

22220 EK

Spherical roller bearing with tapered bore and 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	100 mm
Outside diameter	180 mm
Width	46 mm

Performance

Basic dynamic load rating	433 kN
Basic static load rating	490 kN
Limiting speed	4 500 r/min
Reference speed	3 400 r/min

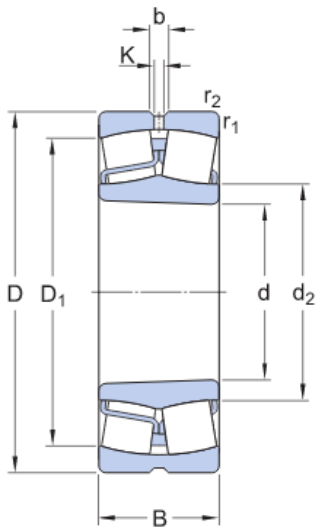
Properties

Bore type	Tapered 1:12
Cage	Sheet metal
Locating feature, bearing outer ring	Without
Lubricant	None
Number of rows	2
Radial internal clearance	CN
Relubrication feature	With
SKF performance class	SKF Explorer
Sealing	Without

Technical Specification

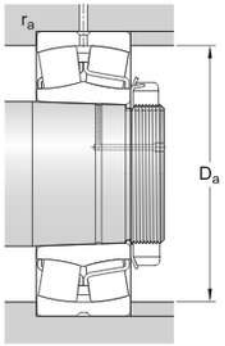
Design

Bore type	Tapered 1:12



Dimensions

d	100 mm	Bore diameter
D	180 mm	Outside diameter
B	46 mm	Width
d_2	≈ 118 mm	Shoulder diameter of inner ring
D_1	≈ 159 mm	Shoulder/recess diameter of outer ring
b	8.3 mm	Width of lubrication groove
K	4.5 mm	Diameter of lubrication hole
$r_{1,2}$	min. 2.1 mm	Chamfer dimension



Abutment dimensions

D_a	max. 168 mm	Diameter of housing abutment
r_a	max. 2 mm	Radius of fillet

Calculation data

Basic dynamic load rating	C	433 kN
Basic static load rating	C_0	490 kN
Fatigue load limit	P_u	49 kN

Reference speed		3 400 r/min
Limiting speed		4 500 r/min
Limiting value	e	0.24
Axial load factor	Y_1	2.8
Axial load factor	Y_2	4.2
Axial load factor	Y_0	2.8

Mass

Mass	4.85 kg

Mounting information

Recommended tightening angle for lock nut	α	150 °

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