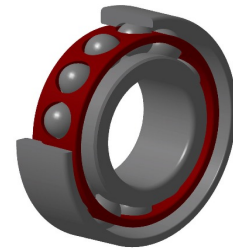


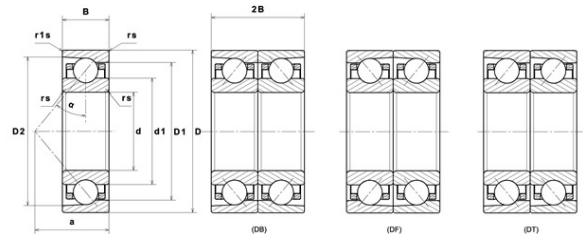
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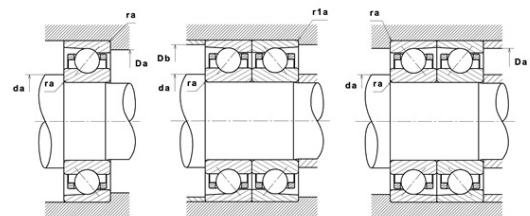
### High precision angular contact ball bearings

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

Product definition	
d	3.5433 "
D	4.9213 "
B	0.7087 "
d1	3.9843 "
D1	4.4783 "
D2	4.6945 "
a	1.3386 "
Contact angle, $\alpha$	25 °
rs min	0.0236 "
r1s min	0.0236 "
f0	16.708
Precision class	P4
Mass	1.98 oz
Brand	SNR



Product performance	
Dynamic load, C	37.90 kN
Static load, C0	41.90 kN
Fatigue limit load, Cu	2.29 kN
Nlim (oil)	15,000 RPM
Nlim (grease)	9,800 RPM
Axial displacement K Factor	0.45
Preload level	8
Peload value	970 kN
axial rigidity	326 N/ $\mu$ m
radial rigidity	662 N/ $\mu$ 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	10.34 Hz
Characteristic outer ring frequency, BPF0	11.87 Hz
Characteristic inner ring frequency, BPF1	14.13 Hz



### Abutment dimensions

da min	3.7205 "
db min	3.7205 "
Da max	4.7441 "
Db max	4.7441 "
r1a max	0.0236 "
ra max	0.0236 "
D6	4.1142 "

### 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 <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  $P_o = F_r$