

# 53316

## 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	80 mm
Outside diameter	140 mm
Radius of aligning surface	112 mm
Thickness	47.6 mm

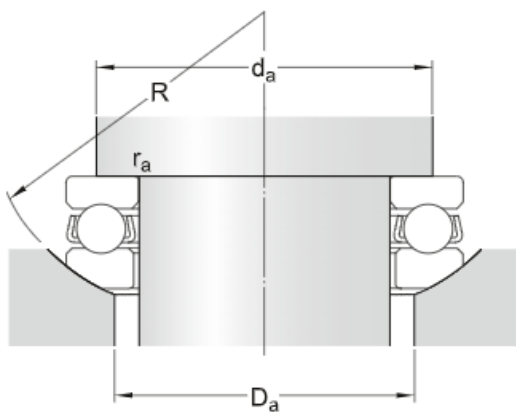
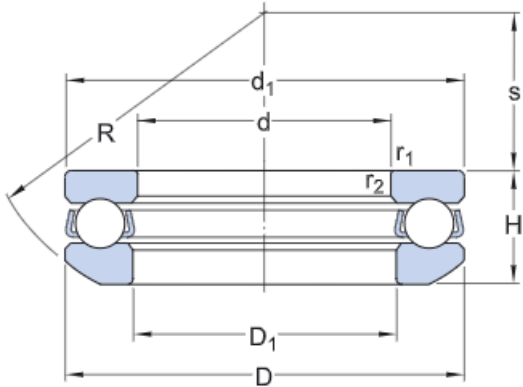
#### Performance

Basic dynamic load rating	159 kN
Basic static load rating	390 kN
Limiting speed	2 200 r/min
Reference speed	1 600 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	80 mm	Bore diameter
D	140 mm	Outside diameter
H	47.6 mm	Height
H <sub>1</sub>	52 mm	Height bearing including seat washer
d <sub>1</sub>	≈ 140 mm	Outside diameter shaft washer
D <sub>1</sub>	≈ 82 mm	Inner diameter housing washer
D <sub>2</sub>	110 mm	Inner diameter sphered seat washer
D <sub>3</sub>	145 mm	Outside diameter sphered housing washer
C	15 mm	Height sphered housing washer
R	112 mm	Radius sphered housing washer
s	50 mm	Centre height housing washer sphere
r <sub>1,2</sub>	min. 1.5 mm	Chamfer dimension washer

## Abutment dimensions

d <sub>a</sub>	min. 116 mm	Abutment diameter shaft
D <sub>a</sub>	max. 110 mm	Abutment diameter housing
r <sub>a</sub>	max. 1 mm	Fillet radius



### Calculation data

Basic dynamic load rating	C	159 kN
Basic static load rating	$C_0$	390 kN
Fatigue load limit	$P_u$	13.7 kN
Reference speed		1 600 r/min
Limiting speed		2 200 r/min
Minimum load factor	A	0.79

### Mass

Mass bearing (including seat washer where applicable)	3.2 kg
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### Associated products

Seat washer	U 316
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