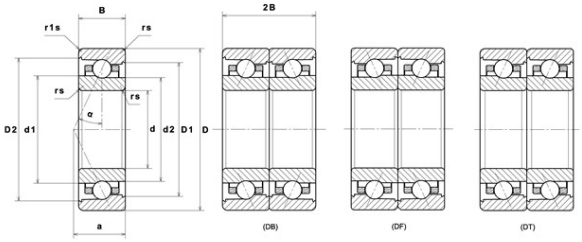
PDF technical sheet
ML7013HVUJ74S

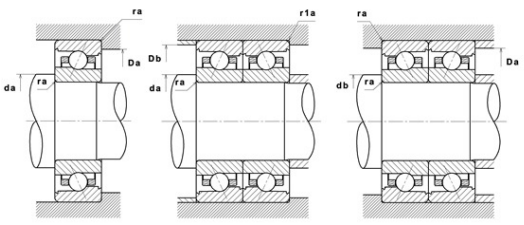
High precision angular contact ball bearings

High precision angular contact ball bearing, high speed series ML, laminated resin cage centred on outer ring

Product definition	
d	65 mm
D	100 mm
B	18 mm
d1	76.90 mm
d2	75.10 mm
D1	89.91 mm
D2	93.11 mm
a	28 mm
Contact angle, a	25 °
rs min	1.10 mm
r1s min	1 mm
f0	8.461
Precision class	P4S
Mass	0.45 kg
Brand	SNR



Product performance	
Dynamic load, C	16.50 kN
Static load, C0	12.10 kN
Fatigue limit load, Cu	0.69 kN
Nlim (oil)	24,000 Tr/min
Nlim (grease)	16,500 Tr/min
Axial displacement K Factor	0.53
Preload level	7
Peload value	140 kN
axial rigidity	138 N/μm
radial rigidity	303 N/μm
Min operating temperature, Tmin	−30 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.46 Hz
Characteristic rolling element frequency, BSF	10.19 Hz
Characteristic outer ring frequency, BPF0	11.40 Hz
Characteristic inner ring frequency, BPFI	13.60 Hz



NTN-SNR ROULEMENTS – www.ntn-snr.com
1 rue des Usines – 74010 Annecy Cedex – France – Tel. +33 (0)4 50 65 30 00
S.A. au capital de 123 599 542 € - RCS ANNECY B 325 821 072 – Id. Fiscale : FR 48 325 821 072 – SIRET 325 821 072 00015 –
Code APE 2815 Z – Code NACE 28.15

Abutment dimensions	
da min	72 mm
db min	72 mm
Da max	93 mm
Db max	93 mm
r1a max	1 mm
ra max	1 mm
D6	79.30 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