



Brand of NTN corporation

Technical data

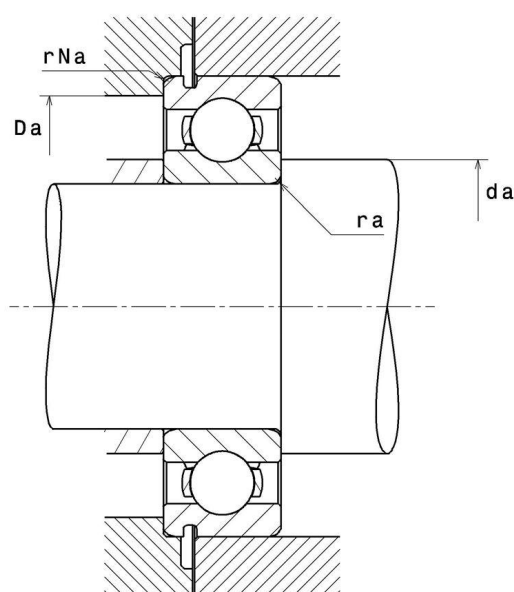
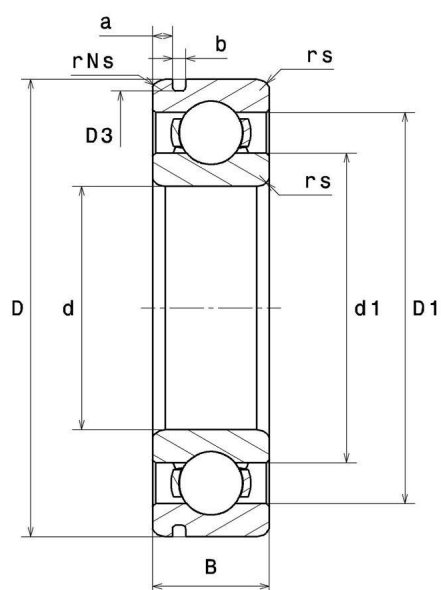
6205N

Single row deep groove ball bearings



Deep groove ball bearing, radial contact, pressed steel cage, snap ring groove on outer diameter, open

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

6205N

Single row deep groove ball bearings

PRODUCT DEFINITION

Brand	SNR
d - Internal diameter	25 mm
D - External diameter	52 mm
B - Bearing/Inner ring width	15 mm
d1 - External diameter inner ring	31,8 mm
D1 - Inner diameter outer ring	49,2 mm
a min - Min position Groove	2,31 mm
a max - Max position groove	2,46 mm
rs - Min fillet radius	1 mm
rNs - Min fillet radius	0,5 mm
D3 - Max bottom groove diameter	49,73 mm
b min - Min groove width	1,35 mm
b max - Max groove width	1,65 mm
r0 max - Max bottom groove radius	0,4 mm
Radial clearance class	CN

PRODUCT PERFORMANCE

C - Dynamic load	13800000 mN
C0 - Static load	7900000 mN
Cu - Fatigue limit load	450000 mN
f0 - Coefficient	13.9
N lim - Oil lubrication limit speed	90000 °/s
N lim - Grease lubrication limit speed	72000 °/s
N ref - Reference thermal speed	84000 °/s



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PRODUCT PERFORMANCE

N lim - Mechanical Limit Speed	132000 %/s
Tmin - Min operating temperature	233,15 °K
Tmax - Max operating temperature	393,15 °K

BEARING FREQUENCIES

BPFO - Over rolling frequency on outer ring (60 rpm)	3.585 Hz
BPFI - Over rolling frequency on inner (60 rpm)	5.415 Hz
BSF - Over rolling frequency on rolling element (60 rpm)	4.715 Hz
FTF - Rotational frequency - cage (60 rpm)	0.398 Hz

ABUTMENT

da min - Min shoulder diameter IR	30 mm
Da max - Max shoulder diameter OR	47 mm
ra max - Max shaft & housing fillet radius	1 mm
rNa max - Max fillet radius on segment side	0,5 mm
Db min - Min stop ring position diameter	58,5 mm



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INDUSTRY CALCUL FACTORS

Equivalent dynamic radial load

$P = X.F_r + Y.F_a$

$\frac{f_0 F_a}{C_0}$	e	Fa / Fr ≤ e		Fa / Fr > e	
		X	Y	X	Y
0.172	0.19	1	0	0.56	2.3
0.345	0.22				1.99
0.689	0.26				1.71
1.03	0.28				1.55
1.38	0.3				1.45
2.07	0.34				1.31
3.45	0.38				1.15
5.17	0.42				1.04
6.89	0.44				1

Equivalent static radial load

$P_0 = X_0.F_r + Y_0.F_a$

X_0	Y_0
0.6	0.5

For single or DT bearing arrangement :

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

