

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

51144 M

Single direction thrust ball bearing

Single direction thrust ball bearings can accommodate axial loads in one direction. They must not be subjected to any radial load. Their separable components facilitate mounting/dismounting and maintenance inspections. Many of the components are interchangeable. The shaft washers have a ground bore that enables an interference fit.

- Separable design facilitates mounting/dismounting and maintenance inspections
- Interchangeable components
- Ground bore of shaft washers enable interference fit

Overview

Dimensions

Bore diameter	220 mm
Outside diameter	270 mm
Height	37 mm

Performance

Basic dynamic load rating	178 kN
Basic static load rating	800 kN
Reference speed	1 300 r/min
Limiting speed	1 900 r/min

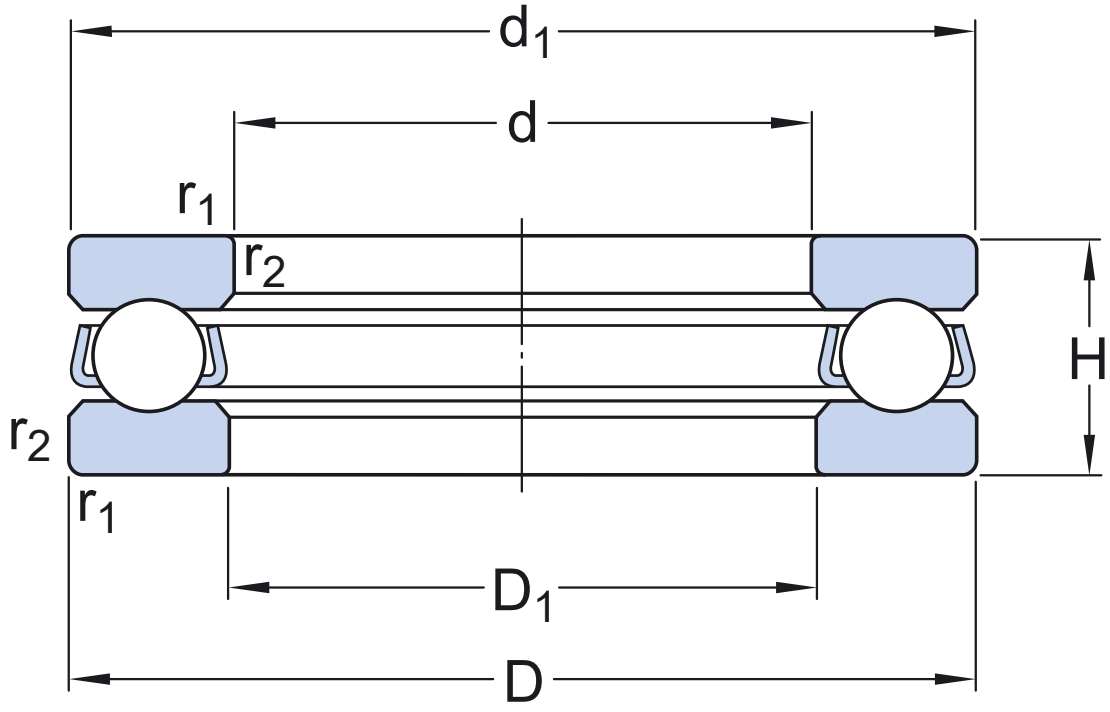
Properties

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

Logistics

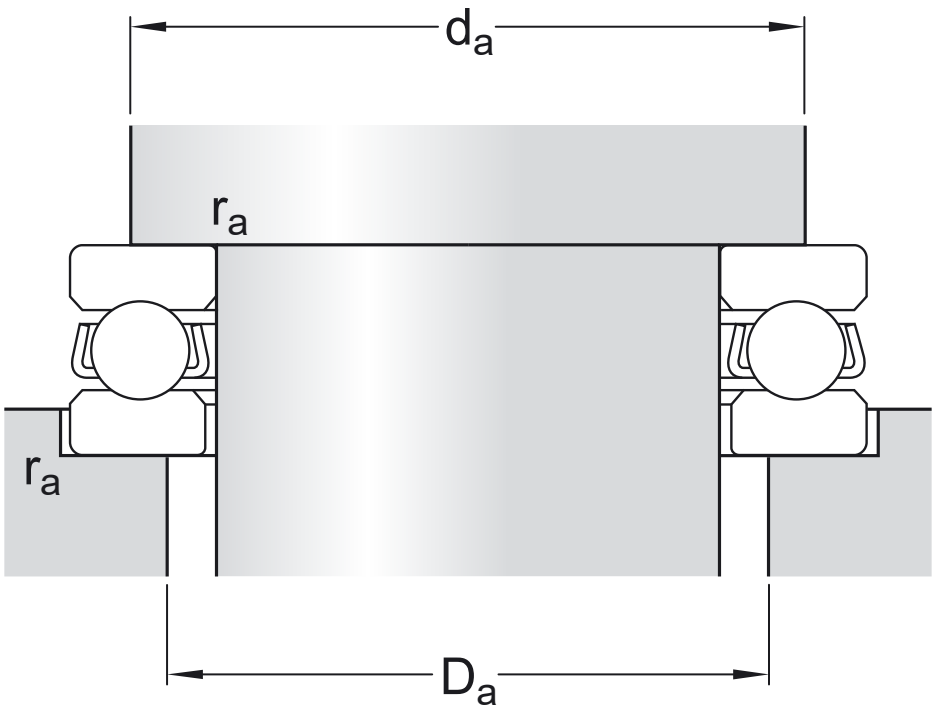
Product net weight	4.52 kg
eClass code	23-05-10-01
UNSPSC code	31171507

Technical specification



Dimensions

d	220 mm	Bore diameter
D	270 mm	Outside diameter
H	37 mm	Height
d_1	≈ 267 mm	Outside diameter shaft washer
D_1	≈ 223 mm	Inner diameter housing washer
$r_{1,2}$	min. 1.1 mm	Chamfer dimension washer



Abutment dimensions

d_a	min. 250 mm	Abutment diameter shaft
D_a	max. 240 mm	Abutment diameter housing
r_a	max. 1 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	178 kN
Basic static load rating	C_0	800 kN
Fatigue load limit	P_u	19 kN
Reference speed		1 300 r/min
Limiting speed		1 900 r/min
Minimum load factor	A	3.3

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: table 1

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fit

More Information

Product details

- Designs and variants
- General bearing specifications
- Loads
- Temperature limits
- Permissible speed
- Mounting
- Designation system

Engineering information

- Principles of rolling bearing selection
- General bearing knowledge
- Bearing selection process
- Bearing interfaces
- Seat tolerances for standard conditions
- Lubrication
- External sealing, mounting and dismounting
- Bearing failure and how to prevent it

Tools

- SKF Product select
- Bearing Frequency Calculator
- SimPro Quick
- LubeSelect for SKF greases
- Heater selection tool

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