

PDF technical sheet 6210L1C3

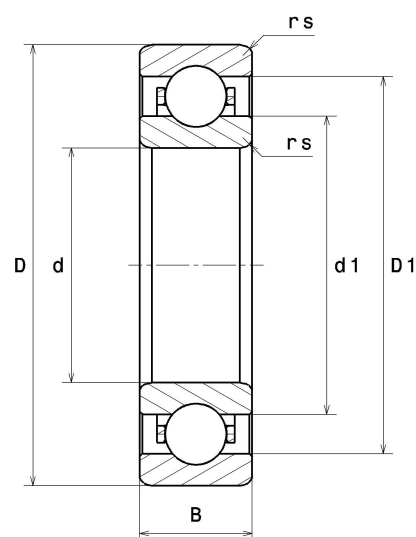


Single row deep groove ball bearings

Deep groove ball bearing, radial contact, machined cage, open

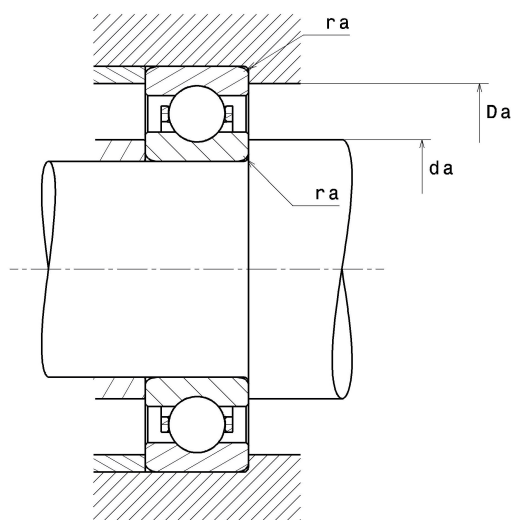
Product definition

d	50 mm
D	90 mm
B	20 mm
rs min	1.10 mm
Radial clearance class	C3
Mass	0.45 kg
Brand	NTN



Product performance

Dynamic load, C	35 kN
Static load, C0	23.20 kN
Fatigue limit load, Cu	1.05 kN
f0	14.4
Nlim (oil)	8,300 Tr/min
Nlim (grease)	7,100 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.41 Hz
Characteristic rolling element frequency, BSF	5.33 Hz
Characteristic outer ring frequency, BPF0	4.09 Hz
Characteristic inner ring frequency, BPF1	5.91 Hz



Abutment dimensions

da min	56.50 mm
Da max	83.50 mm
ra max	1 mm

Calculation factors

Equivalent dynamic radial load

$$P = X \cdot Fr + Y \cdot Fa$$

$\frac{f_0 F_a}{C_0}$	e	$F_a / Fr \leq e$		$F_a / Fr > e$	
		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

$$P_0 = X_0 \cdot Fr + Y_0 \cdot Fa$$

X_0	Y_0
0.6	0.5

For single or DT bearing arrangement:

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