



# 7338 BCBM

## Single row angular contact ball bearing

These single row angular contact ball bearings can accommodate radial and axial loads acting simultaneously, where the axial load acts in one direction only. They can operate at high speeds and, depending on the variant, even very high speeds. They are more suitable than deep groove ball bearings for supporting large axial forces acting in one direction.

- High-speed capability
- Accommodate relatively high radial loads and large unilateral axial loads

## Overview

### Dimensions

|                  |        |
|------------------|--------|
| Bore diameter    | 190 mm |
| Contact angle    | 40 °   |
| Outside diameter | 400 mm |
| Width            | 78 mm  |

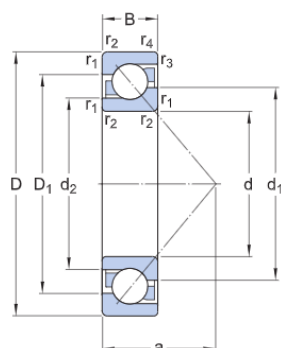
### Performance

|                           |             |
|---------------------------|-------------|
| Basic dynamic load rating | 442 kN      |
| Basic static load rating  | 600 kN      |
| Limiting speed            | 2 200 r/min |
| Reference speed           | 2 000 r/min |

## Properties

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Axial internal clearance             | Not applicable                     |
| Cage                                 | Machined metal                     |
| Coating                              | Without                            |
| Contact type                         | Normal contact (two-point contact) |
| Locating feature, bearing outer ring | None                               |
| Lubricant                            | None                               |
| Matched arrangement                  | No                                 |
| Material, bearing                    | Bearing steel                      |
| Number of rows                       | 1                                  |
| Relubrication feature                | Without                            |
| Ring type                            | One-piece inner and outer rings    |
| Sealing                              | Without                            |
| Universal matching bearing           | Yes                                |

# Technical Specification

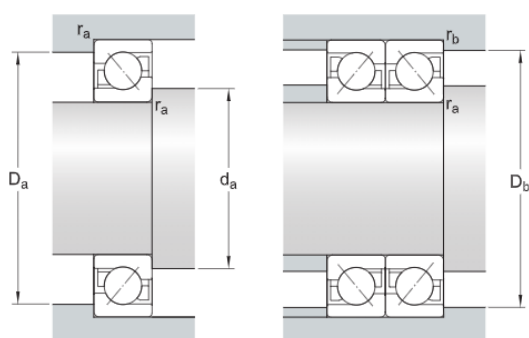


## Dimensions

|                  |             |                                                   |
|------------------|-------------|---------------------------------------------------|
| d                | 190 mm      | Bore diameter                                     |
| D                | 400 mm      | Outside diameter                                  |
| B                | 78 mm       | Width                                             |
| d <sub>1</sub>   | ≈ 271.6 mm  | Shoulder diameter of inner ring (large side face) |
| d <sub>2</sub>   | ≈ 231.8 mm  | Shoulder diameter of inner ring (small side face) |
| D <sub>1</sub>   | ≈ 324.25 mm | Shoulder diameter of outer ring (large side face) |
| a                | 164 mm      | Distance side face to pressure point              |
| r <sub>1,2</sub> | min. 5 mm   | Chamfer dimension                                 |
| r <sub>3,4</sub> | min. 2 mm   | Chamfer dimension                                 |

## Abutment dimensions

|                |             |                              |
|----------------|-------------|------------------------------|
| d <sub>a</sub> | min. 210 mm | Diameter of shaft abutment   |
| D <sub>a</sub> | max. 380 mm | Abutment diameter housing    |
| D <sub>b</sub> | max. 390 mm | Diameter of housing abutment |
| r <sub>a</sub> | max. 4 mm   | Radius of fillet             |
| r <sub>b</sub> | max. 2 mm   | Radius of fillet             |



## Calculation data

|                           |                |             |
|---------------------------|----------------|-------------|
| Basic dynamic load rating | C              | 442 kN      |
| Basic static load rating  | C <sub>0</sub> | 600 kN      |
| Fatigue load limit        | P <sub>u</sub> | 14.6 kN     |
| Reference speed           |                | 2 000 r/min |
| Limiting speed            |                | 2 200 r/min |

|                            |       |      |
|----------------------------|-------|------|
| Minimum axial load factor  | A     | 6.5  |
| Minimum radial load factor | $k_r$ | 0.09 |
| Limiting value             | e     | 1.14 |

#### Single bearing or bearing pair arranged in tandem

|                                     |       |      |
|-------------------------------------|-------|------|
| Calculation factor (single, tandem) | X     | 0.35 |
| Calculation factor (single, tandem) | $Y_0$ | 0.26 |
| Calculation factor (single, tandem) | $Y_2$ | 0.57 |

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

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

#### Mass

|      |         |
|------|---------|
| Mass | 48.5 kg |
|------|---------|

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