

PDF technical sheet 6880



Single row deep groove ball bearings

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

Product definition

d	16.5354 "
D	20.4724 "
B	1.8110 "
rs min	0.0827 "
Radial clearance class	CN
Mass	76.19 oz
Brand	NTN



Product performance

Dynamic load, C	260 kN
Static load, C0	405 kN
Fatigue limit load, Cu	8.50 kN
f0	16.1
Nlim (oil)	1,200 RPM
Nlim (grease)	1,000 RPM
Min operating temperature, Tmin	-4 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.47 Hz
Characteristic rolling element frequency, BSF	14.74 Hz
Characteristic outer ring frequency, BPF0	11.66 Hz
Characteristic inner ring frequency, BPFI	13.34 Hz



Abutment dimensions

da min	16.9685 "
Da max	20.0394 "
ra max	0.0787 "

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 $P_0 = F_r$