



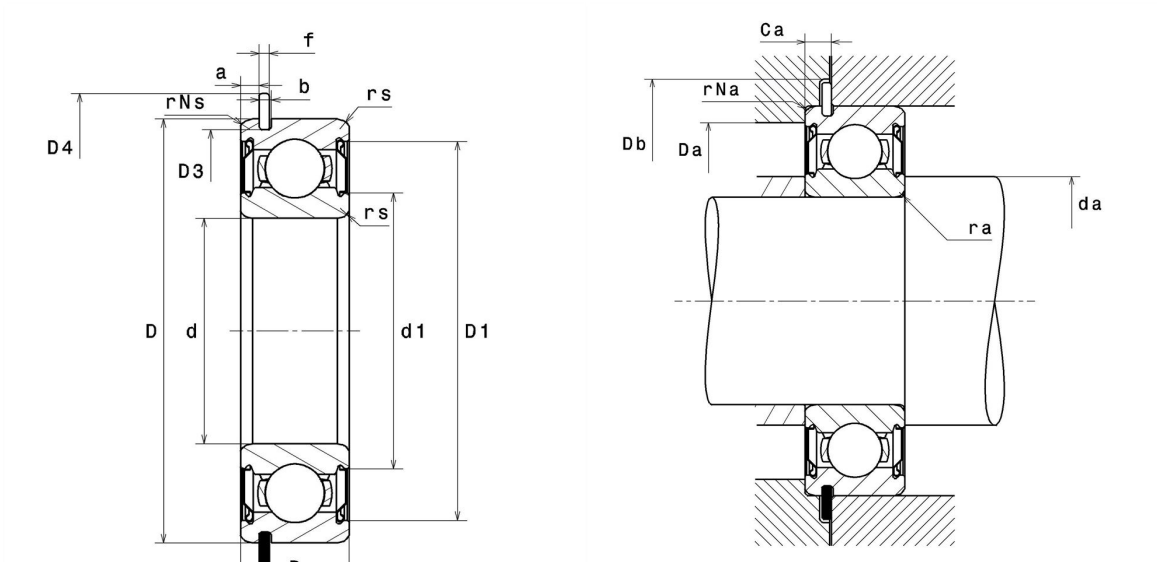
Technical datasheet

6311ZZNR/2AS

Single row deep groove ball bearings

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

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, C_u	2.05 kN
f₀	13.2
N_{lim} (grease)	5,800 rpm
Min operating temperature, T_{min}	-20 °C
Max operating temperature, T_{max}	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, BPF_i	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

$$P = X.F_r + Y.F_a$$

$\frac{f_0 F_a}{C_0}$	e	F _a / F _r ≤ e		F _a / F _r > 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

$$P_0 = X_0.F_r + Y_0.F_a$$

X ₀	Y ₀
0.6	0.5

For single or DT bearing arrangement:

If P₀ < F_r, then use P₀ = F_r