

PDF technical sheet 6828C3



Single row deep groove ball bearings

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

Product definition

d	140 mm
D	175 mm
B	18 mm
rs min	1.10 mm
Radial clearance class	C3
Mass	0.85 kg
Brand	NTN



Product performance

Dynamic load, C	38.50 kN
Static load, C0	44.50 kN
Fatigue limit load, Cu	1.61 kN
f0	16
Nlim (oil)	4,000 Tr/min
Nlim (grease)	3,400 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.47 Hz
Characteristic rolling element frequency, BSF	15.20 Hz
Characteristic outer ring frequency, BPF0	12.15 Hz
Characteristic inner ring frequency, BPF1	13.85 Hz



Abutment dimensions

da min	146.50 mm
Da max	168.50 mm
ra max	1 mm

Calculation factors

Equivalent dynamic radial load

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

$\frac{f_0 F_a}{C_0}$	e	$F_a / F_r \leq e$		$F_a / F_r > e$	
		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 $P_0 < F_r$, then use $P_0 = F_r$