

# 53307



## Single direction thrust ball bearing with sphered housing washer

Single direction thrust ball bearings, with sphered housing washer, can accommodate axial loads in one direction. They must not be subjected to any radial load. Many of the components are interchangeable. The shaft washers have a ground bore that enables an interference fit. The sphered housing washers can accommodate initial misalignment when configured correctly with a sphered seat washer or a machine component with a sphered surface.

- Separable design facilitates mounting/dismounting and maintenance inspections
- Interchangeable components
- Ground bore of shaft washers enables interference fit
- Sphered housing washers can accommodate initial misalignment

## Overview

### Dimensions

|                            |         |
|----------------------------|---------|
| Bore diameter              | 35 mm   |
| Outside diameter           | 68 mm   |
| Radius of aligning surface | 56 mm   |
| Thickness                  | 25.6 mm |

### Performance

|                           |             |
|---------------------------|-------------|
| Basic dynamic load rating | 49.4 kN     |
| Basic static load rating  | 96.5 kN     |
| Limiting speed            | 4 500 r/min |
| Reference speed           | 3 200 r/min |

## Properties

|                       |                  |
|-----------------------|------------------|
| Axial load capability | Single-direction |
| Cage                  | Sheet metal      |
| Coating               | Without          |
| Housing washer type   | Sphered          |
| Material, bearing     | Bearing steel    |
| Number of rows        | 1                |
| Tolerance class       | Normal           |

# Technical Specification



## Dimensions

|                  |           |                                         |
|------------------|-----------|-----------------------------------------|
| d                | 35 mm     | Bore diameter                           |
| D                | 68 mm     | Outside diameter                        |
| H                | 25.6 mm   | Height                                  |
| H <sub>1</sub>   | 28 mm     | Height bearing including seat washer    |
| d <sub>1</sub>   | ≈ 68 mm   | Outside diameter shaft washer           |
| D <sub>1</sub>   | ≈ 37 mm   | Inner diameter housing washer           |
| D <sub>2</sub>   | 52 mm     | Inner diameter sphered seat washer      |
| D <sub>3</sub>   | 72 mm     | Outside diameter sphered housing washer |
| C                | 7.5 mm    | Height sphered housing washer           |
| R                | 56 mm     | Radius sphered housing washer           |
| s                | 24 mm     | Centre height housing washer sphere     |
| r <sub>1,2</sub> | min. 1 mm | Chamfer dimension washer                |

## Abutment dimensions

|                |            |                           |
|----------------|------------|---------------------------|
| d <sub>a</sub> | min. 55 mm | Abutment diameter shaft   |
| D <sub>a</sub> | max. 52 mm | Abutment diameter housing |
| r <sub>a</sub> | max. 1 mm  | Fillet radius             |



## Calculation data

|                           |       |             |
|---------------------------|-------|-------------|
| Basic dynamic load rating | C     | 49.4 kN     |
| Basic static load rating  | $C_0$ | 96.5 kN     |
| Fatigue load limit        | $P_u$ | 3.55 kN     |
| Reference speed           |       | 3 200 r/min |
| Limiting speed            |       | 4 500 r/min |
| Minimum load factor       | A     | 0.048       |

## Mass

|                                                       |         |
|-------------------------------------------------------|---------|
| Mass bearing (including seat washer where applicable) | 0.46 kg |
|-------------------------------------------------------|---------|

## Associated products

|             |       |
|-------------|-------|
| Seat washer | U 307 |
|-------------|-------|

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