



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 |

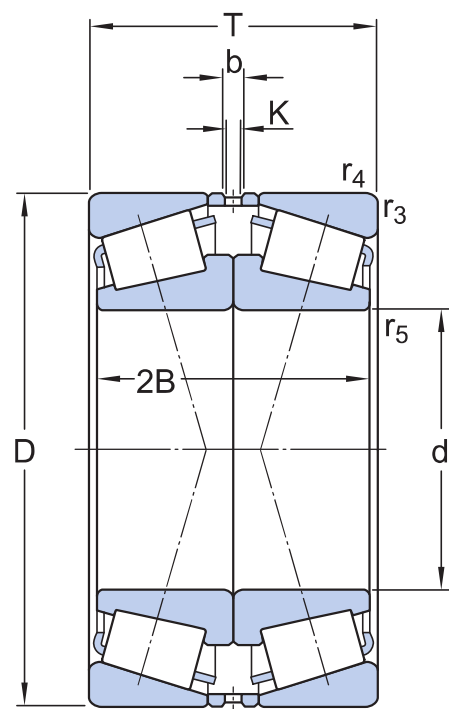
### Properties

|                                      |                  |
|--------------------------------------|------------------|
| 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

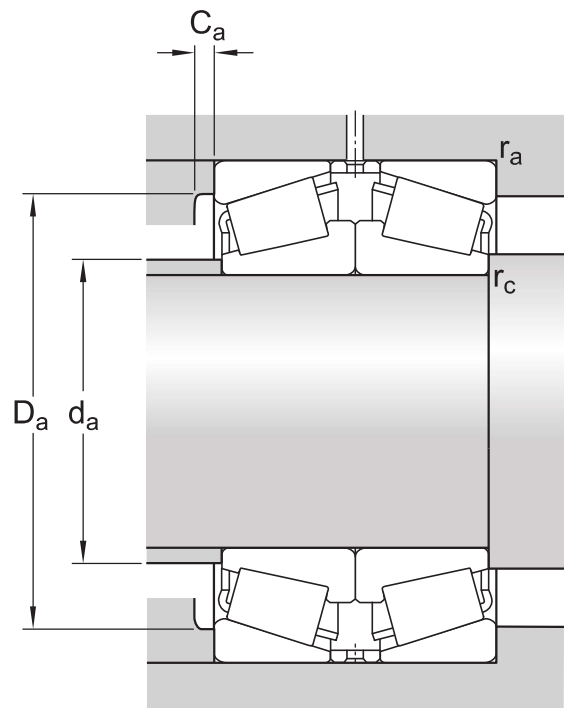
|                    |             |
|--------------------|-------------|
| Product net weight | 0.815 kg    |
| eClass code        | 23-05-09-10 |

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 <sub>3,4</sub> | min. 1.5 mm | Chamfer dimension            |
| r <sub>5</sub>   | 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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <b>Product details</b></div> <div><a href="#">Designs and variants</a></div> <div><a href="#">General bearing specifications</a></div> <div><a href="#">Loads</a></div> <div><a href="#">Temperature limits</a></div> <div><a href="#">Permissible speed</a></div> <div><a href="#">Design considerations</a></div> <div><a href="#">Bearing designations</a></div> <div><a href="#">Designation system</a></div> | <div> <b>Engineering information</b></div> <div><a href="#">Principles of rolling bearing selection</a></div> <div><a href="#">General bearing knowledge</a></div> <div><a href="#">Bearing selection process</a></div> <div><a href="#">Bearing failure and how to prevent it</a></div> | <div> <b>Tools</b></div> <div><a href="#">SimPro Quick</a></div> <div><a href="#">Bearing Select</a></div> <div><a href="#">Engineering Calculator</a></div> <div><a href="#">LubeSelect for SKF greases</a></div> <div><a href="#">Heater Selection Tool</a></div> <div><a href="#">Oil Injection Method Program</a></div> <div><a href="#">skf.com/mount</a></div> |
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