# 7205 BEGAY

## 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 | 0.984 in |
| Outside diameter | 2.047 in |
| Width | 0.591 in |

### Performance

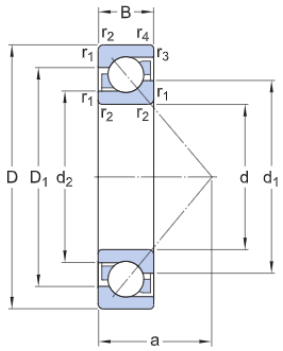
| | |
|---|---|
| Basic dynamic load rating | 3 507 lbf |
| Basic static load rating | 2 248 lbf |
| Limiting speed | 17 000 r/min |
| Reference speed | 16 000 r/min |
| SKF performance class | SKF Explorer |

### Properties

| | |
|---|---|
| Axial internal clearance | Not applicable |
| Cage | Sheet 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 |

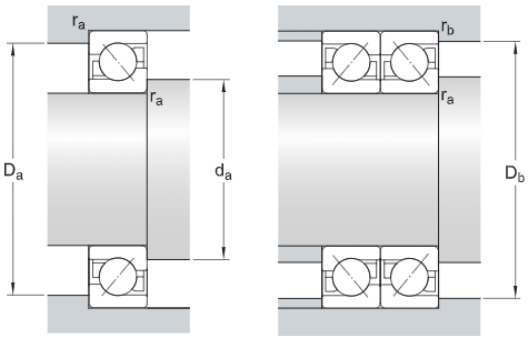
# Technical Specification

| | |
|---|---|
| SKF performance class | SKF Explorer |




## Dimensions

| | | |
|---|---|---|
| d | 0.984 in | Bore diameter |
| D | 2.047 in | Outside diameter |
| B | 0.591 in | Width |
| $d_1$ | ≈ 1.411 in | Shoulder diameter of inner ring (large side face) |
| $d_2$ | ≈ 1.215 in | Shoulder diameter of inner ring (small side face) |
| $D_1$ | ≈ 1.634 in | Shoulder diameter of outer ring (large side face) |
| a | 0.945 in | Distance side face to pressure point |
| $r_{1,2}$ | min. 0.039 in | Chamfer dimension |
| $r_{3,4}$ | min. 0.024 in | Chamfer dimension |




## Abutment dimensions

| | | |
|---|---|---|
| $d_a$ | min. 1.205 in | Diameter of shaft abutment |
| $D_a$ | max. 1.827 in | Abutment diameter housing |
| $D_b$ | max. 1.882 in | Diameter of housing abutment |
| $r_a$ | max. 0.039 in | Radius of fillet |
| $r_b$ | max. 0.024 in | Radius of fillet |

## Calculation data

| | | |
|---|---|---|
| Basic dynamic load rating | C | 3 507 lbf |
| Basic static load rating | $C_0$ | 2 248 lbf |
| Fatigue load limit | $P_u$ | 97 lbf |
| Reference speed | | 16 000 r/min |
| Limiting speed | | 17 000 r/min |
| Minimum axial load factor | A | 0.00159 |
| Minimum radial load factor | $k_r$ | 0.095 |
| 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 | 0.287 lb |

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