

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

# 24060 CCK30/W33

## Spherical roller bearing with tapered bore and relubrication features

Spherical roller bearings can accommodate heavy loads in both directions. They are self-aligning and accommodate misalignment and shaft deflections, with virtually no increase in friction or temperature. The design includes features to facilitate relubrication. The bearings can be used in a modular system, including housings, sleeves and nuts. Also available on request with special sized bore and/or outside diameters, suitable for reworked shafts and housings.

- Accommodate misalignment
- High load carrying capacity
- Relubrication features
- Low friction and long service life
- Increased wear resistance

# Overview

## Dimensions

| | |
|---|---|
| Bore diameter | 300 mm |
| Outside diameter | 460 mm |
| Width | 160 mm |

## Performance

| | |
|---|---|
| Basic dynamic load rating | 2 821 kN |
| Basic static load rating | 4 750 kN |
| Reference speed | 850 r/min |
| Limiting speed | 1 200 r/min |
| SKF performance class | SKF Explorer |

## Properties

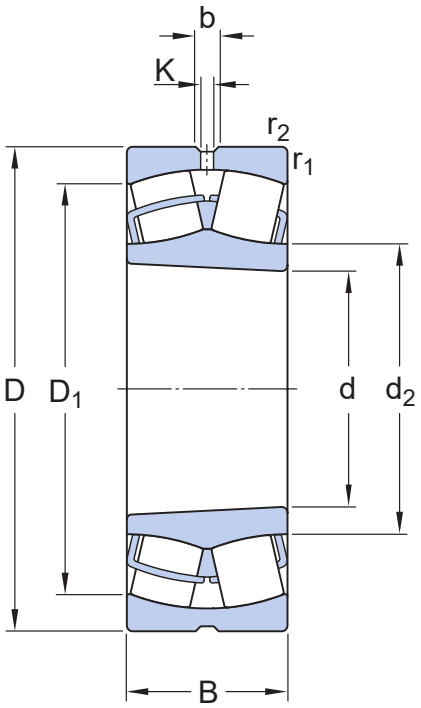
| | |
|---|---|
| Number of rows | 2 |
| Locating feature, bearing outer ring | Without |
| Bore type | Tapered 1:30 |
| Cage | Sheet metal |
| Radial internal clearance | CN |
| Tolerance class for dimensions | Normal |
| Tolerance class for run-out | P5 |
| Sealing | Without |
| Lubricant | None |
| Relubrication feature | With |
| Candidate for remanufacturing | Yes |
| Indicative carbon footprint for new product | 348 kg $CO_2e$ |
| Indicative carbon footprint for remanufactured product | 116 kg $CO_2e$ |

## Logistics

| | |
|---|---|
| Product net weight | 93.9 kg |
| eClass code | 23-05-09-11 |
| UNSPSC code | 31171510 |

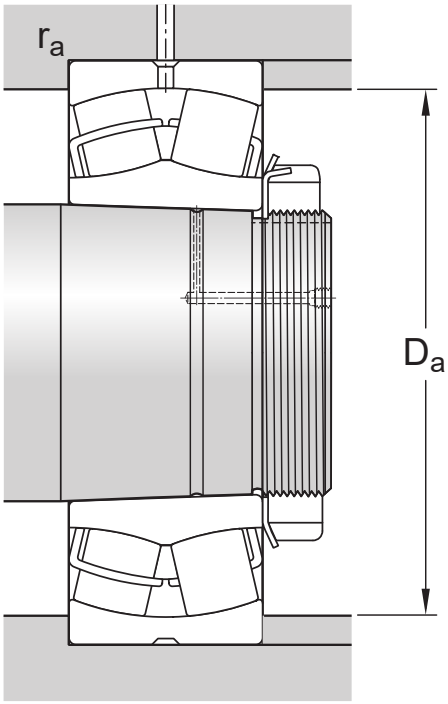
# Technical specification

| | |
|---|---|
| Bore type | Tapered 1:30 |




## Dimensions

| | | |
|---|---|---|
| d | 300 mm | Bore diameter |
| $t_{\Delta dmp}$ | 0 – 0.035 mm | Deviation limits of mid-range bore diameter |
| $t_{\Delta SL}$ | 0 – 0.052 mm | Deviation limits of tapered slope |
| D | 460 mm | Outside diameter |
| $t_{\Delta Dmp}$ | -0.045 – 0 mm | Deviation limits of mid-range outside diameter |
| B | 160 mm | Width |
| $t_{\Delta Bs}$ | -0.1 – 0 mm | Deviation limits of ring width |
| $d_2$ | ≈ 331 mm | Shoulder diameter of inner ring |
| $D_1$ | ≈ 400 mm | Shoulder/recess diameter of outer ring |
| b | 13.9 mm | Width of lubrication groove |
| K | 7.5 mm | Diameter of lubrication hole |
| $r_{1,2}$ | min. 4 mm | Chamfer dimension |
| | Normal | ISO tolerance class for dimensions |




## Abutment dimensions

| | | |
|---|---|---|
| $D_a$ | max. 445 mm | Diameter of housing abutment |
| $r_a$ | max. 3 mm | Radius of fillet |

## Calculation data

| | | |
|---|---|---|
| SKF performance class | | SKF Explorer |
| Basic dynamic load rating | C | 2 821 kN |
| Basic static load rating | $C_0$ | 4 750 kN |
| Fatigue load limit | $P_u$ | 355 kN |
| Reference speed | | 850 r/min |
| Limiting speed | | 1 200 r/min |
| Limiting value | e | 0.33 |
| Calculation factor | $Y_1$ | 2 |
| Calculation factor | $Y_2$ | 3 |
| Calculation factor | $Y_0$ | 2 |

## Tolerances of run-out

| | | |
|---|---|---|
| Range of section height at inner ring of assembled bearing | $t_{Kia}$ | 13 µm |

| | | |
|---|---|---|
| Maximum run-out of inner ring side face to the bore | $t_{Sd}$ | 13 µm |
| Range of section height at outer ring of assembled bearing | $t_{Kea}$ | 23 µm |
| Perpendicularity of outer ring outside surface | $t_{SD}$ | 7.5 µm |
| ISO tolerance class for geometrical tolerances | | P5 |

## Radial internal clearance

| | |
|---|---|
| Minimum initial clearance | 240 µm |
| Maximum initial clearance | 330 µm |

## Tolerances and clearances

### GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal, P6, P5, tapered bore 1:12, tapered bore 1:30
- Radial internal clearance: cylindrical bore, tapered bore

### BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit

# Compatible products

## Recommended product

| | |
|---|---|
| Withdrawal sleeve, for oil injection, ISO standards | AOH 24060 G |

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