

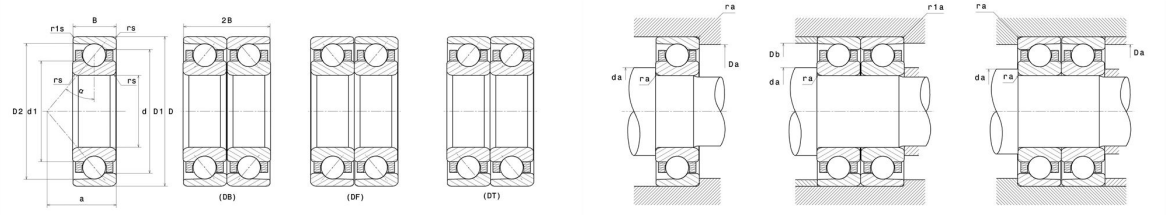
Technical data

7003

Single row or matched pairs of angular contact ball bearings

Angular contact ball bearing, polyamide cage.

Visual(s)



Product definition

d	17 mm
D	35 mm
B	10 mm
a	12.5 mm
Contact angle α	30 °
rs min	0.3 mm
r1s min	0.15 mm
Mass	0.05 kg
Brand	NTN

Product performance

Dynamic load, C	7.15 kN
Static load, C0	3.85 kN
Fatigue limit load, Cu	0.18 kN
Nlim (oil)	28,000 Tr/min
Nlim (grease)	21,000 Tr/min
Min operating temperature, Tmin	-20 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.41 Hz
Characteristic rolling element frequency, BSF	4.52 Hz
Characteristic outer ring frequency, BPF0	4.08 Hz
Characteristic inner ring frequency, BPFI	5.92 Hz

Abutment dimensions

da min	19.5 mm
Da max	32.5 mm
Db max	33.8 mm
r1a max	0.15 mm
ra max	0.3 mm

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

$P_0 = X_0.Fr + Y_0.Fa$

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 $P_0 = Fr$