



3303 ATN9 Double row angular contact ball bearing

Double row angular contact ball bearing

Double row angular contact ball bearings correspond, in their design and operation, to a pair of single row angular contact ball bearings in a back-to-back arrangement, while requiring less axial space. They can operate at high speeds and are more suitable than deep groove ball bearings for supporting large axial forces in both directions.

- High-speed capability
- Accommodate relatively high radial loads, high axial loads in both directions and tilting moments
- Suitable where a stiff bearing arrangement is required
- Require less axial space than equivalent pair of single row angular contact ball bearings

Overview

Dimensions

| | |
|------------------|---------|
| Bore diameter | 17 mm |
| Outside diameter | 47 mm |
| Width | 22.2 mm |
| Contact angle | 30 ° |

Performance

| | |
|---------------------------|--------------|
| Basic dynamic load rating | 21.6 kN |
| Basic static load rating | 12.7 kN |
| Reference speed | 17 000 r/min |
| Limiting speed | 14 000 r/min |

Properties

| | |
|---|------------------------------------|
| Contact type | Normal contact (two-point contact) |
| Number of rows | 2 |
| Locating feature, bearing outer ring | None |
| Ring type | One-piece inner and outer rings |
| Cage | Non-metallic |
| Arrangement of contact angle (double-row bearing) | Back-to-back (O) |
| Matched arrangement | No |
| Universal | No |

matching bearing

| | |
|--------------------------|---------------|
| Axial internal clearance | CN |
| Material, bearing | Bearing steel |
| Coating | Without |
| Sealing | Without |
| Lubricant | None |
| Relubrication feature | Without |

Technical Specification

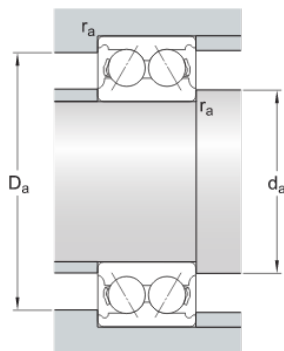


Dimensions

| | | |
|-----------|------------|-------------------------------------|
| d | 17 mm | Bore diameter |
| D | 47 mm | Outside diameter |
| B | 22.2 mm | Width |
| d_2 | ≈ 25.7 mm | Recess diameter inner ring shoulder |
| D_2 | ≈ 40.15 mm | Recess diameter outer ring shoulder |
| $r_{1,2}$ | min. 1 mm | Chamfer dimension inner ring |
| a | 28 mm | Distance pressure point(s) |

Abutment dimensions

| | | |
|-------|--------------|---------------------------|
| d_a | min. 22.6 mm | Abutment diameter shaft |
| D_a | max. 41.4 mm | Abutment diameter housing |
| r_a | max. 1 mm | Fillet radius |



Calculation data

| | | |
|---------------------------|-------|--------------|
| Basic dynamic load rating | C | 21.6 kN |
| Basic static load rating | C_0 | 12.7 kN |
| Fatigue load limit | P_u | 0.54 kN |
| Reference speed | | 17 000 r/min |
| Limiting speed | | 14 000 r/min |
| Calculation factor | k_r | 0.07 |
| Limiting value | e | 0.8 |
| Calculation factor | X | 0.63 |

| | | |
|--------------------|-------|------|
| Calculation factor | Y_0 | 0.66 |
| Calculation factor | Y_1 | 0.78 |
| Calculation factor | Y_2 | 1.24 |

Mass

| | | |
|--------------|--|---------|
| Mass bearing | | 0.18 kg |
|--------------|--|---------|

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