



Brand of **NTN corporation**

Technical data

22313EAW33C4

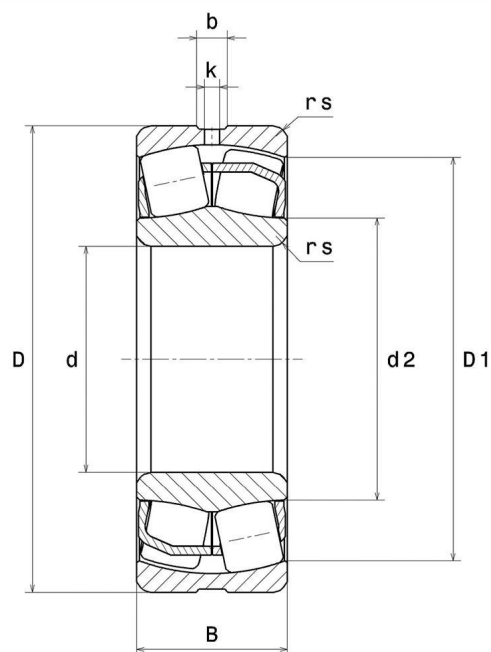
Spherical roller bearings



Spherical roller bearing, pressed steel cage, groove and lubrication holes on outer ring

ULTAGE

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	65 mm
D - External diameter	140 mm
B - Bearing/Inner ring width	48 mm
d2 - External diameter inner ring	81,3 mm
D1 - Inner diameter outer ring	121,2 mm
rs - Min fillet radius	2,1 mm
Number of lubrication holes	3
b - Groove width	9,24 mm
k - Hole diameter	4 mm
Radial clearance class	C4
Mass	3,413 kg

PRODUCT PERFORMANCE



PRODUCT PERFORMANCE

C - Dynamic load	369 kN
C0 - Static load	343 kN
Cu - Fatigue limit load	41,2 kN
e - Coefficient	0.33
Y0 - Static axial load coefficient	2.01
Y1 - Lower axial load coefficient	2.06
Y2 - Upper axial load coefficient	3.06
N ref - Reference thermal speed	4000 tr/min
N lim - Mechanical Limit Speed	4800 tr/min
Tmin - Min operating temperature	-40 °C
Tmax - Max operating temperature	200 °C

BEARING FREQUENCIES

BPFO - Over rolling frequency on outer ring (60 rpm)	5.615 Hz
BPFI - Over rolling frequency on inner (60 rpm)	8.385 Hz
BSF - Over rolling frequency on rolling element (60 rpm)	4.746 Hz
BRF - Rotational frequency - rolling element (60 rpm)	2.373 Hz
FTF - Rotational frequency - cage (60 rpm)	0.401 Hz

ABUTMENT

da max - Max shoulder diameter IR	0 mm
da min - Min shoulder diameter IR	77 mm
Da max - Max shoulder diameter OR	128 mm
ra max - Max shaft & housing fillet radius	2 mm



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 .



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