# Technical data

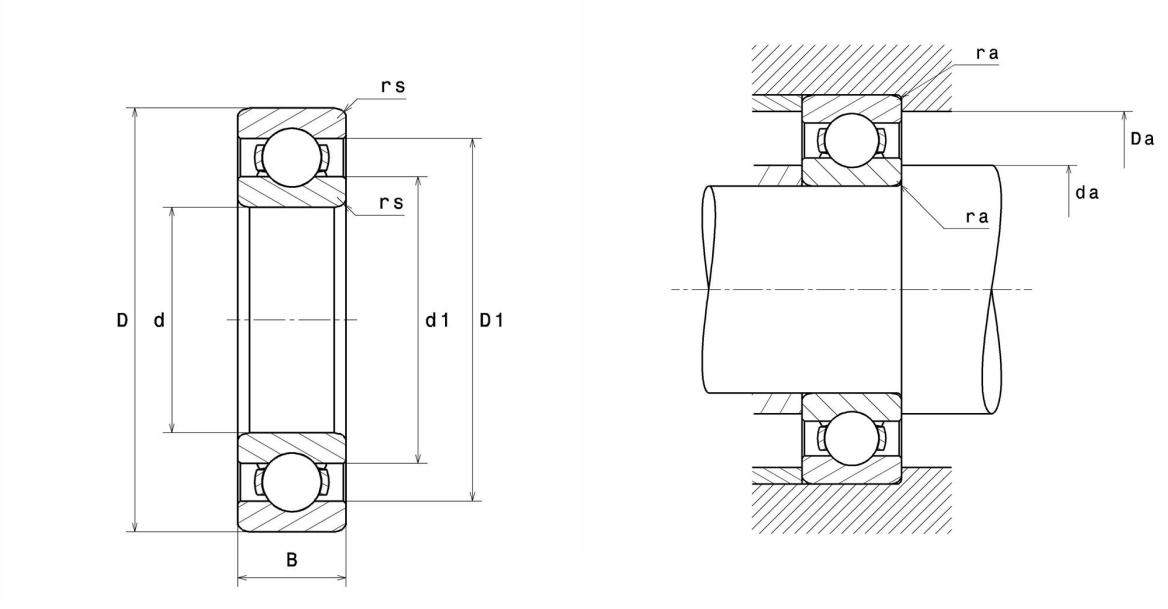
## 6309C3

Single row deep groove ball bearings



Deep groove ball bearing, radial contact, pressed steel cage, open

## Visual(s)




## Product definition

| | |
|---|---|
| **d** | 45 mm |
| **D** | 100 mm |
| **B** | 25 mm |
| **rs min** | 1.5 mm |
| **Radial clearance class** | C3 |
| **Mass** | 0.81 kg |
| **Brand** | NTN |

## Product performance

| | |
|---|---|
| **Dynamic load, C** | 53 kN |
| **Static load, C0** | 32 kN |
| **Fatigue limit load, Cu** | 1.45 kN |
| **f0** | 13.1 |
| **Nlim (oil)** | 8,200 Tr/min |
| **Nlim (grease)** | 7,000 Tr/min |
| **Min operating temperature, Tmin** | -40 °C |
| **Max operating temperature, Tmax** | 120 °C |
| **Characteristic cage frequency, FTF** | 0.38 Hz |
| **Characteristic rolling element frequency, BSF** | 4 Hz |
| **Characteristic outer ring frequency, BPF0** | 3.06 Hz |
| **Characteristic inner ring frequency, BPFI** | 4.94 Hz |

## Abutment dimensions

| | |
|---|---|
| **da min** | 53 mm |
| **Da max** | 92 mm |
| **ra max** | 1.5 mm |

## Calculation factors

**Equivalent dynamic radial load**

P = X.Fr + Y.Fa

| $\frac{f_0 F_a}{C_0}$ | e | Fa / Fr ≤ e | | Fa / Fr > e | |
|---|---|---|---|---|---|
| | | X | Y | X | Y |
| 0.172 | 0.19 | 1 | 0 | 0.56 | 2.3 |
| 0.345 | 0.22 | | | | 1.99 |
| 0.689 | 0.26 | | | | 1.71 |
| 1.03 | 0.28 | | | | 1.55 |
| 1.38 | 0.3 | | | | 1.45 |
| 2.07 | 0.34 | | | | 1.31 |
| 3.45 | 0.38 | | | | 1.15 |
| 5.17 | 0.42 | | | | 1.04 |
| 6.89 | 0.44 | | | | 1 |

**Equivalent static radial load**

Po = Xo.Fr + Yo.Fa

| $X_0$ | $Y_0$ |
|---|---|
| 0.6 | 0.5 |

For single or DT bearing arrangement :

If Po <Fr, then use Po = Fr