

Image may differ from product. See technical specification for details.

31328 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. Also available on request with special sized bore and/or outside diameters, suitable for reworked shafts and housings.

- 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	140 mm
Outside diameter	300 mm
Width, total	77 mm
Width, inner ring	70 mm
Width, outer ring	47 mm
Contact angle	28.8 °

Performance

Basic dynamic load rating	693 kN
Basic static load rating	900 kN
Reference speed	1 500 r/min
Limiting speed	2 200 r/min

Properties

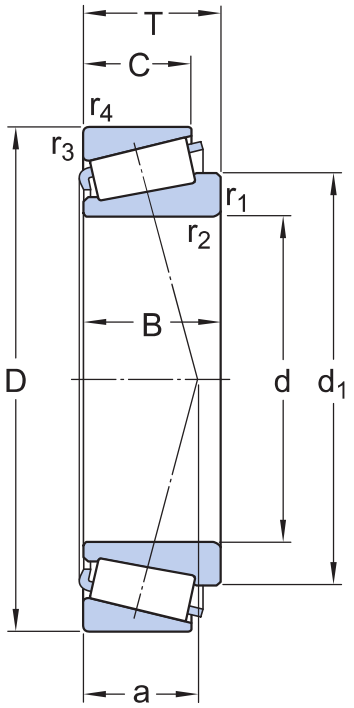
Bearing part	Complete bearing
Number of rows	1
Locating feature, bearing outer ring	Without
Bore type	Cylindrical
Cage	Sheet metal
Arrangement of contact angle (double-row bearing)	Not applicable
Matched arrangement	No
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without
Unit system	Metric
Indicative carbon footprint for new product	83.6 kg CO_2e

Logistics

Product net weight	22.6 kg
eClass code	23-05-09-10
UNSPSC code	31171516

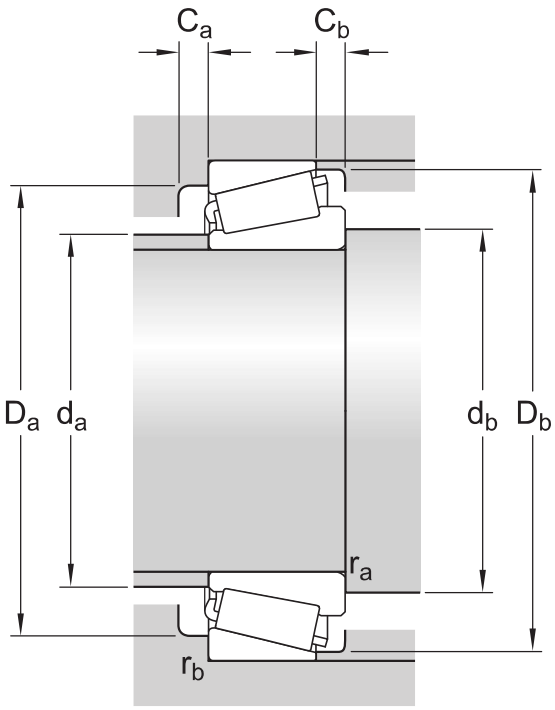
Technical specification

Dimension series	7GB



Dimensions

d	140 mm	Bore diameter
D	300 mm	Outside diameter
T	77 mm	Bearing width, total
d_1	≈ 220.275 mm	Shoulder diameter of inner ring
B	70 mm	Width of inner ring
C	47 mm	Width of outer ring
$r_{1,2}$	min. 5 mm	Chamfer dimension of inner ring
$r_{3,4}$	min. 4 mm	Chamfer dimension of outer ring
a	90.1 mm	Distance side face to pressure point



Abutment dimensions

d_a	max. 169 mm	Diameter of shaft abutment
d_b	min. 159.5 mm	Diameter of shaft abutment
D_a	min. 235 mm	Diameter of housing abutment
D_a	max. 284 mm	Diameter of housing abutment
D_b	min. 280 mm	Diameter of housing abutment
C_a	min. 9 mm	Minimum width of space required in housing on large side face
C_b	min. 30 mm	Minimum width of space required in housing on small side face
r_a	max. 5 mm	Radius of shaft fillet
r_b	max. 4 mm	Radius of housing fillet

Calculation data

Basic dynamic load rating	C	693 kN
Basic static load rating	C_0	900 kN
Fatigue load limit	P_u	90 kN
Reference speed		1 500 r/min
Limiting speed		2 200 r/min
Limiting value	e	0.83

Calculation factor	Y	0.72
Calculation factor	Y_0	0.4

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances:
  metric bearings: Normal and CL7C, CLN
  inch bearings: Normal and CL, deviating width

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit

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