



3313 DNRCBMD Double row angular contact ball bearing with snap ring and split inner ring

Double row angular contact ball bearing with snap ring and split inner ring

Double row angular contact ball bearings, with snap ring and split inner ring, correspond to a pair of single row angular contact ball bearings in a back-to-back arrangement. The snap ring, fitted in an annular groove in the outer ring, facilitates axial location of the bearings within their housings. The split inner ring enables incorporation of more balls, resulting in higher load carrying capacity.

- Snap ring facilitates axial location within housing
- Accommodate very high axial loads in both directions, radial loads, 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 | 65 mm |
| Outside diameter | 140 mm |
| Width | 58.7 mm |
| Contact angle | 40 ° |

Performance

| | |
|---------------------------|-------------|
| Basic dynamic load rating | 138 kN |
| Basic static load rating | 122 kN |
| Reference speed | 5 300 r/min |
| Limiting speed | 4 500 r/min |

Properties

| | |
|---|---|
| Contact type | Normal contact (two-point contact) |
| Number of rows | 2 |
| Locating feature, bearing outer ring | Snap ring (fitted) |
| 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 | CB |
| Material, bearing | Bearing steel |
| Coating | Without |
| Sealing | Without |
| Lubricant | None |
| Relubrication feature | Without |

Technical Specification

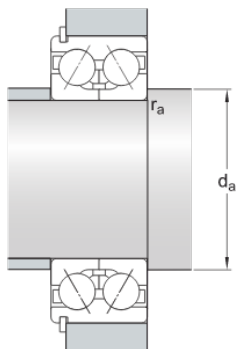


Dimensions

| | | |
|-----------|---------------------|---|
| d | 65 mm | Bore diameter |
| D | 140 mm | Outside diameter |
| B | 58.7 mm | Width |
| d_1 | ≈ 95.05 mm | Shoulder diameter inner ring for two-piece inner ring |
| D_1 | ≈ 124.33 mm | Shoulder diameter outer ring |
| D_3 | 135.2 mm | Snap ring groove diameter at outer ring |
| D_4 | 149.7 mm | Outside diameter snap ring |
| C | 4.9 mm | Distance outer ring side face - snap ring groove |
| b | 3.1 mm | Width snap ring groove outer ring |
| f | 2.82 mm | Width snap ring |
| r_0 | max. 0.6 mm | Snap ring groove bottom radius |
| $r_{1,2}$ | min. 2.1 mm | Chamfer dimension inner ring for two-piece inner ring |
| a | 114 mm | Distance pressure point(s) |

Abutment dimensions

| | | |
|-------|------------|-------------------------|
| d_a | min. 77 mm | Abutment diameter shaft |
| r_a | max. 2 mm | Fillet radius |



Calculation data

| | | |
|---------------------------|-------|-------------|
| Basic dynamic load rating | C | 138 kN |
| Basic static load rating | C_0 | 122 kN |
| Fatigue load limit | P_u | 5.1 kN |
| Reference speed | | 5 300 r/min |
| Limiting speed | | 4 500 r/min |
| Calculation factor | k_r | 0.095 |
| Limiting value | e | 1.14 |
| Calculation factor | X | 0.57 |
| Calculation factor | Y_0 | 0.52 |
| Calculation factor | Y_1 | 0.55 |
| Calculation factor | Y_2 | 0.93 |

Mass

| | | |
|--------------|--|------|
| Mass bearing | | 4 kg |
|--------------|--|------|

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