

# 33022 Single row tapered roller bearing

## bearing

### 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	110 mm
Outside diameter	170 mm
Width, total	47 mm
Width, inner ring	47 mm
Width, outer ring	37 mm
Contact angle	10.833 °

## Performance

Basic dynamic load rating	343 kN
Basic static load rating	500 kN
Reference speed	3 000 r/min
Limiting speed	3 600 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

2DE



## Dimensions

d	110 mm	Bore diameter
D	170 mm	Outside diameter
T	47 mm	Total width
$d_1$	≈ 139.3 mm	Shoulder diameter of inner ring
B	47 mm	Width of inner ring
C	37 mm	Width of outer ring
$r_{1,2}$	min. 2.5 mm	Chamfer dimension of inner ring
$r_{3,4}$	min. 2 mm	Chamfer dimension of outer ring
a	33.6 mm	Distance side face to pressure point

## Abutment dimensions



$d_a$	max. 123 mm	Diameter of shaft abutment
$d_b$	min. 122.5 mm	Diameter of shaft abutment
$D_a$	min. 152 mm	Diameter of housing abutment
$D_a$	max. 159.5 mm	Diameter of housing abutment
$D_b$	min. 161 mm	Diameter of housing abutment
$C_a$	min. 7 mm	Minimum width of space required in housing on large side face
$C_b$	min. 10 mm	Minimum width of space required in housing on small side face

$r_a$	max. 2.5 mm	Radius of shaft fillet
$r_b$	max. 2 mm	Radius of housing fillet

## Calculation data

Basic dynamic load rating	C	343 kN
Basic static load rating	$C_0$	500 kN
Fatigue load limit	$P_u$	53 kN
Reference speed		3 000 r/min
Limiting speed		3 600 r/min
Limiting value	e	0.28
Calculation factor	Y	2.1
Calculation factor	$Y_0$	1.1

## Mass

Mass		3.83 kg
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