



Brand of NTN corporation

## Technical data

### 6209HT200

Single row deep groove ball bearings



TOPLINE deep groove ball bearing, radial contact, pressed steel cage, contact seals on both sides, applications up to 200°C.

**TOPLINE**

#### VISUAL (S)

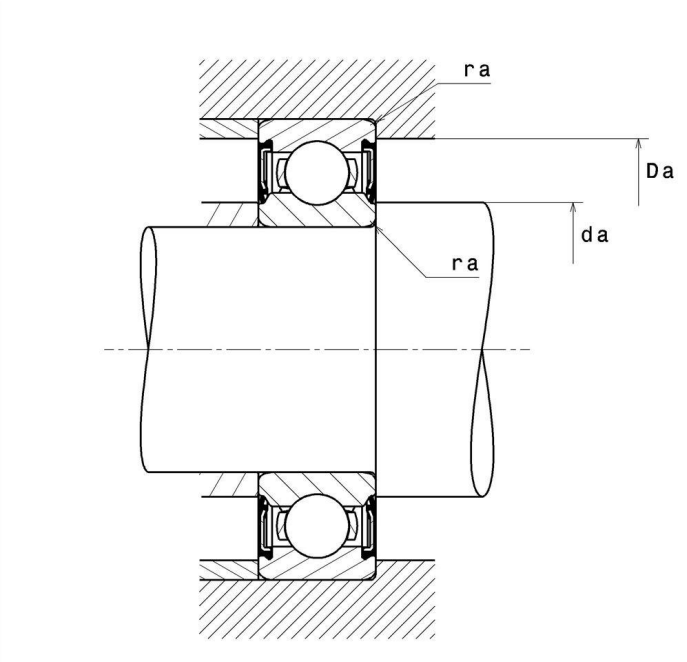


#### NTN Europe

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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

6209HT200

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   |
| Radial clearance class            | C4       |
| Mass                              | 0,404 kg |

PRODUCT PERFORMANCE

|                         |             |
|-------------------------|-------------|
| C - Dynamic load        | 34500000 mN |
| C0 - Static load        | 20400000 mN |
| Cu - Fatigue limit load | 930000 mN   |



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## PRODUCT PERFORMANCE

|                                         |           |
|-----------------------------------------|-----------|
| <b>f0 - Coefficient</b>                 | 14.1      |
| <b>N lim - Mechanical Limit Speed</b>   | 30600 °/s |
| <b>Tmin - Min operating temperature</b> | 233,15 °K |
| <b>Tmax - Max operating temperature</b> | 473,15 °K |

## BEARING FREQUENCIES

|                                                                 |          |
|-----------------------------------------------------------------|----------|
| <b>BPFO - Over rolling frequency on outer ring (60 rpm)</b>     | 3.621 Hz |
| <b>BPFI - Over rolling frequency on inner (60 rpm)</b>          | 5.379 Hz |
| <b>BSF - Over rolling frequency on rolling element (60 rpm)</b> | 4.923 Hz |
| <b>BRF - Rotational frequency - rolling element (60 rpm)</b>    | 2.462 Hz |
| <b>FTF - Rotational frequency - cage (60 rpm)</b>               | 0.402 Hz |

## ABUTMENT

|                                                       |         |
|-------------------------------------------------------|---------|
| <b>da min - Min shoulder diameter IR</b>              | 51,5 mm |
| <b>da max - Max shoulder diameter IR</b>              | 54,5 mm |
| <b>Da max - Max shoulder diameter OR</b>              | 78,5 mm |
| <b>ra max - Max shaft &amp; housing fillet radius</b> | 1 mm    |



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INDUSTRY CALCUL FACTORS

Equivalent dynamic radial load

$$P = X.Fr + Y.Fa$$

| $\frac{f_0 F_a}{C_0}$ | 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

$$Po = X_0.Fr + Y_0.Fa$$

| $X_0$ | $Y_0$ |
|-------|-------|
| 0.6   | 0.5   |

For single or DT bearing arrangement :

If  $Po \leq Fr$ , then use  $Po = Fr$