

PDF technical sheet 68/500



Single row deep groove ball bearings

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

Product definition

d	19.6850 "
D	24.4094 "
B	2.2047 "
rs min	0.1181 "
Radial clearance class	CN
Mass	132.28 oz
Brand	NTN



Product performance

Dynamic load, C	325 kN
Static load, C0	560 kN
Fatigue limit load, Cu	10.80 kN
f0	16.1
Nlim (oil)	970 RPM
Nlim (grease)	820 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	14.63 Hz
Characteristic outer ring frequency, BPF0	11.18 Hz
Characteristic inner ring frequency, BPFI	12.82 Hz



Abutment dimensions

da min	20.1969 "
Da max	23.8976 "
ra max	0.0984 "

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 $P_0 = Fr$