

# 32024 X

## Single row tapered roller bearing

Single row tapered roller bearings are designed to accommodate combined radial and axial loads and provide low friction during operation. The inner ring, with rollers and cage, can be mounted separately from the outer ring. These separable and interchangeable components facilitate mounting, dismounting and maintenance. By mounting one single row tapered roller bearing against another and applying a preload, a rigid bearing application can be achieved.

- High radial and axial load carrying capacity
- Accommodate axial loads in one direction
- Low friction and long service life
- Separable and interchangeable components



## Overview

## Dimensions

|                   |        |
|-------------------|--------|
| Bore diameter     | 120 mm |
| Outside diameter  | 180 mm |
| Width, total      | 38 mm  |
| Width, inner ring | 38 mm  |
| Width, outer ring | 29 mm  |
| Contact angle     | 17 °   |

## Performance

|                           |              |
|---------------------------|--------------|
| Basic dynamic load rating | 299 kN       |
| Basic static load rating  | 415 kN       |
| Reference speed           | 2 800 r/min  |
| Limiting speed            | 3 400 r/min  |
| SKF performance class     | SKF Explorer |

## Properties

|   |                  |
|---|------------------|
| Bearing part                                      | Complete bearing |
| Number of rows                                    | 1                |
| Locating feature, bearing outer ring              | None             |
| Bore type   | Cylindrical      |
| Cage  | Sheet metal      |
| Arrangement of contact angle (double-row bearing) | Not applicable   |
| Matched arrangement                               | No               |
| Coating   | Without          |
| Sealing   | Without          |
| Lubricant   | None             |

Relubrication feature

Without

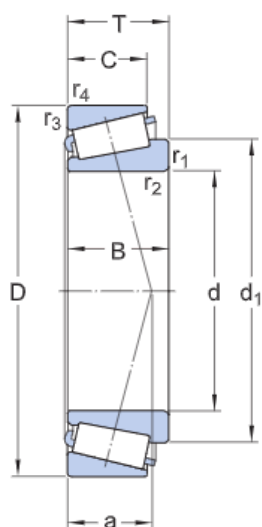
# Technical Specification

SKF performance class

SKF Explorer

Dimension series

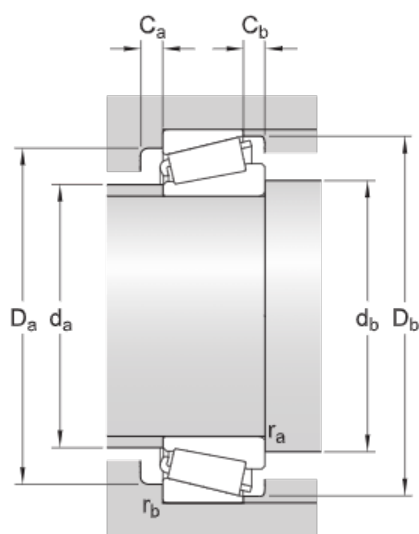
4DC



## Dimensions

|                  |             |                                      |
|------------------|-------------|--------------------------------------|
| d                | 120 mm      | Bore diameter                        |
| D                | 180 mm      | Outside diameter                     |
| T                | 38 mm       | Total width                          |
| d <sub>1</sub>   | ≈ 150.67 mm | Shoulder diameter of inner ring      |
| B                | 38 mm       | Width of inner ring                  |
| C                | 29 mm       | Width of outer ring                  |
| r <sub>1,2</sub> | min. 2.5 mm | Chamfer dimension of inner ring      |
| r <sub>3,4</sub> | min. 2 mm   | Chamfer dimension of outer ring      |
| a                | 38.8 mm     | Distance side face to pressure point |

## Abutment dimensions



|                |             |   |
|----------------|-------------|---|
| d <sub>a</sub> | max. 132 mm | Diameter of shaft abutment                                    |
| d <sub>t</sub> | min. 133 mm | Diameter of shaft abutment                                    |
| D <sub>ε</sub> | min. 161 mm | Diameter of housing abutment                                  |
| D <sub>ε</sub> | max. 169 mm | Diameter of housing abutment                                  |
| D <sub>f</sub> | min. 173 mm | Diameter of housing abutment                                  |
| C <sub>ε</sub> | min. 7 mm   | Minimum width of space required in housing on large side face |
| C <sub>t</sub> | min. 9 mm   | Minimum width of space required in housing on small side face |
| r <sub>a</sub> | max. 2.5 mm | Radius of shaft fillet  |

$r_b$  max. 2  
mm

Radius of housing fillet

## Calculation data

|                           |       |             |
|---------------------------|-------|-------------|
| Basic dynamic load rating | C     | 299 kN      |
| Basic static load rating  | $C_0$ | 415 kN      |
| Fatigue load limit        | $P_u$ | 42.5 kN     |
| Reference speed           |       | 2 800 r/min |
| Limiting speed            |       | 3 400 r/min |
| Limiting value            | e     | 0.46        |
| Calculation factor        | Y     | 1.3         |
| Calculation factor        | $Y_0$ | 0.7         |

## Mass

|      |         |
|------|---------|
| Mass | 3.29 kg |
|------|---------|

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