

PDF technical sheet 7316BG

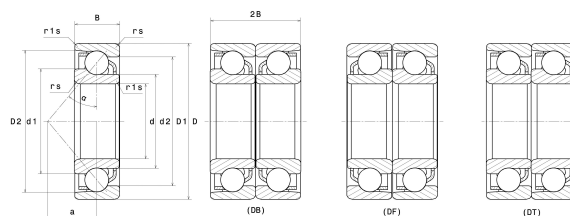


Single row or matched pairs of angular contact ball bearings

Angular contact ball bearings, pressed steel cage

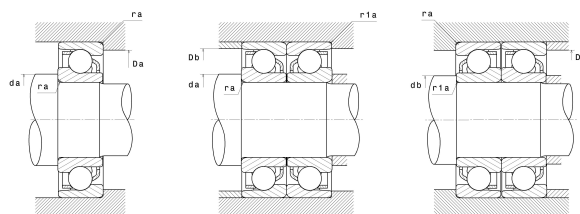
Product definition

d	80 mm
D	170 mm
B	39 mm
a	72 mm
Contact angle, α	40 °
rs min	2.10 mm
r1s min	1.10 mm
Radial clearance class	CN
Mass	3.72 kg
Brand	NTN



Product performance

Dynamic load, C	135 kN
Static load, C0	109 kN
Fatigue limit load, Cu	4.45 kN
Nlim (oil)	5,100 Tr/min
Nlim (grease)	3,800 Tr/min
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	120 °C



Abutment dimensions

da min	92 mm
db min	87 mm
Da max	158 mm
Db max	163 mm
r1a max	1 mm
ra max	2 mm

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 $P_0 = F_r$