# Technical data

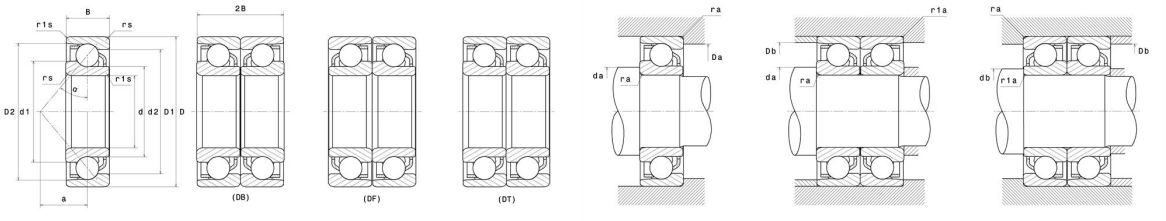
## 7310BG

Single row or matched pairs of angular contact ball bearings

Angular contact ball bearings, pressed steel cage



## Visual(s)




## Product definition

| | |
|---|---|
| **d** | 50 mm |
| **D** | 110 mm |
| **B** | 27 mm |
| **a** | 47 mm |
| **Contact angle α** | 40 ° |
| **rs min** | 2 mm |
| **r1s min** | 1 mm |
| **Radial clearance class** | CN |
| **Mass** | 1.11 kg |
| **Brand** | NTN |

## Product performance

| | |
|---|---|
| **Dynamic load, C** | 68 kN |
| **Static load, C0** | 48 kN |
| **Fatigue limit load, Cu** | 2.18 kN |
| **Nlim (oil)** | 8,100 Tr/min |
| **Nlim (grease)** | 6,000 Tr/min |
| **Min operating temperature, Tmin** | -40 °C |
| **Max operating temperature, Tmax** | 120 °C |
| **Characteristic cage frequency, FTF** | 0.41 Hz |
| **Characteristic rolling element frequency, BSF** | 4.17 Hz |
| **Characteristic outer ring frequency, BPF0** | 4.93 Hz |
| **Characteristic inner ring frequency, BPFI** | 7.07 Hz |

## Abutment dimensions

| | |
|---|---|
| **da min** | 60 mm |
| **db min** | 55.5 mm |
| **Da max** | 100 mm |
| **Db max** | 104.5 mm |
| **r1a max** | 1 mm |
| **ra max** | 2 mm |

## Calculation factors

### Equivalent dynamic radial load

$P = X.Fr + Y.Fa$

| | 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 |
| 30° | 0.8 | 1 | 0 | 0.9 | 0.76 | 1 | 0.78 | 0.63 | 1.24 |
| 40° | 1.14 | | | 0.35 | 0.57 | | 0.55 | 0.57 | 0.93 |

### Equivalent static radial load

$P_0 = X_0.Fr + Y_0.Fa$

| a | Single or DT bearing arrangement | | DB or DF arrangement | |
|---|---|---|---|---|
| | $X_0$ | $Y_0$ | $X_0$ | $Y_0$ |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | | 0.26 | | 0.52 |

For single or DT bearing arrangement :

If $P_0 < Fr$, then use $P_0 = Fr$