



Brand of NTN corporation

## Technical data

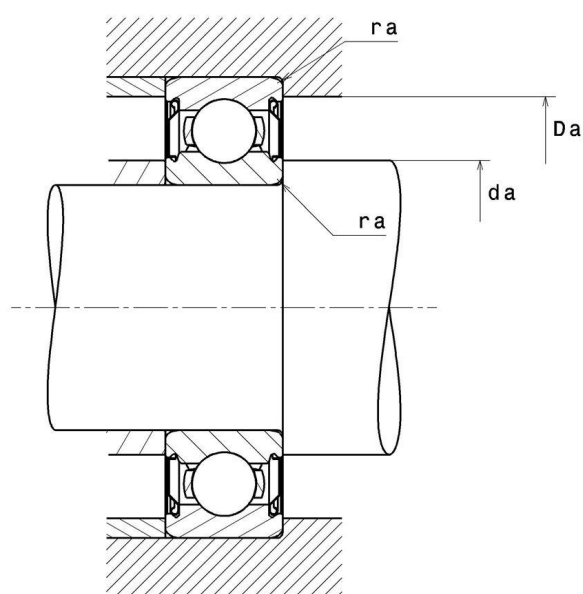
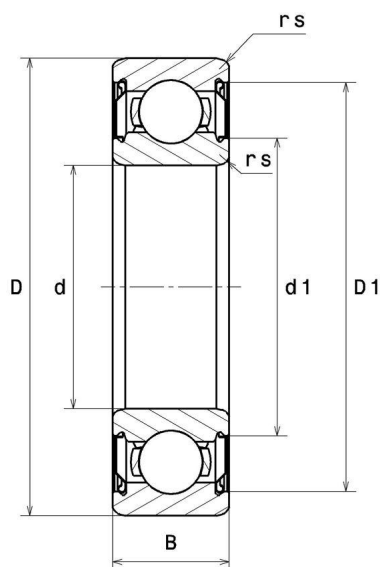
### 6313ZZ

Single row deep groove ball bearings



Deep groove ball bearing, radial contact, pressed steel cage, shields on both sides

#### VISUAL (S)



**NTN Europe**

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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

|                                          |          |
|------------------------------------------|----------|
| <b>Brand</b>                             | SNR      |
| <b>d - Internal diameter</b>             | 65 mm    |
| <b>D - External diameter</b>             | 140 mm   |
| <b>B - Bearing/Inner ring width</b>      | 33 mm    |
| <b>d1 - External diameter inner ring</b> | 85,8 mm  |
| <b>D1 - Inner diameter outer ring</b>    | 119,8 mm |
| <b>rs - Min fillet radius</b>            | 2,1 mm   |
| <b>Radial clearance class</b>            | CN       |
| <b>Mass</b>                              | 2,11 kg  |

## PRODUCT PERFORMANCE

|                                         |             |
|-----------------------------------------|-------------|
| <b>C - Dynamic load</b>                 | 97700000 mN |
| <b>C0 - Static load</b>                 | 59800000 mN |
| <b>Cu - Fatigue limit load</b>          | 2700000 mN  |
| <b>f0 - Coefficient</b>                 | 13.2        |
| <b>N ref - Reference thermal speed</b>  | 38400 °/s   |
| <b>N lim - Mechanical Limit Speed</b>   | 39000 °/s   |
| <b>Tmin - Min operating temperature</b> | 243,15 °K   |
| <b>Tmax - Max operating temperature</b> | 393,15 °K   |

## BEARING FREQUENCIES

|                                                                 |          |
|-----------------------------------------------------------------|----------|
| <b>BPFO - Over rolling frequency on outer ring (60 rpm)</b>     | 3.071 Hz |
| <b>BPFI - Over rolling frequency on inner (60 rpm)</b>          | 4.929 Hz |
| <b>BSF - Over rolling frequency on rolling element (60 rpm)</b> | 4.072 Hz |
| <b>BRF - Rotational frequency - rolling element (60 rpm)</b>    | 2.036 Hz |



## BEARING FREQUENCIES

FTF - Rotational frequency - cage (60 rpm)

0.384 Hz

## ABUTMENT

da min - Min shoulder diameter IR

76 mm

da max - Max shoulder diameter IR

85,8 mm

Da max - Max shoulder diameter OR

129 mm

ra max - Max shaft &amp; housing fillet radius

2 mm

## 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  $P_0 = F_r$ 