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

C 2314

CARB toroidal roller bearing

CARB toroidal roller bearings are unique: as well as accommodating misalignment without increased stress levels, they also provide frictionless axial movement within the bearing in the non-locating position in self-aligning bearing arrangements. Being SKF Explorer bearings, they can accommodate higher load levels and provide significantly extended service life.

- Accommodate misalignment and axial displacement within the bearing
- High radial load carrying capacity
- Provide frictionless axial movement
- Long bearing system life
- Reduce noise and vibration levels

Overview

Dimensions

Bore diameter	70 mm
Outside diameter	150 mm
Width	51 mm

Performance

Basic dynamic load rating	405 kN
Basic static load rating	430 kN
Reference speed	3 800 r/min
Limiting speed	5 000 r/min
SKF performance class	SKF Explorer

Properties

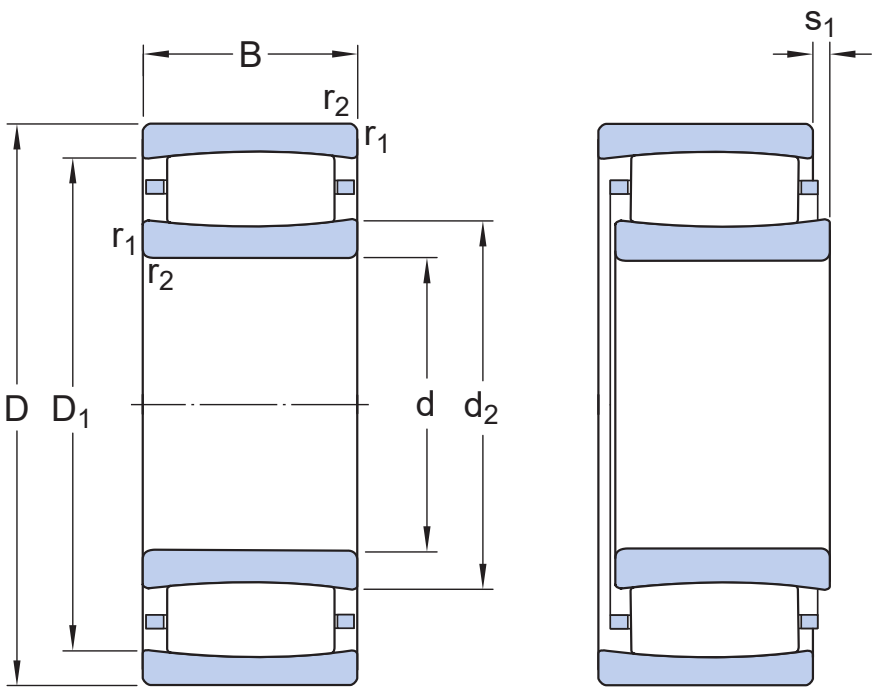
Number of rows	1
Locating feature, bearing outer ring	Without
Bore type	Cylindrical
Cage	Sheet metal
Radial internal clearance	CN
Tolerance class	Normal
Sealing	Without
Lubricant	None
Relubrication feature	Without

Logistics

Product net weight	4.22 kg
eClass code	23-05-09-13
UNSPSC code	31171505

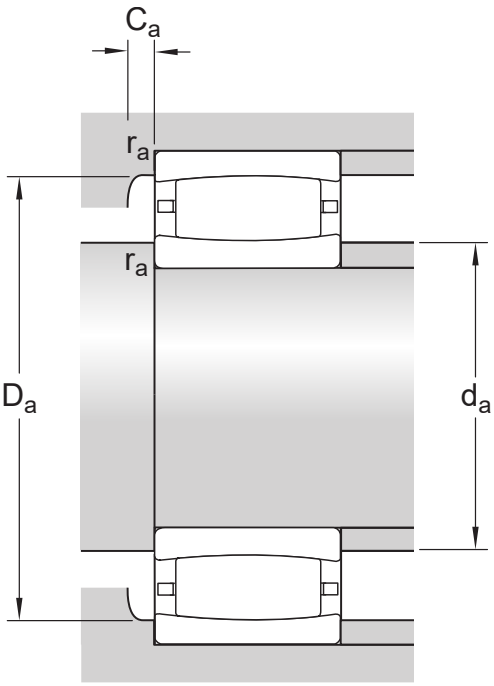
Technical specification

Bore type	Cylindrical



Dimensions

d	70 mm	Bore diameter
D	150 mm	Outside diameter
B	51 mm	Width
d_2	≈ 91.4 mm	Shoulder diameter of inner ring
D_1	≈ 130 mm	Shoulder or recess diameter of outer ring
s_1	max. 9.1 mm	Permissible axial displacement
$r_{1,2}$	min. 2.1 mm	Chamfer dimension



Abutment dimensions

d_a	min. 82 mm	Diameter of shaft abutment
d_a	max. 106 mm	Diameter of shaft abutment
D_a	min. 119 mm	Diameter of housing abutment
D_a	max. 138 mm	Abutment diameter housing
C_a	min. 2.2 mm	Minimum width of space required in housing
r_a	max. 2 mm	Radius of fillet

A negative value for C_a is theoretical.

Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	C	405 kN
Basic static load rating	C_0	430 kN
Fatigue load limit	P_u	49 kN
Reference speed		3 800 r/min
Limiting speed		5 000 r/min
Misalignment factor	k_1	0.11
Internal clearance factor	k_2	0.099

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal, P5, tapered bore 1:12, tapered bore 1:30
- Radial internal clearance: cylindrical bore, tapered bore

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
- Design considerations
- Mounting
- 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 - Select and evaluate bearing
- SKF Product select - Combine bearing with housing
- LubeSelect for SKF greases
- Drive-up Method Program
- Heater selection tool
- Oil Injection Method Program
- Tool and Accessory Selector for sleeves and shafts

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