

33020 Single row tapered roller 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	100 mm
Outside diameter	150 mm
Width, total	39 mm
Width, inner ring	39 mm
Width, outer ring	32.5 mm
Contact angle	10.833 °

Performance

Basic dynamic load rating	278 kN
Basic static load rating	390 kN
Reference speed	3 400 r/min
Limiting speed	4 000 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

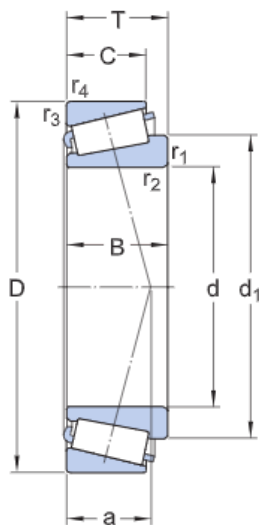
SKF performance class

SKF Explorer

Dimension series

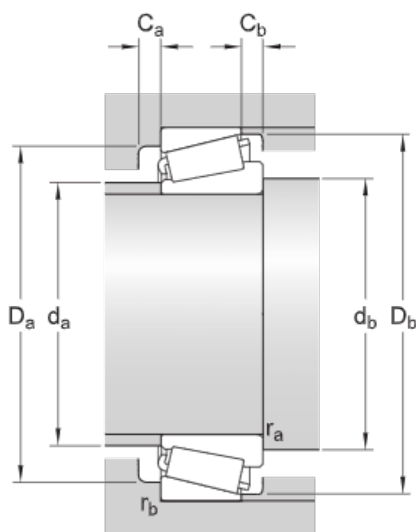
2CE

Dimensions



d	100 mm	Bore diameter
D	150 mm	Outside diameter
T	39 mm	Total width
d_1	≈ 122.6 mm	Shoulder diameter of inner ring
B	39 mm	Width of inner ring
C	32.5 mm	Width of outer ring
$r_{1,2}$	min. 2 mm	Chamfer dimension of inner ring
$r_{3,4}$	min. 1.5 mm	Chamfer dimension of outer ring
a	28.845 mm	Distance side face to pressure point

Abutment dimensions



d_ϵ	max. 109 mm	Diameter of shaft abutment
d_t	min. 111 mm	Diameter of shaft abutment
D_i	min. 135 mm	Diameter of housing abutment
D_o	max. 141 mm	Diameter of housing abutment
D_l	min. 143 mm	Diameter of housing abutment
C_i	min. 7 mm	Minimum width of space required in housing on large side face
C_l	min. 6.5 mm	Minimum width of space required in housing on small side face
r_a	max. 2 mm	Radius of shaft fillet

r_b max. 1.5 mm	Radius of housing fillet
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Calculation data

Basic dynamic load rating	C	278 kN
Basic static load rating	C_0	390 kN
Fatigue load limit	P_u	41.5 kN
Reference speed		3 400 r/min
Limiting speed		4 000 r/min
Limiting value	e	0.28
Calculation factor	Y	2.1
Calculation factor	Y_0	1.1

Mass

Mass	2.38 kg
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