

# C 3036CARB toroidal roller bearing

## CARB toroidal roller bearing

CARB toroidal roller bearings are unique: as well as accommodating misalignment without increased stress levels, they also provide frictionless axial movement within the bearing in the non-locating position in self-aligning bearing arrangements. Being SKF Explorer bearings, they can accommodate higher load levels and provide significantly extended service life.

- Accommodate misalignment and axial displacement within the bearing
- High radial load carrying capacity
- Provide frictionless axial movement
- Long bearing system life
- Reduce noise and vibration levels

## Overview

### Dimensions

| | |
|---|---|
| Bore diameter | 180 mm |
| Outside diameter | 280 mm |
| Width | 74 mm |

### Performance

| | |
|---|---|
| Basic dynamic load rating | 880 kN |
| Basic static load rating | 1 340 kN |
| Reference speed | 2 000 r/min |
| Limiting speed | 2 600 r/min |
| SKF performance class | SKF Explorer |

### Properties

| | |
|---|---|
| Number of rows | 1 |
| Locating feature, bearing outer ring | Without |
| Bore type | Cylindrical |
| Cage | Sheet metal |
| Radial internal clearance | CN |
| Tolerance class | Normal |
| Sealing | Without |
| Lubricant | None |
| Relubrication feature | Without |

# Technical Specification

| | |
|---|---|
| SKF performance class | SKF Explorer |
| Bore type | Cylindrical |

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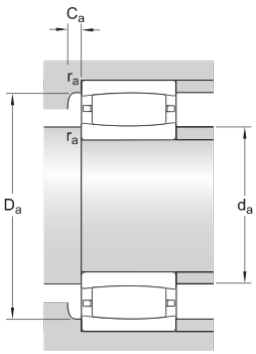
## Dimensions

| | | |
|---|---|---|
| d | 180 mm | Bore diameter |
| D | 280 mm | Outside diameter |
| B | 74 mm | Width |
| $d_2$ | ≈ 209 mm | Shoulder diameter of inner ring |
| $D_1$ | ≈ 251 mm | Shoulder or recess diameter of outer ring |
| $s_1$ | max. 15.1 mm | Permissible axial displacement |
| $r_{1,2}$ | min. 2.1 mm | Chamfer dimension |




## Abutment dimensions

| | | |
|---|---|---|
| $d_a$ | min. 191 mm | Diameter of shaft abutment |
| $d_a$ | max. 223 mm | Diameter of shaft abutment |
| $D_a$ | min. 239 mm | Diameter of housing abutment |
| $D_a$ | max. 269 mm | Abutment diameter housing |
| $C_a$ | min. 2 mm | Minimum width of space required in housing |
| $r_a$ | max. 2 mm | Radius of fillet |
| A negative value for $C_a$ | | |

## Calculation data

| | | |
|---|---|---|
| Basic dynamic load rating | C | 880 kN |
| Basic static load rating | $C_0$ | 1 340 kN |
| Fatigue load limit | $P_u$ | 122 kN |
| Reference speed | | 2 000 r/min |
| Limiting speed | | 2 600 r/min |
| Misalignment factor | $k_1$ | 0.112 |
| Internal clearance factor | $k_2$ | 0.105 |

## Mass

| | |
|---|---|
| Mass | 17 kg |

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