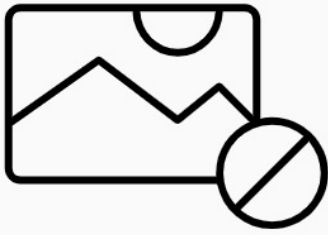


NN 3022 TN9/SP Super-precision

double row cylindrical roller bearing

Super-precision double row cylindrical roller bearing



Super-precision double row cylindrical roller bearings in the NN 30 series provide a unique balance between load carrying capacity, rigidity and speed. Having three flanges on the inner ring and no flanges on the outer ring, the bearings can accommodate axial displacement in both directions. The separable design simplifies mounting and dismounting, particularly when load conditions require both rings to have an interference fit.

- Very high radial load carrying capacity
- High rigidity and high running accuracy
- Minimize noise, vibration and heat generation
- Accommodate axial displacement in both directions

Overview

Dimensions

| | |
|------------------|--------|
| Bore diameter | 110 mm |
| Outside diameter | 170 mm |
| Width | 45 mm |

Performance

| | |
|--|-------------|
| Basic dynamic load rating | 220 kN |
| Basic static load rating | 360 kN |
| Attainable speed for grease lubrication | 5 000 r/min |
| Attainable speed for oil-air lubrication | 5 600 r/min |

Properties

| | |
|-------------------------------|------------------|
| Bearing part | Complete bearing |
| Number of rows | 2 |
| Bore type | Cylindrical |
| Cage | Non-metallic |
| Design | NN |
| Number of flanges, outer ring | 0 |
| Number of flanges, inner ring | 3 |
| Loose flange | None |
| Radial internal clearance | C1 |
| Tolerance class | Class SP (SP) |
| Material, bearing | Bearing steel |
| Coating | Without |
| Sealing | Without |

Lubricant

None

Relubrication feature

Without

Technical Specification

Bore type

Cylindrical

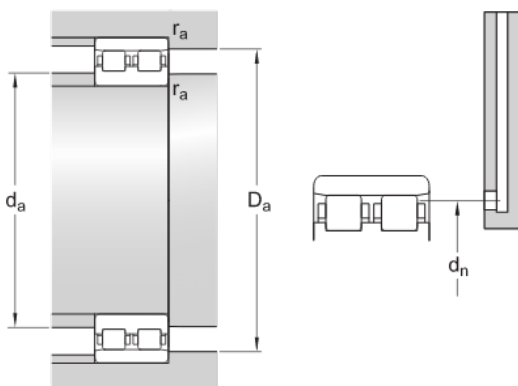


Dimensions

| | | |
|-----------|-----------|---|
| d | 110 mm | Bore diameter |
| D | 170 mm | Outside diameter |
| B | 45 mm | Width |
| d_1 | 132.6 mm | Shoulder diameter inner ring (NN design) |
| E | 155 mm | Raceway diameter outer ring (NN design) |
| $r_{1,2}$ | min. 2 mm | Chamfer dimension outer ring |
| s | max. 3 mm | Permissible axial displacement from the normal position of one bearing ring relative to the other (all) |

Abutment dimensions

| | | |
|-------|-------------|---|
| d_a | min. 120 mm | Abutment diameter shaft |
| D_a | min. 157 mm | Abutment diameter housing |
| D_a | max. 160 mm | Abutment diameter housing |
| r_a | max. 2 mm | Fillet radius |
| d_n | 153 mm | Oil nozzle position (not for variants with TNHA cage) |



Calculation data

| | | |
|---|-----------|----------------------|
| Basic dynamic load rating | C | 220 kN |
| Basic static load rating | C_0 | 360 kN |
| Fatigue load limit | P_u | 41.5 kN |
| Attainable speed for grease lubrication | | 5 000 r/min |
| Attainable speed for oil-air lubrication | | 5 600 r/min |
| Reference grease quantity | G_{ref} | 20.2 cm ³ |
| Static radial stiffness (guideline value) | | 2 470 N/ μ m |

Mass

| | | |
|--------------|--|--------|
| Mass bearing | | 3.5 kg |
|--------------|--|--------|

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