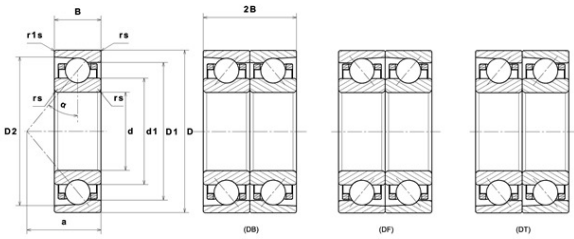
PDF technical sheet
7022CVUJ84

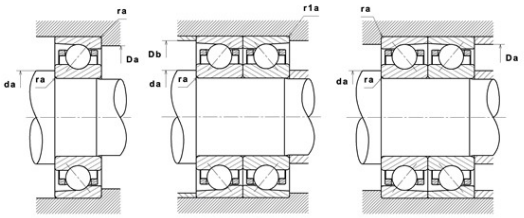
High precision angular contact ball bearings

High precision angular contact ball bearing, laminated resin cage centred on outer ring

Product definition	
d	110 mm
D	170 mm
B	28 mm
d1	129.40 mm
D1	150.60 mm
D2	158.91 mm
a	33 mm
Contact angle, a	15 °
rs min	2 mm
r1s min	1 mm
f0	15.901
Precision class	P4
Mass	1.98 kg
Brand	SNR



Product performance	
Dynamic load, C	95.60 kN
Static load, C0	98.30 kN
Fatigue limit load, Cu	4.45 kN
Nlim (oil)	12,500 Tr/min
Nlim (grease)	8,200 Tr/min
Axial displacement K Factor	0.86
Preload level	8
Peload value	1,510 kN
axial rigidity	211 N/μm
radial rigidity	1,052 N/μm
Min operating temperature, Tmin	−30 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.44 Hz
Characteristic rolling element frequency, BSF	7.90 Hz
Characteristic outer ring frequency, BPF0	9.24 Hz
Characteristic inner ring frequency, BPFI	11.77 Hz



Abutment dimensions	
da min	120 mm
db min	120 mm
Da max	160 mm
Db max	160 mm
r1a max	1 mm
ra max	2 mm
D6	135 mm

Calculation factors

Equivalent dynamic radial load

P = X.Fr + Y.Fa

Series		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
70 (NTN & SNR) 72 (NTN & SNR) 78 (NTN) 79 (NTN) 719 (SNR)	15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39
		0.357	0.4				1.4		1.57		2.28
		0.714	0.43				1.3		1.46		2.11
		1.07	0.46				1.23		1.38		2
		1.43	0.47				1.19		1.34		1.93
		2.14	0.5				1.12		1.26		1.82
		3.57	0.55				1.02		1.14		1.66
		5.35	0.56						1.12		1.63
		7.14	0.56				1		1.12		1.63
	25°		0.68			0.41	0.87		0.92	0.67	1.41
	30°		0.8			0.39	0.76		0.78	0.63	1.24

Equivalent static radial load

Po = Xo.Fr + Yo.Fa

Series		Single or DT bearing arrangement		DB or DF arrangement	
		X_0	Y_0	X_0	Y_0
70 (NTN & SNR) 72 (NTN & SNR) 78 (NTN) 79 (NTN) 719 (SNR)	15°	0.5	0.46	1	0.92
	25°		0.38		0.76
	30°		0.33		0.66

For single or DT bearing arrangement :

If Po <Fr, then use Po = Fr