Brand of NTN corporation

Technical data

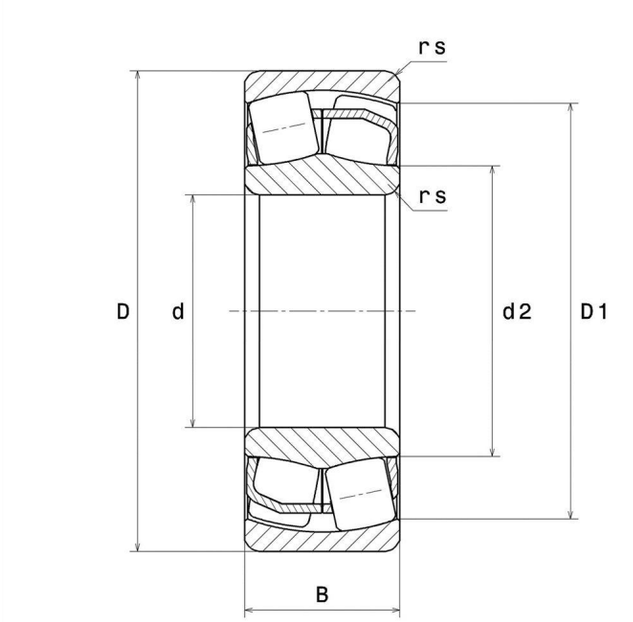
22205EAC3

Spherical roller bearings

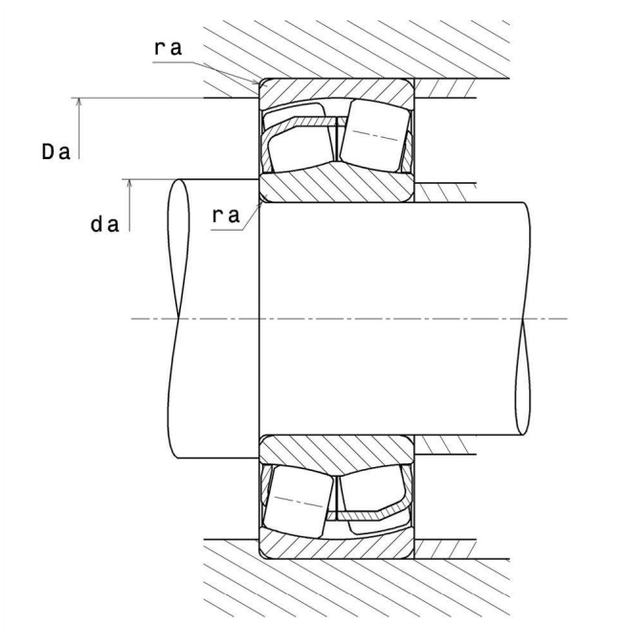
Spherical roller bearing, pressed steel cage

ULTAGE

VISUAL (S)



22205EAC3
Spherical roller bearings



PRODUCT DEFINITION

Brand	SNR
d - Internal diameter	25 mm
D - External diameter	52 mm
B - Bearing/Inner ring width	18 mm
d2 - External diameter inner ring	30,5 mm
D1 - Inner diameter outer ring	45,5 mm
rs - Min fillet radius	1 mm
Number of lubrication holes	0
b - Groove width	0 mm
k - Hole diameter	0 mm
Radial clearance class	C3
Mass	0,16 kg

PRODUCT PERFORMANCE

22205EAC3
Spherical roller bearings

PRODUCT PERFORMANCE	
C - Dynamic load	57300000 mN
C0 - Static load	46100000 mN
Cu - Fatigue limit load	5600000 mN
e - Coefficient	0.34
Y0 - Static axial load coefficient	1.96
Y1 - Lower axial load coefficient	2
Y2 - Upper axial load coefficient	2.98
N ref - Reference thermal speed	78000 °/s
N lim - Mechanical Limit Speed	102000 °/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)	5.645 Hz
BPFI - Over rolling frequency on inner (60 rpm)	8.355 Hz
BSF - Over rolling frequency on rolling element (60 rpm)	4.85 Hz
BRF - Rotational frequency – rolling element (60 rpm)	2.425 Hz
FTF - Rotational frequency - cage (60 rpm)	0.403 Hz

ABUTMENT	
da max - Max shoulder diameter IR	0 mm
da min - Min shoulder diameter IR	30,6 mm
Da max - Max shoulder diameter OR	46,4 mm
ra max - Max shaft & housing fillet radius	1 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 .