Technical data

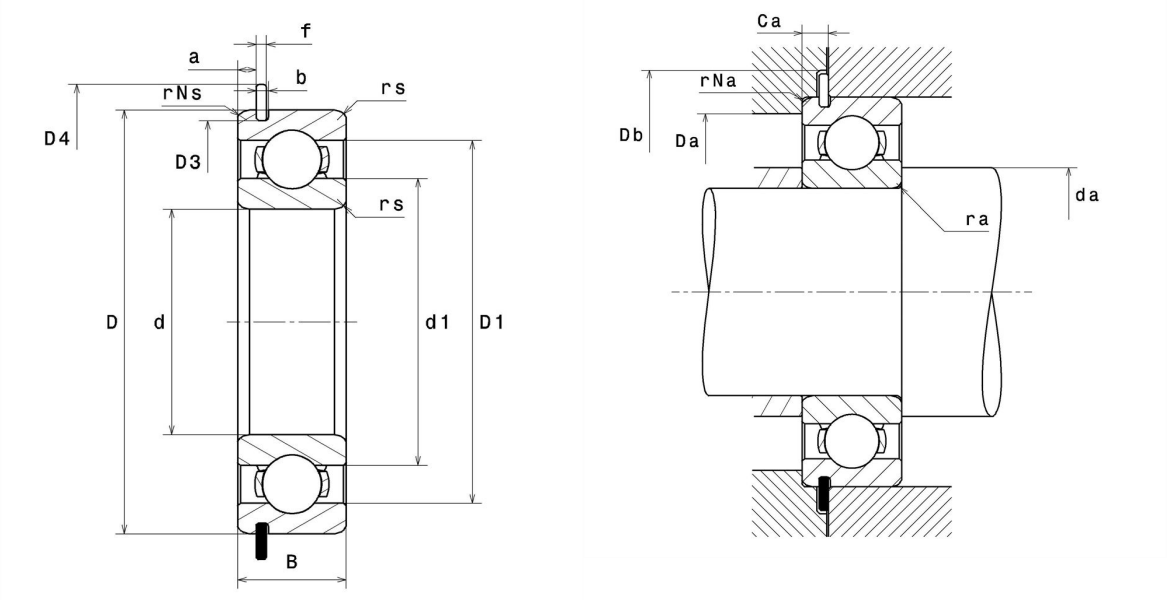
6311NR

Single row deep groove ball bearings



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

Visual(s)



Product definition

d	55 mm
D	120 mm
B	29 mm
a min	3.86 mm
a max	4.06 mm
Ca min	6.58 mm
Ca max	6.88 mm
rs min	2 mm
rNs min	0.5 mm
D3 max	115.21 mm
b min	3.1 mm
b max	3.4 mm
r0 max	0.6 mm
D4 max	129.7 mm
f	2.82 mm
Snap ring reference	R120
Radial clearance class	CN
Mass	1.37 kg
Brand	NTN

Product performance

Dynamic load, C	71.5 kN
Static load, C0	45 kN
Fatigue limit load, Cu	2.05 kN
f0	13.2
Nlim (oil)	6,800 Tr/min
Nlim (grease)	5,800 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	4.08 Hz
Characteristic outer ring frequency, BPF0	3.07 Hz
Characteristic inner ring frequency, BPFI	4.93 Hz

Abutment dimensions

da min	64 mm
Da max	111 mm
ra max	2 mm
rNa max	0.5 mm
Db min	131.5 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