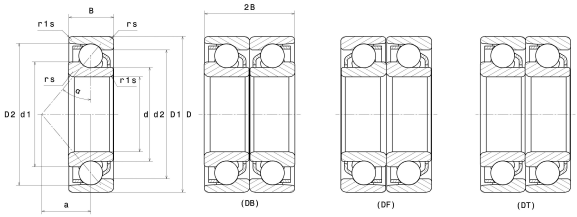
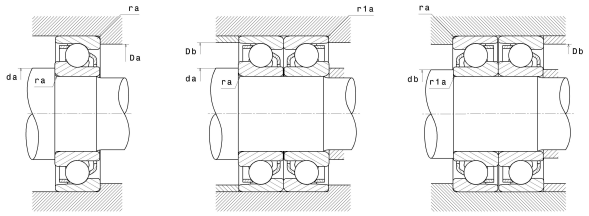
PDF technical sheet
7220B

Single row or matched pairs of angular contact ball bearings
Angular contact ball bearings, pressed steel cage

Product definition	
d	3.9370 "
D	7.0866 "
B	1.3386 "
a	2.9921 "
Contact angle, a	40 °
rs min	0.0827 "
r1s min	0.0433 "
Mass	11.50 oz
Brand	NTN



Product performance	
Dynamic load, C	130 kN
Static load, C0	114 kN
Fatigue limit load, Cu	4.40 kN
Nlim (oil)	4,500 RPM
Nlim (grease)	3,400 RPM
Min operating temperature, Tmin	−40 °C
Max operating temperature, Tmax	248 °C



Abutment dimensions	
da min	4.4094 "
db min	4.2126 "
Da max	6.6142 "
Db max	6.8110 "
r1a max	0.0394 "
ra max	0.0787 "

Calculation factors

Equivalent dynamic radial load

P = X.Fr + Y.Fa

	e	Single or DT bearing arrangement				DB or DF arrangement			
		Fa / Fr ≤ e		Fa / Fr > e		Fa / Fr ≤ e		Fa / Fr > e	
		X	Y	X	Y	X	Y	X	Y
30°	0.8	1	0	0.9	0.76	1	0.78	0.63	1.24
40°	1.14			0.35	0.57		0.55	0.57	0.93

Equivalent static radial load

Po = Xo.Fr + Yo.Fa

a	Single or DT bearing arrangement		DB or DF arrangement	
	X_0	Y_0	X_0	Y_0
30°	0.5	0.33	1	0.66
40°		0.26		0.52

For single or DT bearing arrangement :

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