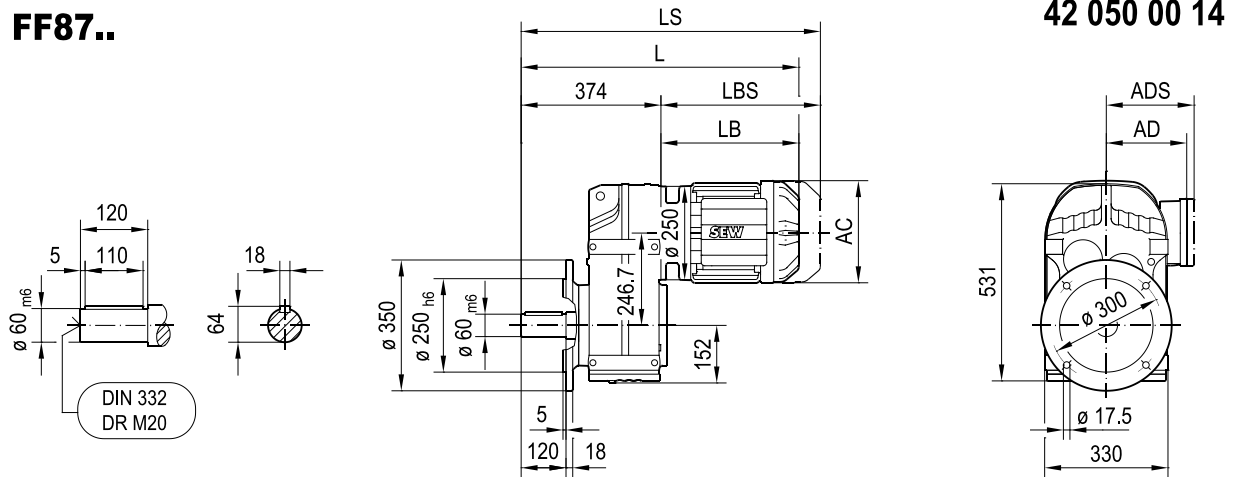
**FV87B..**



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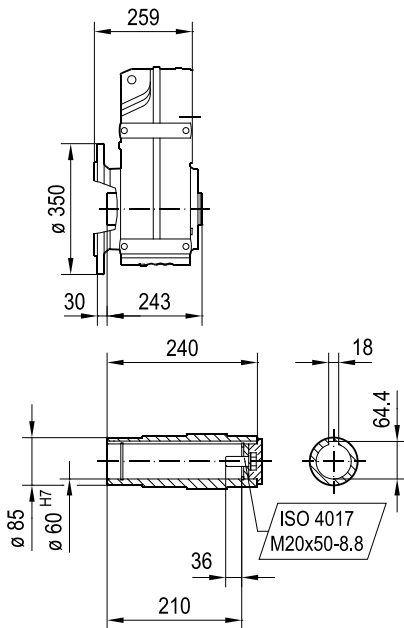
(→ 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	562	607	609	641	637	687	718	768	786	812	878	901	1011
LS	643	688	702	734	731	781	830	880	924	949	1067	1090	1216
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

### FF87..



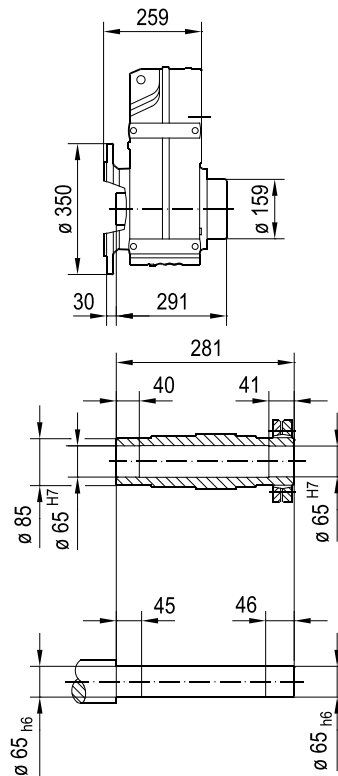
42 050 00 14

### FAF87..

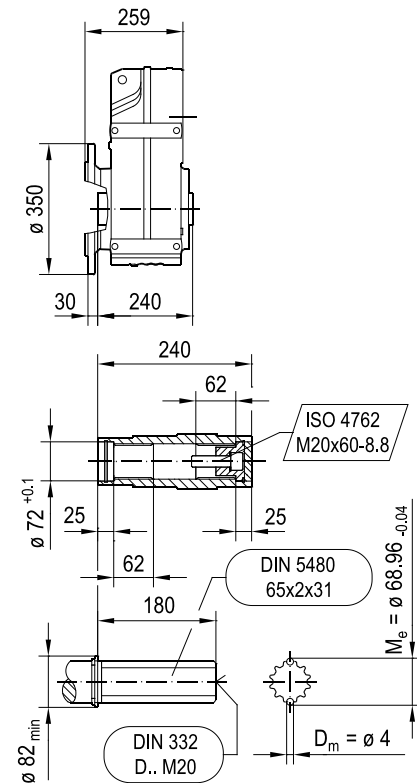


### FHF87..

FHF87/R.. → 6.3



### FVF87..

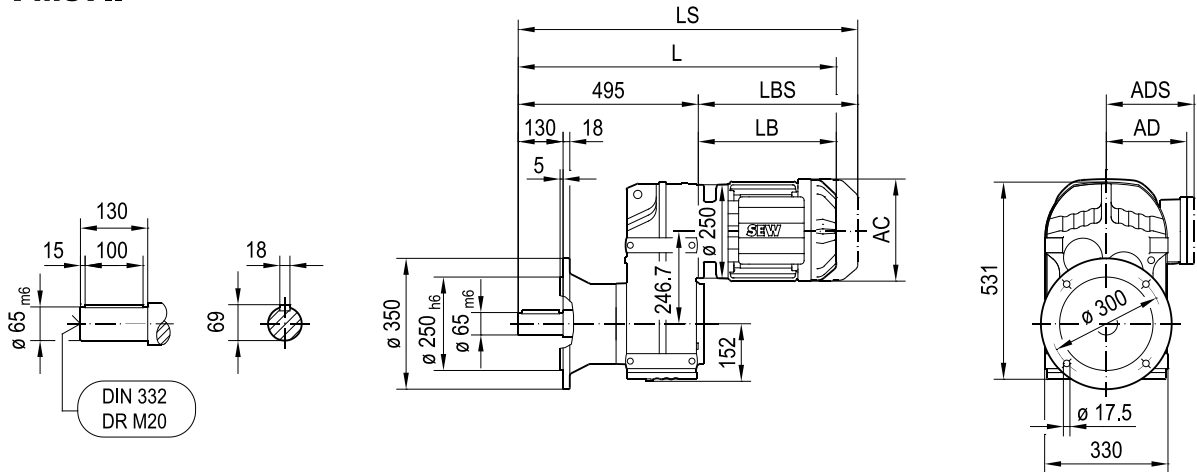


(->  7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	592	637	639	671	667	717	748	798	816	842	908	931	1041
LS	673	718	732	764	761	811	860	910	954	979	1097	1120	1246
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

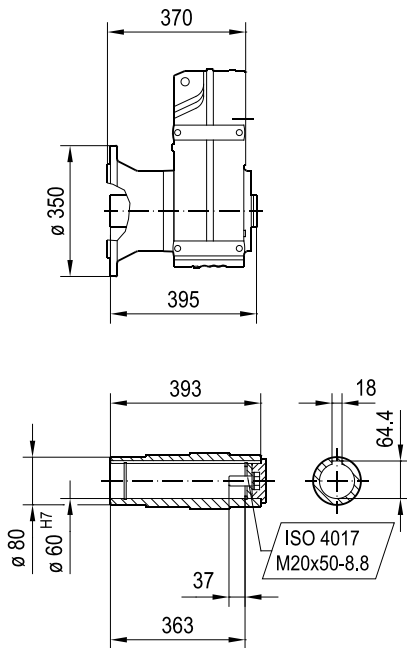


**FM87..**

42 114 01 17



**FAM87..**

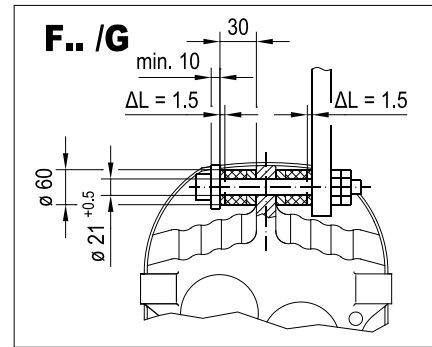
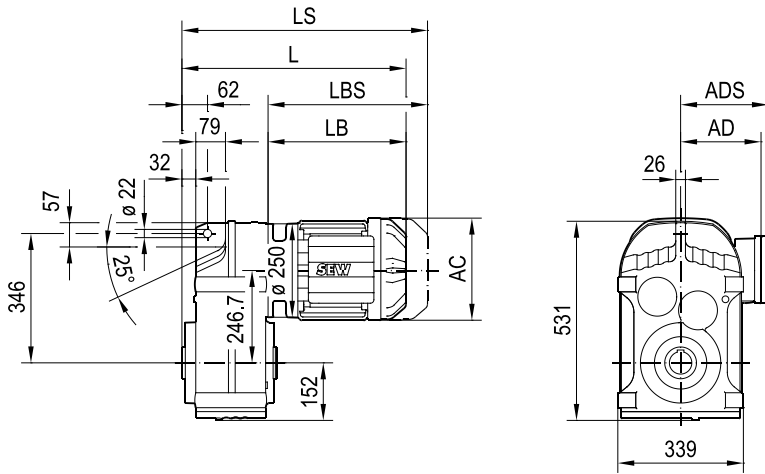


(→  7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	713	758	760	792	788	838	869	919	937	963	1029	1052	1162
LS	794	839	853	885	882	932	981	1031	1075	1100	1218	1241	1367
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

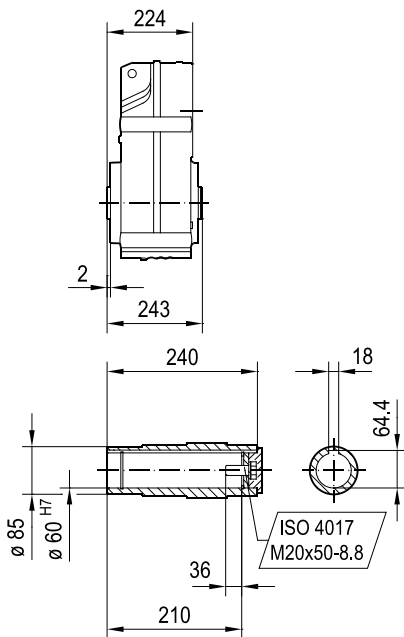
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42 051 00 14

### FA87..

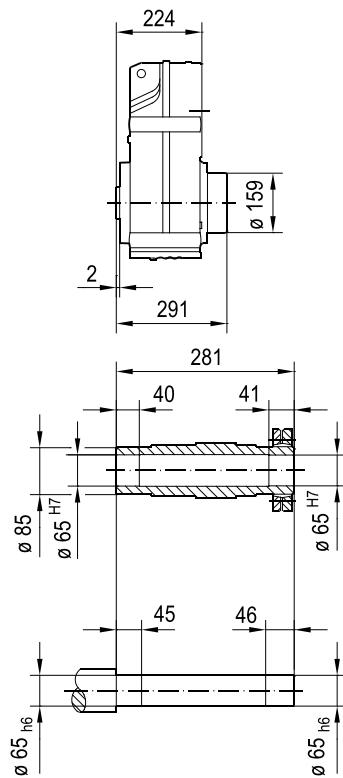


### FA87..

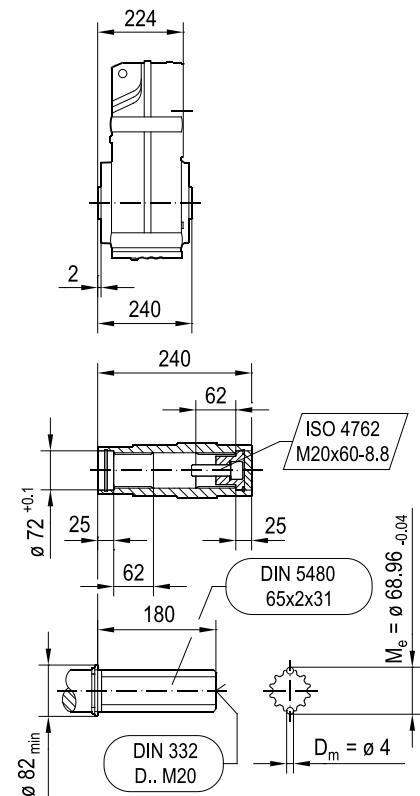


### FH87..

FH87/R.. → 6.3



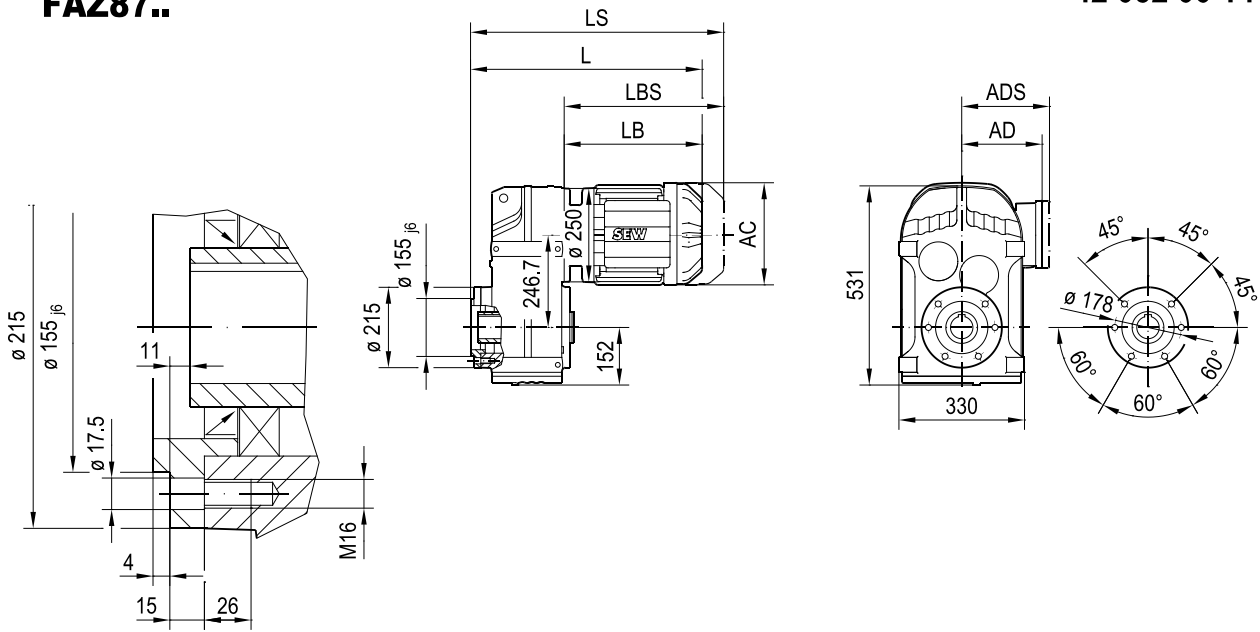
### FV87..



(→  7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	442	487	489	521	517	567	598	648	666	692	758	781	891
LS	523	568	582	614	611	661	710	760	804	829	947	970	1096
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

**FAZ87..**

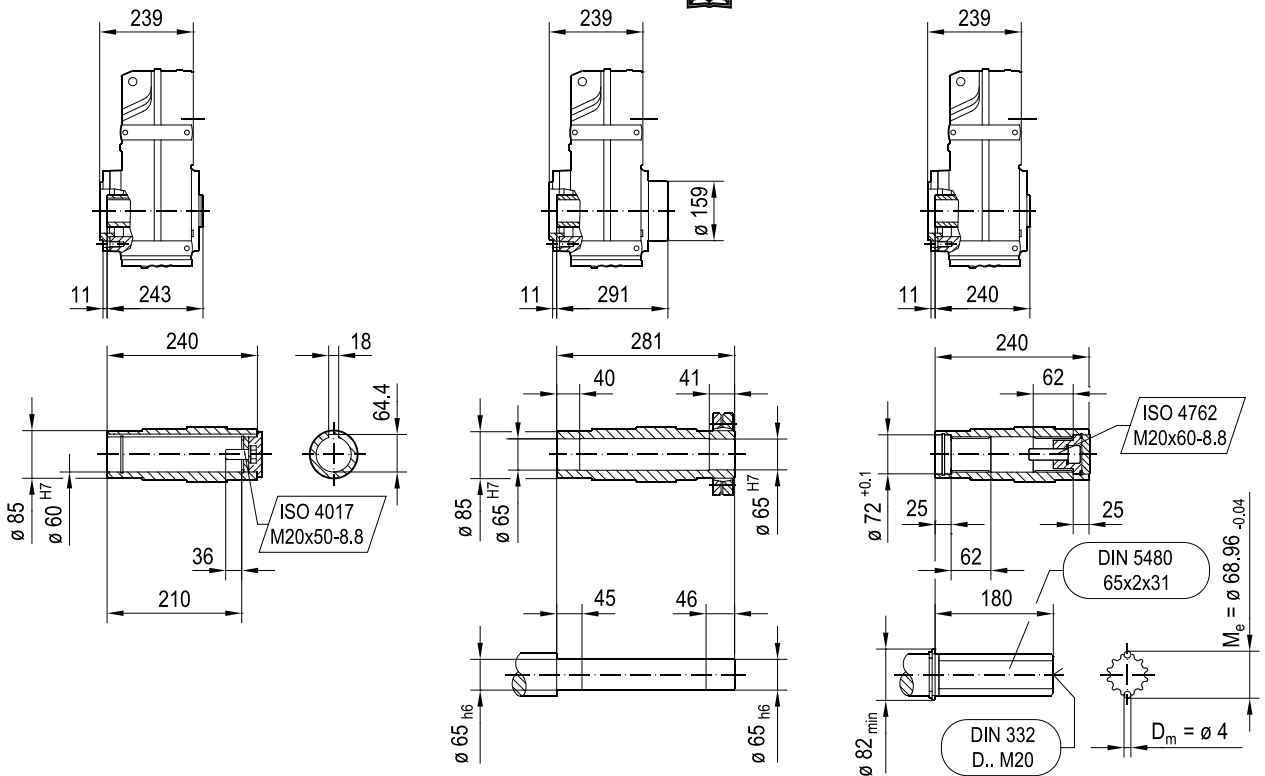
42 052 00 14



**FAZ87..**

**FHZ87..**  
FHZ87/R.. → 6.3

**FVZ87..**

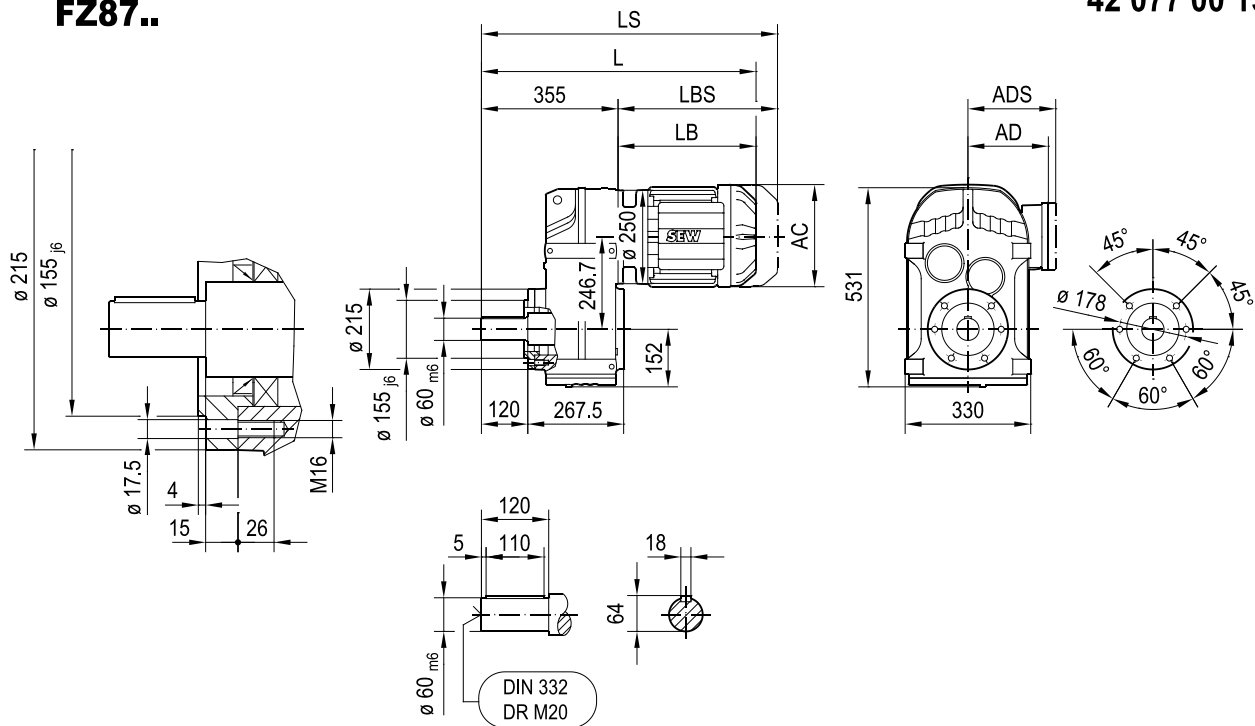


(→  7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	457	502	504	536	532	582	613	663	681	707	773	796	906
LS	538	583	597	629	626	676	725	775	819	844	962	985	1111
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

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### FZ87..

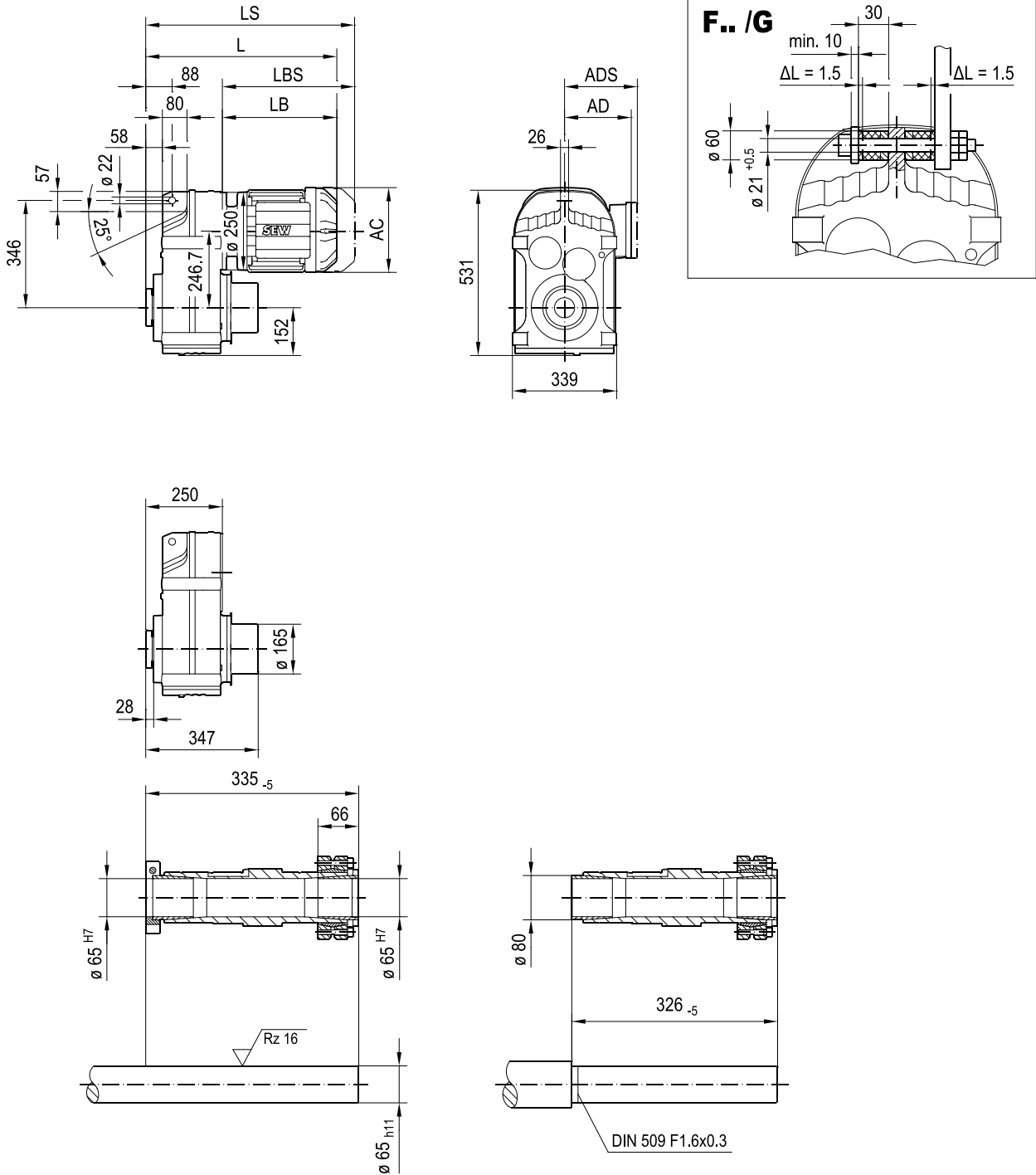
42 077 00 15



(-> 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
<b>AC</b>	156	156	179	179	197	197	221	221	261	261	314	357	394
<b>AD</b>	128	128	140	140	157	157	170	170	228	228	253	268	283
<b>ADS</b>	139	139	150	150	158	158	172	172	228	228	253	268	283
<b>L</b>	573	618	620	652	648	698	729	779	797	823	889	912	1022
<b>LS</b>	654	699	713	745	742	792	841	891	935	960	1078	1101	1227
<b>LB</b>	218	263	265	297	293	343	374	424	442	468	534	557	667
<b>LBS</b>	299	344	358	390	387	437	486	536	580	605	723	746	872

**FT87..**

**42 053 01 14**

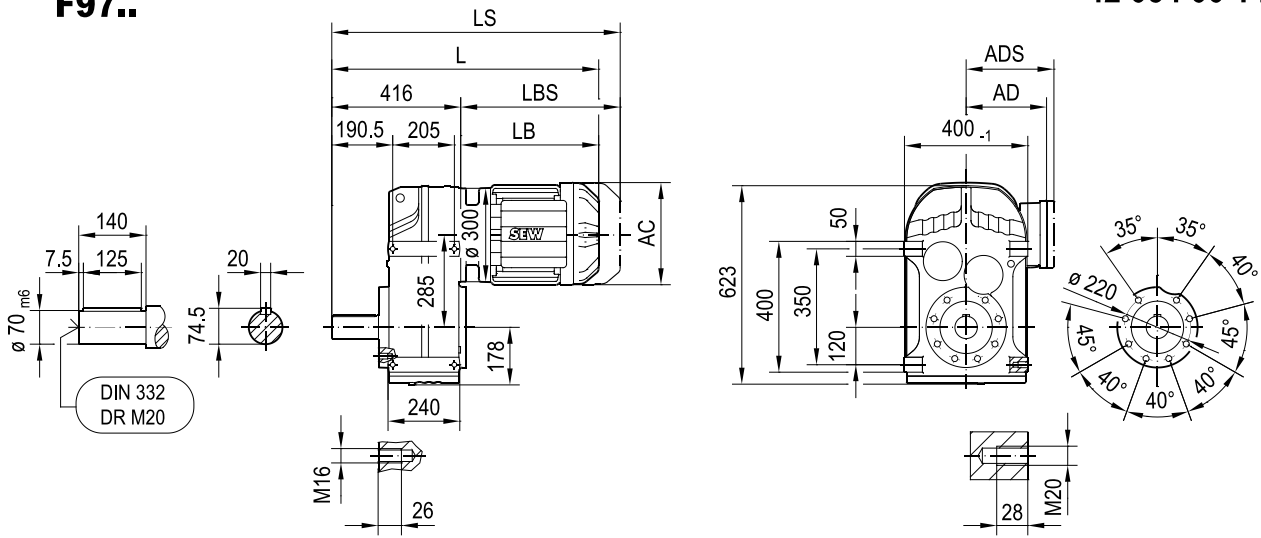


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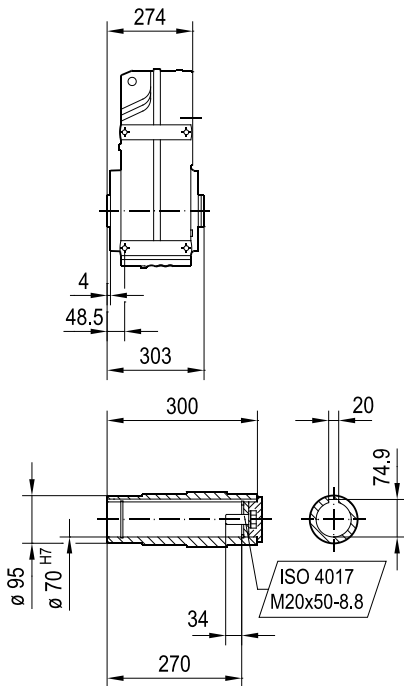
(→ 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	468	513	515	547	543	593	624	674	692	718	784	807	917
LS	549	594	608	640	637	687	736	786	830	855	973	996	1122
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

42 054 00 14

### F97..

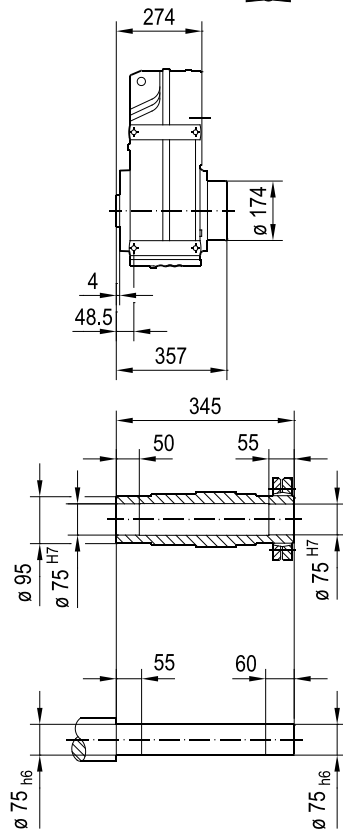


### FA97B..

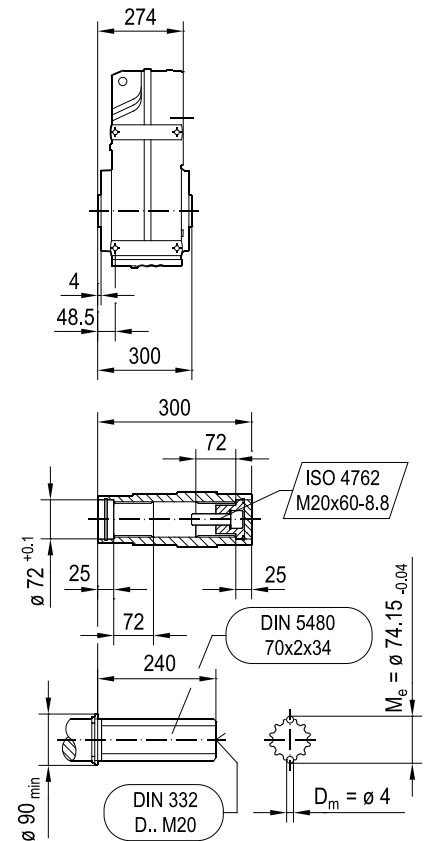


### FH97B..

FH97B/R.. → 6.3



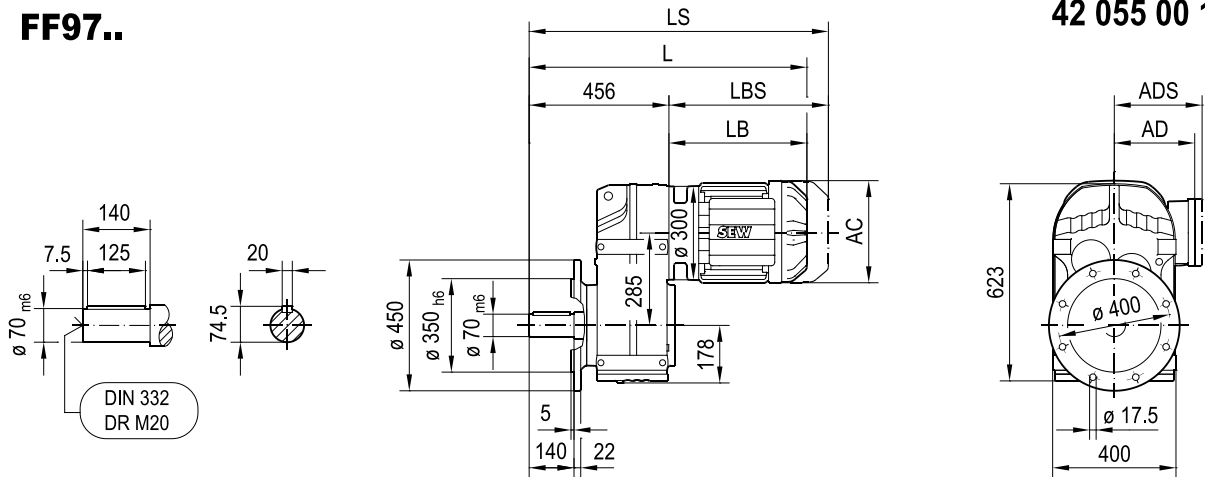
### FV97B..



(→ 7.3)	DRN												
	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	150	150	158	158	172	172	228	228	253	268	283	305
L	674	676	708	704	754	785	835	853	879	945	968	1078	1052
LS	755	769	801	798	848	897	947	991	1016	1134	1157	1283	1257
LB	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	339	353	385	382	432	481	531	575	600	718	741	867	841

**FF97..**

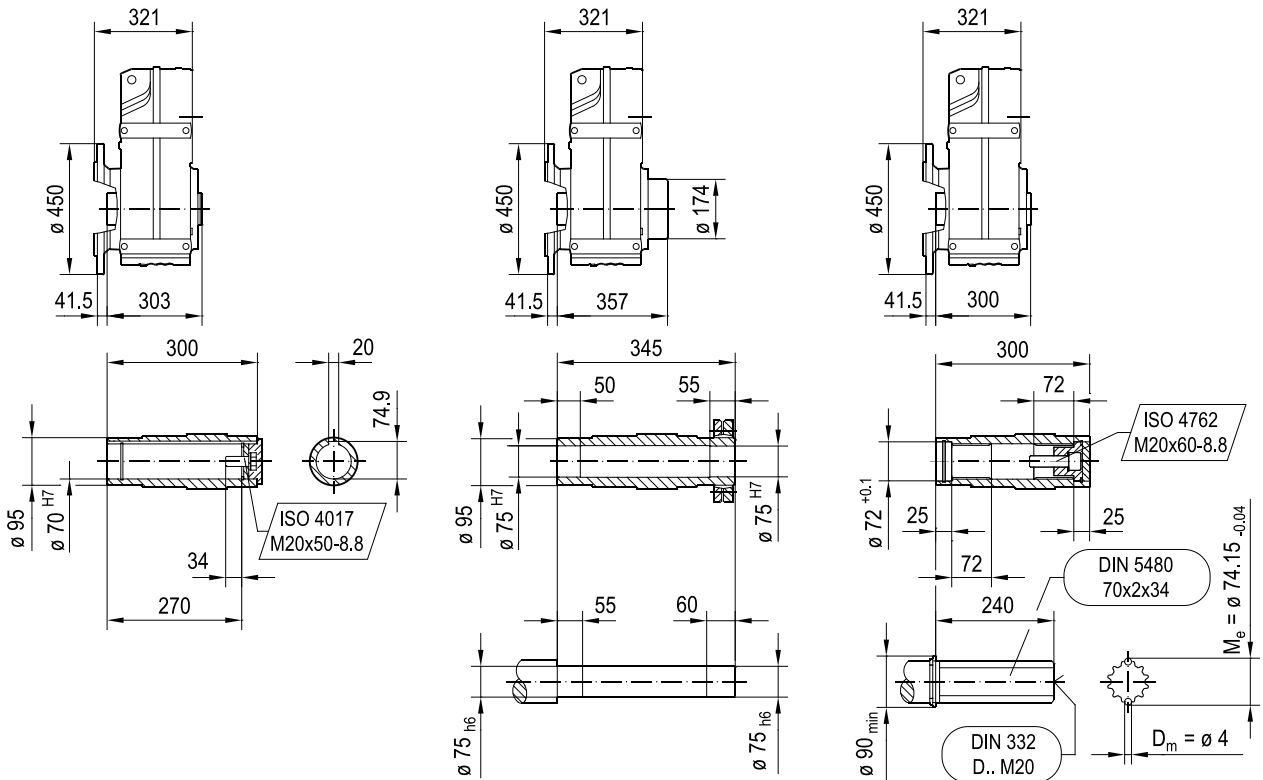
42 055 00 14



**FAF97..**

**FHF97..**  
FHF97/R.. → 6.3

**FVF97..**

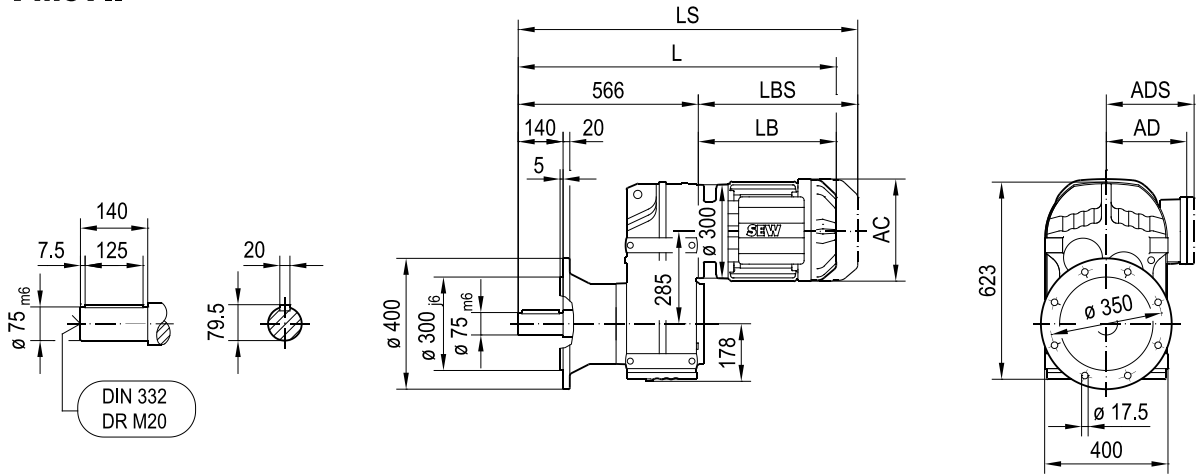


(→  7.3)	DRN												
	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	150	150	158	158	172	172	228	228	253	268	283	305
L	714	716	748	744	794	825	875	893	919	985	1008	1118	1092
LS	795	809	841	838	888	937	987	1031	1056	1174	1197	1323	1297
LB	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	339	353	385	382	432	481	531	575	600	718	741	867	841

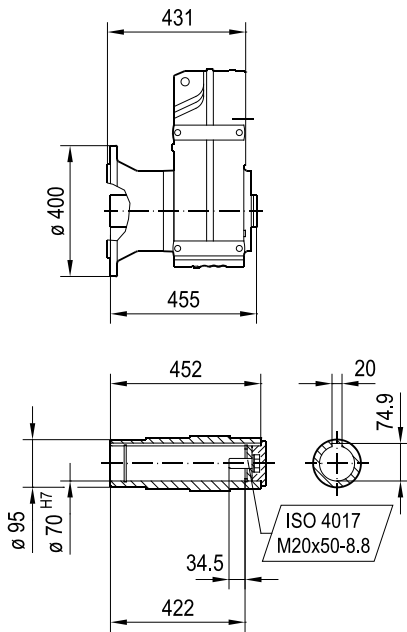
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### FM97..

42 115 00 17



### FAM97..



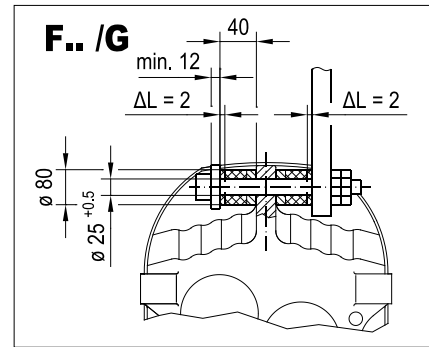
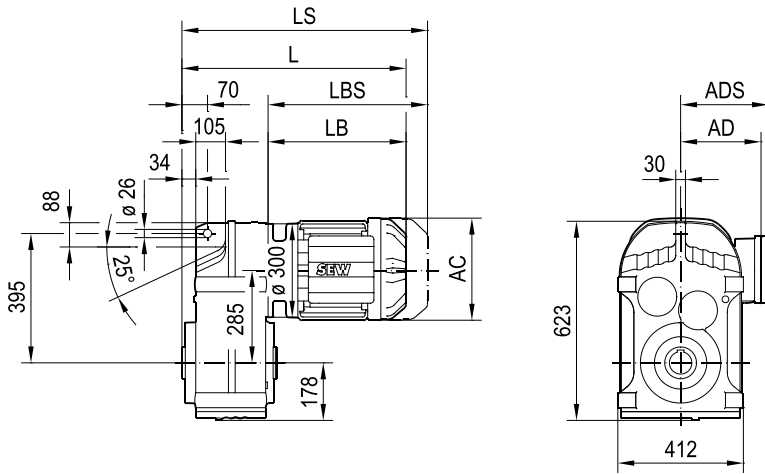
(-> 7.3)	DRN												
	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	150	150	158	158	172	172	228	228	253	268	283	305
L	824	826	858	854	904	935	985	1003	1029	1095	1118	1228	1202
LS	905	919	951	948	998	1047	1097	1141	1166	1284	1307	1433	1407
LB	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	339	353	385	382	432	481	531	575	600	718	741	867	841

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**FA97..**

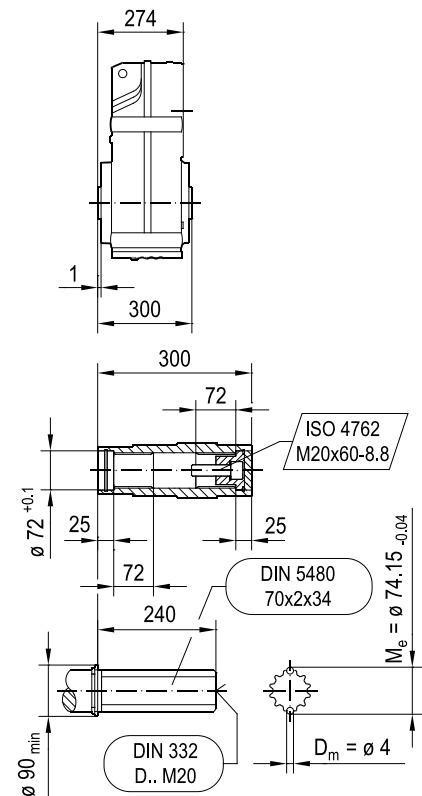
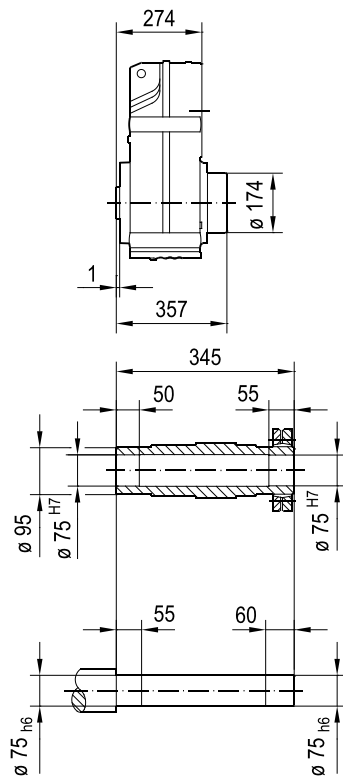
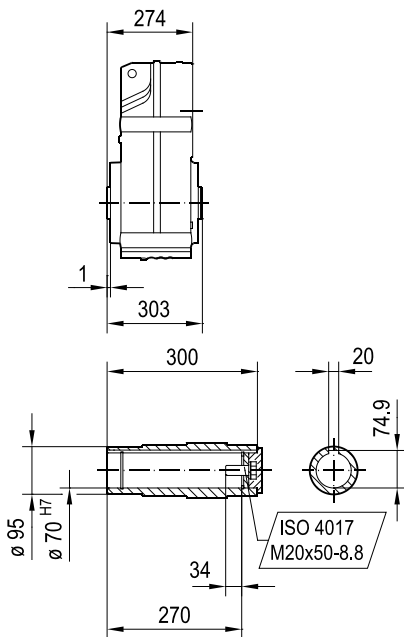
42 056 00 14



**FA97..**

**FH97..**  
**FH97/R..** → 6.3

**FV97..**

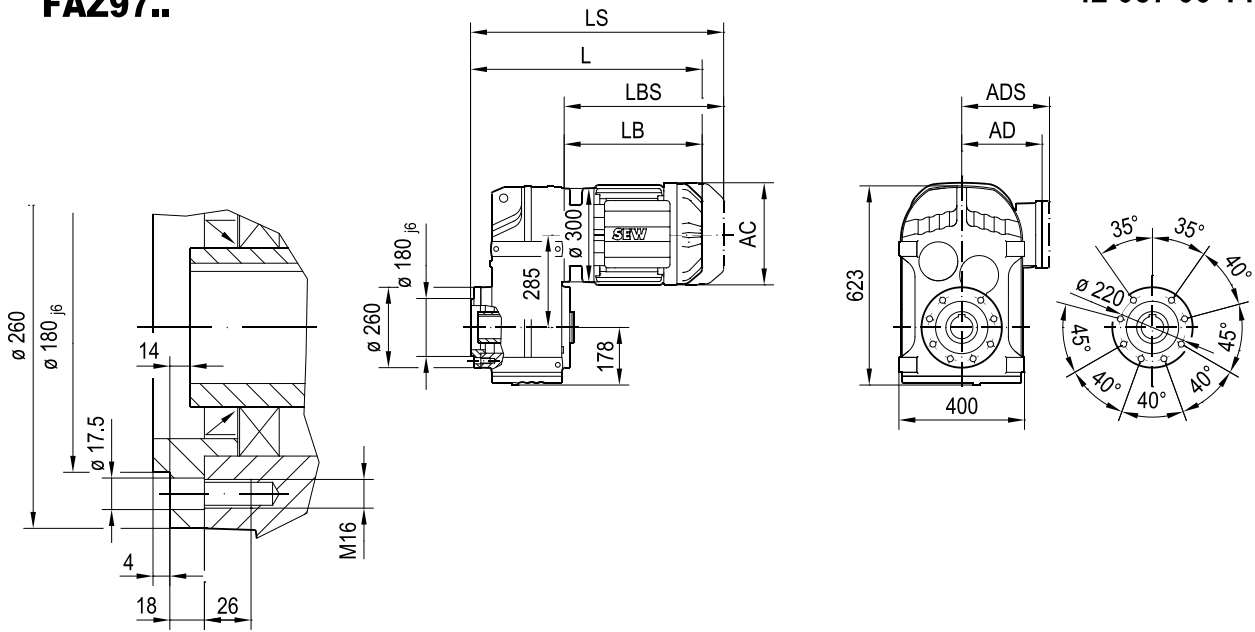


(→  7.3)	DRN												
	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	150	150	158	158	172	172	228	228	253	268	283	305
L	532	534	566	562	612	643	693	711	737	803	826	936	910
LS	613	627	659	656	706	755	805	849	874	992	1015	1141	1115
LB	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	339	353	385	382	432	481	531	575	600	718	741	867	841

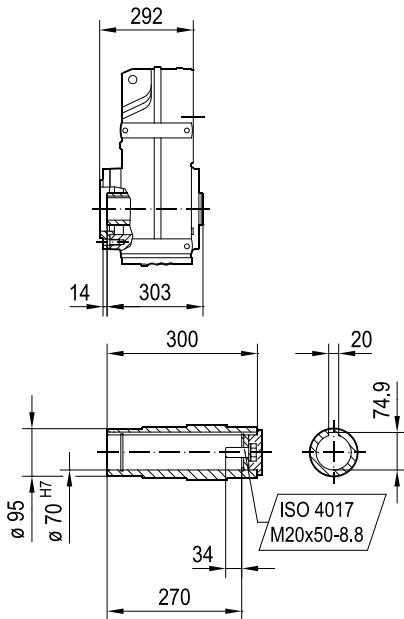
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42 057 00 14

### FAZ97..

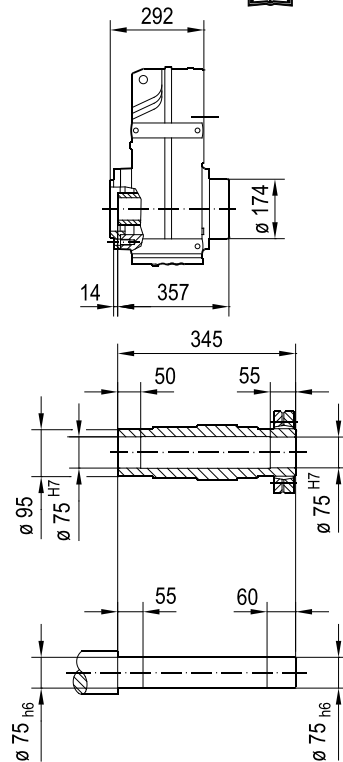


### FAZ97..

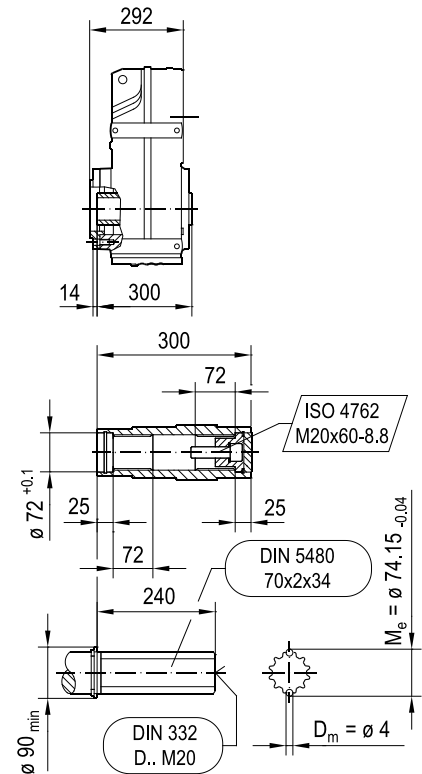


### FHZ97..

FHZ97/R.. → 6.3



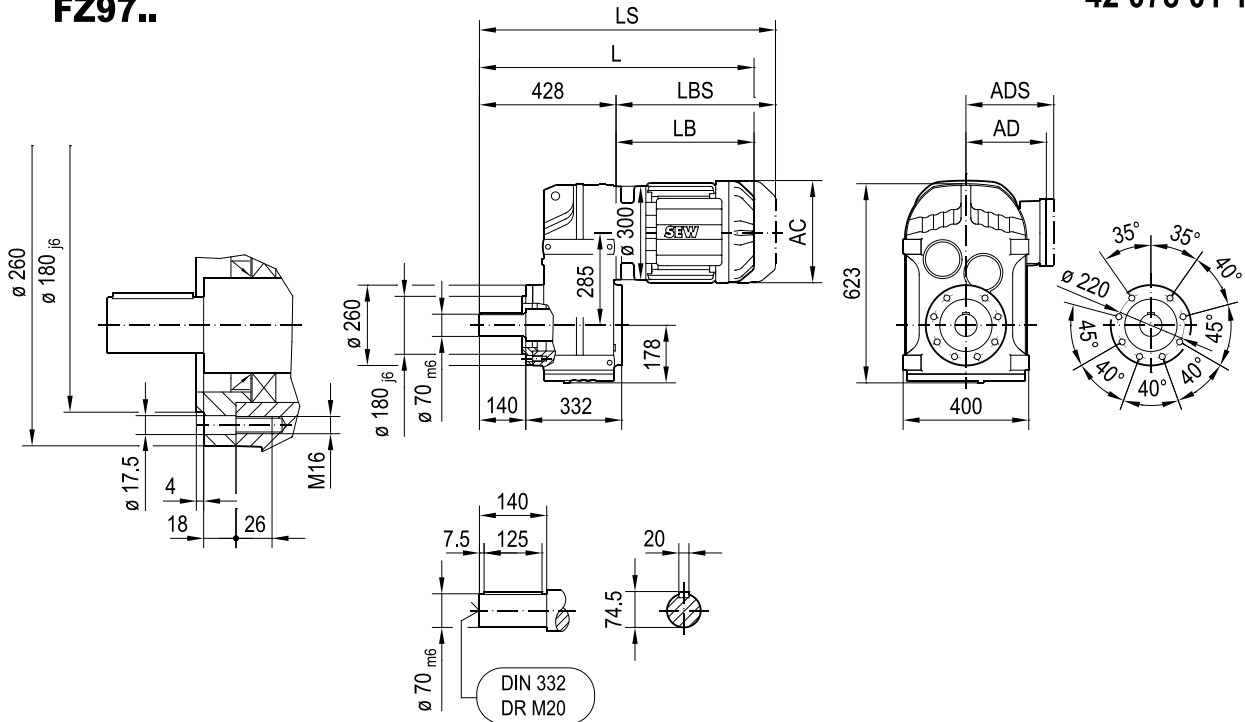
### FVZ97..



(→  7.3)	DRN												
	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	150	150	158	158	172	172	228	228	253	268	283	305
L	550	552	584	580	630	661	711	729	755	821	844	954	928
LS	631	645	677	674	724	773	823	867	892	1010	1033	1159	1133
LB	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	339	353	385	382	432	481	531	575	600	718	741	867	841

FZ97..

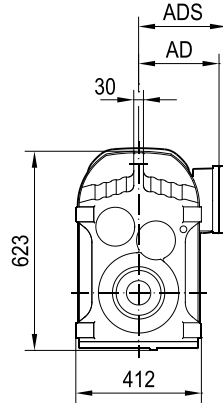
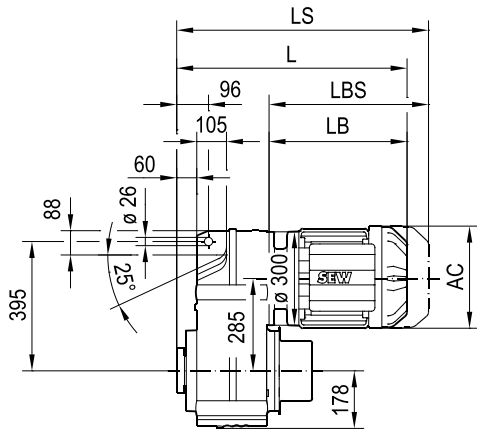
42 078 01 15



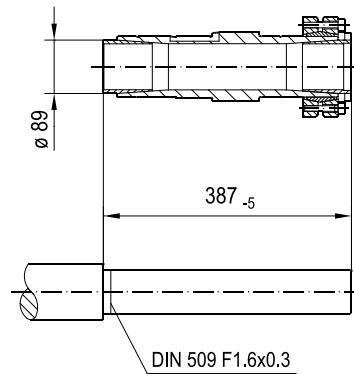
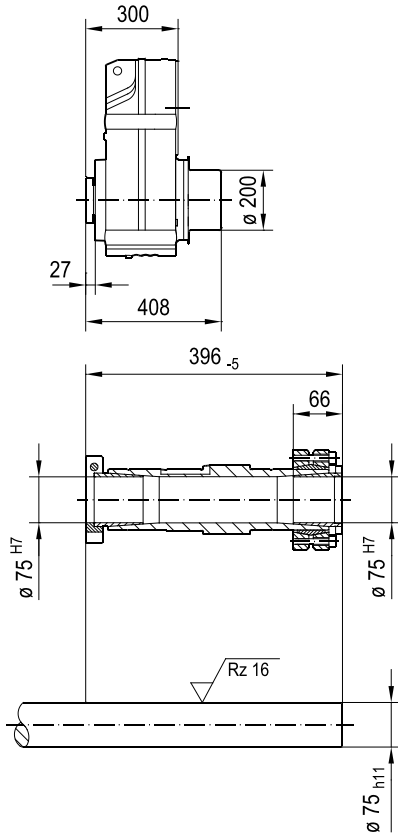
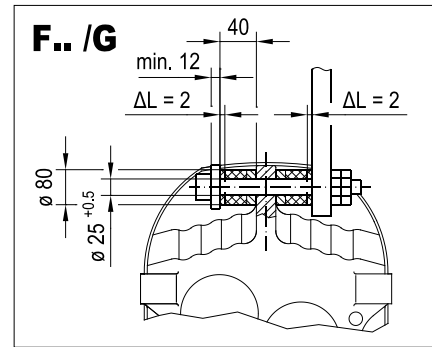
(→  7.3)	DRN												
	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	150	150	158	158	172	172	228	228	253	268	283	305
L	686	688	720	716	766	797	847	865	891	957	980	1090	1064
LS	767	781	813	810	860	909	959	1003	1028	1146	1169	1295	1269
LB	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	339	353	385	382	432	481	531	575	600	718	741	867	841

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### FT97..



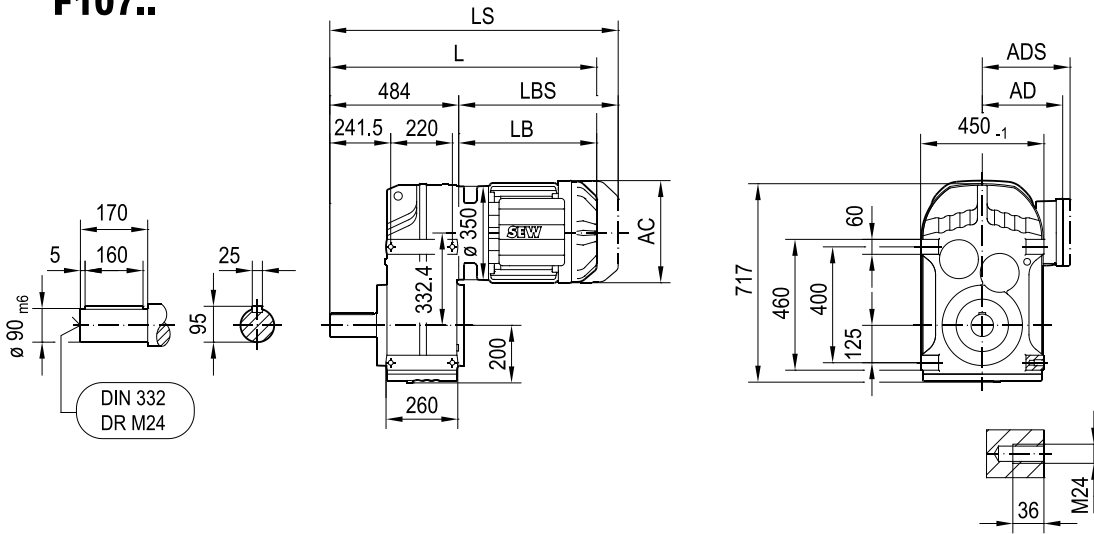
### 42 058 01 14



(-> 7.3)	DRN										
	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..
AC	156	179	179	197	197	221	221	261	261	314	357
AD	128	140	140	157	157	170	170	228	228	253	268
ADS	139	150	150	158	158	172	172	228	228	253	268
L	558	560	592	588	638	669	719	737	763	829	852
LS	639	653	685	682	732	781	831	875	900	1018	1041
LB	258	260	292	288	338	369	419	437	463	529	552
LBS	339	353	385	382	432	481	531	575	600	718	741

F107..

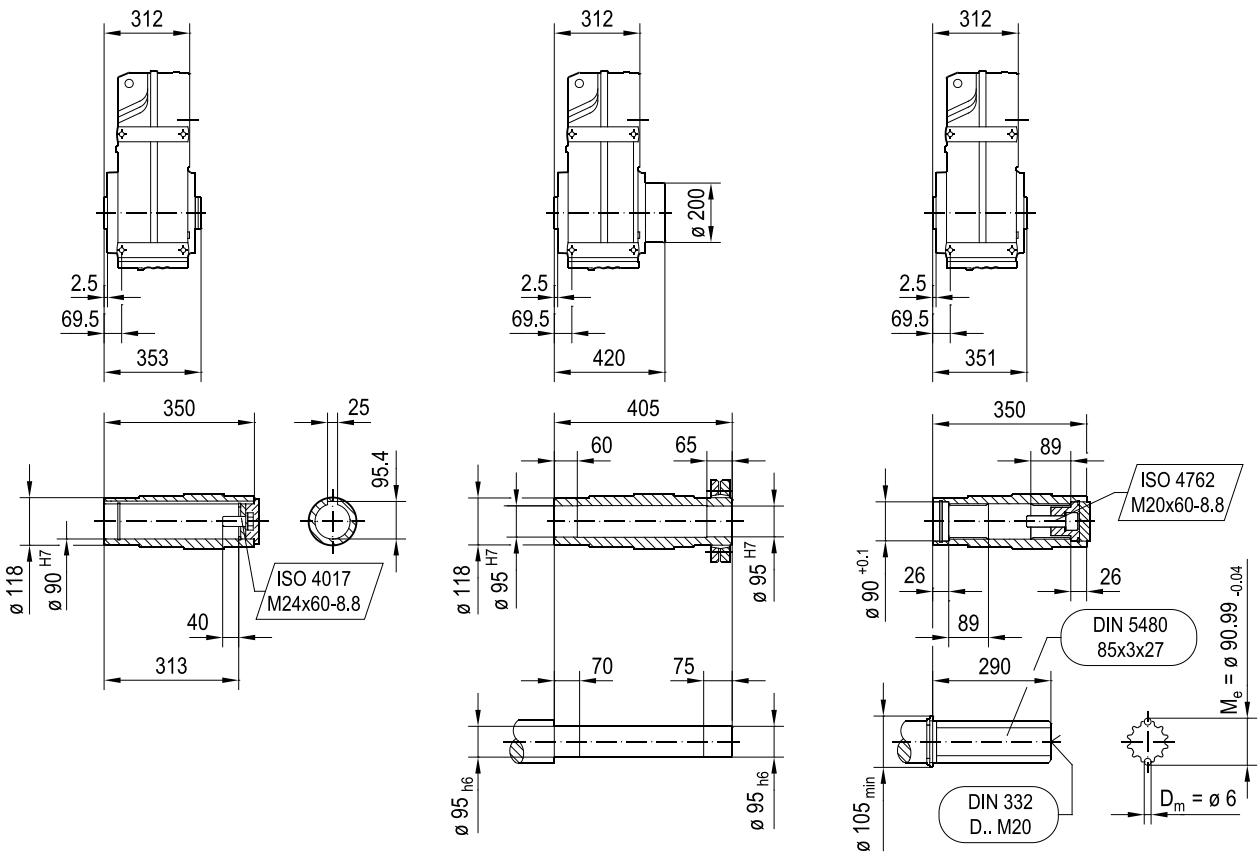
42 059 00 14



FA107B..

FH107B..

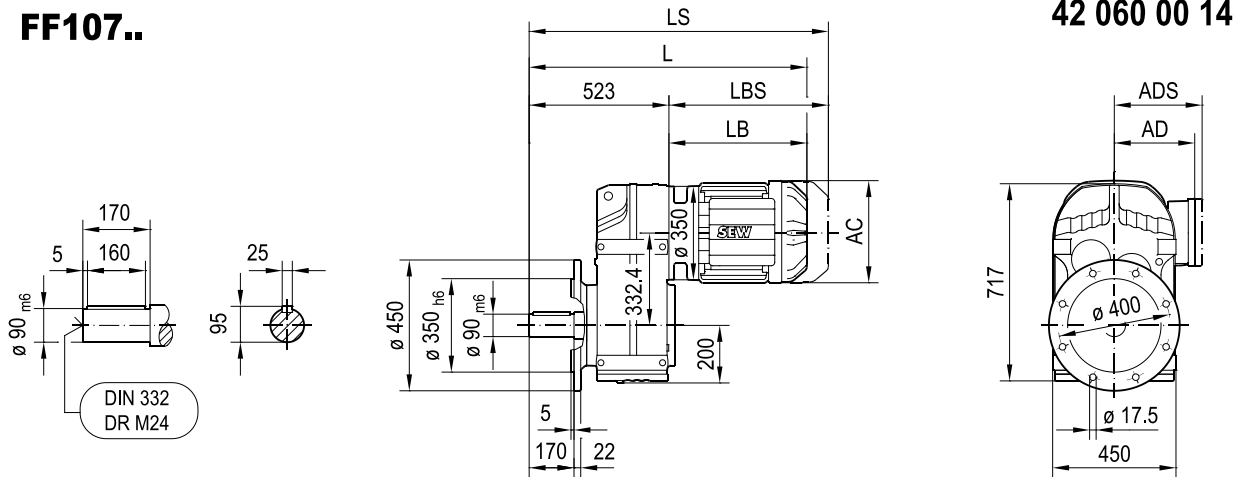
FV107B..



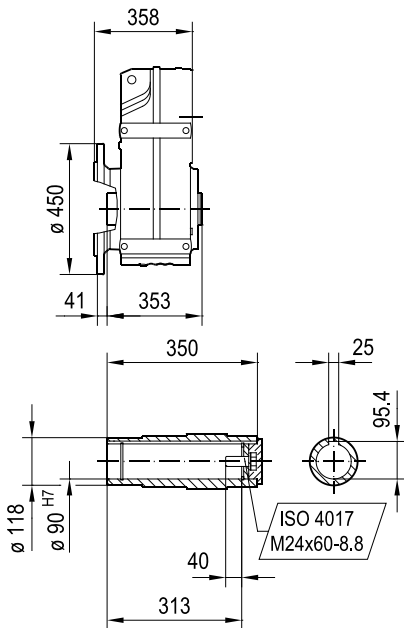
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(→ 7.3)	DRN											
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M	
AC	197	197	221	221	261	261	314	357	394	434	495	
AD	157	157	170	170	228	228	253	268	283	305	394	
ADS	158	158	172	172	228	228	253	268	283	305	394	
L	766	816	847	897	915	941	1007	1030	1140	1114	1251	
LS	860	910	959	1009	1053	1078	1196	1219	1345	1319	1491	
LB	282	332	363	413	431	457	523	546	656	630	767	
LBS	376	426	475	525	569	594	712	735	861	835	1007	

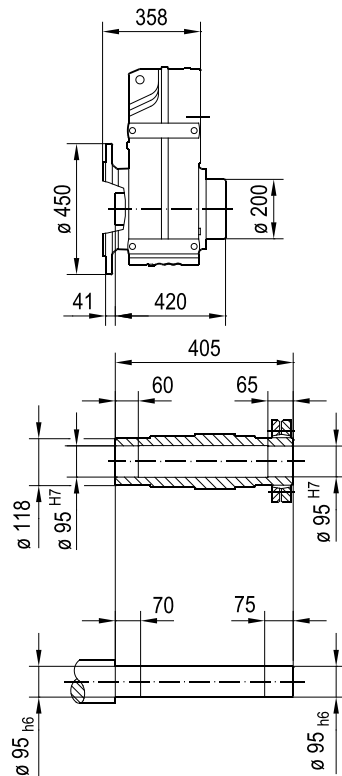
### FF107..



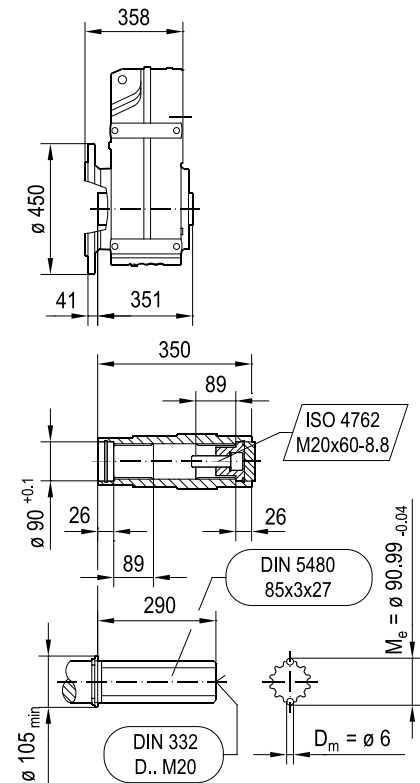
### FAF107..



### FHF107..



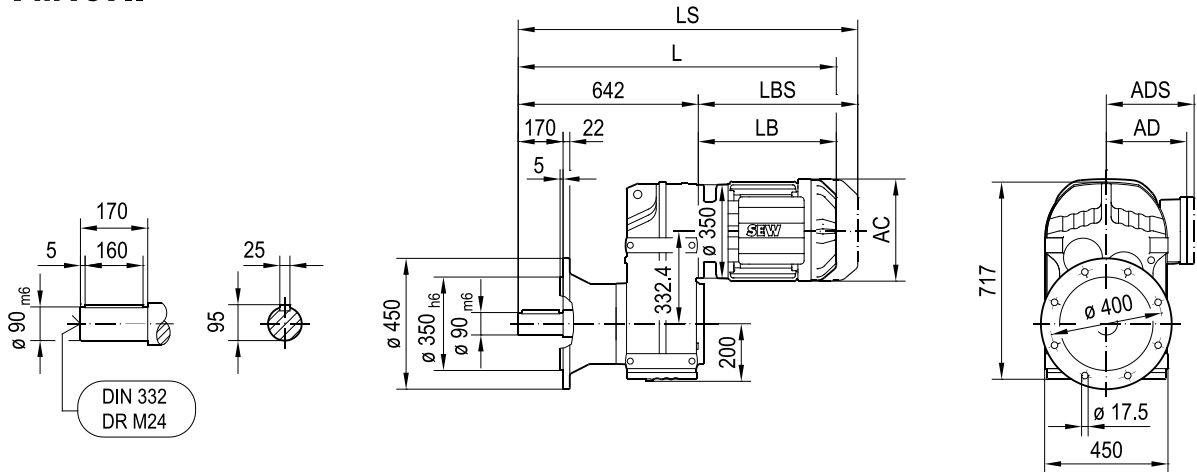
### FVF107..



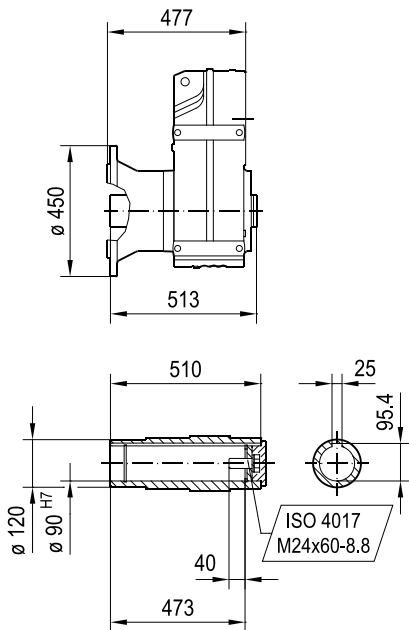
(-> 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	805	855	886	936	954	980	1046	1069	1179	1153	1290
LS	899	949	998	1048	1092	1117	1235	1258	1384	1358	1530
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

**FM107..**

42 116 00 17



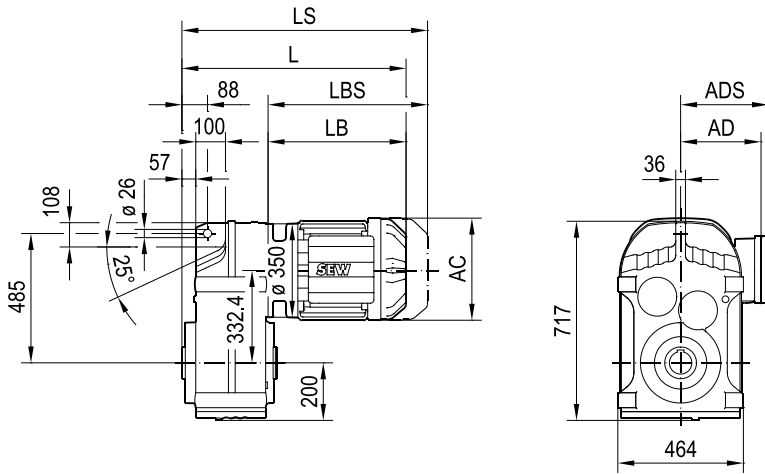
**FAM107..**



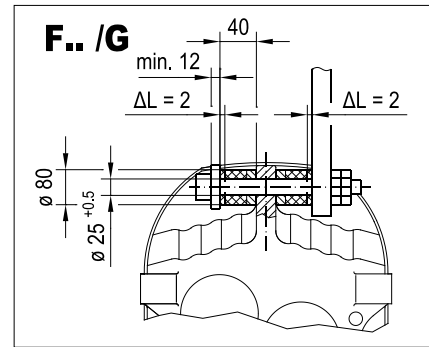
(→  7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	924	974	1005	1055	1073	1099	1165	1188	1298	1272	1409
LS	1018	1068	1117	1167	1211	1236	1354	1377	1503	1477	1649
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

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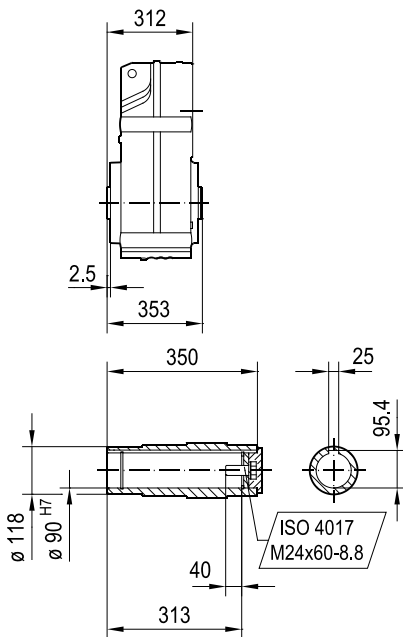
### FA107..



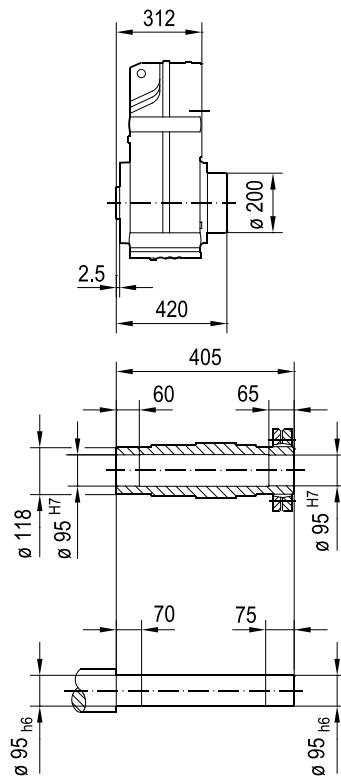
42 061 00 14



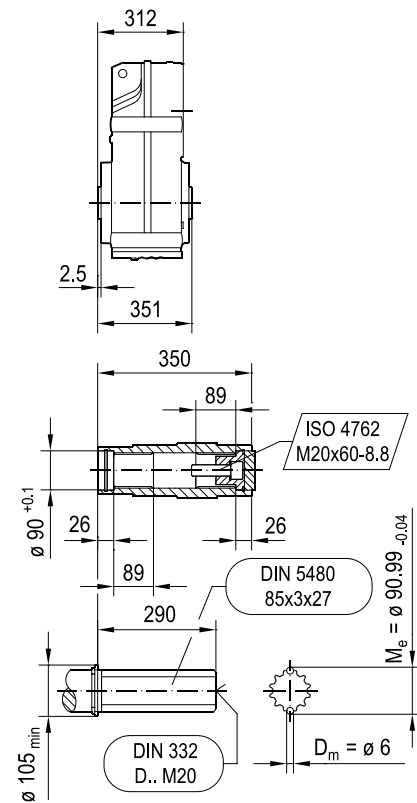
### FA107..



### FH107..



### FV107..

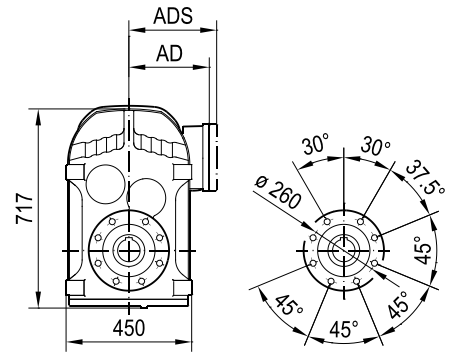
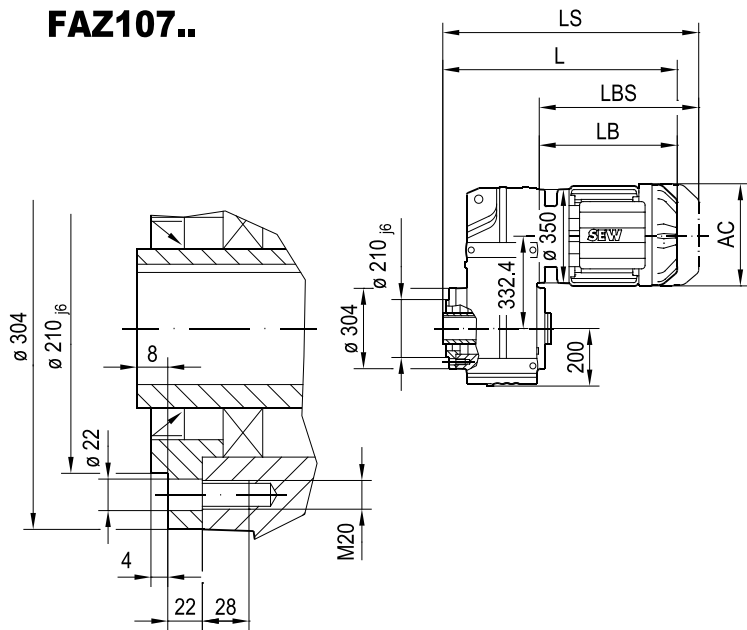


(-> 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	594	644	675	725	743	769	835	858	968	942	1079
LS	688	738	787	837	881	906	1024	1047	1173	1147	1319
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

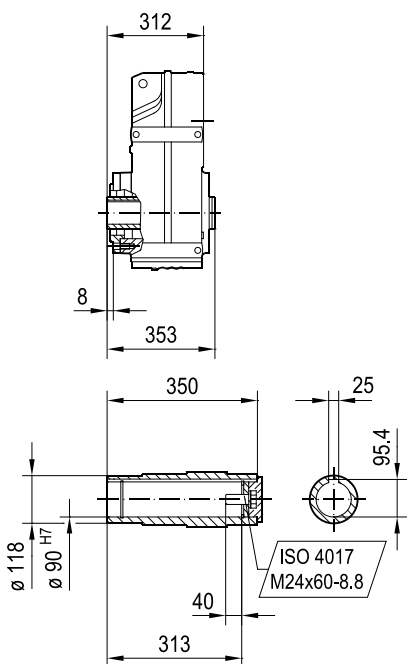


42 062 00 14

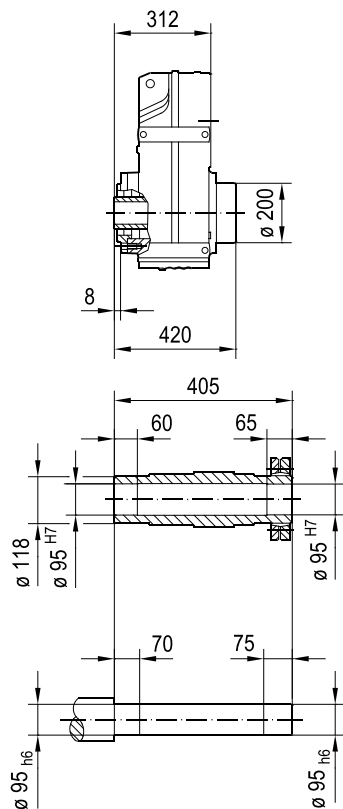
**FAZ107..**



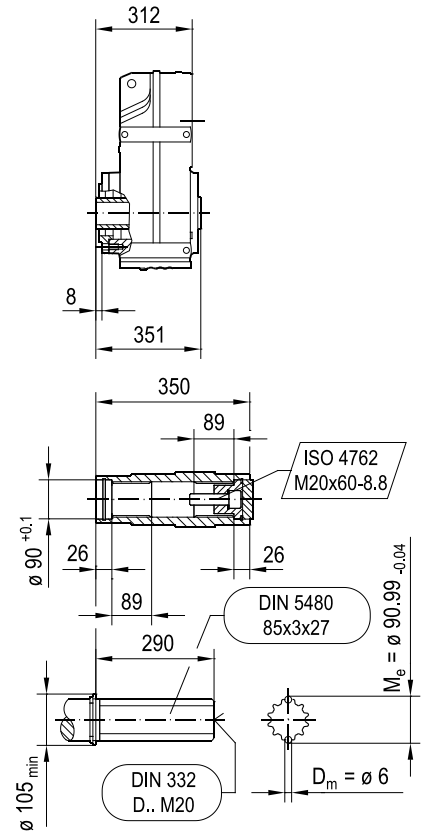
**FAZ107..**



**FHZ107..**



**FVZ107..**

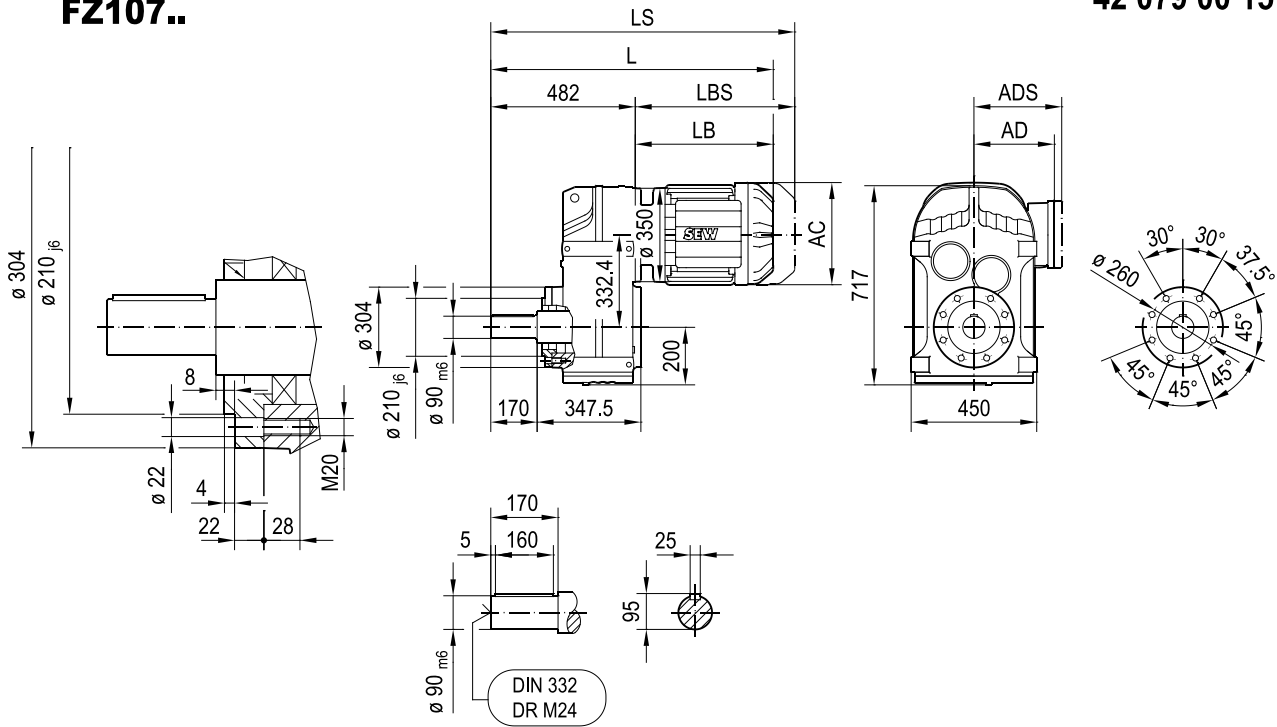


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(→ 7.3)	DRN											
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M	
<b>AC</b>	197	197	221	221	261	261	314	357	394	434	495	
<b>AD</b>	157	157	170	170	228	228	253	268	283	305	394	
<b>ADS</b>	158	158	172	172	228	228	253	268	283	305	394	
<b>L</b>	594	644	675	725	743	769	835	858	968	942	1079	
<b>LS</b>	688	738	787	837	881	906	1024	1047	1173	1147	1319	
<b>LB</b>	282	332	363	413	431	457	523	546	656	630	767	
<b>LBS</b>	376	426	475	525	569	594	712	735	861	835	1007	

### FZ107..

42 079 00 15

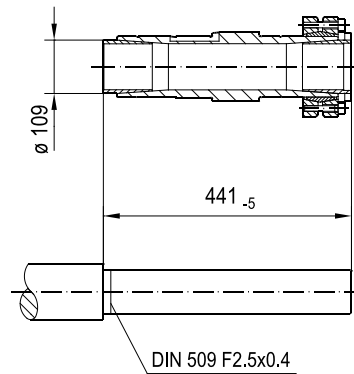
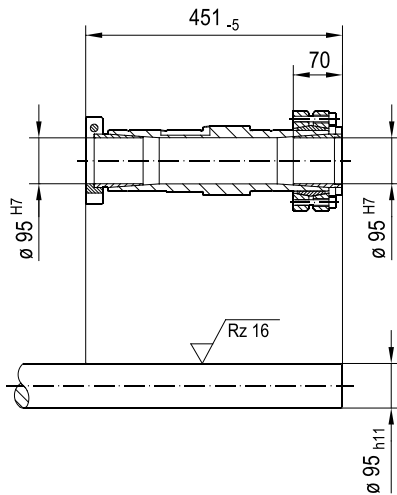
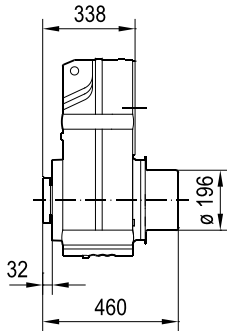
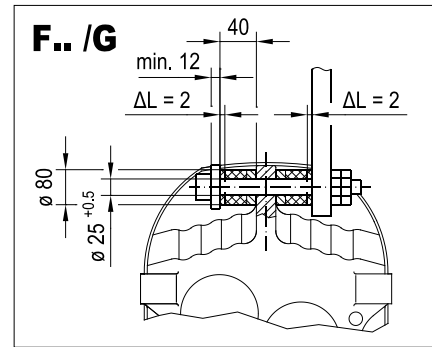
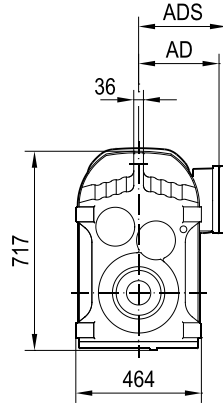
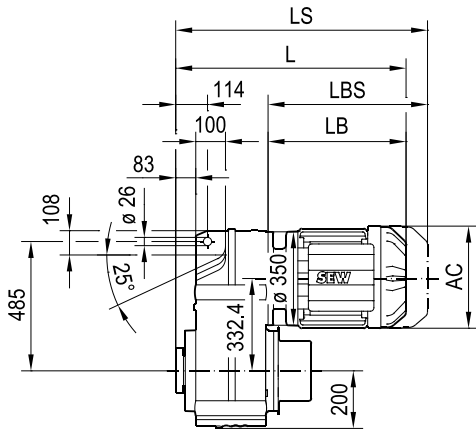


(-> 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	764	814	845	895	913	939	1005	1028	1138	1112	1249
LS	858	908	957	1007	1051	1076	1194	1217	1343	1317	1489
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

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**FT107..**

**42 063 01 14**

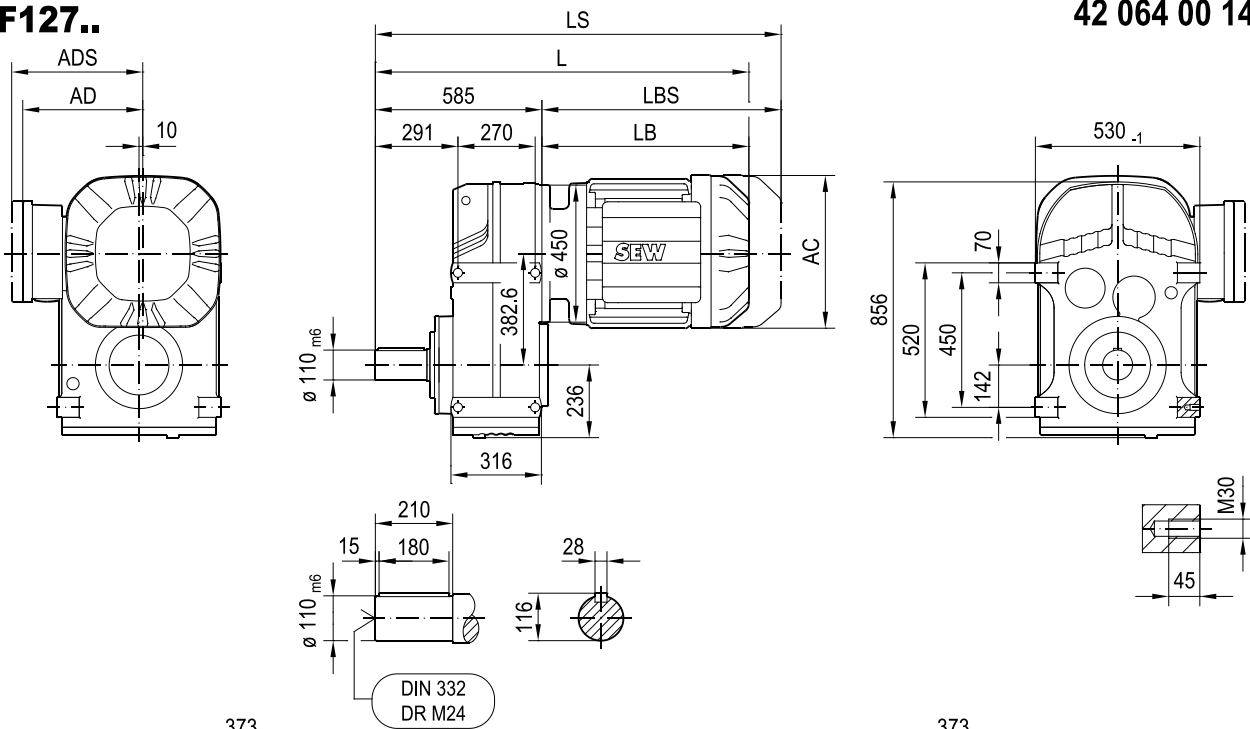


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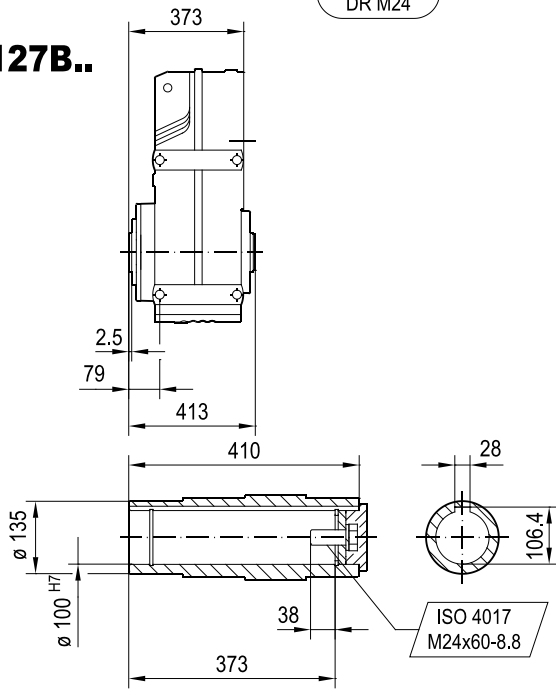
(→ 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	620	670	701	751	769	795	861	884	994	968	1105
LS	714	764	813	863	907	932	1050	1073	1199	1173	1345
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

42 064 00 14

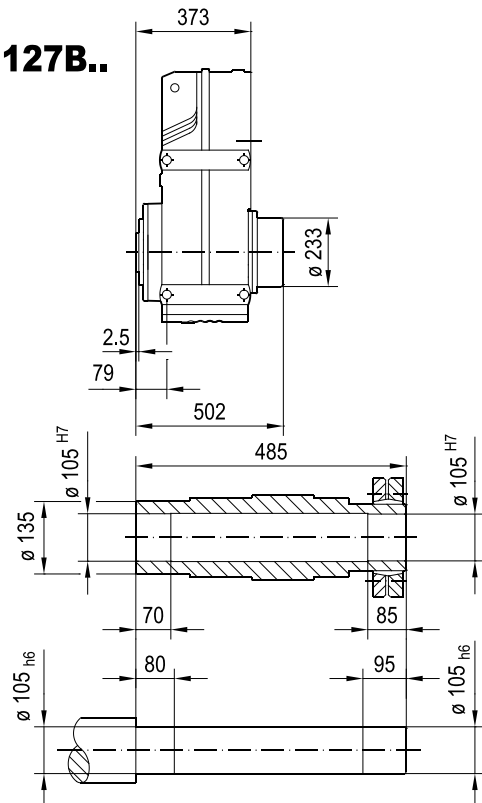
### F127..



### FA127B..

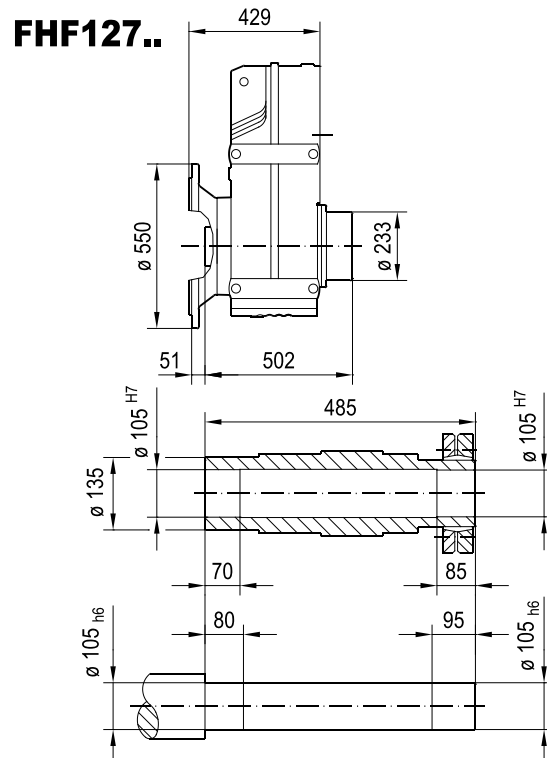
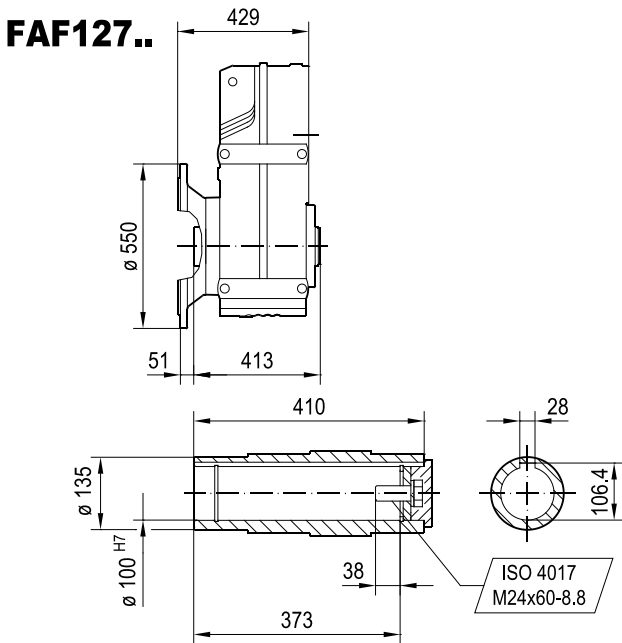
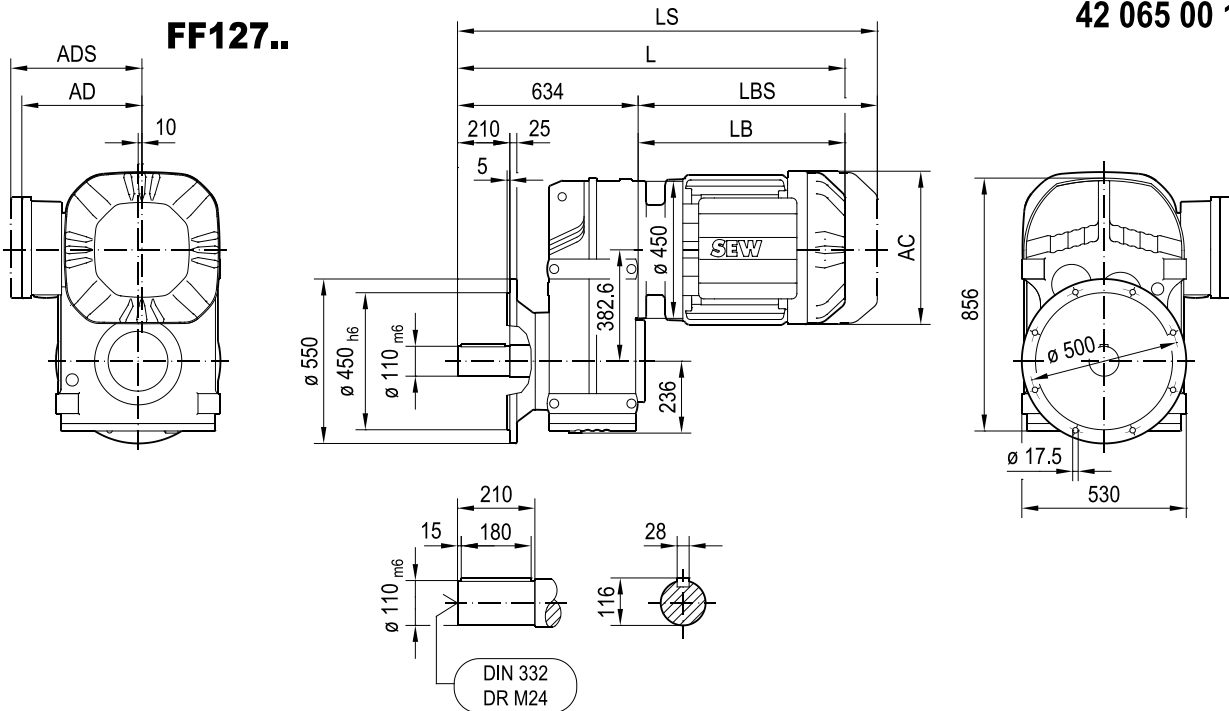


### FH127B..



(\(\rightarrow\)) 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	983	1001	1027	1093	1116	1226	1200	1337	1337	1432
LS	1095	1139	1164	1282	1305	1431	1405	1577	1577	1672
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

42 065 00 14

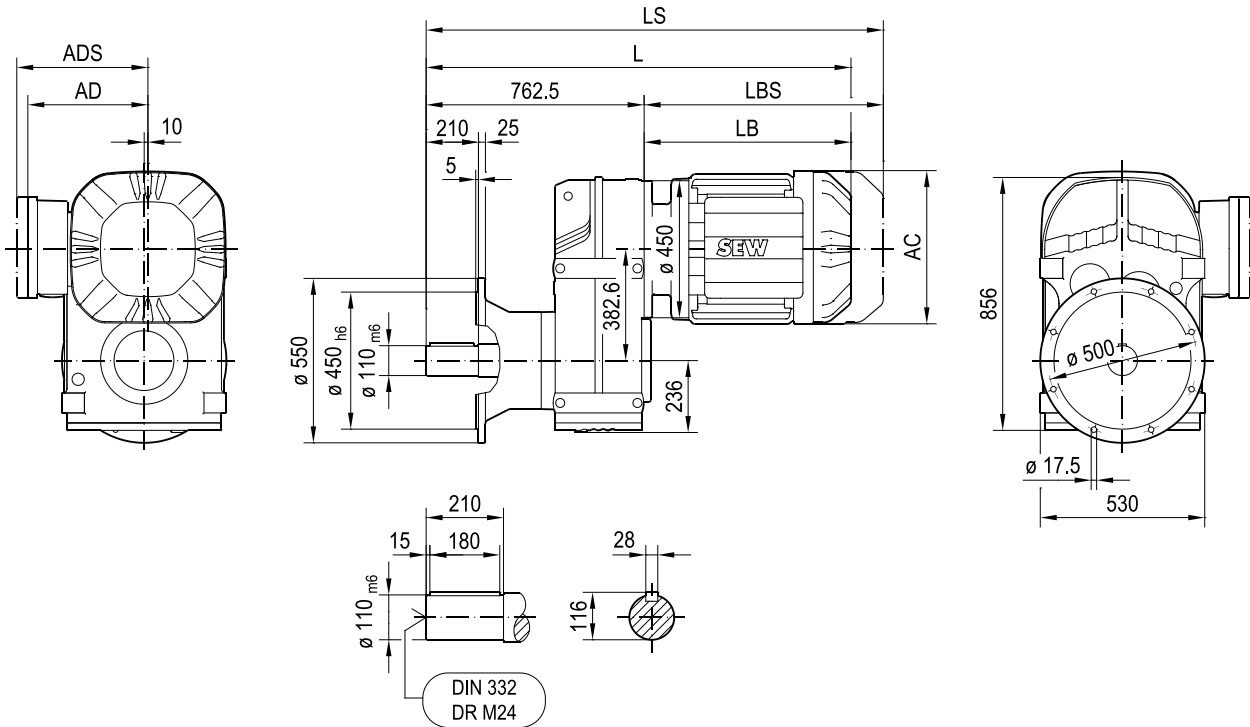


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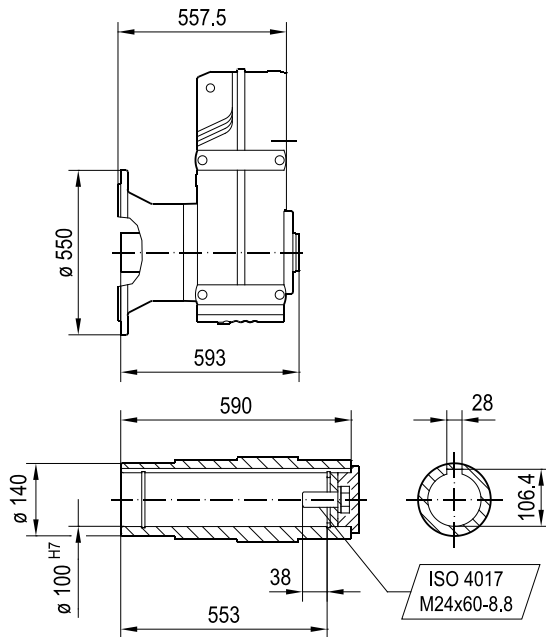
( $\rightarrow$ 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1032	1050	1076	1142	1165	1275	1249	1386	1386	1481
LS	1144	1188	1213	1331	1354	1480	1454	1626	1626	1721
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

42 011 01 17

### FM127..



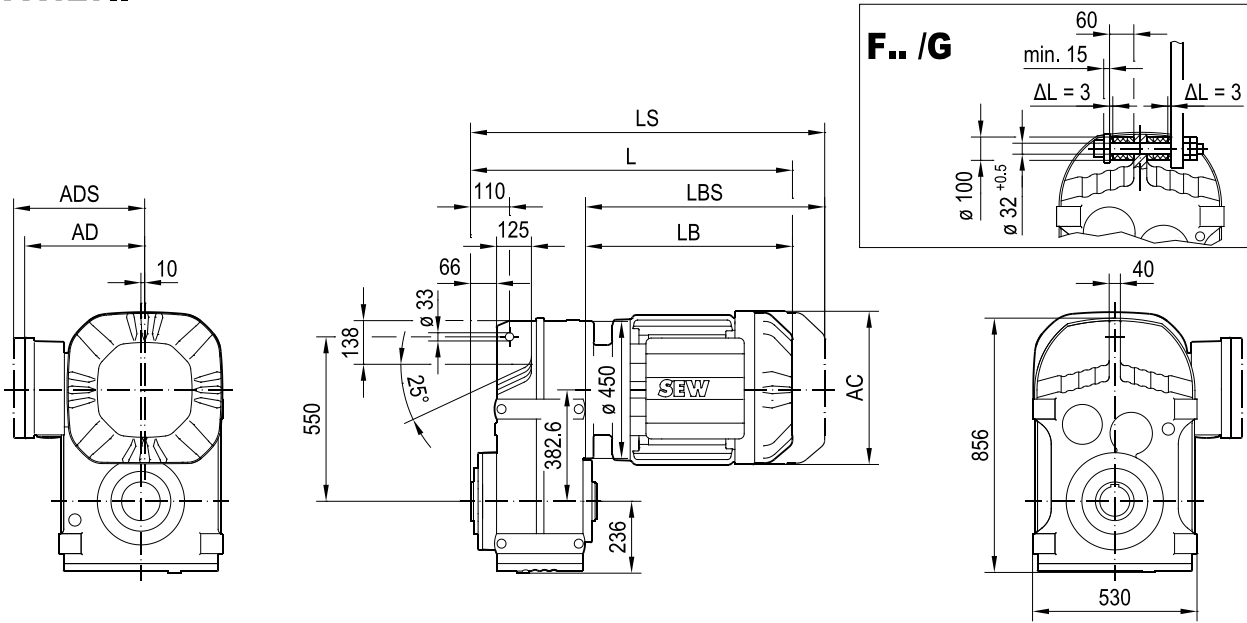
### FAM127..



(-> 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1161	1179	1204	1271	1294	1403	1378	1515	1515	1610
LS	1273	1316	1341	1460	1483	1608	1583	1755	1755	1850
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

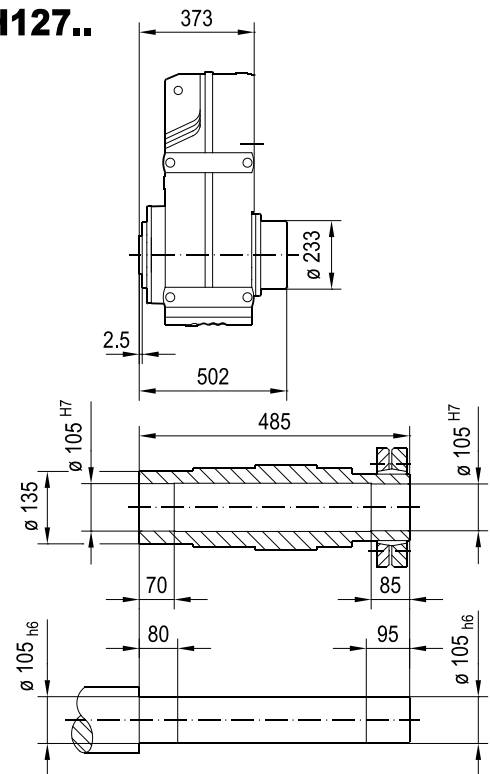
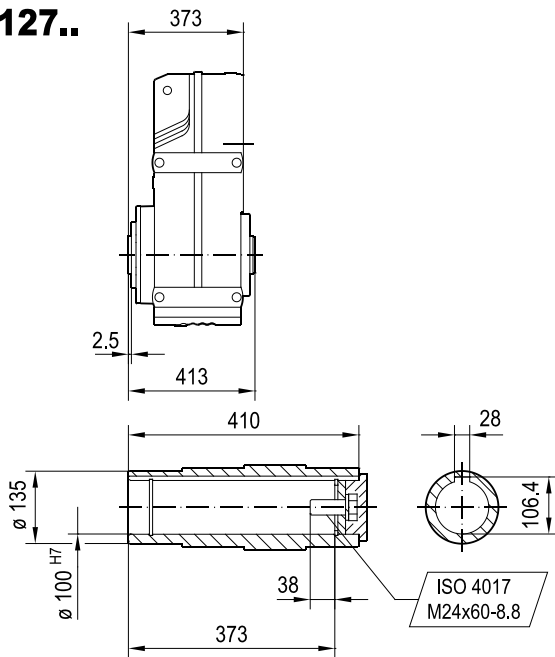
**FA127..**

42 066 00 14



**FA127..**

**FH127..**

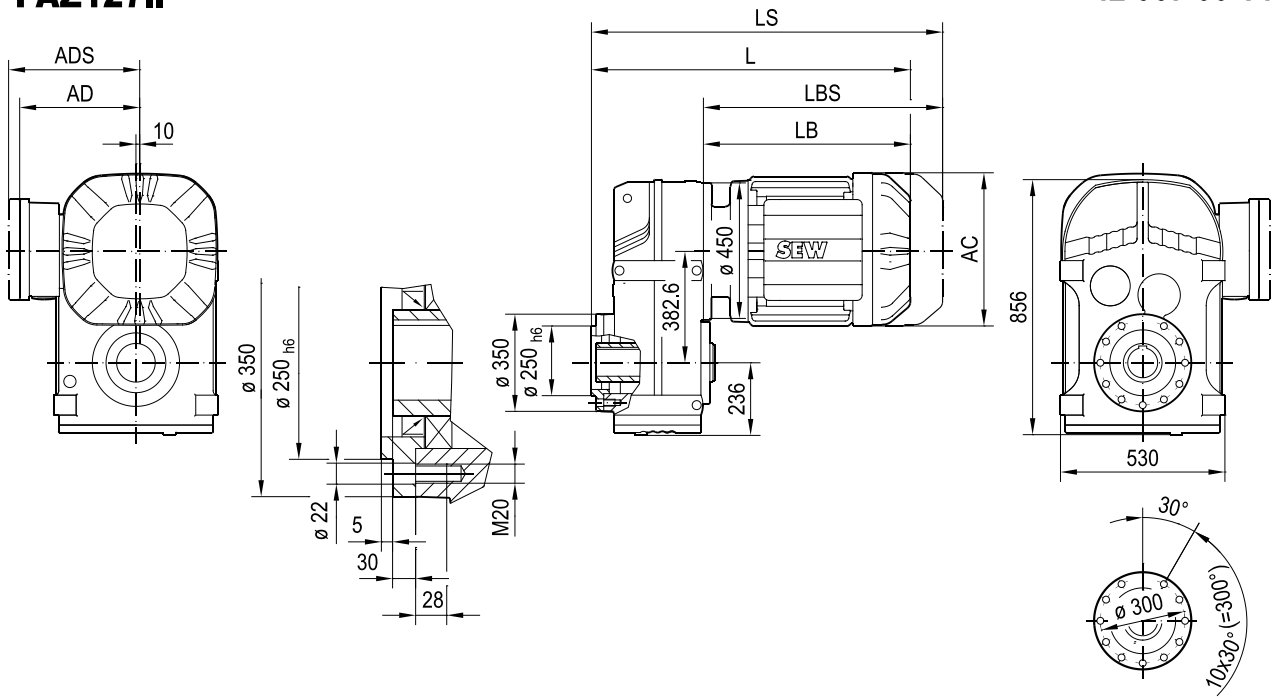


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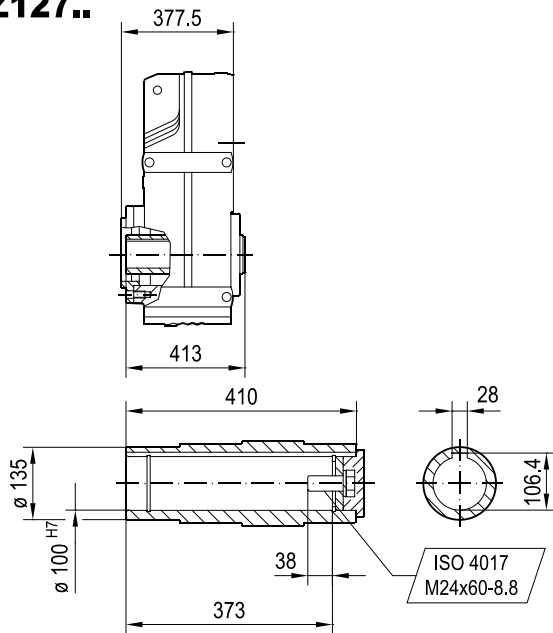
(-> 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	771	789	815	881	904	1014	988	1125	1125	1220
LS	883	927	952	1070	1093	1219	1193	1365	1365	1460
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

42 067 00 14

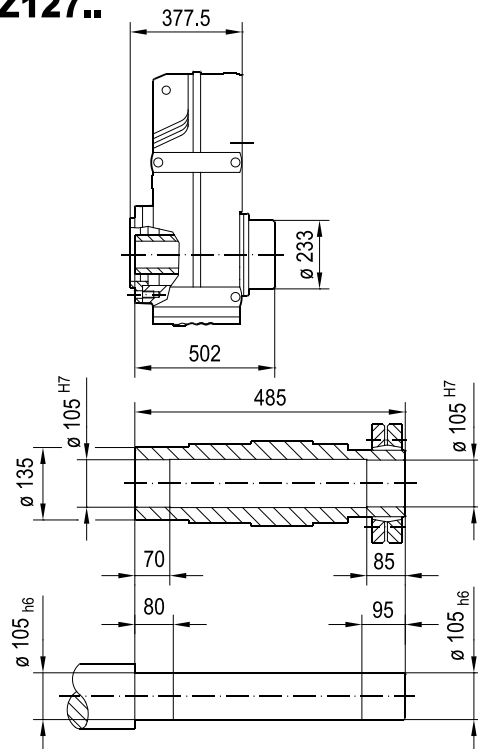
### FAZ127..



### FAZ127..



### FHZ127..



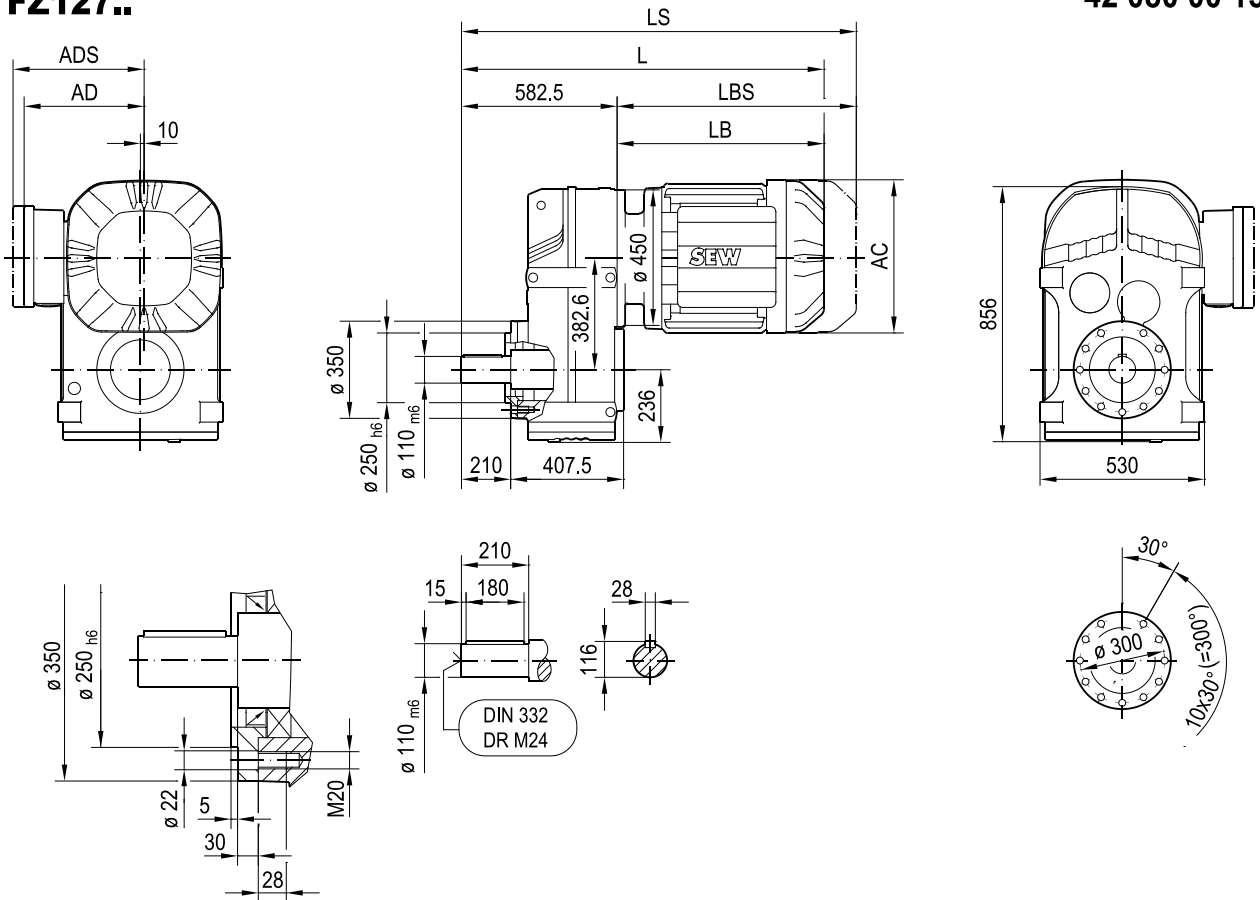
( $\rightarrow$ 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	776	794	819	886	909	1018	993	1130	1130	1225
LS	888	931	956	1075	1098	1223	1198	1370	1370	1465
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

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**FZ127..**

42 080 00 15

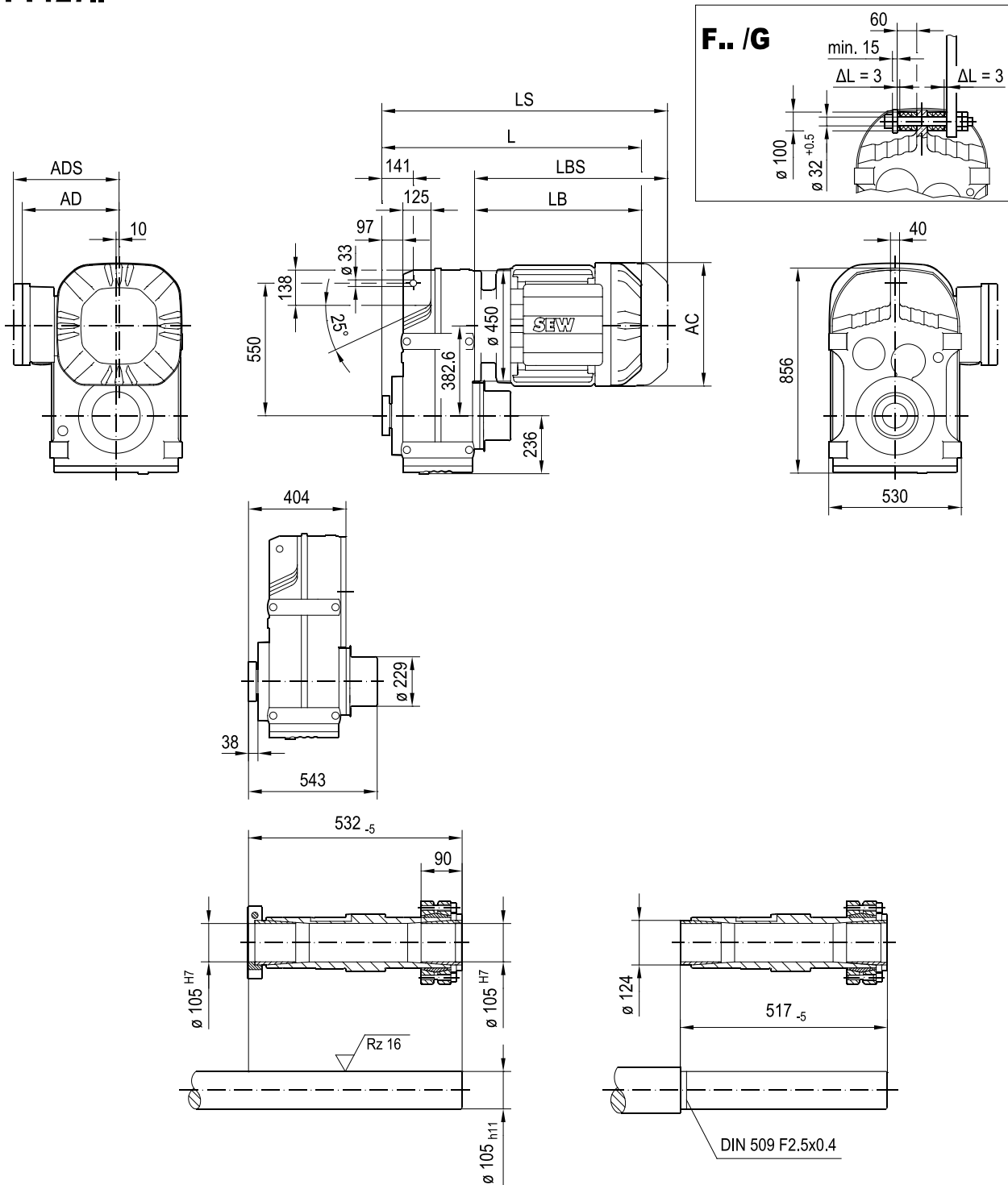


(→ 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	981	999	1024	1091	1114	1223	1198	1335	1335	1430
LS	1093	1136	1161	1280	1303	1428	1403	1575	1575	1670
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

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### FT127..

42 068 01 14

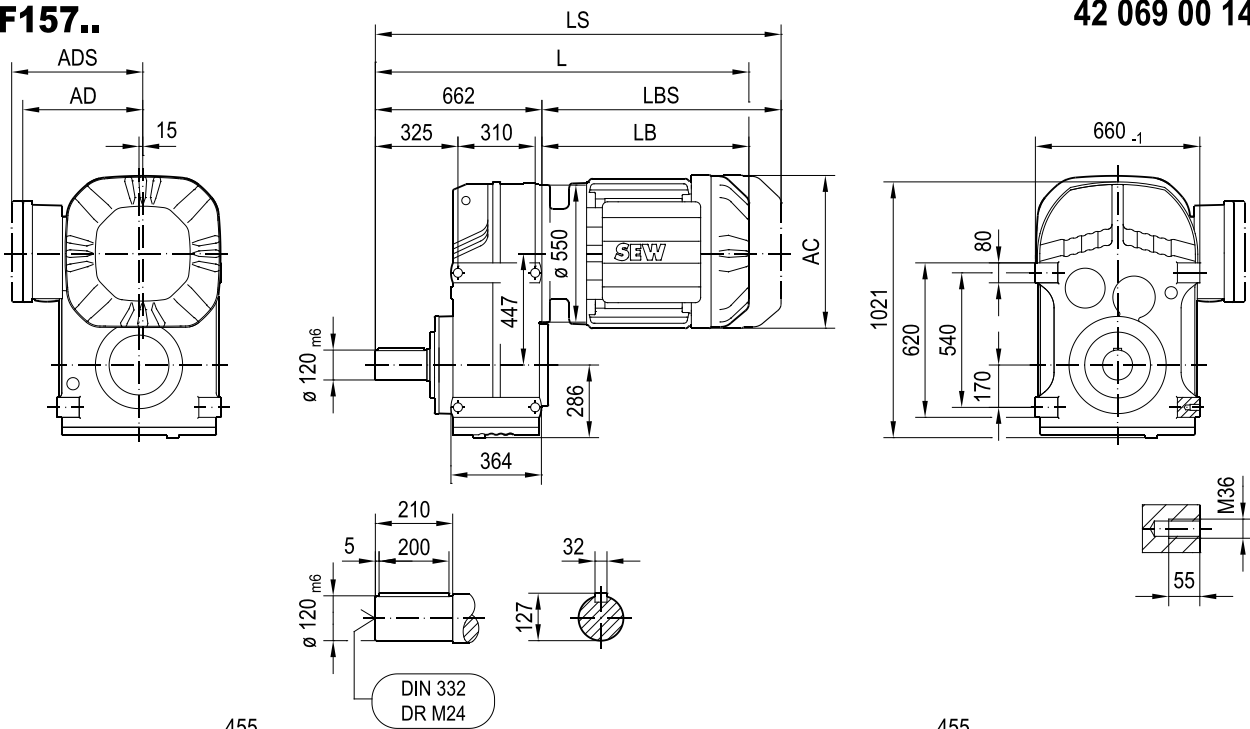


(-> 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	802	820	846	912	935	1045	1019	1156	1156	1251
LS	914	958	983	1101	1124	1250	1224	1396	1396	1491
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

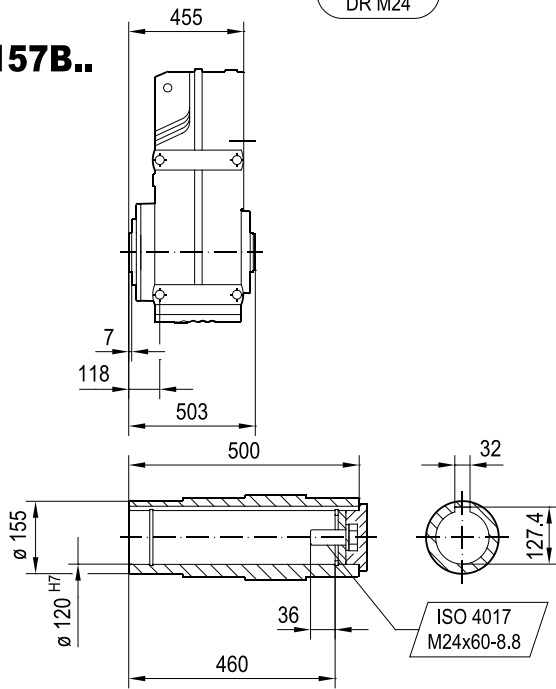
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42 069 00 14

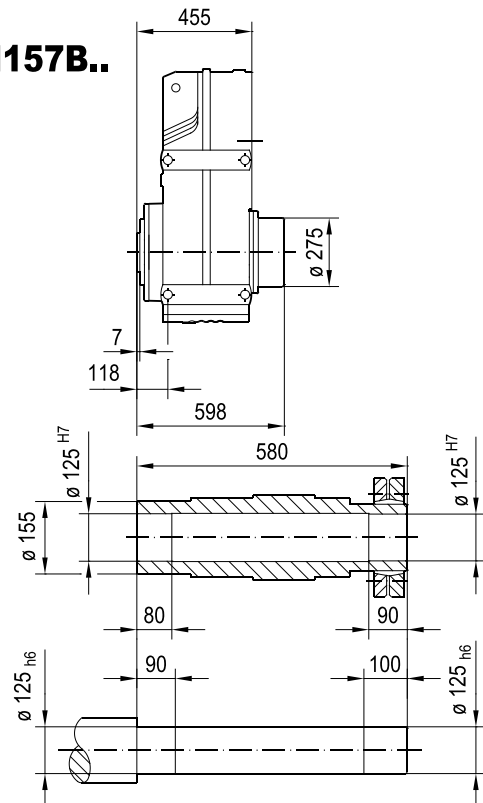
**F157..**



**FA157B..**



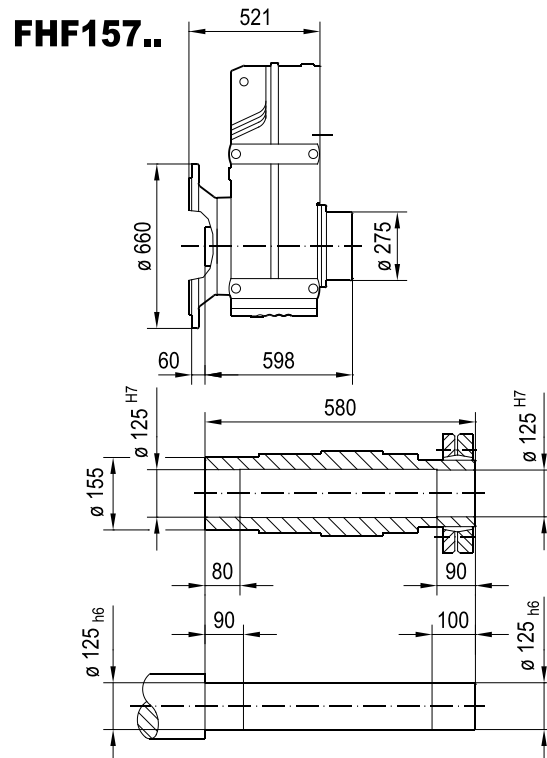
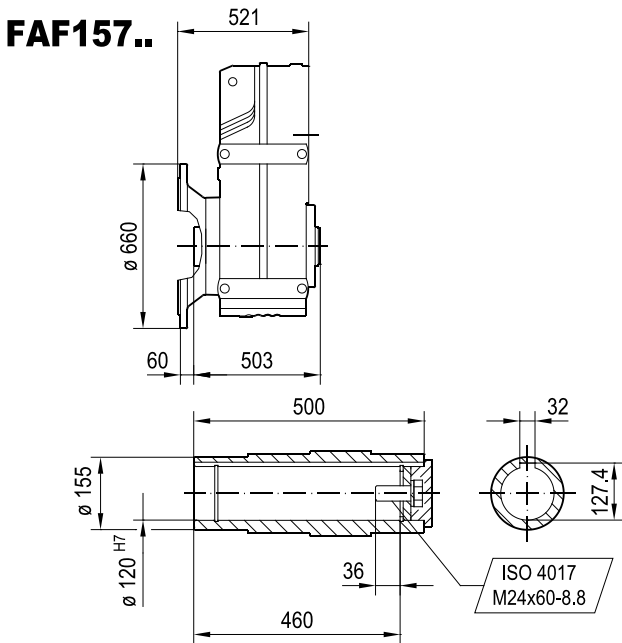
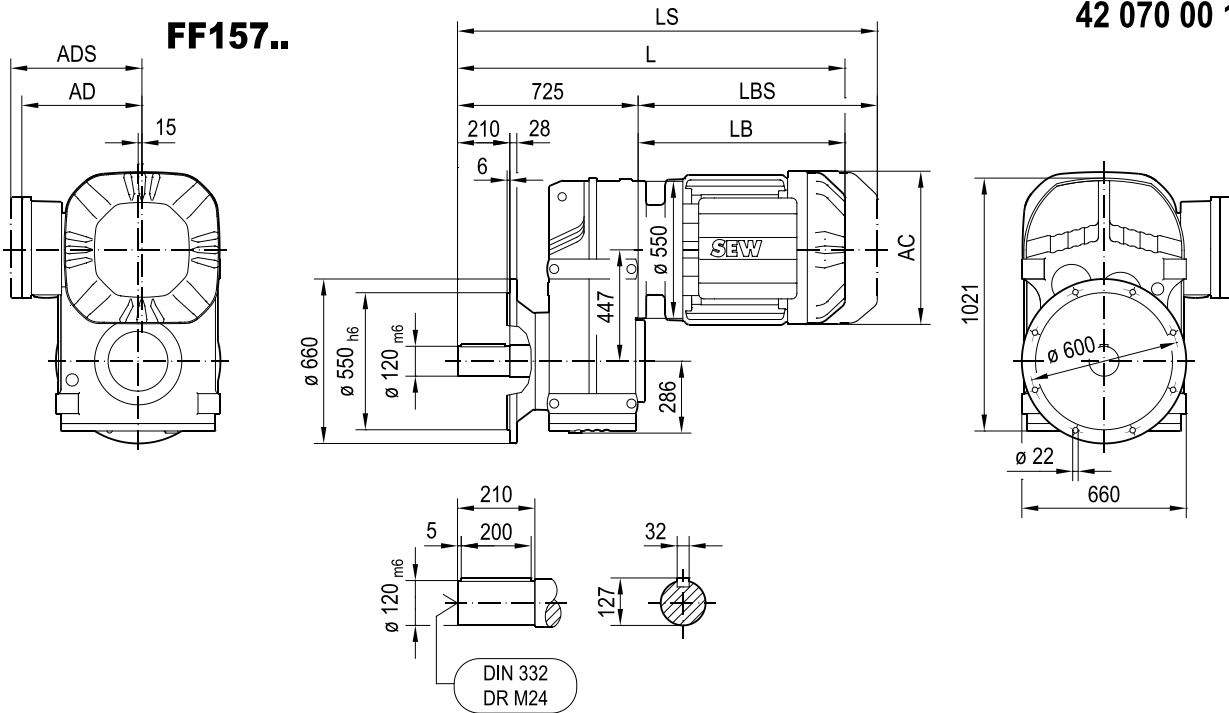
**FH157B..**



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( $\rightarrow$ 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1096	1162	1185	1295	1269	1406	1406	1501	1603	1733
LS	1233	1351	1374	1500	1474	1646	1646	1741	1854	1984
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

42 070 00 14

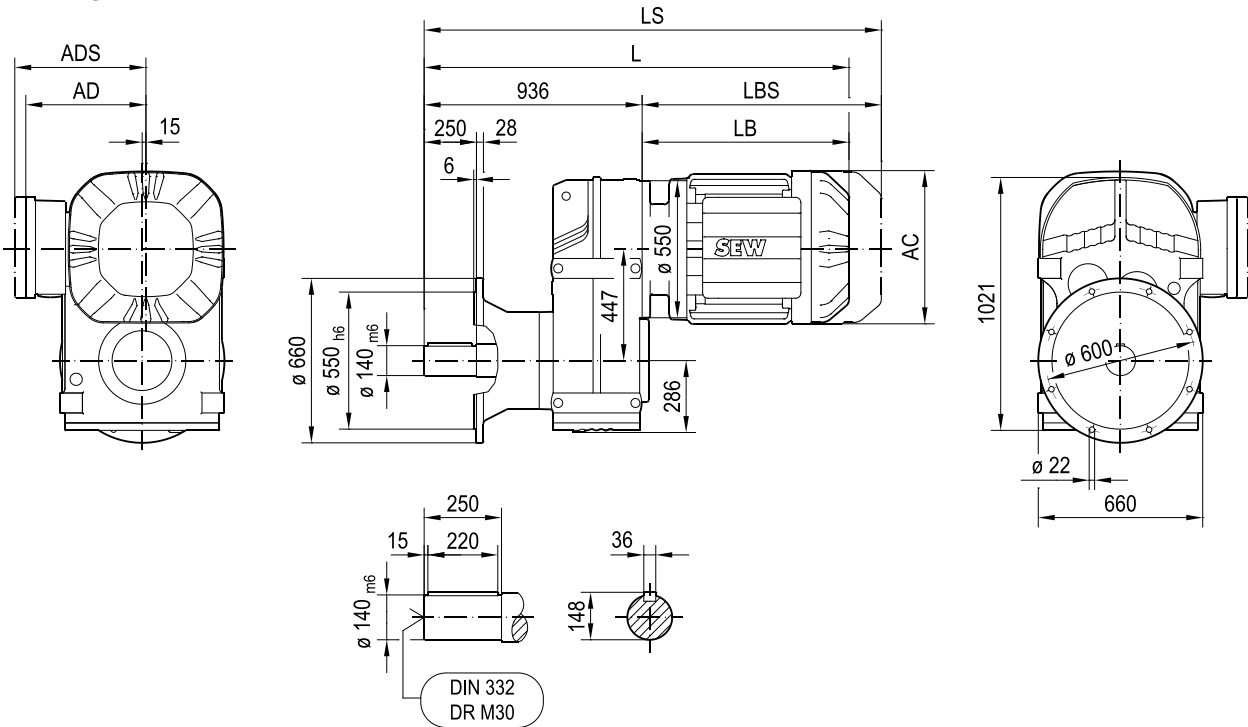


(-> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1159	1225	1248	1358	1332	1469	1469	1564	1666	1796
LS	1296	1414	1437	1563	1537	1709	1709	1804	1917	2047
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

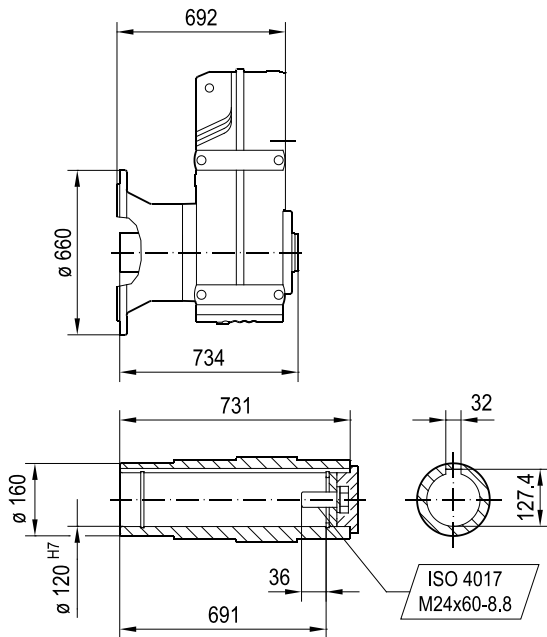
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**FM157..**

42 117 00 17



**FAM157..**

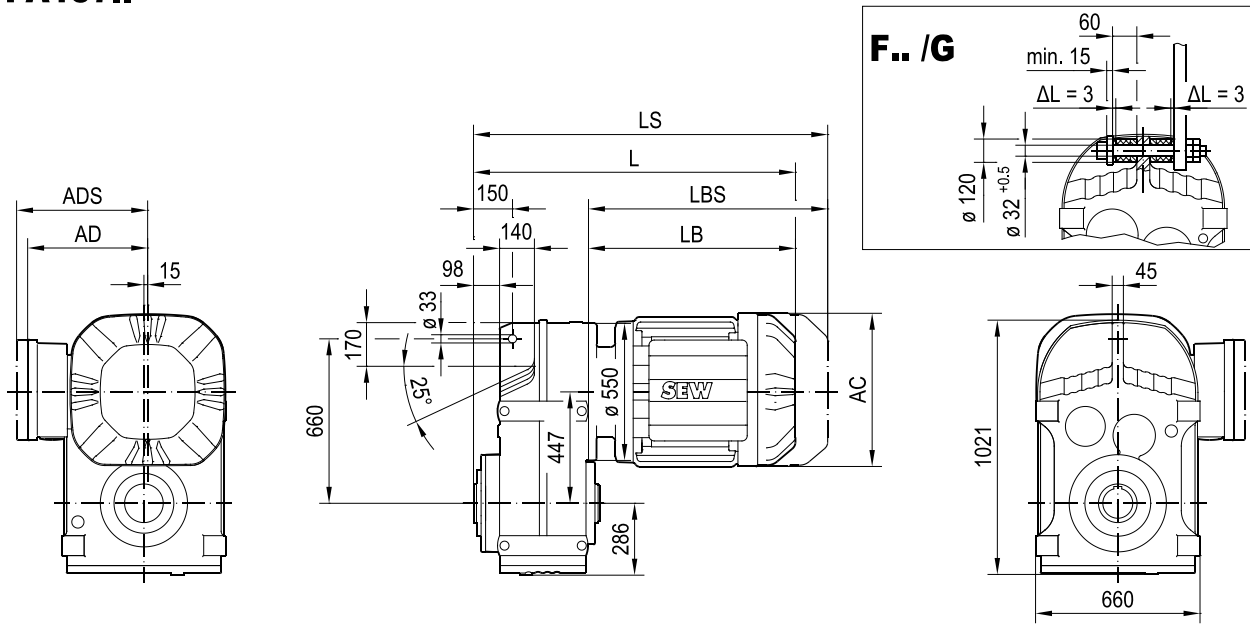


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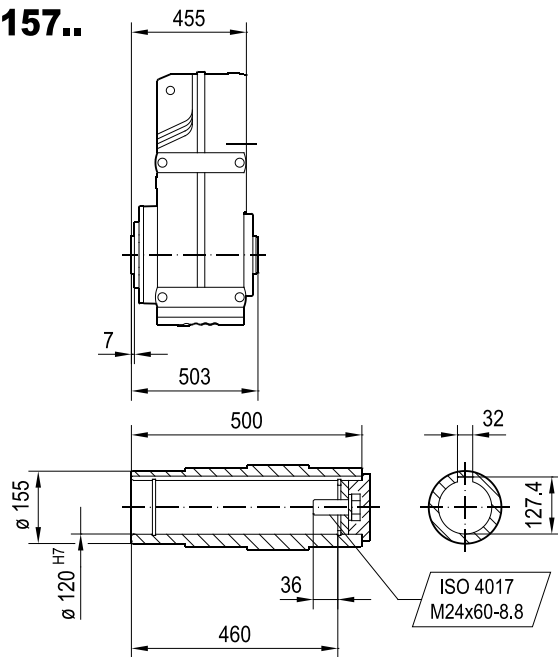
(-> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1370	1436	1459	1569	1543	1680	1680	1775	1877	2007
LS	1507	1625	1648	1774	1748	1920	1920	2015	2128	2258
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

### FA157..

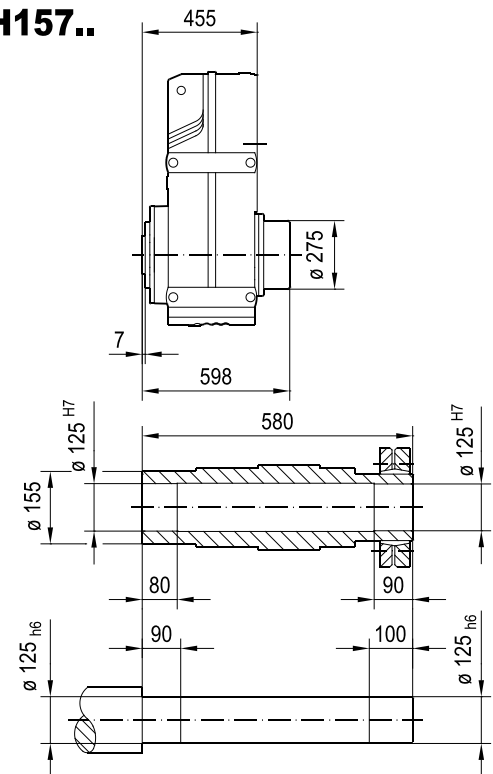
42 071 00 14



### FA157..



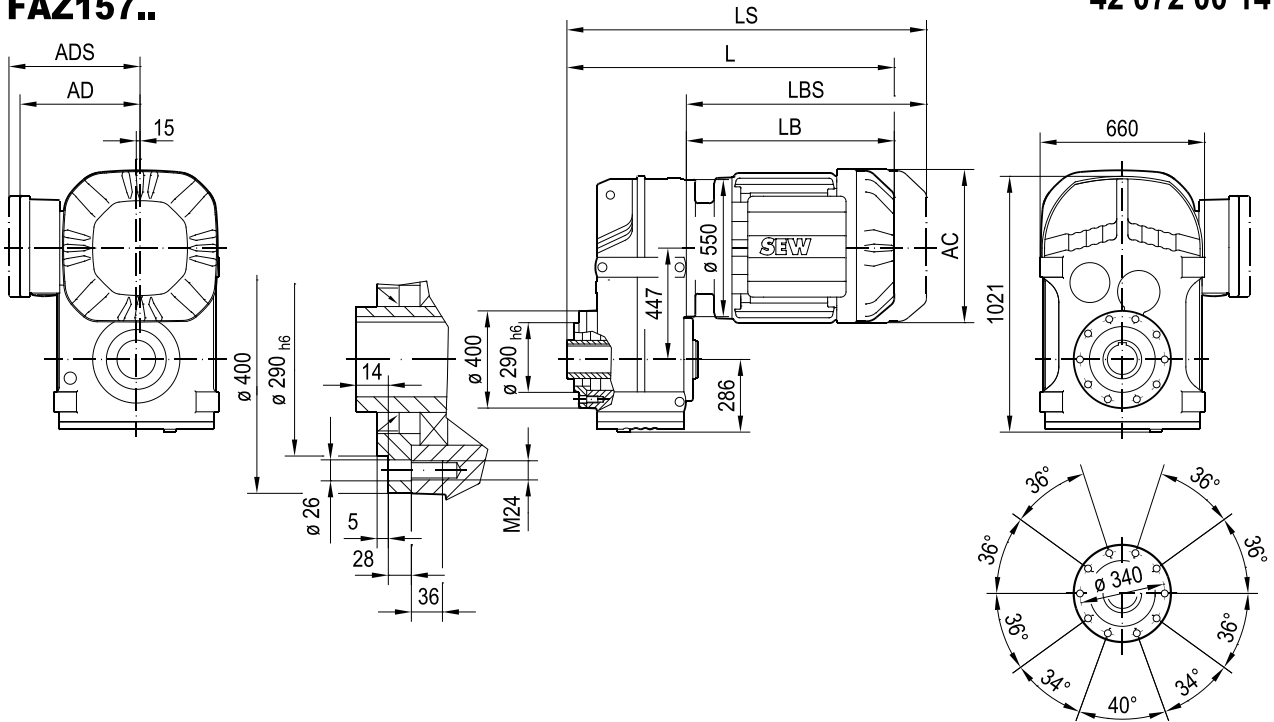
### FH157..



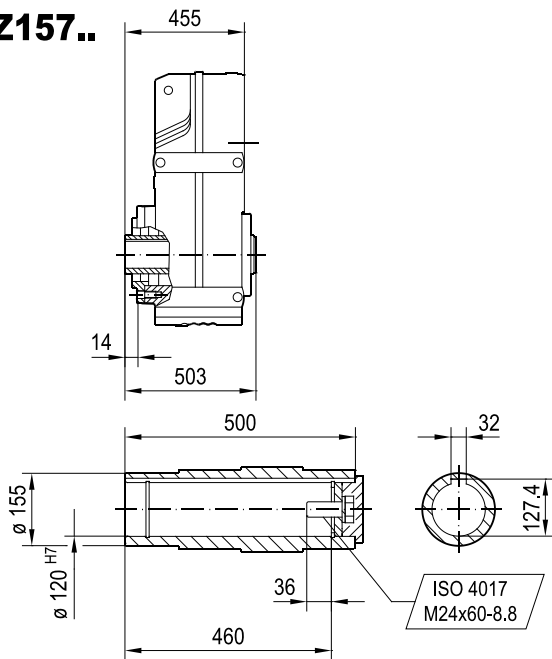
(-> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	889	955	978	1088	1062	1199	1199	1294	1396	1526
LS	1026	1144	1167	1293	1267	1439	1439	1534	1647	1777
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

42 072 00 14

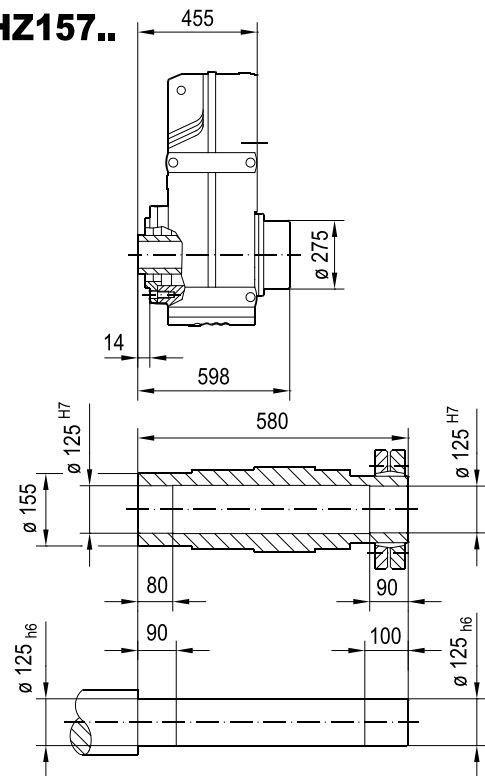
**FAZ157..**



**FAZ157..**



**FHZ157..**

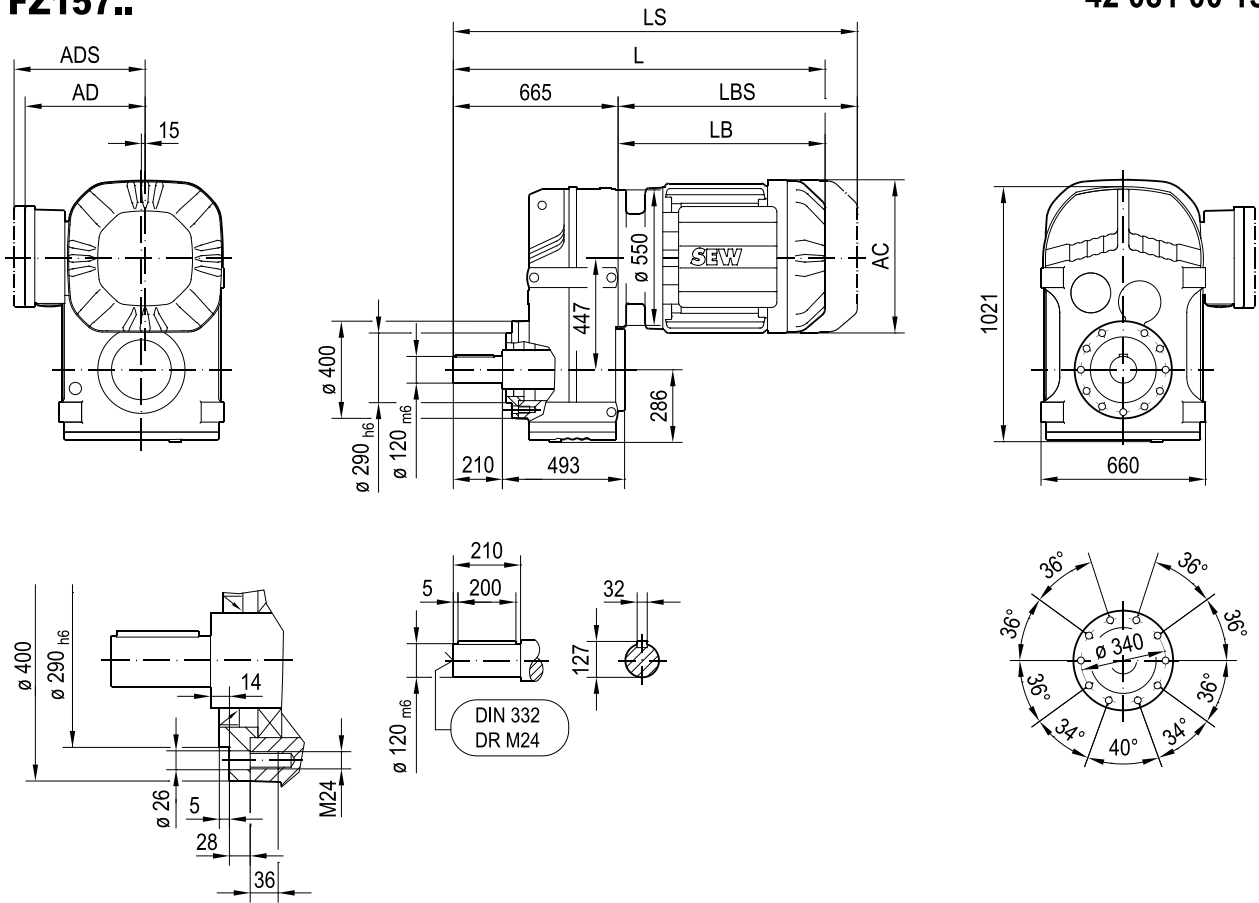


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( $\rightarrow$ 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	889	955	978	1088	1062	1199	1199	1294	1396	1526
LS	1026	1144	1167	1293	1267	1439	1439	1534	1647	1777
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

### FZ157..

42 081 00 15

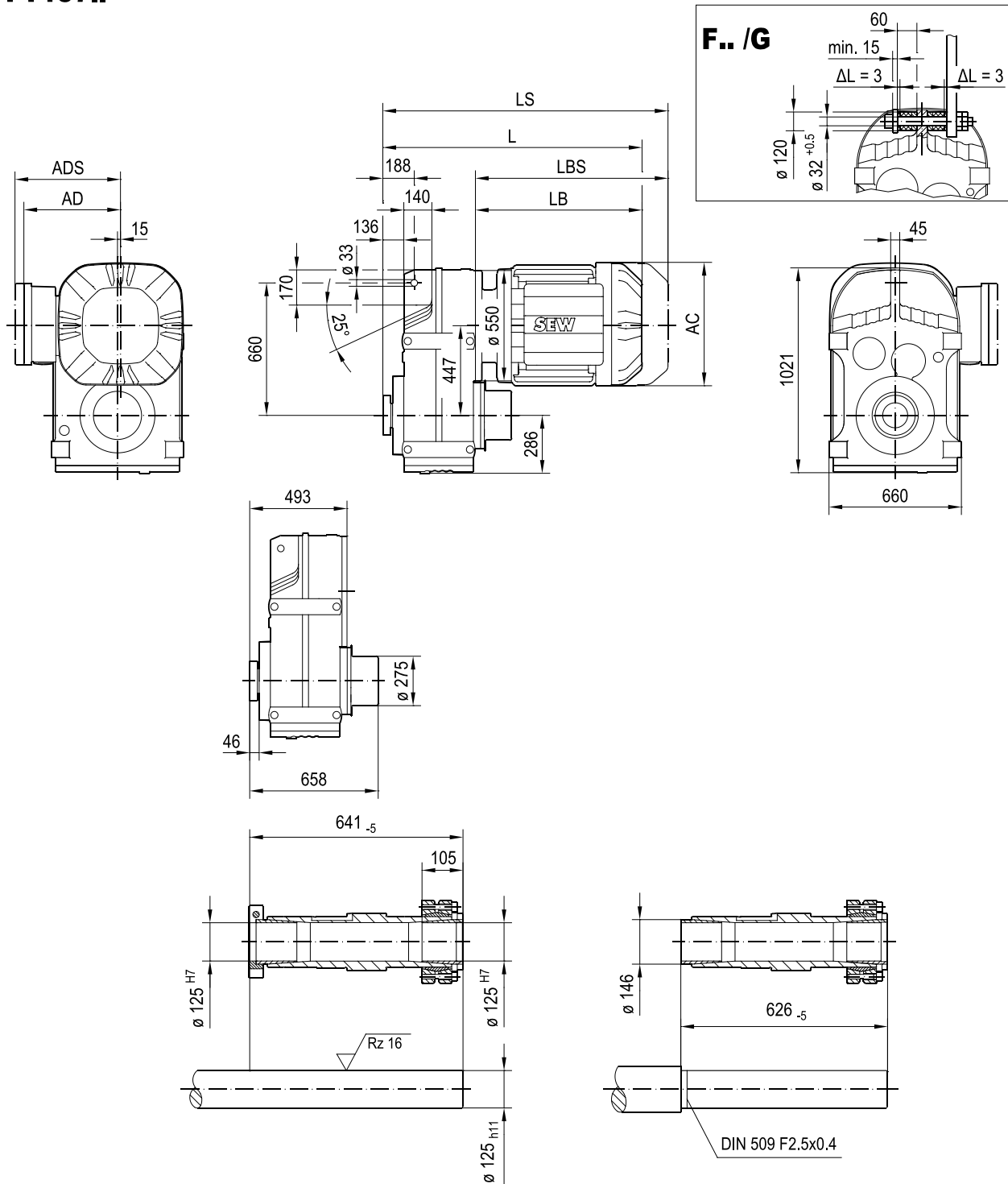


( $\rightarrow$ 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1099	1165	1188	1298	1272	1409	1409	1504	1606	1736
LS	1236	1354	1377	1503	1477	1649	1649	1744	1857	1987
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322



FT157..

42 073 01 14

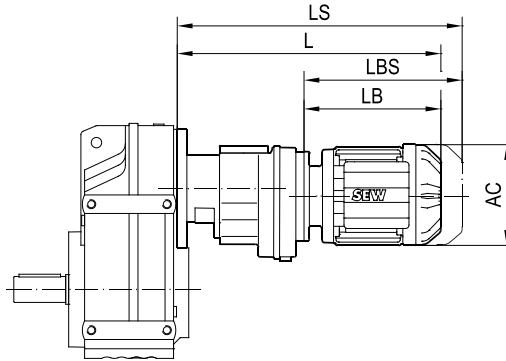


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(-> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	927	993	1016	1126	1100	1237	1237	1332	1434	1564
LS	1064	1182	1205	1331	1305	1477	1477	1572	1685	1815
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

### 9.6 F..R..DRN.. dimension sheets in mm

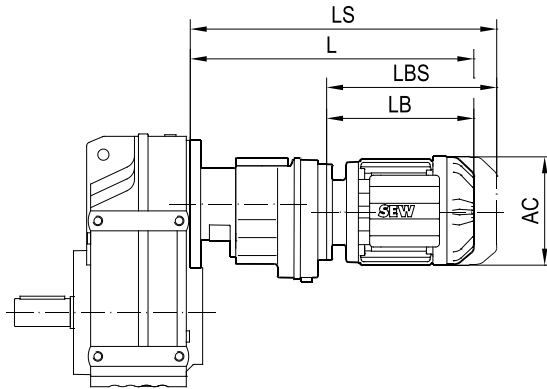
42 084 01 21



( 7.3)	AC	L	LS	LB	LBS
F..27R17 DR2S56..	109	293	329	160	196
F..27R17 DRN63MS	115	323	379	190	246
F..27R17 DRN63M	115	337	393	204	260
F..27R17 DRN71MS	139	339	406	206	273
F..27R17 DRN71M	139	359	426	226	293
F..37R17 DR2S56..	109	293	329	160	196
F..37R17 DRN63MS	115	323	379	190	246
F..37R17 DRN63M	115	337	393	204	260
F..37R17 DRN71MS	139	339	406	206	273
F..37R17 DRN71M	139	359	426	226	293
F..37R17 DRN80MK	156	370	451	237	318
F..47R17 DR2S56..	109	293	329	160	196
F..47R17 DRN63MS	115	323	379	190	246
F..47R17 DRN63M	115	337	393	204	260
F..47R17 DRN71MS	139	339	406	206	273
F..47R17 DRN71M	139	359	426	226	293
F..47R17 DRN80MK	156	370	451	237	318
F..47R17 DRN80M	156	416	497	283	364
F..57R37 DRN63MS	115	355	411	190	246
F..57R37 DRN63M	115	369	425	204	260
F..57R37 DRN71MS	139	371	438	206	273
F..57R37 DRN71M	139	391	458	226	293
F..57R37 DRN80MK	156	402	483	237	318
F..57R37 DRN80M	156	447	528	282	363
F..57R37 DRN90S	179	448	542	283	377
F..67R37 DRN63MS	115	355	411	190	246
F..67R37 DRN63M	115	369	425	204	260
F..67R37 DRN71MS	139	371	438	206	273
F..67R37 DRN71M	139	391	458	226	293
F..67R37 DRN80MK	156	402	483	237	318
F..67R37 DRN80M	156	447	528	282	363
F..67R37 DRN90S	179	448	542	283	377
F..77R37 DRN63MS	115	347	403	190	246
F..77R37 DRN63M	115	361	417	204	260
F..77R37 DRN71MS	139	363	430	206	273
F..77R37 DRN71M	139	383	450	226	293
F..77R37 DRN80MK	156	394	475	237	318
F..77R37 DRN80M	156	439	520	282	363
F..77R37 DRN90S	179	440	534	283	377
F..77R37 DRN90L	179	472	566	315	409
F..77R37 DRN100L/LM	197	521	615	364	458
F..87R57 DRN63MS	115	411	467	184	240
F..87R57 DRN63M	115	425	481	198	254
F..87R57 DRN71MS	139	427	494	199	267
F..87R57 DRN71M	139	447	514	219	287
F..87R57 DRN80MK	156	458	539	230	311
F..87R57 DRN80M	156	503	584	275	356
F..87R57 DRN90S	179	504	598	277	370
F..87R57 DRN90L	179	536	630	309	402
F..87R57 DRN100LS	197	533	626	305	399
F..87R57 DRN100L/LM	197	583	676	355	449

( 7.3)	AC	L	LS	LB	LBS
F..97R57 DRN63MS	115	406	462	184	240
F..97R57 DRN63M	115	420	476	198	254
F..97R57 DRN71MS	139	422	489	199	267
F..97R57 DRN71M	139	442	509	219	287
F..97R57 DRN80MK	156	453	534	230	311
F..97R57 DRN80M	156	498	579	275	356
F..97R57 DRN90S	179	499	593	277	370
F..97R57 DRN90L	179	531	625	309	402
F..97R57 DRN100LS	197	528	621	305	399
F..97R57 DRN100L/LM	197	578	671	355	449
F..97R57 DRN112M	221	609	721	386	498
F..97R57 DRN132S	221	663	775	440	552
F..107R77 DRN63MS	115	424	480	177	233
F..107R77 DRN63M	115	438	494	191	247
F..107R77 DRN71MS	139	439	507	192	260
F..107R77 DRN71M	139	459	527	212	280
F..107R77 DRN80MK	156	470	551	223	304
F..107R77 DRN80M	156	515	596	268	349
F..107R77 DRN90S	179	517	610	270	363
F..107R77 DRN90L	179	549	642	302	395
F..107R77 DRN100LS	197	545	639	298	392
F..107R77 DRN100L/LM	197	595	689	348	442
F..107R77 DRN112M	221	626	738	379	491
F..107R77 DRN132S	221	676	788	429	541
F..107R77 DRN132M	261	694	832	447	585
F..107R77 DRN132L	261	720	857	473	610
F..127R77 DRN63MS	115	409	465	177	233
F..127R77 DRN63M	115	423	479	191	247
F..127R77 DRN71MS	139	424	492	192	260
F..127R77 DRN71M	139	444	512	212	280
F..127R77 DRN80MK	156	455	536	223	304
F..127R77 DRN80M	156	500	581	268	349
F..127R77 DRN90S	179	502	595	270	363
F..127R77 DRN90L	179	534	627	302	395
F..127R77 DRN100LS	197	530	624	298	392
F..127R77 DRN100L/LM	197	580	674	348	442
F..127R77 DRN112M	221	611	723	379	491
F..127R77 DRN132S	221	661	773	429	541
F..127R77 DRN132M	261	679	817	447	585
F..127R87 DRN100L/LM	197	623	717	343	437
F..127R87 DRN112M	221	654	766	374	486
F..127R87 DRN132S	221	704	816	424	536
F..127R87 DRN132M	261	722	860	442	580
F..127R87 DRN132L	261	748	885	468	605
F..127R87 DRN160..	314	814	1003	534	723
F..157R97 DRN71MS	139	507	575	182	250
F..157R97 DRN71M	139	527	595	202	270
F..157R97 DRN80MK	156	538	619	213	294
F..157R97 DRN80M	156	583	664	258	339
F..157R97 DRN90S	179	585	678	260	353
F..157R97 DRN90L	179	617	710	292	385

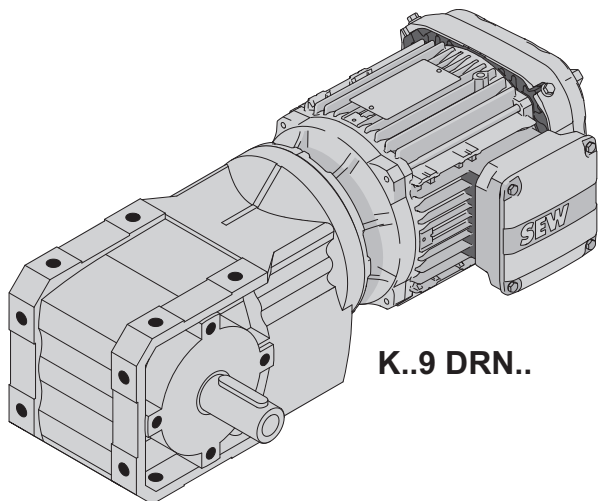
42 084 01 21



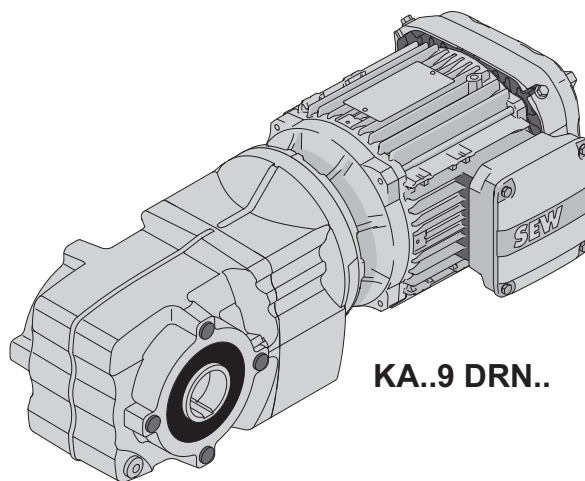
( 7.3)	AC	L	LS	LB	LBS
F..157R97 DRN100LS	197	613	707	288	382
F..157R97 DRN100L/LM	197	663	757	338	432
F..157R97 DRN112M	221	694	806	369	481
F..157R97 DRN132S	221	744	856	419	531
F..157R97 DRN132M	261	762	900	437	575
F..157R97 DRN132L	261	788	925	463	600
F..157R97 DRN160..	314	854	1043	529	718
F..157R97 DRN180..	357	877	1066	552	741

## 10 Helical-bevel gearmotors

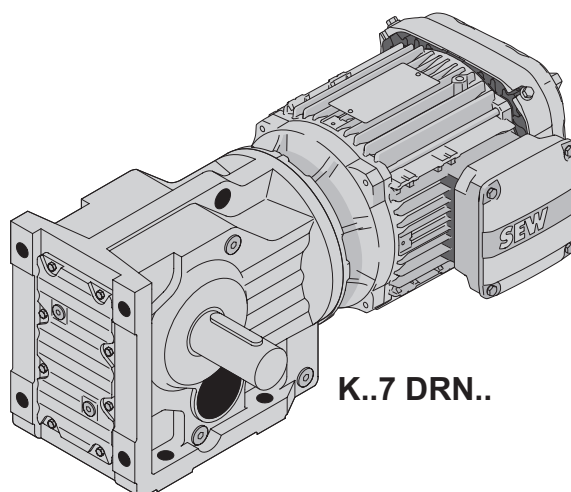
## 10.1 K..DRN.. variant



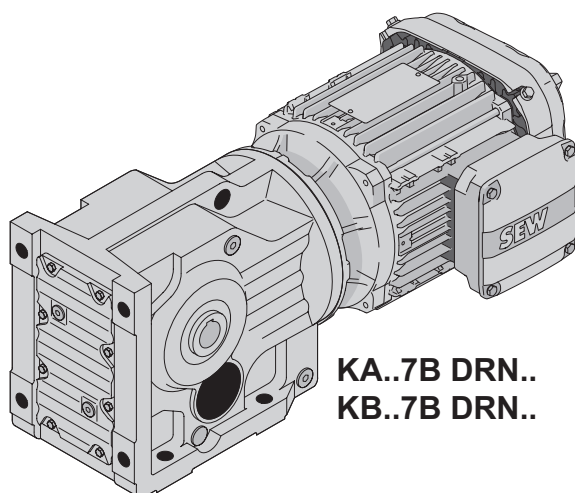
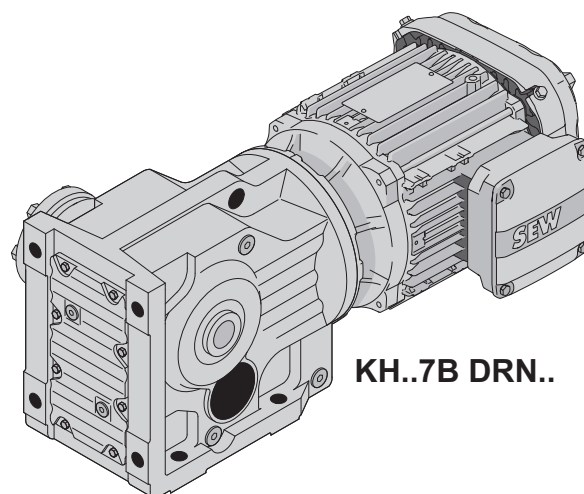
K..9 DRN..



KA..9 DRN..

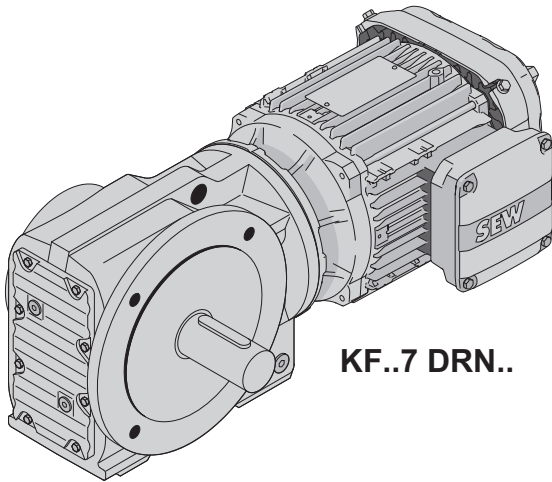


K..7 DRN..

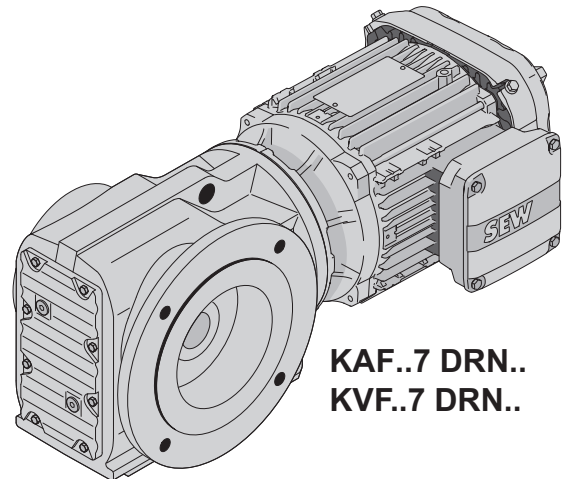
KA..7B DRN..  
KB..7B DRN..

KH..7B DRN..

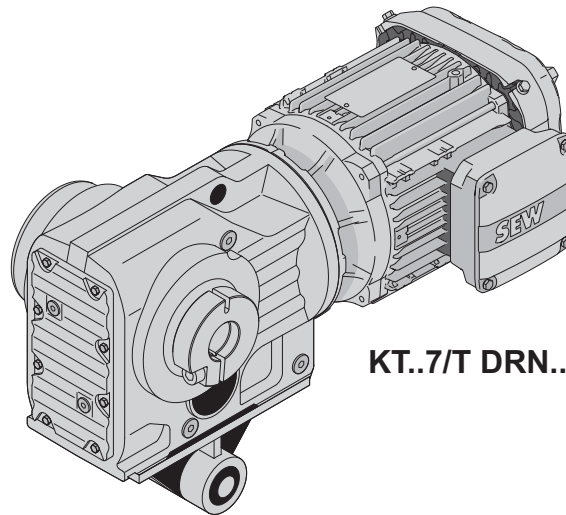
45036004938459275



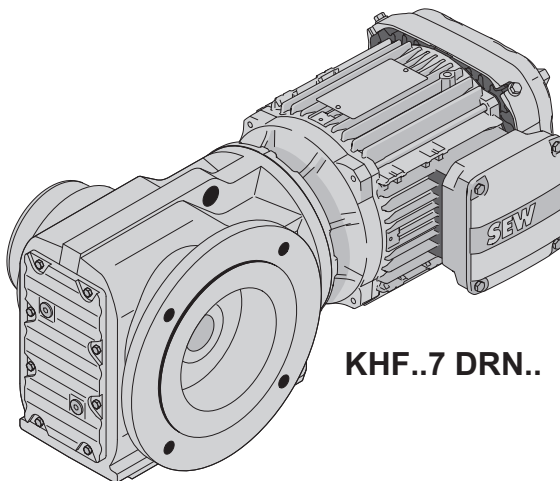
**KF..7 DRN..**



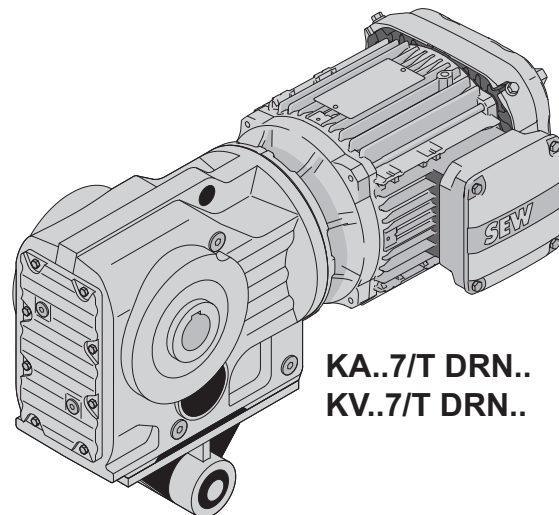
**KAF..7 DRN..  
KVF..7 DRN..**



**KT..7/T DRN..**



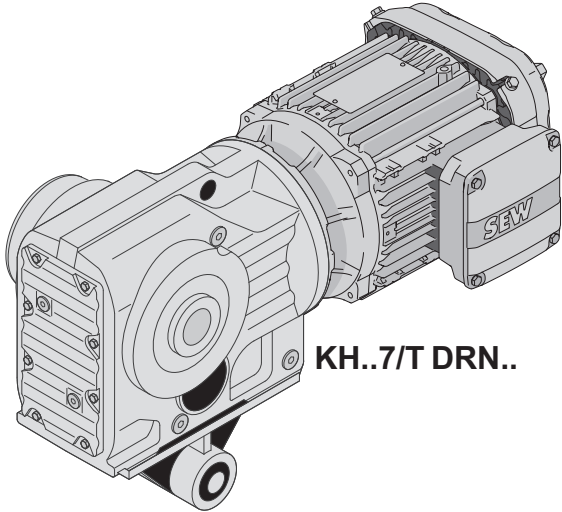
**KHF..7 DRN..**



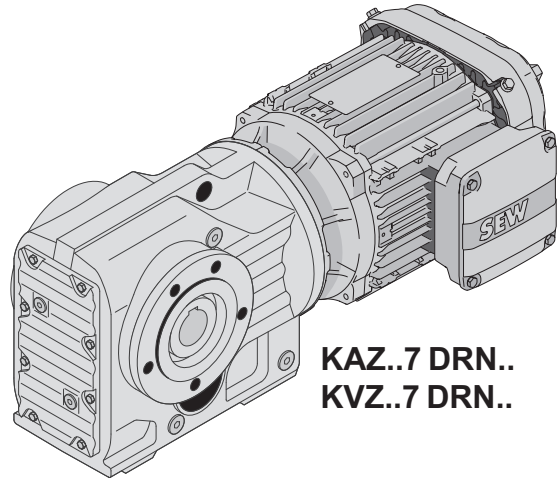
**KA..7/T DRN..  
KV..7/T DRN..**

36028805683720203

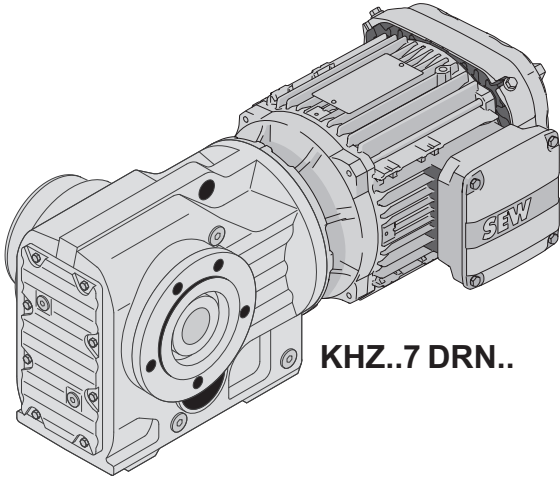
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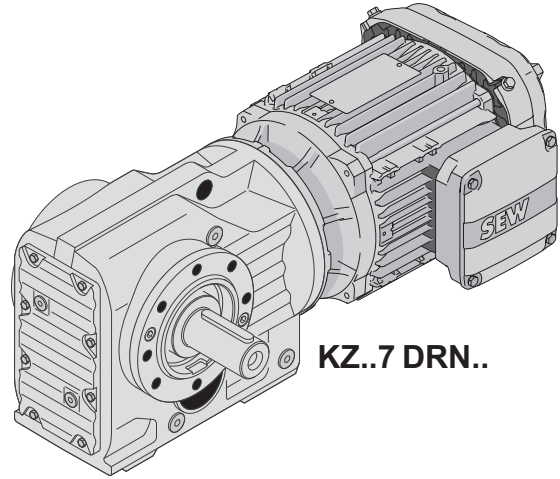
**KH..7/T DRN..**



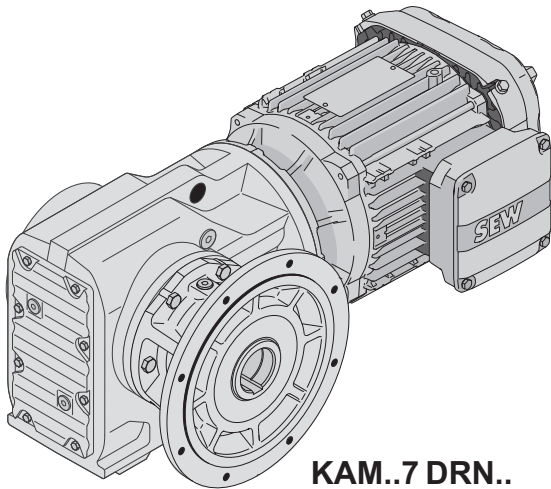
**KAZ..7 DRN..  
KVZ..7 DRN..**



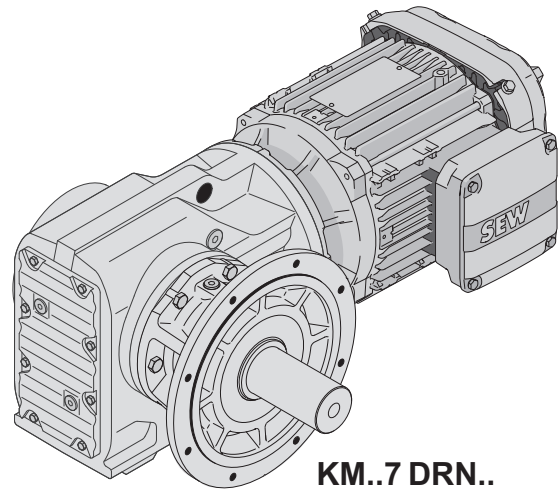
**KHZ..7 DRN..**



**KZ..7 DRN..**




**KAM..7 DRN..**




**KM..7 DRN..**

63050403901142923


10.2 K..DRN.. possible geometrical combinations

K19, $n_e=1400 \text{ min}^{-1}$					80 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN 63MS 63M 71MS	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S
 2							
24	70	4330	-	58.68			
26	70	4330	-	53.88			
28	70	4330	-	49.69*			
31	69	4340	-	44.48			
34	67	4350	-	40.63			
41	64	4370	-	34.29			
44	80	4260	-	31.74			
48	61	4200	-	29.29			
48	80	4120	-	29.14			
52	60	4090	-	27.16*			
52	80	3990	-	26.88*			
58	80	3820	-	24.06			
64	80	3680	-	21.98			
75	80	3430	-	18.55			
88	80	3210	-	15.84			
95	80	3110	-	14.69			
110	80	2930	-	12.70			
118	79	2850	-	11.84			
136	76	2720	-	10.32*			
146	63	2910	-	9.58			
173	80	2590	-	8.09			
203	80	2420	-	6.91			
218	80	2340	-	6.41*			
253	80	2200	-	5.54			
271	80	2140	-	5.16			
311	80	2010	-	4.50*			

K29, $n_e=1400 \text{ min}^{-1}$					130 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN 63MS 63M 71MS	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS
 2									
19	130	4980	-	71.93					
21	130	4980	-	66.25*					
23	130	4980	-	61.28*					
26	130	4980	-	54.89					
28	130	4980	-	50.35*					
33	128	4790	-	42.87					
36	130	4720	-	38.90					
38	122	4560	-	36.96					
39	130	4560	-	35.83					
42	130	4410	-	33.15					





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K29, $n_e=1400 \text{ min}^{-1}$					130 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS	63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS
46	115	4250	-	30.11					
47	130	4210	-	29.69					
51	130	4060	-	27.23					
56	109	3980	-	24.91*					
60	130	3790	-	23.19					
63	105	3820	-	22.08					
70	130	3550	-	19.99					
86	130	3240	-	16.29					
104	130	2970	-	13.47					
117	130	2810	-	11.94					
141	110	3000	-	9.90					
153	130	2470	-	9.17					
164	122	2740	-	8.53					
187	123	2300	-	7.48					
201	112	2580	-	6.95					
243	112	2370	-	5.75					
275	110	2260	-	5.10					
357	126	1910	-	3.92					
439	110	1830	-	3.19					


K37, $n_e=1400 \text{ min}^{-1}$					200 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	
 3									
13	200	5640	7	106.38					
14	200	5640	7	97.81					
17	200	5640	7	83.69					
19	200	5520	7	72.54					
21	200	5360	7	67.80					
24	200	5020	7	58.60					
28	200	4660	7	49.79					
31	200	4420	7	44.46					
37	200	4100	7	37.97					
39	200	3970	8	35.57					
47	200	3650	8	29.96					
49	200	3580	9	28.83					
56	200	3330	9	24.99					
60	195	3260	9	23.36					
69	185	3110	9	20.19					
82	180	2900	9	17.15					
91	175	2780	9	15.31					
107	165	2650	9	13.08					
115	160	2600	12	12.14					
133	160	2410	13	10.49					
157	160	2200	13	8.91					







<b>K37, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>200 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> °	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
176	155	2110	13	7.96				
206	150	1980	13	6.80				
220	145	1950	13	6.37				
261	140	1810	14	5.36				
352	125	1660	13	3.98				


<b>K37R17, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>200 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> °	i	DR2S	DRN	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M	
 3  3								
0.20	200	5640	8	6832				
0.24	200	5640	8	5922				
0.25	200	5640	8	5491				
0.29	200	5640	8	4759				
0.34	200	5640	8	4160				
0.38	200	5640	8	3645				
0.44	200	5640	8	3205				
0.50	200	5640	8	2801				
0.57	200	5640	8	2454				
0.65	200	5640	8	2166				
0.74	200	5640	9	1891				
0.84	200	5640	8	1660				
0.95	200	5640	8	1466				
1.1	200	5640	8	1288				
1.2	200	5640	8	1136				
 3  2								
1.4	200	5640	8	996				
1.6	200	5640	8	876				
1.8	200	5640	8	761				
2.1	200	5640	8	671				
2.4	200	5640	8	585				
2.7	200	5640	8	512				
3.1	200	5640	8	451				
3.5	200	5640	10	396				
4.0	200	5640	10	346				
4.6	200	5640	8	304				
5.2	200	5640	8	267				
6.0	200	5640	8	234				
6.8	200	5640	8	205				
7.7	200	5640	8	181				
8.8	200	5640	8	160				
10	200	5640	8	136				
11	200	5640	10	127				
13	200	5640	10	110				
15	200	5640	10	96				

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K39, $n_e=1400 \text{ min}^{-1}$					300 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M
 2									
24	300	7500	-	58.24*					
28	300	7440	-	49.69					
32	300	7000	-	43.45					
34	300	6840	-	41.28*					
39	300	6440	-	36.22					
46	300	5960	-	30.72*					
50	300	5670	-	27.73					
57	300	5330	-	24.40*					
61	300	5180	-	23.04*					
71	295	4820	-	19.62					
79	290	4630	-	17.83					
91	280	4380	-	15.44					
104	270	4160	-	13.44*					
110	250	4930	-	12.73					
116	255	4790	-	12.09*					
132	285	4360	-	10.61					
156	300	3950	-	9.00*					
172	300	3760	-	8.12*					
196	300	3530	-	7.15*					
207	300	3430	-	6.75*					
243	275	3300	-	5.75					
268	260	3240	-	5.22					
310	240	3130	-	4.52					
355	215	3070	-	3.94*					
498	170	2870	-	2.81*					

K39R17, $n_e=1400 \text{ min}^{-1}$					300 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M		
 2  3									
0.35	300	7500	-	4057					
0.42	300	7500	-	3370					
0.48	300	7500	-	2906					
0.56	300	7500	-	2508					
0.59	300	7500	-	2367					
0.65	300	7500	-	2162					
0.74	300	7500	-	1881					
0.79	300	7500	-	1762					
0.86	300	7500	-	1622					
0.94	300	7500	-	1494					
1.1	300	7500	-	1321					
1.2	300	7500	-	1169					
1.3	300	7500	-	1093					

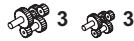
<b>K39R17, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>300 Nm</b>		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
 2  2							
1.5	300	7500	-	956			
1.7	300	7500	-	814			
2.0	300	7500	-	711			
2.3	300	7500	-	605			
2.8	300	7500	-	504			
3.1	300	7500	-	454			
3.5	300	7500	-	399			
3.8	300	7500	-	365			
4.5	300	7500	-	312			
4.7	300	7500	-	299			
5.5	300	7500	-	254			
6.0	300	7500	-	234			
6.7	300	7500	-	210			
7.4	300	7500	-	189			
8.0	300	7500	-	174			
9.0	300	7500	-	156			
9.9	300	7500	-	142			
12	300	7500	-	117			
19	295	7500	-	75			

<b>K47, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>400 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
 3								
11	400	5920	7	131.87*				
12	400	5920	7	121.48*				
13	400	5920	7	104.37				
15	400	5920	7	90.86				
16	400	5920	7	85.12*				
19	400	5920	7	75.20*				
20	400	5920	7	69.84				
22	400	5920	7	63.30*				
25	400	5920	7	56.83				
29	400	5920	7	48.95*				
30	400	5920	7	46.03*				
35	400	5920	7	39.61				
40	400	5920	7	35.39				
45	400	5700	8	31.30				
48	400	5520	8	29.32				
54	400	5170	8	25.91				
58	400	4970	8	24.06				
64	400	4710	8	21.81				
72	400	4440	8	19.58				
83	380	4220	8	16.86				

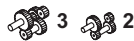
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K47, $n_e=1400 \text{ min}^{-1}$					400 Nm			
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
88	380	4080	8	15.86				
103	360	3890	8	13.65				
115	350	3720	9	12.19				
119	280	4060	11	11.77				
133	280	3830	11	10.56				
154	280	3540	11	9.10				
164	270	3500	11	8.56				
190	250	3380	11	7.36				
213	240	3270	12	6.58				
241	230	3140	12	5.81				
302	205	2980	12	4.64				

K47R37, $n_e=1400 \text{ min}^{-1}$					400 Nm			
$n_a$ $\text{min}^{-1}$	$M_{\text{amax}}$ Nm	$F_{\text{Ra}}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L



0.14	400	5920	7	10138				
0.16	400	5920	7	8534				
0.18	400	5920	7	7662				
0.21	400	5920	7	6826				
0.23	400	5920	7	5983				
0.27	400	5920	7	5159				
0.30	400	5920	7	4601*				
0.36	400	5920	7	3940				
0.40	400	5920	7	3477				
0.46	400	5920	7	3043				
0.51	400	5920	7	2733				
0.59	400	5920	7	2354				
0.68	400	5920	7	2063				
0.77	400	5920	7	1819				
0.88	400	5920	7	1586				
1.0	400	5920	7	1388				



1.1	400	5920	7	1222				
1.3	400	5920	7	1097				
1.5	400	5920	7	945				
1.7	400	5920	7	831*				
1.9	400	5920	7	718*				
2.2	400	5920	8	639				
2.5	400	5920	8	552				
2.8	400	5920	7	495				
3.3	400	5920	7	426				
3.7	400	5920	8	375				
4.3	400	5920	8	327				
4.8	400	5920	9	289				


K47R37, $n_e=1400 \text{ min}^{-1}$					400 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
5.5	400	5920	7	256				
6.2	400	5920	8	225				
7.1	400	5920	8	198				
8.2	400	5920	8	171				
9.2	400	5920	8	153				
11	400	5920	9	131				
12	400	5920	9	112				
14	400	5920	10	99				
15	400	5920	10	94				



K49, $n_e=1400 \text{ min}^{-1}$					500 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M





19	475	9000	-	75.20*						
20	445	9000	-	70.19						
23	500	9000	-	60.27						
26	500	8590	-	52.94						
28	500	8380	-	50.29*						
32	500	7900	-	44.44						
37	500	7310	-	37.98*						
40	500	7000	-	34.81						
46	500	6550	-	30.55*						
48	500	6370	-	28.95*						
55	500	5940	-	25.34						
61	500	5610	-	22.83						
70	500	5220	-	20.03						
79	500	4860	-	17.67*						
89	490	4590	-	15.67						
105	470	4320	-	13.38						
123	495	5000	-	11.37*						
134	480	4860	-	10.42						
153	500	4460	-	9.14*						
162	500	4340	-	8.66*						
185	500	4050	-	7.58						
205	500	3840	-	6.83						
234	500	3570	-	5.99						
265	485	3400	-	5.29*						
299	465	3270	-	4.69*						
350	440	3110	-	4.00						


K49R37, $n_e=1400 \text{ min}^{-1}$					500 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
2  3								
0.20	500	9000	-	7137				
0.23	500	9000	-	5991				
0.27	500	9000	-	5120				
0.35	500	9000	-	4034				
0.39	500	9000	-	3580				
0.45	500	9000	-	3081				
0.50	500	9000	-	2773				
0.55	500	9000	-	2545				
0.59	500	9000	-	2372				
0.66	500	9000	-	2118				
0.72	500	9000	-	1941				
0.80	500	9000	-	1741				
0.86	500	9000	-	1632				
0.92	500	9000	-	1521				
1.1	500	9000	-	1228				
1.4	500	9000	-	1000				
2  2								
0.98	500	9000	-	1424				
1.1	500	9000	-	1309				
1.2	500	9000	-	1120				
1.5	500	9000	-	908				
1.7	500	9000	-	802				
2.0	500	9000	-	701				
2.2	500	9000	-	645				
2.4	500	9000	-	595				
2.6	500	9000	-	543				
2.8	500	9000	-	501				
3.1	500	9000	-	449				
3.5	500	9000	-	401				
3.9	500	9000	-	360				
4.2	500	9000	-	330				
4.7	500	9000	-	300				
5.1	500	9000	-	274				
5.8	500	9000	-	243				
6.5	500	9000	-	217				
7.3	500	9000	-	193				
8.0	500	9000	-	176				
9.2	500	9000	-	152				
11	500	9000	-	125				
14	500	9000	-	99				

<b>K57, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>600 Nm</b>					
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3										
9.6	600	7630	6	145.14*						
11	600	7630	6	123.85						
13	600	7630	6	108.29						
14	600	7630	6	102.88*						
16	600	7630	6	90.26*						
18	600	7630	6	76.56*						
20	600	7630	6	69.12						
23	600	7630	6	60.81*						
24	600	7630	6	57.42*						
29	600	7630	6	48.89						
32	600	7630	7	44.43						
36	600	7630	7	38.49						
39	600	7630	7	35.70						
46	600	7300	7	30.28						
51	600	6930	7	27.34						
58	600	6480	7	24.05						
62	600	6280	7	22.71						
72	575	5910	7	19.34						
80	555	5740	8	17.57						
92	535	5430	8	15.22						
106	510	5190	8	13.25						
117	415	5150	10	11.92						
124	415	4990	10	11.26						
146	405	4650	10	9.59						
161	390	4520	10	8.71						
185	365	4360	11	7.55						
213	345	4180	11	6.57						
299	300	3800	11	4.69						

<b>K57R37, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>600 Nm</b>					
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L		
 3  3										
0.12	600	7630	7	12169						
0.13	600	7630	7	11162*						
0.15	600	7630	7	9503						
0.16	600	7630	7	8547						
0.19	600	7630	7	7277						
0.22	600	7630	7	6478*						
0.25	600	7630	7	5662*						
0.28	600	7630	7	5033						
0.32	600	7630	7	4340						
0.36	600	7630	7	3854						
0.41	600	7630	7	3390						





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K57R37, $n_e=1400 \text{ min}^{-1}$					600 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.48	600	7630	7	2924				
0.54	600	7630	7	2593				
0.62	600	7630	7	2249				
0.70	600	7630	7	1986				
 3  2								
0.80	600	7630	7	1743				
0.91	600	7630	7	1539				
1.0	600	7630	7	1354				
1.2	600	7630	7	1174				
1.4	600	7630	7	1036*				
1.5	600	7630	7	906*				
1.7	600	7630	7	806				
2.0	600	7630	7	699				
2.3	600	7630	7	615				
2.6	600	7630	7	544*				
3.0	600	7630	8	473				
3.3	600	7630	7	421				
3.9	600	7630	8	362				
4.4	600	7630	8	319				
5.0	600	7630	7	280				
5.7	600	7630	7	246				
6.5	600	7630	8	215				
7.3	600	7630	7	192				
8.4	600	7630	7	166				
9.7	600	7630	8	145				
11	600	7630	9	129				
13	600	7630	8	111				
14	600	7630	9	97				

K67, $n_e=1400 \text{ min}^{-1}$					820 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3										
9.7	820	10300	7	144.79*						
11	820	10300	7	123.54						
13	820	10300	7	108.03						
14	820	10300	7	102.62						
16	820	10300	7	90.04						
18	820	10300	7	76.37						
20	820	10300	7	68.95						
23	820	10300	7	60.66						
24	820	10300	7	57.28						
29	820	10300	7	48.77						
32	820	10300	7	44.32						
36	800	10500	7	38.39						



K67, $n_e=1400 \text{ min}^{-1}$					820 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
39	820	10300	8	35.62						
46	820	10300	8	30.22						
51	820	10300	8	27.28						
58	800	10500	8	24.00						
62	780	10700	8	22.66						
73	760	10800	8	19.30						
80	740	11000	8	17.54						
92	700	11300	8	15.19						
106	670	11500	8	13.22						
112	530	12300	9	12.48						
132	500	11800	9	10.63						
145	480	11500	10	9.66						
167	440	11100	10	8.37						
192	420	10700	10	7.28						
269	350	9860	10	5.20						

K67R37, $n_e=1400 \text{ min}^{-1}$					820 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 132S 132M	
 3  3										
0.12	820	10300	7	12139						
0.13	820	10300	7	11134						
0.15	820	10300	7	9479						
0.17	820	10300	7	8173						
0.19	820	10300	7	7259						
0.22	820	10300	7	6462						
0.25	820	10300	7	5648						
0.29	820	10300	7	4846						
0.32	820	10300	7	4329						
0.37	820	10300	7	3750						
0.42	820	10300	7	3315						
0.48	820	10300	7	2917						
0.55	820	10300	7	2532						
0.62	820	10300	7	2244						
0.71	820	10300	7	1981						
 3  2										
0.81	820	10300	7	1739						
0.91	820	10300	7	1535						
1.0	820	10300	7	1351						
1.2	820	10300	7	1171						
1.4	820	10300	7	1034						
1.6	820	10300	7	903						
1.8	820	10300	8	793						
2.0	820	10300	7	697						
2.3	820	10300	7	613						

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K67R37, $n_e=1400 \text{ min}^{-1}$					820 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
2.6	820	10300	7	542				
3.0	820	10300	8	471				
3.3	820	10300	7	420				
3.9	820	10300	8	361				
4.3	820	10300	8	323				
5.0	820	10300	7	279				
5.7	820	10300	7	246				
6.5	820	10300	8	217				
7.3	820	10300	7	191				
8.4	820	10300	7	166				
9.7	820	10300	8	144				
11	820	10300	9	122				

K77, $n_e=1400 \text{ min}^{-1}$					1550 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L



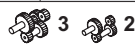
7.3	1450	16100	6	192.18							
7.8	1450	16100	6	179.37							
9.1	1550	15400	6	154.02							
10	1550	15400	6	135.28							
11	1550	15400	6	128.52							
12	1550	15400	6	113.56							
14	1550	15400	6	97.05							
16	1550	15400	6	88.97							
18	1550	15400	6	78.07							
19	1550	15400	6	73.99							
22	1550	15400	6	64.75							
24	1550	15400	6	58.34							
27	1550	15400	6	51.18							
31	1550	15400	6	45.16							
35	1550	15400	6	40.04							
36	1500	15700	6	38.39							
40	1550	15400	6	35.20							
45	1550	15400	7	30.89							
48	1550	15400	7	29.27							
55	1550	15400	7	25.62							
61	1550	15400	7	23.08							
69	1500	15700	7	20.25							
78	1450	16100	7	17.87							
88	1400	15500	7	15.84							
104	1340	14800	7	13.52							
113	1000	15100	8	12.36							
129	990	14400	8	10.84							
146	940	13900	8	9.56							

K77, $n_e=1400 \text{ min}^{-1}$					1550 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
165	890	13500	9	8.48							
193	820	13100	9	7.24							

K77R37, $n_e=1400 \text{ min}^{-1}$					1550 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L






0.09	1550	15400	6	15310				
0.10	1550	15400	6	14043				
0.12	1550	15400	6	11955				
0.14	1550	15400	6	10217				
0.16	1550	15400	6	8809				
0.19	1550	15400	6	7528				
0.21	1550	15400	6	6606				
0.24	1550	15400	6	5774				
0.28	1550	15400	6	5089				
0.31	1550	15400	6	4489				
0.35	1550	15400	6	3961				
0.40	1550	15400	6	3485				
0.48	1550	15400	6	2901				
0.52	1550	15400	6	2717				
0.59	1550	15400	6	2370				






0.68	1550	15400	6	2050				
0.79	1550	15400	6	1772				
0.92	1550	15400	6	1514				
1.0	1550	15400	6	1388				
1.1	1550	15400	6	1218				
1.3	1550	15400	6	1053				
1.5	1550	15400	6	924				
1.7	1550	15400	6	815				
2.0	1550	15400	6	709				
2.3	1550	15400	6	622				
2.5	1550	15400	6	552				
2.9	1550	15400	6	485				
3.3	1550	15400	6	428				
3.8	1550	15400	6	367				
4.3	1550	15400	6	328				
4.8	1550	15400	7	290				
5.6	1550	15400	6	252				
6.3	1550	15400	7	221				
7.2	1550	15400	7	195				
8.0	1550	15400	7	175				
9.1	1550	15400	7	154				

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K87, $n_e=1400 \text{ min}^{-1}$					2700 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L	
 3														
7.1	2700	27300	6	197.37										
8.0	2700	27300	6	174.19										
8.5	2700	27300	6	164.34*										
9.5	2700	27300	6	147.32*										
11	2700	27300	6	126.91*										
12	2700	27300	6	115.82										
14	2700	27300	6	102.71*										
16	2700	27300	6	86.34										
18	2700	27300	6	79.34										
20	2700	27300	6	70.46										
22	2700	26200	6	63.00*										
25	2700	25000	6	56.64										
28	2700	23500	6	49.16										
32	2600	22800	6	44.02										
38	2500	21400	6	36.52*										
45	2700	19200	7	31.39										
50	2600	18500	7	27.88										
56	2500	18000	7	24.92										
62	2300	17900	7	22.41										
72	2300	16800	7	19.45										
80	2200	16300	7	17.42										
88	1800	16000	7	16.00										
97	2100	15300	7	14.45										
111	2000	14800	7	12.56										
125	1500	14900	7	11.17										
140	1500	14200	7	10.00										
169	1400	13500	7	8.29										
194	1300	13200	8	7.21										





K87R57, $n_e=1400 \text{ min}^{-1}$					2700 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3  3										
0.09	2700	27300	6	14829						
0.11	2700	27300	6	13168						
0.12	2700	27300	6	11737						
0.14	2700	27300	6	10217						
0.15	2700	27300	6	9073						
0.18	2700	27300	6	7854						
0.20	2700	27300	6	6832						
0.24	2700	27300	6	5930						
0.27	2700	27300	6	5240						
0.31	2700	27300	6	4562						
0.35	2700	27300	6	4037						
0.39	2700	27300	6	3609						

K87R57, $n_e=1400 \text{ min}^{-1}$					2700 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
0.45	2700	27300	7	3107						
0.51	2700	27300	6	2728						
0.59	2700	27300	6	2371						
 3  2										
0.67	2700	27300	6	2088						
0.76	2700	27300	6	1854						
0.84	2700	27300	6	1657						
0.99	2700	27300	6	1415						
1.1	2700	27300	6	1229						
1.3	2700	27300	6	1078						
1.5	2700	27300	6	951						
1.7	2700	27300	6	837						
1.9	2700	27300	6	726						
2.2	2700	27300	6	638						
2.5	2700	27300	6	562*						
3.0	2700	27300	6	474*						
3.3	2700	27300	6	426						
3.8	2700	27300	7	373						
4.2	2700	27300	6	330						
4.8	2700	27300	7	294						
5.6	2700	27300	7	250						
5.9	2700	27300	7	236						
7.0	2700	27300	7	201						
7.7	2700	27300	7	183						
8.8	2700	27300	7	159						
9.9	2600	27400	7	141						


K97, $n_e=1400 \text{ min}^{-1}$					4300 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L	DRN 180M 180L	DRN 200L 225S
 3												
8.0	4300	40000	7	176.05*								
9.1	4300	40000	7	153.21*								
10.0	4300	40000	7	140.28								
11	4300	40000	7	123.93*								
13	4300	40000	7	105.13								
14	4300	40000	7	96.80								
16	4300	38800	7	86.52								
18	4300	37100	7	77.89*								
20	4300	35600	7	70.54								
22	4300	33800	7	62.55								
25	4300	32300	7	56.55								
29	4300	30000	7	47.93*								
33	4300	28300	7	41.87								
37	4300	27100	8	38.30								
41	4300	25700	8	34.23								



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K97, $n_e=1400 \text{ min}^{-1}$					4300 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S
45	4300	24500	8	30.82								
50	4300	23300	8	27.91								
57	4300	22000	8	24.75								
63	4300	20900	8	22.37								
74	4300	19100	8	18.96								
85	4300	17800	8	16.56								
101	4300	16100	8	13.85								
117	3890	16200	8	11.99								
134	2870	16400	10	10.41								
161	2660	15800	10	8.71								
186	2400	15700	10	7.54								



K97R57, $n_e=1400 \text{ min}^{-1}$					4300 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 3  3										
0.08	4300	40000	7	18091						
0.08	4300	40000	7	16666						
0.09	4300	40000	7	14897						
0.11	4300	40000	8	13182						
0.12	4300	40000	7	11677						
0.14	4300	40000	7	10317						
0.15	4300	40000	8	9083						
0.17	4300	40000	8	8054						
0.20	4300	40000	7	6970						
0.23	4300	40000	8	6027						
0.26	4300	40000	8	5391						
0.30	4300	40000	7	4669						
0.34	4300	40000	8	4082						
0.39	4300	40000	8	3583						
0.45	4300	40000	8	3108*						
0.51	4300	40000	8	2757						
 3  2										
0.58	4300	40000	7	2419						
0.66	4300	40000	7	2123						
0.75	4300	40000	8	1856						
0.86	4300	40000	7	1625						
0.98	4300	40000	7	1430						
1.1	4300	40000	8	1261						
1.3	4300	40000	8	1102						
1.5	4300	40000	8	957						
1.6	4300	40000	8	855						
1.9	4300	40000	8	743						
2.1	4300	40000	8	652*						
2.4	4300	40000	8	573						
2.8	4300	40000	8	504						
3.2	4300	40000	8	437						


<b>K97R57, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>4300 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
3.7	4300	40000	8	382*						
4.1	4300	40000	8	342*						
4.6	4300	40000	8	305						
5.4	4300	40000	8	258						
6.0	4300	40000	9	232						
7.0	4300	40000	9	199						

<b>K107, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>8000 Nm</b>						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M
 3											
9.8	8000	65000	6	143.47*							
12	8000	61500	6	121.46							
12	8000	59300	6	112.41*							
14	8000	56200	6	100.75							
15	8000	53500	6	90.96*							
17	8000	50900	6	82.61							
19	8000	47900	6	73.30							
21	8000	45400	6	66.52*							
24	8000	41700	6	57.17*							
28	7840	39300	6	49.90							
33	7360	37900	6	42.33*							
38	7200	35800	6	37.00*							
43	7200	33200	7	32.69							
45	6800	34200	6	31.28*							
48	7200	30700	7	29.00							
53	7200	28800	7	26.32							
62	7200	25800	7	22.62							
71	7200	23200	7	19.74							
84	7050	21000	7	16.75							
96	6890	19500	7	14.64							
104	4300	29200	9	13.43							
119	4300	27500	9	11.73							
141	4190	25800	9	9.94							
161	4070	24600	9	8.69							
190	3600	24400	9	7.35							

<b>K107R77, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>8000 Nm</b>						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
 3  3											
0.10	8000	65000	6	14311*							
0.11	8000	65000	6	12211							
0.13	8000	65000	6	10677							





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K107R77, $n_e=1400 \text{ min}^{-1}$					8000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
0.15	8000	65000	6	9524							
0.17	8000	65000	6	8328							
0.19	8000	65000	7	7270							
0.23	8000	65000	6	6184							
0.25	8000	65000	6	5662							
0.27	8000	65000	6	5138							
0.32	8000	65000	7	4359*							
0.37	8000	65000	7	3810*							
0.42	8000	65000	6	3358							
0.47	8000	65000	7	2977*							
0.54	8000	65000	7	2599							
0.61	8000	65000	7	2286							
0.72	8000	65000	7	1939							
 3  2											
0.82	8000	65000	6	1713							
0.90	8000	65000	6	1554							
1.0	8000	65000	6	1336*							
1.2	8000	65000	7	1166							
1.4	8000	65000	6	1030							
1.5	8000	65000	6	904							
1.8	8000	65000	7	793*							
2.0	8000	65000	7	696*							
2.3	8000	65000	7	615							
2.7	8000	65000	7	522							
3.0	8000	65000	7	461*							
3.4	8000	65000	7	408*							
3.8	8000	65000	7	364							
4.4	8000	65000	7	318							
4.9	8000	65000	7	286*							
5.6	8000	65000	7	251							
6.3	8000	65000	7	222*							
7.1	8000	65000	7	196*							
8.0	7200	65000	8	174							
9.1	7200	65000	8	154							
10	7200	65000	8	140							

K127, $n_e=1400 \text{ min}^{-1}$					13000 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN
					132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M
 3									
9.6	13000	79200	6	146.07					
10	13000	79200	6	136.14					
11	13000	79200	6	122.48					
13	13000	79200	6	110.18					
16	13000	75100	6	89.89					
17	13000	72100	6	81.98					






K127, $n_e=1400 \text{ min}^{-1}$					13000 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN
					132S 132M	132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M
20	13000	67700	6	70.95*					
22	13000	64000	6	62.60					
26	13000	59800	6	54.07					
29	13000	56500	6	47.82					
35	13000	52000	6	40.19					
39	13000	49400	6	36.25					
45	13000	45900	6	31.37					
51	13000	43000	6	27.68					
59	13000	39800	6	23.91					
66	13000	37200	6	21.15					
79	13000	32600	6	17.77					
98	12100	31000	6	14.35					
109	8530	35400	8	12.79					
130	8000	33900	9	10.74					
161	7230	32500	9	8.68					

K127R77, $n_e=1400 \text{ min}^{-1}$					13000 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
 3  3											
0.08	13000	79200	6	17550							
0.09	13000	79200	6	16006							
0.09	13000	79200	6	14975							
0.11	13000	79200	6	12440							
0.13	13000	79200	6	10915							
0.14	13000	79200	6	9819							
0.17	13000	79200	6	8443							
0.19	13000	79200	6	7482							
0.21	13000	79200	6	6565							
0.24	13000	79200	6	5804							
0.28	13000	79200	6	5027							
0.32	13000	79200	6	4423							
0.36	13000	79200	6	3889							
0.42	13000	79200	6	3311							
0.47	13000	79200	6	3009							
0.54	13000	79200	6	2607							
0.62	13000	79200	6	2268							
 3  2											
0.73	13000	79200	6	1926							
0.80	13000	79200	6	1757							
0.91	13000	79200	6	1541							
1.0	13000	79200	6	1342							
1.2	13000	79200	6	1177							
1.4	13000	79200	6	1025							
1.6	13000	79200	6	899							
1.8	13000	79200	6	790							
2.0	13000	79200	6	704							

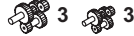
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<b>K127R77, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>13000 Nm</b>						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
2.3	13000	79200	6	610							
2.6	13000	79200	6	549							
2.9	13000	79200	6	477							
3.3	13000	79200	6	418							

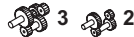
<b>K127R87, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>13000 Nm</b>							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L
 3  2												
2.6	13000	79200	6	536								
3.0	13000	79200	6	473								
3.3	13000	79200	6	418								
3.8	13000	79200	6	367								
4.2	13000	79200	6	330								
4.9	13000	79200	6	287								
5.5	13000	79200	6	253								
6.6	13000	79200	6	213								
7.0	12000	79700	7	200								
8.4	12000	79700	7	166								
9.5	12000	79700	7	147								

<b>K157, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>20000 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M	315S 315M	315L 315H
 3										
9.3	20000	111100	6	150.41						
11	20000	102100	6	122.39						
14	20000	93700	6	100.22						
15	20000	90000	6	91.65						
18	20000	84500	6	79.75						
20	20000	79800	6	70.38						
23	20000	74600	6	61.02						
26	20000	70600	6	54.29						
30	20000	65600	6	46.79						
37	20000	59000	6	38.02						
45	19000	55300	6	31.30						
51	20000	49600	6	27.62						
58	20000	45700	6	23.95						
66	20000	42600	6	21.31						
76	20000	38800	6	18.37						
94	20000	33800	6	14.92						
111	18700	32900	6	12.65						

K157R97, $n_e=1400 \text{ min}^{-1}$					20000 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S	

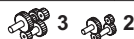


0.08	20000	111100	6	17679									
0.09	20000	111100	6	15729									
0.10	20000	111100	6	14721									
0.11	20000	111100	6	13097									
0.12	20000	111100	6	11368									
0.14	20000	111100	6	10114									
0.16	20000	111100	6	8718									
0.18	20000	111100	6	7734									
0.20	20000	111100	6	6881									
0.24	20000	111100	6	5931									
0.28	20000	111100	6	5074									
0.31	20000	111100	6	4514									
0.35	20000	111100	6	3979									
0.40	20000	111100	6	3516									
0.46	20000	111100	6	3051									
0.54	20000	111100	6	2610									
0.60	20000	111100	6	2322									
0.69	20000	111100	6	2029									
0.78	20000	111100	6	1805									



0.84	20000	111100	6	1659									
1.0	20000	111100	6	1365									
1.1	20000	111100	6	1229*									
1.3	20000	111100	6	1093*									
1.5	20000	111100	6	942									
1.6	20000	111100	6	854									
1.9	20000	111100	6	756*									
2.1	20000	111100	6	661									
2.5	20000	111100	6	567									
2.8	20000	111100	6	504									
3.2	20000	111100	6	434*									
3.7	20000	111100	6	379									
4.2	20000	111100	6	333									
4.8	20000	111100	6	291									

K157R107, $n_e=1400 \text{ min}^{-1}$					20000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M



3.6	20000	111100	6	385						
4.3	20000	111100	6	325						
4.7	20000	111100	6	299						
5.5	20000	111100	6	253						
6.1	20000	111100	6	230						
6.6	20000	111100	7	213						
7.5	20000	111100	6	187						
8.9	20000	111100	7	157						

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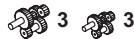
<b>K157R107, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>20000 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M
11	20000	102100	7	122						
13	20000	96400	7	107						

<b>K167, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>35000 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M	315S 315M	315L 315H



8.5	33800	150000	5	164.50						
10	35000	150000	5	134.99						
13	35000	150000	5	109.83						
16	35000	141700	5	87.86						
18	35000	134600	5	78.14						
21	35000	126500	5	68.07						
23	35000	120100	5	60.74						
27	35000	111500	5	51.77						
33	35000	101900	5	42.89						
38	35000	94200	5	36.61						
43	35000	88200	5	32.25						
49	35000	83100	5	28.77						
57	35000	76200	5	24.52						
69	35000	68500	5	20.32						
81	35000	62400	5	17.34						

<b>K167R97, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>35000 Nm</b>								
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S



0.07	35000	150000	5	19723									
0.08	35000	150000	5	17406									
0.09	35000	150000	5	15000									
0.11	35000	150000	5	13238									
0.12	35000	150000	5	11573									
0.14	35000	150000	5	10264									
0.16	35000	150000	5	8628									
0.21	35000	150000	5	6562									
0.26	35000	150000	5	5355									
0.29	35000	150000	5	4788									
0.34	35000	150000	5	4079									
0.41	35000	150000	5	3376									
0.51	35000	150000	5	2755									
0.62	35000	150000	5	2263									





0.64	35000	150000	5	2182									
0.82	35000	150000	5	1704									
0.99	35000	150000	5	1408									
1.1	35000	150000	5	1296									


**K167R97,  $n_e=1400 \text{ min}^{-1}$  35000 Nm**

$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S
1.3	35000	150000	5	1101									
1.5	35000	150000	5	944									
1.7	35000	150000	5	843									
1.8	35000	150000	5	757									
2.2	35000	150000	5	632									
2.5	35000	150000	5	561									
2.9	35000	150000	5	481									
3.3	35000	150000	5	423									
3.8	35000	150000	5	369									





**K167R107,  $n_e=1400 \text{ min}^{-1}$  35000 Nm**

$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M
 3  2										
4.4	35000	150000	6	318						
5.0	35000	150000	6	278						
5.7	35000	150000	5	244						
6.6	35000	150000	5	213						
6.8	35000	150000	6	206						
7.8	35000	150000	5	180						
8.8	35000	150000	6	160						
10	35000	150000	6	135						
12	35000	150000	6	118						



**K187,  $n_e=1400 \text{ min}^{-1}$  53000 Nm**

$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					132L 160M 160L	180M 180L	200L 225S 225M	250M 280S 280M	315S 315M	315L 315H
 3										
7.8	53000	190000	4	179.86						
8.5	53000	190000	4	165.21						
9.7	53000	181500	4	144.59						
11	53000	173100	4	129.69						
12	53000	162500	4	112.60						
14	53000	155400	4	102.16						
16	53000	145000	4	88.00						
19	53000	133500	4	73.96						
22	53000	124400	4	64.04						
26	53000	113400	4	53.36						
31	53000	104300	4	45.50*						
33	53000	100500	5	42.51						
36	53000	95300	5	38.57						
42	53000	87500	5	33.23						
50	53000	78900	5	27.92						
58	53000	72100	5	24.18						
69	49700	69000	5	20.15						
81	46400	67300	5	17.18						

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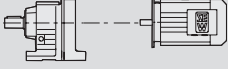

<b>K187R97, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>53000 Nm</b>									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S	
 3  3														
0.04	53000	190000	4	32625										
0.05	53000	190000	4	27165										
0.06	53000	190000	4	24353										
0.07	53000	190000	4	19144										
0.08	53000	190000	4	16978										
0.10	53000	190000	4	14272										
0.11	53000	190000	4	13116										
0.12	53000	190000	4	11647										
0.13	53000	190000	4	10413										
0.15	53000	190000	4	9363										
0.17	53000	190000	4	8126										
0.19	53000	190000	4	7343										
0.21	53000	190000	4	6747										
0.23	53000	190000	4	5991										
0.26	53000	190000	4	5358										
0.29	53000	190000	4	4817										
0.32	53000	190000	4	4370										
0.50	53000	190000	4	2818*										
 3  2														
0.39	53000	190000	4	3609										
0.46	53000	190000	4	3062										
0.56	53000	190000	4	2519										
0.62	53000	190000	4	2268										
0.68	53000	190000	4	2054										
0.77	53000	190000	4	1821										
0.87	53000	190000	4	1605										
1.0	53000	190000	4	1395										
1.2	53000	190000	4	1196										
1.3	53000	190000	4	1046										
1.5	53000	190000	4	945										
1.9	53000	190000	4	738										
2.3	53000	190000	4	621										
2.7	53000	190000	4	527										

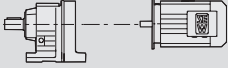

<b>K187R107, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>53000 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S 225M
 3  2										
1.7	53000	190000	4	835						
1.9	53000	190000	4	729						
2.3	53000	190000	5	622						
2.7	53000	190000	5	520						
3.1	53000	190000	5	454						
3.9	53000	190000	5	355						
5.4	53000	190000	5	261						
6.3	53000	190000	5	221						
7.3	53000	190000	5	193						

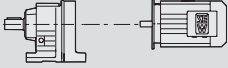

<b>K187R107, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>53000 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	$i$	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L	DRN 180M 180L	DRN 200L 225S 225M
8.6	53000	190000	5	163						

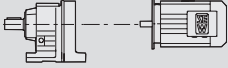

## 10.3 K..DRN.. selection tables in kW

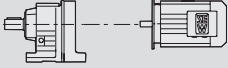

<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.08	10800	17550	80300	1.20						
0.09	9890	16006	80700	1.30						
0.09	9260	14975	81000	1.40	K	127R77	DRN	63MS4	470	756
0.11	7690	12440	81600	1.70	KF	127R77	DRN	63MS4	510	756
0.13	6750	10915	81800	1.95	KA	127R77	DRN	63MS4	440	756
0.14	6070	9819	82000	2.1	KAF	127R77	DRN	63MS4	480	756
0.16	5180	8443	82200	2.5						
0.18	4620	7482	82400	2.8						
0.10	8850	14311	65000	0.90						
0.11	7550	12211	65000	1.05						
0.13	6600	10677	65000	1.20						
0.14	5890	9524	65000	1.35	K	107R77	DRN	63MS4	310	756
0.17	5150	8328	65000	1.55	KF	107R77	DRN	63MS4	320	756
0.19	4490	7270	65000	1.80	KA	107R77	DRN	63MS4	280	756
0.22	3700	6184	65000	2.2	KAF	107R77	DRN	63MS4	305	756
0.24	3210	5662	65000	2.5						
0.27	2910	5138	65000	2.7						
0.32	2670	4359	65000	3.0						
0.20	4420	6970	40000	0.95						
0.23	4000	6027	40000	1.05						
0.26	3650	5391	40000	1.20	K	97R57	DRN	63MS4	180	756
0.30	3020	4669	40000	1.40	KF	97R57	DRN	63MS4	200	756
0.34	2730	4082	40000	1.55	KA	97R57	DRN	63MS4	160	756
0.39	2370	3583	40000	1.80	KAF	97R57	DRN	63MS4	185	756
0.44	2090	3108	40000	2.0						
0.50	1760	2757	40000	2.4						
0.57	1650	2419	40000	2.6						
0.65	1420	2123	40000	3.0	K	97R57	DRN	63MS4	180	756
0.74	1270	1856	40000	3.4	KF	97R57	DRN	63MS4	200	756
0.85	1040	1625	40000	4.1	KA	97R57	DRN	63MS4	160	756
0.96	890	1430	40000	4.8	KAF	97R57	DRN	63MS4	185	756
1.1	860	1261	40000	5.0						
1.2	755	1102	40000	5.7						
0.30	2890	4562	27000	0.95						
0.34	2680	4037	27300	1.00	K	87R57	DRN	63MS4	120	756
0.38	2390	3609	27600	1.15	KF	87R57	DRN	63MS4	130	756
0.44	2060	3107	28000	1.30	KA	87R57	DRN	63MS4	105	756
0.51	1730	2728	28300	1.55	KAF	87R57	DRN	63MS4	120	756
0.58	1530	2371	28400	1.75						
0.66	1430	2088	28500	1.90						
0.74	1270	1854	28600	2.1						
0.83	1130	1657	28700	2.4	K	87R57	DRN	63MS4	120	756
0.97	960	1415	28800	2.8	KF	87R57	DRN	63MS4	125	756
1.1	830	1229	28900	3.2	KA	87R57	DRN	63MS4	105	756
1.3	720	1078	28900	3.7	KAF	87R57	DRN	63MS4	120	756
1.4	610	951	29000	4.4						
1.6	520	837	29000	5.2						
1.9	450	726	29000	5.9						
0.51	1840	2717	11500	0.85	K	77R37	DRN	63MS4	70	756
0.58	1530	2370	15500	1.00	KF	77R37	DRN	63MS4	78	756
					KA	77R37	DRN	63MS4	62	756
					KAF	77R37	DRN	63MS4	70	756
0.67	1430	2050	16100	1.10						
0.78	1220	1772	17300	1.25						
0.91	1040	1514	18100	1.50						
0.99	960	1388	18500	1.60	K	77R37	DRN	63MS4	69	756
1.1	840	1218	18900	1.85	KF	77R37	DRN	63MS4	78	756
1.3	735	1053	19200	2.1	KA	77R37	DRN	63MS4	62	756
1.5	645	924	19400	2.4	KAF	77R37	DRN	63MS4	70	756
1.7	570	815	19600	2.7						
1.9	445	709	19800	3.5						
2.2	390	622	19900	3.9						

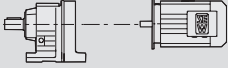



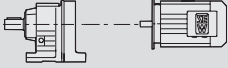

<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.0	960	1351	6940	0.85						
1.2	820	1171	10300	1.00						
1.3	720	1034	11100	1.15						
1.5	600	903	11900	1.35						
1.7	570	793	12100	1.45						
2.0	455	697	12600	1.80						
2.2	400	613	12800	2.0	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	45	756
2.5	350	542	13000	2.3	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	51	756
2.9	325	471	13000	2.5	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	42	756
3.3	270	420	13000	3.0	<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	48	756
3.8	245	361	13000	3.3						
4.3	215	323	13000	3.8						
5.0	180	279	13000	4.5						
5.6	159	246	13000	5.2						
6.3	138	217	13000	5.9						
1.5	605	906	7580	1.00						
1.7	545	806	8060	1.10						
2.0	455	699	8620	1.30						
2.2	400	615	8870	1.50						
2.5	350	544	9080	1.70						
2.9	320	473	9190	1.85	<b>K</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	39	756
3.3	270	421	9390	2.2	<b>KF</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	44	756
3.8	245	362	9470	2.4	<b>KA</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	37	756
4.3	215	319	9570	2.8	<b>KAF</b>	<b>57R37</b>	<b>DRN</b>	<b>63MS4</b>	43	756
4.9	181	280	9690	3.3						
5.6	159	246	9760	3.8						
6.4	140	215	9810	4.3						
7.2	125	192	9850	4.8						
1.5	615	908	9000	0.80						
1.7	545	802	9000	0.90						
2.0	460	701	9000	1.10						
2.1	445	645	9000	1.10						
2.3	385	595	9000	1.30						
2.5	360	543	9000	1.35						
2.8	315	501	9000	1.60	<b>K</b>	<b>49R37</b>	<b>DRN</b>	<b>63MS4</b>	43	756
3.1	285	449	9000	1.75	<b>KF</b>	<b>49R37</b>	<b>DRN</b>	<b>63MS4</b>	45	756
3.4	245	401	9000	2.0	<b>KA</b>	<b>49R37</b>	<b>DRN</b>	<b>63MS4</b>	40	756
3.8	225	360	9000	2.2	<b>KAF</b>	<b>49R37</b>	<b>DRN</b>	<b>63MS4</b>	45	756
4.2	205	330	9000	2.4						
4.6	197	300	9000	2.5						
5.0	172	274	9000	2.9						
5.7	149	243	9000	3.3						
6.3	138	217	9000	3.6						
7.2	129	193	9000	3.9						
2.5	380	552	6170	1.05						
2.8	320	495	6840	1.25	<b>K</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	33	756
3.2	285	426	7160	1.40	<b>KF</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	37	756
3.7	240	375	7510	1.65	<b>KA</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	33	756
4.2	225	327	7620	1.75	<b>KAF</b>	<b>47R37</b>	<b>DRN</b>	<b>63MS4</b>	35	756
4.8	197	289	7780	2.0						
2.7	330	504	7500	0.90						
3.0	315	454	7500	0.95						
3.5	265	399	7500	1.10						
3.8	250	365	7500	1.20						
4.4	205	312	7500	1.45						
4.6	200	299	7500	1.50	<b>K</b>	<b>39R17</b>	<b>DRN</b>	<b>63MS4</b>	24	756
5.4	172	254	7500	1.75	<b>KF</b>	<b>39R17</b>	<b>DRN</b>	<b>63MS4</b>	26	756
5.9	153	234	7500	1.95	<b>KA</b>	<b>39R17</b>	<b>DRN</b>	<b>63MS4</b>	23	756
6.6	139	210	7500	2.1	<b>KAF</b>	<b>39R17</b>	<b>DRN</b>	<b>63MS4</b>	25	756
7.3	128	189	7500	2.3						
7.9	120	174	7500	2.5						
8.8	104	156	7500	2.9						
9.7	96	142	7500	3.1						
12	78	117	7500	3.8						

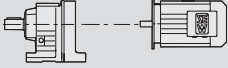

<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
4.0	240	346	3540	0.80						
4.5	205	304	5150	0.95						
5.2	188	267	5310	1.05	<b>K</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	19	756
5.9	163	234	5540	1.25	<b>KF</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	22	756
6.7	142	205	5730	1.40	<b>KA</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	19	756
7.6	124	181	5900	1.60	<b>KAF</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	21	756
8.6	108	160	6040	1.85						
10	90	136	6200	2.2						
<b>6.0</b>	190	144.79*	13000	4.3	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>63M6</b>	35	703
					<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>63M6</b>	40	704
					<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>63M6</b>	32	706
					<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>63M6</b>	38	704
<b>6.0</b>	191	145.14*	9660	3.1						
<b>7.0</b>	163	123.85	9740	3.7	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	29	697
<b>8.0</b>	142	108.29	9800	4.2	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	34	698
<b>8.5</b>	135	102.88*	9820	4.4	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	27	699
<b>9.6</b>	118	90.26*	9870	5.0	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	33	698
<b>11</b>	100	76.56*	9920	6.0						
<b>9.5</b>	120	145.14*	9870	5.0	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>63MS4</b>	28	697
<b>11</b>	102	123.85	9910	5.8	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>63MS4</b>	33	698
<b>13</b>	89	108.29	9950	6.7	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>63MS4</b>	26	699
<b>13</b>	85	102.88*	9960	7.0	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>63MS4</b>	32	698
<b>15</b>	74	90.26*	9990	8.0						
<b>6.6</b>	173	131.87*	7900	2.3	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>63M6</b>	23	687
<b>7.2</b>	160	121.48*	7960	2.5	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>63M6</b>	26	688
<b>8.3</b>	137	104.37	8050	2.9	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>63M6</b>	22	689
					<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>63M6</b>	25	688
<b>10</b>	109	131.87*	8140	3.6	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>63MS4</b>	22	687
<b>11</b>	100	121.48*	8160	4.0	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>63MS4</b>	26	688
					<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>63MS4</b>	21	689
					<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>63MS4</b>	24	688
<b>8.2</b>	140	106.38	5750	1.45	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>63M6</b>	17	677
<b>8.9</b>	128	97.81	5860	1.55	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>63M6</b>	19	678
<b>10</b>	110	83.69	6030	1.80	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>63M6</b>	17	679
<b>12</b>	95	72.54	6160	2.1	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>63M6</b>	18	678
<b>13</b>	88	106.38	6220	2.3	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>63MS4</b>	16	677
<b>14</b>	81	97.81	6290	2.5	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>63MS4</b>	18	678
<b>16</b>	69	83.69	6400	2.9	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>63MS4</b>	16	679
<b>19</b>	60	72.54	6480	3.3	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>63MS4</b>	18	678
<b>20</b>	56	67.80	6520	3.5						
<b>25</b>	45	54.89	5230	2.9	<b>K</b>	<b>29</b>	<b>DRN</b>	<b>63MS4</b>	10	669
<b>27</b>	41	50.35*	5240	3.1	<b>KF</b>	<b>29</b>	<b>DRN</b>	<b>63MS4</b>	11	673
<b>32</b>	35	42.87	5260	3.6	<b>KA</b>	<b>29</b>	<b>DRN</b>	<b>63MS4</b>	10.0	675
					<b>KAF</b>	<b>29</b>	<b>DRN</b>	<b>63MS4</b>	11	673
<b>31</b>	36	44.48	4500	1.85						
<b>34</b>	33	40.63	4500	2.0						
<b>40</b>	28	34.29	4500	2.2						
<b>47</b>	24	29.29	4500	2.5						
<b>51</b>	22	27.16*	4500	2.7						
<b>57</b>	19	24.06	4460	4.0	<b>K</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	8.6	662
<b>63</b>	18	21.98	4340	4.4	<b>KF</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	9.0	665
<b>74</b>	15	18.55	4120	5.2	<b>KA</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	8.2	667
<b>87</b>	13	15.84	3920	6.1	<b>KAF</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	8.6	665
<b>94</b>	12	14.69	3830	6.6						
<b>109</b>	10	12.70	3660	7.6						
<b>117</b>	9.0	11.84	3580	8.0						
<b>134</b>	8.0	10.32*	3430	8.9						
<b>144</b>	7.0	9.58	3370	7.9						

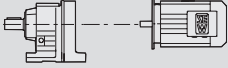

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.09	15000	14975	75800	0.85						
0.11	12500	12440	79400	1.05						
0.13	10900	10915	80200	1.20						
0.14	9870	9819	80700	1.30						
0.16	8450	8443	81300	1.55	K	127R77	DRN	63M4	470	756
0.18	7520	7482	81600	1.75	KF	127R77	DRN	63M4	510	756
0.21	6600	6565	81900	1.95	KA	127R77	DRN	63M4	445	756
0.24	5590	5804	82200	2.3	KAF	127R77	DRN	63M4	480	756
0.27	4960	5027	82300	2.6						
0.31	4260	4423	82400	3.0						
0.35	3710	3889	82500	3.5						
0.42	3080	3311	82600	4.2						
0.17	8370	8328	65000	0.95						
0.19	7310	7270	65000	1.10						
0.22	6100	6184	65000	1.30						
0.24	5400	5662	65000	1.50						
0.27	4900	5138	65000	1.65	K	107R77	DRN	63M4	310	756
0.32	4360	4359	65000	1.85	KF	107R77	DRN	63M4	320	756
0.36	3810	3810	65000	2.1	KA	107R77	DRN	63M4	285	756
0.41	3230	3358	65000	2.5	KAF	107R77	DRN	63M4	305	756
0.46	2930	2977	65000	2.7						
0.53	2560	2599	65000	3.1						
0.60	2200	2286	65000	3.6						
0.29	4820	4669	40000	0.90	K	97R57	DRN	63M4	180	756
0.34	4330	4082	40000	1.00	KF	97R57	DRN	63M4	200	756
0.38	3760	3583	40000	1.15	KA	97R57	DRN	63M4	160	756
0.44	3300	3108	40000	1.30	KAF	97R57	DRN	63M4	185	756
0.50	2840	2757	40000	1.50						
0.57	2600	2419	40000	1.65						
0.65	2250	2123	40000	1.90						
0.74	2000	1856	40000	2.1						
0.85	1680	1625	40000	2.6						
0.96	1450	1430	40000	3.0	K	97R57	DRN	63M4	180	756
1.1	1360	1261	40000	3.2	KF	97R57	DRN	63M4	200	756
1.2	1180	1102	40000	3.6	KA	97R57	DRN	63M4	160	756
1.4	1030	957	40000	4.1	KAF	97R57	DRN	63M4	185	756
1.6	920	855	40000	4.6						
1.9	735	743	40000	5.8						
2.1	655	652	40000	6.5						
0.44	3280	3107	26500	0.80	K	87R57	DRN	63M4	120	756
0.50	2790	2728	27200	0.95	KF	87R57	DRN	63M4	130	756
0.58	2450	2371	27600	1.10	KA	87R57	DRN	63M4	105	756
					KAF	87R57	DRN	63M4	120	756
0.66	2250	2088	27800	1.20						
0.74	1990	1854	28100	1.35						
0.83	1780	1657	28200	1.50						
0.97	1520	1415	28500	1.75	K	87R57	DRN	63M4	120	756
1.1	1320	1229	28600	2.0	KF	87R57	DRN	63M4	130	756
1.3	1140	1078	28700	2.4	KA	87R57	DRN	63M4	105	756
1.4	980	951	28800	2.7	KAF	87R57	DRN	63M4	120	756
1.6	850	837	28900	3.2						
1.9	735	726	28900	3.6						
0.91	1640	1514	14700	0.95						
0.99	1500	1388	15700	1.05						
1.1	1310	1218	16800	1.15						
1.3	1150	1053	17700	1.35						
1.5	1000	924	18300	1.55	K	77R37	DRN	63M4	70	756
1.7	890	815	18700	1.75	KF	77R37	DRN	63M4	78	756
1.9	725	709	19200	2.1	KA	77R37	DRN	63M4	63	756
2.2	635	622	19400	2.4	KAF	77R37	DRN	63M4	71	756
2.5	570	552	19600	2.7						
2.8	500	485	19700	3.1						
3.2	440	428	19800	3.5						
3.8	390	367	19900	4.0						

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.7	880	793	9670	0.95						
2.0	725	697	11100	1.10						
2.2	640	613	11600	1.30						
2.5	560	542	12100	1.45	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	46	756
2.9	515	471	12300	1.60	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	52	756
3.3	435	420	12700	1.90	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	43	756
3.8	390	361	12800	2.1	<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	49	756
4.3	345	323	13000	2.4						
4.9	290	279	13000	2.8						
2.5	565	544	7910	1.05						
2.9	510	473	8330	1.15						
3.3	435	421	8720	1.35						
3.8	390	362	8920	1.55	<b>K</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	40	756
4.3	340	319	9110	1.75	<b>KF</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	45	756
4.9	290	280	9320	2.1	<b>KA</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	38	756
5.6	255	246	9440	2.3	<b>KAF</b>	<b>57R37</b>	<b>DRN</b>	<b>63M4</b>	44	756
6.4	225	215	9550	2.7						
7.2	200	192	9630	3.0						
8.3	173	166	9710	3.5						
2.5	570	543	9000	0.90						
2.7	505	501	9000	1.00						
3.1	455	449	9000	1.10						
3.4	395	401	9000	1.25						
3.8	360	360	9000	1.40						
4.2	330	330	9000	1.50	<b>K</b>	<b>49R37</b>	<b>DRN</b>	<b>63M4</b>	44	756
4.6	310	300	9000	1.60	<b>KF</b>	<b>49R37</b>	<b>DRN</b>	<b>63M4</b>	46	756
5.0	275	274	9000	1.80	<b>KA</b>	<b>49R37</b>	<b>DRN</b>	<b>63M4</b>	41	756
5.6	240	243	9000	2.1	<b>KAF</b>	<b>49R37</b>	<b>DRN</b>	<b>63M4</b>	46	756
6.3	220	217	9000	2.3						
7.1	200	193	9000	2.5						
7.8	181	176	9000	2.8						
9.1	150	152	9000	3.3						
11	127	125	9000	3.9						
3.7	390	375	6060	1.05						
4.2	350	327	6510	1.15						
4.8	310	289	6950	1.30						
5.4	265	256	7340	1.50	<b>K</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	34	756
6.1	240	225	7530	1.65	<b>KF</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	37	756
6.9	205	198	7740	1.95	<b>KA</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	33	756
8.0	179	171	7880	2.2	<b>KAF</b>	<b>47R37</b>	<b>DRN</b>	<b>63M4</b>	36	756
9.0	160	153	7960	2.5						
10	140	131	8040	2.9						
4.4	320	312	7500	0.95						
4.6	315	299	7500	0.95						
5.4	265	254	7500	1.10						
5.9	240	234	7500	1.25						
6.5	215	210	7500	1.35	<b>K</b>	<b>39R17</b>	<b>DRN</b>	<b>63M4</b>	25	756
7.3	200	189	7500	1.50	<b>KF</b>	<b>39R17</b>	<b>DRN</b>	<b>63M4</b>	27	756
7.9	186	174	7500	1.60	<b>KA</b>	<b>39R17</b>	<b>DRN</b>	<b>63M4</b>	24	756
8.8	163	156	7500	1.85	<b>KAF</b>	<b>39R17</b>	<b>DRN</b>	<b>63M4</b>	26	756
9.7	150	142	7500	2.0						
12	122	117	7500	2.4						
18	77	75	7500	3.8						
6.7	220	205	5000	0.90	<b>K</b>	<b>37R17</b>	<b>DRN</b>	<b>63M4</b>	20	756
7.6	195	181	5250	1.05	<b>KF</b>	<b>37R17</b>	<b>DRN</b>	<b>63M4</b>	23	756
8.6	171	160	5470	1.15	<b>KA</b>	<b>37R17</b>	<b>DRN</b>	<b>63M4</b>	20	756
10	144	136	5720	1.40	<b>KAF</b>	<b>37R17</b>	<b>DRN</b>	<b>63M4</b>	22	756
11	138	127	5770	1.45						
6.3	270	144.79*	13000	3.0	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	35	703
7.4	230	123.54	13000	3.5	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	41	704
8.5	200	108.03	13000	4.0	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	33	706
8.9	192	102.62	13000	4.2	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	38	704
9.5	181	144.79*	13000	4.5	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>63M4</b>	35	703
11	154	123.54	13000	5.3	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>63M4</b>	40	704
13	135	108.03	13000	6.1	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>63M4</b>	32	706
					<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>63M4</b>	38	704

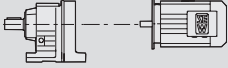

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
6.3	270	145.14*	9380	2.2	K	57	DRN	71MS6	30	697
7.4	230	123.85	9520	2.6	KF	57	DRN	71MS6	34	698
8.4	200	108.29	9620	3.0	KA	57	DRN	71MS6	28	699
8.9	193	102.88*	9650	3.1	KAF	57	DRN	71MS6	33	698
10	169	90.26*	9720	3.5						
9.5	181	145.14*	9690	3.3						
11	154	123.85	9770	3.9	K	57	DRN	63M4	29	697
13	135	108.29	9820	4.4	KF	57	DRN	63M4	34	698
13	128	102.88*	9840	4.7	KA	57	DRN	63M4	27	699
15	112	90.26*	9890	5.3	KAF	57	DRN	63M4	33	698
18	95	76.56*	9930	6.3						
6.9	245	131.87*	7480	1.60	K	47	DRN	71MS6	24	687
7.5	225	121.48*	7600	1.75	KF	47	DRN	71MS6	27	688
8.8	196	104.37	7790	2.0	KA	47	DRN	71MS6	23	689
10	170	90.86	7920	2.3	KAF	47	DRN	71MS6	26	688
11	159	85.12*	7960	2.5						
10	164	131.87*	7940	2.4	K	47	DRN	63M4	23	687
11	151	121.48*	8000	2.6	KF	47	DRN	63M4	26	688
13	130	104.37	8080	3.1	KA	47	DRN	63M4	22	689
15	113	90.86	8130	3.5	KAF	47	DRN	63M4	25	688
16	106	85.12*	8150	3.8						
8.6	199	106.38	5210	1.00	K	37	DRN	71MS6	18	677
9.4	183	97.81	5360	1.10	KF	37	DRN	71MS6	20	678
11	157	83.69	5600	1.25	KA	37	DRN	71MS6	17	679
13	136	72.54	5790	1.45	KAF	37	DRN	71MS6	19	678
13	132	106.38	5820	1.50						
14	122	97.81	5920	1.65						
16	104	83.69	6080	1.90	K	37	DRN	63M4	17	677
19	90	72.54	6200	2.2	KF	37	DRN	63M4	19	678
20	84	67.80	6260	2.4	KA	37	DRN	63M4	17	679
23	73	58.60	6210	2.7	KAF	37	DRN	63M4	18	678
28	62	49.79	5950	3.2						
31	55	44.46	5770	3.6						
36	47	37.97	5520	4.2						
25	68	54.89	5160	1.90						
27	62	50.35*	5180	2.1						
32	53	42.87	5210	2.4	K	29	DRN	63M4	11	669
37	46	36.96	5230	2.6	KF	29	DRN	63M4	12	673
46	37	30.11	5050	3.0	KA	29	DRN	63M4	11	675
46	37	29.69	5070	3.5	KAF	29	DRN	63M4	12	673
50	34	27.23	4950	3.8						
55	31	24.91*	4790	3.5						
31	55	44.48	4420	1.25						
34	50	40.63	4450	1.30						
40	42	34.29	4490	1.50						
47	36	29.29	4500	1.65						
51	33	27.16*	4440	1.75						
57	30	24.06	4360	2.7						
63	27	21.98	4240	2.9	K	19	DRN	63M4	9.5	662
74	23	18.55	4040	3.5	KF	19	DRN	63M4	9.8	665
87	19	15.84	3860	4.0	KA	19	DRN	63M4	9.0	667
94	18	14.69	3770	4.4	KAF	19	DRN	63M4	9.4	665
108	15	12.70	3610	5.0						
116	14	11.84	3530	5.3						
133	12	10.32*	3390	5.9						
143	11	9.58	3340	5.3						
170	10	8.09	3160	7.9						
199	8.0	6.91	3010	9.3						

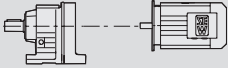

<b>P<sub>m</sub> = 0.25 kW</b>																
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>							
<b>0.08</b>	22000	17679	109900	0.90	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	790	756						
					<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	870	756						
					<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	750	756						
					<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>71MS4</b>	810	756						
<b>0.14</b>	13900	9819	78100	0.95	<b>K</b>	<b>127R77</b>	<b>DRN</b>	<b>71MS4</b>	470	756						
<b>0.17</b>	11900	8443	79700	1.10												
<b>0.19</b>	10600	7482	80400	1.20												
<b>0.21</b>	9320	6565	81000	1.40												
<b>0.24</b>	7990	5804	81400	1.65												
<b>0.28</b>	7040	5027	81800	1.85												
<b>0.32</b>	6090	4423	82000	2.1												
<b>0.36</b>	5320	3889	82200	2.4												
<b>0.42</b>	4440	3311	82400	2.9												
<b>0.23</b>	8660	6184	65000	0.90	<b>KF</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	310	756						
<b>0.25</b>	7740	5662	65000	1.05												
<b>0.27</b>	7030	5138	65000	1.15												
<b>0.32</b>	6170	4359	65000	1.30												
<b>0.37</b>	5390	3810	65000	1.50												
<b>0.42</b>	4620	3358	65000	1.75												
<b>0.47</b>	4170	2977	65000	1.90												
<b>0.54</b>	3640	2599	65000	2.2												
<b>0.61</b>	3150	2286	65000	2.5												
<b>0.72</b>	2670	1939	65000	3.0												
<b>0.82</b>	2450	1713	65000	3.3	<b>KA</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	310	756						
<b>0.90</b>	2220	1554	65000	3.6												
<b>1.1</b>	1910	1336	65000	4.2												
<b>1.1</b>	1910	1336	65000	4.2												
<b>0.45</b>	4580	3108	40000	0.95	<b>KAF</b>	<b>107R77</b>	<b>DRN</b>	<b>71MS4</b>	305	756						
<b>0.51</b>	4000	2757	40000	1.05												
<b>0.45</b>	4580	3108	40000	0.95												
<b>0.51</b>	4000	2757	40000	1.05												
<b>0.58</b>	3610	2419	40000	1.20	<b>K</b>	<b>97R57</b>	<b>DRN</b>	<b>71MS4</b>	180	756						
<b>0.66</b>	3140	2123	40000	1.35												
<b>0.76</b>	2770	1856	40000	1.55												
<b>0.86</b>	2360	1625	40000	1.80												
<b>0.98</b>	2050	1430	40000	2.1												
<b>1.1</b>	1880	1261	40000	2.3												
<b>1.3</b>	1640	1102	40000	2.6												
<b>1.5</b>	1440	957	40000	3.0												
<b>1.6</b>	1290	855	40000	3.3												
<b>0.67</b>	3120	2088	26700	0.85							<b>KF</b>	<b>97R57</b>	<b>DRN</b>	<b>71MS4</b>	180	756
<b>0.76</b>	2770	1854	27200	0.95												
<b>0.85</b>	2480	1657	27500	1.10												
<b>0.99</b>	2110	1415	27900	1.30												
<b>1.1</b>	1830	1229	28200	1.45												
<b>1.3</b>	1590	1078	28400	1.70												
<b>1.5</b>	1380	951	28600	1.95												
<b>1.7</b>	1200	837	28700	2.2												
<b>1.9</b>	1040	726	28800	2.6												
<b>2.2</b>	920	638	28800	2.9												
<b>1.3</b>	1590	1053	15100	0.95	<b>K</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	120	756						
<b>1.5</b>	1390	924	16400	1.10												
<b>1.7</b>	1230	815	17300	1.25												
<b>2.0</b>	1020	709	18200	1.50												
<b>2.3</b>	890	622	18700	1.75												
<b>2.5</b>	800	552	19000	1.90												
<b>2.9</b>	705	485	19200	2.2												
<b>3.3</b>	620	428	19400	2.5												
<b>3.8</b>	545	367	19600	2.8												
<b>4.3</b>	480	328	19700	3.2												
<b>4.8</b>	430	290	19800	3.6												
<b>5.6</b>	365	252	19900	4.2												
<b>6.3</b>	320	221	20000	4.8												
<b>7.2</b>	285	195	20000	5.4												
<b>8.1</b>	250	175	20000	6.2												
<b>1.3</b>	1590	1053	15100	0.95							<b>KF</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	120	756
<b>1.5</b>	1390	924	16400	1.10												
<b>1.7</b>	1230	815	17300	1.25												
<b>2.0</b>	1020	709	18200	1.50												
<b>2.3</b>	890	622	18700	1.75												
<b>2.5</b>	800	552	19000	1.90												
<b>2.9</b>	705	485	19200	2.2												
<b>3.3</b>	620	428	19400	2.5												
<b>3.8</b>	545	367	19600	2.8												
<b>4.3</b>	480	328	19700	3.2	<b>KA</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	71	756						
<b>4.8</b>	430	290	19800	3.6												
<b>5.6</b>	365	252	19900	4.2												
<b>6.3</b>	320	221	20000	4.8												
<b>7.2</b>	285	195	20000	5.4												
<b>8.1</b>	250	175	20000	6.2												
<b>1.3</b>	1590	1053	15100	0.95							<b>KAF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	71	756
<b>1.5</b>	1390	924	16400	1.10												
<b>1.7</b>	1230	815	17300	1.25												
<b>2.0</b>	1020	709	18200	1.50												
<b>2.3</b>	890	622	18700	1.75												
<b>2.5</b>	800	552	19000	1.90												
<b>2.9</b>	705	485	19200	2.2												
<b>3.3</b>	620	428	19400	2.5												

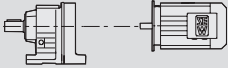

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.3	890	613	9540	0.90						
2.6	790	542	10600	1.05						
3.0	715	471	11200	1.15						
3.4	610	420	11800	1.35	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	47	756
3.9	540	361	12200	1.50	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	52	756
4.3	480	323	12500	1.70	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	44	756
5.0	405	279	12800	2.0	<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	50	756
5.7	355	246	13000	2.3						
6.5	315	217	13000	2.6						
3.3	610	421	7520	1.00						
3.9	540	362	8070	1.10						
4.4	475	319	8520	1.25						
5.0	405	280	8850	1.45						
5.7	355	246	9050	1.65	<b>K</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	41	756
6.5	315	215	9220	1.90	<b>KF</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	45	756
7.3	280	192	9350	2.1	<b>KA</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	39	756
8.4	240	166	9490	2.5	<b>KAF</b>	<b>57R37</b>	<b>DRN</b>	<b>71MS4</b>	44	756
9.7	210	145	9590	2.8						
11	193	129	9650	3.1						
13	163	111	9740	3.7						
14	143	97	9800	4.2						
3.5	560	401	9000	0.90						
3.9	505	360	9000	1.00						
4.3	465	330	9000	1.05						
4.7	430	300	9000	1.15						
5.1	385	274	9000	1.30	<b>K</b>	<b>49R37</b>	<b>DRN</b>	<b>71MS4</b>	44	756
5.8	340	243	9000	1.45	<b>KF</b>	<b>49R37</b>	<b>DRN</b>	<b>71MS4</b>	46	756
6.5	305	217	9000	1.60	<b>KA</b>	<b>49R37</b>	<b>DRN</b>	<b>71MS4</b>	42	756
7.3	280	193	9000	1.80	<b>KAF</b>	<b>49R37</b>	<b>DRN</b>	<b>71MS4</b>	46	756
8.0	250	176	9000	2.0						
9.3	210	152	9000	2.4						
11	177	125	9000	2.8						
14	138	99	9000	3.6						
6.0	335	234	7500	0.90						
6.7	305	210	7500	1.00						
7.4	275	189	7500	1.10	<b>K</b>	<b>39R17</b>	<b>DRN</b>	<b>71MS4</b>	26	756
8.1	255	174	7500	1.15	<b>KF</b>	<b>39R17</b>	<b>DRN</b>	<b>71MS4</b>	27	756
9.0	225	156	7500	1.30	<b>KA</b>	<b>39R17</b>	<b>DRN</b>	<b>71MS4</b>	25	756
9.9	205	142	7500	1.45	<b>KAF</b>	<b>39R17</b>	<b>DRN</b>	<b>71MS4</b>	26	756
12	170	117	7500	1.75						
19	107	75	7500	2.7						
4.8	500	192.18	19700	2.9	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>71M6</b>	63	710
5.1	465	179.37	19800	3.1	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>71M6</b>	71	711
5.9	400	154.02	19900	3.9	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>71M6</b>	55	713
6.8	350	135.28	19900	4.4	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>71M6</b>	63	711
6.3	375	144.79*	12900	2.2	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	37	703
7.4	320	123.54	13000	2.5	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	42	704
8.5	280	108.03	13000	2.9	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	34	706
8.9	265	102.62	13000	3.1	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	40	704
9.7	245	144.79*	13000	3.3	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	35	703
11	205	123.54	13000	3.9	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	41	704
13	183	108.03	13000	4.5	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	33	706
14	174	102.62	13000	4.7	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	38	704
6.3	375	145.14*	8970	1.60						
7.4	320	123.85	9200	1.85	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	31	697
8.4	280	108.29	9350	2.1	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	36	698
8.9	265	102.88*	9400	2.2	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	29	699
10	235	90.26*	9520	2.5	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	34	698
12	199	76.56*	9630	3.0						
9.7	245	145.14*	9480	2.4						
11	210	123.85	9600	2.9	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	30	697
13	184	108.29	9680	3.3	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	34	698
14	174	102.88*	9710	3.4	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	28	699
16	153	90.26*	9770	3.9	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	33	698
18	130	76.56*	9840	4.6						

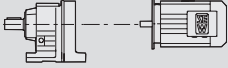

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>19</b>	127	75.20*	9000	3.7	<b>K</b>	<b>49</b>	<b>DRN</b>	<b>71MS4</b>	36	693
<b>20</b>	119	70.19	9000	3.7	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>71MS4</b>	38	694
					<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>71MS4</b>	33	695
					<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>71MS4</b>	38	694
<b>6.9</b>	340	131.87*	6620	1.15	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>71M6</b>	25	687
<b>7.5</b>	315	121.48*	6900	1.25	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>71M6</b>	28	688
<b>8.8</b>	270	104.37	7290	1.45	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>71M6</b>	24	689
<b>10</b>	235	90.86	7550	1.70	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>71M6</b>	27	688
<b>11</b>	220	85.12*	7640	1.80						
<b>11</b>	220	131.87*	7630	1.80	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>71MS4</b>	24	687
<b>12</b>	205	121.48*	7740	1.95	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>71MS4</b>	27	688
<b>13</b>	177	104.37	7890	2.3	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>71MS4</b>	23	689
<b>15</b>	154	90.86	7990	2.6	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>71MS4</b>	26	688
<b>17</b>	144	85.12*	8020	2.8						
<b>24</b>	98	58.24*	7500	3.0	<b>K</b>	<b>39</b>	<b>DRN</b>	<b>71MS4</b>	23	683
<b>28</b>	84	49.69	7500	3.5	<b>KF</b>	<b>39</b>	<b>DRN</b>	<b>71MS4</b>	24	684
					<b>KA</b>	<b>39</b>	<b>DRN</b>	<b>71MS4</b>	22	685
					<b>KAF</b>	<b>39</b>	<b>DRN</b>	<b>71MS4</b>	23	684
<b>11</b>	215	83.69	5040	0.90	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>71M6</b>	19	677
<b>13</b>	189	72.54	5310	1.05	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>71M6</b>	21	678
<b>14</b>	176	67.80	5420	1.15	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>71M6</b>	19	679
<b>16</b>	152	58.60	5640	1.30	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>71M6</b>	20	678
<b>18</b>	129	49.79	5850	1.55						
<b>13</b>	180	106.38	5380	1.10						
<b>14</b>	166	97.81	5520	1.20						
<b>17</b>	142	83.69	5740	1.40						
<b>19</b>	123	72.54	5910	1.60						
<b>21</b>	115	67.80	5980	1.75	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>71MS4</b>	18	677
<b>24</b>	99	58.60	5920	2.0	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>71MS4</b>	20	678
<b>28</b>	84	49.79	5700	2.4	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>71MS4</b>	17	679
<b>32</b>	75	44.46	5540	2.6	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>71MS4</b>	19	678
<b>37</b>	64	37.97	5320	3.1						
<b>40</b>	60	35.57	5230	3.3						
<b>47</b>	50	29.96	5000	3.9						
<b>49</b>	48	28.83	4940	4.1						
<b>20</b>	122	71.93	5000	1.05						
<b>21</b>	112	66.25*	5030	1.15						
<b>23</b>	104	61.28*	5060	1.25						
<b>26</b>	93	54.89	5090	1.40						
<b>28</b>	85	50.35*	5110	1.50						
<b>33</b>	72	42.87	5150	1.75						
<b>36</b>	66	38.90	5180	1.95						
<b>38</b>	62	36.96	5140	1.95	<b>K</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	12	669
<b>39</b>	60	35.83	5170	2.1	<b>KF</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	13	673
<b>42</b>	56	33.15	5060	2.3	<b>KA</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	11	675
<b>47</b>	51	30.11	4880	2.2	<b>KAF</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	12	673
<b>47</b>	50	29.69	4920	2.6						
<b>52</b>	46	27.23	4800	2.8						
<b>56</b>	42	24.91*	4640	2.6						
<b>61</b>	39	23.19	4590	3.3						
<b>64</b>	37	22.08	4490	2.8						
<b>70</b>	33	19.99	4400	3.8						

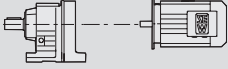

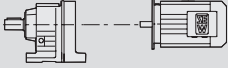



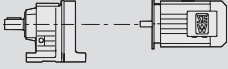

<b>P<sub>m</sub> = 0.25 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
32	75	44.48	4290	0.90						
35	69	40.63	4330	0.95						
41	58	34.29	4400	1.10						
44	53	31.74	4430	1.50						
48	49	29.29	4330	1.25						
48	49	29.14	4430	1.60						
52	46	27.16*	4250	1.30						
52	45	26.88*	4340	1.75						
58	40	24.06	4210	1.95						
64	37	21.98	4110	2.1	K	19	DRN	71MS4	10	662
76	31	18.55	3920	2.5	KF	19	DRN	71MS4	10	665
89	26	15.84	3750	3.0	KA	19	DRN	71MS4	9.6	667
96	24	14.69	3670	3.2	KAF	19	DRN	71MS4	10.0	665
111	21	12.70	3520	3.7						
119	20	11.84	3450	3.9						
136	17	10.32*	3310	4.3						
147	16	9.58	3280	3.9						
174	13	8.09	3110	5.8						
203	11	6.91	2960	6.8						
219	10	6.41*	2890	7.3						
254	9.0	5.54	2760	8.5						
272	8.0	5.16	2700	9.1						

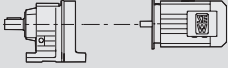

<b>P<sub>m</sub> = 0.37 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.04	64600	32625	190000	0.80	K	187R97	DRN	71M4	1770	756
0.05	53800	27165	190000	1.00	KH	187R97	DRN	71M4	1700	756
0.07	39000	19723	150000	0.90	K	167R97	DRN	71M4	1180	756
0.08	34400	17406	150000	1.00	KH	167R97	DRN	71M4	1150	756
0.08	35000	17679	98700	0.55						
0.09	31100	15729	102700	0.65	K	157R97	DRN	71M4	790	756
0.10	29100	14721	104500	0.70	KF	157R97	DRN	71M4	870	756
0.11	25900	13097	107200	0.75	KA	157R97	DRN	71M4	750	756
0.12	22500	11368	109600	0.90	KAF	157R97	DRN	71M4	810	756
0.14	20000	10114	111100	1.00						
0.19	16100	7482	73600	0.80						
0.22	14100	6565	77700	0.90	K	127R77	DRN	71M4	475	756
0.24	12200	5804	79600	1.05	KF	127R77	DRN	71M4	510	756
0.28	10700	5027	80300	1.20	KA	127R77	DRN	71M4	445	756
0.32	9340	4423	80900	1.40	KAF	127R77	DRN	71M4	480	756
0.36	8180	3889	81400	1.60						
0.43	6880	3311	81800	1.90						
0.73	4160	1926	82500	3.1	K	127R77	DRN	71M4	470	756
0.81	3790	1757	82500	3.4	KF	127R77	DRN	71M4	510	756
0.92	3290	1541	82600	3.9	KA	127R77	DRN	71M4	445	756
					KAF	127R77	DRN	71M4	480	756
0.37	8190	3810	65000	1.00						
0.42	7090	3358	65000	1.15	K	107R77	DRN	71M4	310	756
0.48	6360	2977	65000	1.25	KF	107R77	DRN	71M4	325	756
0.54	5550	2599	65000	1.45	KA	107R77	DRN	71M4	285	756
0.62	4830	2286	65000	1.65	KAF	107R77	DRN	71M4	310	756
0.73	4090	1939	65000	1.95						
0.83	3730	1713	65000	2.1	K	107R77	DRN	71M4	310	756
0.91	3380	1554	65000	2.4	KF	107R77	DRN	71M4	325	756
1.1	2900	1336	65000	2.8	KA	107R77	DRN	71M4	285	756
1.2	2530	1166	65000	3.1	KAF	107R77	DRN	71M4	310	756

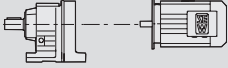

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.67	4720	2123	40000	0.90						
0.76	4160	1856	40000	1.05						
0.87	3570	1625	40000	1.20						
0.99	3110	1430	40000	1.40						
1.1	2820	1261	40000	1.50	K	97R57	DRN	71M4	180	756
1.3	2470	1102	40000	1.75	KF	97R57	DRN	71M4	200	756
1.5	2160	957	40000	2.0	KA	97R57	DRN	71M4	165	756
1.6	1930	855	40000	2.2	KAF	97R57	DRN	71M4	190	756
1.9	1590	743	40000	2.7						
2.2	1410	652	40000	3.0						
2.5	1270	573	40000	3.4						
1.0	3160	1415	26600	0.85						
1.1	2750	1229	27200	1.00						
1.3	2400	1078	27600	1.10						
1.5	2090	951	28000	1.30	K	87R57	DRN	71M4	120	756
1.7	1820	837	28200	1.50	KF	87R57	DRN	71M4	130	756
1.9	1580	726	28400	1.70	KA	87R57	DRN	71M4	110	756
2.2	1400	638	28500	1.90	KAF	87R57	DRN	71M4	120	756
2.5	1220	562	28700	2.2						
3.0	1030	474	28800	2.6						
3.3	920	426	28800	2.9						
3.8	810	373	28900	3.3						
1.7	1830	815	11900	0.85						
2.0	1550	709	15400	1.00						
2.3	1360	622	16600	1.15						
2.6	1210	552	17400	1.25						
2.9	1060	485	18000	1.45						
3.3	940	428	18500	1.65	K	77R37	DRN	71M4	72	756
3.9	810	367	18900	1.90	KF	77R37	DRN	71M4	80	756
4.3	725	328	19200	2.1	KA	77R37	DRN	71M4	64	756
4.9	645	290	19400	2.4	KAF	77R37	DRN	71M4	72	756
5.6	555	252	19600	2.8						
6.4	485	221	19700	3.2						
7.2	430	195	19800	3.6						
8.1	380	175	19900	4.1						
9.2	335	154	19900	4.6						
3.4	920	420	9250	0.90						
3.9	810	361	10300	1.00						
4.4	725	323	11100	1.15						
5.1	610	279	11800	1.35	K	67R37	DRN	71M4	48	756
5.8	540	246	12200	1.50	KF	67R37	DRN	71M4	53	756
6.5	480	217	12500	1.70	KA	67R37	DRN	71M4	45	756
7.4	420	191	12700	1.95	KAF	67R37	DRN	71M4	51	756
8.5	360	166	12900	2.2						
9.8	320	144	13000	2.6						
12	270	122	13000	3.0						
5.1	615	280	7490	0.95						
5.8	540	246	8090	1.10						
6.6	475	215	8520	1.25						
7.4	420	192	8770	1.40	K	57R37	DRN	71M4	42	756
8.5	365	166	9020	1.65	KF	57R37	DRN	71M4	47	756
9.8	320	145	9200	1.85	KA	57R37	DRN	71M4	40	756
11	290	129	9320	2.1	KAF	57R37	DRN	71M4	46	756
13	245	111	9480	2.4						
15	215	97	9580	2.8						
5.2	585	274	9000	0.85						
5.8	515	243	9000	0.95						
6.5	465	217	9000	1.05	K	49R37	DRN	71M4	46	756
7.3	420	193	9000	1.20	KF	49R37	DRN	71M4	47	756
8.0	380	176	9000	1.30	KA	49R37	DRN	71M4	43	756
9.3	320	152	9000	1.55	KAF	49R37	DRN	71M4	48	756
11	265	125	9000	1.85						
14	205	99	9000	2.4						
9.1	340	156	7500	0.90	K	39R17	DRN	71M4	27	756
10.0	310	142	7500	0.95	KF	39R17	DRN	71M4	29	756
12	255	117	7500	1.20	KA	39R17	DRN	71M4	26	756
19	162	75	7500	1.80	KAF	39R17	DRN	71M4	28	756

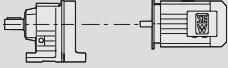

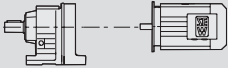

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>4.7</b>	745	197.37	28900	3.6	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>80MK6</b>	100	717
<b>5.4</b>	655	174.19	28900	4.1	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>80MK6</b>	110	718
					<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>80MK6</b>	89	720
					<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>80MK6</b>	100	718
<b>6.1</b>	580	154.02	19500	2.7	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	65	710
<b>6.9</b>	510	135.28	19700	3.0	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	73	711
<b>7.3</b>	485	128.52	19700	3.2	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	58	713
<b>8.2</b>	425	113.56	19800	3.6	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	65	711
<b>7.4</b>	475	192.18	19700	3.0	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>71M4</b>	63	710
<b>7.9</b>	445	179.37	19800	3.2	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>71M4</b>	71	711
<b>9.2</b>	380	154.02	19900	4.0	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>71M4</b>	55	713
					<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>71M4</b>	63	711
<b>7.6</b>	465	123.54	12600	1.75	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	39	703
<b>8.7</b>	405	108.03	12800	2.0	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	45	704
<b>9.1</b>	385	102.62	12900	2.1	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	36	706
<b>10</b>	340	90.04	13000	2.4	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	42	704
<b>9.8</b>	360	144.79*	12900	2.3	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	37	703
<b>11</b>	305	123.54	13000	2.7	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	42	704
<b>13</b>	265	108.03	13000	3.0	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	34	706
<b>16</b>	220	90.04	13000	3.6	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	40	704
<b>19</b>	190	76.37	13000	4.3						
<b>7.5</b>	465	123.85	8570	1.30	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	33	697
<b>8.6</b>	405	108.29	8840	1.45	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	38	698
<b>9.1</b>	385	102.88*	8930	1.55	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	31	699
<b>10</b>	340	90.26*	9130	1.75	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	37	698
<b>12</b>	285	76.56*	9320	2.1						
<b>14</b>	260	69.12	9430	2.3						
<b>9.8</b>	360	145.14*	9040	1.65	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	31	697
<b>11</b>	305	123.85	9250	1.95	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	36	698
<b>13</b>	270	108.29	9390	2.2	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	29	699
<b>14</b>	255	102.88*	9440	2.3	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	34	698
<b>16</b>	225	90.26*	9550	2.7						
<b>18</b>	191	76.56*	9660	3.1						
<b>20</b>	172	69.12	9720	3.5						
<b>19</b>	187	75.20*	9000	2.5	<b>K</b>	<b>49</b>	<b>DRN</b>	<b>71M4</b>	37	693
<b>20</b>	175	70.19	9000	2.5	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>71M4</b>	39	694
<b>23</b>	150	60.27	9000	3.3	<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>71M4</b>	35	695
					<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>71M4</b>	39	694
<b>9.0</b>	390	104.37	6000	1.00	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>80MK6</b>	27	687
<b>10</b>	340	90.86	6630	1.15	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>80MK6</b>	31	688
<b>11</b>	320	85.12*	6860	1.25	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>80MK6</b>	27	689
<b>12</b>	280	75.20*	7200	1.40	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>80MK6</b>	29	688
<b>11</b>	325	131.87*	6780	1.20	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	25	687
<b>12</b>	300	121.48*	7030	1.30	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	28	688
<b>14</b>	260	104.37	7380	1.55	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	24	689
<b>16</b>	225	90.86	7610	1.75	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	27	688
<b>17</b>	210	85.12*	7700	1.90						
<b>19</b>	187	75.20*	7840	2.1						
<b>20</b>	174	69.84	7900	2.3						
<b>22</b>	158	63.30*	7970	2.5						
<b>24</b>	145	58.24*	7500	2.1	<b>K</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	24	683
<b>28</b>	124	49.69	7500	2.4	<b>KF</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	25	684
<b>33</b>	108	43.45	7500	2.8	<b>KA</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	23	685
<b>34</b>	103	41.28*	7500	2.9	<b>KAF</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	24	684
<b>39</b>	90	36.22	7500	3.3						

<b>P<sub>m</sub> = 0.37 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
14	240	97.81	3550	0.80						
17	205	83.69	5130	0.95						
20	181	72.54	5380	1.10						
21	169	67.80	5490	1.20						
24	146	58.60	5480	1.35						
28	124	49.79	5320	1.60						
32	111	44.46	5200	1.80	K	37	DRN	71M4	19	677
37	94	37.97	5030	2.1	KF	37	DRN	71M4	21	678
40	88	35.57	4960	2.2	KA	37	DRN	71M4	19	679
47	74	29.96	4770	2.7	KAF	37	DRN	71M4	20	678
49	71	28.83	4720	2.8						
57	62	24.99	4560	3.2						
61	58	23.36	4480	3.3						
70	50	20.19	4320	3.7						
82	42	17.15	4130	4.2						
26	137	54.89	4950	0.95						
28	125	50.35*	4990	1.05						
33	107	42.87	4980	1.20						
38	92	36.96	4840	1.30						
47	75	30.11	4630	1.55	K	29	DRN	71M4	13	669
48	74	29.69	4690	1.75	KF	29	DRN	71M4	14	673
52	68	27.23	4590	1.90	KA	29	DRN	71M4	13	675
57	62	24.91*	4430	1.75	KAF	29	DRN	71M4	13	673
61	57	23.19	4410	2.2						
64	55	22.08	4300	1.90						
71	49	19.99	4250	2.6						
87	40	16.29	4020	3.2						
48	73	29.29	4030	0.85						
52	67	27.16*	3980	0.90						
59	60	24.06	4000	1.35						
64	54	21.98	3920	1.45						
76	46	18.55	3760	1.75						
89	39	15.84	3610	2.0						
96	36	14.69	3540	2.2						
111	31	12.70	3410	2.5	K	19	DRN	71M4	11	662
120	29	11.84	3340	2.7	KF	19	DRN	71M4	12	665
137	25	10.32*	3220	3.0	KA	19	DRN	71M4	11	667
148	23	9.58	3210	2.6	KAF	19	DRN	71M4	11	665
175	20	8.09	3050	4.0						
205	17	6.91	2910	4.6						
221	16	6.41*	2850	5.0						
255	13	5.54	2720	5.8						
274	12	5.16	2660	6.2						
314	11	4.50*	2550	7.1						
<b>P<sub>m</sub> = 0.55 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
0.06	74300	24353	174100	0.70						
0.07	58400	19144	190000	0.90						
0.08	51800	16978	190000	1.00						
0.10	43400	14272	190000	1.20						
0.11	39400	13116	190000	1.35	K	187R97	DRN	80MK4	1770	756
0.12	34300	11647	190000	1.55	KH	187R97	DRN	80MK4	1700	756
0.20	22300	7343	190000	2.4						
0.21	20200	6747	190000	2.6						
0.24	17600	5991	190000	3.0						
0.40	11100	3609	190000	4.8	K	187R97	DRN	80MK4	1760	756
0.47	9420	3062	190000	5.6	KH	187R97	DRN	80MK4	1700	756
0.57	7520	2519	190000	7.0						

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.08	53100	17406	127300	0.65						
0.10	45800	15000	150000	0.75						
0.11	40400	13238	150000	0.85						
0.12	35300	11573	150000	1.00						
0.14	31300	10264	150000	1.10						
0.17	26200	8628	150000	1.35	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>80MK4</b>	1190	756
0.22	19900	6562	150000	1.75	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>80MK4</b>	1150	756
0.27	15700	5355	150000	2.2						
0.35	12200	4079	150000	2.9						
0.43	10200	3376	150000	3.4						
0.52	8120	2755	150000	4.3						
0.66	6740	2182	150000	5.2	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>80MK4</b>	1180	756
0.84	5180	1704	150000	6.8	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>80MK4</b>	1140	756
1.0	4330	1408	150000	8.1						
1.1	3940	1296	150000	8.9						
0.16	26600	8718	106600	0.75	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	790	756
0.19	23500	7734	108900	0.85	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	870	756
0.21	20900	6881	110600	0.95	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	750	756
0.24	18000	5931	112200	1.10	<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	810	756
0.36	12100	3979	114600	1.65						
0.47	9270	3051	115500	2.2						
0.87	5100	1659	116300	3.9	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	790	756
1.1	4070	1365	116400	4.9	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	870	756
					<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	750	756
					<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>80MK4</b>	810	756
0.32	14000	4423	77800	0.90	<b>K</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	475	756
0.37	12300	3889	79500	1.05	<b>KF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	520	756
0.43	10400	3311	80500	1.25	<b>KA</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	445	756
0.48	9430	3009	80900	1.40	<b>KAF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	485	756
0.55	8090	2607	81400	1.60						
0.74	6250	1926	82000	2.1	<b>K</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	475	756
0.82	5700	1757	82100	2.3	<b>KF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	520	756
0.93	4970	1541	82300	2.6	<b>KA</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	445	756
1.1	4350	1342	82400	3.0	<b>KAF</b>	<b>127R77</b>	<b>DRN</b>	<b>80MK4</b>	485	756
1.2	3790	1177	82500	3.4						
1.4	3320	1025	82600	3.9						
0.48	9550	2977	65000	0.85	<b>K</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	315	756
0.55	8330	2599	65000	0.95	<b>KF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	325	756
0.63	7280	2286	65000	1.10	<b>KA</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	285	756
0.74	6170	1939	65000	1.30	<b>KAF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	310	756
0.84	5590	1713	65000	1.45						
0.92	5070	1554	65000	1.60						
1.1	4360	1336	65000	1.85	<b>K</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	315	756
1.2	3800	1166	65000	2.1	<b>KF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	325	756
1.4	3260	1030	65000	2.5	<b>KA</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	285	756
1.6	2840	904	65000	2.8	<b>KAF</b>	<b>107R77</b>	<b>DRN</b>	<b>80MK4</b>	310	756
1.8	2570	793	65000	3.1						
2.1	2240	696	65000	3.6						
2.3	1930	615	65000	4.1						
1.0	4670	1430	40000	0.90						
1.1	4190	1261	40000	1.00						
1.3	3660	1102	40000	1.15						
1.5	3210	957	40000	1.35						
1.7	2870	855	40000	1.50	<b>K</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	185	756
1.9	2400	743	40000	1.80	<b>KF</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	205	756
2.2	2120	652	40000	2.0	<b>KA</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	165	756
2.5	1900	573	40000	2.2	<b>KAF</b>	<b>97R57</b>	<b>DRN</b>	<b>80MK4</b>	190	756
2.9	1620	504	40000	2.6						
3.3	1390	437	40000	3.1						
3.8	1240	382	40000	3.4						
4.7	1000	305	40000	4.3						

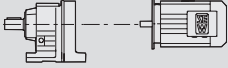

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.5	3120	951	26700	0.85						
1.7	2730	837	27200	1.00						
2.0	2370	726	27700	1.15						
2.2	2090	638	28000	1.30						
2.5	1830	562	28200	1.45						
3.0	1540	474	28400	1.75	<b>K</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	125	756
3.4	1380	426	28500	1.95	<b>KF</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	130	756
3.9	1210	373	28700	2.2	<b>KA</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	110	756
4.3	1060	330	28700	2.5	<b>KAF</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	125	756
4.9	940	294	28800	2.8						
5.7	820	250	28900	3.3						
6.1	775	236	28900	3.5						
7.1	655	201	28900	4.1						
3.0	1590	485	15100	0.95						
3.4	1400	428	16300	1.10						
3.9	1210	367	17400	1.25						
4.4	1080	328	18000	1.45	<b>K</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	74	756
5.0	960	290	18400	1.60	<b>KF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	82	756
5.7	830	252	18900	1.85	<b>KA</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	67	756
6.5	725	221	19200	2.1	<b>KAF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	75	756
7.3	640	195	19400	2.4						
8.2	570	175	19600	2.7						
9.3	500	154	19700	3.1						
5.1	910	279	9330	0.90						
5.8	800	246	10400	1.00	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	50	756
6.6	715	217	11100	1.15	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	56	756
7.5	630	191	11700	1.30	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	47	756
8.6	540	166	12200	1.50	<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	53	756
10.0	475	144	12500	1.70						
12	405	122	12800	2.0						
7.5	630	192	7360	0.95						
8.6	545	166	8050	1.10	<b>K</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	44	756
9.9	480	145	8510	1.25	<b>KF</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	49	756
11	430	129	8740	1.40	<b>KA</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	42	756
13	365	111	9020	1.65	<b>KAF</b>	<b>57R37</b>	<b>DRN</b>	<b>80MK4</b>	48	756
15	320	97	9200	1.85						
8.2	565	176	9000	0.90	<b>K</b>	<b>49R37</b>	<b>DRN</b>	<b>80MK4</b>	48	756
9.5	480	152	9000	1.05	<b>KF</b>	<b>49R37</b>	<b>DRN</b>	<b>80MK4</b>	50	756
11	400	125	9000	1.25	<b>KA</b>	<b>49R37</b>	<b>DRN</b>	<b>80MK4</b>	45	756
15	310	99	9000	1.60	<b>KAF</b>	<b>49R37</b>	<b>DRN</b>	<b>80MK4</b>	50	756
4.9	1070	197.37	28700	2.5	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	110	717
5.5	940	174.19	28800	2.9	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	120	718
5.9	890	164.34*	28800	3.0	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	97	720
6.6	800	147.32*	28900	3.4	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	110	718
6.3	830	154.02	18900	1.85	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	73	710
7.1	735	135.28	19200	2.1	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	82	711
7.5	695	128.52	19300	2.2	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	66	713
8.5	615	113.56	19500	2.5	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	74	711
9.3	560	154.02	19600	2.8	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	65	710
11	495	135.28	19700	3.1	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	73	711
11	470	128.52	19700	3.3	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	58	713
13	415	113.56	19800	3.7	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	65	711
15	355	97.05	19900	4.4						
7.8	670	123.54	11500	1.20	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>90SR6</b>	47	703
8.9	585	108.03	12000	1.40	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>90SR6</b>	53	704
9.4	555	102.62	12100	1.45	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>90SR6</b>	44	706
11	485	90.04	12500	1.70	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>90SR6</b>	50	704
13	415	76.37	12800	1.95						
12	450	123.54	12600	1.80	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	39	703
13	395	108.03	12800	2.1	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	45	704
16	325	90.04	13000	2.5	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	36	706
19	275	76.37	13000	2.9	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	42	704

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
8.9	585	108.29	7720	1.00						
9.4	555	102.88*	7960	1.05						
11	490	90.26*	8460	1.20	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>90SR6</b>	41	697
13	415	76.56*	8810	1.45	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>90SR6</b>	46	698
14	375	69.12	8980	1.60	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>90SR6</b>	39	699
16	330	60.81*	9170	1.80	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>90SR6</b>	45	698
17	310	57.42*	9240	1.90						
12	450	123.85	8640	1.30						
13	395	108.29	8900	1.50						
14	375	102.88*	8980	1.60	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	33	697
16	330	90.26*	9170	1.80	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	38	698
19	280	76.56*	9360	2.1	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	31	699
21	250	69.12	9460	2.4	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	37	698
24	220	60.81*	9560	2.7						
25	210	57.42*	9600	2.9						
19	275	75.20*	9000	1.75						
20	255	70.19	9000	1.75	<b>K</b>	<b>49</b>	<b>DRN</b>	<b>80MK4</b>	40	693
24	220	60.27	9000	2.3	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>80MK4</b>	41	694
27	193	52.94	9000	2.6	<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>80MK4</b>	37	695
29	184	50.29*	9000	2.7	<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>80MK4</b>	42	694
32	162	44.44	9000	3.1						
38	138	37.98*	9000	3.6						
14	380	104.37	6170	1.05						
16	330	90.86	6750	1.20						
17	310	85.12*	6950	1.30	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	27	687
19	275	75.20*	7270	1.45	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	31	688
21	255	69.84	7420	1.55	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	27	689
23	230	63.30*	7580	1.75	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	29	688
25	205	56.83	7730	1.90						
29	179	48.95*	7880	2.2						
31	168	46.03*	7930	2.4						
25	210	58.24*	7500	1.40						
29	181	49.69	7500	1.65						
33	159	43.45	7500	1.90	<b>K</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	26	683
35	151	41.28*	7500	2.0	<b>KF</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	28	684
40	132	36.22	7500	2.3	<b>KA</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	25	685
47	112	30.72*	7500	2.7	<b>KAF</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	27	684
52	101	27.73	7310	3.0						
59	89	24.40*	7070	3.4						
62	84	23.04*	6970	3.6						
24	210	58.60	4830	0.95						
29	182	49.79	4760	1.10						
32	162	44.46	4700	1.25						
38	138	37.97	4600	1.45						
40	130	35.57	4560	1.55						
48	109	29.96	4420	1.80						
50	105	28.83	4390	1.90	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	21	677
57	91	24.99	4270	2.2	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	23	678
61	85	23.36	4210	2.3	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	21	679
71	73	20.19	4080	2.5	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	23	678
84	62	17.15	3930	2.9						
94	56	15.31	3830	3.1						
110	47	13.08	3680	3.5						
118	44	12.14	3610	3.6						
137	38	10.49	3470	4.2						

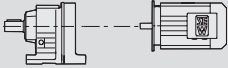

<b>P<sub>m</sub> = 0.55 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
39	135	36.96	4380	0.90						
48	110	30.11	4250	1.05						
48	108	29.69	4360	1.20						
53	99	27.23	4290	1.30						
58	91	24.91*	4120	1.20						
62	84	23.19	4150	1.55	K	29	DRN	80MK4	15	669
65	80	22.08	4020	1.30	KF	29	DRN	80MK4	16	673
72	73	19.99	4020	1.80	KA	29	DRN	80MK4	15	675
88	59	16.29	3830	2.2	KAF	29	DRN	80MK4	16	673
107	49	13.47	3650	2.6						
120	43	11.94	3540	3.0						
145	36	9.90	3460	3.0						
168	31	8.53	3310	3.9						
60	88	24.06	3700	0.90						
65	80	21.98	3640	1.00						
77	67	18.55	3520	1.20						
91	57	15.84	3410	1.40						
98	53	14.69	3350	1.50						
113	46	12.70	3240	1.70	K	19	DRN	80MK4	14	662
121	43	11.84	3190	1.80	KF	19	DRN	80MK4	14	665
139	37	10.32*	3080	2.0	KA	19	DRN	80MK4	13	667
150	35	9.58	3100	1.80	KAF	19	DRN	80MK4	13	665
177	29	8.09	2960	2.7						
208	25	6.91	2830	3.2						
224	23	6.41*	2770	3.4						
259	20	5.54	2660	4.0						
278	18	5.16	2600	4.2						
319	16	4.50*	2500	4.9						
295	17	9.58	2560	3.5	K	19	DRN	71M2	11	662
349	15	8.09	2430	5.3	KF	19	DRN	71M2	12	665
409	12	6.91	2320	6.2	KA	19	DRN	71M2	11	667
441	11	6.41*	2270	6.7	KAF	19	DRN	71M2	11	665
<b>P<sub>m</sub> = 0.75 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.08	72400	16978	181900	0.75						
0.10	60600	14272	190000	0.85						
0.11	55300	13116	190000	0.95						
0.12	48400	11647	190000	1.10						
0.14	42700	10413	190000	1.25						
0.15	37800	9363	190000	1.40						
0.18	32000	8126	190000	1.65	K	187R97	DRN	80M4	1770	756
0.20	31200	7343	190000	1.70	KH	187R97	DRN	80M4	1700	756
0.21	28400	6747	190000	1.85						
0.24	24900	5991	190000	2.1						
0.27	21900	5358	190000	2.4						
0.30	19400	4817	190000	2.7						
0.33	17600	4370	190000	3.0						
0.40	15500	3609	190000	3.4						
0.47	13100	3062	190000	4.0						
0.57	10600	2519	190000	5.0						
0.63	9410	2268	190000	5.6	K	187R97	DRN	80M4	1770	756
0.70	8390	2054	190000	6.3	KH	187R97	DRN	80M4	1700	756
0.79	7270	1821	190000	7.3						
0.90	6560	1605	190000	8.1						
1.2	4780	1196	190000	11						
1.4	4170	1046	190000	13						
0.14	43700	10264	150000	0.80						
0.17	36600	8628	150000	0.95						
0.22	27900	6562	150000	1.25						
0.27	22200	5355	150000	1.55	K	167R97	DRN	80M4	1190	756
0.30	19600	4788	150000	1.80	KH	167R97	DRN	80M4	1150	756
0.35	17200	4079	150000	2.0						
0.43	14300	3376	150000	2.4						
0.52	11400	2755	150000	3.0						

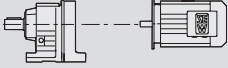

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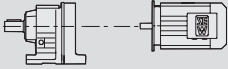

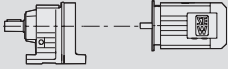



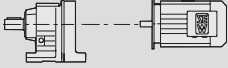

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.66	9410	2182	150000	3.7						
0.85	7270	1704	150000	4.8						
1.0	6050	1408	150000	5.8						
1.1	5530	1296	150000	6.3	K	167R97	DRN	80M4	1190	756
1.3	4400	1101	150000	8.0	KH	167R97	DRN	80M4	1150	756
1.5	3850	944	150000	9.1						
2.3	2520	632	150000	14						
3.0	1920	481	150000	18						
0.24	25200	5931	107700	0.80						
0.28	20400	5074	110800	1.00						
0.32	18200	4514	112100	1.10	K	157R97	DRN	80M4	800	756
0.36	16900	3979	112700	1.20	KF	157R97	DRN	80M4	870	756
0.41	14400	3516	113800	1.40	KA	157R97	DRN	80M4	760	756
0.47	12900	3051	114300	1.55	KAF	157R97	DRN	80M4	820	756
0.55	10500	2610	115100	1.90						
0.62	9370	2322	115400	2.1						
0.87	7130	1659	115900	2.8						
1.1	5740	1365	116200	3.5						
1.2	5100	1229	116300	3.9	K	157R97	DRN	80M4	790	756
1.3	4530	1093	116400	4.4	KF	157R97	DRN	80M4	870	756
1.5	3910	942	116400	5.1	KA	157R97	DRN	80M4	760	756
1.7	3480	854	116500	5.7	KAF	157R97	DRN	80M4	810	756
2.5	2260	567	116600	8.8						
2.9	2010	504	116600	9.9						
0.43	14400	3311	77100	0.90	K	127R77	DRN	80M4	480	756
0.48	13000	3009	79100	1.00	KF	127R77	DRN	80M4	520	756
0.55	11200	2607	80100	1.15	KA	127R77	DRN	80M4	450	756
					KAF	127R77	DRN	80M4	490	756
0.75	8610	1926	81200	1.50						
0.82	7860	1757	81500	1.65						
0.93	6860	1541	81800	1.90	K	127R77	DRN	80M4	475	756
1.1	6000	1342	82100	2.2	KF	127R77	DRN	80M4	520	756
1.2	5240	1177	82200	2.5	KA	127R77	DRN	80M4	450	756
1.4	4580	1025	82400	2.8	KAF	127R77	DRN	80M4	485	756
1.6	4000	899	82500	3.2						
0.84	7690	1713	65000	1.05						
0.93	6980	1554	65000	1.15						
1.1	5990	1336	65000	1.35						
1.2	5230	1166	65000	1.55	K	107R77	DRN	80M4	315	756
1.4	4530	1030	65000	1.75	KF	107R77	DRN	80M4	330	756
1.6	3940	904	65000	2.0	KA	107R77	DRN	80M4	290	756
1.8	3540	793	65000	2.3	KAF	107R77	DRN	80M4	315	756
2.1	3090	696	65000	2.6						
2.3	2680	615	65000	3.0						
1.3	5010	1102	39900	0.85						
1.5	4400	957	40000	1.00						
1.7	3930	855	40000	1.10						
1.9	3310	743	40000	1.30						
2.2	2920	652	40000	1.45						
2.5	2610	573	40000	1.65	K	97R57	DRN	80M4	185	756
2.9	2240	504	40000	1.90	KF	97R57	DRN	80M4	205	756
3.3	1930	437	40000	2.2	KA	97R57	DRN	80M4	170	756
3.8	1710	382	40000	2.5	KAF	97R57	DRN	80M4	195	756
4.7	1380	305	40000	3.1						
5.6	1160	258	40000	3.7						
6.2	1050	232	40000	4.1						
7.2	890	199	40000	4.8						

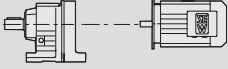

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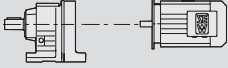

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.0	3260	726	26500	0.85						
2.3	2870	638	27100	0.95						
2.6	2520	562	27500	1.05						
3.0	2120	474	27900	1.25						
3.4	1910	426	28100	1.40	<b>K</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	125	756
3.9	1680	373	28300	1.60	<b>KF</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	135	756
4.4	1460	330	28500	1.85	<b>KA</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	115	756
4.9	1310	294	28600	2.1	<b>KAF</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	125	756
5.8	1130	250	28700	2.4						
6.1	1070	236	28700	2.5						
7.2	900	201	28800	3.0						
3.9	1660	367	14500	0.95	<b>K</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	78	756
4.4	1480	328	15800	1.05	<b>KF</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	86	756
5.0	1310	290	16800	1.20	<b>KA</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	70	756
5.7	1130	252	17700	1.35	<b>KAF</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	78	756
6.5	1000	221	18300	1.55						
12	545	125	9000	0.90	<b>K</b>	<b>49R37</b>	<b>DRN</b>	<b>80M4</b>	51	756
15	430	99	9000	1.15	<b>KF</b>	<b>49R37</b>	<b>DRN</b>	<b>80M4</b>	53	756
					<b>KA</b>	<b>49R37</b>	<b>DRN</b>	<b>80M4</b>	48	756
					<b>KAF</b>	<b>49R37</b>	<b>DRN</b>	<b>80M4</b>	53	756
19	330	75	7500	0.90	<b>K</b>	<b>39R17</b>	<b>DRN</b>	<b>80M4</b>	32	756
					<b>KF</b>	<b>39R17</b>	<b>DRN</b>	<b>80M4</b>	34	756
					<b>KA</b>	<b>39R17</b>	<b>DRN</b>	<b>80M4</b>	31	756
					<b>KAF</b>	<b>39R17</b>	<b>DRN</b>	<b>80M4</b>	33	756
5.5	1300	174.19	28600	2.1	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	110	717
5.8	1220	164.34*	28700	2.2	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	120	718
6.5	1100	147.32*	28700	2.5	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	97	720
7.5	940	126.91*	28800	2.8	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	110	718
7.3	980	197.37	28800	2.8	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	105	717
8.3	860	174.19	28800	3.1	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	115	718
8.8	810	164.34*	28900	3.3	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	92	720
9.8	730	147.32*	28900	3.7	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	105	718
7.1	1010	135.28	18300	1.55	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	73	710
7.5	960	128.52	18400	1.60	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	82	711
8.4	840	113.56	18800	1.80	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	66	713
					<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	74	711
9.9	725	97.05	19200	2.1	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	73	710
11	665	88.97	19300	2.3	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	82	711
					<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	66	713
					<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	74	711
9.3	765	154.02	19100	2.0	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	68	710
11	670	135.28	19300	2.3	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	77	711
11	635	128.52	19400	2.4	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	61	713
13	560	113.56	19600	2.7	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	69	711
15	480	97.05	19700	3.2						
12	610	123.54	11800	1.35	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	43	703
13	535	108.03	12200	1.55	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	48	704
16	445	90.04	12600	1.85	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	40	706
					<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	46	704
19	375	76.37	12900	2.2	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	43	703
21	340	68.95	13000	2.4	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	48	704
24	300	60.66	13000	2.7	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	40	706
25	280	57.28	13000	2.9	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	46	704
12	615	123.85	7500	0.95						
13	535	108.29	8120	1.10						
14	510	102.88*	8330	1.15						
16	445	90.26*	8660	1.35	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	37	697
19	380	76.56*	8960	1.60	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	41	698
21	340	69.12	9120	1.75	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	35	699
24	300	60.81*	9280	2.0	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	40	698
25	285	57.42*	9340	2.1						
29	240	48.89	9490	2.5						
32	220	44.43	9560	2.7						

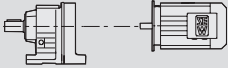

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
24	295	60.27	9000	1.65						
27	260	52.94	9000	1.90						
29	250	50.29*	9000	2.0	<b>K</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	43	693
32	220	44.44	9000	2.3	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	45	694
38	188	37.98*	9000	2.6	<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	40	695
41	173	34.81	9000	2.9	<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	45	694
47	151	30.55*	8960	3.3						
50	144	28.95*	8840	3.5						
19	370	75.20*	6270	1.05	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	31	687
21	345	69.84	6590	1.15	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	34	688
23	310	63.30*	6920	1.25	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	30	689
					<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	33	688
25	280	56.83	7210	1.40	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	31	687
29	240	48.95*	7500	1.65	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	34	688
31	225	46.03*	7600	1.75	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	30	689
36	197	39.61	7790	2.0	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	33	688
41	176	35.39	7690	2.3						
46	155	31.30	7480	2.6						
29	245	49.69	7500	1.20						
33	215	43.45	7500	1.40	<b>K</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	30	683
35	205	41.28*	7500	1.45	<b>KF</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	31	684
40	180	36.22	7390	1.65	<b>KA</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	29	685
47	152	30.72*	7140	1.95	<b>KAF</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	30	684
52	137	27.73	6990	2.2						
59	121	24.40*	6790	2.5						
62	114	23.04*	6700	2.6						
73	97	19.62	6440	3.0						
81	88	17.83	6290	3.3						
93	76	15.44	6060	3.6						
32	220	44.46	4170	0.90						
38	188	37.97	4140	1.05						
40	176	35.57	4130	1.15						
48	149	29.96	4060	1.35						
50	143	28.83	4040	1.40						
58	124	24.99	3970	1.60	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	24	677
62	116	23.36	3930	1.70	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	27	678
71	100	20.19	3840	1.85	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	24	679
84	85	17.15	3720	2.1	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	26	678
94	76	15.31	3640	2.3						
110	65	13.08	3520	2.5						
119	60	12.14	3460	2.6						
137	52	10.49	3340	3.1						
162	44	8.91	3210	3.6						
181	39	7.96	3120	3.9						
58	123	24.91*	3780	0.90						
62	115	23.19	3870	1.15						
65	109	22.08	3720	0.95						
72	99	19.99	3780	1.30						
88	81	16.29	3630	1.60	<b>K</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	19	669
107	67	13.47	3490	1.95	<b>KF</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	20	673
121	59	11.94	3400	2.2	<b>KA</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	18	675
146	49	9.90	3370	2.2	<b>KAF</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	19	673
157	45	9.17	3190	2.9						
169	42	8.53	3230	2.9						
193	37	7.48	3030	3.3						
207	34	6.95	3050	3.2						

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
78	92	18.55	3260	0.85						
91	78	15.84	3190	1.00						
98	73	14.69	3150	1.10						
113	63	12.70	3060	1.25						
122	58	11.84	3020	1.35	<b>K</b>	<b>19</b>	<b>DRN</b>	<b>80M4</b>	17	662
140	51	10.32*	2940	1.50	<b>KF</b>	<b>19</b>	<b>DRN</b>	<b>80M4</b>	17	665
178	40	8.09	2870	2.0	<b>KA</b>	<b>19</b>	<b>DRN</b>	<b>80M4</b>	16	667
208	34	6.91	2760	2.3	<b>KAF</b>	<b>19</b>	<b>DRN</b>	<b>80M4</b>	17	665
225	31	6.41*	2700	2.5						
260	27	5.54	2600	2.9						
279	25	5.16	2550	3.1						
320	22	4.50*	2450	3.6						
298	24	9.58	2500	2.6	<b>K</b>	<b>19</b>	<b>DRN</b>	<b>80MS2</b>	17	662
353	20	8.09	2380	3.9	<b>KF</b>	<b>19</b>	<b>DRN</b>	<b>80MS2</b>	17	665
413	17	6.91	2280	4.6	<b>KA</b>	<b>19</b>	<b>DRN</b>	<b>80MS2</b>	16	667
446	16	6.41*	2220	5.0	<b>KAF</b>	<b>19</b>	<b>DRN</b>	<b>80MS2</b>	17	665
<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.12	72500	11647	181400	0.75						
0.14	64200	10413	190000	0.80						
0.16	57100	9363	190000	0.95						
0.18	48800	8126	190000	1.10						
0.20	46400	7343	190000	1.15	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>90S4</b>	1780	756
0.22	42400	6747	190000	1.25	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>90S4</b>	1710	756
0.24	37300	5991	190000	1.40						
0.27	33000	5358	190000	1.60						
0.30	29400	4817	190000	1.80						
0.33	26600	4370	190000	2.0						
0.40	23100	3609	190000	2.3						
0.48	19500	3062	190000	2.7						
0.58	15800	2519	190000	3.3						
0.64	14100	2268	190000	3.7	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>90S4</b>	1770	756
0.71	12600	2054	190000	4.2	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>90S4</b>	1710	756
0.80	11000	1821	190000	4.8						
0.91	9920	1605	190000	5.3						
1.2	7280	1196	190000	7.3						
1.4	6360	1046	190000	8.3						
0.22	41400	6562	150000	0.85						
0.27	33300	5355	150000	1.05						
0.30	29500	4788	150000	1.20	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>90S4</b>	1190	756
0.36	25600	4079	150000	1.35	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>90S4</b>	1160	756
0.43	21300	3376	150000	1.65						
0.53	17100	2755	150000	2.0						
0.67	13900	2182	150000	2.5						
0.85	10800	1704	150000	3.2						
1.0	9000	1408	150000	3.9						
1.1	8240	1296	150000	4.2	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>90S4</b>	1190	756
1.3	6700	1101	150000	5.2	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>90S4</b>	1150	756
1.5	5830	944	150000	6.0						
2.3	3840	632	150000	9.1						
3.0	2920	481	150000	12						
0.32	27500	4514	105900	0.75						
0.37	25100	3979	107800	0.80	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	800	756
0.41	21600	3516	110100	0.90	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	880	756
0.48	19200	3051	111500	1.05	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	760	756
0.56	15900	2610	113200	1.25	<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	820	756
0.63	14100	2322	113900	1.40						

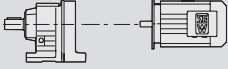

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.88	10600	1659	115100	1.90						
1.1	8600	1365	115600	2.3						
1.2	7670	1229	115800	2.6	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	800	756
1.3	6820	1093	116000	2.9	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	880	756
1.5	5880	942	116200	3.4	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	760	756
1.7	5270	854	116300	3.8	<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>90S4</b>	820	756
2.6	3450	567	116500	5.8						
2.9	3060	504	116500	6.5						
0.76	12600	1926	79400	1.05						
0.83	11500	1757	80000	1.15						
0.94	10000	1541	80600	1.30						
1.1	8810	1342	81200	1.45						
1.2	7700	1177	81600	1.70	<b>K</b>	<b>127R77</b>	<b>DRN</b>	<b>90S4</b>	480	756
1.4	6730	1025	81900	1.95	<b>KF</b>	<b>127R77</b>	<b>DRN</b>	<b>90S4</b>	520	756
1.6	5880	899	82100	2.2	<b>KA</b>	<b>127R77</b>	<b>DRN</b>	<b>90S4</b>	455	756
1.8	5060	790	82300	2.6	<b>KAF</b>	<b>127R77</b>	<b>DRN</b>	<b>90S4</b>	490	756
2.1	4580	704	82400	2.8						
2.4	3940	610	82500	3.3						
2.6	3560	549	82600	3.6						
3.0	3060	477	82600	4.2						
1.2	7680	1166	65000	1.05						
1.4	6680	1030	65000	1.20						
1.6	5840	904	65000	1.35						
1.8	5200	793	65000	1.55						
2.1	4550	696	65000	1.75	<b>K</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	320	756
2.4	3970	615	65000	2.0	<b>KF</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	335	756
2.8	3370	522	65000	2.4	<b>KA</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	295	756
3.2	2960	461	65000	2.7	<b>KAF</b>	<b>107R77</b>	<b>DRN</b>	<b>90S4</b>	320	756
3.6	2610	408	65000	3.1						
4.0	2360	364	65000	3.4						
4.6	2070	318	65000	3.9						
2.0	4870	743	40000	0.90						
2.2	4280	652	40000	1.00	<b>K</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	195	756
2.5	3830	573	40000	1.10	<b>KF</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	215	756
2.9	3300	504	40000	1.30	<b>KA</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	175	756
3.3	2840	437	40000	1.50	<b>KAF</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	200	756
3.8	2510	382	40000	1.70						
4.2	2220	342	40000	1.95						
3.1	3120	474	26700	0.85						
3.4	2800	426	27200	0.95						
3.9	2470	373	27600	1.10	<b>K</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	130	756
4.4	2160	330	27900	1.25	<b>KF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	140	756
5.0	1930	294	28100	1.40	<b>KA</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	120	756
5.8	1660	250	28300	1.60	<b>KAF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	756
6.2	1570	236	28400	1.70						
7.2	1330	201	28600	2.0						
5.4	1930	176.05*	40000	2.2	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	170	724
6.2	1680	153.21*	40000	2.6	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	190	725
6.8	1530	140.28	40000	2.8	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	155	727
7.7	1360	123.93*	40000	3.2	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	180	725
8.3	1270	176.05*	40000	3.4	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>90S4</b>	170	724
9.5	1100	153.21*	40000	3.9	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>90S4</b>	190	725
10	1010	140.28	40000	4.2	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>90S4</b>	150	727
					<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>90S4</b>	175	725
6.5	1610	147.32*	28400	1.65	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>90L6</b>	110	717
7.5	1390	126.91*	28500	1.95	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>90L6</b>	120	718
					<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>90L6</b>	100	720
					<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>90L6</b>	115	718
8.3	1250	174.19	28600	2.1	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	110	717
8.8	1180	164.34*	28700	2.3	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	120	718
9.9	1060	147.32*	28800	2.5	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	97	720
11	910	126.91*	28800	3.0	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	110	718
13	830	115.82	28900	3.2						

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>8.4</b>	1240	113.56	17200	1.25	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>90L6</b>	77	710
<b>9.9</b>	1060	97.05	18000	1.45	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>90L6</b>	85	711
					<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>90L6</b>	69	713
					<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>90L6</b>	77	711
<b>11</b>	970	135.28	18400	1.60	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	73	710
<b>11</b>	920	128.52	18600	1.65	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	82	711
<b>13</b>	810	113.56	18900	1.90	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	66	713
					<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	74	711
<b>15</b>	700	97.05	19300	2.2	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	73	710
<b>16</b>	640	88.97	19400	2.4	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	82	711
<b>19</b>	560	78.07	19600	2.8	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	66	713
<b>20</b>	530	73.99	19600	2.9	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	74	711
<b>13</b>	775	108.03	10700	1.05	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	49	703
<b>14</b>	740	102.62	11000	1.10	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	54	704
<b>16</b>	650	90.04	11600	1.25	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	46	706
<b>19</b>	550	76.37	12200	1.50	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	52	704
<b>21</b>	495	68.95	12400	1.65						
<b>24</b>	435	60.66	12700	1.85	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	49	703
<b>25</b>	410	57.28	12800	2.0	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	54	704
<b>30</b>	350	48.77	13000	2.3	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	46	706
<b>33</b>	315	44.32	13000	2.6	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	52	704
<b>38</b>	275	38.39	13000	2.9						
<b>16</b>	650	90.26*	6280	0.90						
<b>19</b>	550	76.56*	8010	1.10	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	43	697
<b>21</b>	495	69.12	8420	1.20	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	48	698
<b>24</b>	435	60.81*	8710	1.35	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	41	699
<b>25</b>	410	57.42*	8820	1.45	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	47	698
<b>30</b>	350	48.89	9080	1.70						
<b>33</b>	320	44.43	9210	1.85						
<b>38</b>	275	38.49	9370	2.2						
<b>41</b>	255	35.70	9440	2.3						
<b>48</b>	215	30.28	9570	2.7						
<b>53</b>	197	27.34	9430	3.0						
<b>60</b>	173	24.05	9130	3.5						
<b>64</b>	163	22.71	9000	3.7						
<b>75</b>	139	19.34	8640	4.1						
<b>83</b>	126	17.57	8420	4.4	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	43	697
<b>96</b>	109	15.22	8100	4.9	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	48	698
<b>110</b>	95	13.25	7790	5.3	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	41	699
<b>122</b>	86	11.92	7490	4.8	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	47	698
<b>129</b>	81	11.26	7370	5.1						
<b>152</b>	69	9.59	7040	5.8						
<b>167</b>	62	8.71	6850	6.2						
<b>193</b>	54	7.55	6570	6.7						
<b>222</b>	47	6.57	6310	7.3						
<b>310</b>	33	4.69	5700	8.9						
<b>24</b>	435	60.27	9000	1.15						
<b>27</b>	380	52.94	9000	1.30						
<b>29</b>	360	50.29*	9000	1.40						
<b>33</b>	320	44.44	9000	1.55						
<b>38</b>	270	37.98*	8800	1.80	<b>K</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	48	693
<b>42</b>	250	34.81	8660	2.0	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	50	694
<b>48</b>	220	30.55*	8430	2.3	<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	45	695
<b>50</b>	205	28.95*	8340	2.4	<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	50	694
<b>57</b>	182	25.34	8100	2.7						
<b>64</b>	164	22.83	7900	3.0						
<b>73</b>	144	20.03	7660	3.5						
<b>26</b>	410	56.83	5430	0.95	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	37	687
<b>30</b>	350	48.95*	6520	1.15	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	40	688
<b>32</b>	330	46.03*	6750	1.20	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	36	689
					<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	39	688

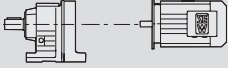

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
37	285	39.61	7160	1.40						
41	255	35.39	7050	1.55						
46	225	31.30	6920	1.75	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	37	687
50	210	29.32	6840	1.90	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	40	688
56	187	25.91	6690	2.1	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	36	689
67	157	21.81	6460	2.5	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>90S4</b>	39	688
74	141	19.58	6310	2.8						
29	355	49.69	6810	0.85						
33	310	43.45	6760	0.95						
35	295	41.28*	6740	1.00						
40	260	36.22	6660	1.15						
47	220	30.72*	6520	1.35						
52	200	27.73	6420	1.50						
60	176	24.40*	6290	1.70	<b>K</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	36	683
63	166	23.04*	6230	1.80	<b>KF</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	38	684
74	141	19.62	6040	2.1	<b>KA</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	35	685
82	128	17.83	5920	2.2	<b>KAF</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	37	684
94	111	15.44	5740	2.5						
108	97	13.44*	5560	2.8						
114	91	12.73	5760	2.7						
120	87	12.09*	5680	2.9						
137	76	10.61	5480	3.7						
49	215	29.96	3430	0.90						
58	180	24.99	3440	1.10						
62	168	23.36	3430	1.15						
72	145	20.19	3410	1.25						
85	123	17.15	3360	1.45						
95	110	15.31	3310	1.60						
111	94	13.08	3240	1.75	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	30	677
120	87	12.14	3200	1.85	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	33	678
139	75	10.49	3120	2.1	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	30	679
163	64	8.91	3020	2.5	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>90S4</b>	32	678
183	57	7.96	2950	2.7						
214	49	6.80	2850	3.1						
229	45	6.37	2800	3.1						
271	38	5.36	2690	3.6						
366	28	3.98	2490	4.3						
73	144	19.99	3360	0.90						
89	117	16.29	3290	1.10						
108	97	13.47	3210	1.35						
122	86	11.94	3150	1.50						
147	71	9.90	3210	1.55	<b>K</b>	<b>29</b>	<b>DRN</b>	<b>90S4</b>	25	669
159	66	9.17	2990	1.95	<b>KF</b>	<b>29</b>	<b>DRN</b>	<b>90S4</b>	26	673
171	61	8.53	3100	2.0	<b>KA</b>	<b>29</b>	<b>DRN</b>	<b>90S4</b>	24	675
195	53	7.48	2870	2.3	<b>KAF</b>	<b>29</b>	<b>DRN</b>	<b>90S4</b>	25	673
209	50	6.95	2940	2.2						
253	41	5.75	2800	2.7						
285	36	5.10	2710	3.0						
115	91	12.70	2760	0.85						
123	85	11.84	2740	0.90						
141	74	10.32*	2690	1.00						
180	58	8.09	2720	1.35	<b>K</b>	<b>19</b>	<b>DRN</b>	<b>90S4</b>	23	662
211	49	6.91	2620	1.60	<b>KF</b>	<b>19</b>	<b>DRN</b>	<b>90S4</b>	23	665
227	46	6.41*	2580	1.75	<b>KA</b>	<b>19</b>	<b>DRN</b>	<b>90S4</b>	22	667
263	39	5.54	2490	2.0	<b>KAF</b>	<b>19</b>	<b>DRN</b>	<b>90S4</b>	23	665
282	37	5.16	2440	2.1						
323	32	4.50*	2360	2.5						

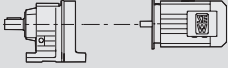

<b>P<sub>m</sub> = 1.5 kW</b>									<b>m</b>	
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>kg</b>	
0.18	68200	8126	190000	0.80						
0.20	63900	7343	190000	0.85						
0.22	58500	6747	190000	0.90						
0.24	51600	5991	190000	1.05	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>90L4</b>	1780	756
0.27	45800	5358	190000	1.15	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>90L4</b>	1710	756
0.30	40800	4817	190000	1.30						
0.33	37100	4370	190000	1.45						
0.40	31800	3609	190000	1.65						
0.48	26900	3062	190000	1.95						
0.58	21900	2519	190000	2.4						
0.64	19600	2268	190000	2.7	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>90L4</b>	1780	756
0.71	17600	2054	190000	3.0	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>90L4</b>	1710	756
0.80	15400	1821	190000	3.4						
0.91	13700	1605	190000	3.8						
1.2	10100	1196	190000	5.2						
1.4	8880	1046	190000	6.0						
0.27	46100	5355	150000	0.75						
0.31	40900	4788	150000	0.85	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>90L4</b>	1200	756
0.36	35300	4079	150000	1.00	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>90L4</b>	1160	756
0.43	29300	3376	150000	1.20						
0.53	23700	2755	150000	1.45						
0.67	19200	2182	150000	1.80						
0.86	14900	1704	150000	2.3						
1.0	12400	1408	150000	2.8						
1.1	11300	1296	150000	3.1	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>90L4</b>	1190	756
1.3	9360	1101	150000	3.7	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>90L4</b>	1160	756
1.6	8110	944	150000	4.3						
2.3	5370	632	150000	6.5						
3.0	4080	481	150000	8.6						
0.48	26500	3051	106700	0.75	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	800	756
0.56	22100	2610	109800	0.90	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	880	756
0.63	19700	2322	111300	1.00	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	770	756
					<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	830	756
0.88	14600	1659	113700	1.35						
1.1	11900	1365	114700	1.70						
1.2	10600	1229	115100	1.90	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	800	756
1.3	9460	1093	115400	2.1	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	880	756
1.6	8150	942	115700	2.5	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	760	756
1.7	7330	854	115900	2.7	<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>90L4</b>	820	756
2.6	4810	567	116300	4.2						
2.9	4280	504	116400	4.7						
2.7	4640	536	82400	2.8	<b>K</b>	<b>127R87</b>	<b>DRN</b>	<b>90L4</b>	510	756
3.5	3660	418	82600	3.5	<b>KF</b>	<b>127R87</b>	<b>DRN</b>	<b>90L4</b>	550	756
4.0	3220	367	82600	4.0	<b>KA</b>	<b>127R87</b>	<b>DRN</b>	<b>90L4</b>	480	756
					<b>KAF</b>	<b>127R87</b>	<b>DRN</b>	<b>90L4</b>	520	756
0.83	15700	1757	74400	0.80						
0.95	13800	1541	78300	0.95						
1.1	12000	1342	79700	1.10						
1.2	10500	1177	80400	1.25						
1.4	9200	1025	81000	1.40	<b>K</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	485	756
1.6	8050	899	81400	1.60	<b>KF</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	530	756
1.9	6970	790	81800	1.85	<b>KA</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	455	756
2.1	6280	704	82000	2.1	<b>KAF</b>	<b>127R77</b>	<b>DRN</b>	<b>90L4</b>	495	756
2.4	5420	610	82200	2.4						
2.7	4890	549	82300	2.7						
3.1	4210	477	82500	3.1						
3.5	3720	418	82500	3.5						

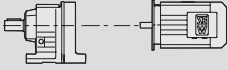



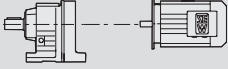

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.4	9170	1030	65000	0.85						
1.6	8020	904	65000	1.00						
1.8	7120	793	65000	1.10						
2.1	6230	696	65000	1.30	<b>K</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	325	756
2.4	5460	615	65000	1.45	<b>KF</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	335	756
2.8	4630	522	65000	1.75	<b>KA</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	300	756
3.2	4070	461	65000	1.95	<b>KAF</b>	<b>107R77</b>	<b>DRN</b>	<b>90L4</b>	320	756
3.6	3600	408	65000	2.2						
4.0	3240	364	65000	2.5						
4.6	2830	318	65000	2.8						
2.5	5220	573	39600	0.80						
2.9	4510	504	40000	0.95						
3.4	3900	437	40000	1.10						
3.8	3440	382	40000	1.25	<b>K</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	195	756
4.3	3040	342	40000	1.40	<b>KF</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	215	756
4.8	2770	305	40000	1.55	<b>KA</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	180	756
5.7	2340	258	40000	1.85	<b>KAF</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	205	756
6.3	2100	232	40000	2.0						
7.3	1800	199	40000	2.4						
4.4	2950	330	27000	0.90						
5.0	2650	294	27400	1.00	<b>K</b>	<b>87R57</b>	<b>DRN</b>	<b>90L4</b>	135	756
5.8	2270	250	27800	1.20	<b>KF</b>	<b>87R57</b>	<b>DRN</b>	<b>90L4</b>	145	756
6.2	2140	236	27900	1.25	<b>KA</b>	<b>87R57</b>	<b>DRN</b>	<b>90L4</b>	125	756
7.3	1820	201	28200	1.50	<b>KAF</b>	<b>87R57</b>	<b>DRN</b>	<b>90L4</b>	135	756
8.0	1650	183	28400	1.65						
5.5	2620	176.05*	40000	1.65	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>100L6</b>	185	724
6.3	2280	153.21*	40000	1.90	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>100L6</b>	205	725
6.8	2090	140.28	40000	2.1	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>100L6</b>	165	727
7.8	1840	123.93*	40000	2.3	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>100L6</b>	190	725
8.3	1720	176.05*	40000	2.5	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	170	724
9.5	1500	153.21*	40000	2.9	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	190	725
10	1370	140.28	40000	3.1	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	155	727
12	1210	123.93*	40000	3.5	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	180	725
6.5	2190	147.32*	27900	1.25	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>100L6</b>	125	717
7.6	1890	126.91*	28200	1.45	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>100L6</b>	135	718
8.3	1720	115.82	28300	1.55	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>100L6</b>	110	720
9.4	1530	102.71*	28400	1.75	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>100L6</b>	125	718
8.4	1700	174.19	28300	1.60						
8.9	1610	164.34*	28400	1.70						
9.9	1440	147.32*	28500	1.85	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	110	717
12	1240	126.91*	28600	2.2	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	120	718
13	1130	115.82	28700	2.4	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	100	720
14	1000	102.71*	28800	2.7	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	115	718
17	840	86.34	28900	3.2						
8.5	1690	113.56	14300	0.90	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>100L6</b>	88	710
9.9	1440	97.05	16100	1.05	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>100L6</b>	96	711
11	1320	88.97	16800	1.15	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>100L6</b>	80	713
12	1160	78.07	17600	1.35	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>100L6</b>	88	711
11	1320	135.28	16800	1.15	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	77	710
11	1260	128.52	17100	1.25	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	85	711
13	1110	113.56	17800	1.40	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	69	713
15	950	97.05	18500	1.65	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	77	711
16	870	88.97	18800	1.80						
19	765	78.07	19100	2.0						
20	725	73.99	19200	2.1						
23	630	64.75	19400	2.4	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	77	710
25	570	58.34	19600	2.7	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	85	711
29	500	51.18	19700	3.1	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	69	713
32	440	45.16	19800	3.5	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	77	711
36	390	40.04	19900	4.0						

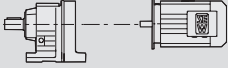

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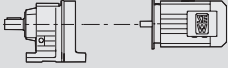

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
16	880	90.04	9710	0.95						
19	745	76.37	10900	1.10	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	52	703
21	675	68.95	11400	1.20	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	58	704
24	590	60.66	11900	1.40	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	49	706
26	560	57.28	12100	1.45	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	55	704
30	475	48.77	12500	1.70						
33	430	44.32	12700	1.90						
38	375	38.39	12900	2.1	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	52	703
41	345	35.62	13000	2.4	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	58	704
48	295	30.22	13000	2.8	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	49	706
54	265	27.28	13000	3.1	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	55	704
61	235	24.00	13000	3.4						
24	595	60.81*	7660	1.00	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	46	697
25	560	57.42*	7930	1.05	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	51	698
30	475	48.89	8520	1.25	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	44	699
33	435	44.43	8720	1.40	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	50	698
38	375	38.49	8980	1.60						
41	350	35.70	9090	1.70	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	46	697
48	295	30.28	9130	2.0	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	51	698
53	265	27.34	8950	2.2	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	44	699
61	235	24.05	8710	2.5	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	50	698
64	220	22.71	8600	2.7						
76	189	19.34	8300	3.0						
28	515	52.94	8280	0.95						
29	490	50.29*	8260	1.00						
33	435	44.44	8200	1.15						
38	370	37.98*	8080	1.35						
42	340	34.81	7990	1.45						
48	295	30.55*	7850	1.65	<b>K</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	51	693
50	280	28.95*	7780	1.75	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	53	694
58	245	25.34	7610	2.0	<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	48	695
64	220	22.83	7470	2.2	<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	53	694
73	196	20.03	7280	2.5						
83	173	17.67*	7090	2.9						
93	153	15.67	6900	3.2						
109	131	13.38	6650	3.6						
37	385	39.61	6080	1.05	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	40	687
41	345	35.39	6340	1.15	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	44	688
47	305	31.30	6290	1.30	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	39	689
					<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	42	688
50	285	29.32	6250	1.40						
56	250	25.91	6160	1.55						
67	210	21.81	6020	1.85						
75	191	19.58	5920	2.1	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	40	687
87	165	16.86	5760	2.3	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	44	688
92	155	15.86	5690	2.4	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	39	689
107	133	13.65	5520	2.7	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	42	688
120	119	12.19	5390	2.9						
124	115	11.77	5300	2.4						
40	355	36.22	5840	0.85						
48	300	30.72*	5830	1.00						
53	270	27.73	5800	1.10						
60	235	24.40*	5740	1.25						
63	225	23.04*	5700	1.35						
74	192	19.62	5600	1.55	<b>K</b>	<b>39</b>	<b>DRN</b>	<b>90L4</b>	39	683
82	174	17.83	5520	1.65	<b>KF</b>	<b>39</b>	<b>DRN</b>	<b>90L4</b>	41	684
95	151	15.44	5390	1.85	<b>KA</b>	<b>39</b>	<b>DRN</b>	<b>90L4</b>	38	685
109	131	13.44*	5260	2.0	<b>KAF</b>	<b>39</b>	<b>DRN</b>	<b>90L4</b>	40	684
115	124	12.73	5560	2.0						
121	118	12.09*	5490	2.1						
138	104	10.61	5310	2.7						
162	88	9.00*	5080	3.4						
180	79	8.12*	4950	3.8						

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
63	225	23.36	2880	0.85						
72	197	20.19	2920	0.95						
85	168	17.15	2950	1.05						
95	150	15.31	2940	1.15						
112	128	13.08	2920	1.30						
120	118	12.14	2910	1.35						
139	102	10.49	2870	1.55	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>90L4</b>	33	677
164	87	8.91	2810	1.85	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>90L4</b>	36	678
184	78	7.96	2760	2.0	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>90L4</b>	33	679
215	66	6.80	2680	2.2	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>90L4</b>	35	678
229	62	6.37	2650	2.3						
272	52	5.36	2560	2.7						
367	39	3.98	2400	3.2						
90	159	16.29	2910	0.80						
108	132	13.47	2890	1.00						
122	117	11.94	2860	1.10						
159	89	9.17	2780	1.45	<b>K</b>	<b>29</b>	<b>DRN</b>	<b>90L4</b>	28	669
171	83	8.53	2940	1.45	<b>KF</b>	<b>29</b>	<b>DRN</b>	<b>90L4</b>	29	673
195	73	7.48	2690	1.70	<b>KA</b>	<b>29</b>	<b>DRN</b>	<b>90L4</b>	27	675
210	68	6.95	2820	1.65	<b>KAF</b>	<b>29</b>	<b>DRN</b>	<b>90L4</b>	28	673
254	56	5.75	2690	2.0						
287	49	5.10	2620	2.2						
373	38	3.92	2440	3.3						
458	31	3.19	2310	3.5						

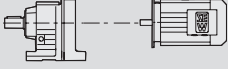

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.24	77500	5991	160700	0.70						
0.27	68900	5358	190000	0.75	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>100LS4</b>	1780	756
0.30	61700	4817	190000	0.85	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>100LS4</b>	1720	756
0.33	56000	4370	190000	0.95						
0.51	35200	2818	190000	1.50						
0.40	47600	3609	190000	1.10						
0.47	40300	3062	190000	1.30						
0.58	32900	2519	190000	1.60	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>100LS4</b>	1780	756
0.64	29500	2268	190000	1.80	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>100LS4</b>	1710	756
0.71	26600	2054	190000	2.0						
0.80	23400	1821	190000	2.3						
0.90	20800	1605	190000	2.5						
0.43	43900	3376	150000	0.80	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>100LS4</b>	1200	756
0.53	35600	2755	150000	1.00	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>100LS4</b>	1160	756
0.64	28600	2263	150000	1.20						
0.66	28800	2182	150000	1.20						
0.85	22400	1704	150000	1.55						
1.0	18500	1408	150000	1.90	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>100LS4</b>	1200	756
1.1	17000	1296	150000	2.0	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>100LS4</b>	1160	756
1.3	14100	1101	150000	2.5						
1.5	12200	944	150000	2.9						
0.62	29700	2322	104000	0.65	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	810	756
0.71	25600	2029	107400	0.80	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	890	756
0.80	22800	1805	109400	0.90	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	770	756
					<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	830	756
0.87	21800	1659	110000	0.90						
1.1	17800	1365	112200	1.10	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	800	756
1.2	16000	1229	113100	1.25	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	880	756
1.3	14200	1093	113900	1.40	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	770	756
1.5	12200	942	114600	1.65	<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>100LS4</b>	830	756
1.7	11000	854	115000	1.80						
1.9	9570	756	115400	2.1						
2.7	6980	536	81800	1.85	<b>K</b>	<b>127R87</b>	<b>DRN</b>	<b>100LS4</b>	510	756
3.1	6110	473	82000	2.1	<b>KF</b>	<b>127R87</b>	<b>DRN</b>	<b>100LS4</b>	550	756
3.5	5500	418	82200	2.4	<b>KA</b>	<b>127R87</b>	<b>DRN</b>	<b>100LS4</b>	480	756
4.0	4830	367	82300	2.7	<b>KAF</b>	<b>127R87</b>	<b>DRN</b>	<b>100LS4</b>	520	756
4.4	4320	330	82400	3.0						

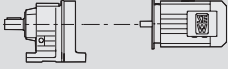

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.4	13600	1025	78600	0.95						
1.6	11900	899	79700	1.10						
1.8	10400	790	80500	1.25	<b>K</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	490	756
2.1	9360	704	80900	1.40	<b>KF</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	530	756
2.4	8090	610	81400	1.60	<b>KA</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	460	756
2.6	7290	549	81700	1.80	<b>KAF</b>	<b>127R77</b>	<b>DRN</b>	<b>100LS4</b>	500	756
3.0	6300	477	82000	2.1						
3.5	5550	418	82200	2.3						
2.4	8150	615	65000	1.00						
2.8	6910	522	65000	1.15						
3.1	6080	461	65000	1.30	<b>K</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	330	756
3.5	5380	408	65000	1.50	<b>KF</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	340	756
4.0	4830	364	65000	1.65	<b>KA</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	300	756
4.6	4220	318	65000	1.90	<b>KAF</b>	<b>107R77</b>	<b>DRN</b>	<b>100LS4</b>	325	756
5.1	3800	286	65000	2.1						
5.8	3330	251	65000	2.4						
3.8	5110	382	39800	0.85						
4.2	4540	342	40000	0.95	<b>K</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	200	756
4.8	4120	305	40000	1.05	<b>KF</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	220	756
5.6	3470	258	40000	1.25	<b>KA</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	180	756
6.2	3130	232	40000	1.35	<b>KAF</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	205	756
7.3	2680	199	40000	1.60						
6.3	3300	153.21*	40000	1.30	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	190	724
6.9	3020	140.28	40000	1.40	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	210	725
7.8	2670	123.93*	40000	1.60	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	175	727
					<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	200	725
9.3	2260	105.13	40000	1.90	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	190	724
					<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	210	725
					<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	175	727
					<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	200	725
8.2	2550	176.05*	40000	1.70	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	175	724
9.5	2210	153.21*	40000	1.95	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	195	725
10	2030	140.28	40000	2.1	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	160	727
12	1790	123.93*	40000	2.4	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	185	725
14	1520	105.13	40000	2.8	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	175	724
15	1400	96.80	40000	3.1	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	195	725
					<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	160	727
					<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	185	725
9.8	2130	147.32*	27900	1.25	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	115	717
11	1830	126.91*	28200	1.45	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	125	718
13	1670	115.82	28300	1.60	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	105	720
					<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	120	718
14	1480	102.71*	28500	1.80	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	115	717
17	1250	86.34	28600	2.2	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	125	718
18	1140	79.34	28700	2.4	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	105	720
21	1020	70.46	28800	2.6	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	120	718
23	910	63.00*	28800	3.0						
13	1640	113.56	14700	0.95						
15	1400	97.05	16300	1.10	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	81	710
16	1280	88.97	17000	1.20	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	89	711
19	1130	78.07	17800	1.35	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	73	713
20	1070	73.99	18000	1.45	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	81	711
22	930	64.75	18500	1.65						
25	840	58.34	18800	1.85						
28	740	51.18	19200	2.1						
32	650	45.16	19400	2.4	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	81	710
36	580	40.04	19500	2.7	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	89	711
41	505	35.20	19700	3.0	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	73	713
47	445	30.89	19800	3.5	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	81	711
50	420	29.27	19800	3.7						
57	370	25.62	19900	4.2						

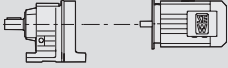

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
24	870	60.66	9750	0.95						
25	820	57.28	10200	1.00						
30	705	48.77	11200	1.15	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	56	703
33	640	44.32	11600	1.30	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	61	704
38	555	38.39	12100	1.45	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	53	706
41	515	35.62	12300	1.60	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	59	704
48	435	30.22	12700	1.85						
53	395	27.28	12800	2.1						
60	345	24.00	13000	2.3						
64	325	22.66	13000	2.4						
75	275	19.30	13000	2.7						
83	250	17.54	13000	2.9						
95	220	15.19	13000	3.2	<b>K</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	56	703
110	191	13.22	13000	3.5	<b>KF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	61	704
116	180	12.48	13000	2.9	<b>KA</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	53	706
136	153	10.63	13000	3.2	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	59	704
150	139	9.66	13000	3.4						
173	121	8.37	13000	3.6						
199	105	7.28	12700	4.0						
279	75	5.20	11600	4.6						
33	640	44.43	7040	0.95	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	50	697
38	555	38.49	7970	1.10	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	55	698
41	515	35.70	8290	1.15	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	48	699
48	435	30.28	8230	1.35	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	54	698
53	395	27.34	8140	1.50						
60	345	24.05	8000	1.70						
64	325	22.71	7930	1.80						
75	280	19.34	7730	2.0	<b>K</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	50	697
83	250	17.57	7590	2.2	<b>KF</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	55	698
95	220	15.22	7380	2.4	<b>KA</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	48	699
109	191	13.25	7170	2.7	<b>KAF</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	54	698
122	172	11.92	6850	2.4						
129	163	11.26	6770	2.5						
38	550	37.98*	6820	0.90						
42	500	34.81	6840	1.00						
47	440	30.55*	6840	1.15						
50	415	28.95*	6830	1.20						
57	365	25.34	6780	1.35						
64	330	22.83	6720	1.50	<b>K</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	55	693
72	290	20.03	6620	1.70	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	57	694
82	255	17.67*	6510	1.95	<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	53	695
93	225	15.67	6400	2.2	<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	58	694
108	193	13.38	6220	2.4						
128	164	11.37*	6450	3.0						
139	150	10.42	6310	3.2						
159	132	9.14*	6090	3.8						
56	375	25.91	5260	1.05	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	44	687
66	315	21.81	5260	1.25	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	47	688
74	280	19.58	5240	1.40	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	43	689
					<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	46	688
86	240	16.86	5180	1.55						
91	225	15.86	5140	1.65						
106	197	13.65	5050	1.80	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	44	687
119	176	12.19	4970	2.0	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	47	688
123	170	11.77	4870	1.65	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	43	689
137	153	10.56	4790	1.85	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>100LS4</b>	46	688
159	131	9.10	4660	2.1						

<b>P<sub>m</sub> = 2.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
59	350	24.40*	4770	0.85						
63	330	23.04*	4800	0.90						
74	280	19.62	4820	1.05						
81	255	17.83	4820	1.10						
94	220	15.44	4790	1.25						
108	194	13.44*	4730	1.40						
137	153	10.61	5040	1.85	K	39	DRN	100LS4	43	683
161	130	9.00*	4860	2.3	KF	39	DRN	100LS4	45	684
178	117	8.12*	4740	2.5	KA	39	DRN	100LS4	42	685
203	103	7.15*	4600	2.9	KAF	39	DRN	100LS4	44	684
215	97	6.75*	4530	3.1						
252	83	5.75	4350	3.3						
278	75	5.22	4240	3.4						
320	65	4.52	4080	3.7						
368	57	3.94*	3930	3.8						
111	189	13.08	2380	0.85						
138	151	10.49	2430	1.05						
163	129	8.91	2440	1.25	K	37	DRN	100LS4	37	677
182	115	7.96	2430	1.35	KF	37	DRN	100LS4	40	678
213	98	6.80	2400	1.50	KA	37	DRN	100LS4	37	679
228	92	6.37	2390	1.55	KAF	37	DRN	100LS4	39	678
270	77	5.36	2340	1.80						
364	57	3.98	2240	2.2						

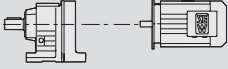

  

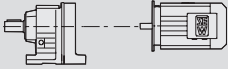

<b>P<sub>m</sub> = 3.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.52	48700	2818	190000	1.10	K	187R97	DRN	100L4	1790	756
					KH	187R97	DRN	100L4	1720	756
0.40	65100	3609	190000	0.80						
0.48	55100	3062	190000	0.95						
0.58	45100	2519	190000	1.15						
0.64	40500	2268	190000	1.30						
0.71	36500	2054	190000	1.45	K	187R97	DRN	100L4	1790	756
0.80	32200	1821	190000	1.65	KH	187R97	DRN	100L4	1720	756
0.91	28500	1605	190000	1.85						
1.0	24400	1395	190000	2.2						
1.2	21100	1196	190000	2.5						
0.64	39400	2263	150000	0.90	K	167R97	DRN	100L4	1210	756
					KH	167R97	DRN	100L4	1170	756
0.67	39300	2182	150000	0.90						
0.85	30600	1704	150000	1.15						
1.0	25300	1408	150000	1.40						
1.1	23300	1296	150000	1.50	K	167R97	DRN	100L4	1210	756
1.3	19500	1101	150000	1.80	KH	167R97	DRN	100L4	1170	756
1.5	16800	944	150000	2.1						
1.7	14700	843	150000	2.4						
1.9	13300	757	150000	2.6						
1.1	24400	1365	108200	0.80						
1.2	21900	1229	109900	0.90						
1.3	19500	1093	111400	1.00	K	157R97	DRN	100L4	810	756
1.5	16800	942	112700	1.20	KF	157R97	DRN	100L4	890	756
1.7	15200	854	113500	1.30	KA	157R97	DRN	100L4	780	756
1.9	13200	756	114200	1.50	KAF	157R97	DRN	100L4	830	756
2.6	10000	567	115300	2.0						
2.9	8930	504	115600	2.2						
2.7	9580	536	80900	1.35						
3.1	8400	473	81300	1.55	K	127R87	DRN	100L4	520	756
3.5	7550	418	81600	1.70	KF	127R87	DRN	100L4	560	756
4.0	6610	367	81900	1.95	KA	127R87	DRN	100L4	490	756
4.4	5920	330	82100	2.2	KAF	127R87	DRN	100L4	530	756
5.1	5080	287	82300	2.6						

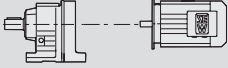

<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.8	14200	790	77400	0.90						
2.1	12700	704	79300	1.00	<b>K</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	495	756
2.4	11000	610	80200	1.20	<b>KF</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	540	756
2.6	9950	549	80700	1.30	<b>KA</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	470	756
3.0	8610	477	81200	1.50	<b>KAF</b>	<b>127R77</b>	<b>DRN</b>	<b>100L4</b>	510	756
3.5	7580	418	81600	1.70						
3.2	8310	461	65000	0.95						
3.6	7360	408	65000	1.10						
4.0	6590	364	65000	1.20						
4.6	5760	318	65000	1.40	<b>K</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	335	756
5.1	5190	286	65000	1.55	<b>KF</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	350	756
5.8	4540	251	65000	1.75	<b>KA</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	310	756
6.6	4000	222	65000	2.0	<b>KAF</b>	<b>107R77</b>	<b>DRN</b>	<b>100L4</b>	335	756
7.4	3540	196	65000	2.3						
8.4	3170	174	65000	2.3						
9.4	2800	154	65000	2.6						
10	2540	140	65000	2.8						
5.7	4730	258	40000	0.90	<b>K</b>	<b>97R57</b>	<b>DRN</b>	<b>100L4</b>	205	756
6.3	4260	232	40000	1.00	<b>KF</b>	<b>97R57</b>	<b>DRN</b>	<b>100L4</b>	225	756
7.3	3660	199	40000	1.15	<b>KA</b>	<b>97R57</b>	<b>DRN</b>	<b>100L4</b>	190	756
					<b>KAF</b>	<b>97R57</b>	<b>DRN</b>	<b>100L4</b>	215	756
6.8	4210	143.47*	65000	1.90	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>132S6</b>	315	731
8.0	3570	121.46	65000	2.2	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>132S6</b>	330	732
8.7	3300	112.41*	65000	2.4	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>132S6</b>	290	734
9.7	2960	100.75	65000	2.7	<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>132S6</b>	315	732
10	2820	143.47*	65000	2.8	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>100L4</b>	300	731
12	2380	121.46	65000	3.4	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>100L4</b>	310	732
					<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>100L4</b>	270	734
					<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>100L4</b>	295	732
7.9	3640	123.93*	40000	1.20	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>132S6</b>	205	724
					<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>132S6</b>	225	725
					<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>132S6</b>	185	727
					<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>132S6</b>	210	725
9.3	3090	105.13	40000	1.40	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>132S6</b>	205	724
10	2840	96.80	40000	1.50	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>132S6</b>	225	725
11	2540	86.52	40000	1.70	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>132S6</b>	185	727
					<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>132S6</b>	210	725
8.3	3460	176.05*	40000	1.25	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	185	724
9.5	3010	153.21*	40000	1.45	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	205	725
10	2760	140.28	40000	1.55	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	165	727
12	2430	123.93*	40000	1.75	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	190	725
14	2060	105.13	40000	2.1						
15	1900	96.80	40000	2.3	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	185	724
17	1700	86.52	40000	2.5	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	205	725
19	1530	77.89*	40000	2.8	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	165	727
21	1380	70.54	40000	3.1	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	190	725
23	1230	62.55	40000	3.5						
26	1110	56.55	40000	3.9						
9.9	2890	147.32*	27000	0.95	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	125	717
11	2490	126.91*	27500	1.10	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	135	718
13	2270	115.82	27800	1.20	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	110	720
14	2020	102.71*	28000	1.35	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	125	718
17	1690	86.34	28300	1.60						
18	1560	79.34	28400	1.75						
21	1380	70.46	28600	1.95	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	125	717
23	1230	63.00*	28600	2.2	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	135	718
26	1110	56.64	28700	2.4	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	110	720
30	960	49.16	28800	2.8	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	125	718
33	860	44.02	28800	3.0						
40	715	36.52*	28200	3.5						

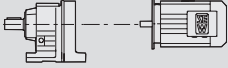

<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
16	1750	88.97	13800	0.90						
19	1530	78.07	15500	1.00	K	77	DRN	100L4	88	710
20	1450	73.99	16000	1.05	KF	77	DRN	100L4	96	711
22	1270	64.75	17100	1.20	KA	77	DRN	100L4	80	713
25	1140	58.34	17700	1.35	KAF	77	DRN	100L4	88	711
28	1000	51.18	18300	1.55						
32	880	45.16	18700	1.75	K	77	DRN	100L4	88	710
36	785	40.04	19000	1.95	KF	77	DRN	100L4	96	711
41	690	35.20	19300	2.2	KA	77	DRN	100L4	80	713
47	605	30.89	19500	2.5	KAF	77	DRN	100L4	88	711
33	870	44.32	9820	0.95						
38	755	38.39	10900	1.05	K	67	DRN	100L4	63	703
41	700	35.62	11300	1.15	KF	67	DRN	100L4	69	704
48	590	30.22	11900	1.40	KA	67	DRN	100L4	60	706
53	535	27.28	12200	1.55	KAF	67	DRN	100L4	66	704
61	470	24.00	12500	1.70						
64	445	22.66	12600	1.75						
75	375	19.30	12900	2.0						
83	340	17.54	13000	2.1	K	67	DRN	100L4	63	703
96	295	15.19	13000	2.3	KF	67	DRN	100L4	69	704
110	260	13.22	13000	2.6	KA	67	DRN	100L4	60	706
117	245	12.48	13000	2.2	KAF	67	DRN	100L4	66	704
137	205	10.63	13000	2.4						
151	190	9.66	13000	2.5						
48	595	30.28	7190	1.00	K	57	DRN	100L4	57	697
53	535	27.34	7190	1.10	KF	57	DRN	100L4	62	698
61	470	24.05	7170	1.25	KA	57	DRN	100L4	55	699
					KAF	57	DRN	100L4	61	698
64	445	22.71	7150	1.35						
75	380	19.34	7060	1.50						
83	345	17.57	6980	1.60						
96	295	15.22	6860	1.80						
110	260	13.25	6710	1.95	K	57	DRN	100L4	57	697
122	230	11.92	6380	1.75	KF	57	DRN	100L4	62	698
129	220	11.26	6330	1.85	KA	57	DRN	100L4	55	699
152	188	9.59	6160	2.1	KAF	57	DRN	100L4	61	698
167	171	8.71	6040	2.3						
193	148	7.55	5870	2.5						
222	129	6.57	5700	2.7						
310	92	4.69	5270	3.2						
48	600	30.55*	5690	0.85						
50	565	28.95*	5740	0.90						
57	495	25.34	5820	1.00						
64	445	22.83	5860	1.10						
73	390	20.03	5860	1.25						
82	345	17.67*	5840	1.45	K	49	DRN	100L4	63	693
93	305	15.67	5800	1.60	KF	49	DRN	100L4	64	694
109	260	13.38	5710	1.80	KA	49	DRN	100L4	60	695
128	220	11.37*	6160	2.2	KAF	49	DRN	100L4	65	694
140	200	10.42	6050	2.3						
159	179	9.14*	5860	2.8						
168	170	8.66*	5790	2.9						
192	149	7.58	5600	3.4						
213	134	6.83	5460	3.7						
74	385	19.58	4450	1.05	K	47	DRN	100L4	51	687
86	330	16.86	4500	1.15	KF	47	DRN	100L4	55	688
92	310	15.86	4510	1.20	KA	47	DRN	100L4	50	689
					KAF	47	DRN	100L4	53	688

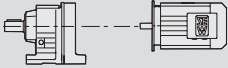

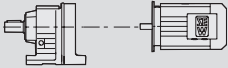



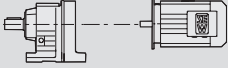

<b>P<sub>m</sub> = 3.0 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
107	265	13.65	4500	1.35						
119	235	12.19	4480	1.45						
124	230	11.77	4360	1.20						
138	205	10.56	4340	1.35	<b>K</b>	<b>47</b>	<b>DRN</b>	<b>100L4</b>	51	687
160	179	9.10	4280	1.55	<b>KF</b>	<b>47</b>	<b>DRN</b>	<b>100L4</b>	55	688
170	168	8.56	4250	1.60	<b>KA</b>	<b>47</b>	<b>DRN</b>	<b>100L4</b>	50	689
198	144	7.36	4160	1.75	<b>KAF</b>	<b>47</b>	<b>DRN</b>	<b>100L4</b>	53	688
221	129	6.58	4090	1.85						
250	114	5.81	4000	2.0						
314	91	4.64	3830	2.2						
82	350	17.83	4010	0.85						
94	300	15.44	4090	0.90						
108	260	13.44*	4120	1.00						
137	205	10.61	4720	1.35						
162	177	9.00*	4580	1.70	<b>K</b>	<b>39</b>	<b>DRN</b>	<b>100L4</b>	50	683
179	159	8.12*	4490	1.90	<b>KF</b>	<b>39</b>	<b>DRN</b>	<b>100L4</b>	52	684
204	140	7.15*	4380	2.1	<b>KA</b>	<b>39</b>	<b>DRN</b>	<b>100L4</b>	49	685
216	132	6.75*	4320	2.3	<b>KAF</b>	<b>39</b>	<b>DRN</b>	<b>100L4</b>	51	684
253	113	5.75	4170	2.4						
279	102	5.22	4080	2.5						
322	89	4.52	3940	2.7						
370	77	3.94*	3800	2.8						
518	55	2.81*	3480	3.1						
163	175	8.91	2020	0.90	<b>K</b>	<b>37</b>	<b>DRN</b>	<b>100L4</b>	45	677
183	156	7.96	2050	1.00	<b>KF</b>	<b>37</b>	<b>DRN</b>	<b>100L4</b>	47	678
214	133	6.80	2080	1.10	<b>KA</b>	<b>37</b>	<b>DRN</b>	<b>100L4</b>	44	679
229	125	6.37	2090	1.15	<b>KAF</b>	<b>37</b>	<b>DRN</b>	<b>100L4</b>	46	678
271	105	5.36	2090	1.35						
366	78	3.98	2040	1.60						

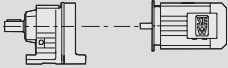

<b>P<sub>m</sub> = 4.0 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
1.8	19400	835	190000	2.7	<b>K</b>	<b>187R107</b>	<b>DRN</b>	<b>112M4</b>	1840	756
2.8	12200	520	190000	4.3	<b>KH</b>	<b>187R107</b>	<b>DRN</b>	<b>112M4</b>	1780	756
0.52	65300	2818	190000	0.80	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>112M4</b>	1800	756
					<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>112M4</b>	1730	756
0.17	196000	16978	-	0.25						
0.21	163300	14272	-	0.30						
0.22	149400	13116	-	0.35						
0.25	131700	11647	-	0.40						
0.28	116800	10413	-	0.45						
0.31	104100	9363	-	0.50						
0.36	89300	8126	100500	0.60	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>112M2</b>	1800	756
0.40	84000	7343	129700	0.65	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>112M2</b>	1730	756
0.44	76800	6747	163500	0.70						
0.49	67700	5991	190000	0.80						
0.55	60100	5358	190000	0.90						
0.61	53500	4817	190000	1.00						
0.67	48600	4370	190000	1.10						
0.58	60200	2519	190000	0.90						
0.65	54100	2268	190000	1.00						
0.71	48800	2054	190000	1.10						
0.80	43100	1821	190000	1.25						
0.91	38200	1605	190000	1.40	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>112M4</b>	1800	756
1.1	32700	1395	190000	1.60	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>112M4</b>	1730	756
1.2	28300	1196	190000	1.85						
1.4	24700	1046	190000	2.1						
1.6	22300	945	190000	2.4						

<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
0.82	42100	3609	190000	1.25						
0.96	35400	3062	190000	1.50						
1.2	28800	2519	190000	1.85						
1.3	25700	2268	190000	2.1						
1.4	23100	2054	190000	2.3	K	187R97	DRN	112M2	1800	756
1.6	20200	1821	190000	2.6	KH	187R97	DRN	112M2	1730	756
1.8	18000	1605	190000	2.9						
2.5	13300	1196	190000	4.0						
2.8	11600	1046	190000	4.6						
0.25	134300	11573	-	0.25						
0.29	118500	10264	-	0.30						
0.34	98700	8628	-	0.35						
0.45	75100	6562	-	0.45						
0.55	60500	5355	-	0.60	K	167R97	DRN	112M2	1220	756
0.62	53700	4788	111200	0.65	KH	167R97	DRN	112M2	1180	756
0.72	46400	4079	150000	0.75						
0.87	38600	3376	150000	0.90						
1.1	31100	2755	150000	1.10						
0.86	40800	1704	150000	0.85						
1.0	33800	1408	150000	1.05						
1.1	31000	1296	150000	1.15						
1.3	26100	1101	150000	1.35	K	167R97	DRN	112M4	1210	756
1.6	22400	944	150000	1.55	KH	167R97	DRN	112M4	1180	756
1.7	19800	843	150000	1.75						
1.9	17800	757	150000	1.95						
2.3	14900	632	150000	2.3						
1.4	25400	2182	150000	1.35						
1.7	19600	1704	150000	1.80						
2.1	16300	1408	150000	2.1						
2.3	14900	1296	150000	2.3	K	167R97	DRN	112M2	1210	756
2.7	12200	1101	150000	2.9	KH	167R97	DRN	112M2	1180	756
3.1	10600	944	150000	3.3						
4.7	7030	632	150000	5.0						
6.1	5340	481	150000	6.5						
0.50	67800	5931	-	0.30						
0.58	56400	5074	-	0.35						
0.65	50200	4514	-	0.40	K	157R97	DRN	112M2	820	756
0.74	45500	3979	-	0.45	KF	157R97	DRN	112M2	900	756
0.84	39400	3516	70800	0.50	KA	157R97	DRN	112M2	790	756
0.97	34900	3051	98800	0.55	KAF	157R97	DRN	112M2	850	756
1.1	29000	2610	104600	0.70						
1.3	25800	2322	107200	0.75						
1.3	26000	1093	107000	0.75						
1.6	22400	942	109600	0.90						
1.7	20300	854	110900	1.00	K	157R97	DRN	112M4	820	756
1.9	17700	756	112300	1.15	KF	157R97	DRN	112M4	900	756
2.6	13400	567	114200	1.50	KA	157R97	DRN	112M4	780	756
2.9	11900	504	114700	1.65	KAF	157R97	DRN	112M4	840	756
3.4	10100	434	115200	1.95						
1.8	19200	1659	111500	1.05						
2.2	15600	1365	113300	1.30						
2.4	13900	1229	114000	1.45	K	157R97	DRN	112M2	820	756
2.7	12400	1093	114500	1.60	KF	157R97	DRN	112M2	900	756
3.1	10700	942	115100	1.85	KA	157R97	DRN	112M2	780	756
3.5	9610	854	115400	2.1	KAF	157R97	DRN	112M2	840	756
5.2	6300	567	116100	3.2						
5.8	5600	504	116200	3.6						
2.7	12700	536	79300	1.00						
3.1	11200	473	80100	1.15	K	127R87	DRN	112M4	530	756
3.5	10000	418	80600	1.30	KF	127R87	DRN	112M4	570	756
4.0	8810	367	81200	1.50	KA	127R87	DRN	112M4	500	756
4.4	7900	330	81500	1.65	KAF	127R87	DRN	112M4	540	756
5.1	6800	287	81800	1.90						
5.8	6010	253	82100	2.2						

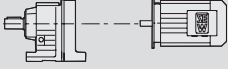

<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.4	14700	610	76600	0.90	K	127R77	DRN	112M4	510	756
2.7	13200	549	79000	1.00	KF	127R77	DRN	112M4	550	756
3.1	11400	477	80000	1.15	KA	127R77	DRN	112M4	480	756
3.5	10000	418	80600	1.30	KAF	127R77	DRN	112M4	520	756
4.0	8770	364	65000	0.90						
4.6	7670	318	65000	1.05						
5.1	6900	286	65000	1.15						
5.8	6050	251	65000	1.30	K	107R77	DRN	112M4	345	756
6.6	5330	222	65000	1.50	KF	107R77	DRN	112M4	360	756
7.5	4720	196	65000	1.70	KA	107R77	DRN	112M4	320	756
8.4	4220	174	65000	1.70	KAF	107R77	DRN	112M4	340	756
9.5	3730	154	65000	1.95						
10	3390	140	65000	2.1						
6.6	5760	146.07	82100	2.3	K	127	DRN	132S6	480	738
7.1	5370	136.14	82200	2.4	KF	127	DRN	132S6	520	739
7.9	4830	122.48	82300	2.7	KA	127	DRN	132S6	450	741
8.8	4340	110.18	82400	3.0	KAF	127	DRN	132S6	485	739
6.8	5660	143.47*	65000	1.40	K	107	DRN	132S6	315	731
8.0	4790	121.46	65000	1.65	KF	107	DRN	132S6	330	732
8.6	4430	112.41*	65000	1.80	KA	107	DRN	132S6	290	734
9.6	3970	100.75	65000	2.0	KAF	107	DRN	132S6	315	732
11	3580	90.96*	65000	2.2						
10	3740	143.47*	65000	2.1						
12	3160	121.46	65000	2.5	K	107	DRN	112M4	305	731
13	2930	112.41*	65000	2.7	KF	107	DRN	112M4	320	732
15	2620	100.75	65000	3.0	KA	107	DRN	112M4	280	734
16	2370	90.96*	65000	3.4	KAF	107	DRN	112M4	305	732
18	2150	82.61	65000	3.7						
20	1910	73.30	65000	4.2						
9.6	3990	153.21*	40000	1.10	K	97	DRN	112M4	190	724
10	3660	140.28	40000	1.15	KF	97	DRN	112M4	210	725
12	3230	123.93*	40000	1.35	KA	97	DRN	112M4	175	727
					KAF	97	DRN	112M4	200	725
14	2740	105.13	40000	1.55	K	97	DRN	112M4	190	724
15	2520	96.80	40000	1.70	KF	97	DRN	112M4	210	725
17	2250	86.52	40000	1.90	KA	97	DRN	112M4	175	727
19	2030	77.89*	40000	2.1	KAF	97	DRN	112M4	200	725
21	1840	70.54	40000	2.3						
13	3020	115.82	26900	0.90	K	87	DRN	112M4	135	717
14	2670	102.71*	27300	1.00	KF	87	DRN	112M4	140	718
17	2250	86.34	27800	1.20	KA	87	DRN	112M4	120	720
18	2070	79.34	28000	1.30	KAF	87	DRN	112M4	135	718
21	1830	70.46	28200	1.45						
23	1640	63.00*	28400	1.65	K	87	DRN	112M4	135	717
26	1470	56.64	28500	1.85	KF	87	DRN	112M4	140	718
30	1280	49.16	28600	2.1	KA	87	DRN	112M4	120	720
33	1140	44.02	28200	2.3	KAF	87	DRN	112M4	135	718
40	950	36.52*	27200	2.6						
23	1680	64.75	14300	0.90						
25	1520	58.34	15600	1.00	K	77	DRN	112M4	97	710
29	1330	51.18	16700	1.15	KF	77	DRN	112M4	105	711
32	1170	45.16	17500	1.30	KA	77	DRN	112M4	90	713
37	1040	40.04	18100	1.50	KAF	77	DRN	112M4	98	711
38	1000	38.39	18300	1.50						
42	910	35.20	18600	1.70						
47	800	30.89	19000	1.90	K	77	DRN	112M4	97	710
50	760	29.27	19100	2.0	KF	77	DRN	112M4	105	711
57	665	25.62	19300	2.3	KA	77	DRN	112M4	90	713
63	600	23.08	19500	2.6	KAF	77	DRN	112M4	98	711
72	525	20.25	19600	2.8						
48	785	30.22	10600	1.05	K	67	DRN	112M4	72	703
54	710	27.28	11200	1.15	KF	67	DRN	112M4	78	704
61	625	24.00	11700	1.30	KA	67	DRN	112M4	70	706
65	590	22.66	11900	1.30	KAF	67	DRN	112M4	76	704

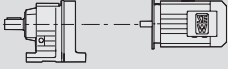

<b>P<sub>m</sub> = 4.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
76	500	19.30	12400	1.50						
84	455	17.54	12600	1.60						
96	395	15.19	12800	1.75						
111	340	13.22	13000	1.95	K	67	DRN	112M4	72	703
117	325	12.48	13000	1.65	KF	67	DRN	112M4	78	704
138	275	10.63	13000	1.80	KA	67	DRN	112M4	70	706
152	250	9.66	12800	1.90	KAF	67	DRN	112M4	76	704
175	215	8.37	12400	2.0						
201	189	7.28	12000	2.2						
282	135	5.20	11100	2.6						
61	625	24.05	6140	0.95						
64	590	22.71	6180	1.00						
76	500	19.34	6230	1.15						
83	455	17.57	6230	1.20						
96	395	15.22	6200	1.35	K	57	DRN	112M4	67	697
110	345	13.25	6140	1.50	KF	57	DRN	112M4	71	698
123	310	11.92	5800	1.35	KA	57	DRN	112M4	65	699
130	290	11.26	5780	1.40	KAF	57	DRN	112M4	70	698
153	250	9.59	5680	1.60						
168	225	8.71	5620	1.70						
194	196	7.55	5500	1.85						
223	171	6.57	5380	2.0						
312	122	4.69	5030	2.5						
64	595	22.83	4780	0.85						
73	520	20.03	4920	0.95						
83	460	17.67*	5010	1.10						
93	405	15.67	5060	1.20						
109	345	13.38	5080	1.35						
129	295	11.37*	5810	1.65	K	49	DRN	112M4	72	693
141	270	10.42	5720	1.75	KF	49	DRN	112M4	73	694
160	235	9.14*	5580	2.1	KA	49	DRN	112M4	69	695
169	225	8.66*	5520	2.2	KAF	49	DRN	112M4	74	694
193	197	7.58	5360	2.5						
214	178	6.83	5240	2.8						
244	156	5.99	5080	3.2						
277	137	5.29*	4930	3.5						
312	122	4.69*	4780	3.8						
163	230	9.00*	4240	1.30						
180	210	8.12*	4180	1.40						
205	186	7.15*	4100	1.60						
217	176	6.75*	4060	1.70	K	39	DRN	112M4	60	683
255	149	5.75	3950	1.85	KF	39	DRN	112M4	61	684
280	136	5.22	3880	1.90	KA	39	DRN	112M4	59	685
324	118	4.52	3760	2.0	KAF	39	DRN	112M4	60	684
372	102	3.94*	3650	2.1						
521	73	2.81*	3370	2.3						
<b>P<sub>m</sub> = 5.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.71	67700	2054	190000	0.80						
0.80	59900	1821	190000	0.90						
0.91	52900	1605	190000	1.00						
1.1	45600	1395	190000	1.15						
1.2	39300	1196	190000	1.35	K	187R97	DRN	132S4	1810	756
1.4	34400	1046	190000	1.55	KH	187R97	DRN	132S4	1740	756
1.6	31000	945	190000	1.70						
2.0	24200	738	190000	2.2						
2.4	20300	621	190000	2.6						

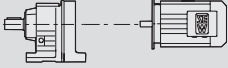

<b>P<sub>m</sub> = 5.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.0	46700	1408	150000	0.75						
1.1	43000	1296	150000	0.80						
1.3	36200	1101	150000	0.95						
1.6	31100	944	150000	1.10						
1.7	27500	843	150000	1.25	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>132S4</b>	1230	756
1.9	24800	757	150000	1.40	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>132S4</b>	1190	756
2.3	20800	632	150000	1.70						
2.6	18200	561	150000	1.90						
3.0	15800	481	150000	2.2						
3.5	13700	423	150000	2.5						
1.9	24700	756	108100	0.80						
2.2	21500	661	110200	0.95	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>132S4</b>	830	756
2.6	18600	567	111800	1.05	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>132S4</b>	910	756
2.9	16500	504	112900	1.20	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>132S4</b>	800	756
3.4	14100	434	113900	1.40	<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>132S4</b>	850	756
3.9	12300	379	114600	1.60						
4.4	10800	333	115000	1.85						
3.5	13900	418	78000	0.95						
4.0	12100	367	79600	1.05						
4.4	10900	330	80200	1.20	<b>K</b>	<b>127R87</b>	<b>DRN</b>	<b>132S4</b>	540	756
5.1	9440	287	80900	1.40	<b>KF</b>	<b>127R87</b>	<b>DRN</b>	<b>132S4</b>	580	756
5.8	8350	253	81300	1.55	<b>KA</b>	<b>127R87</b>	<b>DRN</b>	<b>132S4</b>	510	756
6.9	7010	213	81800	1.85	<b>KAF</b>	<b>127R87</b>	<b>DRN</b>	<b>132S4</b>	550	756
7.3	6680	200	81900	1.80						
8.8	5530	166	82200	2.2						
10.0	4880	147	82300	2.5						
6.6	7370	222	65000	1.10	<b>K</b>	<b>107R77</b>	<b>DRN</b>	<b>132S4</b>	355	756
7.4	6530	196	65000	1.20	<b>KF</b>	<b>107R77</b>	<b>DRN</b>	<b>132S4</b>	370	756
8.4	5830	174	65000	1.25	<b>KA</b>	<b>107R77</b>	<b>DRN</b>	<b>132S4</b>	330	756
9.5	5170	154	65000	1.40	<b>KAF</b>	<b>107R77</b>	<b>DRN</b>	<b>132S4</b>	355	756
10	4690	140	65000	1.55						
7.2	7330	136.14	81700	1.75	<b>K</b>	<b>127</b>	<b>DRN</b>	<b>132L6</b>	500	738
8.0	6590	122.48	81900	1.95	<b>KF</b>	<b>127</b>	<b>DRN</b>	<b>132L6</b>	540	739
8.8	5930	110.18	82100	2.2	<b>KA</b>	<b>127</b>	<b>DRN</b>	<b>132L6</b>	470	741
11	4840	89.89	82300	2.7	<b>KAF</b>	<b>127</b>	<b>DRN</b>	<b>132L6</b>	510	739
8.7	6050	112.41*	65000	1.30	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>132L6</b>	345	731
9.7	5420	100.75	65000	1.45	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>132L6</b>	355	732
11	4890	90.96*	65000	1.65	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>132L6</b>	315	734
					<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>132L6</b>	340	732
12	4450	82.61	65000	1.80	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>132L6</b>	345	731
					<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>132L6</b>	355	732
					<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>132L6</b>	315	734
					<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>132L6</b>	340	732
10	5150	143.47*	65000	1.55						
12	4360	121.46	65000	1.85	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	315	731
13	4040	112.41*	65000	2.0	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	330	732
14	3620	100.75	65000	2.2	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	290	734
16	3260	90.96*	65000	2.5	<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>132S4</b>	315	732
18	2960	82.61	65000	2.7						
12	4450	123.93*	40000	0.95	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	205	724
14	3770	105.13	40000	1.15	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	225	725
15	3470	96.80	40000	1.25	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	185	727
17	3110	86.52	40000	1.40	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	210	725
19	2800	77.89*	40000	1.55	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	205	724
21	2530	70.54	40000	1.70	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	225	725
23	2240	62.55	40000	1.90	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	185	727
26	2030	56.55	39600	2.1	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	210	725
30	1720	47.93*	38400	2.5						
17	3100	86.34	26700	0.85	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	145	717
18	2850	79.34	27100	0.95	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	155	718
21	2530	70.46	27500	1.05	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	130	720
23	2260	63.00*	27400	1.20	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	145	718
26	2030	56.64	27200	1.35						

<b>P<sub>m</sub> = 5.5 kW</b>																
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg							
30	1760	49.16	26800	1.55	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	145	717						
33	1580	44.02	26400	1.65												
40	1310	36.52*	25700	1.90												
47	1120	31.39	25100	2.4												
52	1000	27.88	24600	2.6												
32	1620	45.16	14800	0.95	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	110	710						
36	1430	40.04	16100	1.10												
47	1110	30.89	17900	1.40												
50	1050	29.27	18100	1.45												
57	920	25.62	18600	1.70												
63	820	23.08	18900	1.85	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	110	710						
72	725	20.25	19200	2.1												
82	640	17.87	19400	2.3												
92	565	15.84	19100	2.5												
108	485	13.52	18500	2.8												
118	440	12.36	17800	2.2	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	110	711						
135	385	10.84	17400	2.5												
61	860	24.00	9910	0.95							<b>K</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	84	703
64	810	22.66	10400	0.95												
76	690	19.30	11300	1.10												
83	630	17.54	11700	1.15												
96	545	15.19	12200	1.30												
111	475	13.22	12500	1.40	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	87	704						
117	445	12.48	12600	1.20												
137	380	10.63	12400	1.30												
151	345	9.66	12200	1.40												
175	300	8.37	11900	1.45												
201	260	7.28	11600	1.60	<b>KAF</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	87	704						
281	186	5.20	10800	1.85												
93	560	15.67	3950	0.85							<b>K</b>	<b>49</b>	<b>DRN</b>	<b>132S4</b>	83	693
109	480	13.38	4130	1.00												
160	325	9.14*	5160	1.50												
169	310	8.66*	5130	1.60												
193	270	7.58	5020	1.85												
214	245	6.83	4930	2.0												
244	215	5.99	4810	2.3												
276	190	5.29*	4690	2.5												
312	168	4.69*	4570	2.8												
365	143	4.00	4410	3.1												
193	270	7.58	5020	1.85	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>132S4</b>	85	694						
214	245	6.83	4930	2.0												
244	215	5.99	4810	2.3												
276	190	5.29*	4690	2.5												
312	168	4.69*	4570	2.8												
365	143	4.00	4410	3.1												
109	480	13.38	4130	1.00							<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>132S4</b>	80	695
160	325	9.14*	5160	1.50												
169	310	8.66*	5130	1.60												
193	270	7.58	5020	1.85												
214	245	6.83	4930	2.0												
244	215	5.99	4810	2.3												
276	190	5.29*	4690	2.5												
312	168	4.69*	4570	2.8												
365	143	4.00	4410	3.1												
109	480	13.38	4130	1.00	<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>132S4</b>	85	694						
160	325	9.14*	5160	1.50												
169	310	8.66*	5130	1.60												
193	270	7.58	5020	1.85												
214	245	6.83	4930	2.0												
244	215	5.99	4810	2.3												
276	190	5.29*	4690	2.5												
312	168	4.69*	4570	2.8												
365	143	4.00	4410	3.1												



  

<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
1.8	37100	835	190000	1.45	<b>KH</b>	<b>187R107</b>	<b>DRN</b>	<b>132M4</b>	1870	756
2.0	32200	729	190000	1.65						
2.4	27500	622	190000	1.95						
0.91	72200	1605	182700	0.75	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>132M4</b>	1830	756
1.1	62300	1395	190000	0.85						
1.2	53700	1196	190000	1.00						
1.4	46900	1046	190000	1.15						
1.6	42300	945	190000	1.25						
2.0	33100	738	190000	1.60						
2.4	27800	621	190000	1.90						
2.8	23500	527	190000	2.2						
1.6	42400	944	150000	0.80						
1.7	37700	843	150000	0.95						
1.9	33900	757	150000	1.05						
2.3	28300	632	150000	1.25						
2.6	24900	561	150000	1.40						
3.0	21500	481	150000	1.60						
3.5	18800	423	150000	1.85						
4.0	16400	369	150000	2.1						

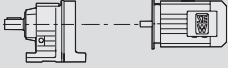

<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.6	25400	567	107500	0.80						
2.9	22600	504	109500	0.90	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>132M4</b>	850	756
3.4	19300	434	111400	1.05	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>132M4</b>	930	756
3.9	16800	379	112700	1.20	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>132M4</b>	810	756
4.4	14800	333	113600	1.35	<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>132M4</b>	870	756
5.0	12900	291	114400	1.55						
4.4	14900	330	76200	0.85						
5.1	12800	287	79300	1.00	<b>K</b>	<b>127R87</b>	<b>DRN</b>	<b>132M4</b>	560	756
5.8	11300	253	80000	1.15	<b>KF</b>	<b>127R87</b>	<b>DRN</b>	<b>132M4</b>	600	756
6.9	9570	213	80900	1.35	<b>KA</b>	<b>127R87</b>	<b>DRN</b>	<b>132M4</b>	530	756
7.3	9110	200	81000	1.30	<b>KAF</b>	<b>127R87</b>	<b>DRN</b>	<b>132M4</b>	560	756
8.8	7540	166	81600	1.60						
10	6650	147	81900	1.80						
6.0	12000	164.50	150000	2.8	<b>K</b>	<b>167</b>	<b>DRN</b>	<b>160M6</b>	1160	752
7.2	9870	134.99	150000	3.5	<b>KH</b>	<b>167</b>	<b>DRN</b>	<b>160M6</b>	1120	753
6.5	11000	150.41	115000	1.80	<b>K</b>	<b>157</b>	<b>DRN</b>	<b>160M6</b>	760	745
8.0	8950	122.39	115600	2.2	<b>KF</b>	<b>157</b>	<b>DRN</b>	<b>160M6</b>	840	746
9.8	7330	100.22	115900	2.7	<b>KA</b>	<b>157</b>	<b>DRN</b>	<b>160M6</b>	730	748
11	6700	91.65	116000	3.0	<b>KAF</b>	<b>157</b>	<b>DRN</b>	<b>160M6</b>	780	746
12	5830	79.75	116200	3.4						
7.2	9950	136.14	80700	1.30	<b>K</b>	<b>127</b>	<b>DRN</b>	<b>160M6</b>	530	738
8.0	8960	122.48	81100	1.45	<b>KF</b>	<b>127</b>	<b>DRN</b>	<b>160M6</b>	570	739
8.9	8060	110.18	81400	1.60	<b>KA</b>	<b>127</b>	<b>DRN</b>	<b>160M6</b>	500	741
11	6570	89.89	81900	2.0	<b>KAF</b>	<b>127</b>	<b>DRN</b>	<b>160M6</b>	540	739
10	7120	146.07	81700	1.80						
11	6640	136.14	81900	1.95	<b>K</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	490	738
12	5970	122.48	82100	2.2	<b>KF</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	530	739
13	5370	110.18	82200	2.4	<b>KA</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	460	741
16	4380	89.89	82400	3.0	<b>KAF</b>	<b>127</b>	<b>DRN</b>	<b>132M4</b>	500	739
18	3990	81.98	82500	3.2						
21	3460	70.95*	82600	3.8						
10	6990	143.47*	65000	1.15	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	335	731
12	5920	121.46	65000	1.35	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	350	732
13	5480	112.41*	65000	1.45	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	310	734
					<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	330	732
15	4910	100.75	65000	1.65						
16	4430	90.96*	64000	1.80						
18	4030	82.61	63000	2.0	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	335	731
20	3570	73.30	61700	2.2	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	350	732
22	3240	66.52*	60600	2.5	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	310	734
26	2780	57.17*	58800	2.9	<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>132M4</b>	330	732
29	2430	49.90	57100	3.2						
35	2060	42.33*	55100	3.6						
40	1800	37.00*	53500	4.0						
15	4720	96.80	38400	0.90	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	220	724
17	4220	86.52	38300	1.00	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	240	725
19	3800	77.89*	38100	1.15	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	205	727
21	3440	70.54	37800	1.25	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	230	725
23	3050	62.55	37400	1.40						
26	2750	56.55	37000	1.55	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	220	724
31	2330	47.93*	36200	1.85	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	240	725
35	2040	41.87	35500	2.1	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	205	727
38	1860	38.30	35000	2.3	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	230	725
43	1660	34.23	34300	2.6						
23	3070	63.00*	24100	0.90	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	160	717
26	2760	56.64	24200	1.00	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	170	718
30	2390	49.16	24200	1.15	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	150	720
33	2140	44.02	24100	1.20	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	165	718
40	1780	36.52*	23800	1.40						

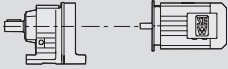

<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
47	1530	31.39	23400	1.75						
53	1350	27.88	23100	1.90						
59	1210	24.92	22700	2.1	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	160	717
66	1090	22.41	22400	2.1	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	170	718
75	940	19.45	21800	2.4	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	150	720
84	840	17.42	21400	2.6	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	165	718
92	780	16.00	20500	2.3						
102	700	14.45	20600	3.0						
48	1500	30.89	15700	1.05	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	125	710
50	1420	29.27	16200	1.10	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	135	711
57	1240	25.62	17200	1.25	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	120	713
64	1120	23.08	17800	1.40	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	125	711
73	980	20.25	18400	1.50						
82	870	17.87	18500	1.65						
93	770	15.84	18200	1.80						
109	655	13.52	17700	2.0	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	125	710
119	600	12.36	17000	1.65	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	135	711
135	525	10.84	16600	1.85	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	120	713
154	465	9.56	16200	2.0	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	125	711
173	410	8.48	15800	2.1						
203	350	7.24	15300	2.3						
161	445	9.14*	4610	1.10						
169	420	8.66*	4600	1.20						
194	365	7.58	4560	1.35	<b>K</b>	<b>49</b>	<b>DRN</b>	<b>132M4</b>	100	693
215	330	6.83	4510	1.50	<b>KF</b>	<b>49</b>	<b>DRN</b>	<b>132M4</b>	105	694
245	290	5.99	4440	1.70	<b>KA</b>	<b>49</b>	<b>DRN</b>	<b>132M4</b>	98	695
278	255	5.29*	4370	1.90	<b>KAF</b>	<b>49</b>	<b>DRN</b>	<b>132M4</b>	105	694
313	225	4.69*	4280	2.0						
367	195	4.00	4170	2.2						

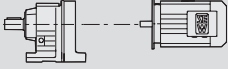

  

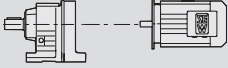

<b>P<sub>m</sub> = 9.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.8	45700	835	190000	1.15						
2.0	39700	729	190000	1.35						
2.4	33900	622	190000	1.55	<b>K</b>	<b>187R107</b>	<b>DRN</b>	<b>132L4</b>	1880	756
2.8	28700	520	190000	1.85	<b>KH</b>	<b>187R107</b>	<b>DRN</b>	<b>132L4</b>	1810	756
3.2	25000	454	190000	2.1						
1.2	65900	1196	190000	0.80						
1.4	57600	1046	190000	0.90						
1.6	52000	945	190000	1.00	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>132L4</b>	1830	756
2.0	40600	738	190000	1.30	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>132L4</b>	1770	756
2.4	34100	621	190000	1.55						
2.8	28900	527	190000	1.85						
4.6	17500	318	150000	2.0						
5.3	15200	278	150000	2.3	<b>K</b>	<b>167R107</b>	<b>DRN</b>	<b>132L4</b>	1300	756
6.0	13200	244	150000	2.6	<b>KH</b>	<b>167R107</b>	<b>DRN</b>	<b>132L4</b>	1260	756
6.9	11500	213	150000	3.0						
7.1	11200	206	150000	3.1						
1.9	41600	757	150000	0.85						
2.3	34800	632	150000	1.00						
2.6	30700	561	150000	1.15	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>132L4</b>	1250	756
3.1	26500	481	150000	1.30	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>132L4</b>	1210	756
3.5	23100	423	150000	1.50						
4.0	20200	369	150000	1.75						
3.8	20800	385	110600	0.95	<b>K</b>	<b>157R107</b>	<b>DRN</b>	<b>132L4</b>	910	756
4.5	17400	325	112400	1.15	<b>KF</b>	<b>157R107</b>	<b>DRN</b>	<b>132L4</b>	980	756
4.9	16200	299	113000	1.25	<b>KA</b>	<b>157R107</b>	<b>DRN</b>	<b>132L4</b>	870	756
5.8	13700	253	114100	1.45	<b>KAF</b>	<b>157R107</b>	<b>DRN</b>	<b>132L4</b>	930	756
6.4	12300	230	114600	1.60						
3.4	23800	434	108700	0.85	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>132L4</b>	860	756
3.9	20700	379	110700	0.95	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>132L4</b>	940	756
4.4	18200	333	112000	1.10	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>132L4</b>	820	756
5.0	15900	291	113200	1.25	<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>132L4</b>	880	756

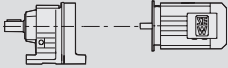



<b>P<sub>m</sub> = 9.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>5.8</b>	13900	253	78000	0.95	<b>K</b>	<b>127R87</b>	<b>DRN</b>	<b>132L4</b>	560	756
<b>6.9</b>	11700	213	79900	1.10	<b>KF</b>	<b>127R87</b>	<b>DRN</b>	<b>132L4</b>	610	756
<b>7.3</b>	11100	200	80100	1.05	<b>KA</b>	<b>127R87</b>	<b>DRN</b>	<b>132L4</b>	540	756
<b>8.8</b>	9260	166	81000	1.30	<b>KAF</b>	<b>127R87</b>	<b>DRN</b>	<b>132L4</b>	570	756
<b>10</b>	8170	147	81400	1.45						
<b>11</b>	8130	136.14	81400	1.60	<b>K</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	500	738
<b>12</b>	7320	122.48	81700	1.80	<b>KF</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	540	739
<b>13</b>	6580	110.18	81900	1.95	<b>KA</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	470	741
<b>16</b>	5370	89.89	82200	2.4	<b>KAF</b>	<b>127</b>	<b>DRN</b>	<b>132L4</b>	510	739
<b>18</b>	4890	81.98	82300	2.6						
<b>13</b>	6710	112.41*	62300	1.20	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	345	731
<b>15</b>	6020	100.75	61700	1.35	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	355	732
<b>16</b>	5430	90.96*	61000	1.45	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	315	734
					<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	340	732
<b>18</b>	4930	82.61	60300	1.60	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	345	731
<b>20</b>	4380	73.30	59300	1.85	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	355	732
<b>22</b>	3970	66.52*	58400	2.0	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	315	734
<b>26</b>	3410	57.17*	56900	2.3	<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>132L4</b>	340	732
<b>29</b>	2980	49.90	55500	2.6						
<b>35</b>	2520	42.33*	53700	2.9						
<b>19</b>	4650	77.89*	35100	0.90	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	230	724
<b>21</b>	4210	70.54	35100	1.00	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	250	725
<b>24</b>	3730	62.55	35000	1.15	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	210	727
<b>26</b>	3370	56.55	34800	1.25	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	235	725
<b>31</b>	2860	47.93*	34400	1.50						
<b>35</b>	2500	41.87	33900	1.70	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	230	724
<b>38</b>	2280	38.30	33500	1.90	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	250	725
<b>43</b>	2040	34.23	33000	2.1	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	210	727
<b>48</b>	1840	30.82	32400	2.3	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>132L4</b>	235	725
<b>53</b>	1660	27.91	31900	2.6						
<b>59</b>	1470	24.75	31200	2.9						
<b>30</b>	2930	49.16	22000	0.90	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	170	717
<b>33</b>	2630	44.02	22200	1.00	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	180	718
<b>40</b>	2180	36.52*	22200	1.15	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	160	720
<b>47</b>	1870	31.39	22000	1.45	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	170	718
<b>53</b>	1660	27.88	21900	1.55						
<b>59</b>	1480	24.92	21600	1.70						
<b>66</b>	1330	22.41	21400	1.70						
<b>76</b>	1160	19.45	21000	2.0	<b>K</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	170	717
<b>84</b>	1040	17.42	20600	2.1	<b>KF</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	180	718
<b>92</b>	950	16.00	19700	1.90	<b>KA</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	160	720
<b>102</b>	860	14.45	20000	2.4	<b>KAF</b>	<b>87</b>	<b>DRN</b>	<b>132L4</b>	170	718
<b>117</b>	750	12.56	19500	2.7						
<b>132</b>	665	11.17	18500	2.2						
<b>147</b>	595	10.00	18200	2.5						
<b>64</b>	1370	23.08	16500	1.10	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	135	710
<b>73</b>	1200	20.25	17400	1.25	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	145	711
<b>82</b>	1060	17.87	17600	1.35	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	125	713
<b>93</b>	940	15.84	17300	1.50	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	135	711
<b>109</b>	800	13.52	17000	1.65						
<b>119</b>	735	12.36	16200	1.35	<b>K</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	135	710
<b>136</b>	645	10.84	15900	1.55	<b>KF</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	145	711
<b>154</b>	570	9.56	15600	1.65	<b>KA</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	125	713
<b>173</b>	505	8.48	15300	1.75	<b>KAF</b>	<b>77</b>	<b>DRN</b>	<b>132L4</b>	135	711
<b>203</b>	430	7.24	14900	1.90						



<b>P<sub>m</sub> = 11.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.8	54700	835	190000	0.95						
2.0	47600	729	190000	1.10						
2.4	40600	622	190000	1.30	<b>K</b>	<b>187R107</b>	<b>DRN</b>	<b>160M4</b>	1910	756
2.8	34400	520	190000	1.55	<b>KH</b>	<b>187R107</b>	<b>DRN</b>	<b>160M4</b>	1850	756
3.2	29900	454	190000	1.75						
4.1	23100	355	190000	2.3						
1.6	62200	945	190000	0.85	<b>K</b>	<b>187R97</b>	<b>DRN</b>	<b>160M4</b>	1870	756
2.0	48600	738	190000	1.10	<b>KH</b>	<b>187R97</b>	<b>DRN</b>	<b>160M4</b>	1800	756
2.4	40800	621	190000	1.30						
2.8	34500	527	190000	1.55						
4.6	21000	318	150000	1.65	<b>K</b>	<b>167R107</b>	<b>DRN</b>	<b>160M4</b>	1330	756
5.3	18300	278	150000	1.90	<b>KH</b>	<b>167R107</b>	<b>DRN</b>	<b>160M4</b>	1290	756
6.0	15800	244	150000	2.2						
6.9	13800	213	150000	2.5						
7.2	13400	206	150000	2.6						
2.3	41600	632	150000	0.85	<b>K</b>	<b>167R97</b>	<b>DRN</b>	<b>160M4</b>	1280	756
2.6	36700	561	150000	0.95	<b>KH</b>	<b>167R97</b>	<b>DRN</b>	<b>160M4</b>	1250	756
3.1	31600	481	150000	1.10						
3.5	27700	423	150000	1.25						
4.0	24200	369	150000	1.45						
4.5	20900	325	110500	0.95	<b>K</b>	<b>157R107</b>	<b>DRN</b>	<b>160M4</b>	940	756
					<b>KF</b>	<b>157R107</b>	<b>DRN</b>	<b>160M4</b>	1020	756
					<b>KA</b>	<b>157R107</b>	<b>DRN</b>	<b>160M4</b>	900	756
					<b>KAF</b>	<b>157R107</b>	<b>DRN</b>	<b>160M4</b>	960	756
3.9	24800	379	108000	0.80	<b>K</b>	<b>157R97</b>	<b>DRN</b>	<b>160M4</b>	890	756
4.4	21800	333	110000	0.90	<b>KF</b>	<b>157R97</b>	<b>DRN</b>	<b>160M4</b>	970	756
5.1	19000	291	111600	1.05	<b>KA</b>	<b>157R97</b>	<b>DRN</b>	<b>160M4</b>	850	756
					<b>KAF</b>	<b>157R97</b>	<b>DRN</b>	<b>160M4</b>	910	756
6.9	14000	213	77900	0.95	<b>K</b>	<b>127R87</b>	<b>DRN</b>	<b>160M4</b>	600	756
7.3	13300	200	79000	0.90	<b>KF</b>	<b>127R87</b>	<b>DRN</b>	<b>160M4</b>	640	756
8.9	11000	166	80200	1.10	<b>KA</b>	<b>127R87</b>	<b>DRN</b>	<b>160M4</b>	570	756
10	9770	147	80800	1.25	<b>KAF</b>	<b>127R87</b>	<b>DRN</b>	<b>160M4</b>	610	756
8.9	11700	164.50	150000	2.9	<b>K</b>	<b>167</b>	<b>DRN</b>	<b>160M4</b>	1160	752
11	9620	134.99	150000	3.6	<b>KH</b>	<b>167</b>	<b>DRN</b>	<b>160M4</b>	1120	753
9.8	10700	150.41	115100	1.85	<b>K</b>	<b>157</b>	<b>DRN</b>	<b>160M4</b>	760	745
12	8720	122.39	115600	2.3	<b>KF</b>	<b>157</b>	<b>DRN</b>	<b>160M4</b>	840	746
15	7140	100.22	115900	2.8	<b>KA</b>	<b>157</b>	<b>DRN</b>	<b>160M4</b>	730	748
16	6530	91.65	116100	3.1	<b>KAF</b>	<b>157</b>	<b>DRN</b>	<b>160M4</b>	780	746
11	9700	136.14	80800	1.35	<b>K</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	530	738
12	8730	122.48	81200	1.50	<b>KF</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	570	739
13	7850	110.18	81500	1.65	<b>KA</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	500	741
16	6410	89.89	82000	2.0	<b>KAF</b>	<b>127</b>	<b>DRN</b>	<b>160M4</b>	540	739
18	5840	81.98	82100	2.2						
21	5050	70.95*	82300	2.6						
13	8010	112.41*	57800	1.00	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	375	731
15	7180	100.75	58200	1.10	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	390	732
16	6480	90.96*	57900	1.25	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	350	734
18	5890	82.61	57400	1.35	<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	375	732
20	5220	73.30	56700	1.55						
22	4740	66.52*	56100	1.70	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	375	731
26	4070	57.17*	54900	1.95	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	390	732
30	3550	49.90	53800	2.2	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	350	734
35	3010	42.33*	52300	2.4	<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>160M4</b>	375	732
40	2630	37.00*	51000	2.7						
21	5030	70.54	32300	0.85	<b>K</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	265	724
24	4460	62.55	32500	0.95	<b>KF</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	285	725
26	4030	56.55	32500	1.05	<b>KA</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	245	727
31	3410	47.93*	32400	1.25	<b>KAF</b>	<b>97</b>	<b>DRN</b>	<b>160M4</b>	270	725

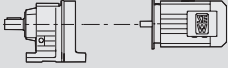

<b>P<sub>m</sub> = 11.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
35	2980	41.87	32200	1.45						
38	2730	38.30	31900	1.55						
43	2440	34.23	31600	1.75	K	97	DRN	160M4	265	724
48	2190	30.82	31200	1.95	KF	97	DRN	160M4	285	725
53	1980	27.91	30700	2.2	KA	97	DRN	160M4	245	727
60	1760	24.75	30200	2.4	KAF	97	DRN	160M4	270	725
66	1590	22.37	29700	2.7						
33	3130	44.02	20100	0.85						
40	2600	36.52*	20500	0.95	K	87	DRN	160M4	205	717
47	2230	31.39	20600	1.20	KF	87	DRN	160M4	210	718
53	1980	27.88	20500	1.30	KA	87	DRN	160M4	190	720
59	1770	24.92	20400	1.40	KAF	87	DRN	160M4	205	718
66	1590	22.41	20300	1.45						
76	1380	19.45	20000	1.65						
85	1240	17.42	19800	1.75						
92	1140	16.00	18800	1.60	K	87	DRN	160M4	205	717
102	1030	14.45	19300	2.0	KF	87	DRN	160M4	210	718
117	890	12.56	18900	2.2	KA	87	DRN	160M4	190	720
132	795	11.17	17900	1.90	KAF	87	DRN	160M4	205	718
147	710	10.00	17600	2.1						
178	590	8.29	17000	2.4						
204	510	7.21	16600	2.5						
64	1640	23.08	14700	0.95						
73	1440	20.25	16100	1.05						
82	1270	17.87	16600	1.15						
93	1120	15.84	16500	1.25	K	77	DRN	160M4	165	710
109	960	13.52	16200	1.40	KF	77	DRN	160M4	175	711
119	880	12.36	15500	1.15	KA	77	DRN	160M4	160	713
136	770	10.84	15300	1.30	KAF	77	DRN	160M4	165	711
154	680	9.56	15000	1.40						
174	600	8.48	14800	1.45						
203	515	7.24	14400	1.60						

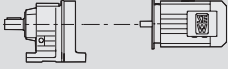

<b>P<sub>m</sub> = 15.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
2.0	65200	729	190000	0.80						
2.4	55600	622	190000	0.95						
2.8	47100	520	190000	1.15	K	187R107	DRN	160L4	1930	756
3.2	41000	454	190000	1.30	KH	187R107	DRN	160L4	1860	756
4.2	31700	355	190000	1.65						
5.7	23500	261	190000	2.2						
2.0	66400	738	190000	0.80	K	187R97	DRN	160L4	1880	756
2.4	55800	621	190000	0.95	KH	187R97	DRN	160L4	1820	756
4.6	28800	318	150000	1.20						
5.3	25000	278	150000	1.40						
6.0	21700	244	150000	1.60						
6.9	18900	213	150000	1.85	K	167R107	DRN	160L4	1350	756
7.2	18400	206	150000	1.90	KH	167R107	DRN	160L4	1310	756
8.2	15900	180	150000	2.2						
9.2	14400	160	150000	2.4						
3.1	43300	481	150000	0.80	K	167R97	DRN	160L4	1300	756
3.5	37900	423	150000	0.90	KH	167R97	DRN	160L4	1260	756
4.9	26700	299	106600	0.75						
5.8	22600	253	109500	0.90						
6.4	20400	230	110900	1.00	K	157R107	DRN	160L4	950	756
6.9	19100	213	111600	1.05	KF	157R107	DRN	160L4	1030	756
7.9	16500	187	112900	1.20	KA	157R107	DRN	160L4	920	756
9.4	14000	157	113900	1.40	KAF	157R107	DRN	160L4	980	756
12	11000	122	115000	1.80						
14	9610	107	115400	2.1						



<b>P<sub>m</sub> = 15.0 kW</b>											
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg		
5.1	26000	291	107100	0.75	K	157R97	DRN	160L4	910	756	
					KF	157R97	DRN	160L4	990	756	
					KA	157R97	DRN	160L4	870	756	
					KAF	157R97	DRN	160L4	930	756	
9.0	15900	164.50	150000	2.1	K	167	DRN	160L4	1170	752	
11	13100	134.99	150000	2.7	KH	167	DRN	160L4	1130	753	
9.8	14600	150.41	113700	1.35	K	157	DRN	160L4	780	745	
12	11800	122.39	114700	1.70		KF	157	DRN	160L4	860	746
15	9730	100.22	114000	2.0		KA	157	DRN	160L4	740	748
16	8900	91.65	112300	2.2		KAF	157	DRN	160L4	800	746
18	7750	79.75	109400	2.6							
11	13200	136.14	79000	1.00	K	127	DRN	160L4	550	738	
12	11900	122.48	79800	1.10	KF	127	DRN	160L4	590	739	
13	10700	110.18	80400	1.20	KA	127	DRN	160L4	520	741	
					KAF	127	DRN	160L4	560	739	
16	8730	89.89	81200	1.50	K	127	DRN	160L4	550	738	
18	7960	81.98	81500	1.65		KF	127	DRN	160L4	590	739
21	6890	70.95*	81400	1.90		KA	127	DRN	160L4	520	741
24	6080	62.60	79800	2.1		KAF	127	DRN	160L4	560	739
27	5250	54.07	77800	2.5							
31	4640	47.82	76100	2.8							
16	8830	90.96*	48300	0.90	K	107	DRN	160L4	395	731	
18	8020	82.61	49500	1.00	KF	107	DRN	160L4	405	732	
20	7120	73.30	50500	1.10	KA	107	DRN	160L4	365	734	
22	6460	66.52*	51000	1.25	KAF	107	DRN	160L4	390	732	
26	5550	57.17*	50600	1.45	K	107	DRN	160L4	395	731	
30	4840	49.90	50000	1.60		KF	107	DRN	160L4	405	732
35	4110	42.33*	49000	1.80		KA	107	DRN	160L4	365	734
40	3590	37.00*	48100	2.0		KAF	107	DRN	160L4	390	732
45	3170	32.69	47200	2.3							
47	3030	31.28*	46900	2.2							
51	2810	29.00	46300	2.6							
31	4650	47.93*	28100	0.90	K	97	DRN	160L4	280	724	
35	4060	41.87	28400	1.05	KF	97	DRN	160L4	300	725	
38	3720	38.30	28500	1.15	KA	97	DRN	160L4	260	727	
43	3320	34.23	28500	1.30	KAF	97	DRN	160L4	285	725	
48	2990	30.82	28400	1.45							
53	2710	27.91	28200	1.60	K	97	DRN	160L4	280	724	
60	2400	24.75	28000	1.80	KF	97	DRN	160L4	300	725	
66	2170	22.37	27700	2.0	KA	97	DRN	160L4	260	727	
78	1840	18.96	27100	2.3	KAF	97	DRN	160L4	285	725	
89	1600	16.56	26600	2.7							
47	3040	31.39	17300	0.90	K	87	DRN	160L4	220	717	
53	2700	27.88	17600	0.95		KF	87	DRN	160L4	230	718
59	2420	24.92	17900	1.05		KA	87	DRN	160L4	205	720
66	2170	22.41	18000	1.05		KAF	87	DRN	160L4	220	718
76	1880	19.45	18000	1.20							
85	1690	17.42	18000	1.30							
92	1550	16.00	16800	1.15	K	87	DRN	160L4	220	717	
102	1400	14.45	17800	1.50		KF	87	DRN	160L4	230	718
117	1220	12.56	17600	1.65		KA	87	DRN	160L4	205	720
132	1080	11.17	16600	1.40		KAF	87	DRN	160L4	220	718
147	970	10.00	16400	1.55							
178	800	8.29	16000	1.75							
204	700	7.21	15700	1.85							

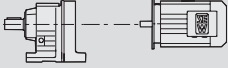

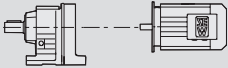

  


<b>P<sub>m</sub> = 18.5 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
2.8	58000	520	190000	0.90	K	187R107	DRN	180M4	1950	756
3.3	50500	454	190000	1.05						
4.2	39100	355	190000	1.35						
5.7	29000	261	190000	1.80						
6.7	24600	221	190000	2.1						
					KH	187R107	DRN	180M4	1880	756

<b>P<sub>m</sub> = 18.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.8	58200	527	190000	0.90	K	187R97	DRN	180M4	1900	756
					KH	187R97	DRN	180M4	1840	756
4.7	35500	318	150000	1.00						
5.3	30900	278	150000	1.15						
6.1	26800	244	150000	1.30						
6.9	23400	213	150000	1.50	K	167R107	DRN	180M4	1370	756
7.2	22800	206	150000	1.55	KH	167R107	DRN	180M4	1330	756
8.2	19700	180	150000	1.75						
9.3	17700	160	150000	1.95						
11	15000	135	150000	2.3						
12	13100	118	150000	2.7						
4.0	40700	369	150000	0.85	K	167R97	DRN	180M4	1320	756
					KH	167R97	DRN	180M4	1280	756
6.9	23600	213	108800	0.85	K	157R107	DRN	180M4	980	756
7.9	20400	187	110800	1.00	KF	157R107	DRN	180M4	1050	756
9.4	17300	157	112500	1.15	KA	157R107	DRN	180M4	940	756
12	13600	122	113800	1.45	KAF	157R107	DRN	180M4	1000	756
14	11800	107	111900	1.70						
8.2	21400	179.86	190000	2.5						
8.9	19700	165.21	190000	2.7	K	187	DRN	180M4	1780	754
10	17200	144.59	190000	3.1	KH	187	DRN	180M4	1710	755
11	15500	129.69	190000	3.4						
11	16100	134.99	150000	2.2	K	167	DRN	180M4	1200	752
13	13100	109.83	150000	2.7	KH	167	DRN	180M4	1160	753
17	10500	87.86	150000	3.3						
12	14600	122.39	111600	1.35						
15	11900	100.22	109000	1.65						
16	10900	91.65	107700	1.85						
19	9530	79.75	105400	2.1	K	157	DRN	180M4	800	745
21	8410	70.38	103200	2.4	KF	157	DRN	180M4	880	746
24	7290	61.02	100600	2.7	KA	157	DRN	180M4	770	748
27	6480	54.29	98300	3.1	KAF	157	DRN	180M4	820	746
32	5590	46.79	95400	3.6						
39	4540	38.02	91200	4.4						
13	13100	110.18	79100	1.00	K	127	DRN	180M4	570	738
16	10700	89.89	79000	1.20	KF	127	DRN	180M4	610	739
18	9790	81.98	78500	1.35	KA	127	DRN	180M4	540	741
					KAF	127	DRN	180M4	580	739
21	8480	70.95*	77400	1.55						
24	7480	62.60	76300	1.75						
27	6460	54.07	74700	2.0	K	127	DRN	180M4	570	738
31	5710	47.82	73300	2.3	KF	127	DRN	180M4	610	739
37	4800	40.19	71100	2.7	KA	127	DRN	180M4	540	741
41	4330	36.25	69800	3.0	KAF	127	DRN	180M4	580	739
47	3740	31.37	67800	3.5						
53	3300	27.68	66100	3.9						
20	8760	73.30	42900	0.90	K	107	DRN	180M4	415	731
22	7950	66.52*	44300	1.00	KF	107	DRN	180M4	425	732
26	6830	57.17*	45800	1.15	KA	107	DRN	180M4	385	734
30	5960	49.90	46600	1.30	KAF	107	DRN	180M4	410	732
35	5050	42.33*	46200	1.45						
40	4420	37.00*	45700	1.65						
45	3900	32.69	45000	1.85						
47	3730	31.28*	44800	1.80	K	107	DRN	180M4	415	731
51	3460	29.00	44300	2.1	KF	107	DRN	180M4	425	732
56	3140	26.32	43700	2.3	KA	107	DRN	180M4	385	734
65	2700	22.62	42700	2.7	KAF	107	DRN	180M4	410	732
75	2350	19.74	41700	3.0						
88	2000	16.75	40400	3.5						
35	5000	41.87	25100	0.85	K	97	DRN	180M4	300	724
48	3680	30.82	26000	1.15	KF	97	DRN	180M4	320	725
53	3330	27.91	26000	1.30	KA	97	DRN	180M4	280	727
60	2950	24.75	26000	1.45	KAF	97	DRN	180M4	305	725


<b>P<sub>m</sub> = 18.5 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
66	2670	22.37	25900	1.60	K	97	DRN	180M4	300	724
78	2260	18.96	25600	1.90						
89	1970	16.56	25300	2.2						
107	1650	13.85	24700	2.6						
123	1430	11.99	24200	2.7						
59	2970	24.92	15600	0.85	K	87	DRN	180M4	240	717
66	2670	22.41	15900	0.85						
76	2320	19.45	16200	1.00						
85	2080	17.42	16400	1.05						
102	1720	14.45	16500	1.20						
118	1500	12.56	16400	1.35						
132	1330	11.17	15400	1.10						
148	1190	10.00	15300	1.25						
178	990	8.29	15100	1.40						
205	860	7.21	14900	1.50						

<b>P<sub>m</sub> = 22 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
3.2	60300	454	190000	0.90	K	187R107	DRN	180L4	1970	756
4.2	46600	355	190000	1.15						
5.7	34600	261	190000	1.55						
6.7	29300	221	190000	1.80						
7.6	25600	193	190000	2.1						
9.0	21500	163	190000	2.5						
4.6	42300	318	150000	0.85	K	167R107	DRN	180L4	1380	756
5.3	36800	278	150000	0.95						
6.1	32000	244	150000	1.10						
6.9	27900	213	150000	1.25						
7.2	27200	206	150000	1.30						
8.2	23500	180	150000	1.50						
9.2	21200	160	150000	1.65						
11	17900	135	150000	1.95						
12	15600	118	150000	2.2						
7.9	24400	187	108300	0.80	K	157R107	DRN	180L4	990	756
9.4	20700	157	109400	0.95						
12	16200	122	108100	1.25						
14	14100	107	106900	1.40						
8.2	25500	179.86	190000	2.1	K	187	DRN	180L4	1790	754
8.9	23400	165.21	190000	2.3						
10	20500	144.59	190000	2.6						
11	18400	129.69	190000	2.9						
11	19100	134.99	150000	1.80	K	167	DRN	180L4	1210	752
13	15600	109.83	150000	2.2						
17	12400	87.86	150000	2.8						
19	11100	78.14	150000	3.1						
12	17400	122.39	105500	1.15	K	157	DRN	180L4	820	745
15	14200	100.22	104000	1.40						
16	13000	91.65	103100	1.55						
19	11300	79.75	101500	1.75						
21	10000	70.38	99700	2.0						
24	8670	61.02	97600	2.3						
27	7720	54.29	95600	2.6						
32	6650	46.79	93100	3.0						
39	5400	38.02	89300	3.7						
16	12700	89.89	73900	1.00	K	127	DRN	180L4	580	738
18	11600	81.98	73800	1.10						
21	10000	70.95*	73400	1.30						
24	8900	62.60	72700	1.45						

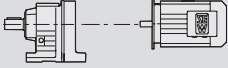

<b>P<sub>m</sub> = 22 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
27	7690	54.07	71700	1.70						
31	6800	47.82	70600	1.90						
37	5710	40.19	68900	2.3	K	127	DRN	180L4	580	738
41	5150	36.25	67700	2.5	KF	127	DRN	180L4	630	739
47	4460	31.37	66100	2.9	KA	127	DRN	180L4	560	741
53	3930	27.68	64500	3.3	KAF	127	DRN	180L4	590	739
62	3390	23.91	62700	3.8						
70	3000	21.15	61100	4.3						
26	8130	57.17*	39800	1.00	K	107	DRN	180L4	430	731
30	7090	49.90	41600	1.10	KF	107	DRN	180L4	440	732
35	6020	42.33*	42900	1.20	KA	107	DRN	180L4	400	734
					KAF	107	DRN	180L4	425	732
40	5260	37.00*	43200	1.35						
45	4640	32.69	42900	1.55						
47	4440	31.28*	42700	1.55						
51	4120	29.00	42400	1.75						
56	3740	26.32	42000	1.90	K	107	DRN	180L4	430	731
65	3210	22.62	41200	2.2	KF	107	DRN	180L4	440	732
75	2800	19.74	40300	2.6	KA	107	DRN	180L4	400	734
88	2380	16.75	39300	3.0	KAF	107	DRN	180L4	425	732
101	2080	14.64	38300	3.3						
110	1910	13.43	36700	2.2						
126	1660	11.73	35800	2.6						
149	1410	9.94	34700	3.0						
48	4380	30.82	23500	1.00	K	97	DRN	180L4	315	724
53	3960	27.91	23800	1.10	KF	97	DRN	180L4	335	725
60	3510	24.75	24100	1.20	KA	97	DRN	180L4	300	727
66	3180	22.37	24200	1.35	KAF	97	DRN	180L4	325	725
78	2690	18.96	24100	1.60						
89	2350	16.56	24000	1.85	K	97	DRN	180L4	315	724
107	1960	13.85	23700	2.2	KF	97	DRN	180L4	335	725
123	1700	11.99	23300	2.3	KA	97	DRN	180L4	300	727
142	1480	10.41	21800	1.95	KAF	97	DRN	180L4	325	725
170	1230	8.71	21300	2.1						
76	2760	19.45	14500	0.85						
85	2470	17.42	14800	0.90						
102	2050	14.45	15200	1.00	K	87	DRN	180L4	255	717
118	1780	12.56	15300	1.10	KF	87	DRN	180L4	265	718
132	1580	11.17	14200	0.95	KA	87	DRN	180L4	245	720
148	1420	10.00	14300	1.05	KAF	87	DRN	180L4	255	718
178	1170	8.29	14300	1.20						
205	1020	7.21	14200	1.25						
<b>P<sub>m</sub> = 30 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
4.2	63700	355	190000	0.85						
5.7	47300	261	190000	1.10						
6.7	40000	221	190000	1.30	KH	187R107	DRN	200L4	2080	756
7.7	34900	193	190000	1.50	KH	187R107	DRN	200L4	2010	756
9.1	29500	163	190000	1.80						
6.1	43700	244	150000	0.80						
6.9	38100	213	150000	0.90						
7.2	37200	206	150000	0.95						
8.2	32100	180	150000	1.10	KH	167R107	DRN	200L4	1490	756
9.3	28900	160	150000	1.20	KH	167R107	DRN	200L4	1460	756
11	24500	135	150000	1.45						
13	21300	118	150000	1.65						
12	22100	122	95000	0.90	K	157R107	DRN	200L4	1100	756
					KF	157R107	DRN	200L4	1180	756
					KA	157R107	DRN	200L4	1060	756
					KAF	157R107	DRN	200L4	1120	756

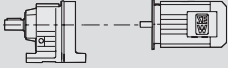

<b>P<sub>m</sub> = 30 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
8.2	34800	179.86	190000	1.50						
9.0	31900	165.21	190000	1.65						
10	27900	144.59	190000	1.90	K	187	DRN	200L4	1900	754
11	25100	129.69	190000	2.1	KH	187	DRN	200L4	1830	755
13	21700	112.60	190000	2.4						
14	19700	102.16	190000	2.7						
17	17000	88.00	190000	3.1						
13	21200	109.83	150000	1.65						
17	17000	87.86	150000	2.1	K	167	DRN	200L4	1320	752
19	15100	78.14	150000	2.3	KH	167	DRN	200L4	1280	753
22	13100	68.07	150000	2.7						
24	11700	60.74	150000	3.0						
15	19400	100.22	92700	1.05						
16	17700	91.65	92800	1.15						
19	15400	79.75	92400	1.30	K	157	DRN	200L4	930	745
21	13600	70.38	91700	1.45	KF	157	DRN	200L4	1000	746
24	11800	61.02	90600	1.70	KA	157	DRN	200L4	890	748
27	10500	54.29	89500	1.90	KAF	157	DRN	200L4	950	746
32	9050	46.79	87700	2.2						
39	7350	38.02	85000	2.7						
47	6050	31.30	82100	3.1						
21	13700	70.95*	64200	0.95						
24	12100	62.60	64600	1.05						
27	10400	54.07	64700	1.25	K	127	DRN	200L4	690	738
31	9250	47.82	64400	1.40	KF	127	DRN	200L4	730	739
37	7770	40.19	63700	1.65	KA	127	DRN	200L4	660	741
41	7010	36.25	63000	1.85	KAF	127	DRN	200L4	700	739
47	6070	31.37	62000	2.1						
53	5350	27.68	60900	2.4						
62	4620	23.91	59600	2.8						
35	8190	42.33*	32500	0.90	K	107	DRN	200L4	540	731
40	7160	37.00*	34800	1.00	KF	107	DRN	200L4	550	732
47	6050	31.28*	36600	1.10	KA	107	DRN	200L4	510	734
					KAF	107	DRN	200L4	540	732
51	5610	29.00	37200	1.30						
56	5090	26.32	37700	1.40						
65	4370	22.62	37700	1.65						
75	3820	19.74	37300	1.90	K	107	DRN	200L4	540	731
88	3240	16.75	36700	2.2	KF	107	DRN	200L4	550	732
101	2830	14.64	36100	2.4	KA	107	DRN	200L4	510	734
110	2590	13.43	34300	1.65	KAF	107	DRN	200L4	540	732
126	2260	11.73	33700	1.90						
149	1920	9.94	32900	2.2						
170	1680	8.69	32200	2.4						
60	4780	24.75	19600	0.90						
66	4320	22.37	20200	1.00						
78	3660	18.96	20700	1.15	K	97	DRN	200L4	425	724
89	3200	16.56	21000	1.35	KF	97	DRN	200L4	445	725
107	2680	13.85	21200	1.60	KA	97	DRN	200L4	405	727
123	2320	11.99	21100	1.70	KAF	97	DRN	200L4	430	725
142	2010	10.41	19500	1.40						
170	1680	8.71	19400	1.60						

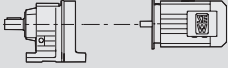

  

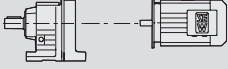

<b>P<sub>m</sub> = 37 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
5.7	58300	261	190000	0.90						
6.7	49400	221	190000	1.05	K	187R107	DRN	225S4	2110	756
7.7	43100	193	190000	1.25	KH	187R107	DRN	225S4	2040	756
9.1	36400	163	190000	1.45						
8.2	39700	180	150000	0.90						
9.3	35600	160	150000	1.00	K	167R107	DRN	225S4	1530	756
11	30200	135	150000	1.15	KH	167R107	DRN	225S4	1490	756
13	26400	118	150000	1.35						





<b>P<sub>m</sub> = 37 kW</b>																
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg							
14	23800	107	85500	0.85	K	157R107	DRN	225S4	1130	756						
					KF	157R107	DRN	225S4	1210	756						
					KA	157R107	DRN	225S4	1090	756						
					KAF	157R107	DRN	225S4	1150	756						
8.2	42800	179.86	190000	1.25	K	187	DRN	225S4	1930	754						
9.0	39300	165.21	190000	1.35												
10	34400	144.59	190000	1.55												
11	30900	129.69	190000	1.70												
13	26800	112.60	190000	1.95												
15	24300	102.16	190000	2.2												
17	20900	88.00	190000	2.5	KH	187	DRN	225S4	1870	755						
13	26100	109.83	150000	1.35	K	167	DRN	225S4	1350	752						
17	20900	87.86	150000	1.65												
19	18600	78.14	150000	1.90												
22	16200	68.07	150000	2.2												
24	14400	60.74	150000	2.4												
29	12300	51.77	150000	2.8							KH	167	DRN	225S4	1310	753
15	23800	100.22	82800	0.85	K	157	DRN	225S4	960	745						
16	21800	91.65	83700	0.90	KF	157	DRN	225S4	1040	746						
19	19000	79.75	84500	1.05	KA	157	DRN	225S4	920	748						
					KAF	157	DRN	225S4	980	746						
21	16700	70.38	84800	1.20	K	157	DRN	225S4	960	745						
24	14500	61.02	84600	1.35												
27	12900	54.29	84100	1.55												
32	11100	46.79	83100	1.80												
39	9060	38.02	81200	2.2												
47	7460	31.30	79000	2.5							KF	157	DRN	225S4	1040	746
24	14900	62.60	57500	0.85	K	127	DRN	225S4	720	738						
27	12800	54.07	58600	1.00	KF	127	DRN	225S4	770	739						
31	11400	47.82	59000	1.15	KA	127	DRN	225S4	700	741						
37	9580	40.19	59100	1.35	KAF	127	DRN	225S4	730	739						
41	8640	36.25	58900	1.50	K	127	DRN	225S4	720	738						
47	7470	31.37	58400	1.75												
54	6590	27.68	57800	1.95												
62	5690	23.91	56800	2.3												
70	5040	21.15	55900	2.6												
83	4230	17.77	54500	3.1												
103	3420	14.35	52500	3.5												
116	3040	12.79	50200	2.8												
138	2560	10.74	48600	3.1												
171	2060	8.68	46500	3.5							KF	127	DRN	225S4	770	739
					KA	127	DRN	225S4	700	741						
					KAF	127	DRN	225S4	730	739						
40	8820	37.00*	26000	0.80	K	107	DRN	225S4	570	731						
47	7450	31.28*	29800	0.90												
51	6910	29.00	31100	1.05												
56	6270	26.32	32300	1.15												
66	5390	22.62	33700	1.35												
75	4700	19.74	34400	1.55												
89	3990	16.75	34500	1.75												
101	3480	14.64	34100	1.95												
110	3200	13.43	32300	1.35												
126	2790	11.73	31900	1.55												
149	2370	9.94	31400	1.75												
171	2070	8.69	30800	1.95							KF	107	DRN	225S4	580	732
											KA	107	DRN	225S4	540	734
											KAF	107	DRN	225S4	570	732

<b>P<sub>m</sub> = 45 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
6.7	60200	221	190000	0.90	K	187R107	DRN	225M4	2110	756
7.7	52500	193	190000	1.00	KH	187R107	DRN	225M4	2040	756
9.1	44300	163	190000	1.20						
9.3	43400	160	150000	0.80	K	167R107	DRN	225M4	1530	756
11	36800	135	150000	0.95	KH	167R107	DRN	225M4	1490	756
13	32100	118	150000	1.10						

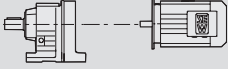

<b>P<sub>m</sub> = 45 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
8.2	52100	179.86	190000	1.00						
9.0	47900	165.21	190000	1.10						
10	41900	144.59	190000	1.25						
11	37600	129.69	190000	1.40	<b>K</b>	<b>187</b>	<b>DRN</b>	<b>225M4</b>	1930	754
13	32600	112.60	189800	1.60	<b>KH</b>	<b>187</b>	<b>DRN</b>	<b>225M4</b>	1870	755
15	29600	102.16	187600	1.80						
17	25500	88.00	183700	2.1						
20	21400	73.96	178700	2.5						
13	31800	109.83	150000	1.10						
17	25400	87.86	150000	1.35						
19	22600	78.14	150000	1.55	<b>K</b>	<b>167</b>	<b>DRN</b>	<b>225M4</b>	1350	752
22	19700	68.07	150000	1.75	<b>KH</b>	<b>167</b>	<b>DRN</b>	<b>225M4</b>	1310	753
24	17600	60.74	148900	2.0						
29	15000	51.77	145100	2.3						
35	12400	42.89	140400	2.8						
19	23100	79.75	75500	0.85						
21	20400	70.38	76800	1.00						
24	17600	61.02	77700	1.15						
27	15700	54.29	78000	1.25	<b>K</b>	<b>157</b>	<b>DRN</b>	<b>225M4</b>	960	745
32	13500	46.79	77800	1.45	<b>KF</b>	<b>157</b>	<b>DRN</b>	<b>225M4</b>	1040	746
39	11000	38.02	76900	1.80	<b>KA</b>	<b>157</b>	<b>DRN</b>	<b>225M4</b>	920	748
47	9070	31.30	75400	2.1	<b>KAF</b>	<b>157</b>	<b>DRN</b>	<b>225M4</b>	980	746
54	8000	27.62	74300	2.5						
62	6940	23.95	72700	2.9						
70	6170	21.31	71400	3.2						
81	5320	18.37	69600	3.8						
31	13800	47.82	52800	0.95	<b>K</b>	<b>127</b>	<b>DRN</b>	<b>225M4</b>	720	738
37	11600	40.19	53900	1.10	<b>KF</b>	<b>127</b>	<b>DRN</b>	<b>225M4</b>	770	739
41	10500	36.25	54300	1.25	<b>KA</b>	<b>127</b>	<b>DRN</b>	<b>225M4</b>	700	741
					<b>KAF</b>	<b>127</b>	<b>DRN</b>	<b>225M4</b>	730	739
47	9090	31.37	54400	1.45						
54	8020	27.68	54200	1.60						
62	6930	23.91	53800	1.90	<b>K</b>	<b>127</b>	<b>DRN</b>	<b>225M4</b>	720	738
70	6120	21.15	53200	2.1	<b>KF</b>	<b>127</b>	<b>DRN</b>	<b>225M4</b>	770	739
83	5150	17.77	52200	2.5	<b>KA</b>	<b>127</b>	<b>DRN</b>	<b>225M4</b>	700	741
103	4160	14.35	50600	2.9	<b>KAF</b>	<b>127</b>	<b>DRN</b>	<b>225M4</b>	730	739
116	3700	12.79	48300	2.3						
138	3110	10.74	47000	2.6						
171	2510	8.68	45200	2.9						
51	8400	29.00	23000	0.85	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	570	731
56	7620	26.32	25400	0.95	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	580	732
66	6550	22.62	28100	1.10	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	540	734
75	5720	19.74	29800	1.25	<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	570	732
89	4850	16.75	31100	1.45						
101	4240	14.64	31700	1.60	<b>K</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	570	731
110	3890	13.43	29900	1.10	<b>KF</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	580	732
126	3390	11.73	29900	1.25	<b>KA</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	540	734
149	2880	9.94	29600	1.45	<b>KAF</b>	<b>107</b>	<b>DRN</b>	<b>225M4</b>	570	732
171	2510	8.69	29300	1.60						

<b>P<sub>m</sub> = 55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
10	51200	144.59	179800	1.05						
11	45900	129.69	179600	1.15						
13	39900	112.60	178600	1.35						
15	36200	102.16	177400	1.45	<b>K</b>	<b>187</b>	<b>DRN</b>	<b>250M4</b>	2080	754
17	31100	88.00	174900	1.70	<b>KH</b>	<b>187</b>	<b>DRN</b>	<b>250M4</b>	2020	755
20	26200	73.96	171300	2.0						
23	22600	64.04	167800	2.3						

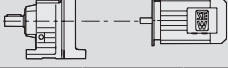

<b>P<sub>m</sub> = 55 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
17	31100	87.86	145300	1.10						
19	27600	78.14	144600	1.25						
22	24100	68.07	143200	1.45						
24	21500	60.74	141700	1.65	K	167	DRN	250M4	1500	752
29	18300	51.77	139000	1.90	KH	167	DRN	250M4	1460	753
35	15200	42.89	135300	2.3						
40	12900	36.61	131800	2.7						
21	24900	70.38	66900	0.80						
24	21600	61.02	69100	0.90						
27	19200	54.29	70300	1.05						
32	16500	46.79	71200	1.20						
39	13400	38.02	71500	1.50	K	157	DRN	250M4	1110	745
47	11000	31.30	71000	1.70	KF	157	DRN	250M4	1190	746
54	9780	27.62	70400	2.0	KA	157	DRN	250M4	1070	748
62	8480	23.95	69400	2.4	KAF	157	DRN	250M4	1130	746
70	7550	21.31	68400	2.6						
81	6500	18.37	67000	3.1						
99	5280	14.92	64700	3.8						
117	4480	12.65	62800	4.2						
37	14200	40.19	47400	0.90	K	127	DRN	250M4	870	738
47	11100	31.37	49300	1.15	KF	127	DRN	250M4	920	739
54	9800	27.68	49700	1.35	KA	127	DRN	250M4	850	741
					KAF	127	DRN	250M4	880	739
62	8470	23.91	49900	1.55						
70	7490	21.15	49800	1.75	K	127	DRN	250M4	870	738
83	6290	17.77	49300	2.1	KF	127	DRN	250M4	920	739
103	5080	14.35	48300	2.4	KA	127	DRN	250M4	850	741
116	4530	12.79	45900	1.90	KAF	127	DRN	250M4	880	739
138	3800	10.74	45000	2.1						
171	3070	8.68	43600	2.4						

<b>P<sub>m</sub> = 75 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
11	62600	129.69	153800	0.85						
13	54400	112.60	156100	0.95						
15	49300	102.16	157000	1.05						
17	42500	88.00	157400	1.25	K	187	DRN	280S4	2130	754
20	35700	73.96	156600	1.50	KH	187	DRN	280S4	2070	755
23	30900	64.04	155000	1.70						
28	25700	53.36	152200	2.1						
33	21900	45.50*	149100	2.4						
17	42400	87.86	124500	0.80						
19	37700	78.14	126200	0.95						
22	32800	68.07	127200	1.05						
24	29300	60.74	127300	1.20						
29	25000	51.77	126800	1.40	K	167	DRN	280S4	1550	752
35	20700	42.89	125200	1.70	KH	167	DRN	280S4	1510	753
40	17600	36.61	123200	2.0						
46	15500	32.25	121200	2.2						
52	13900	28.77	119300	2.5						
60	11800	24.52	116300	3.0						
32	22600	46.79	58000	0.90						
39	18300	38.02	60800	1.10						
47	15100	31.30	62200	1.25	K	157	DRN	280S4	1160	745
54	13300	27.62	62600	1.50	KF	157	DRN	280S4	1240	746
62	11500	23.95	62600	1.75	KA	157	DRN	280S4	1120	748
70	10200	21.31	62400	1.95	KAF	157	DRN	280S4	1180	746
81	8870	18.37	61800	2.2						
99	7210	14.92	60500	2.8						
117	6110	12.65	59200	3.1						

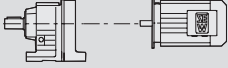

**P<sub>m</sub> = 75 kW**

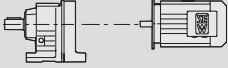

n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
47	15100	31.37	38000	0.85						
54	13300	27.68	40800	0.95						
62	11500	23.91	42200	1.15						
70	10200	21.15	43000	1.25	K	127	DRN	280S4	920	738
83	8580	17.77	43600	1.50	KF	127	DRN	280S4	960	739
103	6930	14.35	43700	1.75	KA	127	DRN	280S4	890	741
116	6170	12.79	41100	1.40	KAF	127	DRN	280S4	930	739
138	5190	10.74	41000	1.55						
171	4190	8.68	40400	1.70						

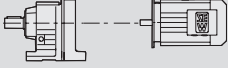

**P<sub>m</sub> = 90 kW**

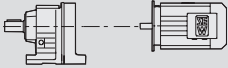

n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
13	65300	112.60	139300	0.80						
14	59200	102.16	141700	0.90						
17	51000	88.00	144200	1.05						
20	42900	73.96	145500	1.25						
23	37100	64.04	145400	1.45	K	187	DRN	280M4	2250	754
28	30900	53.36	144200	1.70	KH	187	DRN	280M4	2180	755
33	26400	45.50*	142300	2.0						
35	24600	42.51	141300	2.1						
38	22300	38.57	139700	2.4						
22	39500	68.07	115100	0.90						
24	35200	60.74	116600	1.00						
29	30000	51.77	117600	1.15						
35	24800	42.89	117600	1.40						
40	21200	36.61	116700	1.65	K	167	DRN	280M4	1670	752
46	18700	32.25	115500	1.85	KH	167	DRN	280M4	1630	753
51	16600	28.77	114200	2.1						
60	14200	24.52	111900	2.5						
73	11700	20.32	108800	3.0						
85	10000	17.34	105900	3.5						
39	22000	38.02	52700	0.90						
54	16000	27.62	56700	1.25	K	157	DRN	280M4	1270	745
62	13800	23.95	57500	1.45	KF	157	DRN	280M4	1350	746
70	12300	21.31	57900	1.60	KA	157	DRN	280M4	1230	748
81	10600	18.37	57900	1.90	KAF	157	DRN	280M4	1290	746
99	8650	14.92	57400	2.3						
117	7340	12.65	56600	2.5						
62	13800	23.91	35500	0.95						
70	12200	21.15	37800	1.05						
83	10300	17.77	39200	1.25	K	127	DRN	280M4	1040	738
103	8320	14.35	40200	1.45	KF	127	DRN	280M4	1080	739
116	7410	12.79	37600	1.15	KA	127	DRN	280M4	1010	741
138	6230	10.74	38000	1.30	KAF	127	DRN	280M4	1050	739
171	5030	8.68	38000	1.45						

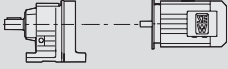

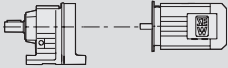

**P<sub>m</sub> = 110 kW**

n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
17	62100	88.00	126800	0.85						
20	52200	73.96	130800	1.00						
23	45200	64.04	132700	1.15	K	187	DRN	315S4	2490	754
28	37600	53.36	133600	1.40	KH	187	DRN	315S4	2420	755
33	32100	45.50*	133200	1.65						
35	30000	42.51	132800	1.75	K	187	DRN	315S4/ERF/NS	2490	754
					KH	187	DRN	315S4/ERF/NS	2420	755
39	27200	38.57	131900	1.95						
45	23400	33.23	130100	2.3	K	187	DRN	315S4	2490	754
53	19700	27.92	127500	2.7	KH	187	DRN	315S4	2420	755

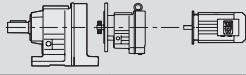

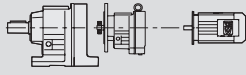

<b>P<sub>m</sub> = 110 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
24	42800	60.74	102400	0.80						
29	36500	51.77	105500	0.95	K	167	DRN	315S4	1910	752
35	30200	42.89	107500	1.15	KH	167	DRN	315S4	1870	753
41	25800	36.61	108100	1.35						
46	22700	32.25	107900	1.55	K	167	DRN	315S4/ERF/NS	1910	752
					KH	167	DRN	315S4/ERF/NS	1870	753
52	20300	28.77	107400	1.70						
61	17300	24.52	106100	2.0	K	167	DRN	315S4	1910	752
73	14300	20.32	104000	2.4	KH	167	DRN	315S4	1870	753
86	12200	17.34	101800	2.9						
62	16900	23.95	50800	1.20	K	157	DRN	315S4/ERF/NS	1520	745
					KF	157	DRN	315S4/ERF/NS	1590	746
					KA	157	DRN	315S4/ERF/NS	1480	748
					KAF	157	DRN	315S4/ERF/NS	1540	746
70	15000	21.31	51900	1.35	K	157	DRN	315S4	1520	745
81	12900	18.37	52700	1.55	KF	157	DRN	315S4	1590	746
100	10500	14.92	53200	1.90	KA	157	DRN	315S4	1480	748
118	8930	12.65	53000	2.1	KAF	157	DRN	315S4	1540	746

<b>P<sub>m</sub> = 132 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
20	62600	73.96	114700	0.85						
23	54200	64.04	118700	1.00	K	187	DRN	315M4	2510	754
28	45200	53.36	121900	1.15	KH	187	DRN	315M4	2450	755
33	38500	45.50*	123300	1.40						
35	36000	42.51	123500	1.45	K	187	DRN	315M4/ERF/NS	2510	754
39	32600	38.57	123500	1.60	KH	187	DRN	315M4/ERF/NS	2450	755
45	28100	33.23	122900	1.90						
53	23600	27.92	121400	2.2	K	187	DRN	315M4	2510	754
62	20400	24.18	119600	2.6	KH	187	DRN	315M4	2450	755
74	17000	20.15	116800	2.9						
87	14500	17.18	114000	3.2						
29	43800	51.77	92100	0.80	K	167	DRN	315M4	1930	752
35	36300	42.89	96400	0.95	KH	167	DRN	315M4	1890	753
41	31000	36.61	98600	1.15						
46	27300	32.25	99600	1.30	K	167	DRN	315M4/ERF/NS	1930	752
52	24300	28.77	99900	1.45	KH	167	DRN	315M4/ERF/NS	1890	753
61	20700	24.52	99800	1.70	K	167	DRN	315M4	1930	752
73	17200	20.32	98700	2.0	KH	167	DRN	315M4	1890	753
86	14600	17.34	97300	2.4						
62	20200	23.95	43400	1.00	K	157	DRN	315M4/ERF/NS	1540	745
					KF	157	DRN	315M4/ERF/NS	1610	746
70	18000	21.31	45300	1.10	KA	157	DRN	315M4/ERF/NS	1500	748
					KAF	157	DRN	315M4/ERF/NS	1560	746
81	15500	18.37	47000	1.30	K	157	DRN	315M4	1540	745
100	12600	14.92	48500	1.60	KF	157	DRN	315M4	1610	746
118	10700	12.65	49100	1.75	KA	157	DRN	315M4	1500	748
					KAF	157	DRN	315M4	1560	746

<b>P<sub>m</sub> = 160 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
23	65800	64.04	100900	0.80						
28	54800	53.36	107100	0.95						
33	46700	45.50*	110600	1.15						
45	34100	33.23	113700	1.55	K	187	DRN	315L4	2640	754
53	28700	27.92	113600	1.85	KH	187	DRN	315L4	2580	755
61	24800	24.18	112900	2.1						
74	20700	20.15	111300	2.4						
86	17600	17.18	109300	2.6						

<b>P<sub>m</sub> = 160 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
41	37600	36.61	86500	0.95						
61	25200	24.52	91700	1.40	<b>K</b>	<b>167</b>	<b>DRN</b>	<b>315L4</b>	2060	752
73	20800	20.32	92000	1.70	<b>KH</b>	<b>167</b>	<b>DRN</b>	<b>315L4</b>	2020	753
86	17800	17.34	91600	1.95						
81	18800	18.37	39800	1.05	<b>K</b>	<b>157</b>	<b>DRN</b>	<b>315L4</b>	1670	745
100	15300	14.92	42600	1.30	<b>KF</b>	<b>157</b>	<b>DRN</b>	<b>315L4</b>	1750	746
117	13000	12.65	44100	1.45	<b>KA</b>	<b>157</b>	<b>DRN</b>	<b>315L4</b>	1630	748
					<b>KAF</b>	<b>157</b>	<b>DRN</b>	<b>315L4</b>	1690	746
<b>P<sub>m</sub> = 200 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
33	58300	45.50*	92600	0.90	<b>K</b>	<b>187</b>	<b>DRN</b>	<b>315H4</b>	2760	754
					<b>KH</b>	<b>187</b>	<b>DRN</b>	<b>315H4</b>	2700	755
45	42600	33.23	100500	1.25	<b>K</b>	<b>187</b>	<b>DRN</b>	<b>315H4/ERF/NS</b>	2760	754
					<b>KH</b>	<b>187</b>	<b>DRN</b>	<b>315H4/ERF/NS</b>	2700	755
53	35800	27.92	102500	1.50						
62	31000	24.18	103300	1.70	<b>K</b>	<b>187</b>	<b>DRN</b>	<b>315H4</b>	2760	754
74	25800	20.15	103200	1.90	<b>KH</b>	<b>187</b>	<b>DRN</b>	<b>315H4</b>	2700	755
87	22000	17.18	102400	2.1						
61	31400	24.52	80200	1.10	<b>K</b>	<b>167</b>	<b>DRN</b>	<b>315H4/ERF/NS</b>	2180	752
					<b>KH</b>	<b>167</b>	<b>DRN</b>	<b>315H4/ERF/NS</b>	2140	753
73	26000	20.32	82500	1.35	<b>K</b>	<b>167</b>	<b>DRN</b>	<b>315H4</b>	2180	752
86	22200	17.34	83400	1.55	<b>KH</b>	<b>167</b>	<b>DRN</b>	<b>315H4</b>	2140	753
81	23500	18.37	23200	0.85	<b>K</b>	<b>157</b>	<b>DRN</b>	<b>315H4</b>	1790	745
100	19100	14.92	34300	1.05	<b>KF</b>	<b>157</b>	<b>DRN</b>	<b>315H4</b>	1860	746
118	16200	12.65	37000	1.15	<b>KA</b>	<b>157</b>	<b>DRN</b>	<b>315H4</b>	1750	748
					<b>KAF</b>	<b>157</b>	<b>DRN</b>	<b>315H4</b>	1810	746

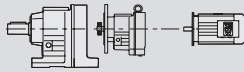

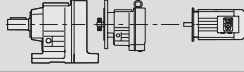

10.4 K..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 200 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.20	6832	5210						
0.23	5922	5210						
0.25	5491	5210						
0.29	4759	5210						
0.33	4160	5210						
0.38	3645	5210						
0.43	3205	5210	K	37R17	DRN	63MS4	20	756
0.49	2801	5210	KF	37R17	DRN	63MS4	22	756
0.56	2454	5210	KA	37R17	DRN	63MS4	19	756
0.64	2166	5210	KAF	37R17	DRN	63MS4	21	756
0.73	1891	5210						
0.83	1660	5210						
0.94	1466	5210						
1.1	1288	5210						
1.2	1136	5210						
1.4	996	5210						
1.6	876	5210						
1.8	761	5210						
2.1	671	5210	K	37R17	DRN	63MS4	19	756
2.4	585	5210	KF	37R17	DRN	63MS4	22	756
2.7	512	5210	KA	37R17	DRN	63MS4	19	756
3.1	451	5210	KAF	37R17	DRN	63MS4	21	756
3.5	396	5210						
4.0	346	5210						
4.5	304	5210						
5.2	267	5210	K	37R17	DRN	63M4	20	756
5.9	234	5210	KF	37R17	DRN	63M4	23	756
6.7	205	5210	KA	37R17	DRN	63M4	20	756
			KAF	37R17	DRN	63M4	22	756
7.8	181	5210	K	37R17	DRN	71MS4	21	756
8.8	160	5210	KF	37R17	DRN	71MS4	23	756
10	136	5210	KA	37R17	DRN	71MS4	21	756
			KAF	37R17	DRN	71MS4	22	756
11	127	5210	K	37R17	DRN	71M4	22	756
13	110	5210	KF	37R17	DRN	71M4	24	756
15	96	5210	KA	37R17	DRN	71M4	22	756
			KAF	37R17	DRN	71M4	24	756
<b>M<sub>a max</sub> = 295 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
19	75	7500	K	39R17	DRN	80M4	32	756
			KF	39R17	DRN	80M4	34	756
			KA	39R17	DRN	80M4	31	756
			KAF	39R17	DRN	80M4	33	756

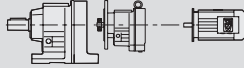

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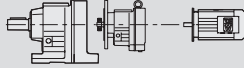

## Helical-bevel gearmotors

K..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 300 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.34	4057	7500							
0.41	3370	7500							
0.47	2906	7500							
0.55	2508	7500							
0.58	2367	7500							
0.64	2162	7500	K	39R17	DRN	63MS4	25	756	
0.73	1881	7500	KF	39R17	DRN	63MS4	26	756	
0.78	1762	7500	KA	39R17	DRN	63MS4	24	756	
0.85	1622	7500	KAF	39R17	DRN	63MS4	25	756	
0.92	1494	7500							
1.0	1321	7500							
1.2	1169	7500							
1.3	1093	7500							
1.4	956	7500							
1.7	814	7500	K	39R17	DRN	63MS4	24	756	
1.9	711	7500	KF	39R17	DRN	63MS4	26	756	
2.3	605	7500	KA	39R17	DRN	63MS4	23	756	
2.7	504	7500	KAF	39R17	DRN	63MS4	25	756	
3.0	454	7500							
3.5	399	7500	K	39R17	DRN	63M4	25	756	
3.8	365	7500	KF	39R17	DRN	63M4	27	756	
4.4	312	7500	KA	39R17	DRN	63M4	24	756	
4.6	299	7500	KAF	39R17	DRN	63M4	26	756	
5.5	254	7500	K	39R17	DRN	71MS4	26	756	
6.0	234	7500	KF	39R17	DRN	71MS4	27	756	
6.7	210	7500	KA	39R17	DRN	71MS4	25	756	
			KAF	39R17	DRN	71MS4	26	756	
7.5	189	7500	K	39R17	DRN	71M4	27	756	
8.1	174	7500	KF	39R17	DRN	71M4	29	756	
9.1	156	7500	KA	39R17	DRN	71M4	26	756	
10.0	142	7500	KAF	39R17	DRN	71M4	28	756	
12	117	7500	K	39R17	DRN	80MK4	29	756	
			KF	39R17	DRN	80MK4	31	756	
			KA	39R17	DRN	80MK4	28	756	
			KAF	39R17	DRN	80MK4	30	756	
<b>M<sub>a max</sub> = 400 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.14	10138	5920							
0.16	8534	5920							
0.18	7662	5920							
0.20	6826	5920							
0.23	5983	5920							
0.27	5159	5920							
0.30	4601	5920	K	47R37	DRN	63MS4	34	756	
0.35	3940	5920	KF	47R37	DRN	63MS4	37	756	
0.40	3477	5920	KA	47R37	DRN	63MS4	33	756	
0.45	3043	5920	KAF	47R37	DRN	63MS4	36	756	
0.51	2733	5920							
0.59	2354	5920							
0.67	2063	5920							
0.76	1819	5920							
0.87	1586	5920							
0.99	1388	5920							
1.1	1222	5920							
1.3	1097	5920	K	47R37	DRN	63MS4	33	756	
1.5	945	5920	KF	47R37	DRN	63MS4	37	756	
1.7	831	5920	KA	47R37	DRN	63MS4	33	756	
1.9	718	5920	KAF	47R37	DRN	63MS4	35	756	
2.2	639	5920							
2.5	552	5920	K	47R37	DRN	63M4	34	756	
2.8	495	5920	KF	47R37	DRN	63M4	37	756	
3.2	426	5920	KA	47R37	DRN	63M4	33	756	
			KAF	47R37	DRN	63M4	36	756	



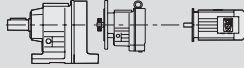

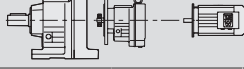

<b>M<sub>a max</sub> = 400 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
3.8	375	5920	K	47R37	DRN	71MS4	35	756	
4.3	327	5920	KF	47R37	DRN	71MS4	38	756	
4.9	289	5920	KA	47R37	DRN	71MS4	34	756	
			KAF	47R37	DRN	71MS4	37	756	
5.5	256	5920	K	47R37	DRN	71M4	36	756	
6.3	225	5920	KF	47R37	DRN	71M4	39	756	
7.1	198	5920	KA	47R37	DRN	71M4	35	756	
			KAF	47R37	DRN	71M4	38	756	
8.4	171	5920	K	47R37	DRN	80MK4	38	756	
9.4	153	5920	KF	47R37	DRN	80MK4	42	756	
11	131	5920	KA	47R37	DRN	80MK4	37	756	
			KAF	47R37	DRN	80MK4	40	756	
13	112	5920	K	47R37	DRN	80M4	42	756	
15	99	5920	KF	47R37	DRN	80M4	45	756	
15	94	5920	KA	47R37	DRN	80M4	41	756	
			KAF	47R37	DRN	80M4	44	756	

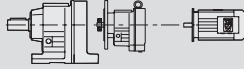

<b>M<sub>a max</sub> = 500 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.19	7137	9000							
0.23	5991	9000							
0.27	5120	9000							
0.34	4034	9000							
0.39	3580	9000							
0.45	3081	9000							
0.50	2773	9000							
0.54	2545	9000	K	49R37	DRN	63MS4	43	756	
0.58	2372	9000	KF	49R37	DRN	63MS4	45	756	
0.65	2118	9000	KA	49R37	DRN	63MS4	40	756	
0.71	1941	9000	KAF	49R37	DRN	63MS4	45	756	
0.79	1741	9000							
0.85	1632	9000							
0.91	1521	9000							
1.1	1228	9000							
1.4	1000	9000							
0.97	1424	9000	K	49R37	DRN	63MS4	43	756	
1.1	1309	9000	KF	49R37	DRN	63MS4	45	756	
1.2	1120	9000	KA	49R37	DRN	63MS4	40	756	
1.5	908	9000	KAF	49R37	DRN	63MS4	45	756	
1.7	802	9000							
2.0	701	9000	K	49R37	DRN	63M4	44	756	
2.1	645	9000	KF	49R37	DRN	63M4	46	756	
2.3	595	9000	KA	49R37	DRN	63M4	41	756	
2.5	543	9000	KAF	49R37	DRN	63M4	46	756	
2.7	501	9000							
3.1	449	9000	K	49R37	DRN	71MS4	44	756	
3.5	401	9000	KF	49R37	DRN	71MS4	46	756	
3.9	360	9000	KA	49R37	DRN	71MS4	42	756	
			KAF	49R37	DRN	71MS4	46	756	
4.3	330	9000	K	49R37	DRN	71M4	46	756	
4.7	300	9000	KF	49R37	DRN	71M4	47	756	
5.2	274	9000	KA	49R37	DRN	71M4	43	756	
5.8	243	9000	KAF	49R37	DRN	71M4	48	756	
6.6	217	9000	K	49R37	DRN	80MK4	48	756	
7.4	193	9000	KF	49R37	DRN	80MK4	50	756	
8.2	176	9000	KA	49R37	DRN	80MK4	45	756	
			KAF	49R37	DRN	80MK4	50	756	
9.5	152	9000	K	49R37	DRN	80M4	51	756	
			KF	49R37	DRN	80M4	53	756	
12	125	9000	KA	49R37	DRN	80M4	48	756	
			KAF	49R37	DRN	80M4	53	756	

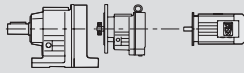

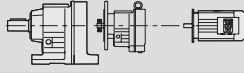

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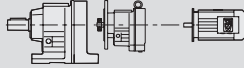

## Helical-bevel gearmotors

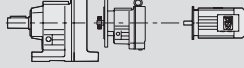

K..R..DRN.. selection tables for low output speeds in Nm

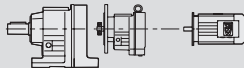

<b>M<sub>a max</sub> = 500 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
15	99	9000	K	49R37	DRN	90S4	57	756
			KF	49R37	DRN	90S4	59	756
			KA	49R37	DRN	90S4	54	756
			KAF	49R37	DRN	90S4	59	756
<b>M<sub>a max</sub> = 600 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.11	12169	7630						
0.12	11162	7630						
0.15	9503	7630						
0.16	8547	7630						
0.19	7277	7630						
0.21	6478	7630						
0.24	5662	7630	K	57R37	DRN	63MS4	40	756
0.27	5033	7630	KF	57R37	DRN	63MS4	44	756
0.32	4340	7630	KA	57R37	DRN	63MS4	37	756
0.36	3854	7630	KAF	57R37	DRN	63MS4	43	756
0.41	3390	7630						
0.47	2924	7630						
0.53	2593	7630						
0.61	2249	7630						
0.70	1986	7630						
0.79	1743	7630						
0.90	1539	7630	K	57R37	DRN	63MS4	39	756
1.0	1354	7630	KF	57R37	DRN	63MS4	44	756
1.2	1174	7630	KA	57R37	DRN	63MS4	37	756
1.3	1036	7630	KAF	57R37	DRN	63MS4	43	756
1.5	906	7630						
1.7	806	7630	K	57R37	DRN	63M4	40	756
2.0	699	7630	KF	57R37	DRN	63M4	45	756
2.2	615	7630	KA	57R37	DRN	63M4	38	756
			KAF	57R37	DRN	63M4	44	756
2.6	544	7630	K	57R37	DRN	71MS4	41	756
3.0	473	7630	KF	57R37	DRN	71MS4	45	756
3.3	421	7630	KA	57R37	DRN	71MS4	39	756
			KAF	57R37	DRN	71MS4	44	756
3.9	362	7630	K	57R37	DRN	71M4	42	756
4.4	319	7630	KF	57R37	DRN	71M4	47	756
5.1	280	7630	KA	57R37	DRN	71M4	40	756
			KAF	57R37	DRN	71M4	46	756
5.8	246	7630	K	57R37	DRN	80MK4	44	756
6.7	215	7630	KF	57R37	DRN	80MK4	49	756
7.5	192	7630	KA	57R37	DRN	80MK4	42	756
			KAF	57R37	DRN	80MK4	48	756
8.7	166	7630	K	57R37	DRN	80M4	48	756
10.0	145	7630	KF	57R37	DRN	80M4	52	756
			KA	57R37	DRN	80M4	45	756
			KAF	57R37	DRN	80M4	51	756
11	129	7630	K	57R37	DRN	90S4	53	756
13	111	7630	KF	57R37	DRN	90S4	58	756
15	97	7630	KA	57R37	DRN	90S4	51	756
			KAF	57R37	DRN	90S4	57	756

<b>M<sub>a max</sub> = 820 Nm</b>								
<b>n<sub>a</sub> min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup> N</b>					<b>m kg</b>	
0.11	12139	10300						
0.12	11134	10300						
0.15	9479	10300						
0.17	8173	10300						
0.19	7259	10300						
0.21	6462	10300						
0.24	5648	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	45	756
0.28	4846	10300	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	51	756
0.32	4329	10300	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	43	756
0.37	3750	10300	<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	48	756
0.42	3315	10300						
0.47	2917	10300						
0.55	2532	10300						
0.62	2244	10300						
0.70	1981	10300						
0.79	1739	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	45	756
0.90	1535	10300	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	51	756
1.0	1351	10300	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	42	756
1.2	1171	10300	<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	48	756
1.3	1034	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	46	756
1.5	903	10300	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	52	756
1.7	793	10300	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	43	756
			<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	49	756
2.0	697	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	47	756
			<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	52	756
2.3	613	10300	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	44	756
			<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	50	756
2.6	542	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	48	756
3.0	471	10300	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	53	756
3.4	420	10300	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	45	756
			<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	51	756
4.0	361	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	50	756
4.5	323	10300	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	56	756
5.1	279	10300	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	47	756
			<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	53	756
5.9	246	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>80M4</b>	53	756
6.6	217	10300	<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>80M4</b>	59	756
7.5	191	10300	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>80M4</b>	51	756
			<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>80M4</b>	56	756
8.8	166	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>90S4</b>	59	756
			<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>90S4</b>	65	756
10	144	10300	<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>90S4</b>	57	756
			<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>90S4</b>	62	756
12	122	10300	<b>K</b>	<b>67R37</b>	<b>DRN</b>	<b>90L4</b>	62	756
			<b>KF</b>	<b>67R37</b>	<b>DRN</b>	<b>90L4</b>	68	756
			<b>KA</b>	<b>67R37</b>	<b>DRN</b>	<b>90L4</b>	60	756
			<b>KAF</b>	<b>67R37</b>	<b>DRN</b>	<b>90L4</b>	65	756

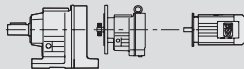

<b>M<sub>a max</sub> = 1550 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.09	15310	15400						
0.10	14043	15400						
0.12	11955	15400						
0.14	10217	15400						
0.16	8809	15400						
0.18	7528	15400	K	77R37	DRN	63MS4	70	756
0.21	6606	15400	KF	77R37	DRN	63MS4	78	756
0.24	5774	15400	KA	77R37	DRN	63MS4	62	756
0.27	5089	15400	KAF	77R37	DRN	63MS4	70	756
0.31	4489	15400						
0.35	3961	15400						
0.40	3485	15400						
0.48	2901	15400						
0.51	2717	15400						
0.58	2370	15400	K	77R37	DRN	63M4	70	756
			KF	77R37	DRN	63M4	79	756
			KA	77R37	DRN	63M4	63	756
			KAF	77R37	DRN	63M4	71	756
0.67	2050	15400	K	77R37	DRN	63M4	70	756
			KF	77R37	DRN	63M4	78	756
			KA	77R37	DRN	63M4	63	756
			KAF	77R37	DRN	63M4	71	756
0.78	1772	15400	K	77R37	DRN	63M4	70	756
			KF	77R37	DRN	63M4	78	756
			KA	77R37	DRN	63M4	63	756
			KAF	77R37	DRN	63M4	71	756
0.91	1514	15400	K	77R37	DRN	63M4	70	756
			KF	77R37	DRN	63M4	78	756
			KA	77R37	DRN	63M4	63	756
			KAF	77R37	DRN	63M4	71	756
1.0	1388	15400	K	77R37	DRN	71MS4	71	756
			KF	77R37	DRN	71MS4	79	756
			KA	77R37	DRN	71MS4	63	756
			KAF	77R37	DRN	71MS4	71	756
1.1	1218	15400	K	77R37	DRN	71MS4	71	756
			KF	77R37	DRN	71MS4	79	756
			KA	77R37	DRN	71MS4	63	756
			KAF	77R37	DRN	71MS4	71	756
1.3	1053	15400	K	77R37	DRN	71MS4	71	756
			KF	77R37	DRN	71MS4	79	756
			KA	77R37	DRN	71MS4	63	756
			KAF	77R37	DRN	71MS4	71	756
1.5	924	15400	K	77R37	DRN	71M4	72	756
			KF	77R37	DRN	71M4	80	756
			KA	77R37	DRN	71M4	64	756
			KAF	77R37	DRN	71M4	72	756
1.7	815	15400	K	77R37	DRN	71M4	72	756
			KF	77R37	DRN	71M4	80	756
			KA	77R37	DRN	71M4	64	756
			KAF	77R37	DRN	71M4	72	756
2.0	709	15400	K	77R37	DRN	71M4	72	756
			KF	77R37	DRN	71M4	80	756
			KA	77R37	DRN	71M4	64	756
			KAF	77R37	DRN	71M4	72	756
2.3	622	15400	K	77R37	DRN	80MK4	74	756
			KF	77R37	DRN	80MK4	82	756
			KA	77R37	DRN	80MK4	67	756
			KAF	77R37	DRN	80MK4	75	756
2.6	552	15400	K	77R37	DRN	80MK4	74	756
			KF	77R37	DRN	80MK4	82	756
			KA	77R37	DRN	80MK4	67	756
			KAF	77R37	DRN	80MK4	75	756
3.0	485	15400	K	77R37	DRN	80MK4	74	756
			KF	77R37	DRN	80MK4	82	756
			KA	77R37	DRN	80MK4	67	756
			KAF	77R37	DRN	80MK4	75	756
3.4	428	15400	K	77R37	DRN	80M4	78	756
			KF	77R37	DRN	80M4	86	756
			KA	77R37	DRN	80M4	70	756
			KAF	77R37	DRN	80M4	78	756
3.9	367	15400	K	77R37	DRN	80M4	78	756
			KF	77R37	DRN	80M4	86	756
			KA	77R37	DRN	80M4	70	756
			KAF	77R37	DRN	80M4	78	756
4.4	328	15400	K	77R37	DRN	90S4	83	756
			KF	77R37	DRN	90S4	92	756
			KA	77R37	DRN	90S4	76	756
			KAF	77R37	DRN	90S4	84	756
5.0	290	15400	K	77R37	DRN	90S4	83	756
			KF	77R37	DRN	90S4	92	756
			KA	77R37	DRN	90S4	76	756
			KAF	77R37	DRN	90S4	84	756
5.8	252	15400	K	77R37	DRN	90S4	83	756
			KF	77R37	DRN	90S4	92	756
			KA	77R37	DRN	90S4	76	756
			KAF	77R37	DRN	90S4	84	756
6.6	221	15400	K	77R37	DRN	90L4	87	756
			KF	77R37	DRN	90L4	95	756
			KA	77R37	DRN	90L4	79	756
			KAF	77R37	DRN	90L4	87	756
7.5	195	15400	K	77R37	DRN	90L4	87	756
			KF	77R37	DRN	90L4	95	756
			KA	77R37	DRN	90L4	79	756
			KAF	77R37	DRN	90L4	87	756
8.4	175	15400	K	77R37	DRN	90L4	87	756
			KF	77R37	DRN	90L4	95	756
			KA	77R37	DRN	90L4	79	756
			KAF	77R37	DRN	90L4	87	756
9.4	154	15400	K	77R37	DRN	100LS4	91	756
			KF	77R37	DRN	100LS4	99	756
			KA	77R37	DRN	100LS4	83	756
			KAF	77R37	DRN	100LS4	91	756
<b>M<sub>a max</sub> = 2600 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
10	141	27400	K	87R57	DRN	112M4	155	756
			KF	87R57	DRN	112M4	165	756
			KA	87R57	DRN	112M4	145	756
			KAF	87R57	DRN	112M4	155	756

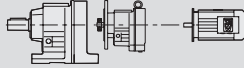

<b>M<sub>a max</sub> = 2700 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.09	14829	27300							
0.10	13168	27300							
0.12	11737	27300							
0.14	10217	27300	K	87R57	DRN	63MS4	120	756	
0.15	9073	27300	KF	87R57	DRN	63MS4	130	756	
0.18	7854	27300	KA	87R57	DRN	63MS4	105	756	
0.20	6832	27300	KAF	87R57	DRN	63MS4	120	756	
0.23	5930	27300							
0.26	5240	27300							
0.30	4562	27300							
0.34	4037	27300	K	87R57	DRN	63M4	120	756	
0.38	3609	27300	KF	87R57	DRN	63M4	130	756	
0.44	3107	27300	KA	87R57	DRN	63M4	105	756	
0.50	2728	27300	KAF	87R57	DRN	63M4	120	756	
0.59	2371	27300	K	87R57	DRN	71MS4	120	756	
			KF	87R57	DRN	71MS4	130	756	
			KA	87R57	DRN	71MS4	110	756	
			KAF	87R57	DRN	71MS4	120	756	
0.67	2088	27300	K	87R57	DRN	71MS4	120	756	
0.76	1854	27300	KF	87R57	DRN	71MS4	130	756	
			KA	87R57	DRN	71MS4	105	756	
			KAF	87R57	DRN	71MS4	120	756	
0.85	1657	27300	K	87R57	DRN	71M4	120	756	
1.0	1415	27300	KF	87R57	DRN	71M4	130	756	
1.1	1229	27300	KA	87R57	DRN	71M4	110	756	
			KAF	87R57	DRN	71M4	120	756	
1.3	1078	27300	K	87R57	DRN	80MK4	125	756	
1.5	951	27300	KF	87R57	DRN	80MK4	130	756	
1.7	837	27300	KA	87R57	DRN	80MK4	110	756	
			KAF	87R57	DRN	80MK4	125	756	
2.0	726	27300	K	87R57	DRN	80M4	125	756	
2.3	638	27300	KF	87R57	DRN	80M4	135	756	
			KA	87R57	DRN	80M4	115	756	
			KAF	87R57	DRN	80M4	125	756	
2.6	562	27300	K	87R57	DRN	90S4	130	756	
3.1	474	27300	KF	87R57	DRN	90S4	140	756	
3.4	426	27300	KA	87R57	DRN	90S4	120	756	
			KAF	87R57	DRN	90S4	135	756	
3.9	373	27300	K	87R57	DRN	90L4	135	756	
4.4	330	27300	KF	87R57	DRN	90L4	145	756	
			KA	87R57	DRN	90L4	125	756	
			KAF	87R57	DRN	90L4	135	756	
4.9	294	27300	K	87R57	DRN	100LS4	140	756	
5.8	250	27300	KF	87R57	DRN	100LS4	150	756	
6.1	236	27300	KA	87R57	DRN	100LS4	125	756	
7.2	201	27300	KAF	87R57	DRN	100LS4	140	756	
8.0	183	27300	K	87R57	DRN	100L4	145	756	
9.2	159	27300	KF	87R57	DRN	100L4	155	756	
			KA	87R57	DRN	100L4	135	756	
			KAF	87R57	DRN	100L4	150	756	

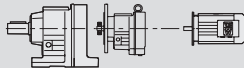

<b>M<sub>a max</sub> = 4300 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.08	18091	40000							
0.08	16666	40000							
0.09	14897	40000							
0.10	13182	40000	K	97R57	DRN	63MS4	180	756	
0.12	11677	40000	KF	97R57	DRN	63MS4	200	756	
0.13	10317	40000	KA	97R57	DRN	63MS4	160	756	
0.15	9083	40000	KAF	97R57	DRN	63MS4	185	756	
0.17	8054	40000							
0.20	6970	40000							

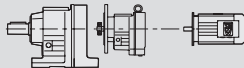

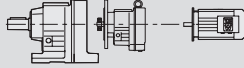

<b>M<sub>a max</sub> = 4300 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
0.23	6027	40000	K	97R57	DRN	63M4	180	756	
0.26	5391	40000	KF	97R57	DRN	63M4	200	756	
0.29	4669	40000	KA	97R57	DRN	63M4	160	756	
0.34	4082	40000	KAF	97R57	DRN	63M4	185	756	
0.39	3583	40000	K	97R57	DRN	71MS4	180	756	
0.45	3108	40000	KF	97R57	DRN	71MS4	200	756	
			KA	97R57	DRN	71MS4	160	756	
			KAF	97R57	DRN	71MS4	185	756	
0.51	2757	40000	K	97R57	DRN	71M4	180	756	
			KF	97R57	DRN	71M4	200	756	
			KA	97R57	DRN	71M4	165	756	
			KAF	97R57	DRN	71M4	190	756	
0.58	2419	40000	K	97R57	DRN	71M4	180	756	
0.67	2123	40000	KF	97R57	DRN	71M4	200	756	
			KA	97R57	DRN	71M4	165	756	
			KAF	97R57	DRN	71M4	190	756	
0.77	1856	40000	K	97R57	DRN	80MK4	185	756	
0.88	1625	40000	KF	97R57	DRN	80MK4	205	756	
1.0	1430	40000	KA	97R57	DRN	80MK4	165	756	
			KAF	97R57	DRN	80MK4	190	756	
1.1	1261	40000	K	97R57	DRN	80M4	185	756	
1.3	1102	40000	KF	97R57	DRN	80M4	205	756	
1.5	957	40000	KA	97R57	DRN	80M4	170	756	
			KAF	97R57	DRN	80M4	195	756	
1.7	855	40000	K	97R57	DRN	90S4	195	756	
2.0	743	40000	KF	97R57	DRN	90S4	215	756	
			KA	97R57	DRN	90S4	175	756	
			KAF	97R57	DRN	90S4	200	756	
2.2	652	40000	K	97R57	DRN	90L4	195	756	
2.5	573	40000	KF	97R57	DRN	90L4	215	756	
2.9	504	40000	KA	97R57	DRN	90L4	180	756	
			KAF	97R57	DRN	90L4	205	756	
3.3	437	40000	K	97R57	DRN	100LS4	200	756	
3.8	382	40000	KF	97R57	DRN	100LS4	220	756	
4.2	342	40000	KA	97R57	DRN	100LS4	180	756	
			KAF	97R57	DRN	100LS4	205	756	
4.8	305	40000	K	97R57	DRN	100L4	205	756	
5.7	258	40000	KF	97R57	DRN	100L4	225	756	
			KA	97R57	DRN	100L4	190	756	
			KAF	97R57	DRN	100L4	215	756	
6.3	232	40000	K	97R57	DRN	112M4	215	756	
7.3	199	40000	KF	97R57	DRN	112M4	235	756	
			KA	97R57	DRN	112M4	200	756	
			KAF	97R57	DRN	112M4	225	756	

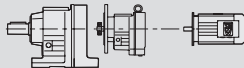

<b>M<sub>a max</sub> = 7200 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg		
8.4	174	65000	K	107R77	DRN	132M4	375	756	
			KF	107R77	DRN	132M4	385	756	
			KA	107R77	DRN	132M4	350	756	
			KAF	107R77	DRN	132M4	370	756	
9.5	154	65000	K	107R77	DRN	132L4	385	756	
11	140	65000	KF	107R77	DRN	132L4	395	756	
			KA	107R77	DRN	132L4	355	756	
			KAF	107R77	DRN	132L4	380	756	

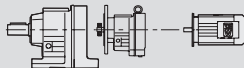

<b>M<sub>a max</sub> = 8000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.10	14311	65000	K	107R77	DRN	63MS4	310	756
			KF	107R77	DRN	63MS4	320	756
			KA	107R77	DRN	63MS4	280	756
			KAF	107R77	DRN	63MS4	305	756
0.11 0.13 0.14 0.17	12211	65000	K	107R77	DRN	63M4	310	756
	10677	65000	KF	107R77	DRN	63M4	320	756
	9524	65000	KA	107R77	DRN	63M4	285	756
	8328	65000	KAF	107R77	DRN	63M4	305	756
0.19 0.23	7270	65000	K	107R77	DRN	71MS4	310	756
	6184	65000	KF	107R77	DRN	71MS4	325	756
		65000	KA	107R77	DRN	71MS4	285	756
		65000	KAF	107R77	DRN	71MS4	310	756
0.25 0.28 0.32 0.37	5662	65000	K	107R77	DRN	71M4	310	756
	5138	65000	KF	107R77	DRN	71M4	325	756
	4359	65000	KA	107R77	DRN	71M4	285	756
	3810	65000	KAF	107R77	DRN	71M4	310	756
0.43 0.48 0.55	3358	65000	K	107R77	DRN	80MK4	315	756
	2977	65000	KF	107R77	DRN	80MK4	325	756
	2599	65000	KA	107R77	DRN	80MK4	285	756
		65000	KAF	107R77	DRN	80MK4	310	756
0.63 0.74	2286	65000	K	107R77	DRN	80M4	320	756
	1939	65000	KF	107R77	DRN	80M4	330	756
		65000	KA	107R77	DRN	80M4	290	756
		65000	KAF	107R77	DRN	80M4	315	756
0.85 0.94 1.1	1713	65000	K	107R77	DRN	90S4	320	756
	1554	65000	KF	107R77	DRN	90S4	335	756
		65000	KA	107R77	DRN	90S4	295	756
		1336	65000	KAF	107R77	DRN	90S4	320
1.2 1.4 1.6	1166	65000	K	107R77	DRN	90L4	325	756
	1030	65000	KF	107R77	DRN	90L4	335	756
	904	65000	KA	107R77	DRN	90L4	300	756
		65000	KAF	107R77	DRN	90L4	320	756
1.8 2.1 2.4	793	65000	K	107R77	DRN	100LS4	330	756
	696	65000	KF	107R77	DRN	100LS4	340	756
	615	65000	KA	107R77	DRN	100LS4	300	756
		65000	KAF	107R77	DRN	100LS4	325	756
2.8 3.2	522	65000	K	107R77	DRN	100L4	335	756
	461	65000	KF	107R77	DRN	100L4	350	756
		65000	KA	107R77	DRN	100L4	310	756
		65000	KAF	107R77	DRN	100L4	335	756
3.6 4.0	408	65000	K	107R77	DRN	112M4	345	756
	364	65000	KF	107R77	DRN	112M4	360	756
		65000	KA	107R77	DRN	112M4	320	756
		65000	KAF	107R77	DRN	112M4	340	756
4.6 5.1 5.8	318	65000	K	107R77	DRN	132S4	355	756
	286	65000	KF	107R77	DRN	132S4	370	756
	251	65000	KA	107R77	DRN	132S4	330	756
		65000	KAF	107R77	DRN	132S4	355	756
6.6 7.5	222	65000	K	107R77	DRN	132M4	375	756
	196	65000	KF	107R77	DRN	132M4	385	756
		65000	KA	107R77	DRN	132M4	350	756
		65000	KAF	107R77	DRN	132M4	370	756

<b>M<sub>a max</sub> = 12000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
7.3	200	79700	K	127R87	DRN	160M4	600	756
			KF	127R87	DRN	160M4	640	756
			KA	127R87	DRN	160M4	570	756
			KAF	127R87	DRN	160M4	610	756

<b>M<sub>a max</sub> = 12000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
8.9	166	79700	K	127R87	DRN	160L4	610	756
10	147	79700	KF	127R87	DRN	160L4	650	756
			KA	127R87	DRN	160L4	580	756
			KAF	127R87	DRN	160L4	620	756
<b>M<sub>a max</sub> = 13000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.08	17550	79200	K	127R77	DRN	63M4	470	756
0.09	16006	79200	KF	127R77	DRN	63M4	510	756
0.09	14975	79200	KA	127R77	DRN	63M4	445	756
			KAF	127R77	DRN	63M4	480	756
0.11	12440	79200	K	127R77	DRN	71MS4	470	756
0.13	10915	79200	KF	127R77	DRN	71MS4	510	756
0.14	9819	79200	KA	127R77	DRN	71MS4	445	756
			KAF	127R77	DRN	71MS4	480	756
0.17	8443	79200	K	127R77	DRN	71M4	475	756
0.19	7482	79200	KF	127R77	DRN	71M4	510	756
0.22	6565	79200	KA	127R77	DRN	71M4	445	756
			KAF	127R77	DRN	71M4	480	756
0.25	5804	79200	K	127R77	DRN	80MK4	475	756
0.29	5027	79200	KF	127R77	DRN	80MK4	520	756
0.32	4423	79200	KA	127R77	DRN	80MK4	445	756
			KAF	127R77	DRN	80MK4	485	756
0.37	3889	79200	K	127R77	DRN	80M4	480	756
0.43	3311	79200	KF	127R77	DRN	80M4	520	756
0.48	3009	79200	KA	127R77	DRN	80M4	450	756
			KAF	127R77	DRN	80M4	490	756
0.56	2607	79200	K	127R77	DRN	90S4	485	756
0.64	2268	79200	KF	127R77	DRN	90S4	530	756
			KA	127R77	DRN	90S4	455	756
			KAF	127R77	DRN	90S4	495	756
0.76	1926	79200	K	127R77	DRN	90L4	485	756
0.83	1757	79200	KF	127R77	DRN	90L4	530	756
0.95	1541	79200	KA	127R77	DRN	90L4	455	756
			KAF	127R77	DRN	90L4	495	756
1.1	1342	79200	K	127R77	DRN	100LS4	490	756
1.2	1177	79200	KF	127R77	DRN	100LS4	530	756
1.4	1025	79200	KA	127R77	DRN	100LS4	460	756
			KAF	127R77	DRN	100LS4	500	756
1.6	899	79200	K	127R77	DRN	100L4	495	756
1.8	790	79200	KF	127R77	DRN	100L4	540	756
			KA	127R77	DRN	100L4	470	756
			KAF	127R77	DRN	100L4	510	756
2.1	704	79200	K	127R77	DRN	112M4	510	756
2.4	610	79200	KF	127R77	DRN	112M4	550	756
2.7	549	79200	KA	127R77	DRN	112M4	480	756
			KAF	127R77	DRN	112M4	520	756
3.1	477	79200	K	127R77	DRN	132S4	520	756
3.5	418	79200	KF	127R77	DRN	132S4	560	756
			KA	127R77	DRN	132S4	490	756
			KAF	127R77	DRN	132S4	530	756
2.7	536	79200	K	127R87	DRN	132S4	540	756
3.1	473	79200	KF	127R87	DRN	132S4	580	756
3.5	418	79200	KA	127R87	DRN	132S4	510	756
			KAF	127R87	DRN	132S4	550	756
4.0	367	79200	K	127R87	DRN	132M4	560	756
4.4	330	79200	KF	127R87	DRN	132M4	600	756
			KA	127R87	DRN	132M4	530	756
			KAF	127R87	DRN	132M4	560	756

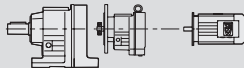



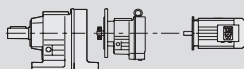

<b>M<sub>a max</sub> = 13000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
5.1 5.8	287	79200	K	127R87	DRN	132L4	560	756
	253	79200	KF	127R87	DRN	132L4	610	756
			KA	127R87	DRN	132L4	540	756
			KAF	127R87	DRN	132L4	570	756
6.9	213	79200	K	127R87	DRN	160M4	600	756
			KF	127R87	DRN	160M4	640	756
			KA	127R87	DRN	160M4	570	756
			KAF	127R87	DRN	160M4	610	756

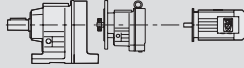

<b>M<sub>a max</sub> = 20000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.08	17679	111100	K	157R97	DRN	71MS4	790	756
			KF	157R97	DRN	71MS4	870	756
			KA	157R97	DRN	71MS4	750	756
			KAF	157R97	DRN	71MS4	810	756
0.09 0.10 0.11 0.12 0.14	15729 14721 13097 11368 10114	111100 111100 111100 111100 111100	K	157R97	DRN	71M4	790	756
			KF	157R97	DRN	71M4	870	756
			KA	157R97	DRN	71M4	750	756
			KAF	157R97	DRN	71M4	810	756
							810	756
0.16 0.19 0.21	8718 7734 6881	111100 111100 111100	K	157R97	DRN	80MK4	790	756
			KF	157R97	DRN	80MK4	870	756
			KA	157R97	DRN	80MK4	750	756
			KAF	157R97	DRN	80MK4	810	756
0.24 0.28	5931 5074	111100 111100	K	157R97	DRN	80M4	800	756
			KF	157R97	DRN	80M4	870	756
			KA	157R97	DRN	80M4	760	756
			KAF	157R97	DRN	80M4	820	756
0.32 0.37 0.41	4514 3979 3516	111100 111100 111100	K	157R97	DRN	90S4	800	756
			KF	157R97	DRN	90S4	880	756
			KA	157R97	DRN	90S4	760	756
			KAF	157R97	DRN	90S4	820	756
0.48 0.56	3051 2610	111100 111100	K	157R97	DRN	90L4	800	756
			KF	157R97	DRN	90L4	880	756
			KA	157R97	DRN	90L4	770	756
			KAF	157R97	DRN	90L4	830	756
0.62 0.71 0.80	2322 2029 1805	111100 111100 111100	K	157R97	DRN	100LS4	810	756
			KF	157R97	DRN	100LS4	890	756
			KA	157R97	DRN	100LS4	770	756
			KAF	157R97	DRN	100LS4	830	756
0.87	1659	111100	K	157R97	DRN	100LS4	800	756
			KF	157R97	DRN	100LS4	880	756
			KA	157R97	DRN	100LS4	770	756
			KAF	157R97	DRN	100LS4	830	756
1.1 1.2	1365 1229	111100 111100	K	157R97	DRN	100L4	810	756
			KF	157R97	DRN	100L4	890	756
			KA	157R97	DRN	100L4	780	756
			KAF	157R97	DRN	100L4	830	756
1.3 1.6 1.7	1093 942 854	111100 111100 111100	K	157R97	DRN	112M4	820	756
			KF	157R97	DRN	112M4	900	756
			KA	157R97	DRN	112M4	780	756
			KAF	157R97	DRN	112M4	840	756
1.9 2.2	756 661	111100 111100	K	157R97	DRN	132S4	830	756
			KF	157R97	DRN	132S4	910	756
			KA	157R97	DRN	132S4	800	756
			KAF	157R97	DRN	132S4	850	756
2.6 2.9	567 504	111100 111100	K	157R97	DRN	132M4	850	756
			KF	157R97	DRN	132M4	930	756
			KA	157R97	DRN	132M4	810	756
			KAF	157R97	DRN	132M4	870	756

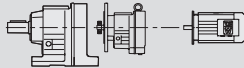

## Helical-bevel gearmotors

K..R..DRN.. selection tables for low output speeds in Nm

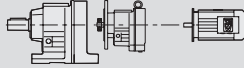

<b>M<sub>a max</sub> = 20000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
3.4 3.9	434	111100	K	157R97	DRN	132L4	860	756
	379	111100	KF	157R97	DRN	132L4	940	756
			KA	157R97	DRN	132L4	820	756
			KAF	157R97	DRN	132L4	880	756
4.4	333	111100	K	157R97	DRN	160M4	890	756
			KF	157R97	DRN	160M4	970	756
			KA	157R97	DRN	160M4	850	756
			KAF	157R97	DRN	160M4	910	756
5.1	291	111100	K	157R97	DRN	160L4	910	756
			KF	157R97	DRN	160L4	990	756
			KA	157R97	DRN	160L4	870	756
			KAF	157R97	DRN	160L4	930	756
3.8	385	111100	K	157R107	DRN	132L4	910	756
			KF	157R107	DRN	132L4	980	756
			KA	157R107	DRN	132L4	870	756
			KAF	157R107	DRN	132L4	930	756
4.5	325	111100	K	157R107	DRN	160M4	940	756
			KF	157R107	DRN	160M4	1020	756
			KA	157R107	DRN	160M4	900	756
			KAF	157R107	DRN	160M4	960	756
4.9 5.8 6.4	299	111100	K	157R107	DRN	160L4	950	756
	253	111100	KF	157R107	DRN	160L4	1030	756
	230	111100	KA	157R107	DRN	160L4	920	756
			KAF	157R107	DRN	160L4	980	756
6.9 7.9	213	111100	K	157R107	DRN	180M4	980	756
	187	111100	KF	157R107	DRN	180M4	1050	756
			KA	157R107	DRN	180M4	940	756
			KAF	157R107	DRN	180M4	1000	756
9.4	157	111000	K	157R107	DRN	180L4	990	756
			KF	157R107	DRN	180L4	1070	756
			KA	157R107	DRN	180L4	950	756
			KAF	157R107	DRN	180L4	1010	756
12	122	99700	K	157R107	DRN	200L4	1100	756
			KF	157R107	DRN	200L4	1180	756
			KA	157R107	DRN	200L4	1060	756
			KAF	157R107	DRN	200L4	1120	756
14	107	94000	K	157R107	DRN	225S4	1130	756
			KF	157R107	DRN	225S4	1210	756
			KA	157R107	DRN	225S4	1090	756
			KAF	157R107	DRN	225S4	1150	756

<b>M<sub>a max</sub> = 35000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.07	19723	150000	K	167R97	DRN	71M4	1180	756
			KH	167R97	DRN	71M4	1150	756
0.08	17406	150000	K	167R97	DRN	80MK4	1190	756
0.10	15000	150000						
0.11	13238	150000						
0.12	11573	150000						
0.14 0.17	10264	150000	K	167R97	DRN	80M4	1190	756
	8628	150000	KH	167R97	DRN	80M4	1150	756
0.22	6562	150000	K	167R97	DRN	90S4	1190	756
			KH	167R97	DRN	90S4	1160	756
0.27 0.31 0.36	5355	150000	K	167R97	DRN	90L4	1200	756
	4788	150000						
	4079	150000						
0.43 0.53	3376	150000	K	167R97	DRN	100LS4	1200	756
	2755	150000	KH	167R97	DRN	100LS4	1160	756
0.64	2263	150000	K	167R97	DRN	100L4	1210	756
			KH	167R97	DRN	100L4	1170	756

<b>M<sub>a max</sub> = 35000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.67	2182	150000	K	167R97	DRN	100L4	1210	756
			KH	167R97	DRN	100L4	1170	756
0.86	1704	150000	K	167R97	DRN	112M4	1210	756
			KH	167R97	DRN	112M4	1180	756
1.0	1408	150000	K	167R97	DRN	132S4	1230	756
1.1	1296	150000	KH	167R97	DRN	132S4	1190	756
1.3	1101	150000	K	167R97	DRN	132M4	1240	756
1.6	944	150000	KH	167R97	DRN	132M4	1210	756
1.9	757	150000	K	167R97	DRN	132L4	1250	756
			KH	167R97	DRN	132L4	1210	756
2.3	632	150000	K	167R97	DRN	160M4	1280	756
			KH	167R97	DRN	160M4	1250	756
2.6	561	150000	K	167R97	DRN	160L4	1300	756
			KH	167R97	DRN	160L4	1260	756
3.1	481	150000	K	167R97	DRN	180M4	1320	756
			KH	167R97	DRN	180M4	1280	756
4.0	369	150000	K	167R97	DRN	180M4	1370	756
			KH	167R97	DRN	180M4	1330	756
4.7	318	150000	K	167R107	DRN	180L4	1380	756
			KH	167R107	DRN	180L4	1350	756
5.3	278	150000	K	167R107	DRN	200L4	1490	756
			KH	167R107	DRN	200L4	1460	756
6.1	244	150000	K	167R107	DRN	225S4	1530	756
			KH	167R107	DRN	225S4	1490	756
6.9	213	150000	K	167R107	DRN	225M4	1530	756
			KH	167R107	DRN	225M4	1490	756
7.2	206	150000	K	167R107	DRN	225M4	1530	756
			KH	167R107	DRN	225M4	1490	756
8.2	180	150000	K	167R107	DRN	225M4	1530	756
			KH	167R107	DRN	225M4	1490	756
9.3	160	150000	K	167R107	DRN	225M4	1530	756
			KH	167R107	DRN	225M4	1490	756
11	135	150000	K	167R107	DRN	225M4	1530	756
			KH	167R107	DRN	225M4	1490	756

<b>M<sub>a max</sub> = 53000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.04	32625	190000	K	187R97	DRN	71M4	1770	756
			KH	187R97	DRN	71M4	1700	756
0.05	27165	190000	K	187R97	DRN	80MK4	1770	756
			KH	187R97	DRN	80MK4	1700	756
0.06	24353	190000	K	187R97	DRN	80M4	1770	756
			KH	187R97	DRN	80M4	1700	756
0.07	19144	190000	K	187R97	DRN	80M4	1770	756
			KH	187R97	DRN	80M4	1700	756
0.08	16978	190000	K	187R97	DRN	90S4	1780	756
			KH	187R97	DRN	90S4	1710	756
0.10	14272	190000	K	187R97	DRN	90L4	1780	756
			KH	187R97	DRN	90L4	1710	756
0.11	13116	190000	K	187R97	DRN	90L4	1780	756
			KH	187R97	DRN	90L4	1710	756
0.12	11647	190000	K	187R97	DRN	100LS4	1780	756
			KH	187R97	DRN	100LS4	1720	756
0.14	10413	190000	K	187R97	DRN	100LS4	1780	756
			KH	187R97	DRN	100LS4	1720	756
0.16	9363	190000	K	187R97	DRN	112M4	1800	756
			KH	187R97	DRN	112M4	1730	756
0.18	8126	190000	K	187R97	DRN	100L4	1790	756
			KH	187R97	DRN	100L4	1720	756
0.20	7343	190000	K	187R97	DRN	112M4	1800	756
			KH	187R97	DRN	112M4	1730	756
0.22	6747	190000	K	187R97	DRN	112M4	1800	756
			KH	187R97	DRN	112M4	1730	756
0.24	5991	190000	K	187R97	DRN	132S4	1810	756
			KH	187R97	DRN	132S4	1740	756
0.27	5358	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.30	4817	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.33	4370	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.52	2818	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.40	3609	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.48	3062	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.58	2519	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.65	2268	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.71	2054	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.80	1821	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
0.91	1605	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
1.1	1395	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756
1.2	1196	190000	K	187R97	DRN	132M4	1830	756
			KH	187R97	DRN	132M4	1760	756

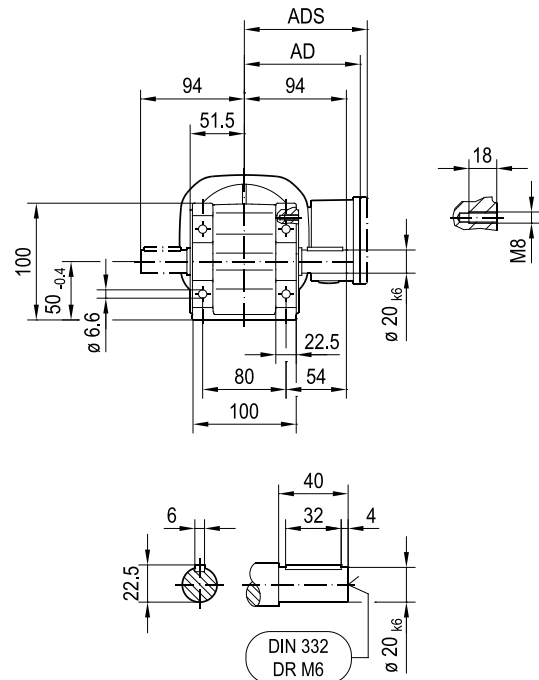
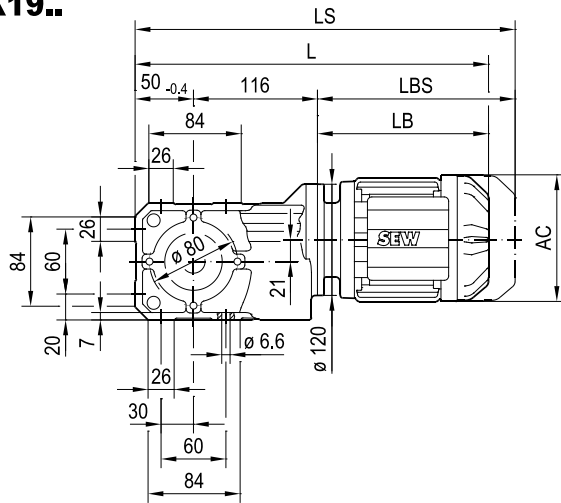
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$M_{a \max} = 53000 \text{ Nm}$								
$n_a$ $\text{min}^{-1}$	$i$	$F_{Ra}^{(1)}$ N					$m$ kg	
1.4	1046	190000	K	187R97	DRN	132L4	1830	756
			KH	187R97	DRN	132L4	1770	756
1.6	945	190000	K	187R97	DRN	160M4	1870	756
			KH	187R97	DRN	160M4	1800	756
2.0	738	190000	K	187R97	DRN	160L4	1880	756
			2.4	621	190000	KH	187R97	DRN
2.8	527	190000				K	187R97	DRN
			KH	187R97	DRN	180M4	1840	756
1.8	835	190000	K	187R107	DRN	160M4	1910	756
			KH	187R107	DRN	160M4	1850	756
2.0	729	190000	K	187R107	DRN	160L4	1930	756
			2.4	622	190000	KH	187R107	DRN
2.8	520	190000				K	187R107	DRN
			KH	187R107	DRN	180M4	1880	756
3.2	454	190000	K	187R107	DRN	180L4	1970	756
			KH	187R107	DRN	180L4	1900	756
4.2	355	190000	K	187R107	DRN	200L4	2080	756
			KH	187R107	DRN	200L4	2010	756
5.7	261	190000	K	187R107	DRN	225S4	2110	756
			KH	187R107	DRN	225S4	2040	756
6.7	221	190000	K	187R107	DRN	225M4	2110	756
			KH	187R107	DRN	225M4	2040	756

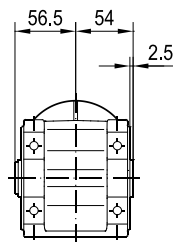
10.5 K..DRN.. dimension sheets in mm

33 008 01 15

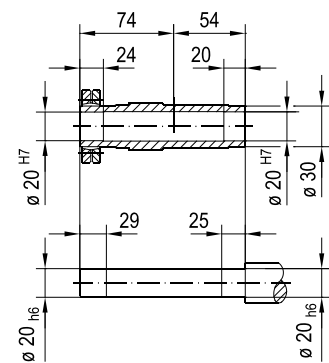
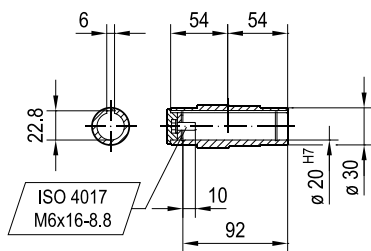
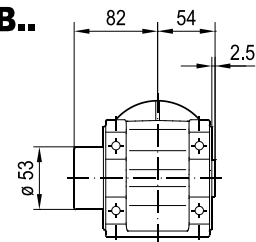
**K19..**



**KA19B..**



**KH19B..**

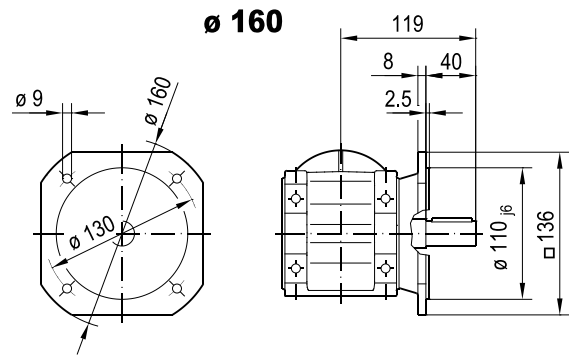
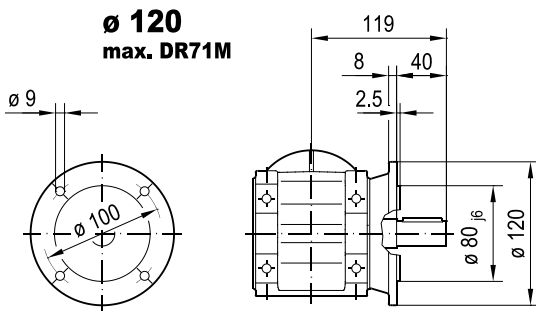
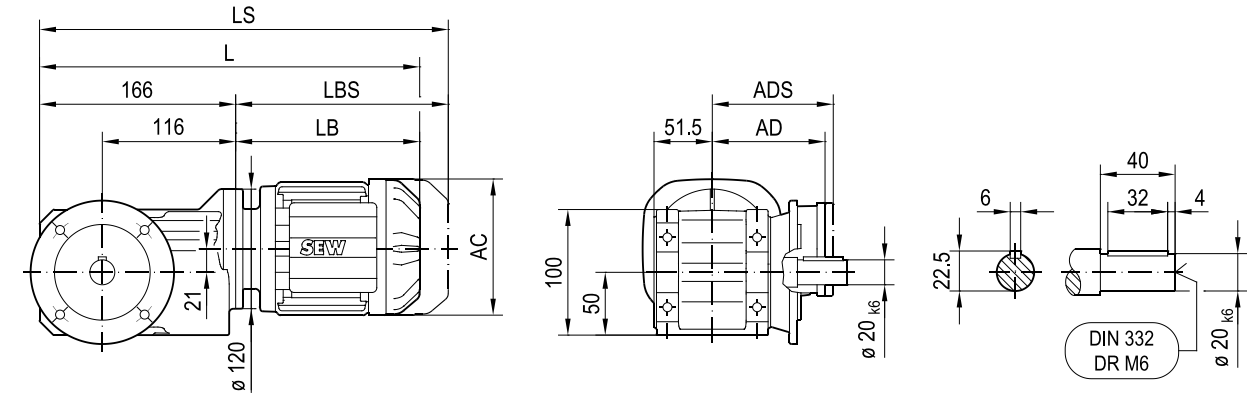


(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80MS	80M	90S
AC	115	115	139	139	156	156	156	179
AD	98	98	118	118	128	128	128	140
ADS	98	98	129	129	139	139	139	150
L	356	370	372	392	403	420	448	449
LS	412	426	439	459	484	501	529	543
LB	190	204	206	226	237	254	282	283
LBS	246	260	273	293	318	335	363	377

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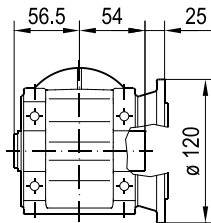
33 009 00 15

### KF19B..

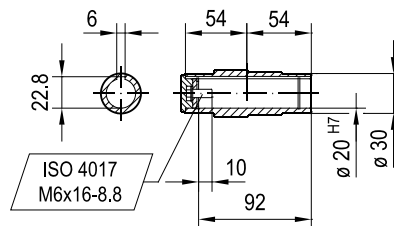
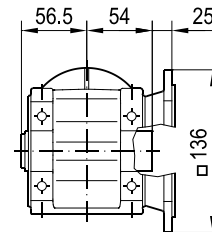


### KAF19B..

**ø 120**  
max. DR71M



**ø 160**

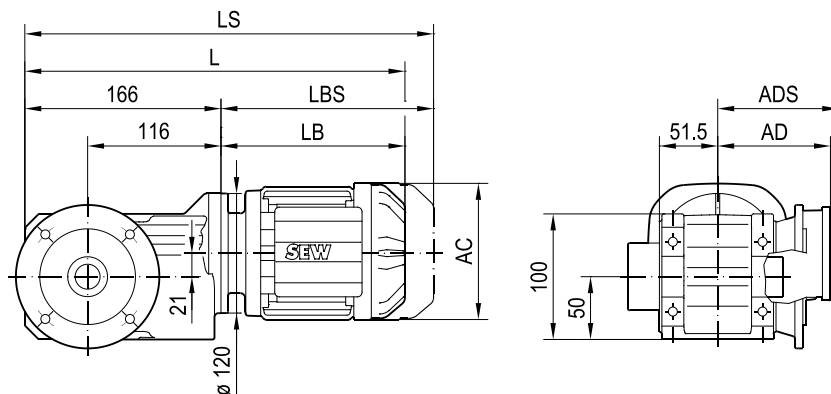


(-> 7.3)	DRN								
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	
AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	356	370	372	392	403	420	448	449	
LS	412	426	439	459	484	501	529	543	
LB	190	204	206	226	237	254	282	283	
LBS	246	260	273	293	318	335	363	377	

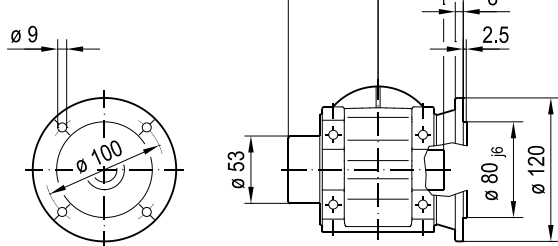
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33 010 01 15

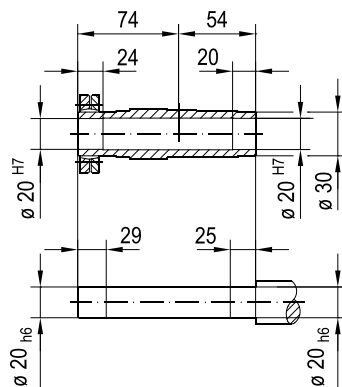
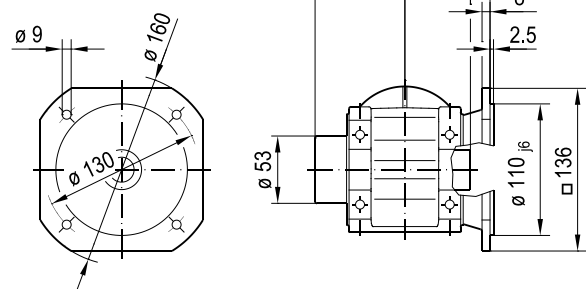
**KHF19B..**



**ø 120**  
max. DR71M



**ø 160**

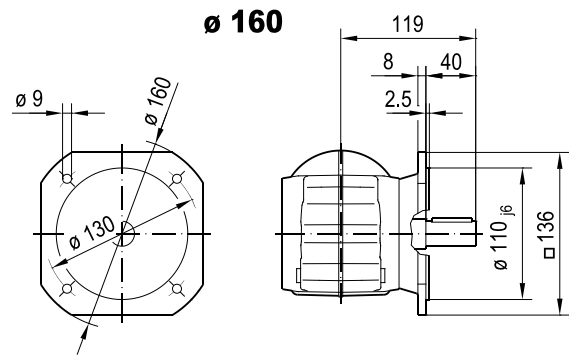
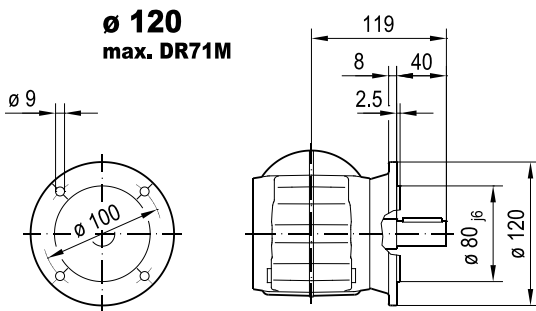
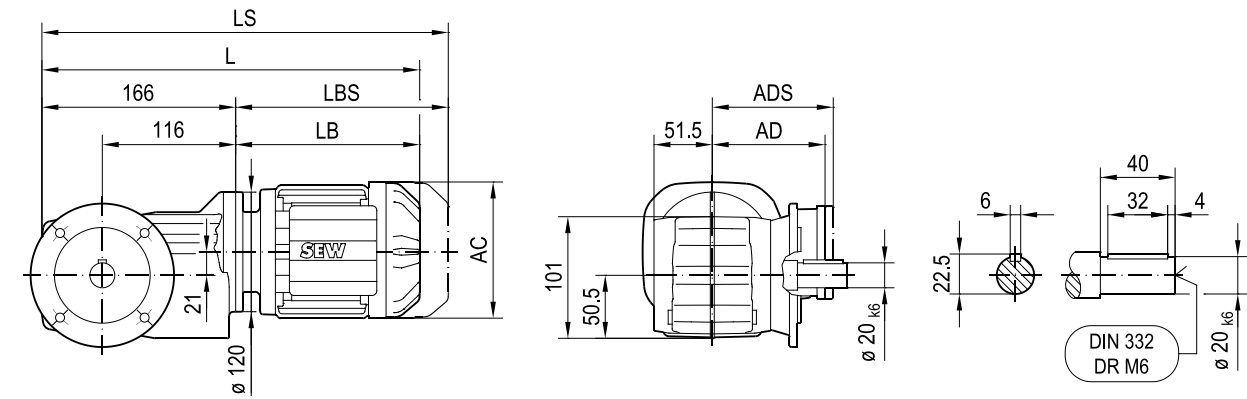


(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80MS	80M	90S
AC	115	115	139	139	156	156	156	179
AD	98	98	118	118	128	128	128	140
ADS	98	98	129	129	139	139	139	150
L	356	370	372	392	403	420	448	449
LS	412	426	439	459	484	501	529	543
LB	190	204	206	226	237	254	282	283
LBS	246	260	273	293	318	335	363	377

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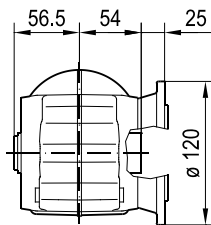
33 011 00 15

### KF19..

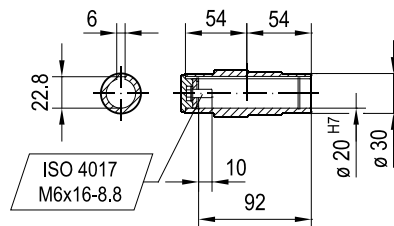
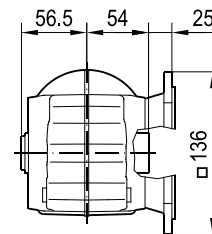


### KAF19..

**ø 120**  
max. DR71M



**ø 160**



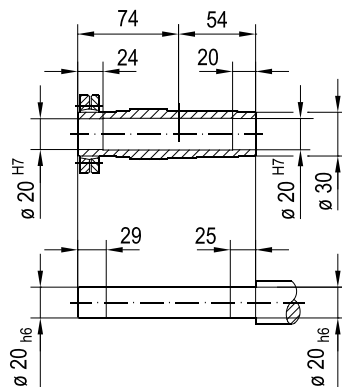
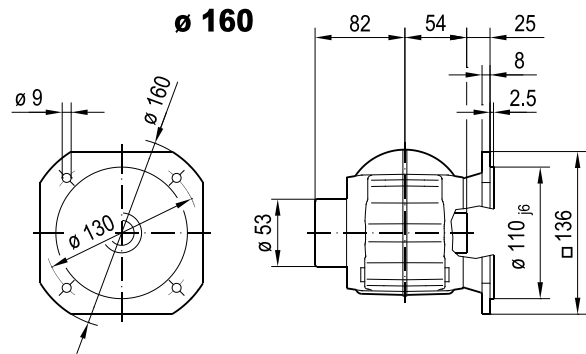
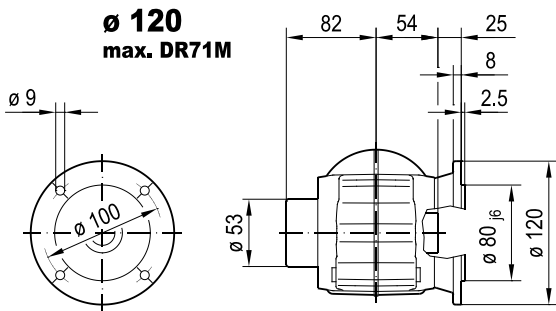
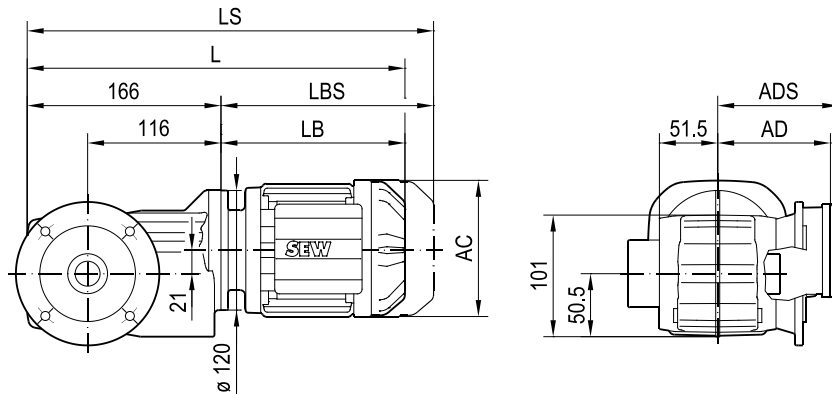
(-> 7.3)	DRN								
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	
AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	356	370	372	392	403	420	448	449	
LS	412	426	439	459	484	501	529	543	
LB	190	204	206	226	237	254	282	283	
LBS	246	260	273	293	318	335	363	377	

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**KHF19..**

33 013 01 15

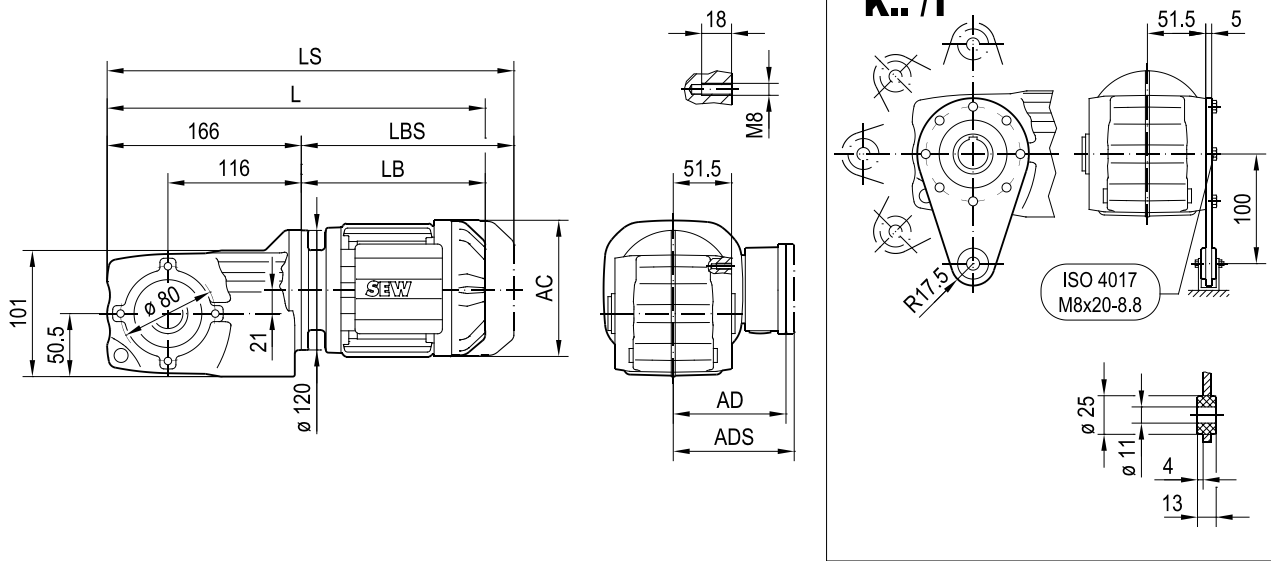


(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80MS	80M	90S
AC	115	115	139	139	156	156	156	179
AD	98	98	118	118	128	128	128	140
ADS	98	98	129	129	139	139	139	150
L	356	370	372	392	403	420	448	449
LS	412	426	439	459	484	501	529	543
LB	190	204	206	226	237	254	282	283
LBS	246	260	273	293	318	335	363	377

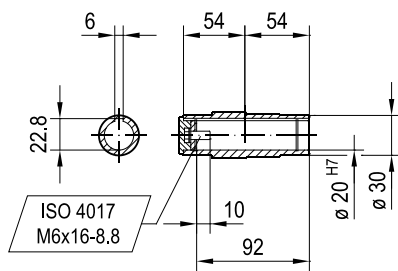
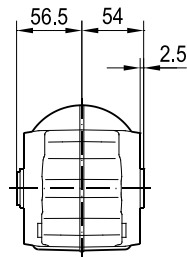
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33 014 01 15

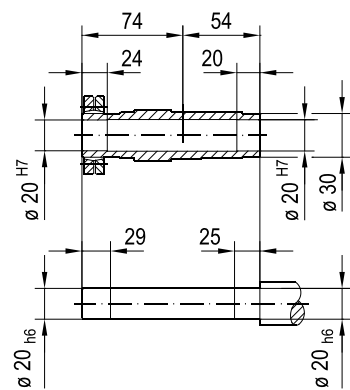
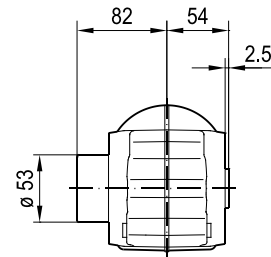
### KA19..



### KA19..



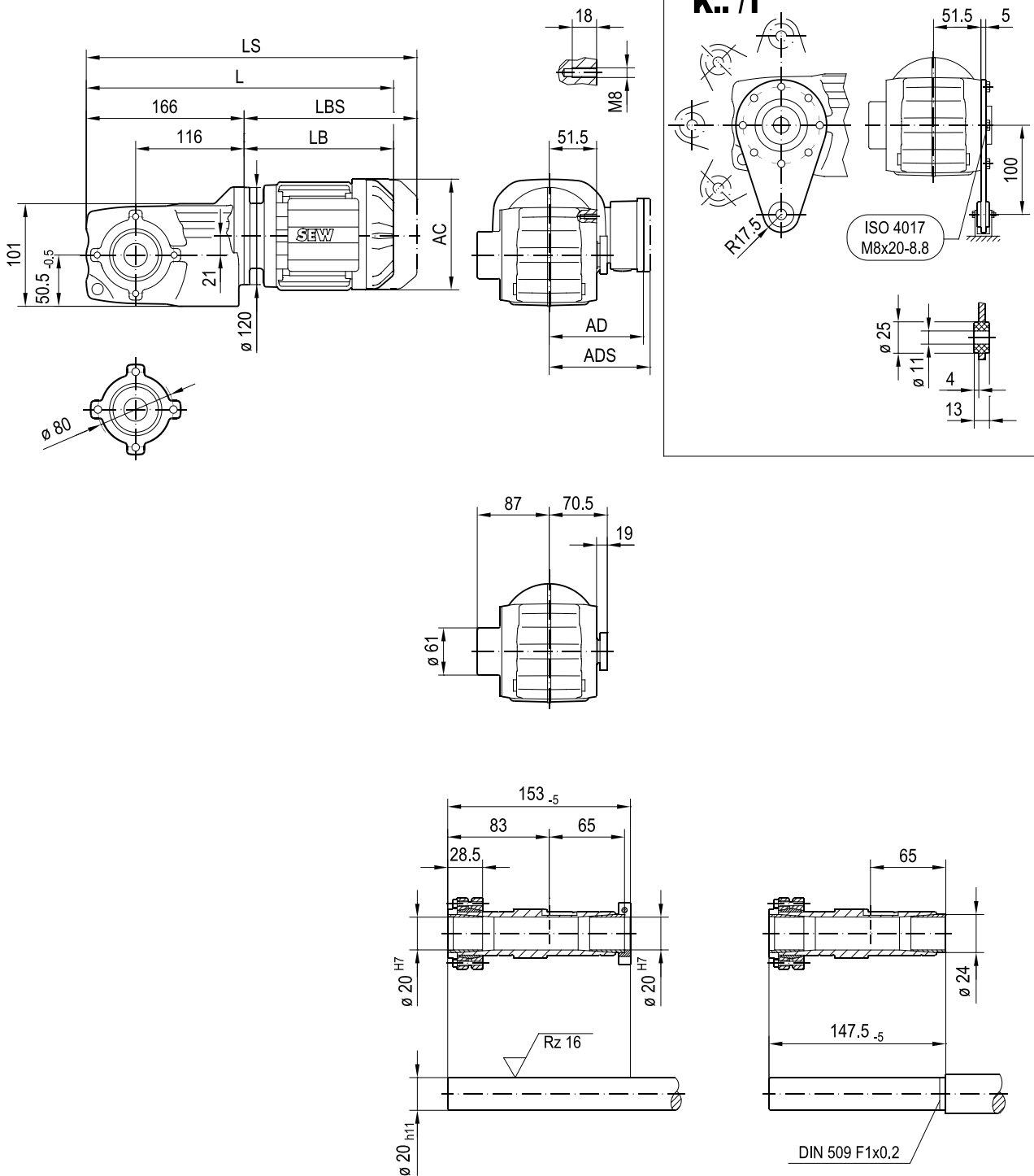
### KH19..



(-> 7.3)	DRN								
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AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	356	370	372	392	403	420	448	449	
LS	412	426	439	459	484	501	529	543	
LB	190	204	206	226	237	254	282	283	
LBS	246	260	273	293	318	335	363	377	

KT19..

33 104 00 21

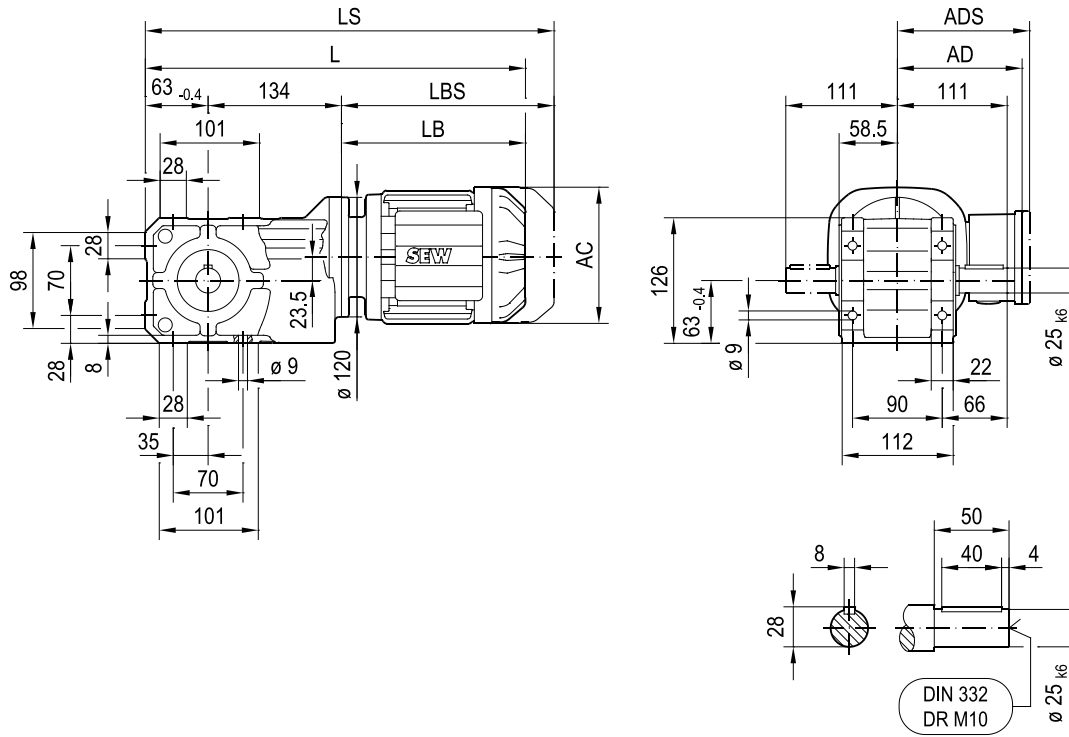


→ 7.3	DRN								
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	
AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	356	370	372	392	403	420	448	449	
LS	412	426	439	459	484	501	529	543	
LB	190	204	206	226	237	254	282	283	
LBS	246	260	273	293	318	335	363	377	

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33 015 01 15

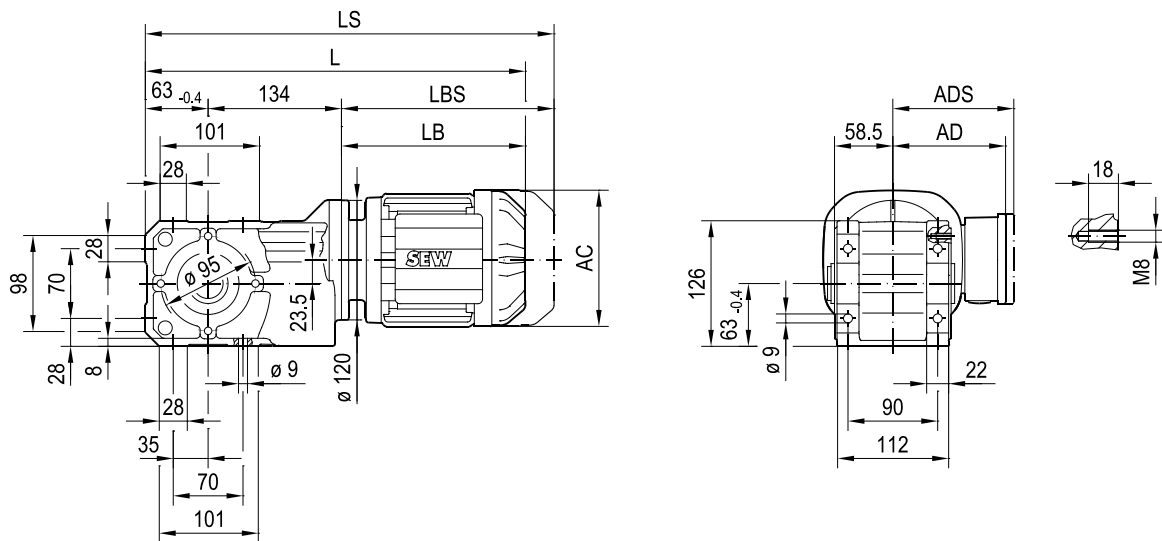
### K29..



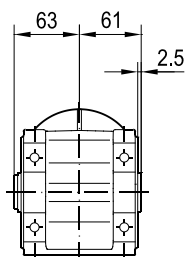
(> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	387	401	403	423	434	451	479	480	512	511	561
LS	443	457	470	490	515	532	560	574	606	605	655
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

33 364 01 15

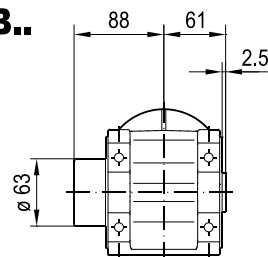
**KA29B..**



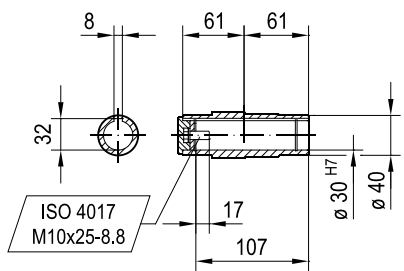
**KA29B..**



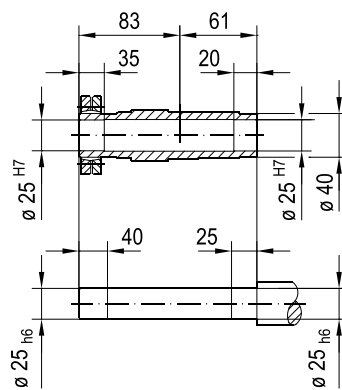
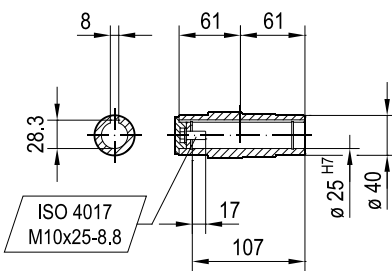
**KH29B..**



**ø 30 H7  
DIN 6885-3**



**ø 25 H7**

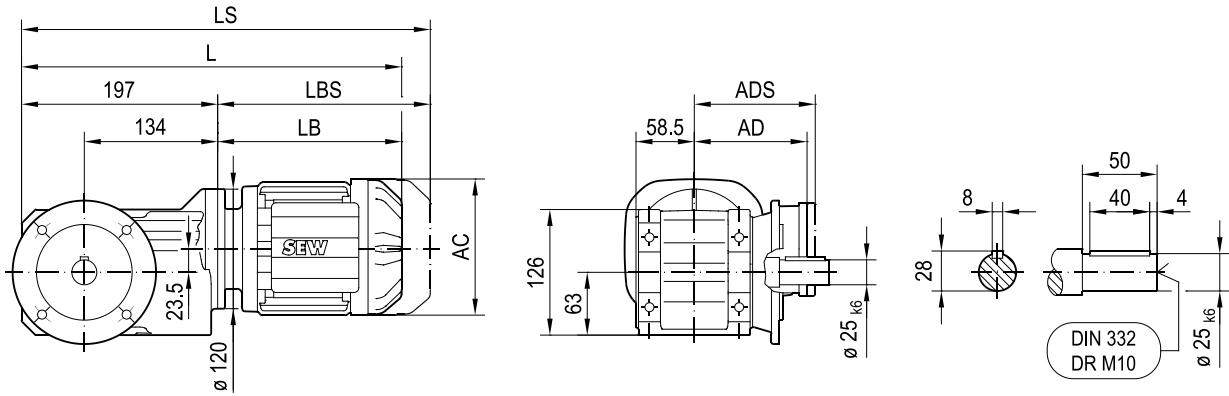


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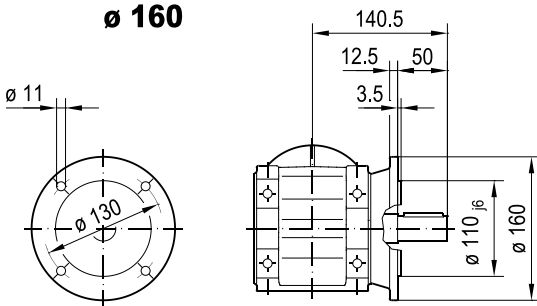
(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	387	401	403	423	434	451	479	480	512	511	561
LS	443	457	470	490	515	532	560	574	606	605	655
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

33 016 00 15

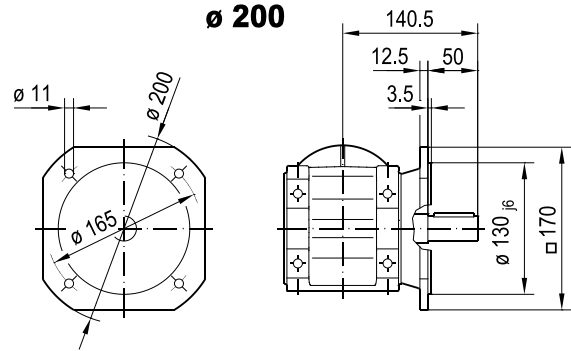
### KF29B..



#### $\varnothing 160$

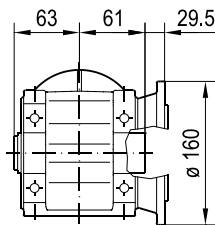


#### $\varnothing 200$

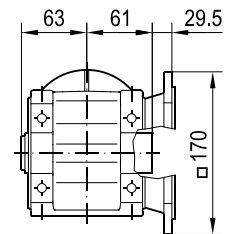


### KAF29B..

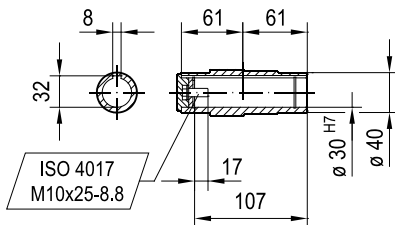
#### $\varnothing 160$



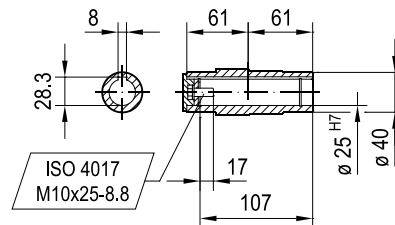
#### $\varnothing 200$



#### $\varnothing 30_{H7}$ DIN 6885-3



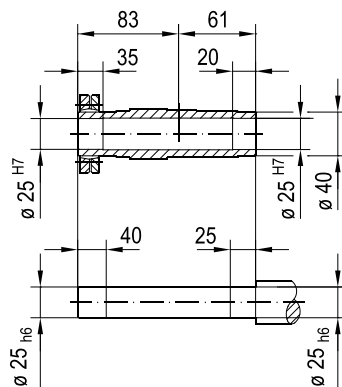
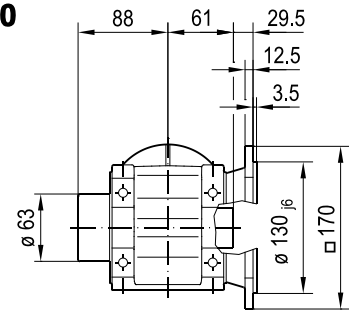
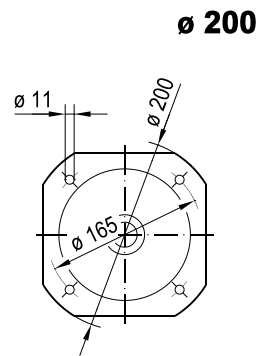
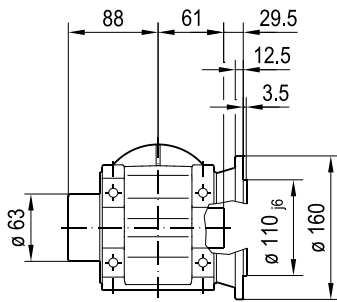
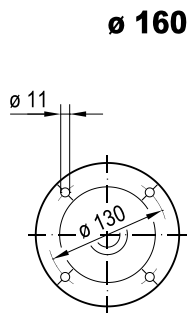
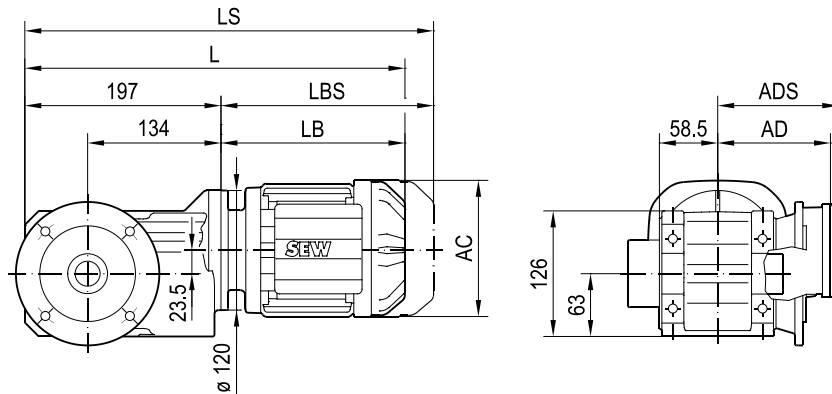
#### $\varnothing 25_{H7}$



( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	387	401	403	423	434	451	479	480	512	511	561
LS	443	457	470	490	515	532	560	574	606	605	655
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

**KHF29B..**

33 017 01 15

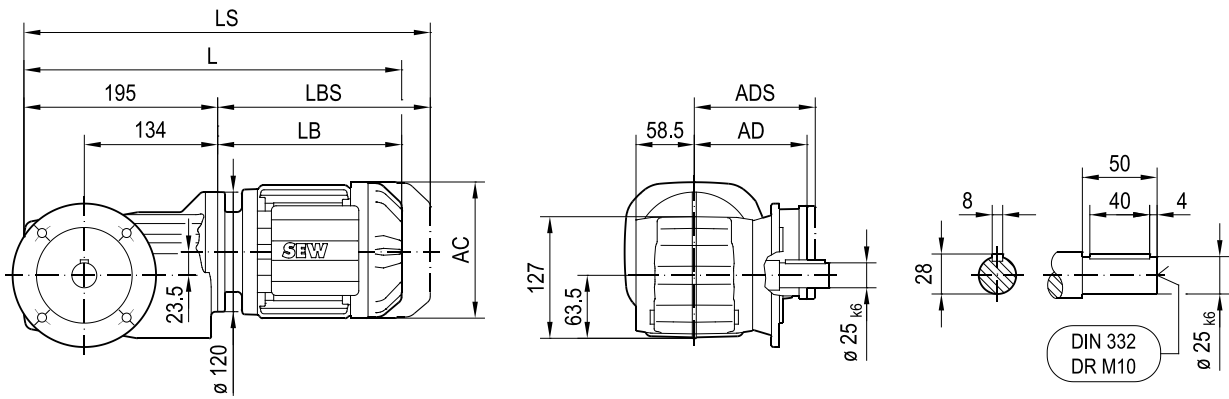


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	387	401	403	423	434	451	479	480	512	511	561
LS	443	457	470	490	515	532	560	574	606	605	655
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

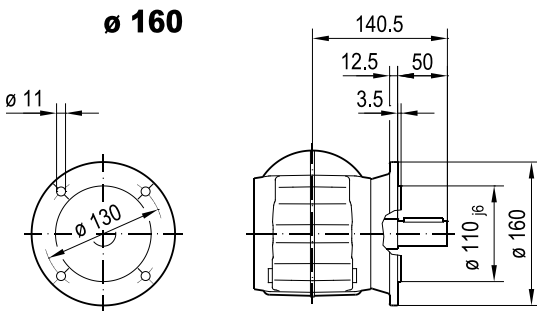
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33 018 00 15

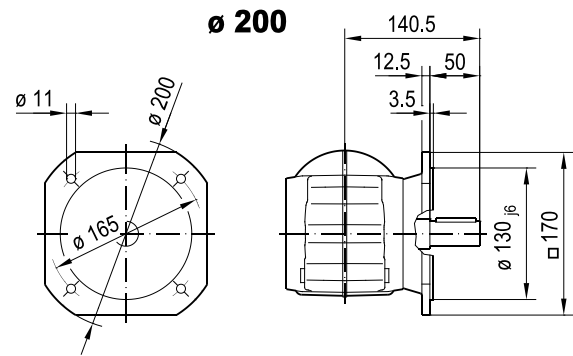
### KF29..



#### ø 160

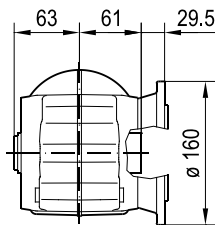


#### ø 200

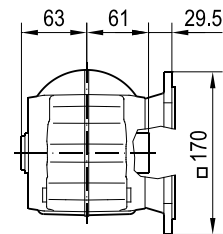


### KAF29..

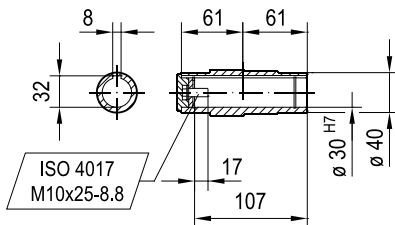
#### ø 160



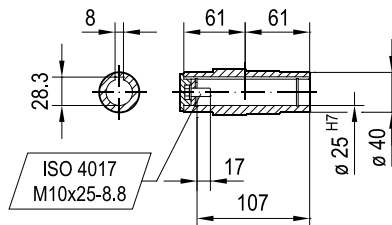
#### ø 200



#### ø 30 H7 DIN 6885-3



#### ø 25 H7

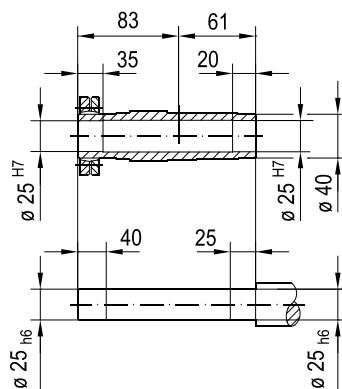
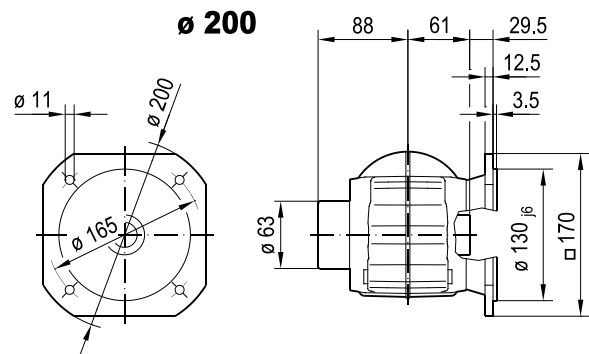
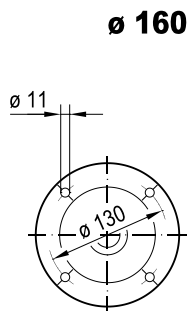
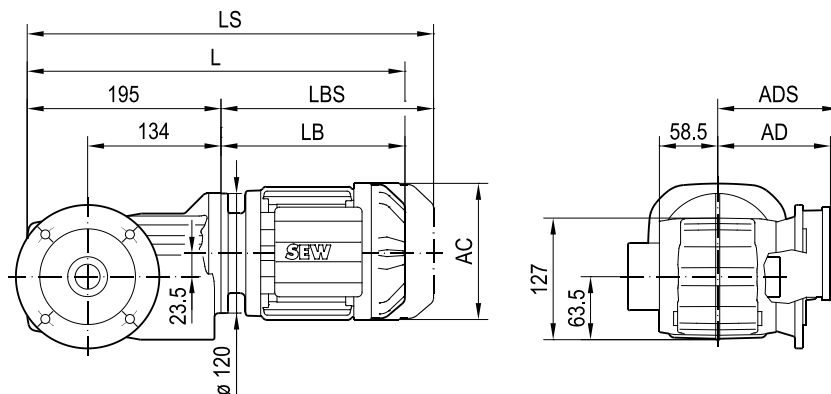


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	385	399	401	421	432	449	477	478	510	509	559
LS	441	455	468	488	513	530	558	572	604	603	653
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458



**KHF29..**

33 019 01 15

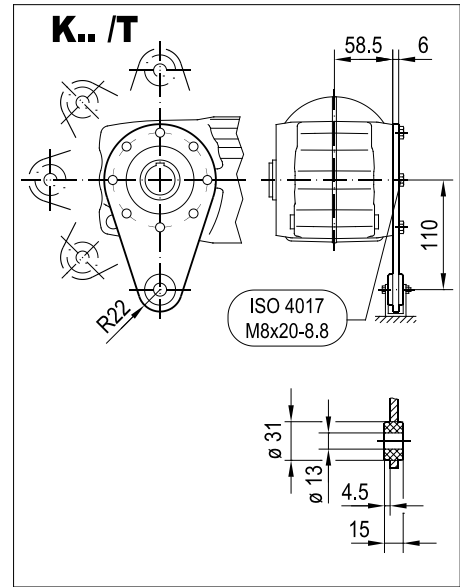
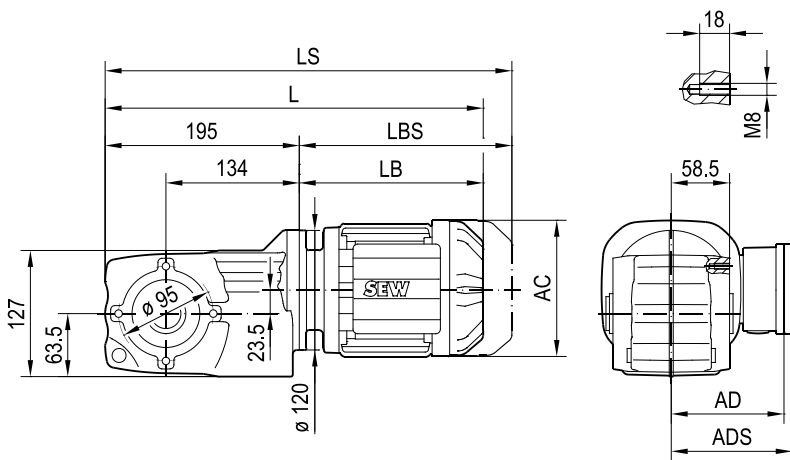


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	385	399	401	421	432	449	477	478	510	509	559
LS	441	455	468	488	513	530	558	572	604	603	653
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

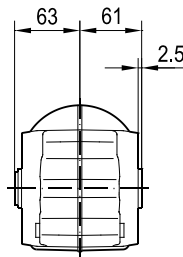
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33 020 02 15

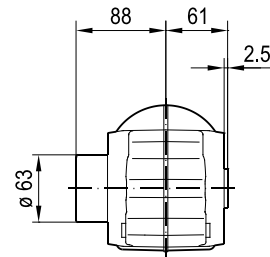
### KA29..



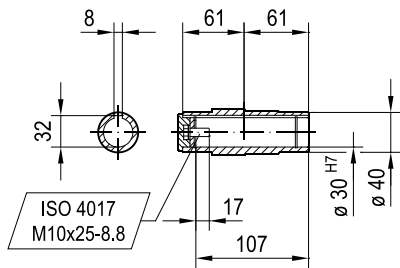
### KA29..



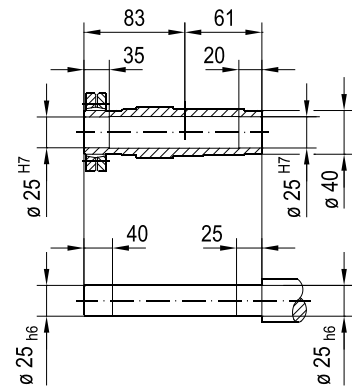
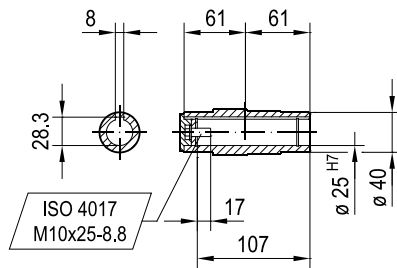
### KH29..



**ø 30 H7**  
DIN 6885-3



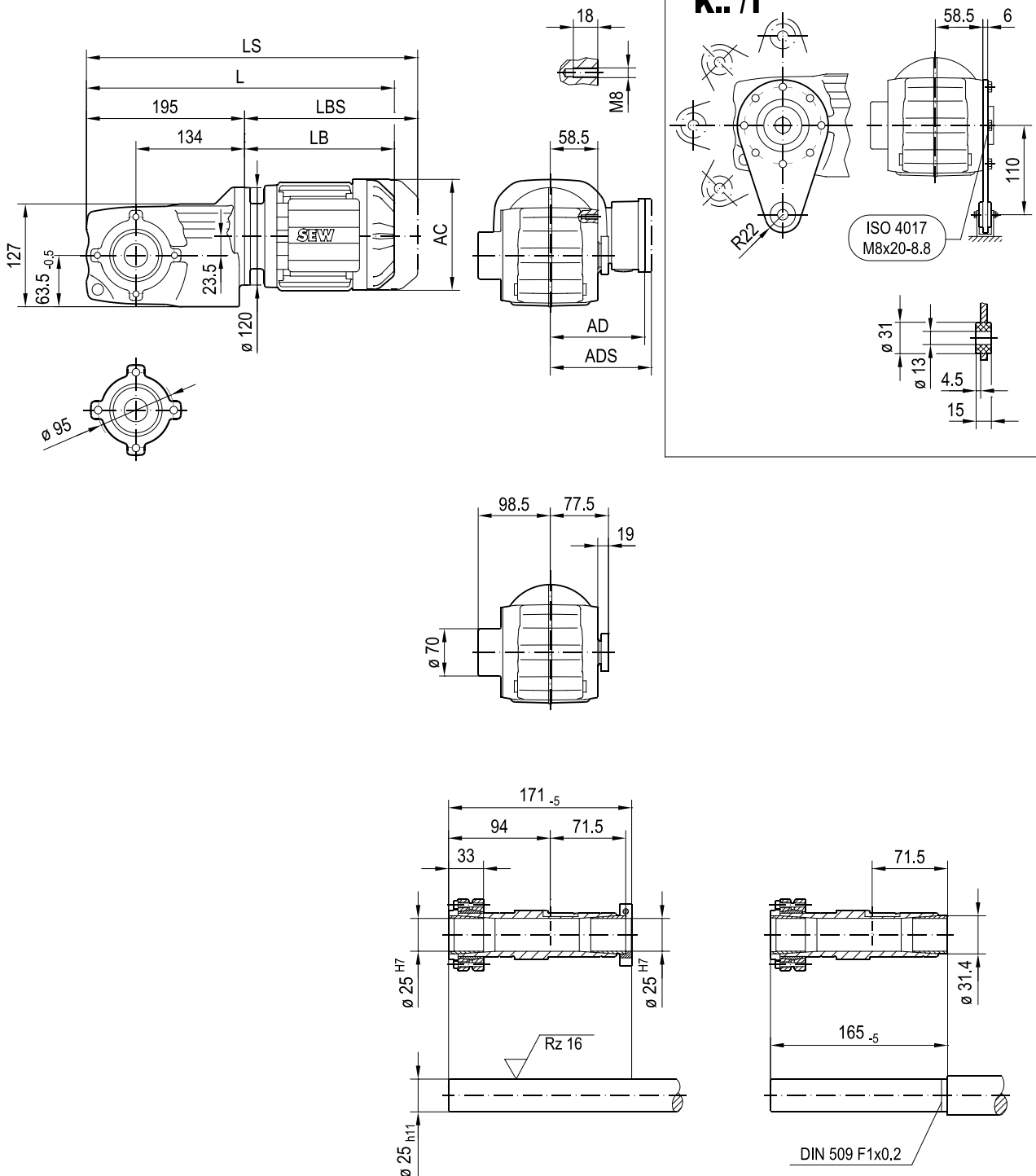
**ø 25 H7**



(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	385	399	401	421	432	449	477	478	510	509	559
LS	441	455	468	488	513	530	558	572	604	603	653
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

KT29..

33 105 01 21

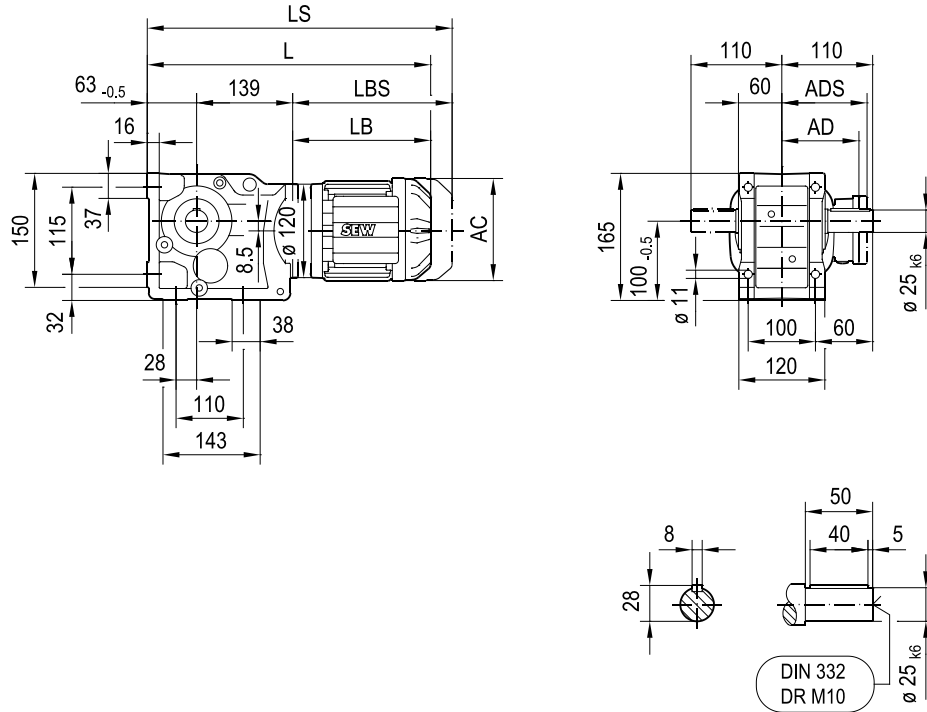


(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	385	399	401	421	432	449	477	478	510	509	559
LS	441	455	468	488	513	530	558	572	604	603	653
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

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33 037 00 14

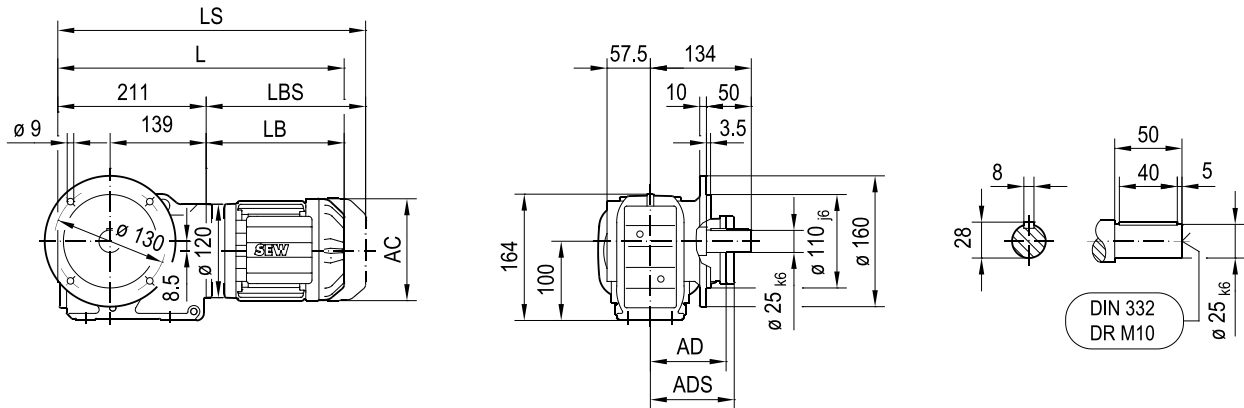
### K37..



(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	392	406	408	428	439	456	484	485	517	516	566
LS	448	462	475	495	520	537	565	579	611	610	660
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

**KF37..**

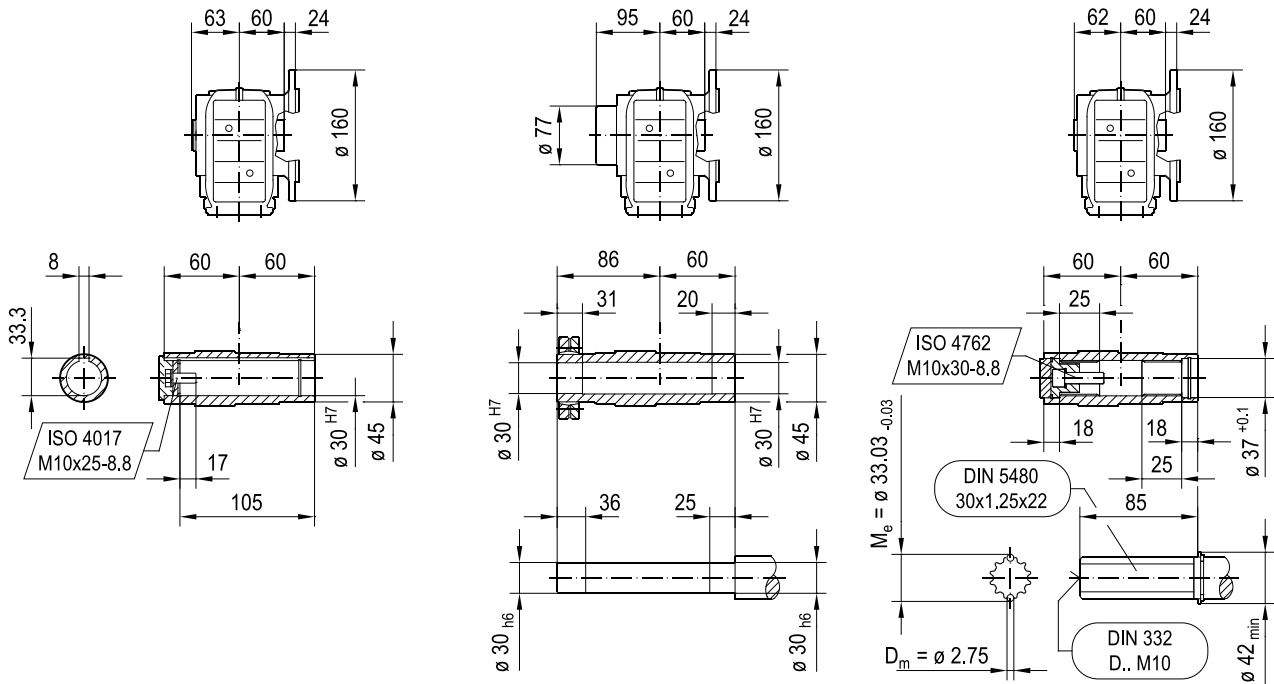
33 038 00 14



**KAF37..**

**KHF37..**

**KVF37..**

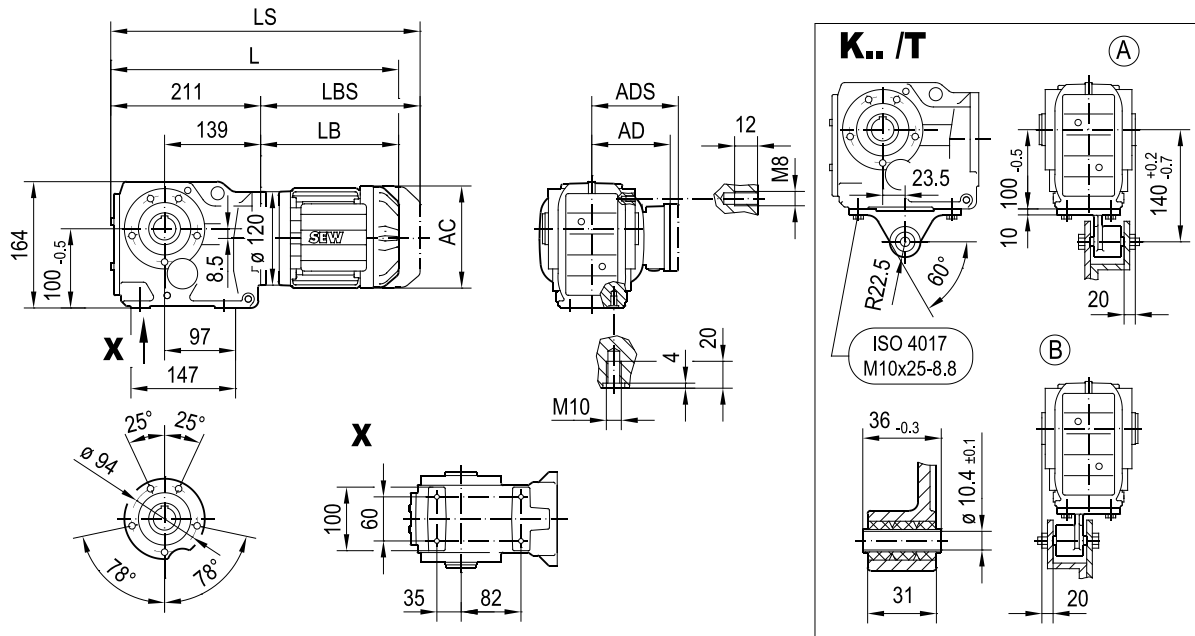


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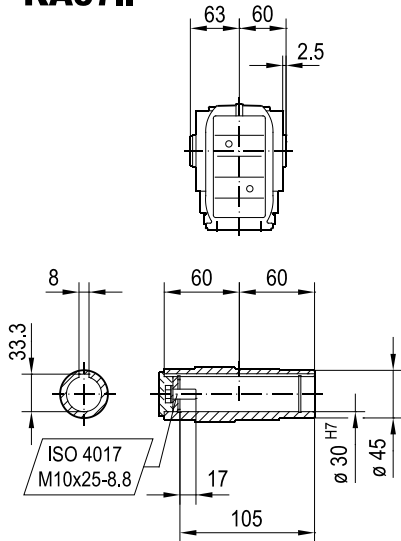
( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	401	415	417	437	448	465	493	494	526	525	575
LS	457	471	484	504	529	546	574	588	620	619	669
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

33 039 00 14

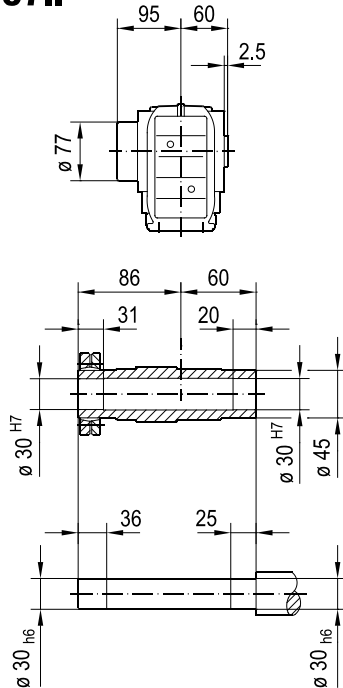
### KA37..



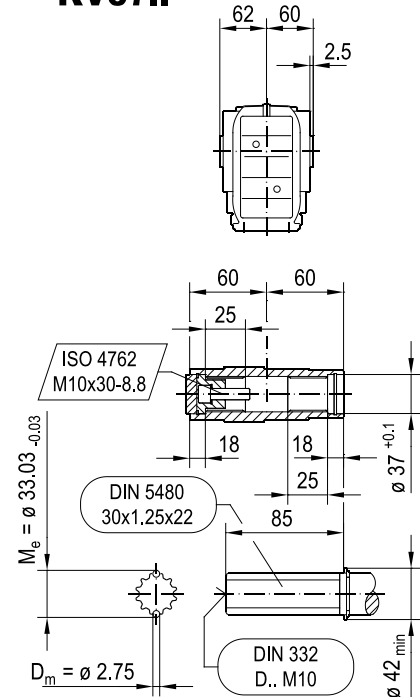
### KA37..



### KH37..



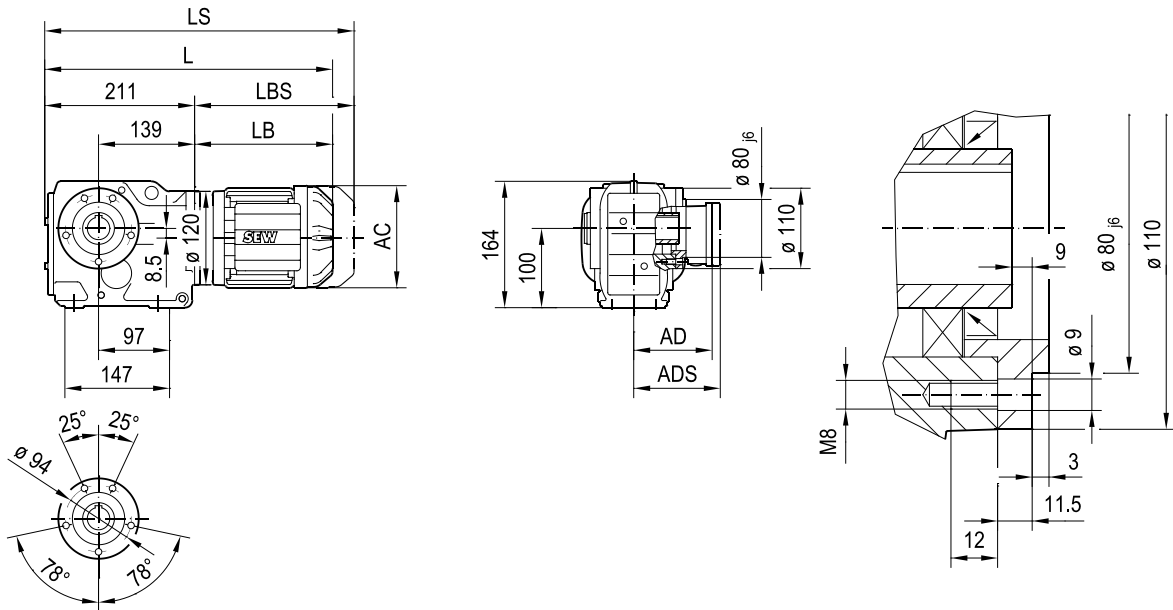
### KV37..



(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	401	415	417	437	448	465	493	494	526	525	575
LS	457	471	484	504	529	546	574	588	620	619	669
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

**KAZ37..**

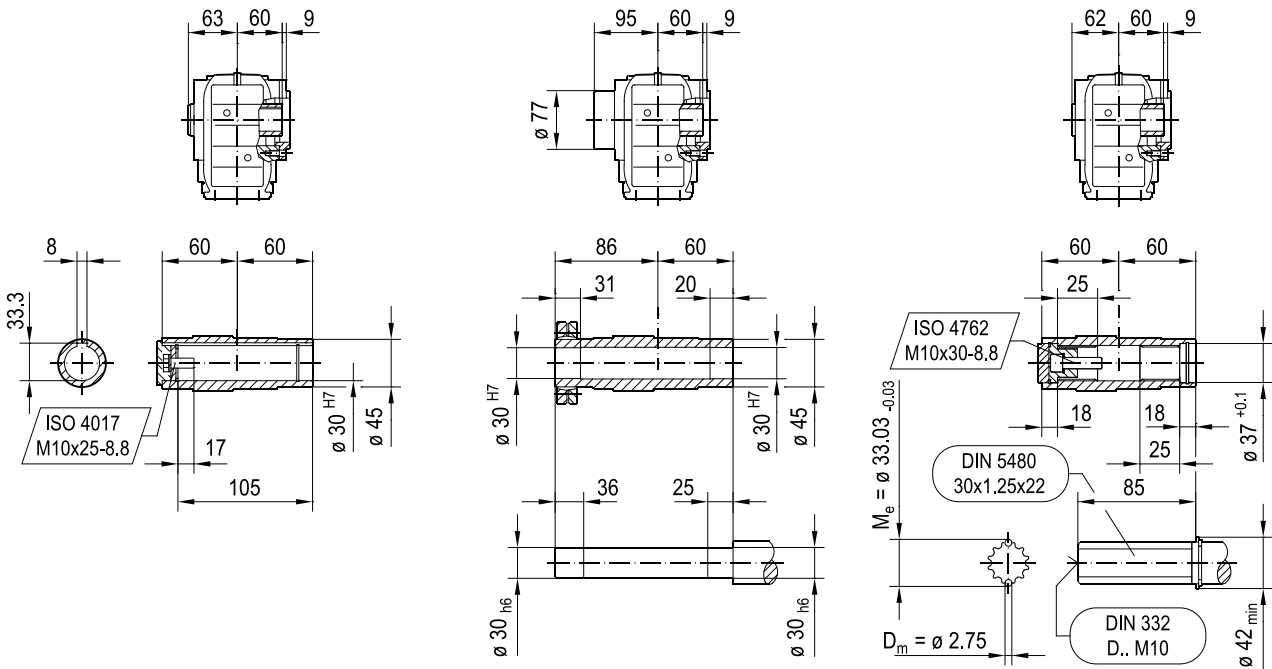
33 040 00 14



**KAZ37..**

**KHZ37..**

**KVZ37..**

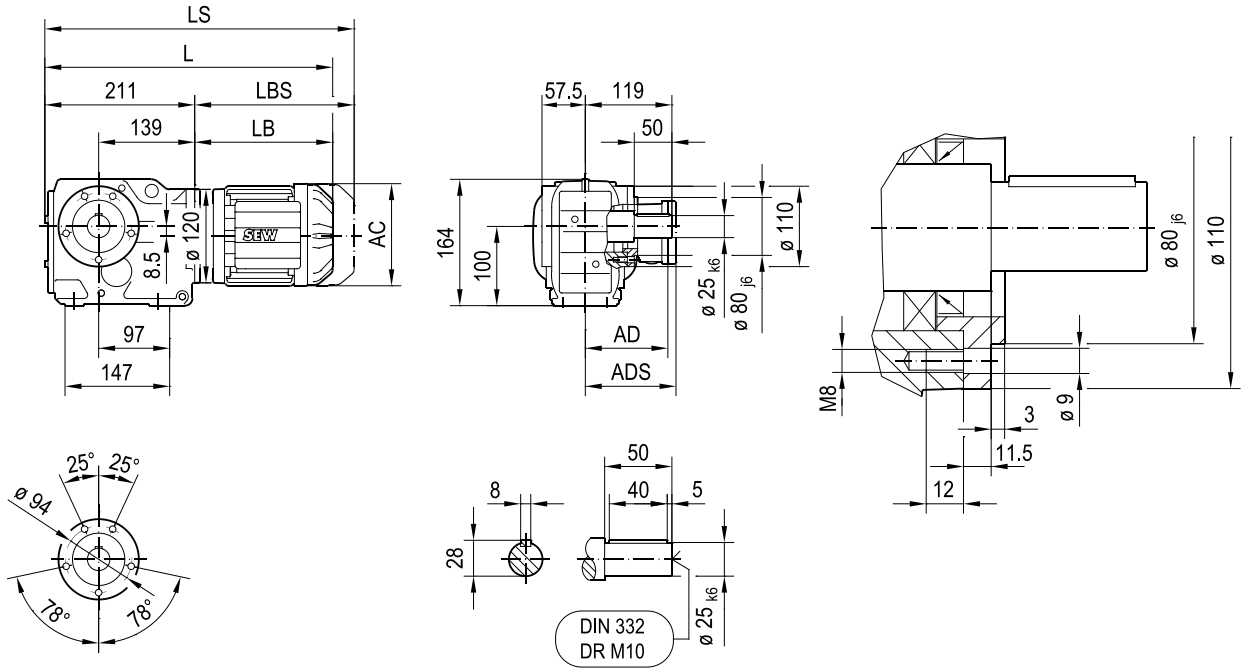


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	401	415	417	437	448	465	493	494	526	525	575
LS	457	471	484	504	529	546	574	588	620	619	669
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

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33 232 00 15

### KZ37..

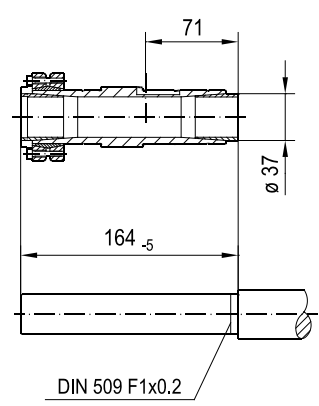
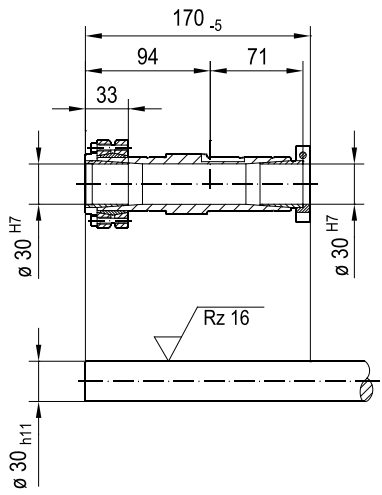
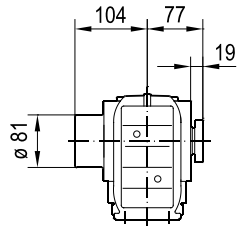
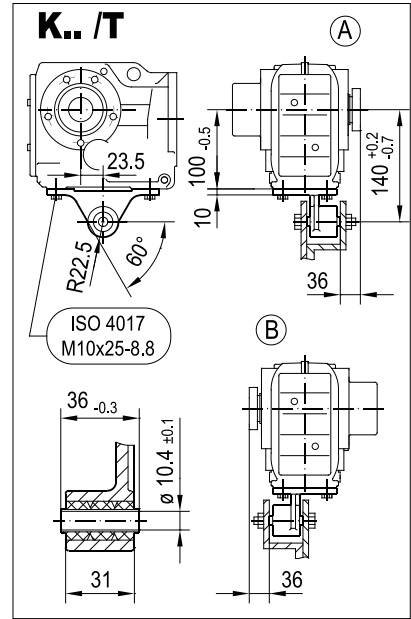
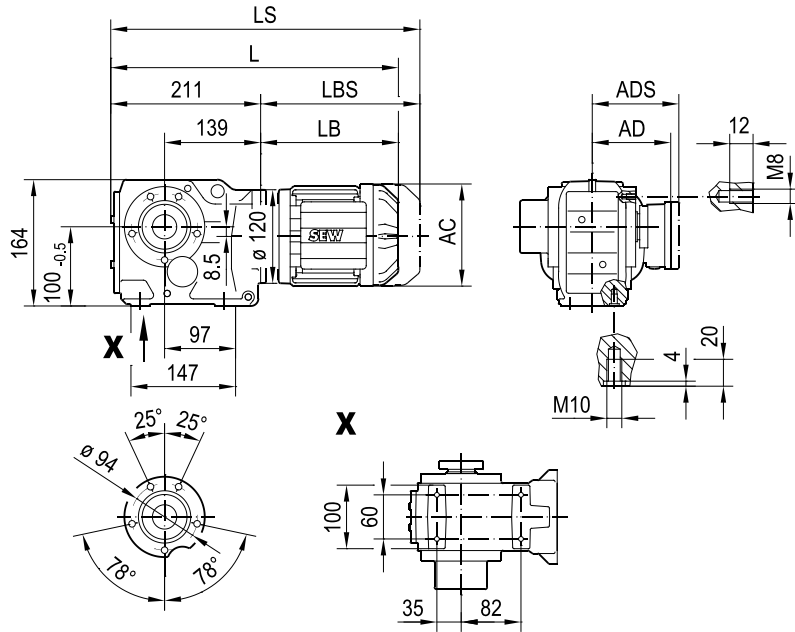


(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	401	415	417	437	448	465	493	494	526	525	575
LS	457	471	484	504	529	546	574	588	620	619	669
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458



**KT37..**

**33 041 01 14**

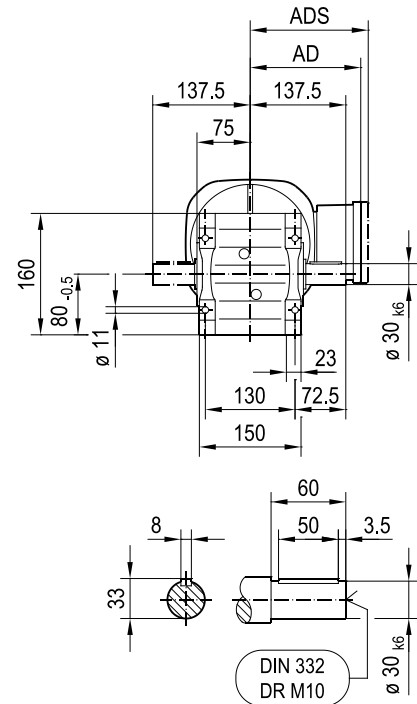
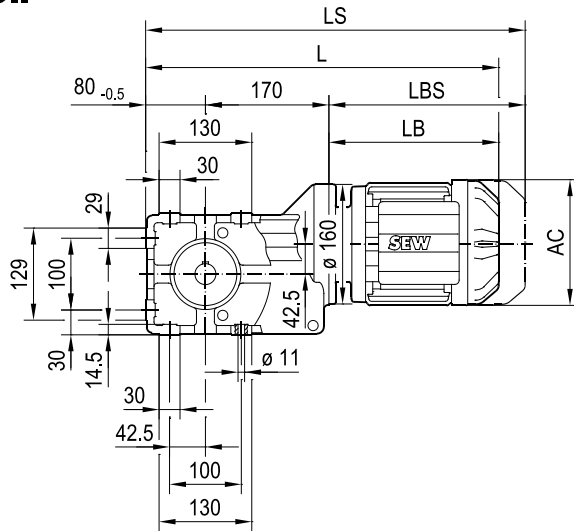


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	401	415	417	437	448	465	493	494	526	525	575
LS	457	471	484	504	529	546	574	588	620	619	669
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

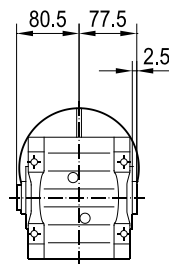
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33 021 02 14

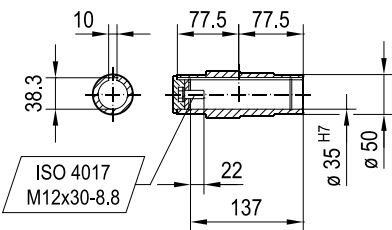
### K39..



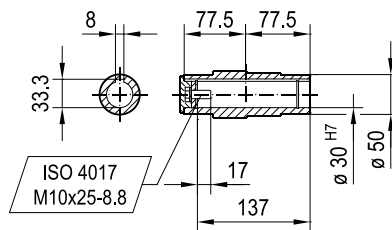
### KA39B..



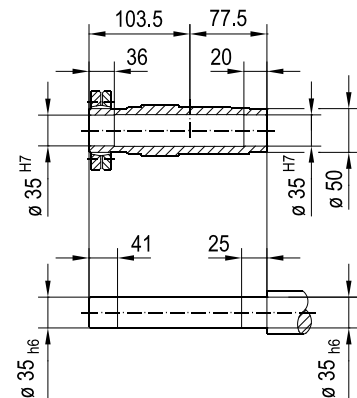
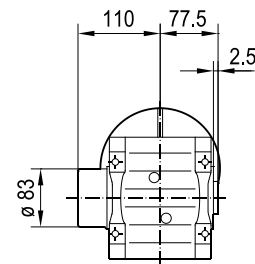
Ø 35 H7



Ø 30 H7



### KH39B..

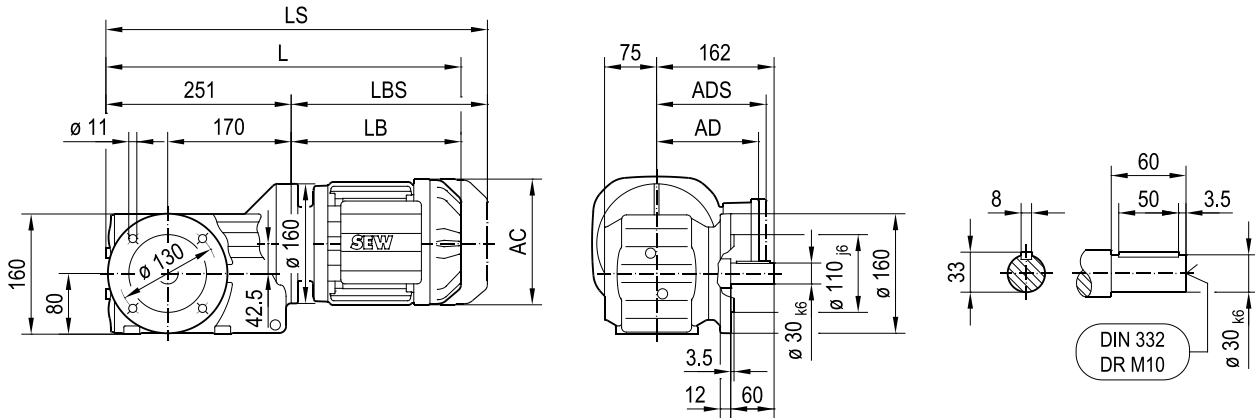


(-> 7.3)	DRN										
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M
AC	115	139	139	156	156	156	179	179	197	197	221
AD	98	118	118	128	128	128	140	140	157	157	170
ADS	98	129	129	139	139	139	150	150	158	158	172
L	448	449	469	480	497	525	527	559	555	605	636
LS	504	517	537	561	578	606	620	652	649	699	748
LB	198	199	219	230	247	275	277	309	305	355	386
LBS	254	267	287	311	328	356	370	402	399	449	498

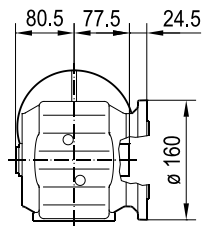
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33 022 01 14

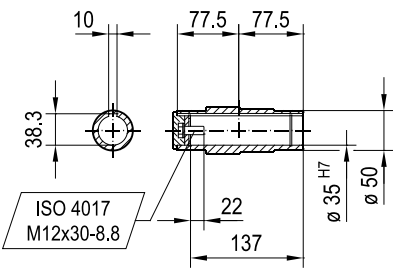
**KF39..**



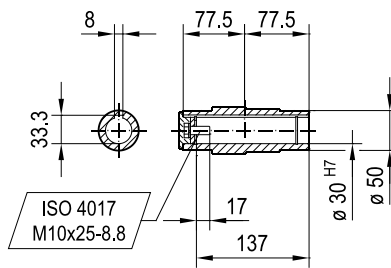
**KAF39..**



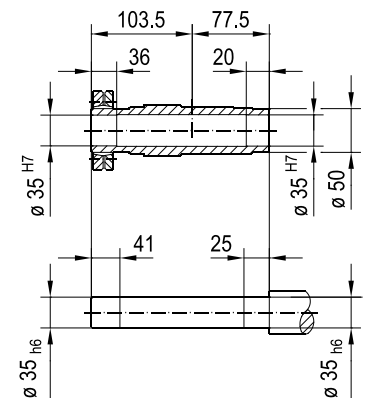
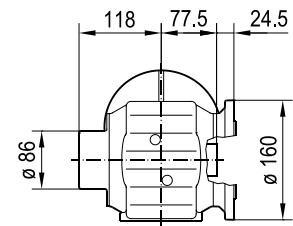
$\phi 35_{H7}$



$\phi 30_{H7}$



**KHF39..**

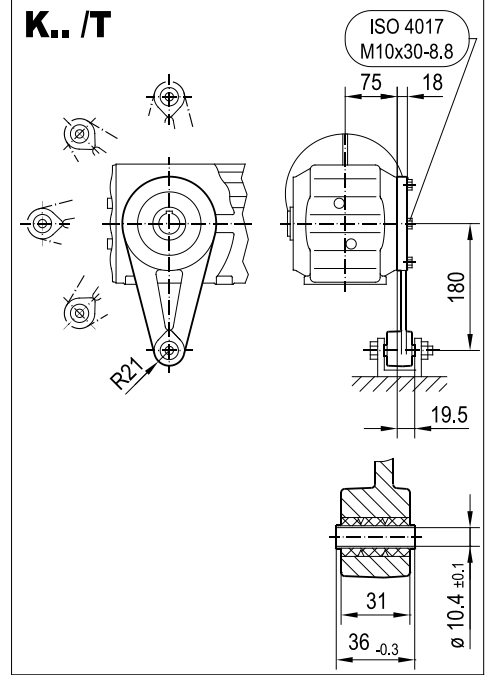
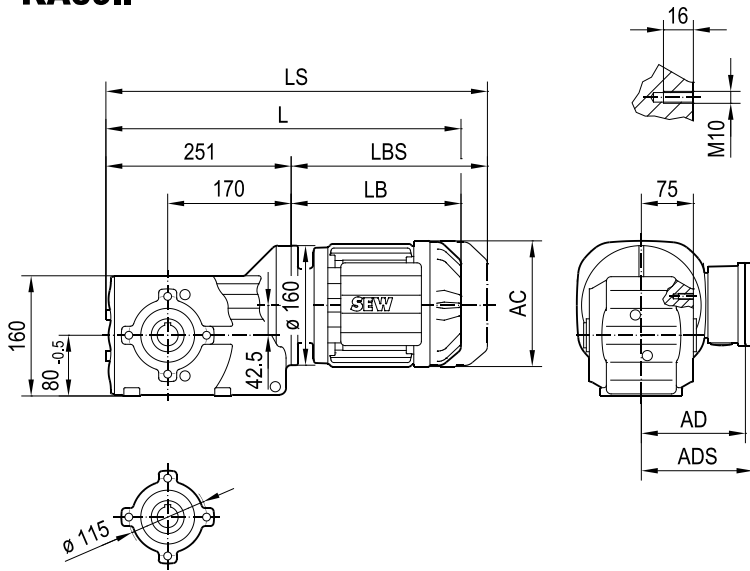


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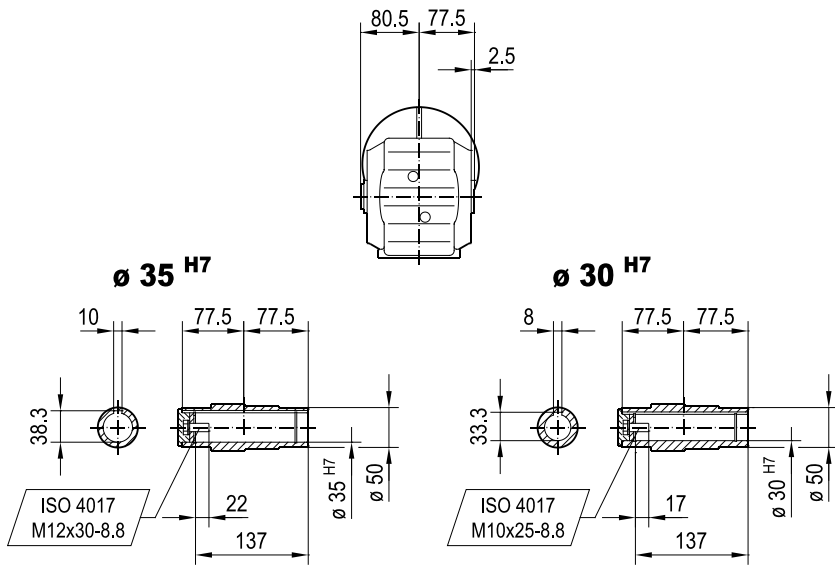
( $\rightarrow$ 7.3)	DRN										
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M
AC	115	139	139	156	156	156	179	179	197	197	221
AD	98	118	118	128	128	128	140	140	157	157	170
ADS	98	129	129	139	139	139	150	150	158	158	172
L	449	450	470	481	498	526	528	560	556	606	637
LS	505	518	538	562	579	607	621	653	650	700	749
LB	198	199	219	230	247	275	277	309	305	355	386
LBS	254	267	287	311	328	356	370	402	399	449	498

33 023 01 14

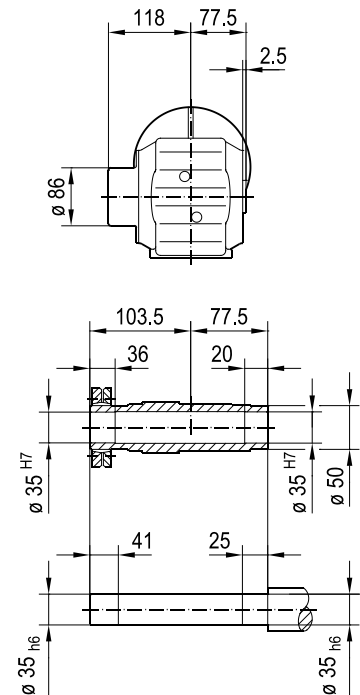
### KA39..



### KA39..



### KH39..

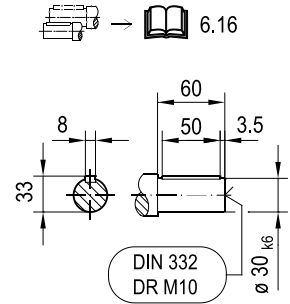
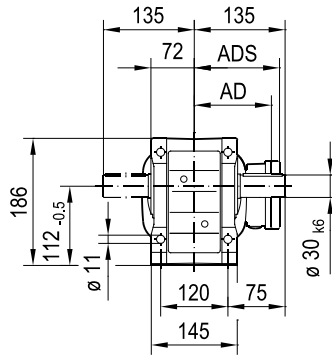
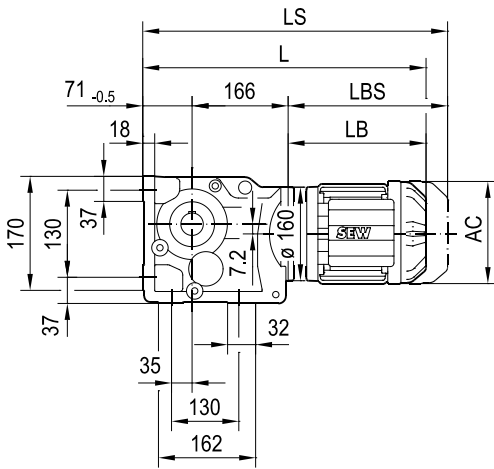


( $\rightarrow$ 7.3)	DRN										
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M
AC	115	139	139	156	156	156	179	179	197	197	221
AD	98	118	118	128	128	128	140	140	157	157	170
ADS	98	129	129	139	139	139	150	150	158	158	172
L	449	450	470	481	498	526	528	560	556	606	637
LS	505	518	538	562	579	607	621	653	650	700	749
LB	198	199	219	230	247	275	277	309	305	355	386
LBS	254	267	287	311	328	356	370	402	399	449	498

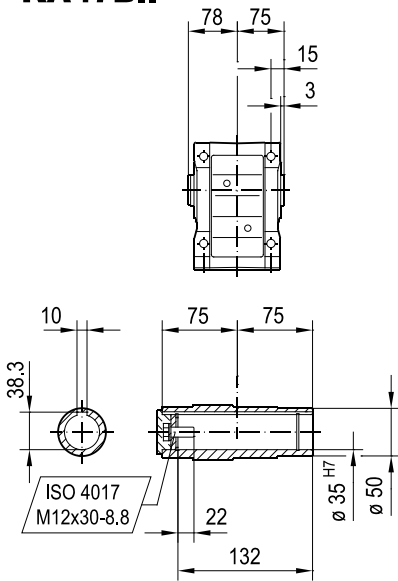


33 042 01 14

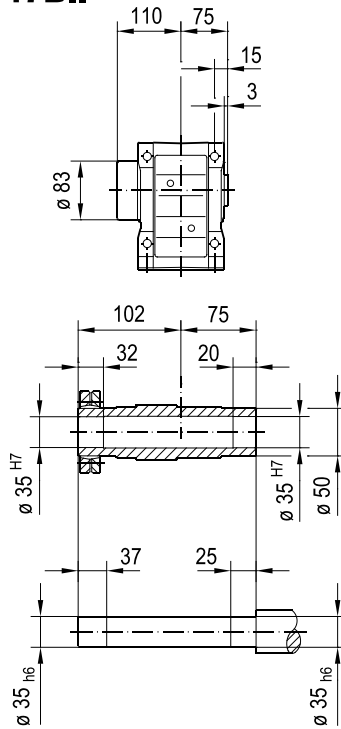
### K47..



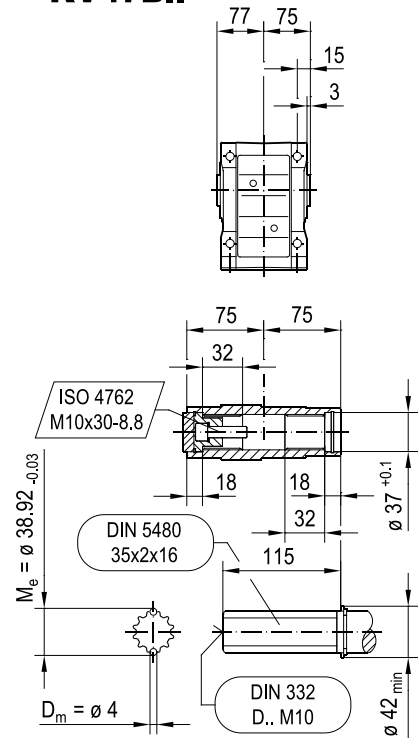
### KA47B..



### KH47B..



### KV47B..

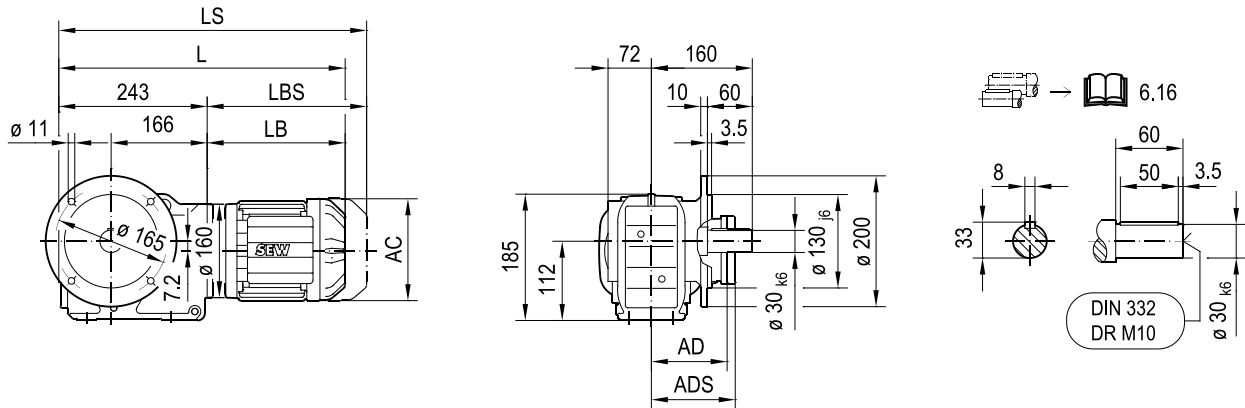


(\rightarrow 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	421	435	436	456	467	484	512	514	546	542	592
LS	477	491	504	524	548	565	593	607	639	636	686
LB	184	198	199	219	230	247	275	277	309	305	355
LBS	240	254	267	287	311	328	356	370	402	399	449

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**KF47..**

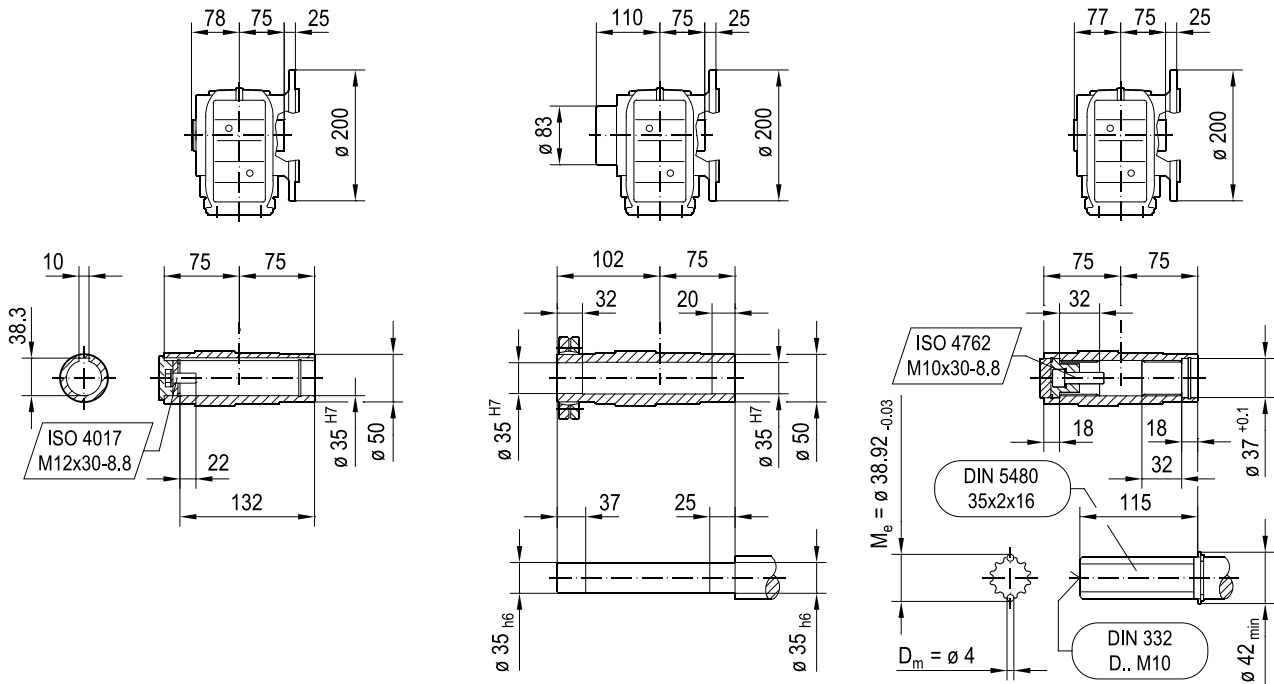
33 043 01 14



**KAF47..**

**KHF47..**

**KVF47..**

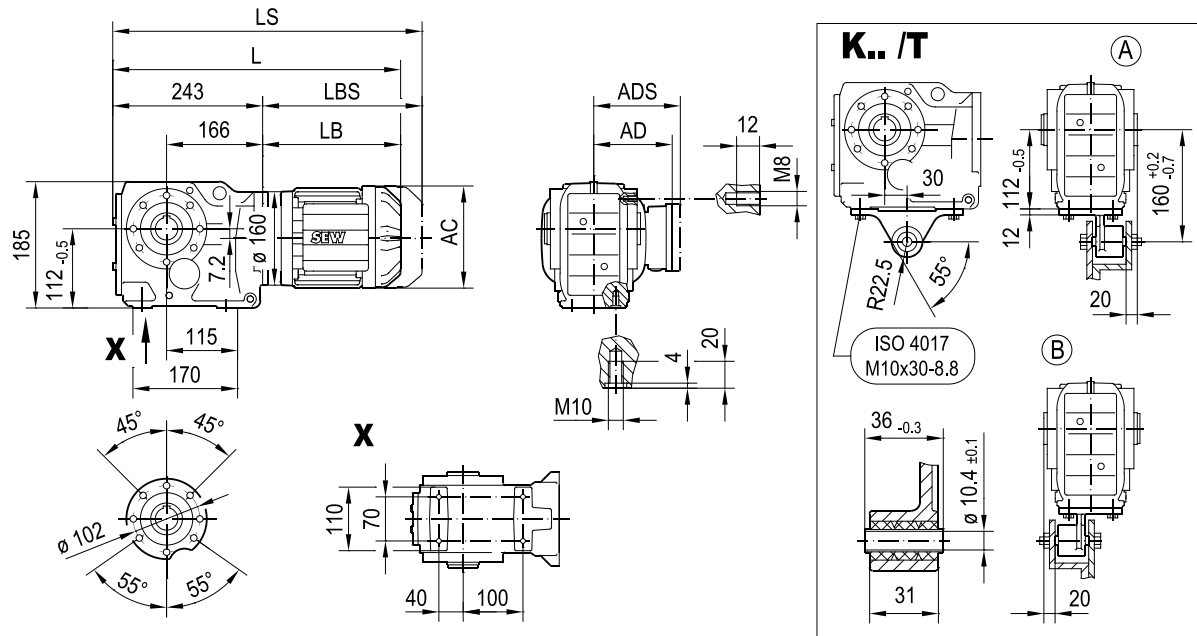


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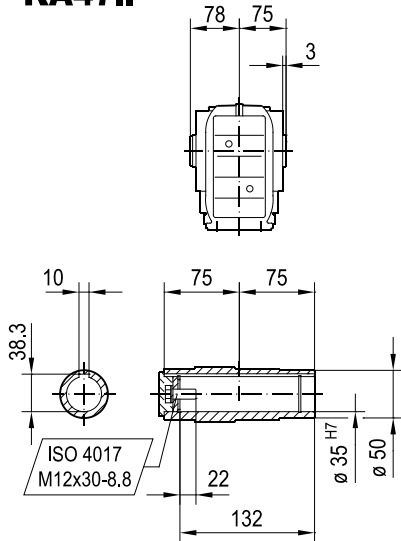
( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	427	441	442	462	473	490	518	520	552	548	598
LS	483	497	510	530	554	571	599	613	645	642	692
LB	184	198	199	219	230	247	275	277	309	305	355
LBS	240	254	267	287	311	328	356	370	402	399	449

33 044 00 14

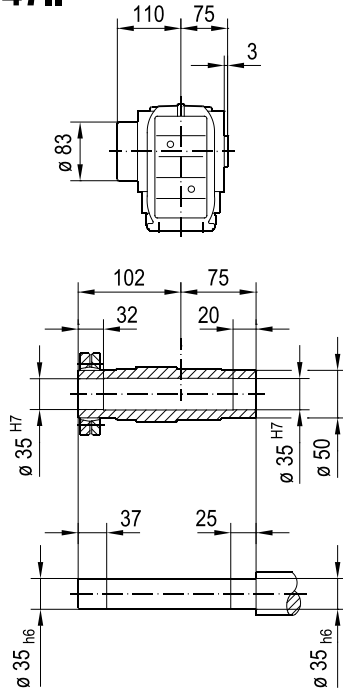
### KA47..



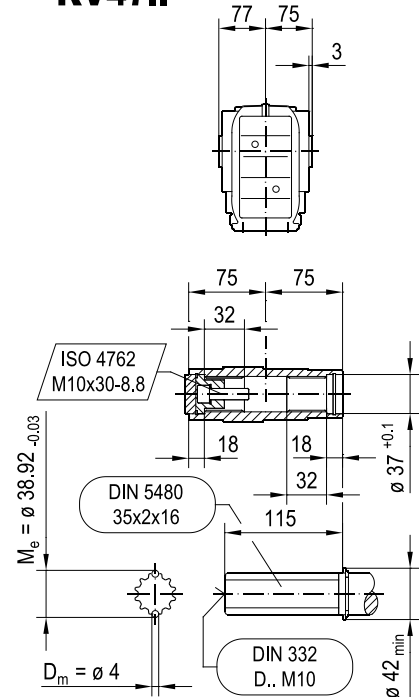
### KA47..



### KH47..



### KV47..



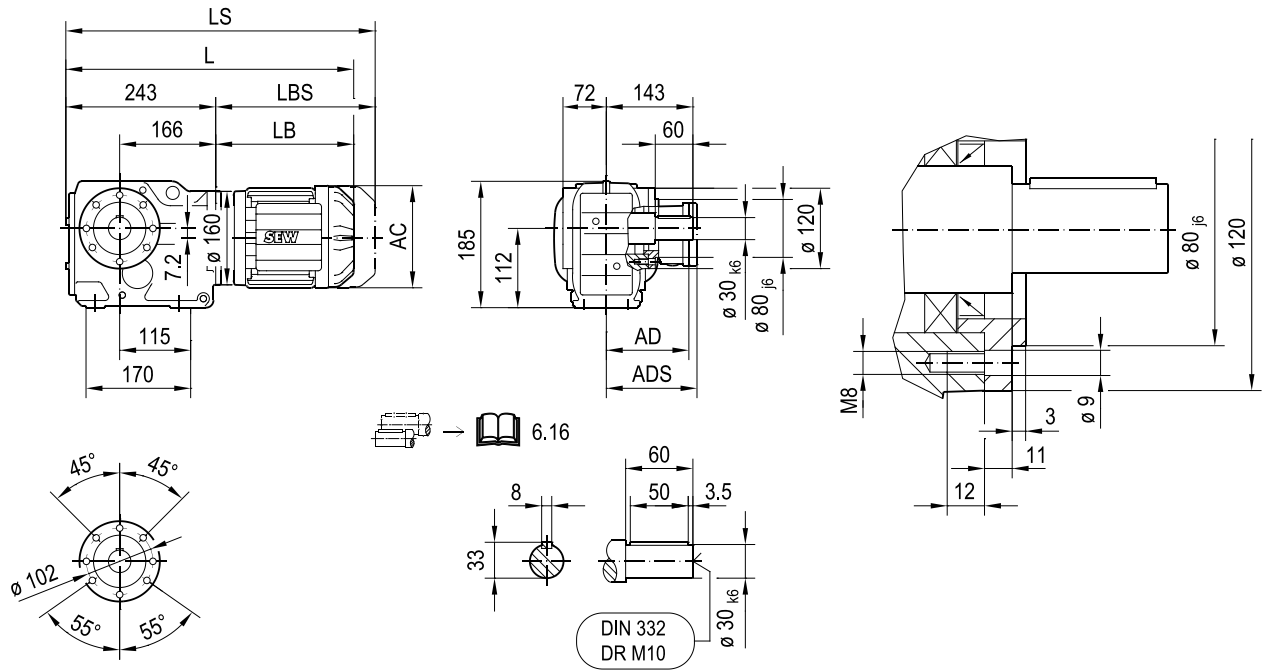
( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	427	441	442	462	473	490	518	520	552	548	598
LS	483	497	510	530	554	571	599	613	645	642	692
LB	184	198	199	219	230	247	275	277	309	305	355
LBS	240	254	267	287	311	328	356	370	402	399	449





33 233 01 15

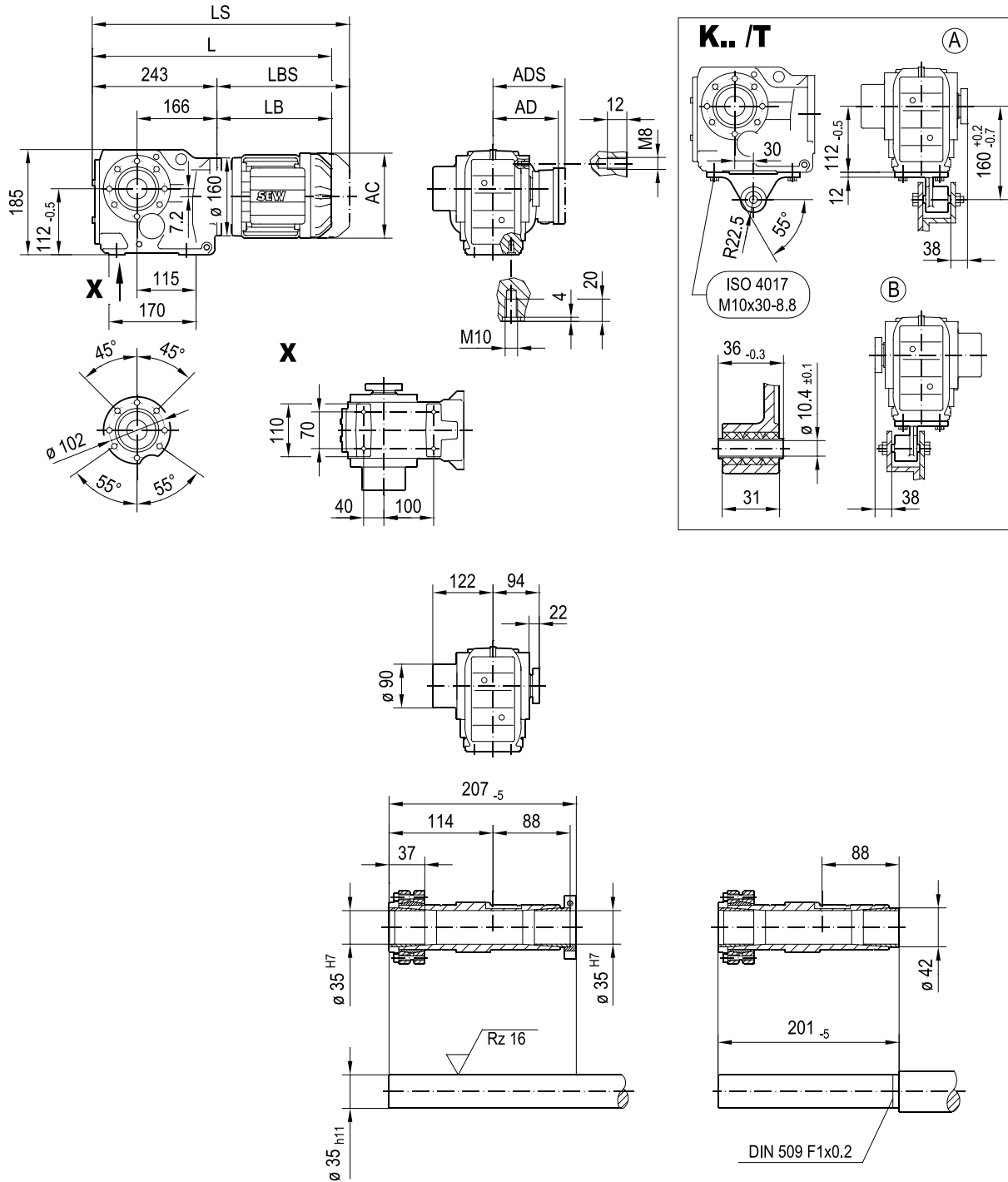
### KZ47..



(> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	427	441	442	462	473	490	518	520	552	548	598
LS	483	497	510	530	554	571	599	613	645	642	692
LB	184	198	199	219	230	247	275	277	309	305	355
LBS	240	254	267	287	311	328	356	370	402	399	449

KT47..

33 046 01 14

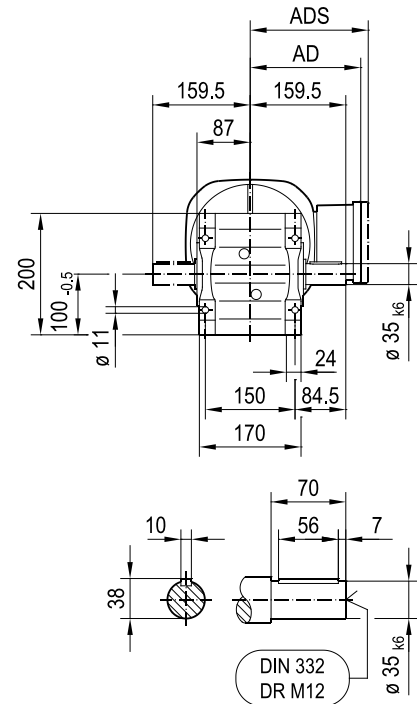
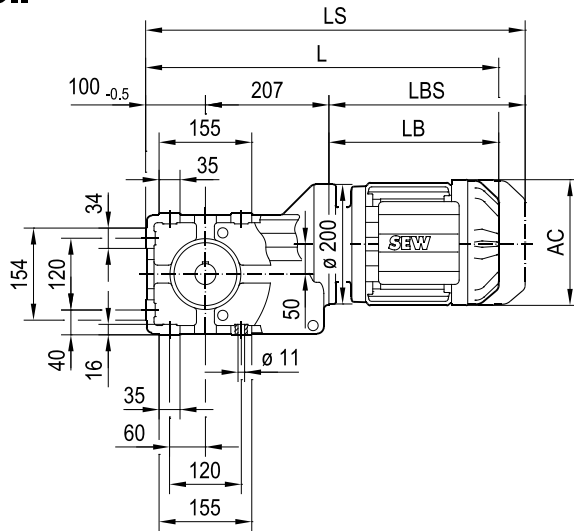


(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	427	441	442	462	473	490	518	520	552	548	598
LS	483	497	510	530	554	571	599	613	645	642	692
LB	184	198	199	219	230	247	275	277	309	305	355
LBS	240	254	267	287	311	328	356	370	402	399	449

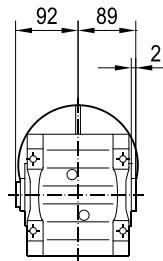
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33 025 02 14

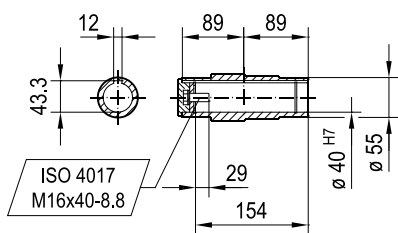
### K49..



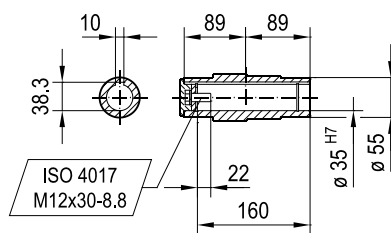
### KA49B..



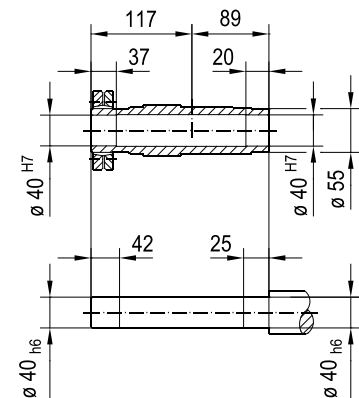
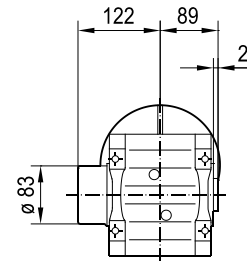
ø 40 H7



ø 35 H7



### KH49B..

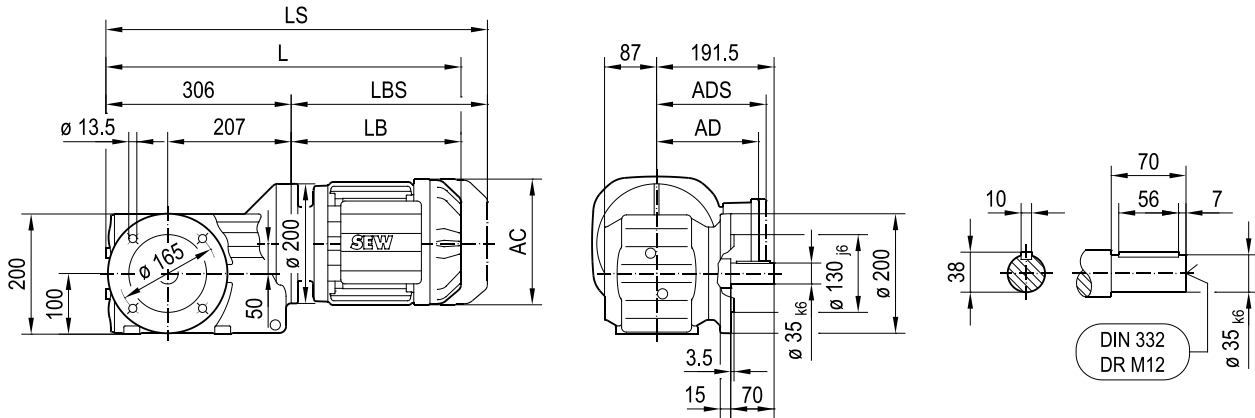


(-> 7.3)	DRN											
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	139	139	156	156	156	179	179	197	197	221	221	261
AD	118	118	128	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	139	150	150	158	158	172	172	228
L	499	519	530	547	575	577	609	605	655	686	736	754
LS	567	587	611	628	656	670	702	699	749	798	848	892
LB	192	212	223	240	268	270	302	298	348	379	429	447
LBS	260	280	304	321	349	363	395	392	442	491	541	585

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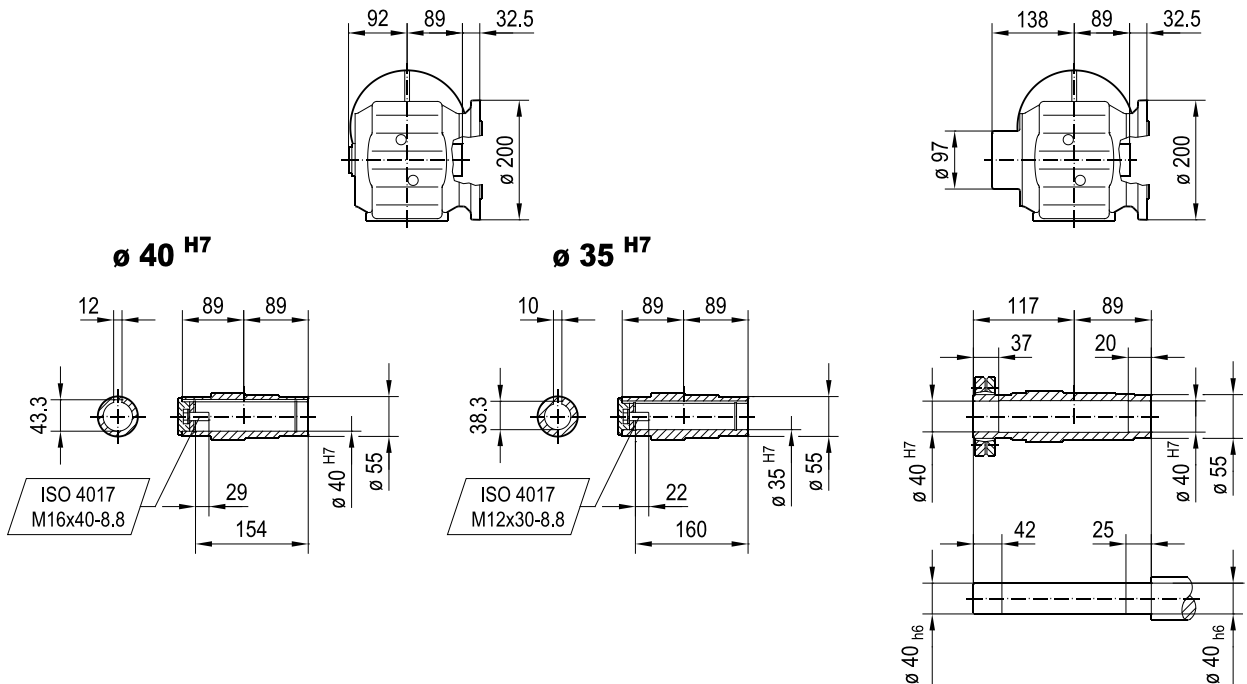
33 026 02 14

**KF49..**



**KAF49..**

**KHF49..**

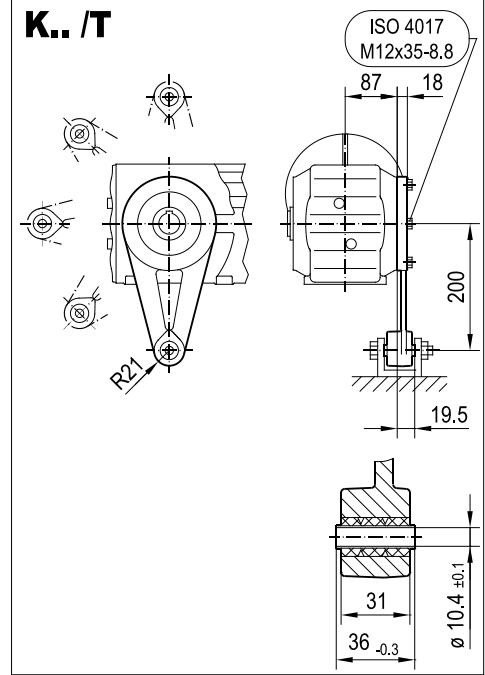
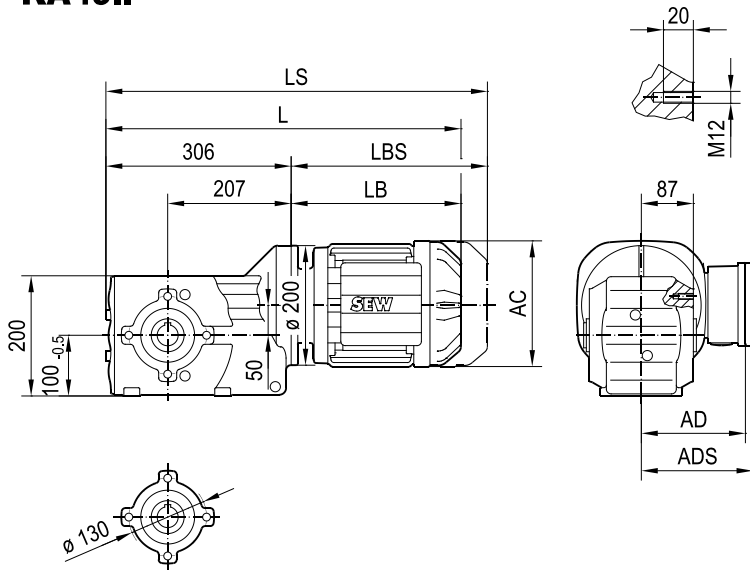


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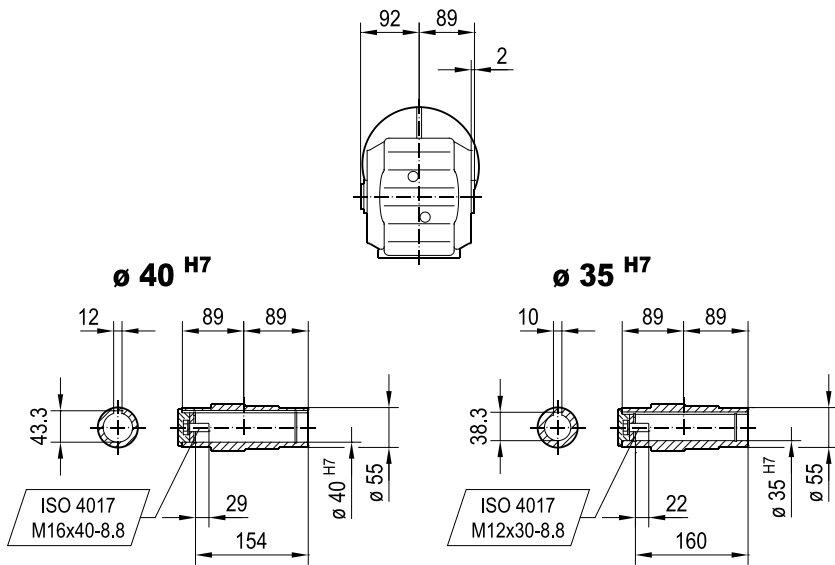
( $\rightarrow$ 7.3)	DRN											
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	139	139	156	156	156	179	179	197	197	221	221	261
AD	118	118	128	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	139	150	150	158	158	172	172	228
L	498	518	529	546	574	576	608	604	654	685	735	753
LS	566	586	610	627	655	669	701	698	748	797	847	891
LB	192	212	223	240	268	270	302	298	348	379	429	447
LBS	260	280	304	321	349	363	395	392	442	491	541	585

33 027 02 14

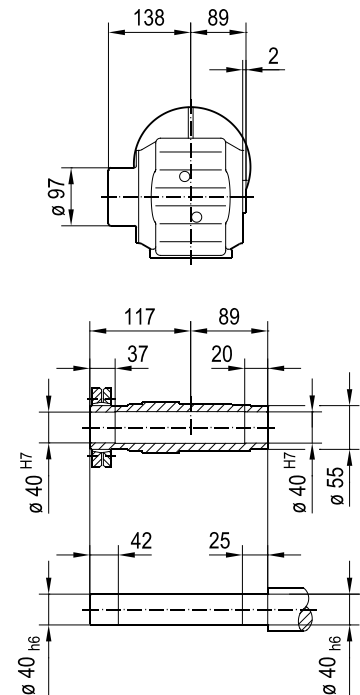
### KA49..



### KA49..



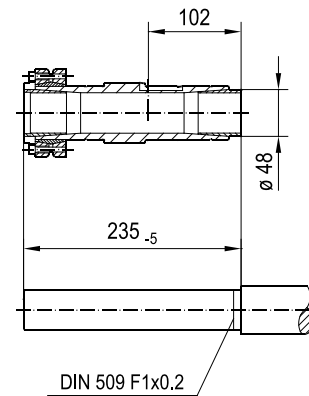
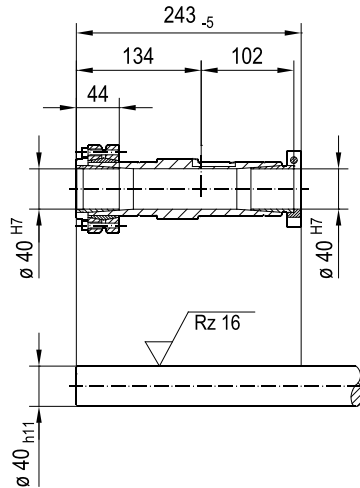
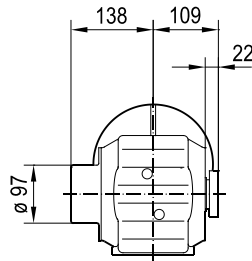
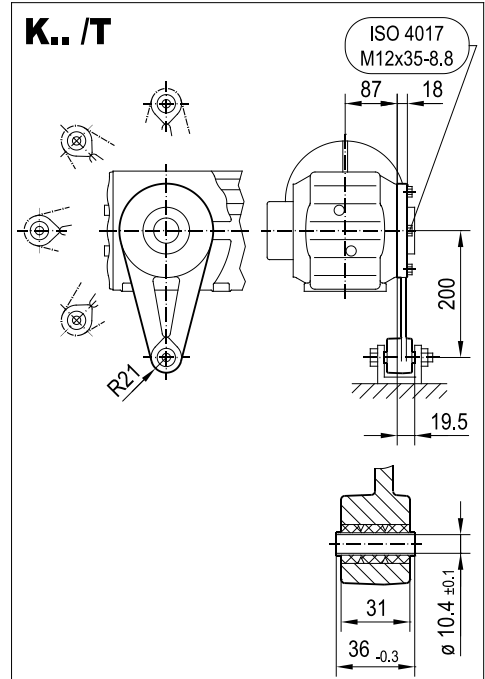
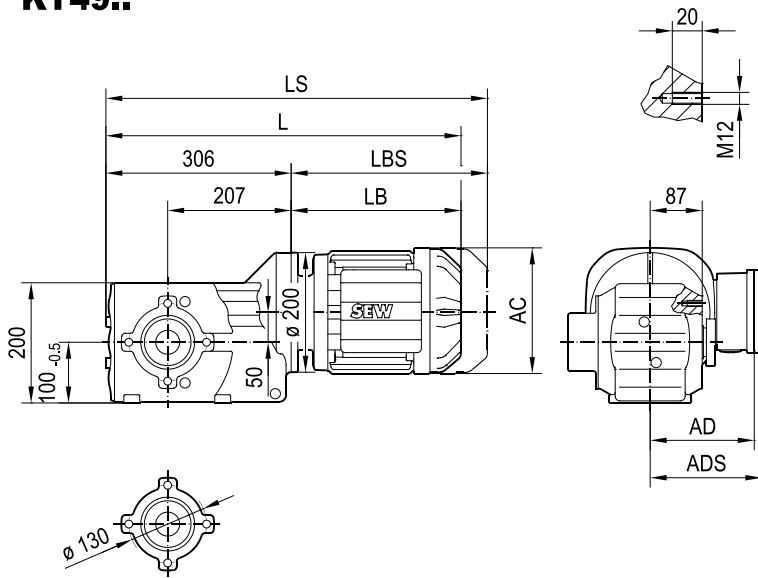
### KH49..



(-> 7.3)	DRN											
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	139	139	156	156	156	179	179	197	197	221	221	261
AD	118	118	128	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	139	150	150	158	158	172	172	228
L	498	518	529	546	574	576	608	604	654	685	735	753
LS	566	586	610	627	655	669	701	698	748	797	847	891
LB	192	212	223	240	268	270	302	298	348	379	429	447
LBS	260	280	304	321	349	363	395	392	442	491	541	585

KT49..

33 028 02 14

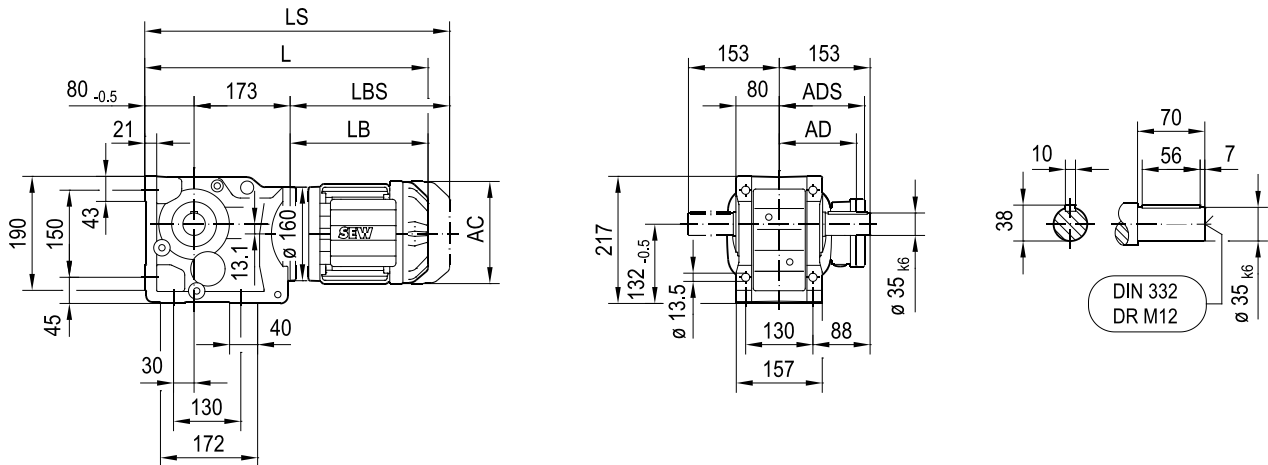


(-> 7.3)	DRN											
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	139	139	156	156	156	179	179	197	197	221	221	261
AD	118	118	128	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	139	150	150	158	158	172	172	228
L	498	518	529	546	574	576	608	604	654	685	735	753
LS	566	586	610	627	655	669	701	698	748	797	847	891
LB	192	212	223	240	268	270	302	298	348	379	429	447
LBS	260	280	304	321	349	363	395	392	442	491	541	585

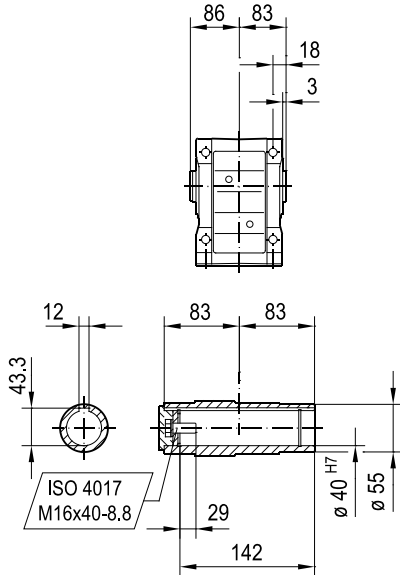
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33 047 00 14

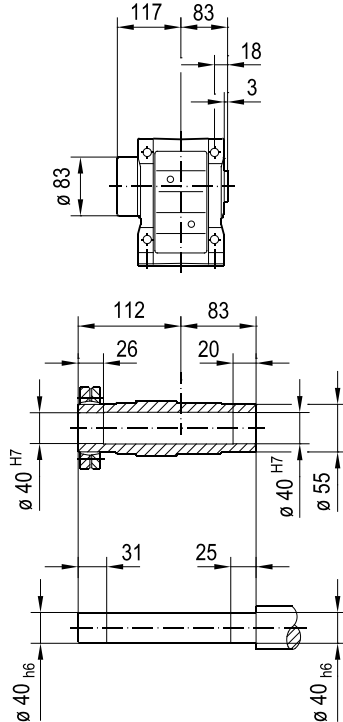
### K57..



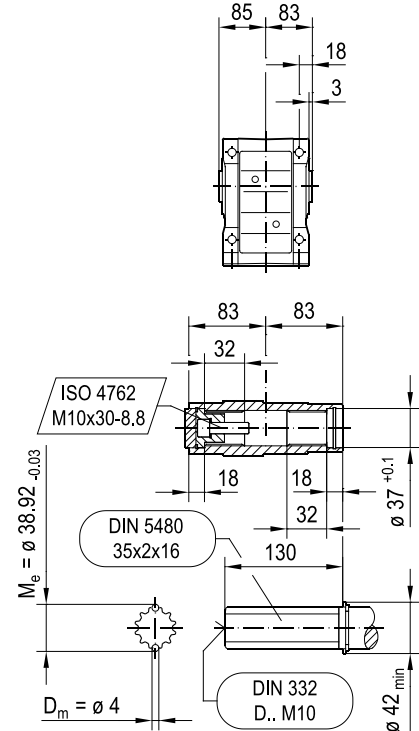
### KA57B..



### KH57B..



### KV57B..

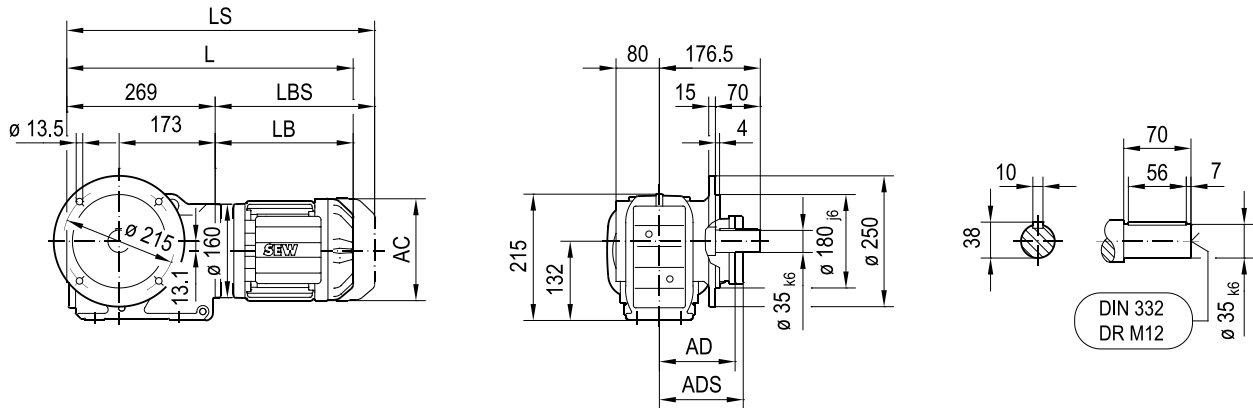


( $\rightarrow$ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	437	451	452	472	483	500	528	530	562	558	608	639	693	711
LS	493	507	520	540	564	581	609	623	655	652	702	751	805	849
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

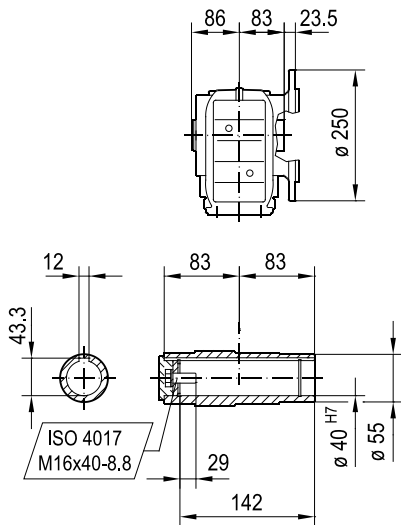


33 048 00 14

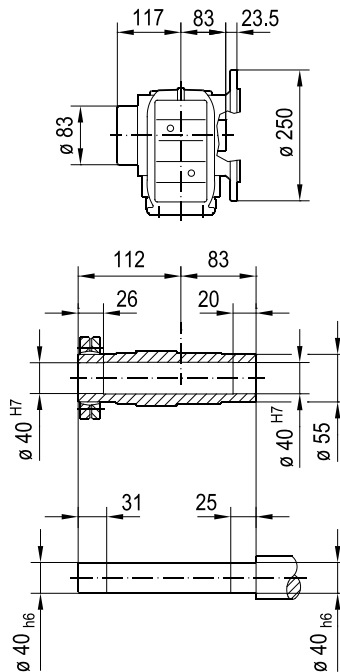
**KF57..**



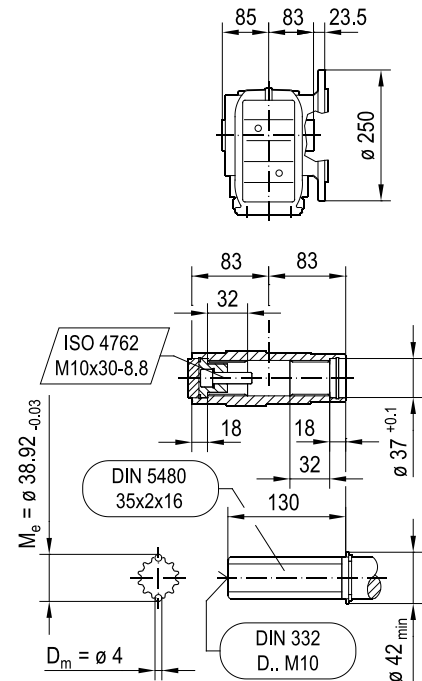
**KAF57..**



**KHF57..**



**KVF57..**

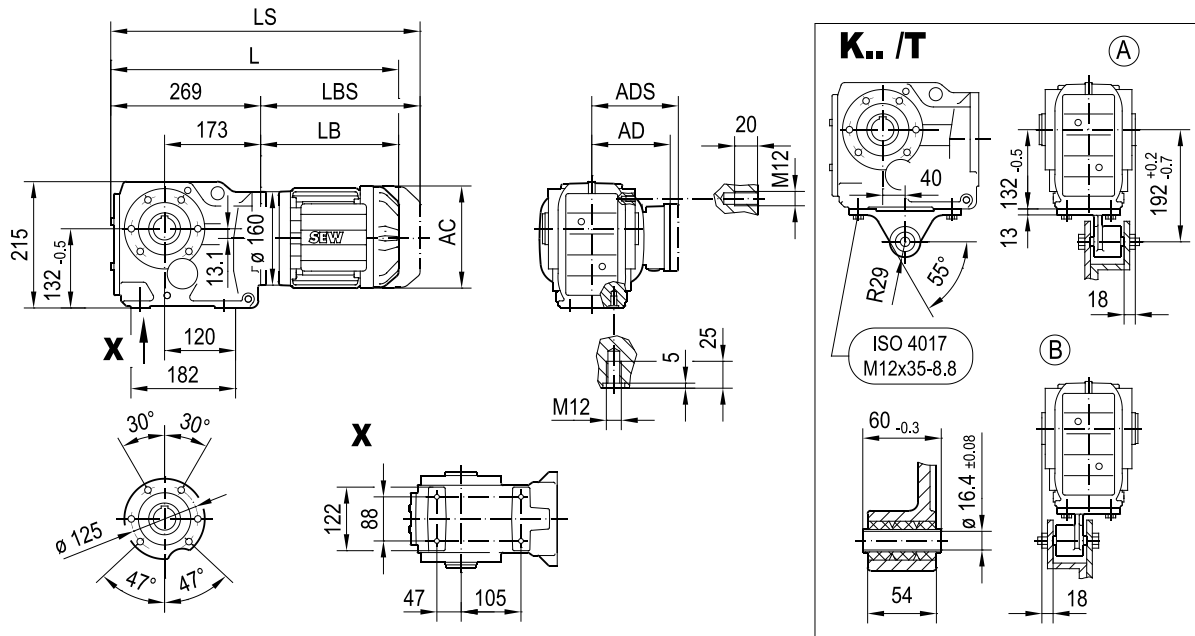


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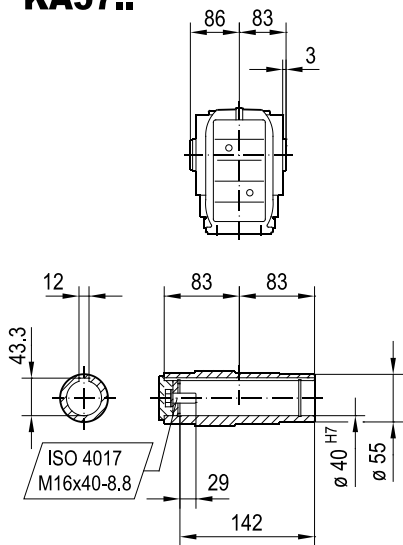
(→ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	453	467	468	488	499	516	544	546	578	574	624	655	709	727
LS	509	523	536	556	580	597	625	639	671	668	718	767	821	865
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

33 049 00 14

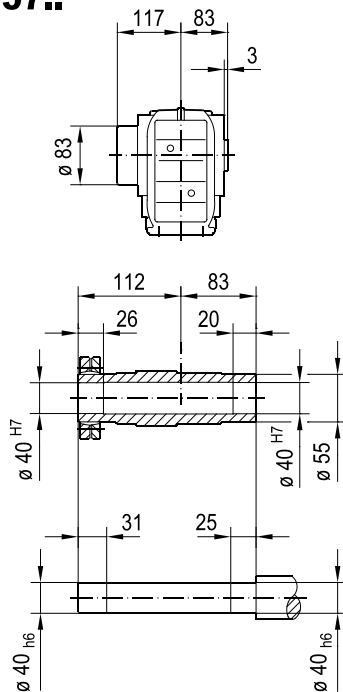
### KA57..



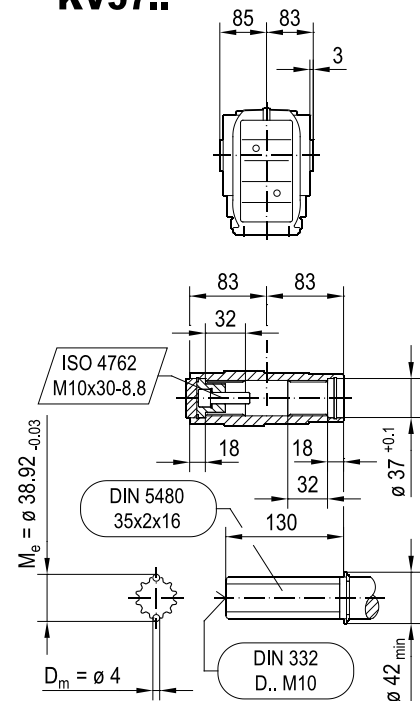
### KA57..



### KH57..



### KV57..

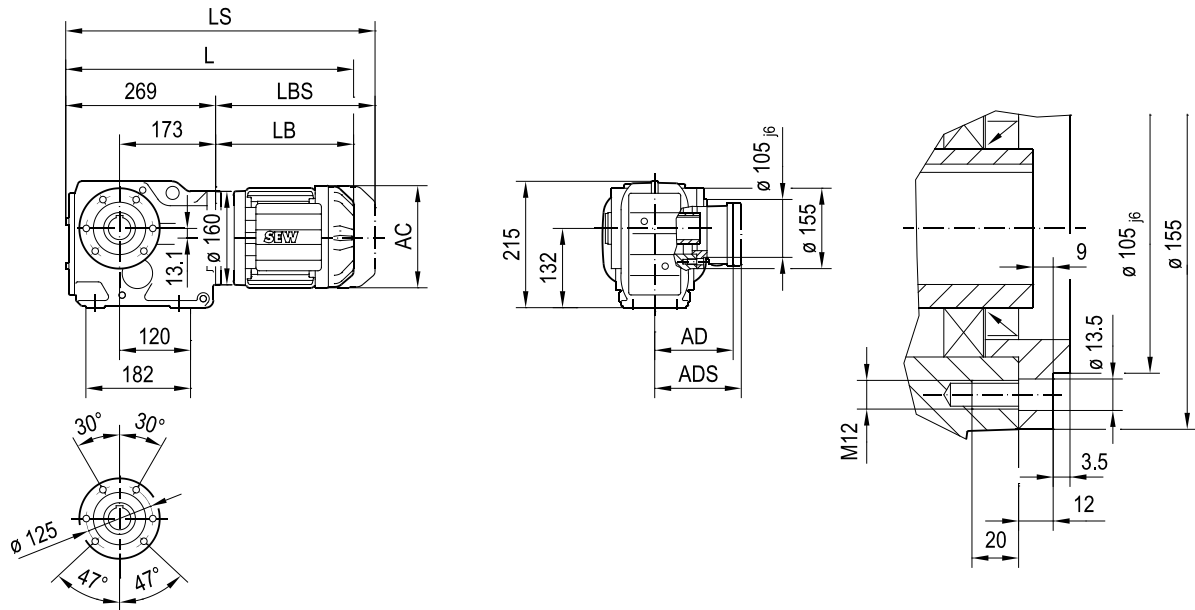


( $\rightarrow$ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	453	467	468	488	499	516	544	546	578	574	624	655	709	727
LS	509	523	536	556	580	597	625	639	671	668	718	767	821	865
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

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**KAZ57..**

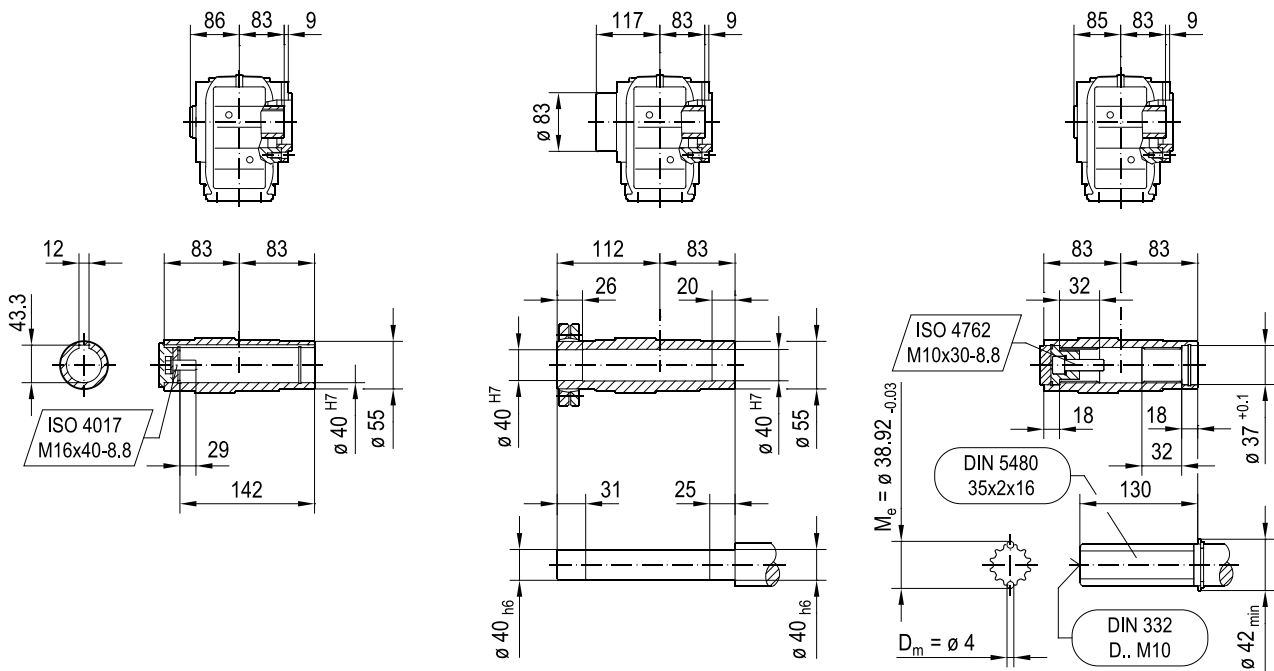
33 050 00 14



**KAZ57..**

**KHZ57..**

**KVZ57..**

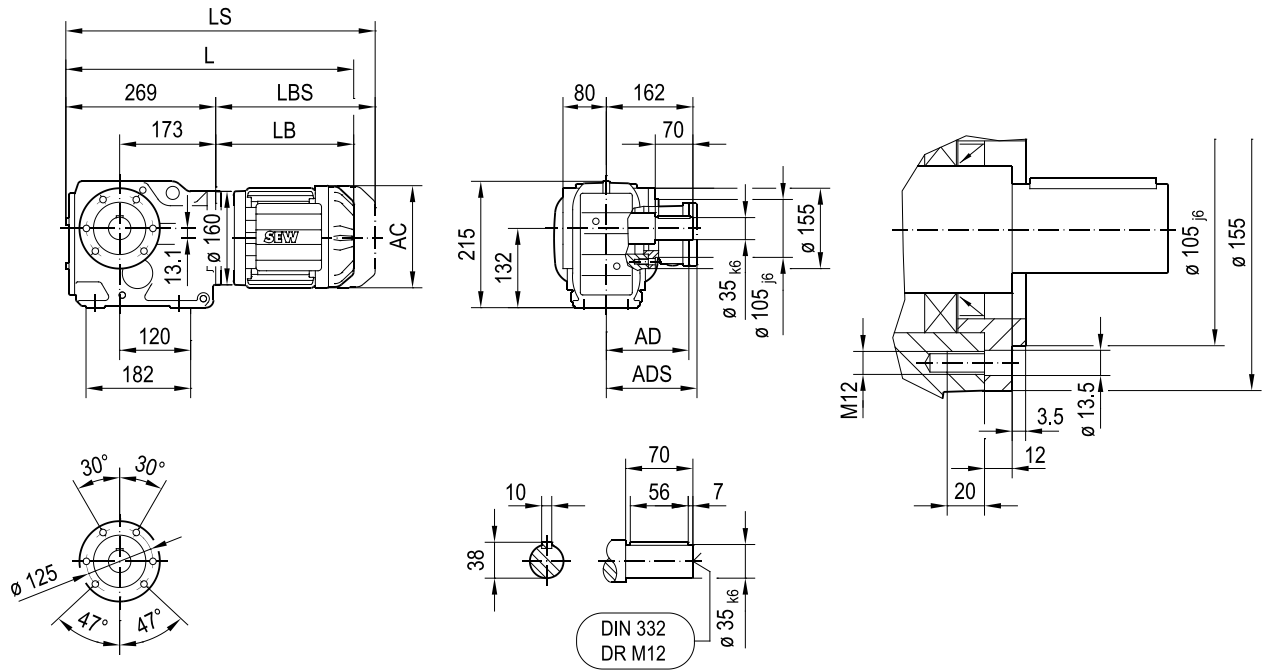


(→  7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	453	467	468	488	499	516	544	546	578	574	624	655	709	727
LS	509	523	536	556	580	597	625	639	671	668	718	767	821	865
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

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33 234 01 15

### KZ57..

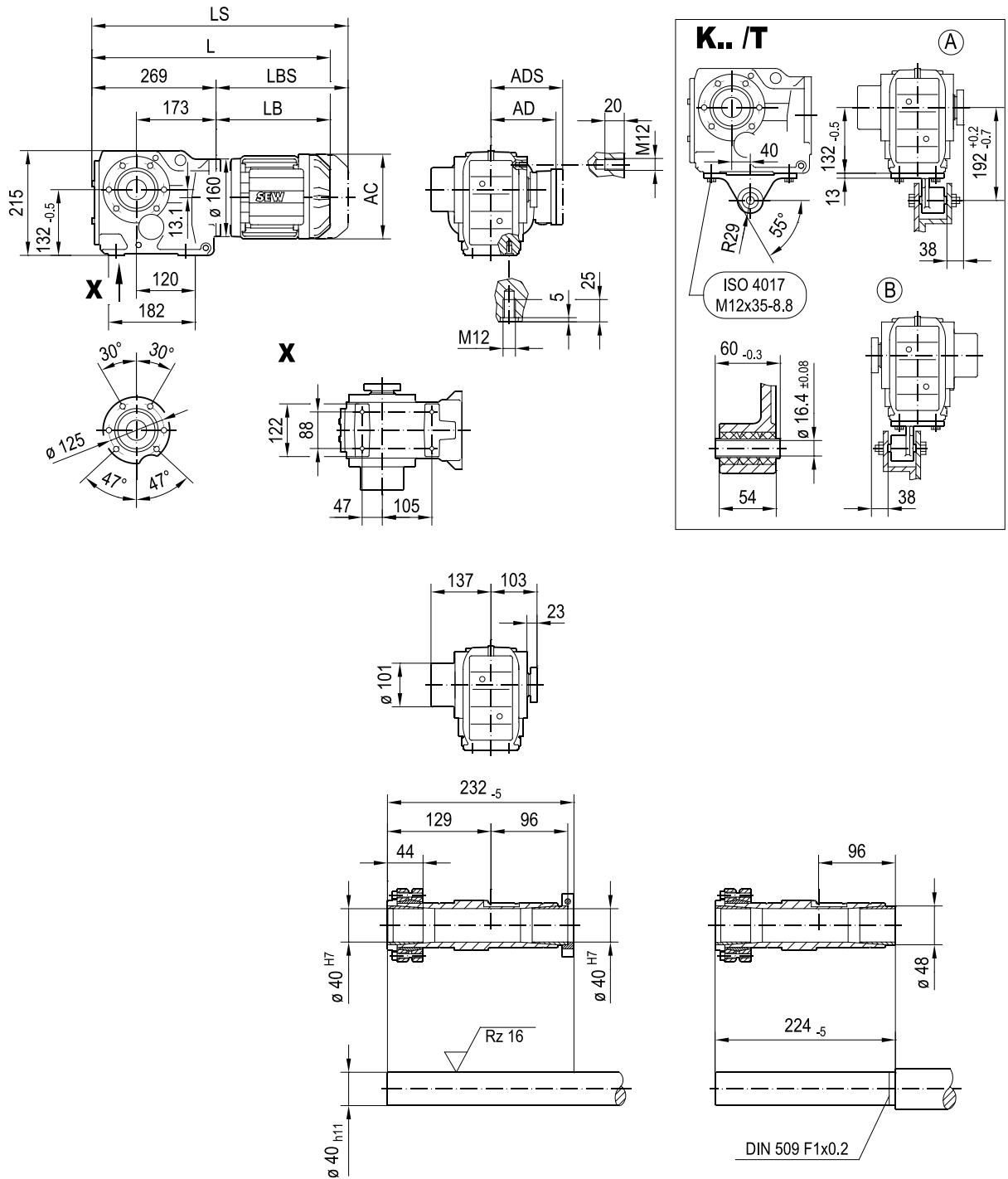


(→ 7.3)	DRN													
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228
L	453	467	468	488	499	516	544	546	578	574	624	655	709	727
LS	509	523	536	556	580	597	625	639	671	668	718	767	821	865
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596

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KT57..

33 051 01 14

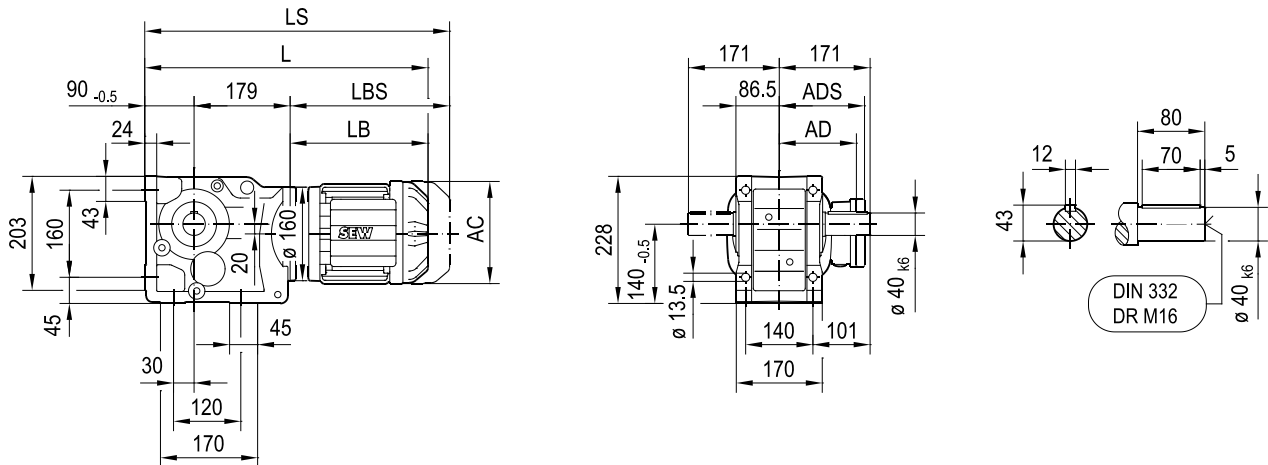


(→ 7.3)	DRN														
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	
AC	115	115	139	139	156	156	156	179	179	197	197	221	221	261	
AD	98	98	118	118	128	128	128	140	140	157	157	170	170	228	
ADS	98	98	129	129	139	139	139	150	150	158	158	172	172	228	
L	453	467	468	488	499	516	544	546	578	574	624	655	709	727	
LS	509	523	536	556	580	597	625	639	671	668	718	767	821	865	
LB	184	198	199	219	230	247	275	277	309	305	355	386	440	458	
LBS	240	254	267	287	311	328	356	370	402	399	449	498	552	596	

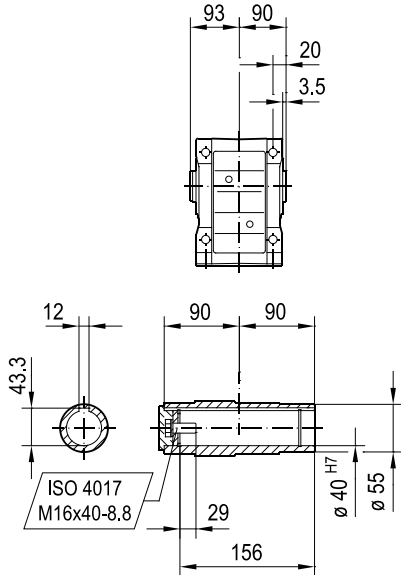
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33 052 00 14

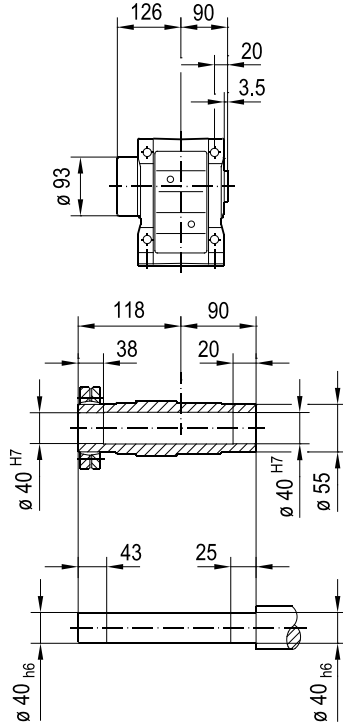
### K67..



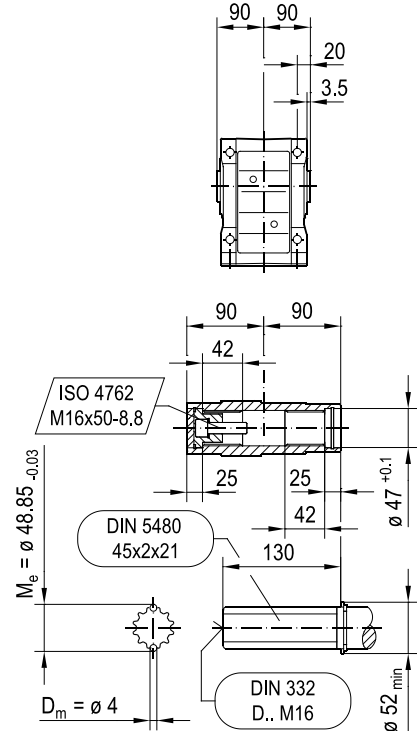
### KA67B..



### KH67B..



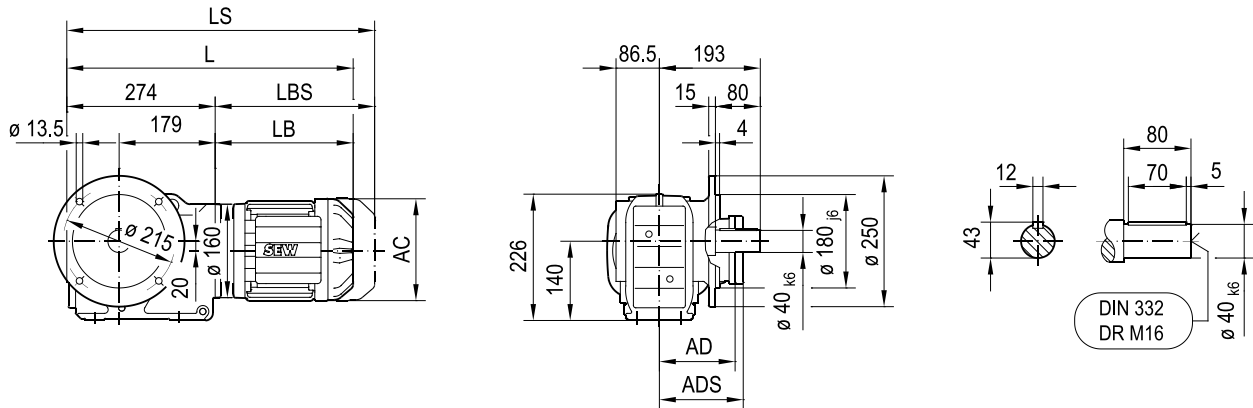
### KV67B..



(\rightarrow 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	467	468	488	499	516	544	546	578	574	624	655	709	727
LS	523	536	556	580	597	625	639	671	668	718	767	821	865
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

**KF67..**

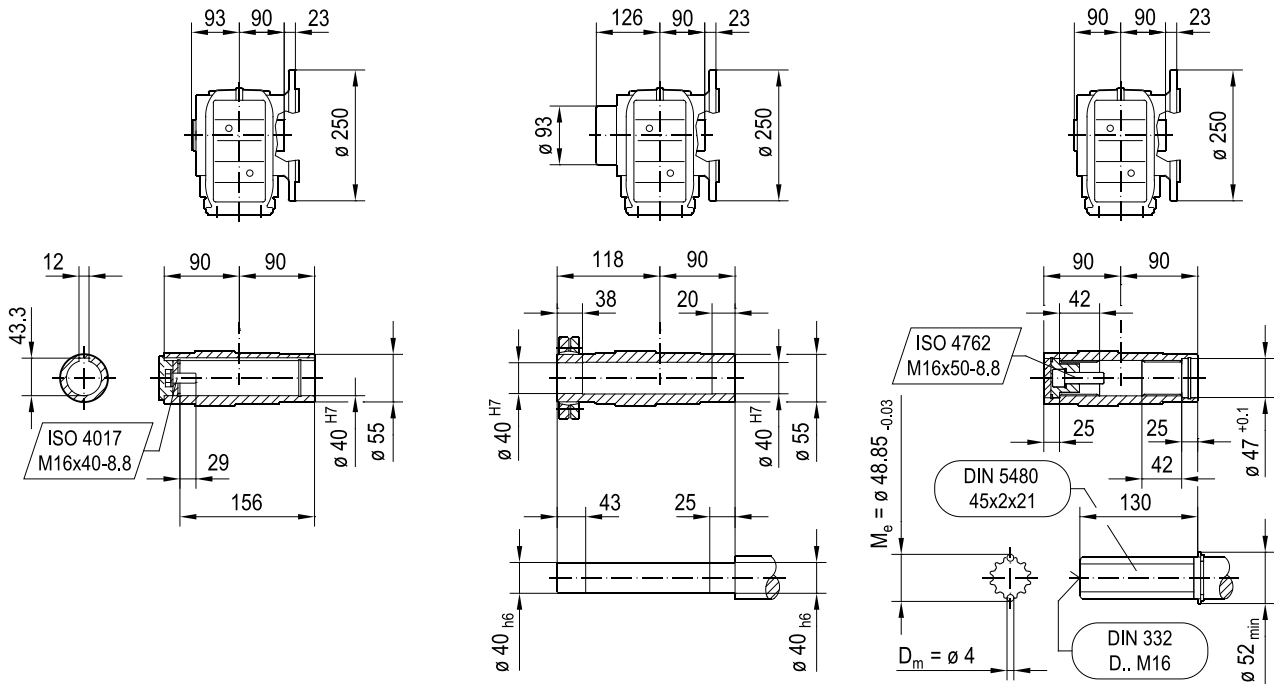
33 053 00 14



**KAF67..**

**KHF67..**

**KVF67..**

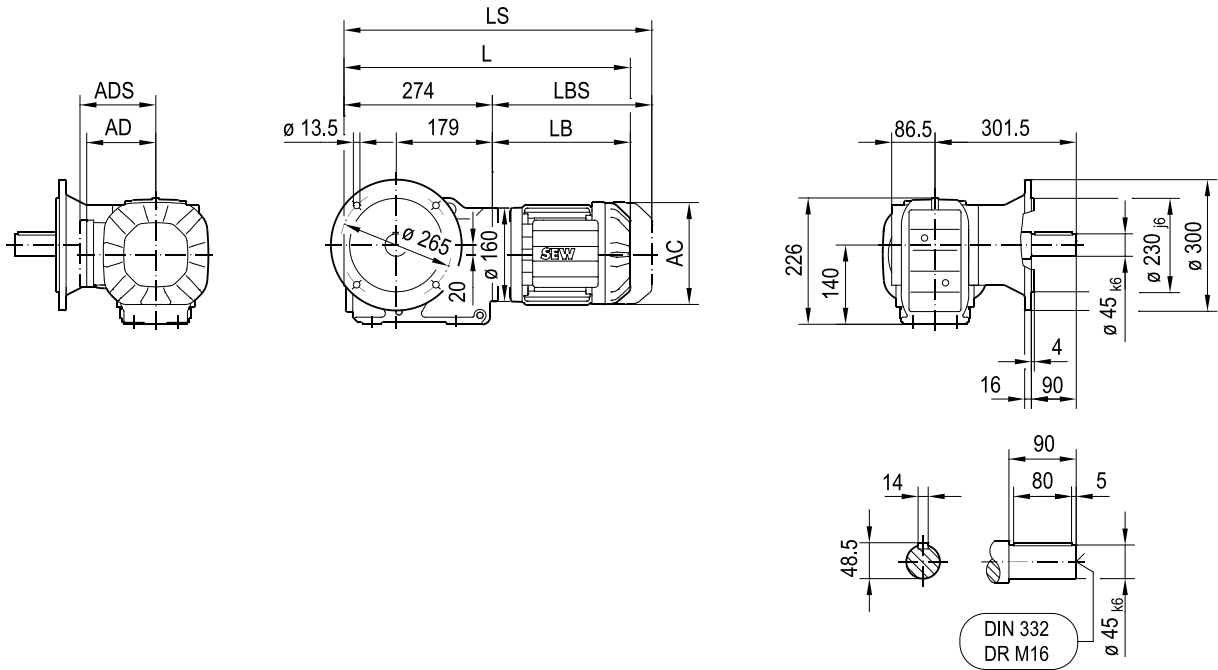


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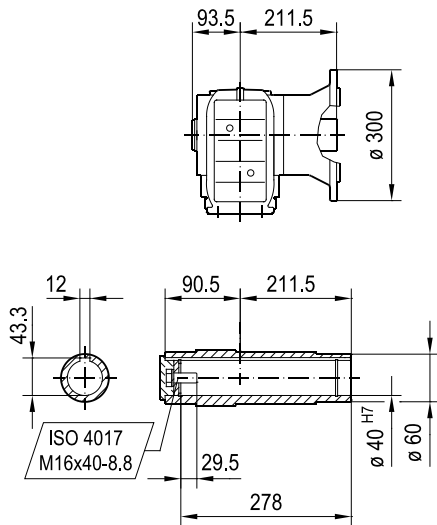
(→ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	472	473	493	504	521	549	551	583	579	629	660	714	732
LS	528	541	561	585	602	630	644	676	673	723	772	826	870
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

33 270 00 17

### KM67..



### KAM67..



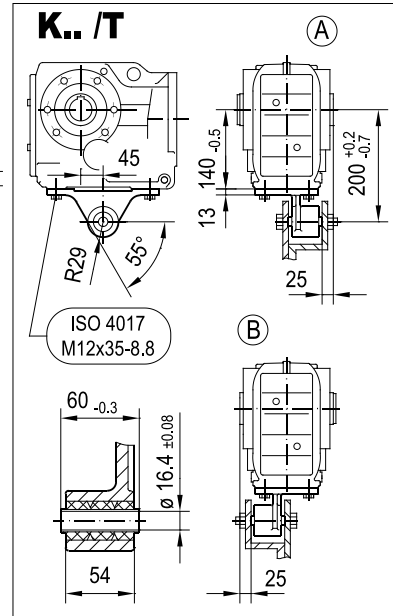
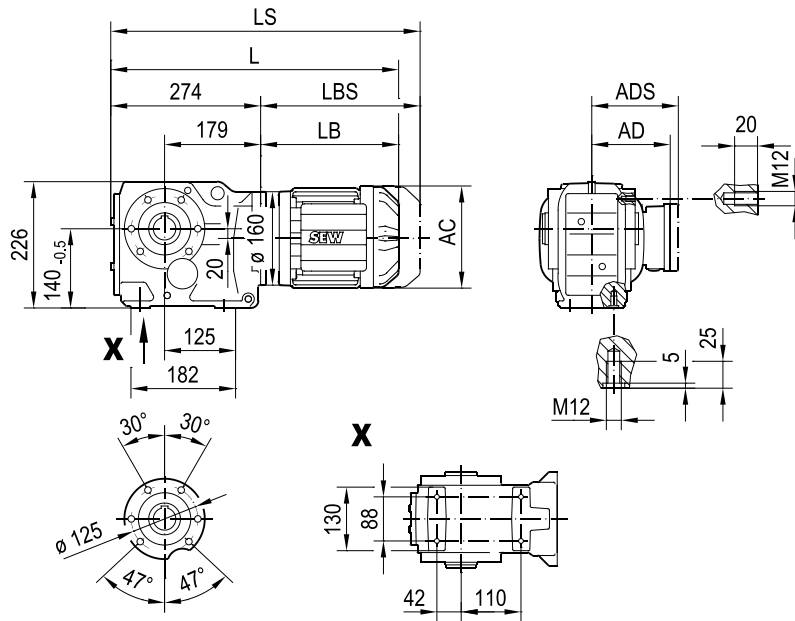
(-> 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	472	473	493	504	521	549	551	583	579	629	660	714	732
LS	528	541	561	585	602	630	644	676	673	723	772	826	870
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

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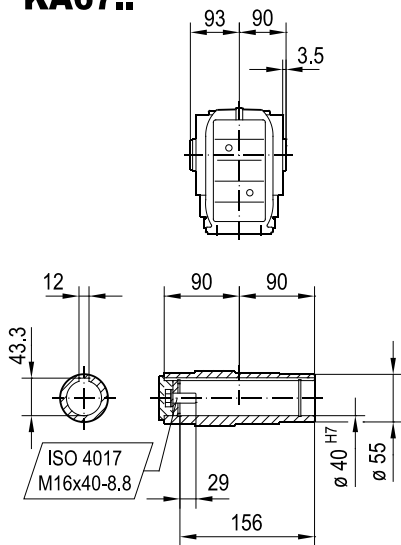


33 054 00 14

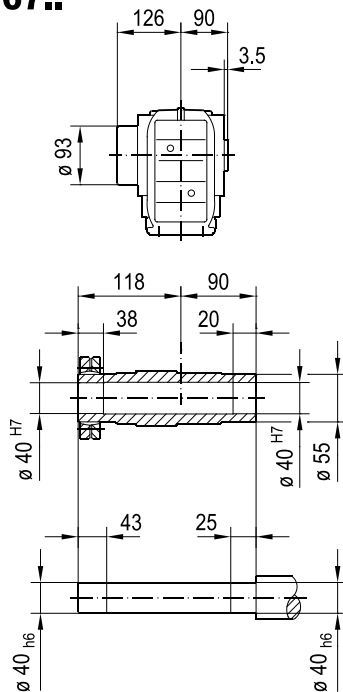
**KA67..**



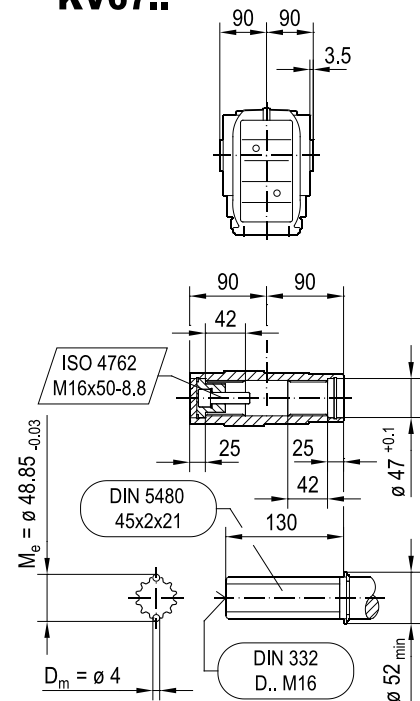
**KA67..**



**KH67..**



**KV67..**

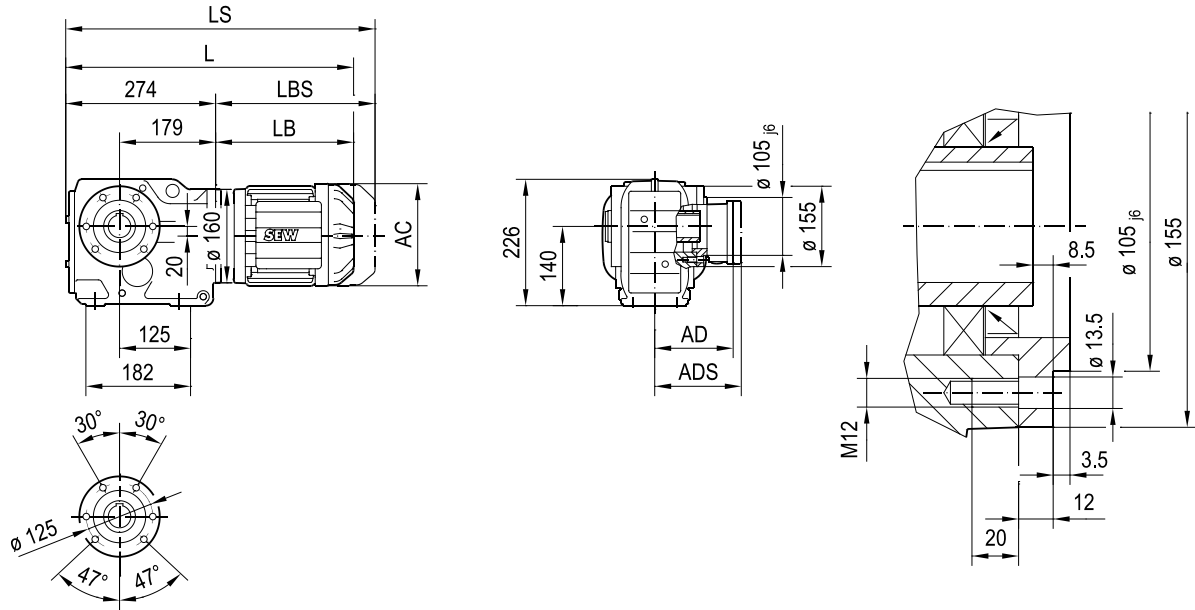


(-> 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	472	473	493	504	521	549	551	583	579	629	660	714	732
LS	528	541	561	585	602	630	644	676	673	723	772	826	870
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

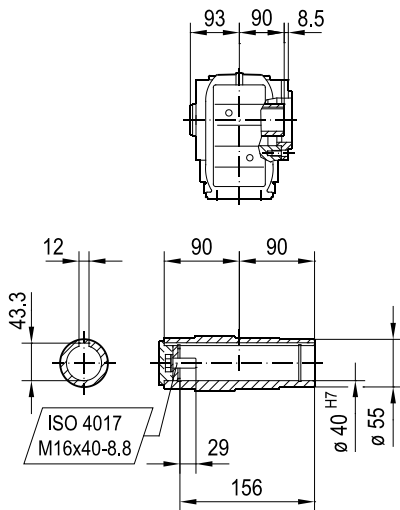
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33 055 00 14

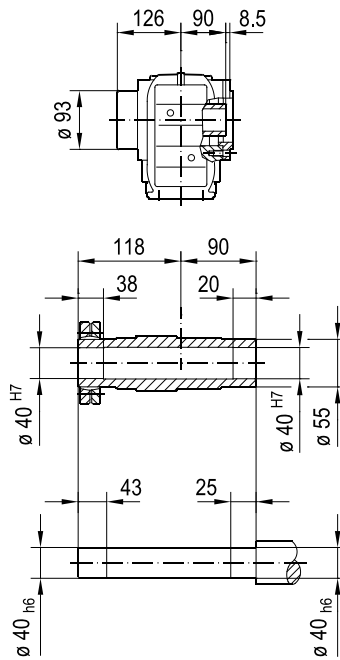
### KAZ67..



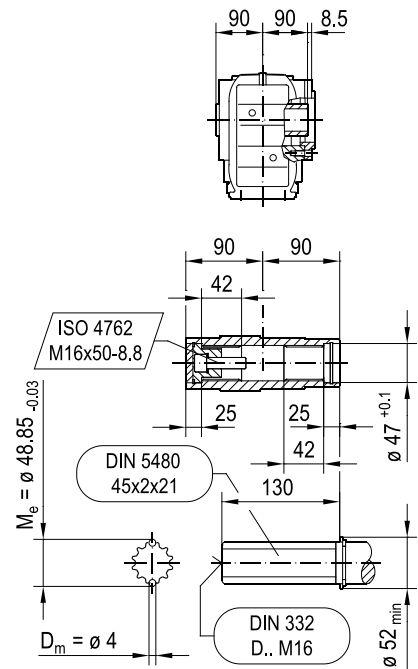
### KAZ67..



### KHZ67..



### KVZ67..

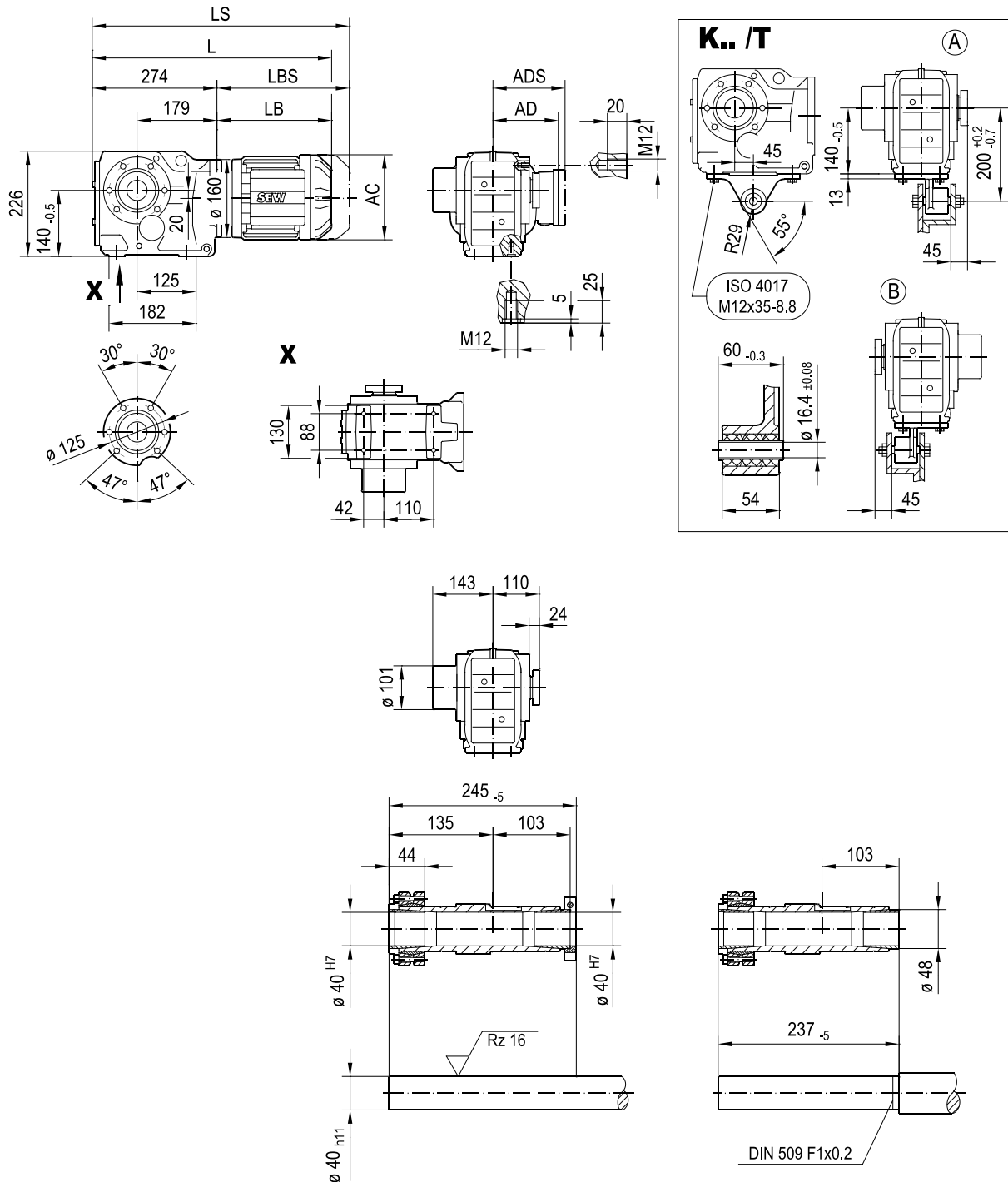


(→ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	472	473	493	504	521	549	551	583	579	629	660	714	732
LS	528	541	561	585	602	630	644	676	673	723	772	826	870
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596



33 056 01 14

### KT67..

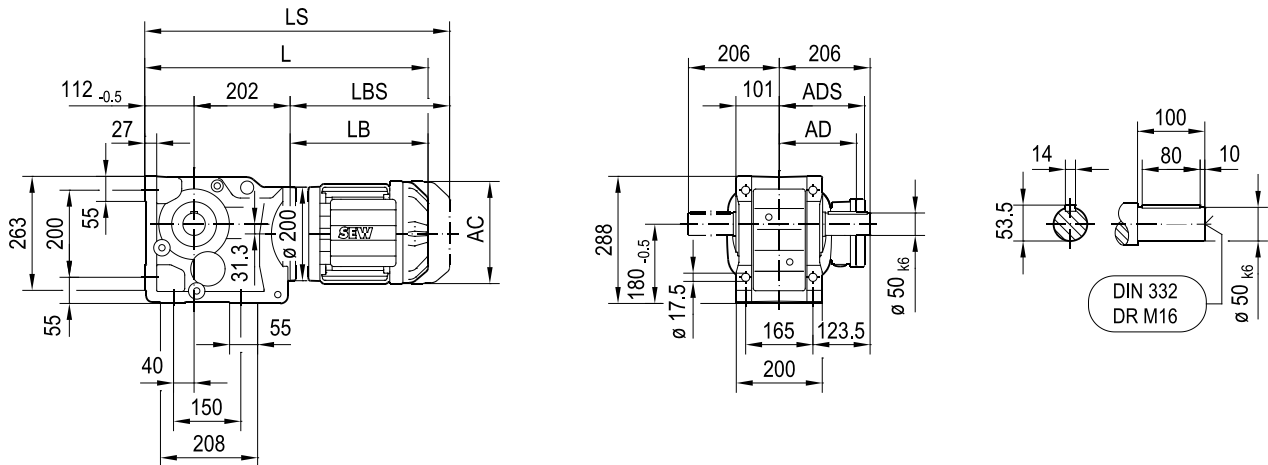


(-> 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	472	473	493	504	521	549	551	583	579	629	660	714	732
LS	528	541	561	585	602	630	644	676	673	723	772	826	870
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

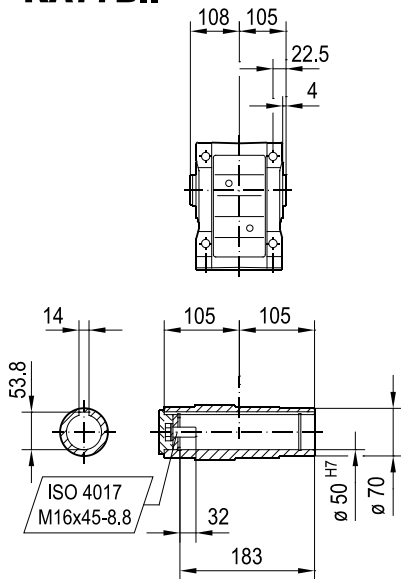
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33 057 00 14

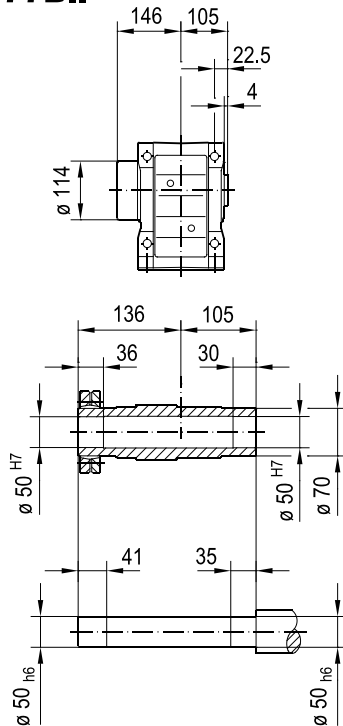
**K77..**



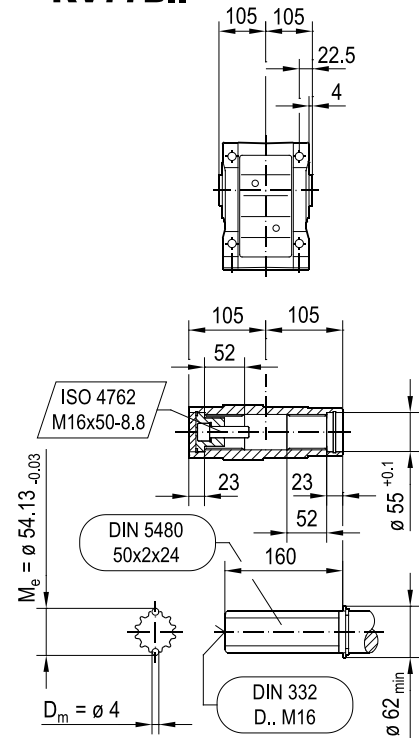
**KA77B..**



**KH77B..**



**KV77B..**

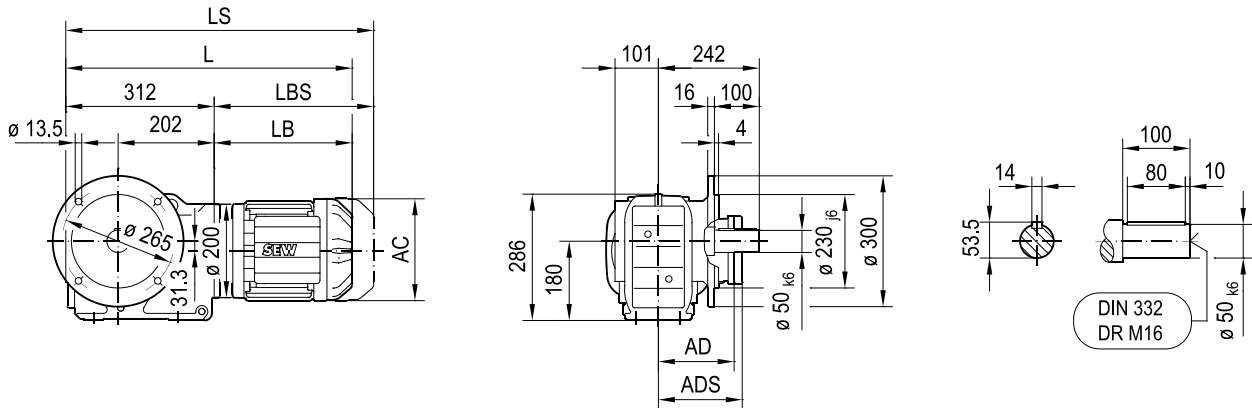


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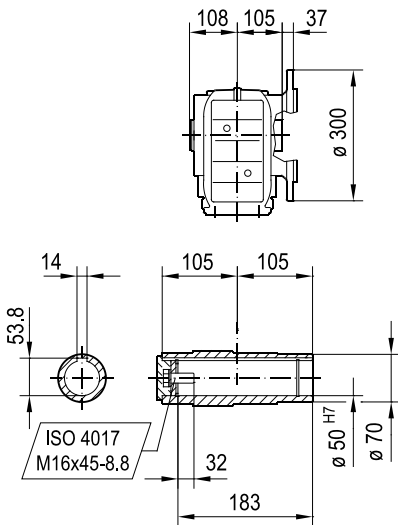
( $\rightarrow$ 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	506	526	537	554	582	584	616	612	662	693	743	761	787	853
LS	574	594	618	635	663	677	709	706	756	805	855	899	924	1042
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

33 058 00 14

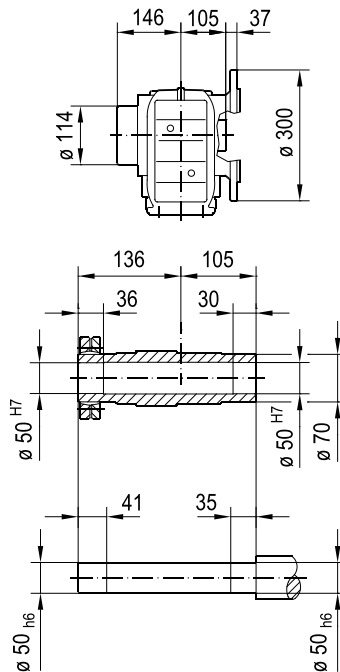
### KF77..



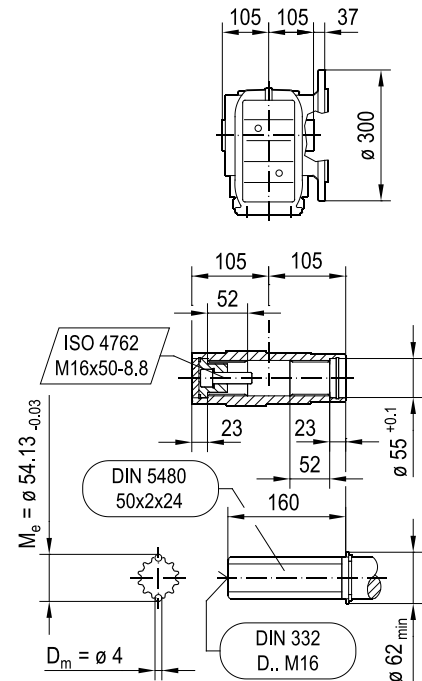
### KAF77..



### KHF77..



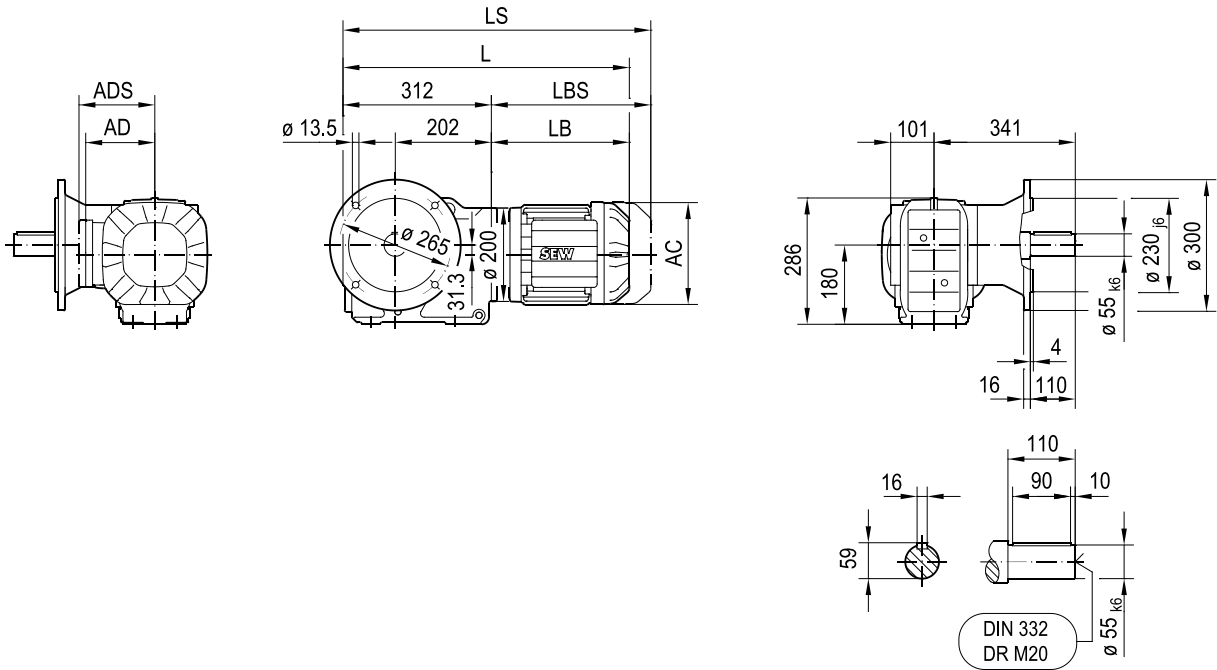
### KVF77..



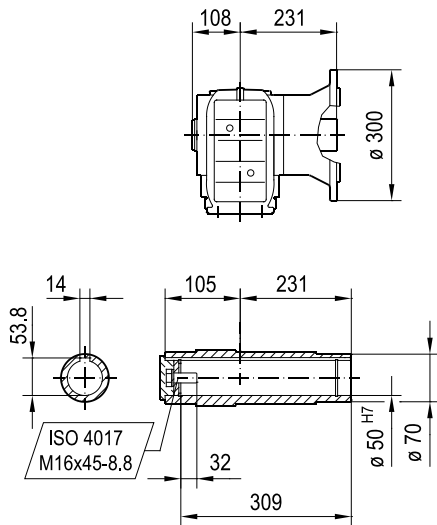
( $\rightarrow$ 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	504	524	535	552	580	582	614	610	660	691	741	759	785	851
LS	572	592	616	633	661	675	707	704	754	803	853	897	922	1040
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

**KM77..**

33 271 01 17



**KAM77..**

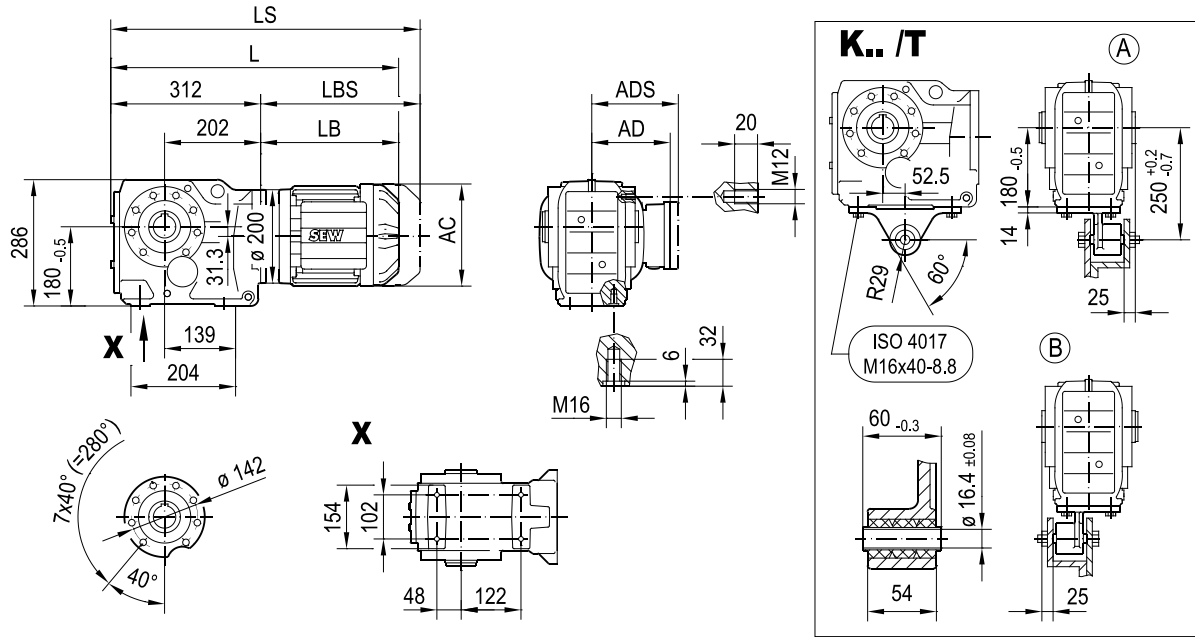


(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	504	524	535	552	580	582	614	610	660	691	741	759	785	851
LS	572	592	616	633	661	675	707	704	754	803	853	897	922	1040
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

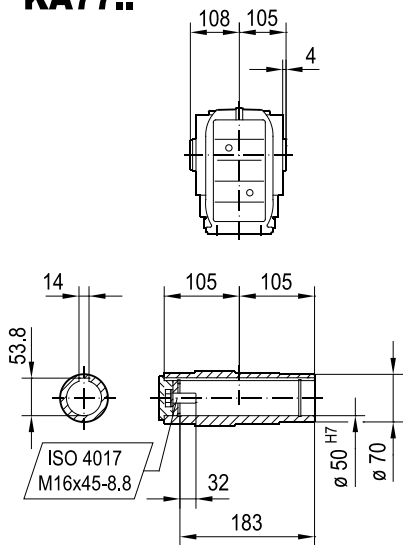
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33 059 00 14

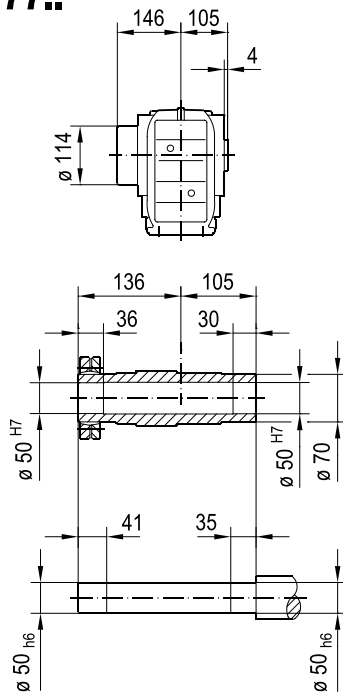
### KA77..



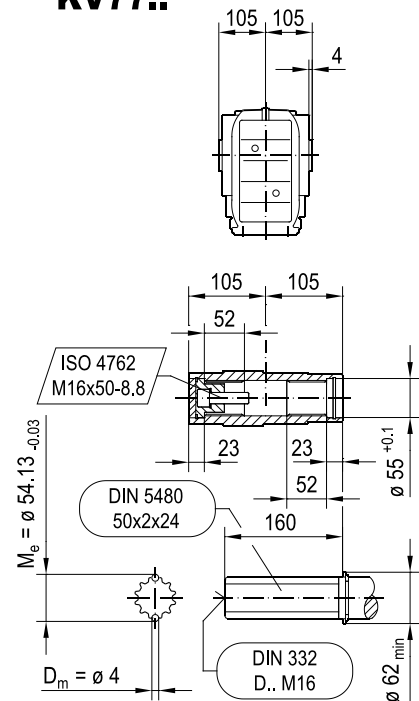
### KA77..



### KH77..



### KV77..



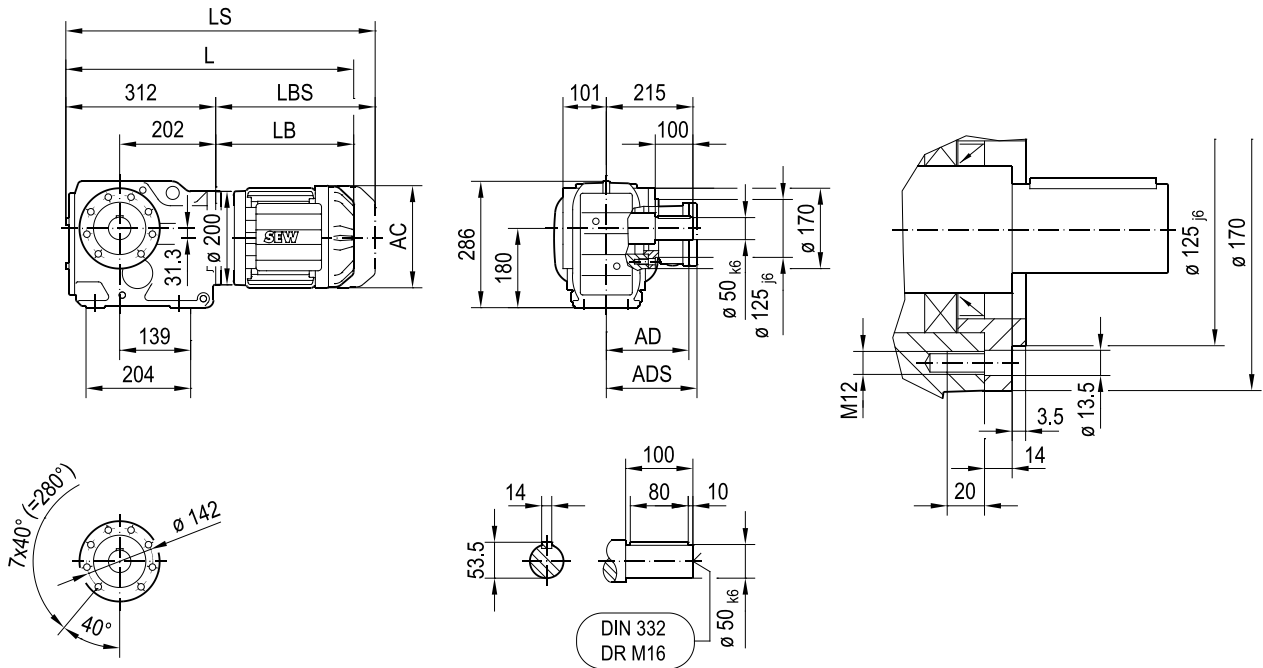
(→ 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	504	524	535	552	580	582	614	610	660	691	741	759	785	851
LS	572	592	616	633	661	675	707	704	754	803	853	897	922	1040
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728





33 236 00 15

### KZ77..

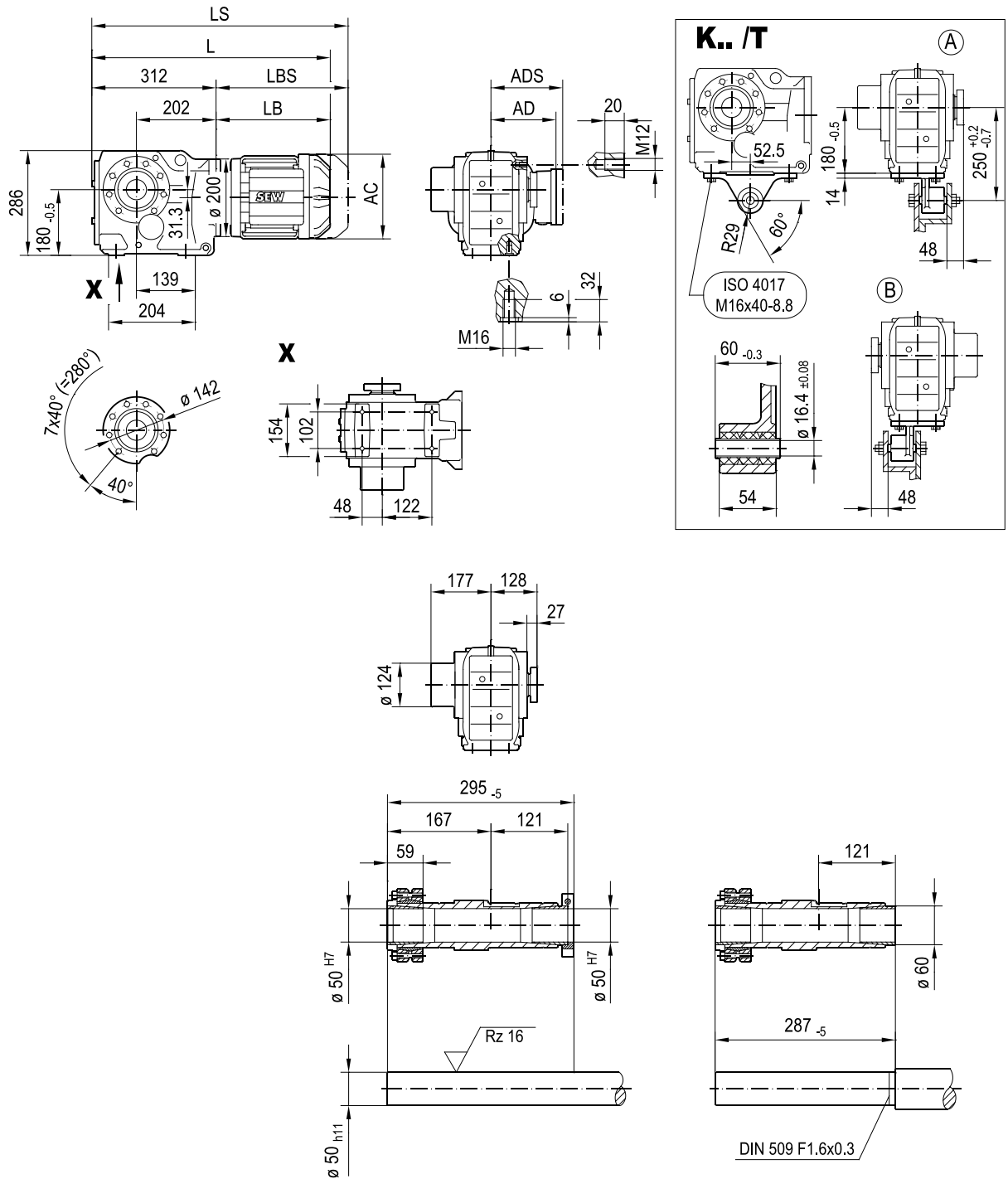


( $\rightarrow$ 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	504	524	535	552	580	582	614	610	660	691	741	759	785	851
LS	572	592	616	633	661	675	707	704	754	803	853	897	922	1040
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

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KT77..

33 061 01 14

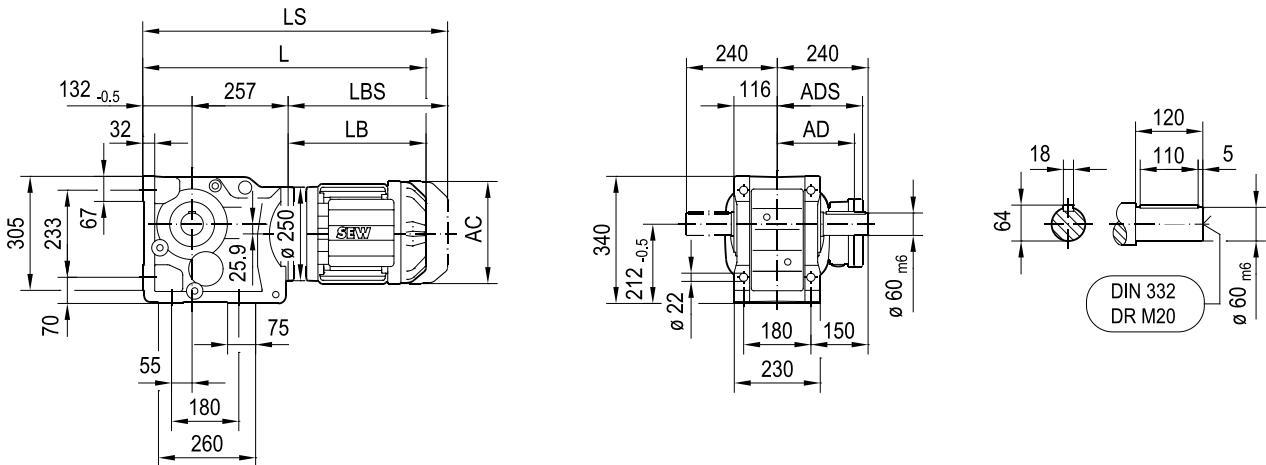


(→ 7.3)	DRN														
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314	
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253	
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253	
L	504	524	535	552	580	582	614	610	660	691	741	759	785	851	
LS	572	592	616	633	661	675	707	704	754	803	853	897	922	1040	
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539	
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728	

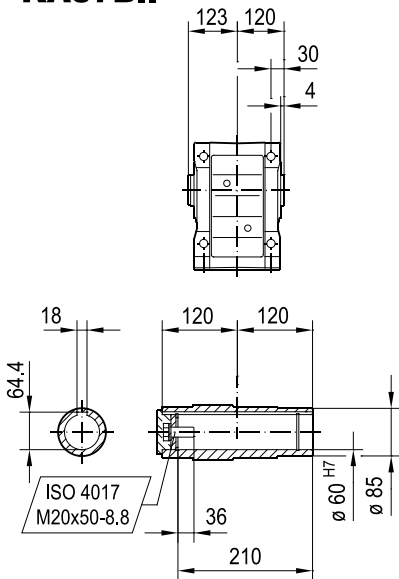
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33 062 00 14

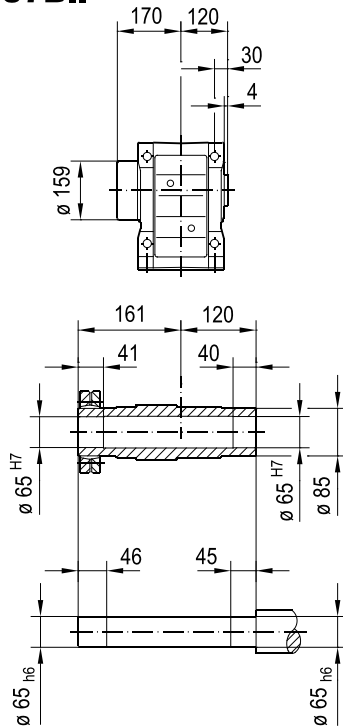
### K87..



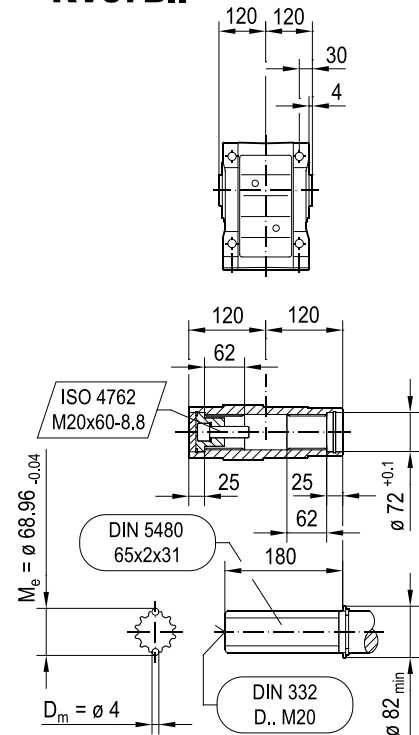
### KA87B..



### KH87B..



### KV87B..

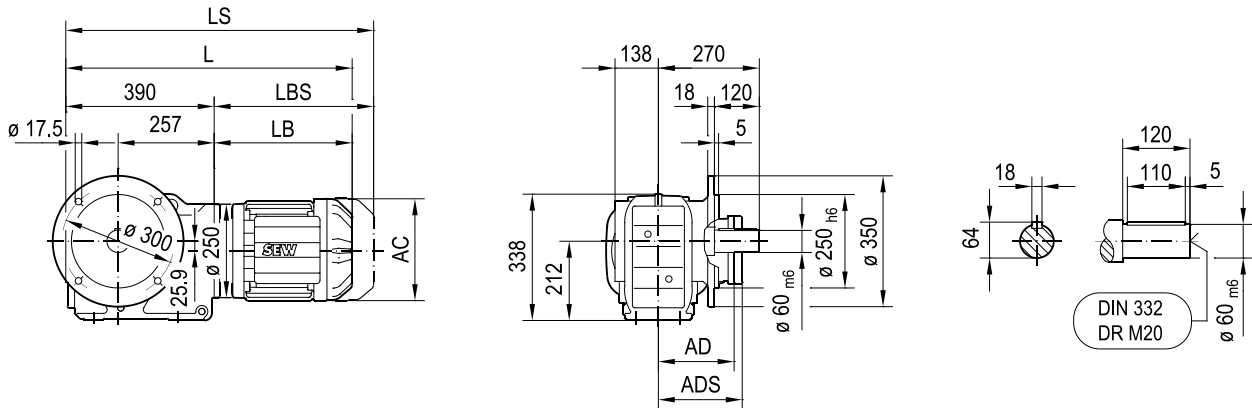


(- 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	607	652	654	686	682	732	763	813	831	857	923	946	1056
LS	688	733	747	779	776	826	875	925	969	994	1112	1135	1261
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

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**KF87..**

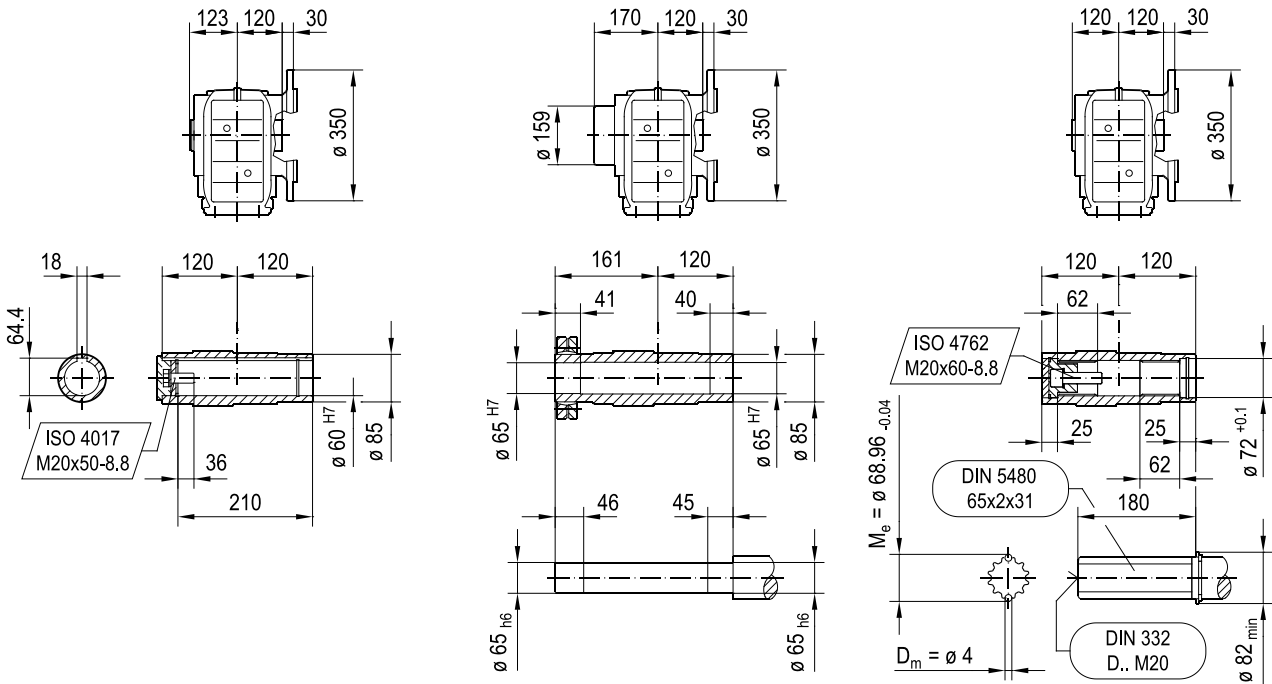
33 063 00 14



**KAF87..**

**KHF87..**

**KVF87..**

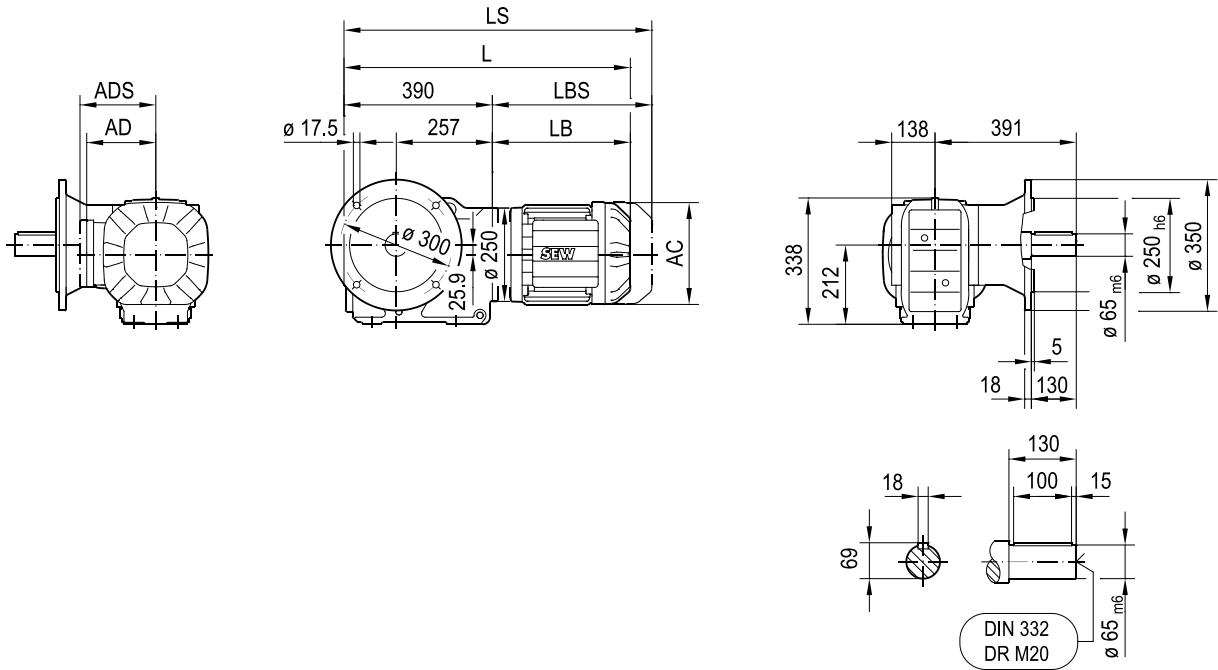


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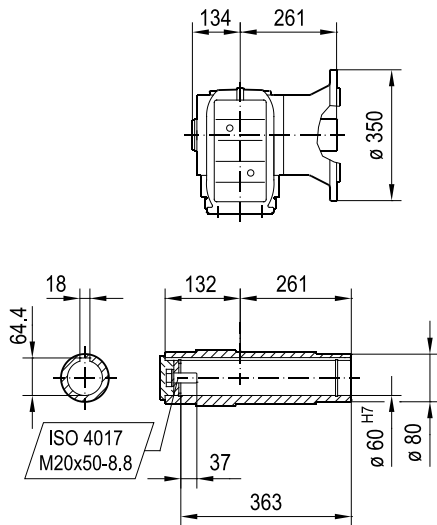
(→ 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	608	653	655	687	683	733	764	814	832	858	924	947	1057
LS	689	734	748	780	777	827	876	926	970	995	1113	1136	1262
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

33 272 01 17

### KM87..



### KAM87..

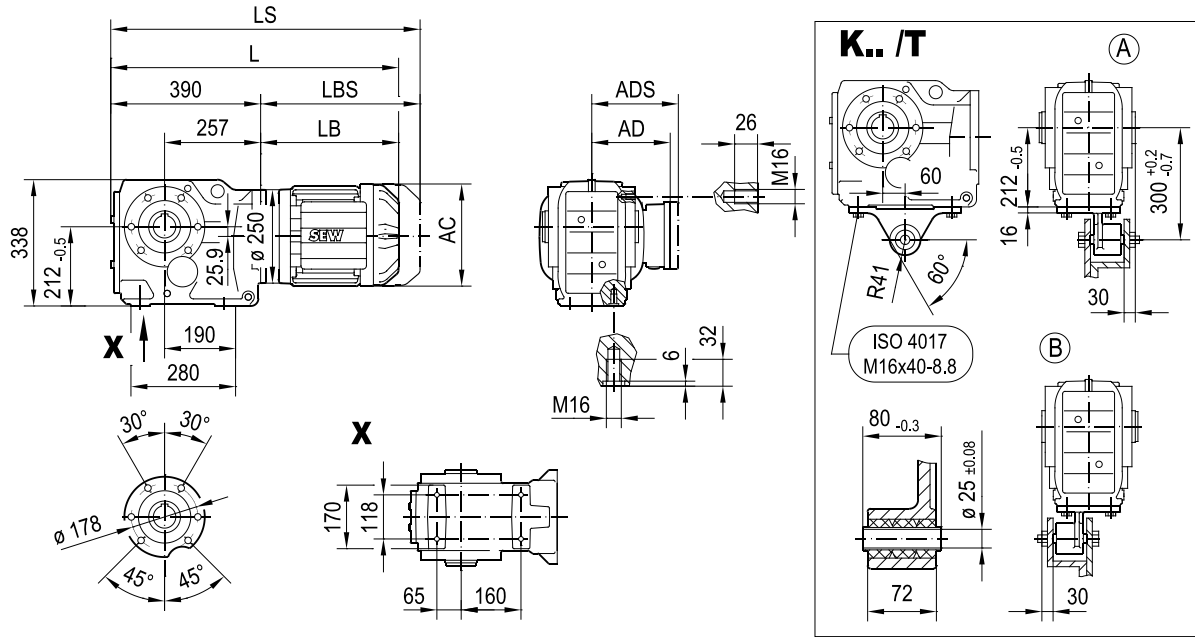


(-> 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	608	653	655	687	683	733	764	814	832	858	924	947	1057
LS	689	734	748	780	777	827	876	926	970	995	1113	1136	1262
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

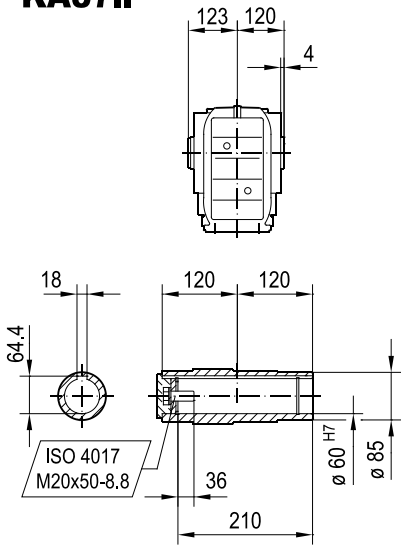
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33 064 00 14

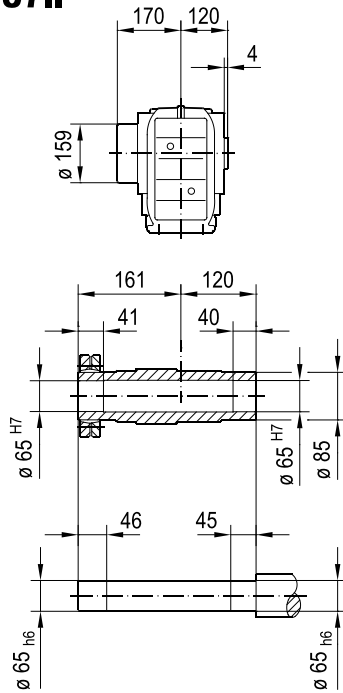
**KA87..**



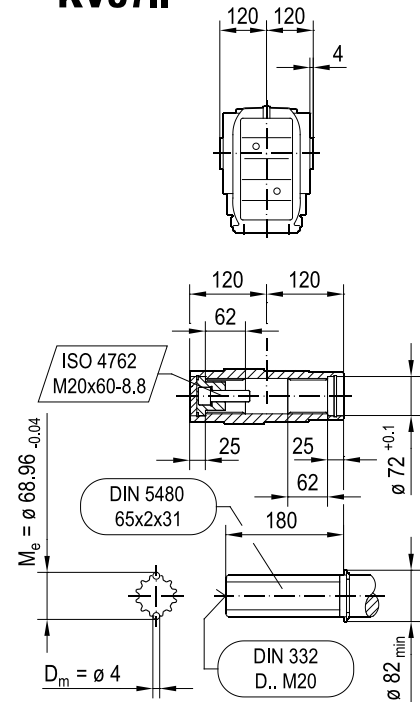
**KA87..**



**KH87..**



**KV87..**

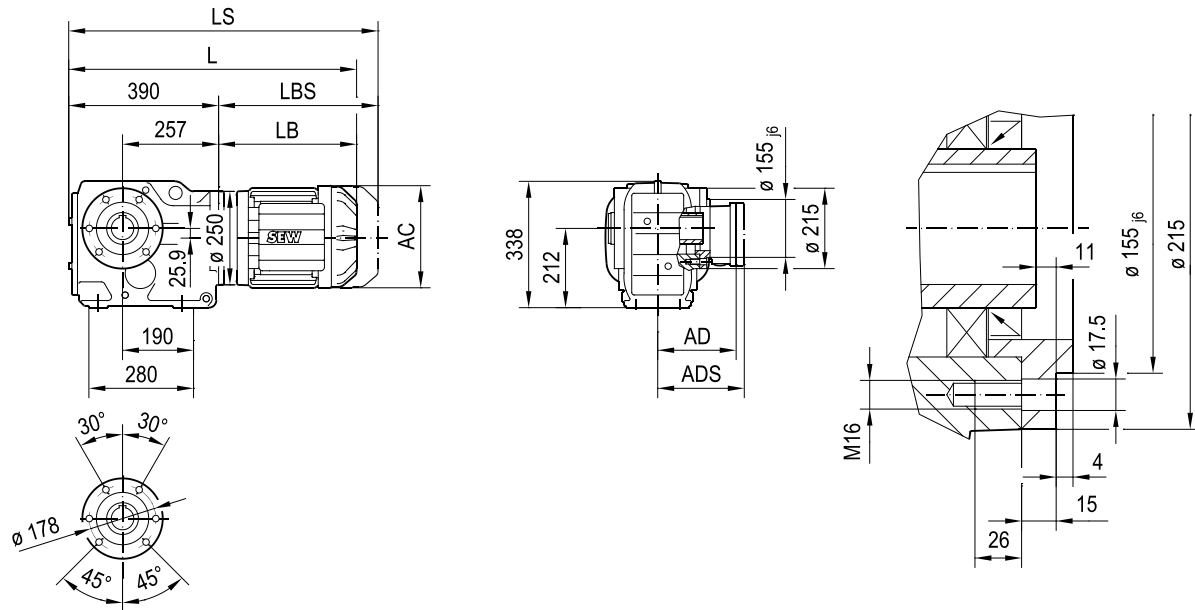


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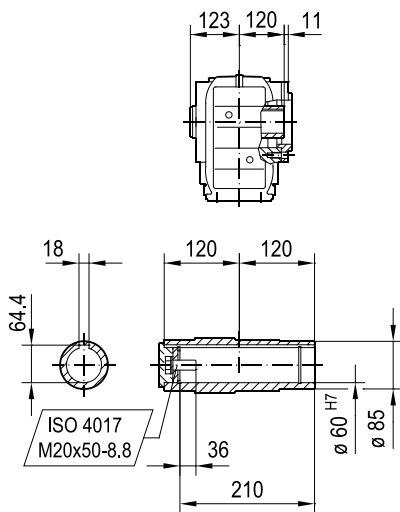
( $\rightarrow$ 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	608	653	655	687	683	733	764	814	832	858	924	947	1057
LS	689	734	748	780	777	827	876	926	970	995	1113	1136	1262
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

33 065 00 14

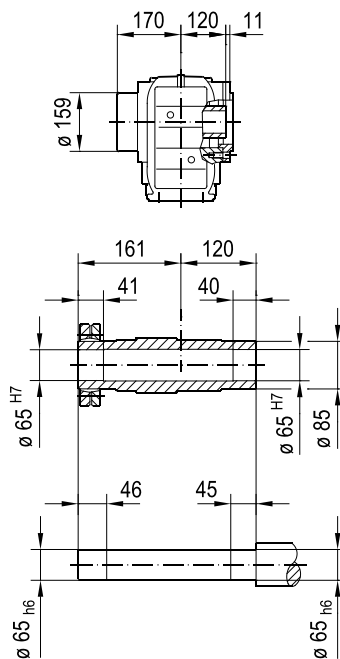
### KAZ87..



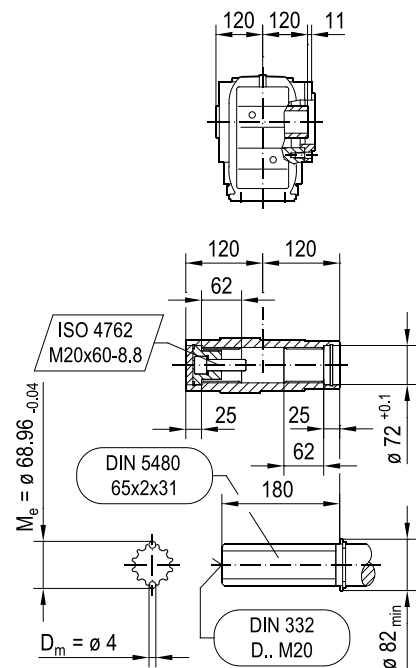
### KAZ87..



### KHZ87..



### KVZ87..

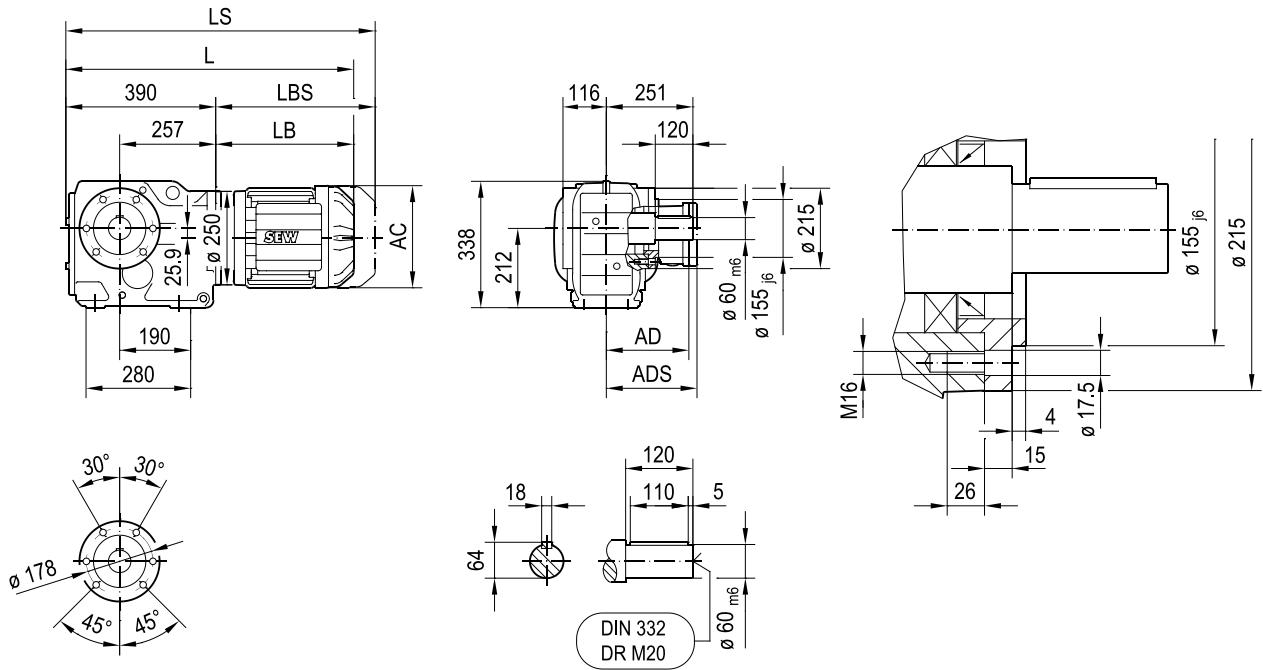


( $\rightarrow$ 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	608	653	655	687	683	733	764	814	832	858	924	947	1057
LS	689	734	748	780	777	827	876	926	970	995	1113	1136	1262
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872



**KZ87..**

**33 237 00 15**

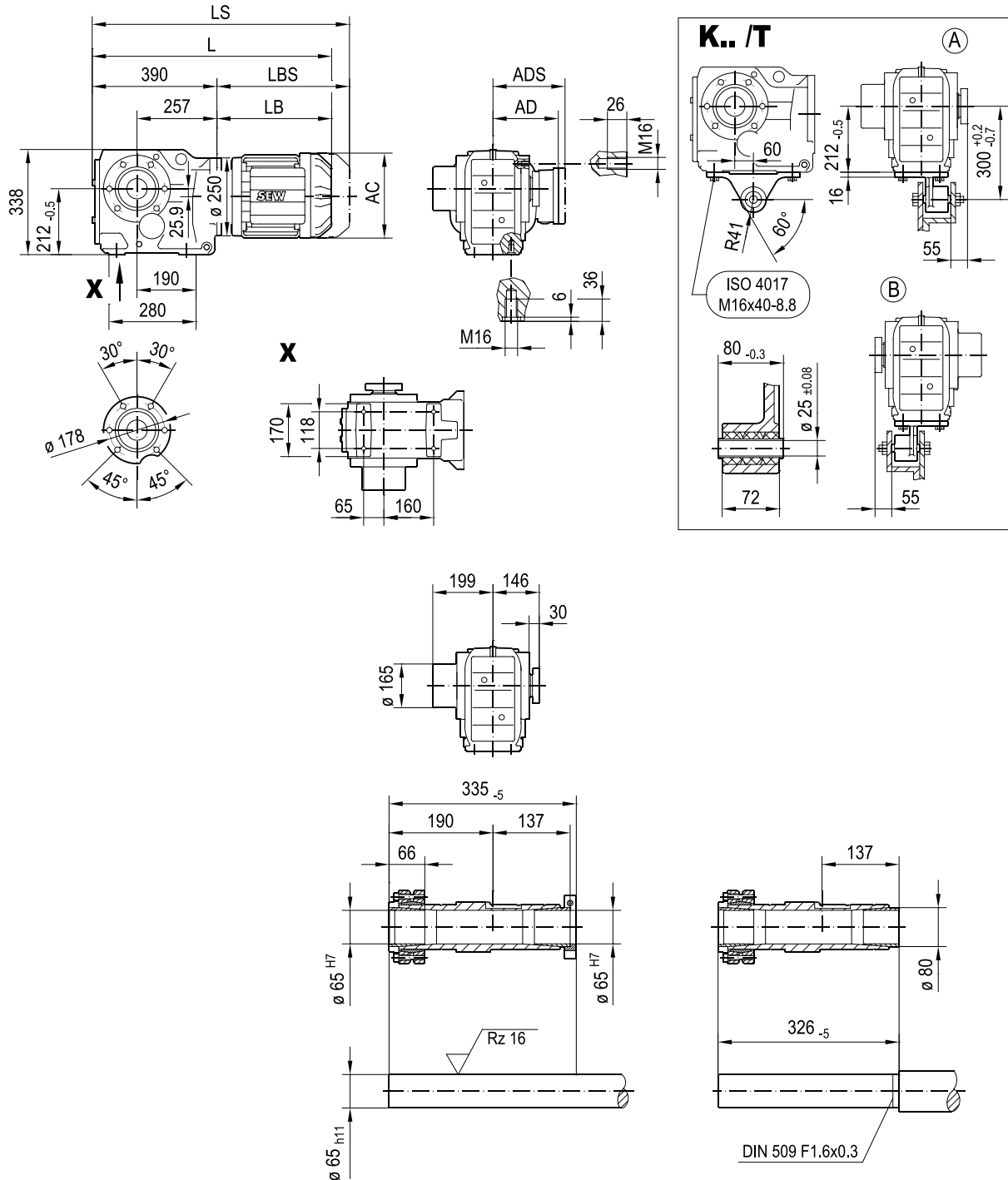


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(> 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	608	653	655	687	683	733	764	814	832	858	924	947	1057
LS	689	734	748	780	777	827	876	926	970	995	1113	1136	1262
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

33 066 01 14

### KT87..



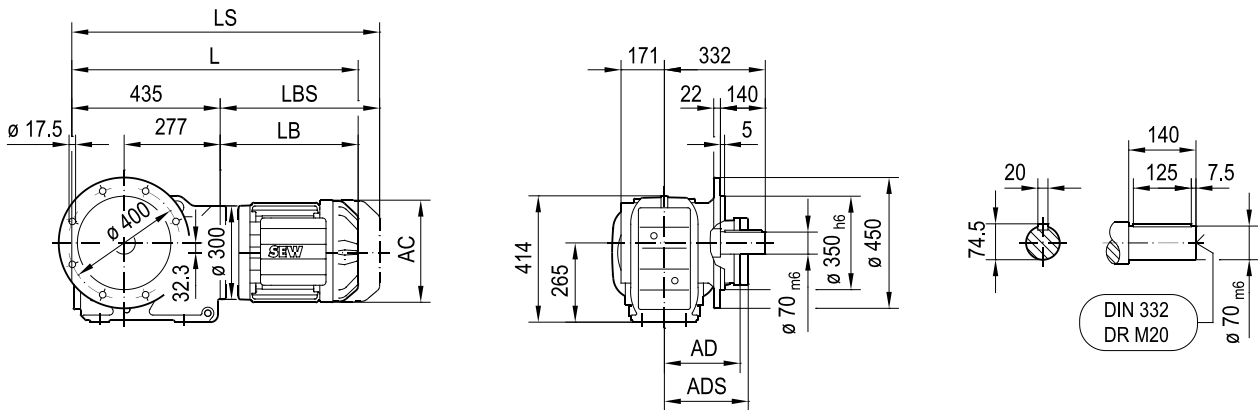
(-> 7.3)	DRN												
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L
AC	156	156	179	179	197	197	221	221	261	261	314	357	394
AD	128	128	140	140	157	157	170	170	228	228	253	268	283
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283
L	608	653	655	687	683	733	764	814	832	858	924	947	1057
LS	689	734	748	780	777	827	876	926	970	995	1113	1136	1262
LB	218	263	265	297	293	343	374	424	442	468	534	557	667
LBS	299	344	358	390	387	437	486	536	580	605	723	746	872

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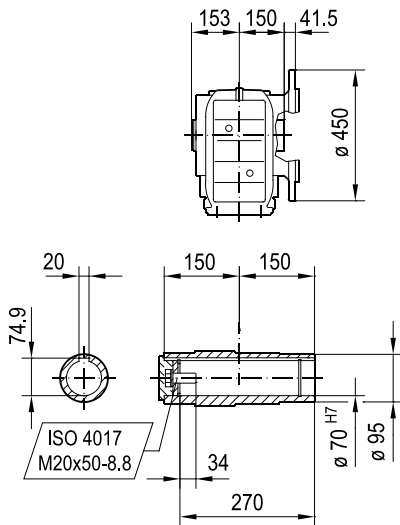


33 068 00 14

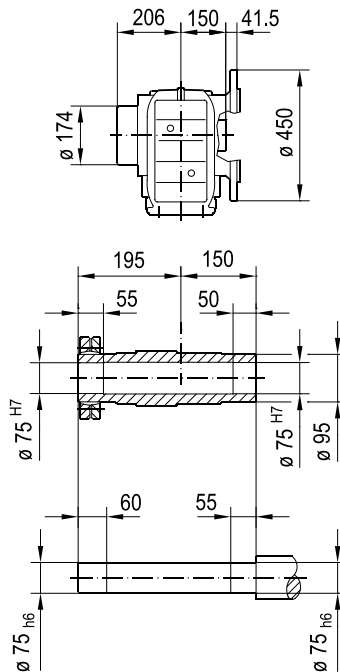
### KF97..



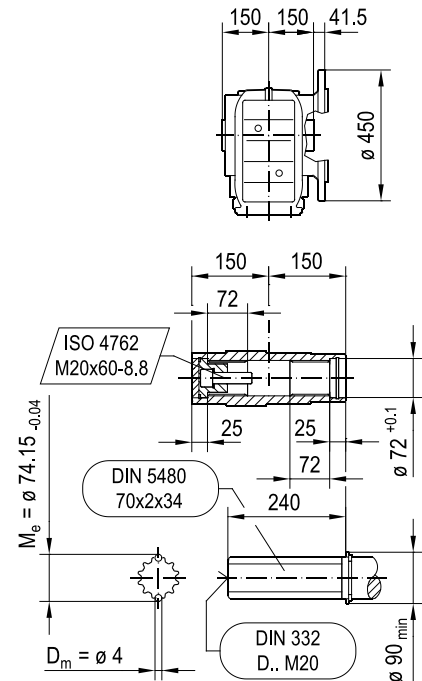
### KAF97..



### KHF97..



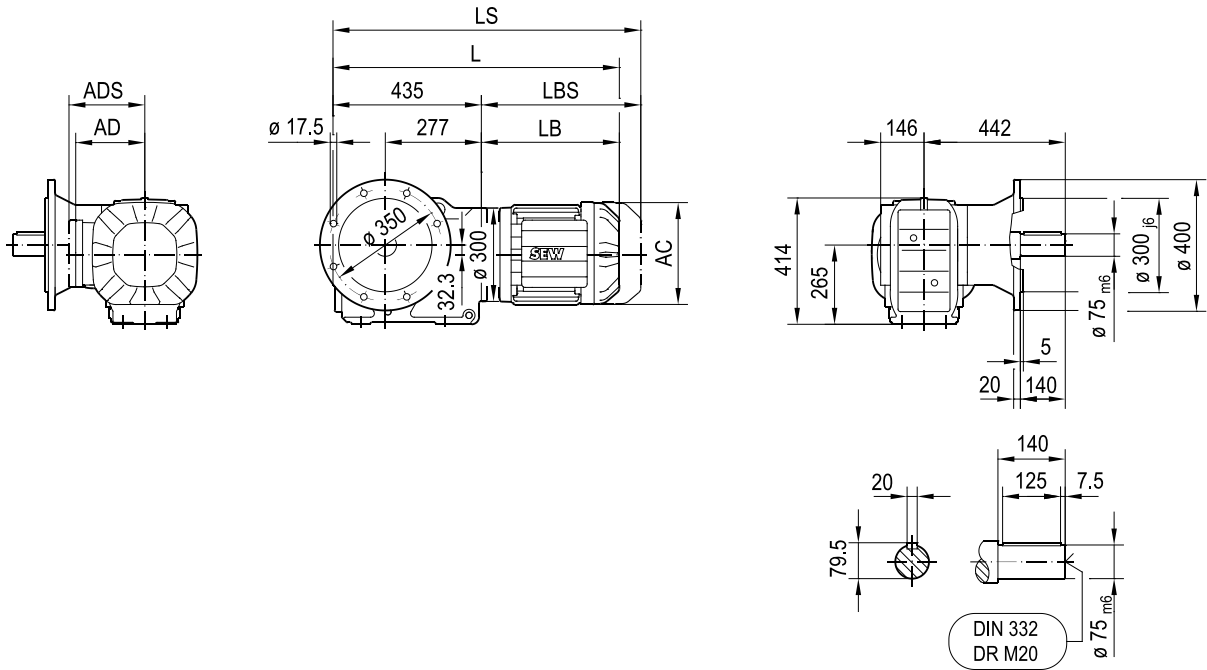
### KVF97..



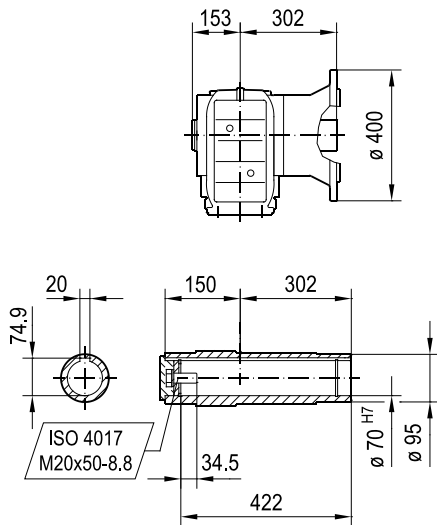
( $\rightarrow$ 7.3)	DRN											
	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	179	179	197	197	221	221	261	261	314	357	394	434
AD	140	140	157	157	170	170	228	228	253	268	283	305
ADS	150	150	158	158	172	172	228	228	253	268	283	305
L	695	727	723	773	804	854	872	898	964	987	1097	1071
LS	788	820	817	867	916	966	1010	1035	1153	1176	1302	1276
LB	260	292	288	338	369	419	437	463	529	552	662	636
LBS	353	385	382	432	481	531	575	600	718	741	867	841

**KM97..**

33 273 00 17



**KAM97..**



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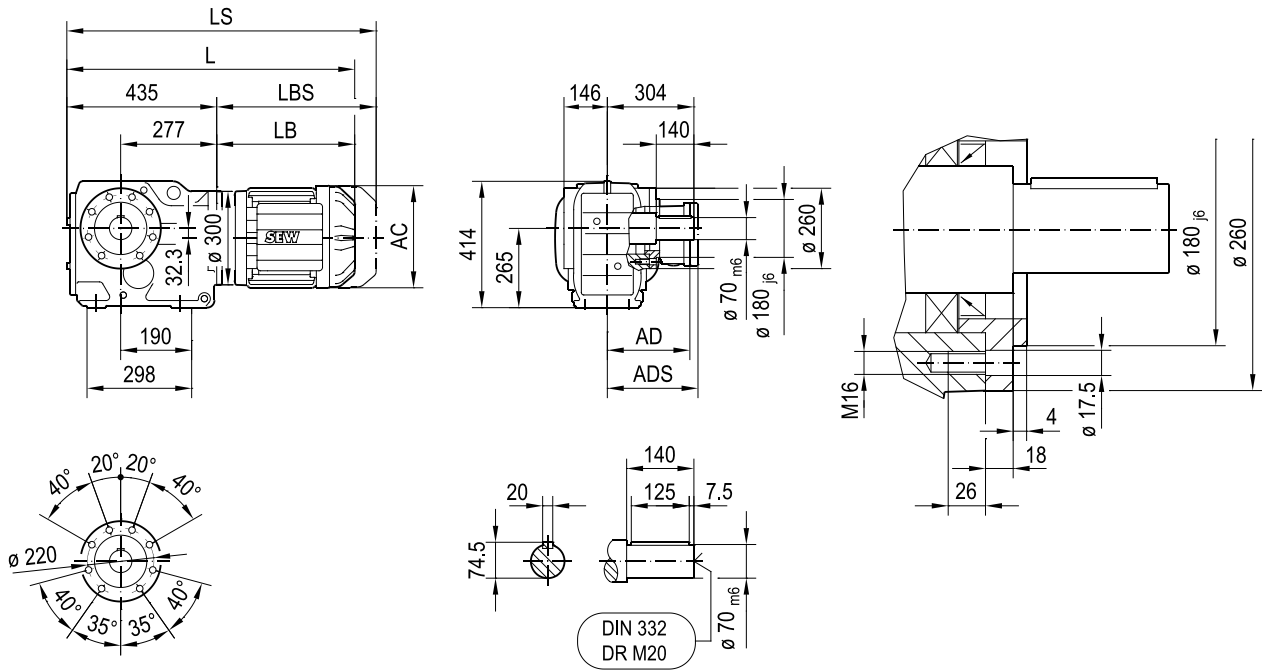
(-> 7.3)	DRN											
	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	179	179	197	197	221	221	261	261	314	357	394	434
AD	140	140	157	157	170	170	228	228	253	268	283	305
ADS	150	150	158	158	172	172	228	228	253	268	283	305
L	695	727	723	773	804	854	872	898	964	987	1097	1071
LS	788	820	817	867	916	966	1010	1035	1153	1176	1302	1276
LB	260	292	288	338	369	419	437	463	529	552	662	636
LBS	353	385	382	432	481	531	575	600	718	741	867	841





33 238 00 15

### KZ97..



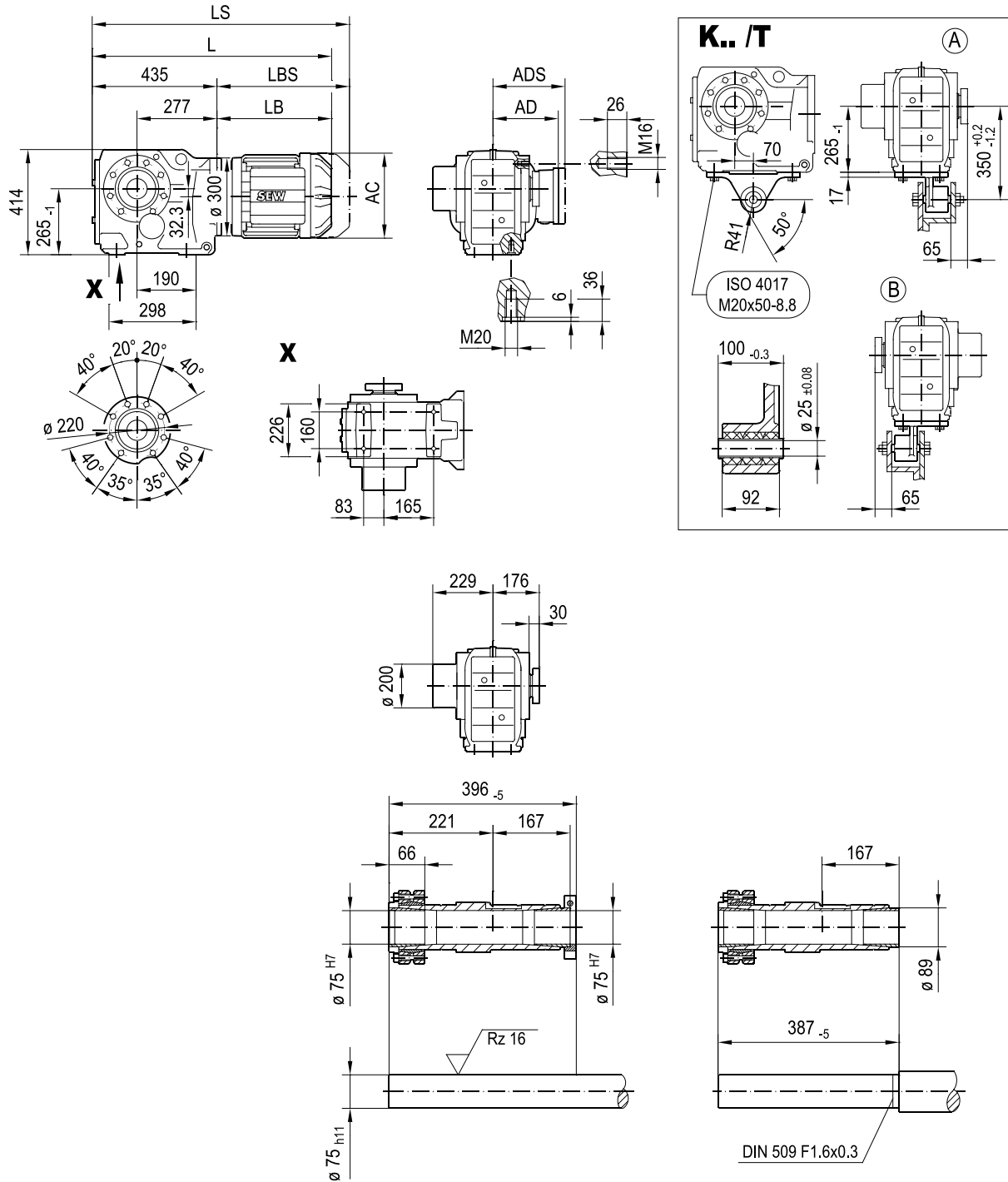
(→ 7.3)	DRN											
	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	179	179	197	197	221	221	261	261	314	357	394	434
AD	140	140	157	157	170	170	228	228	253	268	283	305
ADS	150	150	158	158	172	172	228	228	253	268	283	305
L	695	727	723	773	804	854	872	898	964	987	1097	1071
LS	788	820	817	867	916	966	1010	1035	1153	1176	1302	1276
LB	260	292	288	338	369	419	437	463	529	552	662	636
LBS	353	385	382	432	481	531	575	600	718	741	867	841

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KT97..

33 071 01 14

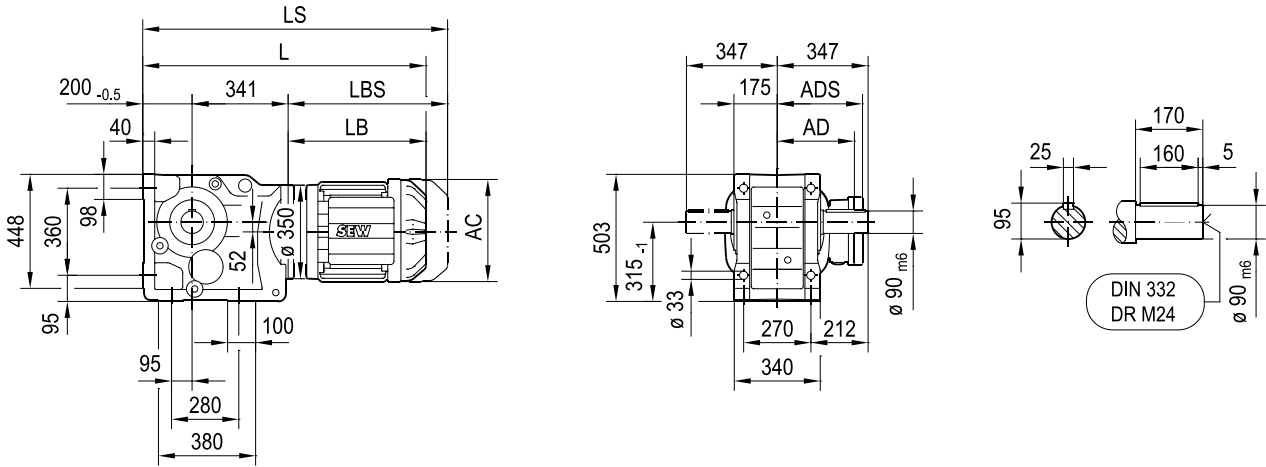


(-> 7.3)	DRN											
	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	179	179	197	197	221	221	261	261	314	357	394	434
AD	140	140	157	157	170	170	228	228	253	268	283	305
ADS	150	150	158	158	172	172	228	228	253	268	283	305
L	695	727	723	773	804	854	872	898	964	987	1097	1071
LS	788	820	817	867	916	966	1010	1035	1153	1176	1302	1276
LB	260	292	288	338	369	419	437	463	529	552	662	636
LBS	353	385	382	432	481	531	575	600	718	741	867	841

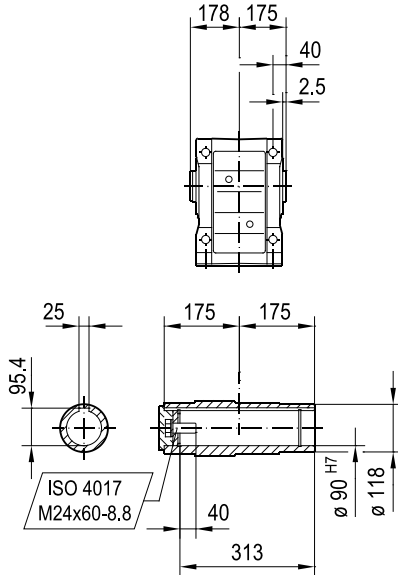
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33 072 00 14

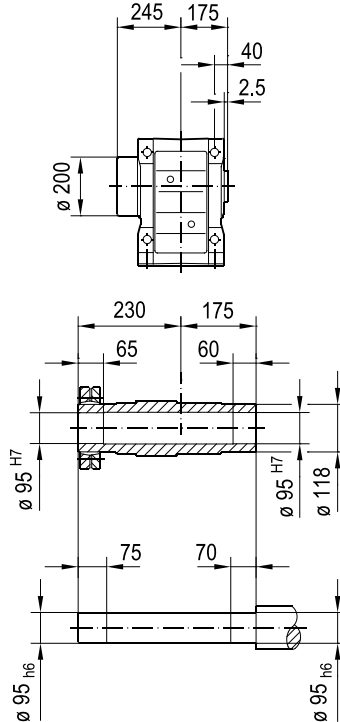
### K107..



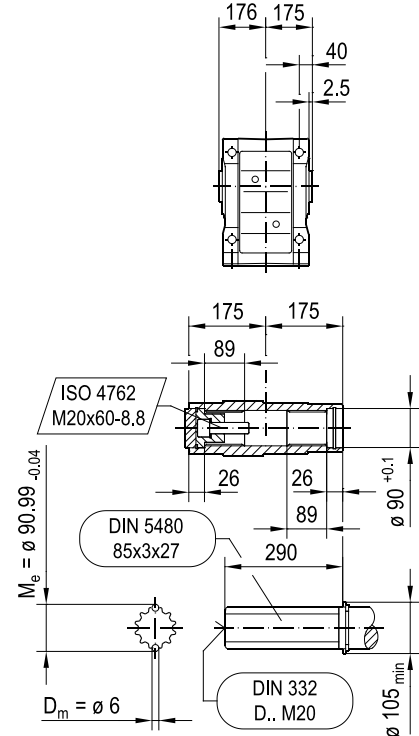
### KA107B..



### KH107B..



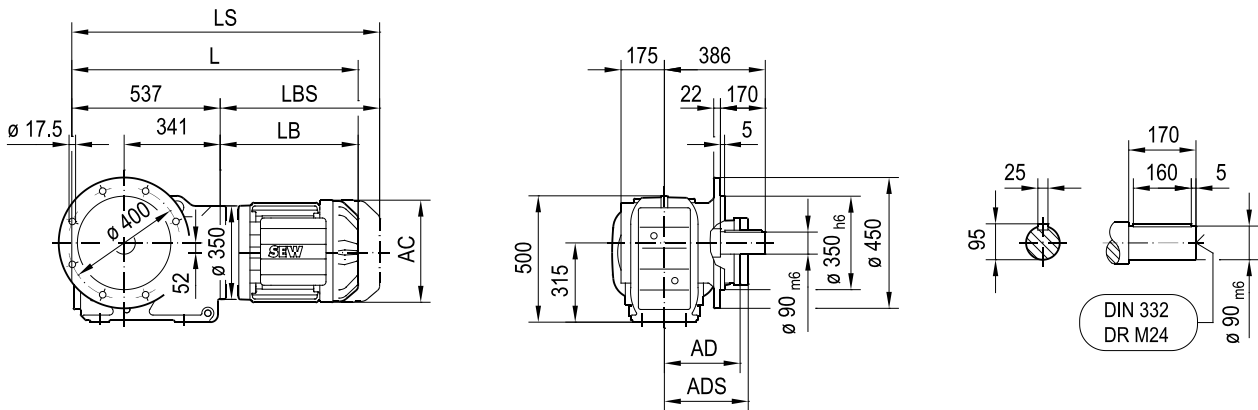
### KV107B..



( $\rightarrow$ 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	823	873	904	954	972	998	1064	1087	1197	1171	1308
LS	917	967	1016	1066	1110	1135	1253	1276	1402	1376	1548
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

**KF107..**

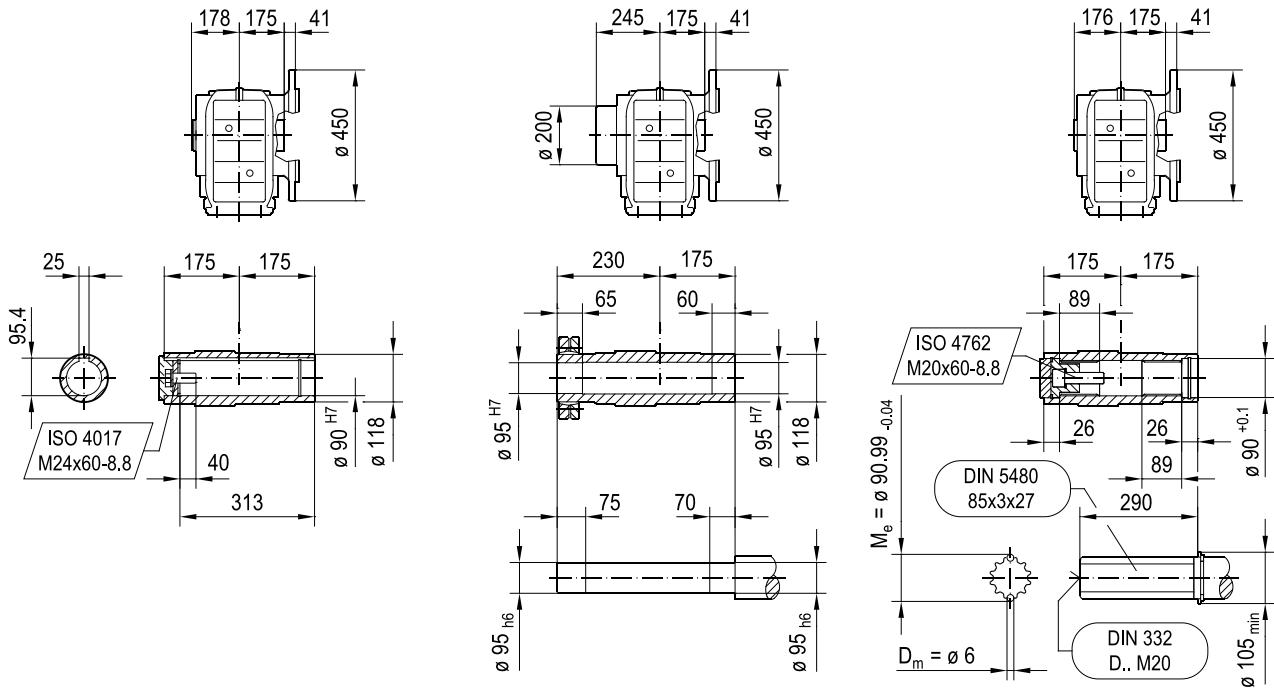
33 073 00 14



**KAF107..**

**KHF107..**

**KVF107..**

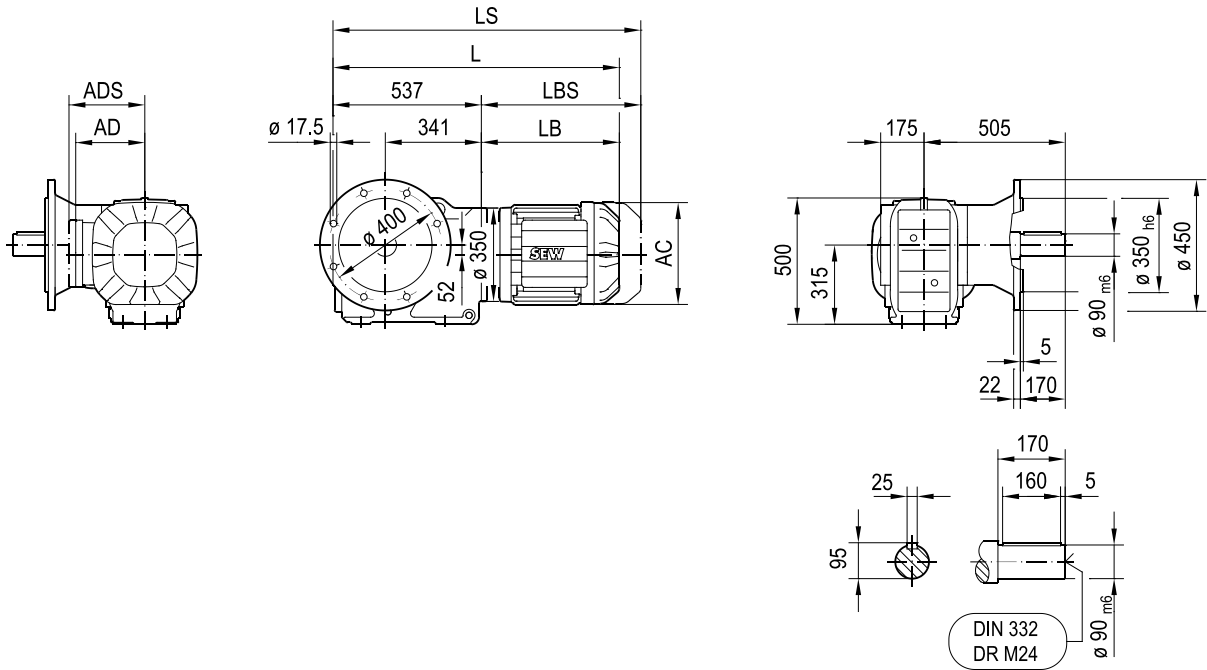


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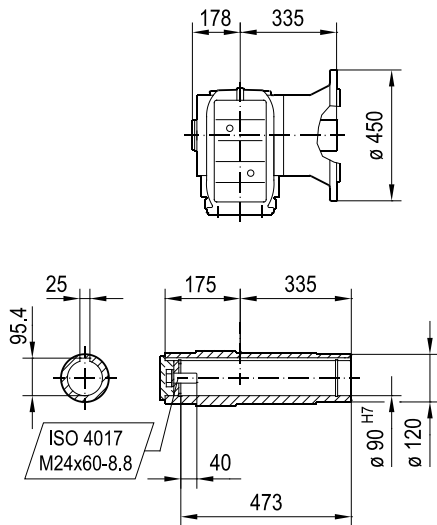
( $\rightarrow$ 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	819	869	900	950	968	994	1060	1083	1193	1167	1304
LS	913	963	1012	1062	1106	1131	1249	1272	1398	1372	1544
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

33 274 00 17

### KM107..



### KAM107..

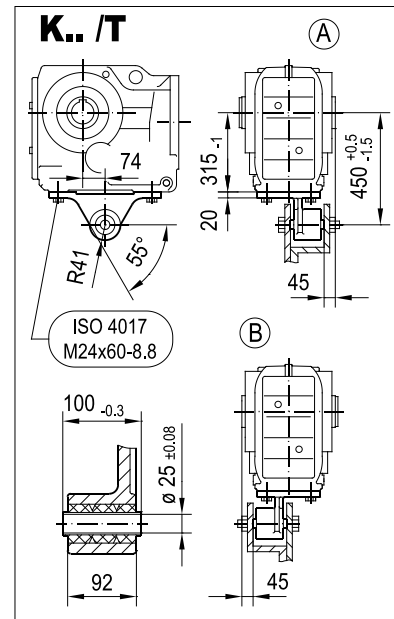
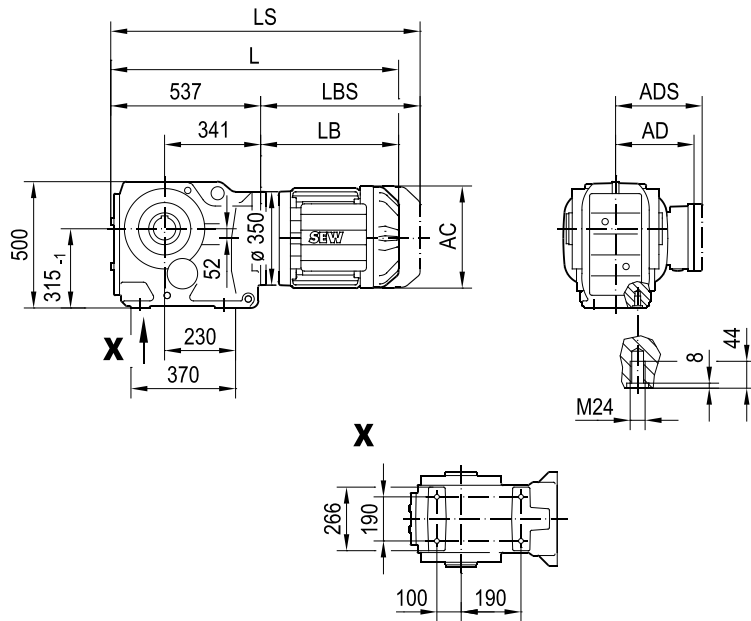


(-> 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	819	869	900	950	968	994	1060	1083	1193	1167	1304
LS	913	963	1012	1062	1106	1131	1249	1272	1398	1372	1544
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

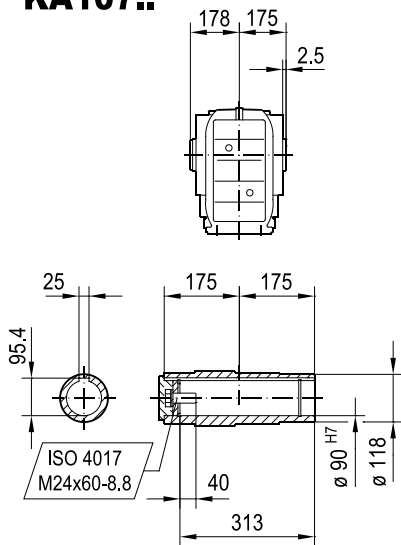
26883198/EN - 04/2022

33 074 00 14

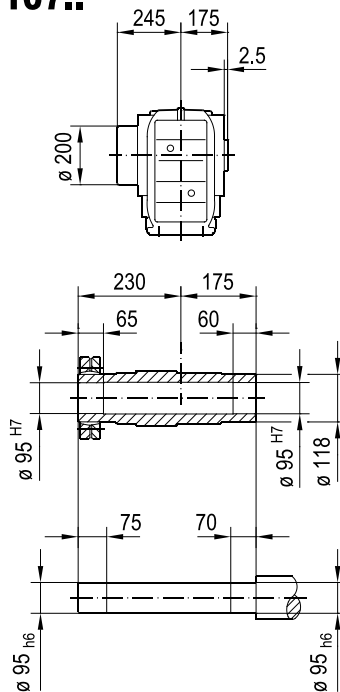
**KA107..**



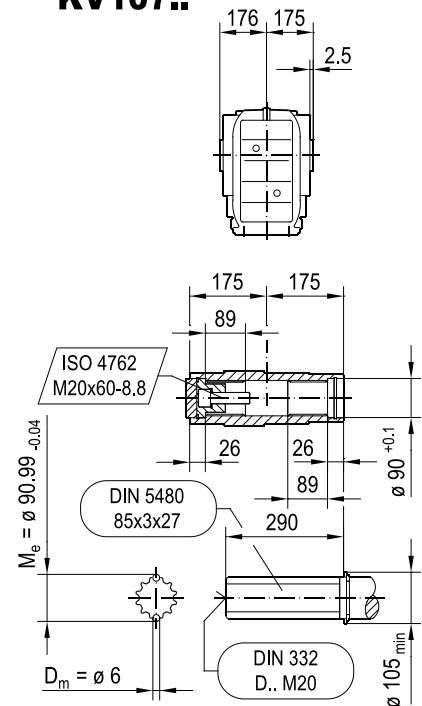
**KA107..**



**KH107..**



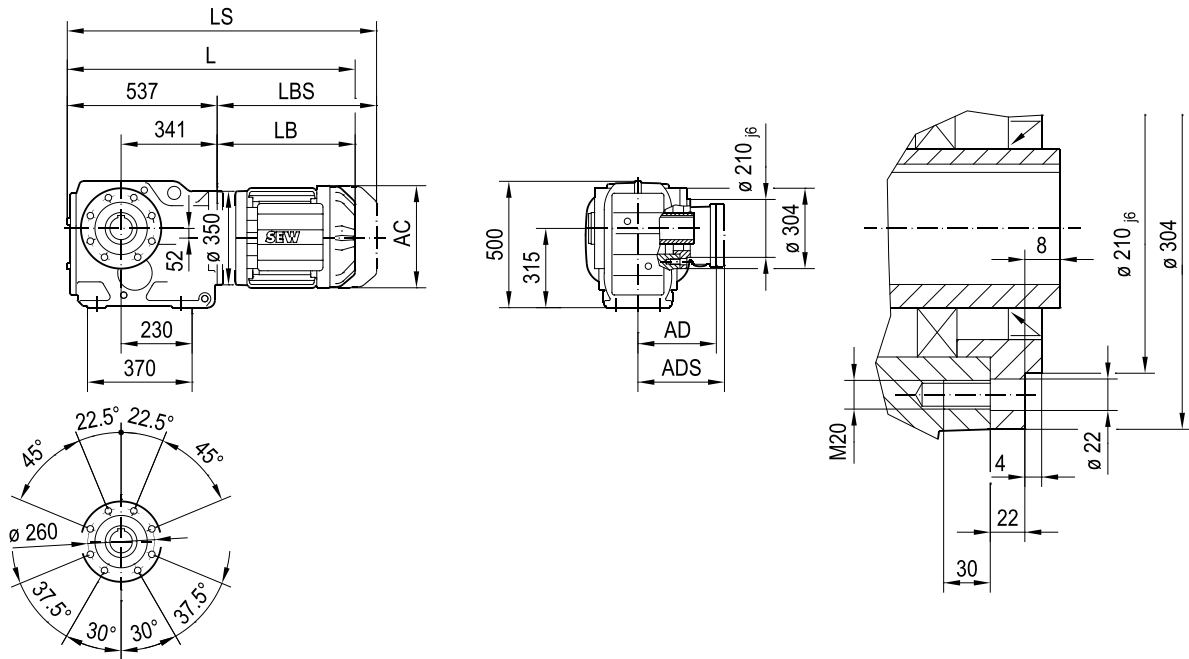
**KV107..**



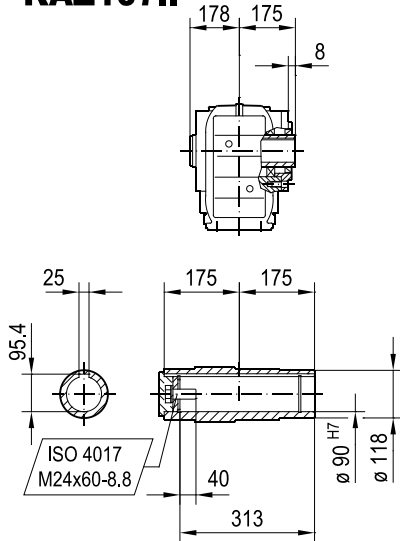
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( $\rightarrow$ 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	819	869	900	950	968	994	1060	1083	1193	1167	1304
LS	913	963	1012	1062	1106	1131	1249	1272	1398	1372	1544
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

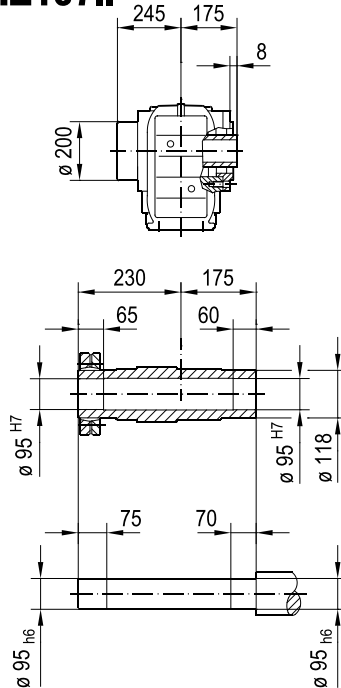
### KAZ107..



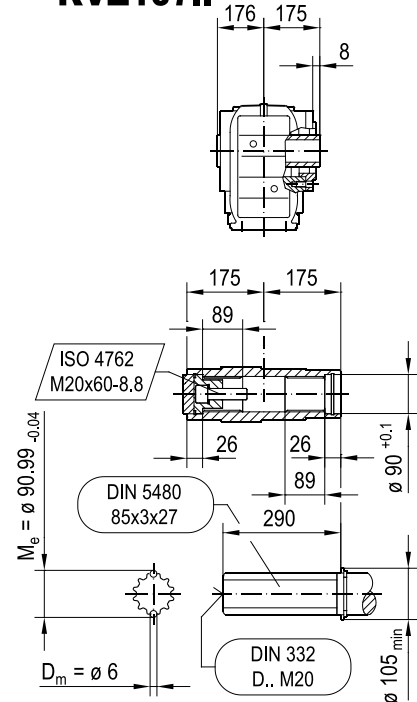
### KAZ107..



### KHZ107..



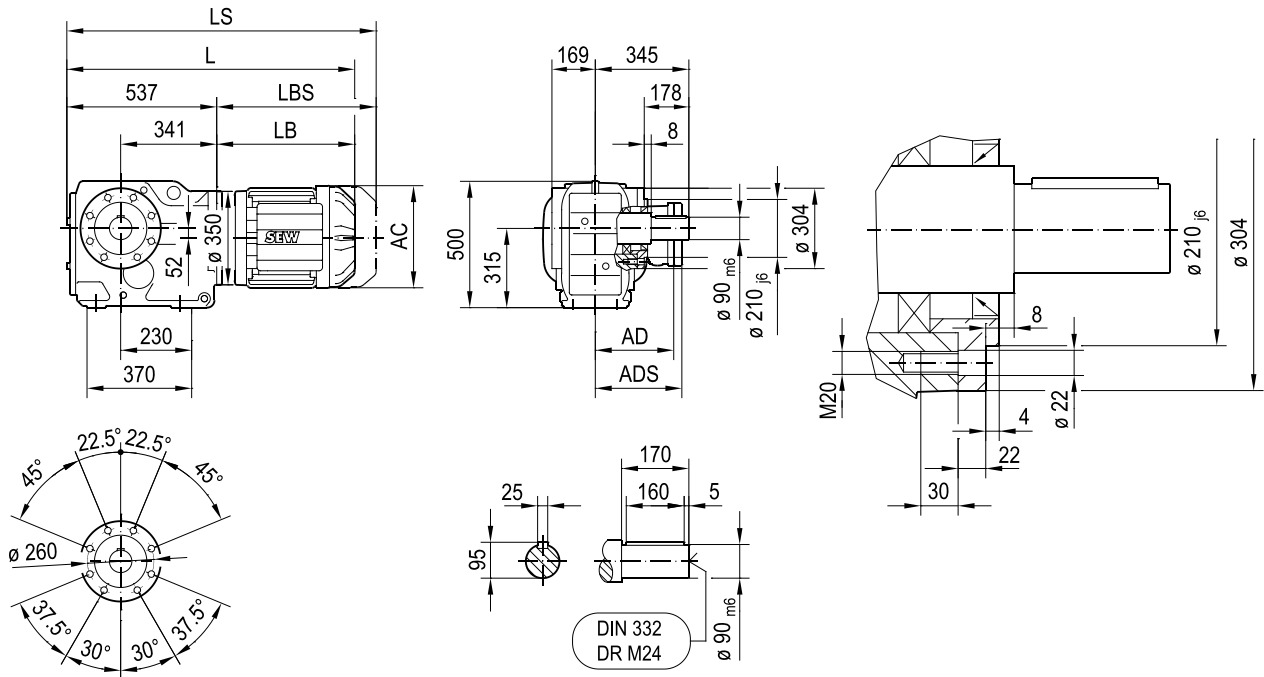
### KVZ107..



(→ 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	819	869	900	950	968	994	1060	1083	1193	1167	1304
LS	913	963	1012	1062	1106	1131	1249	1272	1398	1372	1544
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

**KZ107..**

33 239 01 15

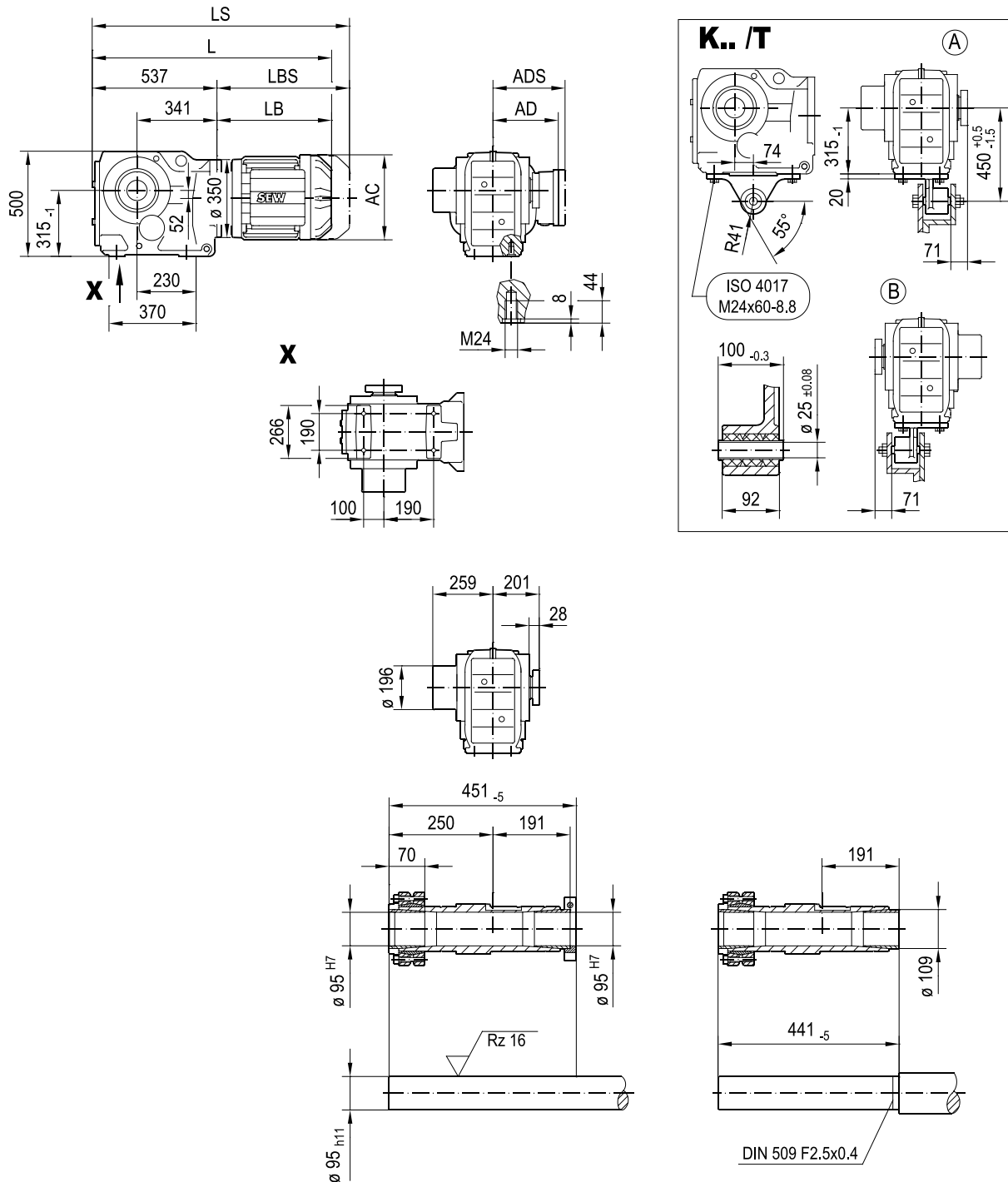


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(→  7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	819	869	900	950	968	994	1060	1083	1193	1167	1304
LS	913	963	1012	1062	1106	1131	1249	1272	1398	1372	1544
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

33 076 01 14

### KT107..



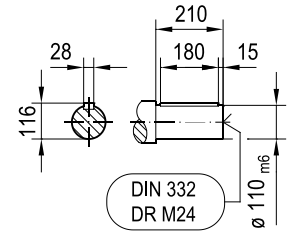
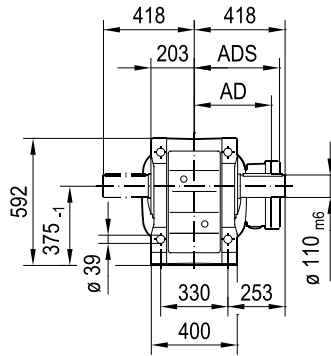
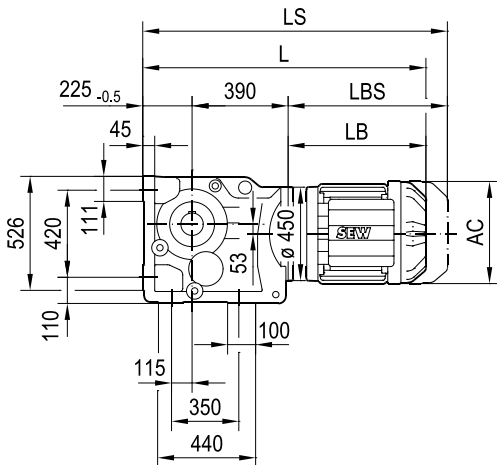
(→ 7.3)	DRN										
	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..	250M
AC	197	197	221	221	261	261	314	357	394	434	495
AD	157	157	170	170	228	228	253	268	283	305	394
ADS	158	158	172	172	228	228	253	268	283	305	394
L	819	869	900	950	968	994	1060	1083	1193	1167	1304
LS	913	963	1012	1062	1106	1131	1249	1272	1398	1372	1544
LB	282	332	363	413	431	457	523	546	656	630	767
LBS	376	426	475	525	569	594	712	735	861	835	1007

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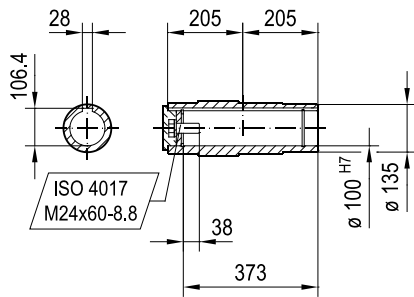
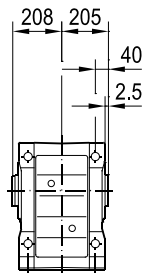


33 077 00 14

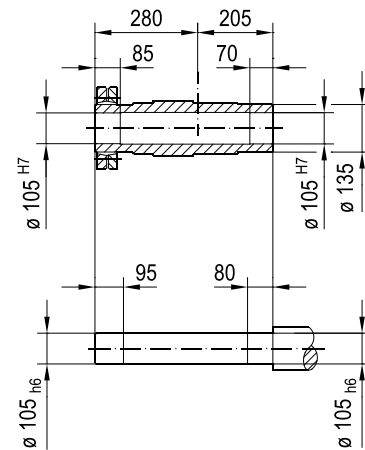
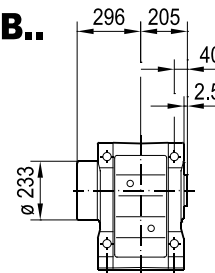
**K127..**



**KA127B..**



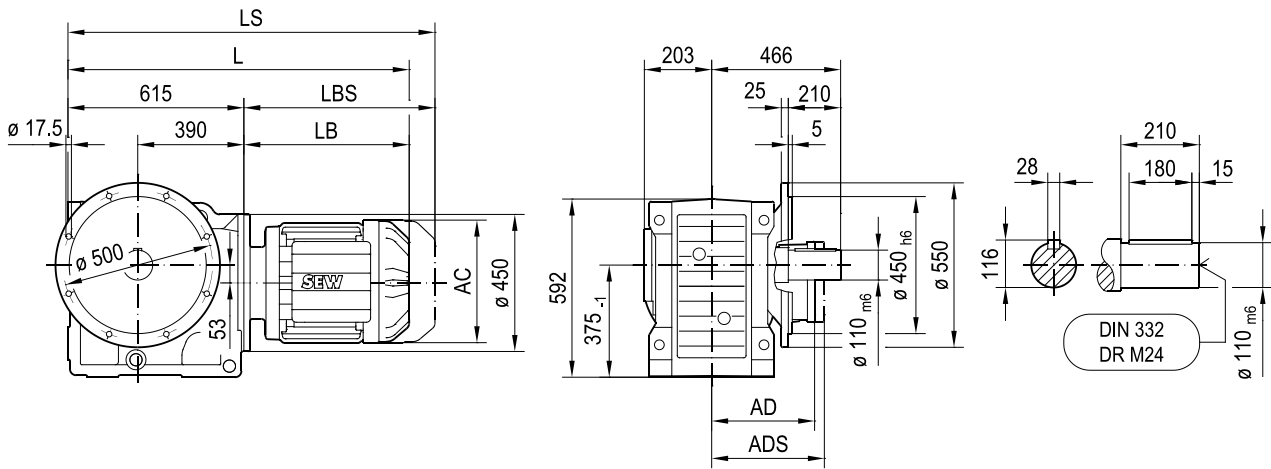
**KH127B..**



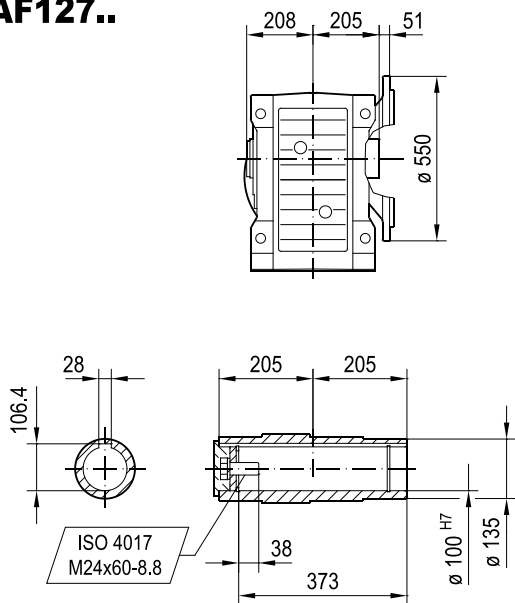
26883198/EN - 04/2022

(-> 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1013	1031	1057	1123	1146	1256	1230	1367	1367	1462
LS	1125	1169	1194	1312	1335	1461	1435	1607	1607	1702
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

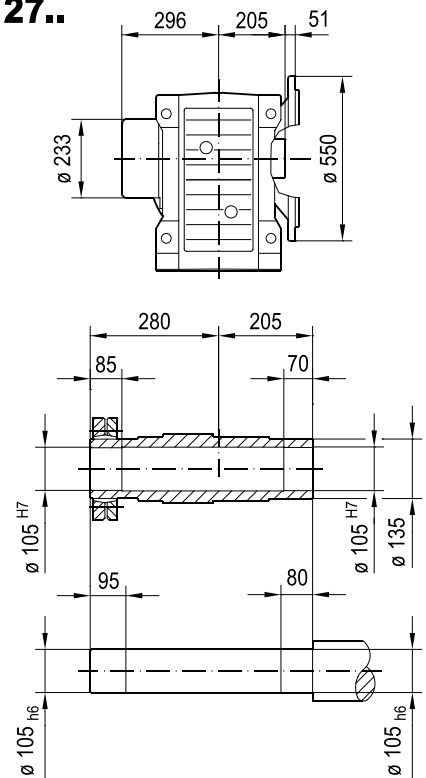
### KF127..



### KAF127..



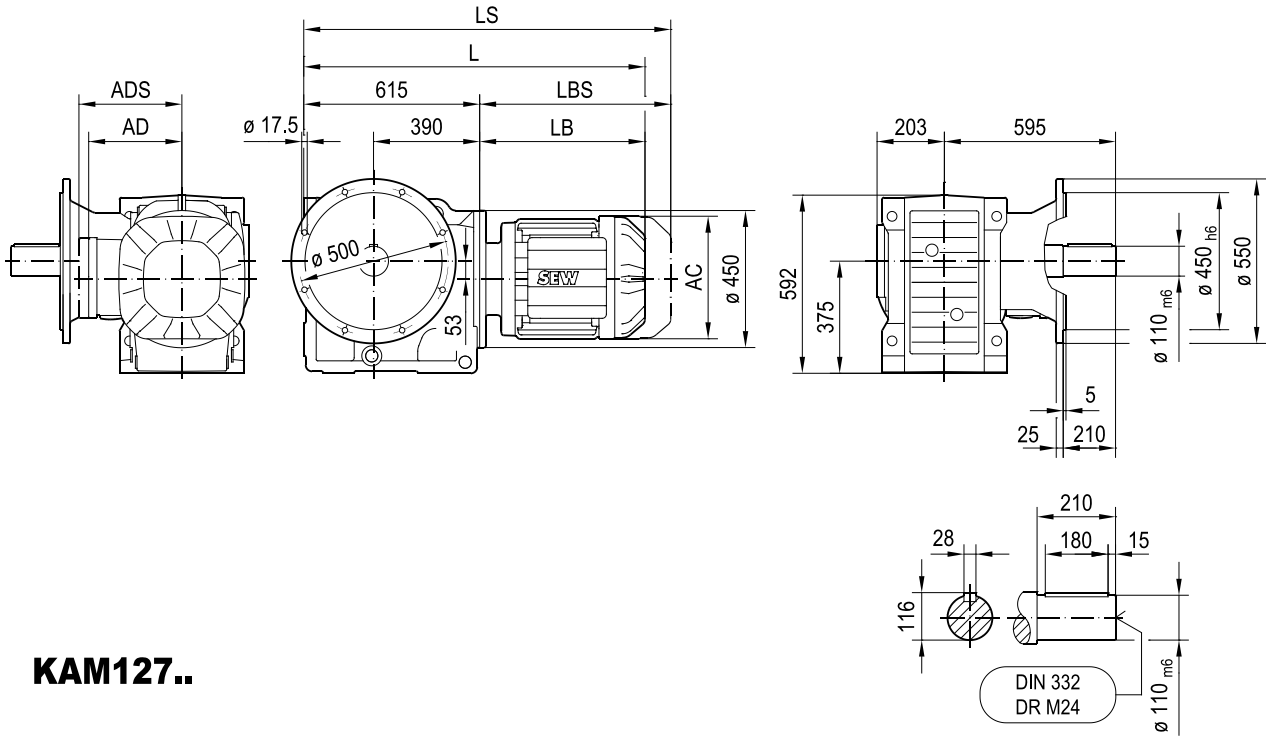
### KHF127..



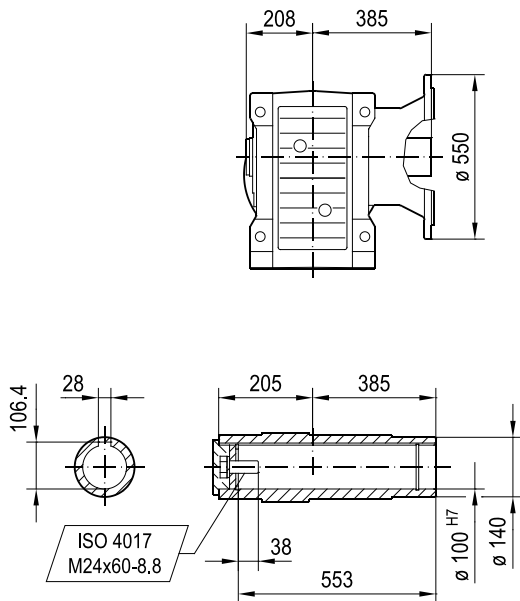
(\rightarrow 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1013	1031	1057	1123	1146	1256	1230	1367	1367	1462
LS	1125	1169	1194	1312	1335	1461	1435	1607	1607	1702
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

33 275 00 17

**KM127..**



**KAM127..**

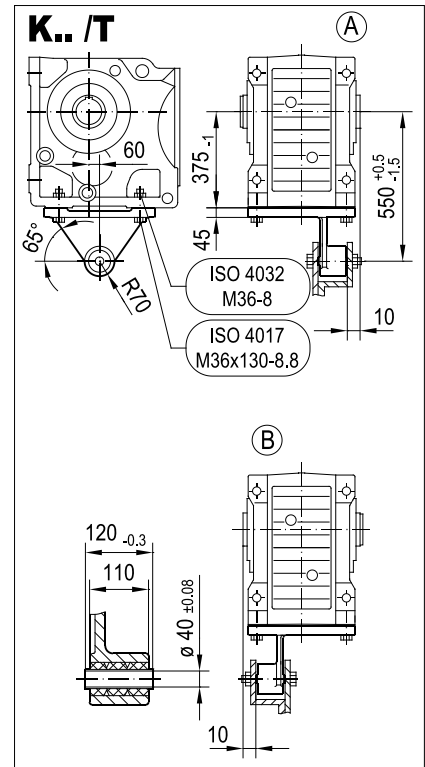
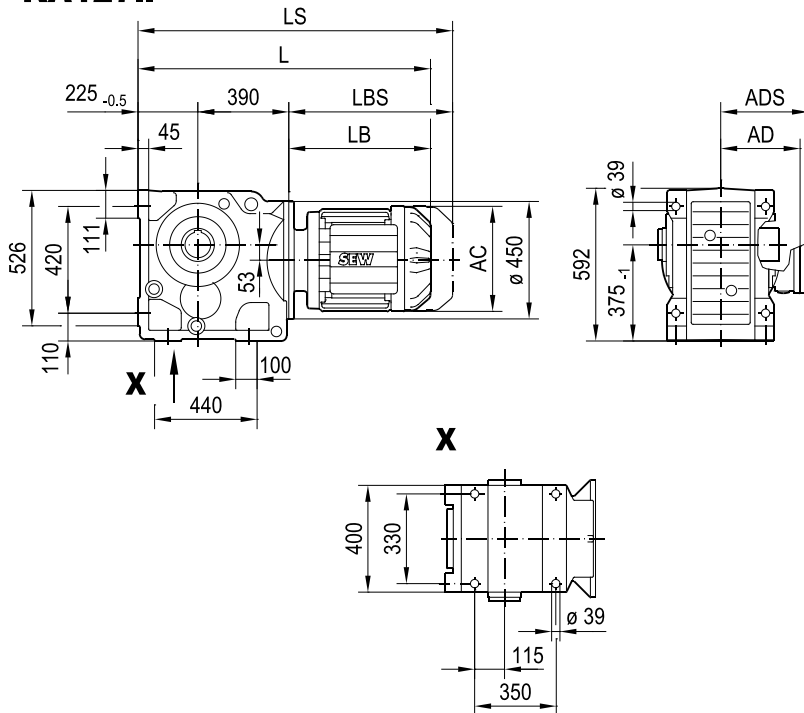


( $\rightarrow$ 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1013	1031	1057	1123	1146	1256	1230	1367	1367	1462
LS	1125	1169	1194	1312	1335	1461	1435	1607	1607	1702
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

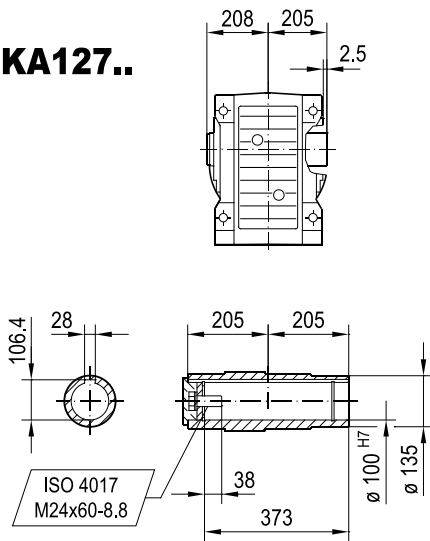
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33 079 02 14

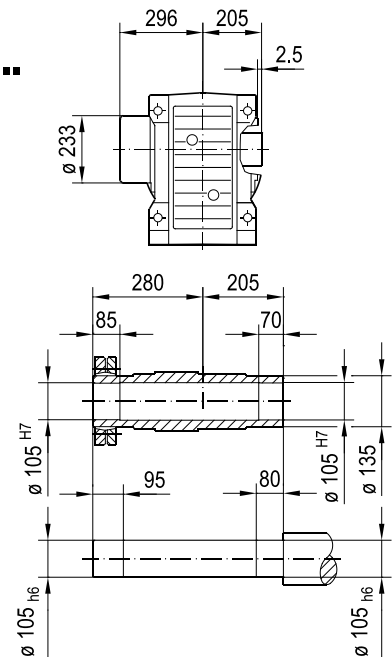
### KA127..



### KA127..



### KH127..

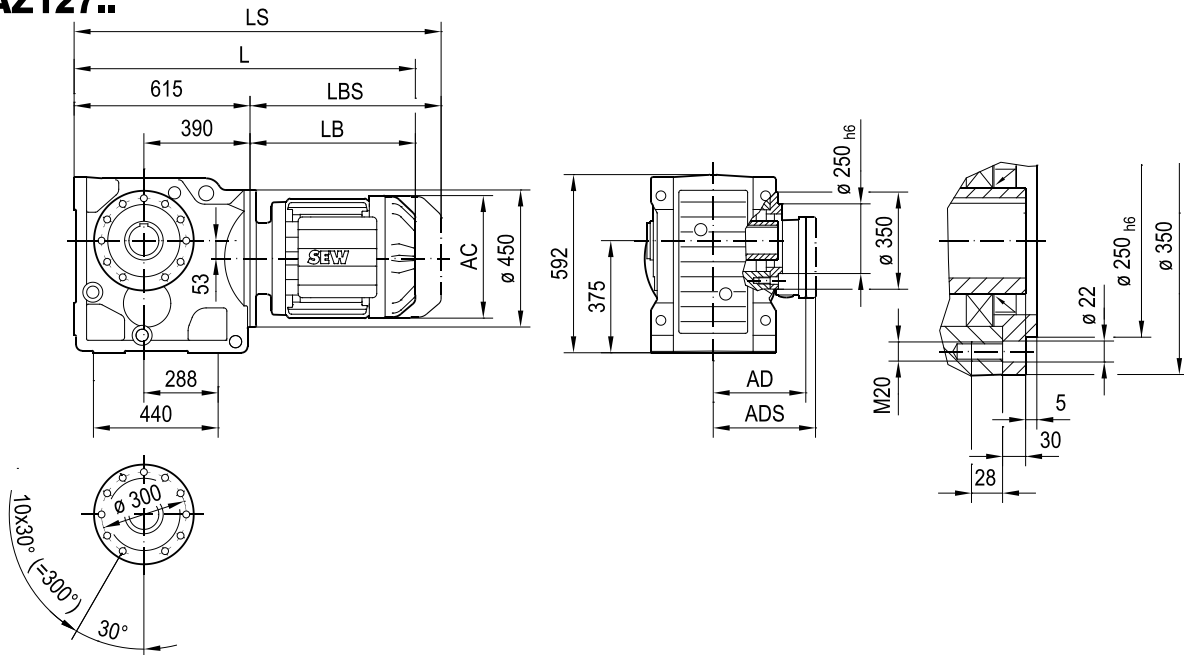


(-> 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1013	1031	1057	1123	1146	1256	1230	1367	1367	1462
LS	1125	1169	1194	1312	1335	1461	1435	1607	1607	1702
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

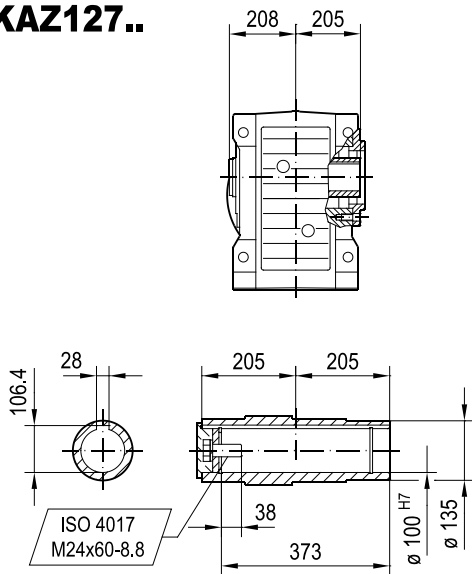
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33 080 00 14

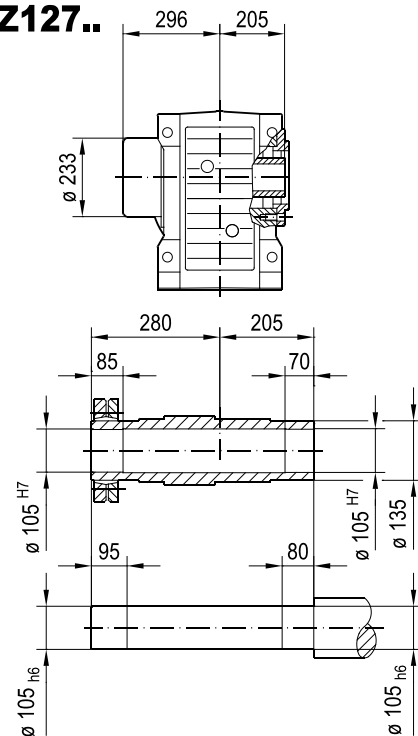
**KAZ127..**



**KAZ127..**



**KHZ127..**

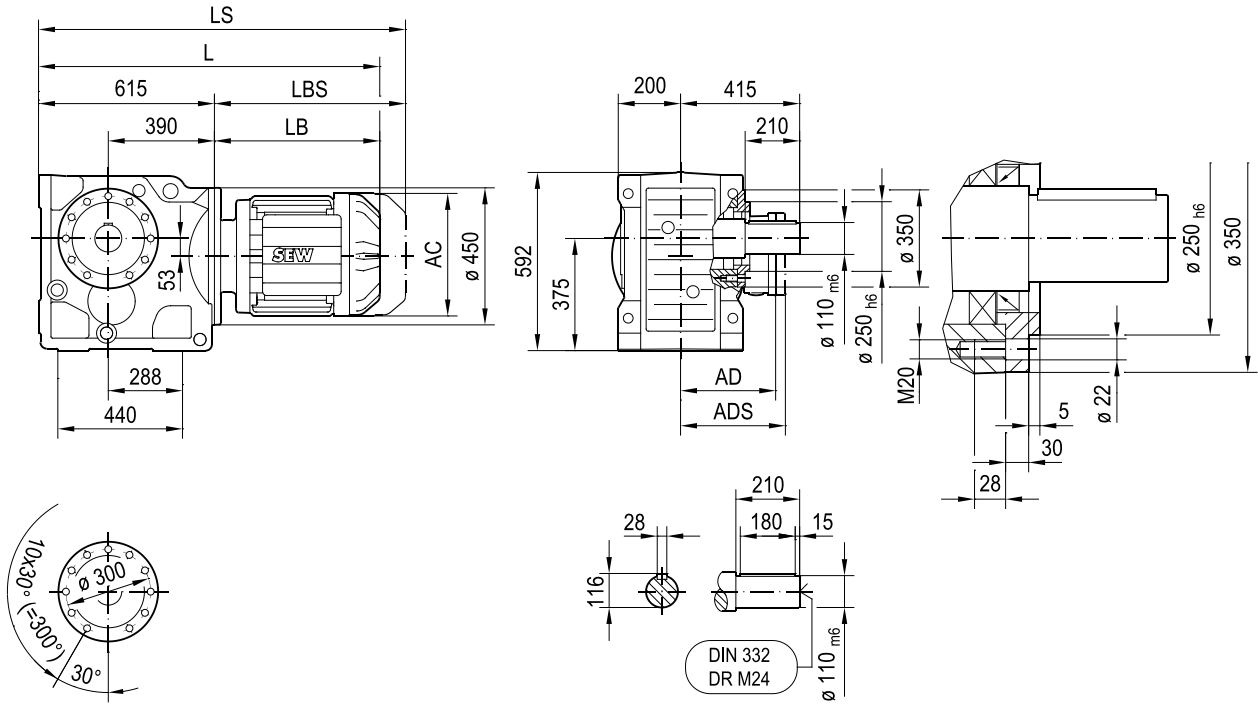


(-> 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1013	1031	1057	1123	1146	1256	1230	1367	1367	1462
LS	1125	1169	1194	1312	1335	1461	1435	1607	1607	1702
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

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33 240 00 15

### KZ127..

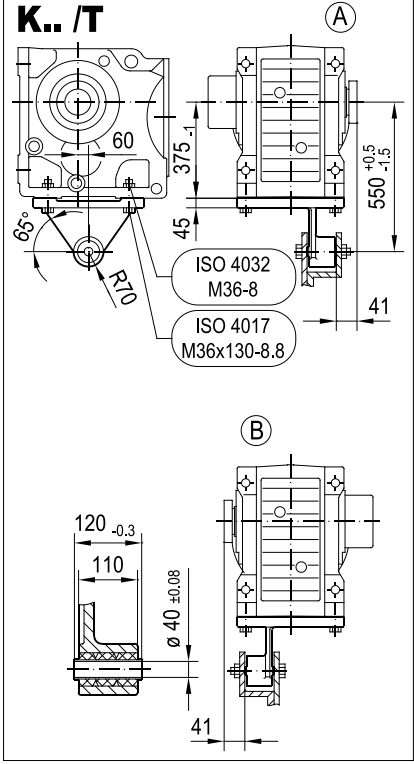
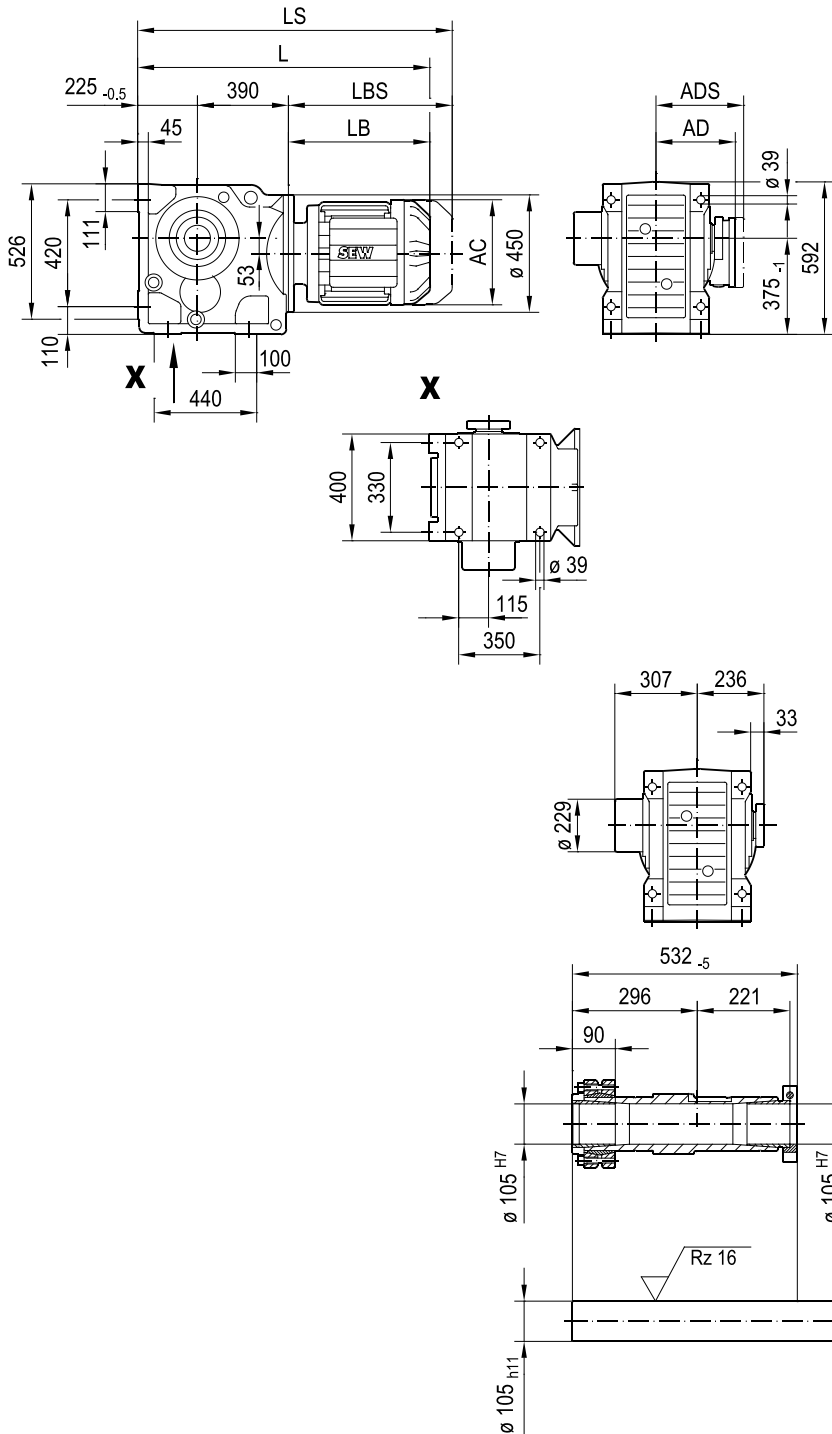


(→ 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1013	1031	1057	1123	1146	1256	1230	1367	1367	1462
LS	1125	1169	1194	1312	1335	1461	1435	1607	1607	1702
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

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33 081 03 14

**KT127..**

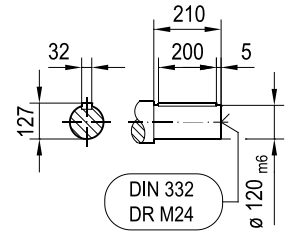
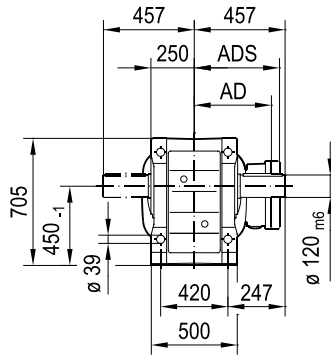
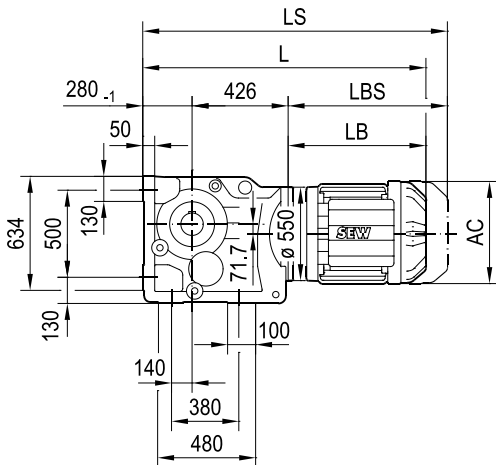


(\rightarrow 7.3)	DRN									
	132S	132M	132L	160..	180..	200L	225..	250M	280S	280M
AC	221	261	261	314	357	394	434	495	495	495
AD	170	228	228	253	268	283	305	394	394	394
ADS	172	228	228	253	268	283	305	394	394	394
L	1013	1031	1057	1123	1146	1256	1230	1367	1367	1462
LS	1125	1169	1194	1312	1335	1461	1435	1607	1607	1702
LB	398	416	442	508	531	641	615	752	752	847
LBS	510	554	579	697	720	846	820	992	992	1087

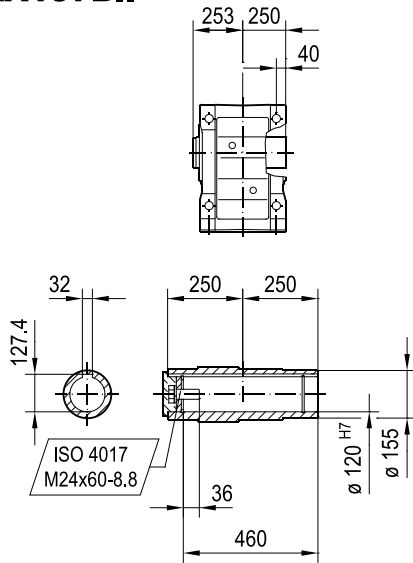
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33 082 00 14

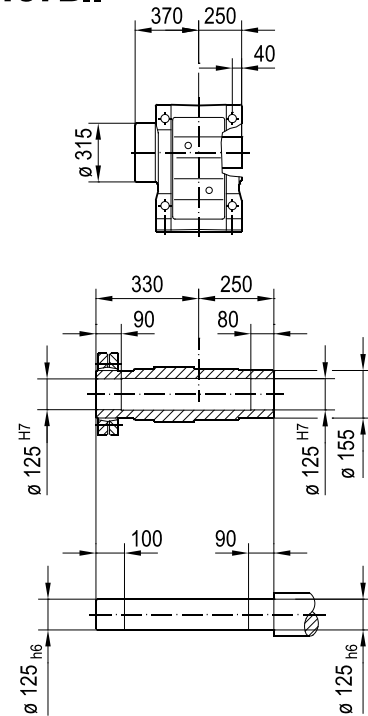
### K157..



### KA157B..



### KH157B..



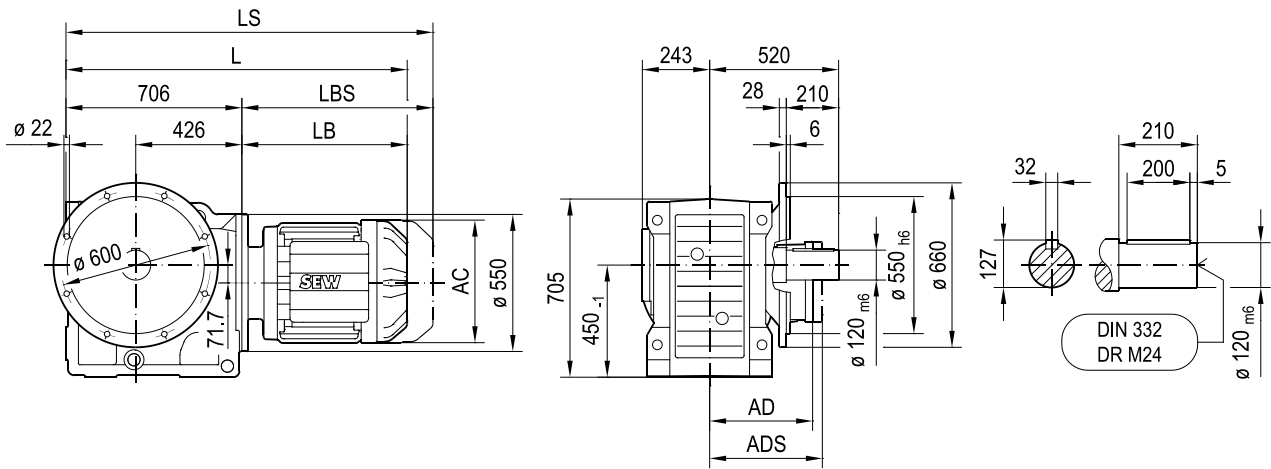
(> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1140	1206	1229	1339	1313	1450	1450	1545	1647	1777
LS	1277	1395	1418	1544	1518	1690	1690	1785	1898	2028
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

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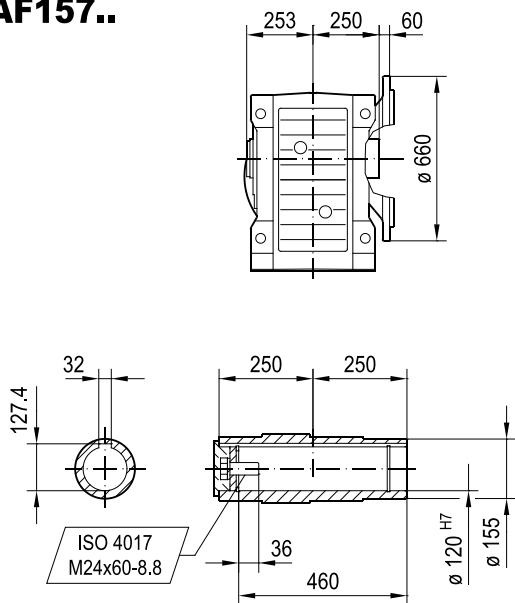


33 083 00 14

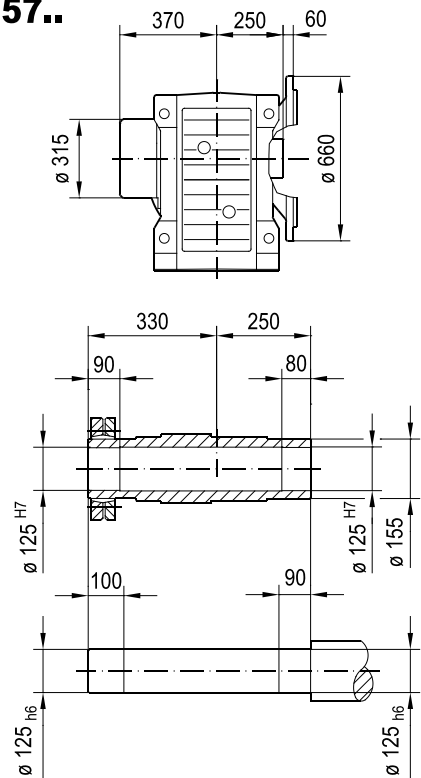
**KF157..**



**KAF157..**



**KHF157..**

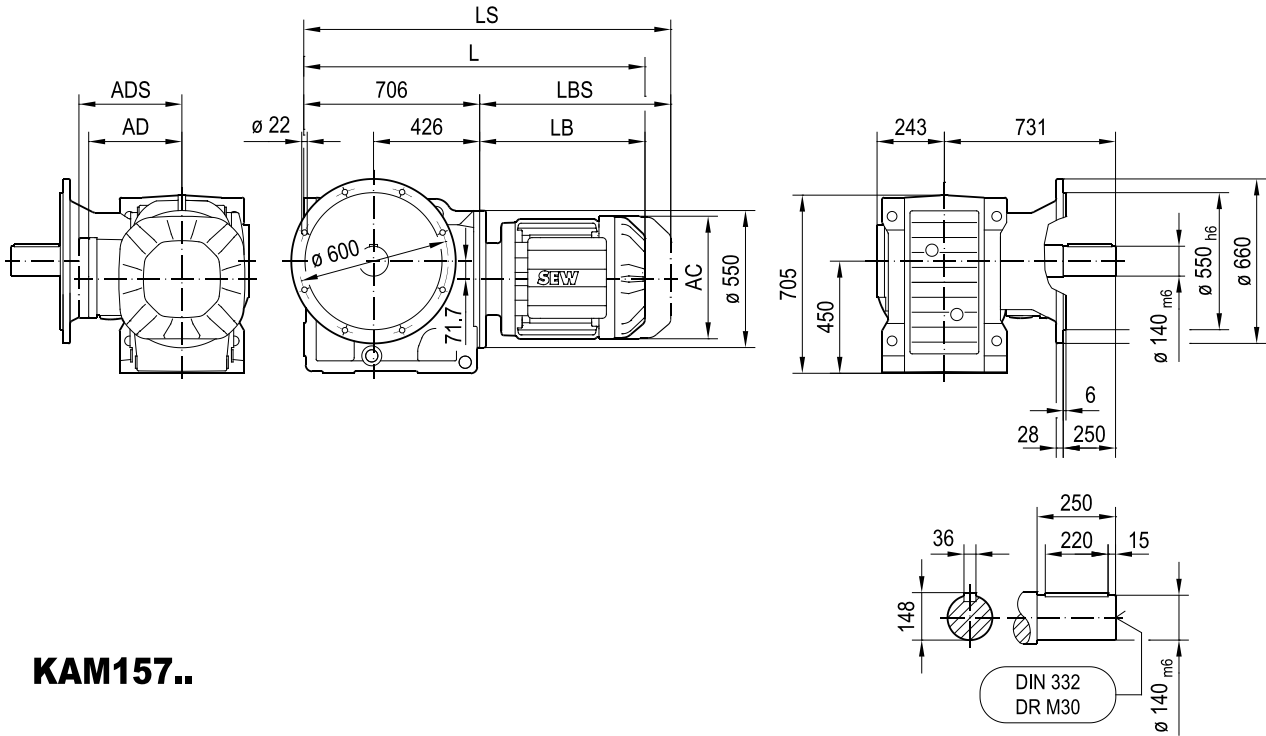


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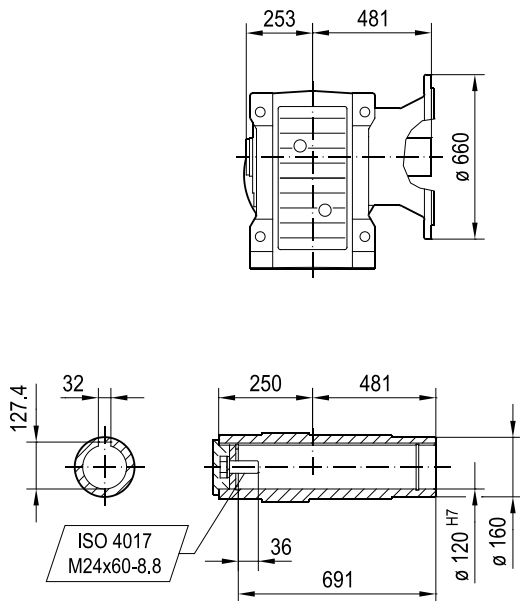
( $\rightarrow$ 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1140	1206	1229	1339	1313	1450	1450	1545	1647	1777
LS	1277	1395	1418	1544	1518	1690	1690	1785	1898	2028
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

33 276 00 17

### KM157..



### KAM157..

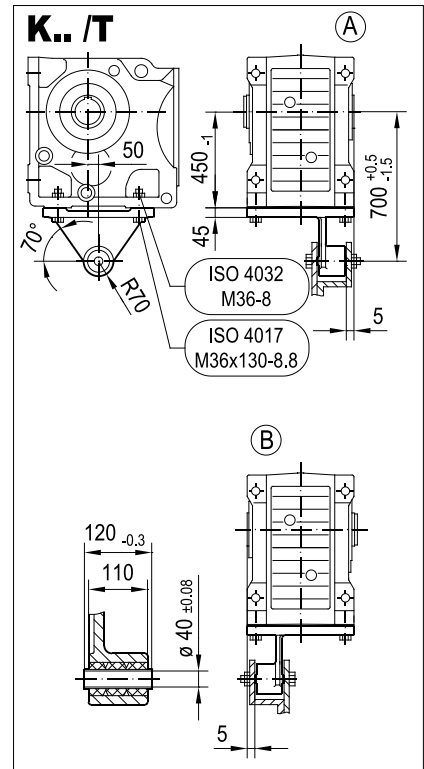
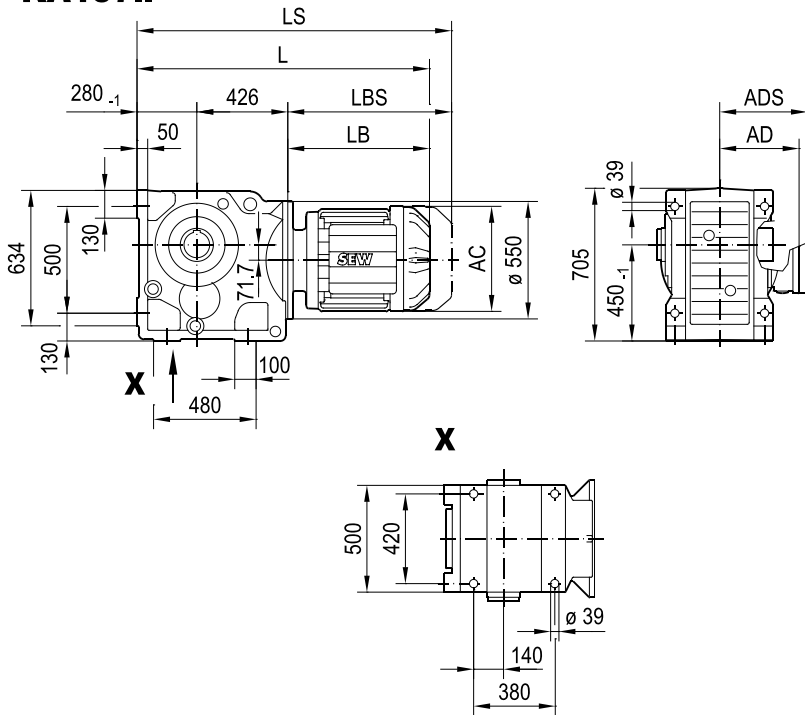


( $\rightarrow$ 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1140	1206	1229	1339	1313	1450	1450	1545	1647	1777
LS	1277	1395	1418	1544	1518	1690	1690	1785	1898	2028
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

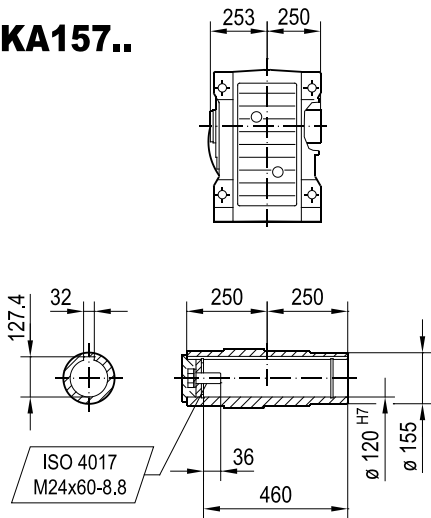
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33 084 02 14

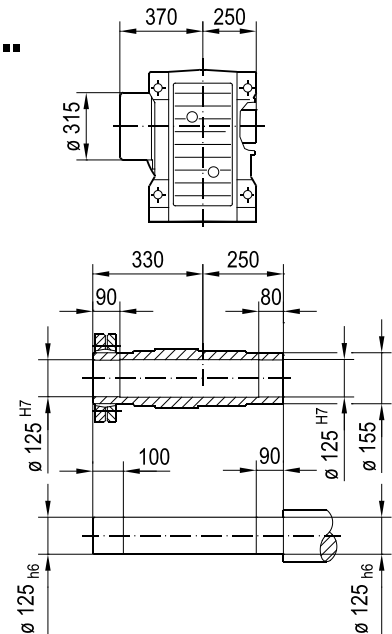
**KA157..**



**KA157..**



**KH157..**

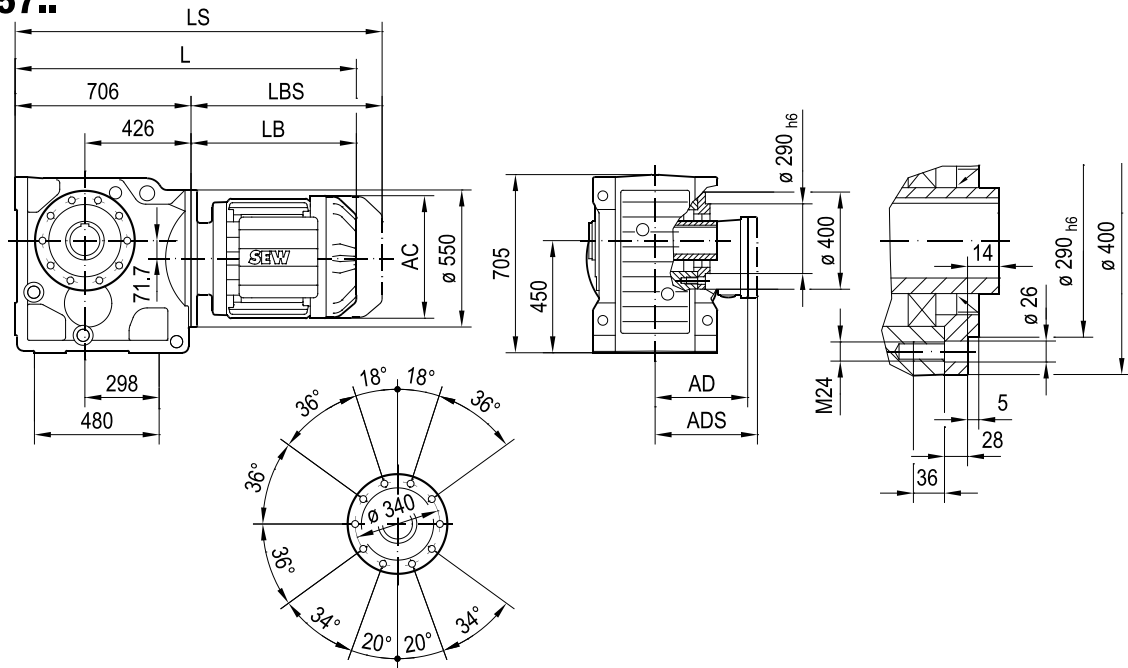


↔ 7.3	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1140	1206	1229	1339	1313	1450	1450	1545	1647	1777
LS	1277	1395	1418	1544	1518	1690	1690	1785	1898	2028
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

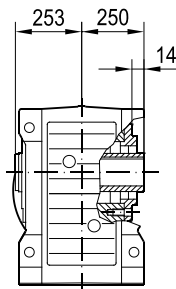
26883198/EN - 04/2022

33 085 00 14

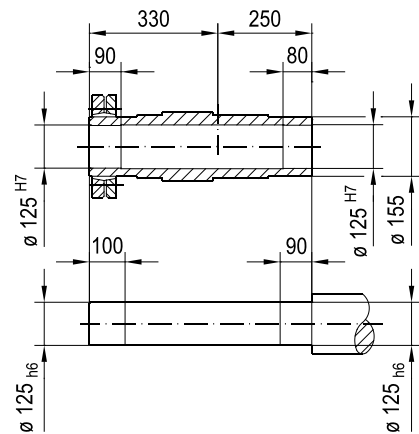
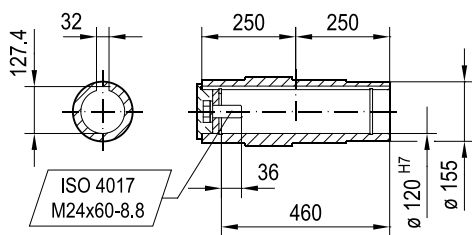
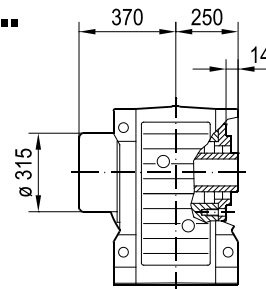
### KAZ157..



### KAZ157..



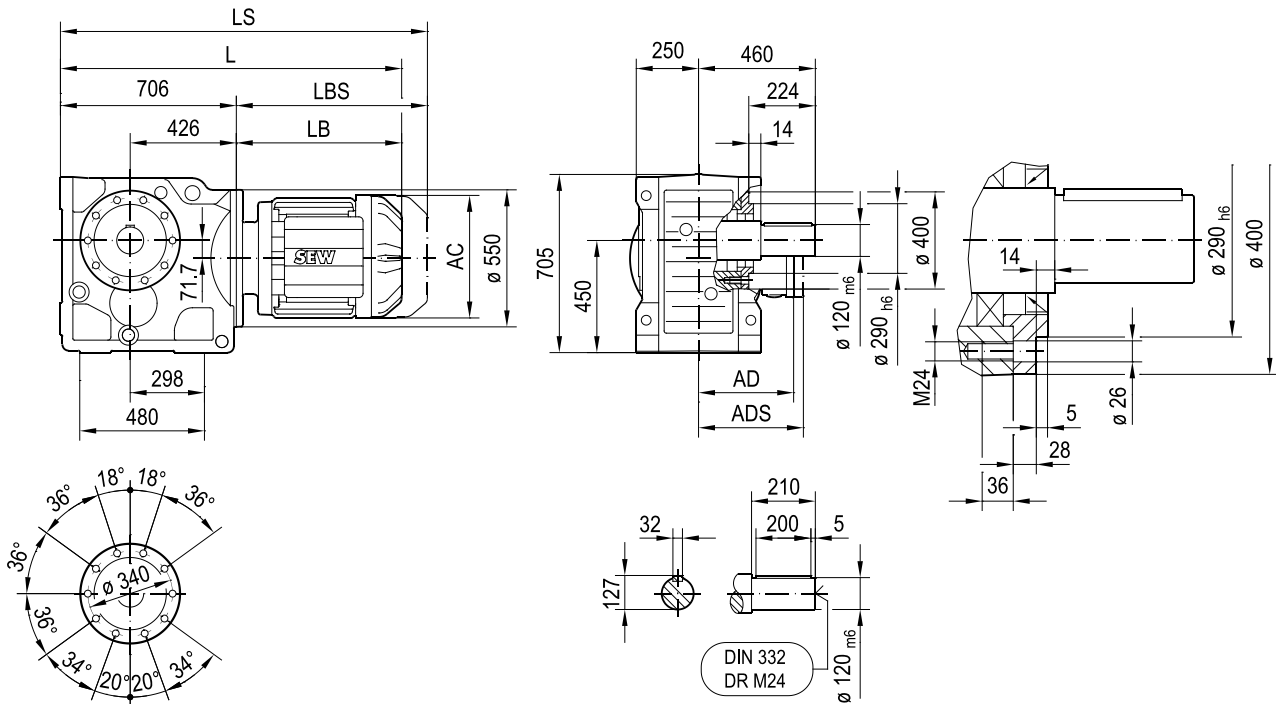
### KHZ157..



( $\rightarrow$ 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1140	1206	1229	1339	1313	1450	1450	1545	1647	1777
LS	1277	1395	1418	1544	1518	1690	1690	1785	1898	2028
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

33 241 01 15

**KZ157..**

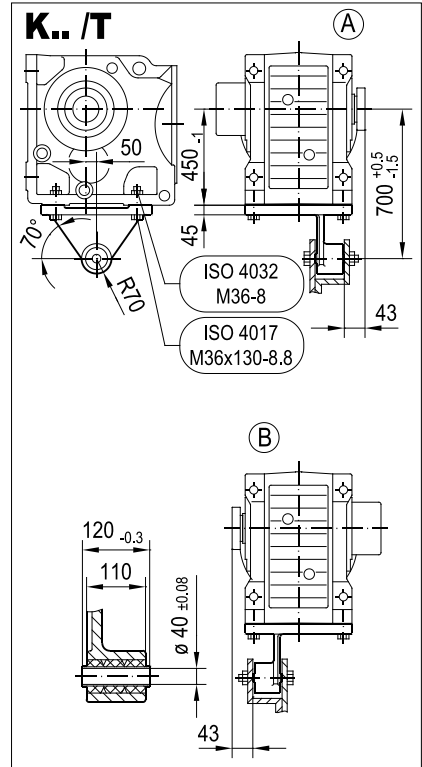
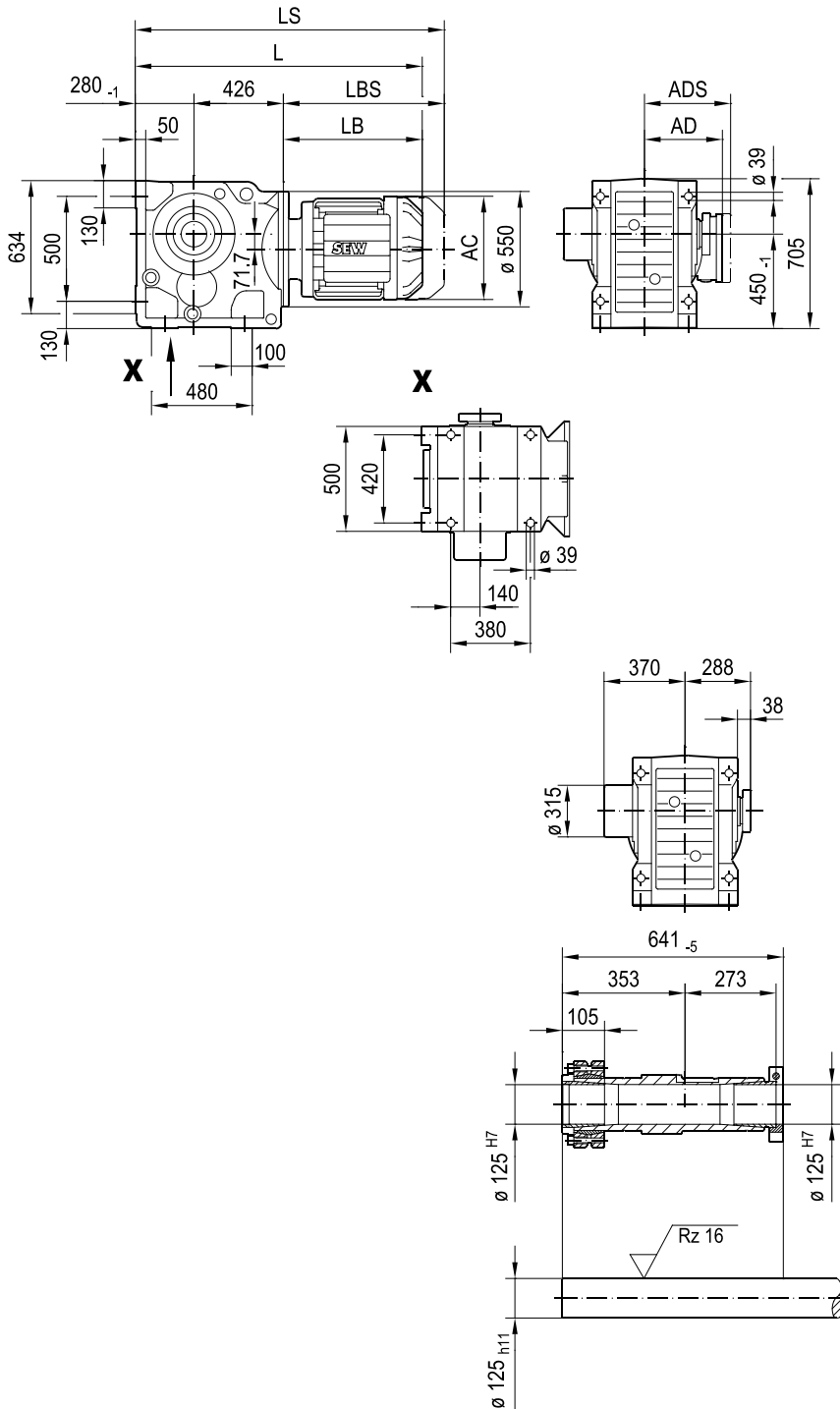


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(-> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1140	1206	1229	1339	1313	1450	1450	1545	1647	1777
LS	1277	1395	1418	1544	1518	1690	1690	1785	1898	2028
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

33 086 03 14

### KT157..

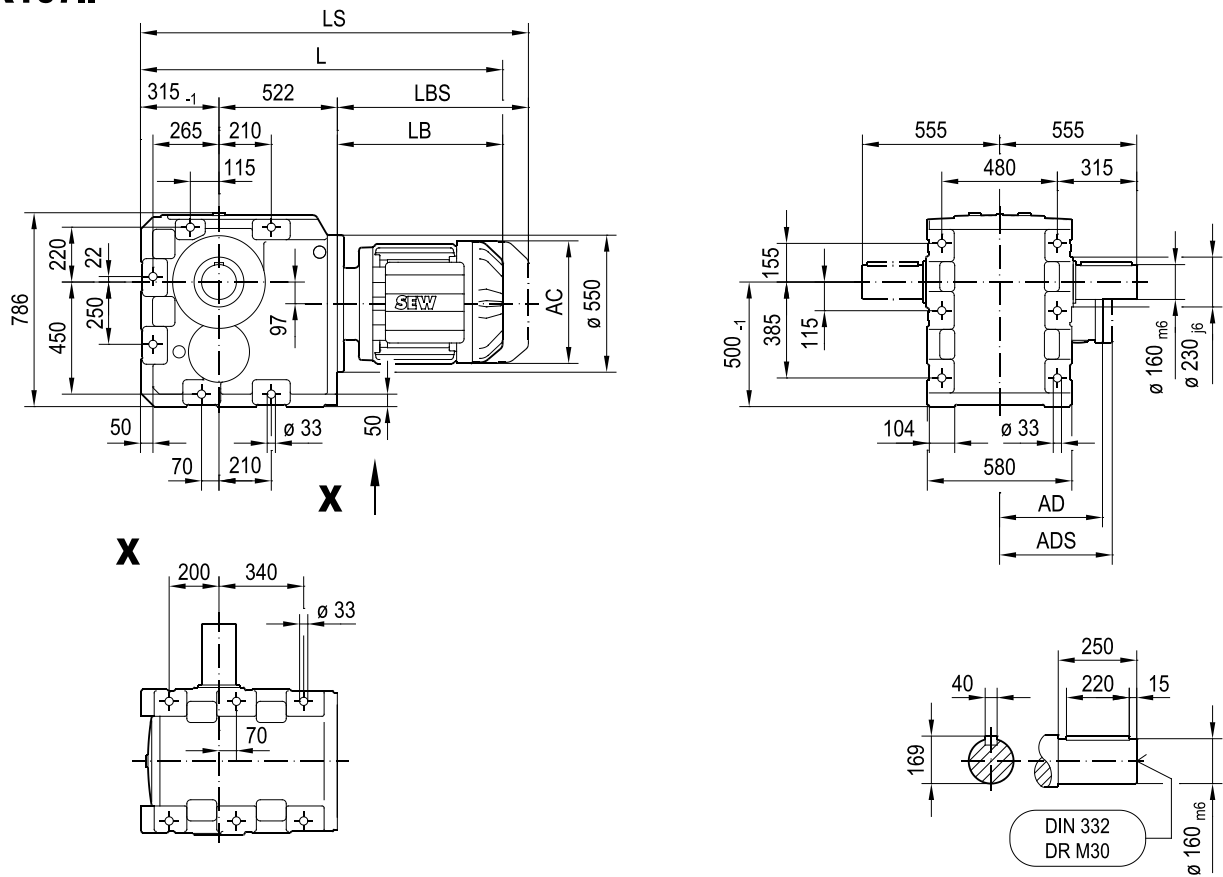


( $\rightarrow$ 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1140	1206	1229	1339	1313	1450	1450	1545	1647	1777
LS	1277	1395	1418	1544	1518	1690	1690	1785	1898	2028
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

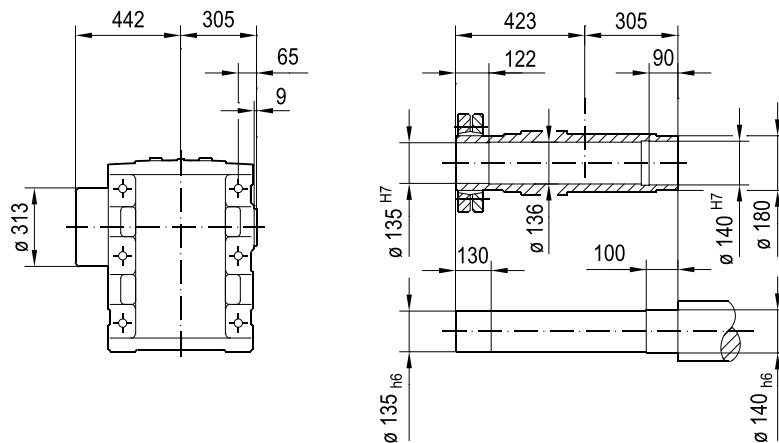
26883198/EN - 04/2022

33 087 00 14

**K167..**



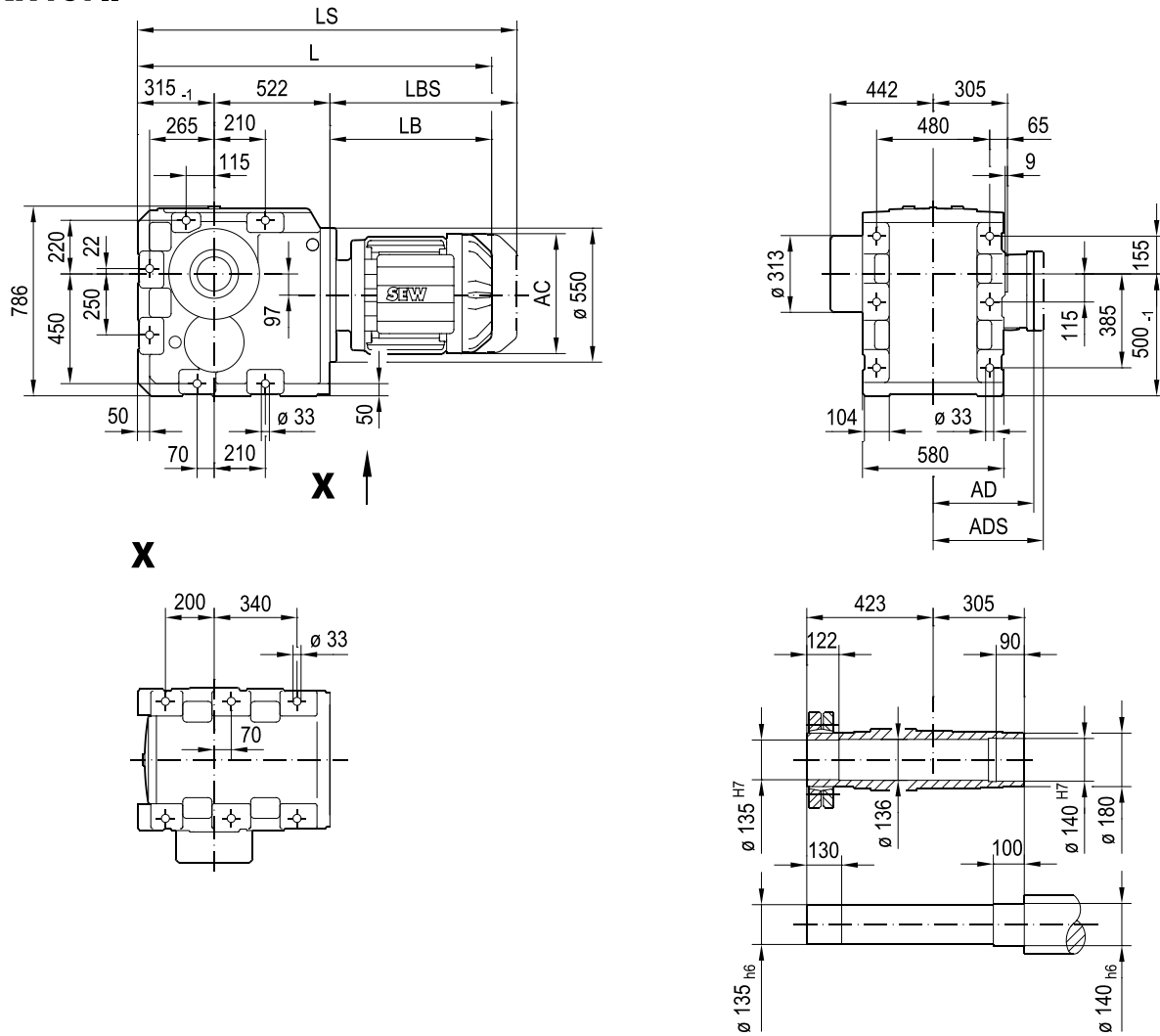
**KH167B..**



(-> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1271	1337	1360	1470	1444	1581	1581	1676	1778	1908
LS	1408	1526	1549	1675	1649	1821	1821	1916	2029	2159
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

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### KH167..

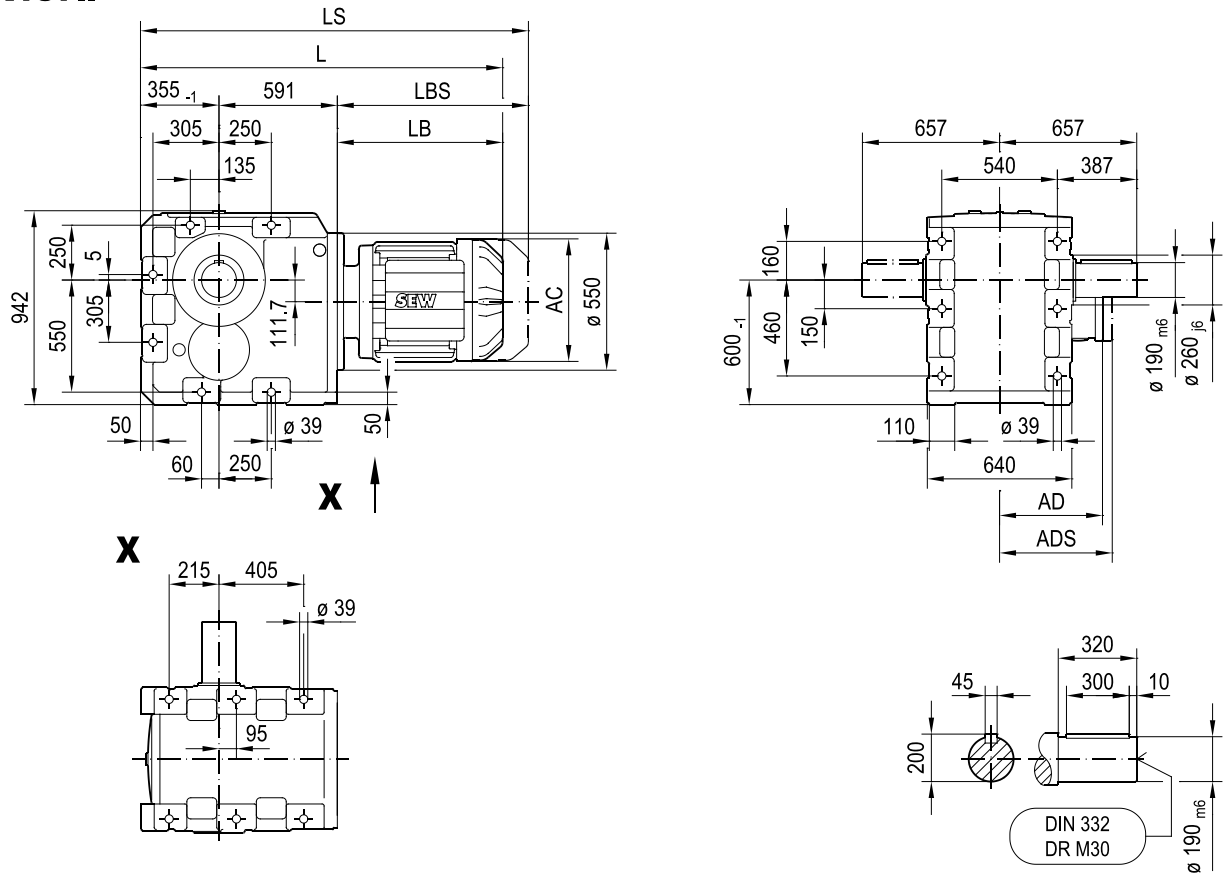


(-> 7.3)	DRN									
	132L	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	261	314	357	394	434	495	495	495	624	624
AD	228	253	268	283	305	394	394	394	506	506
ADS	228	253	268	283	305	394	394	394	506	506
L	1271	1337	1360	1470	1444	1581	1581	1676	1778	1908
LS	1408	1526	1549	1675	1649	1821	1821	1916	2029	2159
LB	434	500	523	633	607	744	744	839	941	1071
LBS	571	689	712	838	812	984	984	1079	1192	1322

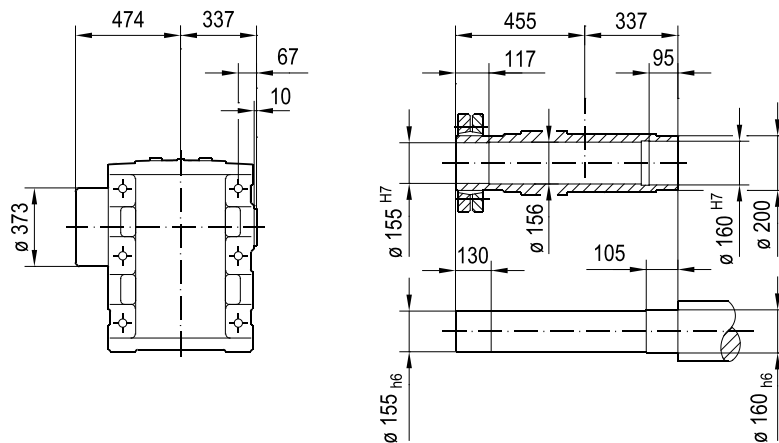


33 089 00 14

**K187..**



**KH187B..**

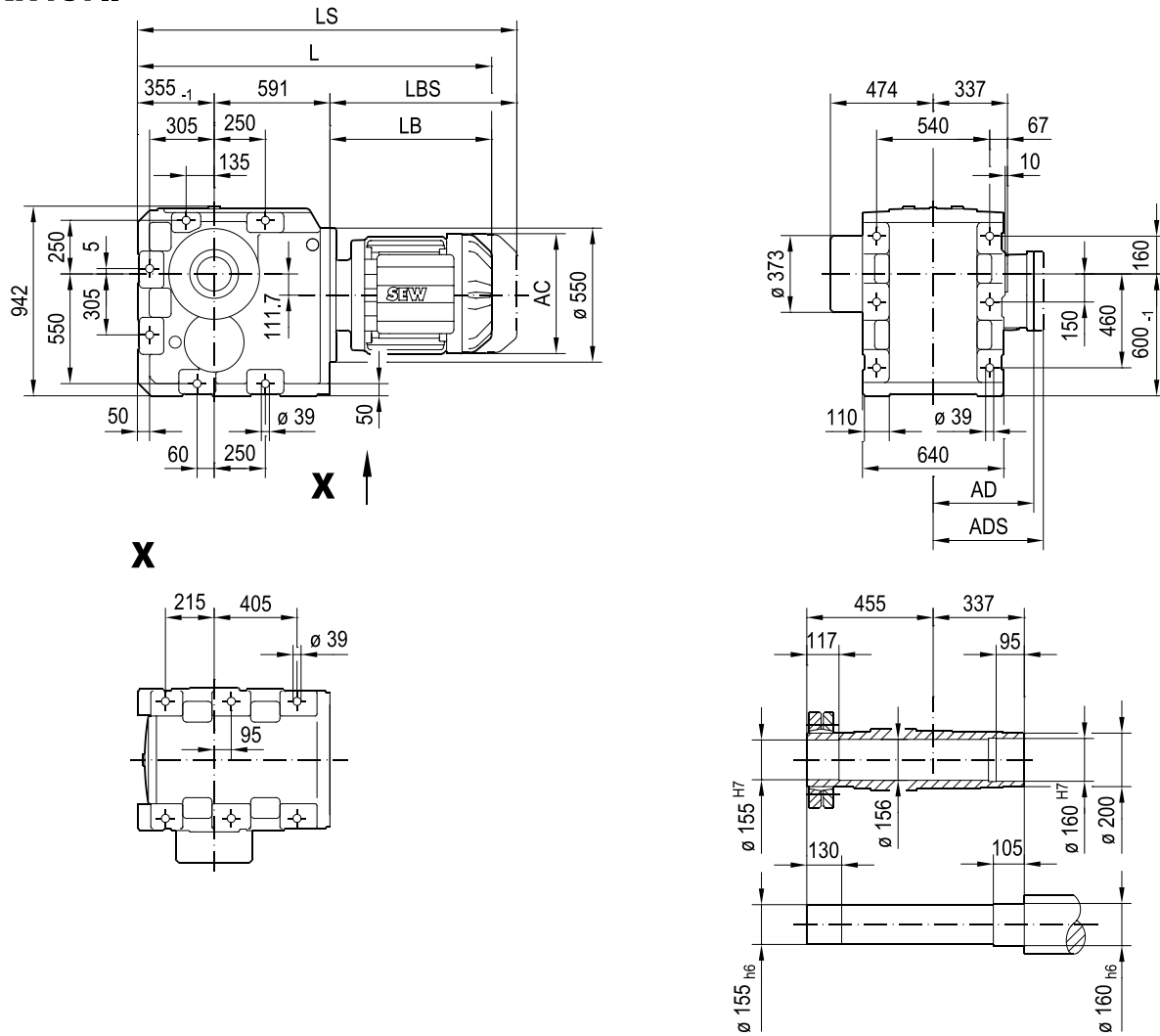


(-> 7.3)	DRN									
	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H	
AC	314	357	394	434	495	495	495	624	624	
AD	253	268	283	305	394	394	394	506	506	
ADS	253	268	283	305	394	394	394	506	506	
L	1446	1469	1579	1553	1690	1690	1785	1887	2017	
LS	1635	1658	1784	1758	1930	1930	2025	2138	2268	
LB	500	523	633	607	744	744	839	941	1071	
LBS	689	712	838	812	984	984	1079	1192	1322	

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33 090 00 14

### KH187..

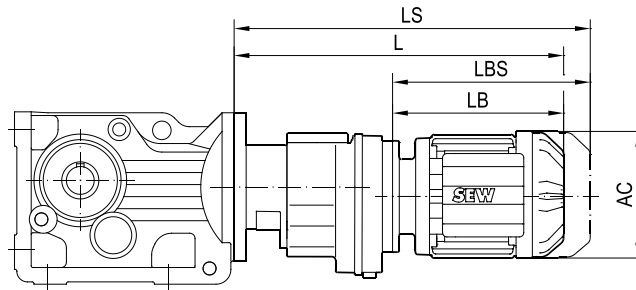


(-> 7.3)	DRN								
	160..	180..	200L	225..	250M	280S	280M	315S-M	315ME-H
AC	314	357	394	434	495	495	495	624	624
AD	253	268	283	305	394	394	394	506	506
ADS	253	268	283	305	394	394	394	506	506
L	1446	1469	1579	1553	1690	1690	1785	1887	2017
LS	1635	1658	1784	1758	1930	1930	2025	2138	2268
LB	500	523	633	607	744	744	839	941	1071
LBS	689	712	838	812	984	984	1079	1192	1322

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10.6 K..R..DRN.. dimension sheets in mm

33 121 01 21

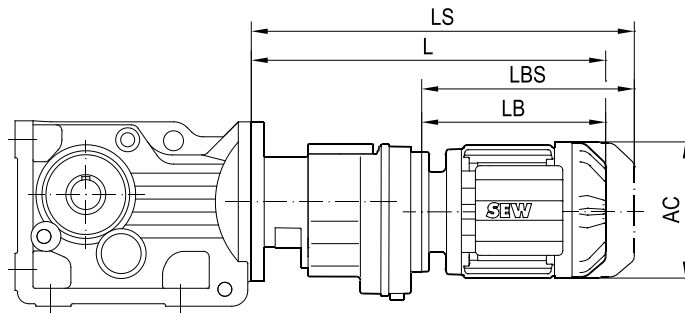


(7.3)	AC	L	LS	LB	LBS
K..37R17 DR2S56..	109	293	329	160	196
K..37R17 DRN63MS	115	323	379	190	246
K..37R17 DRN63M	115	337	393	204	260
K..37R17 DRN71MS	139	339	406	206	273
K..37R17 DRN71M	139	359	426	226	293
K..37R17 DRN80MK	156	370	451	237	318
K..39R17 DR2S56..	109	293	329	160	196
K..39R17 DRN63MS	115	323	379	190	246
K..39R17 DRN63M	115	337	393	204	260
K..39R17 DRN71MS	139	339	406	206	273
K..39R17 DRN71M	139	359	426	226	293
K..39R17 DRN80MK	156	370	451	237	318
K..39R17 DRN80M	156	416	497	283	364
K..47R37 DRN63MS	115	355	411	190	246
K..47R37 DRN63M	115	369	425	204	260
K..47R37 DRN71MS	139	371	438	206	273
K..47R37 DRN71M	139	391	458	226	293
K..47R37 DRN80MK	156	402	483	237	318
K..47R37 DRN80M	156	447	528	282	363
K..47R37 DRN90S	179	448	542	283	377
K..49R37 DRN63MS	115	347	403	190	246
K..49R37 DRN63M	115	361	417	204	260
K..49R37 DRN71MS	139	363	430	206	273
K..49R37 DRN71M	139	383	450	226	293
K..49R37 DRN80MK	156	394	475	237	318
K..49R37 DRN80M	156	439	520	282	363
K..49R37 DRN90S	179	440	534	283	377
K..57R37 DRN63MS	115	355	411	190	246
K..57R37 DRN63M	115	369	425	204	260
K..57R37 DRN71MS	139	371	438	206	273
K..57R37 DRN71M	139	391	458	226	293
K..57R37 DRN80MK	156	402	483	237	318
K..57R37 DRN80M	156	447	528	282	363
K..57R37 DRN90S	179	448	542	283	377
K..57R37 DRN90L	179	480	574	315	409
K..67R37 DRN63MS	115	355	411	190	246
K..67R37 DRN63M	115	369	425	204	260
K..67R37 DRN71MS	139	371	438	206	273
K..67R37 DRN71M	139	391	458	226	293
K..67R37 DRN80MK	156	402	483	237	318
K..67R37 DRN80M	156	447	528	282	363
K..67R37 DRN90S	179	448	542	283	377
K..67R37 DRN90L	179	480	574	315	409
K..77R37 DRN63MS	115	347	403	190	246
K..77R37 DRN63M	115	361	417	204	260
K..77R37 DRN71MS	139	363	430	206	273
K..77R37 DRN71M	139	383	450	226	293
K..77R37 DRN80MK	156	394	475	237	318
K..77R37 DRN80M	156	439	520	282	363
K..77R37 DRN90S	179	440	534	283	377
K..77R37 DRN90L	179	472	566	315	409
K..77R37 DRN100LS	197	471	565	314	408

(7.3)	AC	L	LS	LB	LBS
K..77R37 DRN100L/LM	197	521	615	364	458
K..87R57 DRN63MS	115	411	467	184	240
K..87R57 DRN63M	115	425	481	198	254
K..87R57 DRN71MS	139	427	494	199	267
K..87R57 DRN71M	139	447	514	219	287
K..87R57 DRN80MK	156	458	539	230	311
K..87R57 DRN80M	156	503	584	275	356
K..87R57 DRN90S	179	504	598	277	370
K..87R57 DRN90L	179	536	630	309	402
K..87R57 DRN100LS	197	533	626	305	399
K..87R57 DRN100L/LM	197	583	676	355	449
K..87R57 DRN112M	221	614	726	386	498
K..97R57 DRN63MS	115	406	462	184	240
K..97R57 DRN63M	115	420	476	198	254
K..97R57 DRN71MS	139	422	489	199	267
K..97R57 DRN71M	139	442	509	219	287
K..97R57 DRN80MK	156	453	534	230	311
K..97R57 DRN80M	156	498	579	275	356
K..97R57 DRN90S	179	499	593	277	370
K..97R57 DRN90L	179	531	625	309	402
K..97R57 DRN100LS	197	528	621	305	399
K..97R57 DRN100L/LM	197	578	671	355	449
K..97R57 DRN112M	221	609	721	386	498
K..97R57 DRN132S	221	663	775	440	552
K..107R77 DRN63MS	115	424	480	177	233
K..107R77 DRN63M	115	438	494	191	247
K..107R77 DRN71MS	139	439	507	192	260
K..107R77 DRN71M	139	459	527	212	280
K..107R77 DRN80MK	156	470	551	223	304
K..107R77 DRN80M	156	515	596	268	349
K..107R77 DRN90S	179	517	610	270	363
K..107R77 DRN90L	179	549	642	302	395
K..107R77 DRN100LS	197	545	639	298	392
K..107R77 DRN100L/LM	197	595	689	348	442
K..107R77 DRN112M	221	626	738	379	491
K..107R77 DRN132S	221	676	788	429	541
K..107R77 DRN132M	261	694	832	447	585
K..107R77 DRN132L	261	720	857	473	610
K..107R77 DRN160..	314	786	975	539	728
K..127R77 DRN63MS	115	409	465	177	233
K..127R77 DRN63M	115	423	479	191	247
K..127R77 DRN71MS	139	424	492	192	260
K..127R77 DRN71M	139	444	512	212	280
K..37R17 DR2S56..	109	293	329	160	196
K..127R87 DRN90L	179	577	670	297	390
K..127R87 DRN100LS	197	573	667	293	387
K..127R87 DRN100L/LM	197	623	717	343	437
K..127R87 DRN112M	221	654	766	374	486
K..127R87 DRN132S	221	704	816	424	536
K..127R87 DRN132M	261	722	860	442	580
K..127R87 DRN132L	261	748	885	468	605
K..127R87 DRN160..	314	814	1003	534	723

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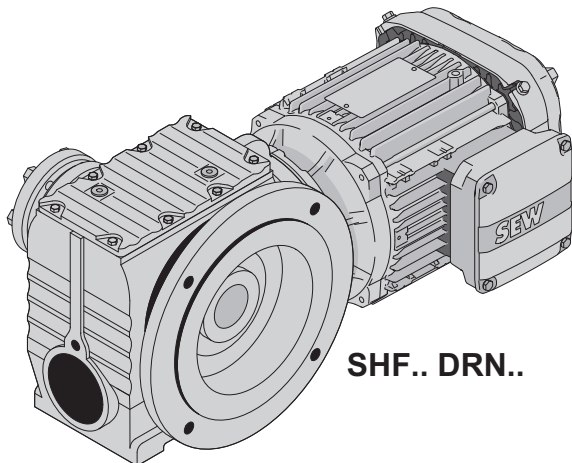
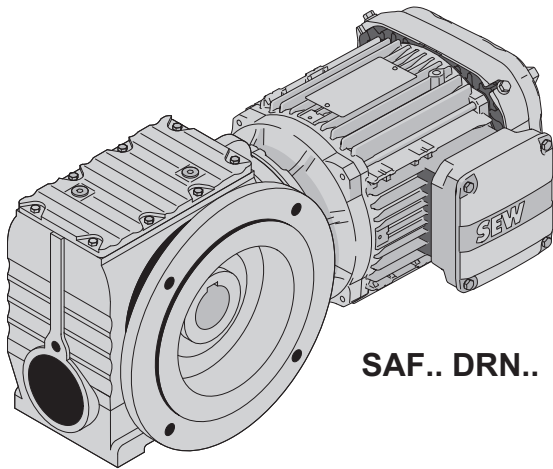
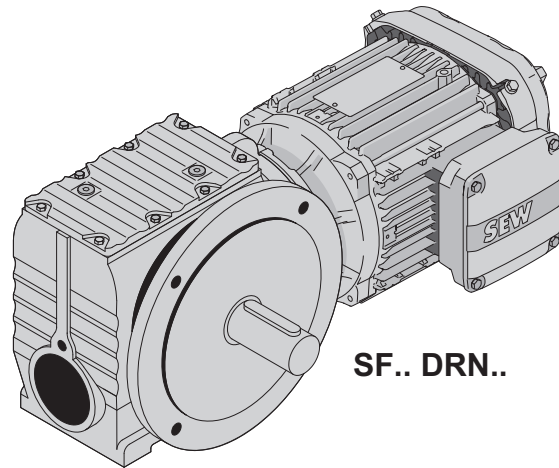
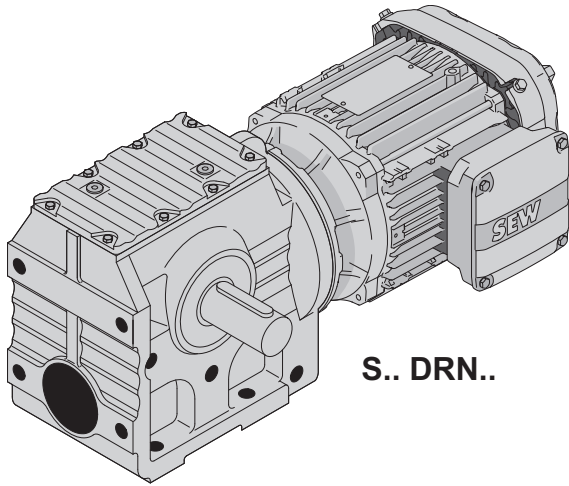


(IE3 7.3)	AC	L	LS	LB	LBS
K..127R87 DRN180..	357	837	1026	557	746
K..157R97 DRN71MS	139	507	575	182	250
K..157R97 DRN71M	139	527	595	202	270
K..157R97 DRN80MK	156	538	619	213	294
K..157R97 DRN80M	156	583	664	258	339
K..157R97 DRN90S	179	585	678	260	353
K..157R97 DRN90L	179	617	710	292	385
K..157R97 DRN100LS	197	613	707	288	382
K..157R97 DRN100L/LM	197	663	757	338	432
K..157R97 DRN112M	221	694	806	369	481
K..157R97 DRN132S	221	744	856	419	531
K..157R97 DRN132M	261	762	900	437	575
K..157R97 DRN132L	261	788	925	463	600
K..157R97 DRN160..	314	854	1043	529	718
K..157R107 DRN132S	221	795	907	413	525
K..157R107 DRN132M	261	813	951	431	569
K..157R107 DRN132L	261	839	976	457	594
K..157R107 DRN160..	314	905	1094	523	712
K..157R107 DRN180..	357	928	1117	546	735
K..157R107 DRN200L	394	1038	1243	656	861
K..157R107 DRN225..	434	1012	1217	630	835
K..167R97 DRN71M	139	527	595	202	270
K..167R97 DRN80MK	156	538	619	213	294
K..167R97 DRN80M	156	583	664	258	339
K..167R97 DRN90S	179	585	678	260	353
K..167R97 DRN90L	179	617	710	292	385
K..167R97 DRN100LS	197	613	707	288	382
K..77R37 DRN63MS	115	347	403	190	246
K..167R97 DRN100L/LM	197	663	757	338	432
K..167R97 DRN112M	221	694	806	369	481
K..167R97 DRN132S	221	744	856	419	531
K..167R97 DRN132M	261	762	900	437	575
K..167R97 DRN132L	261	788	925	463	600
K..167R97 DRN160..	314	854	1043	529	718
K..167R97 DRN180..	357	877	1066	552	741
K..167R107 DRN132M	261	813	951	431	569
K..167R107 DRN132L	261	839	976	457	594
K..167R107 DRN160..	314	905	1094	523	712
K..167R107 DRN180..	357	928	1117	546	735
K..167R107 DRN200L	394	1038	1243	656	861
K..167R107 DRN225..	434	1012	1217	630	835
K..167R107 DRN250M	495	1149	1389	767	1007
K..187R97 DRN71M	139	527	595	202	270
K..187R97 DRN80MK	156	538	619	213	294
K..187R97 DRN80M	156	583	664	258	339
K..187R97 DRN90S	179	585	678	260	353
K..187R97 DRN90L	179	617	710	292	385

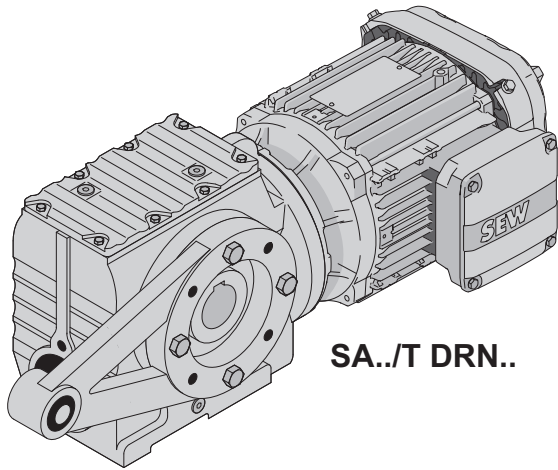
(IE3 7.3)	AC	L	LS	LB	LBS
K..187R97 DRN100LS	197	613	707	288	382
K..187R97 DRN100L/LM	197	663	757	338	432
K..187R97 DRN112M	221	694	806	369	481
K..187R97 DRN132S	221	744	856	419	531
K..187R97 DRN132M	261	762	900	437	575
K..187R97 DRN132L	261	788	925	463	600
K..187R97 DRN160..	314	854	1043	529	718
K..187R97 DRN180..	357	877	1066	552	741
K..187R107 DRN112M	221	745	857	363	475
K..187R107 DRN132S	221	795	907	413	525
K..187R107 DRN132M	261	813	951	431	569
K..187R107 DRN132L	261	839	976	457	594
K..187R107 DRN160..	314	905	1094	523	712
K..187R107 DRN180..	357	928	1117	546	735
K..187R107 DRN200L	394	1038	1243	656	861
K..187R107 DRN225..	434	1012	1217	630	835

11 Helical-worm gearmotors

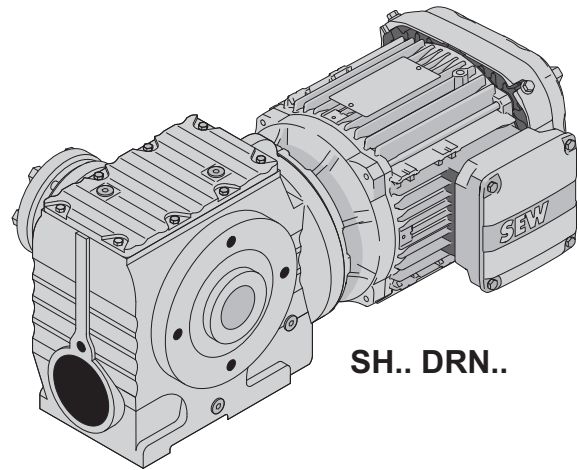
11.1 S..DRN.. designs



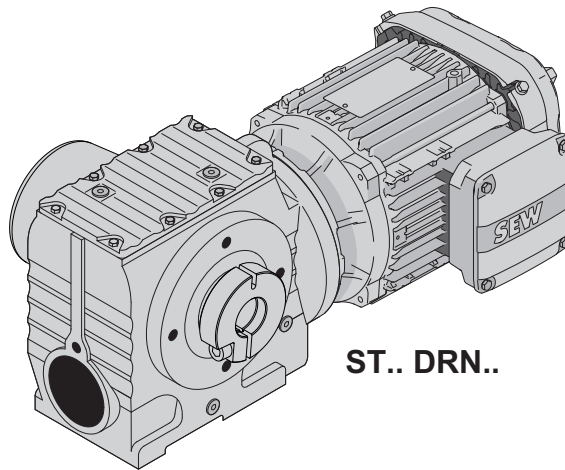
18014407174355595



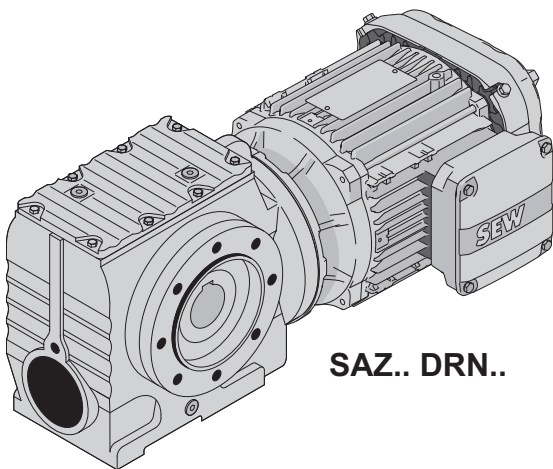
**SA..T DRN..**



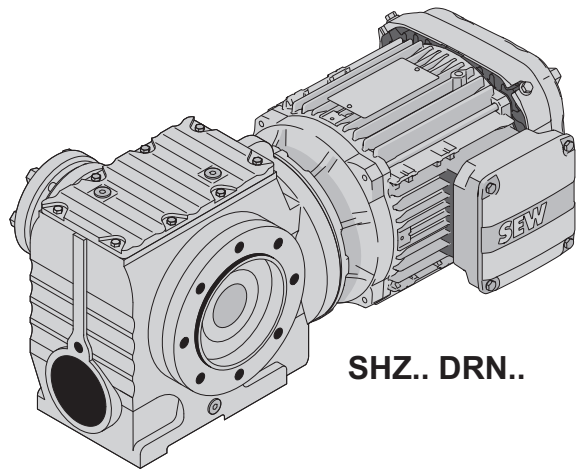
**SH.. DRN..**



**ST.. DRN..**




**SAZ.. DRN..**





**SHZ.. DRN..**

18014407174357515

11.2 Possible geometrical combinations of S..DRN..



<b>S37, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>92 Nm</b>		
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L
 2							
8.9	92	3000	-	157.43			
9.7	92	3000	-	144.40*			
11	91	3000	-	122.94			
13	88	3000	-	106.00*			
14	87	3000	-	98.80*			
16	86	3000	-	86.36			
17	85	3000	-	80.96			
20	84	3000	-	71.44*			
22	82	3000	-	63.33			
25	81	3000	-	55.93			
26	80	3000	-	53.83			
27	81	3000	-	51.30*			
32	81	3000	-	43.68			
37	79	3000	-	37.66			
40	78	3000	-	35.10*			
46	76	2860	-	30.68			
49	75	2800	-	28.76			
55	74	2660	-	25.38*			
62	73	2530	-	22.50*			
70	52	2470	-	19.89			
73	71	2380	-	19.13*			
77	52	2380	-	18.24*			
90	50	2240	-	15.53			
105	49	2110	-	13.39			
112	48	2060	-	12.48*			
128	48	1940	-	10.91			
137	47	1900	-	10.23			
155	46	1810	-	9.02*			
175	45	1730	-	8.00*			
206	43	1630	-	6.80*			
221	35	1670	-	6.33			
260	34	1570	-	5.38			
288	33	1520	-	4.86*			
353	32	1400	-	3.97			


<b>S37R17, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>92 Nm</b>		
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DR2S 56M	DRN 63MS 63M 71MS 71M 80MK	DRN 80M
 2  3							
0.14	92	3000	-	10037			
0.16	92	3000	-	8654			
0.17	92	3000	-	8066			

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Possible geometrical combinations of S..DRN..

<b>S37R17, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>92 Nm</b>		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
0.20	92	3000	-	7051			
0.23	92	3000	-	6079			
0.26	92	3000	-	5431			
0.29	92	3000	-	4747			
0.34	92	3000	-	4155			
0.39	92	3000	-	3632			
0.49	92	3000	-	2866			
0.57	92	3000	-	2471			
0.65	92	3000	-	2160			
0.74	92	3000	-	1887			
0.84	92	3000	-	1665			
0.96	92	3000	-	1456			
1.1	92	3000	-	1271			
1.2	92	3000	-	1121			
1.4	92	3000	-	994			
1.6	92	3000	-	869			
 2 							
1.8	92	3000	-	774			
2.1	92	3000	-	666			
2.3	92	3000	-	596			
2.7	92	3000	-	521			
3.1	92	3000	-	456			
3.5	92	3000	-	398			
4.0	92	3000	-	351			
4.6	92	3000	-	303			
5.3	92	3000	-	265			
6.0	92	3000	-	232			
6.9	92	3000	-	202			
7.8	92	3000	-	179			
8.9	92	3000	-	158			
9.7	92	3000	-	144			
12	92	3000	-	118			
13	92	3000	-	110*			

<b>S37p, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>105 Nm</b>		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L
 2							
8.9	94	3000	-	157.43			
9.7	95	3000	-	144.40*			
11	96	3000	-	122.94			
13	97	3000	-	106.00*			
14	97	3000	-	98.80*			
16	98	3000	-	86.36			
17	99	3000	-	80.96			





S37p, $n_e=1400 \text{ min}^{-1}$					105 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L
20	100	3000	-	71.44*			
22	98	3000	-	63.33			
25	104	3000	-	55.93			
26	92	3000	-	53.83			
27	104	3000	-	51.30*			
32	105	3000	-	43.68			
37	105	2800	-	37.66			
40	105	2700	-	35.10*			
46	105	2530	-	30.68			
49	105	2450	-	28.76			
55	100	2360	-	25.38*			
62	95	2280	-	22.50*			
70	78	2130	-	19.89			
73	89	2170	-	19.13*			
77	78	2040	-	18.24*			
90	76	1860	-	15.53			
105	75	1640	-	13.39			
112	74	1560	-	12.48*			
128	73	1380	-	10.91			
137	73	1280	-	10.23			
155	70	1210	-	9.02*			
175	66	1200	-	8.00*			
206	60	1210	-	6.80*			
221	56	1120	-	6.33			
260	51	1130	-	5.38			
288	48	1140	-	4.86*			
353	44	1070	-	3.97			


S37pR17, $n_e=1400 \text{ min}^{-1}$					105 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S 56M	DRN 63MS 63M 71MS 71M 80MK	DRN 80M
							
0.14	99	3000	-	10037			
0.16	100	3000	-	8654			
0.17	99	3000	-	8066			
0.20	99	3000	-	7051			
0.23	101	3000	-	6079			
0.26	99	3000	-	5431			
0.29	99	3000	-	4747			
0.34	102	3000	-	4155			
0.39	102	3000	-	3632			
0.49	105	3000	-	2866			
0.57	105	3000	-	2471			
0.65	105	3000	-	2160			
0.74	105	3000	-	1887			
0.84	105	3000	-	1665			

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Possible geometrical combinations of S..DRN..

<b>S37pR17, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>105 Nm</b>		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	$i$	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
0.96	105	3000	-	1456			
1.1	105	3000	-	1271			
1.2	105	3000	-	1121			
1.4	105	3000	-	994			
1.6	105	3000	-	869			
 2  2							
1.8	105	3000	-	774			
2.1	105	3000	-	666			
2.3	105	3000	-	596			
2.7	105	3000	-	521			
3.1	105	3000	-	456			
3.5	105	3000	-	398			
4.0	105	3000	-	351			
4.6	105	3000	-	303			
5.3	105	3000	-	265			
6.0	105	3000	-	232			
6.9	105	3000	-	202			
7.8	105	3000	-	179			
8.9	105	3000	-	158			
9.7	105	3000	-	144			
12	105	3000	-	118			
13	105	3000	-	110*			

<b>S47, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>170 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	$i$	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
 2								
7.0	170	5340	-	201.00*				
7.6	170	5340	-	184.80*				
8.9	170	5340	-	158.12				
10	168	5350	-	137.05				
11	168	5350	-	128.10*				
13	168	5350	-	110.73				
15	168	5350	-	94.08*				
17	167	5360	-	84.00*				
20	167	5360	-	71.75*				
20	155	5370	-	69.39				
21	167	5360	-	67.20*				
22	155	5370	-	63.80*				
25	165	5320	-	56.61				
26	155	5150	-	54.59				
30	155	4850	-	47.32				
32	155	4710	-	44.22*				
37	155	4420	-	38.23				
43	155	4120	-	32.48*				

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<b>S47, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>170 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
48	155	3920	-	29.00*				
57	155	3650	-	24.77				
60	152	3570	-	23.20*				
69	110	3370	-	20.33				
72	144	3370	-	19.54				
79	110	3160	-	17.62				
85	110	3060	-	16.47*				
98	110	2850	-	14.24				
116	109	2650	-	12.10*				
130	109	2500	-	10.80*				
152	109	2310	-	9.23*				
162	109	2230	-	8.64*				
192	103	2110	-	7.28				
205	78	2300	-	6.83				
219	76	2260	-	6.40*				
260	74	2110	-	5.39				
294	72	2010	-	4.76				
350	61	1980	-	4.00*				


<b>S47R17, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>185 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> '	i	DR2S	DRN	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M	
								
0.11	185	5250	-	12909				
0.13	185	5250	-	11189				
0.13	185	5250	-	10374				
0.16	185	5250	-	8992				
0.18	185	5250	-	7860				
0.20	185	5250	-	6887				
0.23	185	5250	-	6055				
0.26	185	5250	-	5292				
0.30	185	5250	-	4637				
0.34	185	5250	-	4092				
0.39	185	5200	-	3582				
0.45	185	5200	-	3131				
0.52	185	5200	-	2714				
0.58	185	5200	-	2412				
0.66	185	5200	-	2131				
0.75	185	5200	-	1863				
0.84	185	5200	-	1663				
0.98	185	5200	-	1435				
1.1	185	5200	-	1254				
1.2	185	5200	-	1120				
1.3	185	5200	-	1083				
1.5	183	5210	-	956				

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Possible geometrical combinations of S..DRN..

S47R17, $n_e=1400 \text{ min}^{-1}$					185 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
 2  2							
1.5	185	5200	-	965			
1.6	185	5200	-	865			
1.9	185	5200	-	750			
2.1	185	5200	-	655			
2.4	185	5200	-	574			
2.8	185	5200	-	506			
3.2	185	5200	-	438			
3.6	185	5200	-	388			
4.2	185	5200	-	336			
4.8	185	5200	-	294			
5.4	185	5260	-	257*			
6.1	185	5200	-	229			
7.0	185	5200	-	200			
7.5	185	5200	-	187			
8.5	185	5200	-	165			
9.5	185	5200	-	148			
11	185	5200	-	131			

S47p, $n_e=1400 \text{ min}^{-1}$					200 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
 2								
7.0	192	5230	-	201.00*				
7.6	193	5220	-	184.80*				
8.9	194	5220	-	158.12				
10	195	5210	-	137.05				
11	196	5210	-	128.10*				
13	197	5200	-	110.73				
15	198	5200	-	94.08*				
17	199	5190	-	84.00*				
20	194	5220	-	71.75*				
20	200	5130	-	69.39				
21	189	5250	-	67.20*				
22	200	5130	-	63.80*				
25	179	5220	-	56.61				
26	200	4790	-	54.59				
30	200	4480	-	47.32				
32	200	4350	-	44.22*				
37	196	4090	-	38.23				
43	186	3880	-	32.48*				
48	179	3730	-	29.00*				
57	169	3550	-	24.77				
60	165	3480	-	23.20*				
69	160	2890	-	20.33				

<b>S47p, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>200 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
72	156	3280	-	19.54				
79	156	2720	-	17.62				
85	155	2630	-	16.47*				
98	152	2350	-	14.24				
116	146	2130	-	12.10*				
130	142	1990	-	10.80*				
152	134	1870	-	9.23*				
162	131	1820	-	8.64*				
192	109	2110	-	7.28				
205	120	1490	-	6.83				
219	118	1420	-	6.40*				
260	104	1540	-	5.39				
294	91	1740	-	4.76				
350	75	1860	-	4.00*				

<b>S47pR17, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>200 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DR2S	DRN	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M	
2  3								
0.11	194	5200	-	12909				
0.13	195	5200	-	11189				
0.13	194	5200	-	10374				
0.16	195	5200	-	8992				
0.18	195	5200	-	7860				
0.20	196	5190	-	6887				
0.23	195	5200	-	6055				
0.26	195	5200	-	5292				
0.30	196	5190	-	4637				
0.34	196	5190	-	4092				
0.39	200	5070	-	3582				
0.45	200	5070	-	3131				
0.52	200	5070	-	2714				
0.58	200	5070	-	2412				
0.66	200	5070	-	2131				
0.75	200	5070	-	1863				
0.84	200	5070	-	1663				
0.98	200	5070	-	1435				
1.1	200	5070	-	1254				
1.2	200	5070	-	1120				
1.3	200	5070	-	1083				
1.5	200	5070	-	956				
2  2								
1.5	200	5070	-	965				
1.6	200	5070	-	865				
1.9	200	5070	-	750				

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<b>S47pR17, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>200 Nm</b>		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
2.1	200	5070	-	655			
2.4	200	5070	-	574			
2.8	200	5070	-	506			
3.2	200	5070	-	438			
3.6	200	5070	-	388			
4.2	200	5080	-	336			
4.8	200	5080	-	294			
5.4	200	5180	-	257*			
6.1	200	5100	-	229			
7.0	200	5100	-	200			
7.5	200	5100	-	187			
8.5	200	5110	-	165			
9.5	200	5110	-	148			
11	200	5120	-	131			

<b>S57, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>295 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	$i$	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L



7.0	295	7130	-	201.00*				
7.6	295	7130	-	184.80*				
8.9	295	7130	-	158.12				
10	295	7130	-	137.05				
11	295	7130	-	128.10*				
13	295	7130	-	110.73				
15	295	7130	-	94.08*				
17	295	7130	-	84.00*				
20	290	7170	-	71.75*				
20	245	7520	-	69.39				
21	285	7220	-	67.20*				
22	245	7520	-	63.80*				
25	265	7370	-	56.61				
26	245	7520	-	54.59				
30	245	7520	-	47.32				
32	245	7520	-	44.22*				
37	245	7320	-	38.23				
43	245	6840	-	32.48*				
48	245	6520	-	29.00*				
57	245	6100	-	24.77				
60	245	5930	-	23.20*				
69	168	5690	-	20.33				
72	215	5720	-	19.54				
79	168	5350	-	17.62				
85	168	5200	-	16.47*				
98	169	4860	-	14.24				

<b>S57, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>295 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
116	169	4520	-	12.10*				
130	169	4290	-	10.80*				
152	169	3990	-	9.23*				
162	166	3900	-	8.64*				
192	146	3790	-	7.28				
205	100	4100	-	6.83				
219	98	4010	-	6.40*				
260	95	3760	-	5.39				
294	93	3590	-	4.76				
350	88	3380	-	4.00*				

<b>S57R17, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>330 Nm</b>		
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M



0.11	330	6800	-	12909			
0.13	330	6800	-	11189			
0.13	330	6800	-	10374			
0.16	330	6800	-	8992			
0.18	330	6800	-	7860			
0.20	330	6800	-	6887			
0.23	330	6800	-	6055			
0.26	330	6800	-	5292			
0.30	330	6800	-	4637			
0.34	330	6800	-	4092			
0.39	330	6800	-	3628			
0.45	300	7080	-	3131			
0.52	300	7080	-	2714			
0.58	300	7080	-	2412			
0.66	300	7080	-	2131			
0.75	300	7080	-	1863			
0.84	300	7080	-	1663			
0.98	300	7080	-	1435			
1.1	300	7080	-	1254			
1.3	300	7080	-	1083			



1.5	300	7080	-	965			
1.6	300	7080	-	865			
1.9	300	7080	-	750			
2.1	300	7080	-	655			
2.4	300	7080	-	574			
2.8	300	7080	-	506			
3.2	300	7080	-	438			
3.6	300	7080	-	388			
4.2	300	7080	-	336			

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Possible geometrical combinations of S..DRN..

<b>S57R17, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>330 Nm</b>		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
4.8	300	7080	-	294			
5.2	300	7080	-	269			
6.1	300	7080	-	229			
6.9	300	7080	-	204			
7.5	300	7080	-	187			
8.5	300	7080	-	165			
11	300	7080	-	131			

<b>S57p, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>370 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L



7.0	355	6530	-	201.00*				
7.6	355	6530	-	184.80*				
8.9	360	6470	-	158.12				
10	360	6470	-	137.05				
11	365	6410	-	128.10*				
13	365	6410	-	110.73				
15	350	6580	-	94.08*				
17	335	6740	-	84.00*				
20	320	6900	-	71.75*				
20	370	6350	-	69.39				
21	310	6990	-	67.20*				
22	370	6350	-	63.80*				
25	295	7130	-	56.61				
26	360	6470	-	54.59				
30	345	6640	-	47.32				
32	335	6740	-	44.22*				
37	320	6820	-	38.23				
43	300	6480	-	32.48*				
48	290	6230	-	29.00*				
57	275	5910	-	24.77				
60	270	5780	-	23.20*				
69	225	5260	-	20.33				
72	250	5500	-	19.54				
79	225	4920	-	17.62				
85	225	4760	-	16.47*				
98	225	4440	-	14.24				
116	225	4090	-	12.10*				
130	225	3860	-	10.80*				
152	199	3800	-	9.23*				
162	187	3800	-	8.64*				
192	155	3790	-	7.28				
205	162	3550	-	6.83				
219	156	3490	-	6.40*				



S57p, $n_e=1400 \text{ min}^{-1}$					370 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
260	147	3300	-	5.39				
294	129	3290	-	4.76				
350	108	3240	-	4.00*				

S57pR17, $n_e=1400 \text{ min}^{-1}$					370 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M



0.11	360	6470	-	12909			
0.13	365	6410	-	11189			
0.13	360	6470	-	10374			
0.16	365	6410	-	8992			
0.18	365	6410	-	7860			
0.20	365	6410	-	6887			
0.23	365	6410	-	6055			
0.26	365	6410	-	5292			
0.30	365	6410	-	4637			
0.34	365	6410	-	4092			
0.39	365	6410	-	3628			
0.45	370	6350	-	3131			
0.52	370	6350	-	2714			
0.58	370	6350	-	2412			
0.66	370	6350	-	2131			
0.75	370	6350	-	1863			
0.84	370	6350	-	1663			
0.98	370	6350	-	1435			
1.1	370	6350	-	1254			
1.3	370	6350	-	1083			






1.5	370	6350	-	965			
1.6	370	6350	-	865			
1.9	370	6350	-	750			
2.1	370	6350	-	655			
2.4	370	6350	-	574			
2.8	370	6350	-	506			
3.2	370	6350	-	438			
3.6	370	6350	-	388			
4.2	370	6350	-	336			
4.8	370	6350	-	294			
5.2	370	6350	-	269			
6.1	370	6350	-	229			
6.9	370	6350	-	204			
7.5	370	6350	-	187			
8.5	370	6350	-	165			
11	370	6350	-	131			



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## Helical-worm gearmotors

Possible geometrical combinations of S..DRN..

<b>S67, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>520 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
 2										
6.4	520	8680	-	217.41						
7.4	520	8680	-	190.11						
7.8	520	8680	-	180.60*						
8.8	520	8680	-	158.45						
10	520	8680	-	134.40*						
12	520	8680	-	121.33						
13	520	8680	-	106.75*						
14	520	8680	-	100.80*						
16	520	8680	-	85.83						
18	520	8680	-	78.00*						
19	480	9020	-	75.06						
21	520	8680	-	67.57						
21	480	9020	-	65.63						
22	480	9020	-	62.35*						
24	500	8850	-	58.80*						
26	480	8670	-	54.70						
30	480	8060	-	46.40*						
33	480	7690	-	41.89						
38	480	7250	-	36.85						
40	480	7060	-	34.80*						
47	480	6540	-	29.63						
52	480	6240	-	26.93						
57	340	6040	-	24.44						
60	480	5810	-	23.33						
60	340	5890	-	23.22*						
69	340	5520	-	20.37						
69	425	5760	-	20.30*						
81	340	5080	-	17.28*						
90	340	4820	-	15.60*						
102	340	4510	-	13.73*						
108	340	4310	-	12.96*						
127	340	3660	-	11.03						
140	340	3290	-	10.03						
161	335	2860	-	8.69						
185	295	3220	-	7.56*						

<b>S67R37, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>570 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 100LS 100L	DRN 100LS 100L
 2  3										
0.07	570	8190	-	21362*						
0.07	570	8190	-	19594*						
0.08	570	8190	-	18120*						
0.08	570	8190	-	16682						

S67R37, $n_e=1400 \text{ min}^{-1}$					570 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.10	570	8190	-	14383				
0.11	570	8190	-	12774				
0.13	570	8190	-	11013				
0.14	570	8190	-	9694*				
0.16	570	8190	-	8529*				
0.19	570	8190	-	7455*				
0.21	570	8190	-	6531				
0.24	570	8190	-	5759				
0.28	570	8190	-	4965				
0.32	570	8190	-	4410				
0.36	570	8190	-	3880				
0.41	570	8190	-	3432				
0.48	570	8190	-	2944*				
0.53	570	8190	-	2630				
0.61	570	8190	-	2279				
0.70	570	8190	-	2014				
0.79	570	8190	-	1772				
0.90	570	8190	-	1559				
1.0	570	8190	-	1363				
1.2	570	8190	-	1194				
1.3	570	8190	-	1045				
1.5	570	8190	-	914				
 2  2								
1.7	570	8190	-	809				
2.0	570	8190	-	712				
2.3	570	8190	-	615				
2.6	570	8190	-	543				
3.0	570	8190	-	469				
3.3	570	8190	-	424				
3.8	570	8190	-	365				
4.4	570	8190	-	319				
5.0	570	8190	-	281				
5.7	570	8190	-	246				
6.3	570	8190	-	221				
7.1	570	8190	-	198				
8.3	570	8190	-	168				
9.0	570	8190	-	156				

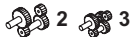
S67p, $n_e=1400 \text{ min}^{-1}$					720 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 2										
6.4	640	10100	-	217.41						
7.4	640	10100	-	190.11						
7.8	645	10100	-	180.60*						



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Possible geometrical combinations of S..DRN..

<b>S67p, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>720 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
8.8	645	10100	-	158.45						
10	645	10100	-	134.40*						
12	645	10100	-	121.33						
13	645	10100	-	106.75*						
14	645	10100	-	100.80*						
16	660	9700	-	85.83						
18	660	9280	-	78.00*						
19	720	8340	-	75.06						
21	650	8740	-	67.57						
21	720	7790	-	65.63						
22	720	7580	-	62.35*						
24	625	8320	-	58.80*						
26	705	7170	-	54.70						
30	680	6720	-	46.40*						
33	670	6420	-	41.89						
38	655	6070	-	36.85						
40	640	5970	-	34.80*						
47	620	5580	-	29.63						
52	600	5410	-	26.93						
57	415	5480	-	24.44						
60	525	5440	-	23.33						
60	420	5300	-	23.22*						
69	435	4700	-	20.37						
69	450	5490	-	20.30*						
81	415	4320	-	17.28*						
90	410	3960	-	15.60*						
102	395	3690	-	13.73*						
108	390	3550	-	12.96*						
127	375	3190	-	11.03						
140	365	3020	-	10.03						
161	350	2780	-	8.69						
185	330	2680	-	7.56*						

<b>S67pR37, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>720 Nm</b>				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	
									
0.07	645	10000	-	21362*					
0.07	645	10000	-	19594*					
0.08	645	10000	-	18120*					
0.08	645	10000	-	16682					
0.10	645	10000	-	14383					
0.11	645	10000	-	12774					
0.13	645	10000	-	11013					
0.14	645	10000	-	9694*					
0.16	645	10000	-	8529*					

<b>S67pR37, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>720 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN		DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.19	645	10000	-	7455*				
0.21	645	10000	-	6531				
0.24	720	9100	-	5759				
0.28	720	9100	-	4965				
0.32	720	9100	-	4410				
0.36	720	9100	-	3880				
0.41	720	9100	-	3432				
0.48	700	9220	-	2944*				
0.53	720	9100	-	2630				
0.61	660	9460	-	2279				
0.70	720	9100	-	2014				
0.79	720	9100	-	1772				
0.90	700	9220	-	1559				
1.0	700	9220	-	1363				
1.2	720	9100	-	1194				
1.3	640	9580	-	1045				
1.5	640	9580	-	914				
 2  2								
1.7	720	9100	-	809				
2.0	720	9100	-	712				
2.3	720	9100	-	615				
2.6	700	9230	-	543				
3.0	720	9130	-	469				
3.3	720	9140	-	424				
3.8	720	9150	-	365				
4.4	660	9530	-	319				
5.0	680	9420	-	281				
5.7	720	9190	-	246				
6.3	640	9670	-	221				
7.1	680	9440	-	198				
8.3	680	9450	-	168				
9.0	640	9690	-	156				

<b>S77, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>1270 Nm</b>							
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(R)</sub> °	i	DRN		DRN	DRN	DRN	DRN	DRN	
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	
 2												
5.5	1270	11700	-	256.47								
6.2	1270	11700	-	225.26								
6.5	1270	11700	-	214.00*								
7.4	1270	11700	-	189.09								
8.7	1260	11800	-	161.60*								
9.4	1240	12000	-	148.15								
11	1210	12200	-	130.00*								
11	1200	12300	-	123.20*								

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## Helical-worm gearmotors


Possible geometrical combinations of S..DRN..

<b>S77, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>1270 Nm</b>							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	
13	1170	12600	-	107.83								
14	1140	12800	-	97.14								
16	1100	13100	-	85.22								
19	1070	12800	-	75.20*								
19	1100	11900	-	75.09								
20	1100	11600	-	71.33								
21	1040	12300	-	66.67								
22	1100	10900	-	63.03								
25	990	11600	-	56.92								
26	1100	10100	-	53.87								
28	1100	9650	-	49.38								
32	1100	9010	-	43.33								
34	1100	8750	-	41.07								
39	1100	8140	-	35.94								
43	1090	7720	-	32.38								
49	1050	7370	-	28.41								
56	1020	7010	-	25.07								
61	705	5960	-	22.89								
63	980	6740	-	22.22								
67	705	5380	-	20.99								
74	930	6390	-	18.97								
76	705	4550	-	18.42								
80	710	4120	-	17.45								
92	710	3320	-	15.28								
102	710	2710	-	13.76								
116	720	1800	-	12.07								
131	720	1130	-	10.65								
148	725	415	-	9.44								
174	680	440	-	8.06								

<b>S77R37, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>1270 Nm</b>			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
2  3								
0.05	1270	11700	-	25493				
0.06	1270	11700	-	21787				
0.07	1270	11700	-	19907				
0.08	1270	11700	-	17013				
0.10	1270	11700	-	14668				
0.11	1270	11700	-	13110				
0.12	1270	11700	-	11569				
0.14	1270	11700	-	9887				
0.16	1270	11700	-	8817				
0.18	1270	11700	-	7735				
0.21	1270	11700	-	6735				
0.24	1270	11700	-	5943				

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S77R37, $n_e=1400 \text{ min}^{-1}$					1270 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.27	1270	11700	-	5214				
0.30	1270	11700	-	4618				
0.35	1270	11700	-	3992				
0.40	1270	11700	-	3540				
0.45	1270	11700	-	3098				
0.51	1240	12000	-	2753				
0.59	1240	12000	-	2374				
0.67	1240	12000	-	2083				
0.77	1240	12000	-	1813				
0.80	1240	12000	-	1745				
0.88	1240	12000	-	1600				
1.00	1240	12000	-	1404				
1.1	1240	12000	-	1245				
 2  2								
1.3	1240	12000	-	1100				
1.5	1240	12000	-	954				
1.7	1240	12000	-	837				
2.0	1240	12000	-	714				
2.2	1240	12000	-	637				
2.4	1240	12000	-	574				
2.8	1240	12000	-	499				
3.2	1240	12000	-	438				
3.6	1240	12000	-	389				
4.3	1240	12000	-	327				
4.8	1240	12000	-	289				
5.6	1240	12000	-	250				
6.4	1240	12000	-	219				

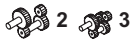
S77p, $n_e=1400 \text{ min}^{-1}$					1500 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
 2											
5.5	1500	12400	-	256.47							
6.2	1500	12400	-	225.26							
6.5	1500	12400	-	214.00*							
7.4	1500	12400	-	189.09							
8.7	1500	12400	-	161.60*							
9.4	1500	12400	-	148.15							
11	1500	12400	-	130.00*							
11	1500	12400	-	123.20*							
13	1470	12500	-	107.83							
14	1440	12600	-	97.14							
16	1390	12000	-	85.22							
19	1340	11500	-	75.20*							
19	1360	10500	-	75.09							

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## Helical-worm gearmotors



Possible geometrical combinations of S..DRN..


S77p, $n_e=1400 \text{ min}^{-1}$					1500 Nm						
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L
20	1350	10300	-	71.33							
21	1290	11000	-	66.67							
22	1320	9770	-	63.03							
25	1230	10400	-	56.92							
26	1300	9050	-	53.87							
28	1280	8710	-	49.38							
32	1250	8220	-	43.33							
34	1240	8020	-	41.07							
39	1210	7560	-	35.94							
43	1180	7250	-	32.38							
49	1140	6890	-	28.41							
56	1100	6580	-	25.07							
61	840	4260	-	22.89							
63	1070	6260	-	22.22							
67	820	4010	-	20.99							
74	1010	5960	-	18.97							
76	800	3490	-	18.42							
80	795	3240	-	17.45							
92	765	2930	-	15.28							
102	745	2650	-	13.76							
116	720	2330	-	12.07							
131	720	1650	-	10.65							
148	725	940	-	9.44							
174	680	920	-	8.06							

S77pR37, $n_e=1400 \text{ min}^{-1}$					1500 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
								
0.05	1500	12200	-	25493				
0.06	1500	12200	-	21787				
0.07	1500	12200	-	19907				
0.08	1500	12200	-	17013				
0.10	1500	12200	-	14668				
0.11	1500	12200	-	13110				
0.12	1500	12200	-	11569				
0.14	1500	12200	-	9887				
0.16	1500	12200	-	8817				
0.18	1500	12200	-	7735				
0.21	1500	12200	-	6735				
0.24	1500	12200	-	5943				
0.27	1500	12200	-	5214				
0.30	1500	12200	-	4618				
0.35	1500	12200	-	3992				
0.40	1500	12200	-	3540				
0.45	1500	12200	-	3098				

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<b>S77pR37, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>1500 Nm</b>			
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> '	i	DRN		DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.51	1440	11500	-	2753				
0.59	1440	11500	-	2374				
0.67	1440	11500	-	2083				
0.77	1440	11500	-	1813				
0.80	1450	11500	-	1745				
0.88	1440	11500	-	1600				
1.00	1440	11500	-	1404				
1.1	1440	11500	-	1245				
 2  2								
1.3	1440	11500	-	1100				
1.5	1440	11500	-	954				
1.7	1440	11500	-	837				
2.0	1450	11500	-	714				
2.2	1450	11500	-	637				
2.4	1440	11500	-	574				
2.8	1440	11600	-	499				
3.2	1440	11600	-	438				
3.6	1400	11800	-	389				
4.3	1400	11800	-	327				
4.8	1440	11700	-	289				
5.6	1440	11700	-	250				
6.4	1440	11700	-	219				

<b>S87, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>2280 Nm</b>							
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L
 2												
4.9	2280	27900	-	288.00*								
5.4	2280	27900	-	258.18								
6.3	2280	27900	-	222.40*								
6.9	2260	28000	-	202.96								
7.8	2210	28100	-	180.00*								
9.3	2150	28200	-	151.30								
10	2100	28300	-	139.05								
11	2060	28300	-	123.48								
13	2000	28400	-	110.40*								
14	1960	28500	-	99.26								
15	1510	29100	-	91.20*								
16	1880	28600	-	86.15								
17	1600	29000	-	81.76								
18	1820	28700	-	77.14								
20	1600	29000	-	70.43								
22	1600	29000	-	64.27								
22	1700	28900	-	64.00*								
25	1600	29000	-	57.00*								
29	1600	29000	-	47.91								
32	1600	29000	-	44.03								

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## Helical-worm gearmotors

Possible geometrical combinations of S..DRN..

S87, $n_e=1400 \text{ min}^{-1}$					2280 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L
36	1600	28200	-	39.10								
40	1600	27100	-	34.96*								
45	1600	26000	-	31.43								
51	1600	24700	-	27.28								
55	1240	23400	-	25.50*								
57	1600	23700	-	24.43								
65	1240	21800	-	21.43								
69	1600	22100	-	20.27								
71	1240	21100	-	19.70								
80	1240	20200	-	17.49								
90	1240	19300	-	15.64*								
100	1240	18500	-	14.06								
115	1240	17400	-	12.21								
128	1240	16400	-	10.93								
154	1140	15900	-	9.07								
178	1010	15700	-	7.88								

S87R57, $n_e=1400 \text{ min}^{-1}$					2500 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
2  3										
0.05	2500	27500	-	25987						
0.06	2500	27500	-	23940						
0.07	2500	27500	-	20568						
0.08	2500	27500	-	18265						
0.08	2500	27500	-	16774						
0.09	2500	27500	-	14820						
0.11	2500	27500	-	13160						
0.12	2500	27500	-	11200						
0.14	2500	27500	-	9904						
0.16	2500	27500	-	8549						
0.18	2500	27500	-	7643						
0.21	2500	27500	-	6706						
0.24	2500	27500	-	5875						
0.27	2500	27500	-	5187						
0.30	2500	27500	-	4606						
0.36	2500	27500	-	3872						
2  2										
0.40	2500	27500	-	3475						
0.48	2500	27500	-	2905						
0.54	2500	27500	-	2586						
0.60	2500	27500	-	2335						
0.68	2500	27500	-	2054						
0.77	2500	27500	-	1824						
0.86	2500	27500	-	1631*						
1.1	2500	27500	-	1332						
1.2	2500	27500	-	1191						

<b>S87R57, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>2500 Nm</b>					
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> °	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
1.4	2500	27500	-	1032*						
1.5	2500	27500	-	930						
1.7	2500	27500	-	831						
1.9	2500	27500	-	719						
2.2	2500	27500	-	624						
2.5	2500	27500	-	558						
2.9	2500	27500	-	485						
3.2	2450	27600	-	435						
3.7	2450	27600	-	378						
4.3	2400	27700	-	323						
5.0	2400	27700	-	281						
5.5	1980	28400	-	255						
6.3	1980	28400	-	222						
6.8	1980	28400	-	205						

<b>S87p, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>3000 Nm</b>							
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	φ <sub>(/R)</sub> °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L
 2												
4.9	3000	19800	-	288.00*								
5.4	2920	22600	-	258.18								
6.3	2860	24400	-	222.40*								
6.9	2820	25500	-	202.96								
7.8	2780	26200	-	180.00*								
9.3	2680	27100	-	151.30								
10	2670	27100	-	139.05								
11	2580	27300	-	123.48								
13	2510	27500	-	110.40*								
14	2440	27600	-	99.26								
15	2490	27500	-	91.20*								
16	2360	27800	-	86.15								
17	2460	27500	-	81.76								
18	2280	27900	-	77.14								
20	2400	27700	-	70.43								
22	2380	27700	-	64.27								
22	2160	28200	-	64.00*								
25	2330	27800	-	57.00*								
29	2260	28000	-	47.91								
32	2210	27300	-	44.03								
36	2160	26200	-	39.10								
40	2090	25400	-	34.96*								
45	2040	24500	-	31.43								
51	1970	23400	-	27.28								
55	1440	22800	-	25.50*								
57	1890	22700	-	24.43								
65	1420	21400	-	21.43								
69	1760	21600	-	20.27								

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Possible geometrical combinations of S..DRN..

S87p, $n_e=1400 \text{ min}^{-1}$					3000 Nm							
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L
71	1370	20900	-	19.70								
80	1310	20200	-	17.49								
90	1260	19600	-	15.64*								
100	1240	18900	-	14.06								
115	1240	17800	-	12.21								
128	1240	16800	-	10.93								
154	1140	16300	-	9.07								
178	1010	16100	-	7.88								

S87pR57, $n_e=1400 \text{ min}^{-1}$					3000 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
2  3										
0.05	3000	19800	-	25987						
0.06	3000	19800	-	23940						
0.07	3000	19800	-	20568						
0.08	3000	19800	-	18265						
0.08	3000	19800	-	16774						
0.09	3000	19800	-	14820						
0.11	3000	19800	-	13160						
0.12	3000	19800	-	11200						
0.14	2900	23200	-	9904						
0.16	3000	19800	-	8549						
0.18	2950	21600	-	7643						
0.21	3000	19800	-	6706						
0.24	2950	21600	-	5875						
0.27	3000	19800	-	5187						
0.30	3000	19800	-	4606						
0.36	2950	21600	-	3872						
2  2										
0.40	3000	19800	-	3475						
0.48	2950	21600	-	2905						
0.54	3000	19800	-	2586						
0.60	3000	19800	-	2335						
0.68	3000	19800	-	2054						
0.77	3000	19800	-	1824						
0.86	2950	21600	-	1631*						
1.1	3000	19800	-	1332						
1.2	2950	21600	-	1191						
1.4	2950	21600	-	1032*						
1.5	3000	19800	-	930						
1.7	2950	21600	-	831						
1.9	3000	19800	-	719						
2.2	3000	19800	-	624						
2.5	2950	21600	-	558						
2.9	2950	21600	-	485						
3.2	2900	23200	-	435						

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<b>S87pR57, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>3000 Nm</b>					
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	Φ <sub>(/R)</sub> °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
3.7	2900	23200	-	378						
4.3	2900	23200	-	323						
5.0	2900	23200	-	281						
5.5	2590	27000	-	255						
6.3	2660	26000	-	222						
6.8	2590	27100	-	205						

<b>S97, n<sub>e</sub>=1400 min<sup>-1</sup></b>					<b>4000 Nm</b>									
n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	F <sub>Ra</sub> N	Φ <sub>(/R)</sub> °	i	DRN 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M	DRN 132L 160M 160L	DRN 180M 180L	DRN 200L 225S	
 2														
4.9	4000	33200	-	286.40*										
5.3	4000	33200	-	262.22										
6.0	4000	33200	-	231.67										
7.1	4000	33200	-	196.52										
7.7	3920	33400	-	180.95										
8.7	3840	33500	-	161.74										
9.6	3730	33700	-	145.60*										
11	3650	33900	-	131.85										
12	3510	34100	-	116.92										
13	3440	34300	-	105.71										
16	3240	34600	-	89.60*										
17	3230	34600	-	80.85										
18	3080	34800	-	78.26										
20	3300	34500	-	71.43										
21	2900	35100	-	65.45										
23	3300	34500	-	60.59										
25	3300	34500	-	55.79										
28	3300	34500	-	49.87										
31	3300	34100	-	44.89										
34	3300	32800	-	40.65										
39	3300	31300	-	36.05										
43	3200	30400	-	32.60										
51	3010	29000	-	27.63										
53	2600	26100	-	26.39										
58	2870	28000	-	24.13										
59	2600	24500	-	23.59										
66	2600	22800	-	21.23										
73	2600	21200	-	19.23										
82	2570	19700	-	17.05										
91	2470	19400	-	15.42										
107	2330	18800	-	13.07										
123	2210	18400	-	11.41										
147	2040	18200	-	9.55										
169	1770	18800	-	8.26										


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Possible geometrical combinations of S..DRN..

S97R57, $n_e=1400 \text{ min}^{-1}$					4200 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M	DRN 132S 132M
 2  3										
0.04	4200	32800	-	33818						
0.04	4200	32800	-	31154						
0.05	4200	32800	-	27847						
0.06	4200	32800	-	24641						
0.07	4200	32800	-	21537						
0.07	4200	32800	-	18749*						
0.09	4200	32800	-	16233						
0.10	4200	32800	-	14576						
0.11	4200	32800	-	12752						
0.12	4200	32800	-	11267						
0.14	4200	32800	-	10078						
0.16	4200	32800	-	8608						
0.19	4200	32800	-	7554						
0.21	4200	31300	-	6640						
0.24	4200	31300	-	5780*						
0.28	4200	31300	-	4937						
0.32	4200	31300	-	4444						
0.35	4200	31300	-	4017						
0.41	4200	31300	-	3453						
0.45	4200	31300	-	3108						
0.53	4200	31300	-	2654						
0.60	4200	31300	-	2329						
0.67	4200	31300	-	2081						
0.75	4200	31300	-	1860						
0.89	4200	31300	-	1574*						
 2  2										
1.0	4200	31300	-	1394						
1.1	4200	31300	-	1223						
1.3	4200	31300	-	1070						
1.5	4200	31300	-	928						
1.7	4200	31300	-	824						
2.0	4200	32800	-	714						
2.2	4200	31300	-	626*						
2.6	4200	31300	-	538						
2.9	4200	31400	-	484*						
3.3	4200	31400	-	420						
3.7	4200	31400	-	376						
4.3	4200	31500	-	327						
4.9	4200	31500	-	287						
5.6	4200	31500	-	252						
6.4	4200	31600	-	219						
6.8	4200	31600	-	205						

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S97p, $n_e=1400 \text{ min}^{-1}$					4300 Nm									
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN	DRN
					71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M	132L 160M 160L	180M 180L	200L 225S	
 2														
4.9	4300	32500	-	286.40*										
5.3	4300	32500	-	262.22										
6.0	4300	32500	-	231.67										
7.1	4300	32500	-	196.52										
7.7	4300	32500	-	180.95										
8.7	4300	32500	-	161.74										
9.6	4300	32500	-	145.60*										
11	4300	32500	-	131.85										
12	4300	32500	-	116.92										
13	4290	32600	-	105.71										
16	4070	33000	-	89.60*										
17	3700	33800	-	80.85										
18	3910	33400	-	78.26										
20	4100	33000	-	71.43										
21	3520	34100	-	65.45										
23	3980	33200	-	60.59										
25	3910	33400	-	55.79										
28	3810	33600	-	49.87										
31	3710	33100	-	44.89										
34	3600	32200	-	40.65										
39	3500	30900	-	36.05										
43	3390	30000	-	32.60										
51	3230	28600	-	27.63										
53	2600	26800	-	26.39										
58	3080	27500	-	24.13										
59	2600	25300	-	23.59										
66	2600	23500	-	21.23										
73	2600	21900	-	19.23										
82	2570	20300	-	17.05										
91	2470	20000	-	15.42										
107	2330	19300	-	13.07										
123	2210	18900	-	11.41										
147	2040	18600	-	9.55										
169	1770	19200	-	8.26										

S97pR57, $n_e=1400 \text{ min}^{-1}$					4300 Nm					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
 2  3										
0.04	4300	32500	-	33818						
0.04	4300	32500	-	31154						
0.05	4300	32500	-	27847						
0.06	4300	32500	-	24641						
0.07	4300	32500	-	21537						
0.07	4300	32500	-	18749*						
0.09	4300	32500	-	16233						

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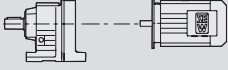

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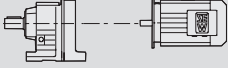

Possible geometrical combinations of S..DRN..

<b>S97pR57, <math>n_e=1400 \text{ min}^{-1}</math></b>					<b>4300 Nm</b>					
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN	DRN	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L	112M	132S 132M
0.10	4300	32500	-	14576						
0.11	4300	32500	-	12752						
0.12	4300	32500	-	11267						
0.14	4300	32500	-	10078						
0.16	4300	32500	-	8608						
0.19	4300	32500	-	7554						
0.21	4300	30200	-	6640						
0.24	4300	30200	-	5780*						
0.28	4300	30200	-	4937						
0.32	4300	30200	-	4444						
0.35	4300	30200	-	4017						
0.41	4300	30200	-	3453						
0.45	4300	30200	-	3108						
0.53	4300	30200	-	2654						
0.60	4300	30200	-	2329						
0.67	4300	30200	-	2081						
0.75	4300	30200	-	1860						
0.89	4300	30200	-	1574*						
										
1.0	4300	30200	-	1394						
1.1	4300	30200	-	1223						
1.3	4300	30200	-	1070						
1.5	4300	30200	-	928						
1.7	4300	30200	-	824						
2.0	4300	32500	-	714						
2.2	4300	30300	-	626*						
2.6	4300	30400	-	538						
2.9	4300	30500	-	484*						
3.3	4300	30500	-	420						
3.7	4300	30600	-	376						
4.3	4300	30600	-	327						
4.9	4300	30700	-	287						
5.6	4300	30700	-	252						
6.4	4300	30700	-	219						
6.8	4300	30700	-	205						

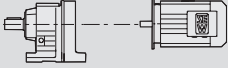



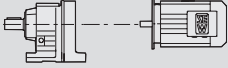

11.3 S..DRN.. selection tables in kW

<b>P<sub>m</sub> = 0.09 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
5.8	97	157.43	3000	1.00						
6.4	90	144.40*	3000	1.05	S	37p	DRN	63MR6	12	845
7.5	79	122.94	3000	1.20	SF	37p	DRN	63MR6	13	846
8.7	70	106.00*	3000	1.40	SA	37p	DRN	63MR6	11	847
9.3	66	98.80*	3000	1.50	SAF	37p	DRN	63MR6	13	846

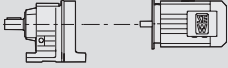

<b>P<sub>m</sub> = 0.12 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.12	4850	11267	20600	0.90						
0.14	4440	10078	31200	0.95	S	97pR57	DRN	63MS4	170	879
0.16	3680	8608	33800	1.15	SF	97pR57	DRN	63MS4	200	879
0.18	3250	7554	34600	1.30	SA	97pR57	DRN	63MS4	165	879
0.21	3850	6640	33500	1.10	SAF	97pR57	DRN	63MS4	190	879
0.24	3350	5780	34400	1.30						
0.12	4740	11267	25100	0.90	S	97R57	DRN	63MS4	170	879
0.14	4330	10078	32500	0.95	SF	97R57	DRN	63MS4	200	879
0.16	3590	8608	34000	1.15	SA	97R57	DRN	63MS4	165	879
0.18	3180	7554	34700	1.30	SAF	97R57	DRN	63MS4	190	879
0.16	3680	8549	-	0.80						
0.18	3290	7643	-	0.90						
0.21	2750	6706	26200	1.10	S	87pR57	DRN	63MS4	110	879
0.23	2460	5875	27600	1.20	SF	87pR57	DRN	63MS4	130	879
0.27	2030	5187	28400	1.45	SA	87pR57	DRN	63MS4	105	879
0.30	1810	4606	28700	1.65	SAF	87pR57	DRN	63MS4	120	879
0.36	1500	3872	29200	1.95						
0.21	2690	6706	27100	0.95	S	87R57	DRN	63MS4	110	879
0.23	2400	5875	27700	1.05	SF	87R57	DRN	63MS4	130	879
0.27	1980	5187	28500	1.25	SA	87R57	DRN	63MS4	105	879
0.30	1760	4606	28800	1.40	SAF	87R57	DRN	63MS4	120	879
0.36	1460	3872	29200	1.70						
0.30	1800	4618	10900	0.85						
0.35	1610	3992	11700	0.95						
0.39	1410	3540	12600	1.05						
0.45	1230	3098	13400	1.20						
0.50	1580	2753	10800	0.90	S	77pR37	DRN	63MS4	59	879
0.58	1340	2374	12000	1.05	SF	77pR37	DRN	63MS4	68	879
0.66	1180	2083	12800	1.20	SA	77pR37	DRN	63MS4	58	879
0.76	1000	1813	13700	1.45	SAF	77pR37	DRN	63MS4	65	879
0.79	950	1745	14000	1.50						
0.86	870	1600	14400	1.65						
0.98	765	1404	14900	1.90						
1.1	665	1245	15400	2.1						
0.39	1370	3540	7230	0.90						
0.45	1200	3098	12300	1.05						
0.58	1320	2374	10600	0.95	S	77R37	DRN	63MS4	59	879
0.66	1160	2083	12600	1.05	SF	77R37	DRN	63MS4	68	879
0.76	980	1813	13900	1.25	SA	77R37	DRN	63MS4	58	879
0.79	930	1745	14200	1.30	SAF	77R37	DRN	63MS4	65	879
0.86	860	1600	14600	1.45						
0.98	755	1404	15100	1.65						
1.1	660	1245	15500	1.90						
0.88	800	1559	8560	0.85	S	67pR37	DRN	63MS4	40	879
1.0	695	1363	9230	1.00	SF	67pR37	DRN	63MS4	46	879
1.2	595	1194	9840	1.20	SA	67pR37	DRN	63MS4	41	879
1.3	540	1045	10200	1.20	SAF	67pR37	DRN	63MS4	45	879
1.5	465	914	10600	1.35						
1.7	425	809	10900	1.70	S	67pR37	DRN	63MS4	39	879
1.9	375	712	11200	1.90	SF	67pR37	DRN	63MS4	46	879
2.2	310	615	11400	2.3	SA	67pR37	DRN	63MS4	40	879
2.5	285	543	11400	2.5	SAF	67pR37	DRN	63MS4	45	879

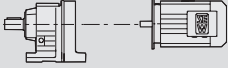

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<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.2	585	1194	7990	0.95	<b>S</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	40	879
1.3	530	1045	8560	1.05	<b>SF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	46	879
1.5	455	914	9180	1.25	<b>SA</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	41	879
					<b>SAF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	45	879
1.7	415	809	9460	1.35	<b>S</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	39	879
1.9	365	712	9770	1.55	<b>SF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	46	879
2.2	305	615	10100	1.85	<b>SA</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	40	879
2.5	275	543	10200	2.1	<b>SAF</b>	<b>67R37</b>	<b>DRN</b>	<b>63MS4</b>	45	879
2.9	225	469	10400	2.5						
3.3	200	424	10500	2.8						
3.8	187	365	10500	3.0						
1.6	445	865	-	0.85						
1.8	385	750	6110	0.95						
2.1	335	655	6740	1.10						
2.4	290	574	7150	1.25	<b>S</b>	<b>57pR17</b>	<b>DRN</b>	<b>63MS4</b>	21	879
2.7	250	506	7450	1.45	<b>SF</b>	<b>57pR17</b>	<b>DRN</b>	<b>63MS4</b>	25	879
3.1	220	438	7660	1.65	<b>SA</b>	<b>57pR17</b>	<b>DRN</b>	<b>63MS4</b>	21	879
3.6	199	388	7800	1.85	<b>SAF</b>	<b>57pR17</b>	<b>DRN</b>	<b>63MS4</b>	23	879
4.1	181	336	7890	2.0						
4.7	157	294	8000	2.4						
5.1	151	269	8020	2.4						
2.1	325	655	6800	0.90						
2.4	285	574	7200	1.05	<b>S</b>	<b>57R17</b>	<b>DRN</b>	<b>63MS4</b>	21	879
2.7	250	506	7480	1.20	<b>SF</b>	<b>57R17</b>	<b>DRN</b>	<b>63MS4</b>	25	879
3.1	215	438	7700	1.40	<b>SA</b>	<b>57R17</b>	<b>DRN</b>	<b>63MS4</b>	21	879
3.6	189	388	7850	1.60	<b>SAF</b>	<b>57R17</b>	<b>DRN</b>	<b>63MS4</b>	23	879
4.1	169	336	7950	1.75						
4.7	144	294	8050	2.1						
5.1	138	269	8070	2.2						
3.1	215	438	4890	0.90						
3.6	193	388	5130	1.05	<b>S</b>	<b>47pR17</b>	<b>DRN</b>	<b>63MS4</b>	17	879
4.1	176	336	5250	1.15	<b>SF</b>	<b>47pR17</b>	<b>DRN</b>	<b>63MS4</b>	21	879
4.7	152	294	5380	1.30	<b>SA</b>	<b>47pR17</b>	<b>DRN</b>	<b>63MS4</b>	18	879
5.4	121	257	5570	1.65	<b>SAF</b>	<b>47pR17</b>	<b>DRN</b>	<b>63MS4</b>	20	879
6.0	128	229	5500	1.55						
6.9	112	200	5580	1.75						
7.4	106	187	5600	1.90						
3.1	215	438	4920	0.85						
3.6	188	388	5160	1.00	<b>S</b>	<b>47R17</b>	<b>DRN</b>	<b>63MS4</b>	17	879
4.1	168	336	5290	1.10	<b>SF</b>	<b>47R17</b>	<b>DRN</b>	<b>63MS4</b>	21	879
4.7	143	294	5420	1.30	<b>SA</b>	<b>47R17</b>	<b>DRN</b>	<b>63MS4</b>	18	879
5.4	97	257	5660	1.90	<b>SAF</b>	<b>47R17</b>	<b>DRN</b>	<b>63MS4</b>	20	879
6.0	117	229	5550	1.55						
6.9	102	200	5620	1.80						
7.4	95	187	5640	1.95						
6.0	125	232	2670	0.85						
6.8	110	202	3000	0.95	<b>S</b>	<b>37pR17</b>	<b>DRN</b>	<b>63MS4</b>	14	879
7.7	99	179	3000	1.05	<b>SF</b>	<b>37pR17</b>	<b>DRN</b>	<b>63MS4</b>	15	879
8.7	89	158	3000	1.15	<b>SA</b>	<b>37pR17</b>	<b>DRN</b>	<b>63MS4</b>	14	879
9.6	83	144	3000	1.25	<b>SAF</b>	<b>37pR17</b>	<b>DRN</b>	<b>63MS4</b>	15	879
12	68	118	3000	1.55						
13	64	110	3000	1.65						
6.8	102	202	3000	0.90						
7.7	91	179	3000	1.00	<b>S</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	14	879
8.7	81	158	3000	1.15	<b>SF</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	15	879
9.6	75	144	3000	1.20	<b>SA</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	14	879
12	61	118	3000	1.50	<b>SAF</b>	<b>37R17</b>	<b>DRN</b>	<b>63MS4</b>	15	879
13	57	110	3000	1.60						
4.3	182	201.00*	7880	1.95	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>63M6</b>	18	854
4.7	170	184.80*	7940	2.1	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>63M6</b>	22	855
5.5	149	158.12	8030	2.4	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>63M6</b>	18	856
6.3	132	137.05	8090	2.8	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>63M6</b>	21	855
4.3	147	201.00*	8040	2.0	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	18	854
4.7	137	184.80*	8080	2.2	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	22	855
5.5	119	158.12	8130	2.5	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	18	856
6.3	105	137.05	8170	2.8	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>63M6</b>	21	855

<b>P<sub>m</sub> = 0.12 kW</b>															
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>						
4.3	175	201.00*	5320	1.10	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>63M6</b>	15	849					
4.7	163	184.80*	5380	1.20		<b>SF</b>					<b>47p</b>	<b>63M6</b>	18	850	
5.5	144	158.12	5470	1.35		<b>SA</b>					<b>47p</b>	<b>63M6</b>	16	851	
6.3	127	137.05	5540	1.55		<b>SAF</b>					<b>47p</b>	<b>63M6</b>	17	850	
6.8	120	128.10*	5580	1.60											
6.9	119	201.00*	5580	1.60	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>63MS4</b>	14	849					
7.5	111	184.80*	5620	1.75		<b>SF</b>					<b>47p</b>	<b>63MS4</b>	17	850	
8.7	96	158.12	5670	2.0		<b>SA</b>					<b>47p</b>	<b>63MS4</b>	15	851	
10	85	137.05	5720	2.3		<b>SAF</b>					<b>47p</b>	<b>63MS4</b>	17	850	
11	80	128.10*	5740	2.4											
12	70	110.73	5770	2.8											
4.3	142	201.00*	5470	1.25	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>63M6</b>	15	849					
4.7	132	184.80*	5520	1.35		<b>SF</b>					<b>47</b>	<b>63M6</b>	18	850	
5.5	115	158.12	5590	1.50		<b>SA</b>					<b>47</b>	<b>63M6</b>	16	851	
6.3	102	137.05	5650	1.70		<b>SAF</b>					<b>47</b>	<b>63M6</b>	17	850	
6.8	96	128.10*	5670	1.80											
6.9	95	201.00*	5680	1.80	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>63MS4</b>	14	849					
7.5	88	184.80*	5700	1.90		<b>SF</b>					<b>47</b>	<b>63MS4</b>	17	850	
8.7	77	158.12	5740	2.2		<b>SA</b>					<b>47</b>	<b>63MS4</b>	15	851	
10	68	137.05	5770	2.5		<b>SAF</b>					<b>47</b>	<b>63MS4</b>	17	850	
11	64	128.10*	5790	2.6											
12	56	110.73	5810	3.0											
7.1	111	122.94	3000	0.85	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>63M6</b>	12	845					
8.2	98	106.00*	3000	1.00		<b>SF</b>					<b>37p</b>	<b>63M6</b>	13	846	
8.8	92	98.80*	3000	1.05		<b>SA</b>					<b>37p</b>	<b>63M6</b>	11	847	
10	82	86.36	3000	1.20		<b>SAF</b>					<b>37p</b>	<b>63M6</b>	13	846	
11	77	80.96	3000	1.25											
12	69	71.44*	3000	1.45											
8.8	92	157.43	3000	1.00	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>63MS4</b>	11	845					
9.6	86	144.40*	3000	1.10							<b>SF</b>	<b>37p</b>	<b>63MS4</b>	12	846
11	74	122.94	3000	1.30							<b>SA</b>	<b>37p</b>	<b>63MS4</b>	10	847
13	65	106.00*	3000	1.50							<b>SAF</b>	<b>37p</b>	<b>63MS4</b>	12	846
14	61	98.80*	3000	1.60											
16	54	86.36	3000	1.80											
17	51	80.96	3000	1.95											
19	45	71.44*	3000	2.2											
22	40	63.33	3000	2.4											
25	40	55.93	3000	2.6											
27	36	51.30*	3000	2.8											
5.5	110	157.43	3000	0.85	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>63M6</b>	12	845					
6.0	102	144.40*	3000	0.90							<b>SF</b>	<b>37</b>	<b>63M6</b>	13	846
7.1	88	122.94	3000	1.05							<b>SA</b>	<b>37</b>	<b>63M6</b>	11	847
8.2	78	106.00*	3000	1.20							<b>SAF</b>	<b>37</b>	<b>63M6</b>	13	846
8.8	73	98.80*	3000	1.25											
10	65	86.36	3000	1.40											
8.8	73	157.43	3000	1.25	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>63MS4</b>	11	845					
9.6	68	144.40*	3000	1.35							<b>SF</b>	<b>37</b>	<b>63MS4</b>	12	846
11	59	122.94	3000	1.55							<b>SA</b>	<b>37</b>	<b>63MS4</b>	10	847
13	52	106.00*	3000	1.70							<b>SAF</b>	<b>37</b>	<b>63MS4</b>	12	846
14	49	98.80*	3000	1.75											
16	43	86.36	3000	1.95											
17	41	80.96	3000	2.1											
19	37	71.44*	3000	2.3											
22	33	63.33	3000	2.5											
25	35	55.93	3000	2.3											
27	32	51.30*	3000	2.5											
32	28	43.68	3000	2.9											
37	24	37.66	3000	3.2											
39	22	35.10*	3000	3.4											
45	20	30.68	3000	3.8											
48	19	28.76	3000	3.9											
54	16	25.38*	3000	4.4											
61	15	22.50*	3000	4.8											
69	14	19.89	3000	3.6											
76	13	18.24*	3000	4.0											
89	11	15.53	2870	4.4											

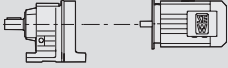

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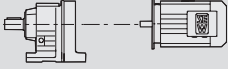

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>0.27</b>	3310	5187	-	0.90	<b>S</b>	<b>87pR57</b>	<b>DRN</b>	<b>63M4</b>	110	879
<b>0.30</b>	2940	4606	21800	1.00	<b>SF</b>	<b>87pR57</b>	<b>DRN</b>	<b>63M4</b>	130	879
<b>0.36</b>	2450	3872	27600	1.20	<b>SA</b>	<b>87pR57</b>	<b>DRN</b>	<b>63M4</b>	105	879
					<b>SAF</b>	<b>87pR57</b>	<b>DRN</b>	<b>63M4</b>	125	879
<b>0.40</b>	2370	3475	27700	1.25						
<b>0.47</b>	1990	2905	28500	1.50	<b>S</b>	<b>87pR57</b>	<b>DRN</b>	<b>63M4</b>	110	879
<b>0.53</b>	1720	2586	28900	1.75	<b>SF</b>	<b>87pR57</b>	<b>DRN</b>	<b>63M4</b>	130	879
<b>0.59</b>	1530	2335	29100	1.95	<b>SA</b>	<b>87pR57</b>	<b>DRN</b>	<b>63M4</b>	105	879
<b>0.67</b>	1330	2054	29400	2.2	<b>SAF</b>	<b>87pR57</b>	<b>DRN</b>	<b>63M4</b>	120	879
<b>0.75</b>	1210	1824	29500	2.5						
<b>0.84</b>	1100	1631	29600	2.7						
<b>0.30</b>	2870	4606	24000	0.85	<b>S</b>	<b>87R57</b>	<b>DRN</b>	<b>63M4</b>	110	879
<b>0.36</b>	2390	3872	27700	1.05	<b>SF</b>	<b>87R57</b>	<b>DRN</b>	<b>63M4</b>	130	879
					<b>SA</b>	<b>87R57</b>	<b>DRN</b>	<b>63M4</b>	105	879
					<b>SAF</b>	<b>87R57</b>	<b>DRN</b>	<b>63M4</b>	125	879
<b>0.40</b>	2310	3475	27900	1.10						
<b>0.47</b>	1940	2905	28500	1.30	<b>S</b>	<b>87R57</b>	<b>DRN</b>	<b>63M4</b>	110	879
<b>0.53</b>	1680	2586	28900	1.50	<b>SF</b>	<b>87R57</b>	<b>DRN</b>	<b>63M4</b>	130	879
<b>0.59</b>	1500	2335	29200	1.65	<b>SA</b>	<b>87R57</b>	<b>DRN</b>	<b>63M4</b>	105	879
<b>0.67</b>	1290	2054	29400	1.95	<b>SAF</b>	<b>87R57</b>	<b>DRN</b>	<b>63M4</b>	120	879
<b>0.75</b>	1150	1824	29500	2.2						
<b>0.84</b>	1030	1631	29700	2.4						
<b>0.76</b>	1570	1813	10800	0.90	<b>S</b>	<b>77pR37</b>	<b>DRN</b>	<b>63M4</b>	60	879
<b>0.79</b>	1500	1745	11200	0.95	<b>SF</b>	<b>77pR37</b>	<b>DRN</b>	<b>63M4</b>	69	879
<b>0.86</b>	1370	1600	11800	1.05	<b>SA</b>	<b>77pR37</b>	<b>DRN</b>	<b>63M4</b>	59	879
<b>0.98</b>	1200	1404	12700	1.20	<b>SAF</b>	<b>77pR37</b>	<b>DRN</b>	<b>63M4</b>	66	879
<b>1.1</b>	1060	1245	13400	1.35						
<b>1.2</b>	990	1100	13800	1.45						
<b>1.4</b>	850	954	14500	1.70	<b>S</b>	<b>77pR37</b>	<b>DRN</b>	<b>63M4</b>	59	879
<b>1.6</b>	745	837	15000	1.95	<b>SF</b>	<b>77pR37</b>	<b>DRN</b>	<b>63M4</b>	69	879
<b>1.9</b>	620	714	15600	2.3	<b>SA</b>	<b>77pR37</b>	<b>DRN</b>	<b>63M4</b>	59	879
<b>2.2</b>	550	637	15700	2.6	<b>SAF</b>	<b>77pR37</b>	<b>DRN</b>	<b>63M4</b>	66	879
<b>2.4</b>	500	574	15700	2.9						
<b>0.98</b>	1190	1404	12400	1.05	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	60	879
<b>1.1</b>	1040	1245	13500	1.20	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	69	879
					<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	59	879
					<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	66	879
<b>1.2</b>	970	1100	14000	1.25						
<b>1.4</b>	830	954	14700	1.50	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	59	879
<b>1.6</b>	735	837	15200	1.70	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	69	879
<b>1.9</b>	610	714	15700	2.0	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	59	879
<b>2.2</b>	540	637	15900	2.3	<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	66	879
<b>2.4</b>	490	574	16000	2.5						
<b>1.7</b>	660	809	9440	1.10						
<b>1.9</b>	580	712	9920	1.25	<b>S</b>	<b>67pR37</b>	<b>DRN</b>	<b>63M4</b>	40	879
<b>2.2</b>	490	615	10500	1.45	<b>SF</b>	<b>67pR37</b>	<b>DRN</b>	<b>63M4</b>	47	879
<b>2.5</b>	445	543	10800	1.55	<b>SA</b>	<b>67pR37</b>	<b>DRN</b>	<b>63M4</b>	41	879
<b>2.9</b>	380	469	11200	1.90	<b>SAF</b>	<b>67pR37</b>	<b>DRN</b>	<b>63M4</b>	46	879
<b>3.2</b>	345	424	11300	2.1						
<b>3.8</b>	315	365	11400	2.3						
<b>1.9</b>	570	712	8140	1.00						
<b>2.2</b>	480	615	8990	1.20	<b>S</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	40	879
<b>2.5</b>	430	543	9370	1.30	<b>SF</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	47	879
<b>2.9</b>	360	469	9820	1.60	<b>SA</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	41	879
<b>3.2</b>	325	424	10000	1.75	<b>SAF</b>	<b>67R37</b>	<b>DRN</b>	<b>63M4</b>	46	879
<b>3.8</b>	290	365	10200	1.95						

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.4	455	574	-	0.80						
2.7	400	506	5940	0.90						
3.1	350	438	6570	1.05						
3.5	310	388	6950	1.20	<b>S</b>	<b>57pR17</b>	<b>DRN</b>	<b>63M4</b>	22	879
4.1	280	336	7230	1.30	<b>SF</b>	<b>57pR17</b>	<b>DRN</b>	<b>63M4</b>	25	879
4.7	245	294	7490	1.50	<b>SA</b>	<b>57pR17</b>	<b>DRN</b>	<b>63M4</b>	21	879
5.1	235	269	7580	1.55	<b>SAF</b>	<b>57pR17</b>	<b>DRN</b>	<b>63M4</b>	24	879
6.0	200	229	7770	1.80						
6.7	185	204	7870	2.0						
7.3	170	187	7940	2.2						
3.1	335	438	6700	0.90						
3.5	295	388	7100	1.00						
4.1	260	336	7380	1.15	<b>S</b>	<b>57R17</b>	<b>DRN</b>	<b>63M4</b>	22	879
4.7	225	294	7620	1.30	<b>SF</b>	<b>57R17</b>	<b>DRN</b>	<b>63M4</b>	25	879
5.1	215	269	7700	1.40	<b>SA</b>	<b>57R17</b>	<b>DRN</b>	<b>63M4</b>	21	879
6.0	185	229	7870	1.60	<b>SAF</b>	<b>57R17</b>	<b>DRN</b>	<b>63M4</b>	24	879
6.7	166	204	7960	1.80						
7.3	152	187	8020	1.95						
4.7	240	294	3990	0.85						
5.3	193	257	5220	1.05						
6.0	199	229	5100	1.00	<b>S</b>	<b>47pR17</b>	<b>DRN</b>	<b>63M4</b>	18	879
6.9	176	200	5260	1.15	<b>SF</b>	<b>47pR17</b>	<b>DRN</b>	<b>63M4</b>	21	879
7.3	165	187	5320	1.20	<b>SA</b>	<b>47pR17</b>	<b>DRN</b>	<b>63M4</b>	19	879
8.3	147	165	5410	1.35	<b>SAF</b>	<b>47pR17</b>	<b>DRN</b>	<b>63M4</b>	21	879
9.3	133	148	5480	1.50						
11	118	131	5550	1.70						
4.7	225	294	4820	0.80						
5.3	155	257	5410	1.20						
6.0	182	229	5210	1.00	<b>S</b>	<b>47R17</b>	<b>DRN</b>	<b>63M4</b>	18	879
6.9	159	200	5340	1.15	<b>SF</b>	<b>47R17</b>	<b>DRN</b>	<b>63M4</b>	21	879
7.3	149	187	5390	1.25	<b>SA</b>	<b>47R17</b>	<b>DRN</b>	<b>63M4</b>	19	879
8.3	132	165	5480	1.40	<b>SAF</b>	<b>47R17</b>	<b>DRN</b>	<b>63M4</b>	21	879
9.3	119	148	5540	1.55						
11	105	131	5600	1.75						
4.2	295	217.41	11500	2.1	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>71MS6</b>	30	859
4.8	265	190.11	11500	2.4	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>71MS6</b>	36	860
5.1	250	180.60*	11600	2.5	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>71MS6</b>	31	861
					<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>71MS6</b>	35	860
4.2	240	217.41	10400	2.3	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	30	859
4.8	215	190.11	10400	2.6	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	36	860
5.1	205	180.60*	10500	2.7	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	31	861
					<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>71MS6</b>	35	860
6.8	185	201.00*	7870	1.90	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>63M4</b>	18	854
7.4	172	184.80*	7930	2.1	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>63M4</b>	22	855
8.7	149	158.12	8030	2.4	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>63M4</b>	18	856
10	131	137.05	8100	2.7	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>63M4</b>	21	855
4.5	210	201.00*	7730	1.40	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>71MS6</b>	19	854
5.0	196	184.80*	7810	1.50	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>71MS6</b>	23	855
5.8	171	158.12	7930	1.70	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>71MS6</b>	19	856
6.7	151	137.05	8020	1.95	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>71MS6</b>	22	855
6.8	148	201.00*	8030	2.0	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>63M4</b>	18	854
7.4	138	184.80*	8070	2.1	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>63M4</b>	22	855
8.7	120	158.12	8130	2.5	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>63M4</b>	18	856
10	106	137.05	8170	2.8	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>63M4</b>	21	855
6.8	179	201.00*	5290	1.05						
7.4	167	184.80*	5360	1.15						
8.7	145	158.12	5460	1.35						
10	128	137.05	5540	1.50	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>63M4</b>	15	849
11	120	128.10*	5580	1.60	<b>SF</b>	<b>47p</b>	<b>DRN</b>	<b>63M4</b>	18	850
12	105	110.73	5640	1.85	<b>SA</b>	<b>47p</b>	<b>DRN</b>	<b>63M4</b>	16	851
15	90	94.08*	5700	2.2	<b>SAF</b>	<b>47p</b>	<b>DRN</b>	<b>63M4</b>	17	850
16	81	84.00*	5730	2.4						
19	70	71.75*	5770	2.8						
20	75	69.39	5730	2.7						

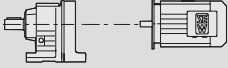

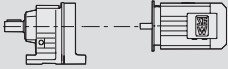

<b>P<sub>m</sub> = 0.18 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
4.5	200	201.00*	5140	0.90	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>71MS6</b>	15	849
5.0	190	184.80*	5230	0.95						
5.8	165	158.12	5360	1.05						
6.7	146	137.05	5450	1.15						
7.1	138	128.10*	5490	1.25						
6.8	143	201.00*	5470	1.20	<b>SF</b>	<b>47</b>	<b>DRN</b>	<b>63M4</b>	15	849
7.4	133	184.80*	5520	1.25						
8.7	116	158.12	5590	1.45						
10	102	137.05	5650	1.65						
11	96	128.10*	5670	1.75						
12	85	110.73	5710	1.95						
15	73	94.08*	5760	2.3						
16	66	84.00*	5780	2.5						
19	58	71.75*	5810	2.9						
20	66	69.39	5760	2.3						
11	112	122.94	3000	0.85	<b>SA</b>	<b>37p</b>	<b>DRN</b>	<b>63M4</b>	12	845
13	98	106.00*	3000	1.00						
14	92	98.80*	3000	1.05						
16	81	86.36	3000	1.20						
17	77	80.96	3000	1.30						
19	68	71.44*	3000	1.45						
22	61	63.33	3000	1.60						
25	60	55.93	3000	1.75						
27	55	51.30*	3000	1.85						
31	47	43.68	3000	2.2						
37	41	37.66	3000	2.5						
39	38	35.10*	3000	2.7						
8.7	110	157.43	3000	0.85	<b>SAF</b>	<b>37p</b>	<b>DRN</b>	<b>63M4</b>	11	847
9.5	102	144.40*	3000	0.90						
11	89	122.94	3000	1.00						
13	78	106.00*	3000	1.10						
14	74	98.80*	3000	1.20						
16	65	86.36	3000	1.30						
17	62	80.96	3000	1.35						
19	55	71.44*	3000	1.50						
22	50	63.33	3000	1.65						
25	53	55.93	3000	1.50						
27	49	51.30*	3000	1.65						
31	42	43.68	3000	1.90						
37	36	37.66	3000	2.1						
39	34	35.10*	3000	2.3						
45	30	30.68	3000	2.5						
48	28	28.76	3000	2.6						
54	25	25.38*	3000	2.9						
61	22	22.50*	3000	3.2						
69	21	19.89	2980	2.4						
75	19	18.24*	2920	2.6						
89	17	15.53	2790	2.9						
103	14	13.39	2680	3.3						
110	13	12.48*	2630	3.5						
126	12	10.91	2530	4.0						
134	11	10.23	2480	4.1						


<b>P<sub>m</sub> = 0.25 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
0.40	3300	3475	-	0.90	<b>S</b>	<b>87pR57</b>	<b>DRN</b>	<b>71MS4</b>	110	879
0.48	2760	2905	26100	1.05						
0.54	2410	2586	27700	1.25						
0.60	2150	2335	28200	1.40						
0.68	1890	2054	28600	1.60						
0.77	1720	1824	28900	1.75						
0.86	1570	1631	29100	1.90						
0.40	3300	3475	-	0.90	<b>SF</b>	<b>87pR57</b>	<b>DRN</b>	<b>71MS4</b>	130	879
0.48	2760	2905	26100	1.05						
0.54	2410	2586	27700	1.25						
0.60	2150	2335	28200	1.40						
0.68	1890	2054	28600	1.60						
0.77	1720	1824	28900	1.75						
0.86	1570	1631	29100	1.90						
0.40	3300	3475	-	0.90	<b>SA</b>	<b>87pR57</b>	<b>DRN</b>	<b>71MS4</b>	105	879
0.48	2760	2905	26100	1.05						
0.54	2410	2586	27700	1.25						
0.60	2150	2335	28200	1.40						
0.68	1890	2054	28600	1.60						
0.77	1720	1824	28900	1.75						
0.86	1570	1631	29100	1.90						
0.40	3300	3475	-	0.90	<b>SAF</b>	<b>87pR57</b>	<b>DRN</b>	<b>71MS4</b>	120	879
0.48	2760	2905	26100	1.05						
0.54	2410	2586	27700	1.25						
0.60	2150	2335	28200	1.40						
0.68	1890	2054	28600	1.60						
0.77	1720	1824	28900	1.75						
0.86	1570	1631	29100	1.90						

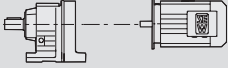

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>0.48</b>	2700	2905	27000	0.95						
<b>0.54</b>	2350	2586	27800	1.05						
<b>0.60</b>	2100	2335	28300	1.20	<b>S</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	110	879
<b>0.68</b>	1830	2054	28700	1.35	<b>SF</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	130	879
<b>0.77</b>	1620	1824	29000	1.55	<b>SA</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	105	879
<b>0.86</b>	1450	1631	29200	1.70	<b>SAF</b>	<b>87R57</b>	<b>DRN</b>	<b>71MS4</b>	120	879
<b>1.5</b>	850	930	29800	2.9						
<b>1.3</b>	1360	1100	11900	1.05						
<b>1.5</b>	1170	954	12800	1.20						
<b>1.7</b>	1030	837	13600	1.40	<b>S</b>	<b>77pR37</b>	<b>DRN</b>	<b>71MS4</b>	60	879
<b>2.0</b>	860	714	14400	1.70	<b>SF</b>	<b>77pR37</b>	<b>DRN</b>	<b>71MS4</b>	70	879
<b>2.2</b>	765	637	14900	1.90	<b>SA</b>	<b>77pR37</b>	<b>DRN</b>	<b>71MS4</b>	59	879
<b>2.5</b>	700	574	15200	2.1	<b>SAF</b>	<b>77pR37</b>	<b>DRN</b>	<b>71MS4</b>	66	879
<b>2.8</b>	605	499	15700	2.4						
<b>1.5</b>	1160	954	12700	1.05						
<b>1.7</b>	1010	837	13700	1.20	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	60	879
<b>2.0</b>	850	714	14600	1.45	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	70	879
<b>2.2</b>	755	637	15100	1.65	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	59	879
<b>2.5</b>	685	574	15400	1.80	<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	66	879
<b>2.8</b>	585	499	15800	2.1						
<b>2.0</b>	800	712	8560	0.90						
<b>2.3</b>	685	615	9300	1.05						
<b>2.6</b>	620	543	9710	1.15	<b>S</b>	<b>67pR37</b>	<b>DRN</b>	<b>71MS4</b>	41	879
<b>3.0</b>	530	469	10200	1.35	<b>SF</b>	<b>67pR37</b>	<b>DRN</b>	<b>71MS4</b>	47	879
<b>3.3</b>	485	424	10500	1.45	<b>SA</b>	<b>67pR37</b>	<b>DRN</b>	<b>71MS4</b>	42	879
<b>3.9</b>	440	365	10800	1.65	<b>SAF</b>	<b>67pR37</b>	<b>DRN</b>	<b>71MS4</b>	46	879
<b>4.4</b>	385	319	11200	1.70						
<b>5.0</b>	340	281	11300	2.0						
<b>2.6</b>	600	543	7860	0.95						
<b>3.0</b>	505	469	8810	1.15	<b>S</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	41	879
<b>3.3</b>	455	424	9200	1.25	<b>SF</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	47	879
<b>3.9</b>	405	365	9540	1.40	<b>SA</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	42	879
<b>4.4</b>	350	319	9860	1.60	<b>SAF</b>	<b>67R37</b>	<b>DRN</b>	<b>71MS4</b>	46	879
<b>5.0</b>	305	281	10100	1.85						
<b>3.6</b>	435	388	-	0.85						
<b>4.2</b>	390	336	6040	0.95						
<b>4.8</b>	345	294	6620	1.05						
<b>5.2</b>	325	269	6830	1.15	<b>S</b>	<b>57pR17</b>	<b>DRN</b>	<b>71MS4</b>	22	879
<b>6.2</b>	280	229	7220	1.30	<b>SF</b>	<b>57pR17</b>	<b>DRN</b>	<b>71MS4</b>	26	879
<b>6.9</b>	255	204	7430	1.45	<b>SA</b>	<b>57pR17</b>	<b>DRN</b>	<b>71MS4</b>	22	879
<b>7.5</b>	235	187	7580	1.55	<b>SAF</b>	<b>57pR17</b>	<b>DRN</b>	<b>71MS4</b>	25	879
<b>8.5</b>	210	165	7740	1.75						
<b>11</b>	169	131	7950	2.2						
<b>4.8</b>	315	294	6910	0.95						
<b>5.2</b>	295	269	7100	1.00	<b>S</b>	<b>57R17</b>	<b>DRN</b>	<b>71MS4</b>	22	879
<b>6.2</b>	255	229	7440	1.15	<b>SF</b>	<b>57R17</b>	<b>DRN</b>	<b>71MS4</b>	26	879
<b>6.9</b>	230	204	7610	1.30	<b>SA</b>	<b>57R17</b>	<b>DRN</b>	<b>71MS4</b>	22	879
<b>7.5</b>	210	187	7730	1.40	<b>SAF</b>	<b>57R17</b>	<b>DRN</b>	<b>71MS4</b>	25	879
<b>8.5</b>	187	165	7860	1.60						
<b>11</b>	149	131	8030	2.0						
<b>4.2</b>	410	217.41	11200	1.55	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>71M6</b>	31	859
<b>4.8</b>	365	190.11	11300	1.75	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>71M6</b>	37	860
<b>5.1</b>	350	180.60*	11300	1.85	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>71M6</b>	32	861
<b>5.8</b>	310	158.45	11400	2.1	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>71M6</b>	36	860
<b>6.5</b>	280	217.41	11500	2.3	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>71MS4</b>	30	859
<b>7.4</b>	250	190.11	11600	2.5	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>71MS4</b>	36	860
<b>7.8</b>	235	180.60*	11600	2.7	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>71MS4</b>	31	861
					<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>71MS4</b>	35	860
<b>4.2</b>	335	217.41	9950	1.65	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	31	859
<b>4.8</b>	295	190.11	10100	1.85	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	37	860
<b>5.1</b>	285	180.60*	10200	1.95	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	32	861
<b>5.8</b>	250	158.45	10300	2.2	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>71M6</b>	36	860

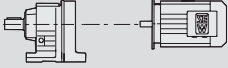

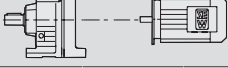

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
6.5	230	217.41	10400	2.3						
7.4	200	190.11	10500	2.5						
7.8	195	180.60*	10500	2.7	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	30	859
8.9	174	158.45	10600	3.0	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	36	860
10	150	134.40*	10600	3.5	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	31	861
12	137	121.33	10600	3.8	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>71MS4</b>	35	860
13	122	106.75*	10700	4.2						
4.5	365	201.00*	6410	0.95	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>71M6</b>	20	854
5.0	340	184.80*	6690	1.05	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>71M6</b>	24	855
5.8	295	158.12	7100	1.20	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>71M6</b>	20	856
6.7	260	137.05	7390	1.40	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>71M6</b>	23	855
7.1	245	128.10*	7500	1.45						
7.0	250	201.00*	7460	1.40						
7.6	230	184.80*	7590	1.50						
8.9	200	158.12	7770	1.75	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>71MS4</b>	19	854
10	178	137.05	7900	2.0	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>71MS4</b>	23	855
11	167	128.10*	7950	2.2	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>71MS4</b>	19	856
13	146	110.73	8040	2.5	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>71MS4</b>	22	855
15	125	94.08*	8120	2.8						
17	112	84.00*	8160	3.0						
4.5	290	201.00*	7140	1.00	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	20	854
5.0	270	184.80*	7310	1.10	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	24	855
5.8	235	158.12	7560	1.25	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	20	856
6.7	210	137.05	7730	1.40	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>71M6</b>	23	855
7.1	198	128.10*	7800	1.50						
7.0	200	201.00*	7780	1.45						
7.6	188	184.80*	7860	1.55						
8.9	164	158.12	7970	1.80	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	19	854
10	144	137.05	8050	2.0	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	23	855
11	136	128.10*	8080	2.2	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	19	856
13	119	110.73	8130	2.5	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>71MS4</b>	22	855
15	103	94.08*	8180	2.8						
17	93	84.00*	8200	3.1						
7.0	245	201.00*	3410	0.80						
7.6	225	184.80*	5020	0.85						
8.9	198	158.12	5190	1.00						
10	174	137.05	5320	1.10						
11	164	128.10*	5370	1.20						
13	143	110.73	5470	1.35	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>71MS4</b>	15	849
15	123	94.08*	5560	1.60	<b>SF</b>	<b>47p</b>	<b>DRN</b>	<b>71MS4</b>	19	850
17	110	84.00*	5620	1.80	<b>SA</b>	<b>47p</b>	<b>DRN</b>	<b>71MS4</b>	16	851
20	95	71.75*	5680	2.0	<b>SAF</b>	<b>47p</b>	<b>DRN</b>	<b>71MS4</b>	18	850
20	102	69.39	5620	1.95						
21	89	67.20*	5700	2.1						
22	94	63.80*	5660	2.1						
26	81	54.59	5710	2.5						
30	71	47.32	5610	2.8						
7.0	195	201.00*	5200	0.85						
7.6	181	184.80*	5280	0.95						
8.9	158	158.12	5400	1.05						
10	140	137.05	5490	1.20						
11	132	128.10*	5520	1.25						
13	116	110.73	5590	1.45	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>71MS4</b>	15	849
15	100	94.08*	5660	1.65	<b>SF</b>	<b>47</b>	<b>DRN</b>	<b>71MS4</b>	19	850
17	91	84.00*	5690	1.85	<b>SA</b>	<b>47</b>	<b>DRN</b>	<b>71MS4</b>	16	851
20	79	71.75*	5740	2.1	<b>SAF</b>	<b>47</b>	<b>DRN</b>	<b>71MS4</b>	18	850
20	90	69.39	5670	1.70						
21	74	67.20*	5750	2.2						
22	83	63.80*	5700	1.85						
26	72	54.59	5740	2.1						
30	63	47.32	5670	2.4						




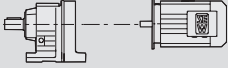

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
14	126	98.80*	2550	0.75						
16	111	86.36	3000	0.90						
17	104	80.96	3000	0.95						
20	93	71.44*	3000	1.05						
22	83	63.33	3000	1.20						
25	82	55.93	3000	1.25						
26	71	53.83	3000	1.30						
27	75	51.30*	3000	1.35	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>71MS4</b>	12	845
32	64	43.68	3000	1.60	<b>SF</b>	<b>37p</b>	<b>DRN</b>	<b>71MS4</b>	13	846
37	56	37.66	3000	1.85	<b>SA</b>	<b>37p</b>	<b>DRN</b>	<b>71MS4</b>	12	847
40	52	35.10*	3000	2.0	<b>SAF</b>	<b>37p</b>	<b>DRN</b>	<b>71MS4</b>	13	846
46	46	30.68	3000	2.3						
49	43	28.76	3000	2.4						
55	38	25.38*	3000	2.6						
62	34	22.50*	3000	2.8						
71	31	19.89	2820	2.5						
77	28	18.24*	2760	2.7						
14	100	98.80*	3000	0.85						
16	89	86.36	3000	0.95						
17	84	80.96	3000	1.00						
20	75	71.44*	3000	1.10						
22	68	63.33	3000	1.20						
25	72	55.93	3000	1.10						
27	66	51.30*	3000	1.20						
32	57	43.68	3000	1.40						
37	50	37.66	3000	1.55						
40	47	35.10*	3000	1.65						
46	41	30.68	3000	1.85						
49	39	28.76	3000	1.90						
55	34	25.38*	3000	2.1	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>71MS4</b>	12	845
62	31	22.50*	3000	2.4	<b>SF</b>	<b>37</b>	<b>DRN</b>	<b>71MS4</b>	13	846
71	29	19.89	2840	1.75	<b>SA</b>	<b>37</b>	<b>DRN</b>	<b>71MS4</b>	12	847
77	26	18.24*	2780	1.95	<b>SAF</b>	<b>37</b>	<b>DRN</b>	<b>71MS4</b>	13	846
90	23	15.53	2680	2.2						
105	20	13.39	2580	2.4						
113	18	12.48*	2530	2.6						
129	16	10.91	2440	2.9						
137	15	10.23	2400	3.0						
156	13	9.02*	2320	3.4						
176	12	8.00*	2240	3.7						
207	10	6.80*	2140	4.1						
222	9.0	6.33	2090	3.6						
261	8.0	5.38	2000	4.1						
289	7.0	4.86*	1940	4.4						
354	6.0	3.97	1820	5.2						
96	20	28.76	2720	3.1						
109	18	25.38*	2620	3.4						
122	16	22.50*	2540	3.5	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>63M2</b>	12	845
139	15	19.89	2390	2.9	<b>SF</b>	<b>37</b>	<b>DRN</b>	<b>63M2</b>	13	846
151	14	18.24*	2340	3.1	<b>SA</b>	<b>37</b>	<b>DRN</b>	<b>63M2</b>	11	847
177	12	15.53	2240	3.5	<b>SAF</b>	<b>37</b>	<b>DRN</b>	<b>63M2</b>	13	846
206	10	13.39	2140	3.9						
221	9.0	12.48*	2100	4.1						
<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
0.55	3630	2586	-	0.85						
0.61	3260	2335	-	0.90						
0.69	2870	2054	23800	1.05	<b>S</b>	<b>87pR57</b>	<b>DRN</b>	<b>71M4</b>	110	879
0.78	2610	1824	27200	1.15	<b>SF</b>	<b>87pR57</b>	<b>DRN</b>	<b>71M4</b>	130	879
0.87	2390	1631	27700	1.25	<b>SA</b>	<b>87pR57</b>	<b>DRN</b>	<b>71M4</b>	105	879
1.5	1500	930	29200	2.0	<b>SAF</b>	<b>87pR57</b>	<b>DRN</b>	<b>71M4</b>	125	879
1.7	1370	831	29300	2.1						

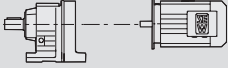

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>0.69</b>	2780	2054	25800	0.90	<b>S</b>	<b>87R57</b>	<b>DRN</b>	<b>71M4</b>	110	879
<b>0.78</b>	2460	1824	27600	1.00	<b>SF</b>	<b>87R57</b>	<b>DRN</b>	<b>71M4</b>	130	879
<b>0.87</b>	2200	1631	28100	1.15	<b>SA</b>	<b>87R57</b>	<b>DRN</b>	<b>71M4</b>	105	879
<b>1.5</b>	1300	930	29400	1.90	<b>SAF</b>	<b>87R57</b>	<b>DRN</b>	<b>71M4</b>	125	879
<b>1.7</b>	1180	831	29500	2.1						
<b>1.5</b>	1750	954	9580	0.80						
<b>1.7</b>	1530	837	11000	0.95						
<b>2.0</b>	1290	714	12200	1.10	<b>S</b>	<b>77pR37</b>	<b>DRN</b>	<b>71M4</b>	61	879
<b>2.2</b>	1150	637	13000	1.25	<b>SF</b>	<b>77pR37</b>	<b>DRN</b>	<b>71M4</b>	71	879
<b>2.5</b>	1050	574	13500	1.35	<b>SA</b>	<b>77pR37</b>	<b>DRN</b>	<b>71M4</b>	61	879
<b>2.8</b>	910	499	14200	1.55	<b>SAF</b>	<b>77pR37</b>	<b>DRN</b>	<b>71M4</b>	67	879
<b>3.2</b>	810	438	14700	1.75						
<b>3.6</b>	730	389	15100	1.90						
<b>2.0</b>	1280	714	11600	0.95	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	61	879
<b>2.2</b>	1130	637	12800	1.10	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	71	879
<b>2.5</b>	1020	574	13600	1.20	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	61	879
<b>2.8</b>	880	499	14500	1.40	<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	67	879
<b>3.2</b>	775	438	15000	1.60						
<b>3.6</b>	690	389	15400	1.80						
<b>3.0</b>	800	469	8600	0.90	<b>S</b>	<b>67pR37</b>	<b>DRN</b>	<b>71M4</b>	42	879
<b>3.3</b>	735	424	9020	0.95	<b>SF</b>	<b>67pR37</b>	<b>DRN</b>	<b>71M4</b>	48	879
<b>3.9</b>	660	365	9510	1.10	<b>SA</b>	<b>67pR37</b>	<b>DRN</b>	<b>71M4</b>	43	879
<b>4.4</b>	580	319	10000	1.15	<b>SAF</b>	<b>67pR37</b>	<b>DRN</b>	<b>71M4</b>	47	879
<b>5.0</b>	510	281	10400	1.30						
<b>5.8</b>	465	246	10700	1.55						
<b>3.9</b>	605	365	7750	0.95	<b>S</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	42	879
<b>4.4</b>	530	319	8570	1.05	<b>SF</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	48	879
<b>5.0</b>	465	281	9120	1.20	<b>SA</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	43	879
<b>5.8</b>	420	246	9450	1.35	<b>SAF</b>	<b>67R37</b>	<b>DRN</b>	<b>71M4</b>	47	879
<b>3.6</b>	745	256.47	15600	2.0	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>80MK6</b>	54	864
<b>4.2</b>	665	225.26	15700	2.2	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>80MK6</b>	64	865
<b>4.4</b>	635	214.00*	15700	2.4	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>80MK6</b>	54	866
					<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>80MK6</b>	60	865
<b>3.6</b>	620	256.47	15600	2.0	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	54	864
<b>4.2</b>	550	225.26	15900	2.3	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	64	865
<b>4.4</b>	525	214.00*	15900	2.4	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	54	866
					<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>80MK6</b>	60	865
<b>4.3</b>	600	217.41	10300	1.05	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>80MK6</b>	33	859
<b>4.9</b>	535	190.11	10700	1.20	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>80MK6</b>	40	860
<b>5.2</b>	510	180.60*	10800	1.25	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>80MK6</b>	34	861
<b>5.9</b>	455	158.45	11100	1.40	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>80MK6</b>	39	860
<b>6.5</b>	415	217.41	11200	1.55						
<b>7.4</b>	365	190.11	11300	1.75	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>71M4</b>	31	859
<b>7.8</b>	350	180.60*	11300	1.85	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>71M4</b>	37	860
<b>8.9</b>	310	158.45	11400	2.1	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>71M4</b>	32	861
<b>11</b>	265	134.40*	11500	2.4	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>71M4</b>	36	860
<b>12</b>	240	121.33	11600	2.7						
<b>4.3</b>	485	217.41	8950	1.15	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	33	859
<b>4.9</b>	430	190.11	9360	1.30	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	40	860
<b>5.2</b>	410	180.60*	9490	1.35	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	34	861
<b>5.9</b>	365	158.45	9770	1.50	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>80MK6</b>	39	860
<b>6.5</b>	335	217.41	9940	1.55						
<b>7.4</b>	300	190.11	10100	1.75	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	31	859
<b>7.8</b>	285	180.60*	10200	1.80	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	37	860
<b>8.9</b>	255	158.45	10300	2.0	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	32	861
<b>11</b>	220	134.40*	10400	2.4	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>71M4</b>	36	860
<b>12</b>	200	121.33	10500	2.6						
<b>5.9</b>	430	158.12	1810	0.85	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>80MK6</b>	22	854
<b>6.8</b>	380	137.05	6190	0.95	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>80MK6</b>	26	855
<b>7.3</b>	355	128.10*	6470	1.00	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>80MK6</b>	22	856
<b>8.4</b>	315	110.73	6940	1.15	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>80MK6</b>	25	855
<b>9.9</b>	270	94.08*	7320	1.35						
<b>11</b>	245	84.00*	7520	1.50						

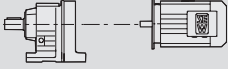

<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
7.0	370	201.00*	6330	0.95						
7.7	340	184.80*	6640	1.05						
8.9	295	158.12	7090	1.20						
10	260	137.05	7390	1.35						
11	245	128.10*	7500	1.50	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>71M4</b>	20	854
13	215	110.73	7710	1.70	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>71M4</b>	24	855
15	184	94.08*	7870	1.90	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>71M4</b>	20	856
17	165	84.00*	7960	2.0	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>71M4</b>	23	855
20	142	71.75*	8060	2.2						
20	152	69.39	8020	2.4						
21	133	67.20*	8090	2.3						
22	140	63.80*	8060	2.6						
5.9	345	158.12	6620	0.85	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	22	854
6.8	305	137.05	7030	0.95	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	26	855
7.3	285	128.10*	7180	1.00	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	22	856
8.4	250	110.73	7450	1.15	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>80MK6</b>	25	855
9.9	220	94.08*	7680	1.35						
11	199	84.00*	7800	1.50						
7.0	295	201.00*	7100	1.00						
7.7	275	184.80*	7280	1.05						
8.9	240	158.12	7540	1.20						
10	210	137.05	7720	1.40						
11	200	128.10*	7790	1.45	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	20	854
13	176	110.73	7910	1.65	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	24	855
15	152	94.08*	8020	1.95	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	20	856
17	137	84.00*	8070	2.1	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>71M4</b>	23	855
20	119	71.75*	8130	2.4						
20	135	69.39	8080	1.80						
21	112	67.20*	8150	2.5						
22	125	63.80*	8120	1.95						
11	240	128.10*	3880	0.80						
13	210	110.73	5120	0.95						
15	181	94.08*	5290	1.10						
17	163	84.00*	5380	1.20						
20	140	71.75*	5490	1.40						
20	150	69.39	5400	1.35	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>71M4</b>	16	849
21	131	67.20*	5530	1.45	<b>SF</b>	<b>47p</b>	<b>DRN</b>	<b>71M4</b>	20	850
22	138	63.80*	5460	1.45	<b>SA</b>	<b>47p</b>	<b>DRN</b>	<b>71M4</b>	17	851
26	119	54.59	5470	1.65	<b>SAF</b>	<b>47p</b>	<b>DRN</b>	<b>71M4</b>	19	850
30	104	47.32	5300	1.90						
32	97	44.22*	5220	2.0						
37	84	38.23	5050	2.3						
44	72	32.48*	4850	2.6						
49	64	29.00*	4720	2.8						
10	205	137.05	5140	0.80						
11	194	128.10*	5210	0.85						
13	170	110.73	5340	1.00						
15	148	94.08*	5450	1.15						
17	133	84.00*	5520	1.25						
20	116	71.75*	5590	1.45						
20	133	69.39	5480	1.15						
21	109	67.20*	5620	1.50						
22	123	63.80*	5530	1.25	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	16	849
26	106	54.59	5570	1.45	<b>SF</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	20	850
30	93	47.32	5390	1.65	<b>SA</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	17	851
32	87	44.22*	5300	1.75	<b>SAF</b>	<b>47</b>	<b>DRN</b>	<b>71M4</b>	19	850
37	76	38.23	5110	2.0						
44	65	32.48*	4900	2.4						
49	58	29.00*	4760	2.6						
57	50	24.77	4560	3.0						
61	47	23.20*	4480	3.2						
70	44	20.33	4170	2.5						
80	38	17.62	4020	2.8						
86	36	16.47*	3950	3.0						

<b>P<sub>m</sub> = 0.37 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
22	122	63.33	3000	0.80						
25	120	55.93	3000	0.85						
26	104	53.83	3000	0.90						
28	111	51.30*	3000	0.95						
32	95	43.68	3000	1.10						
38	82	37.66	3000	1.25						
40	77	35.10*	3000	1.35						
46	67	30.68	2960	1.55	S	37p	DRN	71M4	13	845
49	63	28.76	2930	1.65	SF	37p	DRN	71M4	15	846
56	56	25.38*	2870	1.75	SA	37p	DRN	71M4	13	847
63	50	22.50*	2810	1.90	SAF	37p	DRN	71M4	15	846
71	46	19.89	2590	1.70						
78	42	18.24*	2560	1.85						
91	36	15.53	2480	2.1						
106	31	13.39	2410	2.4						
113	29	12.48*	2370	2.5						
130	25	10.91	2300	2.9						
22	100	63.33	3000	0.80						
28	98	51.30*	3000	0.80						
32	84	43.68	3000	0.95						
38	73	37.66	3000	1.05						
40	69	35.10*	3000	1.15						
46	61	30.68	3000	1.25						
49	57	28.76	3000	1.30						
56	51	25.38*	2930	1.45						
63	45	22.50*	2860	1.60						
71	43	19.89	2620	1.20	S	37	DRN	71M4	13	845
78	39	18.24*	2580	1.30	SF	37	DRN	71M4	15	846
91	33	15.53	2500	1.45	SA	37	DRN	71M4	13	847
106	29	13.39	2430	1.65	SAF	37	DRN	71M4	15	846
113	27	12.48*	2390	1.75						
130	24	10.91	2320	2.0						
138	22	10.23	2280	2.1						
157	20	9.02*	2220	2.3						
177	17	8.00*	2150	2.5						
208	15	6.80*	2060	2.8						
223	14	6.33	2010	2.4						
263	12	5.38	1930	2.8						
291	11	4.86*	1880	3.0						
357	9.0	3.97	1770	3.5						
111	26	25.38*	2500	2.3						
125	23	22.50*	2430	2.4						
141	22	19.89	2270	1.95						
154	20	18.24*	2230	2.1	S	37	DRN	71MS2	12	845
181	17	15.53	2140	2.4	SF	37	DRN	71MS2	13	846
210	15	13.39	2060	2.7	SA	37	DRN	71MS2	12	847
225	14	12.48*	2020	2.8	SAF	37	DRN	71MS2	13	846
258	12	10.91	1950	3.1						
275	11	10.23	1920	3.2						
311	10	9.02*	1850	3.5						
<b>P<sub>m</sub> = 0.55 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
0.88	3590	1631	-	0.80						
1.1	3010	1332	19300	1.00						
1.2	2750	1191	26500	1.05						
1.4	2420	1032	27600	1.20	S	87pR57	DRN	80MK4	110	879
1.5	2260	930	28000	1.30	SF	87pR57	DRN	80MK4	135	879
1.7	2060	831	28300	1.45	SA	87pR57	DRN	80MK4	110	879
2.0	1800	719	28800	1.65	SAF	87pR57	DRN	80MK4	125	879
2.3	1580	624	29100	1.90						
2.6	1430	558	29200	2.0						
3.3	1150	435	29600	2.5						

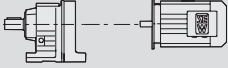

<b>P<sub>m</sub> = 0.55 kW</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>m</b> <b>kg</b>	
1.1	2700	1332	27000	0.95					
1.2	2430	1191	27600	1.05					
1.4	2120	1032	28200	1.20					
1.5	1960	930	28500	1.25	<b>S</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	110 879
1.7	1770	831	28800	1.40	<b>SF</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	135 879
2.0	1540	719	29100	1.60	<b>SA</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	110 879
2.3	1340	624	29400	1.85	<b>SAF</b>	<b>87R57</b>	<b>DRN</b>	<b>80MK4</b>	125 879
2.6	1210	558	29500	2.1					
3.3	970	435	29700	2.5					
2.2	1710	637	10100	0.85					
2.5	1560	574	10900	0.90					
2.9	1370	499	11900	1.05	<b>S</b>	<b>77pR37</b>	<b>DRN</b>	<b>80MK4</b>	63 879
3.3	1220	438	12700	1.20	<b>SF</b>	<b>77pR37</b>	<b>DRN</b>	<b>80MK4</b>	73 879
3.7	1090	389	13300	1.30	<b>SA</b>	<b>77pR37</b>	<b>DRN</b>	<b>80MK4</b>	63 879
4.4	930	327	14100	1.50	<b>SAF</b>	<b>77pR37</b>	<b>DRN</b>	<b>80MK4</b>	70 879
5.0	840	289	14600	1.70					
5.7	735	250	15100	1.95					
3.3	1150	438	12700	1.05	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	63 879
3.7	1030	389	13600	1.20	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	73 879
4.4	870	327	14500	1.40	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	63 879
5.0	785	289	15000	1.55	<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	70 879
5.7	680	250	15400	1.80					
5.1	765	281	8880	0.90	<b>S</b>	<b>67pR37</b>	<b>DRN</b>	<b>80MK4</b>	44 879
5.8	690	246	9340	1.05	<b>SF</b>	<b>67pR37</b>	<b>DRN</b>	<b>80MK4</b>	51 879
6.5	620	221	9780	1.05	<b>SA</b>	<b>67pR37</b>	<b>DRN</b>	<b>80MK4</b>	45 879
7.3	570	198	10100	1.20	<b>SAF</b>	<b>67pR37</b>	<b>DRN</b>	<b>80MK4</b>	50 879
8.6	485	168	10600	1.40					
9.2	455	156	10800	1.40					
5.8	625	246	7560	0.90	<b>S</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	44 879
6.5	555	221	8310	1.00	<b>SF</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	51 879
7.3	510	198	8760	1.10	<b>SA</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	45 879
8.6	435	168	9340	1.30	<b>SAF</b>	<b>67R37</b>	<b>DRN</b>	<b>80MK4</b>	50 879
3.4	1250	288.00*	29400	2.4	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>90SR6</b>	99 869
3.7	1130	258.18	29600	2.6	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>90SR6</b>	120 870
4.3	990	222.40*	29700	3.0	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>90SR6</b>	96 871
					<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>90SR6</b>	110 870
3.4	1060	288.00*	29600	2.3	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	99 869
3.7	960	258.18	29700	2.5	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	120 870
4.3	840	222.40*	29800	2.9	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	96 871
4.8	770	202.96	29900	3.1	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>90SR6</b>	110 870
3.8	1070	256.47	14200	1.40	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>90SR6</b>	63 864
4.3	960	225.26	14700	1.55	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>90SR6</b>	72 865
4.5	910	214.00*	14900	1.65	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>90SR6</b>	62 866
5.1	810	189.09	15300	1.85	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>90SR6</b>	69 865
6.0	705	161.60*	15700	2.1					
5.6	750	256.47	15600	2.0	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>80MK4</b>	54 864
6.4	665	225.26	15700	2.2	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>80MK4</b>	64 865
6.7	635	214.00*	15700	2.4	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>80MK4</b>	54 866
7.6	565	189.09	15700	2.6	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>80MK4</b>	60 865
3.8	890	256.47	14400	1.40	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	63 864
4.3	795	225.26	14900	1.60	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	72 865
4.5	760	214.00*	15100	1.65	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	62 866
5.1	680	189.09	15400	1.85	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>90SR6</b>	69 865
6.0	590	161.60*	15700	2.1					
5.6	625	256.47	15600	2.0	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	54 864
6.4	560	225.26	15800	2.3	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	64 865
6.7	535	214.00*	15900	2.4	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	54 866
7.6	475	189.09	16000	2.6	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>80MK4</b>	60 865

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
6.6	610	217.41	10300	1.05						
7.5	540	190.11	10600	1.20						
8.0	515	180.60*	10800	1.25						
9.1	455	158.45	11100	1.40	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>80MK4</b>	33	859
11	390	134.40*	11200	1.65	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>80MK4</b>	40	860
12	350	121.33	11300	1.80	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>80MK4</b>	34	861
13	310	106.75*	11400	2.1	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>80MK4</b>	39	860
14	295	100.80*	11500	2.2						
17	250	85.83	11600	2.6						
19	240	75.06	11000	2.9						
6.6	495	217.41	8870	1.05						
7.5	440	190.11	9300	1.20						
8.0	420	180.60*	9440	1.25						
9.1	375	158.45	9730	1.40	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	33	859
11	320	134.40*	10000	1.60	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	40	860
12	295	121.33	10100	1.75	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	34	861
13	260	106.75*	10300	1.95	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>80MK4</b>	39	860
14	250	100.80*	10300	2.1						
17	215	85.83	10400	2.4						
19	220	75.06	10400	2.2						
22	194	65.63	10500	2.5						
10	390	94.08*	6060	0.95						
12	350	84.00*	6550	1.05						
13	300	71.75*	7040	1.20	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>90SR6</b>	30	854
14	285	67.20*	7200	1.25	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>90SR6</b>	34	855
17	240	56.61	7530	1.40	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>90SR6</b>	30	856
18	255	54.59	7420	1.45	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>90SR6</b>	33	855
20	225	47.32	7640	1.65						
22	210	44.22*	7730	1.75						
25	183	38.23	7880	2.0						
9.1	435	158.12	-	0.80						
10	385	137.05	6150	0.95						
11	360	128.10*	6440	1.00						
13	315	110.73	6940	1.15						
15	270	94.08*	7330	1.30	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>80MK4</b>	22	854
17	240	84.00*	7530	1.40	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>80MK4</b>	26	855
20	205	71.75*	7750	1.55	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>80MK4</b>	22	856
21	195	67.20*	7820	1.60	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>80MK4</b>	25	855
26	177	54.59	7910	2.0						
30	154	47.32	8010	2.2						
32	144	44.22*	8050	2.3						
38	125	38.23	8120	2.6						
44	106	32.48*	7800	2.8						
10	315	94.08*	6920	0.95						
12	285	84.00*	7190	1.00						
13	250	71.75*	7480	1.20	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>90SR6</b>	30	854
14	235	67.20*	7580	1.25	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>90SR6</b>	34	855
18	225	54.59	7620	1.20	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>90SR6</b>	30	856
20	200	47.32	7790	1.35	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>90SR6</b>	33	855
22	188	44.22*	7850	1.45						
25	164	38.23	7960	1.65						

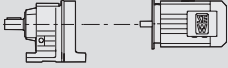

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
9.1	350	158.12	6530	0.85						
10	310	137.05	6970	0.95						
11	290	128.10*	7130	1.00						
13	255	110.73	7420	1.15						
15	220	94.08*	7650	1.30						
17	200	84.00*	7780	1.45						
20	175	71.75*	7920	1.65						
21	165	67.20*	7960	1.70	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	22	854
26	158	54.59	7990	1.55	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	26	855
30	138	47.32	8070	1.75	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	22	856
32	130	44.22*	8100	1.90	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>80MK4</b>	25	855
38	113	38.23	8150	2.1						
44	97	32.48*	7860	2.5						
49	87	29.00*	7610	2.8						
58	75	24.77	7280	3.2						
62	70	23.20*	7140	3.5						
71	65	20.33	6690	2.6						
17	235	84.00*	4180	0.85						
20	205	71.75*	5150	0.95						
21	220	69.39	4950	0.90						
21	193	67.20*	5220	1.00						
22	200	63.80*	5050	1.00						
26	175	54.59	4950	1.15						
30	153	47.32	4850	1.30	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>80MK4</b>	19	849
32	143	44.22*	4790	1.40	<b>SF</b>	<b>47p</b>	<b>DRN</b>	<b>80MK4</b>	22	850
38	124	38.23	4670	1.55	<b>SA</b>	<b>47p</b>	<b>DRN</b>	<b>80MK4</b>	20	851
44	106	32.48*	4530	1.75	<b>SAF</b>	<b>47p</b>	<b>DRN</b>	<b>80MK4</b>	21	850
49	95	29.00*	4430	1.90						
58	81	24.77	4280	2.1						
62	76	23.20*	4210	2.2						
71	69	20.33	3880	2.3						
81	60	17.62	3770	2.6						
87	56	16.47*	3710	2.7						
17	196	84.00*	5200	0.85						
20	170	71.75*	5340	1.00						
21	161	67.20*	5390	1.05						
26	156	54.59	5090	1.00						
30	136	47.32	4970	1.15						
32	128	44.22*	4900	1.20						
38	112	38.23	4770	1.40						
44	96	32.48*	4600	1.60	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	19	849
49	86	29.00*	4490	1.80	<b>SF</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	22	850
58	74	24.77	4330	2.1	<b>SA</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	20	851
62	70	23.20*	4260	2.2	<b>SAF</b>	<b>47</b>	<b>DRN</b>	<b>80MK4</b>	21	850
71	65	20.33	3910	1.70						
81	57	17.62	3790	1.95						
87	53	16.47*	3730	2.1						
101	46	14.24	3610	2.4						
119	39	12.10*	3470	2.8						
133	35	10.80*	3370	3.1						
156	30	9.23*	3240	3.6						

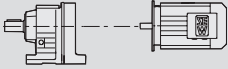

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
38	121	37.66	2560	0.85						
41	113	35.10*	2570	0.95						
47	99	30.68	2560	1.05						
50	93	28.76	2560	1.10						
57	82	25.38*	2540	1.20						
64	73	22.50*	2510	1.30						
72	67	19.89	2260	1.15						
75	62	19.13*	2460	1.40						
79	62	18.24*	2250	1.25	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>80MK4</b>	16	845
92	53	15.53	2220	1.45	<b>SF</b>	<b>37p</b>	<b>DRN</b>	<b>80MK4</b>	17	846
107	45	13.39	2180	1.65	<b>SA</b>	<b>37p</b>	<b>DRN</b>	<b>80MK4</b>	15	847
115	42	12.48*	2160	1.70	<b>SAF</b>	<b>37p</b>	<b>DRN</b>	<b>80MK4</b>	17	846
132	37	10.91	2120	1.95						
140	35	10.23	2090	2.1						
159	31	9.02*	2050	2.2						
179	27	8.00*	2000	2.4						
211	23	6.80*	1940	2.5						
227	21	6.33	1890	2.5						
267	18	5.38	1820	2.7						
295	16	4.86*	1780	2.8						
98	48	28.76	2360	1.60						
111	42	25.38*	2310	1.75						
126	37	22.50*	2260	1.90						
142	34	19.89	2090	2.1						
155	31	18.24*	2060	2.2	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>71M2</b>	13	845
182	27	15.53	2000	2.5	<b>SF</b>	<b>37p</b>	<b>DRN</b>	<b>71M2</b>	15	846
211	23	13.39	1940	2.5	<b>SA</b>	<b>37p</b>	<b>DRN</b>	<b>71M2</b>	13	847
226	21	12.48*	1900	2.6	<b>SAF</b>	<b>37p</b>	<b>DRN</b>	<b>71M2</b>	15	846
276	18	10.23	1820	3.0						
313	15	9.02*	1770	2.9						
353	14	8.00*	1710	2.8						
415	11	6.80*	1640	2.6						
47	89	30.68	2670	0.85						
50	84	28.76	2660	0.90						
57	74	25.38*	2620	1.00						
64	66	22.50*	2580	1.10						
75	57	19.13*	2520	1.25						
92	49	15.53	2250	1.00						
107	43	13.39	2210	1.15	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	16	845
115	40	12.48*	2180	1.20	<b>SF</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	17	846
132	35	10.91	2140	1.35	<b>SA</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	15	847
140	33	10.23	2110	1.40	<b>SAF</b>	<b>37</b>	<b>DRN</b>	<b>80MK4</b>	17	846
159	29	9.02*	2060	1.55						
179	26	8.00*	2010	1.70						
211	22	6.80*	1940	1.90						
227	21	6.33	1900	1.65						
267	17	5.38	1830	1.90						
295	16	4.86*	1790	2.0						
362	13	3.97	1700	2.4						
98	44	28.76	2400	1.45						
111	39	25.38*	2340	1.55						
126	35	22.50*	2280	1.60						
142	32	19.89	2110	1.35						
155	30	18.24*	2070	1.45	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>71M2</b>	13	845
182	25	15.53	2010	1.60	<b>SF</b>	<b>37</b>	<b>DRN</b>	<b>71M2</b>	15	846
211	22	13.39	1940	1.85	<b>SA</b>	<b>37</b>	<b>DRN</b>	<b>71M2</b>	13	847
226	20	12.48*	1920	1.90	<b>SAF</b>	<b>37</b>	<b>DRN</b>	<b>71M2</b>	15	846
259	18	10.91	1860	2.1						
276	17	10.23	1830	2.2						
313	15	9.02*	1770	2.4						
353	13	8.00*	1720	2.6						
415	11	6.80*	1650	2.5						



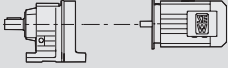

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.2	4740	1223	23200	0.90						
1.4	4160	1070	32100	1.05						
1.6	3590	928	34000	1.20	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>80M4</b>	175	879
1.8	3200	824	34600	1.35	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>80M4</b>	210	879
2.0	2620	714	35500	1.65	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>80M4</b>	170	879
2.3	2480	626	35600	1.75	<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>80M4</b>	195	879
2.7	2140	538	36000	2.0						
3.0	1950	484	36200	2.2						
1.2	4690	1223	24000	0.90						
1.4	4110	1070	32700	1.00						
1.6	3540	928	34100	1.20	<b>S</b>	<b>97R57</b>	<b>DRN</b>	<b>80M4</b>	175	879
1.8	3130	824	34800	1.35	<b>SF</b>	<b>97R57</b>	<b>DRN</b>	<b>80M4</b>	210	879
2.0	2230	714	35900	1.90	<b>SA</b>	<b>97R57</b>	<b>DRN</b>	<b>80M4</b>	170	879
2.3	2380	626	35800	1.75	<b>SAF</b>	<b>97R57</b>	<b>DRN</b>	<b>80M4</b>	195	879
2.7	2040	538	36100	2.1						
3.0	1840	484	36300	2.3						
1.4	3360	1032	-	0.90						
1.6	3110	930	14500	0.95						
1.7	2840	831	24900	1.05	<b>S</b>	<b>87pR57</b>	<b>DRN</b>	<b>80M4</b>	115	879
2.0	2490	719	27500	1.20	<b>SF</b>	<b>87pR57</b>	<b>DRN</b>	<b>80M4</b>	135	879
2.3	2190	624	28100	1.35	<b>SA</b>	<b>87pR57</b>	<b>DRN</b>	<b>80M4</b>	115	879
2.6	1980	558	28500	1.50	<b>SAF</b>	<b>87pR57</b>	<b>DRN</b>	<b>80M4</b>	130	879
3.3	1590	435	29000	1.80						
4.5	1210	323	29500	2.4						
1.4	2930	1032	22000	0.85						
1.6	2700	930	27000	0.90						
1.7	2440	831	27600	1.00	<b>S</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	115	879
2.0	2120	719	28200	1.15	<b>SF</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	135	879
2.3	1860	624	28700	1.35	<b>SA</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	115	879
2.6	1680	558	28900	1.50	<b>SAF</b>	<b>87R57</b>	<b>DRN</b>	<b>80M4</b>	130	879
3.3	1340	435	29400	1.80						
4.5	1020	323	29700	2.3						
3.3	1670	438	10400	0.85						
3.7	1500	389	11300	0.95	<b>S</b>	<b>77pR37</b>	<b>DRN</b>	<b>80M4</b>	67	879
4.4	1280	327	12400	1.10	<b>SF</b>	<b>77pR37</b>	<b>DRN</b>	<b>80M4</b>	77	879
5.0	1160	289	13000	1.25	<b>SA</b>	<b>77pR37</b>	<b>DRN</b>	<b>80M4</b>	66	879
5.8	1010	250	13800	1.40	<b>SAF</b>	<b>77pR37</b>	<b>DRN</b>	<b>80M4</b>	73	879
6.6	890	219	14400	1.60						
4.4	1190	327	12300	1.05	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	67	879
5.0	1070	289	13300	1.15	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	77	879
5.8	930	250	14200	1.35	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	66	879
6.6	820	219	14800	1.50	<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	73	879
3.3	1720	288.00*	28900	1.70	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>90S6</b>	99	869
3.7	1560	258.18	29100	1.90	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>90S6</b>	120	870
4.3	1360	222.40*	29300	2.2	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>90S6</b>	96	871
4.7	1250	202.96	29500	2.4	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>90S6</b>	110	870
5.0	1180	288.00*	29500	2.5	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>80M4</b>	94	869
5.6	1060	258.18	29600	2.7	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>80M4</b>	115	870
					<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>80M4</b>	91	871
					<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>80M4</b>	105	870
3.3	1450	288.00*	29200	1.70	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	99	869
3.7	1320	258.18	29400	1.85	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	120	870
4.3	1150	222.40*	29500	2.1	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	96	871
4.7	1060	202.96	29600	2.2	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>90S6</b>	110	870
5.0	1000	288.00*	29700	2.3	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	94	869
5.6	910	258.18	29800	2.5	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	115	870
6.5	795	222.40*	29800	2.9	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	91	871
7.1	730	202.96	29900	3.1	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>80M4</b>	105	870
3.7	1480	256.47	12500	1.00	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>90S6</b>	63	864
4.2	1320	225.26	13100	1.15	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>90S6</b>	72	865
4.5	1260	214.00*	13400	1.20	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>90S6</b>	62	866
5.1	1120	189.09	14000	1.35	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>90S6</b>	69	865
5.9	970	161.60*	14600	1.55						

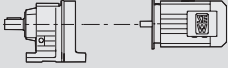

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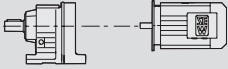

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
5.6	1020	256.47	14400	1.45						
6.4	900	225.26	14900	1.65						
6.7	860	214.00*	15100	1.75	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>80M4</b>	58	864
7.6	765	189.09	15500	1.95	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>80M4</b>	67	865
8.9	660	161.60*	15700	2.3	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>80M4</b>	57	866
9.7	605	148.15	15700	2.5	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>80M4</b>	64	865
11	535	130.00*	15700	2.8						
12	505	123.20*	15700	2.9						
4.2	1090	225.26	13100	1.15	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	63	864
4.5	1040	214.00*	13500	1.20	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	72	865
5.1	930	189.09	14200	1.35	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	62	866
5.9	810	161.60*	14800	1.55	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>90S6</b>	69	865
5.6	850	256.47	14600	1.50						
6.4	760	225.26	15100	1.65						
6.7	725	214.00*	15200	1.75	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	58	864
7.6	650	189.09	15500	1.95	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	67	865
8.9	560	161.60*	15800	2.2	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	57	866
9.7	520	148.15	16000	2.4	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>80M4</b>	64	865
11	460	130.00*	16000	2.6						
12	440	123.20*	16000	2.7						
13	390	107.83	16000	3.0						
7.6	735	190.11	9630	0.85						
8.0	700	180.60*	9810	0.90						
9.1	620	158.45	10200	1.05						
11	530	134.40*	10700	1.20						
12	480	121.33	11000	1.35	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>80M4</b>	37	859
13	425	106.75*	11200	1.50	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>80M4</b>	43	860
14	400	100.80*	11200	1.60	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>80M4</b>	38	861
17	345	85.83	11200	1.90	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>80M4</b>	42	860
19	330	75.06	10500	2.2						
22	290	65.63	10200	2.5						
23	275	62.35*	10100	2.6						
26	240	54.70	9770	2.9						
7.6	600	190.11	7850	0.85						
8.0	570	180.60*	8140	0.90						
9.1	510	158.45	8750	1.00						
11	440	134.40*	9310	1.20						
12	400	121.33	9570	1.30						
13	355	106.75*	9830	1.45	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	37	859
14	340	100.80*	9930	1.50	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	43	860
17	290	85.83	10100	1.75	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	38	861
19	295	75.06	10100	1.60	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>80M4</b>	42	860
22	260	65.63	10300	1.80						
23	250	62.35*	10300	1.90						
26	220	54.70	10200	2.2						
31	190	46.40*	9740	2.5						
13	415	71.75*	4420	0.90						
14	390	67.20*	6040	0.90						
17	330	56.61	6750	1.00	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>90S6</b>	30	854
18	355	54.59	6520	1.05	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>90S6</b>	34	855
20	310	47.32	6990	1.20	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>90S6</b>	30	856
22	290	44.22*	7160	1.25	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>90S6</b>	33	855
25	250	38.23	7460	1.45						

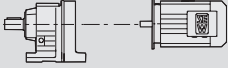

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
13	425	110.73	2770	0.85						
15	365	94.08*	6380	0.95						
17	325	84.00*	6800	1.00						
20	280	71.75*	7230	1.15						
21	265	67.20*	7370	1.15						
25	220	56.61	7650	1.30						
26	240	54.59	7550	1.50						
30	205	47.32	7740	1.65	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>80M4</b>	26	854
33	196	44.22*	7810	1.70	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>80M4</b>	30	855
38	170	38.23	7810	1.90	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>80M4</b>	26	856
44	145	32.48*	7520	2.1	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>80M4</b>	28	855
50	129	29.00*	7310	2.2						
58	110	24.77	7020	2.5						
62	104	23.20*	6900	2.6						
71	94	20.33	6420	2.4						
82	82	17.62	6200	2.7						
87	77	16.47*	6100	2.9						
13	340	71.75*	6650	0.85	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>90S6</b>	30	854
14	320	67.20*	6850	0.90	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>90S6</b>	34	855
17	275	56.61	7270	1.10	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>90S6</b>	30	856
20	275	47.32	7280	1.00	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>90S6</b>	33	855
22	255	44.22*	7410	1.05	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>90S6</b>	30	854
					<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>90S6</b>	34	855
					<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>90S6</b>	30	856
					<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>90S6</b>	33	855
13	350	110.73	6560	0.85						
15	300	94.08*	7040	0.95						
17	275	84.00*	7290	1.05						
20	235	71.75*	7560	1.20						
21	225	67.20*	7650	1.25						
26	215	54.59	7700	1.15						
30	188	47.32	7850	1.30						
33	177	44.22*	7910	1.40	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	26	854
38	154	38.23	7910	1.60	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	30	855
44	132	32.48*	7590	1.85	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	26	856
50	119	29.00*	7370	2.1	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>80M4</b>	28	855
58	102	24.77	7070	2.4						
62	96	23.20*	6950	2.5						
71	89	20.33	6450	1.90						
82	77	17.62	6230	2.2						
87	72	16.47*	6120	2.3						
101	63	14.24	5890	2.7						
26	235	54.59	4250	0.85						
30	205	47.32	4360	0.95						
33	194	44.22*	4340	1.05						
38	169	38.23	4280	1.15						
44	144	32.48*	4190	1.30						
50	129	29.00*	4120	1.40	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>80M4</b>	22	849
58	110	24.77	4020	1.55	<b>SF</b>	<b>47p</b>	<b>DRN</b>	<b>80M4</b>	26	850
62	103	23.20*	3970	1.60	<b>SA</b>	<b>47p</b>	<b>DRN</b>	<b>80M4</b>	23	851
71	94	20.33	3590	1.70	<b>SAF</b>	<b>47p</b>	<b>DRN</b>	<b>80M4</b>	25	850
82	82	17.62	3520	1.90						
87	77	16.47*	3480	2.0						
101	66	14.24	3390	2.3						
119	56	12.10*	3280	2.6						
133	50	10.80*	3210	2.8						
30	186	47.32	4520	0.85	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	22	849
33	174	44.22*	4490	0.90	<b>SF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	26	850
38	152	38.23	4400	1.00	<b>SA</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	23	851
44	130	32.48*	4290	1.20	<b>SAF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	25	850
50	117	29.00*	4210	1.30						

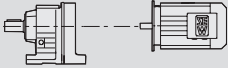

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<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
58	101	24.77	4080	1.55						
62	95	23.20*	4030	1.60						
71	88	20.33	3630	1.25						
82	77	17.62	3550	1.40						
87	72	16.47*	3510	1.50						
101	63	14.24	3410	1.75						
119	53	12.10*	3300	2.0	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	22	849
133	48	10.80*	3220	2.3	<b>SF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	26	850
156	41	9.23*	3110	2.6	<b>SA</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	23	851
167	38	8.64*	3060	2.8	<b>SAF</b>	<b>47</b>	<b>DRN</b>	<b>80M4</b>	25	850
198	32	7.28	2940	3.1						
225	29	6.40*	2830	2.6						
267	24	5.39	2700	3.0						
302	21	4.76	2620	3.3						
360	18	4.00*	2500	3.3						
50	127	28.76	2140	0.85						
57	112	25.38*	2170	0.90						
64	100	22.50*	2180	0.95						
75	85	19.13*	2180	1.05						
93	72	15.53	1930	1.05						
108	62	13.39	1930	1.20						
115	58	12.48*	1930	1.25	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>80M4</b>	19	845
132	51	10.91	1910	1.45	<b>SF</b>	<b>37p</b>	<b>DRN</b>	<b>80M4</b>	20	846
141	47	10.23	1900	1.50	<b>SA</b>	<b>37p</b>	<b>DRN</b>	<b>80M4</b>	19	847
160	42	9.02*	1880	1.65	<b>SAF</b>	<b>37p</b>	<b>DRN</b>	<b>80M4</b>	20	846
180	37	8.00*	1850	1.75						
212	31	6.80*	1810	1.90						
227	29	6.33	1760	1.85						
267	25	5.38	1720	2.0						
296	22	4.86*	1680	2.1						
363	18	3.97	1620	2.4						
51	124	55.93	2150	0.85						
56	114	51.30*	2170	0.85						
65	97	43.68	2180	0.95						
76	84	37.66	2180	1.05						
81	78	35.10*	2180	1.10						
93	69	30.68	2160	1.15						
99	64	28.76	2150	1.20						
112	57	25.38*	2120	1.30	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>80MS2</b>	19	845
127	50	22.50*	2090	1.40	<b>SF</b>	<b>37p</b>	<b>DRN</b>	<b>80MS2</b>	20	846
149	43	19.13*	2040	1.35	<b>SA</b>	<b>37p</b>	<b>DRN</b>	<b>80MS2</b>	19	847
184	36	15.53	1850	1.85	<b>SAF</b>	<b>37p</b>	<b>DRN</b>	<b>80MS2</b>	20	846
213	31	13.39	1800	1.90						
229	29	12.48*	1780	1.95						
262	25	10.91	1740	2.2						
279	24	10.23	1720	2.2						
316	21	9.02*	1680	2.1						
357	19	8.00*	1640	2.0						
420	16	6.80*	1580	1.90						
75	77	19.13*	2260	0.90						
115	54	12.48*	1960	0.85						
132	48	10.91	1940	1.00						
141	45	10.23	1930	1.05						
160	40	9.02*	1900	1.15	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	19	845
180	35	8.00*	1870	1.25	<b>SF</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	20	846
212	30	6.80*	1820	1.40	<b>SA</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	19	847
227	28	6.33	1780	1.20	<b>SAF</b>	<b>37</b>	<b>DRN</b>	<b>80M4</b>	20	846
267	24	5.38	1730	1.40						
296	22	4.86*	1690	1.50						
363	18	3.97	1620	1.75						

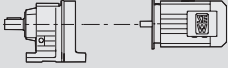

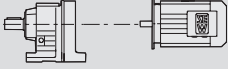

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
149	40	19.13*	2070	1.10						
184	35	15.53	1860	1.20						
213	30	13.39	1820	1.35						
229	28	12.48*	1800	1.40	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>80MS2</b>	19	845
262	24	10.91	1750	1.55	<b>SF</b>	<b>37</b>	<b>DRN</b>	<b>80MS2</b>	20	846
279	23	10.23	1730	1.65	<b>SA</b>	<b>37</b>	<b>DRN</b>	<b>80MS2</b>	19	847
316	20	9.02*	1680	1.75	<b>SAF</b>	<b>37</b>	<b>DRN</b>	<b>80MS2</b>	20	846
357	18	8.00*	1640	1.90						
420	15	6.80*	1580	1.85						

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
1.6	5260	928	-	0.80						
1.8	4700	824	24000	0.90	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>90S4</b>	180	879
2.0	3850	714	33500	1.10	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>90S4</b>	215	879
2.3	3650	626	33900	1.20	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>90S4</b>	175	879
2.7	3160	538	34700	1.35	<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>90S4</b>	200	879
3.0	2870	484	35100	1.50						
3.5	2500	420	35600	1.70						
1.8	4590	824	25600	0.90	<b>S</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	180	879
2.0	3280	714	34500	1.30	<b>SF</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	215	879
2.3	3490	626	34200	1.20	<b>SA</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	175	879
2.7	3000	538	34900	1.40	<b>SAF</b>	<b>97R57</b>	<b>DRN</b>	<b>90S4</b>	200	879
3.0	2710	484	35400	1.55						
3.5	2350	420	35800	1.80						
2.0	3670	719	-	0.80						
2.3	3230	624	5620	0.95	<b>S</b>	<b>87pR57</b>	<b>DRN</b>	<b>90S4</b>	120	879
2.6	2930	558	22200	1.00	<b>SF</b>	<b>87pR57</b>	<b>DRN</b>	<b>90S4</b>	145	879
3.0	2580	485	27300	1.15	<b>SA</b>	<b>87pR57</b>	<b>DRN</b>	<b>90S4</b>	120	879
3.4	2340	435	27800	1.25	<b>SAF</b>	<b>87pR57</b>	<b>DRN</b>	<b>90S4</b>	135	879
3.9	2060	378	28300	1.40						
4.5	1780	323	28800	1.60						
5.2	1560	281	29100	1.85						
5.7	1530	255	29100	1.70						
6.5	1340	222	29300	2.0						
7.1	1250	205	29400	2.1						
2.3	2740	624	26500	0.90	<b>S</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	120	879
2.6	2480	558	27500	1.00	<b>SF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	145	879
3.0	2180	485	28100	1.15	<b>SA</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	120	879
3.4	1980	435	28500	1.25	<b>SAF</b>	<b>87R57</b>	<b>DRN</b>	<b>90S4</b>	135	879
3.9	1740	378	28800	1.40						
4.5	1510	323	29100	1.60						
5.2	1330	281	29400	1.80						
5.7	1420	255	29200	1.40						
6.5	1240	222	29400	1.60						
7.1	1160	205	29500	1.70						
5.0	1690	289	10400	0.85	<b>S</b>	<b>77pR37</b>	<b>DRN</b>	<b>90S4</b>	73	879
5.8	1470	250	11500	0.95	<b>SF</b>	<b>77pR37</b>	<b>DRN</b>	<b>90S4</b>	82	879
6.6	1310	219	12300	1.10	<b>SA</b>	<b>77pR37</b>	<b>DRN</b>	<b>90S4</b>	72	879
					<b>SAF</b>	<b>77pR37</b>	<b>DRN</b>	<b>90S4</b>	79	879
					<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>90S4</b>	73	879
6.6	1200	219	12200	1.05	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>90S4</b>	82	879
					<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>90S4</b>	72	879
					<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>90S4</b>	79	879
3.3	2600	286.40*	35500	1.65	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>90L6</b>	160	874
3.6	2390	262.22	35700	1.80	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>90L6</b>	195	875
4.1	2130	231.67	36000	2.0	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>90L6</b>	155	876
					<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>90L6</b>	180	875
3.3	2220	286.40*	35900	1.90	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	160	874
3.6	2050	262.22	36100	2.0	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	195	875
4.1	1830	231.67	36300	2.3	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	155	876
					<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>90L6</b>	180	875

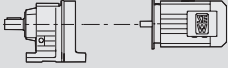

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
3.3	2530	288.00*	27400	1.15	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>90L6</b>	100	869
3.7	2290	258.18	27900	1.30	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>90L6</b>	125	870
4.3	1990	222.40*	28400	1.50	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>90L6</b>	99	871
4.7	1830	202.96	28700	1.60	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>90L6</b>	115	870
5.0	1710	288.00*	28900	1.70						
5.6	1550	258.18	29100	1.90	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>90S4</b>	99	869
6.5	1340	222.40*	29400	2.1	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>90S4</b>	120	870
7.2	1230	202.96	29500	2.3	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>90S4</b>	96	871
8.1	1090	180.00*	29600	2.5	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>90S4</b>	110	870
9.6	920	151.30	29700	2.9						
3.7	1930	258.18	28500	1.25	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>90L6</b>	100	869
4.3	1690	222.40*	28900	1.40	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>90L6</b>	125	870
4.7	1560	202.96	29100	1.55	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>90L6</b>	99	871
					<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>90L6</b>	115	870
5.0	1460	288.00*	29200	1.55						
5.6	1320	258.18	29400	1.70	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	99	869
6.5	1150	222.40*	29500	1.95	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	120	870
7.2	1060	202.96	29600	2.1	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	96	871
8.1	950	180.00*	29700	2.3	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>90S4</b>	110	870
9.6	810	151.30	29800	2.6						
5.7	1480	256.47	12500	1.00						
6.5	1310	225.26	13200	1.15						
6.8	1250	214.00*	13400	1.20						
7.7	1110	189.09	14000	1.35						
9.0	960	161.60*	14700	1.55	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>90S4</b>	63	864
9.8	880	148.15	15000	1.70	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>90S4</b>	72	865
11	775	130.00*	15500	1.90	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>90S4</b>	62	866
12	740	123.20*	15600	2.0	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>90S4</b>	69	865
13	645	107.83	15700	2.3						
15	585	97.14	15700	2.5						
17	515	85.22	15400	2.7						
6.5	1100	225.26	13100	1.15						
6.8	1050	214.00*	13400	1.20						
7.7	940	189.09	14100	1.35						
9.0	820	161.60*	14800	1.55	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	63	864
9.8	755	148.15	15100	1.65	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	72	865
11	670	130.00*	15500	1.80	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	62	866
12	640	123.20*	15600	1.85	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>90S4</b>	69	865
13	565	107.83	15800	2.1						
15	510	97.14	16000	2.2						
17	455	85.22	16000	2.4						
11	770	134.40*	9440	0.85						
12	695	121.33	9820	0.90						
14	615	106.75*	10200	1.05						
14	585	100.80*	10400	1.10						
17	500	85.83	10400	1.30						
19	455	78.00*	10200	1.45	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>90S4</b>	43	859
19	480	75.06	9570	1.50	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>90S4</b>	50	860
22	420	65.63	9380	1.70	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>90S4</b>	44	861
23	400	62.35*	9300	1.80	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>90S4</b>	48	860
27	355	54.70	9080	2.0						
31	300	46.40*	8800	2.2						
35	270	41.89	8620	2.5						
39	240	36.85	8380	2.7						
42	225	34.80*	8270	2.8						

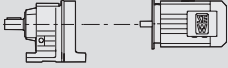

<b>P<sub>m</sub> = 1.1 kW</b>									<b>m</b>	
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>kg</b>		
12	585	121.33	8020	0.90						
14	520	106.75*	8660	1.00						
14	495	100.80*	8890	1.05						
17	425	85.83	9400	1.20						
19	390	78.00*	9640	1.30						
22	380	65.63	9690	1.25	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	43	859
23	365	62.35*	9750	1.30	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	50	860
27	320	54.70	9500	1.50	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	44	861
31	275	46.40*	9170	1.75	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>90S4</b>	48	860
35	250	41.89	8960	1.90						
39	220	36.85	8700	2.2						
42	210	34.80*	8590	2.3						
49	180	29.63	8260	2.7						
20	410	71.75*	5330	0.80						
22	385	67.20*	6140	0.80						
26	325	56.61	6830	0.90						
27	345	54.59	6590	1.05						
31	300	47.32	7050	1.15						
33	280	44.22*	7220	1.20						
38	245	38.23	7230	1.30	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>90S4</b>	32	854
45	210	32.48*	7010	1.45	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>90S4</b>	35	855
50	188	29.00*	6860	1.55	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>90S4</b>	31	856
59	161	24.77	6630	1.70	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>90S4</b>	34	855
63	151	23.20*	6540	1.80						
74	127	19.54	6280	1.95						
83	119	17.62	5830	1.90						
88	111	16.47*	5750	2.0						
102	96	14.24	5570	2.3						
120	82	12.10*	5360	2.7						
20	345	71.75*	6620	0.85	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	32	854
22	325	67.20*	6830	0.85	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	35	855
26	275	56.61	7260	0.95	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	31	856
31	270	47.32	7300	0.90	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	34	855
33	255	44.22*	7430	0.95						
38	220	38.23	7360	1.10						
45	192	32.48*	7120	1.25						
50	172	29.00*	6950	1.40						
59	148	24.77	6710	1.65						
63	139	23.20*	6610	1.75	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	32	854
74	118	19.54	6340	1.80	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	35	855
83	112	17.62	5860	1.50	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	31	856
88	105	16.47*	5780	1.60	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>90S4</b>	34	855
102	91	14.24	5590	1.85						
120	78	12.10*	5380	2.1						
135	70	10.80*	5230	2.4						
158	60	9.23*	5030	2.8						
45	205	32.48*	3600	0.90						
50	187	29.00*	3590	0.95						
59	160	24.77	3560	1.05						
63	150	23.20*	3540	1.10						
72	137	20.33	3090	1.15						
74	127	19.54	3480	1.25						
83	119	17.62	3080	1.30						
88	111	16.47*	3070	1.40	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>90S4</b>	28	849
102	96	14.24	3030	1.55	<b>SF</b>	<b>47p</b>	<b>DRN</b>	<b>90S4</b>	32	850
120	82	12.10*	2980	1.75	<b>SA</b>	<b>47p</b>	<b>DRN</b>	<b>90S4</b>	29	851
135	73	10.80*	2930	1.95	<b>SAF</b>	<b>47p</b>	<b>DRN</b>	<b>90S4</b>	31	850
158	63	9.23*	2860	2.1						
168	59	8.64*	2830	2.2						
200	49	7.28	2740	2.2						
227	44	6.40*	2650	2.7						
270	37	5.39	2550	2.8						
306	32	4.76	2480	2.8						
364	27	4.00*	2380	2.7						

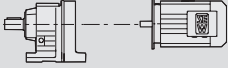

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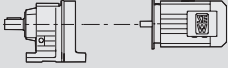

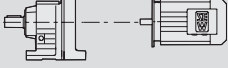

<b>P<sub>m</sub> = 1.1 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
50	170	29.00*	3720	0.90						
59	147	24.77	3660	1.05	S	47	DRN	90S4	28	849
63	138	23.20*	3630	1.10	SF	47	DRN	90S4	32	850
74	117	19.54	3550	1.25	SA	47	DRN	90S4	29	851
83	112	17.62	3120	1.00	SAF	47	DRN	90S4	31	850
88	105	16.47*	3110	1.05						
102	91	14.24	3070	1.20						
120	78	12.10*	3010	1.40						
135	70	10.80*	2960	1.55						
158	60	9.23*	2880	1.80	S	47	DRN	90S4	28	849
168	56	8.64*	2850	1.95	SF	47	DRN	90S4	32	850
200	47	7.28	2750	2.2	SA	47	DRN	90S4	29	851
227	42	6.40*	2660	1.80	SAF	47	DRN	90S4	31	850
270	35	5.39	2560	2.1						
306	31	4.76	2490	2.3						
364	26	4.00*	2390	2.3						
109	90	13.39	960	0.85						
117	84	12.48*	1080	0.85						
133	74	10.91	1280	1.00						
142	69	10.23	1360	1.05						
161	61	9.02*	1500	1.15	S	37p	DRN	90S4	25	845
182	54	8.00*	1590	1.20	SF	37p	DRN	90S4	26	846
214	46	6.80*	1590	1.30	SA	37p	DRN	90S4	25	847
230	43	6.33	1550	1.30	SAF	37p	DRN	90S4	26	846
270	36	5.38	1530	1.40						
299	33	4.86*	1520	1.45						
367	27	3.97	1480	1.60						
99	94	28.76	1780	0.80						
113	83	25.38*	1800	0.90						
127	74	22.50*	1800	0.95						
150	63	19.13*	1790	0.90						
184	53	15.53	1590	1.25	S	37p	DRN	80M2	19	845
214	46	13.39	1590	1.30	SF	37p	DRN	80M2	20	846
229	43	12.48*	1580	1.35	SA	37p	DRN	80M2	19	847
262	37	10.91	1560	1.55	SAF	37p	DRN	80M2	20	846
280	35	10.23	1550	1.50						
317	31	9.02*	1530	1.45						
358	27	8.00*	1500	1.40						
421	23	6.80*	1460	1.30						
721	13	3.97	1300	1.45						
182	51	8.00*	1620	0.85						
214	44	6.80*	1610	0.95	S	37	DRN	90S4	25	845
230	41	6.33	1570	0.85	SF	37	DRN	90S4	26	846
270	35	5.38	1540	0.95	SA	37	DRN	90S4	25	847
299	32	4.86*	1530	1.05	SAF	37	DRN	90S4	26	846
367	26	3.97	1490	1.20						
214	44	13.39	1610	0.90						
229	41	12.48*	1600	0.95	S	37	DRN	80M2	19	845
262	36	10.91	1580	1.05	SF	37	DRN	80M2	20	846
280	34	10.23	1570	1.10	SA	37	DRN	80M2	19	847
317	30	9.02*	1540	1.20	SAF	37	DRN	80M2	20	846
358	26	8.00*	1510	1.30						
421	22	6.80*	1470	1.25						
<b>P<sub>m</sub> = 1.5 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
2.0	5270	714	-	0.80						
2.3	4990	626	12800	0.85						
2.7	4330	538	30000	1.00	S	97pR57	DRN	90L4	185	879
3.0	3930	484	33300	1.10	SF	97pR57	DRN	90L4	220	879
3.5	3430	420	34300	1.25	SA	97pR57	DRN	90L4	180	879
3.9	3110	376	34800	1.40	SAF	97pR57	DRN	90L4	205	879
4.5	2740	327	35300	1.55						

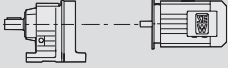



<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
2.0	4490	714	30600	0.95						
2.3	4770	626	22600	0.90						
2.7	4110	538	32800	1.00	<b>S</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	185	879
3.0	3710	484	33700	1.15	<b>SF</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	220	879
3.5	3230	420	34600	1.30	<b>SA</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	180	879
3.9	2920	376	35100	1.45	<b>SAF</b>	<b>97R57</b>	<b>DRN</b>	<b>90L4</b>	205	879
4.5	2560	327	35500	1.65						
3.0	3540	485	-	0.85						
3.4	3210	435	7490	0.90						
3.9	2820	378	25300	1.05	<b>S</b>	<b>87pR57</b>	<b>DRN</b>	<b>90L4</b>	125	879
4.5	2440	323	27600	1.20	<b>SF</b>	<b>87pR57</b>	<b>DRN</b>	<b>90L4</b>	145	879
5.2	2140	281	28200	1.35	<b>SA</b>	<b>87pR57</b>	<b>DRN</b>	<b>90L4</b>	125	879
5.7	2090	255	28200	1.25	<b>SAF</b>	<b>87pR57</b>	<b>DRN</b>	<b>90L4</b>	140	879
6.6	1840	222	28700	1.45						
7.1	1720	205	28800	1.50						
3.0	2990	485	20100	0.85						
3.4	2710	435	27000	0.90						
3.9	2390	378	27700	1.00	<b>S</b>	<b>87R57</b>	<b>DRN</b>	<b>90L4</b>	125	879
4.5	2070	323	28300	1.15	<b>SF</b>	<b>87R57</b>	<b>DRN</b>	<b>90L4</b>	145	879
5.2	1820	281	28700	1.30	<b>SA</b>	<b>87R57</b>	<b>DRN</b>	<b>90L4</b>	125	879
5.7	1940	255	28500	1.00	<b>SAF</b>	<b>87R57</b>	<b>DRN</b>	<b>90L4</b>	140	879
6.6	1700	222	28900	1.15						
7.1	1590	205	29000	1.25						
3.4	3530	286.40*	34100	1.20	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>100L6</b>	170	874
3.7	3250	262.22	34600	1.30	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>100L6</b>	205	875
4.2	2890	231.67	35100	1.50	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>100L6</b>	165	876
4.9	2470	196.52	35700	1.75	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>100L6</b>	195	875
5.1	2370	286.40*	35800	1.80	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>90L4</b>	160	874
5.6	2180	262.22	36000	1.95	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>90L4</b>	195	875
6.3	1930	231.67	36200	2.2	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>90L4</b>	155	876
7.4	1650	196.52	36500	2.6	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>90L4</b>	180	875
3.4	3020	286.40*	34900	1.40	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>100L6</b>	170	874
3.7	2790	262.22	35200	1.50	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>100L6</b>	205	875
4.2	2490	231.67	35600	1.70	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>100L6</b>	165	876
4.9	2140	196.52	36000	1.95	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>100L6</b>	195	875
5.1	2060	286.40*	36100	1.95	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	160	874
5.6	1900	262.22	36300	2.1	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	195	875
6.3	1690	231.67	36400	2.4	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	155	876
7.4	1450	196.52	36600	2.7	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>90L4</b>	180	875
3.7	3110	258.18	14800	0.95	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>100L6</b>	115	869
4.3	2710	222.40*	27000	1.10	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>100L6</b>	135	870
4.7	2490	202.96	27500	1.20	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>100L6</b>	110	871
5.3	2220	180.00*	28000	1.30	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>100L6</b>	125	870
5.1	2330	288.00*	27800	1.25						
5.7	2100	258.18	28300	1.40						
6.6	1820	222.40*	28700	1.55						
7.2	1670	202.96	28900	1.70	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>90L4</b>	100	869
8.1	1490	180.00*	29200	1.85	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>90L4</b>	125	870
9.7	1250	151.30	29400	2.1	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>90L4</b>	99	871
11	1150	139.05	29500	2.3	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>90L4</b>	115	870
12	1030	123.48	29700	2.5						
13	920	110.40*	29800	2.7						
15	830	99.26	29800	2.9						
3.7	2630	258.18	27200	0.90	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>100L6</b>	115	869
4.3	2300	222.40*	27900	1.05	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>100L6</b>	135	870
4.7	2110	202.96	28200	1.10	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>100L6</b>	110	871
5.3	1900	180.00*	28600	1.25	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>100L6</b>	125	870

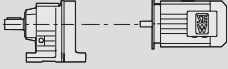

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
5.1	1990	288.00*	28500	1.15						
5.7	1800	258.18	28800	1.25						
6.6	1570	222.40*	29100	1.45						
7.2	1440	202.96	29200	1.55	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	100	869
8.1	1290	180.00*	29400	1.70	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	125	870
9.7	1100	151.30	29600	1.95	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	99	871
11	1020	139.05	29700	2.0	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>90L4</b>	115	870
12	910	123.48	29800	2.2						
13	820	110.40*	29800	2.4						
15	745	99.26	29900	2.6						
6.5	1790	225.26	11200	0.85						
6.8	1700	214.00*	11500	0.90						
7.7	1510	189.09	12300	1.00						
9.0	1300	161.60*	13200	1.15						
9.9	1200	148.15	13700	1.25						
11	1050	130.00*	14300	1.40						
12	1000	123.20*	14500	1.50						
14	880	107.83	15000	1.65	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>90L4</b>	66	864
15	795	97.14	15000	1.80	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>90L4</b>	76	865
17	700	85.22	14600	2.0	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>90L4</b>	65	866
19	675	75.09	13600	2.0	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>90L4</b>	72	865
20	640	71.33	13500	2.1						
22	545	66.67	13900	2.4						
23	570	63.03	13200	2.3						
26	470	56.92	13400	2.6						
27	485	53.87	12700	2.7						
30	445	49.38	12500	2.9						
7.7	1280	189.09	11500	1.00						
9.0	1110	161.60*	13000	1.15						
9.9	1030	148.15	13600	1.20						
11	910	130.00*	14300	1.30						
12	870	123.20*	14600	1.40						
14	765	107.83	15000	1.50						
15	695	97.14	15300	1.65	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	66	864
17	615	85.22	15300	1.80	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	76	865
19	625	75.09	14100	1.75	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	65	866
20	595	71.33	13900	1.85	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>90L4</b>	72	865
22	490	66.67	14400	2.1						
23	530	63.03	13600	2.1						
26	420	56.92	13900	2.3						
27	455	53.87	13100	2.4						
30	420	49.38	12900	2.6						
34	370	43.33	12500	3.0						
14	795	100.80*	9320	0.80						
17	680	85.83	9400	0.95						
19	615	78.00*	9320	1.05						
22	575	65.63	8470	1.25						
23	545	62.35*	8430	1.30						
27	480	54.70	8320	1.45						
31	410	46.40*	8150	1.65						
35	370	41.89	8030	1.80	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>90L4</b>	46	859
40	325	36.85	7860	2.0	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>90L4</b>	53	860
42	305	34.80*	7780	2.1	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>90L4</b>	47	861
49	260	29.63	7550	2.4	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>90L4</b>	52	860
54	235	26.93	7400	2.5						
60	225	24.44	6800	1.85						
63	215	23.22*	6740	1.95						
72	189	20.37	6580	2.3						
85	160	17.28*	6370	2.6						
94	145	15.60*	6240	2.8						
17	580	85.83	8060	0.90	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	46	859
19	530	78.00*	8560	1.00	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	53	860
22	520	65.63	8670	0.90	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	47	861
					<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	52	860

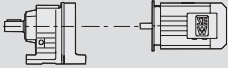

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
23	495	62.35*	8880	0.95						
27	435	54.70	8770	1.10						
31	375	46.40*	8550	1.30						
35	340	41.89	8400	1.40						
40	300	36.85	8200	1.60						
42	285	34.80*	8110	1.70	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	46	859
49	245	29.63	7850	1.95	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	53	860
54	220	26.93	7690	2.1	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	47	861
60	210	24.44	7040	1.60	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>90L4</b>	52	860
63	200	23.22*	6970	1.65						
72	179	20.37	6800	1.90						
85	153	17.28*	6580	2.2						
94	138	15.60*	6430	2.5						
106	122	13.73*	6250	2.8						
31	410	47.32	5120	0.85						
33	385	44.22*	6130	0.85						
38	335	38.23	6580	0.95						
45	285	32.48*	6460	1.05						
50	255	29.00*	6360	1.15						
59	215	24.77	6210	1.25	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>90L4</b>	35	854
63	205	23.20*	6140	1.30	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>90L4</b>	39	855
75	173	19.54	5950	1.45	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>90L4</b>	35	856
83	162	17.62	5410	1.40	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>90L4</b>	37	855
89	152	16.47*	5360	1.50						
103	131	14.24	5230	1.70						
121	111	12.10*	5070	2.0						
135	100	10.80*	4960	2.2						
158	85	9.23*	4790	2.3						
45	260	32.48*	6610	0.95						
50	230	29.00*	6490	1.05						
59	200	24.77	6310	1.20						
63	189	23.20*	6230	1.30	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	35	854
75	161	19.54	6020	1.35	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	39	855
83	153	17.62	5460	1.10	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	35	856
89	143	16.47*	5400	1.15	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>90L4</b>	37	855
103	124	14.24	5260	1.35						
121	106	12.10*	5100	1.60						
135	95	10.80*	4980	1.75						
158	81	9.23*	4810	2.1						
63	200	23.20*	3060	0.80						
75	172	19.54	3070	0.90						
83	162	17.62	2480	0.95						
89	151	16.47*	2610	1.00						
103	131	14.24	2640	1.15						
121	111	12.10*	2640	1.30	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>90L4</b>	31	849
135	100	10.80*	2630	1.40	<b>SF</b>	<b>47p</b>	<b>DRN</b>	<b>90L4</b>	35	850
158	85	9.23*	2600	1.55	<b>SA</b>	<b>47p</b>	<b>DRN</b>	<b>90L4</b>	32	851
169	80	8.64*	2590	1.65	<b>SAF</b>	<b>47p</b>	<b>DRN</b>	<b>90L4</b>	34	850
201	67	7.28	2530	1.60						
228	59	6.40*	2460	1.95						
271	50	5.39	2390	2.1						
307	44	4.76	2340	2.0						
365	37	4.00*	2260	2.0						
103	124	14.24	2680	0.90	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	31	849
121	106	12.10*	2680	1.05	<b>SF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	35	850
135	95	10.80*	2660	1.15	<b>SA</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	32	851
					<b>SAF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	34	850
158	81	9.23*	2630	1.35						
169	76	8.64*	2610	1.40	<b>S</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	31	849
201	64	7.28	2550	1.60	<b>SF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	35	850
228	57	6.40*	2470	1.30	<b>SA</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	32	851
271	48	5.39	2400	1.50	<b>SAF</b>	<b>47</b>	<b>DRN</b>	<b>90L4</b>	34	850
307	43	4.76	2350	1.65						
365	36	4.00*	2270	1.70						

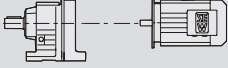

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
162	83	9.02*	620	0.85						
183	74	8.00*	820	0.90						
215	63	6.80*	1030	0.95	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>90L4</b>	28	845
231	58	6.33	940	0.95	<b>SF</b>	<b>37p</b>	<b>DRN</b>	<b>90L4</b>	29	846
271	50	5.38	1120	1.00	<b>SA</b>	<b>37p</b>	<b>DRN</b>	<b>90L4</b>	28	847
300	45	4.86*	1200	1.05	<b>SAF</b>	<b>37p</b>	<b>DRN</b>	<b>90L4</b>	29	846
368	36	3.97	1320	1.20						
186	72	15.53	840	0.95						
216	62	13.39	1040	0.95						
231	58	12.48*	1110	1.00						
265	51	10.91	1240	1.15						
282	48	10.23	1300	1.10	<b>S</b>	<b>37p</b>	<b>DRN</b>	<b>90S2</b>	25	845
320	42	9.02*	1360	1.10	<b>SF</b>	<b>37p</b>	<b>DRN</b>	<b>90S2</b>	26	846
361	37	8.00*	1350	1.05	<b>SA</b>	<b>37p</b>	<b>DRN</b>	<b>90S2</b>	25	847
424	31	6.80*	1340	0.95	<b>SAF</b>	<b>37p</b>	<b>DRN</b>	<b>90S2</b>	26	846
456	29	6.33	1300	1.25						
536	25	5.38	1280	1.20						
593	22	4.86*	1260	1.20						
728	18	3.97	1220	1.05						
320	40	9.02*	1380	0.90	<b>S</b>	<b>37</b>	<b>DRN</b>	<b>90S2</b>	25	845
361	36	8.00*	1370	0.95	<b>SF</b>	<b>37</b>	<b>DRN</b>	<b>90S2</b>	26	846
424	30	6.80*	1350	0.95	<b>SA</b>	<b>37</b>	<b>DRN</b>	<b>90S2</b>	25	847
					<b>SAF</b>	<b>37</b>	<b>DRN</b>	<b>90S2</b>	26	846
<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> min <sup>-1</sup>	<b>M<sub>a</sub></b> Nm	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> N	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> kg	
3.5	5110	420	-	0.85	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>100LS4</b>	190	879
3.9	4620	376	25700	0.95	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>100LS4</b>	220	879
4.4	4060	327	33000	1.05	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>100LS4</b>	185	879
5.0	3590	287	34000	1.20	<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>100LS4</b>	210	879
5.8	3150	252	34700	1.35						
3.5	4810	420	22200	0.85	<b>S</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	190	879
3.9	4340	376	29600	0.95	<b>SF</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	220	879
4.4	3800	327	33600	1.10	<b>SA</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	185	879
5.0	3360	287	34400	1.25	<b>SAF</b>	<b>97R57</b>	<b>DRN</b>	<b>100LS4</b>	210	879
5.8	2940	252	35000	1.40						
3.4	5120	286.40*	-	0.85	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>112M6</b>	180	874
3.7	4720	262.22	26000	0.90	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>112M6</b>	215	875
4.2	4200	231.67	32800	1.00	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>112M6</b>	175	876
5.0	3580	196.52	34000	1.20	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>112M6</b>	200	875
5.4	3310	180.95	34500	1.30						
6.0	2970	161.74	35000	1.45						
5.1	3510	286.40*	34100	1.20	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>100LS4</b>	165	874
5.5	3220	262.22	34600	1.35	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>100LS4</b>	200	875
6.3	2860	231.67	35200	1.50	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>100LS4</b>	160	876
7.4	2430	196.52	35700	1.75	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>100LS4</b>	185	875
8.0	2240	180.95	35900	1.90						
9.0	2010	161.74	36200	2.1						
10.0	1810	145.60*	36300	2.4						
11	1640	131.85	36500	2.6						
12	1460	116.92	36600	2.9						
3.4	4380	286.40*	32200	0.95	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	180	874
3.7	4040	262.22	33100	1.05	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	215	875
4.2	3610	231.67	33900	1.15	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	175	876
5.0	3110	196.52	34800	1.35	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>112M6</b>	200	875

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
5.1	3040	286.40*	34900	1.30						
5.5	2810	262.22	35200	1.40						
6.3	2500	231.67	35600	1.60						
7.4	2150	196.52	36000	1.85						
8.0	1990	180.95	36200	1.95	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	165	874
9.0	1790	161.74	36300	2.1	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	200	875
10.0	1620	145.60*	36500	2.3	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	160	876
11	1480	131.85	36600	2.5	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>100LS4</b>	185	875
12	1320	116.92	36700	2.6						
14	1200	105.71	36800	2.9						
16	1020	89.60*	36900	3.1						
5.6	3110	258.18	14900	0.95						
6.5	2700	222.40*	27100	1.05						
7.1	2470	202.96	27600	1.15						
8.1	2200	180.00*	28100	1.25						
9.6	1860	151.30	28700	1.45						
10	1710	139.05	28900	1.55	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>100LS4</b>	105	869
12	1520	123.48	29100	1.70	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>100LS4</b>	130	870
13	1360	110.40*	29300	1.85	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>100LS4</b>	105	871
15	1230	99.26	29500	2.0	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>100LS4</b>	120	870
17	1070	86.15	29600	2.2						
18	1100	81.76	29600	2.2						
19	950	77.14	29700	2.4						
21	950	70.43	29700	2.5						
23	870	64.27	29800	2.7						
5.6	2660	258.18	27100	0.85						
6.5	2320	222.40*	27900	1.00						
7.1	2130	202.96	28200	1.05						
8.1	1910	180.00*	28600	1.15						
9.6	1630	151.30	29000	1.30						
10	1500	139.05	29200	1.40						
12	1350	123.48	29300	1.50	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	105	869
13	1210	110.40*	29500	1.65	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	130	870
15	1100	99.26	29600	1.80	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	105	871
17	960	86.15	29700	1.95	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>100LS4</b>	120	870
18	1030	81.76	29600	1.55						
19	860	77.14	29800	2.1						
21	890	70.43	29800	1.80						
23	810	64.27	29800	1.95						
25	730	57.00*	29900	2.2						
9.8	1770	148.15	11300	0.85						
11	1560	130.00*	12100	0.95						
12	1480	123.20*	12500	1.00						
13	1300	107.83	13200	1.15						
15	1170	97.14	13500	1.20						
17	1030	85.22	13300	1.35						
19	910	75.20*	13100	1.45						
22	810	66.67	12800	1.60						
23	840	63.03	11900	1.55	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>100LS4</b>	70	864
25	690	56.92	12500	1.75	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>100LS4</b>	80	865
27	720	53.87	11600	1.80	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>100LS4</b>	69	866
29	660	49.38	11500	1.95	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>100LS4</b>	76	865
33	580	43.33	11300	2.1						
35	550	41.07	11200	2.2						
40	485	35.94	10900	2.5						
45	435	32.38	10700	2.7						
51	380	28.41	10400	3.0						
63	315	22.89	9300	2.6						
69	290	20.99	9150	2.8						

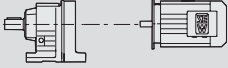

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<b>P<sub>m</sub> = 2.2 kW</b>									<b>m</b>	
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>kg</b>		
11	1350	130.00*	9150	0.90						
12	1280	123.20*	11500	0.95						
13	1130	107.83	12800	1.05						
15	1030	97.14	13600	1.10						
17	910	85.22	14000	1.20						
19	810	75.20*	13800	1.30						
22	725	66.67	13500	1.45						
23	780	63.03	12400	1.40						
25	625	56.92	13000	1.60	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	70	864
27	670	53.87	12100	1.65	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	80	865
29	620	49.38	11900	1.75	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	69	866
33	545	43.33	11700	2.0	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>100LS4</b>	76	865
35	515	41.07	11500	2.1						
40	455	35.94	11200	2.4						
45	410	32.38	11000	2.6						
51	360	28.41	10700	2.9						
58	320	25.07	10400	3.2						
63	300	22.89	9550	2.3						
69	275	20.99	9390	2.5						
21	795	67.57	7840	0.80						
27	710	54.70	6990	1.00						
31	605	46.40*	7020	1.10						
35	545	41.89	7010	1.20						
39	480	36.85	6970	1.35						
42	455	34.80*	6940	1.40						
49	385	29.63	6830	1.60						
54	350	26.93	6750	1.70	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>100LS4</b>	50	859
62	305	23.33	6620	1.70	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>100LS4</b>	57	860
71	275	20.37	5910	1.55	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>100LS4</b>	51	861
84	235	17.28*	5810	1.75	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>100LS4</b>	55	860
93	210	15.60*	5730	1.90						
106	188	13.73*	5610	2.1						
112	178	12.96*	5560	2.2						
131	152	11.03	5400	2.5						
145	138	10.03	5300	2.6						
167	119	8.69	5140	2.9						
31	550	46.40*	7480	0.85						
35	500	41.89	7430	0.95						
39	445	36.85	7350	1.10						
42	420	34.80*	7300	1.15						
49	360	29.63	7160	1.35						
54	330	26.93	7060	1.45						
62	285	23.33	6900	1.65	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	50	859
71	265	20.37	6130	1.30	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	57	860
84	225	17.28*	6010	1.50	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	51	861
93	205	15.60*	5920	1.65	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>100LS4</b>	55	860
106	181	13.73*	5800	1.90						
112	171	12.96*	5740	2.0						
131	146	11.03	5570	2.3						
145	133	10.03	5470	2.5						
167	115	8.69	5300	2.9						
59	320	24.77	5470	0.85						
62	300	23.20*	5450	0.90						
74	255	19.54	5370	1.00						
102	194	14.24	4650	1.15						
120	165	12.10*	4580	1.35						
134	147	10.80*	4520	1.50	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>100LS4</b>	39	854
157	126	9.23*	4420	1.55	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>100LS4</b>	43	855
168	118	8.64*	4380	1.60	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>100LS4</b>	39	856
199	99	7.28	4250	1.55	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>100LS4</b>	41	855
227	88	6.40*	4100	1.75						
269	74	5.39	3960	2.0						
304	65	4.76	3860	1.95						
362	55	4.00*	3710	1.95						

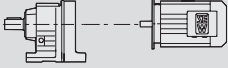

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
102	184	14.24	4700	0.90						
120	157	12.10*	4620	1.05						
134	141	10.80*	4560	1.20						
157	121	9.23*	4450	1.40	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	39	854
168	113	8.64*	4400	1.45	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	43	855
199	96	7.28	4270	1.50	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	39	856
227	85	6.40*	4120	1.15	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>100LS4</b>	41	855
269	72	5.39	3980	1.30						
304	63	4.76	3870	1.45						
362	53	4.00*	3720	1.65						
120	165	12.10*	1500	0.90						
134	147	10.80*	1740	0.95						
157	126	9.23*	2020	1.05	<b>S</b>	<b>47p</b>	<b>DRN</b>	<b>100LS4</b>	35	849
168	118	8.64*	2110	1.10	<b>SF</b>	<b>47p</b>	<b>DRN</b>	<b>100LS4</b>	39	850
199	99	7.28	2180	1.10	<b>SA</b>	<b>47p</b>	<b>DRN</b>	<b>100LS4</b>	36	851
212	94	6.83	2130	1.25	<b>SAF</b>	<b>47p</b>	<b>DRN</b>	<b>100LS4</b>	38	850
227	88	6.40*	2130	1.35						
269	74	5.39	2120	1.40						
304	65	4.76	2100	1.40						
362	55	4.00*	2060	1.35						

<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
5.1	4900	287	18500	0.90	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>100L4</b>	195	879
5.8	4300	252	30600	1.00	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>100L4</b>	230	879
6.7	3760	219	33600	1.15	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>100L4</b>	190	879
7.1	3540	205	34100	1.20	<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>100L4</b>	215	879
5.1	4580	287	26000	0.90	<b>S</b>	<b>97R57</b>	<b>DRN</b>	<b>100L4</b>	195	879
5.8	4020	252	33100	1.05	<b>SF</b>	<b>97R57</b>	<b>DRN</b>	<b>100L4</b>	230	879
6.7	3510	219	34100	1.20	<b>SA</b>	<b>97R57</b>	<b>DRN</b>	<b>100L4</b>	190	879
7.1	3300	205	34500	1.25	<b>SAF</b>	<b>97R57</b>	<b>DRN</b>	<b>100L4</b>	215	879
5.1	4770	286.40*	24200	0.90						
5.5	4380	262.22	32400	1.00						
6.3	3880	231.67	33400	1.10						
7.4	3310	196.52	34500	1.30						
8.1	3050	180.95	34900	1.40	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>100L4</b>	170	874
9.0	2730	161.74	35300	1.55	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>100L4</b>	205	875
10	2460	145.60*	35700	1.75	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>100L4</b>	165	876
11	2230	131.85	35900	1.90	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>100L4</b>	195	875
12	1980	116.92	36200	2.2						
14	1790	105.71	36300	2.4						
16	1520	89.60*	36600	2.7						
18	1490	80.85	36600	2.5						
5.1	4140	286.40*	32900	0.95						
5.5	3820	262.22	33600	1.05						
6.3	3400	231.67	34300	1.15						
7.4	2920	196.52	35100	1.35						
8.1	2710	180.95	35400	1.45	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	170	874
9.0	2440	161.74	35700	1.55	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	205	875
10	2210	145.60*	36000	1.70	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	165	876
11	2010	131.85	36200	1.80	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>100L4</b>	195	875
12	1790	116.92	36300	1.95						
14	1630	105.71	36500	2.1						
16	1390	89.60*	36600	2.3						
18	1410	80.85	36600	2.3						

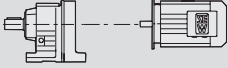

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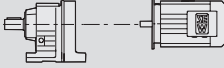

<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
7.2	3350	202.96	-	0.85						
8.1	2990	180.00*	20100	0.95						
9.6	2520	151.30	27400	1.05						
10	2320	139.05	27900	1.15						
12	2070	123.48	28300	1.25						
13	1850	110.40*	28700	1.35						
15	1670	99.26	28900	1.45	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>100L4</b>	115	869
17	1450	86.15	29200	1.60	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>100L4</b>	135	870
18	1490	81.76	29100	1.65	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>100L4</b>	110	871
19	1300	77.14	29400	1.75	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>100L4</b>	125	870
21	1290	70.43	29400	1.85						
23	1180	64.27	29500	2.0						
26	1050	57.00*	29600	2.2						
30	880	47.91	29800	2.5						
33	810	44.03	29800	2.7						
37	720	39.10	29900	3.0						
8.1	2600	180.00*	27300	0.85						
9.6	2210	151.30	28100	0.95						
10	2050	139.05	28400	1.00						
12	1830	123.48	28700	1.10						
13	1650	110.40*	29000	1.20						
15	1490	99.26	29200	1.30						
17	1310	86.15	29400	1.45	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	115	869
18	1400	81.76	29300	1.15	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	135	870
19	1180	77.14	29500	1.55	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	110	871
21	1210	70.43	29500	1.30	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>100L4</b>	125	870
23	1110	64.27	29600	1.45						
26	990	57.00*	29700	1.60						
30	830	47.91	29800	1.90						
33	770	44.03	29800	2.1						
37	685	39.10	29900	2.3						
42	615	34.96*	29900	2.6						
14	1770	107.83	11300	0.85						
15	1590	97.14	11700	0.90						
17	1400	85.22	11700	1.00						
19	1240	75.20*	11700	1.10						
22	1100	66.67	11600	1.15						
23	1140	63.03	10400	1.15						
26	940	56.92	11400	1.30						
27	980	53.87	10400	1.30						
29	900	49.38	10300	1.40	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>100L4</b>	77	864
34	790	43.33	10200	1.60	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>100L4</b>	87	865
35	750	41.07	10200	1.65	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>100L4</b>	77	866
41	655	35.94	10000	1.85	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>100L4</b>	83	865
45	590	32.38	9900	2.0						
51	520	28.41	9700	2.2						
58	460	25.07	9500	2.4						
64	430	22.89	8540	1.95						
69	390	20.99	8450	2.1						
79	345	18.42	8300	2.3						
83	325	17.45	8230	2.4						
95	285	15.28	8040	2.7						
106	255	13.76	7890	2.9						
17	1240	85.22	12000	0.90	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	77	864
19	1100	75.20*	12500	0.95	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	87	865
22	980	66.67	12300	1.05	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	77	866
23	1060	63.03	10900	1.05	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	83	865



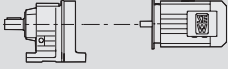

<b>P<sub>m</sub> = 3.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
26	850	56.92	12000	1.15						
27	910	53.87	10900	1.20						
29	840	49.38	10800	1.30						
34	740	43.33	10700	1.50						
35	705	41.07	10600	1.55						
41	620	35.94	10400	1.75						
45	560	32.38	10200	1.95						
51	490	28.41	10000	2.1	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	<b>77</b>	<b>864</b>
58	435	25.07	9790	2.3	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	<b>87</b>	<b>865</b>
64	410	22.89	8790	1.70	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	<b>77</b>	<b>866</b>
69	375	20.99	8690	1.85	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>100L4</b>	<b>83</b>	<b>865</b>
79	330	18.42	8520	2.1						
83	315	17.45	8450	2.2						
95	275	15.28	8250	2.6						
106	250	13.76	8090	2.8						
121	220	12.07	7880	3.3						
137	195	10.65	7670	3.7						
31	820	46.40*	5730	0.85						
35	740	41.89	5840	0.90						
40	655	36.85	5940	1.00						
42	620	34.80*	5960	1.05						
49	525	29.63	6000	1.15						
54	480	26.93	5990	1.25						
62	415	23.33	5960	1.25	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>100L4</b>	<b>57</b>	<b>859</b>
71	375	20.37	5140	1.15	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>100L4</b>	<b>64</b>	<b>860</b>
84	320	17.28*	5150	1.30	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>100L4</b>	<b>58</b>	<b>861</b>
93	290	15.60*	5130	1.40	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>100L4</b>	<b>63</b>	<b>860</b>
106	255	13.73*	5090	1.55						
112	240	12.96*	5060	1.60						
132	205	11.03	4980	1.80						
145	187	10.03	4920	1.95						
168	162	8.69	4810	2.1						
193	141	7.56*	4700	2.3						
42	570	34.80*	6370	0.85	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	<b>57</b>	<b>859</b>
49	490	29.63	6350	1.00	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	<b>64</b>	<b>860</b>
54	445	26.93	6320	1.05	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	<b>58</b>	<b>861</b>
					<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	<b>63</b>	<b>860</b>
62	390	23.33	6260	1.25						
71	360	20.37	5360	0.95						
84	305	17.28*	5350	1.10						
93	275	15.60*	5320	1.20	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	<b>57</b>	<b>859</b>
106	245	13.73*	5270	1.40	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	<b>64</b>	<b>860</b>
112	230	12.96*	5240	1.45	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	<b>58</b>	<b>861</b>
132	198	11.03	5150	1.70	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>100L4</b>	<b>63</b>	<b>860</b>
145	181	10.03	5080	1.90						
168	157	8.69	4960	2.1						
193	137	7.56*	4840	2.1						
102	260	14.24	3990	0.85						
120	220	12.10*	4020	1.00						
135	200	10.80*	4020	1.10						
158	171	9.23*	3990	1.15						
169	160	8.64*	3970	1.15	<b>S</b>	<b>57p</b>	<b>DRN</b>	<b>100L4</b>	<b>46</b>	<b>854</b>
200	135	7.28	3900	1.15	<b>SF</b>	<b>57p</b>	<b>DRN</b>	<b>100L4</b>	<b>50</b>	<b>855</b>
213	127	6.83	3810	1.25	<b>SA</b>	<b>57p</b>	<b>DRN</b>	<b>100L4</b>	<b>46</b>	<b>856</b>
228	119	6.40*	3780	1.30	<b>SAF</b>	<b>57p</b>	<b>DRN</b>	<b>100L4</b>	<b>49</b>	<b>855</b>
270	101	5.39	3690	1.45						
306	89	4.76	3620	1.45						
364	74	4.00*	3510	1.45						
135	191	10.80*	4060	0.90						
158	164	9.23*	4030	1.05						
169	154	8.64*	4000	1.10	<b>S</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	<b>46</b>	<b>854</b>
200	130	7.28	3930	1.10	<b>SF</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	<b>50</b>	<b>855</b>
228	115	6.40*	3810	0.85	<b>SA</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	<b>46</b>	<b>856</b>
270	97	5.39	3710	0.95	<b>SAF</b>	<b>57</b>	<b>DRN</b>	<b>100L4</b>	<b>49</b>	<b>855</b>
306	86	4.76	3630	1.05						
364	72	4.00*	3520	1.20						

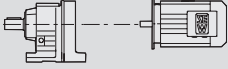

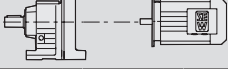

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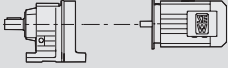

<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
6.7	5010	219	11700	0.85	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>112M4</b>	205	879
7.1	4710	205	24400	0.90	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>112M4</b>	240	879
					<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>112M4</b>	200	879
					<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>112M4</b>	225	879
6.7	4670	219	24500	0.90	<b>S</b>	<b>97R57</b>	<b>DRN</b>	<b>112M4</b>	205	879
7.1	4390	205	28900	0.95	<b>SF</b>	<b>97R57</b>	<b>DRN</b>	<b>112M4</b>	240	879
					<b>SA</b>	<b>97R57</b>	<b>DRN</b>	<b>112M4</b>	200	879
					<b>SAF</b>	<b>97R57</b>	<b>DRN</b>	<b>112M4</b>	225	879
6.3	5150	231.67	-	0.85						
7.5	4390	196.52	32300	1.00						
8.1	4050	180.95	33100	1.05						
9.1	3620	161.74	33900	1.20						
10	3270	145.60*	34500	1.30						
11	2960	131.85	35000	1.45	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>112M4</b>	180	874
13	2630	116.92	35500	1.65	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>112M4</b>	215	875
14	2380	105.71	35800	1.80	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>112M4</b>	175	876
16	2020	89.60*	36100	2.0	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>112M4</b>	200	875
18	1980	80.85	36200	1.85						
20	1750	71.43	36400	2.3						
24	1490	60.59	36600	2.7						
26	1370	55.79	36700	2.8						
6.3	4520	231.67	30300	0.90						
7.5	3880	196.52	33400	1.05						
8.1	3590	180.95	34000	1.10						
9.1	3230	161.74	34600	1.20						
10	2930	145.60*	35000	1.25						
11	2670	131.85	35400	1.35	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	180	874
13	2380	116.92	35800	1.45	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	215	875
14	2170	105.71	36000	1.60	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	175	876
16	1850	89.60*	36300	1.75	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>112M4</b>	200	875
18	1880	80.85	36300	1.70						
20	1660	71.43	36400	2.0						
24	1420	60.59	36600	2.3						
26	1310	55.79	36700	2.5						
11	3080	139.05	16100	0.85						
12	2740	123.48	26700	0.95						
13	2460	110.40*	27600	1.00						
15	2210	99.26	28100	1.10						
17	1920	86.15	28600	1.20						
19	1720	77.14	28900	1.30						
21	1710	70.43	28900	1.40	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>112M4</b>	125	869
23	1560	64.27	29100	1.50	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>112M4</b>	145	870
26	1390	57.00*	29300	1.65	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>112M4</b>	120	871
31	1170	47.91	29500	1.90	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>112M4</b>	135	870
33	1070	44.03	29600	2.0						
37	950	39.10	29700	2.2						
42	850	34.96*	29600	2.4						
47	770	31.43	28900	2.6						
54	670	27.28	27900	2.9						
57	635	25.50*	26500	2.2						
12	2430	123.48	27600	0.85						
13	2190	110.40*	28100	0.90						
15	1980	99.26	28500	1.00						
17	1730	86.15	28800	1.10						
19	1560	77.14	29100	1.15						
21	1610	70.43	29000	1.00	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	125	869
23	1470	64.27	29200	1.10	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	145	870
26	1310	57.00*	29400	1.20	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	120	871
31	1110	47.91	29600	1.45	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>112M4</b>	135	870
33	1020	44.03	29700	1.55						
37	910	39.10	29700	1.75						
42	810	34.96*	29700	1.95						
47	735	31.43	28900	2.2						
54	640	27.28	28000	2.5						
57	615	25.50*	26600	2.0						


<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
19	1640	75.20*	9910	0.80						
22	1460	66.67	10000	0.90						
26	1250	56.92	10100	1.00						
27	1300	53.87	8810	1.00						
30	1190	49.38	8900	1.05						
34	1050	43.33	8970	1.20						
36	990	41.07	8980	1.25						
41	870	35.94	8980	1.40						
45	785	32.38	8940	1.50	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>112M4</b>	86	864
52	690	28.41	8860	1.65	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>112M4</b>	96	865
58	610	25.07	8750	1.80	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>112M4</b>	86	866
64	570	22.89	7600	1.45	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>112M4</b>	93	865
70	520	20.99	7590	1.55						
79	455	18.42	7540	1.75						
84	435	17.45	7510	1.80						
96	380	15.28	7410	2.0						
106	340	13.76	7320	2.2						
121	300	12.07	7190	2.4						
137	265	10.65	7040	2.7						
26	1120	56.92	10800	0.90	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	86	864
27	1210	53.87	9340	0.90	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	96	865
30	1110	49.38	9390	1.00	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	86	866
34	980	43.33	9420	1.10	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	93	865
36	930	41.07	9410	1.15						
41	820	35.94	9370	1.35						
45	740	32.38	9300	1.45						
52	655	28.41	9190	1.60						
58	580	25.07	9060	1.75						
64	545	22.89	7840	1.30	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	86	864
70	500	20.99	7820	1.40	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	96	865
79	440	18.42	7760	1.60	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	86	866
84	415	17.45	7720	1.70	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>112M4</b>	93	865
96	365	15.28	7620	1.95						
106	330	13.76	7520	2.1						
121	290	12.07	7380	2.5						
137	255	10.65	7220	2.8						
155	225	9.44	7070	3.1						
182	196	8.06	6850	3.5						
49	700	29.63	4970	0.90						
54	635	26.93	5060	0.95						
63	550	23.33	5140	0.95						
72	480	20.30*	5180	0.95						
85	425	17.28*	3870	0.95	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>112M4</b>	67	859
94	385	15.60*	4220	1.05	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>112M4</b>	73	860
107	340	13.73*	4440	1.15	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>112M4</b>	68	861
113	320	12.96*	4450	1.20	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>112M4</b>	72	860
133	270	11.03	4450	1.35						
146	245	10.03	4440	1.45						
169	215	8.69	4390	1.60						
194	187	7.56*	4330	1.75						
85	405	17.28*	4060	0.85						
94	365	15.60*	4400	0.90						
107	325	13.73*	4620	1.05	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>112M4</b>	67	859
113	305	12.96*	4620	1.10	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>112M4</b>	73	860
133	260	11.03	4620	1.30	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>112M4</b>	68	861
146	240	10.03	4600	1.40	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>112M4</b>	72	860
169	205	8.69	4540	1.60						
194	182	7.56*	4480	1.60						


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<b>P<sub>m</sub> = 5.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
9.0	5000	161.74	12700	0.85						
10	4500	145.60*	30700	0.95						
11	4080	131.85	33000	1.05						
12	3630	116.92	33900	1.20						
14	3280	105.71	34500	1.30						
16	2780	89.60*	35300	1.45	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>132S4</b>	190	874
19	2430	78.26	35700	1.60	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>132S4</b>	225	875
20	2420	71.43	35700	1.70	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>132S4</b>	185	876
22	2040	65.45	36100	1.70	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>132S4</b>	215	875
24	2050	60.59	36100	1.95						
26	1890	55.79	36300	2.1						
29	1690	49.87	36400	2.2						
33	1520	44.89	36600	2.4						
36	1380	40.65	36700	2.6						
9.0	4460	161.74	31200	0.85						
10	4040	145.60*	33100	0.90						
11	3680	131.85	33800	1.00						
12	3280	116.92	34500	1.05						
14	2980	105.71	35000	1.15						
16	2550	89.60*	35600	1.25	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	190	874
19	2240	78.26	35900	1.35	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	225	875
20	2290	71.43	35900	1.45	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	185	876
22	1890	65.45	36300	1.55	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>132S4</b>	215	875
24	1960	60.59	36200	1.70						
26	1800	55.79	36300	1.80						
29	1620	49.87	36500	2.0						
33	1460	44.89	36600	2.2						
36	1320	40.65	36700	2.5						
17	2650	86.15	27200	0.90						
19	2380	77.14	27700	0.95						
23	1970	64.00*	28500	1.10						
26	1920	57.00*	28500	1.20						
30	1610	47.91	29000	1.40						
33	1480	44.03	29200	1.50						
37	1320	39.10	29000	1.65	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>132S4</b>	135	869
42	1180	34.96*	28400	1.75	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>132S4</b>	155	870
46	1060	31.43	27800	1.90	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>132S4</b>	130	871
54	920	27.28	27000	2.1	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>132S4</b>	150	870
57	880	25.50*	25300	1.65						
68	740	21.43	24500	1.90						
74	680	19.70	24100	2.0						
84	605	17.49	23500	2.2						
93	540	15.64*	23000	2.3						
104	485	14.06	22500	2.5						
120	420	12.21	21700	2.9						
19	2150	77.14	28200	0.85	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	135	869
23	1800	64.00*	28700	0.95	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	155	870
26	1810	57.00*	28700	0.90	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	130	871
30	1530	47.91	29100	1.05	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	150	870
33	1410	44.03	29300	1.15						
37	1250	39.10	29100	1.25						
42	1120	34.96*	28500	1.40						
46	1010	31.43	27900	1.55						
54	880	27.28	27100	1.80	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	135	869
57	840	25.50*	25400	1.45	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	155	870
68	715	21.43	24600	1.75	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	130	871
74	655	19.70	24200	1.90	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>132S4</b>	150	870
84	585	17.49	23600	2.1						
93	525	15.64*	23000	2.4						
104	470	14.06	22500	2.6						
120	410	12.21	21800	3.0						
134	365	10.93	21200	3.4						



<b>P<sub>m</sub> = 5.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
34	1440	43.33	7070	0.85						
36	1370	41.07	7180	0.90						
41	1200	35.94	7400	1.00						
45	1080	32.38	7520	1.10						
51	950	28.41	7610	1.20						
58	840	25.07	7650	1.30						
66	745	22.22	7650	1.45	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>132S4</b>	98	864
79	630	18.42	6030	1.25	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>132S4</b>	105	865
84	600	17.45	6260	1.30	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>132S4</b>	97	866
96	525	15.28	6480	1.45	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>132S4</b>	105	865
106	470	13.76	6480	1.55						
121	415	12.07	6450	1.75						
137	365	10.65	6390	1.95						
155	325	9.44	6320	2.2						
181	275	8.06	6200	2.5						
36	1290	41.07	7660	0.85	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	98	864
41	1130	35.94	7830	0.95	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	105	865
45	1020	32.38	7910	1.05	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	97	866
					<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	105	865
51	900	28.41	7970	1.15						
58	800	25.07	7980	1.25						
66	710	22.22	7950	1.40						
79	605	18.42	6230	1.15						
84	575	17.45	6460	1.25	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	98	864
96	505	15.28	6680	1.40	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	105	865
106	455	13.76	6670	1.55	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	97	866
121	400	12.07	6630	1.80	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>132S4</b>	105	865
137	355	10.65	6570	2.0						
155	315	9.44	6490	2.3						
181	270	8.06	6360	2.5						
106	465	13.73*	2100	0.85						
113	440	12.96*	2360	0.90	<b>S</b>	<b>67p</b>	<b>DRN</b>	<b>132S4</b>	78	859
132	375	11.03	2980	1.00	<b>SF</b>	<b>67p</b>	<b>DRN</b>	<b>132S4</b>	85	860
146	340	10.03	3290	1.05	<b>SA</b>	<b>67p</b>	<b>DRN</b>	<b>132S4</b>	79	861
168	295	8.69	3680	1.20	<b>SAF</b>	<b>67p</b>	<b>DRN</b>	<b>132S4</b>	84	860
193	255	7.56*	3800	1.25						
132	360	11.03	3120	0.95	<b>S</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	78	859
146	330	10.03	3430	1.05	<b>SF</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	85	860
168	285	8.69	3820	1.15	<b>SA</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	79	861
193	250	7.56*	3940	1.20	<b>SAF</b>	<b>67</b>	<b>DRN</b>	<b>132S4</b>	84	860
<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
13	4920	116.92	17200	0.85						
14	4460	105.71	31400	0.95						
16	3780	89.60*	33600	1.10						
19	3300	78.26	34500	1.20						
21	3280	71.43	34500	1.25						
22	2760	65.45	35300	1.25						
24	2790	60.59	35200	1.40						
26	2570	55.79	35500	1.50	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>132M4</b>	210	874
29	2300	49.87	35800	1.65	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>132M4</b>	245	875
33	2070	44.89	36100	1.80	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>132M4</b>	205	876
36	1870	40.65	36300	1.90	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>132M4</b>	230	875
41	1660	36.05	35900	2.1						
45	1500	32.60	35200	2.2						
56	1240	26.39	32100	2.1						
62	1110	23.59	31400	2.3						
69	1000	21.23	30700	2.6						
76	900	19.23	30100	2.9						

<b>P<sub>m</sub> = 7.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
14	4050	105.71	33100	0.85						
16	3460	89.60*	34200	0.95						
19	3040	78.26	34900	1.00						
21	3120	71.43	34800	1.05						
22	2560	65.45	35500	1.15						
24	2660	60.59	35400	1.25						
26	2450	55.79	35700	1.35	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	210	874
29	2200	49.87	36000	1.50	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	245	875
33	1980	44.89	36200	1.65	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	205	876
36	1800	40.65	36300	1.85	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>132M4</b>	230	875
41	1600	36.05	36100	2.1						
45	1450	32.60	35300	2.2						
56	1210	26.39	32100	2.1						
62	1080	23.59	31400	2.4						
69	970	21.23	30800	2.7						
76	880	19.23	30100	2.9						
26	2600	57.00*	27000	0.90						
31	2190	47.91	27700	1.05						
33	2010	44.03	27500	1.10						
38	1790	39.10	27100	1.20						
42	1600	34.96*	26700	1.30						
47	1440	31.43	26300	1.40						
54	1250	27.28	25700	1.55	<b>S</b>	<b>87p</b>	<b>DRN</b>	<b>132M4</b>	150	869
58	1190	25.50*	23600	1.20	<b>SF</b>	<b>87p</b>	<b>DRN</b>	<b>132M4</b>	175	870
68	1000	21.43	23100	1.40	<b>SA</b>	<b>87p</b>	<b>DRN</b>	<b>132M4</b>	150	871
75	920	19.70	22800	1.50	<b>SAF</b>	<b>87p</b>	<b>DRN</b>	<b>132M4</b>	165	870
84	820	17.49	22400	1.60						
94	730	15.64*	22000	1.70						
104	660	14.06	21500	1.90						
120	570	12.21	20900	2.2						
134	510	10.93	20500	2.4						
162	425	9.07	19700	2.7						
186	370	7.88	19000	2.7						
33	1910	44.03	27800	0.85	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	150	869
38	1700	39.10	27400	0.95	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	175	870
42	1530	34.96*	26900	1.05	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	150	871
					<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	165	870
47	1380	31.43	26500	1.15						
54	1200	27.28	25800	1.35						
58	1150	25.50*	23700	1.10						
68	970	21.43	23200	1.30						
75	890	19.70	22900	1.40	<b>S</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	150	869
84	795	17.49	22400	1.55	<b>SF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	175	870
94	710	15.64*	22000	1.75	<b>SA</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	150	871
104	640	14.06	21600	1.95	<b>SAF</b>	<b>87</b>	<b>DRN</b>	<b>132M4</b>	165	870
120	555	12.21	21000	2.2						
134	500	10.93	20500	2.5						
162	415	9.07	19700	2.7						
186	360	7.88	19100	2.8						
52	1290	28.41	5960	0.90						
59	1140	25.07	6190	0.95						
66	1010	22.22	6350	1.05						
77	860	18.97	6480	1.15						
80	850	18.42	2210	0.95	<b>S</b>	<b>77p</b>	<b>DRN</b>	<b>132M4</b>	115	864
84	810	17.45	2620	1.00	<b>SF</b>	<b>77p</b>	<b>DRN</b>	<b>132M4</b>	125	865
96	710	15.28	3500	1.05	<b>SA</b>	<b>77p</b>	<b>DRN</b>	<b>132M4</b>	115	866
107	640	13.76	4090	1.15	<b>SAF</b>	<b>77p</b>	<b>DRN</b>	<b>132M4</b>	120	865
122	560	12.07	4720	1.30						
138	495	10.65	5210	1.45						
155	440	9.44	5540	1.65						
182	375	8.06	5530	1.80						
52	1220	28.41	6340	0.85	<b>S</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	115	864
59	1080	25.07	6540	0.95	<b>SF</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	125	865
66	960	22.22	6670	1.00	<b>SA</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	115	866
80	820	18.42	2360	0.85	<b>SAF</b>	<b>77</b>	<b>DRN</b>	<b>132M4</b>	120	865

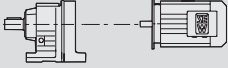

<b>P<sub>m</sub> = 7.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
84	785	17.45	2770	0.90						
96	685	15.28	3660	1.05						
107	620	13.76	4250	1.15	S	77	DRN	132M4	115	864
122	545	12.07	4880	1.30	SF	77	DRN	132M4	125	865
138	480	10.65	5380	1.50	SA	77	DRN	132M4	115	866
155	425	9.44	5710	1.70	SAF	77	DRN	132M4	120	865
182	365	8.06	5690	1.85						

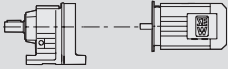

<b>P<sub>m</sub> = 9.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
16	4630	89.60*	28700	0.90						
19	4050	78.26	33100	0.95						
22	3390	65.45	34300	1.05						
26	3150	55.79	34700	1.25						
29	2820	49.87	35200	1.35						
33	2540	44.89	35600	1.45						
36	2300	40.65	35500	1.55	S	97p	DRN	132L4	220	874
41	2040	36.05	34800	1.70	SF	97p	DRN	132L4	250	875
45	1840	32.60	34100	1.85	SA	97p	DRN	132L4	215	876
56	1520	26.39	30900	1.70	SAF	97p	DRN	132L4	240	875
62	1360	23.59	30300	1.90						
69	1220	21.23	29800	2.1						
76	1110	19.23	29200	2.3						
86	980	17.05	28600	2.6						
95	890	15.42	28000	2.8						
19	3730	78.26	33700	0.80	S	97	DRN	132L4	220	874
22	3140	65.45	34700	0.90	SF	97	DRN	132L4	250	875
26	3000	55.79	34900	1.10	SA	97	DRN	132L4	215	876
					SAF	97	DRN	132L4	240	875
29	2690	49.87	35400	1.20						
33	2430	44.89	35700	1.35						
36	2210	40.65	35700	1.50						
41	1960	36.05	34900	1.70						
45	1780	32.60	34300	1.80						
56	1480	26.39	30900	1.75	S	97	DRN	132L4	220	874
62	1320	23.59	30400	1.95	SF	97	DRN	132L4	250	875
69	1190	21.23	29800	2.2	SA	97	DRN	132L4	215	876
76	1080	19.23	29300	2.4	SAF	97	DRN	132L4	240	875
86	960	17.05	28600	2.7						
95	870	15.42	28000	2.8						
112	740	13.07	27000	3.1						
129	645	11.41	26200	3.4						
33	2470	44.03	25800	0.90						
38	2190	39.10	25600	1.00						
42	1960	34.96*	25300	1.05						
47	1760	31.43	25100	1.15						
54	1530	27.28	24600	1.30						
60	1370	24.43	24200	1.35						
73	1140	20.27	23500	1.55	S	87p	DRN	132L4	160	869
75	1130	19.70	21700	1.20	SF	87p	DRN	132L4	180	870
84	1000	17.49	21400	1.30	SA	87p	DRN	132L4	160	871
94	890	15.64*	21100	1.40	SAF	87p	DRN	132L4	175	870
105	800	14.06	20700	1.55						
120	700	12.21	20300	1.75						
135	625	10.93	19900	1.95						
162	520	9.07	19200	2.2						
186	450	7.88	18600	2.2						
42	1870	34.96*	25600	0.85	S	87	DRN	132L4	160	869
47	1690	31.43	25300	0.95	SF	87	DRN	132L4	180	870
54	1470	27.28	24800	1.10	SA	87	DRN	132L4	160	871
60	1320	24.43	24400	1.20	SAF	87	DRN	132L4	175	870


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<b>P<sub>m</sub> = 9.2 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
73	1100	20.27	23600	1.45						
75	1090	19.70	21800	1.15						
84	970	17.49	21500	1.25						
94	870	15.64*	21100	1.40	S	87	DRN	132L4	160	869
105	785	14.06	20800	1.55	SF	87	DRN	132L4	180	870
120	680	12.21	20300	1.80	SA	87	DRN	132L4	160	871
135	610	10.93	19900	2.0	SAF	87	DRN	132L4	175	870
162	510	9.07	19200	2.2						
186	440	7.88	18600	2.3						
66	1240	22.22	5250	0.85						
77	1060	18.97	5540	0.95	S	77p	DRN	132L4	125	864
107	785	13.76	1660	0.95	SF	77p	DRN	132L4	135	865
122	690	12.07	2540	1.05	SA	77p	DRN	132L4	125	866
138	610	10.65	3250	1.20	SAF	77p	DRN	132L4	130	865
156	540	9.44	3840	1.35						
182	460	8.06	4460	1.45						
77	1010	18.97	5840	0.90						
107	760	13.76	1770	0.95	S	77	DRN	132L4	125	864
122	670	12.07	2660	1.05	SF	77	DRN	132L4	135	865
138	590	10.65	3380	1.20	SA	77	DRN	132L4	125	866
156	525	9.44	3970	1.40	SAF	77	DRN	132L4	130	865
182	450	8.06	4590	1.50						
<b>P<sub>m</sub> = 11.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
19	4830	78.26	21600	0.80						
22	4040	65.45	33100	0.85						
26	3760	55.79	33700	1.05						
30	3360	49.87	34400	1.15						
33	3030	44.89	34500	1.20						
36	2740	40.65	34100	1.30						
41	2430	36.05	33500	1.45	S	97p	DRN	160M4	250	874
45	2200	32.60	33000	1.55	SF	97p	DRN	160M4	285	875
56	1810	26.39	29600	1.45	SA	97p	DRN	160M4	245	876
62	1620	23.59	29200	1.60	SAF	97p	DRN	160M4	270	875
69	1460	21.23	28700	1.75						
77	1320	19.23	28300	1.95						
86	1170	17.05	27700	2.2						
96	1060	15.42	27200	2.3						
113	900	13.07	26400	2.6						
129	785	11.41	25700	2.8						
26	3590	55.79	34000	0.90						
30	3210	49.87	34600	1.05						
33	2900	44.89	34800	1.15						
36	2630	40.65	34300	1.25						
41	2340	36.05	33700	1.40						
45	2120	32.60	33200	1.50	S	97	DRN	160M4	250	874
56	1760	26.39	29700	1.45	SF	97	DRN	160M4	285	875
62	1580	23.59	29200	1.65	SA	97	DRN	160M4	245	876
69	1420	21.23	28800	1.80	SAF	97	DRN	160M4	270	875
77	1290	19.23	28300	2.0						
86	1150	17.05	27800	2.2						
96	1040	15.42	27300	2.4						
113	880	13.07	26400	2.6						
129	770	11.41	25700	2.9						




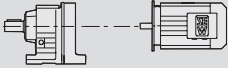

<b>P<sub>m</sub> = 11.0 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
38	2620	39.10	24000	0.80						
42	2340	34.96*	23900	0.90						
47	2110	31.43	23800	0.95						
54	1830	27.28	23500	1.05						
60	1640	24.43	23200	1.15						
73	1360	20.27	22700	1.30	S	87p	DRN	160M4	190	869
75	1350	19.70	20600	1.00	SF	87p	DRN	160M4	215	870
84	1200	17.49	20400	1.10	SA	87p	DRN	160M4	190	871
94	1070	15.64*	20200	1.15	SAF	87p	DRN	160M4	205	870
105	960	14.06	19900	1.30						
121	830	12.21	19500	1.50						
135	750	10.93	19200	1.65						
162	620	9.07	18600	1.85						
187	540	7.88	18100	1.85						
54	1750	27.28	23700	0.90	S	87	DRN	160M4	190	869
60	1570	24.43	23400	1.00	SF	87	DRN	160M4	215	870
73	1310	20.27	22800	1.20	SA	87	DRN	160M4	190	871
					SAF	87	DRN	160M4	205	870
75	1300	19.70	20700	0.95						
84	1160	17.49	20500	1.05						
94	1040	15.64*	20200	1.20	S	87	DRN	160M4	190	869
105	930	14.06	20000	1.30	SF	87	DRN	160M4	215	870
121	810	12.21	19600	1.50	SA	87	DRN	160M4	190	871
135	730	10.93	19300	1.70	SAF	87	DRN	160M4	205	870
162	605	9.07	18700	1.85						
187	530	7.88	18200	1.90						
78	1260	18.97	4550	0.80	S	77p	DRN	160M4	155	864
122	820	12.07	305	0.85	SF	77p	DRN	160M4	165	865
138	725	10.65	1240	1.00	SA	77p	DRN	160M4	155	866
156	645	9.44	2020	1.10	SAF	77p	DRN	160M4	160	865
183	550	8.06	2870	1.25						

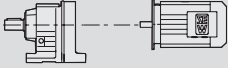

<b>P<sub>m</sub> = 15.0 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
30	4580	49.87	26600	0.85						
33	4130	44.89	31200	0.90						
36	3740	40.65	31100	0.95						
41	3320	36.05	30800	1.05						
45	3000	32.60	30600	1.15						
56	2470	26.39	26800	1.05						
62	2210	23.59	26600	1.15	S	97p	DRN	160L4	265	874
69	1990	21.23	26500	1.30	SF	97p	DRN	160L4	300	875
77	1800	19.23	26200	1.45	SA	97p	DRN	160L4	260	876
86	1600	17.05	25900	1.60	SAF	97p	DRN	160L4	290	875
96	1450	15.42	25600	1.70						
113	1220	13.07	25000	1.90						
129	1070	11.41	24400	2.1						
154	890	9.55	23700	2.3						
178	775	8.26	23000	2.3						
33	3950	44.89	31500	0.85	S	97	DRN	160L4	265	874
36	3590	40.65	31400	0.90	SF	97	DRN	160L4	300	875
41	3190	36.05	31100	1.05	SA	97	DRN	160L4	260	876
					SAF	97	DRN	160L4	290	875
45	2890	32.60	30800	1.10						
56	2410	26.39	26900	1.10						
62	2150	23.59	26700	1.20						
69	1940	21.23	26600	1.35						
77	1760	19.23	26300	1.45	S	97	DRN	160L4	265	874
86	1560	17.05	26000	1.65	SF	97	DRN	160L4	300	875
96	1410	15.42	25600	1.75	SA	97	DRN	160L4	260	876
113	1200	13.07	25000	1.95	SAF	97	DRN	160L4	290	875
129	1050	11.41	24500	2.1						
154	880	9.55	23700	2.3						
178	765	8.26	23000	2.3						

<b>P<sub>m</sub> = 15.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
60	2230	24.43	21000	0.85						
73	1850	20.27	20800	0.95						
94	1460	15.64*	16800	0.85	S	87p	DRN	160L4	210	869
105	1310	14.06	17900	0.95	SF	87p	DRN	160L4	230	870
121	1140	12.21	18000	1.10	SA	87p	DRN	160L4	205	871
135	1020	10.93	17800	1.20	SAF	87p	DRN	160L4	220	870
163	840	9.07	17500	1.35						
187	735	7.88	17100	1.35						
94	1420	15.64*	16800	0.85	S	87	DRN	160L4	210	869
105	1280	14.06	17900	0.95	SF	87	DRN	160L4	230	870
121	1110	12.21	18000	1.10	SA	87	DRN	160L4	205	871
					SAF	87	DRN	160L4	220	870
135	990	10.93	17900	1.25	S	87	DRN	160L4	210	869
163	830	9.07	17500	1.35	SF	87	DRN	160L4	230	870
187	720	7.88	17200	1.40	SA	87	DRN	160L4	205	871
					SAF	87	DRN	160L4	220	870

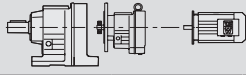

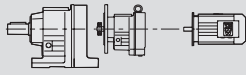

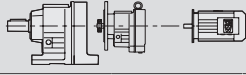

<b>P<sub>m</sub> = 18.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
41	4080	36.05	28500	0.85						
45	3690	32.60	28400	0.90						
54	3130	27.63	28200	1.05						
61	2730	24.13	27900	1.10						
70	2450	21.23	24500	1.05	S	97p	DRN	180M4	290	874
77	2220	19.23	24400	1.15	SF	97p	DRN	180M4	320	875
87	1970	17.05	24300	1.30	SA	97p	DRN	180M4	285	876
96	1780	15.42	24100	1.40	SAF	97p	DRN	180M4	310	875
113	1510	13.07	23800	1.55						
130	1320	11.41	23400	1.65						
155	1100	9.55	22800	1.85						
179	950	8.26	22200	1.85						
41	3930	36.05	28800	0.85						
45	3560	32.60	28700	0.90						
54	3020	27.63	28500	1.00						
61	2650	24.13	28100	1.10						
70	2390	21.23	24500	1.10	S	97	DRN	180M4	290	874
77	2170	19.23	24500	1.20	SF	97	DRN	180M4	320	875
87	1920	17.05	24400	1.35	SA	97	DRN	180M4	285	876
96	1740	15.42	24200	1.40	SAF	97	DRN	180M4	310	875
113	1480	13.07	23800	1.55						
130	1290	11.41	23400	1.70						
155	1080	9.55	22800	1.90						
179	940	8.26	22300	1.90						
121	1400	12.21	14800	0.90	S	87p	DRN	180M4	230	869
135	1250	10.93	16000	1.00	SF	87p	DRN	180M4	250	870
163	1040	9.07	16400	1.10	SA	87p	DRN	180M4	225	871
187	900	7.88	16200	1.10	SAF	87p	DRN	180M4	245	870

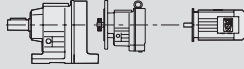

<b>P<sub>m</sub> = 22 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
53	3720	27.63	26400	0.85						
61	3250	24.13	26400	0.95						
70	2920	21.23	18500	0.90						
77	2640	19.23	20400	1.00	S	97p	DRN	180L4	305	874
87	2340	17.05	22300	1.10	SF	97p	DRN	180L4	340	875
96	2120	15.42	22700	1.15	SA	97p	DRN	180L4	300	876
113	1800	13.07	22600	1.30	SAF	97p	DRN	180L4	325	875
129	1570	11.41	22300	1.40						
155	1310	9.55	21900	1.55						
179	1130	8.26	21500	1.55						

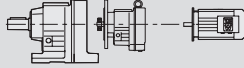

<b>P<sub>m</sub> = 22 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
<b>53</b>	3600	27.63	26700	0.85	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	305	874
<b>61</b>	3150	24.13	26600	0.90	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	340	875
<b>70</b>	2840	21.23	18600	0.90	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	300	876
<b>77</b>	2580	19.23	20500	1.00	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	325	875
<b>87</b>	2290	17.05	22400	1.10						
<b>96</b>	2070	15.42	22800	1.20	<b>S</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	305	874
<b>113</b>	1760	13.07	22600	1.30	<b>SF</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	340	875
<b>129</b>	1540	11.41	22400	1.45	<b>SA</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	300	876
<b>155</b>	1290	9.55	21900	1.60	<b>SAF</b>	<b>97</b>	<b>DRN</b>	<b>180L4</b>	325	875
<b>179</b>	1120	8.26	21500	1.60						

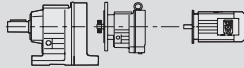

<b>P<sub>m</sub> = 30 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					$m$ kg	
<b>87</b>	3190	17.05	11200	0.80						
<b>96</b>	2880	15.42	13700	0.85	<b>S</b>	<b>97p</b>	<b>DRN</b>	<b>200L4</b>	415	874
<b>113</b>	2440	13.07	17000	0.95	<b>SF</b>	<b>97p</b>	<b>DRN</b>	<b>200L4</b>	445	875
<b>130</b>	2140	11.41	19000	1.05	<b>SA</b>	<b>97p</b>	<b>DRN</b>	<b>200L4</b>	410	876
<b>155</b>	1790	9.55	19900	1.15	<b>SAF</b>	<b>97p</b>	<b>DRN</b>	<b>200L4</b>	435	875
<b>179</b>	1540	8.26	19700	1.15						

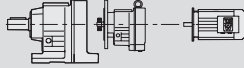

### 11.4 S..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 92 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
0.14	10037	3000						
0.16	8654	3000						
0.17	8066	3000						
0.20	7051	3000						
0.23	6079	3000						
0.25	5431	3000						
0.29	4747	3000						
0.33	4155	3000						
0.38	3632	3000	S	37R17	DRN	63MS4	14	879
0.48	2866	3000	SF	37R17	DRN	63MS4	16	879
0.56	2471	3000	SA	37R17	DRN	63MS4	14	879
0.64	2160	3000	SAF	37R17	DRN	63MS4	16	879
0.73	1887	3000						
0.83	1665	3000						
0.95	1456	3000						
1.1	1271	3000						
1.2	1121	3000						
1.4	994	3000						
1.6	869	3000						
1.8	774	3000						
2.1	666	3000						
2.3	596	3000						
2.6	521	3000						
3.0	456	3000	S	37R17	DRN	63MS4	14	879
3.5	398	3000	SF	37R17	DRN	63MS4	15	879
3.9	351	3000	SA	37R17	DRN	63MS4	14	879
4.6	303	3000	SAF	37R17	DRN	63MS4	15	879
5.2	265	3000						
6.0	232	3000						
6.8	202	3000						
7.7	179	3000	S	37R17	DRN	63M4	15	879
8.7	158	3000	SF	37R17	DRN	63M4	16	879
9.5	144	3000	SA	37R17	DRN	63M4	15	879
12	118	3000	SAF	37R17	DRN	63M4	16	879
13	110	3000	S	37R17	DRN	71MS4	15	879
			SF	37R17	DRN	71MS4	17	879
			SA	37R17	DRN	71MS4	15	879
			SAF	37R17	DRN	71MS4	17	879
<b>M<sub>a max</sub> = 99 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
0.14	10037	3000						
0.17	8066	3000	S	37pR17	DRN	63MS4	14	879
0.20	7051	3000	SF	37pR17	DRN	63MS4	16	879
0.25	5431	3000	SA	37pR17	DRN	63MS4	14	879
0.29	4747	3000	SAF	37pR17	DRN	63MS4	16	879
<b>M<sub>a max</sub> = 100 Nm</b>								
$n_a$ min <sup>-1</sup>	i	F <sub>Ra</sub> <sup>1)</sup> N					m kg	
0.16	8654	3000	S	37pR17	DRN	63MS4	14	879
			SF	37pR17	DRN	63MS4	16	879
			SA	37pR17	DRN	63MS4	14	879
			SAF	37pR17	DRN	63MS4	16	879

<b>M<sub>a max</sub> = 101 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.23	6079	3000	S	37pR17	DRN	63MS4	14	879
			SF	37pR17	DRN	63MS4	16	879
			SA	37pR17	DRN	63MS4	14	879
			SAF	37pR17	DRN	63MS4	16	879

<b>M<sub>a max</sub> = 102 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.33	4155	3000	S	37pR17	DRN	63MS4	14	879
			SF	37pR17	DRN	63MS4	16	879
			SA	37pR17	DRN	63MS4	14	879
			SAF	37pR17	DRN	63MS4	16	879
0.38	3632	3000						

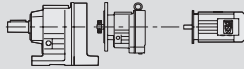

<b>M<sub>a max</sub> = 105 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.48	2866	3000						
0.56	2471	3000						
0.64	2160	3000						
0.73	1887	3000	S	37pR17	DRN	63MS4	14	879
0.83	1665	3000	SF	37pR17	DRN	63MS4	16	879
0.95	1456	3000	SA	37pR17	DRN	63MS4	14	879
1.1	1271	3000	SAF	37pR17	DRN	63MS4	16	879
1.2	1121	3000						
1.4	994	3000						
1.6	869	3000						
1.8	774	3000						
2.1	666	3000						
2.3	596	3000						
2.6	521	3000	S	37pR17	DRN	63MS4	14	879
3.0	456	3000	SF	37pR17	DRN	63MS4	15	879
3.5	398	3000	SA	37pR17	DRN	63MS4	14	879
3.9	351	3000	SAF	37pR17	DRN	63MS4	15	879
4.6	303	3000						
5.2	265	3000						
6.0	232	3000						
6.8	202	3000						
7.7	179	3000	S	37pR17	DRN	63M4	15	879
8.7	158	3000	SF	37pR17	DRN	63M4	16	879
9.5	144	3000	SA	37pR17	DRN	63M4	15	879
12	118	3000	SAF	37pR17	DRN	63M4	16	879
13	110	3000	S	37pR17	DRN	71MS4	15	879
			SF	37pR17	DRN	71MS4	17	879
			SA	37pR17	DRN	71MS4	15	879
			SAF	37pR17	DRN	71MS4	17	879

<b>M<sub>a max</sub> = 183 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
1.4	956	5210	S	47R17	DRN	63MS4	17	879
			SF	47R17	DRN	63MS4	21	879
			SA	47R17	DRN	63MS4	18	879
			SAF	47R17	DRN	63MS4	20	879

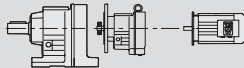

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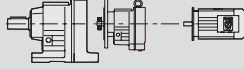

S..R..DRN.. selection tables for low output speeds in Nm

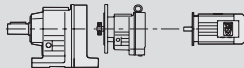

<b>M<sub>a max</sub> = 185 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.11	12909	5250							
0.12	11189	5250							
0.13	10374	5250							
0.15	8992	5250							
0.18	7860	5250							
0.20	6887	5250							
0.23	6055	5250							
0.26	5292	5250							
0.30	4637	5250							
0.34	4092	5250	S	47R17	DRN	63MS4	17	879	
0.39	3582	5200	SF	47R17	DRN	63MS4	21	879	
0.44	3131	5200	SA	47R17	DRN	63MS4	18	879	
0.51	2714	5200	SAF	47R17	DRN	63MS4	20	879	
0.57	2412	5200							
0.65	2131	5200							
0.74	1863	5200							
0.83	1663	5200							
0.96	1435	5200							
1.1	1254	5200							
1.2	1120	5200							
1.3	1083	5200							
1.4	965	5200							
1.6	865	5200							
1.8	750	5200	S	47R17	DRN	63MS4	17	879	
2.1	655	5200	SF	47R17	DRN	63MS4	21	879	
2.4	574	5200	SA	47R17	DRN	63MS4	18	879	
2.7	506	5200	SAF	47R17	DRN	63MS4	20	879	
3.1	438	5200							
3.6	388	5200							
4.1	336	5200	S	47R17	DRN	63M4	18	879	
4.7	294	5200	SF	47R17	DRN	63M4	21	879	
			SA	47R17	DRN	63M4	19	879	
			SAF	47R17	DRN	63M4	21	879	
5.5	257	5260	S	47R17	DRN	71MS4	18	879	
6.2	229	5200	SF	47R17	DRN	71MS4	22	879	
7.0	200	5200	SA	47R17	DRN	71MS4	20	879	
7.5	187	5200	SAF	47R17	DRN	71MS4	21	879	
8.6	165	5200	S	47R17	DRN	71M4	20	879	
9.6	148	5200	SF	47R17	DRN	71M4	23	879	
11	131	5200	SA	47R17	DRN	71M4	21	879	
			SAF	47R17	DRN	71M4	22	879	

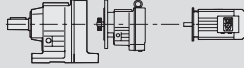

  

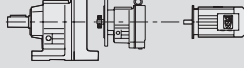

<b>M<sub>a max</sub> = 194 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.11	12909	5200	S	47pR17	DRN	63MS4	17	879	
0.13	10374	5200	SF	47pR17	DRN	63MS4	21	879	
			SA	47pR17	DRN	63MS4	18	879	
			SAF	47pR17	DRN	63MS4	20	879	

<b>M<sub>a max</sub> = 195 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.12	11189	5200	S	47pR17	DRN	63MS4	17	879	
0.15	8992	5200	SF	47pR17	DRN	63MS4	21	879	
0.18	7860	5200	SA	47pR17	DRN	63MS4	18	879	
0.23	6055	5200	SAF	47pR17	DRN	63MS4	20	879	
0.26	5292	5200							

<b>M<sub>a max</sub> = 196 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.20	6887	5190	S	47pR17	DRN	63MS4	17	879	
0.30	4637	5190	SF	47pR17	DRN	63MS4	21	879	
0.34	4092	5190	SA	47pR17	DRN	63MS4	18	879	
			SAF	47pR17	DRN	63MS4	20	879	

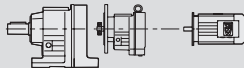

<b>M<sub>a max</sub> = 200 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.39	3582	5070							
0.44	3131	5070							
0.51	2714	5070							
0.57	2412	5070							
0.65	2131	5070	S	47pR17	DRN	63MS4	17	879	
0.74	1863	5070	SF	47pR17	DRN	63MS4	21	879	
0.83	1663	5070	SA	47pR17	DRN	63MS4	18	879	
0.96	1435	5070	SAF	47pR17	DRN	63MS4	20	879	
1.1	1254	5070							
1.2	1120	5070							
1.3	1083	5070							
1.4	956	5070							
1.4	965	5070							
1.6	865	5070	S	47pR17	DRN	63MS4	17	879	
1.8	750	5070	SF	47pR17	DRN	63MS4	21	879	
2.1	655	5070	SA	47pR17	DRN	63MS4	18	879	
2.4	574	5070	SAF	47pR17	DRN	63MS4	20	879	
2.7	506	5070							
3.1	438	5070							
3.5	388	5070	S	47pR17	DRN	63M4	18	879	
4.1	336	5080	SF	47pR17	DRN	63M4	21	879	
4.7	294	5080	SA	47pR17	DRN	63M4	19	879	
			SAF	47pR17	DRN	63M4	21	879	
5.5	257	5180	S	47pR17	DRN	71MS4	18	879	
6.2	229	5100	SF	47pR17	DRN	71MS4	22	879	
7.0	200	5100	SA	47pR17	DRN	71MS4	20	879	
7.5	187	5100	SAF	47pR17	DRN	71MS4	21	879	
8.5	165	5110							
9.6	148	5110	S	47pR17	DRN	71M4	20	879	
			SF	47pR17	DRN	71M4	23	879	
11	131	5120	SA	47pR17	DRN	71M4	21	879	
			SAF	47pR17	DRN	71M4	22	879	

<b>M<sub>a max</sub> = 300 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.44	3131	7080							
0.51	2714	7080							
0.57	2412	7080							
0.65	2131	7080	S	57R17	DRN	63MS4	21	879	
0.74	1863	7080	SF	57R17	DRN	63MS4	25	879	
0.83	1663	7080	SA	57R17	DRN	63MS4	21	879	
0.96	1435	7080	SAF	57R17	DRN	63MS4	24	879	
1.1	1254	7080							
1.3	1083	7080							
1.4	965	7080	S	57R17	DRN	63MS4	21	879	
1.6	865	7080	SF	57R17	DRN	63MS4	25	879	
1.8	750	7080	SA	57R17	DRN	63MS4	21	879	
2.1	655	7080	SAF	57R17	DRN	63MS4	23	879	
2.4	574	7080	S	57R17	DRN	63M4	22	879	
2.7	506	7080	SF	57R17	DRN	63M4	25	879	
			SA	57R17	DRN	63M4	21	879	
3.1	438	7080	SAF	57R17	DRN	63M4	24	879	

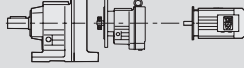

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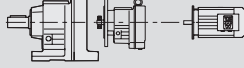

S..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 300 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
3.6	388	7080	S	57R17	DRN	71MS4	22	879	
4.2	336	7080	SF	57R17	DRN	71MS4	26	879	
4.8	294	7080	SA	57R17	DRN	71MS4	22	879	
			SAF	57R17	DRN	71MS4	25	879	
5.3	269	7080	S	57R17	DRN	71M4	23	879	
6.2	229	7080	SF	57R17	DRN	71M4	27	879	
6.9	204	7080	SA	57R17	DRN	71M4	23	879	
7.6	187	7080	SAF	57R17	DRN	71M4	26	879	
8.7	165	7080	S	57R17	DRN	80MK4	26	879	
11	131	7080	SF	57R17	DRN	80MK4	29	879	
			SA	57R17	DRN	80MK4	25	879	
			SAF	57R17	DRN	80MK4	28	879	

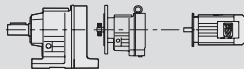

  

<b>M<sub>a max</sub> = 330 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.11	12909	6800							
0.12	11189	6800							
0.13	10374	6800							
0.15	8992	6800							
0.18	7860	6800	S	57R17	DRN	63MS4	21	879	
0.20	6887	6800	SF	57R17	DRN	63MS4	25	879	
0.23	6055	6800	SA	57R17	DRN	63MS4	21	879	
0.26	5292	6800	SAF	57R17	DRN	63MS4	24	879	
0.30	4637	6800							
0.34	4092	6800							
0.38	3628	6800							

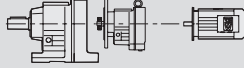

  

<b>M<sub>a max</sub> = 360 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.11	12909	6470	S	57pR17	DRN	63MS4	21	879	
0.13	10374	6470	SF	57pR17	DRN	63MS4	25	879	
			SA	57pR17	DRN	63MS4	21	879	
			SAF	57pR17	DRN	63MS4	24	879	

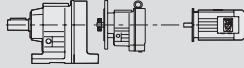

  

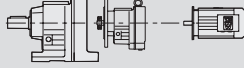

<b>M<sub>a max</sub> = 365 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.12	11189	6410							
0.15	8992	6410							
0.18	7860	6410							
0.20	6887	6410	S	57pR17	DRN	63MS4	21	879	
0.23	6055	6410	SF	57pR17	DRN	63MS4	25	879	
0.26	5292	6410	SA	57pR17	DRN	63MS4	21	879	
0.30	4637	6410	SAF	57pR17	DRN	63MS4	24	879	
0.34	4092	6410							
0.38	3628	6410							

<b>M<sub>a max</sub> = 370 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.44	3131	6350							
0.51	2714	6350							
0.57	2412	6350							
0.65	2131	6350	S	57pR17	DRN	63MS4	21	879	
0.74	1863	6350	SF	57pR17	DRN	63MS4	25	879	
0.83	1663	6350	SA	57pR17	DRN	63MS4	21	879	
0.96	1435	6350	SAF	57pR17	DRN	63MS4	24	879	
1.1	1254	6350							
1.3	1083	6350							



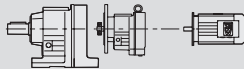

<b>M<sub>a max</sub> = 370 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
1.4	965	6350	S	57pR17	DRN	63MS4	21	879
1.6	865	6350	SF	57pR17	DRN	63MS4	25	879
1.8	750	6350	SA	57pR17	DRN	63MS4	21	879
			SAF	57pR17	DRN	63MS4	23	879
2.1	655	6350	S	57pR17	DRN	63M4	22	879
2.4	574	6350	SF	57pR17	DRN	63M4	25	879
2.7	506	6350	SA	57pR17	DRN	63M4	21	879
			SAF	57pR17	DRN	63M4	24	879
3.2	438	6350	S	57pR17	DRN	71MS4	22	879
3.6	388	6350	SF	57pR17	DRN	71MS4	26	879
4.2	336	6350	SA	57pR17	DRN	71MS4	22	879
			SAF	57pR17	DRN	71MS4	25	879
4.8	294	6350	S	57pR17	DRN	71M4	23	879
5.3	269	6350	SF	57pR17	DRN	71M4	27	879
6.2	229	6350	SA	57pR17	DRN	71M4	23	879
6.9	204	6350	SAF	57pR17	DRN	71M4	26	879
7.7	187	6350	S	57pR17	DRN	80MK4	26	879
8.7	165	6350	SF	57pR17	DRN	80MK4	29	879
11	131	6350	SA	57pR17	DRN	80MK4	25	879
			SAF	57pR17	DRN	80MK4	28	879

<b>M<sub>a max</sub> = 570 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.06	21362	8190						
0.07	19594	8190						
0.08	18120	8190						
0.08	16682	8190						
0.10	14383	8190						
0.11	12774	8190						
0.13	11013	8190						
0.14	9694	8190						
0.16	8529	8190						
0.19	7455	8190						
0.21	6531	8190	S	67R37	DRN	63MS4	40	879
0.24	5759	8190	SF	67R37	DRN	63MS4	46	879
0.28	4965	8190	SA	67R37	DRN	63MS4	41	879
0.31	4410	8190	SAF	67R37	DRN	63MS4	45	879
0.36	3880	8190						
0.40	3432	8190						
0.47	2944	8190						
0.52	2630	8190						
0.61	2279	8190						
0.69	2014	8190						
0.78	1772	8190						
0.88	1559	8190						
1.0	1363	8190						
1.2	1194	8190						
1.3	1045	8190	S	67R37	DRN	63M4	40	879
			SF	67R37	DRN	63M4	47	879
1.5	914	8190	SA	67R37	DRN	63M4	41	879
			SAF	67R37	DRN	63M4	46	879
1.7	809	8190	S	67R37	DRN	63M4	40	879
			SF	67R37	DRN	63M4	47	879
1.9	712	8190	SA	67R37	DRN	63M4	41	879
			SAF	67R37	DRN	63M4	46	879
2.3	615	8190	S	67R37	DRN	71MS4	41	879
			SF	67R37	DRN	71MS4	47	879
2.6	543	8190	SA	67R37	DRN	71MS4	42	879
			SAF	67R37	DRN	71MS4	46	879
3.0	469	8190	S	67R37	DRN	71M4	42	879
			SF	67R37	DRN	71M4	48	879
3.3	424	8190	SA	67R37	DRN	71M4	43	879
3.9	365	8190	SAF	67R37	DRN	71M4	47	879

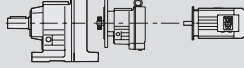

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## Helical-worm gearmotors

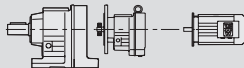

S..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 570 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
4.5	319	8190	S	67R37	DRN	80MK4	44	879	
5.1	281	8190	SF	67R37	DRN	80MK4	51	879	
5.8	246	8190	SA	67R37	DRN	80MK4	45	879	
			SAF	67R37	DRN	80MK4	50	879	
6.5	221	8190	S	67R37	DRN	80M4	48	879	
7.3	198	8190	SF	67R37	DRN	80M4	54	879	
8.6	168	8190	SA	67R37	DRN	80M4	49	879	
			SAF	67R37	DRN	80M4	53	879	
9.3	156	8190	S	67R37	DRN	90S4	53	879	
			SF	67R37	DRN	90S4	60	879	
			SA	67R37	DRN	90S4	54	879	
			SAF	67R37	DRN	90S4	59	879	

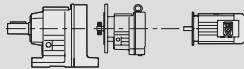

  

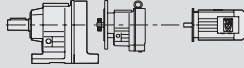

<b>M<sub>a max</sub> = 640 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
1.3	1045	9580	S	67pR37	DRN	63M4	40	879	
1.5	914	9580	SF	67pR37	DRN	63M4	47	879	
			SA	67pR37	DRN	63M4	41	879	
			SAF	67pR37	DRN	63M4	46	879	
6.5	221	9670	S	67pR37	DRN	80M4	48	879	
			SF	67pR37	DRN	80M4	54	879	
			SA	67pR37	DRN	80M4	49	879	
			SAF	67pR37	DRN	80M4	53	879	
9.3	156	9690	S	67pR37	DRN	90S4	53	879	
			SF	67pR37	DRN	90S4	60	879	
			SA	67pR37	DRN	90S4	54	879	
			SAF	67pR37	DRN	90S4	59	879	

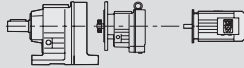

  

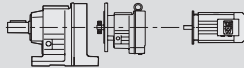

<b>M<sub>a max</sub> = 645 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.06	21362	10000							
0.07	19594	10000							
0.08	18120	10000							
0.08	16682	10000							
0.10	14383	10000	S	67pR37	DRN	63MS4	40	879	
0.11	12774	10000	SF	67pR37	DRN	63MS4	46	879	
0.13	11013	10000	SA	67pR37	DRN	63MS4	41	879	
0.14	9694	10000	SAF	67pR37	DRN	63MS4	45	879	
0.16	8529	10000							
0.19	7455	10000							
0.21	6531	10000							

<b>M<sub>a max</sub> = 660 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
0.61	2279	9460	S	67pR37	DRN	63MS4	40	879	
			SF	67pR37	DRN	63MS4	46	879	
			SA	67pR37	DRN	63MS4	41	879	
			SAF	67pR37	DRN	63MS4	45	879	
4.5	319	9530	S	67pR37	DRN	80MK4	44	879	
			SF	67pR37	DRN	80MK4	51	879	
			SA	67pR37	DRN	80MK4	45	879	
			SAF	67pR37	DRN	80MK4	50	879	

<b>M<sub>a max</sub> = 680 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
5.1	281	9420	S	67pR37	DRN	80MK4	44	879
			SF	67pR37	DRN	80MK4	51	879
			SA	67pR37	DRN	80MK4	45	879
			SAF	67pR37	DRN	80MK4	50	879
7.3	198	9440	S	67pR37	DRN	80M4	48	879
			SF	67pR37	DRN	80M4	54	879
			SA	67pR37	DRN	80M4	49	879
			SAF	67pR37	DRN	80M4	53	879
8.7	168	9450	S	67pR37	DRN	90S4	53	879
			SF	67pR37	DRN	90S4	60	879
			SA	67pR37	DRN	90S4	54	879
			SAF	67pR37	DRN	90S4	59	879

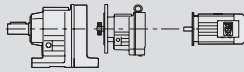

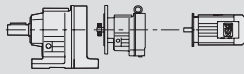

<b>M<sub>a max</sub> = 700 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.47 0.88	2944 1559	9220 9220	S	67pR37	DRN	63MS4	40	879
			SF	67pR37	DRN	63MS4	46	879
			SA	67pR37	DRN	63MS4	41	879
			SAF	67pR37	DRN	63MS4	45	879
1.0	1363	9220	S	67pR37	DRN	63M4	40	879
			SF	67pR37	DRN	63M4	47	879
			SA	67pR37	DRN	63M4	41	879
			SAF	67pR37	DRN	63M4	46	879
2.6	543	9230	S	67pR37	DRN	71M4	42	879
			SF	67pR37	DRN	71M4	48	879
			SA	67pR37	DRN	71M4	43	879
			SAF	67pR37	DRN	71M4	47	879

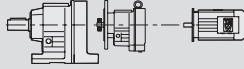

<b>M<sub>a max</sub> = 720 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.24	5759	9100	S SF SA SAF	67pR37 67pR37 67pR37 67pR37	DRN DRN DRN DRN	63MS4 63MS4 63MS4 63MS4	40 46 41 45	879 879 879 879
0.28	4965	9100						
0.31	4410	9100						
0.36	3880	9100						
0.40	3432	9100						
0.52	2630	9100						
0.69	2014	9100						
0.78	1772	9100						
1.1	1194	9100	S	67pR37	DRN	63M4	40	879
			SF	67pR37	DRN	63M4	47	879
			SA	67pR37	DRN	63M4	41	879
			SAF	67pR37	DRN	63M4	46	879
1.7 2.0	809 712	9100 9100	S	67pR37	DRN	71MS4	41	879
			SF	67pR37	DRN	71MS4	47	879
			SA	67pR37	DRN	71MS4	42	879
			SAF	67pR37	DRN	71MS4	46	879
2.3 3.0 3.3	615 469 424	9100 9130 9140	S	67pR37	DRN	71M4	42	879
			SF	67pR37	DRN	71M4	48	879
			SA	67pR37	DRN	71M4	43	879
			SAF	67pR37	DRN	71M4	47	879
3.9	365	9160	S	67pR37	DRN	80MK4	44	879
			SF	67pR37	DRN	80MK4	51	879
			SA	67pR37	DRN	80MK4	45	879
			SAF	67pR37	DRN	80MK4	50	879
5.9	246	9190	S	67pR37	DRN	80M4	48	879
			SF	67pR37	DRN	80M4	54	879
			SA	67pR37	DRN	80M4	49	879
			SAF	67pR37	DRN	80M4	53	879

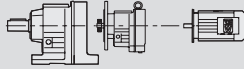

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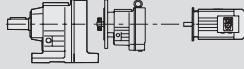

## Helical-worm gearmotors

S..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 1240 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
<b>0.50</b> <b>0.58</b>	2753	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>63MS4</b>	59	879	
	2374	12000	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>63MS4</b>	68	879	
			<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>63MS4</b>	58	879	
			<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>63MS4</b>	65	879	
<b>0.66</b> <b>0.76</b> <b>0.79</b> <b>0.86</b>	2083	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	60	879	
	1813	12000	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	69	879	
	1745	12000	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	59	879	
	1600	12000	<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	66	879	
<b>1.0</b> <b>1.1</b>	1404	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	60	879	
	1245	12000	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	70	879	
			<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	60	879	
			<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	66	879	
<b>1.3</b>	1100	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	60	879	
			<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	70	879	
			<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	59	879	
			<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>71MS4</b>	66	879	
<b>1.5</b> <b>1.7</b> <b>2.0</b>	954	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	61	879	
	837	12000	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	71	879	
	714	12000	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	61	879	
			<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>71M4</b>	67	879	
<b>2.2</b> <b>2.5</b> <b>2.9</b>	637	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	63	879	
	574	12000	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	73	879	
	499	12000	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	63	879	
			<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>80MK4</b>	70	879	
<b>3.3</b> <b>3.7</b>	438	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	67	879	
	389	12000	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	77	879	
			<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	66	879	
			<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>80M4</b>	73	879	
<b>4.4</b> <b>5.0</b> <b>5.8</b>	327	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>90S4</b>	73	879	
	289	12000	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>90S4</b>	82	879	
	250	12000	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>90S4</b>	72	879	
			<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>90S4</b>	79	879	
<b>6.7</b>	219	12000	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>90L4</b>	76	879	
			<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>90L4</b>	86	879	
			<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>90L4</b>	75	879	
			<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>90L4</b>	82	879	
<b>M<sub>a max</sub> = 1270 Nm</b>									
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg		
<b>0.05</b> <b>0.06</b> <b>0.07</b> <b>0.08</b> <b>0.09</b> <b>0.11</b> <b>0.12</b> <b>0.14</b> <b>0.16</b> <b>0.18</b> <b>0.20</b> <b>0.23</b> <b>0.26</b> <b>0.30</b> <b>0.35</b> <b>0.39</b>	25493	11700							
	21787	11700							
	19907	11700							
	17013	11700							
	14668	11700							
	13110	11700							
	11569	11700							
	9887	11700	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>63MS4</b>	59	879	
	8817	11700	<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>63MS4</b>	68	879	
	7735	11700	<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>63MS4</b>	58	879	
	6735	11700	<b>SAF</b>	<b>77R37</b>	<b>DRN</b>	<b>63MS4</b>	65	879	
	5943	11700							
	5214	11700							
	4618	11700							
	3992	11700							
	3540	11700							
	<b>0.44</b>	3098	11700	<b>S</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	60	879
				<b>SF</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	69	879
				<b>SA</b>	<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	59	879
<b>SAF</b>				<b>77R37</b>	<b>DRN</b>	<b>63M4</b>	66	879	

<b>M<sub>a max</sub> = 1400 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
3.7	389	11800	S	77pR37	DRN	80M4	67	879
			SF	77pR37	DRN	80M4	77	879
			SA	77pR37	DRN	80M4	66	879
			SAF	77pR37	DRN	80M4	73	879
4.4	327	11800	S	77pR37	DRN	90S4	73	879
			SF	77pR37	DRN	90S4	82	879
			SA	77pR37	DRN	90S4	72	879
			SAF	77pR37	DRN	90S4	79	879

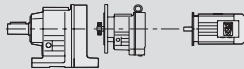

<b>M<sub>a max</sub> = 1440 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.50	2753	11500	S	77pR37	DRN	63MS4	59	879
			SF	77pR37	DRN	63MS4	68	879
			SA	77pR37	DRN	63MS4	58	879
			SAF	77pR37	DRN	63MS4	65	879
0.58	2374	11500	S	77pR37	DRN	63M4	60	879
			SF	77pR37	DRN	63M4	69	879
			SA	77pR37	DRN	63M4	59	879
			SAF	77pR37	DRN	63M4	66	879
0.66	2083	11500	S	77pR37	DRN	63M4	60	879
			SF	77pR37	DRN	63M4	70	879
			SA	77pR37	DRN	63M4	60	879
			SAF	77pR37	DRN	63M4	66	879
0.76	1813	11500	S	77pR37	DRN	63M4	60	879
			SF	77pR37	DRN	63M4	70	879
			SA	77pR37	DRN	63M4	60	879
			SAF	77pR37	DRN	63M4	66	879
0.88	1600	11500	S	77pR37	DRN	71MS4	60	879
			SF	77pR37	DRN	71MS4	70	879
			SA	77pR37	DRN	71MS4	60	879
			SAF	77pR37	DRN	71MS4	66	879
1.0	1404	11500	S	77pR37	DRN	71MS4	60	879
			SF	77pR37	DRN	71MS4	70	879
			SA	77pR37	DRN	71MS4	60	879
			SAF	77pR37	DRN	71MS4	66	879
1.1	1245	11500	S	77pR37	DRN	71MS4	60	879
			SF	77pR37	DRN	71MS4	70	879
			SA	77pR37	DRN	71MS4	60	879
			SAF	77pR37	DRN	71MS4	66	879
1.3	1100	11500	S	77pR37	DRN	71M4	61	879
			SF	77pR37	DRN	71M4	71	879
			SA	77pR37	DRN	71M4	61	879
			SAF	77pR37	DRN	71M4	67	879
1.5	954	11500	S	77pR37	DRN	71M4	61	879
			SF	77pR37	DRN	71M4	71	879
			SA	77pR37	DRN	71M4	61	879
			SAF	77pR37	DRN	71M4	67	879
1.7	837	11500	S	77pR37	DRN	71M4	61	879
			SF	77pR37	DRN	71M4	71	879
			SA	77pR37	DRN	71M4	61	879
			SAF	77pR37	DRN	71M4	67	879
2.5	574	11500	S	77pR37	DRN	80MK4	63	879
			SF	77pR37	DRN	80MK4	73	879
			SA	77pR37	DRN	80MK4	63	879
			SAF	77pR37	DRN	80MK4	70	879
2.9	499	11600	S	77pR37	DRN	80M4	67	879
			SF	77pR37	DRN	80M4	77	879
			SA	77pR37	DRN	80M4	66	879
			SAF	77pR37	DRN	80M4	73	879
3.3	438	11600	S	77pR37	DRN	80M4	67	879
			SF	77pR37	DRN	80M4	77	879
			SA	77pR37	DRN	80M4	66	879
			SAF	77pR37	DRN	80M4	73	879
5.0	289	11700	S	77pR37	DRN	90S4	73	879
			SF	77pR37	DRN	90S4	82	879
			SA	77pR37	DRN	90S4	72	879
			SAF	77pR37	DRN	90S4	79	879
5.8	250	11700	S	77pR37	DRN	90S4	73	879
			SF	77pR37	DRN	90S4	82	879
			SA	77pR37	DRN	90S4	72	879
			SAF	77pR37	DRN	90S4	79	879
6.7	219	11700	S	77pR37	DRN	90L4	76	879
			SF	77pR37	DRN	90L4	86	879
			SA	77pR37	DRN	90L4	75	879
			SAF	77pR37	DRN	90L4	82	879

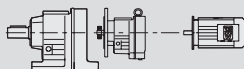

<b>M<sub>a max</sub> = 1450 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.79	1745	11500	S	77pR37	DRN	63M4	60	879
			SF	77pR37	DRN	63M4	69	879
			SA	77pR37	DRN	63M4	59	879
			SAF	77pR37	DRN	63M4	66	879
2.0	714	11500	S	77pR37	DRN	80MK4	63	879
			SF	77pR37	DRN	80MK4	73	879
			SA	77pR37	DRN	80MK4	63	879
			SAF	77pR37	DRN	80MK4	70	879
2.2	637	11500	S	77pR37	DRN	80MK4	63	879
			SF	77pR37	DRN	80MK4	73	879
			SA	77pR37	DRN	80MK4	63	879
			SAF	77pR37	DRN	80MK4	70	879

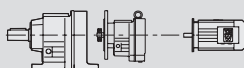

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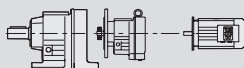

## Helical-worm gearmotors

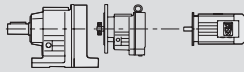

S..R..DRN.. selection tables for low output speeds in Nm

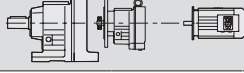

<b>M<sub>a max</sub> = 1500 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.05	25493	12200						
0.06	21787	12200						
0.07	19907	12200						
0.08	17013	12200						
0.09	14668	12200						
0.11	13110	12200						
0.12	11569	12200	S	77pR37	DRN	63MS4	59	879
0.14	9887	12200	SF	77pR37	DRN	63MS4	68	879
0.16	8817	12200	SA	77pR37	DRN	63MS4	58	879
0.18	7735	12200	SAF	77pR37	DRN	63MS4	65	879
0.20	6735	12200						
0.23	5943	12200						
0.26	5214	12200						
0.30	4618	12200						
0.35	3992	12200						
0.39	3540	12200	S	77pR37	DRN	63M4	60	879
0.44	3098	12200	SF	77pR37	DRN	63M4	69	879
			SA	77pR37	DRN	63M4	59	879
			SAF	77pR37	DRN	63M4	66	879

<b>M<sub>a max</sub> = 1980 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
5.7	255	28400	S	87R57	DRN	100LS4	130	879
6.5	222	28400	SF	87R57	DRN	100LS4	150	879
7.1	205	28400	SA	87R57	DRN	100LS4	125	879
			SAF	87R57	DRN	100LS4	145	879

<b>M<sub>a max</sub> = 2400 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
4.5	323	27700	S	87R57	DRN	100LS4	130	879
5.2	281	27700	SF	87R57	DRN	100LS4	150	879
			SA	87R57	DRN	100LS4	125	879
			SAF	87R57	DRN	100LS4	145	879

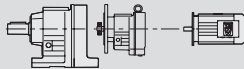

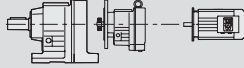

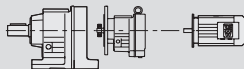

<b>M<sub>a max</sub> = 2450 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
3.4	435	27600	S	87R57	DRN	90L4	125	879
			SF	87R57	DRN	90L4	145	879
			SA	87R57	DRN	90L4	125	879
			SAF	87R57	DRN	90L4	140	879
3.8	378	27600	S	87R57	DRN	100LS4	130	879
			SF	87R57	DRN	100LS4	150	879
			SA	87R57	DRN	100LS4	125	879
			SAF	87R57	DRN	100LS4	145	879

<b>M<sub>a max</sub> = 2500 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.05	25987	27500						
0.06	23940	27500						
0.07	20568	27500						
0.08	18265	27500						
0.08	16774	27500	S	87R57	DRN	63MS4	110	879
0.09	14820	27500	SF	87R57	DRN	63MS4	130	879
0.10	13160	27500	SA	87R57	DRN	63MS4	105	879
0.12	11200	27500	SAF	87R57	DRN	63MS4	120	879
0.14	9904	27500						
0.16	8549	27500						
0.18	7643	27500						
0.21	6706	27500						
0.23	5875	27500	S	87R57	DRN	63M4	110	879
0.27	5187	27500	SF	87R57	DRN	63M4	130	879
0.30	4606	27500	SA	87R57	DRN	63M4	105	879
			SAF	87R57	DRN	63M4	125	879
0.36	3872	27500	S	87R57	DRN	71MS4	110	879
			SF	87R57	DRN	71MS4	130	879
			SA	87R57	DRN	71MS4	105	879
			SAF	87R57	DRN	71MS4	125	879
0.40	3475	27500	S	87R57	DRN	71MS4	110	879
0.48	2905	27500	SF	87R57	DRN	71MS4	130	879
			SA	87R57	DRN	71MS4	105	879
			SAF	87R57	DRN	71MS4	120	879
0.55	2586	27500	S	87R57	DRN	71M4	110	879
0.61	2335	27500	SF	87R57	DRN	71M4	130	879
0.69	2054	27500	SA	87R57	DRN	71M4	105	879
			SAF	87R57	DRN	71M4	125	879
0.79	1824	27500	S	87R57	DRN	80MK4	110	879
0.88	1631	27500	SF	87R57	DRN	80MK4	135	879
1.1	1332	27500	SA	87R57	DRN	80MK4	110	879
			SAF	87R57	DRN	80MK4	125	879
1.2	1191	27500	S	87R57	DRN	80M4	115	879
1.4	1032	27500	SF	87R57	DRN	80M4	135	879
1.6	930	27500	SA	87R57	DRN	80M4	115	879
			SAF	87R57	DRN	80M4	130	879
1.8	831	27500	S	87R57	DRN	90S4	120	879
2.0	719	27500	SF	87R57	DRN	90S4	145	879
2.3	624	27500	SA	87R57	DRN	90S4	120	879
			SAF	87R57	DRN	90S4	135	879
2.6	558	27500	S	87R57	DRN	90L4	125	879
3.0	485	27500	SF	87R57	DRN	90L4	145	879
			SA	87R57	DRN	90L4	125	879
			SAF	87R57	DRN	90L4	140	879

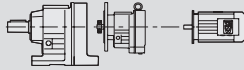

<b>M<sub>a max</sub> = 2590 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
5.7	255	27000	S	87pR57	DRN	100LS4	130	879
			SF	87pR57	DRN	100LS4	150	879
			SA	87pR57	DRN	100LS4	125	879
			SAF	87pR57	DRN	100LS4	145	879
7.1	205	27100	S	87pR57	DRN	100L4	135	879
			SF	87pR57	DRN	100L4	160	879
			SA	87pR57	DRN	100L4	135	879
			SAF	87pR57	DRN	100L4	150	879

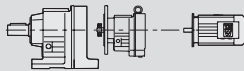

## Helical-worm gearmotors

S..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 2660 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
6.5	222	26000	S	87pR57	DRN	100LS4	130	879
			SF	87pR57	DRN	100LS4	150	879
			SA	87pR57	DRN	100LS4	125	879
			SAF	87pR57	DRN	100LS4	145	879
<b>M<sub>a max</sub> = 2900 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.14	9904	23200	S	87pR57	DRN	63MS4	110	879
			SF	87pR57	DRN	63MS4	130	879
			SA	87pR57	DRN	63MS4	105	879
			SAF	87pR57	DRN	63MS4	120	879
3.4	435	23200	S	87pR57	DRN	90L4	125	879
			SF	87pR57	DRN	90L4	145	879
			SA	87pR57	DRN	90L4	125	879
			SAF	87pR57	DRN	90L4	140	879
3.8	378	23200	S	87pR57	DRN	100LS4	130	879
			SF	87pR57	DRN	100LS4	150	879
			SA	87pR57	DRN	100LS4	125	879
			SAF	87pR57	DRN	100LS4	145	879
4.5	323	23200	S	87pR57	DRN	100LS4	130	879
			SF	87pR57	DRN	100LS4	150	879
			SA	87pR57	DRN	100LS4	125	879
			SAF	87pR57	DRN	100LS4	145	879
5.2	281	23200	S	87pR57	DRN	100LS4	130	879
			SF	87pR57	DRN	100LS4	150	879
			SA	87pR57	DRN	100LS4	125	879
			SAF	87pR57	DRN	100LS4	145	879
<b>M<sub>a max</sub> = 2950 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.18	7643	21600	S	87pR57	DRN	63MS4	110	879
			SF	87pR57	DRN	63MS4	130	879
			SA	87pR57	DRN	63MS4	105	879
			SAF	87pR57	DRN	63MS4	120	879
0.23	5875	21600	S	87pR57	DRN	63M4	110	879
			SF	87pR57	DRN	63M4	130	879
			SA	87pR57	DRN	63M4	105	879
			SAF	87pR57	DRN	63M4	125	879
0.36	3872	21600	S	87pR57	DRN	71MS4	110	879
			SF	87pR57	DRN	71MS4	130	879
			SA	87pR57	DRN	71MS4	105	879
			SAF	87pR57	DRN	71MS4	125	879
0.49	2905	21600	S	87pR57	DRN	71M4	110	879
			SF	87pR57	DRN	71M4	130	879
			SA	87pR57	DRN	71M4	105	879
			SAF	87pR57	DRN	71M4	125	879
0.88	1631	21600	S	87pR57	DRN	80MK4	110	879
			SF	87pR57	DRN	80MK4	135	879
			SA	87pR57	DRN	80MK4	110	879
			SAF	87pR57	DRN	80MK4	125	879
1.2	1191	21600	S	87pR57	DRN	80M4	115	879
			SF	87pR57	DRN	80M4	135	879
			SA	87pR57	DRN	80M4	115	879
			SAF	87pR57	DRN	80M4	130	879
1.4	1032	21600	S	87pR57	DRN	80M4	115	879
			SF	87pR57	DRN	80M4	135	879
			SA	87pR57	DRN	80M4	115	879
			SAF	87pR57	DRN	80M4	130	879
1.8	831	21600	S	87pR57	DRN	90S4	120	879
			SF	87pR57	DRN	90S4	145	879
			SA	87pR57	DRN	90S4	120	879
			SAF	87pR57	DRN	90S4	135	879
2.6	558	21600	S	87pR57	DRN	90L4	125	879
			SF	87pR57	DRN	90L4	145	879
			SA	87pR57	DRN	90L4	125	879
			SAF	87pR57	DRN	90L4	140	879
3.0	485	21600	S	87pR57	DRN	90L4	125	879
			SF	87pR57	DRN	90L4	145	879
			SA	87pR57	DRN	90L4	125	879
			SAF	87pR57	DRN	90L4	140	879



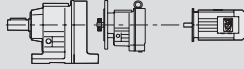

<b>M<sub>a max</sub> = 3000 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.05	25987	19800						
0.06	23940	19800						
0.07	20568	19800						
0.08	18265	19800	S	87pR57	DRN	63MS4	110	879
0.08	16774	19800	SF	87pR57	DRN	63MS4	130	879
0.09	14820	19800	SA	87pR57	DRN	63MS4	105	879
0.10	13160	19800	SAF	87pR57	DRN	63MS4	120	879
0.12	11200	19800						
0.16	8549	19800						
0.21	6706	19800	S	87pR57	DRN	63M4	110	879
0.27	5187	19800	SF	87pR57	DRN	63M4	130	879
			SA	87pR57	DRN	63M4	105	879
			SAF	87pR57	DRN	63M4	125	879
0.31	4606	19800	S	87pR57	DRN	71MS4	110	879
			SF	87pR57	DRN	71MS4	130	879
			SA	87pR57	DRN	71MS4	105	879
			SAF	87pR57	DRN	71MS4	125	879
0.40	3475	19800	S	87pR57	DRN	71MS4	110	879
			SF	87pR57	DRN	71MS4	130	879
			SA	87pR57	DRN	71MS4	105	879
			SAF	87pR57	DRN	71MS4	120	879
0.55	2586	19800	S	87pR57	DRN	71M4	110	879
0.61	2335	19800	SF	87pR57	DRN	71M4	130	879
			SA	87pR57	DRN	71M4	105	879
			SAF	87pR57	DRN	71M4	125	879
0.70	2054	19800	S	87pR57	DRN	80MK4	110	879
0.79	1824	19800	SF	87pR57	DRN	80MK4	135	879
1.1	1332	19800	SA	87pR57	DRN	80MK4	110	879
			SAF	87pR57	DRN	80MK4	125	879
1.6	930	19800	S	87pR57	DRN	80M4	115	879
			SF	87pR57	DRN	80M4	135	879
			SA	87pR57	DRN	80M4	115	879
			SAF	87pR57	DRN	80M4	130	879
2.0	719	19800	S	87pR57	DRN	90S4	120	879
2.3	624	19800	SF	87pR57	DRN	90S4	145	879
			SA	87pR57	DRN	90S4	120	879
			SAF	87pR57	DRN	90S4	135	879

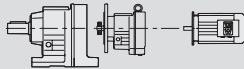

<b>M<sub>a max</sub> = 4200 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.04	33818	25200						
0.04	31154	25200						
0.05	27847	25200						
0.06	24641	25200						
0.06	21537	25200	S	97R57	DRN	63MS4	170	879
0.07	18749	25200	SF	97R57	DRN	63MS4	200	879
0.09	16233	25200	SA	97R57	DRN	63MS4	165	879
0.09	14576	25200	SAF	97R57	DRN	63MS4	190	879
0.11	12752	25200						
0.12	11267	25200						
0.14	10078	25200						
0.16	8608	25200	S	97R57	DRN	63M4	170	879
0.18	7554	25200	SF	97R57	DRN	63M4	200	879
0.21	6640	20300	SA	97R57	DRN	63M4	165	879
0.24	5780	20300	SAF	97R57	DRN	63M4	190	879
0.28	4937	20300						
0.32	4444	20300	S	97R57	DRN	71MS4	170	879
0.35	4017	20300	SF	97R57	DRN	71MS4	200	879
0.41	3453	20300	SA	97R57	DRN	71MS4	165	879
			SAF	97R57	DRN	71MS4	190	879

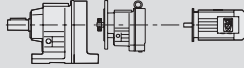

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## Helical-worm gearmotors

S..R..DRN.. selection tables for low output speeds in Nm

<b>M<sub>a max</sub> = 4200 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.46	3108	20300	S	97R57	DRN	71M4	170	879
0.53	2654	20300	SF	97R57	DRN	71M4	205	879
0.61	2329	20300	SA	97R57	DRN	71M4	165	879
			SAF	97R57	DRN	71M4	190	879
0.69	2081	20300	S	97R57	DRN	80MK4	175	879
0.77	1860	20300	SF	97R57	DRN	80MK4	205	879
0.91	1574	20300	SA	97R57	DRN	80MK4	170	879
			SAF	97R57	DRN	80MK4	195	879
1.0	1394	20300	S	97R57	DRN	80M4	175	879
1.2	1223	20300	SF	97R57	DRN	80M4	210	879
			SA	97R57	DRN	80M4	170	879
			SAF	97R57	DRN	80M4	195	879
1.4	1070	20300	S	97R57	DRN	90S4	180	879
1.6	928	20300	SF	97R57	DRN	90S4	215	879
1.8	824	20300	SA	97R57	DRN	90S4	175	879
			SAF	97R57	DRN	90S4	200	879
2.0	714	25400	S	97R57	DRN	90L4	185	879
2.3	626	20300	SF	97R57	DRN	90L4	220	879
			SA	97R57	DRN	90L4	180	879
			SAF	97R57	DRN	90L4	205	879
2.7	538	20400	S	97R57	DRN	100LS4	190	879
3.0	484	20400	SF	97R57	DRN	100LS4	220	879
3.5	420	20400	SA	97R57	DRN	100LS4	185	879
3.9	376	20500	SAF	97R57	DRN	100LS4	210	879
4.5	327	20500	S	97R57	DRN	100L4	195	879
5.1	287	20600	SF	97R57	DRN	100L4	230	879
			SA	97R57	DRN	100L4	190	879
			SAF	97R57	DRN	100L4	215	879
5.8	252	20600	S	97R57	DRN	112M4	205	879
6.7	219	20700	SF	97R57	DRN	112M4	240	879
7.1	205	20700	SA	97R57	DRN	112M4	200	879
			SAF	97R57	DRN	112M4	225	879

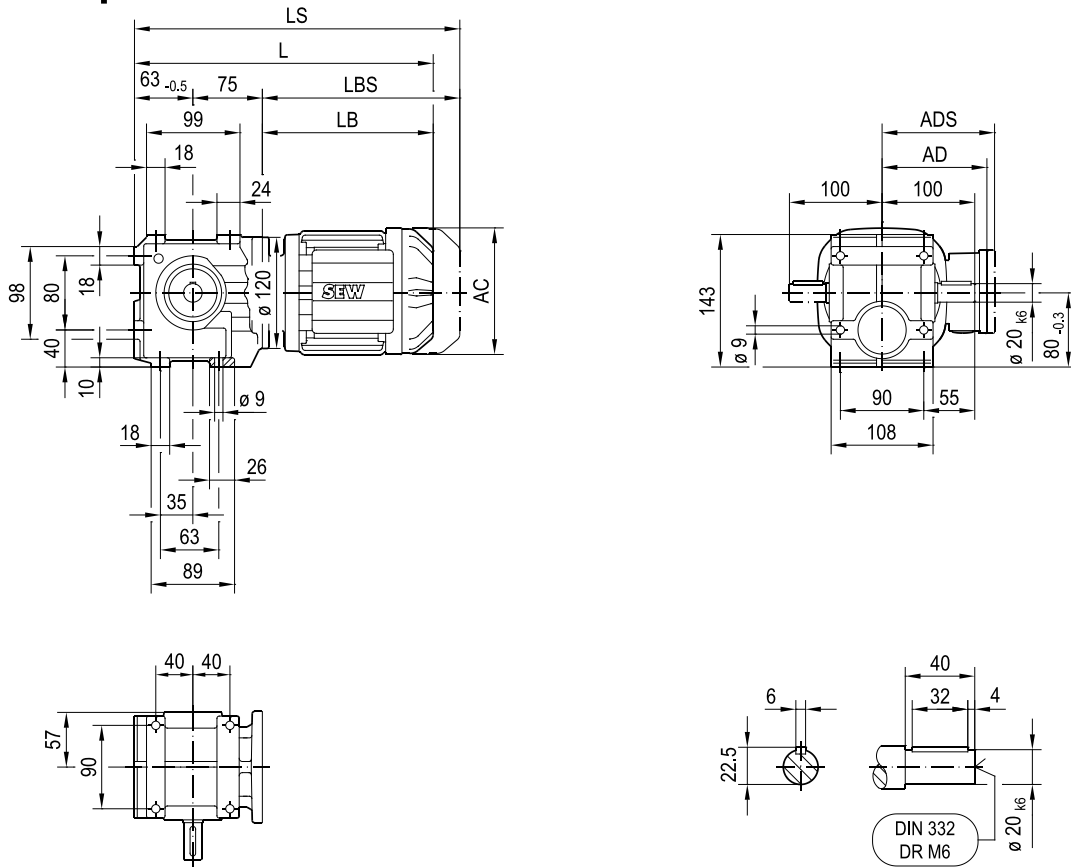
<b>M<sub>a max</sub> = 4300 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.04	33818	23600						
0.04	31154	23600						
0.05	27847	23600						
0.06	24641	23600						
0.06	21537	23600	S	97pR57	DRN	63MS4	170	879
0.07	18749	23600	SF	97pR57	DRN	63MS4	200	879
0.09	16233	23600	SA	97pR57	DRN	63MS4	165	879
0.09	14576	23600	SAF	97pR57	DRN	63MS4	190	879
0.11	12752	23600						
0.12	11267	23600						
0.14	10078	23600						
0.16	8608	23600	S	97pR57	DRN	63M4	170	879
0.18	7554	23600	SF	97pR57	DRN	63M4	200	879
0.21	6640	18700	SA	97pR57	DRN	63M4	165	879
0.24	5780	18700	SAF	97pR57	DRN	63M4	190	879
0.28	4937	18700						
0.32	4444	18700	S	97pR57	DRN	71MS4	170	879
0.35	4017	18700	SF	97pR57	DRN	71MS4	200	879
0.41	3453	18700	SA	97pR57	DRN	71MS4	165	879
			SAF	97pR57	DRN	71MS4	190	879
0.46	3108	18700	S	97pR57	DRN	71M4	170	879
0.53	2654	18700	SF	97pR57	DRN	71M4	205	879
0.61	2329	18700	SA	97pR57	DRN	71M4	165	879
			SAF	97pR57	DRN	71M4	190	879

<b>M<sub>a max</sub> = 4300 Nm</b>								
<b>n<sub>a</sub> min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup> N</b>					<b>m kg</b>	
<b>0.69</b>	2081	18700	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>80MK4</b>	175	879
<b>0.77</b>	1860	18700	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>80MK4</b>	205	879
<b>0.91</b>	1574	18700	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>80MK4</b>	170	879
			<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>80MK4</b>	195	879
<b>1.0</b>	1394	18700	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>80M4</b>	175	879
<b>1.2</b>	1223	18700	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>80M4</b>	210	879
			<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>80M4</b>	170	879
			<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>80M4</b>	195	879
<b>1.4</b>	1070	18700	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>90S4</b>	180	879
<b>1.6</b>	928	18700	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>90S4</b>	215	879
<b>1.8</b>	824	18800	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>90S4</b>	175	879
			<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>90S4</b>	200	879
<b>2.0</b>	714	24200	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>90L4</b>	185	879
<b>2.3</b>	626	19000	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>90L4</b>	220	879
<b>2.7</b>	538	19100	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>90L4</b>	180	879
			<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>90L4</b>	205	879
<b>3.0</b>	484	19200	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>100LS4</b>	190	879
<b>3.5</b>	420	19300	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>100LS4</b>	220	879
<b>3.9</b>	376	19400	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>100LS4</b>	185	879
			<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>100LS4</b>	210	879
<b>4.5</b>	327	19400	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>100L4</b>	195	879
<b>5.1</b>	287	19500	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>100L4</b>	230	879
<b>5.8</b>	252	19600	<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>100L4</b>	190	879
			<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>100L4</b>	215	879
<b>6.7</b>	219	19600	<b>S</b>	<b>97pR57</b>	<b>DRN</b>	<b>112M4</b>	205	879
<b>7.1</b>	205	19600	<b>SF</b>	<b>97pR57</b>	<b>DRN</b>	<b>112M4</b>	240	879
			<b>SA</b>	<b>97pR57</b>	<b>DRN</b>	<b>112M4</b>	200	879
			<b>SAF</b>	<b>97pR57</b>	<b>DRN</b>	<b>112M4</b>	225	879

### 11.5 S..DRN.. dimension sheets in mm

02 047 02 16

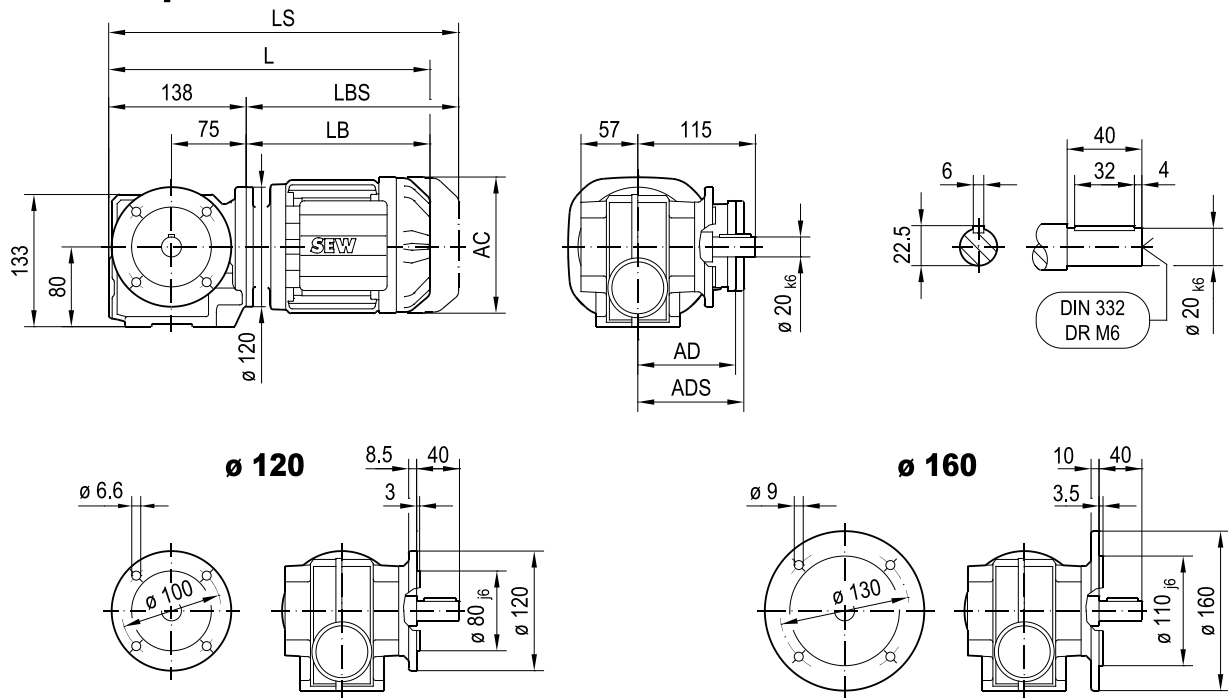
#### S37/S37p..



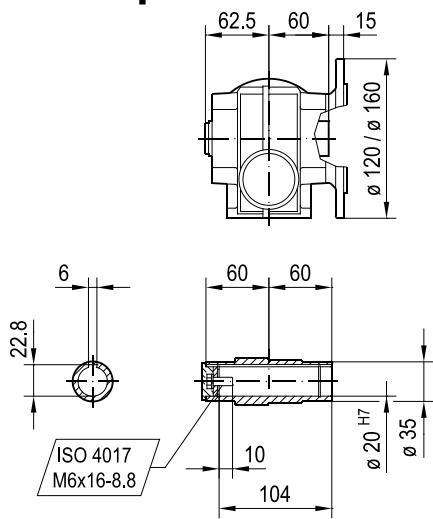
(-> 7.3)	DRN								
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AC	115	115	139	139	156	156	156	179	179
AD	98	98	118	118	128	128	128	140	140
ADS	98	98	129	129	139	139	139	150	150
L	328	342	344	364	375	392	420	421	453
LS	384	398	411	431	456	473	501	515	547
LB	190	204	206	226	237	254	282	283	315
LBS	246	260	273	293	318	335	363	377	409

02 048 02 16

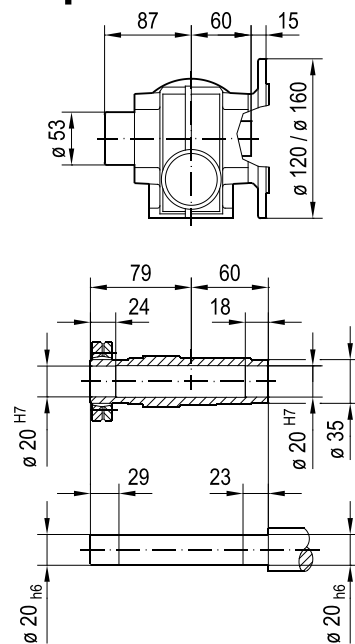
**SF37/SF37p..**



**SAF37/SAF37p..**



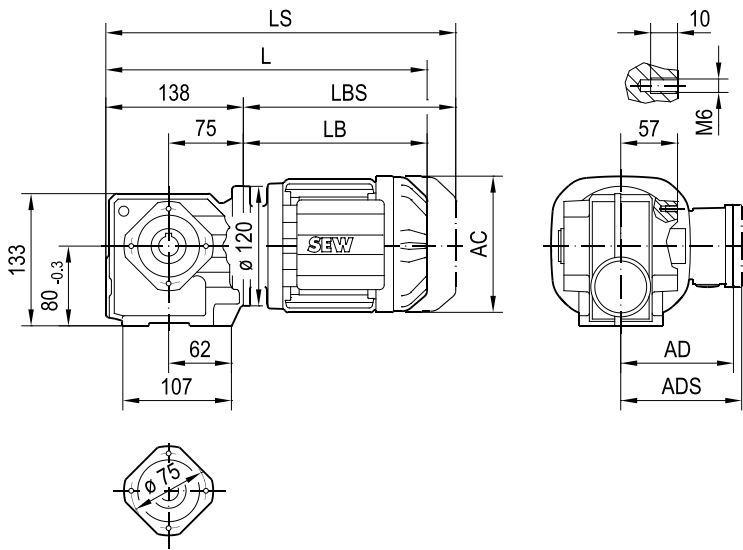
**SHF37/SHF37p..**



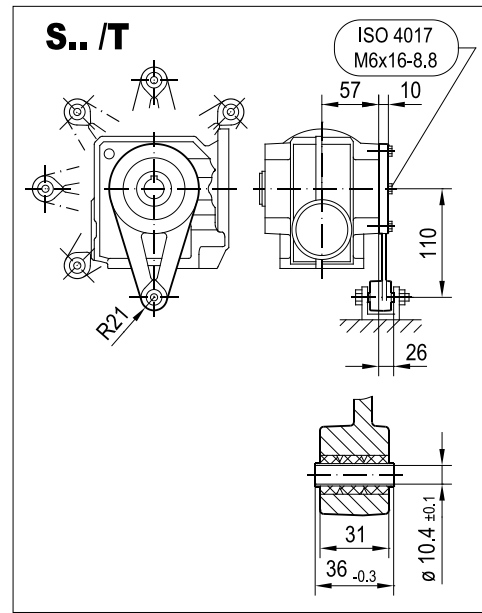
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(- 7.3)	DRN									
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	
AC	115	115	139	139	156	156	156	179	179	
AD	98	98	118	118	128	128	128	140	140	
ADS	98	98	129	129	139	139	139	150	150	
L	328	342	344	364	375	392	420	421	453	
LS	384	398	411	431	456	473	501	515	547	
LB	190	204	206	226	237	254	282	283	315	
LBS	246	260	273	293	318	335	363	377	409	

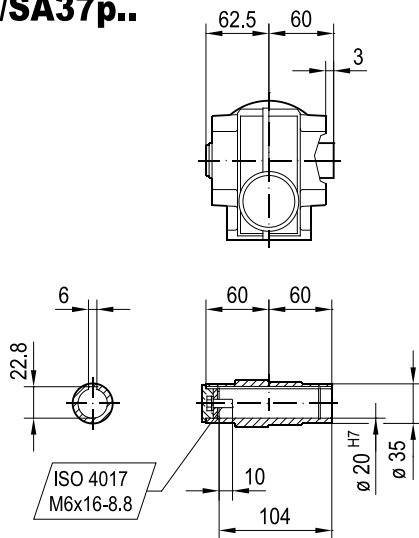
### SA37/SA37p..



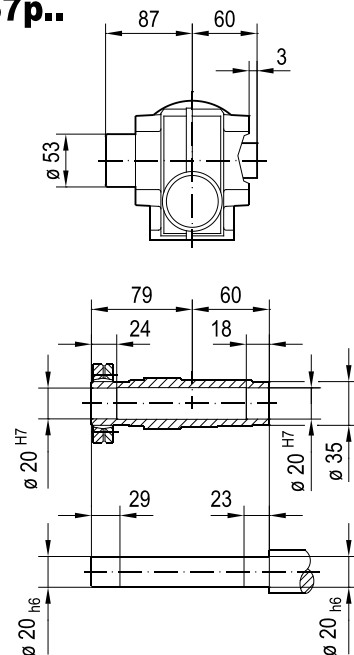
02 049 02 16



### SA37/SA37p..



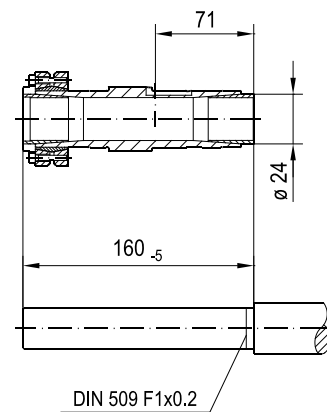
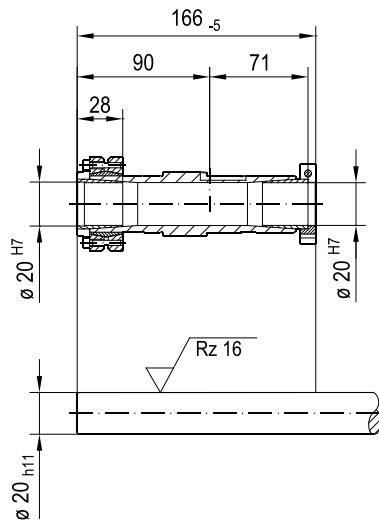
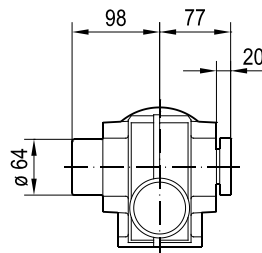
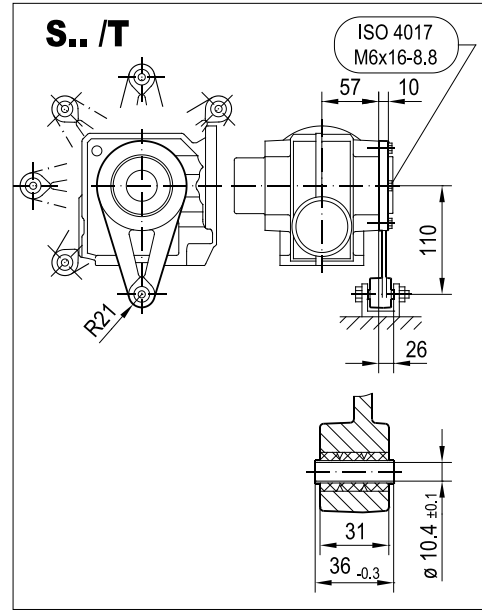
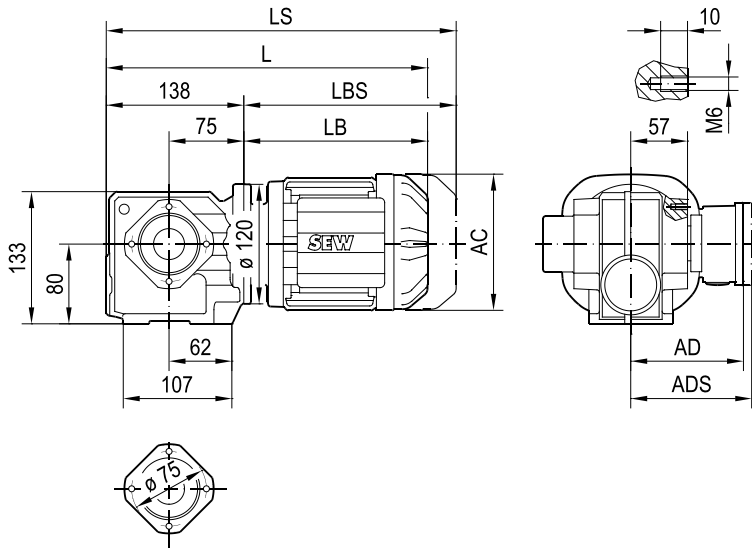
### SH37/SH37p..



(-> 7.3)	DRN									
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AC	115	115	139	139	156	156	156	179	179	
AD	98	98	118	118	128	128	128	140	140	
ADS	98	98	129	129	139	139	139	150	150	
L	328	342	344	364	375	392	420	421	453	
LS	384	398	411	431	456	473	501	515	547	
LB	190	204	206	226	237	254	282	283	315	
LBS	246	260	273	293	318	335	363	377	409	

02 050 02 16

**ST37/ST37p..**

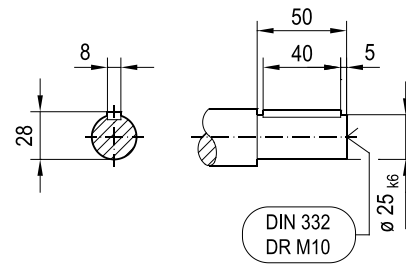
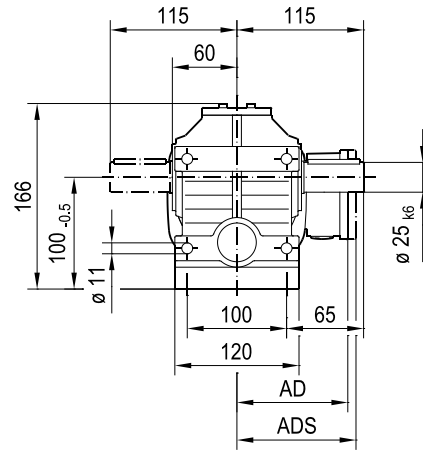
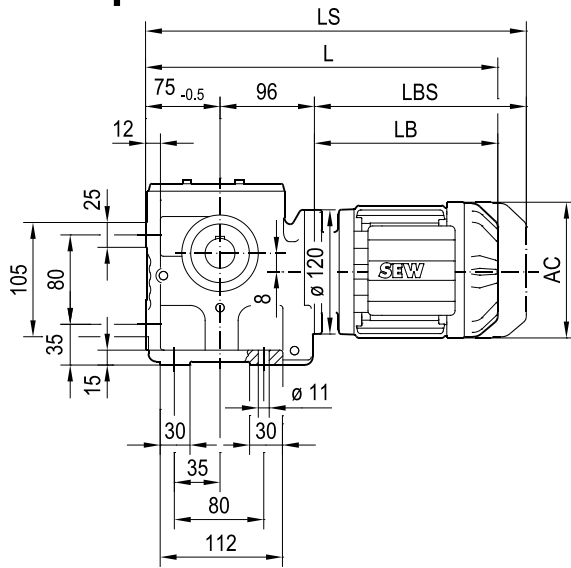


(-> 7.3)	DRN									
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	
AC	115	115	139	139	156	156	156	179	179	
AD	98	98	118	118	128	128	128	140	140	
ADS	98	98	129	129	139	139	139	150	150	
L	328	342	344	364	375	392	420	421	453	
LS	384	398	411	431	456	473	501	515	547	
LB	190	204	206	226	237	254	282	283	315	
LBS	246	260	273	293	318	335	363	377	409	

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02 051 02 16

### S47/S47p..



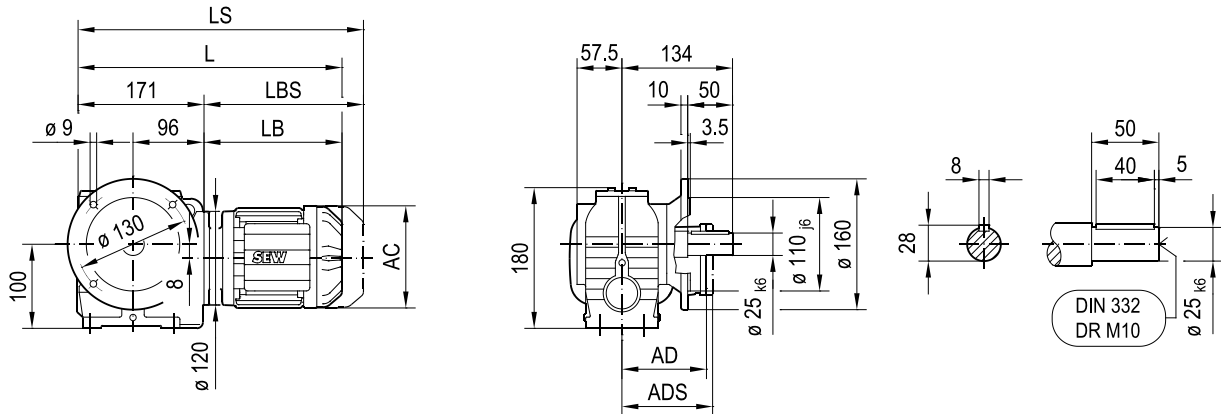
(> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	361	375	377	397	408	425	453	454	486	485	535
LS	417	431	444	464	489	506	534	548	580	579	629
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

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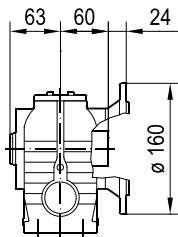


02 052 01 16

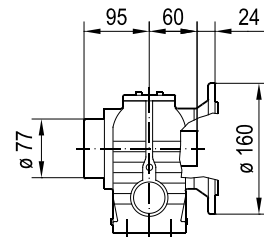
**SF47/SF47p..**



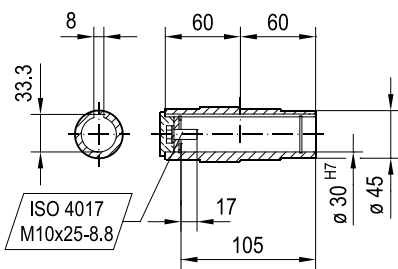
**SAF47/SAF47p..**



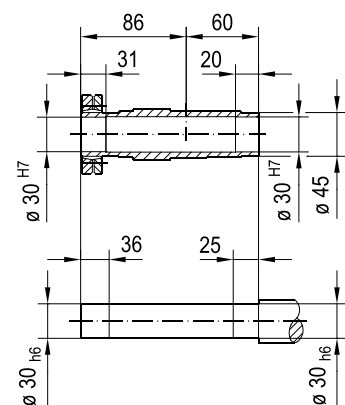
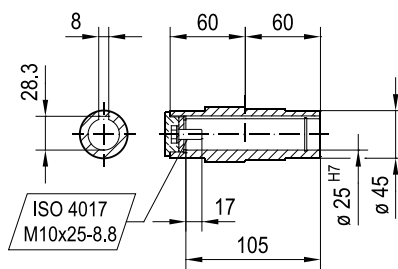
**SHF47/SHF47p..**



**$\phi 30^{H7}$**



**$\phi 25^{H7}$**

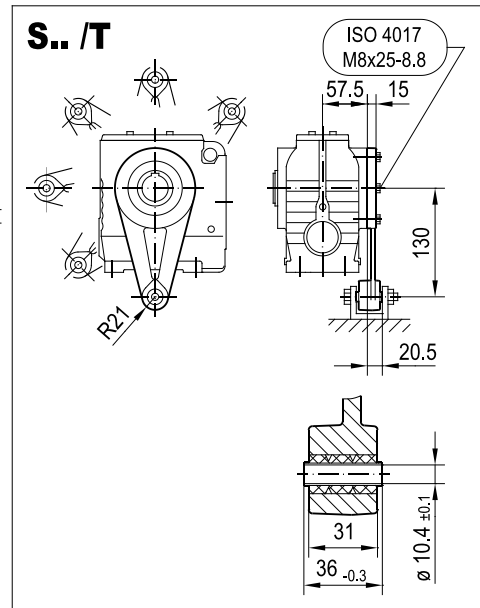
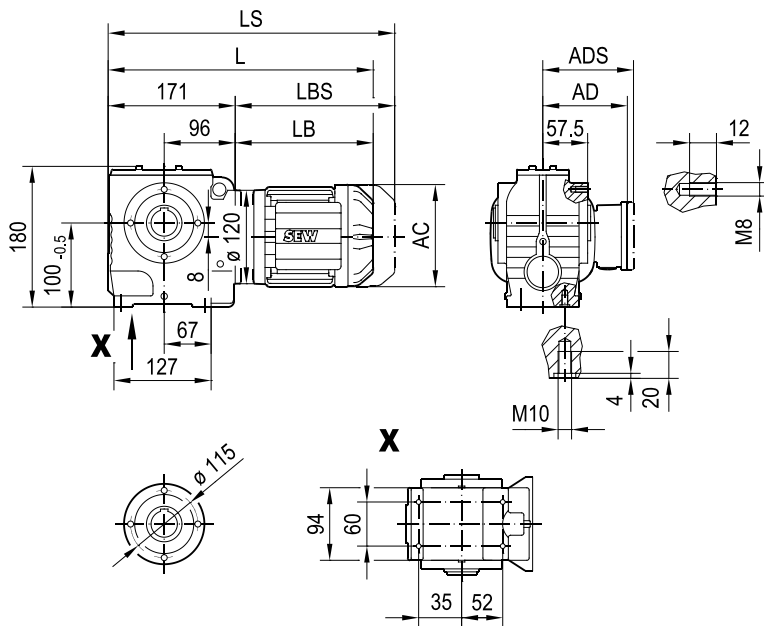


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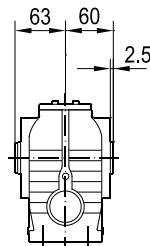
( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	361	375	377	397	408	425	453	454	486	485	535
LS	417	431	444	464	489	506	534	548	580	579	629
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

02 053 01 16

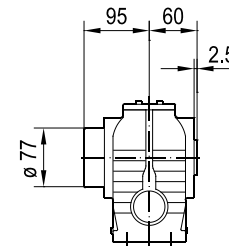
### SA47/SA47p..



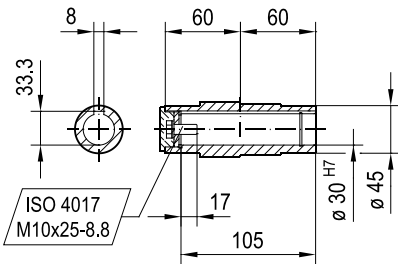
### SA47/SA47p..



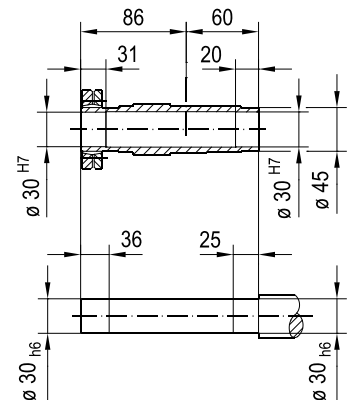
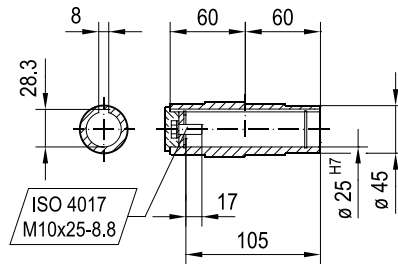
### SH47/SH47p..



### SA47/SA47p..



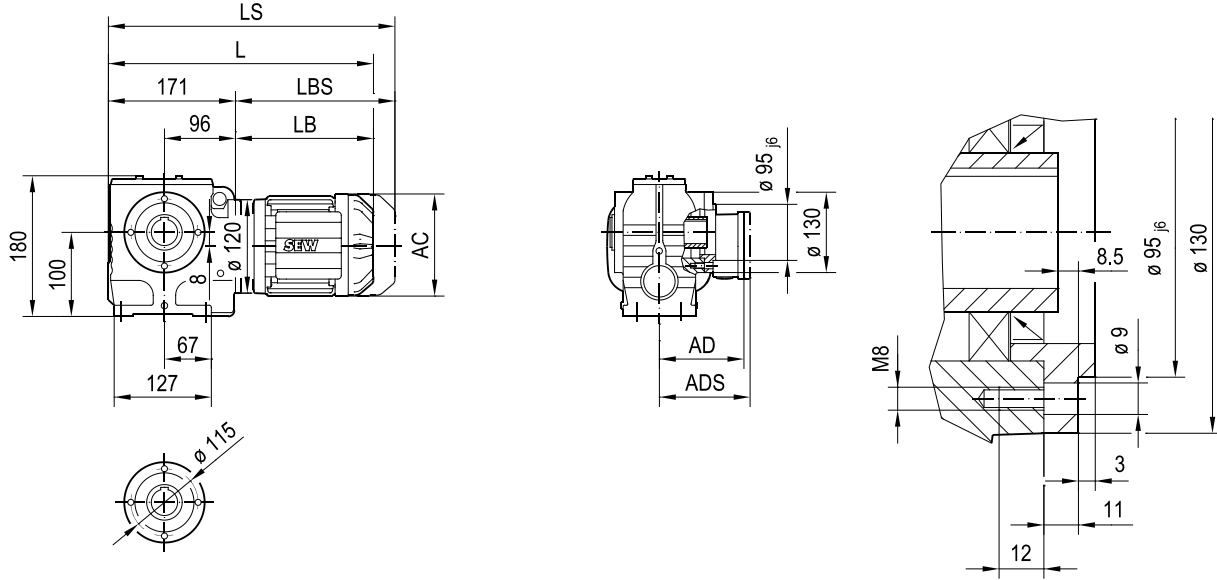
### SA47/SA47p..



(\rightarrow 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	361	375	377	397	408	425	453	454	486	485	535
LS	417	431	444	464	489	506	534	548	580	579	629
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

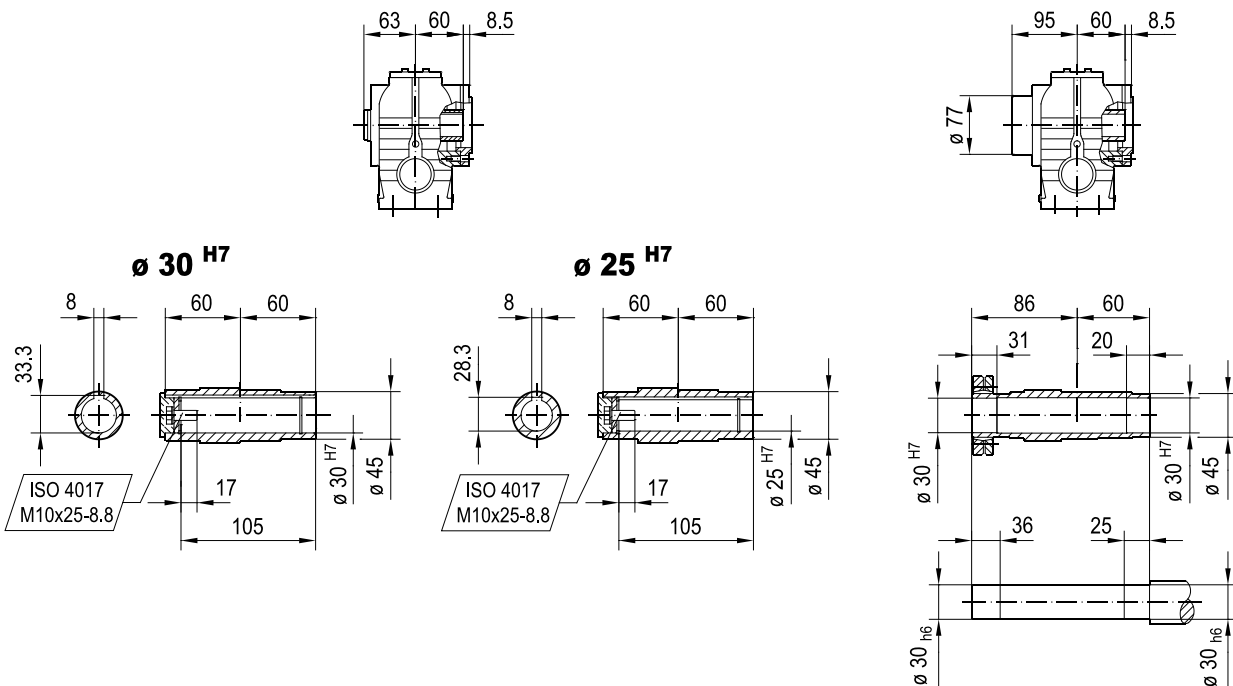
**SAZ47/SAZ47p..**

02 054 01 16



**SAZ47/SAZ47p..**

**SHZ47/SHZ47p..**

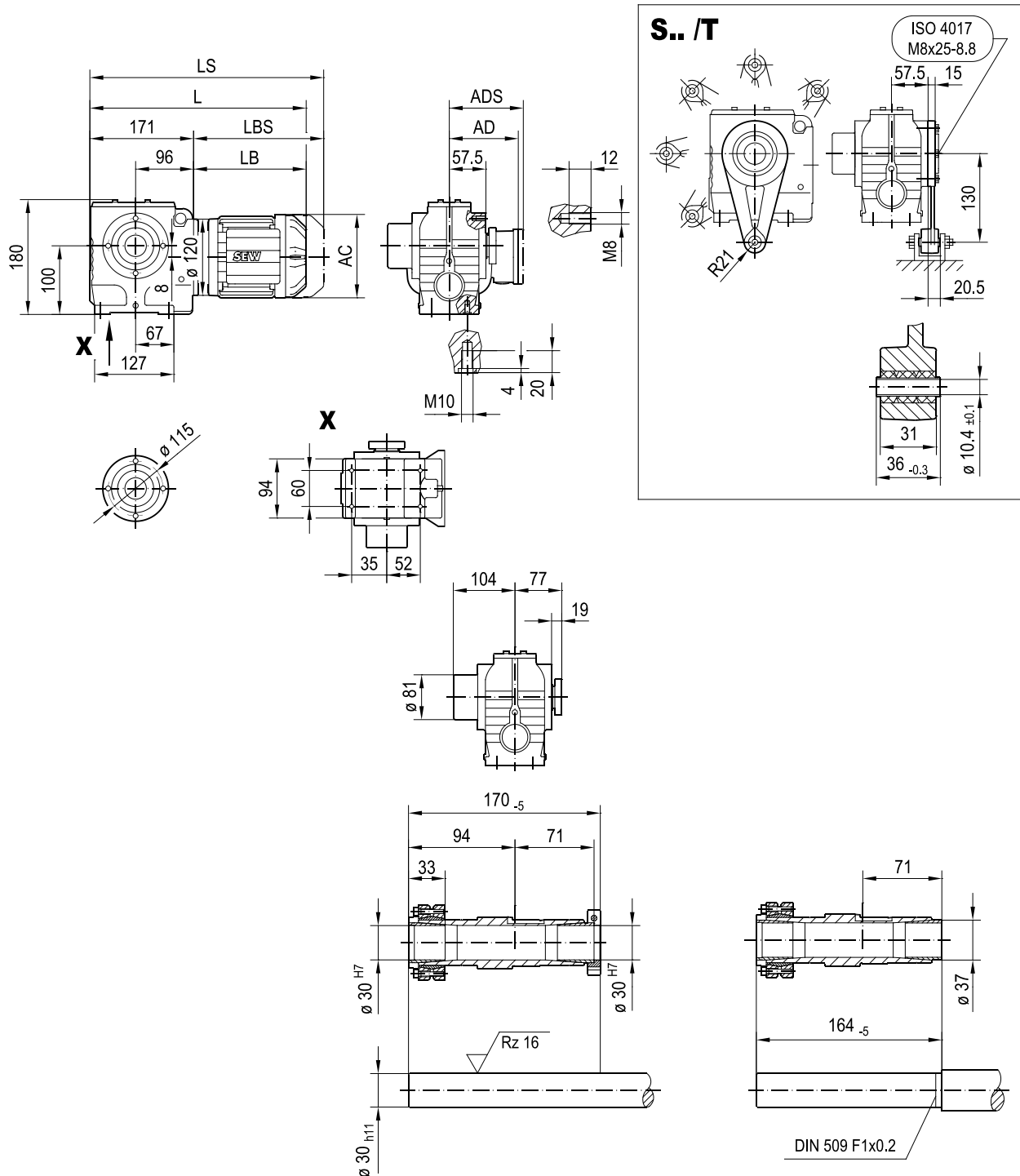


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( $\rightarrow$ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	361	375	377	397	408	425	453	454	486	485	535
LS	417	431	444	464	489	506	534	548	580	579	629
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

02 055 01 16

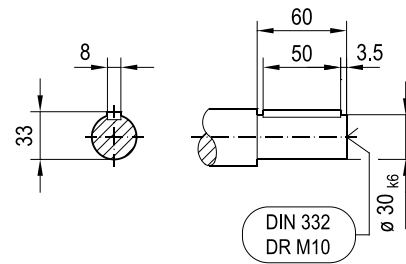
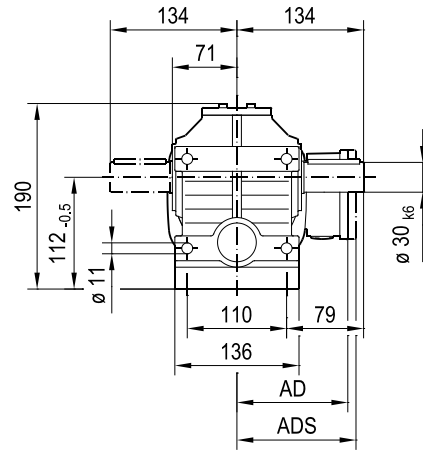
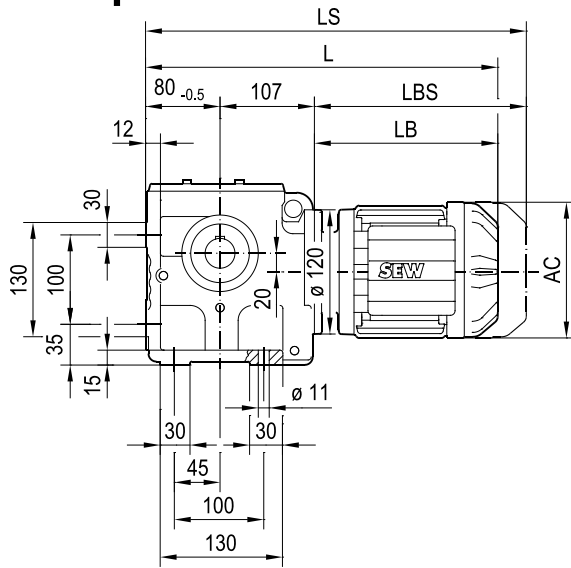
### ST47/ST47p..



(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/M
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	361	375	377	397	408	425	453	454	486	485	535
LS	417	431	444	464	489	506	534	548	580	579	629
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

02 017 01 14

**S57/S57p..**

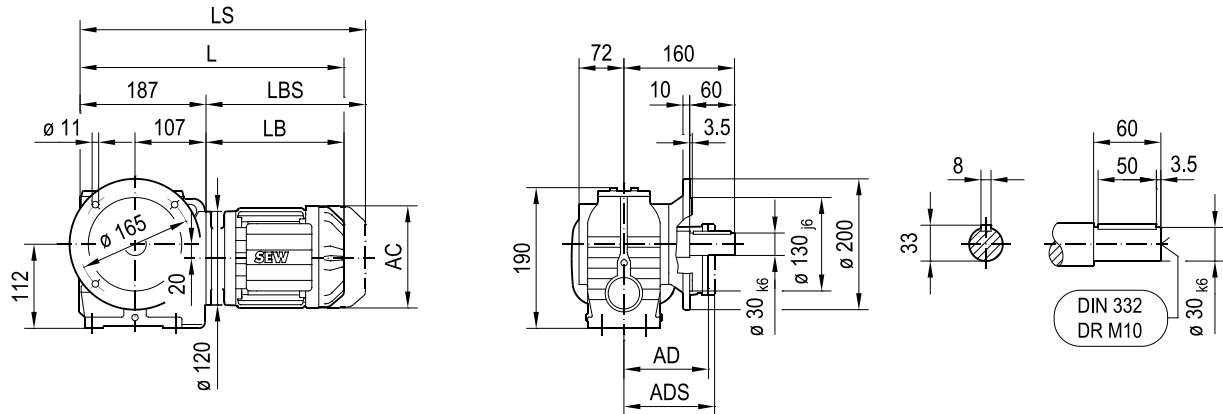


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	377	391	393	413	424	441	469	470	502	501	551
LS	433	447	460	480	505	522	550	564	596	595	645
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

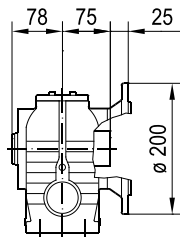
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02 018 02 14

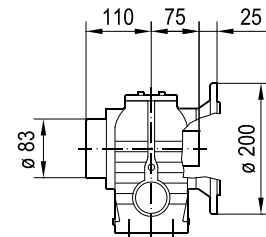
### SF57/SF57p..



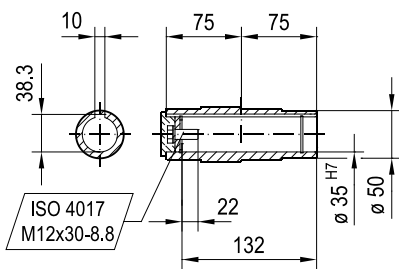
### SAF57/SAF57p..



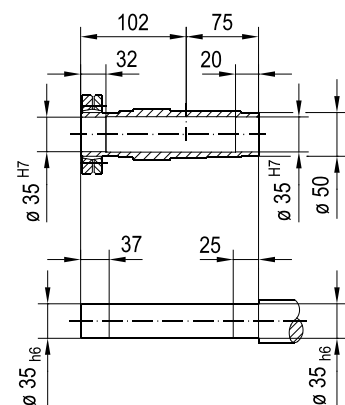
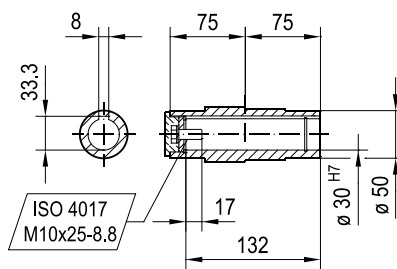
### SHF57/SHF57p..



### $\phi 35$ H7



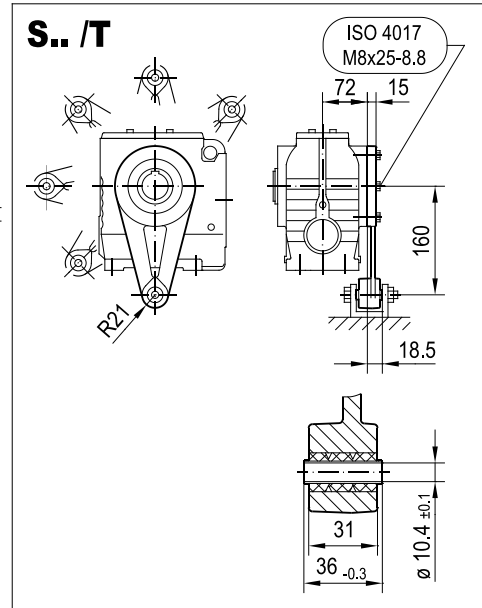
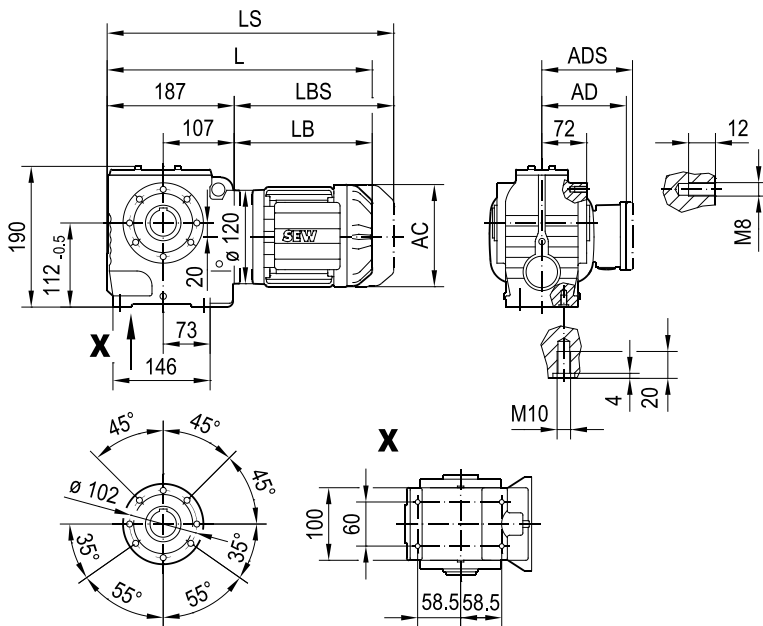
### $\phi 30$ H7



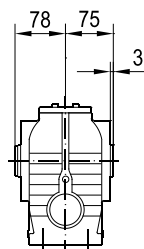
(\(\rightarrow 7.3\))	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	377	391	393	413	424	441	469	470	502	501	551
LS	433	447	460	480	505	522	550	564	596	595	645
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

02 019 02 14

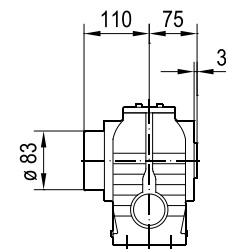
**SA57/SA57p..**



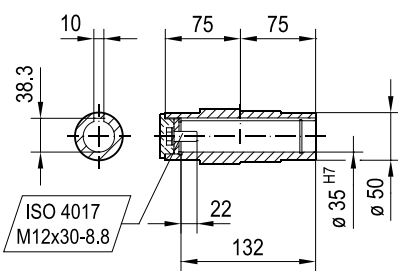
**SA57/SA57p..**



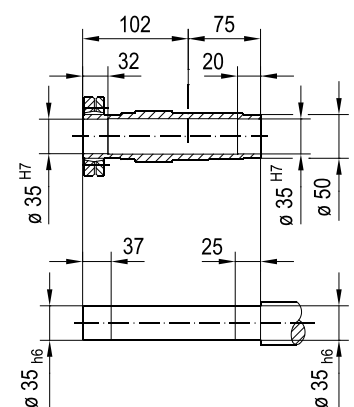
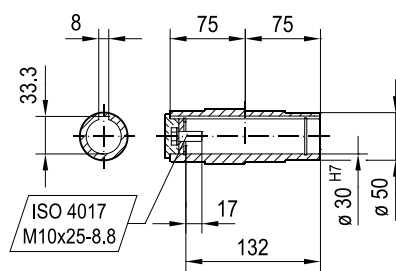
**SH57/SH57p..**



**SA57/SA57p..**



**SH57/SH57p..**

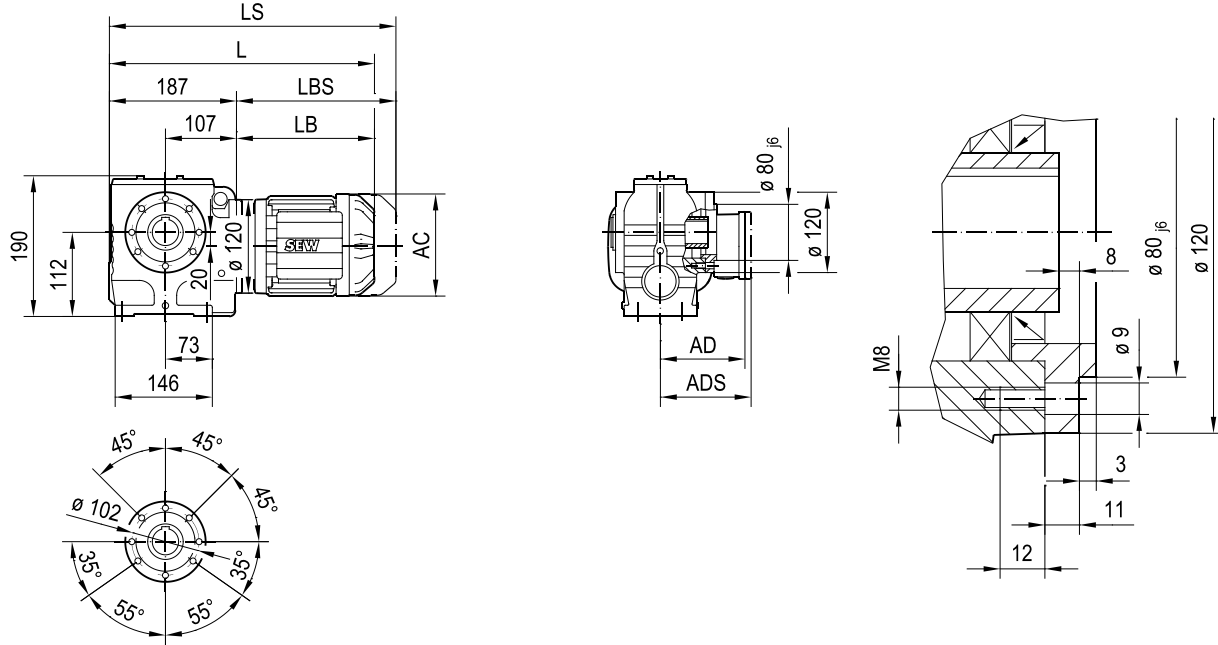


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(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	377	391	393	413	424	441	469	470	502	501	551
LS	433	447	460	480	505	522	550	564	596	595	645
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

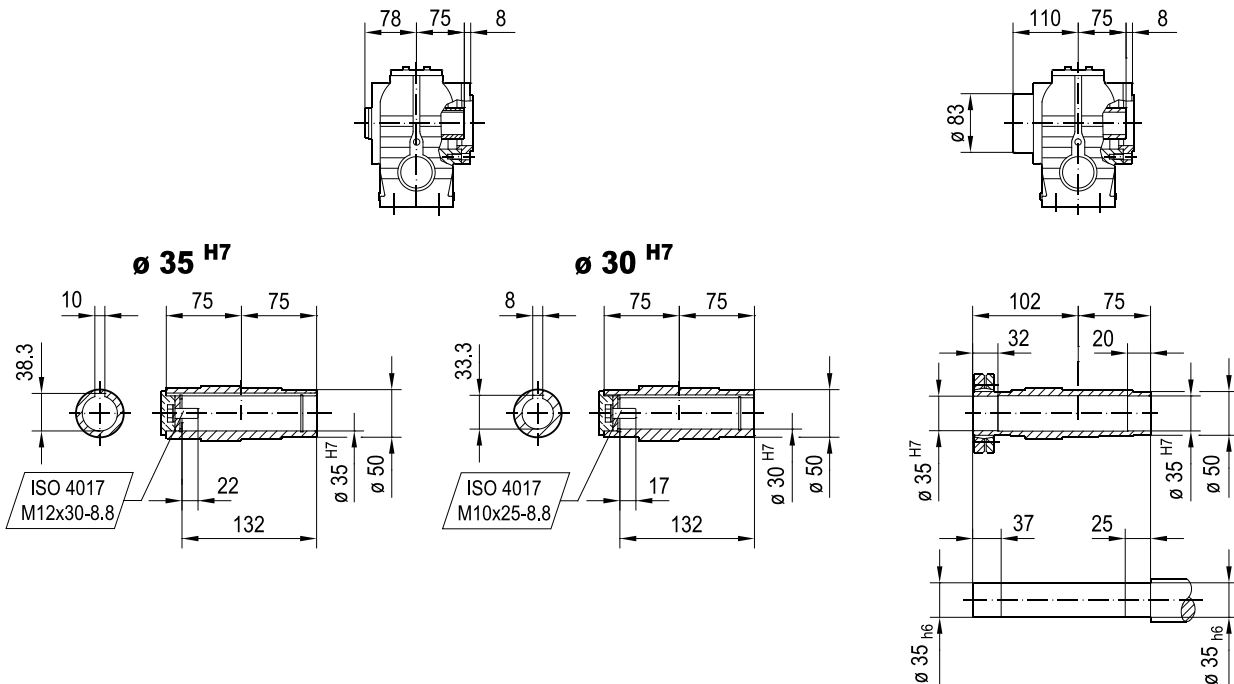
### SAZ57/SAZ57p..

02 020 01 14



### SAZ57/SAZ57p..

### SHZ57/SHZ57p..

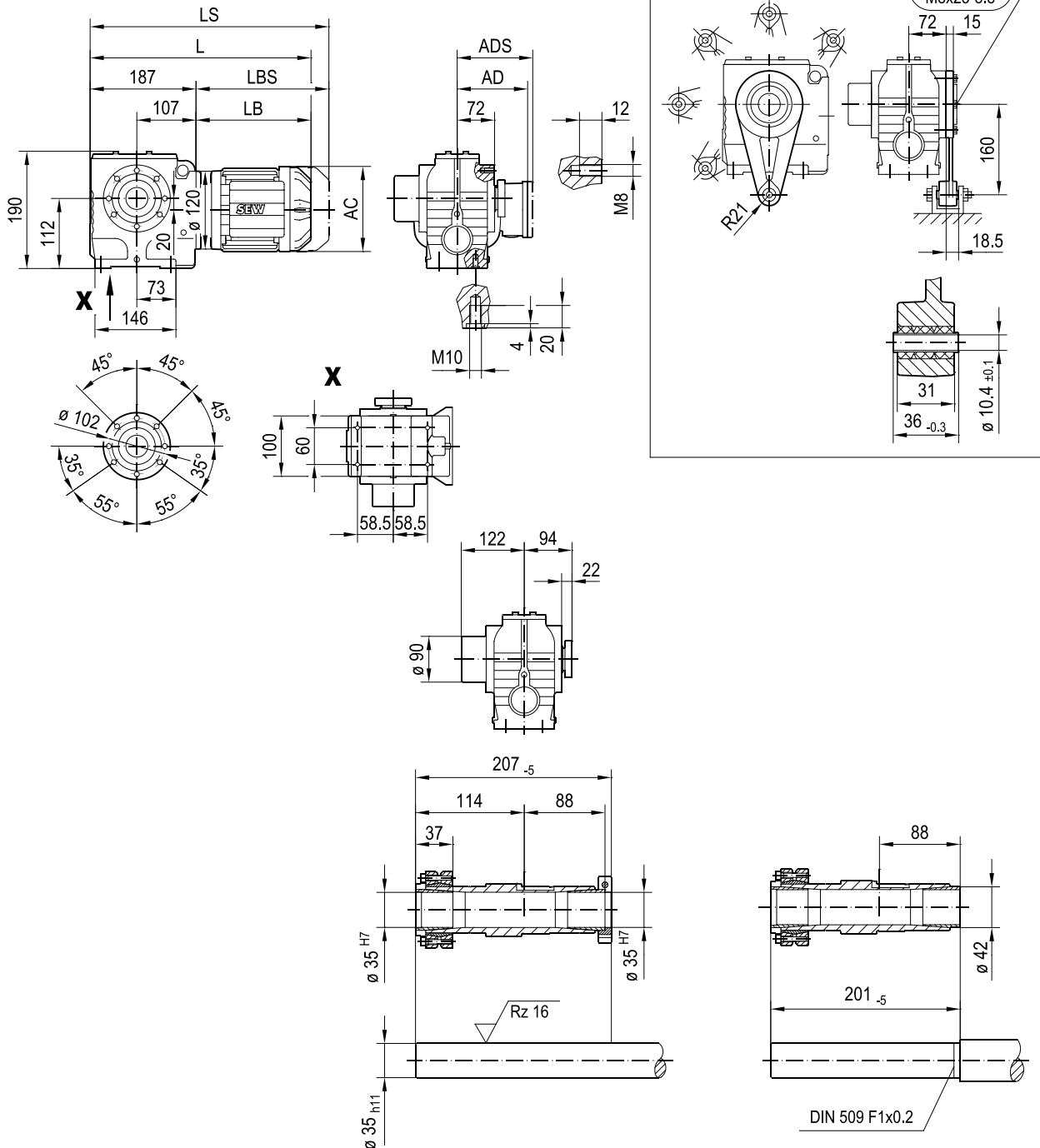


(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	377	391	393	413	424	441	469	470	502	501	551
LS	433	447	460	480	505	522	550	564	596	595	645
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458



02 021 02 14

**ST57/ST57p..**

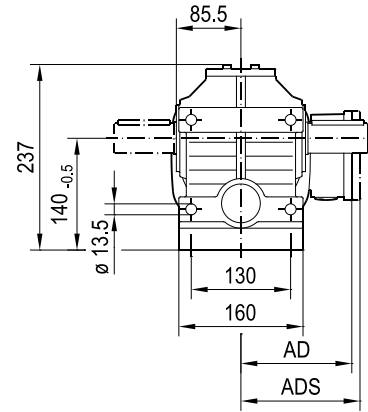
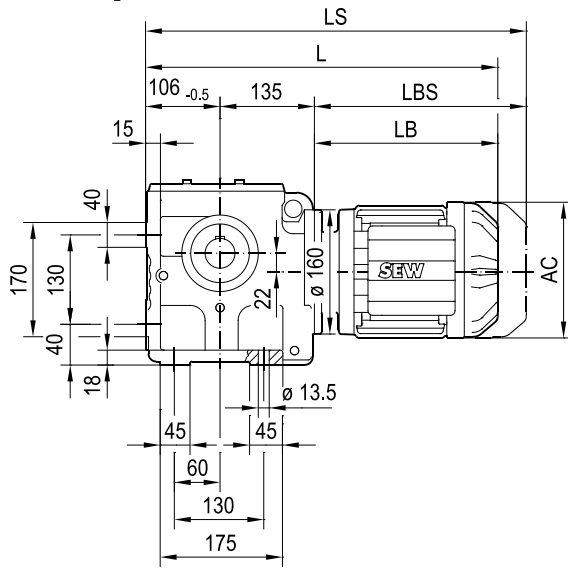


(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	377	391	393	413	424	441	469	470	502	501	551
LS	433	447	460	480	505	522	550	564	596	595	645
LB	190	204	206	226	237	254	282	283	315	314	364
LBS	246	260	273	293	318	335	363	377	409	408	458

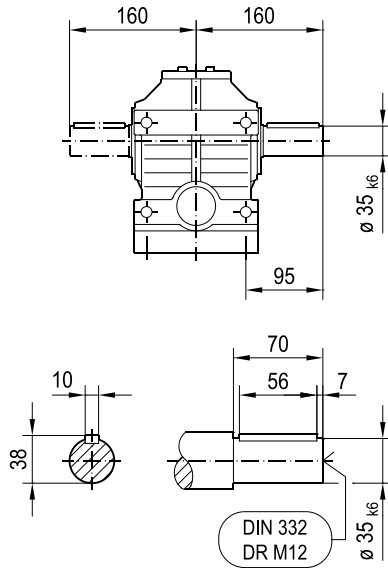
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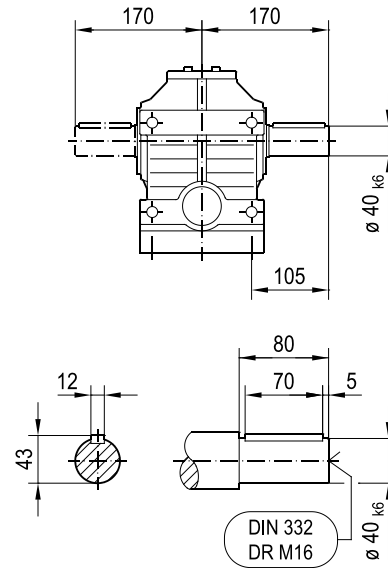
### S67/S67p..



### S67..



### S67/S67p..

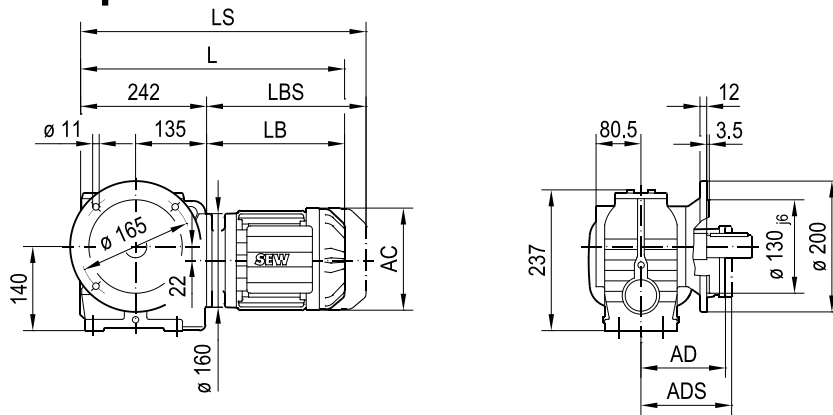


(> 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	439	440	460	471	488	516	518	550	546	596	627	681	699
LS	495	508	528	552	569	597	611	643	640	690	739	793	837
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

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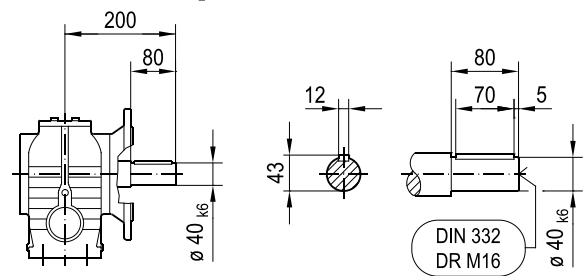
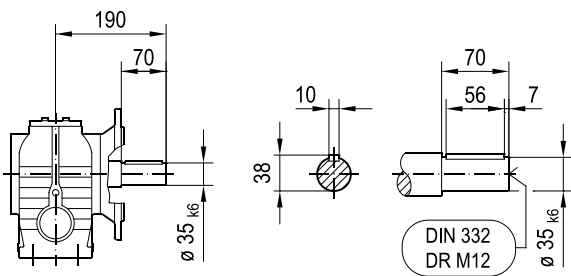
**SF67/SF67p..**

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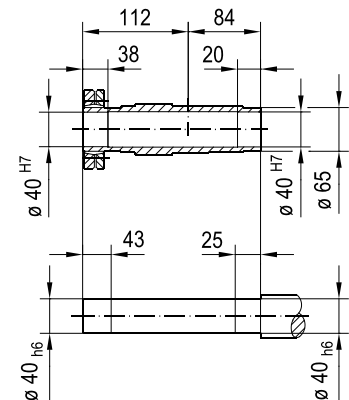
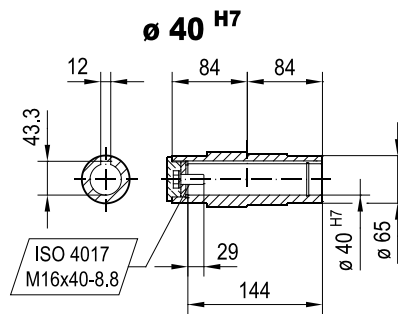
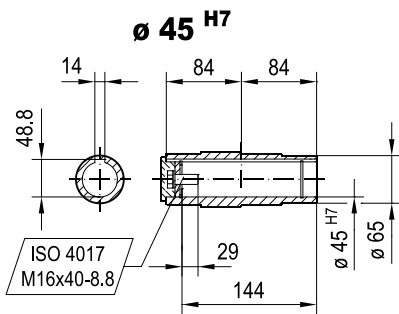
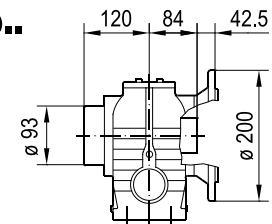
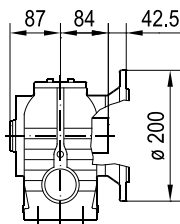
**SF67..**

**SF67/SF67p..**



**SAF67/SAF67p..**

**SHF67/SHF67p..**

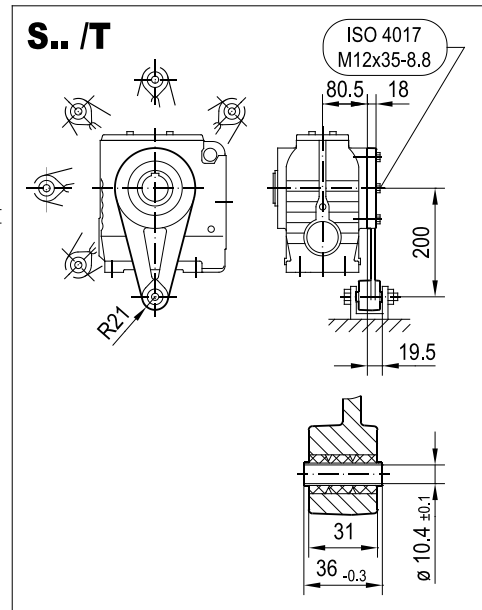
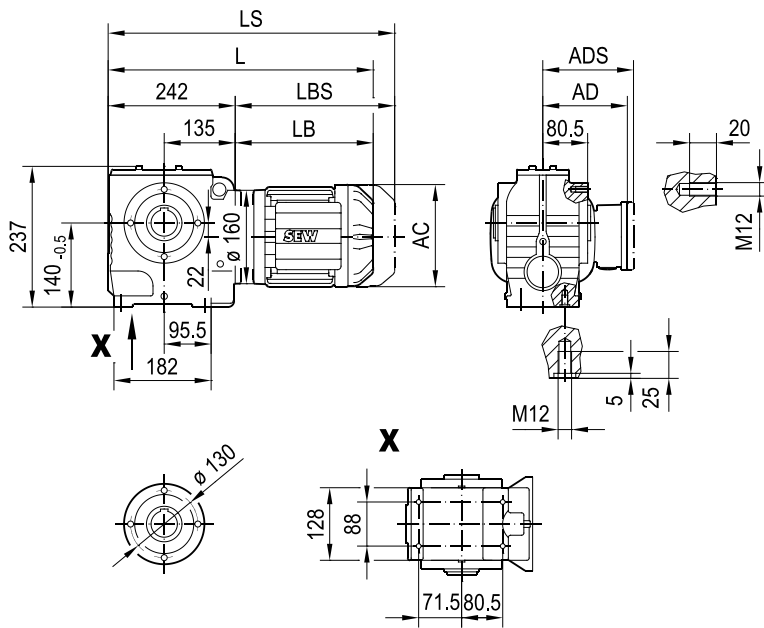


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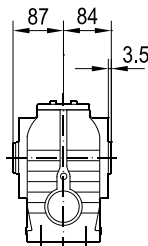
(→ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	440	441	461	472	489	517	519	551	547	597	628	682	700
LS	496	509	529	553	570	598	612	644	641	691	740	794	838
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

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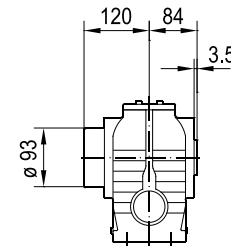
### SA67/SA67p..



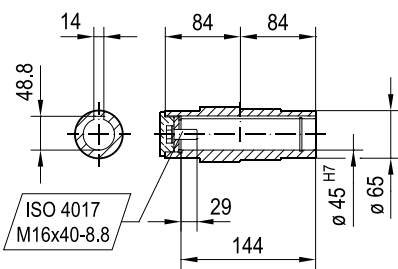
### SA67/SA67p..



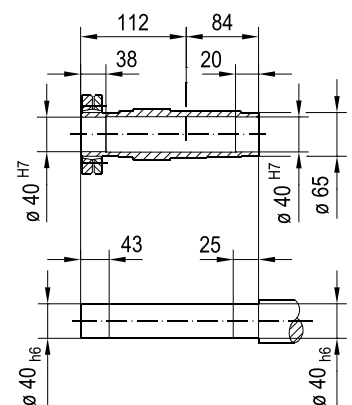
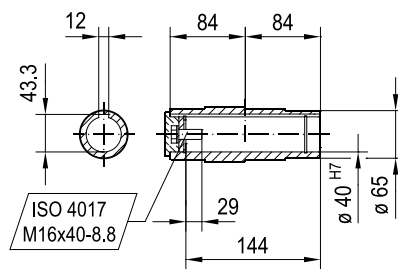
### SH67/SH67p..



### SA67/SA67p..



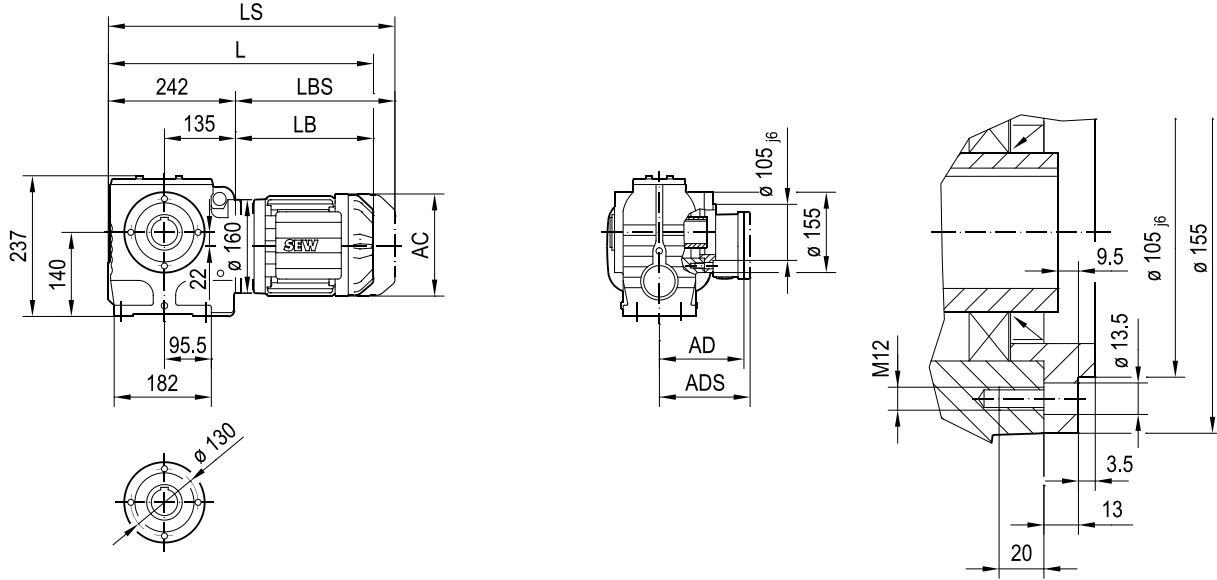
### SH67/SH67p..



(→ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	440	441	461	472	489	517	519	551	547	597	628	682	700
LS	496	509	529	553	570	598	612	644	641	691	740	794	838
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

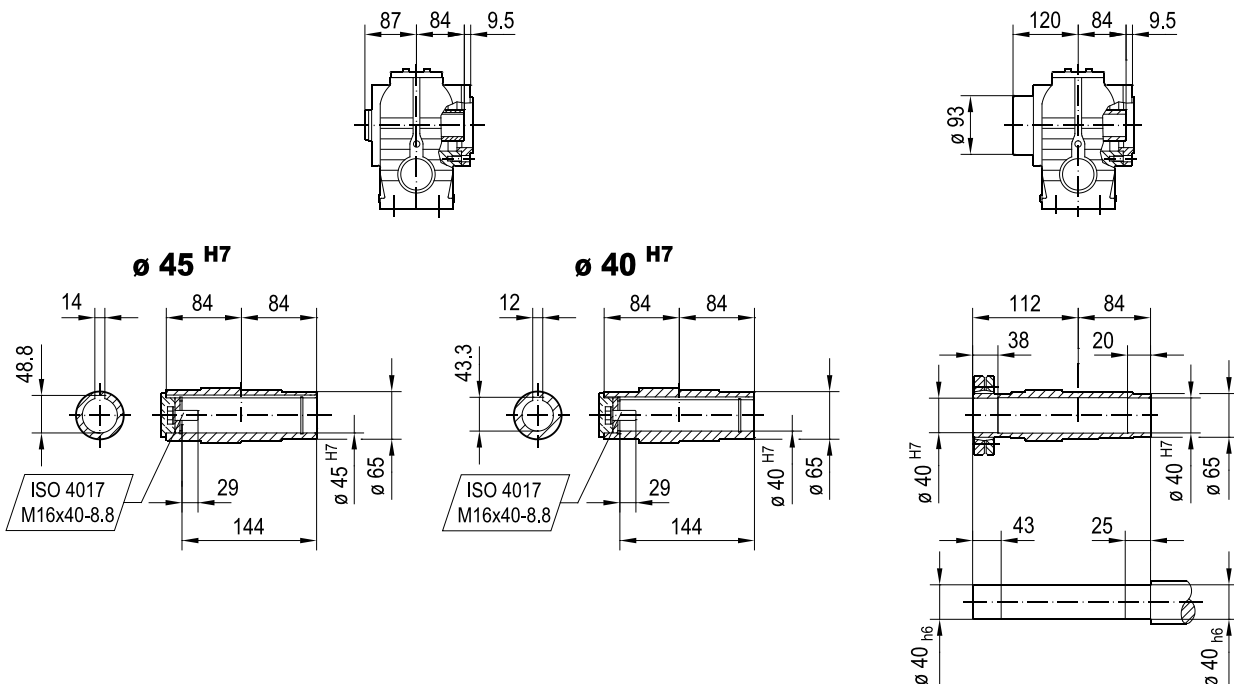
**SAZ67/SAZ67p..**

02 025 01 14



**SAZ67/SAZ67p..**

**SHZ67/SHZ67p..**

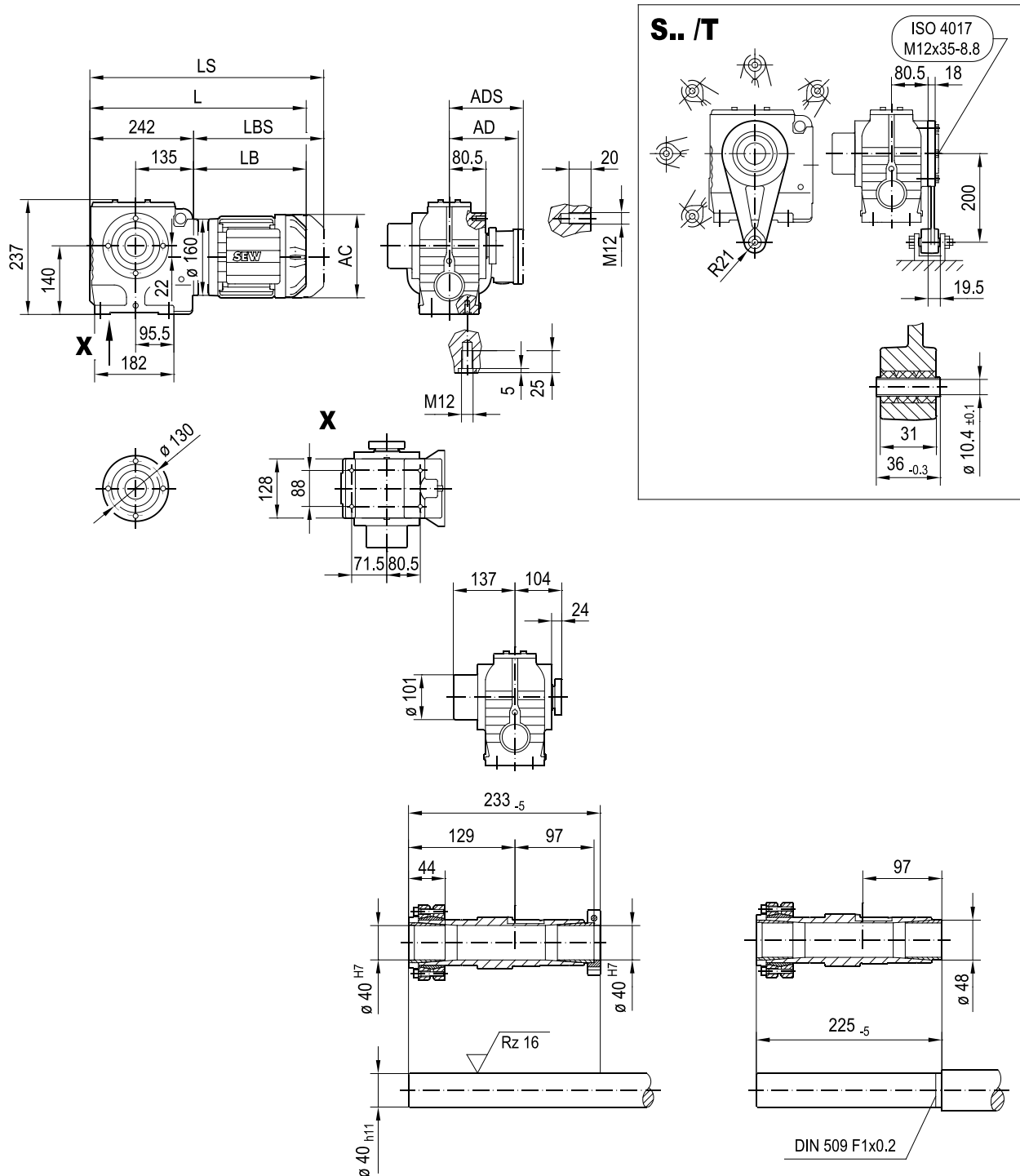


(-> 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	440	441	461	472	489	517	519	551	547	597	628	682	700
LS	496	509	529	553	570	598	612	644	641	691	740	794	838
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

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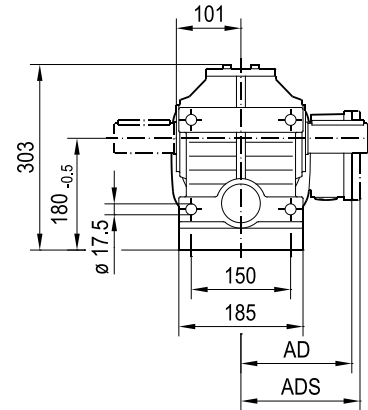
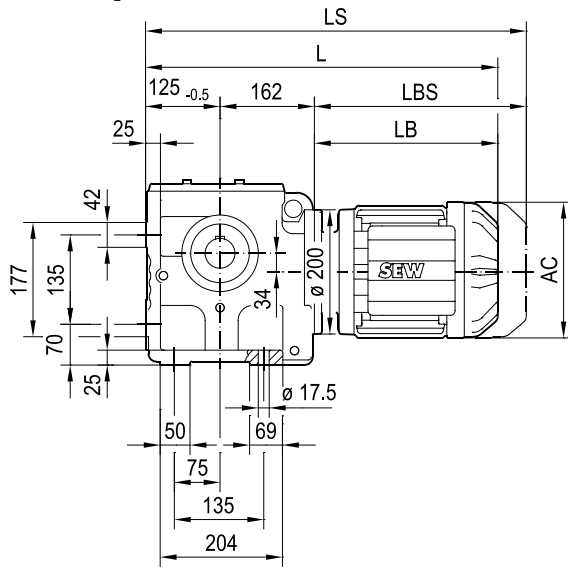
### ST67/ST67p..



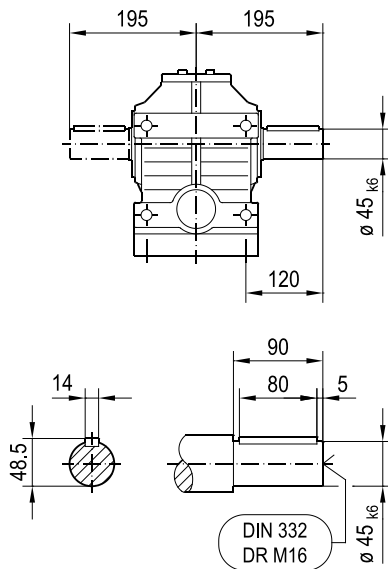
(→ 7.3)	DRN												
	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M
AC	115	139	139	156	156	156	179	179	197	197	221	221	261
AD	98	118	118	128	128	128	140	140	157	157	170	170	228
ADS	98	129	129	139	139	139	150	150	158	158	172	172	228
L	440	441	461	472	489	517	519	551	547	597	628	682	700
LS	496	509	529	553	570	598	612	644	641	691	740	794	838
LB	198	199	219	230	247	275	277	309	305	355	386	440	458
LBS	254	267	287	311	328	356	370	402	399	449	498	552	596

02 027 01 14

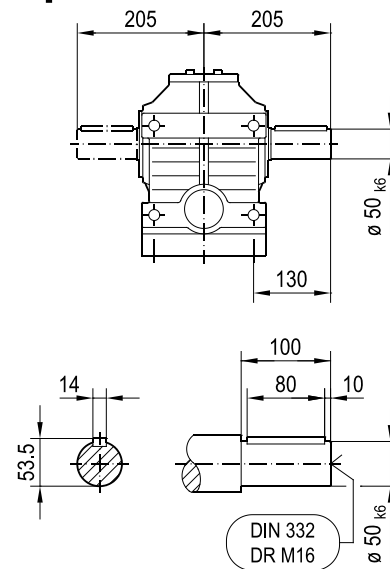
**S77/S77p..**



**S77..**



**S77/S77p..**

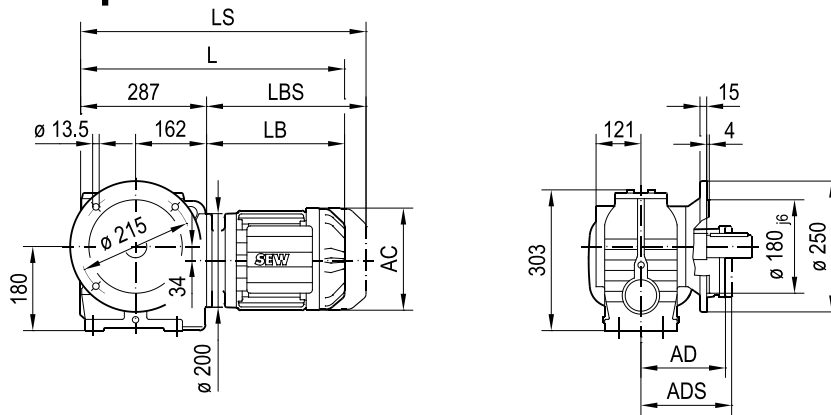


(> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	479	499	510	527	555	557	589	585	635	666	716	734	760	826
LS	547	567	591	608	636	650	682	679	729	778	828	872	897	1015
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

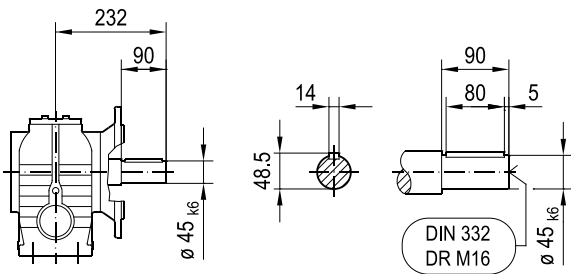
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### SF77/SF77p..

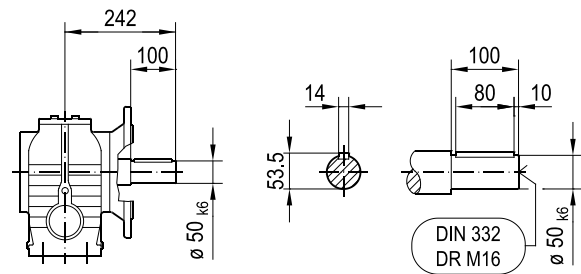
02 028 01 14



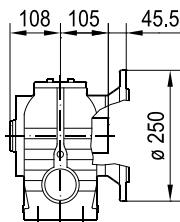
### SF77..



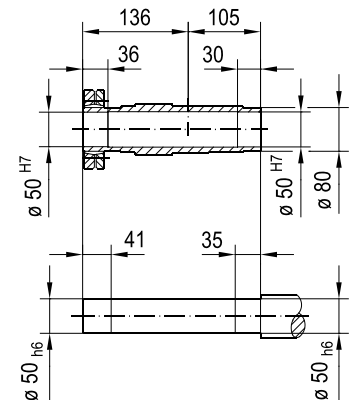
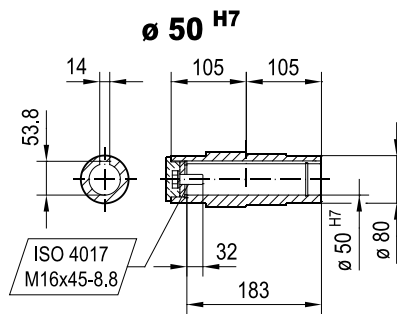
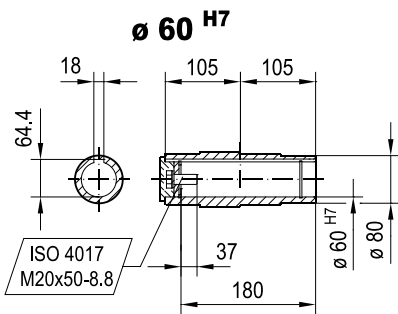
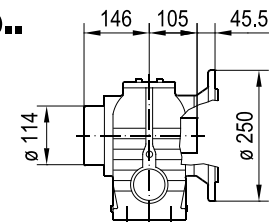
### SF77/SF77p..



### SAF77/SAF77p..



### SHF77/SHF77p..

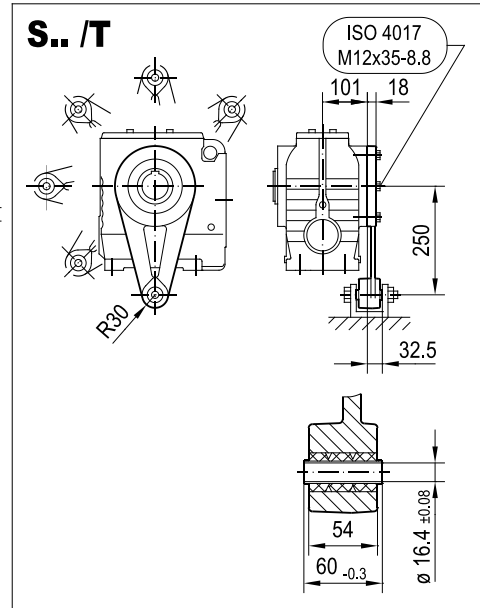
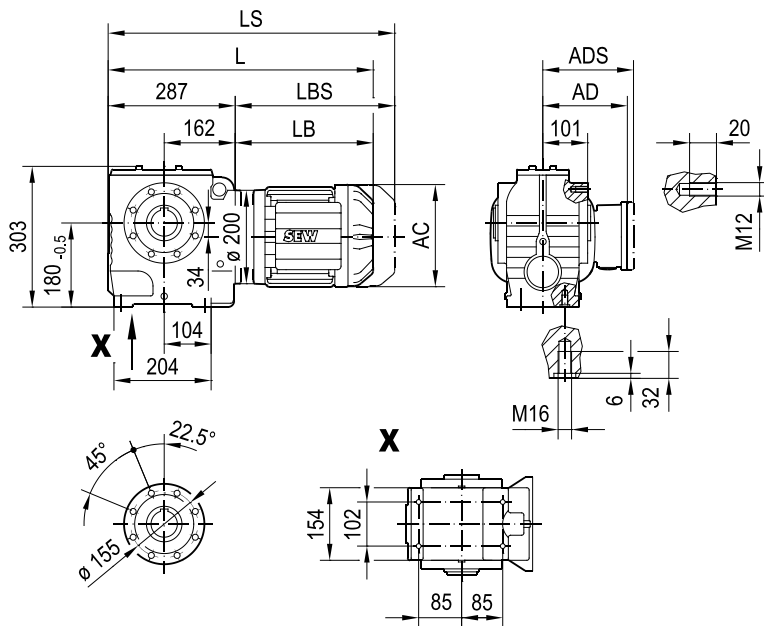


(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	479	499	510	527	555	557	589	585	635	666	716	734	760	826
LS	547	567	591	608	636	650	682	679	729	778	828	872	897	1015
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

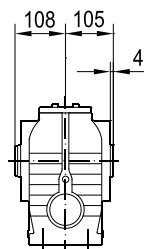


02 029 02 14

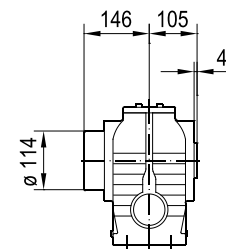
**SA77/SA77p..**



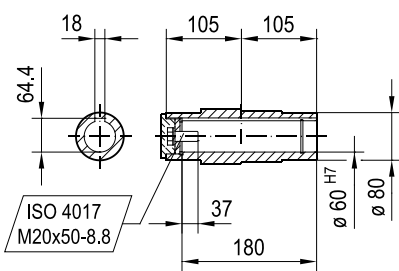
**SA77/SA77p..**



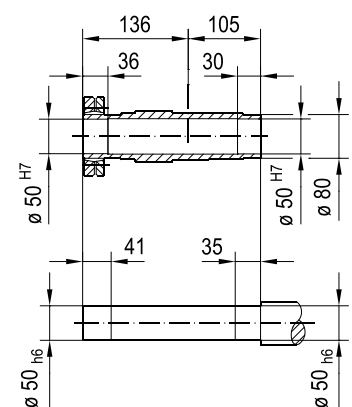
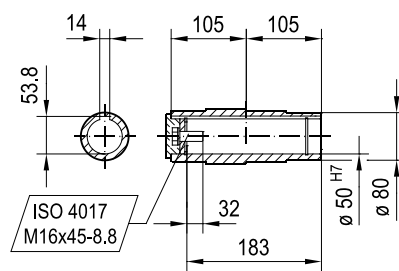
**SH77/SH77p..**



**SA77/SA77p..**



**SH77/SH77p..**

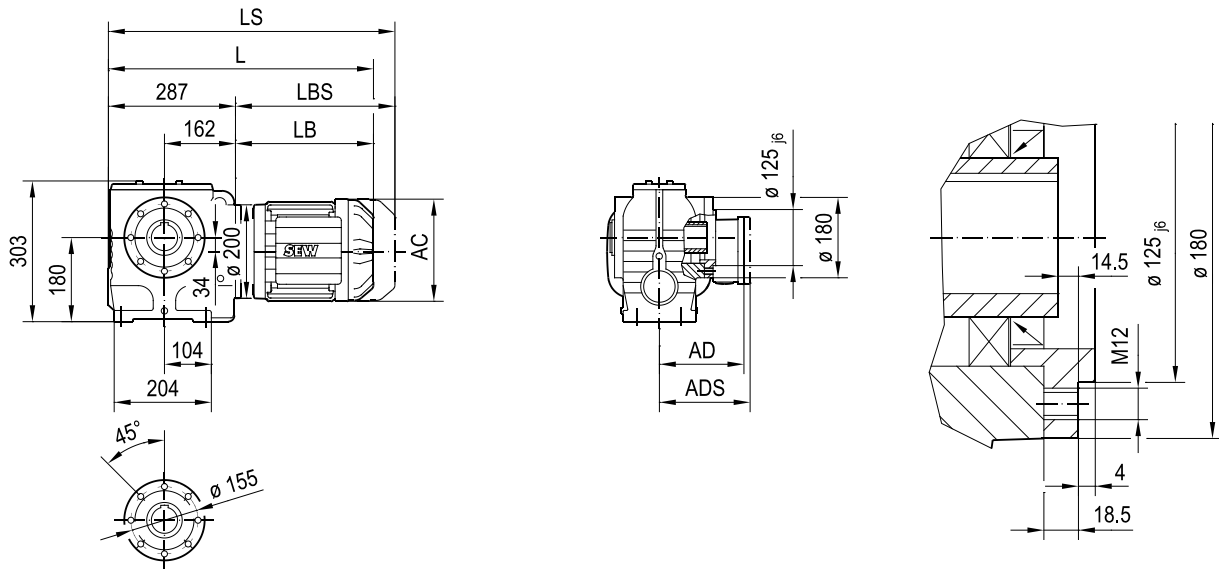


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(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	479	499	510	527	555	557	589	585	635	666	716	734	760	826
LS	547	567	591	608	636	650	682	679	729	778	828	872	897	1015
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

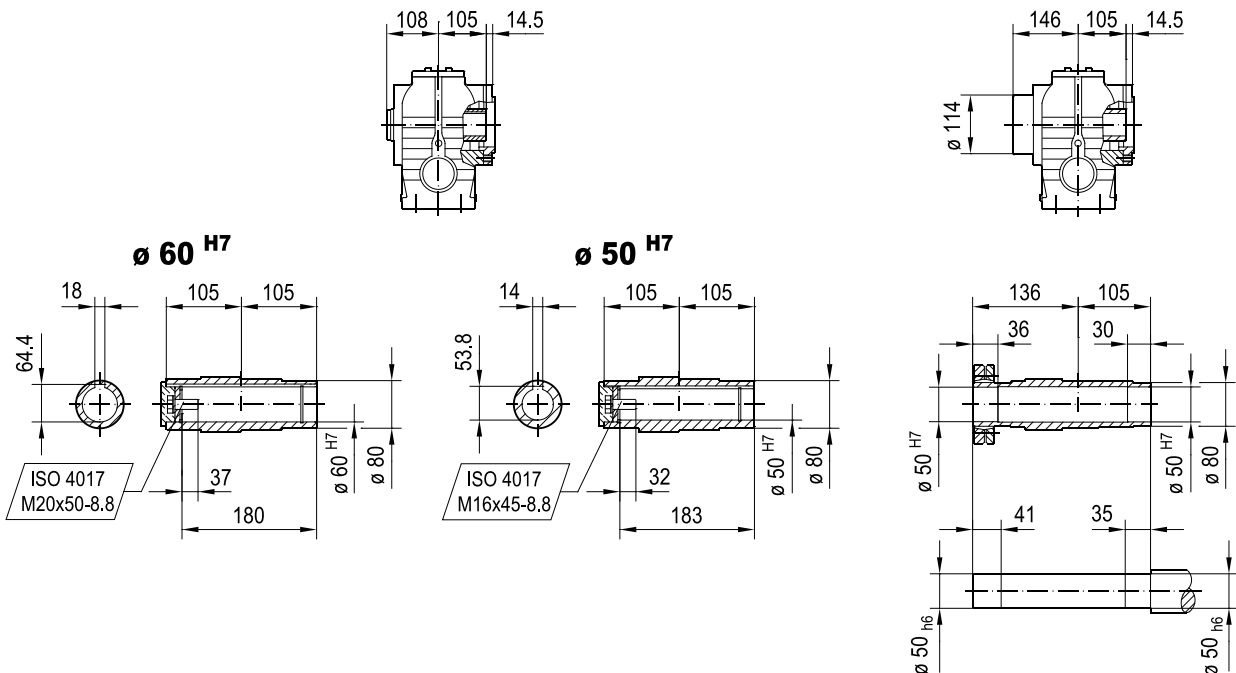
### SAZ77/SAZ77p..

02 030 01 14



### SAZ77/SAZ77p..

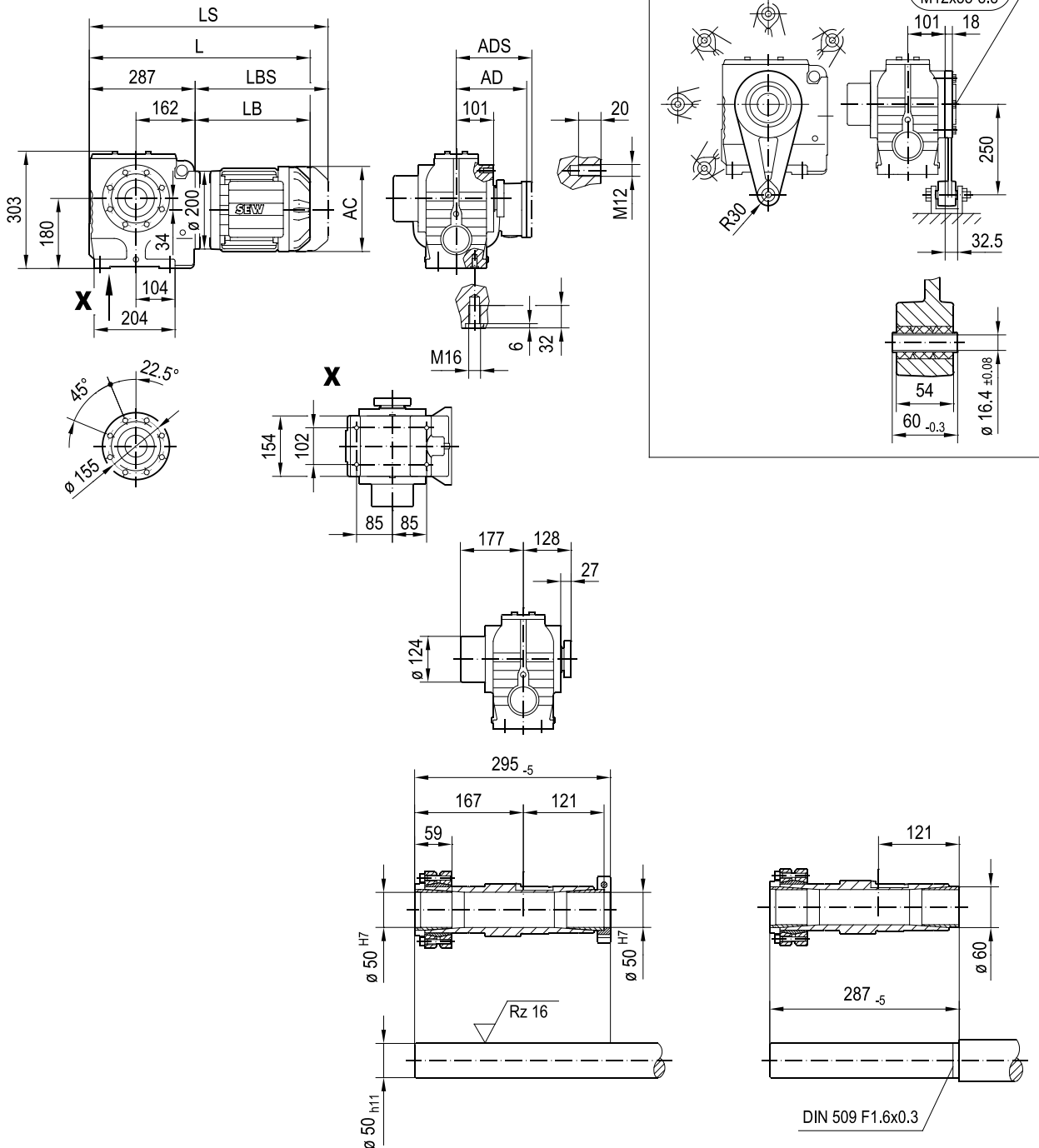
### SHZ77/SHZ77p..



(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	479	499	510	527	555	557	589	585	635	666	716	734	760	826
LS	547	567	591	608	636	650	682	679	729	778	828	872	897	1015
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

02 031 02 14

ST77/ST77p..

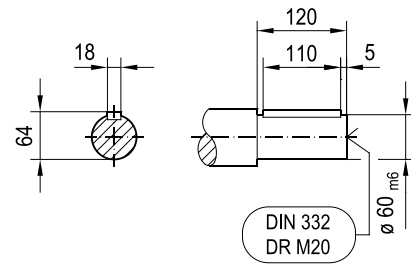
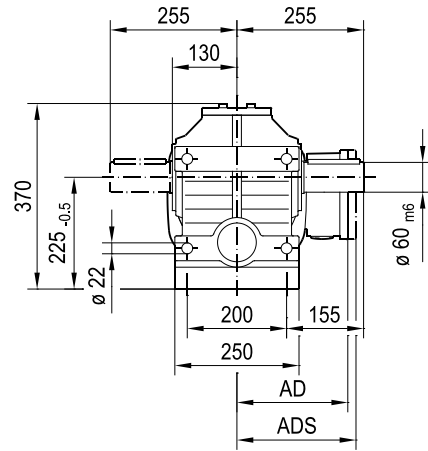
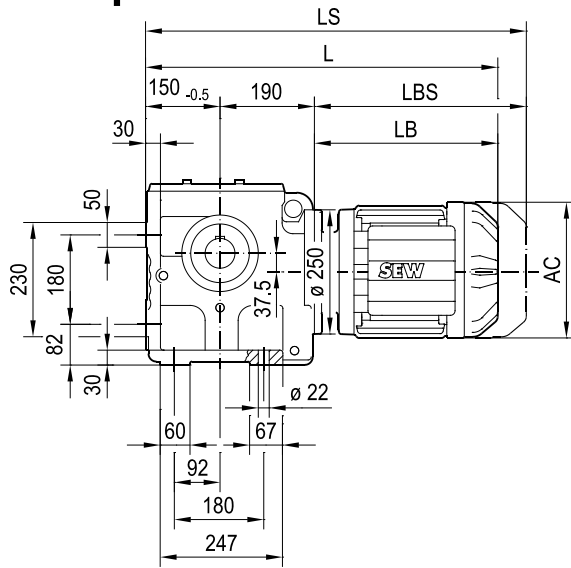


(-> 7.3)	DRN													
	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..
AC	139	139	156	156	156	179	179	197	197	221	221	261	261	314
AD	118	118	128	128	128	140	140	157	157	170	170	228	228	253
ADS	129	129	139	139	139	150	150	158	158	172	172	228	228	253
L	479	499	510	527	555	557	589	585	635	666	716	734	760	826
LS	547	567	591	608	636	650	682	679	729	778	828	872	897	1015
LB	192	212	223	240	268	270	302	298	348	379	429	447	473	539
LBS	260	280	304	321	349	363	395	392	442	491	541	585	610	728

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### S87/S87p..

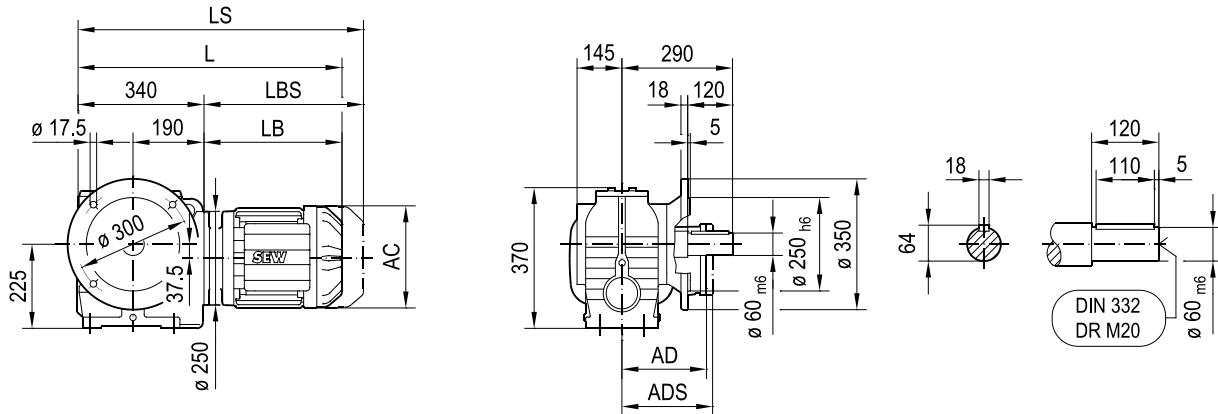


(-> 7.3)	DRN												
	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..
AC	156	156	156	179	179	197	197	221	221	261	261	314	357
AD	128	128	128	140	140	157	157	170	170	228	228	253	268
ADS	139	139	139	150	150	158	158	172	172	228	228	253	268
L	558	575	603	605	637	633	683	714	764	782	808	874	897
LS	639	656	684	698	730	727	777	826	876	920	945	1063	1086
LB	218	235	263	265	297	293	343	374	424	442	468	534	557
LBS	299	316	344	358	390	387	437	486	536	580	605	723	746

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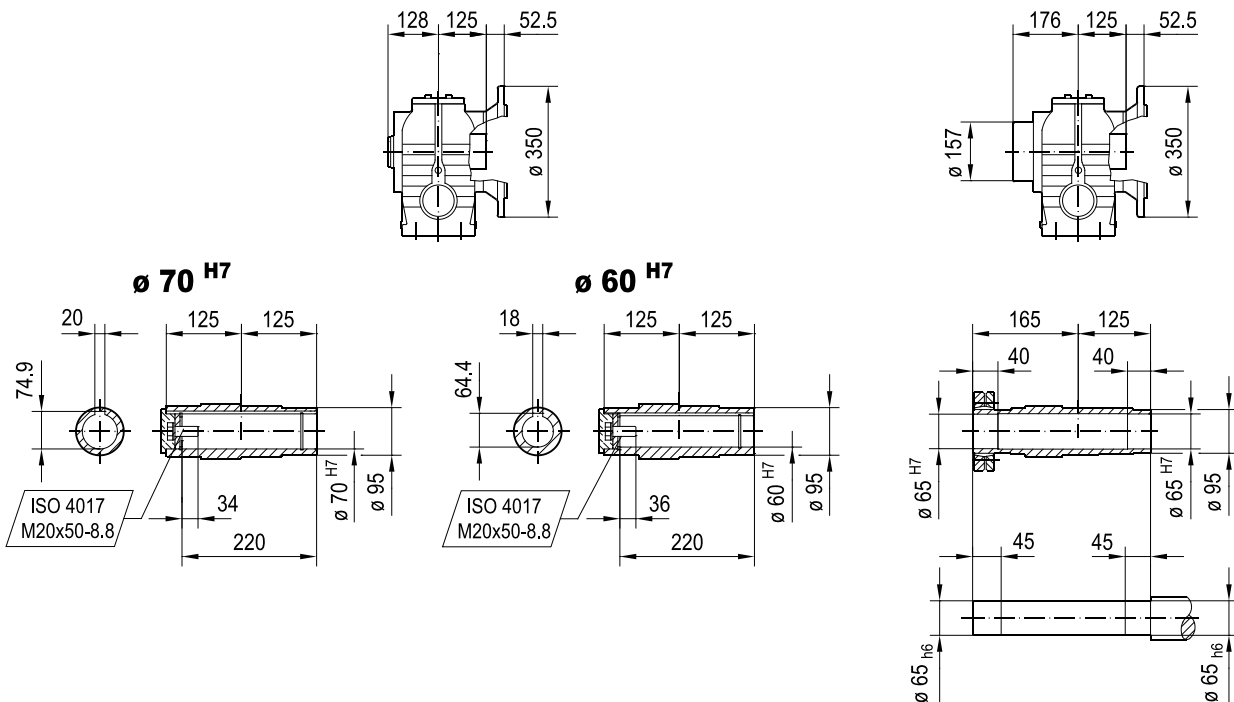
02 033 01 14

**SF87/SF87p..**



**SAF87/SAF87p..**

**SHF87/SHF87p..**

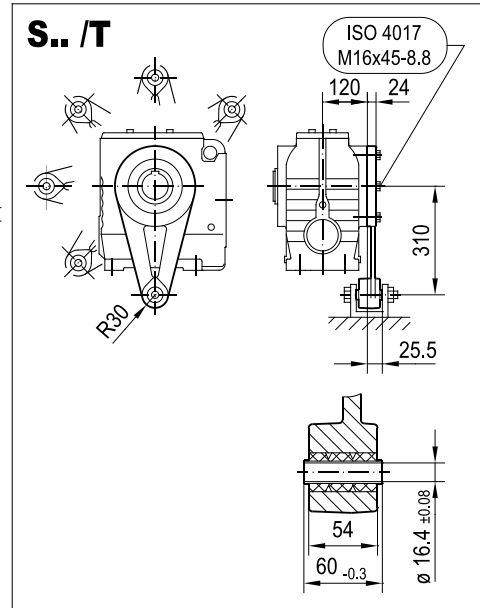
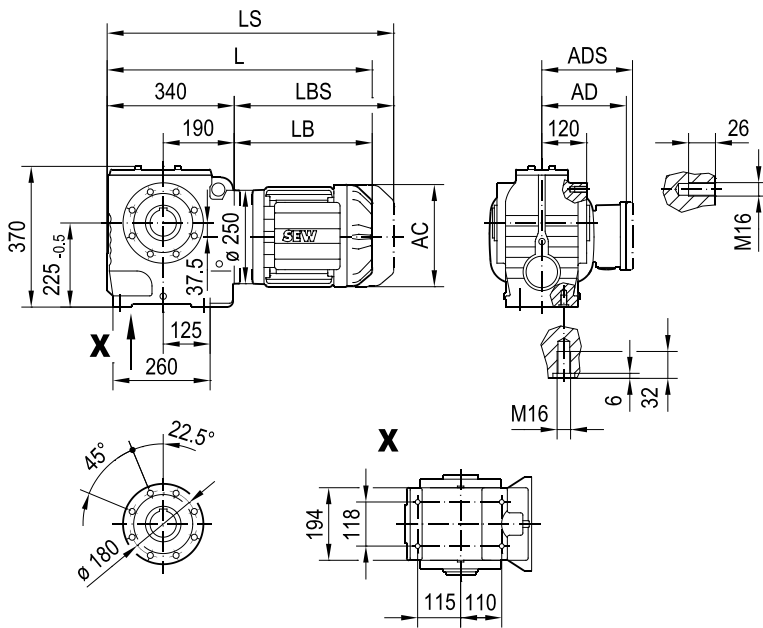


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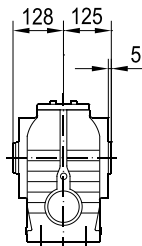
(-> 7.3)	DRN												
	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..
AC	156	156	156	179	179	197	197	221	221	261	261	314	357
AD	128	128	128	140	140	157	157	170	170	228	228	253	268
ADS	139	139	139	150	150	158	158	172	172	228	228	253	268
L	558	575	603	605	637	633	683	714	764	782	808	874	897
LS	639	656	684	698	730	727	777	826	876	920	945	1063	1086
LB	218	235	263	265	297	293	343	374	424	442	468	534	557
LBS	299	316	344	358	390	387	437	486	536	580	605	723	746

02 034 02 14

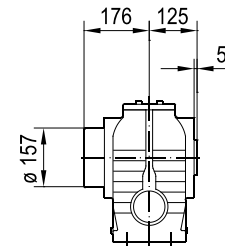
### SA87/SA87p..



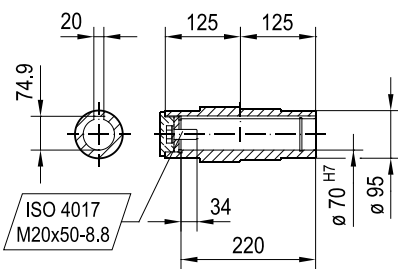
### SA87/SA87p..



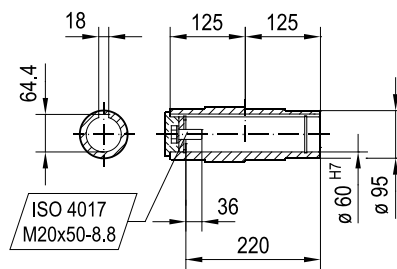
### SH87/SH87p..



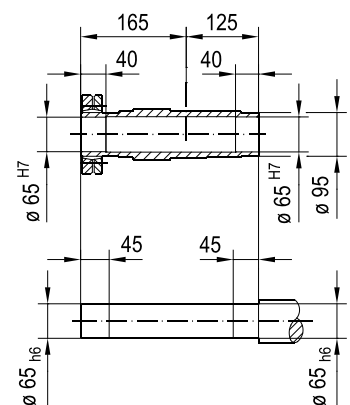
### SA87/SA87p..



### SA87/SA87p..



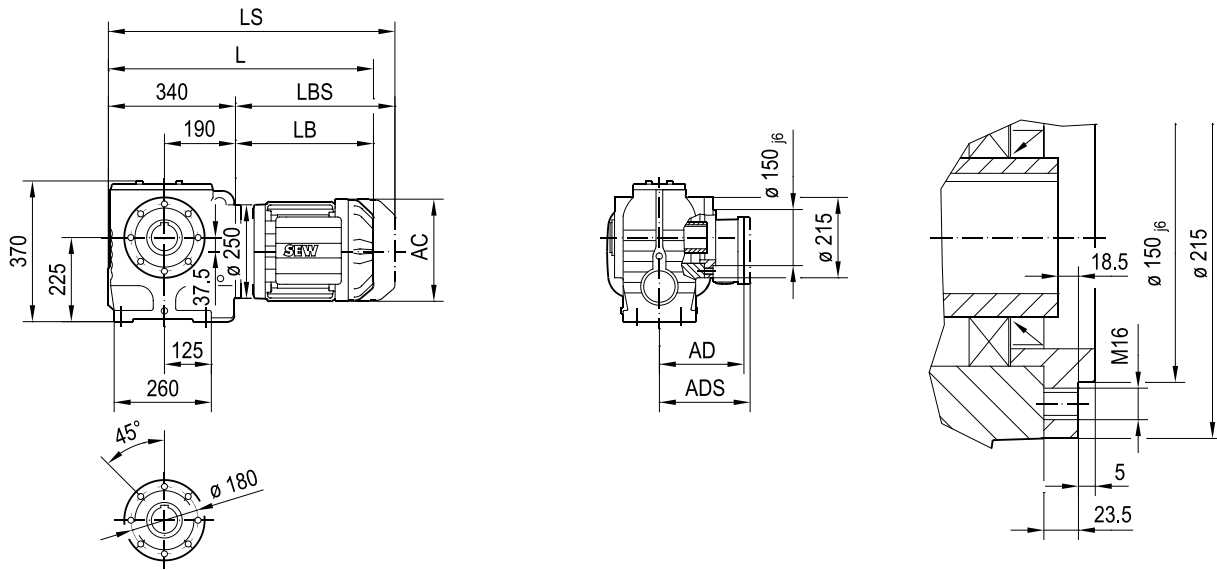
### SH87/SH87p..



(-> 7.3)	DRN												
	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..
AC	156	156	156	179	179	197	197	221	221	261	261	314	357
AD	128	128	128	140	140	157	157	170	170	228	228	253	268
ADS	139	139	139	150	150	158	158	172	172	228	228	253	268
L	558	575	603	605	637	633	683	714	764	782	808	874	897
LS	639	656	684	698	730	727	777	826	876	920	945	1063	1086
LB	218	235	263	265	297	293	343	374	424	442	468	534	557
LBS	299	316	344	358	390	387	437	486	536	580	605	723	746

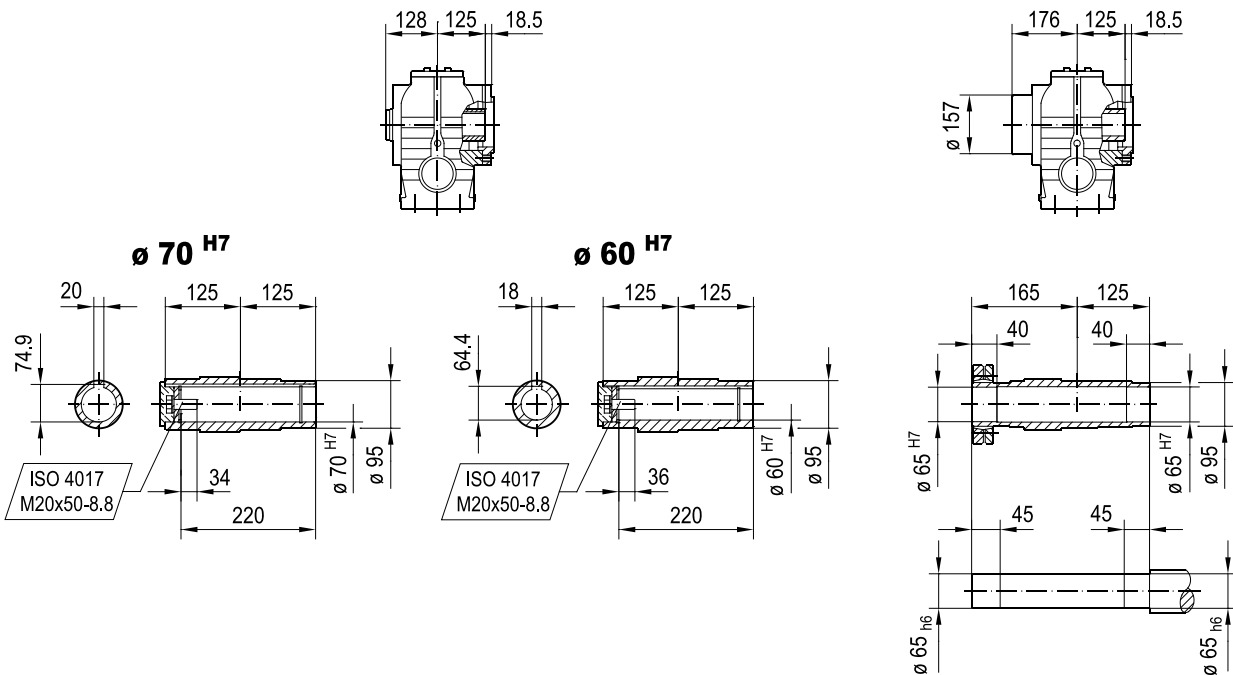
**SAZ87/SAZ87p..**

02 035 01 14



**SAZ87/SAZ87p..**

**SHZ87/SHZ87p..**

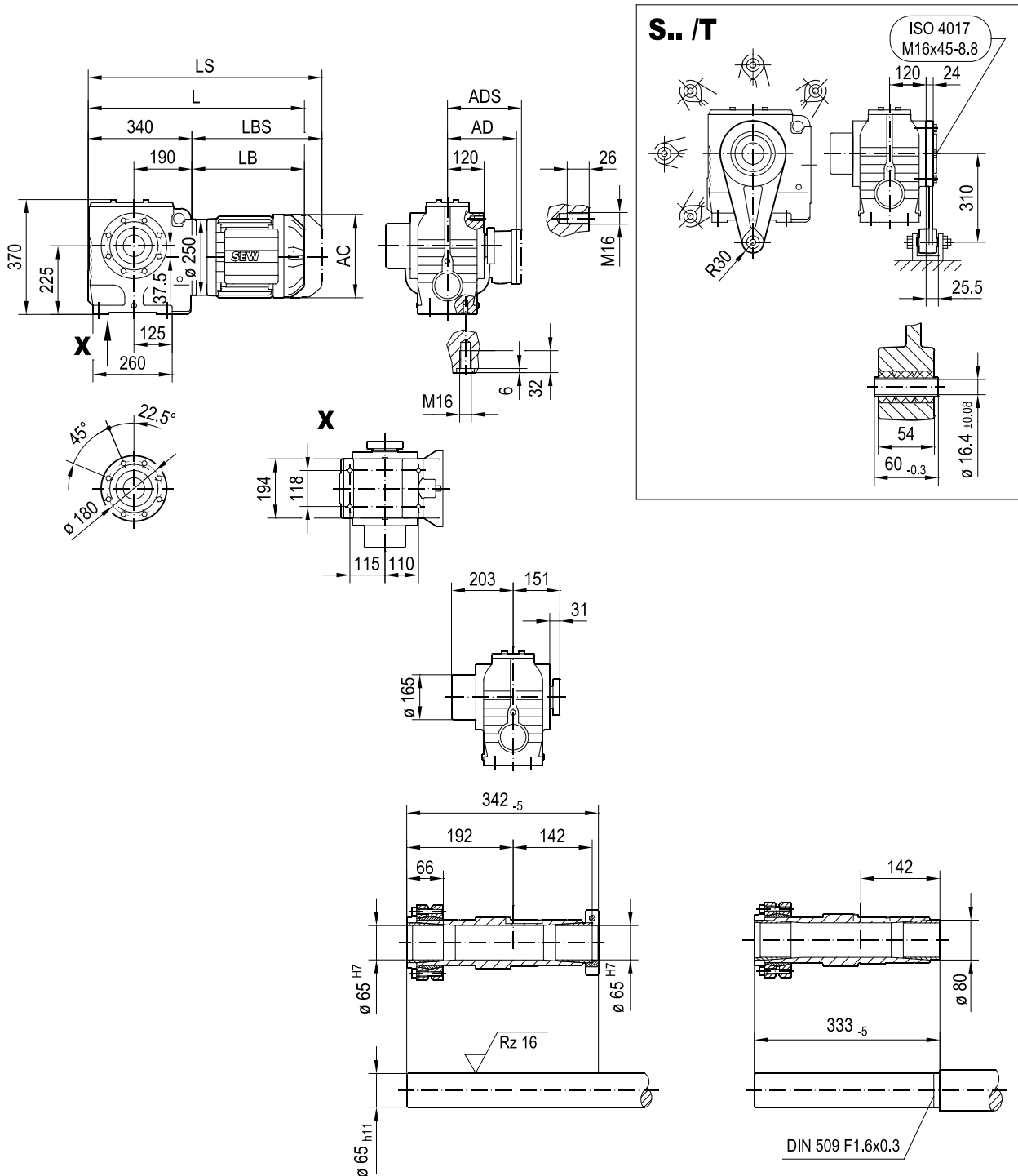


(-> 7.3)	DRN												
	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..
AC	156	156	156	179	179	197	197	221	221	261	261	314	357
AD	128	128	128	140	140	157	157	170	170	228	228	253	268
ADS	139	139	139	150	150	158	158	172	172	228	228	253	268
L	558	575	603	605	637	633	683	714	764	782	808	874	897
LS	639	656	684	698	730	727	777	826	876	920	945	1063	1086
LB	218	235	263	265	297	293	343	374	424	442	468	534	557
LBS	299	316	344	358	390	387	437	486	536	580	605	723	746

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02 036 02 14

### ST87/ST87p..

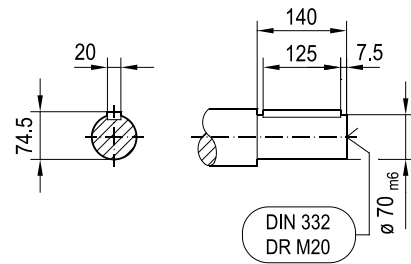
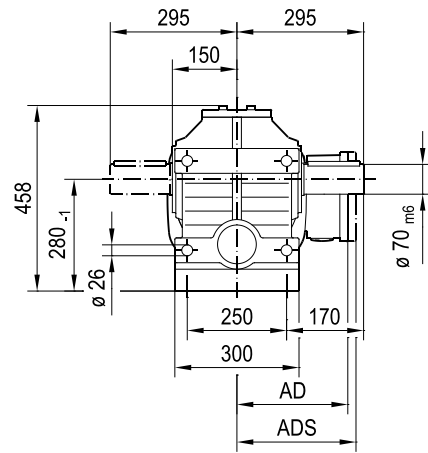
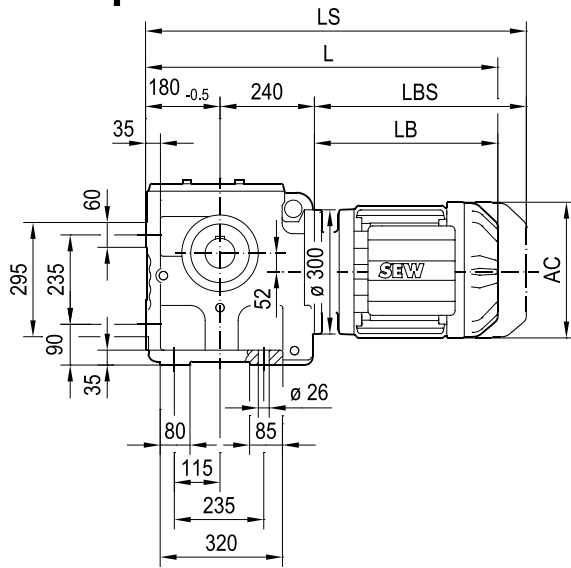


( $\rightarrow$ 7.3)	DRN												
	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..
AC	156	156	156	179	179	197	197	221	221	261	261	314	357
AD	128	128	128	140	140	157	157	170	170	228	228	253	268
ADS	139	139	139	150	150	158	158	172	172	228	228	253	268
L	558	575	603	605	637	633	683	714	764	782	808	874	897
LS	639	656	684	698	730	727	777	826	876	920	945	1063	1086
LB	218	235	263	265	297	293	343	374	424	442	468	534	557
LBS	299	316	344	358	390	387	437	486	536	580	605	723	746



02 037 01 14

S97/S97p..

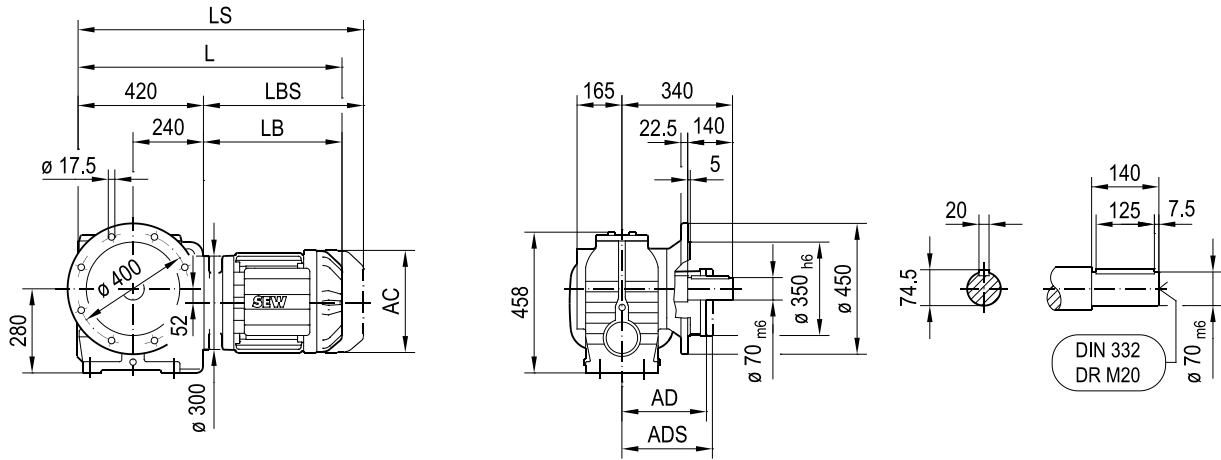


(-> 7.3)	DRN													
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283	305
L	633	678	680	712	708	758	789	839	857	883	949	972	1082	1056
LS	714	759	773	805	802	852	901	951	995	1020	1138	1161	1287	1261
LB	213	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	294	339	353	385	382	432	481	531	575	600	718	741	867	841

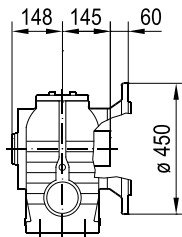
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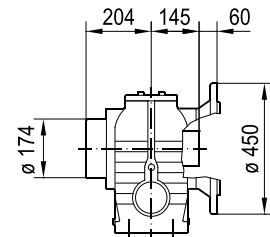
### SF97/SF97p..



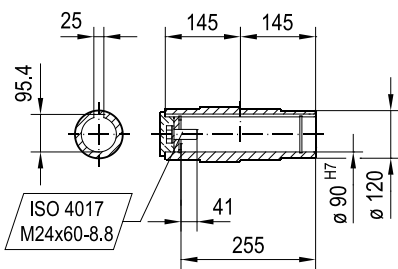
### SAF97/SAF97p..



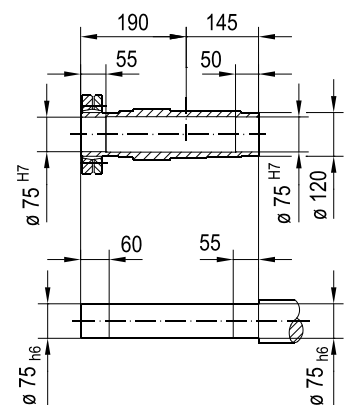
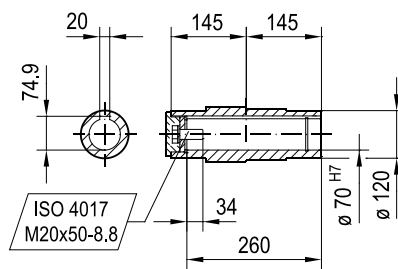
### SHF97/SHF97p..



### $\varnothing 90$ H7



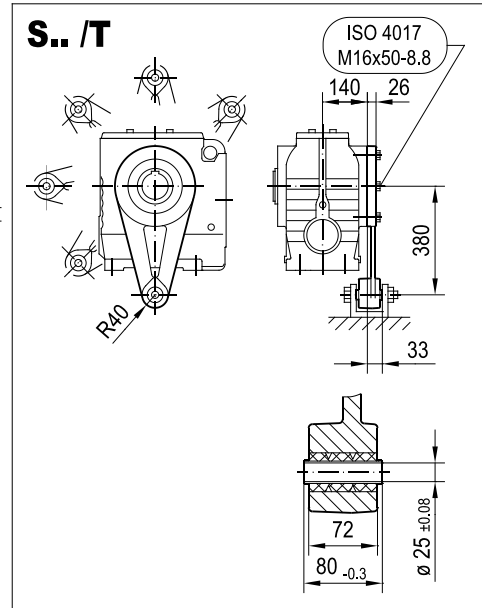
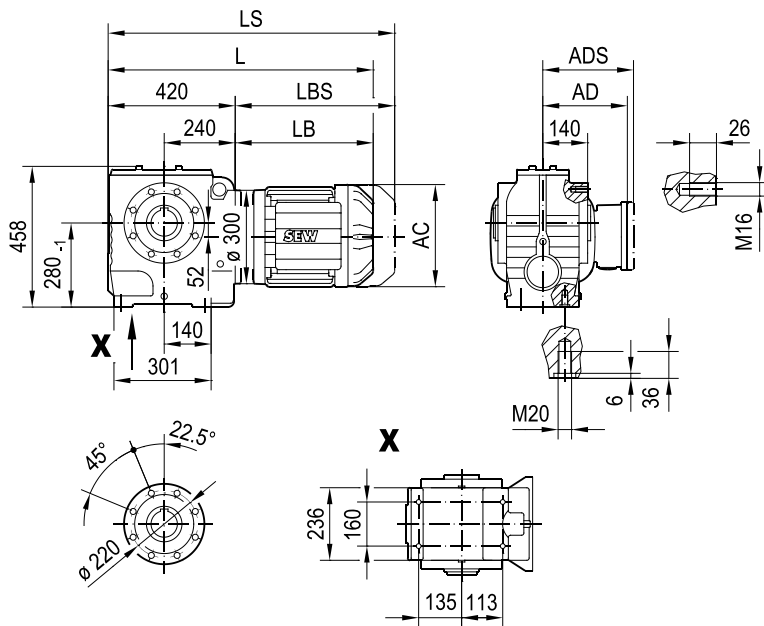
### $\varnothing 70$ H7



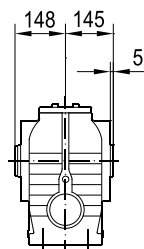
(→ 7.3)	DRN													
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283	305
L	633	678	680	712	708	758	789	839	857	883	949	972	1082	1056
LS	714	759	773	805	802	852	901	951	995	1020	1138	1161	1287	1261
LB	213	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	294	339	353	385	382	432	481	531	575	600	718	741	867	841

02 039 02 14

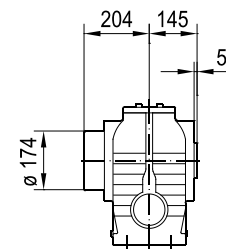
**SA97/SA97p..**



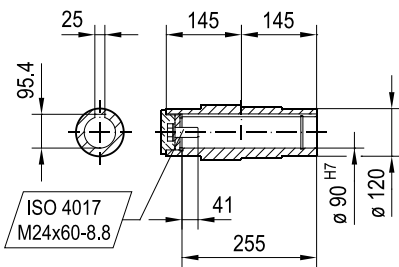
**SA97/SA97p..**



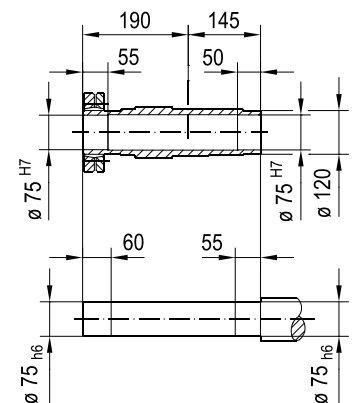
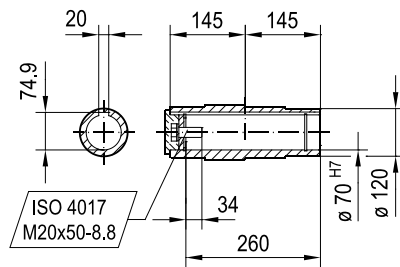
**SH97/SH97p..**



**ø 90 H7**



**ø 70 H7**

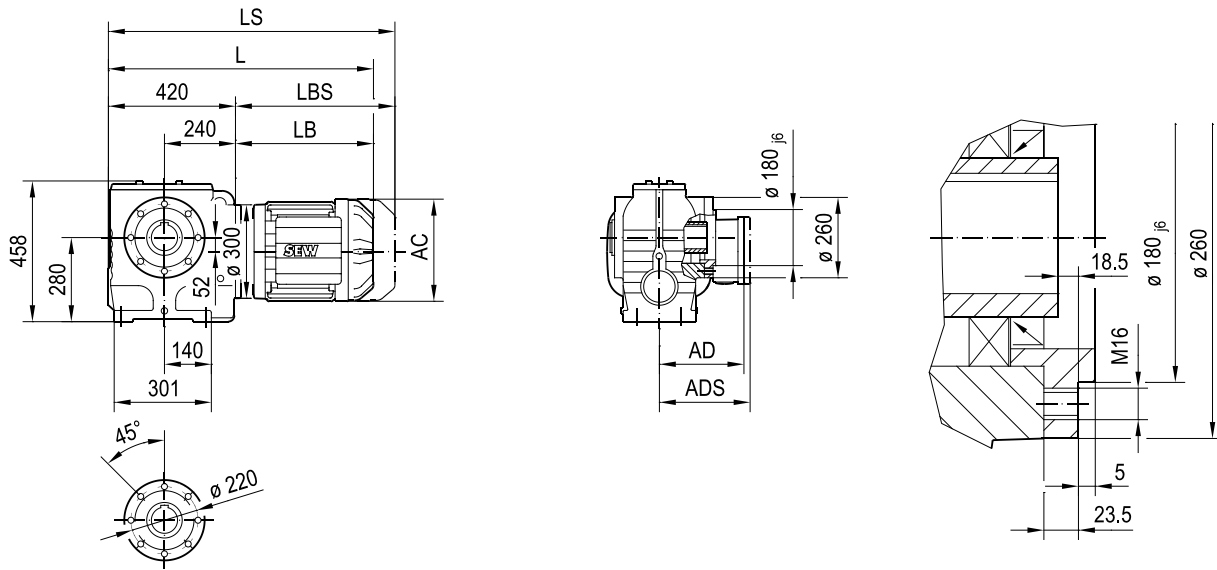


(→ 7.3)	DRN													
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283	305
L	633	678	680	712	708	758	789	839	857	883	949	972	1082	1056
LS	714	759	773	805	802	852	901	951	995	1020	1138	1161	1287	1261
LB	213	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	294	339	353	385	382	432	481	531	575	600	718	741	867	841

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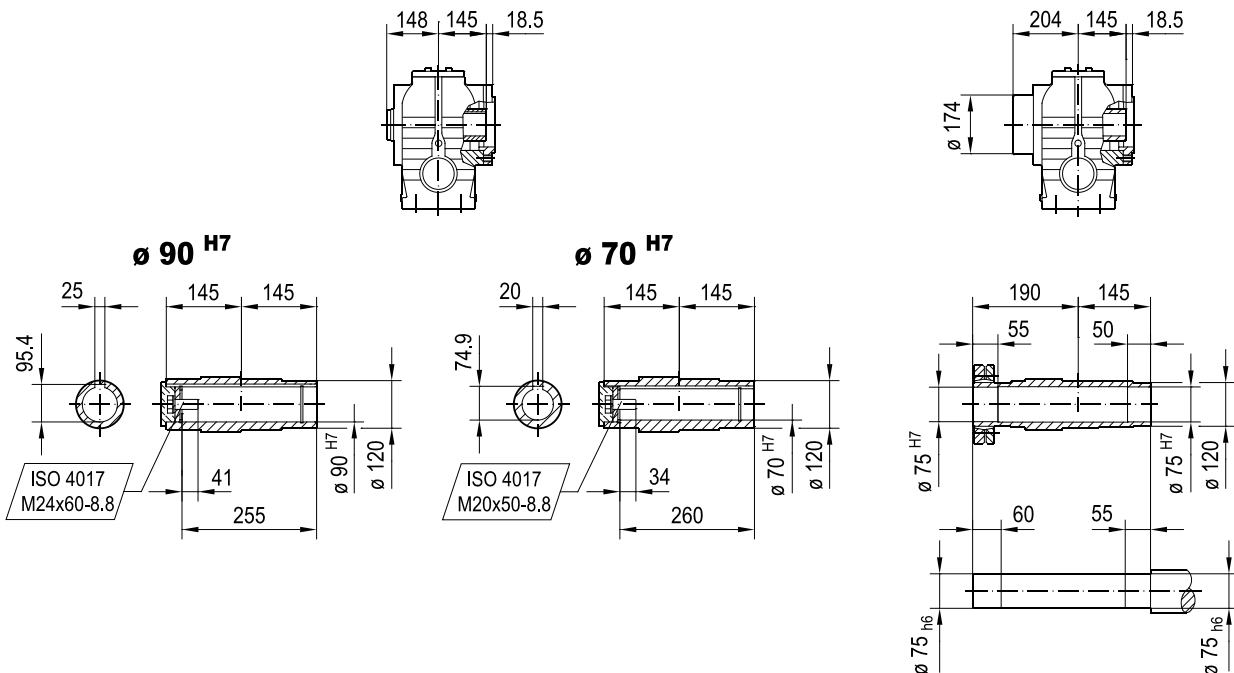
### SAZ97/SAZ97p..

02 040 01 14



### SAZ97/SAZ97p..

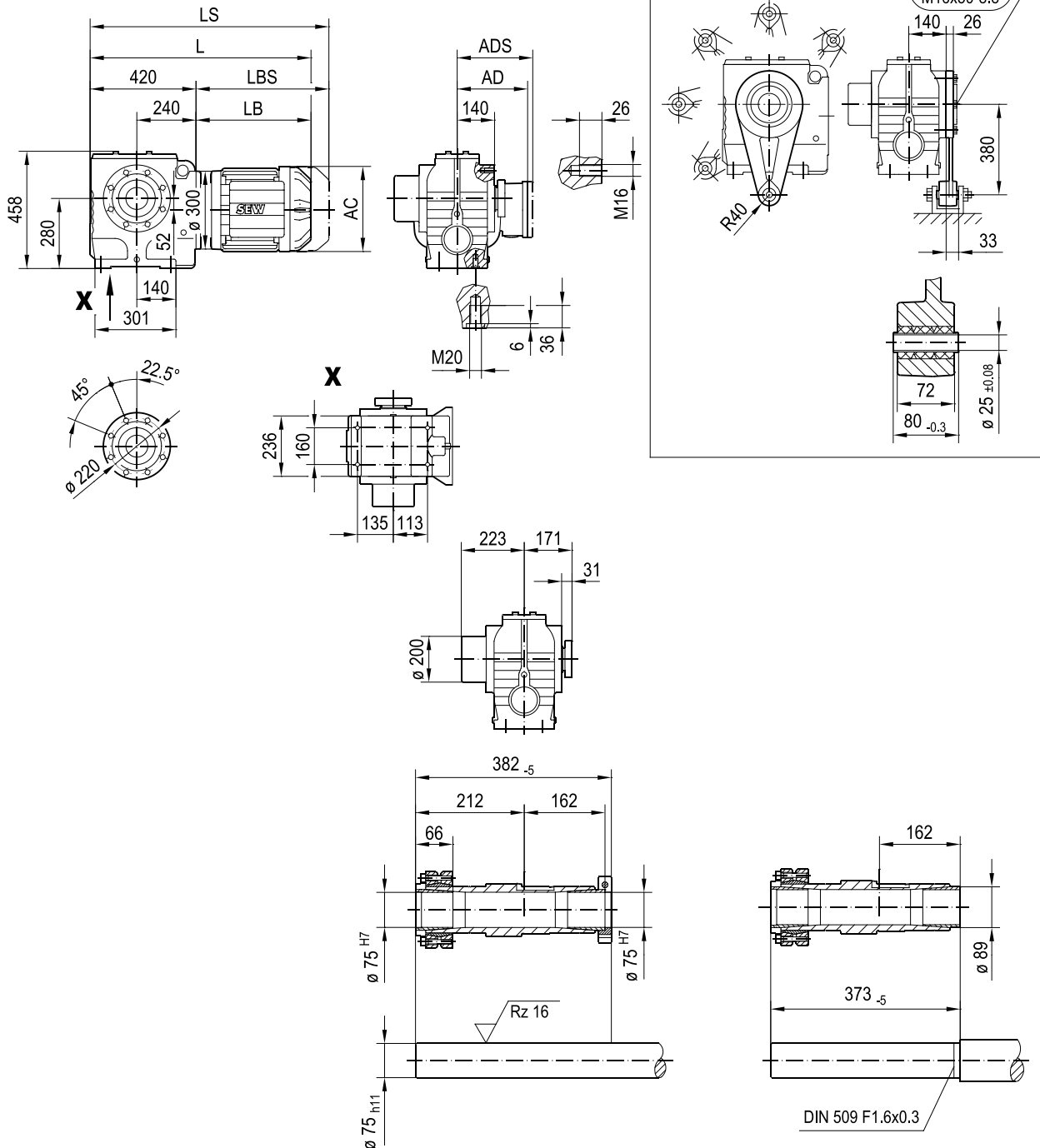
### SHZ97/SHZ97p..



(-> 7.3)	DRN													
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283	305
L	633	678	680	712	708	758	789	839	857	883	949	972	1082	1056
LS	714	759	773	805	802	852	901	951	995	1020	1138	1161	1287	1261
LB	213	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	294	339	353	385	382	432	481	531	575	600	718	741	867	841

02 041 02 14

ST97/ST97p..

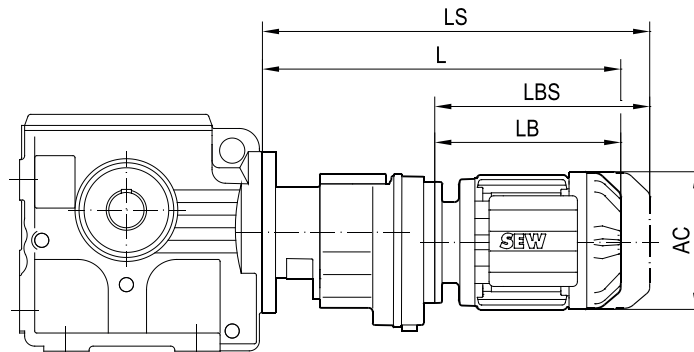


(-> 7.3)	DRN													
	80MK	80M	90S	90L	100LS	100L/LM	112M	132S	132M	132L	160..	180..	200L	225..
AC	156	156	179	179	197	197	221	221	261	261	314	357	394	434
AD	128	128	140	140	157	157	170	170	228	228	253	268	283	305
ADS	139	139	150	150	158	158	172	172	228	228	253	268	283	305
L	633	678	680	712	708	758	789	839	857	883	949	972	1082	1056
LS	714	759	773	805	802	852	901	951	995	1020	1138	1161	1287	1261
LB	213	258	260	292	288	338	369	419	437	463	529	552	662	636
LBS	294	339	353	385	382	432	481	531	575	600	718	741	867	841

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### 11.6 Dimension sheets S..(p)R..DRN.. in mm

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(IP 7.3)	AC	L	LS	LB	LBS
S..37R17 DR2S56..	109	293	329	160	196
S..37R17 DRN63MS	115	323	379	190	246
S..37R17 DRN63M	115	337	393	204	260
S..37R17 DRN71MS	139	339	406	206	273
S..47R17 DR2S56..	109	293	329	160	196
S..47R17 DRN63MS	115	323	379	190	246
S..47R17 DRN63M	115	337	393	204	260
S..47R17 DRN71MS	139	339	406	206	273
S..47R17 DRN80MK	156	370	451	237	318
S..57R17 DR2S56..	109	293	329	160	196
S..57R17 DRN63MS	115	323	379	190	246
S..57R17 DRN63M	115	337	393	204	260
S..57R17 DRN71MS	139	339	406	206	273
S..57R17 DRN71M	139	359	426	226	293
S..57R17 DRN80MK	156	370	451	237	318
S..57R17 DRN80M	156	416	497	283	364
S..67R37 DRN63MS	115	355	411	190	246
S..67R37 DRN63M	115	369	425	204	260
S..67R37 DRN71MS	139	371	438	206	273
S..67R37 DRN71M	139	391	458	226	293
S..67R37 DRN80MK	156	402	483	237	318
S..67R37 DRN80M	156	447	528	282	363
S..67R37 DRN90S	179	448	542	283	377
S..77R37 DRN63MS	115	347	403	190	246
S..77R37 DRN63M	115	361	417	204	260
S..77R37 DRN71MS	139	363	430	206	273
S..77R37 DRN71M	139	383	450	226	293
S..77R37 DRN80MK	156	394	475	237	318
S..77R37 DRN80M	156	439	520	282	363
S..77R37 DRN90S	179	440	534	283	377
S..77R37 DRN90L	179	472	566	315	409
S..87R57 DRN63MS	115	411	467	184	240
S..87R57 DRN63M	115	425	481	198	254
S..87R57 DRN71MS	139	427	494	199	267
S..87R57 DRN71M	139	447	514	219	287
S..87R57 DRN80MK	156	458	539	230	311
S..87R57 DRN80M	156	503	584	275	356
S..87R57 DRN90S	179	504	598	277	370
S..87R57 DRN90L	179	536	630	309	402
S..87R57 DRN100LS	197	533	626	305	399
S..87R57 DRN100L/LM	197	583	676	355	449

(IP 7.3)	AC	L	LS	LB	LBS
S..97R57 DRN63MS	115	406	462	184	240
S..97R57 DRN63M	115	420	476	198	254
S..97R57 DRN71MS	139	422	489	199	267
S..97R57 DRN71M	139	442	509	219	287
S..97R57 DRN80MK	156	453	534	230	311
S..97R57 DRN80M	156	498	579	275	356
S..97R57 DRN90S	179	499	593	277	370
S..97R57 DRN90L	179	531	625	309	402
S..97R57 DRN100LS	197	528	621	305	399
S..97R57 DRN100L/LM	197	578	671	355	449
S..97R57 DRN112M	221	609	721	386	498
S..97R57 DRN132S	221	663	775	440	552

36236131467

## 11.7 Technical data S..37 – 97

## 11.7.1 Technical data S..37

3400 - 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
157.43	38/1	21	78	0.31	56	20	80	0.30	56	17	82	0.28	56	
144.40		23	76	0.33	57	22	78	0.32	56	19	80	0.29	56	
122.94		27	74	0.37	57	26	75	0.36	57	22	78	0.33	57	
106.00		32	71	0.41	58	30	72	0.39	58	26	76	0.36	58	
98.80		34	70	0.43	58	32	72	0.42	58	28	75	0.38	58	
86.36		39	68	0.48	59	37	69	0.45	59	32	72	0.42	59	
80.96		41	66	0.49	59	39	68	0.48	59	34	72	0.44	59	
71.44		47	55	0.47	59	44	64	0.50	60	39	70	0.48	60	
63.33		53	37	0.37	56	50	51	0.46	59	44	67	0.52	60	
53.83		63	29	0.35	54	59	32	0.36	55	52	53	0.49	60	
55.93		27/2	60	70	0.59	76	57	71	0.56	76	50	72	0.50	75
51.30			66	68	0.62	76	62	70	0.60	76	54	72	0.55	76
43.68	77		66	0.70	77	73	67	0.67	76	64	70	0.62	76	
37.66	90		64	0.78	77	84	65	0.75	77	74	68	0.69	77	
35.10	96		62	0.81	77	91	64	0.79	77	79	66	0.72	77	
30.68	110		61	0.91	78	104	62	0.87	78	91	64	0.79	77	
28.76	118		58	0.92	78	111	61	0.91	78	97	64	0.84	78	
25.38	133		47	0.85	77	126	53	0.90	78	110	62	0.92	78	
22.50	151		31	0.65	75	142	43	0.83	77	124	57	0.95	78	
19.13	177		24	0.61	74	167	27	0.63	75	146	44	0.87	78	
19.89	24/5		170	42	0.88	85	160	43	0.85	85	140	44	0.76	85
18.24			186	41	0.93	86	175	42	0.90	86	153	44	0.83	85
15.53		218	39	1.0	86	206	40	1.0	86	180	42	0.93	86	
13.39		253	37	1.1	86	238	39	1.1	86	209	41	1.0	86	
12.48		272	37	1.2*	86	256	38	1.2*	86	224	40	1.1	86	
10.91		311	35	1.3*	86	293	36	1.3*	86	256	39	1.2*	86	
10.23		332	35	1.4*	86	312	36	1.4*	86	273	38	1.3*	86	
9.02		376	31	1.4*	85	354	34	1.5*	86	310	36	1.4*	86	
8.00		425	20	1.0	85	400	29	1.4*	85	350	35	1.5*	86	
6.80		500	16	1.0	84	470	18	1.0	85	411	29	1.5*	85	
6.33		19/5	537	24	1.5*	87	505	27	1.6*	88	442	32	1.7*	88
5.38			631	20	1.5*	87	594	22	1.6*	87	520	26	1.6*	88
4.86	699		18	1.5*	87	658	19	1.5*	87	576	24	1.6*	88	
3.97	856		14	1.5*	86	806	15	1.5*	87	705	19	1.6*	88	

\* P<sub>Mot\_max</sub> = 1.1 kW

### 2200 - 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
157.43	38/1	13	87	0.23	54	10	91	0.19	53	8.8	92	0.16	52
144.40		15	86	0.25	55	11	90	0.21	54	9.6	92	0.18	53
122.94		17	83	0.28	56	13	87	0.23	55	11	91	0.20	54
106.00		20	81	0.31	57	16	86	0.26	56	13	88	0.22	55
98.80		22	80	0.33	57	17	85	0.27	56	14	87	0.23	55
86.36		25	78	0.36	58	19	82	0.30	57	16	86	0.26	56
80.96		27	77	0.38	58	20	82	0.31	57	17	85	0.27	56
71.44		30	75	0.41	59	23	80	0.34	58	19	84	0.30	57
63.33		34	73	0.44	60	26	79	0.38	59	22	82	0.33	58
53.83		40	69	0.49	60	31	76	0.42	60	26	80	0.37	59
55.93	27/2	39	77	0.43	74	30	81	0.35	73	25	81	0.29	73
51.30		42	76	0.46	75	33	80	0.38	74	27	81	0.32	73
43.68		50	74	0.52	76	38	78	0.43	75	32	81	0.37	74
37.66		58	72	0.58	76	45	76	0.48	75	37	79	0.41	75
35.10		62	71	0.61	76	48	75	0.50	76	39	78	0.43	75
30.68		71	70	0.68	77	55	73	0.56	76	45	76	0.48	76
28.76		76	68	0.71	77	59	73	0.59	77	48	75	0.50	76
25.38		86	67	0.78	78	66	71	0.65	77	55	74	0.56	76
22.50		97	66	0.86	78	75	70	0.71	78	62	73	0.62	77
19.13		115	63	0.96	79	88	68	0.81	78	73	71	0.70	78
19.89	24/5	110	48	0.66	85	85	50	0.53	84	70	52	0.46	84
18.24		120	47	0.70	85	93	49	0.57	84	76	52	0.50	84
15.53		141	45	0.78	85	109	48	0.65	85	90	50	0.56	84
13.39		164	44	0.88	86	126	47	0.73	85	104	49	0.63	85
12.48		176	43	0.92	86	136	46	0.77	86	112	48	0.66	85
10.91		201	42	1.0	86	155	45	0.85	86	128	48	0.75	86
10.23		215	41	1.1	86	166	45	0.91	86	136	47	0.79	86
9.02		243	40	1.2*	87	188	43	0.98	86	155	46	0.87	86
8.00		275	39	1.3*	86	212	43	1.1	87	175	45	0.95	86
6.80		323	37	1.5*	86	250	41	1.2*	87	205	43	1.1	87
6.33	19/5	347	35	1.4*	88	268	35	1.1	88	221	35	0.93	87
5.38		408	34	1.6*	88	315	34	1.3*	88	260	34	1.1	88
4.86		452	32	1.7*	89	349	33	1.4*	88	288	33	1.1	88
3.97		554	26	1.7*	88	428	32	1.6*	89	352	32	1.3*	88

\* P<sub>Mot\_max</sub> = 1.1 kW



1100 - 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
157.43	38/1	6.9	92	0.13	51	5.7	92	0.11	50	4.4	92	0.09	48
144.40		7.6	92	0.14	51	6.2	92	0.12	50	4.8	92	0.10	49
122.94		8.9	92	0.17	52	7.3	92	0.14	51	5.6	92	0.11	50
106.00		10	92	0.19	53	8.4	92	0.16	52	6.6	92	0.13	51
98.80		11	92	0.20	54	9.1	92	0.17	53	7.0	92	0.13	51
86.36		12	90	0.22	55	10	92	0.19	54	8.1	92	0.15	52
80.96		13	89	0.23	55	11	92	0.20	54	8.6	92	0.16	53
71.44		15	87	0.25	56	12	91	0.22	55	9.7	92	0.18	53
63.33		17	86	0.28	57	14	89	0.24	56	11	92	0.20	54
53.83		20	84	0.31	58	16	87	0.27	57	13	91	0.22	56
55.93	27/2	19	87	0.25	72	16	91	0.22	71	12	92	0.17	69
51.30		21	87	0.27	72	17	90	0.23	71	13	92	0.19	70
43.68		25	84	0.30	73	20	87	0.26	72	16	92	0.22	71
37.66		29	82	0.34	74	23	86	0.30	73	18	89	0.24	72
35.10		31	82	0.36	74	25	84	0.31	73	19	88	0.26	72
30.68		35	80	0.40	75	29	82	0.34	74	22	87	0.29	73
28.76		38	79	0.42	75	31	82	0.36	74	24	86	0.30	73
25.38		43	78	0.47	76	35	81	0.40	75	27	84	0.33	74
22.50		48	77	0.52	76	40	79	0.44	75	31	82	0.36	74
19.13		57	75	0.59	77	47	78	0.50	76	36	81	0.41	75
19.89	24/5	55	55	0.38	83	45	58	0.33	82	35	60	0.27	81
18.24		60	54	0.41	83	49	56	0.35	83	38	60	0.30	82
15.53		70	53	0.47	84	57	55	0.40	83	45	58	0.33	82
13.39		82	52	0.53	84	67	54	0.45	84	52	56	0.37	83
12.48		88	51	0.56	85	72	53	0.48	84	56	55	0.39	83
10.91		100	50	0.62	85	82	52	0.53	84	64	54	0.43	84
10.23		107	49	0.65	85	87	51	0.56	85	68	54	0.46	84
9.02		121	48	0.72	86	99	50	0.61	85	77	53	0.51	84
8.00		137	47	0.79	86	112	49	0.68	85	87	52	0.56	85
6.80		161	46	0.90	86	132	48	0.77	86	102	51	0.64	85
6.33	19/5	173	45	0.94	87	142	45	0.77	87	110	45	0.61	86
5.38		204	43	1.1	88	167	43	0.86	87	130	43	0.68	87
4.86		226	42	1.1	88	185	42	0.93	88	144	42	0.73	87
3.97		277	40	1.3*	88	226	40	1.1	88	176	40	0.84	88

\* P<sub>Mot\_max</sub> = 1.1 kW

### 500 - 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
157.43	38/1	3.1	92	0.07	47	1.5	92	<0.05	46	0.06	92	<0.05	46
144.40		3.4	92	0.07	47	1.7	92	<0.05	46	0.06	92	<0.05	46
122.94		4.0	92	0.08	48	2.0	92	<0.05	46	0.08	92	<0.05	46
106.00		4.7	92	0.09	49	2.3	92	<0.05	46	0.09	92	<0.05	47
98.80		5.0	92	0.10	49	2.5	92	0.05	46	0.10	92	<0.05	47
86.36		5.7	92	0.11	50	2.8	92	0.06	47	0.11	92	<0.05	47
80.96		6.1	92	0.12	50	3.0	92	0.06	47	0.12	92	<0.05	47
71.44		6.9	92	0.13	51	3.4	92	0.07	48	0.13	92	<0.05	47
63.33		7.8	92	0.15	52	3.9	92	0.08	48	0.15	92	<0.05	47
53.83		9.2	92	0.17	53	4.6	92	0.09	49	0.18	92	<0.05	47
55.93	27/2	8.9	92	0.13	68	4.4	92	0.06	67	0.17	92	<0.05	67
51.30		9.7	92	0.14	68	4.8	92	0.07	67	0.19	92	<0.05	67
43.68		11	92	0.16	69	5.7	92	0.08	67	0.22	92	<0.05	67
37.66		13	92	0.18	70	6.6	92	0.10	67	0.26	92	<0.05	67
35.10		14	92	0.20	70	7.1	92	0.10	67	0.28	92	<0.05	67
30.68		16	92	0.22	71	8.1	92	0.12	68	0.32	92	<0.05	67
28.76		17	91	0.23	71	8.6	92	0.12	68	0.34	92	<0.05	67
25.38		19	89	0.25	72	9.8	92	0.14	69	0.39	92	<0.05	67
22.50		22	87	0.28	73	11	92	0.15	69	0.44	92	<0.05	67
19.13		26	85	0.32	74	13	92	0.18	70	0.52	92	<0.05	67
19.89	24/5	25	68	0.22	80	12	72	0.12	79	0.50	72	<0.05	79
18.24		27	66	0.23	81	13	72	0.13	79	0.54	72	<0.05	79
15.53		32	63	0.26	81	16	72	0.15	79	0.64	72	<0.05	79
13.39		37	61	0.29	82	18	72	0.18	80	0.74	72	<0.05	79
12.48		40	59	0.30	82	20	72	0.19	80	0.8	72	<0.05	79
10.91		45	58	0.34	83	22	71	0.21	80	0.91	71	<0.05	79
10.23		48	57	0.35	83	24	70	0.22	81	0.97	70	<0.05	79
9.02		55	56	0.39	83	27	66	0.24	81	1.1	66	<0.05	79
8.00		62	55	0.43	84	31	63	0.25	81	1.2	63	<0.05	79
6.80		73	54	0.49	84	36	61	0.29	82	1.4	61	<0.05	79
6.33	19/5	78	45	0.44	85	39	45	0.23	83	1.5	45	<0.05	80
5.38		92	43	0.49	86	46	43	0.25	83	1.8	43	<0.05	80
4.86		102	42	0.53	86	51	42	0.27	84	2.0	42	<0.05	80
3.97		125	40	0.61	87	62	40	0.31	84	0.06	92	<0.05	80

## 11.7.2 Technical data S..47

3400 - 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
201.00	42/1	16	150	0.46	57	15	150	0.44	57	13	150	0.39	56	
184.80		18	150	0.50	58	17	150	0.47	58	15	150	0.42	57	
158.12		21	150	0.58	59	20	150	0.54	58	17	150	0.48	58	
137.05		24	150	0.65	60	23	150	0.62	59	20	150	0.55	59	
128.10		26	150	0.69	60	24	150	0.66	60	21	150	0.58	59	
110.73		30	138	0.73	60	28	148	0.74	61	25	150	0.66	60	
94.08		36	113	0.71	60	34	123	0.73	60	29	146	0.75	61	
84.00		40	95	0.68	59	38	107	0.71	60	33	130	0.75	61	
71.75		47	58	0.52	56	44	82	0.65	59	39	107	0.72	61	
67.20		50	53	0.51	55	47	68	0.59	58	41	99	0.72	60	
56.61		60	40	0.48	53	56	46	0.50	54	49	75	0.66	59	
69.39		29/2	48	140	0.94	77	46	140	0.88	77	40	140	0.78	76
63.80			53	140	1.0	77	50	140	0.96	77	43	140	0.84	76
54.59	62		140	1.2	78	58	140	1.1	78	51	140	0.98	77	
47.32	71		139	1.3	78	67	140	1.3	78	59	140	1.1	78	
44.22	76		129	1.3	78	72	139	1.3	78	63	140	1.2	78	
38.23	88		112	1.3	78	83	120	1.3	79	73	139	1.4	79	
32.48	104		91	1.3	78	98	100	1.3	78	86	117	1.3	79	
29.00	117		76	1.2	77	110	86	1.3	78	96	104	1.3	79	
24.77	137		47	0.91	75	129	66	1.2	77	113	87	1.3	78	
23.20	146		42	0.87	74	137	54	1.0	76	120	79	1.3	78	
19.54	174		32	0.81	72	163	37	0.86	74	143	59	1.1	77	
20.33	27/5		167	100	2.0*	86	157	100	1.9*	86	137	100	1.7*	86
17.62			192	97	2.3*	86	181	100	2.2*	86	158	100	1.9*	86
16.47		206	90	2.3*	86	194	97	2.3*	86	170	100	2.1*	86	
14.24		238	78	2.3*	86	224	83	2.3*	86	196	97	2.3*	86	
12.10		280	63	2.2*	86	264	69	2.2*	86	231	82	2.3*	86	
10.80		314	53	2.1*	85	296	60	2.2*	85	259	72	2.3*	86	
9.23		368	32	1.5	85	346	45	1.9*	85	303	60	2.2*	86	
8.64		393	29	1.4	84	370	37	1.7*	85	324	55	2.2*	86	
7.28		467	22	1.3	83	439	25	1.4	84	384	41	1.9*	85	
6.83		20/5	497	34	2.0*	87	468	37	2.1*	88	409	45	2.2*	88
6.4			531	31	2.0*	87	500	34	2.0*	87	437	42	2.2*	88
5.39			630	24	1.8*	86	593	27	1.9*	87	519	34	2.1*	88
4.76			714	20	1.8*	85	672	23	1.9*	86	588	29	2.0*	87
4	850		16	1.7*	85	800	18	1.8*	85	700	23	1.9*	87	

\* P<sub>Mot\_max</sub> = 1.5 kW

### 2200 - 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
201.00	42/1	10	167	0.35	55	8.4	170	0.28	54	6.9	170	0.23	53	
184.80		11	167	0.37	56	9.1	168	0.30	55	7.5	170	0.25	53	
158.12		13	167	0.43	57	10	168	0.34	56	8.8	170	0.29	54	
137.05		16	165	0.48	58	12	167	0.38	57	10	168	0.32	55	
128.10		17	165	0.51	58	13	167	0.41	57	10	168	0.34	56	
110.73		19	165	0.58	59	15	167	0.46	58	12	168	0.39	57	
94.08		23	165	0.67	60	18	167	0.53	59	14	168	0.45	58	
84.00		26	162	0.73	61	20	167	0.59	60	16	167	0.50	59	
71.75		30	145	0.76	62	23	167	0.68	61	19	167	0.57	60	
67.20		32	137	0.76	62	25	164	0.71	61	20	167	0.60	60	
56.61		38	115	0.76	62	30	152	0.77	62	24	165	0.69	62	
69.39		29/2	31	155	0.68	75	24	155	0.54	74	20	155	0.45	73
63.80	34		155	0.74	76	26	155	0.58	75	21	155	0.48	74	
54.59	40		155	0.86	77	31	155	0.67	75	25	155	0.56	75	
47.32	46		155	0.98	77	35	155	0.77	76	29	155	0.64	75	
44.22	49		155	1.0	78	38	155	0.82	77	31	155	0.68	76	
38.23	57		154	1.2	78	44	155	0.93	77	36	155	0.78	77	
32.48	67		146	1.3	79	52	155	1.1	78	43	155	0.91	77	
29.00	75		137	1.4	79	58	154	1.2	79	48	155	1.0	78	
24.77	88		117	1.4	79	68	145	1.3	79	56	155	1.2	79	
23.20	94		111	1.4	79	73	142	1.4	79	60	152	1.2	79	
19.54	112		92	1.4	79	87	123	1.4	80	71	144	1.4	79	
20.33	27/5		108	109	1.4	86	83	110	1.1	86	68	110	0.93	85
17.62		124	108	1.6*	87	96	109	1.3	86	79	110	1.1	86	
16.47		133	108	1.7*	87	103	109	1.4	86	85	110	1.1	86	
14.24		154	108	2.0*	87	119	109	1.6*	87	98	110	1.3	86	
12.10		181	105	2.3*	87	140	109	1.8*	87	115	109	1.5	87	
10.80		203	95	2.3*	87	157	108	2.1*	87	129	109	1.7*	87	
9.23		238	82	2.4*	87	184	105	2.3*	87	151	109	2.0*	87	
8.64		254	77	2.4*	86	196	100	2.4*	87	162	109	2.1*	87	
7.28		302	64	2.3*	86	233	86	2.4*	87	192	103	2.4*	87	
6.83		20/5	322	62	2.4*	89	248	78	2.3*	89	204	78	1.9*	89
6.40			343	58	2.3*	89	265	76	2.4*	89	218	76	2.0*	89
5.39			408	48	2.3*	89	315	65	2.4*	89	259	74	2.3*	89
4.76	462		42	2.3*	89	357	58	2.4*	89	294	72	2.5*	90	
4.00	550		34	2.2*	88	425	48	2.4*	89	350	61	2.5*	90	

\* P<sub>Mot\_max</sub> = 1.5 kW

1100 - 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
201.00	42/1	5.4	176	0.20	52	4.4	180	0.17	50	3.4	185	0.14	49	
184.80		5.9	174	0.21	52	4.8	178	0.18	51	3.7	183	0.15	50	
158.12		6.9	172	0.24	53	5.6	176	0.20	52	4.4	180	0.17	51	
137.05		8.0	171	0.27	54	6.5	172	0.22	53	5.1	178	0.19	51	
128.10		8.5	171	0.28	55	7.0	172	0.24	53	5.4	176	0.19	52	
110.73		9.9	169	0.32	56	8.1	171	0.27	54	6.3	174	0.22	53	
94.08		11	169	0.37	57	9.5	171	0.31	55	7.4	172	0.25	54	
84.00		13	169	0.40	58	10	169	0.34	56	8.3	171	0.27	55	
71.75		15	169	0.46	59	12	169	0.39	57	9.7	171	0.31	56	
67.20		16	169	0.49	59	13	169	0.41	58	10	171	0.33	56	
56.61		19	169	0.57	60	15	169	0.48	59	12	171	0.38	58	
69.39		29/2	15	173	0.40	72	12	176	0.33	71	10	180	0.27	70
63.80	17		173	0.43	73	14	175	0.36	72	10	180	0.29	71	
54.59	20		171	0.49	74	16	173	0.41	73	12	176	0.33	72	
47.32	23		171	0.56	74	19	173	0.47	74	14	175	0.38	72	
44.22	24		171	0.60	75	20	171	0.49	74	15	175	0.40	73	
38.23	28		169	0.67	76	23	171	0.56	75	18	173	0.45	73	
32.48	33		169	0.78	76	27	171	0.66	76	21	171	0.52	74	
29.00	37		170	0.88	77	31	171	0.73	76	24	171	0.58	75	
24.77	44		169	1.0	78	36	170	0.84	77	28	171	0.67	76	
23.20	47		164	1.0	78	38	170	0.89	77	30	171	0.71	76	
19.54	56		154	1.2	79	46	165	1.0	78	35	170	0.83	77	
20.33	27/5		54	112	0.75	84	44	114	0.63	84	34	116	0.51	83
17.62		62	112	0.86	85	51	113	0.72	84	39	115	0.57	83	
16.47		66	112	0.92	85	54	113	0.77	84	42	114	0.61	84	
14.24		77	111	1.1	86	63	112	0.87	85	49	113	0.69	84	
12.10		90	111	1.2	86	74	111	1.0	86	57	113	0.81	85	
10.80		101	111	1.4	86	83	111	1.1	86	64	112	0.89	85	
9.23		119	110	1.6*	87	97	111	1.3	86	75	112	1.0	86	
8.64		127	109	1.7*	87	104	111	1.4	87	81	112	1.1	86	
7.28		151	109	2.0*	87	123	111	1.6*	87	96	111	1.3	87	
6.83		20/5	161	95	1.8*	89	131	95	1.5*	88	102	95	1.2	88
6.40			171	93	1.9*	89	140	93	1.6*	88	109	93	1.2	88
5.39			204	89	2.1*	89	166	89	1.8*	89	129	89	1.4	88
4.76	231		87	2.4*	89	189	87	1.9*	89	147	87	1.5	89	
4.00	275		78	2.5*	90	225	84	2.2*	89	175	84	1.7*	89	

\* P<sub>Mot\_max</sub> = 1.5 kW

### 500 - 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
201.00	42/1	2.4	185	0.10	47	1.2	185	0.05	47	0.04	185	<0.05	47	
184.80		2.7	185	0.11	48	1.3	185	0.06	47	0.05	185	<0.05	47	
158.12		3.1	185	0.13	49	1.5	185	0.07	47	0.06	185	<0.05	47	
137.05		3.6	185	0.14	50	1.8	185	0.08	47	0.07	185	<0.05	47	
128.10		3.9	183	0.15	50	1.9	185	0.08	47	0.07	185	<0.05	47	
110.73		4.5	181	0.17	51	2.2	185	0.09	47	0.09	185	<0.05	48	
94.08		5.3	178	0.19	52	2.6	185	0.11	48	0.10	185	<0.05	48	
84.00		5.9	176	0.21	53	2.9	185	0.12	49	0.11	185	<0.05	48	
71.75		6.9	174	0.24	54	3.4	185	0.14	50	0.13	185	<0.05	48	
67.20		7.4	172	0.25	54	3.7	185	0.14	50	0.14	185	<0.05	48	
56.61		8.8	172	0.29	56	4.4	181	0.16	51	0.17	181	<0.05	48	
69.39		29/2	7.2	185	0.20	69	3.6	185	0.10	67	0.14	185	<0.05	67
63.80	7.8		185	0.22	69	3.9	185	0.11	67	0.15	185	<0.05	67	
54.59	9.1		185	0.25	70	4.5	185	0.13	67	0.18	185	<0.05	67	
47.32	10		181	0.28	71	5.2	185	0.15	68	0.21	185	<0.05	68	
44.22	11		180	0.30	71	5.6	185	0.16	68	0.22	185	<0.05	68	
38.23	13		178	0.34	72	6.5	185	0.18	69	0.26	185	<0.05	68	
32.48	15		174	0.39	73	7.6	185	0.22	69	0.30	185	<0.05	68	
29.00	17		174	0.43	73	8.6	185	0.24	70	0.34	185	<0.05	68	
24.77	20		172	0.49	74	10	183	0.27	71	0.40	183	<0.05	68	
23.20	21		172	0.52	75	10	181	0.29	71	0.43	181	<0.05	68	
19.54	25		172	0.61	76	12	178	0.33	72	0.51	178	<0.05	68	
20.33	27/5		24	124	0.39	82	12	157	0.25	80	0.49	157	<0.05	79
17.62		28	120	0.43	82	14	149	0.28	80	0.56	149	<0.05	80	
16.47		30	118	0.46	82	15	145	0.29	80	0.60	145	<0.05	80	
14.24		35	116	0.51	83	17	138	0.31	81	0.70	138	<0.05	80	
12.10		41	115	0.60	84	20	131	0.35	81	0.82	131	<0.05	80	
10.80		46	114	0.66	84	23	127	0.38	82	0.92	127	<0.05	80	
9.23		54	113	0.76	85	27	121	0.42	82	1.0	121	<0.05	80	
8.64		57	113	0.81	85	28	120	0.44	83	1.1	120	<0.05	80	
7.28		68	112	0.94	86	34	117	0.51	83	1.3	117	<0.05	80	
6.83		20/5	73	95	0.84	87	36	95	0.43	84	1.4	95	<0.05	81
6.40			78	93	0.88	87	39	93	0.45	85	1.5	93	<0.05	81
5.39			92	89	0.99	87	46	89	0.51	85	1.8	89	<0.05	81
4.76	105		87	1.1	88	52	87	0.56	86	2.1	87	<0.05	81	
4.00	125		84	1.2	88	62	84	0.64	86	2.5	84	<0.05	81	

## 11.7.3 Technical data S..57

3400 - 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
201.00	42/1	16	270	0.78	61	15	270	0.74	61	13	270	0.66	60	
184.80		18	270	0.84	62	17	270	0.79	62	15	270	0.70	61	
158.12		21	270	0.97	63	20	270	0.92	63	17	270	0.81	62	
137.05		24	255	1.0	64	23	270	1.0	63	20	270	0.92	63	
128.10		26	245	1.1	64	24	255	1.0	64	21	270	0.98	63	
110.73		30	215	1.1	64	28	230	1.1	64	25	255	1.1	64	
94.08		36	184	1.1	64	34	196	1.1	64	29	225	1.1	64	
84.00		40	165	1.1	64	38	175	1.1	64	33	200	1.1	64	
71.75		47	139	1.1	64	44	149	1.1	64	39	174	1.1	65	
67.20		50	128	1.1	64	47	139	1.1	64	41	164	1.1	65	
56.61		60	103	1.0	63	56	114	1.1	64	49	138	1.1	65	
69.39		29/2	48	220	1.4	79	46	220	1.4	79	40	220	1.2	78
63.80	53		220	1.5	79	50	220	1.5	79	43	220	1.3	79	
54.59	62		220	1.8	80	58	220	1.7	80	51	220	1.5	79	
47.32	71		210	2.0	80	67	220	1.9	80	59	220	1.7	80	
44.22	76		197	2.0	80	72	205	1.9	80	63	220	1.8	80	
38.23	88		174	2.0	81	83	184	2.0	81	73	205	2.0	81	
32.48	104		148	2.0	81	98	157	2.0	81	86	180	2.0	81	
29.00	117		131	2.0	81	110	141	2.0	81	96	162	2.0	81	
24.77	137		111	2.0	80	129	120	2.0	81	113	139	2.0	81	
23.20	146		102	2.0	80	137	111	2.0	81	120	131	2.0	81	
19.54	174		81	1.9	80	163	90	1.9	80	143	109	2.0	81	
20.33	27/5		167	160	3.2*	88	157	160	3.0	88	137	160	2.6	88
17.62		192	140	3.2*	88	181	149	3.2*	88	158	160	3.0	88	
16.47		206	132	3.2*	88	194	140	3.2*	88	170	158	3.2*	88	
14.24		238	116	3.3*	88	224	123	3.3*	88	196	139	3.2*	88	
12.10		280	99	3.3*	88	264	105	3.3*	88	231	121	3.3*	88	
10.80		314	88	3.3*	88	296	94	3.3*	88	259	108	3.3*	88	
9.23		368	73	3.2*	88	346	79	3.3*	88	303	93	3.3*	88	
8.64		393	68	3.2*	88	370	74	3.3*	88	324	87	3.3*	88	
7.28		467	54	3.0	88	439	60	3.1*	88	384	72	3.3*	88	
6.8		20/5	497	54	3.2*	89	468	58	3.2*	89	409	69	3.3*	90
6.4			531	50	3.1*	89	500	54	3.2*	89	437	64	3.3*	89
5.4			630	41	3.1*	89	593	44	3.1*	89	519	53	3.2*	89
4.8	714		35	3.0	88	672	38	3.0	89	588	46	3.2*	89	
4.0	850		28	2.8	88	800	31	2.9	88	700	38	3.1*	89	

\* P<sub>Mot\_max</sub> = 3.0 kW

### 2200 - 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
201.00	42/1	10	295	0.58	59	8.4	295	0.46	57	6.9	295	0.39	56	
184.80		11	295	0.62	60	9.1	295	0.49	58	7.5	295	0.41	56	
158.12		13	295	0.71	61	10	295	0.56	59	8.8	295	0.47	58	
137.05		16	295	0.80	62	12	295	0.64	60	10	295	0.54	59	
128.10		17	295	0.85	62	13	295	0.68	61	10	295	0.57	59	
110.73		19	290	0.96	63	15	295	0.77	62	12	295	0.65	60	
94.08		23	275	1.1	64	18	300	0.91	63	14	295	0.75	62	
84.00		26	250	1.1	64	20	285	0.95	63	16	295	0.83	62	
71.75		30	220	1.1	65	23	275	1.1	64	19	290	0.94	63	
67.20		32	210	1.1	65	25	260	1.1	64	20	285	0.98	64	
56.61		38	179	1.1	65	30	225	1.1	65	24	265	1.1	65	
69.39		29/2	31	245	1.1	77	24	245	0.83	76	20	245	0.69	75
63.80	34		245	1.1	78	26	245	0.89	77	21	245	0.74	76	
54.59	40		245	1.3	79	31	245	1.0	78	25	245	0.86	77	
47.32	46		245	1.5	79	35	245	1.2	78	29	245	0.98	77	
44.22	49		245	1.6	80	38	245	1.3	79	31	245	1.0	78	
38.23	57		245	1.8	80	44	245	1.4	79	36	245	1.2	78	
32.48	67		225	2.0	81	52	245	1.7	80	43	245	1.4	79	
29.00	75		200	2.0	81	58	245	1.9	80	48	245	1.6	80	
24.77	88		177	2.0	81	68	220	2.0	81	56	245	1.8	80	
23.20	94		167	2.0	81	73	210	2.0	81	60	245	1.9	81	
19.54	112		143	2.1	81	87	183	2.1	81	71	215	2.0	81	
20.33	27/5		108	168	2.2	87	83	168	1.7	87	68	168	1.4	86
17.62		124	168	2.5	88	96	168	2.0	87	79	168	1.6	86	
16.47		133	169	2.7	88	103	168	2.1	87	85	168	1.7	87	
14.24		154	169	3.1*	88	119	169	2.4	88	98	169	2.0	87	
12.10		181	150	3.2*	88	140	169	2.8	88	115	169	2.3	88	
10.80		203	136	3.3*	88	157	169	3.2*	88	129	169	2.6	88	
9.23		238	119	3.4*	88	184	149	3.3*	88	151	169	3.0	88	
8.64		254	112	3.4*	89	196	141	3.3*	89	162	166	3.2*	88	
7.28		302	96	3.4*	89	233	122	3.4*	89	192	146	3.3*	89	
6.8		20/5	322	91	3.4*	90	248	100	2.9	90	204	100	2.4	89
6.4			343	85	3.4*	90	265	98	3.0	90	218	98	2.5	89
5.4			408	72	3.4*	90	315	95	3.5*	90	259	95	2.9	90
4.8	462		63	3.4*	90	357	84	3.5*	90	294	93	3.2*	90	
4.0	550		53	3.4*	90	425	71	3.5*	90	350	88	3.6*	90	

\* P<sub>Mot\_max</sub> = 3.0 kW



1100 - 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
201.00	42/1	5.4	295	0.31	54	4.4	300	0.27	53	3.4	310	0.22	51	
184.80		5.9	295	0.34	55	4.8	300	0.29	54	3.7	305	0.23	52	
158.12		6.9	295	0.38	56	5.6	295	0.32	55	4.4	300	0.26	53	
137.05		8.0	295	0.43	57	6.5	295	0.36	56	5.1	300	0.29	54	
128.10		8.5	295	0.46	58	7.0	295	0.38	57	5.4	295	0.31	55	
110.73		9.9	295	0.52	59	8.1	295	0.44	58	6.3	295	0.35	56	
94.08		11	295	0.60	60	9.5	295	0.50	59	7.4	295	0.40	57	
84.00		13	295	0.67	61	10	295	0.56	60	8.3	295	0.44	58	
71.75		15	295	0.77	62	12	295	0.64	61	9.7	295	0.51	59	
67.20		16	300	0.82	62	13	295	0.68	61	10	295	0.54	60	
56.61		19	290	0.93	64	15	300	0.80	62	12	295	0.63	61	
69.39		29/2	15	270	0.61	74	12	270	0.50	73	10	270	0.40	72
63.80	17		270	0.65	75	14	270	0.54	74	10	270	0.43	72	
54.59	20		270	0.75	76	16	270	0.62	75	12	270	0.50	73	
47.32	23		270	0.86	76	19	270	0.71	75	14	270	0.56	74	
44.22	24		270	0.92	77	20	270	0.76	76	15	270	0.60	75	
38.23	28		270	1.0	78	23	270	0.87	77	18	270	0.69	75	
32.48	33		270	1.2	78	27	270	1.0	77	21	270	0.80	76	
29.00	37		270	1.4	79	31	270	1.1	78	24	270	0.89	77	
24.77	44		270	1.6	80	36	270	1.3	79	28	270	1.0	78	
23.20	47		270	1.7	80	38	270	1.4	79	30	270	1.1	78	
19.54	56		250	1.8	81	46	270	1.6	80	35	270	1.3	79	
20.33	27/5		54	168	1.1	85	44	170	0.93	84	34	172	0.74	84
17.62		62	169	1.3	86	51	169	1.1	85	39	170	0.84	84	
16.47		66	168	1.4	86	54	168	1.1	85	42	170	0.90	84	
14.24		77	168	1.6	86	63	168	1.3	86	49	170	1.0	85	
12.10		90	169	1.9	87	74	169	1.5	86	57	169	1.2	86	
10.80		101	169	2.1	87	83	169	1.7	87	64	169	1.3	86	
9.23		119	170	2.4	88	97	168	2.0	87	75	168	1.5	87	
8.64		127	170	2.6	88	104	169	2.1	87	81	168	1.6	87	
7.28		151	170	3.0	88	123	170	2.5	88	96	170	2.0	87	
6.8		20/5	161	120	2.3	89	131	120	1.9	89	102	120	1.5	88
6.4			171	117	2.4	89	140	117	1.9	89	109	117	1.5	88
5.4			204	111	2.6	90	166	111	2.2	89	129	111	1.7	89
4.8	231		108	2.9	90	189	108	2.4	90	147	108	1.9	89	
4.0	275		103	3.3*	90	225	103	2.7	90	175	103	2.1	89	

\* P<sub>Mot\_max</sub> = 3.0 kW

500 - 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
201.00	42/1	2.4	330	0.17	50	1.2	330	0.09	48	0.04	330	<0.05	48	
184.80		2.7	330	0.19	50	1.3	330	0.10	48	0.05	330	<0.05	48	
158.12		3.1	315	0.20	51	1.5	330	0.11	48	0.06	330	<0.05	48	
137.05		3.6	310	0.23	52	1.8	330	0.13	49	0.07	330	<0.05	48	
128.10		3.9	305	0.24	53	1.9	330	0.14	49	0.07	330	<0.05	49	
110.73		4.5	300	0.26	54	2.2	330	0.16	50	0.09	330	<0.05	49	
94.08		5.3	300	0.30	55	2.6	330	0.18	51	0.10	330	<0.05	49	
84.00		5.9	295	0.33	56	2.9	325	0.20	51	0.11	325	<0.05	49	
71.75		6.9	295	0.38	57	3.4	310	0.22	52	0.13	310	<0.05	49	
67.20		7.4	295	0.40	57	3.7	310	0.23	53	0.14	310	<0.05	49	
56.61		8.8	295	0.47	59	4.4	300	0.26	54	0.17	300	<0.05	49	
69.39		29/2	7.2	300	0.32	70	3.6	300	0.17	68	0.14	300	<0.05	68
63.80			7.8	300	0.35	71	3.9	300	0.18	68	0.15	300	<0.05	68
54.59	9.1		300	0.40	72	4.5	300	0.21	68	0.18	300	<0.05	68	
47.32	10		300	0.46	73	5.2	300	0.24	69	0.21	300	<0.05	68	
44.22	11		300	0.49	73	5.6	300	0.26	69	0.22	300	<0.05	68	
38.23	13		295	0.55	74	6.5	300	0.29	70	0.26	300	<0.05	68	
32.48	15		295	0.64	75	7.6	300	0.34	71	0.30	300	<0.05	68	
29.00	17		295	0.71	75	8.6	300	0.38	72	0.34	300	<0.05	68	
24.77	20		295	0.82	76	10	300	0.44	73	0.40	300	<0.05	68	
23.20	21		295	0.87	76	10	300	0.46	73	0.43	300	<0.05	68	
19.54	25		295	1.0	77	12	295	0.54	74	0.51	295	<0.05	68	
20.33	27/5		24	181	0.57	82	12	215	0.35	80	0.49	215	<0.05	79
17.62			28	175	0.63	83	14	210	0.39	80	0.56	210	<0.05	79
16.47		30	174	0.66	83	15	205	0.40	81	0.60	205	<0.05	79	
14.24		35	172	0.75	84	17	198	0.45	81	0.70	198	<0.05	79	
12.10		41	170	0.87	84	20	188	0.50	82	0.82	188	<0.05	79	
10.80		46	170	0.97	85	23	184	0.54	82	0.92	184	<0.05	79	
9.23		54	170	1.1	85	27	177	0.61	83	1.0	177	<0.05	79	
8.64		57	170	1.2	86	28	175	0.64	83	1.1	175	<0.05	79	
7.28		68	170	1.4	86	34	172	0.74	84	1.3	172	<0.05	79	
6.8		20/5	73	120	1.1	87	36	120	0.54	85	1.4	120	<0.05	81
6.4			78	117	1.1	87	39	117	0.56	85	1.5	117	<0.05	81
5.4			92	111	1.2	88	46	111	0.63	86	1.8	111	<0.05	81
4.8			105	108	1.3	88	52	108	0.69	86	2.1	108	<0.05	81
4.0	125		103	1.5	89	62	103	0.78	87	2.5	103	<0.05	81	

## 11.7.4 Technical data S..67

3400 - 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
217.41	42/1	15	465	1.2	63	14	465	1.2	62	12	465	1.0	62	
190.11		17	465	1.4	63	16	465	1.3	63	14	465	1.2	62	
180.60		18	465	1.4	63	17	465	1.4	63	15	465	1.2	63	
158.45		21	465	1.6	64	20	465	1.5	64	17	465	1.4	63	
134.40		25	465	1.9	65	23	465	1.8	65	20	465	1.6	64	
121.33		28	455	2.0	65	26	465	2.0	65	23	465	1.7	65	
106.75		31	405	2.1	65	29	430	2.1	66	26	465	2.0	65	
100.80		33	380	2.1	65	31	410	2.1	66	27	465	2.1	66	
85.83		39	320	2.0	65	37	345	2.1	65	32	400	2.1	66	
78.00		43	285	2.0	65	41	310	2.0	65	35	365	2.1	66	
67.57		50	235	1.9	64	47	260	2.0	65	41	315	2.1	66	
58.80		57	184	1.8	62	54	215	1.9	64	47	270	2.1	65	
75.06		29/2	45	435	2.6	80	42	435	2.4	80	37	435	2.1	79
65.63			51	435	2.9	80	48	435	2.8	80	42	435	2.4	80
62.35	54		435	3.1	81	51	435	2.9	80	44	435	2.6	80	
54.70	62		435	3.5	81	58	435	3.3	81	51	435	2.9	81	
46.40	73		395	3.7	81	68	415	3.7	81	60	435	3.4	81	
41.89	81		355	3.7	81	76	380	3.7	81	66	430	3.7	81	
36.85	92		310	3.7	81	86	335	3.8	81	75	380	3.7	81	
34.80	97		295	3.7	81	91	315	3.7	81	80	365	3.8	81	
29.63	114		250	3.7	81	107	270	3.8	81	94	310	3.8	81	
26.93	126		220	3.6	80	118	240	3.7	81	103	280	3.7	81	
23.33	145		182	3.5	80	137	200	3.6	80	120	245	3.8	81	
20.30	167		141	3.1	79	157	164	3.4	80	137	205	3.7	81	
24.44	27/5		139	315	5.2	89	130	315	4.9	89	114	315	4.3	88
23.22			146	315	5.4	89	137	315	5.1	89	120	315	4.5	89
20.37		166	315	6.2*	89	157	315	5.8*	89	137	315	5.1	89	
17.28		196	270	6.3*	89	185	290	6.3*	89	162	315	6.0*	89	
15.60		217	245	6.3*	89	205	260	6.3*	89	179	295	6.2*	89	
13.73		247	215	6.3*	89	233	230	6.3*	89	203	265	6.4*	89	
12.96		262	200	6.2*	89	246	215	6.3*	89	216	250	6.4*	89	
11.03		308	169	6.2*	88	290	183	6.3*	89	253	215	6.4*	89	
10.03		338	151	6.1*	88	319	164	6.2*	88	279	194	6.4*	89	
8.69		391	124	5.8*	88	368	137	6.0*	88	322	166	6.3*	89	
7.56		449	95	5.1	87	423	112	5.7*	88	370	141	6.2*	88	

\* P<sub>Mot\_max</sub> = 5.5 kW

2200 - 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
217.41	42/1	10	520	0.91	61	7.8	520	0.72	59	6.4	520	0.60	58	
190.11		11	520	1.0	62	8.9	520	0.81	60	7.3	520	0.68	59	
180.60		12	520	1.1	62	9.4	520	0.85	61	7.7	520	0.71	59	
158.45		13	520	1.2	63	10	520	0.95	61	8.8	520	0.80	60	
134.40		16	520	1.4	64	12	520	1.1	62	10	520	0.93	61	
121.33		18	520	1.5	64	14	520	1.2	63	11	520	1.0	62	
106.75		20	520	1.7	65	15	520	1.4	64	13	520	1.1	63	
100.80		21	510	1.8	65	16	520	1.4	64	13	520	1.2	63	
85.83		25	490	2.0	66	19	520	1.7	65	16	520	1.4	64	
78.00		28	465	2.1	66	21	510	1.8	66	17	520	1.5	65	
67.57		32	410	2.1	67	25	495	2.0	66	20	520	1.7	66	
58.80		37	360	2.1	67	28	460	2.1	67	23	500	1.9	66	
75.06		29/2	29	480	1.9	79	22	480	1.5	78	18	480	1.2	77
65.63			33	480	2.1	79	25	480	1.7	78	21	480	1.4	78
62.35	35		480	2.2	80	27	480	1.7	79	22	480	1.5	78	
54.70	40		480	2.5	80	31	480	2.0	79	25	480	1.6	78	
46.40	47		480	3.0	81	36	480	2.3	80	30	480	1.9	79	
41.89	52		480	3.3	81	40	480	2.5	80	33	480	2.1	80	
36.85	59		475	3.6	81	46	480	2.9	81	37	480	2.4	80	
34.80	63		450	3.7	82	48	480	3.0	81	40	480	2.5	80	
29.63	74		395	3.8	82	57	480	3.5	82	47	480	2.9	81	
26.93	81		360	3.8	82	63	455	3.7	82	51	480	3.2	81	
23.33	94		320	3.9	82	72	405	3.8	82	60	480	3.7	82	
20.30	108		280	3.9	82	83	360	3.8	82	68	425	3.7	82	
24.44	27/5		90	340	3.6	88	69	340	2.8	87	57	340	2.3	87
23.22			94	340	3.8	88	73	340	3.0	88	60	340	2.5	87
20.37		108	340	4.3	88	83	340	3.4	88	68	340	2.8	87	
17.28		127	340	5.1	89	98	340	4.0	88	81	340	3.3	88	
15.60		141	340	5.6*	89	108	340	4.4	89	89	340	3.6	88	
13.73		160	330	6.2*	89	123	340	5.0	89	101	340	4.1	89	
12.96		169	315	6.3*	89	131	340	5.2	89	108	340	4.3	89	
11.03		199	275	6.4*	89	154	340	6.2*	89	126	340	5.1	89	
10.03		219	250	6.4*	89	169	315	6.3*	89	139	340	5.6*	89	
8.69		253	220	6.6*	89	195	280	6.4*	89	161	335	6.3*	89	
7.56		291	192	6.6*	89	224	250	6.6*	89	185	295	6.4*	89	

\* P<sub>Mot\_max</sub> = 5.5 kW

1100 - 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
217.41	42/1	5.0	555	0.52	57	4.1	560	0.44	56	3.2	570	0.35	54	
190.11		5.7	555	0.58	58	4.7	560	0.49	57	3.6	565	0.40	55	
180.60		6.0	555	0.61	58	4.9	555	0.51	57	3.8	565	0.41	55	
158.45		6.9	550	0.68	59	5.6	555	0.57	58	4.4	560	0.46	56	
134.40		8.1	550	0.78	60	6.6	550	0.65	59	5.2	555	0.53	57	
121.33		9.0	550	0.86	61	7.4	550	0.72	60	5.7	555	0.58	58	
106.75		10	550	0.96	62	8.4	550	0.80	61	6.5	555	0.65	59	
100.80		10	550	1.0	62	8.9	550	0.84	61	6.9	555	0.68	59	
85.83		12	550	1.2	63	10	550	0.97	62	8.1	550	0.78	61	
78.00		14	550	1.3	64	11	550	1.1	63	8.9	550	0.84	61	
67.57		16	550	1.4	65	13	550	1.2	64	10	550	0.96	62	
58.80		18	530	1.6	66	15	550	1.4	65	11	550	1.1	63	
75.06		29/2	14	525	1.1	76	11	525	0.88	75	9.3	525	0.69	74
65.63			16	525	1.2	77	13	525	1.00	76	10	525	0.79	75
62.35	17		525	1.3	77	14	525	1.0	76	11	525	0.83	75	
54.70	20		525	1.4	78	16	525	1.2	77	12	525	0.93	75	
46.40	23		525	1.7	78	19	525	1.4	78	15	525	1.1	76	
41.89	26		525	1.8	79	21	525	1.5	78	16	525	1.2	77	
36.85	29		525	2.1	79	24	525	1.7	79	18	525	1.3	78	
34.80	31		525	2.2	80	25	525	1.8	79	20	525	1.4	78	
29.63	37		525	2.5	80	30	525	2.1	80	23	525	1.7	79	
26.93	40		525	2.8	81	33	525	2.3	80	25	525	1.8	79	
23.33	47		525	3.2	81	38	525	2.6	81	30	525	2.1	80	
20.30	54		520	3.6	82	44	525	3.0	81	34	525	2.4	80	
24.44	27/5		45	355	1.9	86	36	360	1.6	86	28	365	1.3	85
23.22			47	355	2.0	86	38	360	1.7	86	30	365	1.4	85
20.37		54	355	2.3	87	44	355	1.9	86	34	365	1.5	86	
17.28		63	355	2.7	87	52	355	2.2	87	40	360	1.8	86	
15.60		70	350	3.0	88	57	355	2.5	87	44	355	1.9	86	
13.73		80	350	3.3	88	65	355	2.8	88	50	355	2.2	87	
12.96		84	350	3.5	88	69	350	2.9	88	54	355	2.3	87	
11.03		99	350	4.1	89	81	350	3.4	88	63	355	2.7	88	
10.03		109	345	4.5	89	89	350	3.7	88	69	355	3.0	88	
8.69		126	345	5.1	89	103	350	4.3	89	80	350	3.3	88	
7.56		145	345	5.9*	89	119	345	4.8	89	92	350	3.8	89	

\* P<sub>Mot\_max</sub> = 5.5 kW

### 500 - 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
217.41	42/1	2.2	570	0.26	52	1.1	570	0.14	50	0.04	570	<0.05	51	
190.11		2.6	570	0.30	53	1.3	570	0.16	50	0.05	570	<0.05	51	
180.60		2.7	570	0.31	53	1.3	570	0.17	50	0.05	570	<0.05	51	
158.45		3.1	570	0.35	54	1.5	570	0.19	51	0.06	570	<0.05	51	
134.40		3.7	565	0.40	55	1.8	570	0.22	52	0.07	570	<0.05	51	
121.33		4.1	560	0.43	56	2.0	570	0.24	52	0.08	570	<0.05	51	
106.75		4.6	560	0.48	57	2.3	570	0.27	53	0.09	570	<0.05	51	
100.80		4.9	560	0.51	57	2.4	570	0.28	53	0.09	570	<0.05	51	
85.83		5.8	555	0.58	58	2.9	570	0.32	54	0.11	570	<0.05	51	
78.00		6.4	555	0.63	59	3.2	570	0.35	55	0.12	570	<0.05	51	
67.57		7.3	555	0.71	60	3.6	565	0.39	56	0.14	565	<0.05	51	
58.80		8.5	550	0.80	61	4.2	560	0.44	57	0.17	560	<0.05	51	
75.06		29/2	6.6	570	0.55	72	3.3	570	0.29	69	0.13	570	<0.05	70
65.63			7.6	570	0.62	73	3.8	570	0.33	70	0.15	570	<0.05	70
62.35	8.0		570	0.65	73	4.0	570	0.34	70	0.16	570	<0.05	70	
54.70	9.1		570	0.74	74	4.5	570	0.39	71	0.18	570	<0.05	70	
46.40	10		570	0.86	75	5.3	570	0.45	71	0.21	570	<0.05	70	
41.89	11		570	0.95	75	5.9	570	0.50	72	0.23	570	<0.05	70	
36.85	13		570	1.1	76	6.7	570	0.56	73	0.27	570	<0.05	70	
34.80	14		570	1.1	76	7.1	570	0.59	73	0.28	570	<0.05	70	
29.63	16		565	1.3	77	8.4	570	0.68	74	0.33	570	<0.05	70	
26.93	18		565	1.4	78	9.2	570	0.75	74	0.37	570	<0.05	70	
23.33	21		565	1.6	78	10	570	0.85	75	0.42	570	<0.05	70	
20.30	24		565	1.8	79	12	570	0.97	76	0.49	570	<0.05	70	
24.44	27/5		20	365	0.93	84	10	355	0.47	82	0.40	355	<0.05	81
23.22			21	365	0.98	84	10	355	0.49	82	0.43	355	<0.05	81
20.37		24	380	1.2	85	12	365	0.57	82	0.49	365	<0.05	81	
17.28		28	365	1.3	85	14	435	0.80	83	0.57	435	<0.05	81	
15.60		32	365	1.4	85	16	430	0.87	83	0.64	430	<0.05	81	
13.73		36	365	1.6	86	18	415	0.95	84	0.72	415	<0.05	81	
12.96		38	360	1.7	86	19	410	0.99	84	0.77	410	<0.05	81	
11.03		45	355	1.9	87	22	390	1.1	84	0.90	390	<0.05	81	
10.03		49	355	2.1	87	24	380	1.2	85	0.99	380	<0.05	81	
8.69		57	355	2.4	87	28	370	1.3	85	1.1	370	0.06	81	
7.56		66	355	2.8	88	33	365	1.5	86	1.3	365	0.06	81	

## 11.7.5 Technical data S..77

3400 - 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
256.47	40/1	13	1160	2.4	68	12	1160	2.2	67	10	1160	2.0	67
225.26		15	1130	2.6	68	14	1150	2.5	68	12	1160	2.2	68
214.00		15	1110	2.7	68	14	1140	2.6	68	13	1160	2.3	68
189.09		17	1080	3.0	69	16	1100	2.8	69	14	1140	2.6	68
161.60		21	1040	3.3	69	19	1050	3.1	69	17	1090	2.9	69
148.15		22	1010	3.5	70	21	1030	3.4	70	18	1070	3.1	69
130.00		26	970	3.8	70	24	990	3.7	70	21	1030	3.3	70
123.20		27	950	3.9	70	25	970	3.8	70	22	1010	3.4	70
107.83		31	900	4.2	70	29	920	4.1	70	25	970	3.8	70
97.14		35	860	4.5	71	32	880	4.3	71	28	930	4.0	71
85.22		39	770	4.6	71	37	820	4.6	71	32	880	4.3	71
75.20		45	675	4.5	70	42	725	4.6	71	37	830	4.6	71
66.67		50	585	4.5	70	47	635	4.5	70	41	745	4.6	71
56.92		59	485	4.4	69	56	530	4.5	70	49	635	4.6	71
75.09	40/3	45	1020	5.7	85	42	1020	5.4	85	37	1020	4.7	84
71.33		47	1020	6.0	85	44	1020	5.7	85	39	1020	5.0	84
63.03		53	1020	6.8	85	50	1020	6.4	85	44	1020	5.6	85
53.87		63	980	7.6	86	59	1000	7.3	85	51	1020	6.5	85
49.38		68	950	8.0	86	64	970	7.7	86	56	1010	7.0	85
43.33		78	910	8.7	86	73	930	8.4	86	64	970	7.7	86
41.07		82	900	9.1	86	77	910	8.7	86	68	950	7.9	86
35.94		94	800	9.2	86	89	850	9.2	86	77	910	8.6	86
32.38		105	725	9.3*	86	98	770	9.3*	86	86	880	9.3	86
28.41		119	635	9.3*	86	112	680	9.3*	86	98	780	9.3	86
25.07		135	560	9.3*	86	127	600	9.3*	86	111	695	9.4	86
22.22		153	485	9.1	85	144	525	9.2	86	126	615	9.4	86
18.97		179	395	8.7	85	168	440	9.1	85	147	520	9.4	86
22.89		34/6	148	590	10.*2	90	139	590	9.6*	90	122	590	8.4
20.99	161		590	11.1*	90	152	590	10.5*	90	133	590	9.1	90
18.42	184		590	12.7*	90	173	590	11.9*	90	152	590	10.4	90
17.45	194		590	13.4*	90	183	590	12.6*	90	160	590	11.0	90
15.28	222		530	13.8*	90	209	560	13.7*	90	183	590	12.6	90
13.76	247		480	13.9*	90	232	505	13.7*	90	203	585	13.9*	90
12.07	281		415	13.7*	89	265	445	13.8*	89	231	515	13.9*	90
10.65	319		365	13.7*	89	300	390	13.8*	89	262	455	14.0*	90
9.44	360		315	13.4*	89	338	345	13.8*	89	296	405	14.1*	89
8.06	421		260	13.0*	88	397	285	13.4*	89	347	340	13.9*	89

\* P<sub>Mot\_max</sub> = 9.2 kW

### 2200 - 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
256.47	40/1	8.5	1260	1.7	66	6.6	1270	1.4	64	5.4	1270	1.1	63	
225.26		9.7	1230	1.9	67	7.5	1270	1.5	65	6.2	1270	1.3	64	
214.00		10	1220	2.0	67	7.9	1270	1.6	66	6.5	1270	1.4	64	
189.09		11	1200	2.2	67	8.9	1240	1.8	66	7.4	1270	1.5	65	
161.60		13	1160	2.4	68	10	1220	2.0	67	8.6	1260	1.7	66	
148.15		14	1140	2.6	69	11	1200	2.1	68	9.4	1240	1.8	67	
130.00		16	1100	2.8	69	13	1170	2.4	68	10	1210	2.0	67	
123.20		17	1080	2.9	69	13	1150	2.4	68	11	1200	2.1	68	
107.83		20	1040	3.2	70	15	1110	2.7	69	12	1170	2.3	68	
97.14		22	1010	3.4	70	17	1090	2.9	70	14	1140	2.5	69	
85.22		25	970	3.7	71	19	1050	3.1	70	16	1100	2.7	69	
75.20		29	920	4.0	71	22	1010	3.4	71	18	1070	3.0	70	
66.67		32	880	4.3	71	25	970	3.6	71	20	1040	3.2	71	
56.92		38	830	4.7	72	29	920	4.0	72	24	990	3.6	71	
75.09		40/3	29	1100	4.0	84	22	1100	3.1	83	18	1100	2.6	82
71.33	30		1100	4.2	84	23	1100	3.3	83	19	1100	2.7	82	
63.03	34		1100	4.8	84	26	1100	3.7	84	22	1100	3.1	83	
53.87	40		1100	5.5	85	31	1100	4.3	84	25	1100	3.6	83	
49.38	44		1080	5.9	85	34	1100	4.7	84	28	1100	3.9	84	
43.33	50		1050	6.5	85	39	1100	5.3	85	32	1100	4.4	84	
41.07	53		1030	6.8	85	41	1100	5.6	85	34	1100	4.7	84	
35.94	61		980	7.3	86	47	1060	6.2	85	38	1100	5.3	85	
32.38	67		960	8.0	86	52	1040	6.7	86	43	1090	5.8	85	
28.41	77		920	8.7	86	59	990	7.2	86	49	1050	6.3	86	
25.07	87		870	9.3*	86	67	960	7.9	86	55	1020	7.0	86	
22.22	99		790	9.5*	86	76	920	8.5	86	63	980	7.5	86	
18.97	115		680	9.6*	86	89	860	9.3*	87	73	930	8.3	86	
22.89	34/6		96	710	7.9	90	74	705	6.1	89	61	705	5.1	89
20.99			104	710	8.7	90	80	705	6.7	90	66	705	5.5	89
18.42		119	720	10.0*	90	92	710	7.6	90	76	705	6.3	90	
17.45		126	720	10.5*	90	97	710	8.0	90	80	710	6.7	90	
15.28		143	720	12.0*	90	111	720	9.3*	90	91	710	7.6	90	
13.76		159	725	13.5*	90	123	720	10.3*	90	101	710	8.4	90	
12.07		182	650	13.8*	90	140	725	11.8*	90	115	720	9.7*	90	
10.65		206	580	13.9*	90	159	725	13.4*	90	131	720	11.0*	91	
9.44		233	520	14.1*	90	180	655	13.7*	90	148	725	12.4*	91	
8.06		272	445	14.1*	90	210	575	14.1*	90	173	680	13.7*	91	

\* P<sub>Mot\_max</sub> = 9.2 kW



1100 - 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
256.47	40/1	4.2	1270	0.92	62	3.5	1270	0.77	61	2.7	1270	0.61	59
225.26		4.8	1270	1.0	63	3.9	1270	0.86	62	3.1	1270	0.69	60
214.00		5.1	1270	1.1	63	4.2	1270	0.90	62	3.2	1270	0.72	60
189.09		5.8	1270	1.2	64	4.7	1270	1.0	63	3.7	1270	0.81	61
161.60		6.8	1270	1.4	65	5.5	1270	1.2	64	4.3	1270	0.93	62
148.15		7.4	1270	1.5	65	6.0	1270	1.3	64	4.7	1270	1.0	63
130.00		8.4	1260	1.7	66	6.9	1270	1.4	65	5.3	1270	1.1	64
123.20		8.9	1250	1.8	67	7.3	1270	1.5	65	5.6	1270	1.2	64
107.83		10	1220	1.9	67	8.3	1260	1.7	66	6.4	1270	1.3	65
97.14		11	1200	2.1	68	9.2	1250	1.8	67	7.2	1270	1.5	66
85.22		12	1170	2.3	69	10	1220	2.0	68	8.2	1270	1.6	66
75.20		14	1140	2.5	69	11	1190	2.2	68	9.3	1250	1.8	67
66.67		16	1110	2.7	70	13	1160	2.4	69	10	1220	2.0	68
56.92		19	1060	3.0	71	15	1120	2.7	70	12	1190	2.2	69
75.09	40/3	14	1120	2.1	81	11	1130	1.8	81	9.3	1170	1.4	80
71.33		15	1120	2.2	82	12	1130	1.9	81	9.8	1120	1.4	80
63.03		17	1120	2.5	82	14	1120	2.1	81	11	1130	1.6	80
53.87		20	1120	2.9	83	16	1120	2.4	82	12	1120	1.9	81
49.38		22	1120	3.1	83	18	1120	2.6	82	14	1120	2.0	81
43.33		25	1130	3.6	84	20	1120	2.9	83	16	1120	2.3	82
41.07		26	1130	3.8	84	21	1120	3.1	83	17	1120	2.4	82
35.94		30	1150	4.4	84	25	1130	3.5	84	19	1120	2.8	83
32.38		33	1130	4.8	85	27	1130	3.9	84	21	1120	3.1	83
28.41		38	1110	5.3	85	31	1150	4.5	84	24	1130	3.5	84
25.07		43	1080	5.8	85	35	1120	5.0	85	27	1130	3.9	84
22.22		49	1050	6.4	86	40	1100	5.5	85	31	1150	4.5	85
18.97		57	1010	7.1	86	47	1060	6.1	86	36	1120	5.1	85
22.89		34/6	48	695	4.0	89	39	695	3.3	88	30	705	2.6
20.99	52		705	4.4	89	42	695	3.5	88	33	705	2.8	88
18.42	59		700	4.9	89	48	700	4.0	89	38	700	3.2	88
17.45	63		700	5.2	89	51	700	4.3	89	40	700	3.3	88
15.28	71		710	6.0	90	58	700	4.8	89	45	700	3.8	89
13.76	79		710	6.6	90	65	700	5.4	89	50	700	4.2	89
12.07	91		710	7.5	90	74	710	6.2	90	57	700	4.8	89
10.65	103		715	8.6	90	84	710	7.0	90	65	710	5.5	90
9.44	116		720	9.7*	91	95	715	7.9	90	74	710	6.1	90
8.06	136		725	11.4*	91	111	720	9.3*	91	86	710	7.2	90

\* P<sub>Mot\_max</sub> = 9.2 kW

500 - 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
256.47	40/1	1.9	1270	0.45	57	0.97	1270	0.24	55	0.03	1270	<0.05	55	
225.26		2.2	1270	0.51	58	1.1	1270	0.27	55	0.04	1270	<0.05	55	
214.00		2.3	1270	0.53	58	1.1	1270	0.28	55	0.04	1270	<0.05	55	
189.09		2.6	1270	0.59	59	1.3	1270	0.32	55	0.05	1270	<0.05	55	
161.60		3.0	1270	0.68	60	1.5	1270	0.37	56	0.06	1270	<0.05	55	
148.15		3.3	1270	0.74	61	1.6	1270	0.40	57	0.06	1270	<0.05	55	
130.00		3.8	1270	0.83	62	1.9	1270	0.45	57	0.07	1270	<0.05	55	
123.20		4.0	1270	0.87	62	2.0	1270	0.47	58	0.08	1270	<0.05	55	
107.83		4.6	1270	0.98	63	2.3	1270	0.53	59	0.09	1270	<0.05	55	
97.14		5.1	1270	1.1	64	2.5	1270	0.58	59	0.10	1270	<0.05	55	
85.22		5.8	1270	1.2	64	2.9	1270	0.65	60	0.11	1270	<0.05	55	
75.20		6.6	1270	1.4	65	3.3	1270	0.73	61	0.13	1270	<0.05	55	
66.67		7.4	1270	1.5	66	3.7	1270	0.81	62	0.14	1270	<0.05	55	
56.92		8.7	1260	1.7	67	4.3	1270	0.93	63	0.17	1270	<0.05	55	
75.09		40/3	6.6	1160	1.0	78	3.3	1120	0.52	76	0.13	1120	<0.05	76
71.33			7.0	1110	1.0	78	3.5	1060	0.51	76	0.14	1060	<0.05	76
63.03	7.9		1230	1.3	79	3.9	1200	0.65	76	0.15	1200	<0.05	76	
53.87	9.2		1180	1.4	80	4.6	1240	0.78	77	0.18	1240	<0.05	76	
49.38	10		1160	1.5	80	5.0	1240	0.85	77	0.20	1240	<0.05	76	
43.33	11		1120	1.7	81	5.7	1240	0.96	78	0.23	1240	<0.05	76	
41.07	12		1120	1.8	81	6.0	1240	1.0	78	0.24	1240	<0.05	76	
35.94	13		1120	2.0	81	6.9	1240	1.1	79	0.27	1240	<0.05	76	
32.38	15		1120	2.2	82	7.7	1240	1.3	79	0.30	1240	0.05	76	
28.41	17		1120	2.5	82	8.7	1190	1.4	80	0.35	1190	0.06	76	
25.07	19		1120	2.8	83	9.9	1170	1.5	80	0.39	1170	0.06	76	
22.22	22		1130	3.2	83	11	1130	1.6	81	0.45	1130	0.07	76	
18.97	26		1130	3.7	84	13	1120	1.9	81	0.52	1120	0.08	76	
22.89	34/6		21	690	1.8	86	10	675	0.92	84	0.43	675	<0.05	83
20.99			23	725	2.1	87	11	740	1.1	85	0.47	740	<0.05	83
18.42			27	705	2.3	87	13	830	1.4	85	0.54	830	0.06	83
17.45		28	705	2.4	87	14	810	1.4	85	0.57	810	0.06	83	
15.28		32	705	2.8	88	16	785	1.6	86	0.65	785	0.06	83	
13.76		36	695	3.0	88	18	770	1.7	86	0.72	770	0.07	83	
12.07		41	695	3.4	88	20	750	1.9	86	0.82	750	0.08	83	
10.65		46	695	3.9	89	23	725	2.1	87	0.93	725	0.09	83	
9.44		52	705	4.4	89	26	705	2.2	87	1.0	705	0.09	83	
8.06		62	705	5.1	90	31	705	2.6	88	1.2	705	0.11	83	

## 11.7.6 Technical data S..87

3400 - 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
288.00	40/1	11	2030	3.6	70	11	2070	3.4	70	9.7	2070	3.0	70
258.18		13	1990	3.9	71	12	2010	3.7	71	10	2070	3.4	70
222.40		15	1910	4.3	71	14	1950	4.1	71	12	2010	3.8	71
202.96		16	1850	4.6	71	15	1890	4.4	71	13	1970	4.0	71
180.00		18	1800	5.0	72	17	1830	4.8	72	15	1910	4.4	71
151.30		22	1690	5.5	72	21	1730	5.3	72	18	1800	4.9	72
139.05		24	1630	5.8	72	23	1680	5.6	72	20	1760	5.2	72
123.48		27	1570	6.3	72	25	1600	6.0	72	22	1690	5.6	72
110.40		30	1430	6.4	72	28	1540	6.4	73	25	1620	5.9	73
99.26		34	1260	6.3	72	32	1380	6.4	72	28	1550	6.3	73
86.15		39	1030	6.0	71	37	1150	6.2	72	32	1390	6.5	73
77.14		44	830	5.5	70	41	970	5.9	71	36	1220	6.4	72
64.00		53	500	4.3	65	50	620	4.8	68	43	960	6.2	72
91.20	38/3	37	1470	6.7	86	35	1470	6.3	86	30	1470	5.5	85
81.76		41	1470	7.5	86	39	1470	7.0	86	34	1470	6.2	86
70.43		48	1470	8.6	86	45	1470	8.1	86	39	1470	7.1	86
64.27		52	1470	9.4	86	49	1470	8.9	86	43	1470	7.8	86
57.00		59	1470	10.6	87	56	1470	10.0	87	49	1470	8.8	86
47.91		70	1470	12.6	87	66	1470	11.8	87	58	1470	10.4	87
44.03		77	1470	13.6	87	72	1470	12.8	87	63	1470	11.3	87
39.10		86	1300	13.6	87	81	1400	13.8	87	71	1470	12.6	87
34.96		97	1140	13.4	87	91	1240	13.6	87	80	1440	13.8	87
31.43		108	1000	13.1	87	101	1090	13.4	87	89	1290	13.8	87
27.28		124	810	12.3	86	117	910	12.9	87	102	1110	13.7	87
24.43		139	660	11.3	85	130	775	12.4	86	114	960	13.3	87
20.27		167	395	8.4	83	157	490	9.6	84	138	755	12.7	86
25.50	34/6	133	990	15.2*	91	125	990	14.3	91	109	990	12.6	91
21.43		158	990	18.1*	91	149	990	17.0*	91	130	990	14.9	91
19.70		172	990	20*	91	162	990	19*	91	142	990	16.2*	91
17.49		194	870	20*	90	182	930	20*	91	160	990	18.3*	91
15.64		217	760	19*	90	204	830	20*	90	179	960	20*	91
14.06		241	660	19*	90	227	725	19*	90	199	860	20*	91
12.21		278	540	17.6*	90	262	605	18.5*	90	229	730	19*	90
10.93		311	440	16.0*	89	292	510	17.4*	90	256	645	19*	90
9.07		374	255	11.5	87	352	325	13.5	89	308	500	18.0*	90
7.88		431	200	10.5	86	406	230	11.2	87	355	375	15.6*	89

\* P<sub>Mot\_max</sub> = 15 kW

2200 - 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
288.00	40/1	7.6	2210	2.6	69	5.9	2280	2.1	67	4.8	2280	1.7	66
258.18		8.5	2170	2.8	69	6.5	2260	2.3	68	5.4	2280	1.9	67
222.40		9.8	2130	3.2	70	7.6	2210	2.6	69	6.2	2280	2.2	68
202.96		10	2080	3.4	70	8.3	2190	2.8	69	6.8	2260	2.4	68
180.00		12	2020	3.7	71	9.4	2130	3.0	70	7.7	2210	2.6	69
151.30		14	1940	4.1	71	11	2060	3.4	71	9.2	2150	3.0	70
139.05		15	1880	4.4	72	12	2020	3.6	71	10	2100	3.2	70
123.48		17	1820	4.7	72	13	1960	4.0	71	11	2060	3.5	71
110.40		19	1770	5.1	72	15	1900	4.3	72	12	2000	3.7	71
99.26		22	1700	5.4	73	17	1840	4.6	72	14	1960	4.0	72
86.15		25	1620	5.9	73	19	1770	5.0	73	16	1880	4.4	72
77.14		28	1540	6.3	73	22	1700	5.4	73	18	1820	4.8	73
64.00		34	1360	6.7	73	26	1580	6.0	74	21	1700	5.3	73
91.20		38/3	24	1540	4.6	85	18	1520	3.5	84	15	1510	2.9
81.76	26		1600	5.3	85	20	1600	4.1	84	17	1600	3.4	84
70.43	31		1600	6.1	86	24	1600	4.8	85	19	1600	3.9	84
64.27	34		1600	6.7	86	26	1600	5.2	85	21	1600	4.3	85
57.00	38		1600	7.5	86	29	1600	5.8	86	24	1600	4.8	85
47.91	45		1600	8.9	87	35	1600	6.9	86	29	1600	5.7	86
44.03	49		1600	9.7	87	38	1600	7.5	86	31	1600	6.2	86
39.10	56		1600	10.8	87	43	1600	8.4	87	35	1600	7.0	86
34.96	62		1600	12.1	87	48	1600	9.4	87	40	1600	7.8	87
31.43	69		1600	13.4	88	54	1600	10.4	87	44	1600	8.6	87
27.28	80		1450	14.0	88	62	1600	11.9	88	51	1600	9.9	87
24.43	90		1310	14.1	88	69	1600	13.3	88	57	1600	11.0	87
20.27	108		1080	14.0	88	83	1420	14.2	88	69	1600	13.2	88
25.50	34/6		86	1240	12.4	91	66	1240	9.6	90	54	1240	7.9
21.43		102	1240	14.6	91	79	1240	11.4	91	65	1240	9.4	90
19.70		111	1240	15.9*	91	86	1240	12.3	91	71	1240	10.2	91
17.49		125	1240	17.9*	91	97	1240	13.9	91	80	1240	11.4	91
15.64		140	1230	20*	91	108	1240	15.5*	91	89	1240	12.8	91
14.06		156	1110	20*	91	120	1240	17.2*	91	99	1240	14.2	91
12.21		180	970	20*	91	139	1240	20*	91	114	1240	16.3*	91
10.93		201	870	20*	91	155	1130	20*	91	128	1240	18.2*	91
9.07		242	720	20*	91	187	950	20*	91	154	1140	20*	91
7.88		279	605	20*	90	215	830	21*	91	177	1010	21*	91

\* P<sub>Mot\_max</sub> = 15 kW

1100 - 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
288.00	40/1	3.8	2400	1.5	65	3.1	2450	1.3	64	2.4	2480	1.0	63
258.18		4.2	2380	1.6	66	3.4	2430	1.4	65	2.7	2470	1.1	63
222.40		4.9	2350	1.8	67	4.0	2400	1.6	66	3.1	2450	1.3	64
202.96		5.4	2330	2.0	67	4.4	2380	1.7	66	3.4	2430	1.4	65
180.00		6.1	2280	2.2	68	5.0	2350	1.8	67	3.8	2400	1.5	65
151.30		7.2	2240	2.5	69	5.9	2310	2.1	68	4.6	2350	1.7	67
139.05		7.9	2190	2.6	69	6.4	2260	2.2	68	5.0	2330	1.8	67
123.48		8.9	2150	2.9	70	7.2	2240	2.5	69	5.6	2310	2.0	68
110.40		9.9	2110	3.1	70	8.1	2190	2.7	70	6.3	2280	2.2	68
99.26		11	2070	3.4	71	9.0	2150	2.9	70	7.0	2240	2.4	69
86.15		12	2000	3.7	72	10	2090	3.2	71	8.1	2190	2.7	70
77.14		14	1940	4.0	72	11	2040	3.5	71	9.0	2150	2.9	70
64.00		17	1840	4.5	73	14	1960	4.0	72	10	2070	3.3	71
91.20		38/3	12	1490	2.3	83	9.8	1480	1.9	82	7.6	1460	1.4
81.76	13		1760	3.0	83	11	1760	2.5	83	8.5	1760	1.9	82
70.43	15		1760	3.4	84	12	1760	2.8	83	9.9	1760	2.2	82
64.27	17		1760	3.8	84	14	1760	3.1	84	10	1760	2.4	83
57.00	19		1760	4.2	85	15	1760	3.5	84	12	1760	2.7	83
47.91	22		1760	5.0	85	18	1760	4.1	85	14	1760	3.2	84
44.03	24		1760	5.4	85	20	1760	4.4	85	15	1760	3.5	84
39.10	28		1760	6.0	86	23	1760	5.0	85	17	1760	3.9	85
34.96	31		1760	6.7	86	25	1760	5.5	86	20	1760	4.3	85
31.43	34		1760	7.5	86	28	1760	6.1	86	22	1760	4.8	85
27.28	40		1760	8.6	87	32	1760	7.0	86	25	1760	5.5	86
24.43	45		1760	9.5	87	36	1760	7.8	87	28	1760	6.1	86
20.27	54		1760	11.4	88	44	1760	9.4	87	34	1760	7.3	87
25.50	34/6		43	1340	6.7	90	35	1340	5.6	89	27	1340	4.3
21.43		51	1340	8.0	90	41	1340	6.6	90	32	1340	5.1	89
19.70		55	1340	8.7	90	45	1340	7.1	90	35	1340	5.6	89
17.49		62	1340	9.8	91	51	1340	8.0	90	40	1340	6.3	90
15.64		70	1340	10.9	91	57	1340	8.9	90	44	1340	7.0	90
14.06		78	1340	12.1	91	64	1340	9.9	91	49	1340	7.8	90
12.21		90	1340	13.9	91	73	1340	11.4	91	57	1340	8.9	90
10.93		100	1340	15.5*	91	82	1340	12.7	91	64	1340	9.9	91
9.07		121	1340	19*	91	99	1340	15.2*	91	77	1340	11.9	91
7.88		139	1260	20*	92	114	1340	17.5*	92	88	1340	13.7	91

\* P<sub>Mot\_max</sub> = 15 kW

500 - 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
288.00	40/1	1.7	2500	0.75	61	0.86	2500	0.39	58	0.03	2500	<0.05	58	
258.18		1.9	2500	0.83	61	0.96	2500	0.44	58	0.03	2500	<0.05	58	
222.40		2.2	2500	0.95	62	1.1	2500	0.50	59	0.04	2500	<0.05	58	
202.96		2.4	2480	1.0	63	1.2	2500	0.55	59	0.04	2500	<0.05	58	
180.00		2.7	2480	1.1	64	1.3	2500	0.61	60	0.05	2500	<0.05	58	
151.30		3.3	2430	1.3	65	1.6	2500	0.71	61	0.06	2500	<0.05	58	
139.05		3.5	2430	1.4	65	1.7	2500	0.77	61	0.07	2500	<0.05	58	
123.48		4.0	2400	1.5	66	2.0	2500	0.86	62	0.08	2500	<0.05	58	
110.40		4.5	2380	1.7	67	2.2	2500	0.95	63	0.09	2500	<0.05	58	
99.26		5.0	2330	1.8	67	2.5	2470	1.0	63	0.10	2470	<0.05	58	
86.15		5.8	2310	2.1	68	2.9	2450	1.2	64	0.11	2450	0.05	59	
77.14		6.4	2260	2.2	69	3.2	2430	1.3	65	0.12	2430	0.06	59	
64.00		7.8	2220	2.6	70	3.9	2400	1.5	66	0.15	2400	0.07	59	
91.20		38/3	5.4	1450	1.0	80	2.7	1390	0.51	78	0.10	1390	<0.05	78
81.76			6.1	1960	1.6	81	3.0	1880	0.77	78	0.12	1880	<0.05	78
70.43	7.0		1980	1.8	81	3.5	1980	0.93	79	0.14	1980	<0.05	78	
64.27	7.7		1980	2.0	82	3.8	1980	1.0	79	0.15	1980	<0.05	78	
57.00	8.7		1980	2.2	82	4.3	1980	1.1	80	0.17	1980	<0.05	78	
47.91	10		1980	2.6	83	5.2	1980	1.3	80	0.2	1980	0.06	78	
44.03	11		1980	2.8	83	5.6	1980	1.5	81	0.22	1980	0.06	78	
39.10	12		1980	3.2	84	6.3	1980	1.6	81	0.25	1980	0.07	79	
34.96	14		1980	3.5	84	7.1	1980	1.8	82	0.28	1980	0.08	79	
31.43	15		1980	3.9	84	7.9	1980	2.0	82	0.31	1980	0.08	79	
27.28	18		1980	4.5	85	9.1	1980	2.3	83	0.36	1980	0.10	79	
24.43	20		1980	5.0	85	10	1980	2.6	83	0.40	1980	0.11	79	
20.27	24		1980	5.9	86	12	1980	3.1	84	0.49	1980	0.13	79	
25.50	34/6		19	1430	3.3	88	9.8	1390	1.7	86	0.39	1390	0.07	85
21.43			23	1420	3.9	88	11	1510	2.1	87	0.46	1510	0.09	85
19.70		25	1410	4.2	89	12	1570	2.4	87	0.50	1570	0.10	85	
17.49		28	1390	4.7	89	14	1570	2.7	87	0.57	1570	0.11	85	
15.64		31	1390	5.2	89	15	1540	2.9	87	0.63	1540	0.12	85	
14.06		35	1390	5.8	90	17	1510	3.2	88	0.71	1510	0.13	85	
12.21		40	1390	6.6	90	20	1460	3.5	88	0.81	1460	0.15	85	
10.93		45	1390	7.4	90	22	1430	3.9	89	0.91	1430	0.16	85	
9.07		55	1410	9.0	91	27	1390	4.5	89	1.1	1390	0.19	85	
7.88		63	1410	10.3	91	31	1390	5.2	89	1.2	1390	0.22	85	

## 11.7.7 Technical data S..97

3400 - 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
286.40	40/1	11	3520	6.0	73	11	3590	5.8	73	9.7	3700	5.2	72	
262.22		12	3450	6.4	73	12	3520	6.2	73	10	3630	5.6	73	
231.67		14	3310	6.9	73	13	3380	6.7	73	12	3520	6.1	73	
196.52		17	3120	7.7	74	16	3210	7.4	74	14	3350	6.8	73	
180.95		18	3030	8.1	74	17	3120	7.8	74	15	3250	7.2	74	
161.74		21	2910	8.7	74	19	2970	8.3	74	17	3120	7.7	74	
145.60		23	2760	9.1	74	21	2850	8.9	74	19	3000	8.2	74	
131.85		25	2660	9.7	74	24	2740	9.4	74	21	2880	8.6	74	
116.92		29	2320	9.6	74	27	2550	9.8	74	23	2740	9.2	74	
105.71		32	1980	9.1	73	30	2210	9.5	74	26	2630	9.8	74	
89.60		37	1280	7.3	70	35	1670	8.6	72	31	2210	9.8	74	
78.26		43	920	6.2	67	40	1040	6.5	69	35	1770	9.1	73	
65.45		51	675	5.7	64	48	775	6.0	66	42	1030	6.7	69	
80.85		37/3	42	3150	15.7	88	39	3150	14.8	88	34	3150	13.0	88
71.43	47		3090	17.4	88	44	3150	16.8	88	39	3150	14.7	88	
60.59	56		2910	19	88	52	2970	19	88	46	3120	17.1	88	
55.79	60		2820	20	89	57	2880	20	89	50	3030	18.0	88	
49.87	68		2710	22	89	64	2760	21	89	56	2910	19	89	
44.89	75		2430	22	89	71	2630	22	89	62	2790	21	89	
40.65	83		2170	22	88	78	2350	22	89	68	2680	22	89	
36.05	94		1830	21	88	88	2020	21	88	77	2400	22	89	
32.60	104		1560	19	88	98	1760	21	88	85	2150	22	89	
27.63	123		1010	15.2	86	115	1320	18.4	87	101	1740	21	88	
24.13	140		725	12.7	84	132	820	13.4	85	116	1390	19	88	
26.39	35/6		128	1750	26*	92	121	1750	24*	92	106	1750	21	92
23.59			144	1750	29*	92	135	1750	27*	92	118	1750	24*	92
21.23			160	1750	32*	91	150	1750	30*	92	131	1750	26*	92
19.23		176	1550	31*	91	166	1680	32*	91	145	1750	29*	92	
17.05		199	1320	30*	91	187	1450	31*	91	164	1730	33*	92	
15.42		220	1110	28*	91	207	1260	30*	91	181	1540	32*	91	
13.07		260	725	22	90	244	940	27*	91	214	1240	31*	91	
11.41		297	515	18.1	89	280	585	19	90	245	1000	28*	91	
9.55		356	375	16.0	87	335	435	17.3	88	293	580	20	90	
8.26		411	290	14.6	86	387	335	15.6	87	338	455	18.1	89	

\* P<sub>Mot\_max</sub> = 22 kW

### 2200 - 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
286.40	40/1	7.6	3920	4.4	72	5.9	4000	3.5	70	4.8	4000	3.0	69	
262.22		8.3	3840	4.7	72	6.4	4000	3.8	71	5.3	4000	3.2	70	
231.67		9.4	3770	5.2	72	7.3	3960	4.3	72	6.0	4000	3.6	71	
196.52		11	3580	5.8	73	8.6	3840	4.8	72	7.1	4000	4.2	71	
180.95		12	3510	6.1	73	9.3	3770	5.1	73	7.7	3920	4.4	72	
161.74		13	3410	6.6	74	10	3650	5.5	73	8.6	3840	4.8	72	
145.60		15	3270	7.0	74	11	3550	5.9	73	9.6	3730	5.2	73	
131.85		16	3170	7.5	74	12	3440	6.3	74	10	3650	5.6	73	
116.92		18	3020	8.0	74	14	3340	6.9	74	11	3510	6.0	74	
105.71		20	2930	8.6	75	16	3210	7.3	74	13	3440	6.5	74	
89.60		24	2730	9.4	75	18	3020	8.0	75	15	3240	7.1	74	
78.26		28	2540	10.0	75	21	2870	8.7	75	17	3080	7.7	75	
65.45		33	2120	10.0	75	25	2650	9.6	75	21	2900	8.6	75	
80.85		37/3	27	3300	10.8	87	21	3270	8.3	87	17	3230	6.8	86
71.43	30		3300	12.1	88	23	3300	9.4	87	19	3300	7.8	87	
60.59	36		3300	14.3	88	28	3300	11.1	88	23	3300	9.2	87	
55.79	39		3270	15.3	88	30	3300	12.0	88	25	3300	9.9	87	
49.87	44		3170	16.6	88	34	3300	13.4	88	28	3300	11.1	88	
44.89	49		3050	17.7	89	37	3300	14.8	88	31	3300	12.3	88	
40.65	54		2950	19	89	41	3230	16.0	88	34	3300	13.5	88	
36.05	61		2810	20	89	47	3110	17.3	89	38	3300	15.2	88	
32.60	67		2700	21	89	52	2980	18.3	89	42	3200	16.3	89	
27.63	79		2390	22	89	61	2810	20	89	50	3010	18.0	89	
24.13	91		2060	22	89	70	2670	22	89	58	2870	20	89	
26.39	35/6		83	2550	24*	92	64	2600	19	92	53	2600	15.8	92
23.59			93	2450	26*	92	72	2600	21	92	59	2600	17.6	92
21.23			103	2380	28*	92	80	2570	23*	92	65	2600	20	92
19.23		114	2280	30*	92	88	2500	25*	92	72	2600	21	92	
17.05		129	2170	32*	92	99	2400	27*	92	82	2570	24*	92	
15.42		142	2040	33*	92	110	2300	29*	92	90	2470	25*	92	
13.07		168	1720	33*	92	130	2170	32*	92	107	2330	28*	92	
11.41		192	1480	33*	92	148	2000	34*	92	122	2210	31*	92	
9.55		230	1200	32*	91	178	1670	34*	92	146	2040	34*	92	
8.26		266	980	30*	91	205	1440	34*	92	169	1770	34*	92	

\* P<sub>Mot\_max</sub> = 22 kW



1100 - 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
286.40	40/1	3.8	4200	2.5	68	3.1	4200	2.1	67	2.4	4200	1.6	66	
262.22		4.1	4200	2.7	69	3.4	4200	2.2	68	2.6	4200	1.8	66	
231.67		4.7	4200	3.0	70	3.8	4200	2.5	68	3.0	4200	2.0	67	
196.52		5.5	4160	3.5	70	4.5	4200	2.9	69	3.5	4200	2.3	68	
180.95		6.0	4120	3.7	71	4.9	4200	3.1	70	3.8	4200	2.5	69	
161.74		6.8	4030	4.0	71	5.5	4160	3.4	71	4.3	4200	2.8	69	
145.60		7.5	3950	4.3	72	6.1	4080	3.7	71	4.8	4200	3.0	70	
131.85		8.3	3880	4.7	72	6.8	4030	4.0	72	5.3	4200	3.3	70	
116.92		9.4	3760	5.1	73	7.6	3910	4.4	72	5.9	4120	3.6	71	
105.71		10	3650	5.4	73	8.5	3840	4.7	73	6.6	4030	3.9	72	
89.60		12	3500	6.1	74	10	3690	5.3	73	7.8	3910	4.4	72	
78.26		14	3370	6.7	74	11	3580	5.8	74	8.9	3800	4.9	73	
65.45		16	3170	7.4	75	13	3400	6.6	75	10	3650	5.5	74	
80.85		37/3	13	3230	5.4	86	11	3200	4.4	85	8.6	3170	3.4	84
71.43	15		3600	6.7	86	12	3600	5.5	86	9.7	3600	4.4	85	
60.59	18		3600	7.9	87	14	3600	6.5	86	11	3600	5.1	85	
55.79	19		3600	8.6	87	16	3600	7.0	86	12	3600	5.5	86	
49.87	22		3600	9.5	87	18	3600	7.8	87	14	3600	6.2	86	
44.89	24		3600	10.6	88	20	3600	8.7	87	15	3600	6.8	86	
40.65	27		3600	11.6	88	22	3600	9.6	87	17	3600	7.5	87	
36.05	30		3530	12.8	88	24	3600	10.7	88	19	3600	8.4	87	
32.60	33		3420	13.7	88	27	3600	11.8	88	21	3600	9.3	87	
27.63	39		3260	15.4	89	32	3460	13.4	88	25	3600	10.9	88	
24.13	45		3130	16.8	89	37	3320	14.7	89	29	3560	12.3	88	
26.39	35/6		41	2650	12.7	91	34	2620	10.3	91	26	2620	8.0	91
23.59			46	2650	14.1	92	38	2650	11.6	91	29	2620	9.0	91
21.23			51	2650	15.7	92	42	2650	12.9	91	32	2620	9.9	91
19.23		57	2650	17.3	92	46	2650	14.2	92	36	2620	11.0	91	
17.05		64	2670	20	92	52	2650	16.0	92	41	2650	12.5	91	
15.42		71	2670	22*	92	58	2650	17.6	92	45	2650	13.8	92	
13.07		84	2540	24*	92	68	2670	21	92	53	2650	16.2	92	
11.41		96	2420	26*	92	78	2590	23*	92	61	2650	18.5	92	
9.55		115	2280	30*	92	94	2440	26*	93	73	2650	22	92	
8.26		133	2140	32*	92	108	2320	29*	93	84	2540	24*	93	

\* P<sub>Mot,max</sub> = 22 kW

500 - 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
286.40	40/1	1.7	4200	1.2	64	0.87	4200	0.64	60	0.03	4200	<0.05	60	
262.22		1.9	4200	1.3	64	0.95	4200	0.69	61	0.03	4200	<0.05	60	
231.67		2.1	4200	1.5	65	1	4200	0.77	61	0.04	4200	<0.05	60	
196.52		2.5	4200	1.7	66	1.2	4200	0.90	62	0.05	4200	<0.05	60	
180.95		2.7	4200	1.8	67	1.3	4200	0.97	63	0.05	4200	<0.05	60	
161.74		3	4200	2.0	67	1.5	4200	1.1	63	0.06	4200	<0.05	60	
145.60		3.4	4200	2.2	68	1.7	4200	1.2	64	0.06	4200	0.05	60	
131.85		3.7	4200	2.4	69	1.8	4200	1.3	65	0.07	4200	0.06	60	
116.92		4.2	4200	2.7	69	2.1	4200	1.4	65	0.08	4200	0.06	60	
105.71		4.7	4200	3.0	70	2.3	4200	1.6	66	0.09	4200	0.07	60	
89.60		5.5	4160	3.4	71	2.7	4200	1.8	67	0.11	4200	0.08	60	
78.26		6.3	4080	3.8	72	3.1	4200	2.1	68	0.12	4200	0.09	60	
65.45		7.6	3910	4.3	73	3.8	4200	2.4	69	0.15	4200	0.11	60	
80.85		37/3	6.1	3110	2.4	83	3	3010	1.2	81	0.12	3010	<0.05	80
71.43	6.9		4200	3.7	84	3.4	4160	1.9	82	0.13	4160	0.08	80	
60.59	8.2		4200	4.3	84	4.1	4080	2.1	82	0.16	4080	0.09	80	
55.79	8.9		4200	4.7	85	4.4	4200	2.4	82	0.17	4200	0.10	80	
49.87	10		4200	5.2	85	5	4200	2.7	83	0.20	4200	0.11	80	
44.89	11		4160	5.7	86	5.5	4200	2.9	83	0.22	4200	0.12	80	
40.65	12		4120	6.2	86	6.1	4200	3.2	84	0.24	4200	0.13	80	
36.05	13		4080	6.9	86	6.9	4200	3.6	84	0.27	4200	0.15	80	
32.60	15		3990	7.4	87	7.6	4200	4.0	84	0.30	4200	0.17	80	
27.63	18		3910	8.5	87	9	4200	4.7	85	0.36	4200	0.20	80	
24.13	20		3800	9.4	87	10	4200	5.3	85	0.41	4200	0.23	80	
26.39	35/6		18	2590	5.7	90	9.4	2540	2.9	88	0.37	2540	0.12	86
23.59			21	2590	6.4	90	10	2540	3.2	88	0.42	2540	0.13	86
21.23			23	2590	7.1	90	11	2570	3.6	89	0.47	2570	0.15	86
19.23		26	2620	7.9	91	13	2570	3.9	89	0.52	2570	0.16	86	
17.05		29	2620	8.9	91	14	2570	4.4	89	0.58	2570	0.18	86	
15.42		32	2620	9.8	91	16	2570	4.9	90	0.64	2570	0.20	86	
13.07		38	2650	11.6	91	19	2590	5.8	90	0.76	2590	0.24	86	
11.41		43	2650	13.3	92	21	2590	6.6	90	0.87	2590	0.27	87	
9.55		52	2650	15.8	92	26	2620	7.9	91	1.0	2620	0.33	87	
8.26		60	2650	18.2	92	30	2620	9.1	91	1.2	2620	0.38	87	

## 11.8 Technical data S..37p – 97p

### 11.8.1 Technical data S..37p

3400 – 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
157.43	38/1	21	94	0.31	69	20	94	0.29	69	17	94	0.26	68
144.40		23	94	0.34	69	22	94	0.32	69	19	94	0.28	69
122.94		27	89	0.37	69	26	91	0.36	69	22	95	0.33	69
106.00		32	84	0.41	69	30	86	0.39	69	26	91	0.36	70
98.80		34	81	0.42	69	32	83	0.41	69	28	88	0.38	70
86.36		39	77	0.46	69	37	79	0.44	69	32	83	0.41	70
80.96		41	75	0.48	69	39	77	0.46	69	34	81	0.42	70
71.44		47	71	0.51	69	44	73	0.49	69	39	77	0.45	70
63.33		53	62	0.51	68	50	69	0.53	69	44	73	0.49	70
53.83		63	45	0.45	66	59	53	0.49	67	52	69	0.54	70
55.93	27/2	60	95	0.72	84	57	97	0.69	84	50	103	0.64	84
51.30		66	91	0.75	84	62	94	0.73	84	54	99	0.67	84
43.68		77	86	0.83	84	73	88	0.80	84	64	93	0.74	85
37.66		90	81	0.91	84	84	83	0.87	84	74	87	0.80	85
35.10		96	78	0.94	84	91	80	0.90	84	79	85	0.84	85
30.68		110	73	1.0	84	104	76	0.98	84	91	80	0.90	85
28.76		118	72	1.1	84	111	73	1.0	84	97	78	0.94	85
25.38		133	62	1.0	84	126	69	1.1	84	110	74	1.0	85
22.50		151	50	0.96	83	142	58	1.0	84	124	71	1.1	85
19.13		177	37	0.85	81	167	42	0.90	82	146	58	1.1	84
19.89	24/5	170	69	1.4	91	160	70	1.3	91	140	72	1.2	91
18.24		186	67	1.4	91	175	68	1.4	91	153	70	1.2	91
15.53		218	57	1.4	91	206	59	1.4	91	180	68	1.4	91
13.39		253	53	1.6*	91	238	57	1.6*	91	209	60	1.4	91
12.48		272	53	1.7*	91	256	55	1.6*	91	224	58	1.5	91
10.91		311	44	1.6*	91	293	49	1.7*	91	256	58	1.7*	91
10.23		332	40	1.5	90	312	44	1.6*	91	273	54	1.7*	91
9.02		376	34	1.5	90	354	37	1.5	90	310	46	1.6*	91
8.00		425	26	1.3	89	400	32	1.5	90	350	39	1.6*	90
6.80		500	20	1.2	88	470	23	1.3	89	411	31	1.5	90
6.33	19/5	537	28	1.7*	90	505	31	1.8*	91	442	38	1.9*	91
5.38		631	22	1.6*	90	594	24	1.7*	90	520	31	1.9*	91
4.86		699	19	1.6*	89	658	21	1.6*	90	576	27	1.8*	91
3.97		856	14	1.4	88	806	16	1.5	89	705	20	1.6*	90

\* P<sub>Mot\_max</sub> = 1.5 kW

2200 - 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
157.43	38/1	13	94	0.20	67	10	94	0.16	66	8.8	94	0.14	64
144.40		15	95	0.22	68	11	95	0.18	67	9.6	95	0.15	65
122.94		17	96	0.26	69	13	96	0.21	68	11	96	0.17	67
106.00		20	97	0.30	69	16	97	0.24	69	13	97	0.20	68
98.80		22	97	0.32	70	17	97	0.25	69	14	97	0.21	68
86.36		25	92	0.35	70	19	98	0.29	70	16	98	0.24	69
80.96		27	90	0.37	70	20	99	0.31	70	17	99	0.26	70
71.44		30	85	0.39	70	23	95	0.34	70	19	100	0.29	70
63.33		34	81	0.42	70	26	91	0.36	71	22	98	0.32	71
53.83		40	76	0.46	70	31	85	0.40	71	26	92	0.35	71
55.93	27/2	39	104	0.51	84	30	104	0.40	83	25	104	0.33	82
51.30		42	104	0.55	84	33	104	0.43	84	27	104	0.36	83
43.68		50	103	0.64	85	38	105	0.51	84	32	105	0.42	84
37.66		58	97	0.70	85	45	105	0.59	85	37	105	0.49	84
35.10		62	94	0.73	85	48	105	0.63	85	39	105	0.52	84
30.68		71	89	0.79	85	55	99	0.68	85	45	105	0.59	85
28.76		76	87	0.82	85	59	97	0.71	85	48	105	0.63	85
25.38		86	82	0.88	85	66	92	0.76	85	55	100	0.68	85
22.50		97	78	0.94	85	75	87	0.81	85	62	95	0.73	85
19.13		115	73	1.0	85	88	82	0.89	85	73	89	0.80	86
19.89	24/5	110	74	0.94	91	85	77	0.76	91	70	78	0.64	90
18.24		120	73	1.0	91	93	76	0.82	91	76	78	0.69	90
15.53		141	72	1.2	91	109	74	0.93	91	90	76	0.79	91
13.39		164	70	1.3	91	126	74	1.1	91	104	75	0.90	91
12.48		176	68	1.4	91	136	72	1.1	91	112	74	0.95	91
10.91		201	63	1.5	91	155	70	1.2	91	128	73	1.1	91
10.23		215	59	1.5	91	166	67	1.3	91	136	73	1.1	91
9.02		243	55	1.5	91	188	64	1.4	92	155	70	1.2	92
8.00		275	50	1.6*	91	212	56	1.4	91	175	66	1.3	92
6.80		323	45	1.7*	91	250	52	1.5	91	205	60	1.4	92
6.33	19/5	347	44	1.7*	92	268	49	1.5	92	221	56	1.4	92
5.38		408	40	1.9*	92	315	47	1.7*	92	260	51	1.5	92
4.86		452	36	1.9*	92	349	43	1.7*	92	288	48	1.6*	92
3.97		554	31	2.0*	91	428	40	1.9*	92	352	44	1.8*	92

\* P<sub>Mot\_max</sub> = 1.5 kW

1100 - 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
157.43	38/1	6.9	94	0.11	62	5.7	95	0.09	60	4.4	95	0.08	58
144.40		7.6	95	0.12	63	6.2	96	0.10	61	4.8	96	0.08	59
122.94		8.9	96	0.14	65	7.3	97	0.12	63	5.6	97	0.10	61
106.00		10	97	0.16	66	8.4	98	0.13	65	6.6	98	0.11	62
98.80		11	97	0.17	67	9.1	98	0.14	65	7.0	98	0.12	63
86.36		12	98	0.19	68	10	99	0.16	67	8.1	99	0.13	65
80.96		13	99	0.21	68	11	99	0.17	67	8.6	99	0.14	65
71.44		15	100	0.23	69	12	100	0.19	68	9.7	100	0.15	67
63.33		17	100	0.26	70	14	101	0.22	69	11	101	0.17	68
53.83		20	101	0.30	71	16	102	0.25	70	13	102	0.20	69
55.93	27/2	19	104	0.26	81	16	104	0.22	80	12	104	0.17	78
51.30		21	104	0.29	82	17	104	0.24	81	13	104	0.19	79
43.68		25	105	0.34	83	20	105	0.28	82	16	105	0.22	80
37.66		29	105	0.39	83	23	105	0.32	82	18	105	0.25	81
35.10		31	105	0.41	84	25	105	0.34	83	19	105	0.27	82
30.68		35	105	0.47	84	29	105	0.39	84	22	105	0.30	82
28.76		38	105	0.50	84	31	105	0.41	84	24	105	0.32	83
25.38		43	105	0.56	85	35	105	0.46	84	27	105	0.36	83
22.50		48	105	0.63	85	40	105	0.52	85	31	105	0.41	84
19.13		57	98	0.69	86	47	105	0.61	85	36	105	0.47	85
19.89	24/5	55	80	0.52	90	45	81	0.43	89	35	81	0.34	88
18.24		60	80	0.56	90	49	81	0.47	89	38	82	0.37	88
15.53		70	78	0.64	90	57	80	0.54	90	45	81	0.43	89
13.39		82	78	0.74	91	67	78	0.61	90	52	80	0.49	90
12.48		88	76	0.77	91	72	78	0.65	90	56	80	0.52	90
10.91		100	75	0.87	91	82	78	0.74	91	64	79	0.59	90
10.23		107	75	0.93	91	87	76	0.77	91	68	78	0.62	90
9.02		121	73	1.0	91	99	75	0.86	91	77	77	0.69	91
8.00		137	72	1.1	92	112	74	0.95	91	87	77	0.78	91
6.80		161	70	1.3	92	132	72	1.1	92	102	75	0.88	91
6.33	19/5	173	65	1.3	92	142	68	1.1	92	110	69	0.87	92
5.38		204	63	1.5	92	167	66	1.3	92	130	68	1.0	92
4.86		226	61	1.6*	92	185	63	1.3	92	144	68	1.1	92
3.97		277	56	1.8*	93	226	58	1.5	93	176	61	1.2	92

\* P<sub>Mot\_max</sub> = 1.5 kW

500 - 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
157.43	38/1	3.1	97	0.06	54	1.5	98	<0.05	47	0.06	105	<0.05	48
144.40		3.4	97	0.06	55	1.7	98	<0.05	48	0.06	105	<0.05	48
122.94		4.0	98	0.07	57	2.0	99	<0.05	49	0.08	105	<0.05	48
106.00		4.7	99	0.08	59	2.3	100	<0.05	50	0.09	105	<0.05	48
98.80		5.0	100	0.09	60	2.5	100	0.05	51	0.10	105	<0.05	48
86.36		5.7	101	0.10	61	2.8	101	0.06	53	0.11	105	<0.05	49
80.96		6.1	101	0.11	62	3.0	101	0.06	54	0.12	105	<0.05	49
71.44		6.9	102	0.12	64	3.4	102	0.07	56	0.13	105	<0.05	49
63.33		7.8	102	0.13	65	3.9	102	0.07	57	0.15	105	<0.05	49
53.83		9.2	102	0.15	67	4.6	102	0.08	60	0.18	105	<0.05	49
55.93	27/2	8.9	104	0.13	75	4.4	104	0.07	68	0.17	105	<0.05	68
51.30		9.7	104	0.14	76	4.8	104	0.08	69	0.19	105	<0.05	68
43.68		11	105	0.16	77	5.7	105	0.09	71	0.22	105	<0.05	68
37.66		13	105	0.19	79	6.6	105	0.10	72	0.26	105	<0.05	69
35.10		14	105	0.20	79	7.1	105	0.11	73	0.28	105	<0.05	69
30.68		16	105	0.22	8	8.1	105	0.12	74	0.32	105	<0.05	69
28.76		17	105	0.24	81	8.6	105	0.13	75	0.34	105	<0.05	69
25.38		19	105	0.27	82	9.8	105	0.14	76	0.39	105	<0.05	69
22.50		22	105	0.30	83	11	105	0.16	78	0.44	105	<0.05	69
19.13		26	105	0.34	83	13	105	0.18	79	0.52	105	<0.05	69
19.89	24/5	25	81	0.25	86	12	82	0.13	81	0.50	83	<0.05	80
18.24		27	82	0.27	87	13	82	0.14	82	0.54	83	<0.05	80
15.53		32	82	0.32	88	16	83	0.17	83	0.64	83	<0.05	80
13.39		37	82	0.36	88	18	83	0.19	84	0.74	83	<0.05	80
12.48		40	81	0.38	89	20	83	0.21	85	0.80	83	<0.05	80
10.91		45	81	0.44	89	22	83	0.23	86	0.91	83	<0.05	80
10.23		48	81	0.46	90	24	83	0.25	86	0.97	83	<0.05	81
9.02		55	80	0.52	90	27	82	0.27	87	1.1	82	<0.05	81
8.00		62	79	0.57	90	31	82	0.31	88	1.2	82	<0.05	81
6.80		73	78	0.66	91	36	82	0.36	89	1.4	82	<0.05	81
6.33	19/5	78	69	0.63	91	39	69	0.32	89	1.5	69	<0.05	81
5.38		92	68	0.72	92	46	68	0.37	90	1.8	68	<0.05	81
4.86		102	68	0.80	92	51	68	0.41	90	2.0	68	<0.05	81
3.97		125	68	0.97	92	62	68	0.49	91	2.5	68	<0.05	81

11.8.2 Technical data S..47p

3400 – 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
201.00	42/1	16	192	0.49	70	15	192	0.46	70	13	192	0.40	70
184.80		18	193	0.53	70	17	193	0.50	70	15	193	0.44	70
158.12		21	188	0.60	71	20	192	0.58	71	17	194	0.51	71
137.05		24	179	0.66	71	23	183	0.63	71	20	191	0.58	71
128.10		26	175	0.69	71	24	179	0.66	71	21	187	0.60	71
110.73		30	167	0.76	71	28	170	0.72	71	25	178	0.66	71
94.08		36	126	0.69	69	34	139	0.71	70	29	168	0.73	71
84.00		40	106	0.66	68	38	118	0.68	69	33	147	0.73	71
71.75		47	83	0.62	66	44	93	0.65	67	39	118	0.69	69
67.20		50	79	0.64	66	47	85	0.64	67	41	108	0.68	69
56.61	60	60	0.60	63	56	69	0.63	65	49	90	0.69	68	
69.39	29/2	48	179	1.1	85	46	183	1.0	85	40	191	0.95	85
63.80		53	174	1.1	85	50	177	1.1	85	43	186	1.0	85
54.59		62	165	1.3	85	58	168	1.2	85	51	176	1.1	85
47.32		71	157	1.4	85	67	160	1.3	85	59	168	1.2	85
44.22		76	154	1.5	85	72	157	1.4	85	63	164	1.3	85
38.23		88	131	1.4	85	83	142	1.5	85	73	156	1.4	85
32.48		104	103	1.3	84	98	114	1.4	84	86	139	1.5	85
29.00		117	87	1.3	83	110	96	1.3	84	96	121	1.4	85
24.77		137	68	1.2	82	129	76	1.2	82	113	96	1.4	84
23.20		146	61	1.2	81	137	69	1.2	82	120	88	1.3	84
19.54	174	45	1.0	79	163	53	1.1	80	143	69	1.3	82	
20.33	27/5	167	117	2.2	91	157	127	2.3*	91	137	141	2.2	92
17.62		192	98	2.2	91	181	107	2.2	91	158	127	2.3*	92
16.47		206	90	2.1	91	194	98	2.2	91	170	118	2.3*	91
14.24		238	78	2.2	91	224	83	2.2	91	196	98	2.2	91
12.10		280	63	2.1	90	264	69	2.1	90	231	82	2.2	91
10.80		314	53	2.0	89	296	60	2.1	90	259	72	2.2	91
9.23		368	38	1.7	88	346	45	1.8	89	303	60	2.1	90
8.64		393	34	1.6	87	370	39	1.7	88	324	55	2.1	90
7.28		467	25	1.4	86	439	30	1.6	87	384	41	1.9	89
6.83		20/5	497	36	2.1	90	468	41	2.2	90	409	52	2.5*
6.40	531		33	2.1	89	500	37	2.2	90	437	47	2.4*	91
5.39	630		25	1.9	88	593	28	2.0	89	519	37	2.2	90
4.76	714		20	1.7	87	672	23	1.8	88	588	30	2.1	90
4.00	850		16	1.7	86	800	18	1.7	87	700	23	1.9	89

\* P<sub>Mot\_max</sub> = 2.2 kW

2200 – 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
201.00	42/1	10	192	0.32	69	8.4	192	0.25	67	6.9	192	0.21	66
184.80		11	193	0.35	69	9.1	193	0.27	68	7.5	193	0.23	67
158.12		13	194	0.40	70	10	194	0.32	69	8.8	194	0.27	68
137.05		16	195	0.46	71	12	195	0.36	70	10	195	0.30	69
128.10		17	196	0.50	71	13	196	0.39	70	10	196	0.32	69
110.73		19	193	0.56	71	15	197	0.45	71	12	197	0.37	70
94.08		23	182	0.62	72	18	198	0.52	72	14	198	0.43	71
84.00		26	176	0.67	72	20	191	0.56	72	16	199	0.49	72
71.75		30	167	0.75	72	23	181	0.62	72	19	194	0.55	72
67.20		32	156	0.75	72	25	178	0.65	72	20	189	0.57	72
56.61	38	126	0.72	71	30	168	0.73	73	24	179	0.64	73	
69.39	29/2	31	200	0.78	85	24	200	0.61	84	20	200	0.51	83
63.80		34	200	0.85	85	26	200	0.66	84	21	200	0.55	84
54.59		40	191	0.95	85	31	200	0.77	85	25	200	0.64	84
47.32		46	182	1.0	85	35	198	0.88	85	29	200	0.73	85
44.22		49	178	1.1	85	38	193	0.91	85	31	200	0.78	85
38.23		57	169	1.2	85	44	184	1.0	85	36	196	0.88	85
32.48		67	160	1.3	86	52	174	1.1	86	43	186	0.98	86
29.00		75	154	1.4	86	58	167	1.2	86	48	179	1.1	86
24.77		88	139	1.5	85	68	159	1.3	86	56	169	1.2	86
23.20		94	129	1.5	85	73	155	1.4	86	60	165	1.2	86
19.54	112	103	1.4	85	87	146	1.5	86	71	156	1.4	86	
20.33	27/5	108	149	1.8	92	83	155	1.5	91	68	160	1.3	91
17.62		124	145	2.1	92	96	152	1.7	92	79	156	1.4	91
16.47		133	142	2.2	92	103	149	1.8	92	85	155	1.5	91
14.24		154	134	2.4*	92	119	146	2.0	92	98	152	1.7	92
12.10		181	111	2.3*	92	140	138	2.2	92	115	146	1.9	92
10.80		203	96	2.2	91	157	133	2.4*	92	129	142	2.1	92
9.23		238	82	2.2	91	184	112	2.4*	92	151	134	2.3*	92
8.64		254	77	2.3*	91	196	104	2.3*	92	162	131	2.4*	92
7.28		302	64	2.2	91	233	86	2.3*	91	192	109	2.4*	92
6.83		20/5	322	76	2.8*	92	248	107	3.0*	93	204	120	2.8*
6.40	343		70	2.7*	92	265	99	3.0*	93	218	118	2.9*	93
5.39	408		56	2.6*	92	315	82	2.9*	93	259	104	3.0*	93
4.76	462		48	2.5*	91	357	71	2.9*	92	294	91	3.0*	93
4.00	550		37	2.3*	91	425	57	2.8*	92	350	75	3.0*	93

\* P<sub>Mot,max</sub> = 2.2 kW



1100 – 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
201.00	42/1	5.4	192	0.17	64	4.4	192	0.15	62	3.4	192	0.12	59
184.80		5.9	193	0.19	65	4.8	193	0.16	63	3.7	193	0.13	60
158.12		6.9	194	0.21	66	5.6	194	0.18	64	4.4	194	0.15	62
137.05		8.0	195	0.24	67	6.5	195	0.20	66	5.1	195	0.16	63
128.10		8.5	196	0.26	68	7.0	196	0.22	66	5.4	196	0.17	64
110.73		9.9	197	0.30	69	8.1	197	0.25	68	6.3	197	0.20	66
94.08		11	198	0.35	70	9.5	198	0.29	69	7.4	198	0.23	67
84.00		13	199	0.39	71	10	199	0.32	70	8.3	199	0.25	68
71.75		15	200	0.45	72	12	200	0.37	71	9.7	200	0.29	70
67.20		16	200	0.48	72	13	200	0.39	71	10	200	0.31	70
56.61		19	194	0.54	73	15	200	0.46	72	12	200	0.36	71
69.39	29/2	15	200	0.41	82	12	200	0.34	81	10	200	0.27	79
63.80		17	200	0.44	82	14	200	0.36	81	10	200	0.29	80
54.59		20	200	0.51	83	16	200	0.42	82	12	200	0.33	81
47.32		23	200	0.58	84	19	200	0.48	83	14	200	0.38	82
44.22		24	200	0.62	84	20	200	0.51	83	15	200	0.40	82
38.23		28	200	0.71	85	23	200	0.59	84	18	200	0.46	83
32.48		33	200	0.83	85	27	200	0.69	85	21	200	0.54	84
29.00		37	193	0.90	86	31	200	0.76	85	24	200	0.60	84
24.77		44	183	0.99	86	36	196	0.87	86	28	200	0.70	85
23.20		47	179	1.0	86	38	191	0.91	86	30	200	0.74	85
19.54		56	169	1.2	86	46	180	1.0	86	35	196	0.86	86
20.33	27/5	54	163	1.0	91	44	166	0.85	90	34	169	0.68	89
17.62		62	161	1.2	91	51	164	0.97	91	39	167	0.77	90
16.47		66	159	1.2	91	54	164	1.0	91	42	167	0.82	90
14.24		77	156	1.4	91	63	161	1.2	91	49	164	0.93	91
12.10		90	153	1.6	92	74	158	1.3	91	57	162	1.1	91
10.80		101	151	1.8	92	83	155	1.5	92	64	161	1.2	91
9.23		119	145	2.0	92	97	152	1.7	92	75	158	1.4	92
8.64		127	141	2.0	92	104	149	1.8	92	81	156	1.4	92
7.28		151	132	2.3*	92	123	142	2.0	92	96	152	1.7	92
6.83	20/5	161	128	2.3*	93	131	133	2.0	93	102	139	1.6	93
6.40		171	125	2.4*	93	140	132	2.1	93	109	138	1.7	93
5.39		204	120	2.8*	93	166	126	2.4*	93	129	133	1.9	93
4.76		231	114	3.0*	93	189	122	2.6*	93	147	130	2.2	93
4.00		275	101	3.1*	93	225	113	2.9*	93	175	123	2.4*	93

\* P<sub>Mot\_max</sub> = 2.2 kW

### 500 – 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
201.00	42/1	2.4	192	0.09	54	1.2	193	0.05	48	0.04	200	<0.05	48
184.80		2.7	193	0.10	56	1.3	193	0.06	48	0.05	200	<0.05	48
158.12		3.1	194	0.11	58	1.5	194	0.07	49	0.06	200	<0.05	49
137.05		3.6	195	0.12	60	1.8	195	0.07	51	0.07	200	<0.05	49
128.10		3.9	196	0.13	61	1.9	196	0.08	52	0.07	200	<0.05	49
110.73		4.5	197	0.15	62	2.2	197	0.09	54	0.09	200	<0.05	49
94.08		5.3	198	0.17	64	2.6	198	0.10	56	0.10	200	<0.05	49
84.00		5.9	199	0.19	66	2.9	199	0.11	58	0.11	200	<0.05	49
71.75		6.9	200	0.22	67	3.4	200	0.12	60	0.13	200	<0.05	50
67.20		7.4	200	0.23	68	3.7	200	0.13	61	0.14	200	<0.05	50
56.61	8.8	200	0.27	69	4.4	200	0.15	63	0.17	200	<0.05	50	
69.39	29/2	7.2	200	0.20	76	3.6	200	0.11	69	0.14	200	<0.05	68
63.80		7.8	200	0.21	77	3.9	200	0.12	70	0.15	200	<0.05	69
54.59		9.1	200	0.25	78	4.5	200	0.13	72	0.18	200	<0.05	69
47.32		10	200	0.28	79	5.2	200	0.15	73	0.21	200	<0.05	69
44.22		11	200	0.30	80	5.6	200	0.16	74	0.22	200	<0.05	69
38.23		13	200	0.34	81	6.5	200	0.18	75	0.26	200	<0.05	69
32.48		15	200	0.39	82	7.6	200	0.21	77	0.30	200	<0.05	69
29.00		17	200	0.44	83	8.6	200	0.23	78	0.34	200	<0.05	69
24.77		20	200	0.50	84	10	200	0.27	79	0.40	200	<0.05	69
23.20		21	200	0.54	84	10	200	0.28	80	0.43	200	<0.05	69
19.54	25	200	0.63	85	12	200	0.33	81	0.51	200	<0.05	69	
20.33	27/5	24	171	0.50	88	12	174	0.27	84	0.49	174	<0.05	81
17.62		28	171	0.57	89	14	174	0.31	85	0.56	174	<0.05	81
16.47		30	171	0.61	89	15	174	0.33	85	0.60	174	<0.05	81
14.24		35	169	0.69	90	17	174	0.37	86	0.70	174	<0.05	81
12.10		41	167	0.80	90	20	173	0.43	87	0.82	174	<0.05	81
10.80		46	166	0.89	91	23	173	0.48	88	0.92	174	<0.05	81
9.23		54	164	1.0	91	27	172	0.55	89	1.00	174	<0.05	81
8.64		57	162	1.1	91	28	171	0.58	89	1.1	174	<0.05	81
7.28		68	159	1.2	92	34	170	0.68	90	1.3	174	<0.05	81
6.83		20/5	73	145	1.2	92	36	155	0.66	91	1.4	165	<0.05
6.40	78		145	1.3	92	39	153	0.69	91	1.5	165	<0.05	83
5.39	92		142	1.5	93	46	152	0.81	91	1.8	164	<0.05	83
4.76	105		139	1.6	93	52	151	0.91	92	2.1	164	<0.05	83
4.00	125		134	1.9	93	62	149	1.1	92	2.5	164	0.05	83

11.8.3 Technical data S..57p

3400 – 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
201.00	42/1	16	335	0.81	74	15	345	0.78	73	13	355	0.71	73
184.80		18	325	0.85	74	17	335	0.82	74	15	350	0.75	74
158.12		21	310	0.94	74	20	315	0.90	74	17	330	0.83	74
137.05		24	295	1.0	74	23	300	0.99	74	20	315	0.91	74
128.10		26	290	1.1	74	24	295	1.0	74	21	310	0.95	74
110.73		30	265	1.1	74	28	280	1.1	74	25	295	1.0	75
94.08		36	215	1.1	73	34	235	1.1	74	29	275	1.2	75
84.00		40	188	1.1	73	38	205	1.1	73	33	245	1.2	74
71.75		47	143	1.00	71	44	157	1.0	72	39	200	1.1	74
67.20		50	131	0.98	71	47	145	1.0	72	41	187	1.1	73
56.61	60	103	0.93	69	56	115	0.97	70	49	142	1.0	72	
69.39	29/2	48	290	1.7	86	46	300	1.7	86	40	310	1.5	86
63.80		53	285	1.8	87	50	290	1.8	87	43	305	1.6	87
54.59		62	270	2.0	87	58	275	1.9	87	51	285	1.8	87
47.32		71	255	2.2	87	67	260	2.1	87	59	275	2.0	87
44.22		76	235	2.2	87	72	255	2.2	87	63	265	2.0	87
38.23		88	200	2.2	86	83	215	2.2	87	73	255	2.3	87
32.48		104	164	2.1	86	98	178	2.1	86	86	210	2.2	87
29.00		117	131	1.9	85	110	154	2.1	86	96	186	2.2	86
24.77		137	111	1.9	85	129	120	1.9	85	113	153	2.1	86
23.20		146	102	1.9	84	137	111	1.9	85	120	131	1.9	85
19.54	174	81	1.8	83	163	90	1.8	84	143	109	1.9	85	
20.33	27/5	167	171	3.3*	92	157	184	3.3*	92	137	225	3.5*	92
17.62		192	144	3.2*	92	181	155	3.2*	92	158	183	3.3*	92
16.47		206	134	3.2*	92	194	143	3.2*	92	170	169	3.3*	92
14.24		238	116	3.2*	91	224	123	3.2*	92	196	143	3.2*	92
12.10		280	99	3.2*	91	264	105	3.2*	91	231	121	3.2*	92
10.80		314	88	3.2*	91	296	94	3.2*	91	259	108	3.2*	91
9.23		368	73	3.1*	91	346	79	3.2*	91	303	93	3.2*	91
8.64		393	68	3.1*	90	370	74	3.2*	91	324	87	3.2*	91
7.28		467	54	2.9	90	439	60	3.1*	90	384	72	3.2*	91
6.83		20/5	497	59	3.4*	91	468	66	3.5*	92	409	80	3.7*
6.40	531		54	3.3*	91	500	60	3.4*	91	437	74	3.7*	92
5.39	630		42	3.1*	90	593	47	3.2*	91	519	59	3.5*	92
4.76	714		35	2.9	90	672	40	3.1*	91	588	50	3.4*	91
4.00	850		28	2.8	89	800	31	2.9	90	700	40	3.2*	91

\* P<sub>Mot\_max</sub> = 3.0 kW

2200 – 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
201.00	42/1	10	355	0.56	72	8.4	355	0.44	71	6.9	355	0.37	69
184.80		11	355	0.61	73	9.1	355	0.48	72	7.5	355	0.40	70
158.12		13	360	0.71	74	10	360	0.56	73	8.8	360	0.46	72
137.05		16	340	0.77	74	12	360	0.64	74	10	360	0.53	73
128.10		17	335	0.81	74	13	365	0.69	74	10	365	0.57	73
110.73		19	320	0.89	75	15	345	0.75	74	12	365	0.65	74
94.08		23	300	0.98	75	18	330	0.84	75	14	350	0.73	74
84.00		26	290	1.1	75	20	315	0.89	75	16	335	0.78	75
71.75		30	275	1.2	75	23	300	0.99	75	19	320	0.87	75
67.20		32	255	1.2	75	25	290	1.0	75	20	310	0.90	75
56.61		38	210	1.1	74	30	275	1.1	75	24	295	1.0	76
69.39	29/2	31	335	1.3	86	24	365	1.1	86	20	370	0.92	85
63.80		34	330	1.4	86	26	355	1.2	86	21	370	1.00	85
54.59		40	310	1.5	87	31	340	1.3	86	25	360	1.1	86
47.32		46	295	1.7	87	35	325	1.4	87	29	345	1.2	86
44.22		49	290	1.7	87	38	315	1.5	87	31	335	1.3	87
38.23		57	275	1.9	87	44	300	1.6	87	36	320	1.4	87
32.48		67	260	2.1	87	52	285	1.8	87	43	300	1.6	87
29.00		75	250	2.3	87	58	270	1.9	87	48	290	1.7	87
24.77		88	210	2.3	87	68	255	2.1	87	56	275	1.9	87
23.20		94	195	2.2	87	73	250	2.2	87	60	270	2.0	87
19.54		112	160	2.2	86	87	220	2.3	87	71	250	2.1	87
20.33	27/5	108	225	2.8	92	83	225	2.1	92	68	225	1.8	92
17.62		124	225	3.2*	92	96	225	2.5	92	79	225	2.0	92
16.47		133	225	3.4*	92	103	225	2.6	92	85	225	2.2	92
14.24		154	190	3.3*	92	119	225	3.0	92	98	225	2.5	92
12.10		181	159	3.3*	92	140	220	3.5*	92	115	225	3.0	92
10.80		203	139	3.2*	92	157	191	3.4*	92	129	225	3.3*	92
9.23		238	119	3.2*	92	184	159	3.3*	92	151	199	3.4*	92
8.64		254	112	3.3*	92	196	148	3.3*	92	162	187	3.4*	92
7.28		302	96	3.3*	92	233	123	3.3*	92	192	155	3.4*	92
6.83	20/5	322	112	4.1*	93	248	152	4.3*	93	204	162	3.7*	93
6.40		343	103	4.0*	93	265	141	4.2*	93	218	156	3.8*	93
5.39		408	84	3.9*	92	315	118	4.2*	93	259	147	4.3*	93
4.76		462	72	3.8*	92	357	103	4.2*	93	294	129	4.3*	93
4.00		550	58	3.6*	92	425	84	4.0*	93	350	108	4.3*	93

\* P<sub>Mot\_max</sub> = 3.0 kW

1100 – 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
201.00	42/1	5.4	355	0.30	67	4.4	355	0.25	65	3.4	360	0.21	63
184.80		5.9	360	0.33	68	4.8	360	0.28	67	3.7	360	0.22	64
158.12		6.9	360	0.37	70	5.6	360	0.31	68	4.4	360	0.25	66
137.05		8.0	365	0.43	71	6.5	365	0.36	70	5.1	365	0.29	68
128.10		8.5	365	0.46	72	7.0	365	0.38	70	5.4	365	0.31	68
110.73		9.9	365	0.52	73	8.1	365	0.43	72	6.3	365	0.35	70
94.08		11	370	0.61	74	9.5	370	0.51	73	7.4	370	0.41	71
84.00		13	365	0.67	74	10	370	0.57	73	8.3	370	0.45	72
71.75		15	345	0.74	75	12	370	0.65	74	9.7	370	0.52	73
67.20		16	340	0.78	75	13	360	0.68	75	10	370	0.55	74
56.61		19	320	0.86	75	15	340	0.75	75	12	370	0.64	74
69.39	29/2	15	370	0.73	84	12	370	0.61	83	10	370	0.48	81
63.80		17	370	0.79	84	14	370	0.66	83	10	370	0.52	82
54.59		20	370	0.92	85	16	370	0.76	84	12	370	0.60	83
47.32		23	370	1.0	86	19	370	0.87	85	14	370	0.68	84
44.22		24	365	1.1	86	20	370	0.92	85	15	370	0.73	84
38.23		28	345	1.2	86	23	370	1.1	86	18	370	0.83	85
32.48		33	325	1.3	87	27	350	1.2	86	21	370	0.97	86
29.00		37	315	1.4	87	31	335	1.3	87	24	365	1.1	86
24.77		44	295	1.6	87	36	320	1.4	87	28	345	1.2	87
23.20		47	290	1.7	87	38	310	1.4	87	30	340	1.2	87
19.54		56	275	1.9	87	46	290	1.6	87	35	315	1.4	87
20.33	27/5	54	225	1.4	91	44	225	1.1	91	34	225	0.90	90
17.62		62	225	1.6	92	51	225	1.3	91	39	225	1.0	91
16.47		66	225	1.7	92	54	225	1.4	91	42	225	1.1	91
14.24		77	225	2.0	92	63	225	1.6	92	49	225	1.3	91
12.10		90	225	2.3	92	74	225	1.9	92	57	225	1.5	92
10.80		101	225	2.6	92	83	225	2.1	92	64	225	1.7	92
9.23		119	215	2.9	92	97	225	2.5	92	75	225	1.9	92
8.64		127	205	3.0	92	104	215	2.5	92	81	225	2.1	92
7.28		151	185	3.2*	92	123	210	2.9	92	96	215	2.3	92
6.83	20/5	161	170	3.1*	93	131	195	2.9	93	102	205	2.4	93
6.40		171	165	3.2*	93	140	185	2.9	93	109	190	2.3	93
5.39		204	155	3.6*	93	166	175	3.3*	93	129	180	2.6	93
4.76		231	145	3.8*	93	189	160	3.4*	93	147	170	2.8	93
4.00		275	130	4.0*	93	225	150	3.8*	93	175	160	3.1*	93

\* P<sub>Mot\_max</sub> = 3.0 kW

500 – 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
201.00	42/1	2.4	360	0.16	58	1.2	360	0.09	50	0.04	370	<0.05	50
184.80		2.7	360	0.17	60	1.3	360	0.10	51	0.05	370	<0.05	50
158.12		3.1	360	0.19	62	1.5	360	0.11	53	0.06	370	<0.05	50
137.05		3.6	365	0.22	64	1.8	365	0.13	55	0.07	370	<0.05	50
128.10		3.9	365	0.23	65	1.9	365	0.13	56	0.07	370	<0.05	50
110.73		4.5	365	0.26	67	2.2	365	0.15	58	0.09	370	<0.05	50
94.08		5.3	370	0.30	68	2.6	370	0.17	60	0.10	370	<0.05	50
84.00		5.9	370	0.33	70	2.9	370	0.19	62	0.11	370	<0.05	51
71.75		6.9	370	0.38	71	3.4	370	0.21	64	0.13	370	<0.05	51
67.20		7.4	370	0.40	71	3.7	370	0.22	65	0.14	370	<0.05	51
56.61		8.8	370	0.47	73	4.4	370	0.26	67	0.17	370	<0.05	51
69.39	29/2	7.2	370	0.36	78	3.6	370	0.20	71	0.14	370	<0.05	69
63.80		7.8	370	0.38	79	3.9	370	0.21	72	0.15	370	<0.05	69
54.59		9.1	370	0.44	81	4.5	370	0.24	74	0.18	370	<0.05	69
47.32		10	370	0.50	82	5.2	370	0.27	76	0.21	370	<0.05	69
44.22		11	370	0.53	82	5.6	370	0.29	77	0.22	370	<0.05	69
38.23		13	370	0.61	83	6.5	370	0.32	78	0.26	370	<0.05	70
32.48		15	370	0.71	84	7.6	370	0.38	80	0.30	370	<0.05	70
29.00		17	370	0.79	85	8.6	370	0.41	81	0.34	370	<0.05	70
24.77		20	370	0.91	86	10	370	0.48	82	0.40	370	<0.05	70
23.20		21	370	0.97	86	10	370	0.51	82	0.43	370	<0.05	70
19.54		25	355	1.1	86	12	370	0.59	84	0.51	370	<0.05	70
20.33	27/5	24	225	0.65	89	12	225	0.34	85	0.49	225	<0.05	80
17.62		28	225	0.75	90	14	225	0.39	86	0.56	225	<0.05	80
16.47		30	225	0.80	90	15	225	0.41	86	0.60	225	<0.05	80
14.24		35	225	0.92	90	17	225	0.47	87	0.70	225	<0.05	80
12.10		41	225	1.1	91	20	225	0.55	88	0.82	225	<0.05	80
10.80		46	225	1.2	91	23	225	0.61	89	0.92	225	<0.05	80
9.23		54	225	1.4	92	27	225	0.71	90	1.0	225	<0.05	80
8.64		57	225	1.5	92	28	225	0.76	90	1.1	225	<0.05	80
7.28		68	225	1.8	92	34	225	0.89	90	1.3	225	<0.05	80
6.83	20/5	73	200	1.7	93	36	200	0.84	91	1.4	200	<0.05	82
6.40		78	200	1.8	93	39	200	0.90	91	1.5	200	<0.05	82
5.39		92	205	2.1	93	46	205	1.1	92	1.8	205	<0.05	82
4.76		105	205	2.4	93	52	205	1.2	92	2.1	205	0.05	82
4.00		125	194	2.7	93	62	194	1.4	93	2.5	194	0.06	82

11.8.4 Technical data S..67p

3400 – 2800 min<sup>-1</sup>

i <sub>lot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
217.41	42/1	15	635	1.4	74	14	635	1.3	74	12	640	1.2	74
190.11		17	640	1.6	75	16	640	1.5	75	14	640	1.3	74
180.60		18	640	1.7	75	17	640	1.6	75	15	640	1.4	74
158.45		21	640	1.9	75	20	645	1.8	75	17	645	1.6	75
134.40		25	525	1.9	74	23	610	2.0	75	20	645	1.9	75
121.33		28	460	1.8	74	26	505	1.9	74	23	635	2.0	75
106.75		31	405	1.9	73	29	430	1.8	73	26	515	1.9	74
100.80		33	380	1.9	72	31	410	1.9	73	27	475	1.9	74
85.83		39	320	1.9	72	37	345	1.9	72	32	400	1.9	73
78.00		43	285	1.8	71	41	310	1.9	72	35	365	1.9	73
67.57		50	235	1.8	69	47	260	1.8	70	41	315	1.9	72
58.80		57	184	1.7	67	54	215	1.8	69	47	270	1.9	71
75.06		29/2	45	625	3.4	87	42	635	3.3	87	37	660	3.0
65.63	51		580	3.6	87	48	620	3.6	87	42	635	3.3	87
62.35	54		540	3.6	87	51	585	3.6	87	44	630	3.4	87
54.70	62		465	3.5	87	58	505	3.6	87	51	595	3.7	87
46.40	73		415	3.7	86	68	415	3.5	86	60	490	3.6	87
41.89	81		365	3.6	86	76	395	3.7	86	66	435	3.5	87
36.85	92		310	3.5	85	86	335	3.6	86	75	405	3.7	86
34.80	97		295	3.5	85	91	315	3.5	86	80	380	3.7	86
29.63	114		250	3.6	85	107	270	3.6	85	94	310	3.6	86
26.93	126		220	3.5	84	118	240	3.5	85	103	280	3.6	85
23.33	145		182	3.3	83	137	200	3.4	84	120	245	3.6	85
20.30	167		141	3.0	82	157	164	3.3	83	137	205	3.5	84
24.44	27/5		139	365	5.8*	92	130	370	5.5	92	114	385	5.0
23.22		146	360	6.0*	92	137	365	5.7*	92	120	380	5.2	92
20.37		166	345	6.5*	92	157	350	6.2*	92	137	365	5.7*	92
17.28		196	275	6.2*	92	185	300	6.3*	92	162	350	6.4*	92
15.60		217	245	6.1*	92	205	265	6.2*	92	179	320	6.5*	92
13.73		247	215	6.1*	91	233	230	6.1*	92	203	270	6.3*	92
12.96		262	200	6.0*	91	246	215	6.1*	91	216	250	6.2*	92
11.03		308	169	6.0*	91	290	183	6.1*	91	253	215	6.2*	92
10.03		338	151	5.9*	91	319	164	6.0*	91	279	194	6.2*	91
8.69		391	124	5.7*	90	368	137	5.9*	90	322	166	6.2*	91
7.56		449	95	5.0*	89	423	112	5.5*	90	370	141	6.0*	91

\* P<sub>Mot\_max</sub> = 5.5 kW

2200 – 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
217.41	42/1	10	640	0.92	73	7.8	640	0.72	73	6.4	640	0.60	72
190.11		11	640	1.0	74	8.9	640	0.82	73	7.3	640	0.68	72
180.60		12	640	1.1	74	9.4	645	0.87	73	7.7	645	0.72	73
158.45		13	645	1.3	75	10	645	0.98	74	8.8	645	0.81	73
134.40		16	645	1.5	75	12	645	1.1	75	10	645	0.95	74
121.33		18	645	1.6	75	14	645	1.3	75	11	645	1.0	74
106.75		20	645	1.8	75	15	645	1.4	75	13	645	1.2	75
100.80		21	645	2.0	76	16	645	1.5	75	13	645	1.3	75
85.83		25	550	2.0	75	19	660	1.8	76	16	660	1.5	76
78.00		28	485	1.9	75	21	645	1.9	76	17	660	1.6	76
67.57		32	410	1.9	74	25	580	2.0	76	20	650	1.9	76
58.80	37	360	1.9	74	28	495	2.0	76	23	625	2.0	76	
75.06	29/2	29	685	2.4	87	22	720	2.0	87	18	720	1.6	86
65.63		33	670	2.7	87	25	700	2.2	87	21	720	1.9	87
62.35		35	665	2.8	87	27	700	2.3	87	22	720	2.0	87
54.70		40	645	3.1	87	31	680	2.5	87	25	705	2.2	87
46.40		47	620	3.5	87	36	660	2.9	87	30	680	2.5	87
41.89		52	585	3.7	87	40	645	3.1	87	33	670	2.7	87
36.85		59	505	3.6	87	46	625	3.5	88	37	655	3.0	87
34.80		63	470	3.6	87	48	610	3.6	88	40	640	3.1	88
29.63		74	435	3.9	87	57	545	3.7	88	47	620	3.5	88
26.93		81	385	3.8	87	63	485	3.7	87	51	600	3.7	88
23.33		94	320	3.7	86	72	455	4.0	87	60	525	3.8	88
20.30	108	280	3.7	86	83	390	3.9	87	68	450	3.7	87	
24.44	27/5	90	410	4.2	92	69	415	3.3	92	57	415	2.7	92
23.22		94	405	4.4	92	73	420	3.5	92	60	420	2.9	92
20.37		108	390	4.8	92	83	415	3.9	92	68	435	3.4	92
17.28		127	375	5.4	92	98	400	4.5	92	81	415	3.8	92
15.60		141	360	5.8*	92	108	390	4.8	93	89	410	4.2	93
13.73		160	350	6.4*	92	123	380	5.3	93	101	395	4.6	93
12.96		169	340	6.5*	92	131	375	5.6*	93	108	390	4.8	93
11.03		199	285	6.5*	92	154	355	6.2*	93	126	375	5.4	93
10.03		219	255	6.4*	92	169	340	6.5*	93	139	365	5.8*	93
8.69		253	220	6.4*	92	195	300	6.6*	93	161	350	6.4*	93
7.56		291	192	6.4*	92	224	260	6.6*	92	185	330	6.9*	93

\* P<sub>Mot\_max</sub> = 5.5 kW



1100 – 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
217.41	42/1	5.0	640	0.49	70	4.1	640	0.41	68	3.2	645	0.33	66
190.11		5.7	645	0.55	71	4.7	645	0.46	70	3.6	645	0.37	67
180.60		6.0	645	0.58	71	4.9	645	0.48	70	3.8	645	0.39	68
158.45		6.9	645	0.65	72	5.6	645	0.54	71	4.4	645	0.43	69
134.40		8.1	645	0.76	73	6.6	645	0.63	72	5.2	645	0.50	71
121.33		9.0	645	0.83	74	7.4	645	0.69	73	5.7	645	0.55	71
106.75		10	645	0.94	74	8.4	645	0.77	74	6.5	645	0.61	72
100.80		10	645	0.99	74	8.9	645	0.82	74	6.9	645	0.65	73
85.83		12	660	1.2	75	10	660	0.97	75	8.1	660	0.76	74
78.00		14	665	1.3	76	11	665	1.1	75	8.9	665	0.84	74
67.57		16	665	1.5	76	13	665	1.2	76	10	665	0.96	75
58.80		18	655	1.7	76	15	655	1.4	76	11	655	1.1	76
75.06	29/2	14	720	1.3	85	11	720	1.1	84	9.3	720	0.85	83
65.63		16	720	1.5	86	13	720	1.2	85	10	720	0.96	84
62.35		17	720	1.5	86	14	720	1.3	85	11	720	1.0	84
54.70		20	720	1.8	86	16	720	1.4	86	12	720	1.1	85
46.40		23	715	2.0	87	19	720	1.7	86	15	720	1.3	86
41.89		26	700	2.2	87	21	700	1.8	87	16	700	1.4	86
36.85		29	670	2.4	87	24	670	2.0	87	18	670	1.5	86
34.80		31	640	2.4	87	25	640	2.0	87	20	640	1.6	86
29.63		37	620	2.8	88	30	620	2.3	87	23	620	1.8	87
26.93		40	600	2.9	88	33	600	2.4	87	25	600	1.9	87
23.33		47	580	3.3	88	38	580	2.7	88	30	580	2.1	87
20.30		54	550	3.6	88	44	550	2.9	88	34	550	2.3	88
24.44	27/5	45	415	2.1	92	36	415	1.8	91	28	415	1.4	91
23.22		47	420	2.3	92	38	420	1.9	92	30	420	1.5	91
20.37		54	450	2.8	92	44	455	2.3	92	34	455	1.8	91
17.28		63	435	3.1	92	52	450	2.7	92	40	455	2.1	92
15.60		70	430	3.4	92	57	440	2.9	92	44	455	2.3	92
13.73		80	420	3.8	93	65	435	3.2	92	50	455	2.6	92
12.96		84	415	4.0	93	69	430	3.4	92	54	450	2.8	92
11.03		99	400	4.5	93	81	415	3.8	93	63	435	3.1	92
10.03		109	390	4.8	93	89	410	4.2	93	69	430	3.4	93
8.69		126	375	5.4	93	103	400	4.7	93	80	420	3.8	93
7.56		145	360	5.9*	93	119	385	5.2	93	92	410	4.3	93

\* P<sub>Mot\_max</sub> = 5.5 kW

500 – 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
217.41	42/1	2.2	645	0.25	62	1.1	645	0.15	54	0.04	645	<0.05	52
190.11		2.6	645	0.28	64	1.3	645	0.16	55	0.05	645	<0.05	52
180.60		2.7	645	0.29	64	1.3	645	0.17	56	0.05	645	<0.05	52
158.45		3.1	645	0.32	66	1.5	645	0.19	58	0.06	645	<0.05	52
134.40		3.7	645	0.37	68	1.8	645	0.21	60	0.07	645	<0.05	52
121.33		4.1	645	0.41	69	2.0	645	0.23	61	0.08	645	<0.05	52
106.75		4.6	645	0.45	70	2.3	645	0.25	63	0.09	645	<0.05	52
100.80		4.9	645	0.48	70	2.4	645	0.26	63	0.09	645	<0.05	52
85.83		5.8	660	0.56	72	2.9	660	0.31	66	0.11	695	<0.05	53
78.00		6.4	665	0.61	73	3.2	665	0.33	67	0.12	685	<0.05	53
67.57		7.3	665	0.70	74	3.6	665	0.38	68	0.14	675	<0.05	53
58.80		8.5	655	0.78	74	4.2	655	0.42	70	0.17	655	<0.05	53
75.06	29/2	6.6	720	0.62	81	3.3	720	0.34	75	0.13	720	<0.05	71
65.63		7.6	720	0.70	82	3.8	720	0.38	76	0.15	720	<0.05	71
62.35		8.0	720	0.74	82	4.0	720	0.40	76	0.16	720	<0.05	71
54.70		9.1	720	0.83	83	4.5	720	0.44	78	0.18	720	<0.05	71
46.40		10	720	0.97	84	5.3	720	0.51	79	0.21	720	<0.05	71
41.89		11	720	1.1	85	5.9	720	0.56	80	0.23	720	<0.05	71
36.85		13	720	1.2	85	6.7	720	0.63	81	0.27	720	<0.05	71
34.80		14	700	1.2	86	7.1	700	0.65	82	0.28	700	<0.05	71
29.63		16	680	1.4	86	8.4	680	0.73	83	0.33	680	<0.05	71
26.93		18	660	1.5	86	9.2	660	0.77	83	0.37	660	<0.05	71
23.33		21	640	1.7	87	10	640	0.85	84	0.42	640	<0.05	71
20.30		24	620	1.8	87	12	620	0.94	85	0.49	620	<0.05	71
24.44	27/5	20	415	0.99	90	10	415	0.52	86	0.40	415	<0.05	82
23.22		21	420	1.1	90	10	420	0.55	86	0.43	420	<0.05	82
20.37		24	455	1.3	90	12	455	0.67	87	0.49	455	<0.05	82
17.28		28	455	1.5	91	14	455	0.78	88	0.57	455	<0.05	82
15.60		32	455	1.7	91	16	455	0.86	89	0.64	455	<0.05	82
13.73		36	455	1.9	92	18	455	0.97	89	0.72	455	<0.05	82
12.96		38	455	2.0	92	19	455	1.0	90	0.77	455	<0.05	82
11.03		45	455	2.3	92	22	455	1.2	90	0.90	455	0.05	82
10.03		49	450	2.5	92	24	455	1.3	91	0.99	455	0.06	82
8.69		57	440	2.9	92	28	455	1.5	91	1.1	455	0.07	82
7.56		66	435	3.3	93	33	455	1.7	92	1.3	455	0.08	82

11.8.5 Technical data S..77p

3400 – 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
256.47	40/1	13	1470	2.6	78	12	1480	2.5	78	10	1500	2.2	78
225.26		15	1420	2.9	78	14	1440	2.7	78	12	1480	2.5	78
214.00		15	1410	3.0	78	14	1420	2.8	78	13	1470	2.6	78
189.09		17	1370	3.3	78	16	1380	3.1	78	14	1420	2.8	78
161.60		21	1290	3.6	78	19	1330	3.5	78	17	1370	3.2	78
148.15		22	1260	3.9	78	21	1280	3.7	78	18	1340	3.4	78
130.00		26	1210	4.2	78	24	1230	4.1	78	21	1290	3.7	78
123.20		27	1130	4.2	78	25	1210	4.2	78	22	1260	3.8	78
107.83		31	950	4.1	77	29	1040	4.2	78	25	1210	4.2	78
97.14		35	860	4.1	77	32	900	4.0	77	28	1100	4.3	78
85.22		39	770	4.2	76	37	820	4.2	77	32	930	4.1	78
75.20	45	675	4.2	76	42	725	4.2	76	37	830	4.2	77	
66.67	50	585	4.2	75	47	635	4.2	75	41	745	4.3	77	
56.92	59	485	4.1	74	56	530	4.2	74	49	635	4.3	76	
75.09	40/3	45	1160	6.1	90	42	1190	5.9	90	37	1210	5.3	90
71.33		47	1150	6.4	90	44	1170	6.1	90	39	1210	5.5	90
63.03		53	1110	7.0	90	50	1140	6.7	90	44	1170	6.1	90
53.87		63	1070	7.9	90	59	1080	7.5	90	51	1120	6.8	90
49.38		68	1030	8.3	90	64	1060	8.0	90	56	1100	7.3	90
43.33		78	910	8.4	90	73	1010	8.7	90	64	1060	8.0	90
41.07		82	900	8.7	90	77	910	8.3	90	68	1050	8.3	90
35.94		94	800	8.9	89	89	850	8.9	89	77	910	8.3	90
32.38		105	725	9.0	89	98	770	8.9	89	86	880	8.9	90
28.41		119	635	9.0	89	112	680	9.0	89	98	780	9.0	89
25.07		135	560	9.0	88	127	600	9.1	89	111	695	9.1	89
22.22	153	485	8.8	88	144	525	9.0	88	126	615	9.1	89	
18.97	179	395	8.5	87	168	440	8.9	88	147	520	9.1	89	
22.89	34/6	148	665	11.1*	93	139	680	10.7	93	122	710	9.8	93
20.99		161	620	11.3*	93	152	660	11.3*	93	133	690	10.4	93
18.42		184	590	12.3*	93	173	590	11.6*	93	152	660	11.3*	93
17.45		194	590	13.0*	93	183	590	12.2*	93	160	635	11.5*	93
15.28		222	530	13.3*	93	209	560	13.2*	93	183	590	12.2*	93
13.76		247	480	13.4*	93	232	505	13.3*	93	203	585	13.4*	93
12.07		281	415	13.3*	92	265	445	13.4*	92	231	515	13.5*	93
10.65		319	365	13.3*	92	300	390	13.3	92	262	455	13.5*	93
9.44		360	315	13.0*	92	338	345	13.3*	92	296	405	13.6*	92
8.06		421	260	12.6*	91	397	285	12.9*	92	347	340	13.4*	92

\* P<sub>Mot\_max</sub> = 11.0 kW

### 2200 – 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
256.47	40/1	8.5	1500	1.7	77	6.6	1500	1.4	77	5.4	1500	1.1	76
225.26		9.7	1500	2.0	78	7.5	1500	1.5	77	6.2	1500	1.3	76
214.00		10	1500	2.1	78	7.9	1500	1.6	77	6.5	1500	1.3	77
189.09		11	1490	2.3	78	8.9	1500	1.8	78	7.4	1500	1.5	77
161.60		13	1450	2.6	78	10	1500	2.1	78	8.6	1500	1.7	78
148.15		14	1420	2.8	79	11	1500	2.3	78	9.4	1500	1.9	78
130.00		16	1380	3.1	79	13	1470	2.6	79	10	1500	2.2	78
123.20		17	1370	3.3	79	13	1460	2.7	79	11	1500	2.3	79
107.83		20	1320	3.6	79	15	1410	3.0	79	12	1470	2.5	79
97.14		22	1270	3.8	79	17	1370	3.2	79	14	1440	2.8	79
85.22		25	1220	4.2	79	19	1320	3.5	79	16	1390	3.0	79
75.20		29	1120	4.4	79	22	1270	3.8	79	18	1340	3.3	79
66.67		32	960	4.2	78	25	1220	4.1	79	20	1290	3.6	79
56.92		38	830	4.3	78	29	1140	4.5	79	24	1230	4.0	80
75.09	40/3	29	1280	4.4	90	22	1320	3.5	89	18	1360	3.0	89
71.33		30	1270	4.6	90	23	1320	3.7	90	19	1350	3.1	89
63.03		34	1230	5.0	90	26	1290	4.1	90	22	1320	3.4	90
53.87		40	1200	5.7	90	31	1250	4.6	90	25	1300	3.9	90
49.38		44	1170	6.1	90	34	1230	4.9	90	28	1280	4.2	90
43.33		50	1130	6.7	90	39	1210	5.5	90	32	1250	4.7	90
41.07		53	1110	6.9	90	41	1190	5.7	90	34	1240	4.9	90
35.94		61	1080	7.7	90	47	1150	6.3	90	38	1210	5.5	90
32.38		67	1040	8.2	90	52	1120	6.8	90	43	1180	5.9	90
28.41		77	930	8.4	90	59	1080	7.5	90	49	1140	6.5	90
25.07		87	870	8.9	90	67	1040	8.2	90	55	1100	7.1	90
22.22		99	790	9.1	90	76	970	8.6	90	63	1070	7.8	90
18.97		115	680	9.2	90	89	860	9.0	90	73	1010	8.6	91
22.89	34/6	96	760	8.2	93	74	810	6.8	93	61	840	5.8	93
20.99		104	745	8.8	93	80	790	7.2	93	66	820	6.2	93
18.42		119	720	9.7	93	92	765	7.9	93	76	800	6.8	93
17.45		126	720	10.2	93	97	760	8.3	93	80	795	7.2	93
15.28		143	720	11.6*	93	111	730	9.1	93	91	765	7.9	93
13.76		159	725	13.0*	93	123	720	10.0	93	101	745	8.5	93
12.07		182	650	13.3*	93	140	725	11.4*	93	115	720	9.4	93
10.65		206	580	13.5*	93	159	725	13.0*	93	131	720	10.6	93
9.44		233	520	13.7*	93	180	655	13.2*	93	148	725	12.0*	94
8.06		272	445	13.7*	93	210	575	13.6*	93	173	680	13.2*	94

\* P<sub>Mot\_max</sub> = 11.0 kW

1100 – 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
256.47	40/1	4.2	1500	0.91	74	3.5	1500	0.76	73	2.7	1500	0.61	71
225.26		4.8	1500	1.0	75	3.9	1500	0.85	74	3.1	1500	0.68	72
214.00		5.1	1500	1.1	76	4.2	1500	0.89	74	3.2	1500	0.71	72
189.09		5.8	1500	1.2	76	4.7	1500	0.99	75	3.7	1500	0.79	74
161.60		6.8	1500	1.4	77	5.5	1500	1.1	76	4.3	1500	0.91	75
148.15		7.4	1500	1.5	77	6.0	1500	1.2	77	4.7	1500	0.99	75
130.00		8.4	1500	1.7	78	6.9	1500	1.4	77	5.3	1500	1.1	76
123.20		8.9	1500	1.8	78	7.3	1500	1.5	77	5.6	1500	1.2	76
107.83		10	1500	2.0	79	8.3	1500	1.7	78	6.4	1500	1.3	77
97.14		11	1500	2.3	79	9.2	1500	1.9	78	7.2	1500	1.5	78
85.22		12	1470	2.5	79	10	1500	2.1	79	8.2	1500	1.6	78
75.20		14	1430	2.8	79	11	1490	2.4	79	9.3	1500	1.9	79
66.67		16	1380	3.0	80	13	1450	2.6	79	10	1500	2.1	79
56.92		19	1330	3.4	80	15	1400	2.9	80	12	1480	2.4	80
75.09	40/3	14	1390	2.4	89	11	1420	2.0	88	9.3	1440	1.6	87
71.33		15	1390	2.5	89	12	1410	2.1	88	9.8	1440	1.7	87
63.03		17	1380	2.8	89	14	1390	2.3	89	11	1430	1.9	88
53.87		20	1350	3.2	89	16	1380	2.7	89	12	1400	2.2	88
49.38		22	1320	3.4	90	18	1360	2.9	89	14	1390	2.3	89
43.33		25	1300	3.8	90	20	1350	3.3	90	16	1380	2.6	89
41.07		26	1300	4.1	90	21	1330	3.4	90	17	1380	2.8	89
35.94		30	1270	4.5	90	25	1300	3.8	90	19	1350	3.1	90
32.38		33	1240	4.9	90	27	1290	4.2	90	21	1320	3.3	90
28.41		38	1210	5.4	90	31	1250	4.6	90	24	1280	3.7	90
25.07		43	1180	6.0	90	35	1230	5.1	90	27	1240	4.0	90
22.22		49	1140	6.5	91	40	1200	5.6	91	31	1200	4.4	90
18.97		57	1090	7.3	91	47	1150	6.3	91	36	1150	4.9	90
22.89	34/6	48	850	4.6	93	39	850	3.8	93	30	850	2.9	92
20.99		52	850	5.0	93	42	850	4.1	93	33	850	3.2	93
18.42		59	840	5.6	93	48	850	4.7	93	38	850	3.6	93
17.45		63	830	5.9	93	51	850	4.9	93	40	850	3.8	93
15.28		71	820	6.6	93	58	840	5.6	93	45	850	4.4	93
13.76		79	795	7.1	93	65	830	6.1	93	50	850	4.9	93
12.07		91	765	7.8	93	74	810	6.8	93	57	840	5.5	93
10.65		103	750	8.7	93	84	785	7.4	93	65	830	6.1	93
9.44		116	720	9.4	94	95	765	8.2	94	74	810	6.7	94
8.06		136	725	11.1*	94	111	730	9.1	94	86	785	7.6	94

\* P<sub>Mot\_max</sub> = 11.0 kW

500 – 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
256.47	40/1	1.9	1500	0.46	67	0.97	1500	0.26	59	0.03	1500	<0.05	57
225.26		2.2	1500	0.51	69	1.1	1500	0.29	60	0.04	1500	<0.05	57
214.00		2.3	1500	0.53	69	1.1	1500	0.30	61	0.04	1500	<0.05	57
189.09		2.6	1500	0.59	71	1.3	1500	0.33	63	0.05	1500	<0.05	57
161.60		3.0	1500	0.67	72	1.5	1500	0.38	65	0.06	1500	<0.05	57
148.15		3.3	1500	0.73	73	1.6	1500	0.40	66	0.06	1500	<0.05	57
130.00		3.8	1500	0.82	74	1.9	1500	0.45	67	0.07	1500	<0.05	57
123.20		4.0	1500	0.86	74	2.0	1500	0.47	68	0.08	1500	<0.05	57
107.83		4.6	1500	0.97	75	2.3	1500	0.52	70	0.09	1500	<0.05	57
97.14		5.1	1500	1.1	76	2.5	1500	0.57	71	0.10	1500	<0.05	57
85.22		5.8	1500	1.2	77	2.9	1500	0.64	72	0.11	1500	<0.05	57
75.20		6.6	1500	1.3	78	3.3	1500	0.71	73	0.13	1500	<0.05	57
66.67		7.4	1500	1.5	78	3.7	1500	0.79	74	0.14	1500	<0.05	57
56.92		8.7	1500	1.8	79	4.3	1500	0.91	76	0.17	1500	<0.05	57
75.09	40/3	6.6	1450	1.2	85	3.3	1460	0.64	80	0.13	1500	<0.05	77
71.33		7.0	1460	1.3	85	3.5	1460	0.67	80	0.14	1500	<0.05	77
63.03		7.9	1460	1.4	86	3.9	1460	0.74	82	0.15	1460	<0.05	77
53.87		9.2	1450	1.6	87	4.6	1450	0.85	83	0.18	1450	<0.05	77
49.38		10	1440	1.7	87	5.0	1440	0.92	83	0.20	1440	<0.05	77
43.33		11	1430	2.0	88	5.7	1440	1.0	84	0.23	1440	<0.05	77
41.07		12	1400	2.0	88	6.0	1400	1.1	85	0.24	1400	<0.05	77
35.94		13	1360	2.2	89	6.9	1360	1.2	86	0.27	1360	0.05	77
32.38		15	1320	2.4	89	7.7	1320	1.2	86	0.30	1320	0.06	77
28.41		17	1280	2.6	89	8.7	1280	1.4	87	0.35	1280	0.06	77
25.07		19	1240	2.9	90	9.9	1240	1.5	87	0.39	1240	0.07	77
22.22		22	1200	3.1	90	11	1200	1.6	88	0.45	1200	0.07	77
18.97		26	1150	3.5	90	13	1150	1.8	89	0.52	1150	0.08	77
22.89	34/6	21	850	2.1	92	10	850	1.1	89	0.43	850	<0.05	84
20.99		23	850	2.3	92	11	850	1.2	89	0.47	850	0.05	84
18.42		27	850	2.6	92	13	850	1.3	90	0.54	850	0.06	84
17.45		28	850	2.8	92	14	850	1.4	90	0.57	850	0.06	84
15.28		32	850	3.1	93	16	850	1.6	91	0.65	850	0.07	84
13.76		36	850	3.5	93	18	850	1.8	91	0.72	850	0.08	84
12.07		41	850	4.0	93	20	850	2.0	92	0.82	850	0.09	84
10.65		46	850	4.5	93	23	850	2.3	92	0.93	850	0.10	84
9.44		52	850	5.1	93	26	850	2.6	92	1.0	850	0.11	84
8.06		62	830	5.8	94	31	850	3.0	93	1.2	850	0.13	84

11.8.6 Technical data S..87p

3400 – 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
288.00	40/1	11	2580	4.0	80	11	2600	3.8	80	9.7	2680	3.4	80
258.18		13	2500	4.3	80	12	2520	4.1	80	10	2600	3.7	80
222.40		15	2400	4.8	80	14	2430	4.6	80	12	2520	4.2	80
202.96		16	2350	5.2	80	15	2370	4.9	80	13	2460	4.4	80
180.00		18	2240	5.6	80	17	2300	5.4	80	15	2380	4.9	80
151.30		22	1950	5.8	79	21	2120	5.9	80	18	2260	5.5	80
139.05		24	1860	6.0	79	23	1900	5.8	79	20	2210	5.8	80
123.48		27	1580	5.8	78	25	1730	6.0	79	22	1970	5.9	80
110.40		30	1430	5.9	78	28	1540	6.0	78	25	1820	6.1	79
99.26		34	1260	5.9	77	32	1380	6.0	78	28	1570	5.9	79
86.15		39	1030	5.6	76	37	1150	5.8	77	32	1390	6.1	78
77.14		44	830	5.2	74	41	970	5.6	75	36	1220	6.0	77
64.00		53	500	4.1	69	50	620	4.5	71	43	960	5.8	76
91.20	38/3	37	2140	9.2	91	35	2180	8.8	91	30	2230	7.9	91
81.76		41	2070	9.9	91	39	2100	9.5	91	34	2180	8.6	91
70.43		48	1980	11.0	91	45	2030	10.6	91	39	2090	9.6	91
64.27		52	1940	11.8	91	49	1970	11.3	91	43	2060	10.3	91
57.00		59	1860	12.8	91	56	1900	12.3	91	49	1980	11.2	91
47.91		70	1600	13.2	90	66	1760	13.6	91	58	1880	12.7	91
44.03		77	1470	13.2	90	72	1570	13.2	90	63	1830	13.4	91
39.10		86	1300	13.2	90	81	1400	13.3	90	71	1620	13.4	91
34.96		97	1140	13.0	90	91	1240	13.2	90	80	1440	13.4	90
31.43		108	1000	12.7	89	101	1090	13.0	89	89	1290	13.4	90
27.28		124	810	12.0	88	117	910	12.6	89	102	1110	13.3	90
24.43		139	660	11.0	87	130	775	12.0	88	114	960	12.9	89
20.27		167	395	8.2	84	157	490	9.4	86	138	755	12.3	89
25.50	34/6	133	1070	16.0	93	125	1090	15.4	93	109	1160	14.3	93
21.43		158	990	17.7	93	149	1020	17.1	93	130	1080	15.8	93
19.70		172	990	19.0*	93	162	990	18.1	93	142	1040	16.6	93
17.49		194	870	19.0*	93	182	930	19.0*	93	160	990	17.8	93
15.64		217	760	19.0*	93	204	830	19.0*	93	179	960	19.0*	93
14.06		241	660	18.1	92	227	725	19.0*	93	199	860	19.0*	93
12.21		278	540	17.2	92	262	605	18.0	92	229	730	19.0*	93
10.93		311	440	15.7	91	292	510	17.1	92	256	645	19.0*	92
9.07		374	255	11.3	89	352	325	13.3	90	308	500	17.6	92
7.88		431	200	10.4	87	406	230	11.1	88	355	375	15.3	91

\* P<sub>Mot\_max</sub> = 18.5 kW

2200 – 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
288.00	40/1	7.6	2770	2.8	80	5.9	2900	2.3	79	4.8	3000	2.0	78
258.18		8.5	2720	3.0	80	6.5	2840	2.5	79	5.4	2920	2.1	79
222.40		9.8	2660	3.4	80	7.6	2770	2.8	80	6.2	2860	2.4	79
202.96		10	2610	3.7	80	8.3	2730	3.0	80	6.8	2820	2.6	80
180.00		12	2540	4.1	80	9.4	2680	3.3	80	7.7	2780	2.8	80
151.30		14	2440	4.6	80	11	2580	3.8	80	9.2	2680	3.2	80
139.05		15	2380	4.9	80	12	2540	4.0	80	10	2670	3.5	80
123.48		17	2310	5.4	80	13	2460	4.4	80	11	2580	3.8	80
110.40		19	2210	5.8	80	15	2390	4.8	81	12	2510	4.1	81
99.26		22	2080	6.0	80	17	2340	5.2	81	14	2440	4.5	81
86.15		25	1870	6.3	80	19	2220	5.7	81	16	2360	5.0	81
77.14		28	1620	6.1	79	22	2130	6.1	81	18	2280	5.4	81
64.00		34	1360	6.2	79	26	1860	6.4	80	21	2160	6.1	81
91.20	38/3	24	2330	6.5	91	18	2420	5.2	91	15	2490	4.4	90
81.76		26	2280	7.1	91	20	2400	5.8	91	17	2460	4.9	90
70.43		31	2210	8.0	91	24	2330	6.5	91	19	2400	5.5	91
64.27		34	2190	8.6	91	26	2300	7.0	91	21	2380	6.0	91
57.00		38	2110	9.4	91	29	2230	7.7	91	24	2330	6.6	91
47.91		45	2030	10.7	91	35	2150	8.8	91	29	2260	7.6	91
44.03		49	1970	11.3	91	38	2110	9.4	91	31	2210	8.1	91
39.10		56	1890	12.3	91	43	2050	10.2	91	35	2160	8.9	91
34.96		62	1820	13.2	91	48	1990	11.1	91	40	2090	9.6	91
31.43		69	1720	13.9	91	54	1930	12.0	91	44	2040	10.4	91
27.28		80	1450	13.5	91	62	1840	13.2	91	51	1970	11.6	91
24.43		90	1310	13.7	90	69	1760	14.1	91	57	1890	12.4	91
20.27		108	1080	13.6	90	83	1450	14.0	91	69	1760	13.9	91
25.50	34/6	86	1270	12.3	94	66	1410	10.5	94	54	1440	8.8	94
21.43		102	1240	14.3	94	79	1320	11.7	94	65	1420	10.4	94
19.70		111	1240	15.5	94	86	1270	12.3	94	71	1370	10.9	94
17.49		125	1240	17.4	94	97	1240	13.5	94	80	1310	11.7	94
15.64		140	1230	19.0*	94	108	1240	15.1	94	89	1260	12.6	94
14.06		156	1110	19.0*	94	120	1240	16.8	94	99	1240	13.8	94
12.21		180	970	20.0*	93	139	1240	19.0*	94	114	1240	15.9	94
10.93		201	870	20.0*	93	155	1130	20.0*	94	128	1240	17.7	94
9.07		242	720	20.0*	93	187	950	20.0*	94	154	1140	20.0*	94
7.88		279	605	19.0*	93	215	830	20.0*	93	177	1010	20.0*	94

\* P<sub>Mot,max</sub> = 18.5 kW



1100 – 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
288.00	40/1	3.8	3000	1.6	77	3.1	3000	1.3	76	2.4	3000	1.0	74
258.18		4.2	2970	1.7	78	3.4	2970	1.4	77	2.7	2970	1.1	75
222.40		4.9	2950	1.9	79	4.0	2970	1.6	78	3.1	2970	1.3	76
202.96		5.4	2910	2.1	79	4.4	2970	1.8	78	3.4	2990	1.4	77
180.00		6.1	2890	2.3	79	5.0	2930	2.0	79	3.8	2990	1.6	77
151.30		7.2	2790	2.7	80	5.9	2880	2.3	79	4.6	2980	1.8	78
139.05		7.9	2780	2.9	80	6.4	2870	2.4	80	5.0	2960	2.0	79
123.48		8.9	2700	3.1	80	7.2	2790	2.7	80	5.6	2900	2.2	79
110.40		9.9	2650	3.4	81	8.1	2750	2.9	80	6.3	2860	2.4	80
99.26		11	2600	3.7	81	9.0	2700	3.2	81	7.0	2810	2.6	80
86.15		12	2510	4.2	81	10	2630	3.6	81	8.1	2750	2.9	81
77.14		14	2460	4.5	81	11	2560	3.9	81	9.0	2700	3.2	81
64.00		17	2330	5.2	81	14	2440	4.4	81	10	2600	3.7	81
91.20		38/3	12	2550	3.6	90	9.8	2310	2.7	89	7.6	2310	2.1
81.76	13		2530	4.0	90	11	2560	3.3	90	8.5	2610	2.6	89
70.43	15		2470	4.5	90	12	2530	3.8	90	9.9	2580	3.0	89
64.27	17		2440	4.8	91	14	2500	4.1	90	10	2560	3.3	90
57.00	19		2400	5.4	91	15	2470	4.5	90	12	2530	3.6	90
47.91	22		2350	6.2	91	18	2410	5.2	91	14	2500	4.2	90
44.03	24		2300	6.6	91	20	2400	5.7	91	15	2470	4.5	91
39.10	28		2280	7.4	91	23	2350	6.2	91	17	2440	5.0	91
34.96	31		2210	8.0	91	25	2300	6.8	91	20	2390	5.5	91
31.43	34		2170	8.7	91	28	2250	7.4	91	22	2370	6.1	91
27.28	40		2080	9.6	91	32	2190	8.3	91	25	2300	6.8	91
24.43	45		2030	10.5	91	36	2140	9.0	91	28	2250	7.4	91
20.27	54		1920	11.9	91	44	2030	10.3	92	34	2170	8.6	92
25.50	34/6		43	1440	7.0	93	35	1440	5.7	93	27	1440	4.5
21.43		51	1510	8.7	94	41	1510	7.1	94	32	1510	5.5	93
19.70		55	1500	9.4	94	45	1540	7.9	94	35	1570	6.3	93
17.49		62	1440	10.1	94	51	1510	8.7	94	40	1570	7.0	94
15.64		70	1380	10.8	94	57	1480	9.5	94	44	1540	7.7	94
14.06		78	1340	11.7	94	64	1440	10.3	94	49	1510	8.4	94
12.21		90	1340	13.5	94	73	1370	11.3	94	57	1460	9.3	94
10.93		100	1340	15.0	94	82	1360	12.5	94	64	1440	10.3	94
9.07		121	1340	18.1	94	99	1340	14.8	94	77	1380	11.9	94
7.88		139	1260	20.0*	94	114	1340	17.0	94	88	1340	13.3	94

\* P<sub>Mot,max</sub> = 18.5 kW

500 – 10 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>			
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %
288.00	40/1	1.7	3000	0.77	71	0.86	3000	0.43	63	0.03	3000	<0.05	60
258.18		1.9	2990	0.84	72	0.96	2990	0.47	64	0.03	3000	<0.05	60
222.40		2.2	3000	0.96	73	1.1	3000	0.54	66	0.04	3000	<0.05	60
202.96		2.4	3000	1.0	74	1.2	3000	0.58	67	0.04	3000	<0.05	60
180.00		2.7	3000	1.2	75	1.3	3000	0.64	68	0.05	3000	<0.05	60
151.30		3.3	3000	1.4	77	1.6	3000	0.74	70	0.06	3000	<0.05	60
139.05		3.5	3000	1.5	77	1.7	3000	0.79	71	0.07	3000	<0.05	60
123.48		4.0	2990	1.6	78	2.0	3000	0.88	73	0.08	3000	<0.05	60
110.40		4.5	2950	1.8	79	2.2	2950	0.95	74	0.09	2950	<0.05	60
99.26		5.0	2900	1.9	79	2.5	2900	1.0	75	0.10	2900	0.05	60
86.15		5.8	2880	2.2	80	2.9	2900	1.2	76	0.11	2900	0.06	60
77.14		6.4	2870	2.4	80	3.2	2900	1.3	77	0.12	2900	0.07	60
64.00		7.8	2770	2.8	81	3.9	2900	1.5	78	0.15	2900	0.08	60
91.20	38/3	5.4	2500	1.7	87	2.7	2280	0.80	82	0.10	2280	<0.05	80
81.76		6.1	2670	2.0	87	3.0	2500	0.97	83	0.12	2500	<0.05	80
70.43		7.0	2660	2.2	88	3.5	2580	1.1	84	0.14	2580	<0.05	80
64.27		7.7	2640	2.4	88	3.8	2530	1.2	85	0.15	2530	0.05	80
57.00		8.7	2620	2.7	89	4.3	2710	1.5	85	0.17	2790	0.06	80
47.91		10	2590	3.2	90	5.2	2690	1.7	86	0.20	2790	0.08	80
44.03		11	2560	3.4	90	5.6	2660	1.8	87	0.22	2790	0.08	80
39.10		12	2530	3.8	90	6.3	2660	2.0	88	0.25	2790	0.09	80
34.96		14	2510	4.2	90	7.1	2660	2.3	88	0.28	2810	0.11	80
31.43		15	2470	4.5	91	7.9	2610	2.5	89	0.31	2810	0.12	80
27.28		18	2440	5.2	91	9.1	2590	2.8	89	0.36	2790	0.13	80
24.43		20	2390	5.6	91	10	2590	3.1	90	0.40	2790	0.15	80
20.27		24	2320	6.6	91	12	2530	3.6	90	0.49	2810	0.18	80
25.50	34/6	19	1440	3.2	92	9.8	1440	1.6	90	0.39	1440	0.07	85
21.43		23	1510	4.0	93	11	1510	2.0	91	0.46	1510	0.09	85
19.70		25	1570	4.5	93	12	1570	2.3	91	0.50	1570	0.10	85
17.49		28	1570	5.0	93	14	1570	2.6	92	0.57	1570	0.11	85
15.64		31	1540	5.5	93	15	1540	2.8	92	0.63	1540	0.12	85
14.06		35	1510	6.0	94	17	1510	3.0	92	0.71	1510	0.13	85
12.21		40	1460	6.7	94	20	1460	3.4	93	0.81	1460	0.15	85
10.93		45	1440	7.4	94	22	1440	3.7	93	0.91	1440	0.16	85
9.07		55	1440	8.9	94	27	1440	4.5	93	1.1	1440	0.19	85
7.88		63	1440	10.2	94	31	1440	5.1	94	1.2	1440	0.22	85

11.8.7 Technical data S..97p

3400 – 2800 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 3400 min <sup>-1</sup>				n <sub>e</sub> = 3200 min <sup>-1</sup>				n <sub>e</sub> = 2800 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
286.40	40/1	11	4300	6.6	81	11	4300	6.2	81	9.7	4300	5.4	81	
262.22		12	4300	7.2	81	12	4300	6.8	81	10	4300	5.9	81	
231.67		14	4150	7.9	81	13	4240	7.6	81	12	4300	6.7	81	
196.52		17	3970	8.9	81	16	4010	8.4	81	14	4210	7.7	81	
180.95		18	3780	9.2	81	17	3890	8.9	81	15	4090	8.2	81	
161.74		21	3230	8.9	80	19	3540	9.1	81	17	3970	8.9	81	
145.60		23	2800	8.6	79	21	3050	8.8	80	19	3720	9.3	81	
131.85		25	2660	9.1	79	24	2740	8.8	79	21	3250	9.0	80	
116.92		29	2320	9.0	78	27	2550	9.3	79	23	2760	8.7	80	
105.71		32	1980	8.6	77	30	2210	9.0	78	26	2630	9.2	79	
89.60		37	1280	6.9	74	35	1670	8.2	76	31	2210	9.2	79	
78.26		43	970	6.2	71	40	1130	6.6	73	35	1770	8.6	77	
65.45		51	675	5.5	67	48	795	5.9	69	42	1110	6.8	73	
80.85	37/3	42	3410	16.4	92	39	3480	15.7	92	34	3640	14.4	92	
71.43		47	3280	17.8	92	44	3340	17.1	92	39	3480	15.6	92	
60.59		56	3020	19	91	52	3180	19	92	46	3310	17.5	92	
55.79		60	2820	20	91	57	2950	19	91	50	3210	18.4	92	
49.87		68	2710	21	91	64	2760	20	91	56	3060	20	92	
44.89		75	2430	21	91	71	2630	22	91	62	2790	20	91	
40.65		83	2170	21	91	78	2350	21	91	68	2680	21	91	
36.05		94	1830	20	90	88	2020	21	91	77	2400	21	91	
32.60		104	1560	19	90	98	1760	20	90	85	2150	21	91	
27.63		123	1070	15.6	88	115	1320	17.9	89	101	1740	20	90	
24.13		140	810	13.8	87	132	940	14.9	88	116	1390	19	90	
26.39		35/6	128	1800	26	94	121	1840	25	94	106	1930	23	94
23.59			144	1750	28	94	135	1750	27	94	118	1850	24	94
21.23	160		1750	31*	94	150	1750	29	94	131	1770	26	94	
19.23	176		1550	31*	94	166	1680	31	94	145	1750	28	94	
17.05	199		1320	30	93	187	1450	30	94	164	1730	32*	94	
15.42	220		1110	28	93	207	1260	29	93	181	1540	31*	94	
13.07	260		725	22	92	244	940	26	92	214	1240	30	93	
11.41	297		515	17.9	90	280	585	19	91	245	1000	28	93	
9.55	356		375	15.8	88	335	435	17.1	89	293	580	20	91	
8.26	411		290	14.4	87	387	335	15.5	88	338	455	17.9	90	

\* P<sub>Mot\_max</sub> = 30 kW

### 2200 – 1400 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 2200 min <sup>-1</sup>				n <sub>e</sub> = 1700 min <sup>-1</sup>				n <sub>e</sub> = 1400 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
286.40	40/1	7.6	4300	4.3	81	5.9	4300	3.3	80	4.8	4300	2.8	80	
262.22		8.3	4300	4.7	81	6.4	4300	3.6	81	5.3	4300	3.0	80	
231.67		9.4	4300	5.3	81	7.3	4300	4.1	81	6	4300	3.4	81	
196.52		11	4300	6.2	81	8.6	4300	4.8	81	7.1	4300	4.0	81	
180.95		12	4300	6.7	81	9.3	4300	5.2	81	7.7	4300	4.3	81	
161.74		13	4260	7.5	81	10	4300	5.8	81	8.6	4300	4.8	81	
145.60		15	4150	8.1	81	11	4300	6.5	82	9.6	4300	5.3	81	
131.85		16	3980	8.6	81	12	4300	7.1	82	10	4300	5.9	82	
116.92		18	3840	9.3	81	14	4170	7.8	82	11	4300	6.6	82	
105.71		20	3430	9.2	81	16	4030	8.3	82	13	4290	7.3	82	
89.60		24	2780	8.9	80	18	3800	9.3	82	15	4070	8.1	82	
78.26		28	2540	9.4	80	21	3360	9.4	81	17	3910	8.9	82	
65.45		33	2120	9.4	79	25	2690	9.1	81	21	3520	9.6	82	
80.85		37/3	27	3720	11.6	92	21	3710	8.9	92	17	3700	7.3	91
71.43	30		3710	13.0	92	23	3940	10.7	92	19	4100	9.2	92	
60.59	36		3570	14.8	92	28	3810	12.2	92	23	3980	10.5	92	
55.79	39		3510	15.8	92	30	3730	13.0	92	25	3910	11.2	92	
49.87	44		3360	16.9	92	34	3640	14.1	92	28	3810	12.2	92	
44.89	49		3270	18.3	92	37	3540	15.3	92	31	3710	13.2	92	
40.65	54		3130	19	92	41	3420	16.3	92	34	3600	14.1	92	
36.05	61		2810	20	92	47	3300	17.7	92	38	3500	15.5	92	
32.60	67		2700	21	92	52	3200	19	92	42	3390	16.6	92	
27.63	79		2390	22	91	61	2850	20	92	50	3230	19	92	
24.13	91		2060	22	91	70	2670	21	92	58	3080	20	92	
26.39	35/6		83	2550	24	94	64	2600	19	94	53	2600	15.3	94
23.59			93	2450	25	94	72	2600	21	94	59	2600	17.1	94
21.23			103	2380	27	94	80	2570	23	94	65	2600	19	94
19.23		114	2280	29	94	88	2500	25	94	72	2600	21	95	
17.05		129	2170	31*	94	99	2400	27	94	82	2570	23	95	
15.42		142	2040	32*	94	110	2300	28	94	90	2470	25	95	
13.07		168	1720	32*	94	130	2170	31*	94	107	2330	28	95	
11.41		192	1480	32*	94	148	2000	33*	94	122	2210	30	95	
9.55		230	1200	31*	94	178	1670	33*	94	146	2040	33*	94	
8.26		266	980	29	93	205	1440	33*	94	169	1770	33*	94	

\* P<sub>Mot\_max</sub> = 30 kW

1100 – 700 min<sup>-1</sup>

i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 1100 min <sup>-1</sup>				n <sub>e</sub> = 900 min <sup>-1</sup>				n <sub>e</sub> = 700 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
286.40	40/1	3.8	4300	2.2	79	3.1	4300	1.8	78	2.4	4300	1.4	77	
262.22		4.1	4300	2.4	80	3.4	4300	2.0	79	2.6	4300	1.6	77	
231.67		4.7	4300	2.7	80	3.8	4300	2.2	79	3.0	4300	1.7	78	
196.52		5.5	4300	3.1	80	4.5	4300	2.6	80	3.5	4300	2.0	79	
180.95		6.0	4300	3.4	81	4.9	4300	2.8	80	3.8	4300	2.2	79	
161.74		6.8	4300	3.8	81	5.5	4300	3.1	81	4.3	4300	2.4	80	
145.60		7.5	4300	4.2	81	6.1	4300	3.4	81	4.8	4300	2.7	80	
131.85		8.3	4300	4.6	81	6.8	4300	3.8	81	5.3	4300	3.0	81	
116.92		9.4	4300	5.2	82	7.6	4300	4.3	81	5.9	4300	3.3	81	
105.71		10	4300	5.7	82	8.5	4300	4.7	82	6.6	4300	3.7	81	
89.60		12	4300	6.7	82	10	4300	5.5	82	7.8	4300	4.3	82	
78.26		14	4230	7.6	82	11	4300	6.3	82	8.9	4300	4.9	82	
65.45		16	3980	8.5	82	13	4240	7.4	82	10	4300	5.9	82	
80.85		37/3	13	3690	5.8	91	11	3670	4.7	91	8.6	3640	3.7	90
71.43	15		4200	7.4	92	12	4200	6.1	91	9.7	4200	4.8	91	
60.59	18		4160	8.6	92	14	4270	7.3	92	11	4300	5.7	91	
55.79	19		4110	9.2	92	16	4210	7.8	92	12	4300	6.2	91	
49.87	22		4030	10.1	92	18	4160	8.6	92	14	4300	6.9	92	
44.89	24		3930	11.0	92	20	4070	9.3	92	15	4270	7.6	92	
40.65	27		3860	11.9	92	22	4030	10.2	92	17	4190	8.2	92	
36.05	30		3740	13.0	92	24	3900	11.1	92	19	4110	9.1	92	
32.60	33		3630	13.9	92	27	3820	12.0	92	21	4040	9.9	92	
27.63	39		3490	15.8	92	32	3670	13.6	92	25	3900	11.2	92	
24.13	45		3320	17.2	92	37	3560	15.1	92	29	3770	12.4	92	
26.39	35/6		41	2650	12.3	94	34	2620	9.9	94	26	2700	8.0	94
23.59			46	2650	13.7	94	38	2650	11.2	94	29	2670	8.8	94
21.23			51	2650	15.2	94	42	2650	12.5	94	32	2620	9.6	94
19.23		57	2650	16.8	95	46	2650	13.8	94	36	2620	10.6	94	
17.05		64	2670	19	95	52	2650	15.5	95	41	2650	12.1	94	
15.42		71	2670	21	95	58	2650	17.1	95	45	2650	13.3	95	
13.07		84	2540	24	95	68	2670	20	95	53	2650	15.7	95	
11.41		96	2420	26	95	78	2590	23	95	61	2650	18.0	95	
9.55		115	2280	29	95	94	2440	25	95	73	2650	21	95	
8.26		133	2140	32*	95	108	2320	28	95	84	2540	24	95	

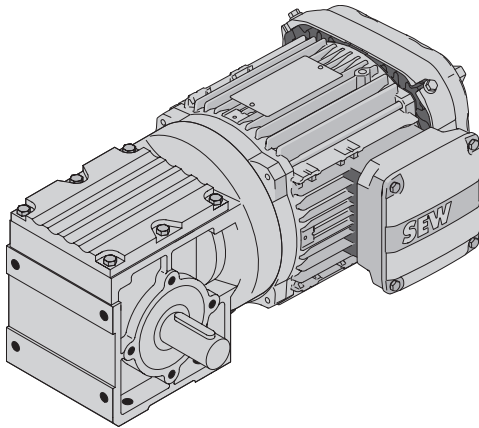
\* P<sub>Mot,max</sub> = 30 kW

500 – 10 min<sup>-1</sup>

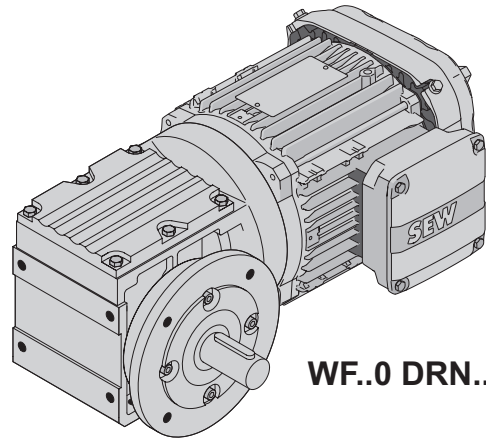
i <sub>tot</sub>	i <sub>s</sub>	n <sub>e</sub> = 500 min <sup>-1</sup>				n <sub>e</sub> = 250 min <sup>-1</sup>				n <sub>e</sub> = 10 min <sup>-1</sup>				
		n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	n <sub>a</sub> min <sup>-1</sup>	M <sub>amax</sub> Nm	P <sub>Mot</sub> kW	η %	
286.40	40/1	1.7	4300	1.1	74	0.87	4300	0.58	67	0.03	4300	<0.05	61	
262.22		1.9	4300	1.1	75	0.95	4300	0.63	68	0.03	4300	<0.05	61	
231.67		2.1	4300	1.3	76	1.0	4300	0.70	70	0.04	4300	<0.05	61	
196.52		2.5	4300	1.5	77	1.2	4300	0.80	72	0.05	4300	<0.05	61	
180.95		2.7	4300	1.6	78	1.3	4300	0.86	72	0.05	4300	<0.05	61	
161.74		3.0	4300	1.8	79	1.5	4300	0.95	74	0.06	4300	<0.05	61	
145.60		3.4	4300	2.0	79	1.7	4300	1.0	75	0.06	4300	0.05	61	
131.85		3.7	4300	2.1	80	1.8	4300	1.1	75	0.07	4300	0.06	61	
116.92		4.2	4300	2.4	80	2.1	4300	1.3	76	0.08	4300	0.06	61	
105.71		4.7	4300	2.6	81	2.3	4300	1.4	77	0.09	4300	0.07	61	
89.60		5.5	4300	3.1	81	2.7	4300	1.6	78	0.11	4300	0.08	61	
78.26		6.3	4300	3.5	82	3.1	4300	1.8	79	0.12	4300	0.09	61	
65.45		7.6	4300	4.2	82	3.8	4300	2.1	80	0.15	4300	0.11	61	
80.85		37/3	6.1	3600	2.6	89	3.0	3250	1.2	86	0.12	3250	0.05	81
71.43	6.9		4200	3.4	90	3.4	4160	1.8	87	0.13	4160	0.08	81	
60.59	8.2		4300	4.1	90	4.1	4300	2.1	88	0.16	4300	0.09	81	
55.79	8.9		4300	4.5	91	4.4	4300	2.3	88	0.17	4300	0.10	81	
49.87	10		4300	5.0	91	5.0	4300	2.6	89	0.20	4300	0.11	81	
44.89	11		4300	5.5	91	5.5	4300	2.8	89	0.22	4300	0.12	81	
40.65	12		4300	6.1	91	6.1	4300	3.1	89	0.24	4300	0.14	81	
36.05	13		4290	6.8	92	6.9	4300	3.5	90	0.27	4300	0.15	81	
32.60	15		4280	7.5	92	7.6	4300	3.8	90	0.30	4300	0.17	81	
27.63	18		4150	8.5	92	9.0	4300	4.5	91	0.36	4300	0.20	81	
24.13	20		4070	9.6	92	10	4300	5.1	91	0.41	4300	0.23	81	
26.39	35/6		18	2790	5.9	94	9.4	2790	3.0	92	0.37	2790	0.13	87
23.59			21	2710	6.4	94	10	2710	3.3	93	0.42	2710	0.14	87
21.23			23	2740	7.2	94	11	2790	3.7	93	0.47	2790	0.16	87
19.23		26	2700	7.8	94	13	2790	4.1	93	0.52	2790	0.17	87	
17.05		29	2670	8.7	94	14	2790	4.6	93	0.58	2790	0.20	87	
15.42		32	2620	9.4	94	16	2790	5.1	94	0.64	2790	0.22	87	
13.07		38	2650	11.2	95	19	2790	6.0	94	0.76	2790	0.26	87	
11.41		43	2650	12.9	95	21	2780	6.8	94	0.87	2790	0.29	87	
9.55		52	2650	15.3	95	26	2700	7.8	94	1.0	2790	0.35	87	
8.26		60	2650	17.7	95	30	2670	9.0	95	1.2	2790	0.41	87	

## 12 SPIROPLAN® gearmotors

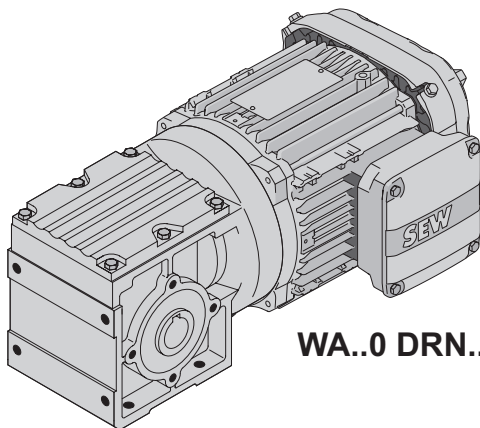
### 12.1 W..DRN.. designs



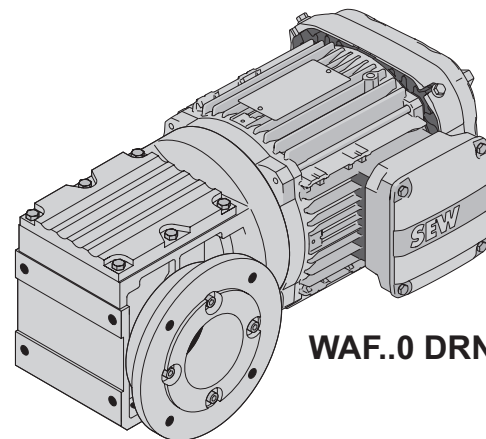
**W..0 DRN..**



**WF..0 DRN..**

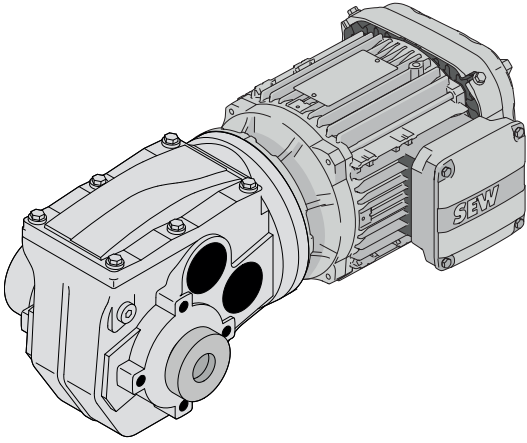


**WA..0 DRN..**

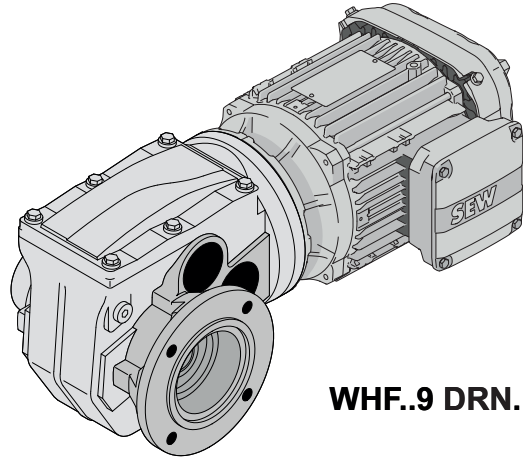


**WAF..0 DRN..**

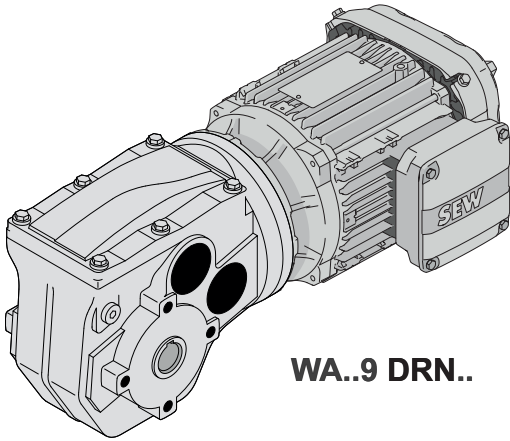
27021606429321995



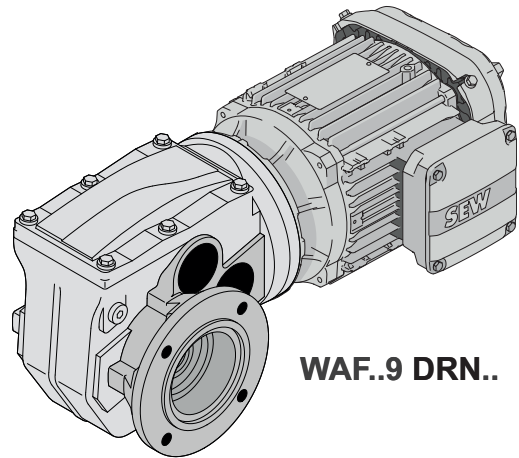
**WT..9 DRN..**



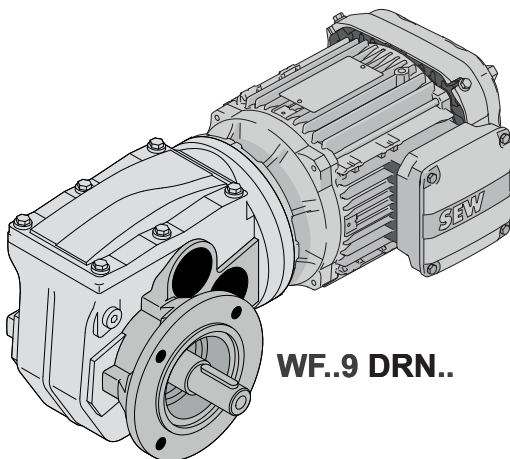
**WHF..9 DRN..**



**WA..9 DRN..**



**WAF..9 DRN..**




**WF..9 DRN..**


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## 12.2 Possible geometrical combinations of W..DRN..



W10, $n_e=1400 \text{ min}^{-1}$					30 Nm	
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DR2S	DRN
					56M	63MS 63M 71MS 71M
 1						
19	25	1800	-	75.00*		
23	25	1800	-	60.00*		
29	25	1800	-	48.00*		
36	26	1800	-	39.00*		
43	28	1800	-	32.50*		
51	27	1800	-	27.50*		
57	25	1800	-	24.50*		
72	30	1800	-	19.50*		
85	27	1800	-	16.50*		
98	24	1800	-	14.33		
137	28	1800	-	10.25*		
171	23	1730	-	8.20*		
213	19	1670	-	6.57		



W20, $n_e=1400 \text{ min}^{-1}$					45 Nm	
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN
					63MS 63M 71MS 71M	80MK
 1						
19	40	2200	-	75.00*		
23	40	2200	-	60.00*		
29	40	2200	-	48.00*		
36	40	2200	-	39.00*		
43	40	2200	-	32.50*		
51	40	2200	-	27.50*		
57	40	2200	-	24.50*		
72	42	2190	-	19.50*		
85	38	2090	-	16.50*		
98	45	1920	-	14.33		
137	36	1790	-	10.25*		
171	29	1730	-	8.20*		
213	24	1700	-	6.57		

W30, $n_e=1400 \text{ min}^{-1}$					70 Nm	
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN
					63MS 63M 71MS 71M	80M 80MK
 1						
19	70	3000	-	75.00*		
23	70	3000	-	60.00*		
29	70	3000	-	48.00*		
36	70	3000	-	39.00*		
43	70	3000	-	32.50*		







W30, $n_e=1400 \text{ min}^{-1}$					70 Nm	
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M	DRN 80M 80MK
51	70	3000	-	27.50*		
57	70	3000	-	24.50*		
72	70	3000	-	19.50*		
86	68	3000	-	16.33		
98	69	3000	-	14.33		
137	63	2860	-	10.25*		
171	65	2610	-	8.20*		
213	62	2450	-	6.57		



WA19, $n_e=1400 \text{ min}^{-1}$					80 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DR2S 56M	DRN 63MS 63M 71MS 71M 80MK	DRN 80M
 3							
8.4	80	2200	-	167.59			
11	80	2200	-	127.90			
12	80	2200	-	119.61			
15	80	2200	-	96.28			
16	80	2200	-	90.04			
17	80	2200	-	82.03			
19	80	2200	-	74.57			
20	80	2200	-	68.71			
23	80	2200	-	61.75			
25	80	2200	-	56.14			
27	80	2200	-	52.61			
30	80	2200	-	47.28			
32	80	2200	-	44.07			
35	80	2200	-	40.07			
41	80	2200	-	33.74			
46	80	2200	-	30.68			
 2							
51	68	2200	-	27.71			
67	61	2200	-	20.86			
79	63	2200	-	17.77			
87	62	2200	-	16.16			
105	57	2200	-	13.38			
115	56	2200	-	12.16			
137	50	2200	-	10.24			
150	50	2140	-	9.31			
167	41	2090	-	8.38			
184	43	1970	-	7.62			
216	32	1970	-	6.49*			
237	34	1850	-	5.90			

WA29, $n_e=1400 \text{ min}^{-1}$					130 Nm	
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S
 3						
7.4	130	5000	-	188.47		
9.4	130	5000	-	149.43		
11	130	5000	-	131.50		
12	130	5000	-	119.55		
13	130	5000	-	108.68		
14	130	5000	-	99.87		
15	130	5000	-	93.58		
17	130	5000	-	83.41		
18	130	5000	-	78.02		
19	130	5000	-	74.19		
20	130	5000	-	69.68		
22	130	5000	-	62.41		
25	130	5000	-	56.74		
27	130	5000	-	52.14		
28	130	5000	-	49.58		
32	130	5000	-	43.54		
36	130	5000	-	38.73*		
38	130	5000	-	36.38		
45	130	4720	-	30.99*		
50	130	4520	-	28.17		
54	130	4350	-	25.89		
 2						
60	130	4340	-	23.29		
66	130	4160	-	21.17		
72	130	4000	-	19.45		
86	120	3710	-	16.25		
95	126	3480	-	14.77		
103	124	3360	-	13.57		
121	85	3510	-	11.56*		
133	90	3300	-	10.51		
145	89	3190	-	9.66		
175	58	3160	-	8.00		
193	62	2960	-	7.27		
210	62	2860	-	6.68		
250	41	2890	-	5.60		
275	43	2740	-	5.09		
299	43	2640	-	4.68		









WA29R17, $n_e=1400 \text{ min}^{-1}$					130 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ °	i	DR2S 56M	DRN 63MS 63M 71MS 71M 80MK	DRN 80M
 3  3							
0.11	130	5000	-	12199			

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WA29R17, $n_e=1400 \text{ min}^{-1}$					130 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
0.13	130	5000	-	10518			
0.14	130	5000	-	9760			
0.16	130	5000	-	8570			
0.18	130	5000	-	7650			
0.21	130	5000	-	6810			
0.23	130	5000	-	6057			
0.26	130	5000	-	5473			
0.29	130	5000	-	4868			
0.32	130	5000	-	4328			
0.36	130	5000	-	3856			
0.45	130	5000	-	3078			
0.57	130	5000	-	2474			
0.64	130	5000	-	2191			
0.79	130	5000	-	1767			
					 2  3		
2.2	124	3360	-	644			
					 3  2		
0.40	130	5000	-	3459			
0.51	130	5000	-	2768			
0.71	130	5000	-	1968			
0.88	130	5000	-	1582			
0.99	130	5000	-	1411			
1.1	130	5000	-	1260			
1.2	130	5000	-	1128			
1.4	130	5000	-	1008			
1.5	130	5000	-	904			
1.7	130	5000	-	810			
1.9	130	5000	-	722			
2.4	130	5000	-	576			
2.7	130	5000	-	513			
					 2  2		
3.1	130	4340	-	459			
3.4	130	4160	-	417			
3.8	130	4340	-	369			
4.2	130	4000	-	330			
4.8	130	4160	-	293			
5.3	90	3300	-	265			
5.9	130	4340	-	236			
6.6	120	3710	-	211			

WA39, $n_e=1400 \text{ min}^{-1}$					200 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L
 3							
6.7	200	6820	-	210.49			
8.9	200	6820	-	157.87			
9.9	200	6620	-	141.23			
11	200	6820	-	126.29			
12	200	6820	-	114.81			
13	200	6680	-	105.50			
14	186	6270	-	97.24			
15	200	6280	-	91.92			
17	200	5860	-	84.74			
18	200	5600	-	77.03			
19	200	5680	-	73.53			
20	200	5380	-	70.79			
21	200	5430	-	66.85			
23	200	5220	-	61.43			
24	186	4920	-	58.34			
26	186	4690	-	53.04			
28	200	4490	-	49.34			
31	200	4280	-	44.85			
34	200	4090	-	41.22			
41	196	3590	-	33.97			
45	196	3400	-	30.88			
49	196	3240	-	28.38			
 2							
59	200	3200	-	23.68*			
65	200	3030	-	21.53			
71	200	2890	-	19.78			
88	170	2690	-	15.89			
97	175	2480	-	14.44			
106	175	2350	-	13.27			
128	125	2580	-	10.94			
141	127	2430	-	9.94			
153	124	2350	-	9.14			
184	88	2380	-	7.61			
203	80	2380	-	6.91			
220	80	2280	-	6.35			
248	66	2240	-	5.65			
272	59	2250	-	5.14			
297	59	2160	-	4.72			

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WA39R17, $n_e=1400 \text{ min}^{-1}$					200 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
 3  3							
0.08	200	6820	-	17184			
0.09	200	6820	-	14816			
0.11	200	6820	-	12889			
0.12	200	6620	-	11530			
0.14	200	6820	-	10358			
0.15	200	6820	-	9373			
0.16	200	6820	-	8487			
0.18	200	6820	-	7620			
0.20	200	6820	-	6975			
0.22	200	5600	-	6289			
0.25	200	6820	-	5579			
0.28	200	5380	-	4983			
0.32	200	6820	-	4433			
0.35	200	5680	-	3953			
0.40	200	5680	-	3488			
 2  3							
1.1	200	3200	-	1273			
 3  2							
0.45	200	6820	-	3112			
0.50	200	6620	-	2784			
0.56	200	6820	-	2501			
0.63	200	6620	-	2237			
0.70	200	6820	-	2000			
0.78	200	5380	-	1786			
0.87	200	6820	-	1602			
0.98	200	5220	-	1422			
1.2	200	5430	-	1136			
1.4	200	5680	-	1018			
1.5	200	6820	-	909			
1.7	200	4090	-	812			
1.9	200	6820	-	727			
2.2	200	6680	-	649			
2.4	200	4280	-	582			
2.7	200	5860	-	521			
 2  2							
3.0	200	3200	-	467			
3.3	200	3030	-	424			
3.7	200	3200	-	375			
4.2	200	2890	-	336			
4.7	200	3030	-	298			
5.3	175	2350	-	262			
6.1	124	2350	-	231			

WA49, $n_e=1400 \text{ min}^{-1}$					400 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L



7.0	396	6000	-	200.76				
9.2	396	6000	-	151.87				
9.3	400	6000	-	149.88				
11	396	6000	-	126.43				
12	396	6000	-	114.94				
13	396	6000	-	105.36				
15	400	6000	-	94.39				
15	396	6000	-	92.86				
16	400	6000	-	85.81				
18	400	6000	-	78.66				
20	396	6000	-	70.25				
21	400	5510	-	67.73				
23	400	5200	-	61.58				
24	396	5600	-	58.48				
26	396	5310	-	53.16				
29	396	5040	-	48.73				
32	400	4470	-	43.66				
35	400	4200	-	39.69				
38	400	3960	-	36.38				
45	378	3490	-	31.33				
49	378	3250	-	28.48				
54	378	3040	-	26.11				



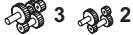
62	342	3560	-	22.69				
68	335	3420	-	20.63				
74	327	3300	-	18.91				
83	258	3610	-	16.94				
91	290	3080	-	15.40				
99	269	3120	-	14.12				
115	184	3570	-	12.16				
127	209	3120	-	11.05				
138	193	3140	-	10.13				
161	131	3440	-	8.67				
178	149	3070	-	7.88				
194	138	3060	-	7.22				

WA49R17, $n_e=1400 \text{ min}^{-1}$					400 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S 56M	DRN 63MS 63M 71MS 71M 80MK	DRN 80M







0.09	396	6000	-	16390			
0.10	396	6000	-	14131			
0.11	396	6000	-	13172			

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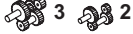
WA49R17, $n_e=1400 \text{ min}^{-1}$					400 Nm		
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\Phi_{(R)}$ '	i	DR2S	DRN	DRN
					56M	63MS 63M 71MS 71M 80MK	80M
0.11	400	6000	-	12236			
0.13	396	6000	-	10793			
0.14	400	6000	-	9834			
0.16	396	6000	-	8899			
0.17	396	6000	-	8165			
0.19	396	6000	-	7416			
0.21	400	6000	-	6644			
0.23	400	6000	-	6040			
0.26	400	6000	-	5413			
0.29	400	6000	-	4787			
0.32	400	6000	-	4335			
0.36	400	6000	-	3884			
0.40	400	6000	-	3475			
0.45	400	6000	-	3106			
0.49	400	6000	-	2847			
0.62	400	6000	-	2276			
 3 2							
0.55	400	6000	-	2546			
0.68	400	6000	-	2074			
0.75	400	6000	-	1860			
0.83	400	6000	-	1691			
0.94	400	6000	-	1495			
1.0	400	6000	-	1335			
1.2	400	6000	-	1214			
1.3	400	6000	-	1089			
1.4	400	6000	-	983			
1.6	400	6000	-	901			
1.7	400	6000	-	815			
1.9	400	6000	-	742			
2.1	400	6000	-	674			
2.3	400	6000	-	604			
2.6	400	6000	-	544			
2.8	400	6000	-	494			
3.2	400	6000	-	443			
3.5	400	6000	-	400			
3.9	400	6000	-	362			
4.2	400	6000	-	330			
4.7	400	6000	-	300			
5.2	396	6000	-	269			
5.7	400	6000	-	244			
6.3	400	6000	-	222			



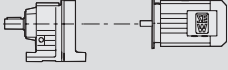

WA59, $n_e=1400 \text{ min}^{-1}$					600 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN 112M
 3									
6.6	600	8000	-	213.21					
9.2	600	8000	-	151.56					
9.8	600	8000	-	142.72					
11	600	8000	-	129.74					
12	600	8000	-	118.93					
13	600	8000	-	107.33					
14	600	8000	-	101.45					
15	600	8000	-	92.23					
17	600	8000	-	84.54					
18	600	7900	-	76.29					
19	600	7960	-	73.72					
21	600	7540	-	67.02					
23	600	7160	-	61.43					
25	600	6730	-	55.44					
27	600	6280	-	52.40					
29	590	6000	-	47.64					
32	570	5860	-	43.67					
36	550	5670	-	39.41					
38	520	5380	-	36.98					
42	520	5040	-	33.62					
45	520	4740	-	30.82					
50	505	4560	-	27.81					
 2									
56	387	5840	-	24.89					
62	444	5000	-	22.63					
68	515	4060	-	20.74					
75	481	4080	-	18.72					
87	310	5170	-	16.09					
95	371	4330	-	14.75					
105	357	4200	-	13.31					
123	217	5040	-	11.35					
134	262	4350	-	10.41					
149	240	4350	-	9.39					
171	157	4730	-	8.18					
187	189	4180	-	7.49					
207	172	4160	-	6.76					

WA59R37, $n_e=1400 \text{ min}^{-1}$					600 Nm				
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ °	$i$	DRN 63MS 63M 71MS 71M 80MK	DRN 80M 90S	DRN 90L	DRN 100LS 100L	DRN
 3  3									
0.07	600	8000	-	19242					
0.08	600	8000	-	17649					

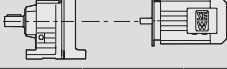

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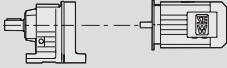

WA59R37, $n_e=1400 \text{ min}^{-1}$					600 Nm			
$n_a$ $\text{min}^{-1}$	$M_{amax}$ Nm	$F_{Ra}$ N	$\varphi_{(R)}$ '	i	DRN	DRN	DRN	DRN
					63MS 63M 71MS 71M 80MK	80M 90S	90L	100LS 100L
0.09	600	8000	-	16044				
0.10	600	8000	-	14707				
0.11	600	8000	-	12955				
0.12	600	8000	-	11405				
0.14	600	8000	-	10063				
0.16	600	8000	-	8796				
0.18	600	8000	-	7674				
0.21	600	8000	-	6692				
0.24	600	8000	-	5814				
0.28	600	8000	-	5032				
0.32	600	8000	-	4367				
0.37	600	8000	-	3788				
0.42	600	8000	-	3311				
 3 2								
0.48	600	8000	-	2889				
0.54	600	8000	-	2576				
0.62	600	8000	-	2259				
0.70	600	8000	-	1986				
0.80	600	8000	-	1745				
0.92	600	8000	-	1526				
1.1	600	8000	-	1331				
1.2	600	8000	-	1167				
1.4	600	8000	-	1016				
1.6	600	8000	-	888				
1.8	600	8000	-	771				
2.1	600	8000	-	674				
2.4	600	8000	-	588				
2.7	600	8000	-	513				
3.1	600	8000	-	447				
3.5	600	8000	-	398				
4.0	600	8000	-	350				
4.5	600	8000	-	311				
5.2	600	8000	-	271				
5.8	600	8000	-	240				

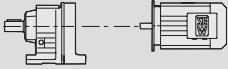

**12.3 W..DRN.. selection tables in kW**

<b>P<sub>m</sub> = 0.09 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
1.4	460	983	6000	0.85						
1.5	420	901	6000	0.95						
1.7	360	815	6000	1.10						
1.9	360	742	6000	1.10						
2.0	330	674	6000	1.20						
2.3	295	604	6000	1.35						
2.5	255	544	6000	1.55						
2.8	235	494	6000	1.70	<b>WA</b>	<b>49R17</b>	<b>DR2S</b>	<b>56MR4</b>	18	1004
3.1	200	443	6000	2.0	<b>WAF</b>	<b>49R17</b>	<b>DR2S</b>	<b>56MR4</b>	18	1004
3.5	189	400	6000	2.1	<b>WF</b>	<b>49R17</b>	<b>DR2S</b>	<b>56MR4</b>	19	1004
3.8	162	362	6000	2.5						
4.2	161	330	6000	2.5						
4.6	147	300	6000	2.7						
5.1	121	269	6000	3.2						
5.7	117	244	6000	3.4						
6.2	103	222	6000	3.9						
2.6	245	521	3890	0.80	<b>WA</b>	<b>39R17</b>	<b>DR2S</b>	<b>56MR4</b>	13	1004
					<b>WAF</b>	<b>39R17</b>	<b>DR2S</b>	<b>56MR4</b>	14	1004
					<b>WF</b>	<b>39R17</b>	<b>DR2S</b>	<b>56MR4</b>	15	1004
3.0	230	467	4180	0.85						
3.2	210	424	4330	0.95						
3.7	182	375	4500	1.10	<b>WA</b>	<b>39R17</b>	<b>DR2S</b>	<b>56MR4</b>	12	1004
4.1	164	336	4500	1.20	<b>WAF</b>	<b>39R17</b>	<b>DR2S</b>	<b>56MR4</b>	13	1004
4.6	143	298	4500	1.40	<b>WF</b>	<b>39R17</b>	<b>DR2S</b>	<b>56MR4</b>	14	1004
5.3	129	262	4500	1.35						
6.0	114	231	4500	1.10						
4.2	162	330	3280	0.80	<b>WA</b>	<b>29R17</b>	<b>DR2S</b>	<b>56MR4</b>	11	1004
4.7	141	293	3460	0.90	<b>WAF</b>	<b>29R17</b>	<b>DR2S</b>	<b>56MR4</b>	11	1004
5.8	107	236	3500	1.20	<b>WF</b>	<b>29R17</b>	<b>DR2S</b>	<b>56MR4</b>	12	1004
6.5	99	211	3500	1.20						
4.9	159	188.47	3480	0.80	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>63MR6</b>	9.8	991
6.2	128	149.43	3570	1.00	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>63MR6</b>	10	990
7.0	110	131.50	3610	1.15	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>63MR6</b>	10	990
8.2	92	167.59	2200	0.85						
11	73	127.90	2200	1.10						
12	66	119.61	2200	1.20						
14	55	96.28	2200	1.45						
15	49	90.04	2200	1.60						
17	48	82.03	2200	1.65						
19	44	74.57	2200	1.80	<b>WA</b>	<b>19</b>	<b>DR2S</b>	<b>56MR4</b>	6.4	989
20	39	68.71	2200	2.0	<b>WAF</b>	<b>19</b>	<b>DR2S</b>	<b>56MR4</b>	6.5	988
22	36	61.75	2200	2.2	<b>WF</b>	<b>19</b>	<b>DR2S</b>	<b>56MR4</b>	7.1	988
25	33	56.14	2200	2.4						
26	30	52.61	2200	2.6						
29	28	47.28	2200	2.9						
31	26	44.07	2200	3.1						
34	23	40.07	2200	3.3						
41	20	33.74	2200	4.0						
19	21	48.00*	1800	1.15	<b>W</b>	<b>10</b>	<b>DRN</b>	<b>63MR6</b>	6.8	976
24	19	39.00*	1800	1.30	<b>WF</b>	<b>10</b>	<b>DRN</b>	<b>63MR6</b>	7.0	977
28	18	32.50*	1800	1.55	<b>WA</b>	<b>10</b>	<b>DRN</b>	<b>63MR6</b>	6.8	979
33	15	27.50*	1800	1.70	<b>WAF</b>	<b>10</b>	<b>DRN</b>	<b>63MR6</b>	7.0	978

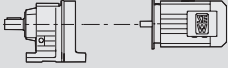

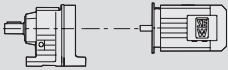

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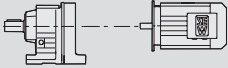

<b>P<sub>m</sub> = 0.09 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>			m kg			
18	18	75.00*	1800	1.30						
23	16	60.00*	1800	1.50						
29	15	48.00*	1800	1.65						
35	13	39.00*	1800	1.85						
42	12	32.50*	1800	2.2						
50	11	27.50*	1800	2.4	W	10	DR2S	56MR4	5.3	976
56	10	24.50*	1800	2.4	WF	10	DR2S	56MR4	5.5	977
71	8.0	19.50*	1800	3.4	WA	10	DR2S	56MR4	5.3	979
84	7.0	16.50*	1800	3.4	WAF	10	DR2S	56MR4	5.5	978
96	7.0	14.33	1800	3.4						
135	5.0	10.25*	1800	5.1						
168	4.0	8.20*	1800	5.1						
210	3.0	6.57	1800	5.1						

<b>P<sub>m</sub> = 0.12 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>			m kg			
1.4	620	1016	8000	0.95						
1.6	570	888	8000	1.05						
1.8	475	771	8000	1.25						
2.0	400	674	8000	1.50						
2.4	345	588	8000	1.70						
2.7	320	513	8000	1.85	WA	59R37	DRN	63MS4	31	1004
3.1	290	447	8000	2.0	WAF	59R37	DRN	63MS4	32	1004
3.5	245	398	8000	2.4	WF	59R37	DRN	63MS4	33	1004
4.0	225	350	8000	2.6						
4.4	197	311	8000	3.0						
5.1	167	271	8000	3.6						
5.8	150	240	8000	4.0						
4.1	260	213.21	8000	2.3	WA	59	DRN	63M6	20	1002
5.7	187	151.56	8000	3.2	WAF	59	DRN	63M6	22	1001
6.1	177	142.72	8000	3.4	WF	59	DRN	63M6	23	1001
6.7	162	129.74	8000	3.7						
6.5	168	213.21	8000	3.6	WA	59	DRN	63MS4	19	1002
					WAF	59	DRN	63MS4	21	1001
					WF	59	DRN	63MS4	22	1001
1.9	495	742	5930	0.80						
2.0	455	674	6000	0.90						
2.3	405	604	6000	1.00						
2.5	355	544	6000	1.10						
2.8	325	494	6000	1.20						
3.1	280	443	6000	1.40	WA	49R17	DRN	63MS4	19	1004
3.5	260	400	6000	1.50	WAF	49R17	DRN	63MS4	19	1004
3.8	225	362	6000	1.75	WF	49R17	DRN	63MS4	20	1004
4.2	220	330	6000	1.80						
4.6	200	300	6000	1.95						
5.1	172	269	6000	2.3						
5.7	162	244	6000	2.5						
6.2	144	222	6000	2.8						
6.9	157	200.76	6000	2.5	WA	49	DRN	63MS4	15	999
9.1	121	151.87	6000	3.2	WAF	49	DRN	63MS4	16	998
9.2	117	149.88	6000	3.4	WF	49	DRN	63MS4	17	998
11	100	126.43	6000	4.0						
3.7	250	375	4050	0.80						
4.1	225	336	4230	0.90	WA	39R17	DRN	63MS4	13	1004
4.6	198	298	4420	1.00	WAF	39R17	DRN	63MS4	14	1004
5.3	177	262	4430	1.00	WF	39R17	DRN	63MS4	15	1004
4.1	245	210.49	4060	0.80						
5.5	195	157.87	4440	1.00						
6.2	167	141.23	4530	1.20	WA	39	DRN	63M6	12	996
6.9	156	126.29	4720	1.30	WAF	39	DRN	63M6	13	994
7.6	143	114.81	4810	1.40	WF	39	DRN	63M6	13	994
8.2	132	105.50	4890	1.50						

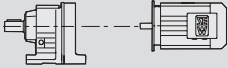

<b>P<sub>m</sub> = 0.12 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
6.6	160	210.49	4700	1.25						
8.7	124	157.87	4950	1.60						
9.8	107	141.23	5000	1.85						
11	99	126.29	5120	2.0						
12	91	114.81	5180	2.2						
13	84	105.50	5170	2.4	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>63MS4</b>	11	996
14	73	97.24	5000	2.5	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>63MS4</b>	12	994
15	72	91.92	4990	2.8	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>63MS4</b>	13	994
16	66	84.74	4840	3.0						
18	61	77.03	4720	3.3						
19	57	73.53	4700	3.5						
19	56	70.79	4610	3.5						
21	53	66.85	4580	3.8						
5.8	151	236	3420	0.85	<b>WA</b>	<b>29R17</b>	<b>DRN</b>	<b>63MS4</b>	12	1004
6.5	137	211	3470	0.85	<b>WAF</b>	<b>29R17</b>	<b>DRN</b>	<b>63MS4</b>	12	1004
					<b>WF</b>	<b>29R17</b>	<b>DRN</b>	<b>63MS4</b>	13	1004
7.3	143	188.47	3530	0.90						
9.2	116	149.43	3600	1.10						
10	100	131.50	3640	1.30						
12	93	119.55	3650	1.40						
13	86	108.68	3670	1.50						
14	79	99.87	3680	1.65						
15	71	93.58	3700	1.80						
17	65	83.41	3710	2.0	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>63MS4</b>	9.0	991
18	60	78.02	3720	2.1	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>63MS4</b>	9.2	990
19	57	74.19	3720	2.3	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>63MS4</b>	9.6	990
20	55	69.68	3720	2.4						
22	48	62.41	3740	2.7						
24	45	56.74	3740	2.9						
26	41	52.14	3750	3.1						
28	39	49.58	3750	3.3						
32	34	43.54	3760	3.8						
11	97	127.90	2200	0.80						
12	88	119.61	2200	0.90						
14	73	96.28	2200	1.10						
15	66	90.04	2200	1.20						
17	64	82.03	2200	1.25						
19	59	74.57	2200	1.35						
20	52	68.71	2200	1.50	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	7.5	989
22	48	61.75	2200	1.65	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	7.6	988
25	44	56.14	2200	1.80	<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	8.2	988
26	40	52.61	2200	2.0						
29	37	47.28	2200	2.1						
31	34	44.07	2200	2.3						
34	31	40.07	2200	2.5						
41	26	33.74	2200	3.0						
45	24	30.68	2200	3.3						
50	21	27.71	2200	3.2	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	7.0	989
66	15	20.86	2200	3.8	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	7.2	988
					<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>63MS4</b>	7.7	988
12	41	75.00*	3000	1.70						
14	38	60.00*	3000	1.80	<b>W</b>	<b>30</b>	<b>DRN</b>	<b>63M6</b>	10.0	984
18	33	48.00*	3000	2.1	<b>WF</b>	<b>30</b>	<b>DRN</b>	<b>63M6</b>	10	985
22	30	39.00*	3000	2.3	<b>WA</b>	<b>30</b>	<b>DRN</b>	<b>63M6</b>	9.7	987
27	25	32.50*	3000	2.7	<b>WAF</b>	<b>30</b>	<b>DRN</b>	<b>63M6</b>	10.0	986
32	24	27.50*	3000	2.9						
18	28	75.00*	3000	2.5	<b>W</b>	<b>30</b>	<b>DRN</b>	<b>63MS4</b>	9.1	984
23	25	60.00*	3000	2.7	<b>WF</b>	<b>30</b>	<b>DRN</b>	<b>63MS4</b>	9.5	985
29	22	48.00*	3000	3.1	<b>WA</b>	<b>30</b>	<b>DRN</b>	<b>63MS4</b>	8.8	987
35	20	39.00*	3000	3.4	<b>WAF</b>	<b>30</b>	<b>DRN</b>	<b>63MS4</b>	9.2	986
42	17	32.50*	3000	4.1						

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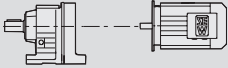

<b>P<sub>m</sub> = 0.12 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
12	37	75.00*	2200	1.10						
14	32	60.00*	2200	1.25	W	20	DRN	63M6	7.5	980
18	30	48.00*	2200	1.30	WF	20	DRN	63M6	7.7	981
22	27	39.00*	2200	1.45	WA	20	DRN	63M6	7.2	983
27	27	32.50*	2200	1.45	WAF	20	DRN	63M6	7.2	982
32	23	27.50*	2200	1.75						
18	25	75.00*	2200	1.60						
23	22	60.00*	2200	1.80						
29	20	48.00*	2200	1.95						
35	18	39.00*	2200	2.2						
42	18	32.50*	2200	2.2	W	20	DRN	63MS4	6.7	980
50	15	27.50*	2200	2.6	WF	20	DRN	63MS4	6.8	981
56	13	24.50*	2200	2.9	WA	20	DRN	63MS4	6.4	983
71	11	19.50*	2200	3.5	WAF	20	DRN	63MS4	6.4	982
84	10	16.50*	2200	3.7						
96	9.0	14.33	2200	4.7						
135	7.0	10.25*	2160	5.0						
168	5.0	8.20*	2020	4.9						
210	4.0	6.57	1890	4.9						
18	30	48.00*	1800	0.85	W	10	DRN	63M6	6.8	976
22	27	39.00*	1800	0.95	WF	10	DRN	63M6	7.0	977
27	25	32.50*	1800	1.10	WA	10	DRN	63M6	6.8	979
32	22	27.50*	1800	1.20	WAF	10	DRN	63M6	7.0	978
18	25	75.00*	1800	1.00						
23	22	60.00*	1800	1.15						
29	20	48.00*	1800	1.25						
35	18	39.00*	1800	1.40						
42	16	32.50*	1800	1.65						
50	14	27.50*	1800	1.80	W	10	DRN	63MS4	6.0	976
56	13	24.50*	1800	1.80	WF	10	DRN	63MS4	6.2	977
71	11	19.50*	1800	2.5	WA	10	DRN	63MS4	6.0	979
84	10	16.50*	1800	2.5	WAF	10	DRN	63MS4	6.2	978
96	9.0	14.33	1800	2.5						
135	7.0	10.25*	1800	3.8						
168	5.0	8.20*	1800	3.8						
210	4.0	6.57	1800	3.8						
<b>P<sub>m</sub> = 0.18 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
2.0	650	674	7960	0.90						
2.3	565	588	8000	1.05						
2.7	510	513	8000	1.15						
3.1	460	447	8000	1.30	WA	59R37	DRN	63M4	31	1004
3.5	395	398	8000	1.50	WAF	59R37	DRN	63M4	33	1004
3.9	355	350	8000	1.70	WF	59R37	DRN	63M4	34	1004
4.4	310	311	8000	1.90						
5.1	265	271	8000	2.2						
5.7	235	240	8000	2.5						
4.3	375	213.21	8000	1.60						
6.0	265	151.56	8000	2.2						
6.4	250	142.72	8000	2.4						
7.0	230	129.74	8000	2.6	WA	59	DRN	71MS6	21	1002
7.7	210	118.93	8000	2.8	WAF	59	DRN	71MS6	22	1001
8.5	192	107.33	8000	3.1	WF	59	DRN	71MS6	24	1001
9.0	180	101.45	8000	3.3						
9.9	164	92.23	8000	3.6						
11	150	84.54	8000	4.0						
6.5	250	213.21	8000	2.4	WA	59	DRN	63M4	20	1002
9.1	179	151.56	8000	3.3	WAF	59	DRN	63M4	22	1001
9.6	170	142.72	8000	3.5	WF	59	DRN	63M4	23	1001
11	155	129.74	8000	3.9						

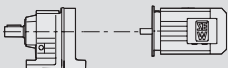

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
3.1	445	443	6000	0.90						
3.4	410	400	6000	0.95						
3.8	360	362	6000	1.10						
4.2	340	330	6000	1.15	<b>WA</b>	<b>49R17</b>	<b>DRN</b>	<b>63M4</b>	19	1004
4.6	315	300	6000	1.25	<b>WAF</b>	<b>49R17</b>	<b>DRN</b>	<b>63M4</b>	20	1004
5.1	270	269	6000	1.45	<b>WF</b>	<b>49R17</b>	<b>DRN</b>	<b>63M4</b>	21	1004
5.6	250	244	6000	1.55						
6.2	225	222	6000	1.75						
6.8	235	200.76	6000	1.65						
9.1	183	151.87	6000	2.2						
9.2	176	149.88	6000	2.3						
11	151	126.43	6000	2.6	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>63M4</b>	16	999
12	137	114.94	6000	2.9	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>63M4</b>	17	998
13	126	105.36	6000	3.1	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>63M4</b>	18	998
15	112	94.39	6000	3.5						
15	109	92.86	6000	3.6						
16	102	85.81	6000	3.9						
6.5	240	210.49	4120	0.85						
8.7	187	157.87	4500	1.05						
9.7	161	141.23	4580	1.25						
11	149	126.29	4770	1.35						
12	137	114.81	4860	1.45						
13	126	105.50	4870	1.60						
14	111	97.24	4700	1.65						
15	109	91.92	4740	1.85						
16	100	84.74	4590	2.0	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>63M4</b>	12	996
18	92	77.03	4480	2.2	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>63M4</b>	13	994
19	87	73.53	4500	2.3	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>63M4</b>	13	994
19	85	70.79	4390	2.4						
21	79	66.85	4390	2.5						
22	73	61.43	4300	2.7						
24	69	58.34	4170	2.7						
26	63	53.04	4070	2.9						
28	58	49.34	4030	3.4						
31	53	44.85	3920	3.7						
10	150	131.50	3510	0.85						
12	140	119.55	3530	0.90						
13	129	108.68	3560	1.00						
14	119	99.87	3590	1.10						
15	107	93.58	3620	1.20						
16	98	83.41	3640	1.30						
18	91	78.02	3660	1.45						
19	86	74.19	3660	1.50						
20	83	69.68	3670	1.55	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>63M4</b>	9.8	991
22	73	62.41	3690	1.75	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>63M4</b>	10	990
24	67	56.74	3700	1.90	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>63M4</b>	10	990
26	62	52.14	3710	2.1						
28	59	49.58	3720	2.2						
32	51	43.54	3730	2.5						
36	45	38.73*	3740	2.9						
38	43	36.38	3740	3.0						
44	36	30.99*	3760	3.6						
49	33	28.17	3760	3.9						
15	99	90.04	2200	0.80						
17	97	82.03	2200	0.80						
18	89	74.57	2200	0.90						
20	79	68.71	2200	1.00						
22	73	61.75	2200	1.10						
24	67	56.14	2200	1.20	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>63M4</b>	8.3	989
26	60	52.61	2200	1.30	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>63M4</b>	8.4	988
29	56	47.28	2200	1.40	<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>63M4</b>	9.0	988
31	52	44.07	2200	1.50						
34	48	40.07	2200	1.65						
41	40	33.74	2200	2.0						
45	36	30.68	2200	2.2						

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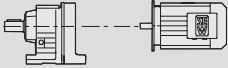

<b>P<sub>m</sub> = 0.18 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
50	31	27.71	2200	2.1						
66	23	20.86	2150	2.5	WA	19	DRN	63M4	7.8	989
77	21	17.77	2060	3.0	WAF	19	DRN	63M4	8.0	988
85	19	16.16	2010	3.2	WF	19	DRN	63M4	8.5	988
103	15	13.38	1900	3.6						
113	14	12.16	1850	3.8						
12	59	75.00*	3000	1.15						
15	55	60.00*	3000	1.25	W	30	DRN	71MS6	11	984
19	48	48.00*	3000	1.45	WF	30	DRN	71MS6	11	985
23	44	39.00*	3000	1.60	WA	30	DRN	71MS6	10	987
28	37	32.50*	3000	1.90	WAF	30	DRN	71MS6	11	986
33	34	27.50*	3000	2.0						
18	42	75.00*	3000	1.65						
23	38	60.00*	3000	1.80						
29	33	48.00*	3000	2.1						
35	30	39.00*	3000	2.3						
42	25	32.50*	3000	2.7	W	30	DRN	63M4	10.0	984
50	24	27.50*	3000	2.9	WF	30	DRN	63M4	10	985
56	22	24.50*	3000	3.1	WA	30	DRN	63M4	9.7	987
71	18	19.50*	3000	3.7	WAF	30	DRN	63M4	10.0	986
84	16	16.33	3000	4.2						
96	14	14.33	3000	4.7						
134	11	10.25*	3000	5.7						
168	9.0	8.20*	3000	7.1						
209	7.0	6.57	2940	8.1						
111	11	24.50*	3000	6.0						
140	9.0	19.50*	3000	7.1	W	30	DRN	63MS2	9.1	984
167	8.0	16.33	3000	8.0	WF	30	DRN	63MS2	9.5	985
190	7.0	14.33	3000	9.0	WA	30	DRN	63MS2	8.8	987
266	5.0	10.25*	2720	11	WAF	30	DRN	63MS2	9.2	986
332	4.0	8.20*	2540	14						
415	3.0	6.57	2360	16						
15	46	60.00*	2200	0.85						
19	43	48.00*	2200	0.90	W	20	DRN	71MS6	8.1	980
23	39	39.00*	2200	1.00	WF	20	DRN	71MS6	8.2	981
28	39	32.50*	2200	1.00	WA	20	DRN	71MS6	7.8	983
33	33	27.50*	2200	1.20	WAF	20	DRN	71MS6	7.8	982
37	30	24.50*	2200	1.35						
47	26	19.50*	2200	1.60						
18	37	75.00*	2200	1.05						
23	33	60.00*	2200	1.20						
29	30	48.00*	2200	1.30						
35	27	39.00*	2200	1.45						
42	27	32.50*	2200	1.45	W	20	DRN	63M4	7.5	980
50	22	27.50*	2200	1.75	WF	20	DRN	63M4	7.7	981
56	20	24.50*	2200	1.90	WA	20	DRN	63M4	7.2	983
71	17	19.50*	2200	2.4	WAF	20	DRN	63M4	7.2	982
83	15	16.50*	2200	2.4						
96	14	14.33	2200	3.1						
134	10	10.25*	2110	3.3						
168	8.0	8.20*	1980	3.3						
209	7.0	6.57	1870	3.2						
111	11	24.50*	2200	3.6						
140	9.0	19.50*	2090	4.5	W	20	DRN	63MS2	6.7	980
165	8.0	16.50*	1980	4.7	WF	20	DRN	63MS2	6.8	981
190	7.0	14.33	1900	6.0	WA	20	DRN	63MS2	6.4	983
266	5.0	10.25*	1720	6.5	WAF	20	DRN	63MS2	6.4	982
332	4.0	8.20*	1610	6.4						
415	3.0	6.57	1510	6.3						

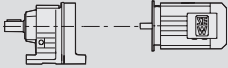



<b>P<sub>m</sub> = 0.18 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
29	30	48.00*	1800	0.80						
35	27	39.00*	1800	0.95						
42	25	32.50*	1800	1.10						
50	22	27.50*	1800	1.20						
56	20	24.50*	1800	1.20	W	10	DRN	63M4	6.8	976
71	17	19.50*	1800	1.70	WF	10	DRN	63M4	7.0	977
83	15	16.50*	1800	1.70	WA	10	DRN	63M4	6.8	979
96	14	14.33	1800	1.65	WAF	10	DRN	63M4	7.0	978
134	10	10.25*	1800	2.5						
168	9.0	8.20*	1800	2.5						
209	7.0	6.57	1790	2.5						
190	7.0	14.33	1800	3.2	W	10	DRN	63MS2	6.0	976
266	5.0	10.25*	1650	4.9	WF	10	DRN	63MS2	6.2	977
332	4.0	8.20*	1540	4.9	WA	10	DRN	63MS2	6.0	979
415	3.0	6.57	1450	4.9	WAF	10	DRN	63MS2	6.2	978

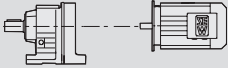

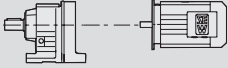

<b>P<sub>m</sub> = 0.25 kW</b>										
$n_a$ min <sup>-1</sup>	$M_a$ Nm	$i$	$F_{Ra}^{1)}$ N	SEW $f_B$					m kg	
2.7	715	513	7520	0.85						
3.1	635	447	8000	0.95						
3.5	555	398	8000	1.10	WA	59R37	DRN	71MS4	32	1004
4.0	490	350	8000	1.20	WAF	59R37	DRN	71MS4	33	1004
4.5	435	311	8000	1.35	WF	59R37	DRN	71MS4	35	1004
5.2	375	271	8000	1.60						
5.9	335	240	8000	1.80						
4.3	520	213.21	8000	1.15						
6.0	370	151.56	8000	1.60						
6.4	350	142.72	8000	1.70						
7.0	320	129.74	8000	1.85						
7.7	290	118.93	8000	2.0						
8.5	265	107.33	8000	2.2	WA	59	DRN	71M6	22	1002
9.0	250	101.45	8000	2.4	WAF	59	DRN	71M6	23	1001
9.9	225	92.23	8000	2.6	WF	59	DRN	71M6	25	1001
11	205	84.54	8000	2.9						
12	190	76.29	8000	3.2						
12	181	73.72	8000	3.3						
14	166	67.02	8000	3.6						
15	151	61.43	8000	4.0						
6.6	340	213.21	8000	1.75						
9.3	240	151.56	8000	2.5						
9.8	230	142.72	8000	2.6						
11	210	129.74	8000	2.9	WA	59	DRN	71MS4	21	1002
12	191	118.93	8000	3.1	WAF	59	DRN	71MS4	22	1001
13	175	107.33	8000	3.4	WF	59	DRN	71MS4	24	1001
14	164	101.45	8000	3.6						
15	149	92.23	8000	4.0						
13	177	213.21	8000	3.4	WA	59	DRN	63M2	20	1002
					WAF	59	DRN	63M2	22	1001
					WF	59	DRN	63M2	23	1001
4.3	470	330	6000	0.85						
4.7	430	300	6000	0.90	WA	49R17	DRN	71MS4	20	1004
5.2	380	269	6000	1.05	WAF	49R17	DRN	71MS4	21	1004
5.8	350	244	6000	1.15	WF	49R17	DRN	71MS4	21	1004
6.3	315	222	6000	1.25						

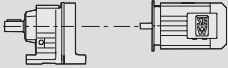

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<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
7.0	320	200.76	6000	1.25						
9.2	245	151.87	6000	1.60						
9.4	240	149.88	6000	1.65						
11	205	126.43	6000	1.95						
12	186	114.94	6000	2.1						
13	172	105.36	6000	2.3	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>71MS4</b>	17	999
15	153	94.39	6000	2.6	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>71MS4</b>	18	998
15	148	92.86	6000	2.7	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>71MS4</b>	18	998
16	139	85.81	6000	2.9						
18	128	78.66	6000	3.1						
20	115	70.25	6000	3.4						
21	110	67.73	6000	3.6						
23	100	61.58	6000	4.0						
9.9	215	141.23	4130	0.90						
11	200	126.29	4390	1.00						
12	186	114.81	4500	1.05						
13	172	105.50	4510	1.15						
14	151	97.24	4330	1.25						
15	148	91.92	4420	1.35						
17	136	84.74	4270	1.45						
18	125	77.03	4190	1.60						
19	118	73.53	4240	1.70	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>71MS4</b>	12	996
20	115	70.79	4120	1.75	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>71MS4</b>	13	994
21	108	66.85	4150	1.85	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>71MS4</b>	14	994
23	100	61.43	4070	2.0						
24	93	58.34	3930	2.0						
26	86	53.04	3850	2.2						
28	79	49.34	3830	2.5						
31	72	44.85	3740	2.7						
34	67	41.22	3670	3.0						
41	54	33.97	3480	3.6						
46	50	30.88	3390	3.9						
50	46	28.38	3320	4.2						
14	162	99.87	3470	0.80						
15	145	93.58	3520	0.90						
17	133	83.41	3550	0.95						
18	124	78.02	3580	1.05						
19	117	74.19	3590	1.10						
20	113	69.68	3600	1.15						
23	99	62.41	3640	1.30	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	10	991
25	92	56.74	3650	1.40	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	11	990
27	84	52.14	3670	1.55	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	11	990
28	80	49.58	3680	1.60						
32	69	43.54	3700	1.85						
36	61	38.73*	3710	2.1						
39	59	36.38	3720	2.2						
45	49	30.99*	3730	2.6						
50	45	28.17	3640	2.8						
54	42	25.89	3560	3.1						
60	37	23.29	3500	3.5	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	10	991
66	34	21.17	3410	3.8	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	10	990
66	34	21.17	3410	3.8	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>71MS4</b>	11	990
23	100	61.75	2200	0.80						
25	91	56.14	2200	0.85						
27	82	52.61	2200	0.95						
30	76	47.28	2200	1.05	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>71MS4</b>	8.8	989
32	71	44.07	2200	1.10	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>71MS4</b>	9.0	988
35	65	40.07	2200	1.20	<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>71MS4</b>	9.6	988
42	54	33.74	2200	1.45						
46	50	30.68	2180	1.60						

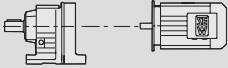

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
51	43	27.71	2200	1.55						
67	32	20.86	2060	1.85						
79	28	17.77	1980	2.2						
87	26	16.16	1930	2.4						
105	21	13.38	1830	2.6						
116	19	12.16	1780	2.8	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>71MS4</b>	8.4	989
137	16	10.24	1690	3.0	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>71MS4</b>	8.5	988
151	15	9.31	1650	3.3	<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>71MS4</b>	9.1	988
168	13	8.38	1580	3.0						
184	12	7.62	1540	3.5						
216	10	6.49*	1460	3.0						
238	9.0	5.90	1430	3.5						
15	77	60.00*	3000	0.90						
19	67	48.00*	3000	1.05	<b>W</b>	<b>30</b>	<b>DRN</b>	<b>71M6</b>	12	984
23	61	39.00*	3000	1.15	<b>WF</b>	<b>30</b>	<b>DRN</b>	<b>71M6</b>	12	985
28	51	32.50*	3000	1.35	<b>WA</b>	<b>30</b>	<b>DRN</b>	<b>71M6</b>	11	987
33	48	27.50*	3000	1.45	<b>WAF</b>	<b>30</b>	<b>DRN</b>	<b>71M6</b>	12	986
37	45	24.50*	3000	1.55						
47	38	19.50*	3000	1.80						
19	57	75.00*	3000	1.20						
23	53	60.00*	3000	1.30						
29	46	48.00*	3000	1.50						
36	41	39.00*	3000	1.65						
43	35	32.50*	3000	2.0	<b>W</b>	<b>30</b>	<b>DRN</b>	<b>71MS4</b>	11	984
51	32	27.50*	3000	2.1	<b>WF</b>	<b>30</b>	<b>DRN</b>	<b>71MS4</b>	11	985
57	30	24.50*	3000	2.3	<b>WA</b>	<b>30</b>	<b>DRN</b>	<b>71MS4</b>	10	987
72	25	19.50*	3000	2.7	<b>WAF</b>	<b>30</b>	<b>DRN</b>	<b>71MS4</b>	11	986
86	22	16.33	3000	3.1						
98	20	14.33	3000	3.4						
137	15	10.25*	3000	4.2						
171	12	8.20*	3000	5.2						
214	10	6.57	2900	6.0						
112	16	24.50*	3000	4.3						
141	13	19.50*	3000	5.2	<b>W</b>	<b>30</b>	<b>DRN</b>	<b>63M2</b>	10.0	984
169	11	16.33	3000	5.8	<b>WF</b>	<b>30</b>	<b>DRN</b>	<b>63M2</b>	10	985
192	10	14.33	2980	6.5	<b>WA</b>	<b>30</b>	<b>DRN</b>	<b>63M2</b>	9.7	987
269	7.0	10.25*	2690	8.0	<b>WAF</b>	<b>30</b>	<b>DRN</b>	<b>63M2</b>	10.0	986
336	6.0	8.20*	2510	10						
419	5.0	6.57	2340	11						
23	45	60.00*	2200	0.90						
29	41	48.00*	2200	0.95						
36	37	39.00*	2200	1.05						
43	37	32.50*	2200	1.10						
51	31	27.50*	2200	1.30	<b>W</b>	<b>20</b>	<b>DRN</b>	<b>71MS4</b>	8.1	980
57	28	24.50*	2200	1.40	<b>WF</b>	<b>20</b>	<b>DRN</b>	<b>71MS4</b>	8.2	981
72	24	19.50*	2200	1.75	<b>WA</b>	<b>20</b>	<b>DRN</b>	<b>71MS4</b>	7.8	983
85	21	16.50*	2200	1.80	<b>WAF</b>	<b>20</b>	<b>DRN</b>	<b>71MS4</b>	7.8	982
98	19	14.33	2200	2.3						
137	14	10.25*	2050	2.5						
171	12	8.20*	1930	2.4						
214	10	6.57	1830	2.4						
85	19	32.50*	2200	2.0						
100	16	27.50*	2200	2.4						
112	15	24.50*	2170	2.6	<b>W</b>	<b>20</b>	<b>DRN</b>	<b>63M2</b>	7.5	980
141	12	19.50*	2030	3.2	<b>WF</b>	<b>20</b>	<b>DRN</b>	<b>63M2</b>	7.7	981
167	11	16.50*	1930	3.4	<b>WA</b>	<b>20</b>	<b>DRN</b>	<b>63M2</b>	7.2	983
192	10	14.33	1860	4.4	<b>WAF</b>	<b>20</b>	<b>DRN</b>	<b>63M2</b>	7.2	982
269	7.0	10.25*	1690	4.7						
336	6.0	8.20*	1580	4.6						
419	5.0	6.57	1490	4.6						

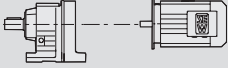

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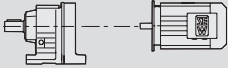

<b>P<sub>m</sub> = 0.25 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
51	30	27.50*	1800	0.90						
57	28	24.50*	1800	0.90						
72	24	19.50*	1800	1.25	<b>W</b>	<b>10</b>	<b>DRN</b>	<b>71MS4</b>	7.4	976
85	21	16.50*	1800	1.25	<b>WF</b>	<b>10</b>	<b>DRN</b>	<b>71MS4</b>	7.6	977
98	19	14.33	1800	1.25	<b>WA</b>	<b>10</b>	<b>DRN</b>	<b>71MS4</b>	7.4	979
137	14	10.25*	1800	1.90	<b>WAF</b>	<b>10</b>	<b>DRN</b>	<b>71MS4</b>	7.6	978
171	12	8.20*	1800	1.90						
214	10	6.57	1750	1.85						
192	10	14.33	1780	2.3	<b>W</b>	<b>10</b>	<b>DRN</b>	<b>63M2</b>	6.8	976
269	7.0	10.25*	1620	3.6	<b>WF</b>	<b>10</b>	<b>DRN</b>	<b>63M2</b>	7.0	977
336	6.0	8.20*	1520	3.6	<b>WA</b>	<b>10</b>	<b>DRN</b>	<b>63M2</b>	6.8	979
419	5.0	6.57	1430	3.6	<b>WAF</b>	<b>10</b>	<b>DRN</b>	<b>63M2</b>	7.0	978
<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
4.0	735	350	7340	0.80	<b>WA</b>	<b>59R37</b>	<b>DRN</b>	<b>71M4</b>	33	1004
4.5	655	311	7930	0.90	<b>WAF</b>	<b>59R37</b>	<b>DRN</b>	<b>71M4</b>	34	1004
5.2	570	271	8000	1.05	<b>WF</b>	<b>59R37</b>	<b>DRN</b>	<b>71M4</b>	35	1004
5.9	505	240	8000	1.20						
6.2	535	151.56	8000	1.10						
6.5	510	142.72	8000	1.20						
7.2	465	129.74	8000	1.30						
7.9	425	118.93	8000	1.40						
8.7	385	107.33	8000	1.55						
9.2	360	101.45	8000	1.65						
10	330	92.23	8000	1.80						
11	300	84.54	8000	2.0	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>80MK6</b>	25	1002
12	275	76.29	8000	2.2	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>80MK6</b>	26	1001
13	260	73.72	8000	2.3	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>80MK6</b>	27	1001
14	240	67.02	8000	2.5						
15	215	61.43	8000	2.7						
17	200	55.44	8000	3.0						
18	187	52.40	8000	3.2						
20	171	47.64	8000	3.5						
21	156	43.67	8000	3.6						
24	142	39.41	8000	3.9						
25	132	36.98	8000	3.9						
6.6	505	213.21	8000	1.20						
9.3	355	151.56	8000	1.65						
9.9	335	142.72	8000	1.75						
11	305	129.74	8000	1.95						
12	280	118.93	8000	2.1	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>71M4</b>	22	1002
13	255	107.33	8000	2.3	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>71M4</b>	23	1001
14	240	101.45	8000	2.5	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>71M4</b>	25	1001
15	220	92.23	8000	2.7						
17	200	84.54	8000	3.0						
19	183	76.29	8000	3.3						
19	175	73.72	8000	3.4						
21	160	67.02	8000	3.8						
13	255	213.21	8000	2.3	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>71MS2</b>	21	1002
19	183	151.56	8000	3.3	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>71MS2</b>	22	1001
20	173	142.72	8000	3.5	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>71MS2</b>	24	1001
22	157	129.74	8000	3.8						
6.4	470	222	6000	0.85	<b>WA</b>	<b>49R17</b>	<b>DRN</b>	<b>71M4</b>	21	1004
					<b>WAF</b>	<b>49R17</b>	<b>DRN</b>	<b>71M4</b>	22	1004
					<b>WF</b>	<b>49R17</b>	<b>DRN</b>	<b>71M4</b>	23	1004

<b>P<sub>m</sub> = 0.37 kW</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>m</b> <b>kg</b>	
7.0	470	200.76	6000	0.85					
9.3	365	151.87	6000	1.10					
9.4	350	149.88	6000	1.15					
11	300	126.43	6000	1.30					
12	270	114.94	6000	1.45					
13	250	105.36	6000	1.55					
15	225	94.39	6000	1.75					
15	215	92.86	6000	1.80	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>71M4</b>	18 999
16	200	85.81	6000	1.95	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>71M4</b>	19 998
18	188	78.66	6000	2.1	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>71M4</b>	20 998
20	169	70.25	6000	2.3					
21	161	67.73	6000	2.5					
23	147	61.58	6000	2.7					
24	139	58.48	6000	2.8					
27	126	53.16	6000	3.1					
29	116	48.73	6000	3.4					
32	104	43.66	6000	3.8					
15	220	97.24	3740	0.85					
15	215	91.92	3920	0.90					
17	200	84.74	3760	1.00					
18	184	77.03	3720	1.10					
19	173	73.53	3840	1.15					
20	170	70.79	3690	1.20					
21	159	66.85	3780	1.25	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	14 996
23	147	61.43	3730	1.35	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	14 994
24	137	58.34	3560	1.35	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	15 994
27	126	53.04	3500	1.45					
29	116	49.34	3540	1.70					
32	107	44.85	3470	1.85					
34	99	41.22	3410	2.0					
42	80	33.97	3260	2.4					
46	73	30.88	3190	2.6					
50	68	28.38	3130	2.9					
60	55	23.68*	3080	3.6	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	13 996
66	51	21.53	3000	3.9	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	14 994
					<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>71M4</b>	14 994
23	146	62.41	3520	0.90					
25	135	56.74	3550	0.95					
27	124	52.14	3580	1.05					
29	118	49.58	3590	1.10	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>71M4</b>	12 991
32	102	43.54	3630	1.25	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>71M4</b>	12 990
37	90	38.73*	3660	1.45	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>71M4</b>	12 990
39	86	36.38	3660	1.50					
46	72	30.99*	3530	1.80					
50	67	28.17	3450	1.95					
55	61	25.89	3380	2.1					
61	54	23.29	3370	2.4					
67	50	21.17	3280	2.6					
73	46	19.45	3210	2.8					
87	38	16.25	3040	3.1					
96	35	14.77	2960	3.6					
104	32	13.57	2900	3.8					
122	27	11.56*	2760	3.1	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>71M4</b>	11 991
135	25	10.51	2680	3.6	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>71M4</b>	12 990
146	23	9.66	2620	3.9	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>71M4</b>	12 990
177	18	8.00	2450	3.1					
195	17	7.27	2380	3.6					
212	15	6.68	2320	3.9					
253	13	5.60	2190	3.1					
278	12	5.09	2130	3.5					
303	11	4.68	2080	3.9					
35	96	40.07	2040	0.85	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>71M4</b>	10 989
42	80	33.74	1960	1.00	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>71M4</b>	10 988
46	73	30.68	1950	1.10	<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>71M4</b>	11 988

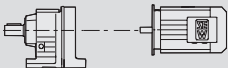

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<b>P<sub>m</sub> = 0.37 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
51	63	27.71	2030	1.05						
68	47	20.86	1910	1.25						
80	42	17.77	1860	1.50						
88	38	16.16	1820	1.60						
106	31	13.38	1730	1.80						
116	29	12.16	1700	1.90	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>71M4</b>	9.6	989
138	24	10.24	1610	2.0	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>71M4</b>	9.8	988
152	22	9.31	1570	2.2	<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>71M4</b>	10	988
169	19	8.38	1510	2.0						
186	18	7.62	1470	2.4						
218	15	6.49*	1400	2.1						
240	14	5.90	1370	2.4						
24	78	60.00*	3000	0.90						
29	67	48.00*	3000	1.05						
36	61	39.00*	3000	1.15						
44	51	32.50*	3000	1.35						
51	48	27.50*	3000	1.45	<b>W</b>	<b>30</b>	<b>DRN</b>	<b>71M4</b>	12	984
58	44	24.50*	3000	1.55	<b>WF</b>	<b>30</b>	<b>DRN</b>	<b>71M4</b>	12	985
73	37	19.50*	3000	1.85	<b>WA</b>	<b>30</b>	<b>DRN</b>	<b>71M4</b>	11	987
87	32	16.33	3000	2.1	<b>WAF</b>	<b>30</b>	<b>DRN</b>	<b>71M4</b>	12	986
99	29	14.33	3000	2.3						
138	22	10.25*	3000	2.8						
173	18	8.20*	3000	3.6						
215	15	6.57	2850	4.0						
115	23	24.50*	3000	3.0						
144	19	19.50*	3000	3.5	<b>W</b>	<b>30</b>	<b>DRN</b>	<b>71MS2</b>	11	984
172	16	16.33	3000	4.0	<b>WF</b>	<b>30</b>	<b>DRN</b>	<b>71MS2</b>	11	985
196	15	14.33	2910	4.5	<b>WA</b>	<b>30</b>	<b>DRN</b>	<b>71MS2</b>	10	987
274	11	10.25*	2640	5.5	<b>WAF</b>	<b>30</b>	<b>DRN</b>	<b>71MS2</b>	11	986
343	9.0	8.20*	2460	7.0						
428	7.0	6.57	2300	7.9						
51	46	27.50*	2200	0.85						
58	41	24.50*	2200	0.95						
73	35	19.50*	2200	1.15	<b>W</b>	<b>20</b>	<b>DRN</b>	<b>71M4</b>	9.3	980
86	31	16.50*	2170	1.20	<b>WF</b>	<b>20</b>	<b>DRN</b>	<b>71M4</b>	9.5	981
99	28	14.33	2120	1.55	<b>WA</b>	<b>20</b>	<b>DRN</b>	<b>71M4</b>	9.1	983
138	21	10.25*	1960	1.65	<b>WAF</b>	<b>20</b>	<b>DRN</b>	<b>71M4</b>	9.1	982
173	17	8.20*	1860	1.65						
215	14	6.57	1780	1.60						
115	22	24.50*	2060	1.80						
144	18	19.50*	1940	2.2	<b>W</b>	<b>20</b>	<b>DRN</b>	<b>71MS2</b>	8.1	980
170	16	16.50*	1850	2.3	<b>WF</b>	<b>20</b>	<b>DRN</b>	<b>71MS2</b>	8.2	981
196	14	14.33	1790	3.0	<b>WA</b>	<b>20</b>	<b>DRN</b>	<b>71MS2</b>	7.8	983
274	11	10.25*	1630	3.2	<b>WAF</b>	<b>20</b>	<b>DRN</b>	<b>71MS2</b>	7.8	982
343	9.0	8.20*	1540	3.2						
428	7.0	6.57	1460	3.1						
73	35	19.50*	1800	0.85						
86	31	16.50*	1800	0.85	<b>W</b>	<b>10</b>	<b>DRN</b>	<b>71M4</b>	8.6	976
99	28	14.33	1800	0.85	<b>WF</b>	<b>10</b>	<b>DRN</b>	<b>71M4</b>	8.8	977
138	21	10.25*	1800	1.30	<b>WA</b>	<b>10</b>	<b>DRN</b>	<b>71M4</b>	8.6	979
173	18	8.20*	1780	1.30	<b>WAF</b>	<b>10</b>	<b>DRN</b>	<b>71M4</b>	8.8	978
215	14	6.57	1700	1.25						
196	15	14.33	1710	1.60	<b>W</b>	<b>10</b>	<b>DRN</b>	<b>71MS2</b>	7.4	976
274	11	10.25*	1560	2.5	<b>WF</b>	<b>10</b>	<b>DRN</b>	<b>71MS2</b>	7.6	977
343	9.0	8.20*	1470	2.5	<b>WA</b>	<b>10</b>	<b>DRN</b>	<b>71MS2</b>	7.4	979
428	7.0	6.57	1390	2.5	<b>WAF</b>	<b>10</b>	<b>DRN</b>	<b>71MS2</b>	7.6	978

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>			<b>m</b> <b>kg</b>			
6.8	730	142.72	7370	0.80						
7.5	670	129.74	7850	0.90						
8.1	610	118.93	8000	1.00						
9.0	555	107.33	8000	1.10						
9.5	520	101.45	8000	1.15						
10	475	92.23	8000	1.25						
11	430	84.54	8000	1.40						
13	395	76.29	8000	1.50						
13	375	73.72	8000	1.60						
14	345	67.02	8000	1.75	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>90SR6</b>	33	1002
16	315	61.43	8000	1.90	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>90SR6</b>	34	1001
17	285	55.44	8000	2.1	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>90SR6</b>	35	1001
18	265	52.40	8000	2.2						
20	245	47.64	8000	2.4						
22	220	43.67	8000	2.5						
25	200	39.41	8000	2.7						
26	190	36.98	8000	2.7						
29	173	33.62	8000	3.0						
31	158	30.82	8000	3.3						
35	144	27.81	8000	3.5						
6.7	740	213.21	7320	0.80						
9.5	525	151.56	8000	1.15						
10	495	142.72	8000	1.20						
11	450	129.74	8000	1.30						
12	410	118.93	8000	1.45						
13	375	107.33	8000	1.60						
14	350	101.45	8000	1.70						
16	320	92.23	8000	1.85	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>80MK4</b>	25	1002
17	290	84.54	8000	2.0	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>80MK4</b>	26	1001
19	265	76.29	8000	2.2	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>80MK4</b>	27	1001
19	255	73.72	8000	2.3						
21	230	67.02	8000	2.6						
23	210	61.43	8000	2.8						
26	195	55.44	8000	3.1						
27	183	52.40	8000	3.3						
30	166	47.64	8000	3.5						
33	151	43.67	8000	3.8						
36	138	39.41	8000	4.0						
13	380	213.21	8000	1.55						
19	270	151.56	8000	2.2						
20	255	142.72	8000	2.3						
22	230	129.74	8000	2.6	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>71M2</b>	22	1002
24	210	118.93	8000	2.8	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>71M2</b>	23	1001
26	193	107.33	8000	3.1	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>71M2</b>	25	1001
28	181	101.45	8000	3.3						
31	165	92.23	8000	3.6						
33	150	84.54	8000	4.0						
39	128	24.89	8000	3.0						
43	116	22.63	8000	3.8	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>90SR6</b>	30	1002
60	83	16.09	7340	3.7	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>90SR6</b>	31	1001
85	58	11.35	6610	3.7	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>90SR6</b>	33	1001
118	42	8.18	5970	3.7						

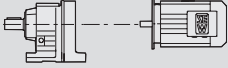

<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
11	440	126.43	6000	0.90						
12	400	114.94	6000	1.00						
14	370	105.36	6000	1.05						
15	330	94.39	6000	1.20						
15	320	92.86	6000	1.25						
17	300	85.81	6000	1.35						
18	275	78.66	6000	1.45						
20	245	70.25	6000	1.60						
21	235	67.73	6000	1.70	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>80MK4</b>	20	999
23	215	61.58	6000	1.85	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>80MK4</b>	21	998
25	200	58.48	6000	1.95	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>80MK4</b>	22	998
27	186	53.16	6000	2.1						
29	171	48.73	6000	2.3						
33	152	43.66	6000	2.6						
36	138	39.69	6000	2.9						
39	128	36.38	6000	3.1						
46	109	31.33	6000	3.5						
50	99	28.48	6000	3.8						
20	245	70.79	3050	0.80						
21	230	66.85	3230	0.85						
23	215	61.43	3220	0.90						
25	200	58.34	3010	0.90						
27	185	53.04	3000	1.00	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	16	996
29	171	49.34	3090	1.15	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	17	994
32	157	44.85	3060	1.25	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	18	994
35	145	41.22	3040	1.40						
42	117	33.97	2930	1.65						
46	108	30.88	2890	1.80						
51	100	28.38	2850	1.95						
61	82	23.68*	2880	2.4						
67	75	21.53	2820	2.6						
73	69	19.78	2760	2.9						
90	55	15.89	2600	3.1						
99	50	14.44	2540	3.5						
108	46	13.27	2490	3.7						
131	37	10.94	2360	3.3	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	15	996
144	34	9.94	2300	3.6	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	16	994
157	32	9.14	2250	3.9	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>80MK4</b>	17	994
189	26	7.61	2110	3.3						
208	24	6.91	2060	3.3						
226	22	6.35	2010	3.6						
254	19	5.65	1930	3.4						
279	18	5.14	1880	3.3						
304	16	4.72	1840	3.5						
33	150	43.54	3440	0.85						
37	132	38.73*	3330	1.00	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>80MK4</b>	14	991
39	127	36.38	3350	1.00	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>80MK4</b>	14	990
46	106	30.99*	3230	1.20	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>80MK4</b>	15	990
51	98	28.17	3170	1.30						
55	90	25.89	3120	1.45						
62	80	23.29	3160	1.60						
68	74	21.17	3090	1.75						
74	68	19.45	3030	1.90						
88	56	16.25	2890	2.1						
97	51	14.77	2820	2.4						
106	47	13.57	2760	2.6						
124	39	11.56*	2640	2.1	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>80MK4</b>	14	991
137	36	10.51	2570	2.5	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>80MK4</b>	14	990
149	33	9.66	2510	2.6	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>80MK4</b>	14	990
179	27	8.00	2340	2.1						
197	25	7.27	2280	2.4						
215	23	6.68	2230	2.6						
256	19	5.60	2110	2.1						
282	17	5.09	2050	2.4						
307	16	4.68	2010	2.6						

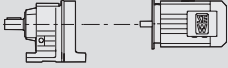



<b>P<sub>m</sub> = 0.55 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
81	62	17.77	1670	1.00						
89	56	16.16	1650	1.10						
107	46	13.38	1590	1.20						
118	42	12.16	1560	1.30						
140	35	10.24	1490	1.40	WA	19	DRN	80MK4	12	989
154	32	9.31	1460	1.55	WAF	19	DRN	80MK4	12	988
171	29	8.38	1400	1.40	WF	19	DRN	80MK4	12	988
188	26	7.62	1370	1.60						
221	22	6.49*	1310	1.40						
243	20	5.90	1280	1.65						
276	18	10.24	1290	2.7						
303	16	9.31	1260	3.0	WA	19	DRN	71M2	9.6	989
337	15	8.38	1210	2.7	WAF	19	DRN	71M2	9.8	988
371	13	7.62	1180	3.1	WF	19	DRN	71M2	10	988
435	11	6.49*	1120	2.8						
479	10	5.90	1090	3.2						
44	75	32.50*	3000	0.90						
52	70	27.50*	3000	1.00						
59	65	24.50*	3000	1.05	W	30	DRN	80MK4	14	984
74	55	19.50*	3000	1.25	WF	30	DRN	80MK4	14	985
88	47	16.33	3000	1.40	WA	30	DRN	80MK4	14	987
100	43	14.33	3000	1.60	WAF	30	DRN	80MK4	14	986
140	32	10.25*	3000	1.95						
175	26	8.20*	2940	2.4						
218	22	6.57	2770	2.8						
115	34	24.50*	3000	2.0						
145	29	19.50*	3000	2.4	W	30	DRN	71M2	12	984
173	24	16.33	2930	2.7	WF	30	DRN	71M2	12	985
197	22	14.33	2830	3.0	WA	30	DRN	71M2	11	987
276	16	10.25*	2580	3.7	WAF	30	DRN	71M2	12	986
345	13	8.20*	2420	4.7						
430	11	6.57	2260	5.3						
74	52	19.50*	2020	0.80						
87	45	16.50*	1960	0.85	W	20	DRN	80MK4	11	980
100	42	14.33	1940	1.05	WF	20	DRN	80MK4	12	981
140	31	10.25*	1820	1.15	WA	20	DRN	80MK4	11	983
175	25	8.20*	1750	1.10	WAF	20	DRN	80MK4	11	982
218	21	6.57	1710	1.10						
115	32	24.50*	1900	1.25						
145	27	19.50*	1810	1.50	W	20	DRN	71M2	9.3	980
171	24	16.50*	1740	1.60	WF	20	DRN	71M2	9.5	981
197	22	14.33	1690	2.0	WA	20	DRN	71M2	9.1	983
276	16	10.25*	1560	2.2	WAF	20	DRN	71M2	9.1	982
345	13	8.20*	1480	2.2						
430	11	6.57	1420	2.1						

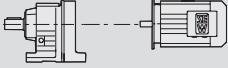

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
9.4	715	101.45	7500	0.85						
10	655	92.23	7950	0.90						
11	595	84.54	8000	1.00						
13	545	76.29	8000	1.10						
13	520	73.72	8000	1.15						
14	475	67.02	8000	1.25						
16	435	61.43	8000	1.40						
17	395	55.44	8000	1.50	WA	59	DRN	90S6	33	1002
18	370	52.40	8000	1.60	WAF	59	DRN	90S6	34	1001
20	335	47.64	8000	1.75	WF	59	DRN	90S6	35	1001
22	305	43.67	8000	1.85						
24	280	39.41	8000	1.95						
26	260	36.98	8000	2.0						
28	235	33.62	8000	2.2						
31	215	30.82	8000	2.4						
34	198	27.81	8000	2.5						

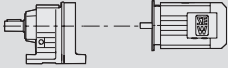

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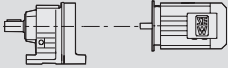

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>				<b>m</b> <b>kg</b>		
9.5	715	151.56	7510	0.85						
10	675	142.72	7800	0.90						
11	615	129.74	8000	0.95						
12	560	118.93	8000	1.05						
13	510	107.33	8000	1.15						
14	480	101.45	8000	1.25						
16	435	92.23	8000	1.35						
17	395	84.54	8000	1.50						
19	360	76.29	8000	1.65						
20	345	73.72	8000	1.70	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>80M4</b>	28	1002
21	315	67.02	8000	1.90	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>80M4</b>	29	1001
23	290	61.43	8000	2.1	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>80M4</b>	31	1001
26	265	55.44	8000	2.3						
27	245	52.40	8000	2.4						
30	225	47.64	8000	2.6						
33	205	43.67	8000	2.8						
37	188	39.41	8000	2.9						
39	175	36.98	7860	3.0						
43	159	33.62	7690	3.2						
47	145	30.82	7540	3.6						
52	132	27.81	7340	3.8						
13	510	213.21	8000	1.15						
19	365	151.56	8000	1.65						
20	345	142.72	8000	1.75						
22	310	129.74	8000	1.90						
24	285	118.93	8000	2.1	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>80MS2</b>	28	1002
27	260	107.33	8000	2.3	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>80MS2</b>	29	1001
28	245	101.45	8000	2.4	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>80MS2</b>	31	1001
31	220	92.23	8000	2.7						
34	200	84.54	8000	3.0						
37	185	76.29	8000	3.2						
39	178	73.72	7980	3.4						
43	162	67.02	7800	3.7						
38	176	24.89	8000	2.2						
42	160	22.63	7830	2.8						
46	146	20.74	7670	3.5						
51	133	18.72	7460	3.6						
59	114	16.09	7150	2.7						
65	104	14.75	6990	3.5	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>90S6</b>	30	1002
72	95	13.31	6800	3.8	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>90S6</b>	31	1001
84	80	11.35	6470	2.7	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>90S6</b>	33	1001
92	73	10.41	6320	3.6						
102	67	9.39	6140	3.6						
117	58	8.18	5860	2.7						
128	53	7.49	5720	3.6						
142	48	6.76	5550	3.6						
58	118	24.89	7230	3.3	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>80M4</b>	25	1002
					<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>80M4</b>	27	1001
					<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>80M4</b>	28	1001
15	445	94.39	6000	0.90						
16	435	92.86	6000	0.90						
17	405	85.81	6000	1.00						
18	375	78.66	6000	1.05						
20	335	70.25	6000	1.15						
21	320	67.73	6000	1.25						
23	290	61.58	6000	1.35						
25	275	58.48	6000	1.40	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	24	999
27	250	53.16	6000	1.55	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	25	998
30	230	48.73	6000	1.70	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	25	998
33	205	43.66	6000	1.95						
36	188	39.69	6000	2.1						
40	173	36.38	6000	2.3						
46	149	31.33	6000	2.5						
51	135	28.48	6000	2.8						
55	124	26.11	6000	3.0						

<b>P<sub>m</sub> = 0.75 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
63	108	22.69	5990	3.2						
70	98	20.63	5850	3.4						
76	90	18.91	5710	3.6						
85	80	16.94	5520	3.2						
93	73	15.40	5380	4.0						
102	67	14.12	5260	4.0	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	22	999
118	57	12.16	5010	3.2	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	23	998
130	52	11.05	4880	4.0	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>80M4</b>	24	998
142	48	10.13	4760	4.0						
166	41	8.67	4530	3.2						
183	37	7.88	4410	4.0						
199	34	7.22	4300	4.0						
29	230	49.34	2610	0.85						
32	210	44.85	2620	0.95	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	19	996
35	197	41.22	2630	1.00	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	20	994
42	160	33.97	2580	1.20	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	21	994
47	147	30.88	2570	1.35						
51	135	28.38	2550	1.45						
61	111	23.68*	2660	1.80						
67	102	21.53	2620	1.95						
73	94	19.78	2580	2.1						
91	74	15.89	2440	2.3						
100	68	14.44	2400	2.5						
108	63	13.27	2360	2.8						
132	51	10.94	2250	2.4	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	18	996
145	47	9.94	2200	2.7	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	19	994
158	43	9.14	2160	2.8	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>80M4</b>	20	994
189	35	7.61	2020	2.5						
208	32	6.91	1970	2.4						
227	30	6.35	1930	2.6						
255	26	5.65	1850	2.5						
280	24	5.14	1810	2.4						
305	22	4.72	1770	2.6						
46	145	30.99*	2900	0.90	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	17	991
51	133	28.17	2870	0.95	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	18	990
56	123	25.89	2850	1.05	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	18	990
62	109	23.29	2940	1.20						
68	100	21.17	2890	1.30						
74	92	19.45	2850	1.40						
89	76	16.25	2730	1.60						
97	70	14.77	2670	1.80						
106	64	13.57	2620	1.90						
125	54	11.56*	2510	1.55	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	17	991
137	49	10.51	2460	1.80	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	17	990
149	46	9.66	2410	1.95	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>80M4</b>	18	990
180	37	8.00	2240	1.55						
198	34	7.27	2190	1.80						
216	31	6.68	2140	1.95						
257	26	5.60	2030	1.55						
283	24	5.09	1980	1.80						
308	22	4.68	1940	1.95						
89	77	16.16	1470	0.80						
108	63	13.38	1430	0.90						
118	58	12.16	1420	0.95						
141	48	10.24	1360	1.05	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>80M4</b>	15	989
155	44	9.31	1350	1.10	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>80M4</b>	15	988
172	39	8.38	1280	1.05	<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>80M4</b>	16	988
189	36	7.62	1260	1.20						
222	30	6.49*	1200	1.05						
244	28	5.90	1190	1.20						
279	24	10.24	1220	2.0						
307	22	9.31	1200	2.2	<b>WA</b>	<b>19</b>	<b>DRN</b>	<b>80MS2</b>	15	989
341	20	8.38	1140	2.0	<b>WAF</b>	<b>19</b>	<b>DRN</b>	<b>80MS2</b>	15	988
375	18	7.62	1120	2.3	<b>WF</b>	<b>19</b>	<b>DRN</b>	<b>80MS2</b>	16	988
440	15	6.49*	1070	2.0						
484	14	5.90	1040	2.4						

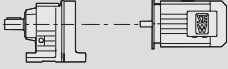

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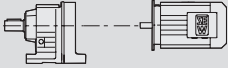

<b>P<sub>m</sub> = 0.75 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
59	89	24.50*	3000	0.80						
74	75	19.50*	3000	0.95						
88	65	16.33	3000	1.05	W	30	DRN	80M4	17	984
100	59	14.33	3000	1.15	WF	30	DRN	80M4	18	985
140	44	10.25*	3000	1.40	WA	30	DRN	80M4	17	987
176	36	8.20*	2850	1.80	WAF	30	DRN	80M4	17	986
219	30	6.57	2700	2.0						

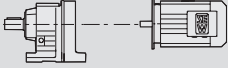

<b>P<sub>m</sub> = 1.1 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
14	695	67.02	7640	0.85						
16	635	61.43	8000	0.95						
17	580	55.44	8000	1.05						
18	540	52.40	8000	1.10						
20	495	47.64	8000	1.20	WA	59	DRN	90L6	37	1002
22	450	43.67	8000	1.25	WAF	59	DRN	90L6	39	1001
24	410	39.41	7900	1.35	WF	59	DRN	90L6	40	1001
26	380	36.98	7690	1.35						
28	350	33.62	7610	1.50						
31	320	30.82	7540	1.60						
34	290	27.81	7410	1.75						
14	745	107.33	7290	0.80						
14	695	101.45	7640	0.85						
16	635	92.23	8000	0.95						
17	575	84.54	8000	1.05						
19	525	76.29	8000	1.15						
20	505	73.72	8000	1.20						
22	460	67.02	8000	1.30						
24	420	61.43	8000	1.40	WA	59	DRN	90S4	34	1002
26	380	55.44	7910	1.55	WAF	59	DRN	90S4	36	1001
28	360	52.40	7780	1.65	WF	59	DRN	90S4	37	1001
31	325	47.64	7680	1.80						
33	295	43.67	7590	1.90						
37	270	39.41	7440	2.0						
39	250	36.98	7260	2.0						
43	230	33.62	7140	2.2						
47	210	30.82	7040	2.5						
52	193	27.81	6880	2.6						
38	255	24.89	7480	1.50						
42	235	22.63	7340	1.90						
46	215	20.74	7220	2.4						
51	196	18.72	7060	2.5						
59	167	16.09	6790	1.85						
65	153	14.75	6660	2.4	WA	59	DRN	90L6	35	1002
72	139	13.31	6500	2.6	WAF	59	DRN	90L6	36	1001
84	118	11.35	6200	1.85	WF	59	DRN	90L6	38	1001
92	108	10.41	6070	2.4						
102	98	9.39	5910	2.4						
117	85	8.18	5640	1.85						
128	77	7.49	5520	2.4						
142	70	6.76	5370	2.4						
58	171	24.89	6860	2.3						
64	156	22.63	6710	2.8						
70	142	20.74	6580	3.6						
78	129	18.72	6400	3.7						
90	111	16.09	6140	2.8						
99	101	14.75	6010	3.7	WA	59	DRN	90S4	32	1002
109	92	13.31	5840	3.9	WAF	59	DRN	90S4	33	1001
128	78	11.35	5570	2.8	WF	59	DRN	90S4	35	1001
140	71	10.41	5440	3.7						
155	65	9.39	5290	3.7						
178	56	8.18	5050	2.8						
194	51	7.49	4930	3.7						
215	46	6.76	4790	3.7						

<b>P<sub>m</sub> = 1.1 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
21	485	70.25	6000	0.80						
21	465	67.73	5970	0.85						
24	425	61.58	6000	0.95						
25	400	58.48	6000	1.00						
27	365	53.16	6000	1.10						
30	335	48.73	6000	1.15	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	30	999
33	300	43.66	6000	1.35	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	31	998
37	270	39.69	6000	1.45	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	32	998
40	250	36.38	6000	1.60						
46	215	31.33	5810	1.75						
51	196	28.48	5730	1.90						
56	181	26.11	5640	2.1						
64	156	22.69	5640	2.2						
71	142	20.63	5530	2.4						
77	131	18.91	5420	2.5						
86	117	16.94	5250	2.2						
94	106	15.40	5130	2.7	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	29	999
103	98	14.12	5020	2.7	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	29	998
120	83	12.16	4800	2.2	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>90S4</b>	30	998
132	76	11.05	4680	2.7						
144	70	10.13	4580	2.7						
168	59	8.67	4360	2.2						
185	54	7.88	4260	2.7						
201	50	7.22	4160	2.8						
43	230	33.97	1980	0.85	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	25	996
47	210	30.88	2010	0.90	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	26	994
51	197	28.38	2040	1.00	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	27	994
61	161	23.68*	2300	1.25						
68	148	21.53	2280	1.35						
74	137	19.78	2270	1.45						
92	108	15.89	2170	1.55						
101	99	14.44	2150	1.75						
110	92	13.27	2120	1.90						
133	74	10.94	2050	1.65	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	24	996
146	68	9.94	2010	1.85	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	25	994
159	63	9.14	1980	1.95	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>90S4</b>	26	994
191	52	7.61	1860	1.70						
210	47	6.91	1820	1.65						
229	44	6.35	1790	1.80						
257	38	5.65	1720	1.70						
283	35	5.14	1680	1.65						
308	32	4.72	1660	1.80						
376	26	7.61	1620	3.3						
414	24	6.91	1590	3.3	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>80M2</b>	18	996
450	22	6.35	1550	3.5	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>80M2</b>	19	994
506	19	5.65	1490	3.3	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>80M2</b>	20	994
557	18	5.14	1450	3.2						
606	16	4.72	1420	3.5						
62	158	23.29	2560	0.80						
69	146	21.17	2540	0.90						
75	134	19.45	2520	0.95						
90	110	16.25	2450	1.10						
99	101	14.77	2410	1.25						
107	93	13.57	2380	1.30						
126	78	11.56*	2300	1.10	<b>WA</b>	<b>29</b>	<b>DRN</b>	<b>90S4</b>	23	991
138	72	10.51	2260	1.25	<b>WAF</b>	<b>29</b>	<b>DRN</b>	<b>90S4</b>	23	990
151	66	9.66	2220	1.35	<b>WF</b>	<b>29</b>	<b>DRN</b>	<b>90S4</b>	23	990
182	54	8.00	2060	1.05						
200	50	7.27	2020	1.25						
218	46	6.68	1990	1.35						
260	38	5.60	1880	1.10						
286	35	5.09	1840	1.20						
311	32	4.68	1810	1.35						

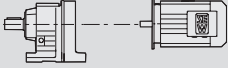

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<b>P<sub>m</sub> = 1.1 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
358	27	8.00	1800	2.1						
393	25	7.27	1760	2.4						
428	23	6.68	1720	2.6	WA	29	DRN	80M2	17	991
511	19	5.60	1630	2.1	WAF	29	DRN	80M2	17	990
562	18	5.09	1590	2.4	WF	29	DRN	80M2	18	990
612	16	4.68	1550	2.6						
137	71	20.86	1200	0.85						
161	63	17.77	1210	1.00						
177	57	16.16	1200	1.10						
214	47	13.38	1170	1.20						
235	43	12.16	1160	1.30	WA	19	DRN	80M2	15	989
279	36	10.24	1110	1.40	WAF	19	DRN	80M2	15	988
307	33	9.31	1090	1.50	WF	19	DRN	80M2	16	988
341	29	8.38	1040	1.40						
375	27	7.62	1020	1.60						
441	23	6.49*	980	1.40						
485	21	5.90	960	1.60						
175	49	16.33	2660	1.40	W	30	DRN	80M2	17	984
200	44	14.33	2590	1.55	WF	30	DRN	80M2	18	985
279	33	10.25*	2410	1.90	WA	30	DRN	80M2	17	987
349	27	8.20*	2280	2.4	WAF	30	DRN	80M2	17	986
435	23	6.57	2160	2.7						

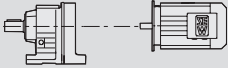

<b>P<sub>m</sub> = 1.5 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
19	715	76.29	6720	0.85						
20	685	73.72	6950	0.85						
22	625	67.02	6990	0.95						
24	570	61.43	7040	1.05						
26	520	55.44	7000	1.15						
28	490	52.40	6900	1.20	WA	59	DRN	90L4	37	1002
31	445	47.64	6870	1.30	WAF	59	DRN	90L4	39	1001
33	405	43.67	6860	1.40	WF	59	DRN	90L4	40	1001
37	370	39.41	6770	1.50						
40	345	36.98	6590	1.50						
43	315	33.62	6530	1.65						
47	285	30.82	6480	1.80						
53	260	27.81	6370	1.95						
19	720	151.56	6710	0.85						
20	680	142.72	6920	0.90						
22	620	129.74	6960	0.95						
24	565	118.93	7020	1.05						
27	515	107.33	6970	1.15						
28	485	101.45	6860	1.25						
31	440	92.23	6840	1.35						
34	400	84.54	6830	1.50						
38	365	76.29	6740	1.65						
39	350	73.72	6820	1.70	WA	59	DRN	90S2	34	1002
43	320	67.02	6740	1.85	WAF	59	DRN	90S2	36	1001
47	290	61.43	6680	2.1	WF	59	DRN	90S2	37	1001
52	265	55.44	6550	2.2						
55	250	52.40	6440	2.4						
61	225	47.64	6340	2.6						
66	205	43.67	6250	2.8						
73	189	39.41	6120	2.9						
78	177	36.98	5960	2.9						
86	161	33.62	5850	3.2						
94	146	30.82	5760	3.5						
104	133	27.81	5620	3.8						

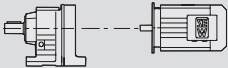

<b>P<sub>m</sub> = 1.5 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
59	230	24.89	6450	1.65						
65	210	22.63	6330	2.1						
70	193	20.74	6240	2.7						
78	176	18.72	6090	2.7						
91	150	16.09	5860	2.0						
99	137	14.75	5760	2.7	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>90L4</b>	35	1002
110	125	13.31	5610	2.9	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>90L4</b>	36	1001
129	106	11.35	5360	2.0	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>90L4</b>	38	1001
140	96	10.41	5250	2.7						
156	88	9.39	5110	2.7						
179	76	8.18	4880	2.0						
195	69	7.49	4780	2.7						
216	63	6.76	4650	2.7						
116	119	24.89	5570	3.2	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>90S2</b>	32	1002
254	54	11.35	4490	4.0	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>90S2</b>	33	1001
					<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>90S2</b>	35	1001
30	455	48.73	5560	0.85						
33	405	43.66	5440	1.00						
37	370	39.69	5440	1.05	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	33	999
40	340	36.38	5410	1.15	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	34	998
47	290	31.33	5220	1.30	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	35	998
51	265	28.48	5190	1.40						
56	245	26.11	5140	1.55						
64	210	22.69	5260	1.60						
71	193	20.63	5180	1.75						
77	178	18.91	5100	1.85						
86	158	16.94	4940	1.60						
95	144	15.40	4860	2.0	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	32	999
103	133	14.12	4770	2.0	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	32	998
120	114	12.16	4560	1.60	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>90L4</b>	33	998
132	103	11.05	4470	2.0						
144	95	10.13	4380	2.0						
169	81	8.67	4180	1.60						
185	73	7.88	4090	2.0						
202	68	7.22	4000	2.0						
62	215	23.68*	1880	0.90						
68	200	21.53	1900	1.00						
74	186	19.78	1910	1.05						
92	147	15.89	1870	1.15						
101	135	14.44	1870	1.30						
110	125	13.27	1860	1.40						
134	101	10.94	1820	1.25	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>90L4</b>	28	996
147	93	9.94	1810	1.35	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>90L4</b>	28	994
160	86	9.14	1790	1.45	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>90L4</b>	29	994
192	70	7.61	1670	1.25						
211	64	6.91	1650	1.25						
230	59	6.35	1640	1.35						
258	52	5.65	1560	1.25						
284	48	5.14	1540	1.20						
309	44	4.72	1520	1.30						
316	44	9.14	1630	2.8						
379	36	7.61	1530	2.4						
417	33	6.91	1500	2.4	<b>WA</b>	<b>39</b>	<b>DRN</b>	<b>90S2</b>	24	996
454	30	6.35	1470	2.6	<b>WAF</b>	<b>39</b>	<b>DRN</b>	<b>90S2</b>	25	994
511	26	5.65	1410	2.5	<b>WF</b>	<b>39</b>	<b>DRN</b>	<b>90S2</b>	26	994
562	24	5.14	1380	2.4						
611	22	4.72	1350	2.6						

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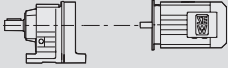

<b>P<sub>m</sub> = 2.2 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
28	720	52.40	5340	0.85						
30	660	47.64	5460	0.90						
33	600	43.67	5570	0.95						
37	545	39.41	5600	1.00	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>100LS4</b>	41	1002
39	510	36.98	5420	1.00	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>100LS4</b>	43	1001
43	465	33.62	5470	1.10	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>100LS4</b>	44	1001
47	420	30.82	5520	1.25						
52	385	27.81	5490	1.30						
27	750	107.33	5420	0.80						
29	705	101.45	5340	0.85						
32	640	92.23	5460	0.95						
34	585	84.54	5570	1.05						
38	535	76.29	5590	1.10						
39	510	73.72	5750	1.15						
43	465	67.02	5770	1.30						
47	425	61.43	5790	1.40	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>90L2</b>	37	1002
52	385	55.44	5740	1.55	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>90L2</b>	39	1001
55	365	52.40	5650	1.65	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>90L2</b>	40	1001
61	330	47.64	5620	1.75						
67	300	43.67	5600	1.90						
74	275	39.41	5520	2.0						
79	255	36.98	5360	2.0						
86	230	33.62	5310	2.2						
94	210	30.82	5260	2.4						
104	195	27.81	5160	2.6						
58	340	24.89	5740	1.10						
64	310	22.63	5690	1.40						
70	285	20.74	5660	1.80						
77	260	18.72	5560	1.85						
90	220	16.09	5400	1.40						
98	200	14.75	5330	1.85	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>100LS4</b>	39	1002
109	185	13.31	5230	1.95	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>100LS4</b>	40	1001
128	157	11.35	5010	1.40	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>100LS4</b>	42	1001
139	143	10.41	4940	1.85						
154	130	9.39	4820	1.85						
177	113	8.18	4600	1.40						
193	103	7.49	4530	1.85						
214	94	6.76	4420	1.85						
117	173	24.89	5200	2.2						
128	158	22.63	5100	2.8						
140	143	20.74	5020	3.6						
155	131	18.72	4900	3.7						
181	112	16.09	4720	2.8						
197	102	14.75	4630	3.6	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>90L2</b>	35	1002
218	93	13.31	4510	3.8	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>90L2</b>	36	1001
256	79	11.35	4300	2.7	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>90L2</b>	38	1001
279	72	10.41	4210	3.6						
309	65	9.39	4100	3.6						
355	57	8.18	3910	2.8						
388	51	7.49	3830	3.6						
430	47	6.76	3720	3.6						
46	430	31.33	4180	0.85	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	37	999
51	390	28.48	4240	0.95	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	38	998
56	360	26.11	4270	1.05	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	39	998
64	310	22.69	4600	1.10						
70	285	20.63	4590	1.15						
77	260	18.91	4550	1.25						
86	230	16.94	4430	1.10						
94	210	15.40	4390	1.35						
103	196	14.12	4340	1.35	<b>WA</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	36	999
119	168	12.16	4170	1.10	<b>WAF</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	36	998
131	153	11.05	4110	1.35	<b>WF</b>	<b>49</b>	<b>DRN</b>	<b>100LS4</b>	37	998
143	141	10.13	4050	1.35						
167	120	8.67	3880	1.10						
184	109	7.88	3810	1.35						
201	100	7.22	3750	1.35						



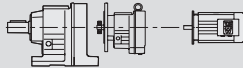

<b>P<sub>m</sub> = 3.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
43	630	33.62	4260	0.80	WA	59	DRN	100L4	48	1002
47	575	30.82	4410	0.90	WAF	59	DRN	100L4	50	1001
52	525	27.81	4480	0.95	WF	59	DRN	100L4	51	1001
38	730	76.29	4270	0.80						
39	700	73.72	4530	0.85						
43	640	67.02	4660	0.95						
47	580	61.43	4790	1.05						
52	530	55.44	4820	1.15						
55	500	52.40	4750	1.20	WA	59	DRN	100LM2	48	1002
61	455	47.64	4800	1.30	WAF	59	DRN	100LM2	50	1001
66	410	43.67	4860	1.40	WF	59	DRN	100LM2	51	1001
73	375	39.41	4840	1.45						
78	350	36.98	4690	1.45						
86	320	33.62	4690	1.60						
94	290	30.82	4700	1.80						
104	265	27.81	4660	1.90						
64	425	22.63	4960	1.05						
70	385	20.74	4980	1.35						
78	350	18.72	4950	1.35						
91	300	16.09	4850	1.00						
99	275	14.75	4830	1.35	WA	59	DRN	100L4	46	1002
109	250	13.31	4770	1.40	WAF	59	DRN	100L4	47	1001
128	210	11.35	4600	1.00	WF	59	DRN	100L4	49	1001
140	194	10.41	4560	1.35						
155	177	9.39	4480	1.35						
178	153	8.18	4270	1.00						
194	140	7.49	4230	1.35						
215	127	6.76	4140	1.35						
116	235	24.89	4790	1.65						
128	215	22.63	4740	2.0						
140	196	20.74	4690	2.6						
155	179	18.72	4600	2.7						
180	153	16.09	4440	2.0						
196	139	14.75	4380	2.7	WA	59	DRN	100LM2	46	1002
217	127	13.31	4280	2.8	WAF	59	DRN	100LM2	47	1001
255	108	11.35	4100	2.0	WF	59	DRN	100LM2	49	1001
278	98	10.41	4030	2.7						
308	90	9.39	3930	2.7						
354	78	8.18	3750	2.0						
386	71	7.49	3680	2.7						
428	64	6.76	3590	2.6						
71	385	20.63	3900	0.85						
77	355	18.91	3920	0.90						
95	285	15.40	3840	1.00	WA	49	DRN	100L4	43	999
103	265	14.12	3840	1.00	WAF	49	DRN	100L4	43	998
132	205	11.05	3690	1.00	WF	49	DRN	100L4	44	998
144	191	10.13	3660	1.00						
185	148	7.88	3490	1.00						
202	136	7.22	3450	1.00						
238	116	12.16	3440	1.60						
262	105	11.05	3390	2.0	WA	49	DRN	100LM2	43	999
286	97	10.13	3330	2.0	WAF	49	DRN	100LM2	43	998
334	82	8.67	3180	1.60	WF	49	DRN	100LM2	44	998
367	75	7.88	3120	2.0						
401	69	7.22	3060	2.0						

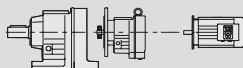

<b>P<sub>m</sub> = 4.0 kW</b>										
n <sub>a</sub> min <sup>-1</sup>	M <sub>a</sub> Nm	i	F <sub>Ra</sub> <sup>1)</sup> N	SEW f <sub>B</sub>					m kg	
53	695	55.44	3700	0.85						
68	540	43.67	3950	1.05	WA	59	DRN	112M2	58	1002
75	495	39.41	4000	1.10	WAF	59	DRN	112M2	59	1001
96	380	30.82	4010	1.35	WF	59	DRN	112M2	61	1001
106	345	27.81	4020	1.45						

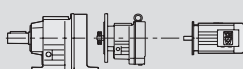

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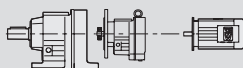

<b>P<sub>m</sub> = 4.0 kW</b>										
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>M<sub>a</sub></b> <b>Nm</b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>	<b>SEW</b> <b>f<sub>B</sub></b>					<b>m</b> <b>kg</b>	
<b>71</b>	510	20.74	4150	1.00						
<b>78</b>	465	18.72	4180	1.00						
<b>99</b>	365	14.75	4220	1.00	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>112M4</b>	55	1002
<b>110</b>	330	13.31	4210	1.05	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>112M4</b>	57	1001
<b>141</b>	255	10.41	4090	1.00	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>112M4</b>	58	1001
<b>156</b>	235	9.39	4050	1.00						
<b>195</b>	185	7.49	3850	1.00						
<b>216</b>	169	6.76	3800	1.00						
<b>142</b>	255	20.74	4260	2.0						
<b>157</b>	235	18.72	4200	2.0						
<b>200</b>	182	14.75	4060	2.0	<b>WA</b>	<b>59</b>	<b>DRN</b>	<b>112M2</b>	55	1002
<b>222</b>	167	13.31	3980	2.1	<b>WAF</b>	<b>59</b>	<b>DRN</b>	<b>112M2</b>	57	1001
<b>283</b>	129	10.41	3780	2.0	<b>WF</b>	<b>59</b>	<b>DRN</b>	<b>112M2</b>	58	1001
<b>314</b>	118	9.39	3700	2.0						
<b>393</b>	92	7.49	3480	2.0						
<b>436</b>	85	6.76	3400	2.0						

12.4 W..R..DRN.. selection tables for low output speeds in Nm

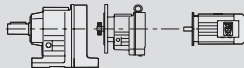

<b>M<sub>a max</sub> = 90 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
5.2	265	-1	WA	29R17	DRN	63MS4	12	1004
			WAF	29R17	DRN	63MS4	12	1004
			WF	29R17	DRN	63MS4	13	1004

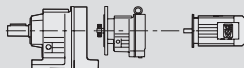

<b>M<sub>a max</sub> = 120 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
6.5	211	-1	WA	29R17	DRN	63MS4	12	1004
			WAF	29R17	DRN	63MS4	12	1004
			WF	29R17	DRN	63MS4	13	1004

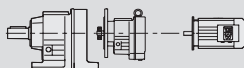

<b>M<sub>a max</sub> = 124 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
2.1	644	-1	WA	29R17	DRN	63MS4	12	1004
			WAF	29R17	DRN	63MS4	13	1004
			WF	29R17	DRN	63MS4	13	1004
6.0	231	-1	WA	39R17	DRN	63MS4	13	1004
			WAF	39R17	DRN	63MS4	14	1004
			WF	39R17	DRN	63MS4	15	1004

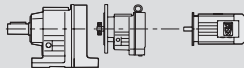

<b>M<sub>a max</sub> = 130 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{(1)}$ N					m kg	
0.11	12199	-1						
0.13	10518	-1						
0.14	9760	-1						
0.16	8570	-1						
0.18	7650	-1						
0.20	6810	-1						
0.23	6057	-1	WA	29R17	DRN	63MS4	13	1004
0.25	5473	-1	WAF	29R17	DRN	63MS4	13	1004
0.28	4868	-1	WF	29R17	DRN	63MS4	13	1004
0.32	4328	-1						
0.36	3856	-1						
0.45	3078	-1						
0.56	2474	-1						
0.63	2191	-1						
0.78	1767	-1						
0.40	3459	-1						
0.50	2768	-1						
0.70	1968	-1						
0.87	1582	-1						
0.98	1411	-1						
1.1	1260	-1	WA	29R17	DRN	63MS4	12	1004
1.2	1128	-1	WAF	29R17	DRN	63MS4	12	1004
1.4	1008	-1	WF	29R17	DRN	63MS4	13	1004
1.5	904	-1						
1.7	810	-1						
1.9	722	-1						
2.4	576	-1						
2.7	513	-1						
3.0	459	-1						
3.3	417	-1						
3.7	369	-1	WA	29R17	DRN	63MS4	12	1004
4.2	330	-1	WAF	29R17	DRN	63MS4	12	1004
4.7	293	-1	WF	29R17	DRN	63MS4	13	1004
5.8	236	-1						

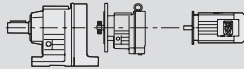

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<b>M<sub>a max</sub> = 175 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
5.3	262	-1	WA	39R17	DRN	63MS4	13	1004
			WAF	39R17	DRN	63MS4	14	1004
			WF	39R17	DRN	63MS4	15	1004

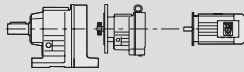

<b>M<sub>a max</sub> = 200 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.08	17184	-1						
0.09	14816	-1						
0.11	12889	-1						
0.12	11530	-1						
0.13	10358	-1						
0.15	9373	-1						
0.16	8487	-1	WA	39R17	DRN	63MS4	15	1004
0.18	7620	-1	WAF	39R17	DRN	63MS4	15	1004
0.20	6975	-1	WF	39R17	DRN	63MS4	16	1004
0.22	6289	-1						
0.25	5579	-1						
0.28	4983	-1						
0.31	4433	-1						
0.35	3953	-1						
0.40	3488	-1						
1.1	1273	-1	WA	39R17	DRN	63MS4	14	1004
			WAF	39R17	DRN	63MS4	15	1004
			WF	39R17	DRN	63MS4	15	1004
0.44	3112	-1						
0.50	2784	-1						
0.55	2501	-1						
0.62	2237	-1						
0.69	2000	-1						
0.77	1786	-1						
0.86	1602	-1						
0.97	1422	-1	WA	39R17	DRN	63MS4	14	1004
1.2	1136	-1	WAF	39R17	DRN	63MS4	15	1004
1.4	1018	-1	WF	39R17	DRN	63MS4	16	1004
1.5	909	-1						
1.7	812	-1						
1.9	727	-1						
2.1	649	-1						
2.4	582	-1						
2.6	521	-1						
3.0	467	-1	WA	39R17	DRN	63MS4	13	1004
3.2	424	-1	WAF	39R17	DRN	63MS4	14	1004
3.7	375	-1	WF	39R17	DRN	63MS4	15	1004
4.1	336	-1						
4.6	298	-1	WA	39R17	DRN	63M4	14	1004
			WAF	39R17	DRN	63M4	15	1004
			WF	39R17	DRN	63M4	16	1004

<b>M<sub>a max</sub> = 395 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.08	16390	-1						
0.10	14131	-1						
0.10	13172	-1	WA	49R17	DRN	63MS4	19	1004
0.13	10793	-1	WAF	49R17	DRN	63MS4	20	1004
0.16	8899	-1	WF	49R17	DRN	63MS4	20	1004
0.17	8165	-1						
0.19	7416	-1						
5.2	269	-1	WA	49R17	DRN	71M4	21	1004
			WAF	49R17	DRN	71M4	22	1004
			WF	49R17	DRN	71M4	23	1004

<b>M<sub>a max</sub> = 400 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.11	12236	-1						
0.14	9834	-1						
0.21	6644	-1						
0.23	6040	-1						
0.25	5413	-1						
0.29	4787	-1	WA	49R17	DRN	63MS4	19	1004
0.32	4335	-1	WAF	49R17	DRN	63MS4	20	1004
0.36	3884	-1	WF	49R17	DRN	63MS4	20	1004
0.40	3475	-1						
0.44	3106	-1						
0.48	2847	-1						
0.61	2276	-1						
0.54	2546	-1						
0.67	2074	-1						
0.74	1860	-1						
0.82	1691	-1						
0.92	1495	-1						
1.0	1335	-1	WA	49R17	DRN	63MS4	19	1004
1.1	1214	-1	WAF	49R17	DRN	63MS4	19	1004
1.3	1089	-1	WF	49R17	DRN	63MS4	20	1004
1.4	983	-1						
1.5	901	-1						
1.7	815	-1						
1.9	742	-1						
2.0	674	-1						
2.3	604	-1						
2.5	544	-1	WA	49R17	DRN	63M4	19	1004
2.8	494	-1	WAF	49R17	DRN	63M4	20	1004
3.1	443	-1	WF	49R17	DRN	63M4	21	1004
3.4	400	-1						
3.9	362	-1	WA	49R17	DRN	71MS4	20	1004
4.3	330	-1	WAF	49R17	DRN	71MS4	21	1004
4.7	300	-1	WF	49R17	DRN	71MS4	21	1004
5.8	244	-1	WA	49R17	DRN	71M4	21	1004
6.4	222	-1	WAF	49R17	DRN	71M4	22	1004
			WF	49R17	DRN	71M4	23	1004

<b>M<sub>a max</sub> = 600 Nm</b>								
$n_a$ min <sup>-1</sup>	i	$F_{Ra}^{1)}$ N					m kg	
0.07	19242	-1						
0.08	17649	-1						
0.09	16044	-1						
0.09	14707	-1						
0.11	12955	-1						
0.12	11405	-1						
0.14	10063	-1	WA	59R37	DRN	63MS4	31	1004
0.16	8796	-1	WAF	59R37	DRN	63MS4	32	1004
0.18	7674	-1	WF	59R37	DRN	63MS4	34	1004
0.21	6692	-1						
0.24	5814	-1						
0.27	5032	-1						
0.32	4367	-1						
0.36	3788	-1						
0.42	3311	-1						
0.48	2889	-1						
0.54	2576	-1						
0.61	2259	-1						
0.69	1986	-1	WA	59R37	DRN	63MS4	30	1004
0.79	1745	-1	WAF	59R37	DRN	63MS4	31	1004
0.90	1526	-1	WF	59R37	DRN	63MS4	33	1004
1.0	1331	-1						
1.2	1167	-1						
1.4	1016	-1						

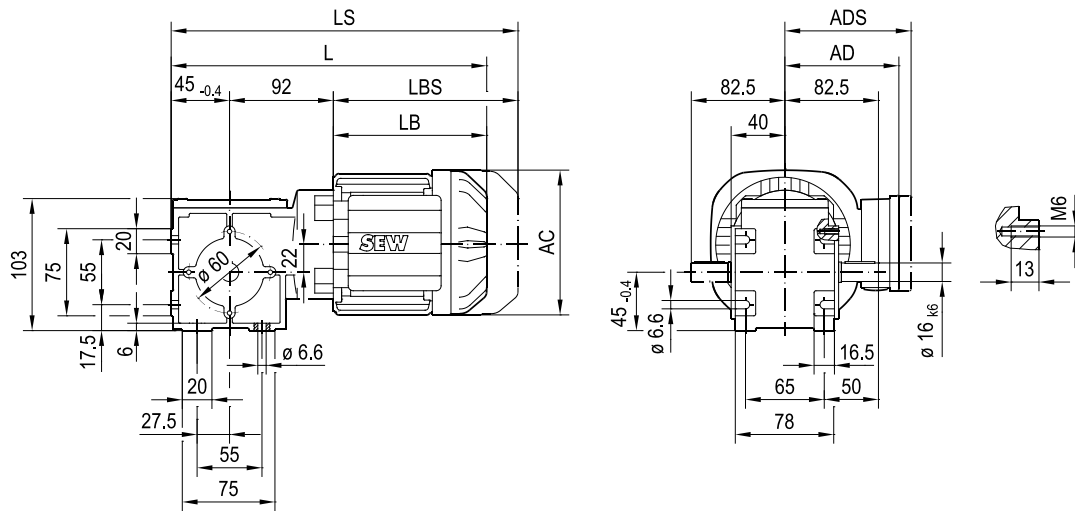
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<b>M<sub>a max</sub> = 600 Nm</b>									
<b>n<sub>a</sub></b> <b>min<sup>-1</sup></b>	<b>i</b>	<b>F<sub>Ra</sub><sup>1)</sup></b> <b>N</b>					<b>m</b> <b>kg</b>		
1.6	888	-1	WA	59R37	DRN	63M4	31	1004	
1.8	771	-1	WAF	59R37	DRN	63M4	33	1004	
2.0	674	-1	WF	59R37	DRN	63M4	34	1004	
2.4	588	-1	WA	59R37	DRN	71MS4	31	1004	
2.7	513	-1	WAF	59R37	DRN	71MS4	33	1004	
3.1	447	-1	WF	59R37	DRN	71MS4	34	1004	
3.5	398	-1	WA	59R37	DRN	71M4	33	1004	
4.0	350	-1	WAF	59R37	DRN	71M4	34	1004	
4.5	311	-1	WF	59R37	DRN	71M4	35	1004	
5.3	271	-1	WA	59R37	DRN	80MK4	35	1004	
6.0	240	-1	WAF	59R37	DRN	80MK4	37	1004	
			WF	59R37	DRN	80MK4	38	1004	

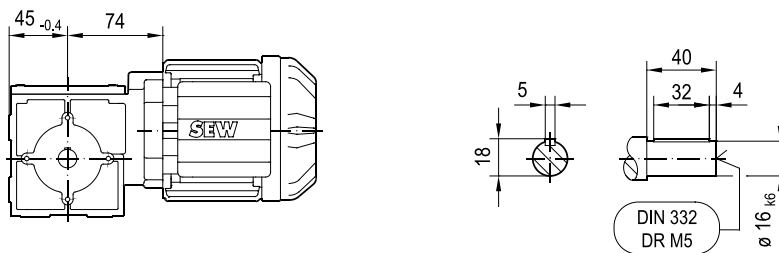
12.5 W..DRN.. dimension sheets in mm

20 001 03 14

**W10..**



**DR2S56..**

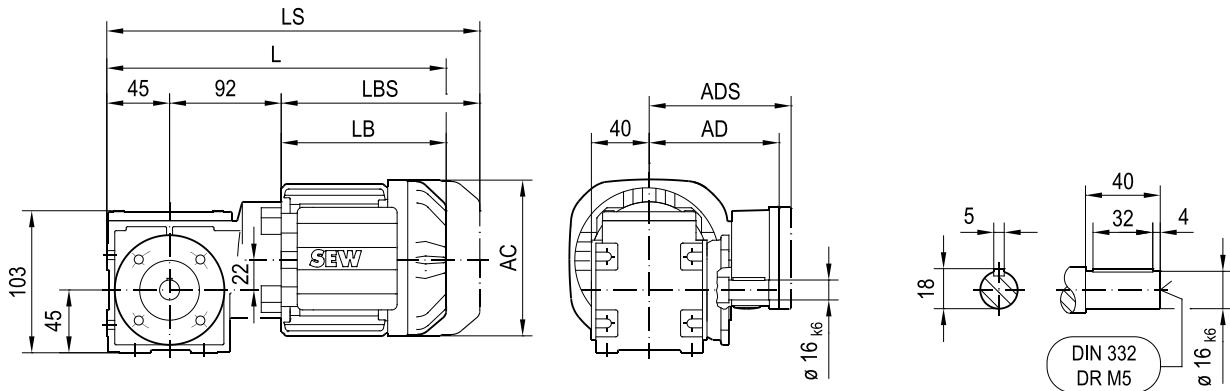


(\rightarrow 7.3)	DR2S	DRN						
	56..	63MS	63M	71MS	71M			
AC	109	115	115	139	139			
AD	87	98	98	118	118			
ADS	87	98	98	129	129			
L	255	285	299	301	321			
LS	291	341	355	368	388			
LB	136	148	162	164	184			
LBS	172	204	218	231	251			

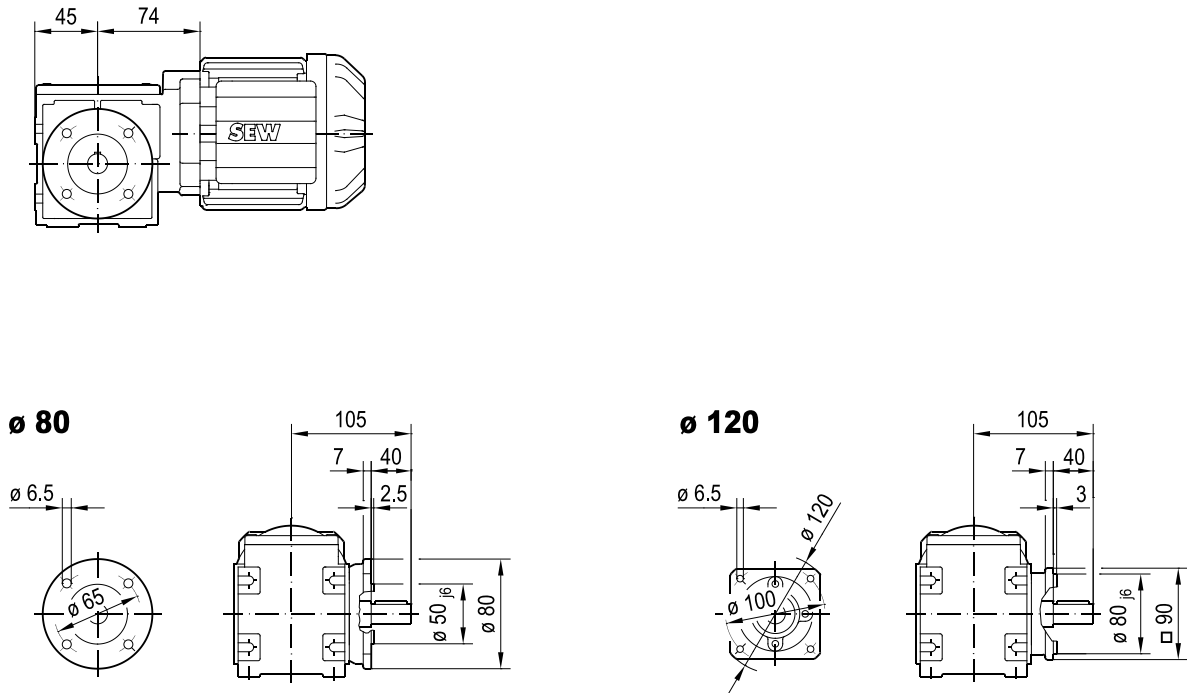
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### WF10..

20 002 03 14



### DR2S56..

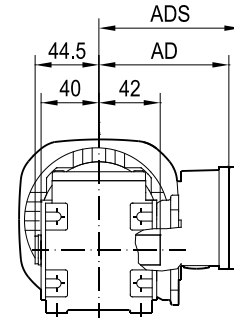
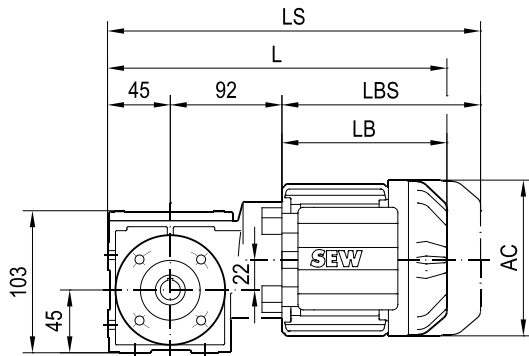


( $\rightarrow$ 7.3)	DR2S		DRN					
	56..	63MS	63M	71MS	71M			
AC	109	115	115	139	139			
AD	87	98	98	118	118			
ADS	87	98	98	129	129			
L	255	285	299	301	321			
LS	291	341	355	368	388			
LB	136	148	162	164	184			
LBS	172	204	218	231	251			

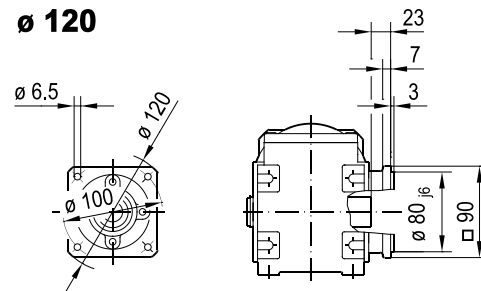
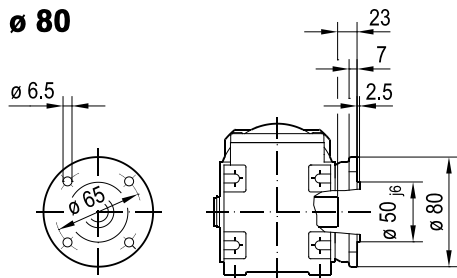
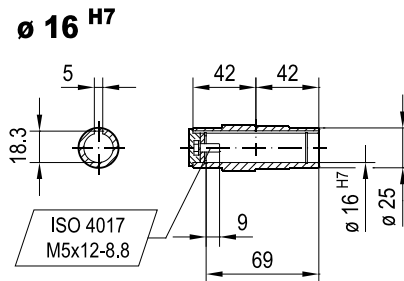
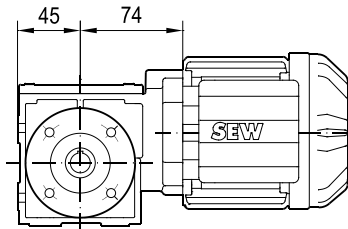


WAF10..

20 058 01 17



DR2S56..

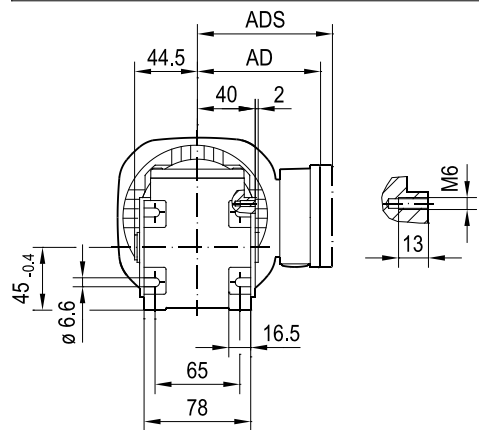
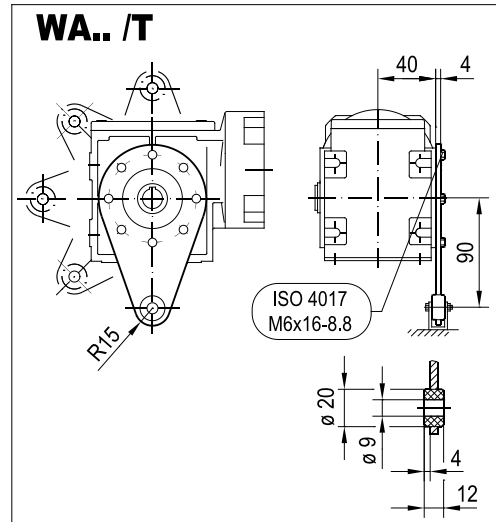
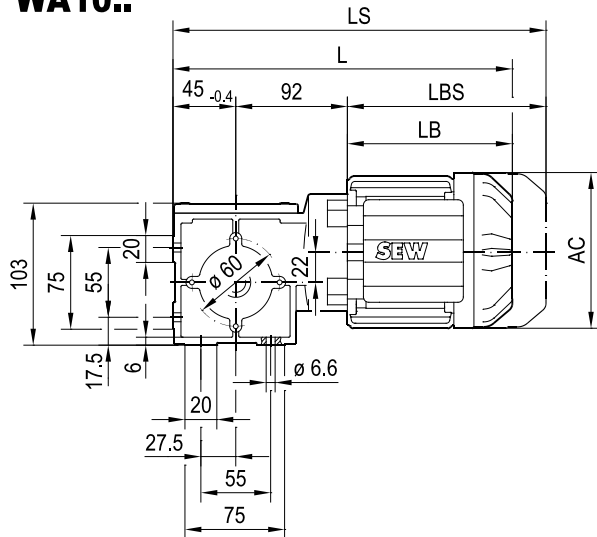


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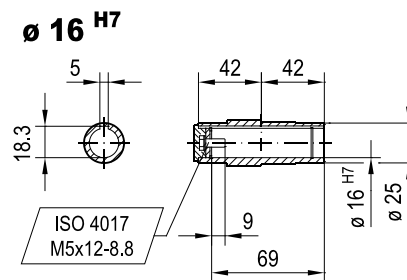
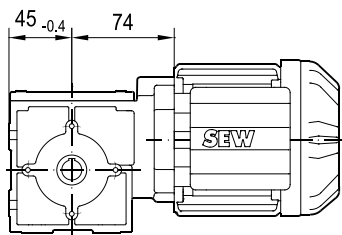
(-> 7.3)	DR2S		DRN					
	56..	63MS	63M	71MS	71M			
AC	109	115	115	139	139			
AD	87	98	98	118	118			
ADS	87	98	98	129	129			
L	255	285	299	301	321			
LS	291	341	355	368	388			
LB	136	148	162	164	184			
LBS	172	204	218	231	251			

20 003 04 14

### WA10..



### DR2S56..

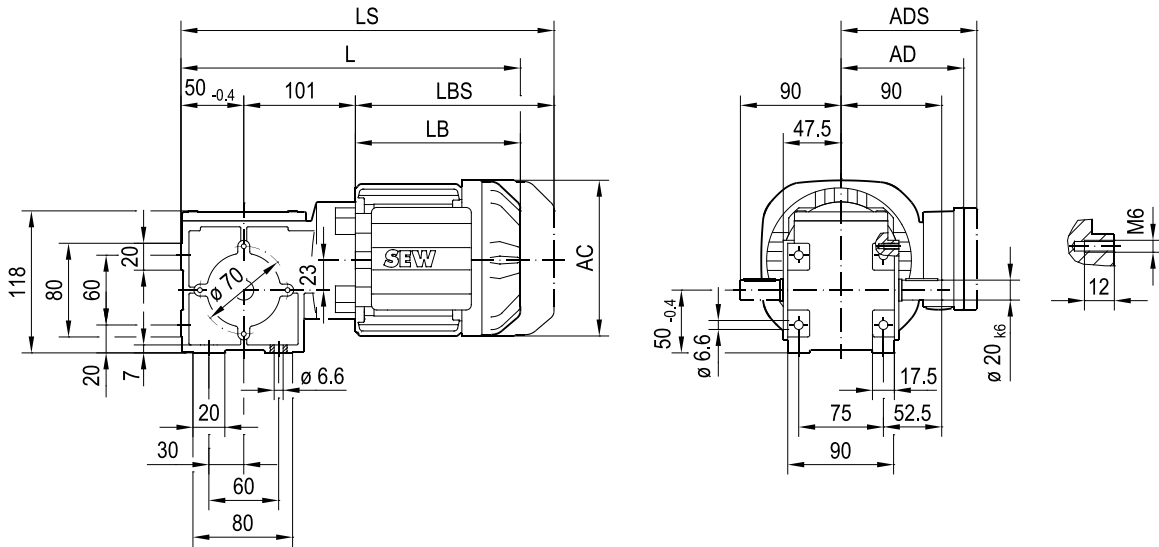


(> 7.3)	DR2S		DRN					
	56..	63MS	63M	71MS	71M			
AC	109	115	115	139	139			
AD	87	98	98	118	118			
ADS	87	98	98	129	129			
L	255	285	299	301	321			
LS	291	341	355	368	388			
LB	136	148	162	164	184			
LBS	172	204	218	231	251			

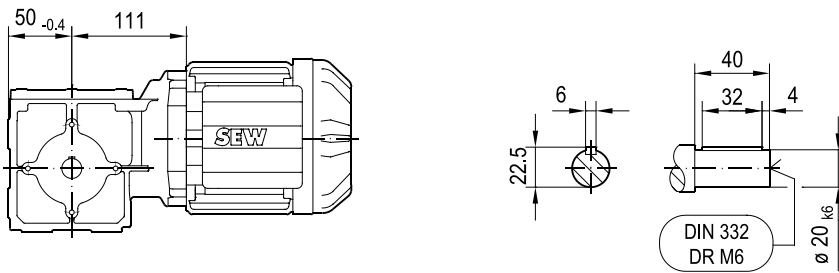
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**W20..**

20 004 01 14



**DRN80..**

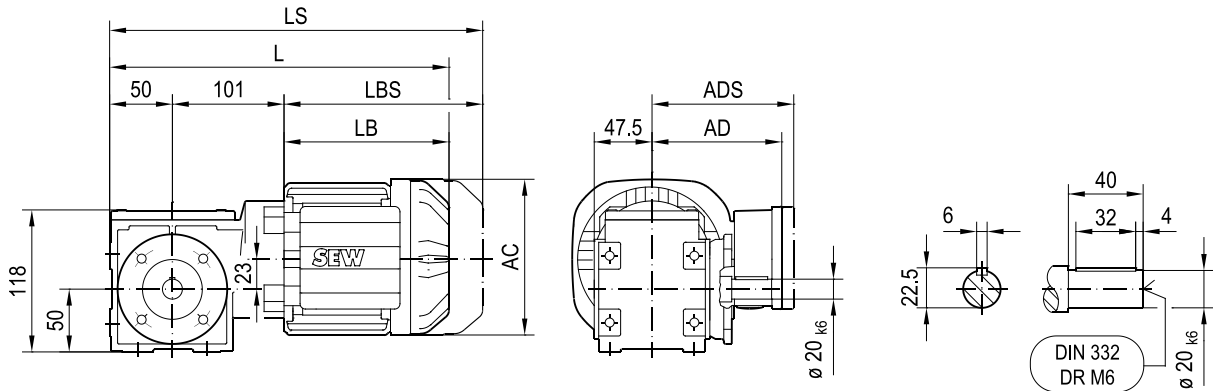


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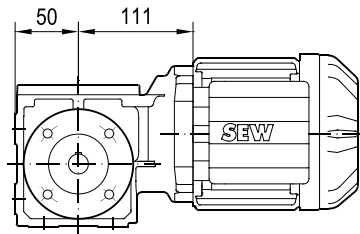
(→ 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80MS		
AC	115	115	139	139	156	156		
AD	98	98	118	118	128	128		
ADS	98	98	129	129	139	139		
L	299	313	315	335	350	368		
LS	355	369	382	402	431	449		
LB	148	162	164	184	189	207		
LBS	204	218	231	251	270	288		

### WF20..

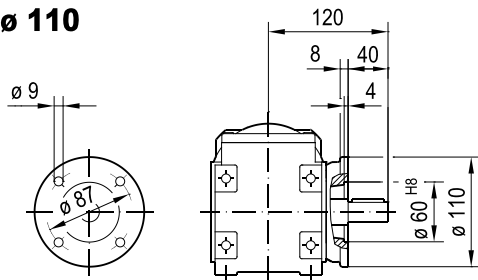
20 005 02 14



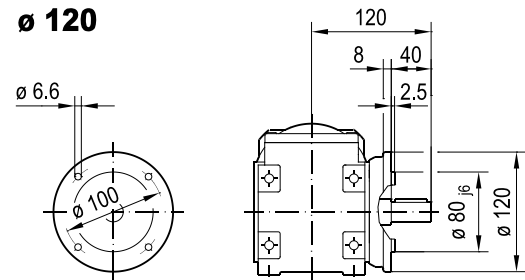
### DRN80..



#### ø 110



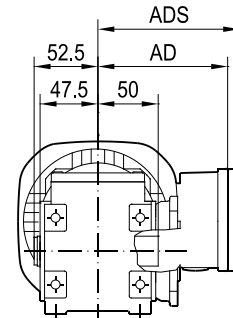
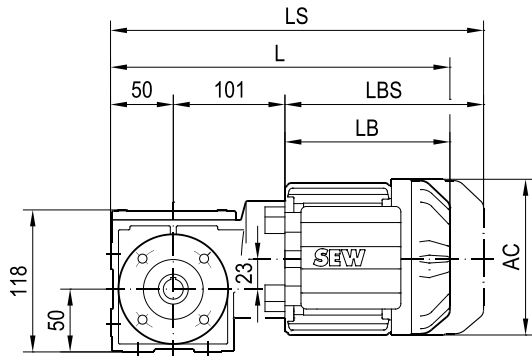
#### ø 120



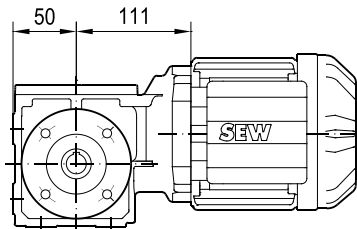
(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80MS		
AC	115	115	139	139	156	156		
AD	98	98	118	118	128	128		
ADS	98	98	129	129	139	139		
L	299	313	315	335	350	368		
LS	355	369	382	402	431	449		
LB	148	162	164	184	189	207		
LBS	204	218	231	251	270	288		

WAF20..

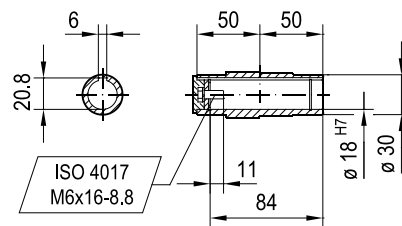
20 059 00 17



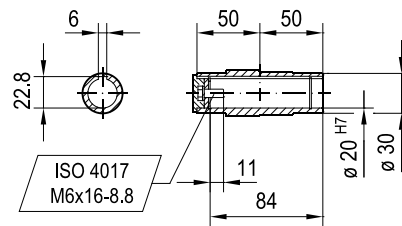
DRN80..



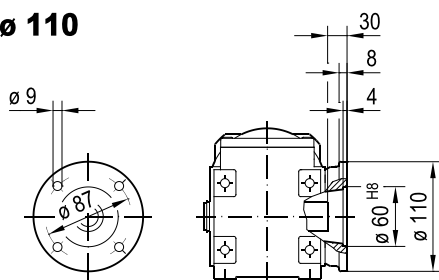
∅ 18 H7



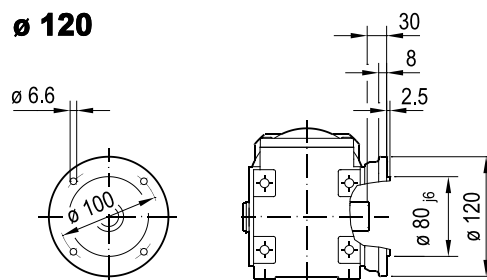
∅ 20 H7



∅ 110



∅ 120

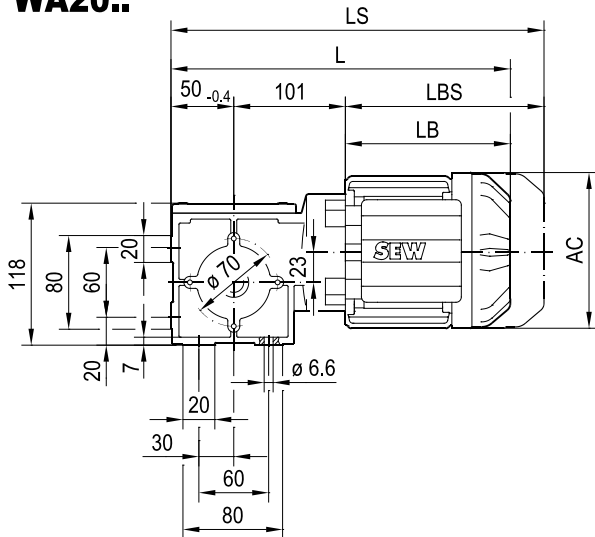


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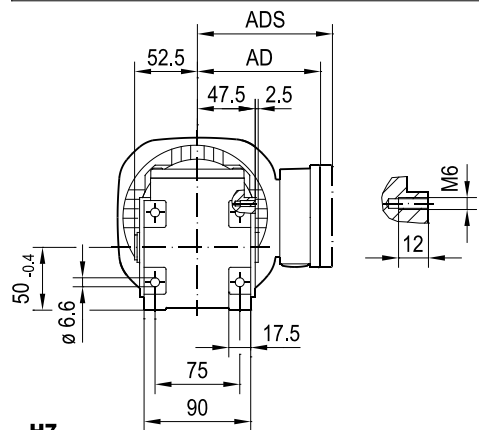
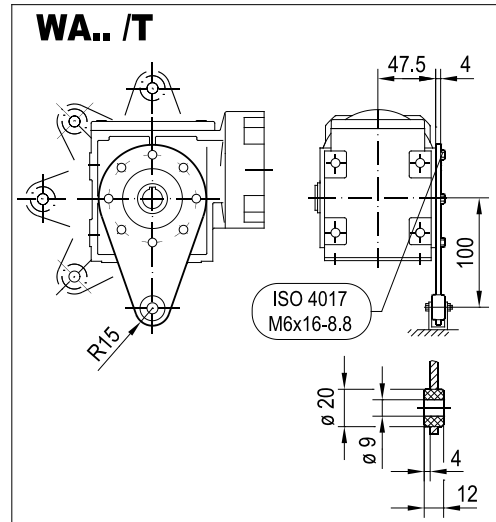
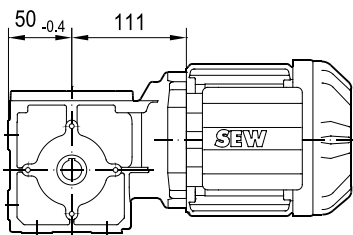
(> 7.3)	DRN						
	63MS	63M	71MS	71M	80MK	80MS	
AC	115	115	139	139	156	156	
AD	98	98	118	118	128	128	
ADS	98	98	129	129	139	139	
L	299	313	315	335	350	368	
LS	355	369	382	402	431	449	
LB	148	162	164	184	189	207	
LBS	204	218	231	251	270	288	

20 006 02 14

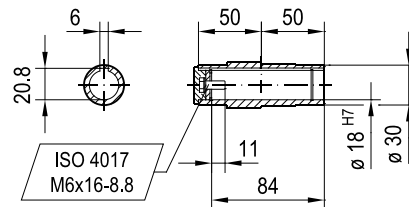
### WA20..



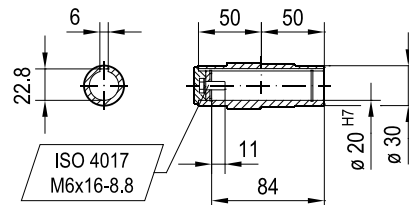
### DRN80..



### ø 18 H7



### ø 20 H7

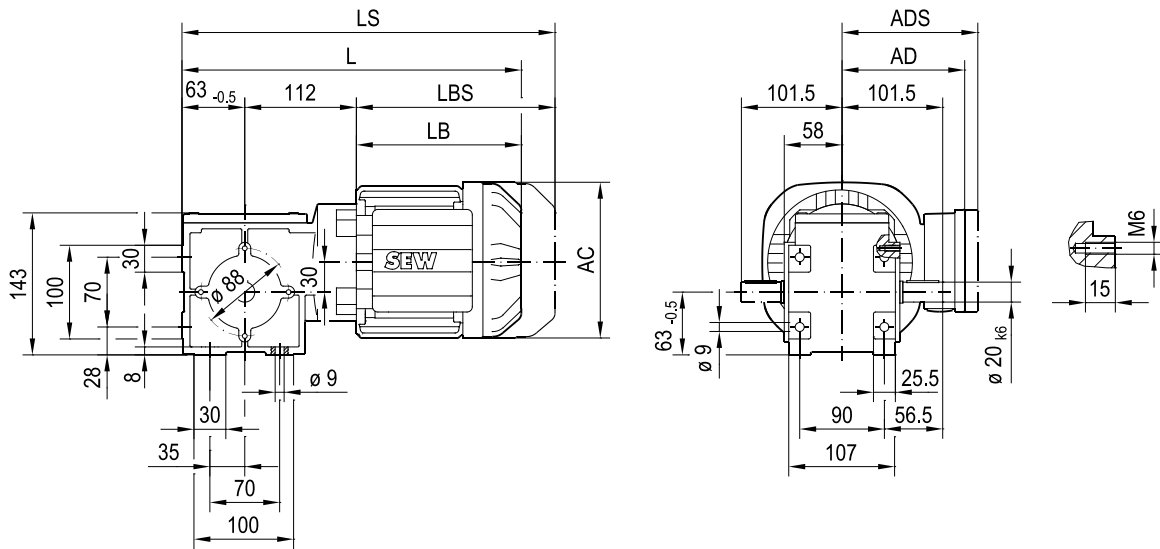


(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80MS		
AC	115	115	139	139	156	156		
AD	98	98	118	118	128	128		
ADS	98	98	129	129	139	139		
L	299	313	315	335	350	368		
LS	355	369	382	402	431	449		
LB	148	162	164	184	189	207		
LBS	204	218	231	251	270	288		

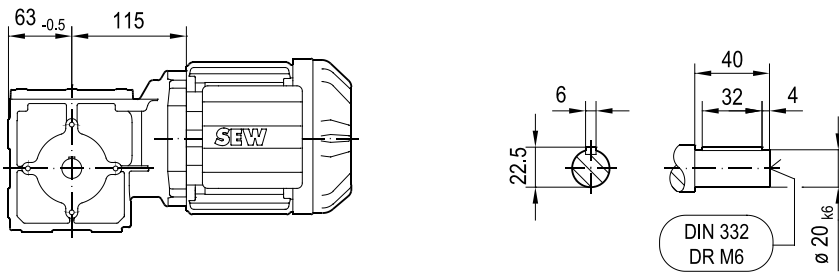
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20 007 00 14

**W30..**



**DRN80..**

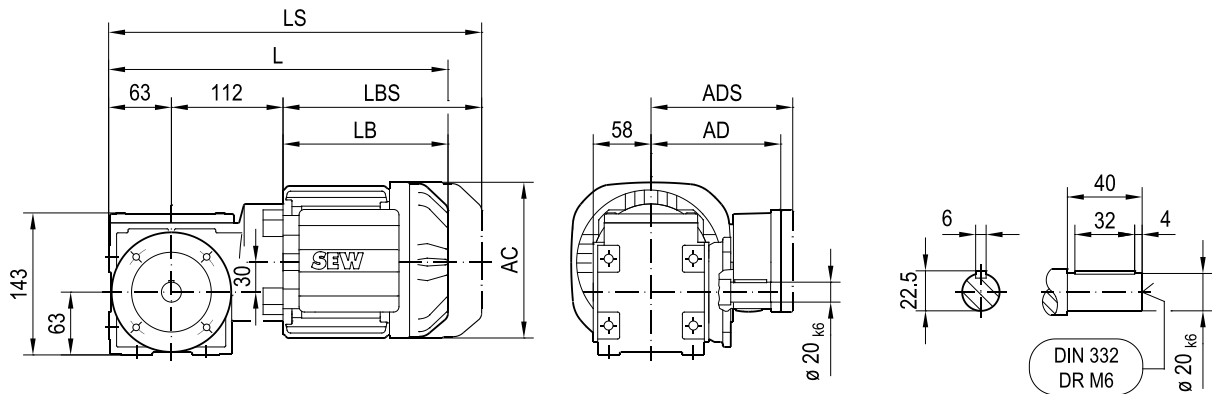


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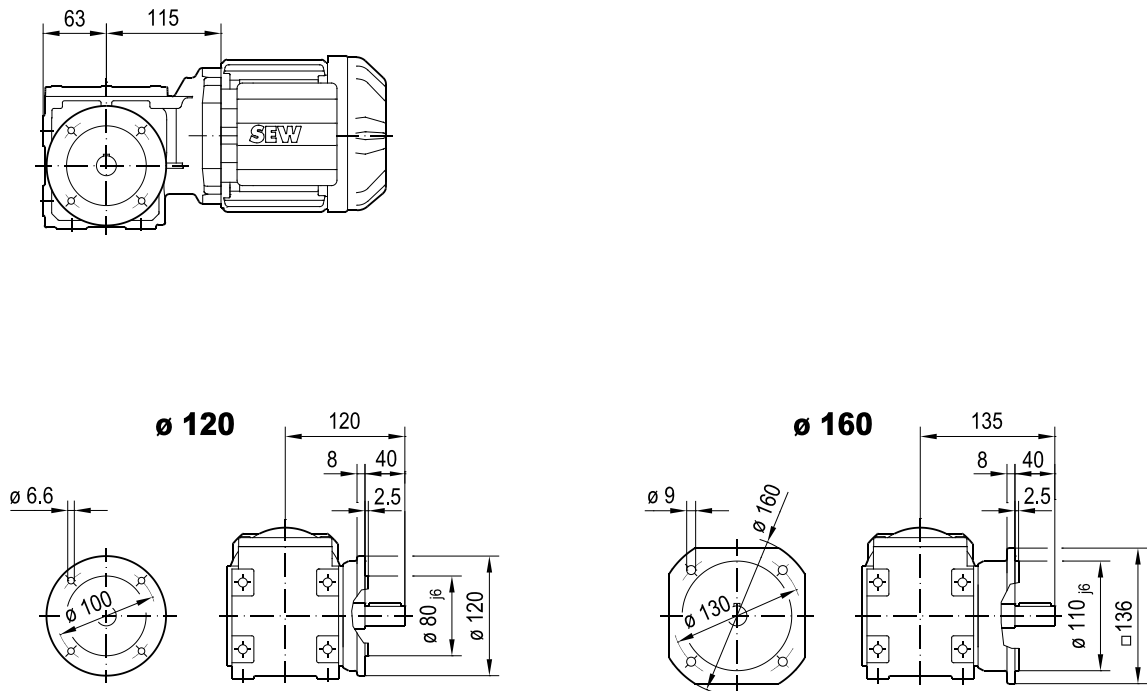
(→ 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80M		
AC	115	115	139	139	156	156		
AD	98	98	118	118	128	128		
ADS	98	98	129	129	139	139		
L	323	337	339	359	367	413		
LS	379	393	406	426	448	494		
LB	148	162	164	184	189	235		
LBS	204	218	231	251	270	316		

### WF30..

20 008 01 14



### DRN80..

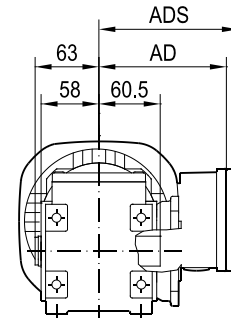
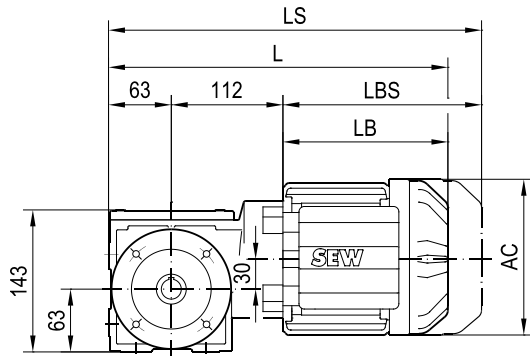


(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80M		
AC	115	115	139	139	156	156		
AD	98	98	118	118	128	128		
ADS	98	98	129	129	139	139		
L	323	337	339	359	367	413		
LS	379	393	406	426	448	494		
LB	148	162	164	184	189	235		
LBS	204	218	231	251	270	316		

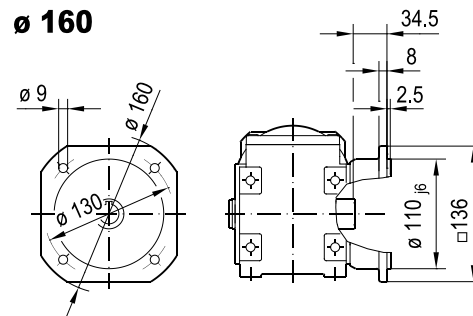
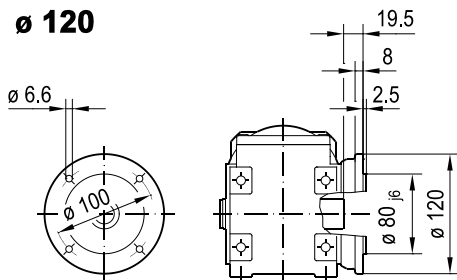
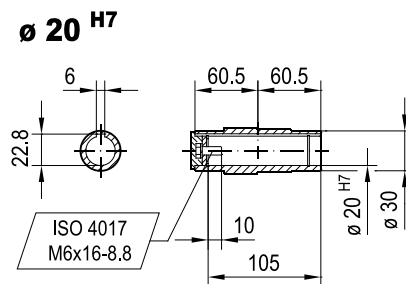
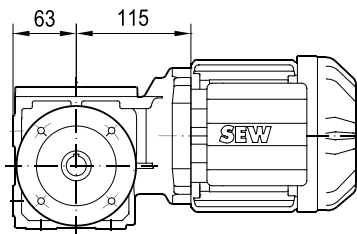


WAF30..

20 009 01 14



DRN80..



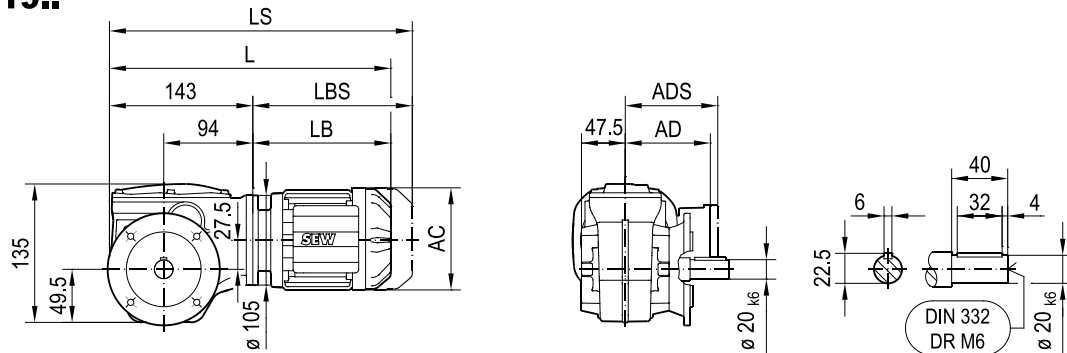
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(-> 7.3)	DRN							
	63MS	63M	71MS	71M	80MK	80M		
AC	115	115	139	139	156	156		
AD	98	98	118	118	128	128		
ADS	98	98	129	129	139	139		
L	323	337	339	359	367	413		
LS	379	393	406	426	448	494		
LB	148	162	164	184	189	235		
LBS	204	218	231	251	270	316		

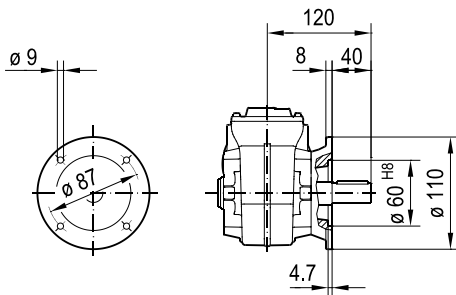


20 002 00 21

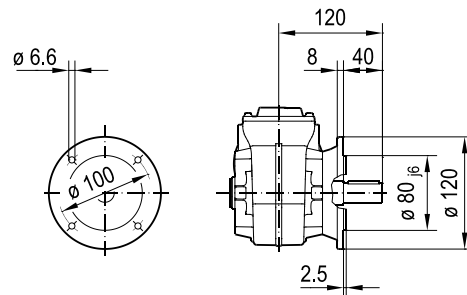
**WF19..**



**∅ 110**

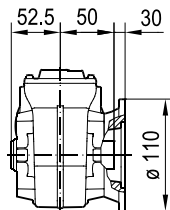


**∅ 120**

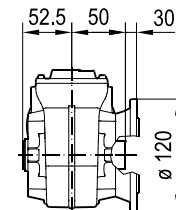


**WAF19..**

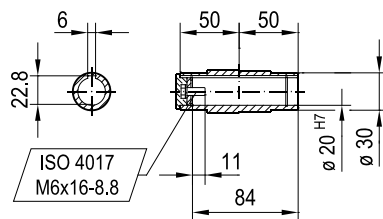
**∅ 110**



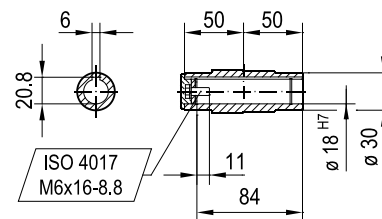
**∅ 120**



**∅ 20 H7**



**∅ 18 H7**

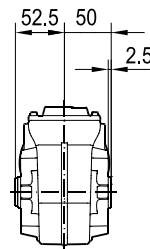
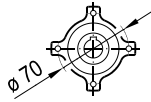
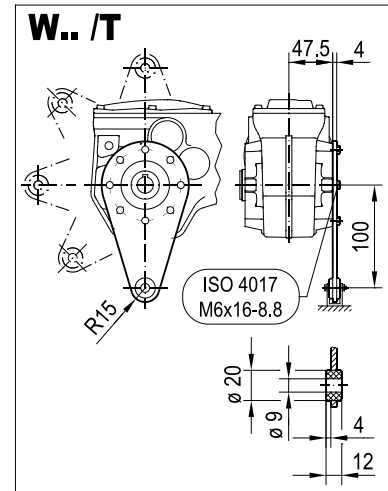
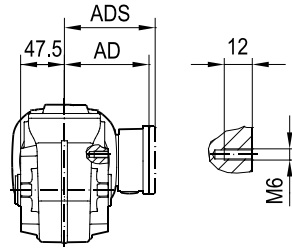
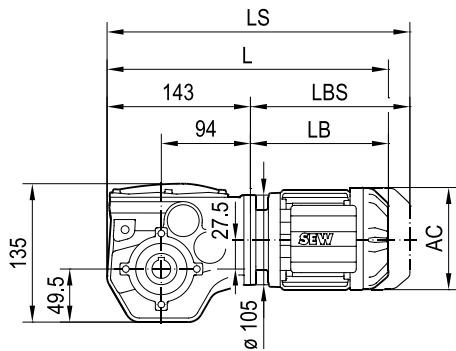


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(-> 7.3)	DR2S				DRN				
	56..	63MS	63M	71MS	71M	80MK	80MS	80M	
AC	109	115	115	139	139	156	156	156	
AD	87	98	98	118	118	128	128	128	
ADS	87	98	98	129	129	139	139	139	
L	303	333	347	349	369	380	392	426	
LS	339	389	403	416	436	461	473	507	
LB	160	190	204	206	226	237	249	283	
LBS	196	246	260	273	293	318	330	364	

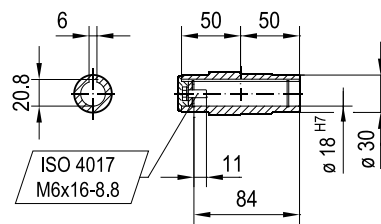
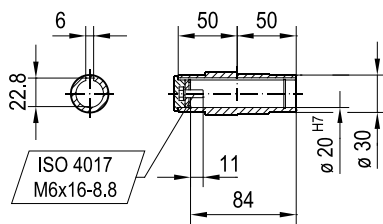
20 001 01 21

### WA19..



∅ 20 H7

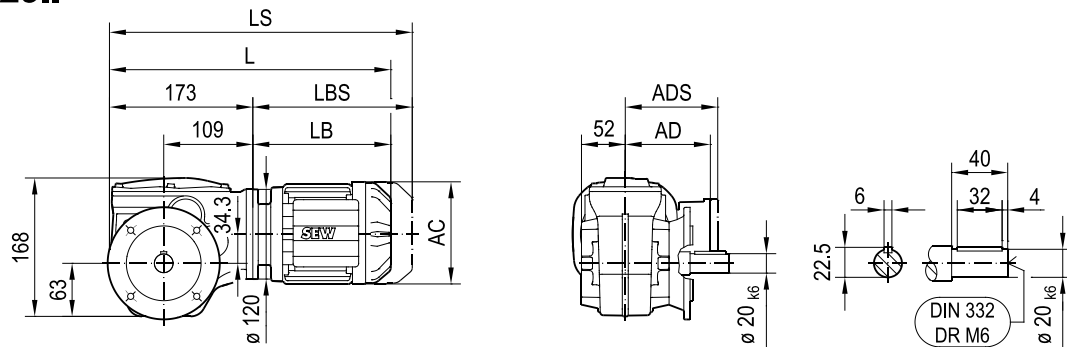
∅ 18 H7



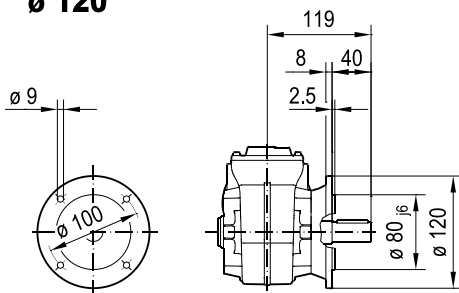
(-> 7.3)	DR2S		DRN						
	56..	63MS	63M	71MS	71M	80MK	80MS	80M	
AC	109	115	115	139	139	156	156	156	
AD	87	98	98	118	118	128	128	128	
ADS	87	98	98	129	129	139	139	139	
L	303	333	347	349	369	380	392	426	
LS	339	389	403	416	436	461	473	507	
LB	160	190	204	206	226	237	249	283	
LBS	196	246	260	273	293	318	330	364	

20 009 01 20

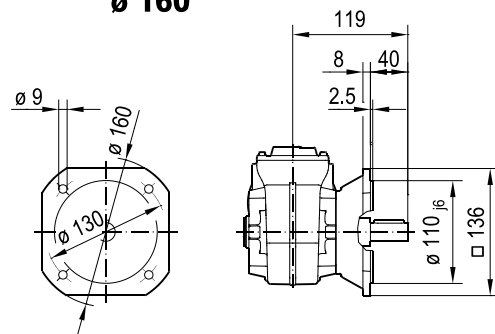
**WF29..**



**ø 120**

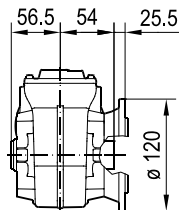


**ø 160**

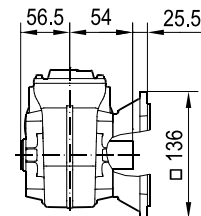


**WAF29..**

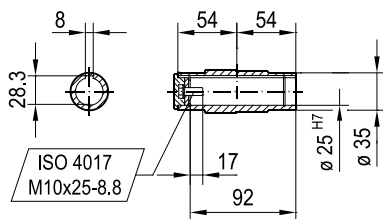
**ø 120**



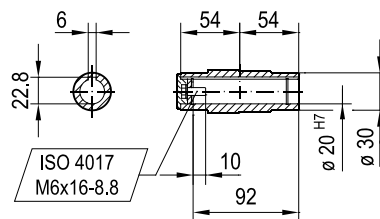
**ø 160**



**ø 25 H7**



**ø 20 H7**

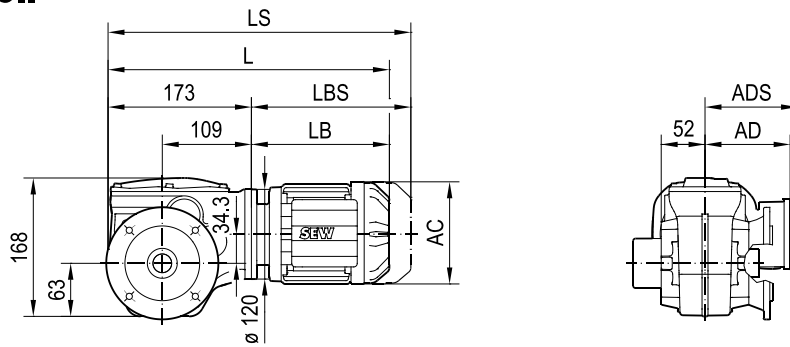


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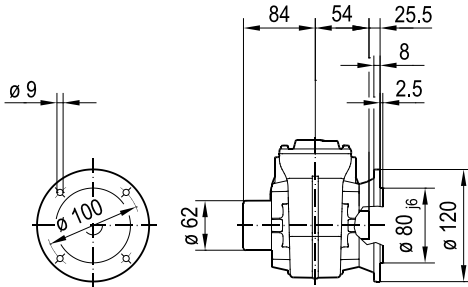
(-> 7.3)	DRN								
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	
AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	363	377	379	399	410	427	455	456	
LS	419	433	446	466	491	508	536	550	
LB	190	204	206	226	237	254	282	283	
LBS	246	260	273	293	318	335	363	377	

20 010 01 20

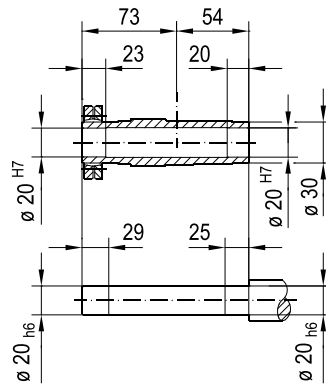
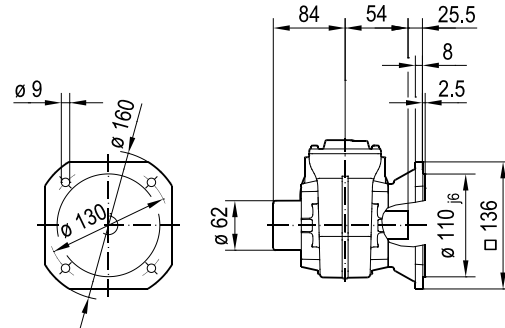
### WHF29..



#### ø 120



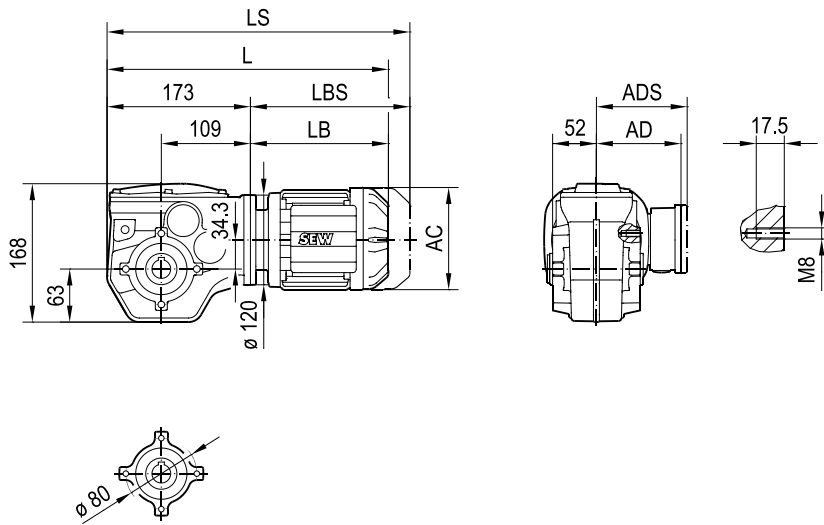
#### ø 160



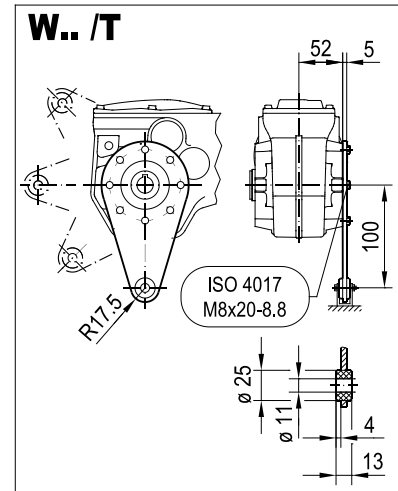
(-> 7.3)	DRN								
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	
AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	363	377	379	399	410	427	455	456	
LS	419	433	446	466	491	508	536	550	
LB	190	204	206	226	237	254	282	283	
LBS	246	260	273	293	318	335	363	377	

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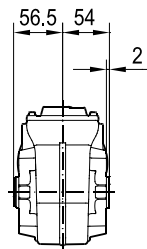
**WA29..**



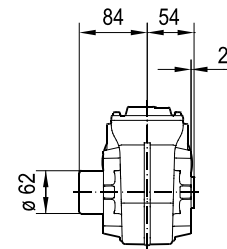
**20 011 03 20**



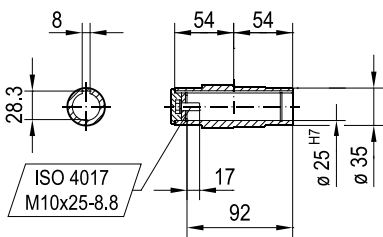
**WA29..**



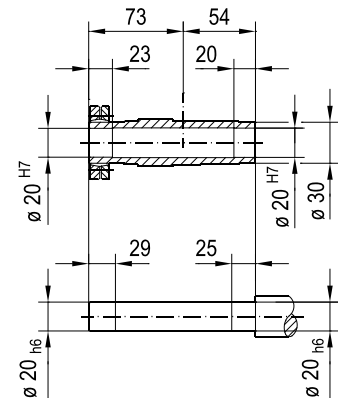
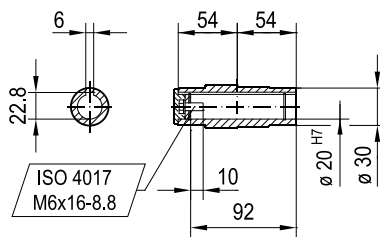
**WH29..**



**ø 25 H7**



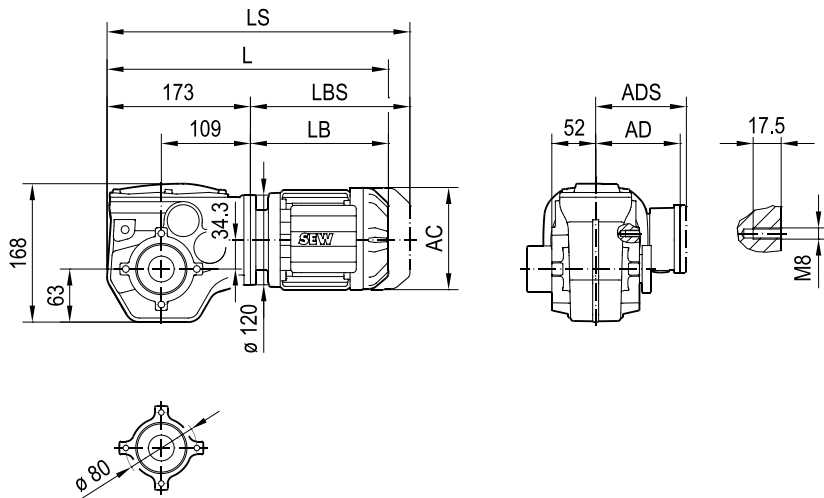
**ø 20 H7**



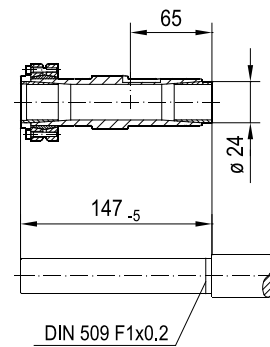
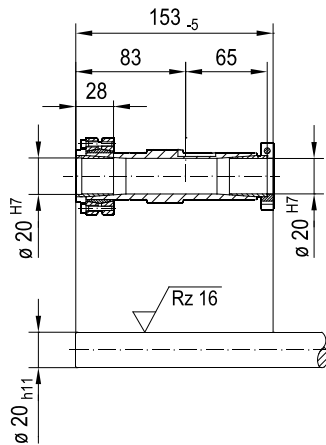
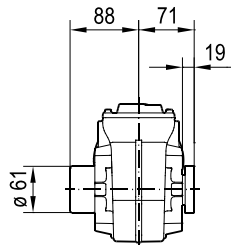
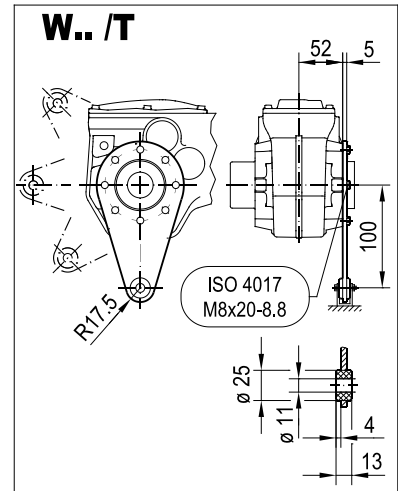
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(-> 7.3)	DRN								
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	
AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	363	377	379	399	410	427	455	456	
LS	419	433	446	466	491	508	536	550	
LB	190	204	206	226	237	254	282	283	
LBS	246	260	273	293	318	335	363	377	

### WT29..



### 20 012 02 20

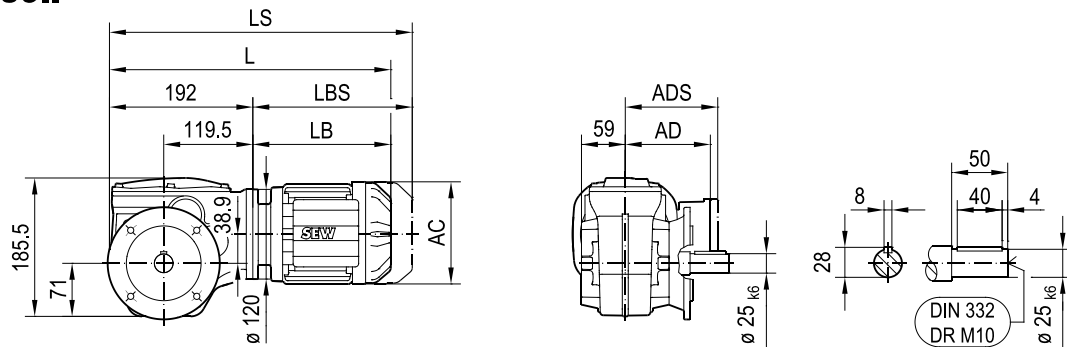


(-> 7.3)	DRN								
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	
AC	115	115	139	139	156	156	156	179	
AD	98	98	118	118	128	128	128	140	
ADS	98	98	129	129	139	139	139	150	
L	363	377	379	399	410	427	455	456	
LS	419	433	446	466	491	508	536	550	
LB	190	204	206	226	237	254	282	283	
LBS	246	260	273	293	318	335	363	377	

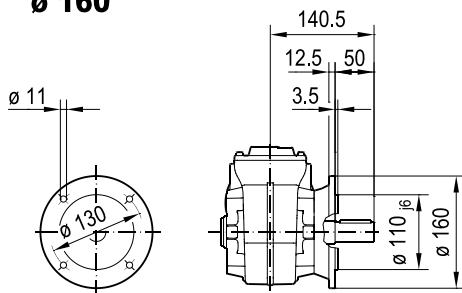


20 014 00 20

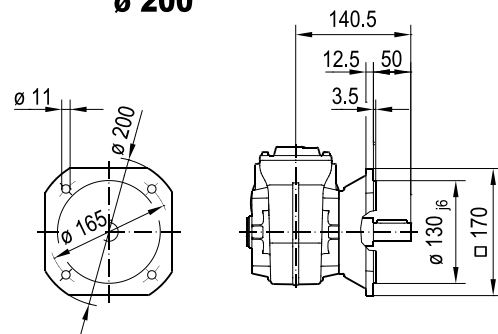
**WF39..**



**∅ 160**

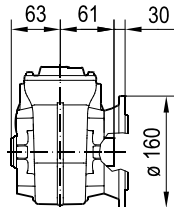


**∅ 200**

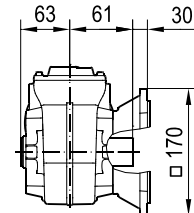


**WAF39..**

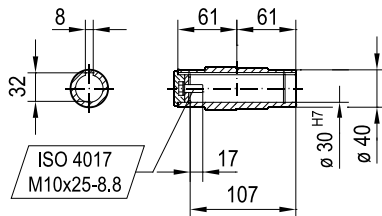
**∅ 160**



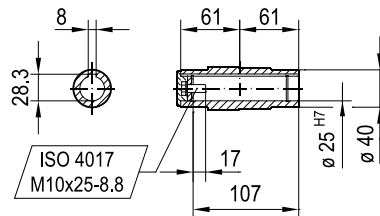
**∅ 200**



**∅ 30 H7  
DIN 6885-3**



**∅ 25 H7**

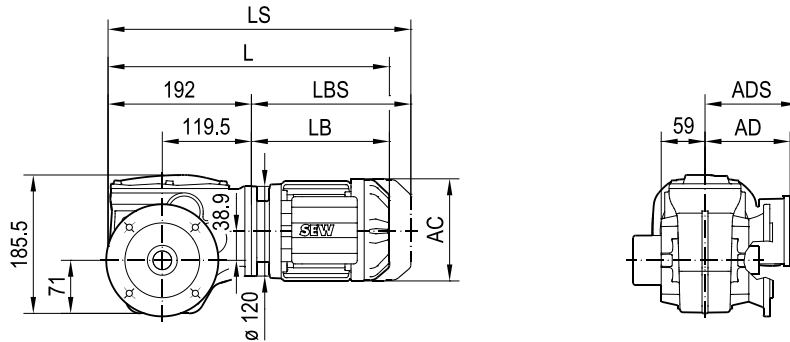


(-> 7.3)	DRN									
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	
AC	115	115	139	139	156	156	156	179	179	
AD	98	98	118	118	128	128	128	140	140	
ADS	98	98	129	129	139	139	139	150	150	
L	382	396	398	418	429	446	474	475	507	
LS	438	452	465	485	510	527	555	569	601	
LB	190	204	206	226	237	254	282	283	315	
LBS	246	260	273	293	318	335	363	377	409	

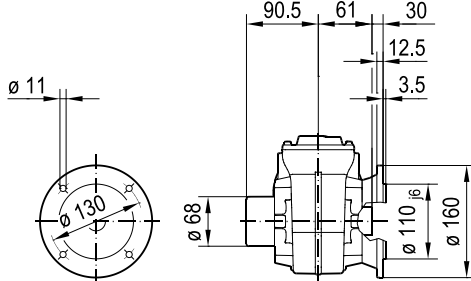
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20 015 00 20

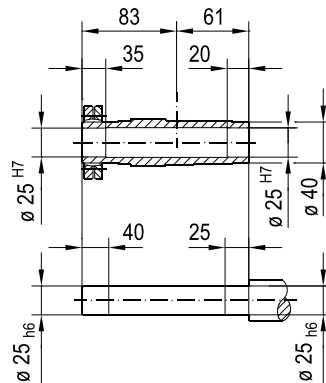
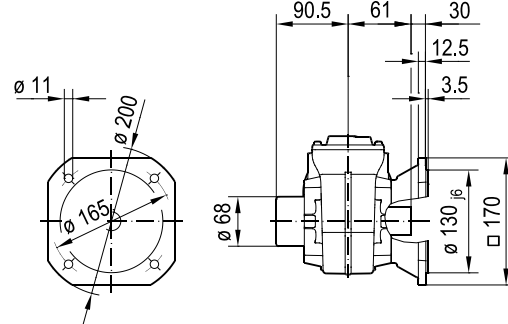
### WHF39..



#### ø 160



#### ø 200

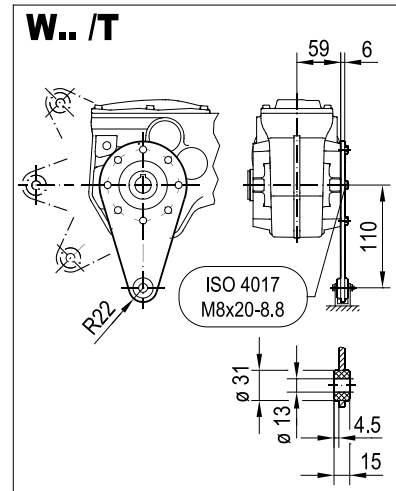
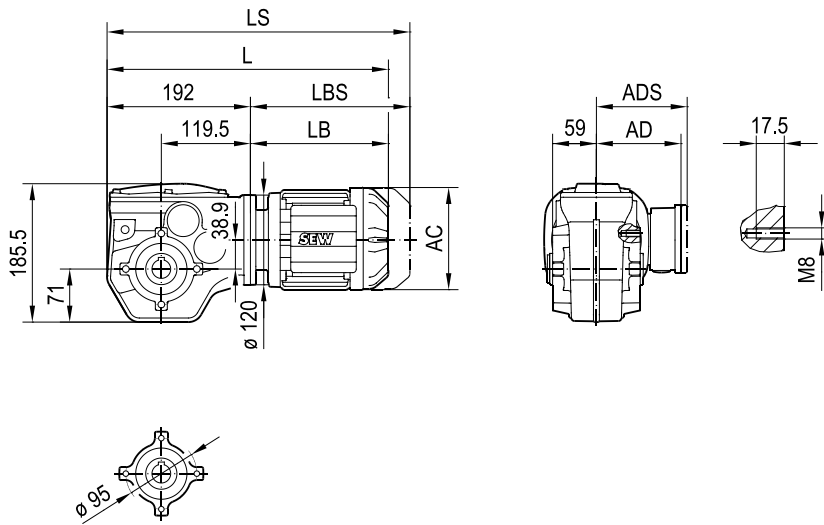


(-> 7.3)	DRN									
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	
AC	115	115	139	139	156	156	156	179	179	
AD	98	98	118	118	128	128	128	140	140	
ADS	98	98	129	129	139	139	139	150	150	
L	382	396	398	418	429	446	474	475	507	
LS	438	452	465	485	510	527	555	569	601	
LB	190	204	206	226	237	254	282	283	315	
LBS	246	260	273	293	318	335	363	377	409	

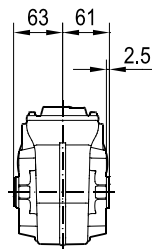
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20 016 03 20

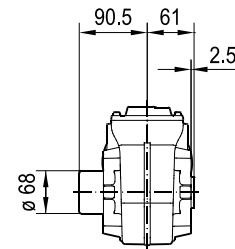
**WA39..**



**WA39..**

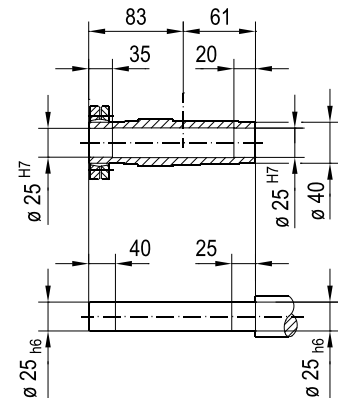
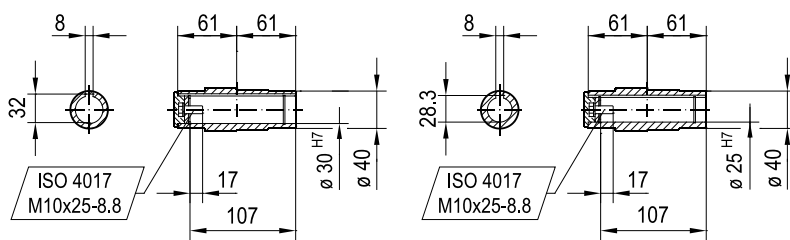


**WH39..**



**∅ 30 H7**  
**DIN 6885-3**

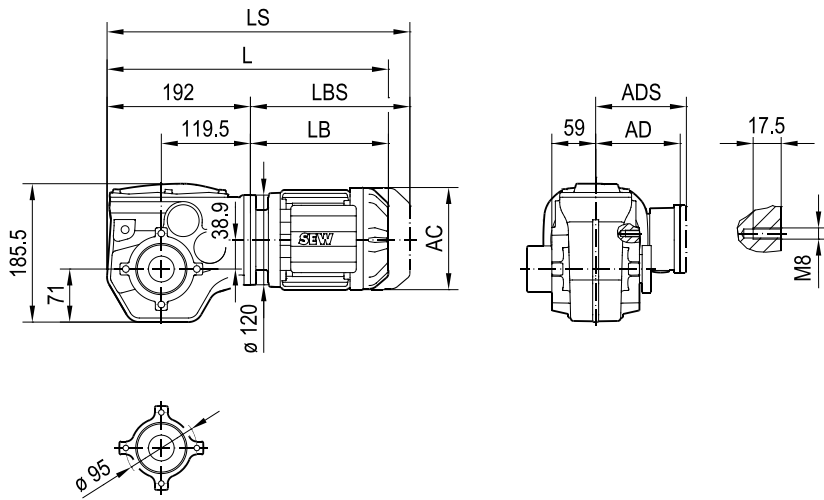
**∅ 25 H7**



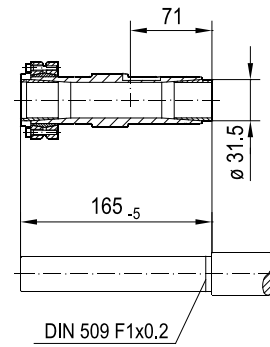
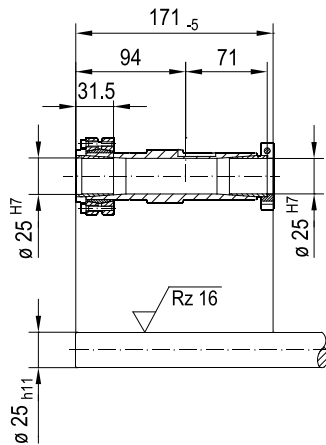
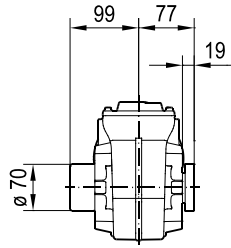
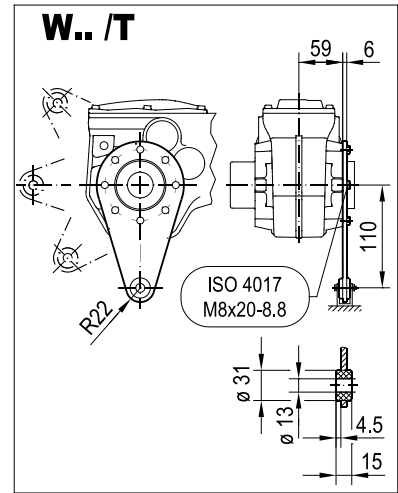
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(-> 7.3)	DRN									
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	
AC	115	115	139	139	156	156	156	179	179	
AD	98	98	118	118	128	128	128	140	140	
ADS	98	98	129	129	139	139	139	150	150	
L	382	396	398	418	429	446	474	475	507	
LS	438	452	465	485	510	527	555	569	601	
LB	190	204	206	226	237	254	282	283	315	
LBS	246	260	273	293	318	335	363	377	409	

### WT39..



### 20 017 02 20

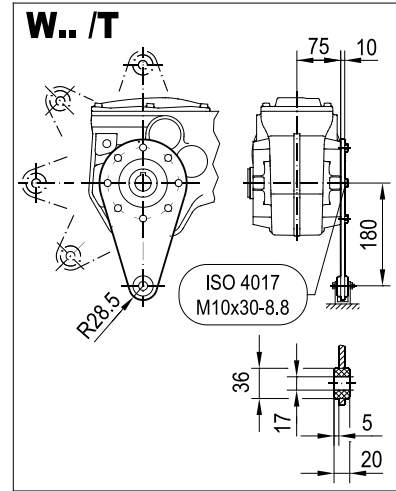
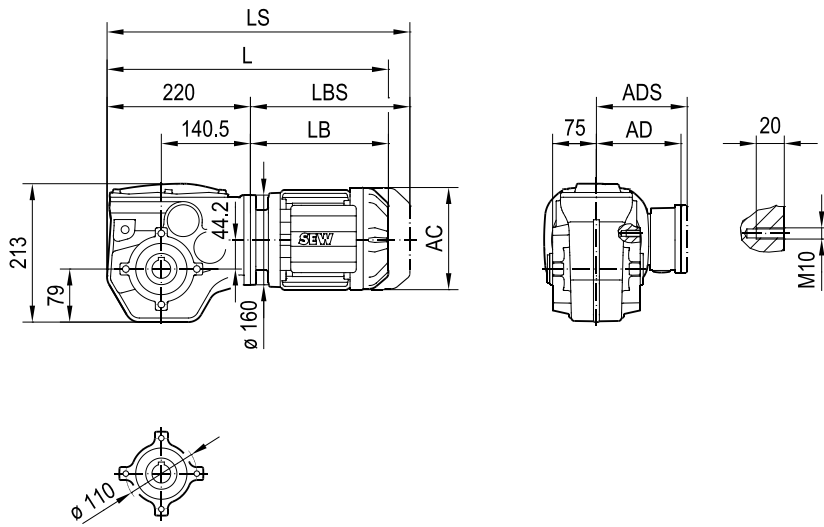


(-> 7.3)	DRN									
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	
AC	115	115	139	139	156	156	156	179	179	
AD	98	98	118	118	128	128	128	140	140	
ADS	98	98	129	129	139	139	139	150	150	
L	382	396	398	418	429	446	474	475	507	
LS	438	452	465	485	510	527	555	569	601	
LB	190	204	206	226	237	254	282	283	315	
LBS	246	260	273	293	318	335	363	377	409	

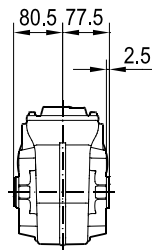


20 003 01 21

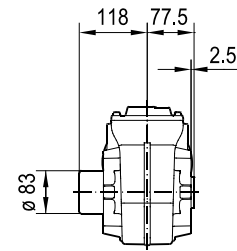
### WA49..



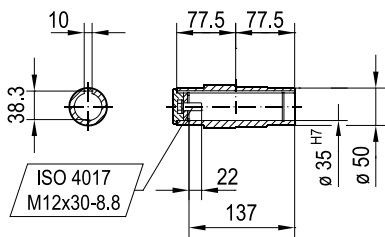
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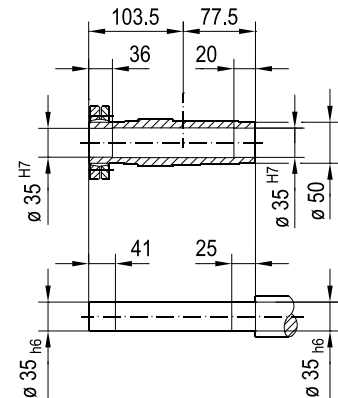
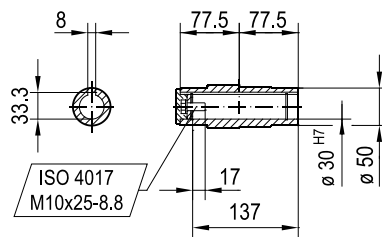
### WH49..



### Ø 35 H7



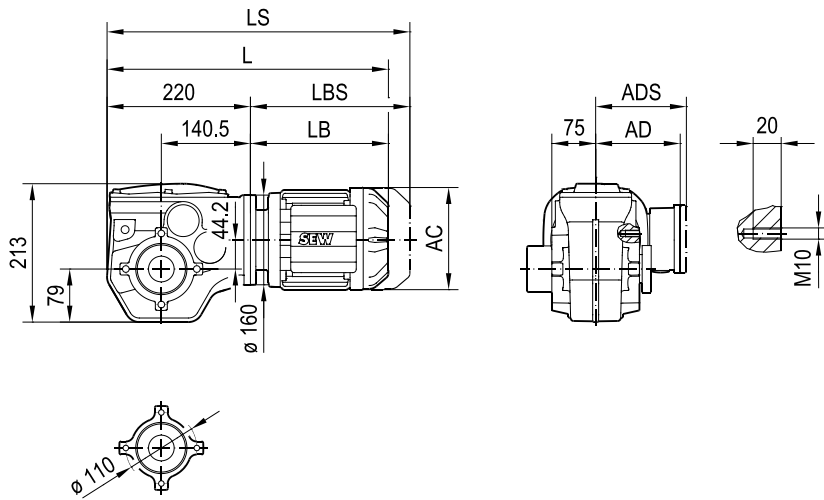
### Ø 30 H7



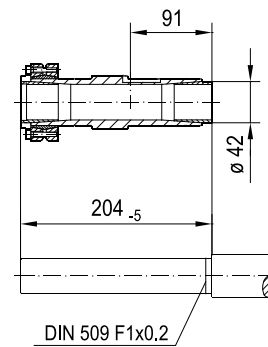
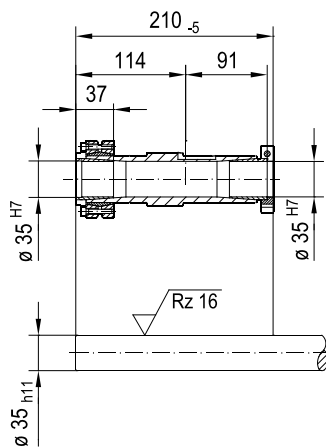
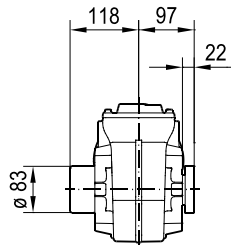
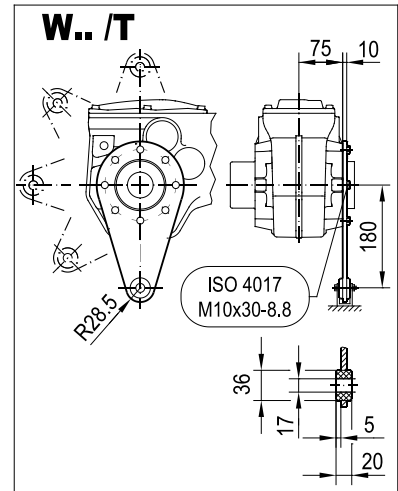
(-> 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	404	418	419	439	450	467	495	497	529	525	575
LS	460	474	487	507	531	548	576	590	622	619	669
LB	184	198	199	219	230	247	275	277	309	305	355
LBS	240	254	267	287	311	328	356	370	402	399	449

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**WT49..**



**20 005 00 21**

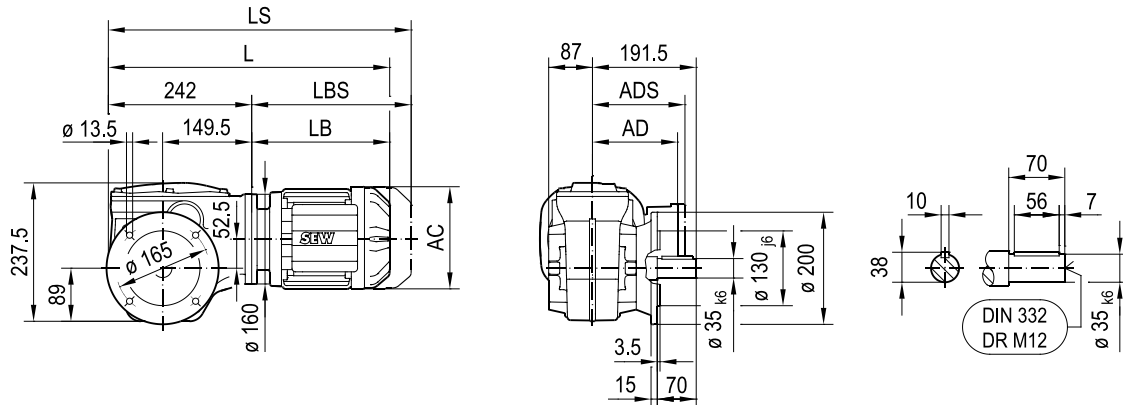


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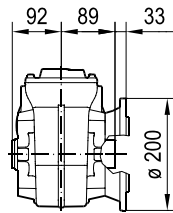
(→ 7.3)	DRN										
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM
AC	115	115	139	139	156	156	156	179	179	197	197
AD	98	98	118	118	128	128	128	140	140	157	157
ADS	98	98	129	129	139	139	139	150	150	158	158
L	404	418	419	439	450	467	495	497	529	525	575
LS	460	474	487	507	531	548	576	590	622	619	669
LB	184	198	199	219	230	247	275	277	309	305	355
LBS	240	254	267	287	311	328	356	370	402	399	449

20 001 01 22

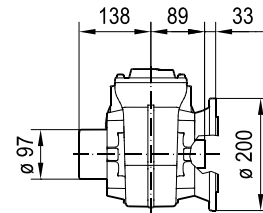
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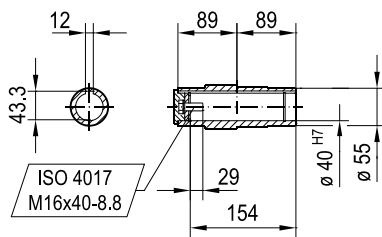
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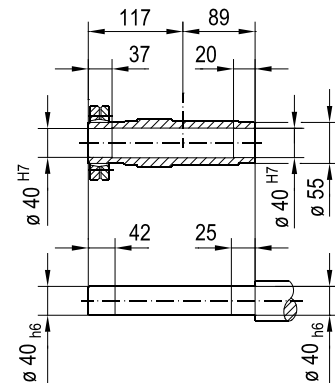
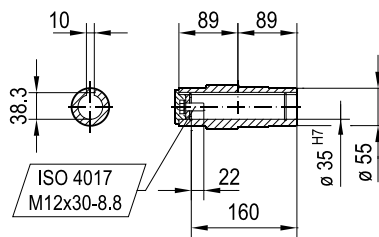
### WHF59..



### $\phi 40$ H7



### $\phi 35$ H7



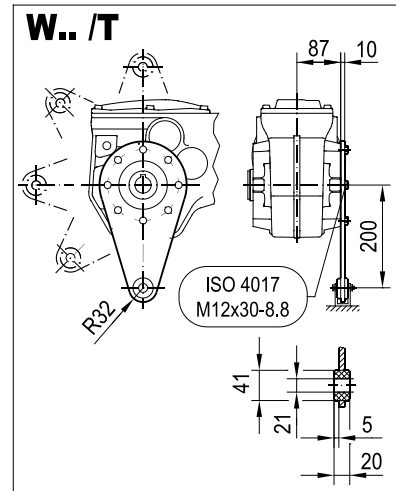
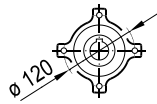
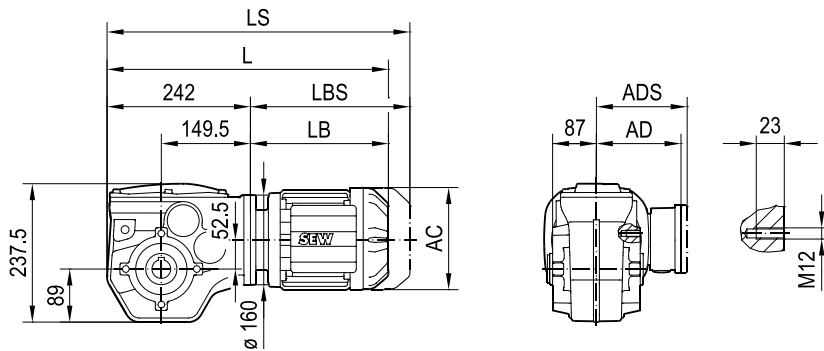
(\rightarrow 7.3)	DRN											
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M
AC	115	115	139	139	156	156	156	179	179	197	197	221
AD	98	98	118	118	128	128	128	140	140	157	157	170
ADS	98	98	129	129	139	139	139	150	150	158	158	172
L	426	440	441	461	472	489	517	519	551	547	597	628
LS	482	496	509	529	553	570	598	612	644	641	691	740
LB	184	198	199	219	230	247	275	277	309	305	355	386
LBS	240	254	267	287	311	328	356	370	402	399	449	498

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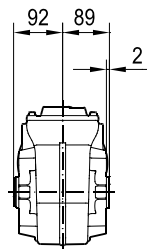


20 002 01 22

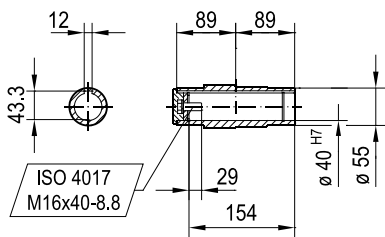
**WA59..**



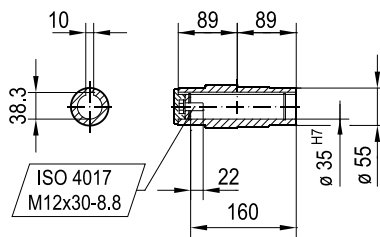
**WA59..**



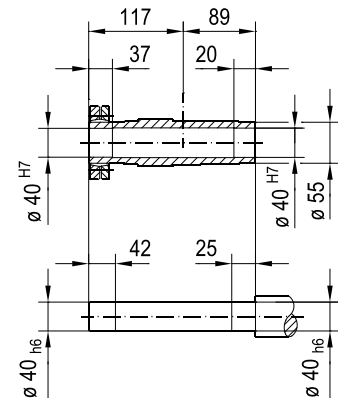
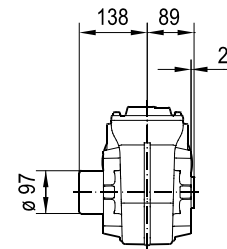
**∅ 40 H7**



**∅ 35 H7**



**WH59..**

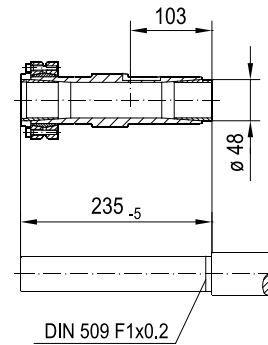
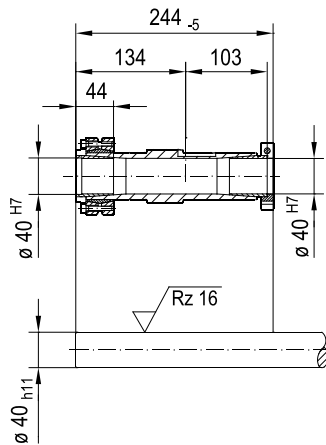
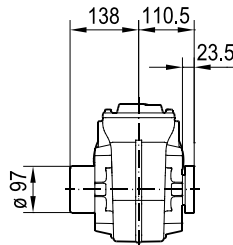
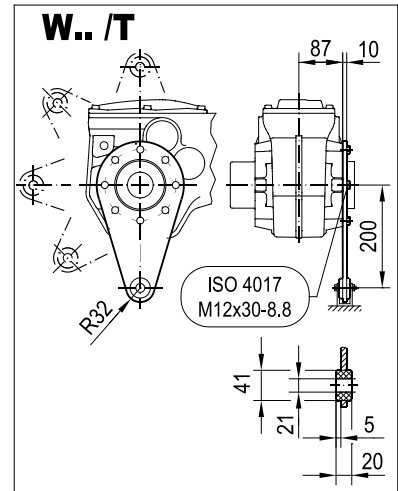
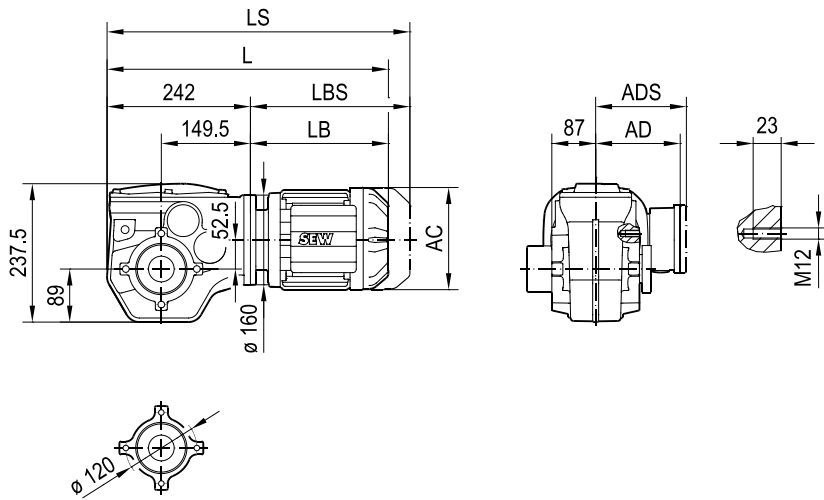


(-> 7.3)	DRN											
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M
AC	115	115	139	139	156	156	156	179	179	197	197	221
AD	98	98	118	118	128	128	128	140	140	157	157	170
ADS	98	98	129	129	139	139	139	150	150	158	158	172
L	426	440	441	461	472	489	517	519	551	547	597	628
LS	482	496	509	529	553	570	598	612	644	641	691	740
LB	184	198	199	219	230	247	275	277	309	305	355	386
LBS	240	254	267	287	311	328	356	370	402	399	449	498

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### WT59..

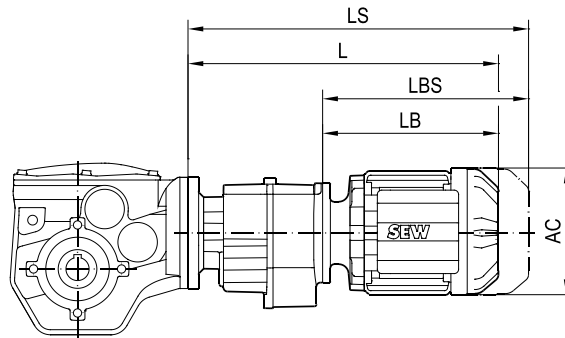


(-> 7.3)	DRN											
	63MS	63M	71MS	71M	80MK	80MS	80M	90S	90L	100LS	100L/LM	112M
AC	115	115	139	139	156	156	156	179	179	197	197	221
AD	98	98	118	118	128	128	128	140	140	157	157	170
ADS	98	98	129	129	139	139	139	150	150	158	158	172
L	426	440	441	461	472	489	517	519	551	547	597	628
LS	482	496	509	529	553	570	598	612	644	641	691	740
LB	184	198	199	219	230	247	275	277	309	305	355	386
LBS	240	254	267	287	311	328	356	370	402	399	449	498

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12.6 W..R..DRN.. dimension sheets in mm

20 049 01 21



(→ 7.3)	AC	L	LS	LB	LBS
W..29R17 DR2S56..	109	293	329	160	196
W..29R17 DRN63MS	115	323	379	190	246
W..39R17 DR2S56..	109	293	329	160	196
W..39R17 DRN63MS	115	323	379	190	246
W..39R17 DRN63M	115	337	393	204	260
W..49R17 DR2S56..	109	293	329	160	196
W..49R17 DRN63MS	115	323	379	190	246
W..49R17 DRN63M	115	337	393	204	260
W..49R17 DRN71MS	139	339	406	206	273
W..49R17 DRN71M	139	359	426	226	293
W..49R17 DRN80MK	156	370	451	237	318
W..59R37 DRN63MS	115	355	411	190	246
W..59R37 DRN63M	115	369	425	204	260
W..59R37 DRN71MS	139	371	438	206	273
W..59R37 DRN71M	139	391	458	226	293
W..59R37 DRN80MK	156	402	483	237	318
W..59R37 DRN80MS	156	419	500	254	335
W..59R37 DRN80M	156	447	528	282	363

## 13 Technical data of the motors

### INFORMATION



You find more information in the "AC Motors" catalog.

#### 13.1 Key to the data tables

The following table lists the short symbols used in the "Technical data" tables.

$P_N$	Rated power
$M_N$	Rated torque
$n_N$	Rated speed
$I_N$	Rated current
$\cos\varphi$	Power factor
$\eta_{50\%}$	Efficiency at 50% of the rated power
$\eta_{75\%}$	Efficiency at 75% of the rated power
$\eta_{100\%}$	Efficiency at 100% of the rated power
$I_A/I_N$	Starting current ratio
$M_A/M_N$	Starting torque ratio
$M_H/M_N$	Ramp-up torque ratio
$M_K/M_N$	Breakdown torque ratio
$m_{Mot}$	Mass of the motor
$J_{Mot}$	Mass moment of inertia of the motor
BE..	Brake used
$Z_0$ BG	Switching frequency for operation with BG brake controller
$Z_0$ BGE	Switching frequency for operation with BGE brake controller
$M_B$	Braking torque
$m_{BMot}$	Mass of the brakemotor
$J_{BMot}$	Mass moment of inertia of the brakemotor

## 13.2 IE3 DRN.. motors, 400 V, 50 Hz, 2-pole

### 13.2.1 AulInformation on motors

Motor	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> min <sup>-1</sup>	I <sub>N</sub> A	cosφ	η <sub>50%</sub> %	η <sub>75%</sub> %	η <sub>100%</sub> %	I <sub>A</sub> /I <sub>N</sub>	M <sub>A</sub> /M <sub>N</sub> M <sub>H</sub> /M <sub>N</sub>	M <sub>K</sub> /M <sub>N</sub>
DRN 63MS 2	0.18	0.63	2725	0.465	0.78	62.7	66.2	65.9	4.2	2.6 2.6	2.6
DRN 63M 2	0.25	0.87	2755	0.57	0.81	69.2	70.9	69.7	4.9	2.7 2.6	2.7
DRN 71MS 2	0.25	0.84	2834	0.59	0.77	66.1	69.3	69.7	5.7	3.5 3.0	3.5
DRN 71MS 2	0.37	1.26	2810	0.87	0.78	70.7	73.8	73.8	5.4	3.1 2.7	3.1
DRN 71M 2	0.55	1.86	2825	1.24	0.81	75.7	78.0	77.8	5.9	3.2 3.0	3.2
DRN 80MS 2	0.75	2.5	2855	1.58	0.84	80.2	82.0	81.4	5.9	2.8 2.5	2.9
DRN 80M 2	1.1	3.65	2860	2.2	0.85	83.1	84.1	83.0	6.6	3.0 2.5	2.9
DRN 90S 2	1.5	4.95	2886	3.1	0.83	83.7	85.0	84.2	6.6	2.7 2.5	2.9
DRN 90L 2	2.2	7.2	2905	4.3	0.85	86.1	86.7	85.9	7.4	2.5 2.1	3.0
DRN 100LM 2	3	9.9	2894	5.8	0.85	88.9	88.7	87.2	7.7	3.3 2.6	3.5
DRN 112M 2	4	13	2948	7.5	0.86	88.1	88.7	88.1	9.8	3.3 2.7	3.9
DRN 132S 2	5.5	17.9	2935	9.4	0.92	90.3	90.2	89.2	10.0	3.0 2.1	3.7
DRN 132S 2	7.5	24.5	2936	14.1	0.85	90.6	90.8	90.1	9.6	3.3 2.0	3.4

## 13.2.2 Further information on motors and brakemotors

Motor	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> min <sup>-1</sup>	m <sub>Mot</sub> kg	J <sub>mot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	BE..	Z <sub>0</sub> BG BGE h <sup>-1</sup>	M <sub>B</sub> Nm	m <sub>BMot</sub> kg	J <sub>BMot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>
DRN 63MS 2	0.18	0.63	2725	4.9	2.95	BE03	5000 6000	1.3	6.8	3.64
DRN 63M 2	0.25	0.87	2755	5.8	3.76	BE03	4500 6000	1.7	7.7	4.45
DRN 71MS 2	0.25	0.84	2834	6.8	2.93	BE03	3600 6000	1.7	8.7	3.62
DRN 71MS 2	0.37	1.26	2810	6.8	2.93	BE03	3600 6000	2.7	8.7	3.62
DRN 71M 2	0.55	1.86	2825	8	3.71	BE05	2600 5500	5	10	5.01
DRN 80MS 2	0.75	2.5	2855	11	18.5	BE05	1200 3400	5	15	20
DRN 80M 2	1.1	3.65	2860	14	24.1	BE1	1000 2600	7	18	25.6
DRN 90S 2	1.5	4.95	2886	20	53.1	BE1	600 1300	10	22	54.7
DRN 90L 2	2.2	7.2	2905	23	66.3	BE2	- 1000	14	27	71
DRN 100LM 2	3	9.9	2894	33	89.7	BE2	- 750	20	37	94.4
DRN 112M 2	4	13	2948	45	178	BE5	- 400	28	52	183
DRN 132S 2	5.5	17.9	2935	56	241	BE5	- 300	40	64	246
DRN 132S 2	7.5	24.5	2936	56	241	BE5	- 300	55	64	246

### 13.3 IE3 DRN.. motors, 400 V, 50 Hz, 4-pole

#### 13.3.1 Information on motors

Motor	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> min <sup>-1</sup>	I <sub>N</sub> A	cosφ	η <sub>50%</sub> %	η <sub>75%</sub> %	η <sub>100%</sub> %	I <sub>A</sub> /I <sub>N</sub>	M <sub>A</sub> /M <sub>N</sub> M <sub>H</sub> /M <sub>N</sub>	M <sub>K</sub> /M <sub>N</sub>
DRN 63MS 4	0.12	0.83	1380	0.405	0.64	58.3	63.9	64.8	3.6	2.7 2.6	2.7
DRN 63M 4	0.18	1.25	1375	0.57	0.65	65.1	69.4	69.9	3.7	2.6 2.6	2.6
DRN 71MS 4	0.18	1.19	1440	0.64	0.54	61.1	67.1	69.9	4.9	3.6 3.2	3.6
DRN 71MS 4	0.25	1.7	1405	0.72	0.66	70.1	73.5	73.5	4.3	2.5 2.3	2.5
DRN 71M 4	0.37	2.5	1415	1.02	0.66	74.3	77.3	77.3	4.8	2.8 2.4	2.8
DRN 80MK 4	0.55	3.65	1435	1.29	0.75	78.6	81.0	80.8	6.1	2.7 2.1	3.1
DRN 80M 4	0.75	4.95	1440	1.75	0.74	80.7	82.9	82.9	6.7	3.1 2.7	3.4
DRN 90S 4	1.1	7.2	1455	2.55	0.73	83.5	85.0	84.5	6.9	2.7 2.1	3.3
DRN 90L 4	1.5	9.8	1461	3.4	0.74	84.6	86.1	85.6	7.5	2.7 2.0	3.3
DRN 100LS 4	2.2	14.5	1450	4.75	0.76	86.4	87.5	86.9	7.1	2.9 2.2	3.3
DRN 100L 4	3	19.7	1456	6.4	0.76	87.3	88.3	87.8	8.2	3.4 2.3	3.7
DRN 112M 4	4	26	1464	7.9	0.81	88.6	89.4	88.7	8.2	2.6 2.3	3.4
DRN 132S 4	5.5	36	1461	10.5	0.84	90.6	90.6	89.6	8.3	2.8 2.2	3.5
DRN 132M 4	7.5	49	1468	15.2	0.78	90.8	91.1	90.4	7.8	3.1 2.4	3.3
DRN 132L 4	9.2	60	1470	18.7	0.77	90.8	91.6	91.0	8.4	3.7 1.8	3.7
DRN 160M 4	11	71	1473	21	0.81	91.1	91.7	91.4	7.3	2.6 2.2	3.0
DRN 160L 4	15	97	1474	29	0.80	91.9	92.5	92.1	8.0	3.0 2.0	3.4
DRN 180M 4	18.5	120	1478	33.5	0.85	92.8	93.1	92.6	9.5	3.6 2.9	3.6
DRN 180L 4	22	142	1477	38.5	0.87	93.4	93.6	93.0	9.6	3.5 2.1	3.4
DRN 200L 4	30	194	1480	56	0.82	93.3	93.9	93.6	8.2	2.9 2.5	3.3
DRN 225S 4	37	240	1482	64	0.88	94.3	94.4	93.9	8.4	3.0 2.3	2.7
DRN 225M 4	45	290	1482	81	0.85	94.1	94.5	94.2	8.8	3.0 2.2	2.7
DRN 250M 4	55	355	1482	104	0.80	94.4	94.8	94.6	8.2	4.0 2.5	2.9
DRN 280S 4	75	485	1482	143	0.79	94.9	95.3	95.0	7.6	3.7 2.6	2.9
DRN 280M 4	90	580	1481	161	0.84	95.4	95.6	95.2	7.7	3.6 2.0	2.7
DRN 315S 4	110	710	1488	189	0.87	95.4	95.7	95.5	6.7	2.9 2.1	3.1
DRN 315M 4	132	850	1487	230	0.87	95.6	95.9	95.6	6.5	2.7 2.0	2.9
DRN 315L 4	160	1030	1486	275	0.87	95.9	96.1	95.9	6.5	2.7 2.0	2.8
DRN 315H 4	200	1.280	1489	355	0.84	95.4	96.0	96.0	8.1	3.7 2.8	3.8

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## 13.3.2 Further information on motors and brakemotors

Motor	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> min <sup>-1</sup>	m <sub>Mot</sub> kg	J <sub>mot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	BE..	Z <sub>0</sub> BG BGE h <sup>-1</sup>	M <sub>B</sub> Nm	m <sub>BMot</sub> kg	J <sub>BMot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>
DRN 63MS 4	0.12	0.83	1380	4.9	2.95	BE03	10000 10000	1.7	6.8	3.64
DRN 63M 4	0.18	1.25	1375	5.8	3.76	BE03	10000 10000	2.7	7.7	4.45
DRN 71MS 4	0.18	1.19	1440	6.8	5.42	BE03	6200 9700	2.7	8.7	6.11
DRN 71MS 4	0.25	1.7	1405	6.8	5.42	BE03	6200 9700	3.4	8.7	6.11
DRN 71M 4	0.37	2.5	1415	8	7.14	BE05	5000 9000	5	10	8.44
DRN 80MK 4	0.55	3.65	1435	11	17.1	BE1	3500 8500	7	14	18.6
DRN 80M 4	0.75	4.95	1440	14	24.7	BE1	3200 8200	10	18	26.2
DRN 90S 4	1.1	7.2	1455	20	54	BE2	2300 6000	14	24	58.7
DRN 90L 4	1.5	9.8	1461	23	67.2	BE2	2200 5800	20	27	71.9
DRN 100LS 4	2.2	14.5	1450	27	81.4	BE5	- 6100	28	33	87.4
DRN 100L 4	3	19.7	1456	34	112	BE5	- 3700	40	40	118
DRN 112M 4	4	26	1464	45	178	BE5	- 2900	55	52	183
DRN 132S 4	5.5	36	1461	56	241	BE11	- 2100	80	71	251
DRN 132M 4	7.5	49	1468	74	381	BE11	- 1100	110	92	403
DRN 132L 4	9.2	60	1470	82	439	BE20	- 980	150	110	490
DRN 160M 4	11	71	1473	115	817	BE20	- 900	150	150	877
DRN 160L 4	15	97	1474	130	1040	BE20	- 800	200	165	1100
DRN 180M 4	18.5	120	1478	155	1630	BE30	- 510	300	195	1770
DRN 180L 4	22	142	1477	170	1950	BE30	- 470	300	210	2090
DRN 200L 4	30	194	1480	285	2660	BE32	- 500	400	340	2890
DRN 225S 4	37	240	1482	315	4350	BE32	- 230	500	370	4580
DRN 225M 4	45	290	1482	315	4350	BE32	- 200	600	370	4580
DRN 250M 4	55	355	1482	470	7360	BE62	- 180	800	560	7960
DRN 280S 4	75	485	1482	530	8940	BE62	- 150	1000	620	9530
DRN 280M 4	90	580	1481	640	12000	BE62	- 79	1200	730	12600
DRN 315S 4	110	710	1488	880	23400	BE122	- 53	1600	1020	24400
DRN 315M 4	132	850	1487	900	24800	BE122	- 46	2000	1040	25800
DRN 315L 4	160	1030	1486	1030	28600	BE122	- 34	2000	1160	29600
DRN 315H 4	200	1280	1489	1150	35200	BE122	- 23	2000	1280	36200



### 13.4 IE3 DRN.. motors, 400 V, 50 Hz, 6-pole

#### 13.4.1 Information on motors

Motor	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> min <sup>-1</sup>	I <sub>N</sub> A	cosφ	η <sub>50%</sub> %	η <sub>75%</sub> %	η <sub>100%</sub> %	I <sub>A</sub> /I <sub>N</sub>	M <sub>A</sub> /M <sub>N</sub> M <sub>H</sub> /M <sub>N</sub>	M <sub>K</sub> /M <sub>N</sub>
DRN 63MR 6	0.09	0.93	920	0.36	0.58	44.3	51.7	55.0	2.9	2.7 2.6	2.8
DRN 63M 6	0.12	1.32	870	0.405	0.71	51.9	57.5	57.7	2.6	1.9 1.8	1.9
DRN 71MS 6	0.18	1.88	915	0.55	0.69	59.4	63.7	63.9	3.4	1.9 1.9	2.2
DRN 71M 6	0.25	2.6	915	0.76	0.68	63.5	68.2	68.6	3.4	2.0 1.9	2.3
DRN 80MK 6	0.37	3.8	935	1.05	0.68	70.8	73.8	73.5	4.1	2.1 2.1	2.4
DRN 90SR 6	0.55	5.4	966	1.52	0.65	73.5	76.7	77.2	5.2	2.3 2.2	2.8
DRN 90S 6	0.75	7.5	957	2	0.68	77.4	79.8	78.9	4.8	2.0 2.0	2.4
DRN 90L 6	1.1	11	957	2.95	0.67	78.8	81.3	81.0	5.0	2.4 2.3	2.8
DRN 100L 6	1.5	14.9	961	4.1	0.63	80.7	82.8	82.5	4.7	2.2 2.2	2.9
DRN 112M 6	2.2	21.5	973	5.5	0.66	83.6	85.0	84.3	6.5	2.4 1.9	3.2
DRN 132S 6	3	29.5	974	7.4	0.66	84.8	86.0	85.6	6.2	2.6 2.5	3.4
DRN 132S 6	4	39.5	968	9.7	0.68	86.4	87.5	86.8	5.5	2.5 2.5	3.2
DRN 132L 6	5.5	54	975	13.8	0.64	86.9	88.3	88.0	5.6	2.7 2.5	2.8
DRN 160M 6	7.5	73	979	15.8	0.74	88.4	89.4	89.1	8.2	2.7 1.6	4.0

## 13.4.2 Further information on motors and brakemotors

Motor	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> min <sup>-1</sup>	m <sub>Mot</sub> kg	J <sub>mot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	BE..	Z <sub>0</sub> BG BGE h <sup>-1</sup>	M <sub>B</sub> Nm	m <sub>BMot</sub> kg	J <sub>BMot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>
DRN 63MR 6	0.09	0.93	920	5.8	6.47	BE03	12000 12000	2.1	7.7	7.16
DRN 63M 6	0.12	1.32	870	5.8	6.47	BE03	12000 12000	2.7	7.7	7.16
DRN 71MS 6	0.18	1.88	915	6.8	8.29	BE05	7000 12000	5	9.2	9.59
DRN 71M 6	0.25	2.6	915	8	10.4	BE05	5200 12000	5	10	11.7
DRN 80MK 6	0.37	3.8	935	11	17.1	BE1	3000 9000	10	14	18.6
DRN 90SR 6	0.55	5.4	966	20	54	BE2	2400 5000	14	24	58.7
DRN 90S 6	0.75	7.5	957	20	54	BE2	2400 5000	20	24	58.7
DRN 90L 6	1.1	11	957	23	67.4	BE5	2200 4400	28	29	73.4
DRN 100L 6	1.5	14.9	961	34	112	BE5	- 3400	40	40	118
DRN 112M 6	2.2	21.5	973	45	178	BE5	- 2500	55	52	183
DRN 132S 6	3	29.5	974	56	245	BE11	- 2300	80	71	256
DRN 132S 6	4	39.5	968	56	245	BE11	- 2100	80	71	256
DRN 132L 6	5.5	54	975	82	439	BE11	- 1700	110	100	461
DRN 160M 6	7.5	73	979	115	1290	BE20	- 1200	150	150	1350

### 13.5 IE3 DRN.. motors, 400 V, 50 Hz, 8-pole

#### 13.5.1 Information on motors

Motor	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> min <sup>-1</sup>	I <sub>N</sub> A	cosφ	η <sub>50%</sub> %	η <sub>75%</sub> %	η <sub>100%</sub> %	I <sub>A</sub> /I <sub>N</sub>	M <sub>A</sub> /M <sub>N</sub> M <sub>H</sub> /M <sub>N</sub>	M <sub>K</sub> /M <sub>N</sub>
DRN 71MSR 8	0.09	1.24	695	0.435	0.53	39.0	46.7	50.7	2.4	2.3 2.3	2.6
DRN 71MS 8	0.12	1.72	665	0.47	0.64	46.2	52.4	53.5	2.3	1.6 1.6	1.8
DRN 80MK 8	0.18	2.45	705	0.76	0.54	49.4	56.1	58.7	3.0	1.8 1.8	2.4
DRN 80M 8	0.25	3.4	702	1.02	0.53	55.8	62.0	64.1	3.1	2.0 1.9	2.3
DRN 90S 8	0.37	4.95	716	1.38	0.55	61.9	67.5	69.3	3.6	1.8 1.7	2.4
DRN 90L 8	0.55	7.4	710	1.81	0.59	69.0	72.7	73.0	3.5	1.8 1.8	2.3
DRN 100LS 8	0.75	10.1	708	2.25	0.62	72.2	75.2	75.0	3.8	1.9 1.8	2.2
DRN 100L 8	1.1	14.8	710	3.45	0.59	73.5	77.2	77.7	4.1	2.2 2.1	2.7
DRN 112M 8	1.5	20	715	4.2	0.63	78.7	80.4	79.7	4.3	1.9 1.8	2.3
DRN 132S 8	2.2	29.5	715	6	0.64	81.6	82.9	81.9	4.5	2.0 1.8	2.4
DRN 132M 8	3	39.5	726	8.7	0.58	80.9	83.3	83.5	5.1	2.2 2.0	2.9
DRN 132L 8	4	53	722	11.1	0.61	83.6	85.1	84.8	4.7	2.1 1.9	2.6
DRN 160M 8	5.5	72	729	15	0.61	85.1	86.5	86.2	5.4	2.1 1.9	2.8
DRN 160L 8	7.5	98	729	19.6	0.63	86.8	87.7	87.3	5.8	2.1 1.9	2.9
DRN 180L 8	11	143	733	27.5	0.64	88.2	89.0	88.6	5.2	2.6 2.0	2.2

## 13.5.2 Further information on motors and brakemotors

Motor	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> min <sup>-1</sup>	m <sub>Mot</sub> kg	J <sub>mot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	BE..	Z <sub>0</sub> BG BGE h <sup>-1</sup>	M <sub>B</sub> Nm	m <sub>BMot</sub> kg	J <sub>BMot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>
DRN 71MSR 8	0.09	1.24	695	6.8	8.29	BE03	6000 16000	2.7	8.7	8.98
DRN 71MS 8	0.12	1.72	665	6.8	8.29	BE03	6000 16000	3.4	8.7	8.98
DRN 80MK 8	0.18	2.45	705	11	17.1	BE05	5000 11500	5	14	18.6
DRN 80M 8	0.25	3.4	702	14	24.7	BE1	3700 10500	7	18	26.2
DRN 90S 8	0.37	4.95	716	20	54	BE1	2800 6700	10	23	55.6
DRN 90L 8	0.55	7.4	710	23	67.6	BE2	2300 5700	20	27	72.3
DRN 100LS 8	0.75	10.1	708	27	80.8	BE2	2400 6400	20	32	85.5
DRN 100L 8	1.1	14.8	710	34	111	BE5	1800 5300	40	40	117
DRN 112M 8	1.5	20	715	45	182	BE5	- 3500	55	52	187
DRN 132S 8	2.2	29.5	715	56	245	BE11	- 2500	80	71	255
DRN 132M 8	3	39.5	726	74	564	BE11	- 2300	80	92	586
DRN 132L 8	4	53	722	82	678	BE11	- 2100	110	100	700
DRN 160M 8	5.5	72	729	115	1290	BE20	- 1300	150	150	1350
DRN 160L 8	7.5	98	729	130	1640	BE20	- 1100	200	165	1700
DRN 180L 8	11	143	733	175	1960	BE30	- 1000	300	215	2100

## 14 Address directory SEW-EURODRIVE

<b>Argentina</b>				
Assembly Sales	Buenos Aires	SEW EURODRIVE ARGENTINA S.A. Ruta Panamericana Km 37.5, Lote 35 (B1619IEA) Centro Industrial Garín Prov. de Buenos Aires	Tel. +54 3327 4572-84 Fax +54 3327 4572-21 <a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a> <a href="mailto:sewar@sew-eurodrive.com.ar">sewar@sew-eurodrive.com.ar</a>	
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	Santa Fe	SEW EURODRIVE ARGENTINA S.A. Ruta Prov. 21 Km 7, Lote 41 Parque Industrial Alvear (2126) Gral. Alvear Prov. de Santa Fe	Tel. +54 341-317-7277 <a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a> <a href="mailto:sewsfe@sew-eurodrive.com.ar">sewsfe@sew-eurodrive.com.ar</a>	
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	Bahía Blanca	SEW EURODRIVE ARGENTINA S.A. O'Higgins 95, 1er Piso A (B8000IVA) Bahía Blanca Prov. de Buenos Aires	Tel. +54 291-451-7345 <a href="http://www.sew-eurodrive.com.ar">http://www.sew-eurodrive.com.ar</a> <a href="mailto:sewbb@sew-eurodrive.com.ar">sewbb@sew-eurodrive.com.ar</a>	
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Assembly Sales Service	Melbourne	SEW-EURODRIVE PTY. LTD. 27 Beverage Drive Tullamarine, Victoria 3043	Tel. +61 3 9933-1000 Fax +61 3 9933-1003 <a href="http://www.sew-eurodrive.com.au">http://www.sew-eurodrive.com.au</a> <a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>	
	Sydney	SEW-EURODRIVE PTY. LTD. 9, Sleigh Place, Wetherill Park New South Wales, 2164	Tel. +61 2 9725-9900 Fax +61 2 9725-9905 <a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>	
Sales Service	Adelaide	SEW-EURODRIVE PTY. LTD. 9C Park Way Mawson Lakes, SA 5095	Tel. +61 8 8161 4000 Fax +61 8 8161 4002 <a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>	
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	Perth	SEW-EURODRIVE PTY. LTD. 10 Colin Jamieson Drive Welshpool, WA 6106	Tel. +61 8 9251-4900 Fax +61 8 9251-4903 <a href="mailto:enquires@sew-eurodrive.com.au">enquires@sew-eurodrive.com.au</a>	
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		Graz	SEW-EURODRIVE Ges.m.b.H. Hagenbuchstraße 1 8054 Seiersberg-Pirka	Tel. +43 316 685 756-0 Fax +43 316 685 756-20 <a href="mailto:tb-graz@sew-eurodrive.at">tb-graz@sew-eurodrive.at</a>
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<b>Belarus</b>			
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Service Competence Center	Industrial Gears	SEW-EURODRIVE n.v./s.a. Rue du Parc Industriel, 31 6900 Marche-en-Famenne	Tel. +32 84 219-878 Fax +32 84 219-879 <a href="http://www.sew-eurodrive.be">http://www.sew-eurodrive.be</a> info@sew.be
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<b>Cameroon</b>			
Sales	Douala	SEW-EURODRIVE SARLU Ancienne Route Bonabéri P.O. Box B.P 8674 Douala-Cameroun	Tel. +237 233 39 12 35 Fax +237 233 39 02 10 <a href="http://www.sew-eurodrive.ci/">www.sew-eurodrive.ci/</a> info@sew-eurodrive.cm
<b>Canada</b>			
Assembly Sales Service	Toronto	SEW-EURODRIVE CO. OF CANADA LTD. 210 Walker Drive Bramalea, ON L6T 3W1	Tel. +1 905 791-1553 Fax +1 905 791-2999 <a href="http://www.sew-eurodrive.ca">http://www.sew-eurodrive.ca</a> l.watson@sew-eurodrive.ca
	Vancouver	SEW-EURODRIVE CO. OF CANADA LTD. Tilbury Industrial Park 7188 Honeyman Street Delta, BC V4G 1G1	Tel. +1 604 946-5535 Fax +1 604 946-2513 b.wake@sew-eurodrive.ca
	Montreal	SEW-EURODRIVE CO. OF CANADA LTD. 2001 Ch. de l'Aviation Dorval Quebec H9P 2X6	Tel. +1 514 367-1124 Fax +1 514 367-3677 n.paradis@sew-eurodrive.ca
<b>Chile</b>			
Assembly Sales Service	Santiago de Chile	SEW-EURODRIVE CHILE LTDA Las Encinas 1295 Parque Industrial Valle Grande LAMP Santiago de Chile P.O. Box Casilla 23 Correo Quilicura - Santiago - Chile	Tel. +56 2 2757 7000 Fax +56 2 2757 7001 <a href="http://www.sew-eurodrive.cl">http://www.sew-eurodrive.cl</a> ventas@sew-eurodrive.cl

<b>China</b>			
Production Assembly Sales Service	Tianjin	SEW-EURODRIVE (Tianjin) Co., Ltd. No. 78, 13th Avenue, TEDA Tianjin 300457	Tel. +86 22 25322612 Fax +86 22 25323273 <a href="http://www.sew-eurodrive.cn">http://www.sew-eurodrive.cn</a> <a href="mailto:info@sew-eurodrive.cn">info@sew-eurodrive.cn</a>
Assembly Sales Service	Suzhou	SEW-EURODRIVE (Suzhou) Co., Ltd. 333, Suhong Middle Road Suzhou Industrial Park Jiangsu Province, 215021	Tel. +86 512 62581781 Fax +86 512 62581783 <a href="mailto:suzhou@sew-eurodrive.cn">suzhou@sew-eurodrive.cn</a>
	Guangzhou	SEW-EURODRIVE (Guangzhou) Co., Ltd. No. 9, JunDa Road East Section of GETDD Guangzhou 510530	Tel. +86 20 82267890 Fax +86 20 82267922 <a href="mailto:guangzhou@sew-eurodrive.cn">guangzhou@sew-eurodrive.cn</a>
	Shenyang	SEW-EURODRIVE (Shenyang) Co., Ltd. 10A-2, 6th Road Shenyang Economic Technological Development Area Shenyang, 110141	Tel. +86 24 25382538 Fax +86 24 25382580 <a href="mailto:shenyang@sew-eurodrive.cn">shenyang@sew-eurodrive.cn</a>
	Taiyuan	SEW-EURODRIVE (Taiyuan) Co., Ltd. No.3, HuaZhang Street, TaiYuan Economic & Technical Development Zone ShanXi, 030032	Tel. +86-351-7117520 Fax +86-351-7117522 <a href="mailto:taiyuan@sew-eurodrive.cn">taiyuan@sew-eurodrive.cn</a>
	Wuhan	SEW-EURODRIVE (Wuhan) Co., Ltd. 10A-2, 6th Road No. 59, the 4th Quanli Road, WEDA 430056 Wuhan	Tel. +86 27 84478388 Fax +86 27 84478389 <a href="mailto:wuhan@sew-eurodrive.cn">wuhan@sew-eurodrive.cn</a>
	Xi'An	SEW-EURODRIVE (Xi'An) Co., Ltd. No. 12 Jinye 2nd Road Xi'An High-Technology Industrial Development Zone Xi'An 710065	Tel. +86 29 68686262 Fax +86 29 68686311 <a href="mailto:xian@sew-eurodrive.cn">xian@sew-eurodrive.cn</a>
Sales Service	Hong Kong	SEW-EURODRIVE LTD. Unit No. 801-806, 8th Floor Hong Leong Industrial Complex No. 4, Wang Kwong Road Kowloon, Hong Kong	Tel. +852 36902200 Fax +852 36902211 <a href="mailto:contact@sew-eurodrive.hk">contact@sew-eurodrive.hk</a>
<b>Colombia</b>			
Assembly Sales Service	Bogotá	SEW-EURODRIVE COLOMBIA LTDA. Calle 17 No. 132-18 Interior 2 Bodega 6, Manzana B Santafé de Bogotá	Tel. +57 1 54750-50 Fax +57 1 54750-44 <a href="http://www.sew-eurodrive.com.co">http://www.sew-eurodrive.com.co</a> <a href="mailto:sew@sew-eurodrive.com.co">sew@sew-eurodrive.com.co</a>
<b>Croatia</b>			
Sales Service	Zagreb	KOMPEKS d. o. o. Zeleni dol 10 10 000 Zagreb	Tel. +385 1 4613-158 Fax +385 1 4613-158 <a href="mailto:kompeks@inet.hr">kompeks@inet.hr</a>
<b>Czech Republic</b>			
Assembly Sales Service	Hostivice	SEW-EURODRIVE CZ s.r.o. Floriánova 2459 253 01 Hostivice	Tel. +420 255 709 601 Fax +420 235 350 613 <a href="http://www.sew-eurodrive.cz">http://www.sew-eurodrive.cz</a> <a href="mailto:sew@sew-eurodrive.cz">sew@sew-eurodrive.cz</a>
Assembly Service	Plzeň	SEW-EURODRIVE CZ s.r.o. Areal KRPA a.s. Zahradní 173/2 326 00 Plzeň	Tel. +420 378 775 320 Fax +420 377 970 710 <a href="mailto:sew@sew-eurodrive.cz">sew@sew-eurodrive.cz</a>
Technical Offices	Brno	SEW-EURODRIVE CZ s.r.o. Křenová 52 60200 Brno	Tel. +420 543 254 174 Fax +420 543 256 845 <a href="mailto:ilona.cermakova@sew-eurodrive.cz">ilona.cermakova@sew-eurodrive.cz</a>
	Hradec Králové	SEW-EURODRIVE CZ s.r.o. Čechova 498 50202 Hradec Králové	Tel. +420 495 510 141 Fax +420 495 521 313 <a href="mailto:miroslav.moravec@sew-eurodrive.cz">miroslav.moravec@sew-eurodrive.cz</a>
	Ostrava	SEW-EURODRIVE CZ s.r.o. Studentská 6202/17 708 00 Ostrava-Poruba	Tel. +420 597 329 044 <a href="mailto:david.kenkus@sew-eurodrive.cz">david.kenkus@sew-eurodrive.cz</a>

	Klatovy	SEW-EURODRIVE CZ s.r.o. Václavská 841 33901 Klatovy	Tel. +420 376 331 634 Fax +420 376 331 634 viktor.kubernat@sew-eurodrive.cz
Service	Přerov	SEW-EURODRIVE CZ s.r.o. Areál STS Přerov a.s. ul. 9. května 2452 750 02 Přerov I – Město	Tel. +420 581 224 374 Fax +420 581 224 374 servis@sew-eurodrive.cz

**Denmark**

Assembly Sales Service	Copenhagen	SEW-EURODRIVE A/S Geminivej 28-30 2670 Greve	Tel. +45 43 95 8500 Fax +45 43 9585-09 <a href="http://www.sew-eurodrive.dk">http://www.sew-eurodrive.dk</a> sew@sew-eurodrive.dk
Service	Vejle	SEW-EURODRIVE A/S Bødkervej 2 7100 Vejle	Tel. +45 43 9585 00 <a href="http://www.sew-eurodrive.dk">http://www.sew-eurodrive.dk</a> sew@sew-eurodrive.dk

**Egypt**

Representation: United Arab Emirates

**Estonia**

Sales	Tallin	ALAS-KUUL AS Loomäe tee 1, Lehmja küla 75306 Rae vald Harjumaa	Tel. +372 6593230 Fax +372 6593231 <a href="http://www.alas-kuul.ee">http://www.alas-kuul.ee</a> info@alas-kuul.ee
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**Finland**

Assembly Sales Service	Hollola	SEW-EURODRIVE OY Vesimäentie 4 15860 Hollola	Tel. +358 201 589-300 Fax +358 3 780-6211 <a href="http://www.sew-eurodrive.fi">http://www.sew-eurodrive.fi</a> sew@sew.fi
Service	Hollola	SEW-EURODRIVE OY Keskikankaantie 21 15860 Hollola	Tel. +358 201 589-300 Fax +358 3 780-6211 <a href="http://www.sew-eurodrive.fi">http://www.sew-eurodrive.fi</a> sew@sew.fi
	Tornio	SEW-EURODRIVE Oy Lossirannankatu 5 95420 Tornio	Tel. +358 201 589 300 Fax +358 3 780 6211 <a href="http://www.sew-eurodrive.fi">http://www.sew-eurodrive.fi</a> sew@sew.fi
Production Assembly	Karkkila	SEW Industrial Gears Oy Santasalonkatu 6, PL 8 03620 Karkkila, 03601 Karkkila	Tel. +358 201 589-300 Fax +358 201 589-310 <a href="http://www.sew-eurodrive.fi">http://www.sew-eurodrive.fi</a> sew@sew.fi
Technical Offices	Helsinki	SEW-EURODRIVE OY Luutnantintie 5 00410 Helsinki	Tel. +358 201 589-300 sew@sew.fi
	Oulu	SEW Industrial Gears Oy Paulaharjuntie 22 90530 Oulu	Tel. +358 201 589 300 sew@sew.fi
	Vaasa	SEW Industrial Gears Oy Asemakatu 7 65100 Vaasa	Tel. +358 201 589-300 sew@sew.fi
	Kuopio	SEW Industrial Gears Oy Leväsentie 23 70780 Kuopio	Tel. +358 201 589-300 sew@sew.fi
	Tampere	SEW Industrial Gears Oy Kampusareena Korkeakoulunkatu 7, 7.krs 33720 Tampere	Tel. +358 201 589-300 sew@sew.fi
	Kotka	SEW Industrial Gears Oy Heikinkatu 7 48100 Kotka	Tel. +358 201 589 300 sew@sew.fi

**France**

Production Sales	Hagenau	SEW USOCOME 48-54 route de Soufflenheim B. P. 20185 67506 Hagenau Cedex	Tel. +33 3 88 73 67 00 <a href="http://www.usocome.com">http://www.usocome.com</a> sew@usocome.com
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France			
Production	Forbach	SEW USOCOME Zone industrielle Technopôle Forbach Sud B. P. 30269 57604 Forbach Cedex	Tel. +33 3 87 29 38 00
	Brumath	SEW USOCOME 1 Rue de Bruxelles 67670 Mommenheim Cedex	Tel. +33 3 88 37 48 00
Assembly Sales Service	Bordeaux	SEW USOCOME Parc d'activités de Magellan 62 avenue de Magellan – B. P. 182 33607 Pessac Cedex	Tel. +33 5 57 26 39 00 dtcbordeaux@usocome.com
	Hagenau	SEW USOCOME 48-54 route de Soufflenheim B. P. 20185 67506 Haguenau Cedex	Tel. +33 3 88 73 67 00 dtchagenau@usocome.com
	Lyon	SEW USOCOME 75 rue Antoine Condorcet 38090 Vaulx-Milieu	Tel. +33 4 74 99 60 00 dtclyon@usocome.com
	Nantes	SEW USOCOME Parc d'activités de la forêt 4 rue des Fontenelles 44140 Le Bignon	Tel. +33 2 40 78 42 00 dtcnantes@usocome.com
	Paris	SEW USOCOME Zone industrielle 2 rue Denis Papin 77390 Verneuil l'Étang	Tel. +33 1 64 42 40 80 dtcparis@usocome.com

#### Gabon

Representation: Cameroon

#### Germany

Headquarters Production Sales	Bruchsal	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 <a href="http://www.sew-eurodrive.de">http://www.sew-eurodrive.de</a> sew@sew-eurodrive.de
	Production / Industrial Gears	Bruchsal	SEW-EURODRIVE GmbH & Co KG Christian-Pähr-Str. 10 76646 Bruchsal
Production / Precision Gear Units	Bruchsal	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 sew@sew-eurodrive.de
Production	Graben	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 76676 Graben-Neudorf	Tel. +49 7251 75-0 Fax +49 7251-2970
Service Competence Center	Mechanics / Mechatronics	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 76676 Graben-Neudorf	Tel. +49 7251 75-1710 Fax +49 7251 75-1711 scc-mechanik@sew-eurodrive.de
	Electronics	SEW-EURODRIVE GmbH & Co KG Christian-Pähr-Straße 12 76646 Bruchsal	Tel. +49 7251 75-1780 Fax +49 7251 75-1769 scc-elektronik@sew-eurodrive.de
	MAXOLU- TION® Factory Automation	SEW-EURODRIVE GmbH & Co KG Eisenbahnstraße 11 76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 sew@sew-eurodrive.de
Drive Technology Center	North	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Straße 43 30823 Garbsen (Hannover)	Tel. +49 5137 8798-30 Fax +49 5137 8798-55 dtc-nord@sew-eurodrive.de
	East	SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg 1 08393 Meerane (Zwickau)	Tel. +49 3764 7606-0 Fax +49 3764 7606-20 dtc-ost@sew-eurodrive.de
	South	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 85551 Kirchheim (München)	Tel. +49 89 909551-21 Fax +49 89 909551-50 dtc-sued@sew-eurodrive.de
	West	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 40764 Langenfeld (Düsseldorf)	Tel. +49 2173 8507-10 Fax +49 2173 8507-50 dtc-west@sew-eurodrive.de

Germany			
Drive Center	Berlin	SEW-EURODRIVE GmbH & Co KG Alexander-Meißner-Straße 44 12526 Berlin	Tel. +49 306331131-30 Fax +49 306331131-36 dc-berlin@sew-eurodrive.de
	Bremen	SEW-EURODRIVE GmbH & Co KG Allerkai 4 28309 Bremen	Tel. +49 421 33918-10 Fax +49 421 33918-22 tb-bremen@sew-eurodrive.de
	Hamburg	SEW-EURODRIVE GmbH & Co KG Hasselbinnen 11 22869 Schenefeld	Tel. +49 40298109-60 Fax +49 40298109-70 dc-hamburg@sew-eurodrive.de
	Saarland	SEW-EURODRIVE GmbH & Co KG Gottlieb-Daimler-Straße 4 66773 Schwalbach Saar – Hülzweiler	Tel. +49 6831 48946 10 Fax +49 6831 48946 13 dc-saarland@sew-eurodrive.de
	Ulm	SEW-EURODRIVE GmbH & Co KG Dieselstraße 18 89160 Dornstadt	Tel. +49 7348 9885-0 Fax +49 7348 9885-90 dc-ulm@sew-eurodrive.de
	Würzburg	SEW-EURODRIVE GmbH & Co KG Nürnbergerstraße 118 97076 Würzburg-Lengfeld	Tel. +49 931 27886-60 Fax +49 931 27886-66 dc-wuerzburg@sew-eurodrive.de
Drive Service Hotline / 24 Hour Service			0 800 SEWHELP 0 800 7394357
Technical Offices	Augsburg	SEW-EURODRIVE GmbH & Co KG August-Wessels-Straße 29 86156 Augsburg	Tel. +49 821 22779-10 Fax +49 821 22779-50 tb-augsburg@sew-eurodrive.de
	Lake Con- stance	SEW-EURODRIVE GmbH & Co KG Dornierstraße 4 88677 Markdorf	Tel. +49 7544 96590-90 Fax +49 7544 96590-99 tb-bodensee@sew-eurodrive.de
	Dortmund	SEW-EURODRIVE GmbH & Co KG Hildastraße 8 44145 Dortmund	Tel. +49 231 229028-10 Fax +49 231 229028-20 tb-dortmund@sew-eurodrive.de
	Dresden	SEW-EURODRIVE GmbH & Co KG Hauptstraße 32 01445 Radebeul	Tel. +49 351 26338-0 Fax +49 351 26338-38 tb-dresden@sew-eurodrive.de
	Erfurt	SEW-EURODRIVE GmbH & Co KG Dubliner Straße 12 99091 Erfurt	Tel. +49 361 21709-70 Fax +49 361 21709-79 tb-erfurt@sew-eurodrive.de
	Güstrow	SEW-EURODRIVE GmbH & Co KG Glasewitzer Chaussee 33 B 18273 Güstrow P.O. Box Postfach 1216 – D-18262 Güstrow	Tel. +49 3843 8557-80 Fax +49 3843 8557-88 tb-guestrow@sew-eurodrive.de
	Hamburg	SEW-EURODRIVE GmbH & Co KG Hasselbinnen 11 22869 Schenefeld	Tel. +49 40298109-60 Fax +49 40298109-70 dc-hamburg@sew-eurodrive.de
	Hannover / Garbsen	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Str.40-42 30823 Garbsen	Tel. +49 5137 8798-10 Fax +49 5137 8798-50 tb-hannover@sew-eurodrive.de
	Heilbronn	SEW-EURODRIVE GmbH & Co KG Zeppelinstraße 7 74357 Bönningheim	Tel. +49 7143 8738-0 Fax +49 7143 8738-25 tb-heilbronn@sew-eurodrive.de
	Herford	SEW-EURODRIVE GmbH & Co KG Goebenstraße 3 – 7 32052 Herford	Tel. +49 5221 9141-0 Fax +49 5221 9141-20 tb-herford@sew-eurodrive.de
	Karlsruhe	SEW-EURODRIVE GmbH & Co KG Ettlinger Weg 2 76467 Bietigheim P.O. Box Postfach 43 – D-76463 Bietigheim	Tel. +49 7245 9190-10 Fax +49 7245 9190-20 tb-karlsruhe@sew-eurodrive.de
	Kassel	SEW-EURODRIVE GmbH & Co KG Sonnenweg 3 34260 Kaufungen	Tel. +49 561 95144-80 Fax +49 561 95144-90 tb-kassel@sew-eurodrive.de
	Koblenz	SEW-EURODRIVE GmbH & Co KG Carl-Benz-Straße 8 56218 Mülheim-Kärlich	Tel. +49 2630 91930-10 Fax +49 2630 91930-90 tb-koblenz@sew-eurodrive.de

Lahr	SEW-EURODRIVE GmbH & Co KG Europastraße 3/1 77933 Lahr / Schwarzwald	Tel. +49 7821 90999-60 Fax +49 7821 90999-79 tb-lahr@sew-eurodrive.de
Langenfeld	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 40764 Langenfeld	Tel. +49 2173 8507-10 Fax +49 2173 8507-50 tb-langenfeld@sew-eurodrive.de
Ludwigshafen	SEW-EURODRIVE GmbH & Co KG Edisonstrasse 15 // Halle 7 68623 Lampertheim	Tel. +49 7251 75 3764 Fax +49 7251 75 503715 tb-ludwigshafen@sew-eurodrive.de
Magdeburg	SEW-EURODRIVE GmbH & Co KG Breiteweg 53 39179 Barleben	Tel. +49 39203 7577-1 Fax +49 39203 7577-9 tb-magdeburg@sew-eurodrive.de
Mannheim	SEW-EURODRIVE GmbH & Co KG Besselstraße 26 68219 Mannheim	Tel. +49 621 71683-10 Fax +49 621 71683-22 tb-mannheim@sew-eurodrive.de
München	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 85551 Kirchheim	Tel. +49 89 90955-110 Fax +49 89 90955-150 tb-muenchen@sew-eurodrive.de
Münster	SEW-EURODRIVE GmbH & Co KG Hafenplatz 4 48155 Münster	Tel. +49 251 41475-11 Fax +49 251 41475-50 tb-muenster@sew-eurodrive.de
Nuremberg	SEW-EURODRIVE GmbH & Co KG Lina-Ammon-Straße 22 90471 Nürnberg	Tel. +49 911 98884-50 Fax +49 911 98884-60 tb-nuernberg@sew-eurodrive.de
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Rhine-Main	SEW-EURODRIVE GmbH & Co KG Niederstedter Weg 5 61348 Bad Homburg	Tel. +49 6172 9617-0 Fax +49 6172 9617-50 tb-rheinmain@sew-eurodrive.de
Stuttgart	SEW-EURODRIVE GmbH & Co KG Friedrich-List-Straße 46 70771 Leinfelden-Echterdingen	Tel. +49 711 16072-0 Fax +49 711 16072-72 tb-stuttgart@sew-eurodrive.de
Zwickau / Meerane	SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg1 08393 Meerane	Tel. +49 3764 7606-0 Fax +49 3764 7606-20 tb-zwickau@sew-eurodrive.de

**Great Britain**

Assembly Sales Service	Normanton	SEW-EURODRIVE Ltd. DeVilliers Way Trident Park Normanton West Yorkshire WF6 1GX	Tel. +44 1924 893-855 Fax +44 1924 893-702 <a href="http://www.sew-eurodrive.co.uk">http://www.sew-eurodrive.co.uk</a> info@sew-eurodrive.co.uk
Service Competence Center	Southern Eng- land	SEW-EURODRIVE Ltd. Unit 41 Easter Park Benyon Road Silchester Reading Berkshire RG7 2PQ	Tel. +44 1189 701-699 Fax +44 1189 701-021
Technical Offices	Midlands	SEW-EURODRIVE Ltd. 5 Sugar Brook court Aston Road Bromsgrove Worcs. B60 3EX	Tel. +44 1527 877-319 Fax +44 1527 575-245
	Northern Ire- land	Heyn Engineering (NI) Ltd. 1 Corry Place, Belfast, BT3 9AH	Tel. +44 02890350022 Fax +44 02890350012 <a href="http://www.heyne.co.uk">http://www.heyne.co.uk</a> info@heyne.co.uk
Drive Center	Scotland	SEW-EURODRIVE Ltd. 133-135 Deedykes View Cumbernauld G68 9HF	Tel. +44 17 8647-8730

<b>Greece</b>			
Sales	Athens	Christ. Boznos & Son S.A. 12, K. Mavromichali Street P.O. Box 80136 18545 Piraeus	Tel. +30 2 1042 251-34 Fax +30 2 1042 251-59 <a href="http://www.boznos.gr">http://www.boznos.gr</a> info@boznos.gr
Technical Office	Thessaloniki	Christ. Boznos & Son S.A. Asklipiou 26 562 24 Evosmos, Thessaloniki	Tel. +30 2 310 7054-00 Fax +30 2 310 7055-15 info@boznos.gr
<b>Hungary</b>			
Sales Service	Budapest	SEW-EURODRIVE Kft. Csillaghegyi út 13. 1037 Budapest	Tel. +36 1 437 06-58 Fax +36 1 437 06-50 <a href="http://www.sew-eurodrive.hu">http://www.sew-eurodrive.hu</a> office@sew-eurodrive.hu
<b>Iceland</b>			
Sales	Reykjavik	Varma & Vélaverk ehf. Knarrarvogi 4 104 Reykjavik	Tel. +354 585 1070 Fax +354 585)1071 <a href="https://vov.is/">https://vov.is/</a> vov@vov.is
<b>India</b>			
Registered Office Assembly Sales Service	Vadodara	SEW-EURODRIVE India Private Limited 302, NOTUS IT PARK, Sarabhai Campus, Beside Notus Pride, Genda Circle, Vadodara 390023 Gujarat	Tel. +91 265 3045200 Fax +91 265 3045300 <a href="http://www.seweurodriveindia.com">http://www.seweurodriveindia.com</a> salesvadodara@seweurodriveindia.com
Assembly Sales Service	Chennai	SEW-EURODRIVE India Private Limited Plot No. K3/1, Sipcot Industrial Park Phase II Mambakkam Village Sriperumbudur - 602105 Kancheepuram Dist, Tamil Nadu	Tel. +91 44 37188888 Fax +91 44 37188811 saleschennai@seweurodriveindia.com
	Pune	SEW-EURODRIVE India Private Limited Plant: Plot No. D236/1, Chakan Industrial Area Phase- II, Warale, Tal- Khed, Pune-410501, Maharashtra	Tel. +91 21 35 628700 Fax +91 21 35 628715 salespune@seweurodriveindia.com
Sales Service	Gurgaon	SEW-EURODRIVE India Private Limited Drive Center Gurugram Plot no 395, Phase-IV, UdyogVihar Gurugram , 122016 Haryana	Tel. +91 99588 78855 salesgurgaon@seweurodriveindia.com
Technical Offices	Ahmedabad	SEW-EURODRIVE India Private Limited 306, Shaan office complex, Behind Sakar-IV, Ellisebridge, Ashram Road Ahmedabad – 380006, Gujarat	Tel. +91 79 40072067 / 68 Fax +91 79 40072069 salesahmedabad@seweurodriveindia.com
	Aurangabad	SEW-EURODRIVE India Private Limited Flat.No.403 , Prism Appt. The Venus Housing Society. Beed Bypass Road, Behind Nishant Park Hotel, Aurangabad – 431005, Maharashtra.	Tel. +91 86000 12333 salesaurangabad@seweurodriveindia.com
	Bangalore	SEW-EURODRIVE India Private Limited Sy.no:41-P3, Peenya1, Phase 1A, Peenya Vil- lage, Yeswanthapura Hobli, Bangalore North Taluk, Bangalore - 560058, Karnataka	Tel. +91 80 28370664 Fax +91 80 28370665 salesbangalore@seweurodriveindia.com
	Bangalore	SEW-EURODRIVE India Private Limited # C-104, 3rd Block, KSSIDC Complex, Electronic City. Bangalore – 560100, Karnataka	Tel. +91 80 28522662 / 28522663 salesbangalore@seweurodriveindia.com
	Bellary	SEW-EURODRIVE India Private Limited Door no-56/279 Ward No-15, Sindhigi compound, Near Raghavendra talkies, Bellary-583101, Karnataka	Tel. +91 77609 88668 salesbellary@seweurodriveindia.com

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Kolhapur	SEW-EURODRIVE India Private Limited C/O. Mr.S.V.Pawar.461/37, Abhideep Resid- ency, Opp-Shriram Petrol Pump, Kasaba Bawada, Kolhapur - 416 122, Maharashtra	Tel. +91 86000 20846 saleskolhapur@seweurodriveindia.com
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Nagpur	SEW-EURODRIVE India Private Limited Plot No 49, New Kailash Nager, Samta colony, Nagpur-440027, Maharashtra	Tel. +91 95610 89525 salesnagpur@seweurodriveindia.com
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Sales	Medan	PT. Serumpun Indah Lestari Jl.Pulau Solor no. 8, Kawasan Industri Medan II Medan 20252 Tel. +62 61 687 1221 Fax +62 61 6871429 / +62 61 6871458 / +62 61 30008041 sil@serumpunindah.com serumpunindah@yahoo.com http://www.serumpunindah.com

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	Surabaya	PT. TRIAGRI JAYA ABADI Jl. Sukosemolo No. 63, Galaxi Bumi Permai G6 No. 11 Surabaya 60111	Tel. +62 31 5990128 Fax +62 31 5962666 sales@triagri.co.id http://www.triagri.co.id
	Surabaya	CV. Multi Mas Jl. Raden Saleh 43A Kav. 18 Surabaya 60174	Tel. +62 31 5458589 Fax +62 31 5317220 sianhwa@sby.centrin.net.id http://www.cvmultimas.com
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Sales Service	Dublin	Alperton Engineering Ltd. 48 Moyle Road Dublin Industrial Estate Glasnevin, Dublin 11	Tel. +353 1 830-6277 Fax +353 1 830-6458 http://www.alperton.ie info@alperton.ie
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Sales	Tel Aviv	Liraz Handasa Ltd. Ahofer Str 34B / 228 58858 Holon	Tel. +972 3 5599511 Fax +972 3 5599512 http://www.liraz-handasa.co.il office@liraz-handasa.co.il
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Assembly Sales Service	Milan	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Via Bernini,12 20033 Solaro (Milano)	Tel. +39 02 96 980229 Fax +39 02 96 980 999 http://www.sew-eurodrive.it milano@sew-eurodrive.it
Drive Center	Bologna	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Via della Grafica, 47 40064 Ozzano dell'Emilia (Bo)	Tel. +39 051 65-23-801 Fax +39 02 96 980 499 bologna@sew-eurodrive.it
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	Verona	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Via Antonio Meucci, 5 37042 - Caldiero ( VR )	Tel. +39 045 89-239-11 Fax +39 02 96 980 814 verona@sew-eurodrive.it
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Fukuoka	SEW-EURODRIVE JAPAN CO., LTD 8th-floor, Imon-Hakata-Bldg.-East. 2-2-1, Sumiyoshi, Hakata-ku Fukuoka, 812-0018	Tel. +81 92 291-3600 Fax +81 92 291-3602 fukuoka@sew-eurodrive.co.jp

**Kazakhstan**

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	Tashkent	Representative Office SEW-EURODRIVE Representative office in Uzbekistan 95A Amir Temur ave, office 401/3 100084 Tashkent	Tel. +998 97 134 01 99 <a href="http://www.sew-eurodrive.uz">http://www.sew-eurodrive.uz</a> sew@sew-eurodrive.uz
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	Ulaanbaatar	IM Trading LLC Olympic street 28B/3 Sukhbaatar district, Ulaanbaatar 14230, MN	Tel. +976-77109997 Fax +976-77109997 imt@imt.mn
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	Oskemen	SEW-EURODRIVE LLP 62 Satpaev ave. office 313 070016, Ust-Kamenogorsk	Tel. +7 (723) 291 37 48 (ext 760) Fax +7 (727) 350 5156 (ext 709) ust-Kamenogorsk@sew-eurodrive.com
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	Aktobe	SEW-EURODRIVE LLP 52/1 Marat Ospanov str., office 11 030000, Aktobe	Tel. +7 (771) 993 0915  aktobe@sew-eurodrive.com
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	Pavlodar	SEW-EURODRIVE LLP 6/2, Lunacharsky str., office 46 140000, Pavlodar	Tel. +7 (771) 993 09 16  pavlodar@sew-eurodrive.com
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**Latvia**

Sales	Riga	SIA Alas-Kuul Kattakalna 11C 1073 Riga	Tel. +371 6 7139253 Fax +371 6 7139386 <a href="http://www.alas-kuul.lv">http://www.alas-kuul.lv</a> info@alas-kuul.com
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**Lebanon**

Sales (Lebanon)	Beirut	Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut	Tel. +961 1 510 532 Fax +961 1 494 971 ssacar@inco.com.lb
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Sales (Jordan, Kuwait , Beirut Saudi Arabia, Syria)		Middle East Drives S.A.L. (offshore) Sin El Fil. B. P. 55-378 Beirut	Tel. +961 1 494 786 Fax +961 1 494 971 <a href="http://www.medrives.com">http://www.medrives.com</a> info@medrives.com
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**Lithuania**

Sales	Alytus	UAB Irseva Statybininku 106C 63431 Alytus	Tel. +370 315 79204 Fax +370 315 56175 <a href="http://www.irseva.lt">http://www.irseva.lt</a> irmantas@irseva.lt
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**Luxembourg**

Representation: Belgium



<b>Macedonia</b>			
Sales	Skopje	Boznos DOOEL Dime Anicin 2A/7A 1000 Skopje	Tel. +389 23256553 Fax +389 23256554 <a href="http://www.boznos.mk">http://www.boznos.mk</a>
<b>Malaysia</b>			
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Technical Offices	Kuala Lumpur	SEW-EURODRIVE SDN BHD No. 2, Jalan Anggerik Mokara 31/46 Kota Kemuning Seksyen 31 40460 Shah Alam Selangor Darul Ehsan West Malaysia	Tel. +60 3 51229633 Fax +60 3 51229622 <a href="mailto:sewsa@sew-eurodrive.com.my">sewsa@sew-eurodrive.com.my</a>
	Penang	SEW-EURODRIVE SDN BHD No. 38, Jalan Bawal Kimsar Garden 13700 Prai, Penang West Malaysia	Tel. +60 4 3999349 Fax +60 4 3999348 <a href="mailto:sewpg@sew-eurodrive.com.my">sewpg@sew-eurodrive.com.my</a>
	Kuching	SEW-EURODRIVE SDN BHD No. 69, Lot 10899 1st Floor, Jalan Tun Jugah 93350 Kuching Sarawak East Malaysia	Tel. +60 82 572780 Fax +60 82 571780 <a href="mailto:sewswk@sew-eurodrive.com.my">sewswk@sew-eurodrive.com.my</a>
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	Ipoh	SEW-EURODRIVE SDN BHD West Malaysia	Tel. +60 19 7177366 <a href="mailto:sewsa@sew-eurodrive.com.my">sewsa@sew-eurodrive.com.my</a>
<b>Mexico</b>			
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Sales Service	Puebla	SEW-EURODRIVE MEXICO S.A. de C.V. Calzada Zavaleta No. 3922 Piso 2 Local 6 Col. Santa Cruz Buenavista C.P. 72154 Puebla, México	Tel. +52 (222) 221 248 <a href="http://www.sew-eurodrive.com.mx">http://www.sew-eurodrive.com.mx</a> <a href="mailto:scmexico@seweurodrive.com.mx">scmexico@seweurodrive.com.mx</a>
<b>Mongolia</b>			
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<b>Morocco</b>			
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<b>Namibia</b>			
Sales	Swakopmund	DB MINING & INDUSTRIAL SUPPLIES CC Einstein Street Strauss Industrial Park Unit1 Swakopmund	Tel. +264 64 462 738 Fax +264 64 462 734 <a href="mailto:anton@dbminingnam.com">anton@dbminingnam.com</a>

<b>Netherlands</b>			
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<b>New Zealand</b>			
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	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 30 Lodestar Avenue, Wigram Christchurch	Tel. +64 3 384-6251 Fax +64 3 384-6455 <a href="mailto:sales@sew-eurodrive.co.nz">sales@sew-eurodrive.co.nz</a>
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<b>Nigeria</b>			
Sales	Lagos	Greenpeg Nig. Ltd 64C Toyin Street Opebi-Allen Ikeja Lagos-Nigeria	Tel. +234-701-821-9200-1 <a href="http://www.greenpeg ltd.com">http://www.greenpeg ltd.com</a> <a href="mailto:sales@greenpeg ltd.com">sales@greenpeg ltd.com</a>
<b>Norway</b>			
Assembly Sales Service	Moss	SEW-EURODRIVE A/S Solgaard skog 71 1599 Moss	Tel. +47 69 24 10 20 Fax +47 69 24 10 40 <a href="http://www.sew-eurodrive.no">http://www.sew-eurodrive.no</a> <a href="mailto:sew@sew-eurodrive.no">sew@sew-eurodrive.no</a>
<b>Pakistan</b>			
Sales	Karachi	Industrial Power Drives Al-Fatah Chamber A/3, 1st Floor Central Commercial Area, Sultan Ahmed Shah Road, Block 7/8, Karachi	Tel. +92 21 452 9369 Fax +92-21-454 7365 <a href="mailto:seweurodrive@cyber.net.pk">seweurodrive@cyber.net.pk</a>
<b>Paraguay</b>			
Sales	Fernando de la Mora	SEW-EURODRIVE PARAGUAY S.R.L Nu Guazu No. 642 casi Campo Esperanza Santisima Trinidad Asuncion	Tel. +595 991 519695 Fax +595 21 3285539 <a href="mailto:sewpy@sew-eurodrive.com.py">sewpy@sew-eurodrive.com.py</a>
<b>Peru</b>			
Assembly Sales Service	Lima	SEW EURODRIVE DEL PERU S.A.C. Los Calderos, 120-124 Urbanizacion Industrial Vulcano, ATE, Lima	Tel. +51 1 3495280 Fax +51 1 3493002 <a href="http://www.sew-eurodrive.com.pe">http://www.sew-eurodrive.com.pe</a> <a href="mailto:sewperu@sew-eurodrive.com.pe">sewperu@sew-eurodrive.com.pe</a>
<b>Philippines</b>			
Sales	Makati	P.T. Cerna Corporation 4137 Ponte St., Brgy. Sta. Cruz Makati City 1205	Tel. +63 2 519 6214 Fax +63 2 890 2802 <a href="mailto:mec_h_drive_sys@ptcerna.com">mec_h_drive_sys@ptcerna.com</a> <a href="http://www.ptcerna.com">http://www.ptcerna.com</a>
<b>Poland</b>			
Assembly Sales Service	Łódź	SEW-EURODRIVE Polska Sp.z.o.o. ul. Techniczna 5 92-518 Łódź	Tel. +48 42 293 00 00 Fax +48 42 293 00 49 <a href="http://www.sew-eurodrive.pl">http://www.sew-eurodrive.pl</a> <a href="mailto:sew@sew-eurodrive.pl">sew@sew-eurodrive.pl</a>
	Service	Tel. +48 42 293 0030 Fax +48 42 293 0043	24 Hour Service Tel. +48 602 739 739 (+48 602 SEW SEW) <a href="mailto:serwis@sew-eurodrive.pl">serwis@sew-eurodrive.pl</a>
Technical Offices	Tychy	SEW-EURODRIVE Polska Sp.z.o.o. ul. Strzelecka 66 43-109 Tychy	Tel. +48 32 32 32 610 Fax +48 32 32 32 648 <a href="mailto:tychy@sew-eurodrive.pl">tychy@sew-eurodrive.pl</a>

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## Variants, possible

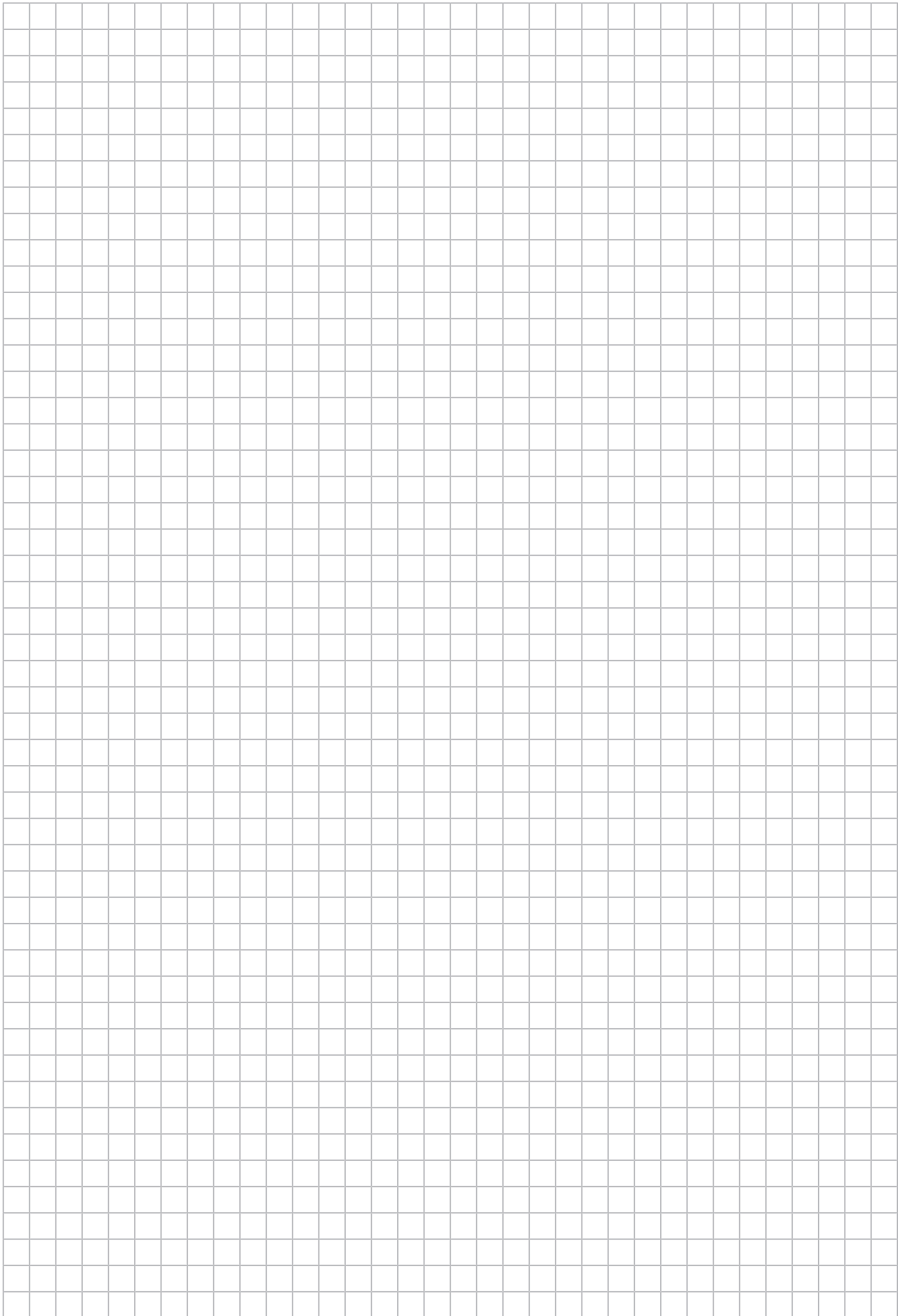
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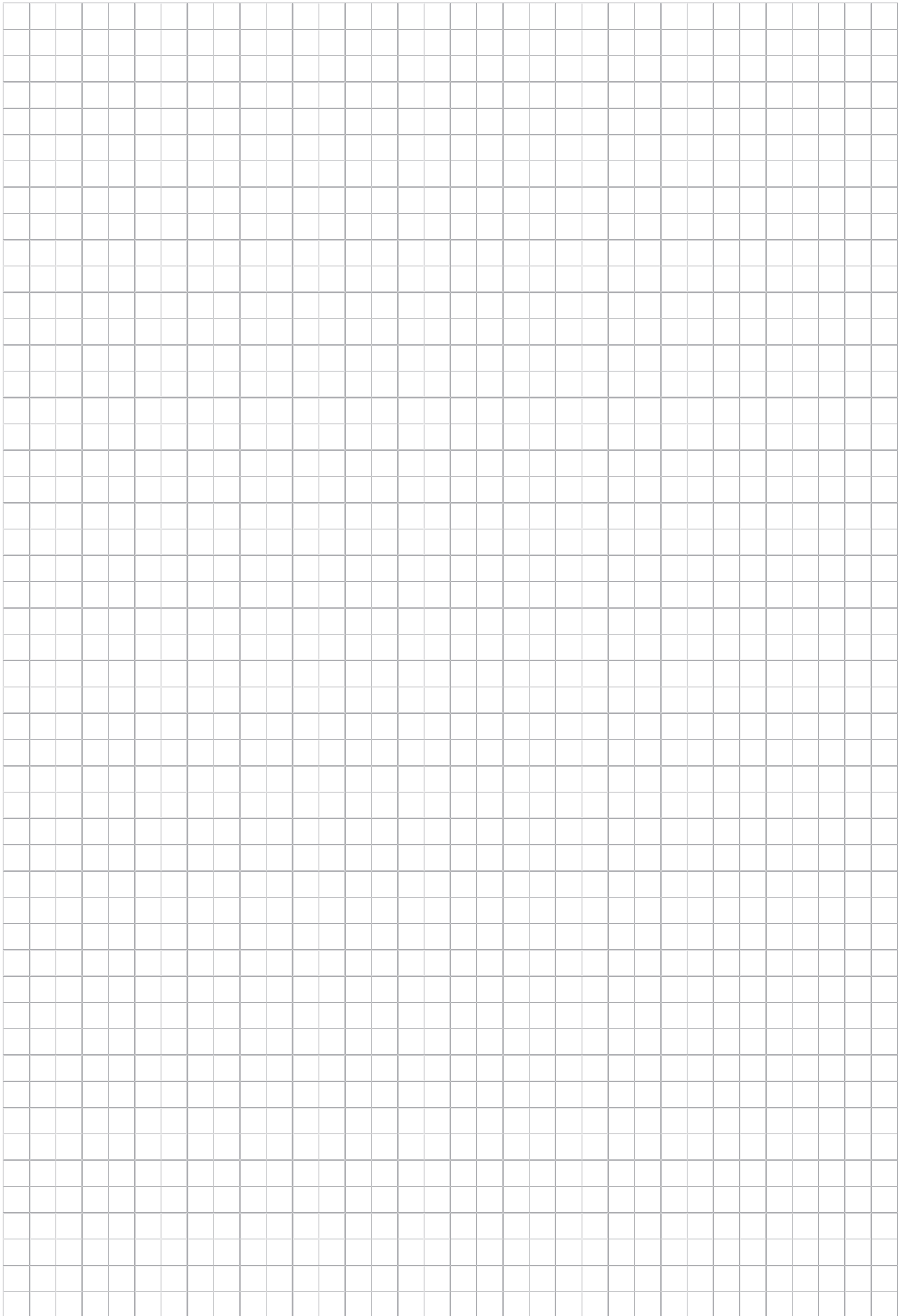
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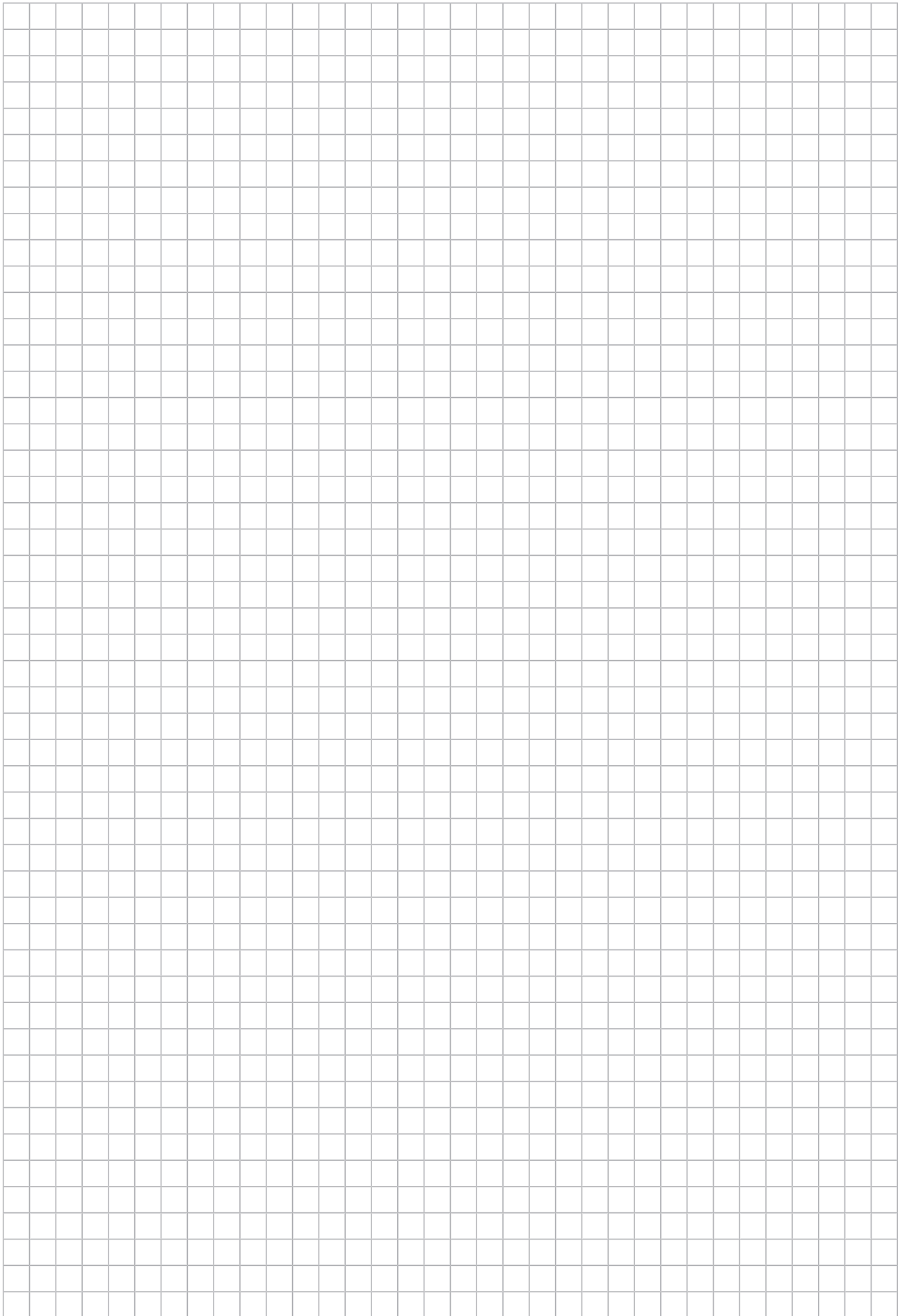
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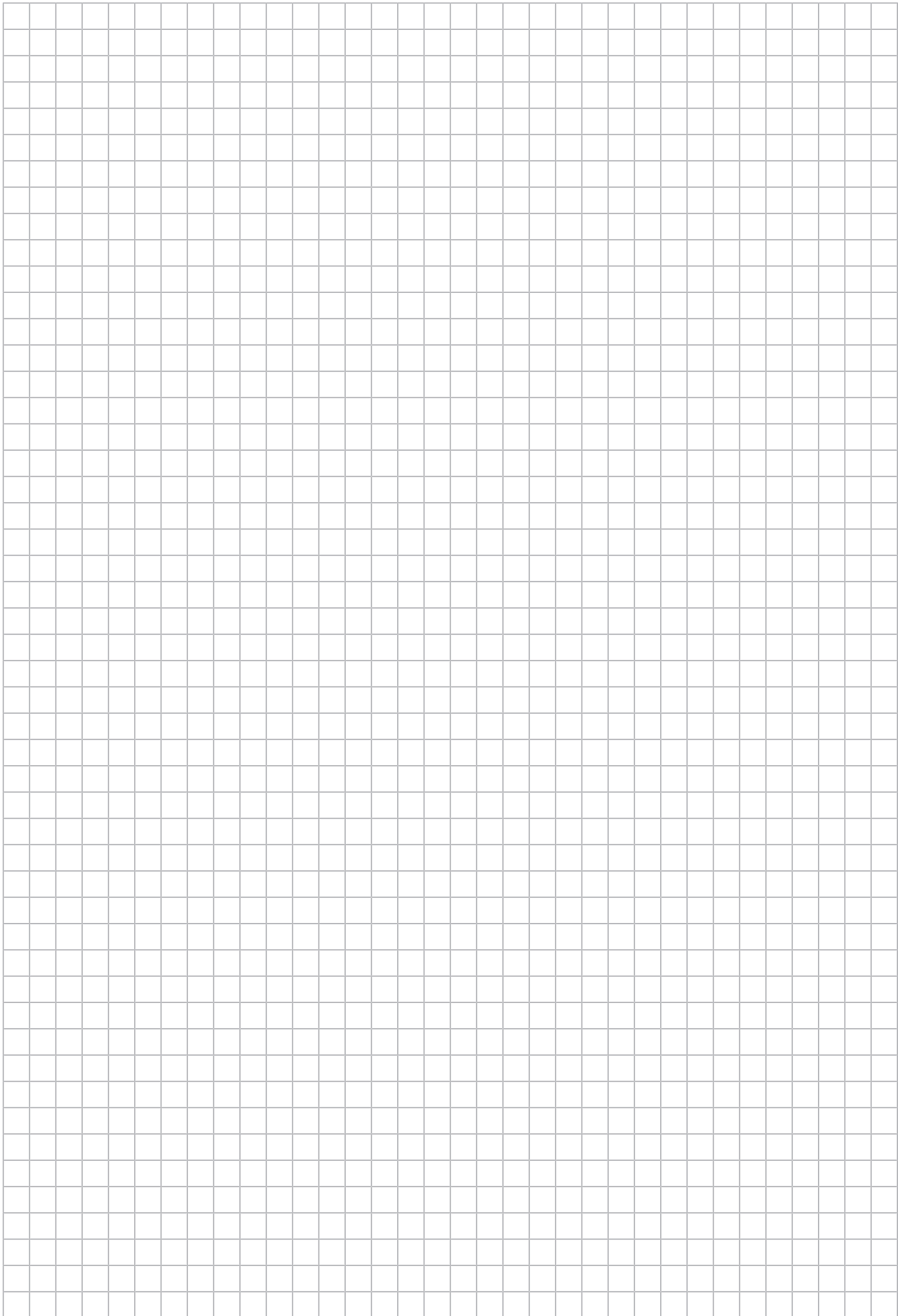


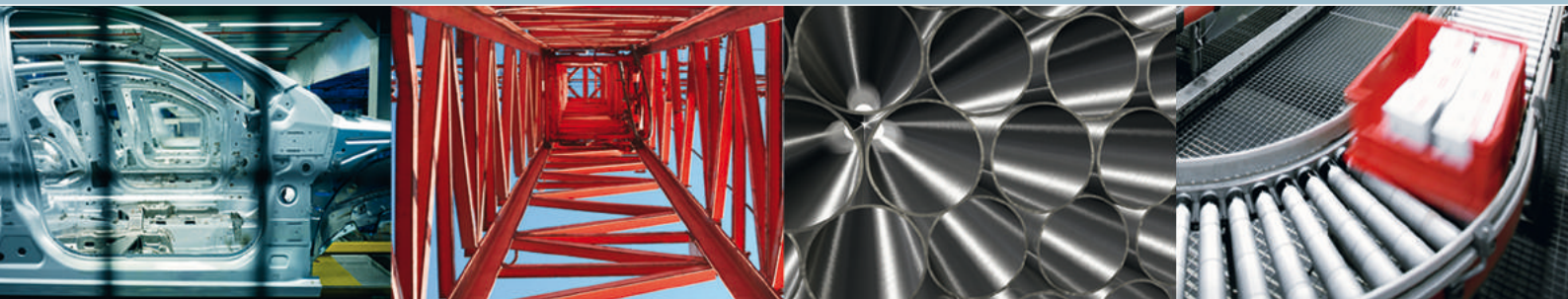
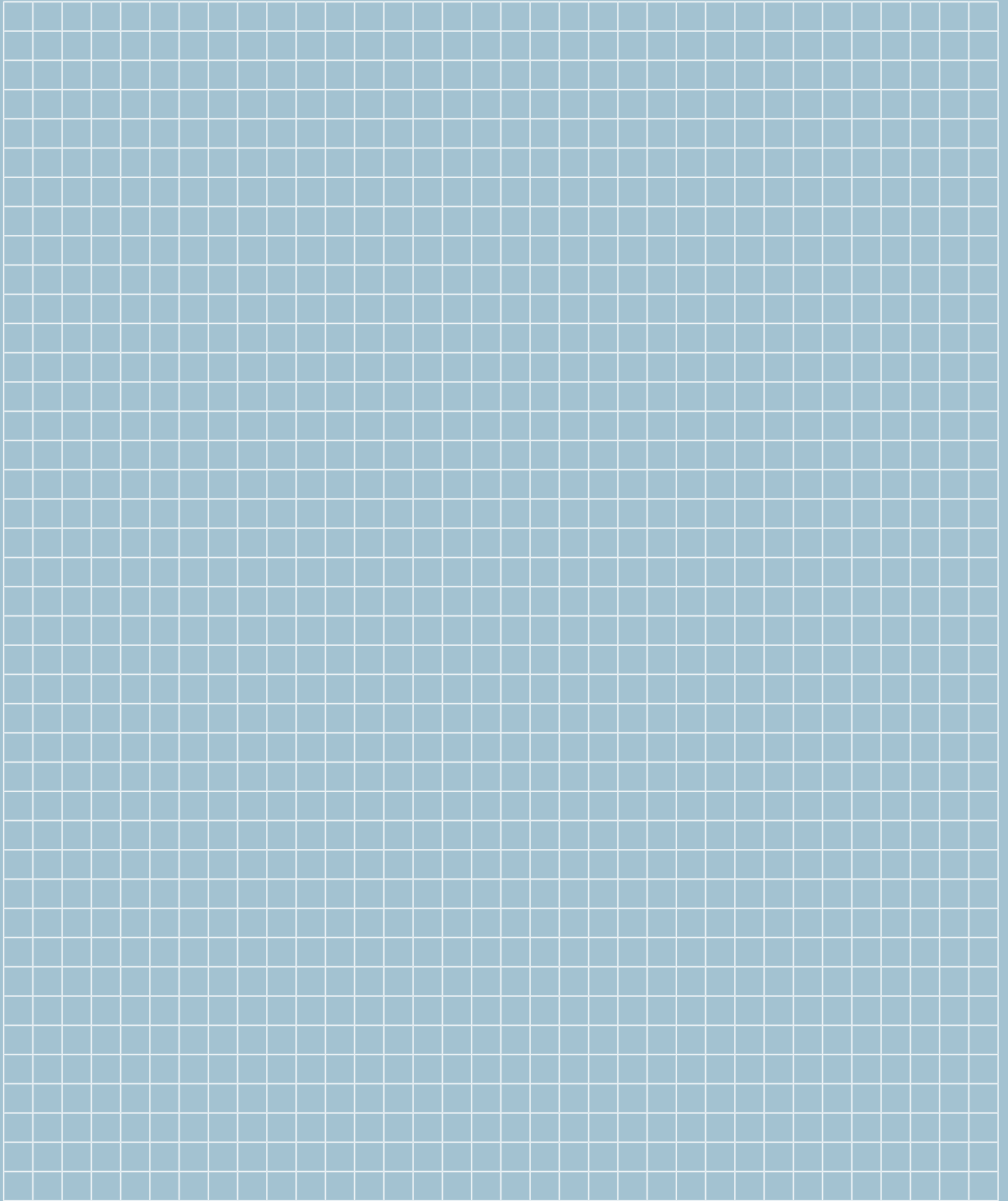














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Driving the world

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