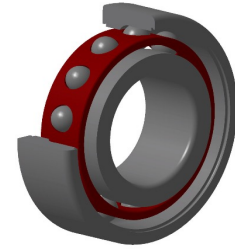


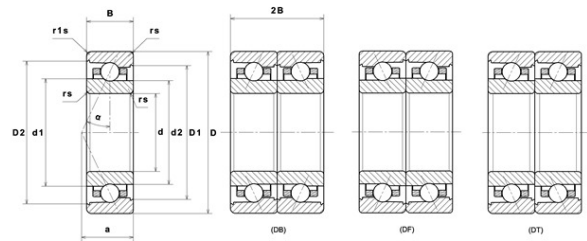
# PDF technical sheet ML71910HVUJ74S



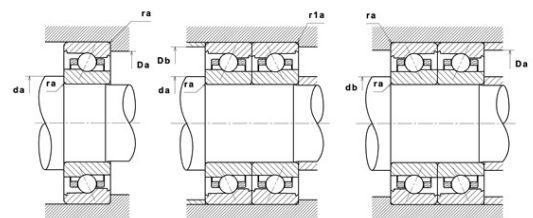
## High precision angular contact ball bearings

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

Product definition	
d	50 mm
D	72 mm
B	12 mm
d1	56.80 mm
d2	54.70 mm
D1	66.01 mm
D2	67.51 mm
a	20 mm
Contact angle, $\alpha$	25 °
rs min	0.60 mm
r1s min	0.30 mm
f0	8.658
Precision class	P4S
Mass	0.13 kg
Brand	SNR



Product performance	
Dynamic load, C	7.10 kN
Static load, C0	5.30 kN
Fatigue limit load, Cu	0.34 kN
Nlim (oil)	32,000 Tr/min
Nlim (grease)	22,000 Tr/min
Axial displacement K Factor	0.61
Preload level	7
Peload value	60 kN
axial rigidity	90 N/ $\mu$ m
radial rigidity	200 N/ $\mu$ m
Min operating temperature, Tmin	-30 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.46 Hz
Characteristic rolling element frequency, BSF	12.47 Hz
Characteristic outer ring frequency, BPF0	13.92 Hz
Characteristic inner ring frequency, BPF1	16.08 Hz



### Abutment dimensions

da min	54.50 mm
db min	54.50 mm
Da max	67.50 mm
Db max	67.50 mm
r1a max	0.30 mm
ra max	0.60 mm
D6	58.30 mm

### Calculation factors

#### Equivalent dynamic radial load

$$P = X.Fr + Y.Fa$$

Series	α	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

$$P_o = X_o.Fr + Y_o.Fa$$

Series	α	Single or DT bearing arrangement		DB or DF arrangement	
		X <sub>o</sub>	Y <sub>o</sub>	X <sub>o</sub>	Y <sub>o</sub>
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  $P_o < F_r$ , then use  $P_o = F_r$