

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

31306/DF

Matched tapered roller bearings arranged face-to-face

Matched tapered roller bearings arranged face-to-face (X-arrangement, load lines diverge towards the bearing axis) accommodate high radial loads and axial loads in both directions. The precision manufactured intermediate ring between the outer rings enables a defined internal clearance or preload to be achieved when mounted. Matched tapered roller

bearings are typically used in gearboxes, hoisting equipment, rolling mills, and machines in the mining industry.

- High radial load carrying capacity
- Designed for axial loads in both directions
- Relatively high stiffness
- Surface finish on the contact surfaces of the rollers and raceways that enhances operational reliability

Overview

Dimensions

Bore diameter	30 mm
Outside diameter	72 mm
Width, total	41.5 mm
Width, inner ring	38 mm
Width, outer ring	41.5 mm
Contact angle	28.811 °

Performance

Basic dynamic load rating	100 kN
Basic static load rating	100 kN
Reference speed	5 600 r/min
Limiting speed	9 500 r/min
SKF performance class	SKF Explorer

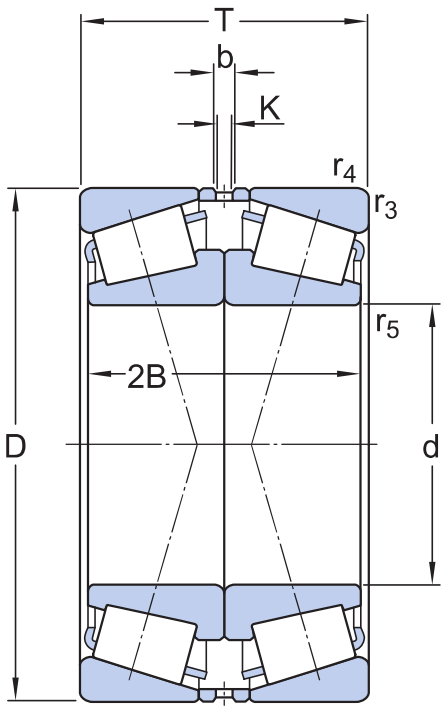
Properties

Bearing part	Complete bearing
Number of rows	2
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Sheet metal
Matched arrangement	Face-to-face (X)
Number of bearings in matched set	2
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	With

Logistics

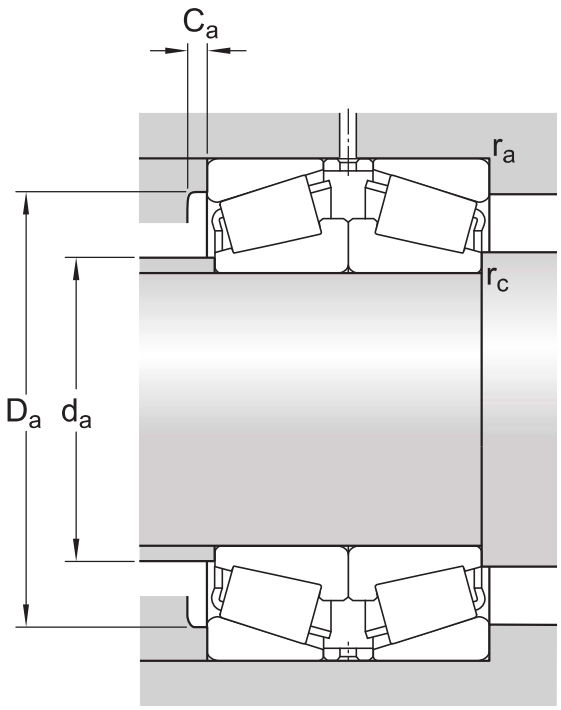
Product net weight	0.815 kg
eClass code	23-05-09-10

Technical specification



Dimensions

d	30 mm	Bore diameter
D	72 mm	Outside diameter
T	41.5 mm	Total width
2B	38 mm	Width of inner rings
b	8 mm	Width of lubrication groove
K	5.5 mm	Diameter of lubrication hole
$r_{3,4}$	min. 1.5 mm	Chamfer dimension
r_5	min. 0.6 mm	Chamfer dimension



Abutment dimensions

d_a	max. 40 mm	Diameter of shaft abutment
D_a	min. 55 mm	Diameter of housing abutment
D_a	max. 64.5 mm	Diameter of housing abutment
C_a	min. 3 mm	Minimum width of space required in housing on large side face
r_a	max. 1.5 mm	Radius of fillet
r_c	max. 0.6 mm	Radius of fillet

Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	C	100 kN
Basic static load rating	C_0	100 kN
Fatigue load limit	P_u	11.4 kN
Reference speed		5 600 r/min
Limiting speed		9 500 r/min
Limiting value	e	0.83
Calculation factor	Y_1	0.81
Calculation factor	Y_2	1.2

Calculation factor	Y_0	0.8

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal + CL7C, P5, total width
- Internal clearance: values

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit

More Information

Product details

- Designs and variants
- General bearing specifications
- Loads
- Temperature limits
- Permissible speed
- Design considerations
- Bearing designations
- Designation system

Engineering information

- Principles of rolling bearing selection
- General bearing knowledge
- Bearing selection process
- Bearing failure and how to prevent it

Tools

- SimPro Quick
- Bearing Select
- Engineering Calculator
- LubeSelect for SKF greases
- Heater Selection Tool
- Oil Injection Method Program
- skf.com/mount

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