# Technical datasheet

## 7016UCG/GNP42U3G

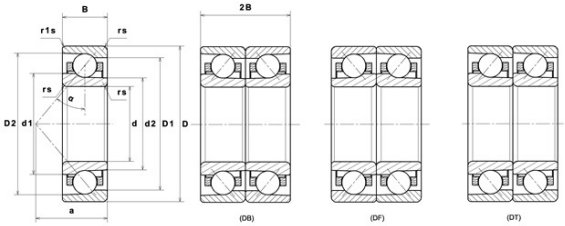
High precision angular contact ball bearings

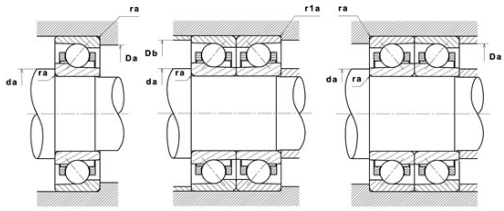


High precision angular contact ball bearing, moulded polyamide cage centred on balls

ULTAGE

## Visual(s)




## Product definition

| | |
|---|---|
| **d** | 80 mm |
| **D** | 125 mm |
| **B** | 22 mm |
| **d1** | 95.2 mm |
| **d2** | 91.7 mm |
| **D1** | 109.8 mm |
| **D2** | 116.9 mm |
| **a** | 24.8 mm |
| **Contact angle α** | 15 ° |
| **rs min** | 1.1 mm |
| **r1s min** | 0.6 mm |
| **f0** | 15.7 |
| **Precision class** | P42 |
| **Mass** | 0.86 kg |
| **Brand** | NTN |

## Product performance

| | |
|---|---|
| **Dynamic load, C** | 60.5 kN |
| **Static load, C0** | 58 kN |
| **Nlim (oil)** | 18,300 rpm |
| **Nlim (grease)** | 11,400 rpm |
| **Preload level** | GN |
| **Preload value** | 0.365 kN |
| **Axial rigidity** | 106.3 N/µm |
| **Radial rigidity** | 610 N/µm |
| **Min operating temperature, Tmin** | -20 °C |
| **Max operating temperature, Tmax** | 120 °C |
| **Characteristic cage frequency, FTF** | 0.44 Hz |
| **Characteristic rolling element frequency, BSF** | 7.48 Hz |
| **Characteristic outer ring frequency, BPF0** | 9.16 Hz |
| **Characteristic inner ring frequency, BPFI** | 11.84 Hz |

## Abutment dimensions

| | |
|---|---|
| **da min** | 87 mm |
| **Da max** | 118 mm |
| **Db max** | 120.5 mm |
| **r1a max** | 0.6 mm |
| **ra max** | 1 mm |
| **D6** | 95.4 mm |

## Calculation factors

**Equivalent dynamic radial load**

P = X.Fr + Y.Fa

| Series | | | | e | Single or DT bearing arrangement | | | | DB or DF arrangement | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Fa / Fr ≤ e | | Fa / Fr > e | | Fa / Fr ≤ e | | Fa / Fr > e | |
| | | | | | X | Y | X | Y | X | Y | X | Y |
| 70 (NTN & SNR)<br>72 (NTN & SNR)<br>78 (NTN)<br>79 (NTN)<br>719 (SNR) | 15° | 0.178 | 0.38 | 1 | 0 | 0.44 | 1.47 | 1 | 1.65 | 0.72 | 2.39 |
| | | 0.357 | 0.4 | | | | 1.4 | | 1.57 | | 2.28 |
| | | 0.714 | 0.43 | | | | 1.3 | | 1.46 | | 2.11 |
| | | 1.07 | 0.46 | | | | 1.23 | | 1.38 | | 2 |
| | | 1.43 | 0.47 | | | | 1.19 | | 1.34 | | 1.93 |
| | | 2.14 | 0.5 | | | | 1.12 | | 1.26 | | 1.82 |
| | | 3.57 | 0.55 | | | | 1.02 | | 1.14 | | 1.66 |
| | | 5.35 | 0.56 | | | | | | 1.12 | | 1.63 |
| | | 7.14 | 0.56 | | | | 1 | | 1.12 | | 1.63 |
| | 25° | | 0.68 | | | | 0.41 | 0.87 | 0.92 | 0.67 | 1.41 |
| | 30° | | 0.8 | | | | 0.39 | 0.76 | 0.78 | 0.63 | 1.24 |

**Equivalent static radial load**

Po = Xo.Fr + Yo.Fa

| Series | | Single or DT bearing arrangement | | DB or DF arrangement | |
|---|---|---|---|---|---|
| | | $X_0$ | $Y_0$ | $X_0$ | $Y_0$ |
| 70 (NTN & SNR)<br>72 (NTN & SNR)<br>78 (NTN)<br>79 (NTN)<br>719 (SNR) | 15° | 0.5 | 0.46 | 1 | 0.92 |
| | 25° | | 0.38 | | 0.76 |
| | 30° | | 0.33 | | 0.66 |

For single or DT bearing arrangement :

If Po <Fr, then use Po = Fr