

30303 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	17 mm
Outside diameter	47 mm
Width, total	15.25 mm
Width, inner ring	14 mm
Width, outer ring	12 mm
Contact angle	10.758 °

Performance

Basic dynamic load rating	34.2 kN
Basic static load rating	25 kN
Reference speed	13 000 r/min
Limiting speed	16 000 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

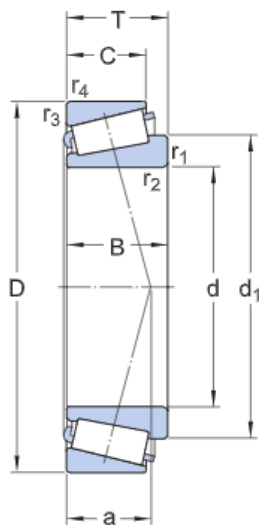
SKF performance class

SKF Explorer

Dimension series

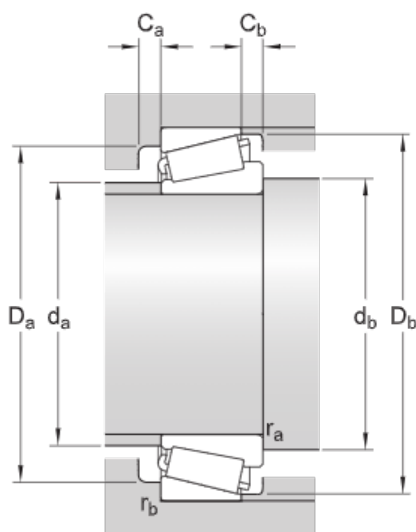
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Dimensions



d	17 mm	Bore diameter
D	47 mm	Outside diameter
T	15.25 mm	Total width
d ₁	≈ 30.55 mm	Shoulder diameter of inner ring
B	14 mm	Width of inner ring
C	12 mm	Width of outer ring
r _{1,2}	min. 1 mm	Chamfer dimension of inner ring
r _{3,4}	min. 1 mm	Chamfer dimension of outer ring
a	10.15 mm	Distance side face to pressure point

Abutment dimensions



d _i	max. 25 mm	Diameter of shaft abutment
d _t	min. 23.5 mm	Diameter of shaft abutment
D _i	min. 40 mm	Diameter of housing abutment
D _o	max. 41.5 mm	Diameter of housing abutment
D _l	min. 42 mm	Diameter of housing abutment
C _i	min. 2 mm	Minimum width of space required in housing on large side face
C _l	min. 3 mm	Minimum width of space required in housing on small side face
r _a	max. 1 mm	Radius of shaft fillet

r_b max. 1 mm	Radius of housing fillet
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Calculation data

Basic dynamic load rating	C	34.2 kN
Basic static load rating	C_0	25 kN
Fatigue load limit	P_u	2.7 kN
Reference speed		13 000 r/min
Limiting speed		16 000 r/min
Limiting value	e	0.28
Calculation factor	Y	2.1
Calculation factor	Y_0	1.1

Mass

Mass	0.13 kg
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