

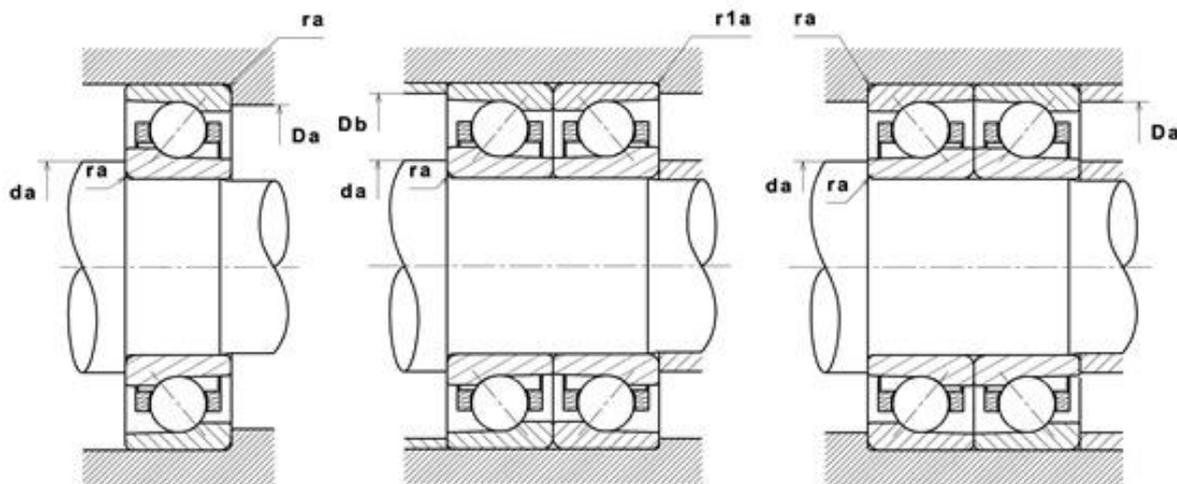
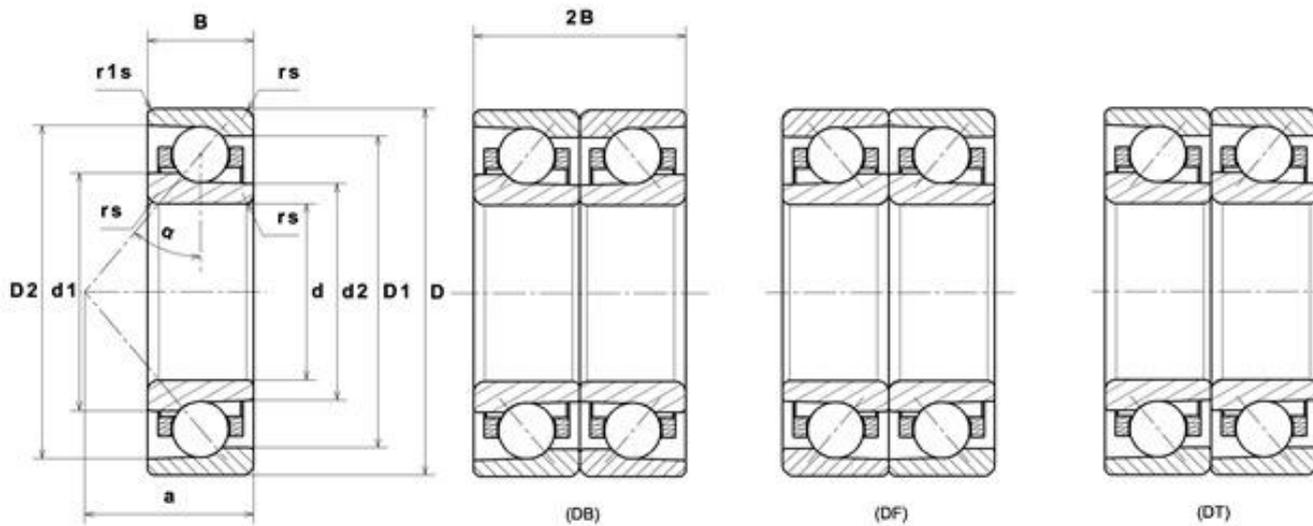


## Technical data

### 7007UADG/GNP42

High precision angular contact ball bearings

#### VISUAL (S)



# 7007UADG/GNP42

High precision angular contact ball bearings

## PRODUCT DEFINITION

<b>Brand</b>	NTN
<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>	44,2 mm
<b>d2 - External diameter inner ring</b>	42,2 mm
<b>D1 - Inner diameter outer ring</b>	52,8 mm
<b>D2 - Inner diameter outer ring</b>	56,9 mm
<b>a - Charge load application point</b>	18,4 mm
<b>- Contact angle</b>	25 °
<b>rs - Min fillet radius</b>	1 mm
<b>r1s - Min fillet radius</b>	0,6 mm
<b>Precision class</b>	P42
<b>Mass</b>	0,15 kg

## PRODUCT PERFORMANCE

<b>C - Dynamic load</b>	21000000 mN
<b>C0 - Static load</b>	13900000 mN
<b>N lim - Oil lubrication limit speed</b>	202800 °/s
<b>N lim - Grease lubrication limit speed</b>	125400 °/s
<b>Preload level</b>	GN
<b>Preload value</b>	186000 mN
<b>Axial rigidity</b>	122.4 N/μm
<b>Radial rigidity</b>	258.1 N/μm



**NTN Europe**

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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 PERFORMANCE

<b>Tmin - Min operating temperature</b>	253,15 °K
<b>Tmax - Max operating temperature</b>	393,15 °K

### ABUTMENT

<b>da min - Min shoulder diameter IR</b>	40,5 mm
<b>Da max - Max shoulder diameter OR</b>	56,5 mm
<b>Db max - Max OR shoulder diameter</b>	57,5 mm
<b>r1a - Max fillet radius</b>	0,6 mm
<b>ra max - Max shaft &amp; housing fillet radius</b>	1 mm

### 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			2.28	
		0.714	0.43				1.3			2.11	
		1.07	0.46				1.23			2	
		1.43	0.47				1.19			1.93	
		2.14	0.5				1.12			1.82	
		3.57	0.55				1.02			1.66	
		5.35	0.56				1			1.63	
	7.14	0.56	1	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  
 $P_o = X_o \cdot Fr + Y_o \cdot Fa$

Series	e	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  $P_o < Fr$ , then use  $P_o = Fr$



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