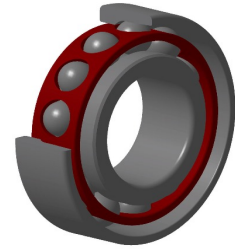


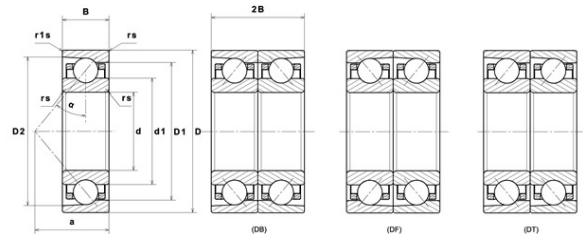
PDF technical sheet 71940HVUJ74A



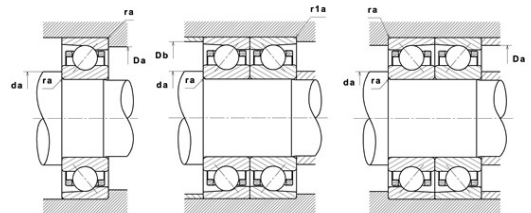
High precision angular contact ball bearings

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

Product definition	
d	7.8740 "
D	11.0236 "
B	1.4961 "
d1	8.8858 "
D1	10.0128 "
D2	10.4954 "
a	2.9528 "
Contact angle, α	25 °
rs min	0.0827 "
r1s min	0.0394 "
f0	16.639
Precision class	P4
Mass	21.73 oz
Brand	SNR



Product performance	
Dynamic load, C	178 kN
Static load, C0	231 kN
Fatigue limit load, Cu	8.30 kN
Nlim (oil)	6,700 RPM
Nlim (grease)	4,400 RPM
Axial displacement K Factor	0.32
Preload level	7
Peload value	2,600 kN
axial rigidity	613 N/ μ m
radial rigidity	1,294 N/ μ m
Min operating temperature, Tmin	-22 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.46 Hz
Characteristic rolling element frequency, BSF	1,0.00 Hz
Characteristic outer ring frequency, BPF0	12.29 Hz
Characteristic inner ring frequency, BPF1	14.71 Hz



Abutment dimensions

da min	8.3465 "
db min	8.3465 "
Da max	10.5512 "
Db max	10.5512 "
r1a max	0.0394 "
ra max	0.0787 "
D6	9.1339 "

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

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

Series	e	Single or DT bearing arrangement		DB or DF arrangement	
		X _o	Y _o	X _o	Y _o
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 $P_o = F_r$