

PDF technical sheet 30220U



Single row tapered roller bearings

Tapered roller bearing, pressed steel cage

Product definition	
d	3.9370 "
D	7.0866 "
B	1.3386 "
C	1.1417 "
T	1.4567 "
d1	5.3346 "
a	1.4173 "
rs min	0.1181 "
r1s min	0.0984 "
e	0.42
Y2	1.43
Y0	0.79
Mass	13.33 oz
ISO 355 reference	T3FB100
Brand	NTN



Product performance	
Dynamic load, C	258 kN
Rating life coefficient, A2	1
Static load, C0	335 kN
Fatigue limit load, Cu	37 kN
Nlim (oil)	2,700 RPM
Nlim (grease)	2,000 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.43 Hz
Characteristic rolling element frequency, BSF	6.63 Hz
Characteristic outer ring frequency, BPF0	8.58 Hz
Characteristic inner ring frequency, BPFI	11.42 Hz



Abutment dimensions

da max	4.5669 "
db min	4.4882 "
Da min	6.1811 "
Da max	6.6142 "
Db min	6.6142 "
Ca min	0.1969 "
Cb min	0.3150 "
ra max	0.0984 "
r1a max	0.0787 "

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 $P_0 \leq F_r$, then use $P_0 = F_r$

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