



6309-ZNR Deep groove ball bearing with snap ring and integral sealing

Deep groove ball bearing with snap ring and integral sealing

Single row deep groove ball bearing, with snap ring groove and seals or shields on one or both sides, are particularly versatile, have low friction and are optimized for low noise and low vibration, which enables high rotational speeds. They accommodate radial and axial loads in both directions, are easy to mount, and require less maintenance than other bearing types. The snap ring, fitted in an annular groove in the outer ring, facilitates axial location of the bearings within their housings. The integral sealing can significantly prolong bearing service life because it keeps lubricant in the bearings and contaminants out.

- Snap ring facilitates axial location within housing
- Integral sealing prolongs bearing service life
- Typical benefits of single row deep groove ball bearings

Overview

Dimensions

Bore diameter	45 mm
Outside diameter	100 mm
Width	25 mm

Performance

Basic dynamic load rating	55.3 kN
Basic static load rating	31.5 kN
Reference speed	15 000 r/min
Limiting speed	9 500 r/min
SKF performance class	SKF Explorer

Properties

Filling slots	Without
Number of rows	1
Locating feature, bearing outer ring	Snap ring (fitted)
Bore type	Cylindrical
Cage	Sheet metal
Matched arrangement	No
Radial internal clearance	CN
Tolerance class	Class P6 (P6)
Material, bearing	Bearing steel
Coating	Without
Sealing	Shield on one side
Sealing type	Non-contact

Lubricant	None
Relubrication feature	Without

Technical Specification

SKF performance class

SKF Explorer

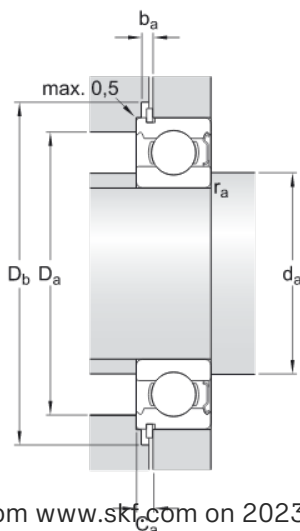


Dimensions

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	25 mm	Width
d ₁	≈ 62.18 mm	Shoulder diameter
D ₂	≈ 86.7 mm	Recess diameter
D ₃	96.8 mm	Diameter of snap ring groove
D ₄	106.5 mm	Outside diameter of snap ring
b	2.7 mm	Width of snap ring groove
C	3.28 mm	Distance from outer ring side face to snap ring groove
f	2.46 mm	Width of snap ring
r ₀	max. 0.6 mm	Bottom radius of snap ring groove
r _{1,2}	min. 1.5 mm	Chamfer dimension

Abutment dimensions

d _a	min. 54 mm	Diameter of shaft abutment
d _a	max. 62.1 mm	Diameter of shaft abutment
D _a	max. 91 mm	Diameter of housing abutment
D _b	min. 108 mm	Diameter of snap ring recess in the housing



b_a	min. 3 mm	Width of snap ring recess in the housing
C_a	max. 5.74 mm	Distance from outer ring side face to snap ring back face
r_a	max. 1.5 mm	Radius of shaft or housing fillet

Calculation data

Basic dynamic load rating	C	55.3 kN
Basic static load rating	C_0	31.5 kN
Fatigue load limit	P_u	1.34 kN
Reference speed		15 000 r/min
Limiting speed		9 500 r/min
Minimum load factor	k_r	0.03
Calculation factor	f_0	13

Mass

Mass bearing	0.87 kg
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Included products

Snap ring	SP 100
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Tolerance class

Dimensional tolerances	P6
Radial run-out	P6

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