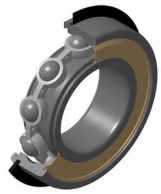
Technical data

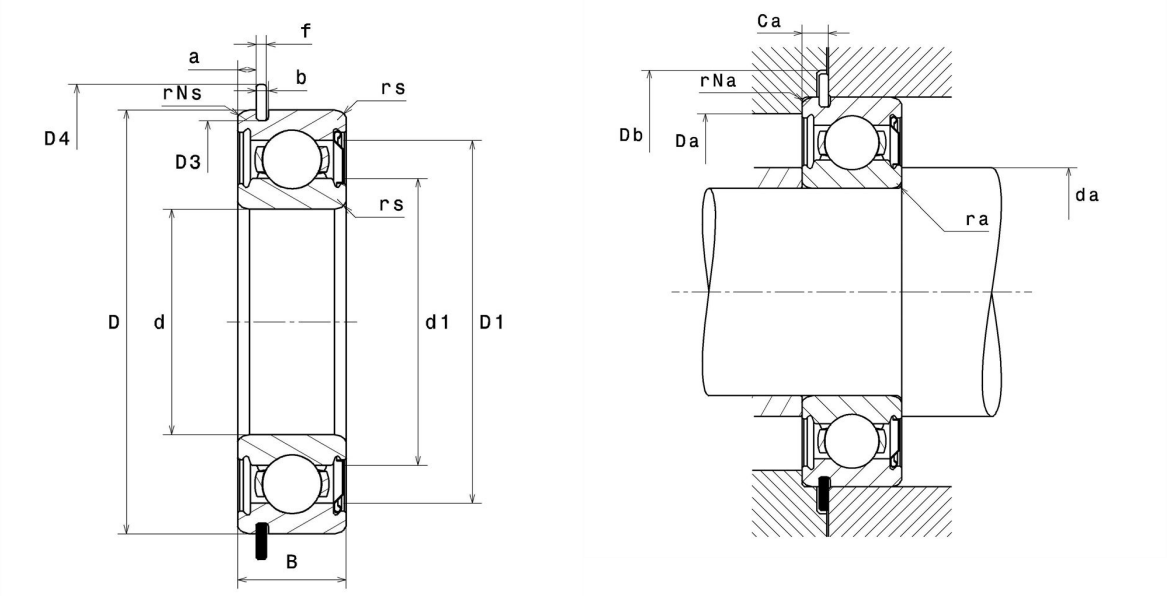
6309ZNR

Single row deep groove ball bearings



Deep groove ball bearing, radial contact, pressed steel cage, snap ring & groove on outer diameter, shield on one side

Visual(s)



Product definition

d	45 mm
D	100 mm
B	25 mm
a min	3.07 mm
a max	3.28 mm
Ca min	5.43 mm
Ca max	5.74 mm
rs min	1.5 mm
rNs min	0.5 mm
D3 max	96.8 mm
b min	2.7 mm
b max	3 mm
r0 max	0.6 mm
D4 max	106.5 mm
f	2.46 mm
Snap ring reference	R100
Radial clearance class	CN
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
rNa max	0.5 mm
Db min	108 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