

6203 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	17 mm
Outside diameter	40 mm
Width	12 mm

Performance

Basic dynamic load rating	9.95 kN
Basic static load rating	4.75 kN
Reference speed	38 000 r/min
Limiting speed	24 000 r/min
SKF performance class	SKF Explorer

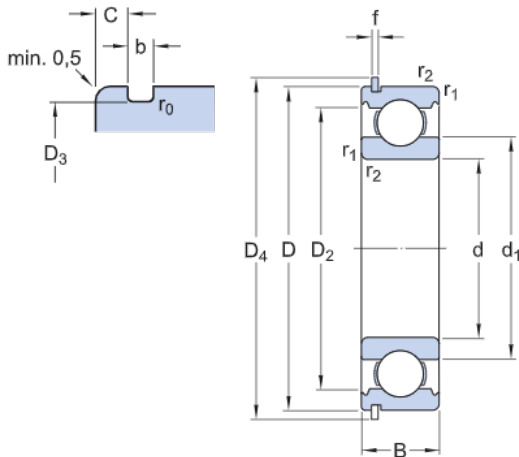
Properties

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

Technical Specification

SKF performance class

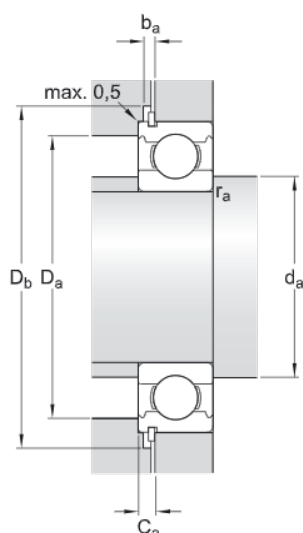
SKF Explorer



Dimensions

d	17 mm	Bore diameter
D	40 mm	Outside diameter
B	12 mm	Width
d ₁	≈ 24.5 mm	Shoulder diameter
D ₂	≈ 34.98 mm	Recess diameter
D ₃	38.1 mm	Diameter of snap ring groove
D ₄	44.6 mm	Outside diameter of snap ring
b	1.35 mm	Width of snap ring groove
C	2.06 mm	Distance outer ring from side face to snap ring groove
f	1.12 mm	Width of snap ring
r ₀	max. 0.4 mm	Bottom radius of snap ring groove
r _{1,2}	min. 0.6 mm	Chamfer dimension

Abutment dimensions



d _a	min. 21.2 mm	Diameter of shaft abutment
D _c	max. 35.8 mm	Diameter of housing abutment
D _t	min. 46 mm	Diameter of snap ring recess in the housing
b _a	min. 1.5 mm	Width of snap ring recess in the housing
C _e	max. 3.18 mm	Distance from outer ring side face to snap ring

mm	ring back face
r_a max. 0.6 mm	Radius of shaft or housing fillet

Calculation data

Basic dynamic load rating	C	9.95 kN
Basic static load rating	C_0	4.75 kN
Fatigue load limit	P_u	0.2 kN
Reference speed		38 000 r/min
Limiting speed		24 000 r/min
Minimum load factor	k_r	0.025
Calculation factor	f_0	13

Mass

Mass bearing	0.065 kg
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Included products

Snap ring	SP 40
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Tolerance class

Dimensional tolerances	P6
Radial run-out	P5

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