



Brand of NTN corporation

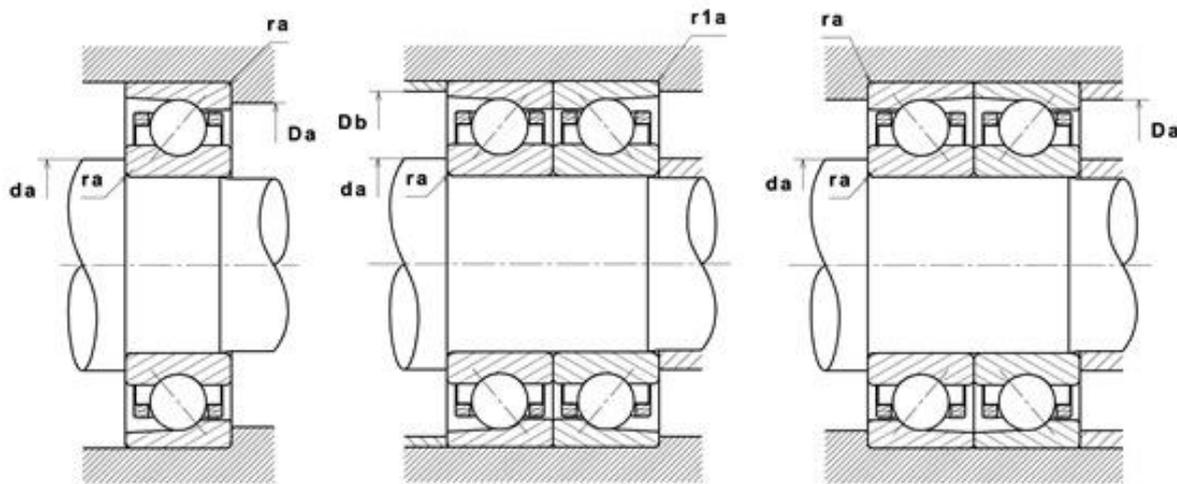
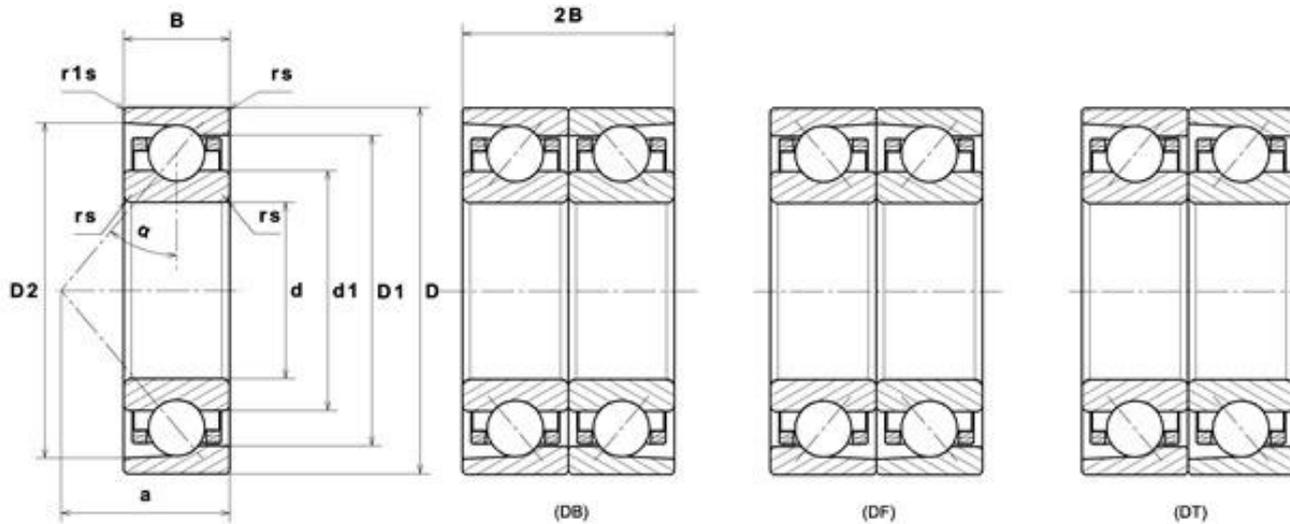
# Technical data

## 7007CVDUJ74

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

<b>Brand</b>	SNR
<b>d - Internal diameter</b>	35 mm
<b>D - External diameter</b>	62 mm
<b>B - Bearing/Inner ring width</b>	14 mm
<b>d1 - External diameter inner ring</b>	43,2 mm
<b>D1 - Inner diameter outer ring</b>	53,1 mm
<b>D2 - Inner diameter outer ring</b>	57,98 mm
<b>a - Charge load application point</b>	13 mm
<b>- Contact angle</b>	15 °
<b>rs - Min fillet radius</b>	1,5 mm
<b>r1s - Min fillet radius</b>	1 mm
<b>Precision class</b>	P4
<b>Mass</b>	0,15 kg

## PRODUCT PERFORMANCE

<b>C - Dynamic load</b>	19900000 mN
<b>C0 - Static load</b>	14600000 mN
<b>Cu - Fatigue limit load</b>	660000 mN
<b>f0 - Coefficient</b>	15
<b>Axial displacement K Factor</b>	1.43
<b>Preload level</b>	7
<b>Preload value</b>	100000 mN
<b>Axial rigidity</b>	49 N/μm
<b>Radial rigidity</b>	278 N/μm



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## PRODUCT PERFORMANCE

<b>Tmin - Min operating temperature</b>	243,15 °K
<b>Tmax - Max operating temperature</b>	393,15 °K
<b>N lim - Oil lubrication limit speed</b>	216000 °/s
<b>N lim - Grease lubrication limit speed</b>	144000 °/s

## BEARING FREQUENCIES

<b>BPFO - Over rolling frequency on outer ring (60 rpm)</b>	6.735 Hz
<b>BPFI - Over rolling frequency on inner (60 rpm)</b>	9.265 Hz
<b>BSF - Over rolling frequency on rolling element (60 rpm)</b>	5.957 Hz
<b>BRF - Rotational frequency - rolling element (60 rpm)</b>	2.979 Hz
<b>FTF - Rotational frequency - cage (60 rpm)</b>	0.421 Hz

## ABUTMENT

<b>da min - Min shoulder diameter IR</b>	40,5 mm
<b>db min - Min IR shoulder diameter</b>	40,5 mm
<b>Da max - Max shoulder diameter OR</b>	56,5 mm
<b>Db max - Max OR shoulder diameter</b>	56,5 mm
<b>r1a - Max fillet radius</b>	1 mm
<b>ra max - Max shaft &amp; housing fillet radius</b>	1,5 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

$$Po = Xo \cdot Fr + Yo \cdot Fa$$

Series			Single or DT bearing arrangement		DB or DF arrangement	
			X <sub>0</sub>	Y <sub>0</sub>	X <sub>0</sub>	Y <sub>0</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  $Po < Fr$ , then use  $Po = Fr$



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