

PDF technical sheet 4T27690/27620



Single row tapered roller bearings

Tapered roller bearing, pressed steel cage

Product definition	
d	3.2813 "
D	4.9375 "
B	1.0000 "
C	0.7813 "
T	1.0000 "
d1	4.1339 "
a	1.0236 "
e	0.42
Y2	1.44
Y0	0.79
Mass	3.70 oz
Brand	NTN



Product performance	
Dynamic load, C	102 kN
Rating life coefficient, A2	1.4
Static load, C0	163 kN
Fatigue limit load, Cu	19.60 kN
Nlim (oil)	3,600 RPM
Nlim (grease)	2,700 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.46 Hz
Characteristic rolling element frequency, BSF	11.22 Hz
Characteristic outer ring frequency, BPF0	12.35 Hz
Characteristic inner ring frequency, BPFI	14.65 Hz



Abutment dimensions	
ra max	0.1378 "
r1a max	0.0591 "

Calculation factors

Equivalent dynamic radial load

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

$F_a / F_r \leq e$		$F_a / F_r > e$	
X	Y	X	Y
1	0	0.4	Y2

Equivalent static radial load

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

X_0	Y_0
0.5	Y0

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

The values for e, Y2 and Y0 are shown in the above table