

6409 NR

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	45 mm
Outside diameter	120 mm
Width	29 mm

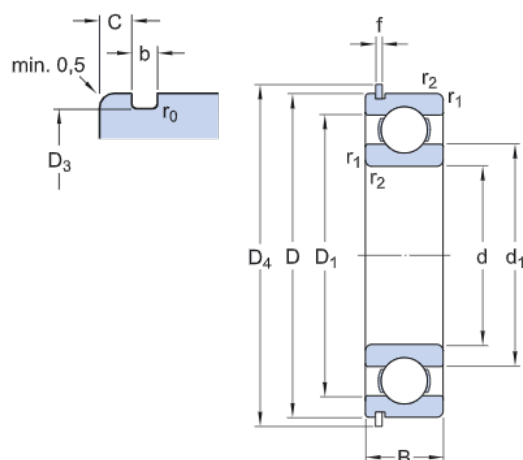
Performance

Basic dynamic load rating	76.1 kN
Basic static load rating	45 kN
Reference speed	13 000 r/min
Limiting speed	8 500 r/min

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
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

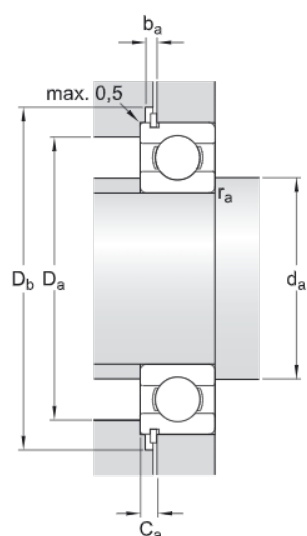
Technical Specification



Dimensions

d	45 mm	Bore diameter
D	120 mm	Outside diameter
B	29 mm	Width
d ₁	≈ 68.91 mm	Shoulder diameter
D ₁	≈ 95.85 mm	Shoulder diameter
D ₃	115 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 outer ring from 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. 58 mm	Diameter of shaft abutment
D _e	max. 107 mm	Diameter of housing abutment
D _i	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 _e	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	76.1 kN
Basic static load rating	C_0	45 kN
Fatigue load limit	P_u	1.9 kN
Reference speed		13 000 r/min
Limiting speed		8 500 r/min
Minimum load factor	k_r	0.035
Calculation factor	f_0	12

Mass

Mass bearing	1.61 kg
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Included products

Snap ring	SP 120
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Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

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