

PDF technical sheet 7214BG

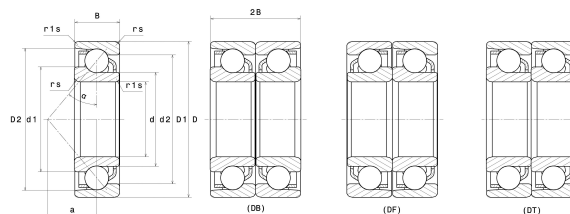


Single row or matched pairs of angular contact ball bearings

Angular contact ball bearings, pressed steel cage

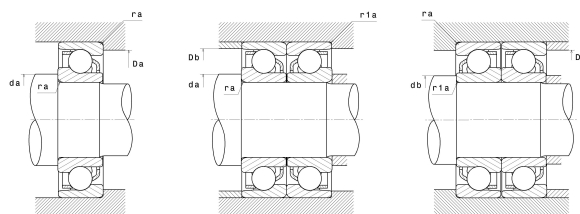
Product definition

d	2.7559 "
D	4.9213 "
B	0.9449 "
a	2.0866 "
Contact angle, α	40 °
rs min	0.0591 "
r1s min	0.0394 "
Radial clearance class	CN
Mass	3.92 oz
Brand	NTN



Product performance

Dynamic load, C	69 kN
Static load, C0	58 kN
Fatigue limit load, Cu	2.65 kN
Nlim (oil)	6,500 RPM
Nlim (grease)	4,900 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	248 °C



Abutment dimensions

da min	3.0906 "
db min	2.9724 "
Da max	4.5866 "
Db max	4.7047 "
r1a max	0.0394 "
ra max	0.0394 "

Calculation factors

Equivalent dynamic radial load

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

	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

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

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