



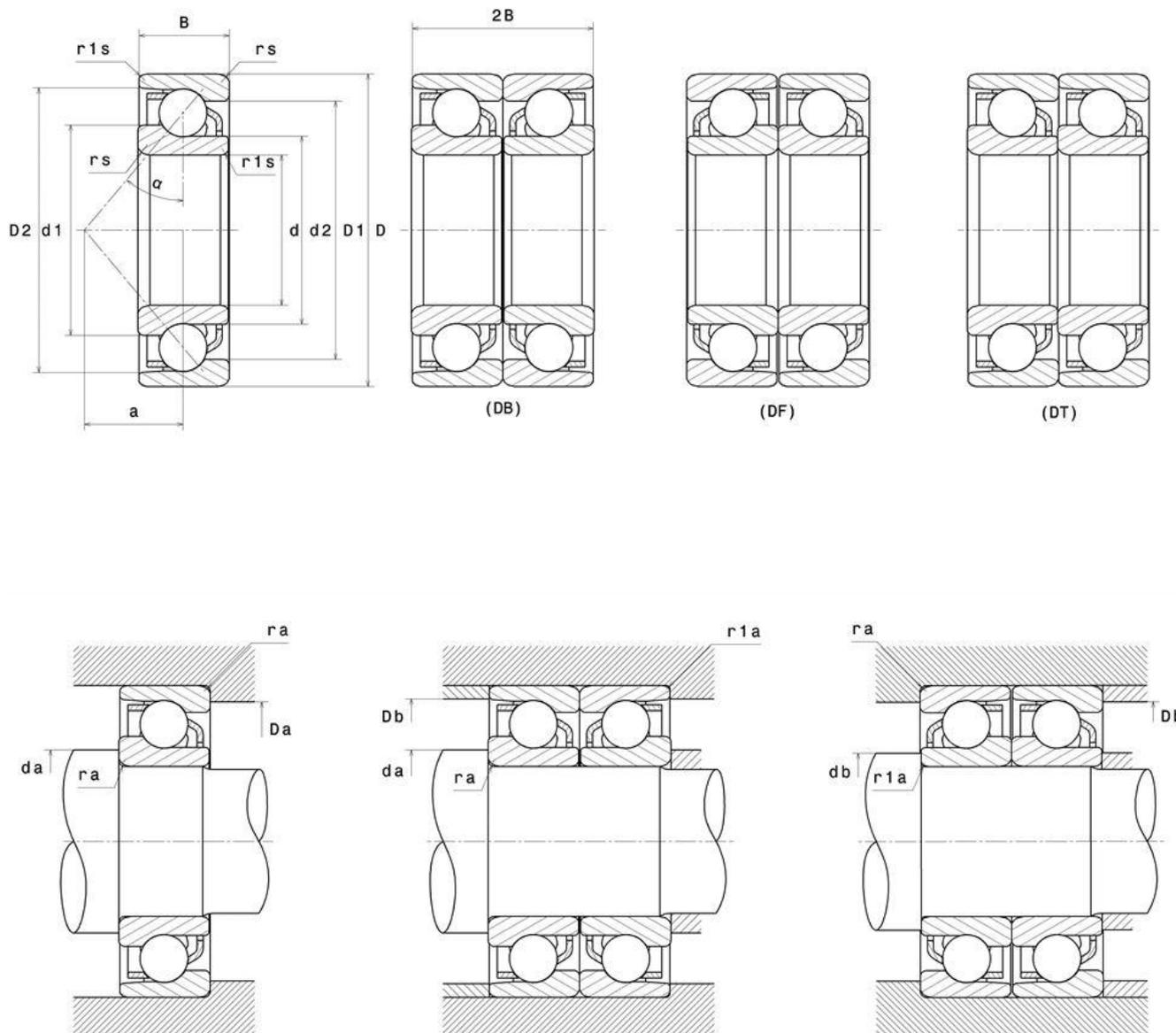
## Technical data

### 7209B

Single row or matched pairs of angular contact ball bearings

Angular contact ball bearings, pressed steel cage

#### VISUAL (S)



# 7209B

Single row or matched pairs of angular contact ball bearings

## PRODUCT DEFINITION

<b>Brand</b>	NTN
<b>d - Internal diameter</b>	45 mm
<b>D - External diameter</b>	85 mm
<b>B - Bearing/Inner ring width</b>	19 mm
<b>a - Charge load application point</b>	37 mm
<b>- Contact angle</b>	40 °
<b>rs - Min fillet radius</b>	1,1 mm
<b>r1s - Min fillet radius</b>	0,6 mm
<b>Radial clearance class</b>	CN
<b>Mass</b>	0,41 kg

## PRODUCT PERFORMANCE

<b>C - Dynamic load</b>	40000000 mN
<b>C0 - Static load</b>	26200000 mN
<b>Cu - Fatigue limit load</b>	2040000 mN
<b>N lim - Oil lubrication limit speed</b>	59400 °/s
<b>N lim - Grease lubrication limit speed</b>	44400 °/s
<b>Tmin - Min operating temperature</b>	233,15 °K
<b>Tmax - Max operating temperature</b>	393,15 °K

## ABUTMENT

<b>da min - Min shoulder diameter IR</b>	52 mm
<b>db min - Min IR shoulder diameter</b>	49,5 mm
<b>Da max - Max shoulder diameter OR</b>	78 mm
<b>Db max - Max OR shoulder diameter</b>	80,5 mm



**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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## ABUTMENT

<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

$$P = X.F_r + Y.F_a$$

	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
30°	0.8	1	0	0.9	0.76	1	0.78	0.63	1.24
40°	1.14			0.35	0.57		0.55	0.57	0.93

### Equivalent static radial load

$$P_0 = X_0.F_r + Y_0.F_a$$

a	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>
30°	0.5	0.33	1	0.66
40°		0.26		0.52

For single or DT bearing arrangement :

If  $P_0 < F_r$ , then use  $P_0 = F_r$



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