Brand of NTN corporation

Technical data

22311EKF800

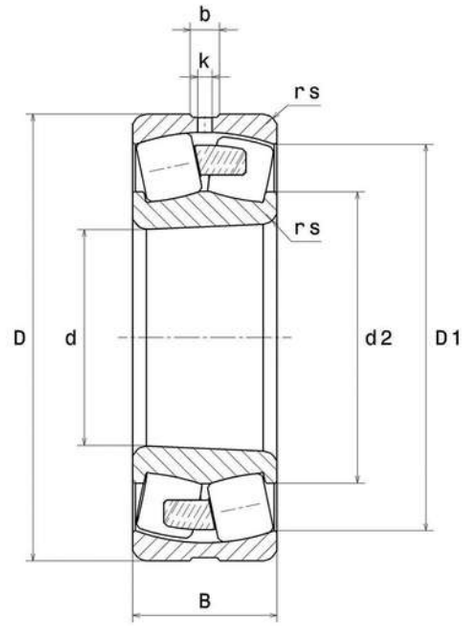
Spherical roller bearings



Spherical roller bearing for vibratory applications, one-piece machined cage, groove and lubrication holes on outer ring, tapered bore 1:12, special C4 class clearance

ULTAGE

VISUAL (S)



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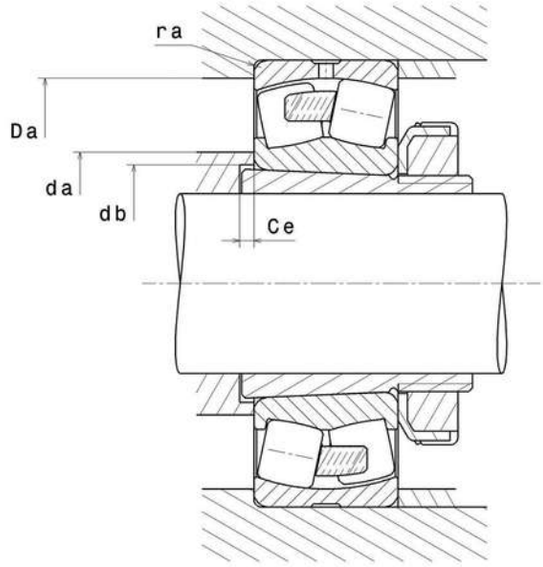

PRODUCT DEFINITION	
Brand	SNR
d - Internal diameter	55 mm
D - External diameter	120 mm
B - Bearing/Inner ring width	43 mm
d2 - External diameter inner ring	0 mm
D1 - Inner diameter outer ring	102,9 mm
rs - Min fillet radius	2 mm
Number of lubrication holes	3
b - Groove width	7,83 mm
k - Hole diameter	3,5 mm
Associated sleeve reference	H2311
Radial clearance class	C4 Special
Mass	2,32 kg

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PRODUCT PERFORMANCE	
C - Dynamic load	296000000 mN
C0 - Static load	274000000 mN
Cu - Fatigue limit load	33400000 mN
e - Coefficient	0.36
Y0 - Static axial load coefficient	1.83
Y1 - Lower axial load coefficient	1.87
Y2 - Upper axial load coefficient	2.79
N ref - Reference thermal speed	27600 °/s
N lim - Mechanical Limit Speed	33600 °/s
Tmin - Min operating temperature	233,15 °K
Tmax - Max operating temperature	473,15 °K

BEARING FREQUENCIES	
BPFO - Over rolling frequency on outer ring (60 rpm)	5.61 Hz
BPFI - Over rolling frequency on inner (60 rpm)	8.39 Hz
BSF - Over rolling frequency on rolling element (60 rpm)	4.703 Hz
BRF - Rotational frequency – rolling element (60 rpm)	2.352 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	66 mm
db - Min diameter for Sleeve	61 mm
Ce - Min length fro Sleeve	6 mm
Da max - Max shoulder diameter OR	109 mm

ABUTMENT

ra max - Max shaft & housing fillet radius	2 mm

INDUSTRY CALCUL FACTORS

Equivalent dynamic radial load

$P = X.Fr + Y.Fa$

Fa / Fr ≤ e		Fa / Fr > e	
X	Y	X	Y
1	Y1	0.67	Y2

Equivalent static radial load

$Po = Xo.Fr + Yo.Fa$

X_0	Y_0
1	Y0

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