



Brand of **NTN corporation**

## Technical data

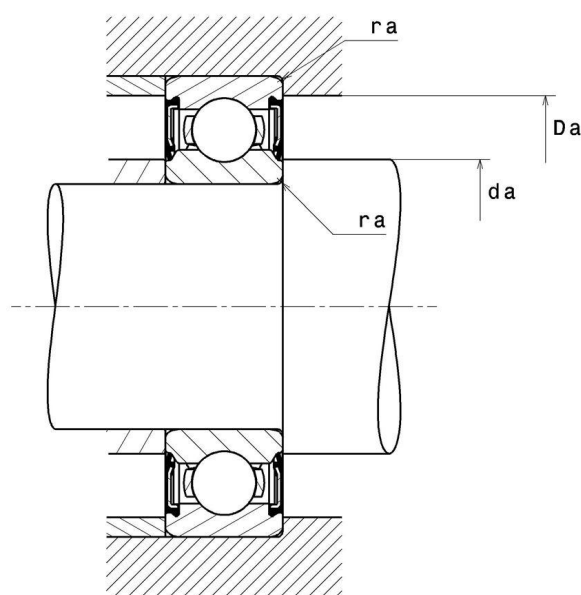
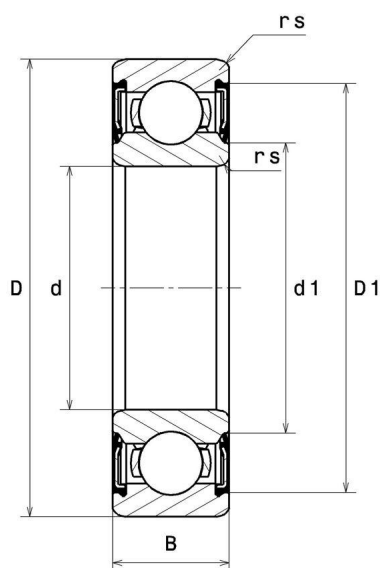
### 6209FT150

Single row deep groove ball bearings



TOPLINE deep groove ball bearing, radial contact, pressed steel cage, contact seals on both sides, applications up to 150°C.

#### VISUAL (S)



#### NTN Europe

1 rue des Usines · BP 2017 · 74010 Annecy Cedex · France · Tel. +33 (0)4 50 65 30 00  
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

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## 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            | C3      |

## PRODUCT PERFORMANCE

|                                        |             |
|----------------------------------------|-------------|
| C - Dynamic load                       | 32200000 mN |
| C0 - Static load                       | 20400000 mN |
| Cu - Fatigue limit load                | 930000 mN   |
| f0 - Coefficient                       | 14.1        |
| N lim - Grease lubrication limit speed | 29400 °/s   |
| N lim - Mechanical Limit Speed         | 30600 °/s   |
| Tmin - Min operating temperature       | 243,15 °K   |
| Tmax - Max operating temperature       | 423,15 °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 |
| FTF - Rotational frequency - cage (60 rpm)               | 0.402 Hz |



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## ABUTMENT

|                                            |         |
|--------------------------------------------|---------|
| da min - Min shoulder diameter IR          | 51,5 mm |
| da max - Max shoulder diameter IR          | 54,5 mm |
| Da max - Max shoulder diameter OR          | 78,5 mm |
| ra max - Max shaft & 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 <sub>0</sub> | Y <sub>0</sub> |
|----------------|----------------|
| 0.6            | 0.5            |

For single or DT bearing arrangement :

If  $P_0 < F_r$ , then use  $P_0 = F_r$



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