

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

81103 TN

Single row cylindrical roller thrust bearing, single direction

Single row cylindrical roller thrust bearings are designed to accommodate heavy axial loads and peak loads in one direction, but not radial loads. They provide a high degree of stiffness and require little axial space. They are mainly used in applications where thrust ball bearings do not have sufficient load carrying capacity. An important feature is the separable design, which facilitates mounting and enables the bearing components to be interchanged.

- High axial load carrying capacity
- High stiffness
- Long service life
- Require little axial space
- Separable design

Overview

Dimensions

Bore diameter	17 mm
Outside diameter	30 mm
Height	9 mm

Performance

Basic dynamic load rating	12.2 kN
Basic static load rating	31.5 kN
Reference speed	4 300 r/min
Limiting speed	8 500 r/min

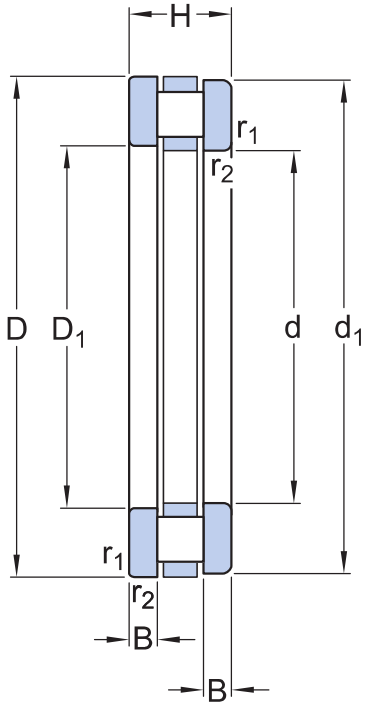
Properties

Bearing part	Complete bearing
Axial load capability	Single-direction
Number of rows	1
Cage	Non-metallic
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without

Logistics

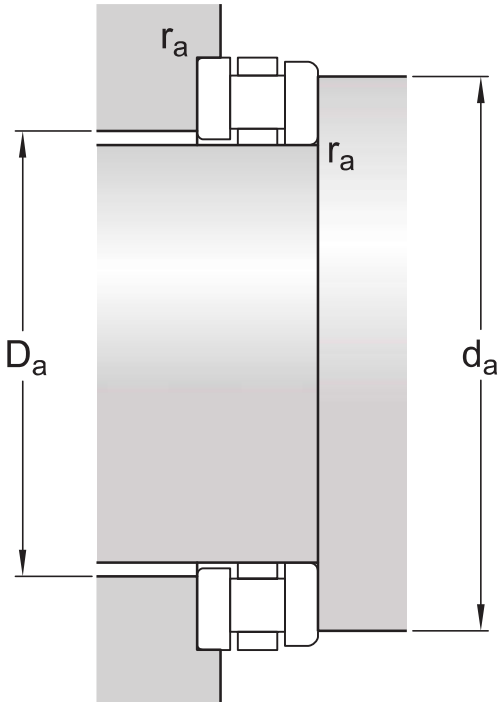
Product net weight	0.0242 kg
UNSPSC code	31171505

Technical specification



Dimensions

d	17 mm	Bore diameter
D	30 mm	Outside diameter
H	9 mm	Height
d_1	30 mm	Outside diameter shaft washer
D_1	18 mm	Bore diameter housing washer
B	2.75 mm	Height shaft washer
$r_{1,2}$	min. 0.3 mm	Chamfer dimension housing washer



Abutment dimensions

d_a	min. 29 mm	Abutment diameter shaft
D_a	max. 18 mm	Abutment diameter housing
r_a	max. 0.3 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	12.2 kN
Basic static load rating	C_0	31.5 kN
Fatigue load limit	P_u	2.85 kN
Reference speed		4 300 r/min
Limiting speed		8 500 r/min
Minimum axial load factor	A	7.9E-5

Included products

Roller and cage thrust assembly	K 81103 TN
Shaft washer	WS 81103
Housing washer	GS 81103

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: table, table, values

DESIGN CONSIDERATIONS

- table

BEARING INTERFACES

- Seat tolerances for standard conditions

Compatible products

Component

Cylindrical roller and cage thrust assembly	K 81103 TN
WS shaft washer for cylindrical and needle roller thrust bearings	WS 81103
GS housing washer for cylindrical and needle roller thrust bearings	GS 81103

More Information

Product details

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

Engineering information

- Principles of rolling bearing selection
- General bearing knowledge
- Bearing selection process
- Bearing failure and how to prevent it

Tools

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

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