



Brand of NTN corporation

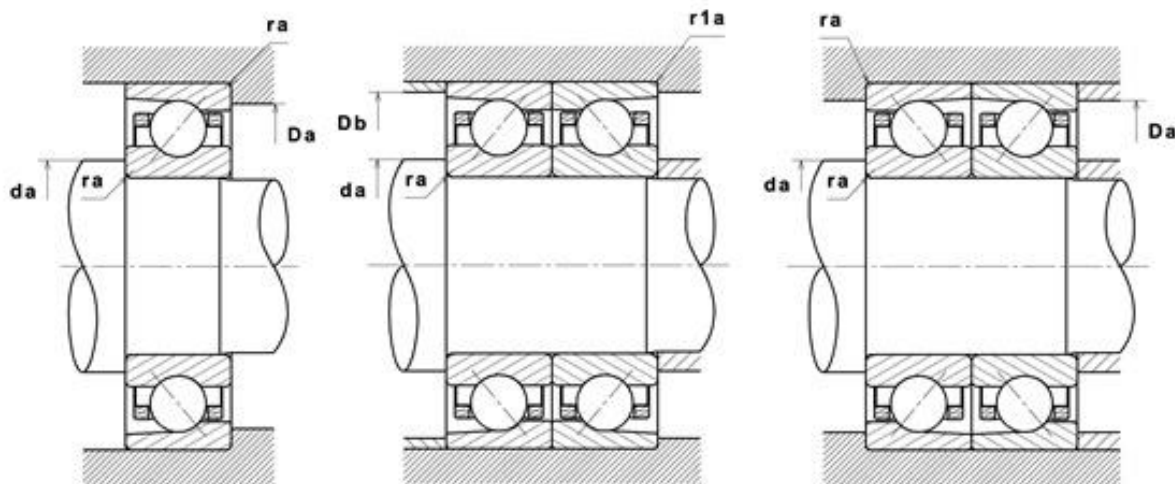
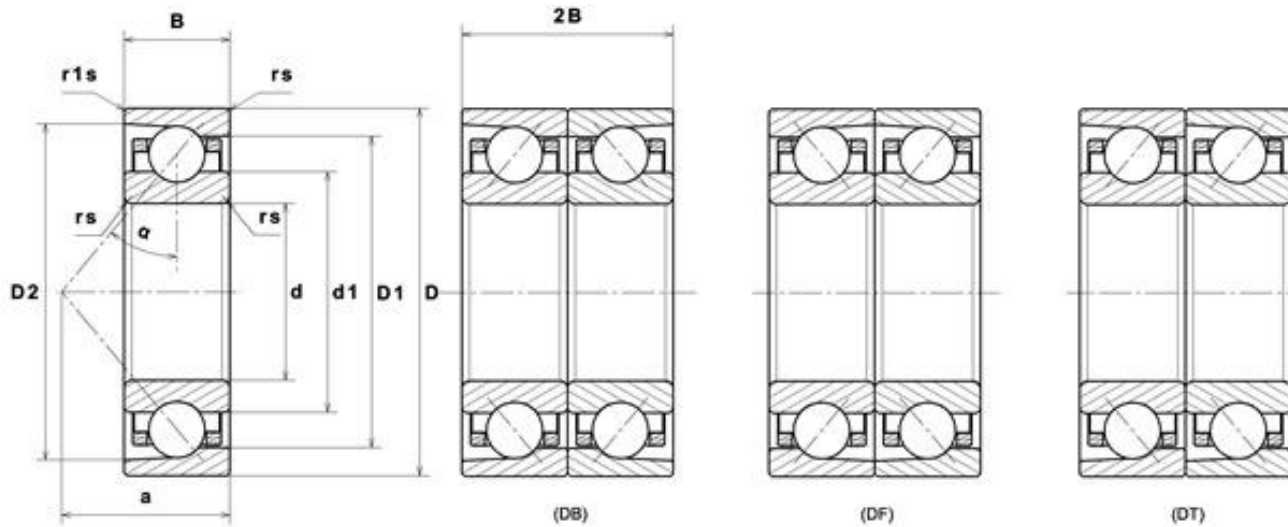
Technical data

71940CVUAJ74

High precision angular contact ball bearings



VISUAL (S)



NTN Europe

1 rue des Usines · BP 2017 · 74010 Annecy Cedex · France · Tel. +33 (0)4 50 65 30 00
S.A. au capital de 322 639 919 € · 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

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High precision angular contact ball bearings

PRODUCT DEFINITION

Brand	SNR
d - Internal diameter	200 mm
D - External diameter	280 mm
B - Bearing/Inner ring width	38 mm
d1 - External diameter inner ring	225,7 mm
D1 - Inner diameter outer ring	254,326 mm
D2 - Inner diameter outer ring	266,583 mm
a - Charge load application point	51 mm
- Contact angle	15 °
rs - Min fillet radius	2,1 mm
r1s - Min fillet radius	1 mm
Precision class	P4
Mass	6,16 kg

PRODUCT PERFORMANCE

C - Dynamic load	189000000 mN
C0 - Static load	244000000 mN
Cu - Fatigue limit load	8300000 mN
f0 - Coefficient	16.498
Axial displacement K Factor	0.69
Preload level	7
Preload value	1650000 mN
Axial rigidity	262 N/μm
Radial rigidity	1460 N/μm



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PRODUCT PERFORMANCE

Tmin - Min operating temperature	243,15 °K
Tmax - Max operating temperature	393,15 °K
Nlim - Oil lubrication limit speed	43800 °/s
Nlim - Grease lubrication limit speed	28800 °/s

BEARING FREQUENCIES

BPFO - Characteristic outer ring frequency (60 rpm)	12.206 Hz
BPFI - Characteristic inner ring frequency (60 rpm)	14.794 Hz
FTF - Characteristic cage frequency (60 rpm)	0.452 Hz
BSF - Characteristic rolling element frequency (60 rpm)	9.986 Hz

ABUTMENT

da min - Min shoulder diameter IR	212 mm
db min - Min IR shoulder diameter	212 mm
Da max - Max shoulder diameter OR	268 mm
Db max - Max OR shoulder diameter	268 mm
r1a - Max fillet radius	1 mm
ra max - Max shaft & housing fillet radius	2 mm



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INDUSTRY CALCUL FACTORS

Equivalent dynamic radial load

$$P = X \cdot Fr + Y \cdot Fa$$

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	0.72	1.65	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

$$P_0 = X_0 \cdot Fr + Y_0 \cdot Fa$$

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 $P_0 < Fr$, then use $P_0 = Fr$



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