



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

22311 E

Spherical roller bearing with relubrication features

Spherical roller bearings can accommodate heavy loads in both directions. They are self-aligning and accommodate misalignment and shaft deflections, with virtually no increase in friction or temperature. The design includes features to facilitate relubrication. The bearings can be used in a modular system, including housings, sleeves and nuts.

- Accommodate misalignment
- High load carrying capacity
- Relubrication features
- Low friction and long service life
- Increased wear resistance

Overview

Dimensions

Bore diameter	55 mm
Outside diameter	120 mm
Width	43 mm

Performance

Basic dynamic load rating	280 kN
Basic static load rating	280 kN
Reference speed	4 300 r/min
Limiting speed	5 600 r/min
SKF performance class	SKF Explorer

Properties

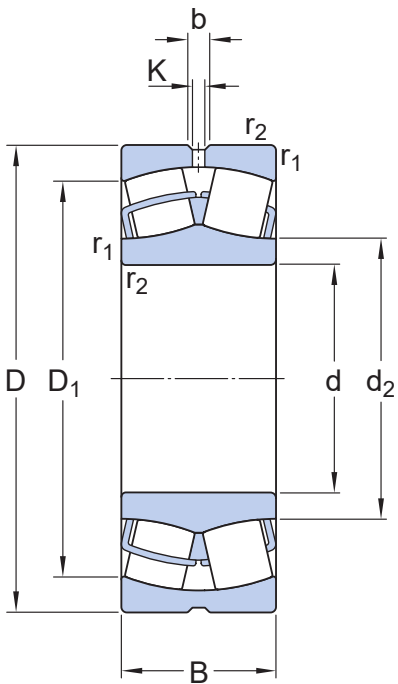
Number of rows	2
Locating feature, bearing outer ring	Without
Bore type	Cylindrical
Cage	Sheet metal
Radial internal clearance	CN
Tolerance class for dimensions	Normal
Tolerance class for run-out	P5
Sealing	Without
Lubricant	None
Relubrication feature	With
Indicative carbon footprint for new product	8.4 kg CO ₂ e

Logistics

Product net weight	2.32 kg
eClass code	23-05-09-11
UNSPSC code	31171510

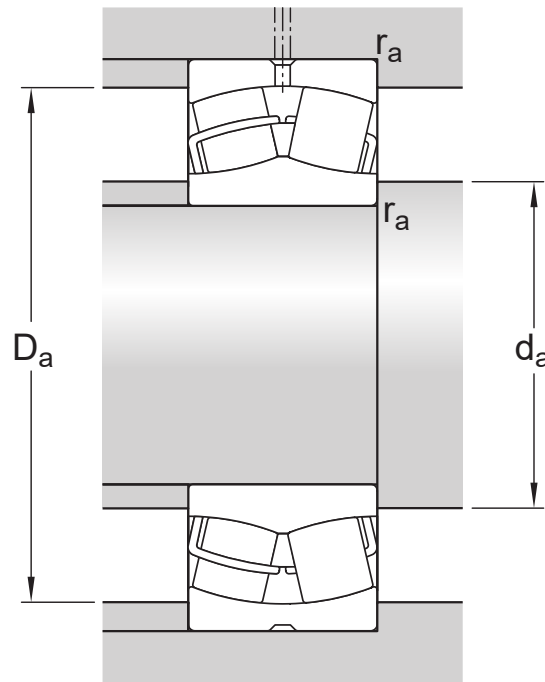
Technical specification

Bore type	Cylindrical
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Dimensions

d	55 mm	Bore diameter
t _{Δdmp}	-0.015 – 0 mm	Deviation limits of mid-range bore diameter
D	120 mm	Outside diameter
t _{ΔDmp}	-0.015 – 0 mm	Deviation limits of mid-range outside diameter
B	43 mm	Width
t _{ΔBs}	-0.06 – 0 mm	Deviation limits of ring width
d ₂	≈ 70.1 mm	Shoulder diameter of inner ring
D ₁	≈ 102 mm	Shoulder/recess diameter of outer ring
b	5.5 mm	Width of lubrication groove
K	3 mm	Diameter of lubrication hole
r _{1,2}	min. 2 mm	Chamfer dimension
	Normal	ISO tolerance class for dimensions



Abutment dimensions

d _a	min. 66 mm	Diameter of shaft abutment
D _a	max. 109 mm	Diameter of housing abutment
r _a	max. 2 mm	Radius of fillet

Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	C	280 kN
Basic static load rating	C ₀	280 kN
Fatigue load limit	P _u	30 kN
Reference speed		4 300 r/min
Limiting speed		5 600 r/min
Limiting value	e	0.35
Calculation factor	Y ₁	1.9
Calculation factor	Y ₂	2.9
Calculation factor	Y ₀	1.8

Tolerances of run-out

Range of section height at inner ring of assembled bearing	t _{Kia}	5 μm
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Maximum run-out of inner ring side face to the bore	t_{Sd}	8 μm
Range of section height at outer ring of assembled bearing	t_{Kea}	10 μm
Perpendicularity of outer ring outside surface	t_{SD}	4.5 μm
ISO tolerance class for geometrical tolerances		P5

Radial internal clearance

Minimum initial clearance	40 μm
Maximum initial clearance	65 μm

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- [Tolerances: Normal, P6, 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](#)



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