



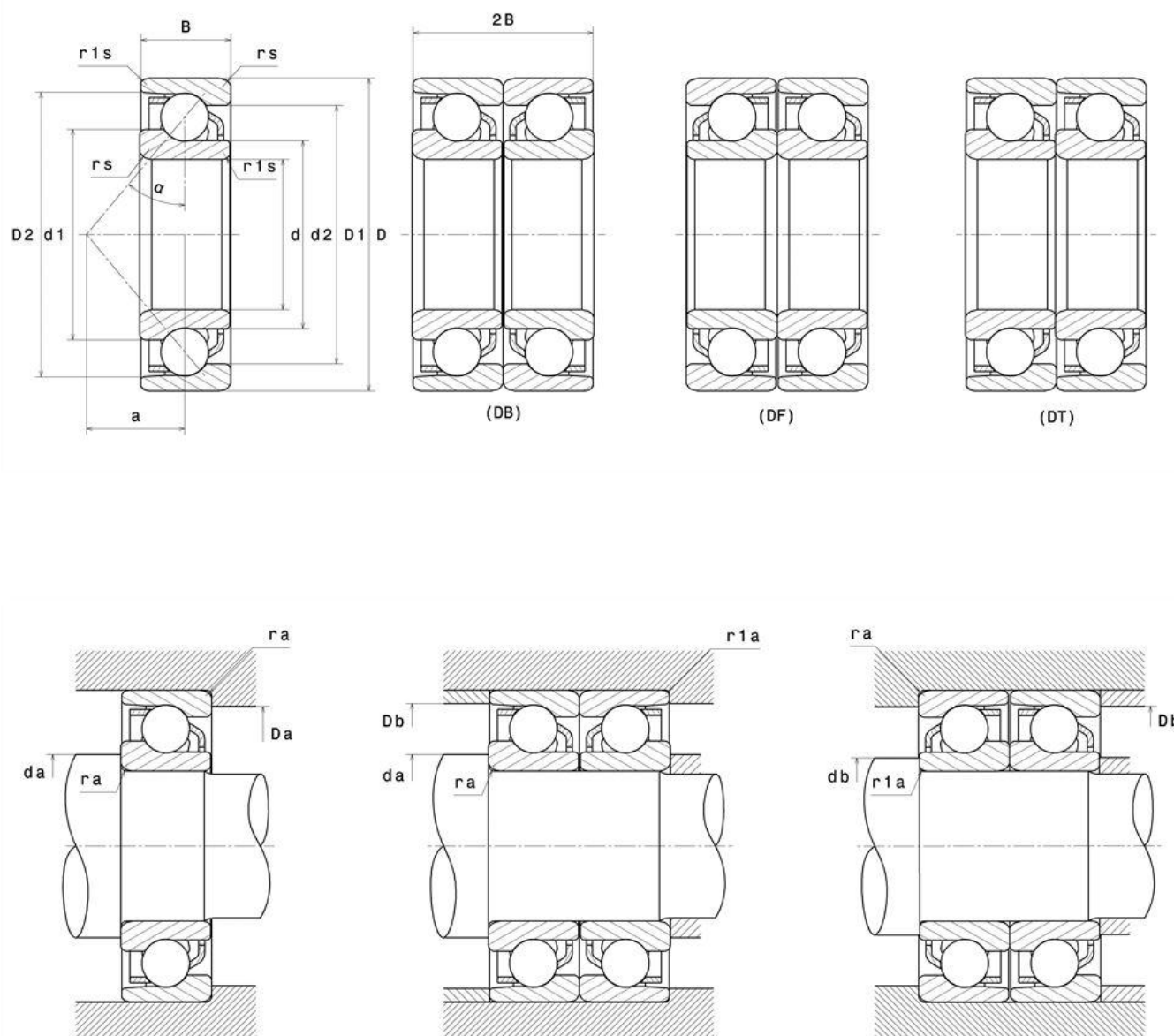
Technical data

7311B

Single row or matched pairs of angular contact ball bearings

Angular contact ball bearings, pressed steel cage

VISUAL (S)



7311B

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PRODUCT DEFINITION

Brand	NTN
d - Internal diameter	55 mm
D - External diameter	120 mm
B - Bearing/Inner ring width	29 mm
a - Charge load application point	52 mm
- Contact angle	40 °
rs - Min fillet radius	2 mm
r1s - Min fillet radius	1 mm
Radial clearance class	CN
Mass	1,42 kg

PRODUCT PERFORMANCE

C - Dynamic load	87000000 mN
C0 - Static load	56500000 mN
Cu - Fatigue limit load	4450000 mN
N lim - Oil lubrication limit speed	43800 °/s
N lim - Grease lubrication limit speed	33000 °/s
Tmin - Min operating temperature	233,15 °K
Tmax - Max operating temperature	393,15 °K

ABUTMENT

da min - Min shoulder diameter IR	65 mm
db min - Min IR shoulder diameter	60,5 mm
Da max - Max shoulder diameter OR	110 mm
Db max - Max OR shoulder diameter	114,5 mm



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
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ABUTMENT

r1a - Max fillet radius	1 mm
ra max - Max shaft & housing fillet radius	2 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 ₀	Y ₀	X ₀	Y ₀
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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