



Brand of **NTN corporation**

Technical data

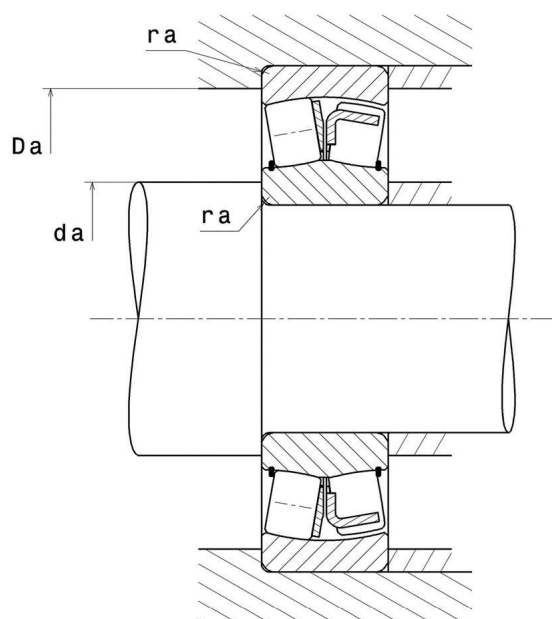
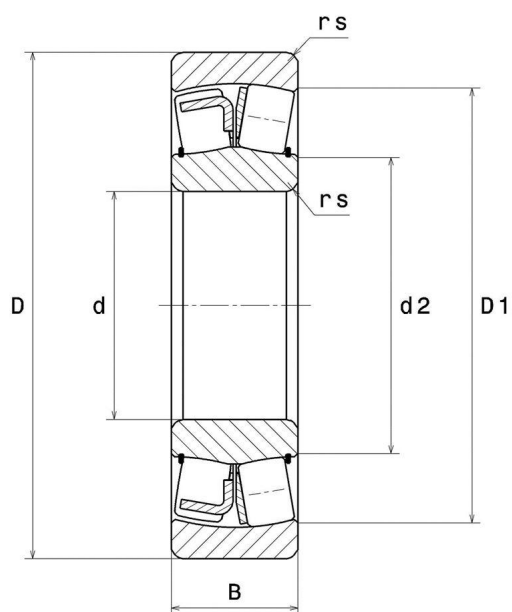
21312VC3

Spherical roller bearings



Spherical roller bearing, pressed steel cage

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

PRODUCT DEFINITION	
Brand	SNR
d - Internal diameter	60 mm
D - External diameter	130 mm
B - Bearing/Inner ring width	31 mm
d2 - External diameter inner ring	79,5 mm
D1 - Inner diameter outer ring	109,9 mm
rs - Min fillet radius	2,1 mm
Number of lubrication holes	0
b - Groove width	0 mm
k - Hole diameter	0 mm
Radial clearance class	C3
Mass	1,986 kg

PRODUCT PERFORMANCE	
C - Dynamic load	192000000 mN
C0 - Static load	186000000 mN
Cu - Fatigue limit load	22700000 mN
e - Coefficient	0.24
Y0 - Static axial load coefficient	2.75
Y1 - Lower axial load coefficient	2.82
Y2 - Upper axial load coefficient	4.19
N ref - Reference thermal speed	28200 °/s
N lim - Mechanical Limit Speed	38400 °/s
Tmin - Min operating temperature	233,15 °K



PRODUCT PERFORMANCE

Tmax - Max operating temperature	473,15 °K
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BEARING FREQUENCIES

BPFO - Over rolling frequency on outer ring (60 rpm)	6.281 Hz
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BPFI - Over rolling frequency on inner (60 rpm)	8.719 Hz
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BSF - Over rolling frequency on rolling element (60 rpm)	5.915 Hz
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BRF - Rotational frequency - rolling element (60 rpm)	2.958 Hz
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FTF - Rotational frequency - cage (60 rpm)	0.419 Hz
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ABUTMENT

da max - Max shoulder diameter IR	0 mm
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da min - Min shoulder diameter IR	72 mm
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Da max - Max shoulder diameter OR	118 mm
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ra max - Max shaft & housing fillet radius	2 mm
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INDUSTRY CALCUL FACTORS

Equivalent dynamic radial load

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

$F_a / F_r \leq e$		$F_a / F_r > e$	
X	Y	X	Y
1	Y1	0.67	Y2

Equivalent static radial load

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

X_0	Y_0
1	Y0

The values for e, Y1, Y2 and Y0 are shown in the above table .



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