# 3309 DMADouble row angular contact ball bearing with two-piece inner ring

## Double row angular contact ball bearing with two-piece inner ring

Double row angular contact ball bearings, with two-piece inner ring, correspond to a pair of single row angular contact ball bearings in a back-to-back arrangement, while requiring less axial space than the equivalent pair of single row angular contact ball bearings. The two-piece inner ring enables incorporation of a larger number of balls, with a larger contact angle, providing a high load carrying capacity, especially in the axial direction.

- Accommodate very high axial loads in both directions, radial loads, and tilting moments
- Suitable where a stiff bearing arrangement is required
- Separable design means outer ring with ball and cage assemblies can be mounted independently of the inner ring halves

## Overview

### Dimensions

| | |
|---|---|
| Bore diameter | 45 mm |
| Outside diameter | 100 mm |
| Width | 39.7 mm |
| Contact angle | 45 ° |

### Performance

| | |
|---|---|
| Basic dynamic load rating | 79.3 kN |
| Basic static load rating | 69.5 kN |
| Reference speed | 7 500 r/min |
| Limiting speed | 6 300 r/min |

### Properties

| | |
|---|---|
| Contact type | Normal contact (two-point contact) |
| Number of rows | 2 |
| Locating feature, bearing outer ring | None |
| Ring type | Two-piece inner ring and one-piece outer ring |
| Cage | Machined metal |
| Arrangement of contact angle (double-row bearing) | Back-to-back (O) |

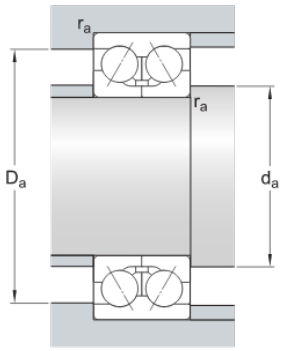
| | |
|---|---|
| Matched arrangement | No |
| Universal matching bearing | No |
| Axial internal clearance | CN |
| Material, bearing | Bearing steel |
| Coating | Without |
| Sealing | Without |
| Lubricant | None |
| Relubrication feature | Without |

# Technical Specification

NOT FOUND

## Dimensions

| | | |
|---|---|---|
| d | 45 mm | Bore diameter |
| D | 100 mm | Outside diameter |
| B | 39.7 mm | Width |
| $d_1$ | ≈ 70 mm | Shoulder diameter inner ring for two-piece inner ring |
| $D_1$ | ≈ 86.35 mm | Shoulder diameter outer ring |
| $r_{1,2}$ | min. 1.5 mm | Chamfer dimension inner ring for two-piece inner ring |
| a | 93 mm | Distance pressure point(s) |




## Abutment dimensions

| | | |
|---|---|---|
| $d_a$ | min. 54 mm | Abutment diameter shaft |
| $D_a$ | max. 91 mm | Abutment diameter housing |
| $r_a$ | max. 1.5 mm | Fillet radius |

## Calculation data

| | | |
|---|---|---|
| Basic dynamic load rating | C | 79.3 kN |
| Basic static load rating | $C_0$ | 69.5 kN |
| Fatigue load limit | $P_u$ | 3 kN |
| Reference speed | | 7 500 r/min |
| Limiting speed | | 6 300 r/min |
| Calculation factor | $k_r$ | 0.095 |

| | | |
|---|---|---|
| Limiting value | e | 1.34 |
| Calculation factor | X | 0.54 |
| Calculation factor | $Y_0$ | 0.44 |
| Calculation factor | $Y_1$ | 0.47 |
| Calculation factor | $Y_2$ | 0.81 |

## Mass

| | |
|---|---|
| Mass bearing | 1.63 kg |

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