

53311 Single direction thrust ball bearing with sphered housing washer



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	55 mm
Outside diameter	105 mm
Height	39.3 mm
Radius of aligning surface	80 mm

Performance

Basic dynamic load rating	101 kN
Basic static load rating	224 kN
Reference speed	2 200 r/min
Limiting speed	3 000 r/min

Properties

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

Technical Specification



Dimensions

d	55 mm	Bore diameter
D	105 mm	Outside diameter
H	39.3 mm	Height
H ₁	42 mm	Height bearing including seat washer
d ₁	≈ 105 mm	Outside diameter shaft washer
D ₁	≈ 57 mm	Inner diameter housing washer
D ₂	80 mm	Inner diameter sphered seat washer
D ₃	110 mm	Outside diameter sphered housing washer
C	11.5 mm	Height sphered housing washer
R	80 mm	Radius sphered housing washer
s	30 mm	Centre height housing washer sphere
r _{1,2}	min. 1.1 mm	Chamfer dimension washer

Abutment dimensions

d _a	min. 85 mm	Abutment diameter shaft
D _a	max. 80 mm	Abutment diameter housing
r _a	max. 1 mm	Fillet radius



Calculation data

Basic dynamic load rating	C	101 kN
Basic static load rating	C ₀	224 kN
Fatigue load limit	P _u	8.3 kN
Reference speed		2 200 r/min
Limiting speed		3 000 r/min
Minimum load factor	A	0.26

Mass

Mass bearing (including seat washer where applicable)	1.68 kg
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Associated products

Seat washer	U 311
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