

6311 NRDeep groove ball bearing with snap ring



Deep groove ball bearing with snap ring

Single row deep groove ball bearings with a snap ring groove 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 many other bearing types. The snap ring, fitted in an annular groove in the outer ring, facilitates axial location of the bearings within their housings.

- Snap ring facilitates axial location within housing
- Simple, versatile and robust design
- Low friction and high-speed capability
- Accommodate radial and axial loads in both directions
- Require little maintenance

Overview

Dimensions

Bore diameter	55 mm
Outside diameter	120 mm
Width	29 mm

Performance

Basic dynamic load rating	74.1 kN
Basic static load rating	45 kN
Reference speed	12 000 r/min
Limiting speed	8 000 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	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None

Relubrication feature

Without

Technical Specification

SKF performance class

SKF Explorer

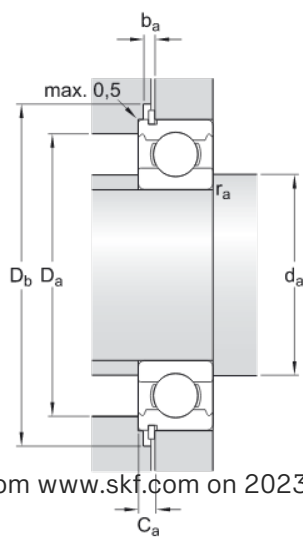


Dimensions

d	55 mm	Bore diameter
D	120 mm	Outside diameter
B	29 mm	Width
d_1	≈ 75.34 mm	Shoulder diameter
D_2	≈ 103.7 mm	Recess diameter
D_3	115.21 mm	Diameter of snap ring groove
D_4	129.7 mm	Outside diameter of snap ring
b	3.1 mm	Width of snap ring groove
C	4.06 mm	Distance from outer ring side face to snap ring groove
f	2.82 mm	Width of snap ring
r_0	max. 0.6 mm	Bottom radius of snap ring groove
$r_{1,2}$	min. 2 mm	Chamfer dimension

Abutment dimensions

d_a	min. 66 mm	Diameter of shaft abutment
D_a	max. 109 mm	Diameter of housing abutment
D_b	min. 131 mm	Diameter of snap ring recess in the housing
b_a	min. 3.5 mm	Width of snap ring recess in the housing



C_a	max. 6.88 mm	Distance from outer ring side face to snap ring back face
r_a	max. 2 mm	Radius of shaft or housing fillet

Calculation data

Basic dynamic load rating	C	74.1 kN
Basic static load rating	C_0	45 kN
Fatigue load limit	P_u	1.9 kN
Reference speed		12 000 r/min
Limiting speed		8 000 r/min
Minimum load factor	k_r	0.03
Calculation factor	f_0	13

Mass

Mass bearing	1.41 kg
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Included products

Snap ring	SP 120
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Tolerance class

Dimensional tolerances	P6
Radial run-out	Normal

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