



Brand of NTN corporation

## Technical data

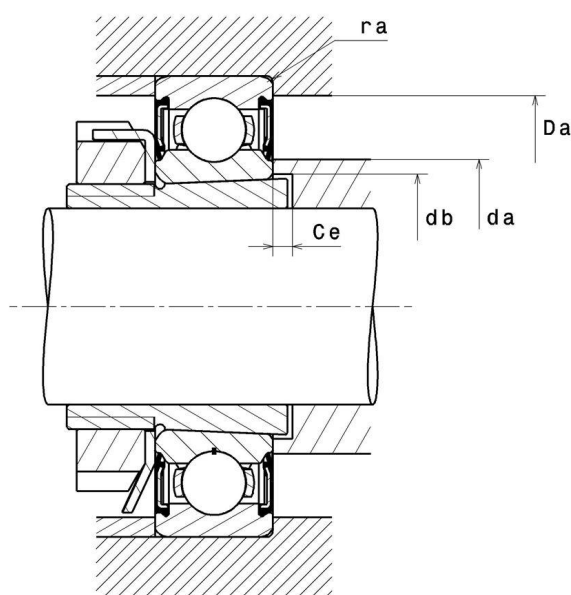
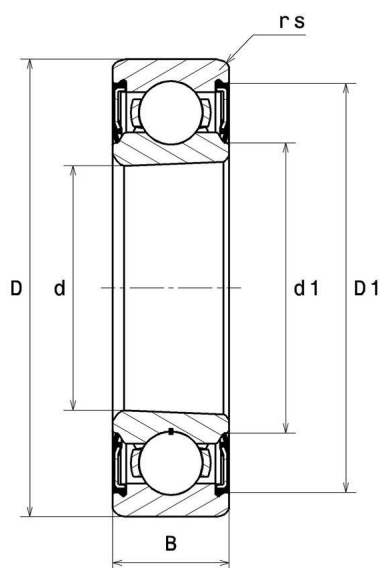
### 6209KEE

Single row deep groove ball bearings



Deep groove ball bearing, radial contact, pressed steel cage, tapered bore, contact seals 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

# 6209KEE

Single row deep groove ball bearings

## PRODUCT DEFINITION

|                                   |          |
|-----------------------------------|----------|
| Brand                             | SNR      |
| d - Internal diameter             | 45 mm    |
| D - External diameter             | 85 mm    |
| B - Bearing/Inner ring width      | 19 mm    |
| d1 - External diameter inner ring | 54,5 mm  |
| D1 - Inner diameter outer ring    | 75,6 mm  |
| rs - Min fillet radius            | 1,1 mm   |
| Associated sleeve reference       | H209     |
| Radial clearance class            | CN       |
| Mass                              | 0,404 kg |

## PRODUCT PERFORMANCE

|                                  |             |
|----------------------------------|-------------|
| C - Dynamic load                 | 34500000 mN |
| C0 - Static load                 | 20400000 mN |
| Cu - Fatigue limit load          | 930000 mN   |
| f0 - Coefficient                 | 14.1        |
| N lim - Mechanical Limit Speed   | 31800 °/s   |
| Tmin - Min operating temperature | 243,15 °K   |
| Tmax - Max operating temperature | 393,15 °K   |

## BEARING FREQUENCIES

|                                                          |          |
|----------------------------------------------------------|----------|
| BPFO - Over rolling frequency on outer ring (60 rpm)     | 3.621 Hz |
| BPFI - Over rolling frequency on inner (60 rpm)          | 5.379 Hz |
| BSF - Over rolling frequency on rolling element (60 rpm) | 4.923 Hz |
| BRF - Rotational frequency - rolling element (60 rpm)    | 2.462 Hz |



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## BEARING FREQUENCIES

FTF - Rotational frequency - cage (60 rpm)

0.402 Hz

## ABUTMENT

da min - Min shoulder diameter IR

51,5 mm

da max - Max shoulder diameter IR

54,5 mm

db - Min diameter for Sleeve

48 mm

Ce - Min length fro Sleeve

5 mm

Da max - Max shoulder diameter OR

78,5 mm

ra max - Max shaft &amp; housing fillet radius

1 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  $P_0 = F_r$ 