# 7309 BE-2RZP

## Single row angular contact ball bearing with 40° contact angle and non-contact seals on both sides

These single row angular contact ball bearings, with 40° contact angle and non-contact seals on both sides, accommodate radial and axial loads acting simultaneously, where the axial load acts in one direction only. They have a ball-centred glass-fibre reinforced PA66 cage. They are more suitable than deep groove ball bearings for supporting large axial forces acting in one direction.

- 40° contact angle
- Integral sealing prolongs bearing service life
- Glass-fibre reinforced PA66 cage
- Accommodate relatively high radial loads and large unilateral axial loads

## Overview

### Dimensions

| | |
|---|---|
| Bore diameter | 45 mm |
| Contact angle | 40 ° |
| Outside diameter | 100 mm |
| Width | 25 mm |

### Performance

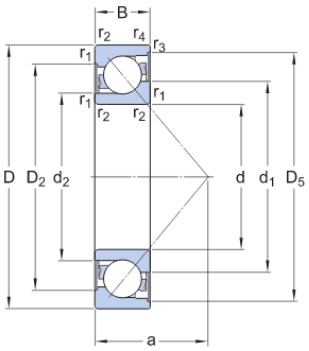
| | |
|---|---|
| Basic dynamic load rating | 55.9 kN |
| Basic static load rating | 37.5 kN |
| Limiting speed | 6 700 r/min |
| Reference speed | 8 500 r/min |

### Properties

| | |
|---|---|
| Axial internal clearance | Not applicable |
| Cage | Non-metallic |
| Coating | Without |
| Contact type | Normal contact (two-point contact) |
| Locating feature, bearing outer ring | None |
| Lubricant | Grease |
| Matched arrangement | No |
| Material, bearing | Bearing steel |
| Number of rows | 1 |
| Relubrication feature | Without |
| Ring type | One-piece inner and outer rings |
| Sealing | Seal on both sides |

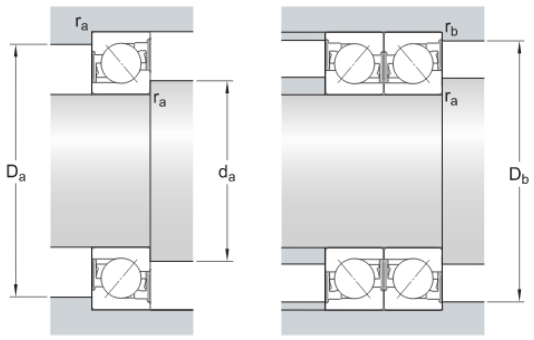
| | |
|---|---|
| Sealing type | Non-contact |
| Universal matching bearing | No |

# Technical Specification




## Dimensions

| | | |
|---|---|---|
| d | 45 mm | Bore diameter |
| D | 100 mm | Outside diameter |
| B | 25 mm | Width |
| $d_1$ | ≈ 66.5 mm | Shoulder diameter of inner ring (large side face) |
| $d_2$ | ≈ 55.25 mm | Shoulder diameter of inner ring (small side face) |
| $D_2$ | ≈ 81.4 mm | Recess diameter of outer ring (large side face) |
| $D_5$ | ≈ 90.8 mm | Recess diameter of outer ring (small side face) |
| a | 43 mm | Distance side face to pressure point |
| $r_{1,2}$ | min. 1.5 mm | Chamfer dimension |
| $r_{3,4}$ | min. 1 mm | Chamfer dimension |




## Abutment dimensions

| | | |
|---|---|---|
| $d_a$ | min. 54 mm | Diameter of shaft abutment |
| $d_a$ | max. 66 mm | Diameter of shaft abutment |
| $D_a$ | max. 91 mm | Abutment diameter housing |
| $D_b$ | max. 94.4 mm | Diameter of housing abutment |
| $r_a$ | max. 1.5 mm | Radius of fillet |
| $r_b$ | max. 1 mm | Radius of fillet |

## Calculation data

| | | |
|---|---|---|
| Basic dynamic load rating | C | 55.9 kN |
| Basic static load rating | $C_0$ | 37.5 kN |
| Fatigue load limit | $P_u$ | 1.6 kN |

| | | |
|---|---|---|
| Reference speed | | 8 500 r/min |
| Limiting speed | | 6 700 r/min |
| Minimum axial load factor | A | 0.0268 |
| Minimum radial load factor | $k_r$ | 0.1 |
| Limiting value | e | 1.14 |

Single bearing or bearing pair arranged in tandem

| | | |
|---|---|---|
| Radial load factor (single, tandem) | X | 0.35 |
| Axial load factor (single, tandem) | $Y_0$ | 0.26 |
| Axial load factor (single, tandem) | $Y_2$ | 0.57 |

Bearing pair arranged back-to-back or face-to-face

| | | |
|---|---|---|
| Radial load factor (back-to-back, face-to-face) | X | 0.57 |
| Axial load factor (back-to-back, face-to-face) | $Y_0$ | 0.52 |
| Axial load factor (back-to-back, face-to-face) | $Y_1$ | 0.55 |
| Axial load factor (back-to-back, face-to-face) | $Y_2$ | 0.93 |

## Mass

| | |
|---|---|
| Mass | 0.85 kg |

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