



Technical data

7209

Single row or matched pairs of angular contact ball bearings

Angular contact ball bearings, pressed steel cage

VISUAL (S)



PRODUCT DEFINITION

Brand	NTN
d - Internal diameter	45 mm
D - External diameter	85 mm
B - Bearing/Inner ring width	19 mm
a - Charge load application point	28,5 mm
- Contact angle	30 °
rs - Min fillet radius	1,1 mm
r1s - Min fillet radius	0,6 mm
Radial clearance class	CN
Mass	0,404 kg

PRODUCT PERFORMANCE

C - Dynamic load	44000000 mN
C0 - Static load	28700000 mN
Cu - Fatigue limit load	2250000 mN
N lim - Oil lubrication limit speed	72000 °/s
N lim - Grease lubrication limit speed	52200 °/s
Tmin - Min operating temperature	233,15 °K
Tmax - Max operating temperature	393,15 °K

ABUTMENT

da min - Min shoulder diameter IR	52 mm
db min - Min IR shoulder diameter	49,5 mm
Da max - Max shoulder diameter OR	78 mm
Db max - Max OR shoulder diameter	80,5 mm



ABUTMENT

r1a - Max fillet radius	0,6 mm
ra max - Max shaft & housing fillet radius	1 mm

INDUSTRY CALCUL 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 $P_0 = F_r$

