



Brand of NTN corporation

Technical data

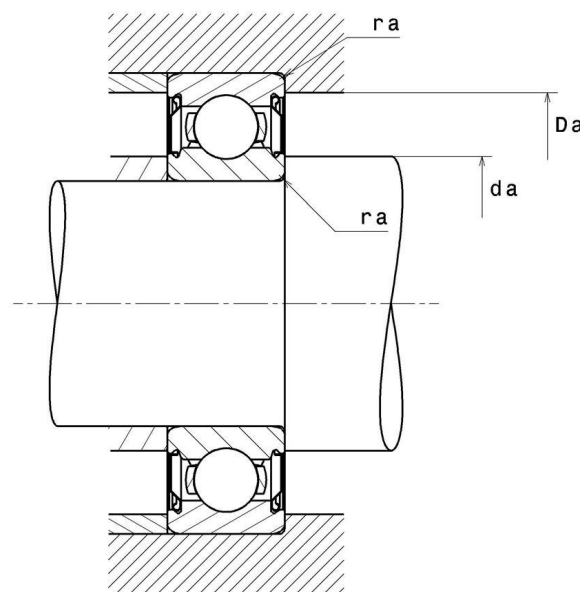
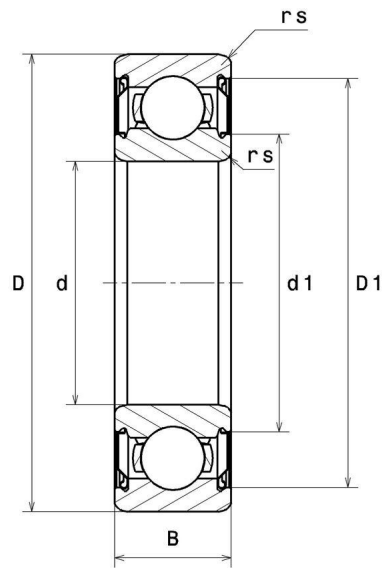
6210.ZZC3

Single row deep groove ball bearings



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

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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Single row deep groove ball bearings

PRODUCT DEFINITION

| | |
|--|---------|
| Brand | SNR |
| d - Internal diameter | 50 mm |
| D - External diameter | 90 mm |
| B - Bearing/Inner ring width | 20 mm |
| d1 - External diameter inner ring | 60 mm |
| D1 - Inner diameter outer ring | 80,1 mm |
| rs - Min fillet radius | 1,1 mm |
| Radial clearance class | C3 |
| Mass | 0,46 kg |

PRODUCT PERFORMANCE

| | |
|---|-------------|
| C - Dynamic load | 37000000 mN |
| C0 - Static load | 23200000 mN |
| Cu - Fatigue limit load | 1060000 mN |
| f0 - Coefficient | 14.4 |
| N ref - Reference thermal speed | 49200 °/s |
| N lim - Mechanical Limit Speed | 57000 °/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) | 4.093 Hz |
| BPFI - Over rolling frequency on inner (60 rpm) | 5.907 Hz |
| BSF - Over rolling frequency on rolling element (60 rpm) | 5.33 Hz |
| BRF - Rotational frequency - rolling element (60 rpm) | 2.665 Hz |



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BEARING FREQUENCIES

| | |
|--|----------|
| FTF - Rotational frequency - cage (60 rpm) | 0.409 Hz |
|--|----------|

ABUTMENT

| | |
|--|---------|
| da min - Min shoulder diameter IR | 56,5 mm |
| da max - Max shoulder diameter IR | 60 mm |
| Da max - Max shoulder diameter OR | 83,5 mm |
| ra max - Max shaft & housing fillet radius | 1 mm |

INDUSTRY CALCUL FACTORS

Equivalent dynamic radial load

$$P = X \cdot Fr + Y \cdot Fa$$

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

$$P_0 = X_0 \cdot Fr + Y_0 \cdot Fa$$

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

For single or DT bearing arrangement :

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



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