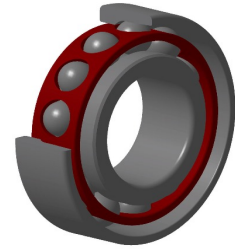


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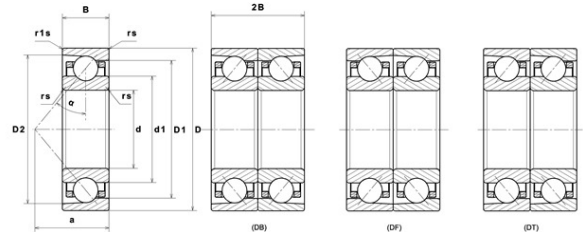


### High precision angular contact ball bearings

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

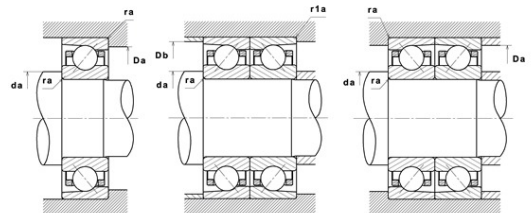
#### Product definition

d	7.8740 "
D	11.0236 "
B	1.4961 "
d1	8.8858 "
D1	10.0128 "
D2	10.4954 "
a	2.9528 "
Contact angle, $\alpha$	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/ $\mu$ m
radial rigidity	1,294 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	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 <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  $P_o = F_r$