



Image may differ from product. See technical specification for details.

## 310-2ZNR

### Deep groove ball bearing with filling slots and integral sealing

Single row deep groove ball bearings with filling slots, a snap ring, and shields on one or both sides, accommodate more balls than standard deep groove ball bearings. They are of a simple, yet versatile, design and are robust in operation, requiring little maintenance. They can accommodate radial and axial loads in both directions. They have a higher radial load carrying capacity than the corresponding bearings without filling slots but have a limited axial load carrying capacity due to the filling slots. 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
- Simple, versatile and robust design
- Accommodate higher radial loads than corresponding bearings without filling slots, with limited axial loads in both directions
- Require little maintenance

# Overview

## Dimensions

Bore diameter	50 mm
Outside diameter	110 mm
Width	27 mm

## Performance

Basic dynamic load rating	64.4 kN
Basic static load rating	52 kN
Reference speed	11 000 r/min
Limiting speed	5 600 r/min

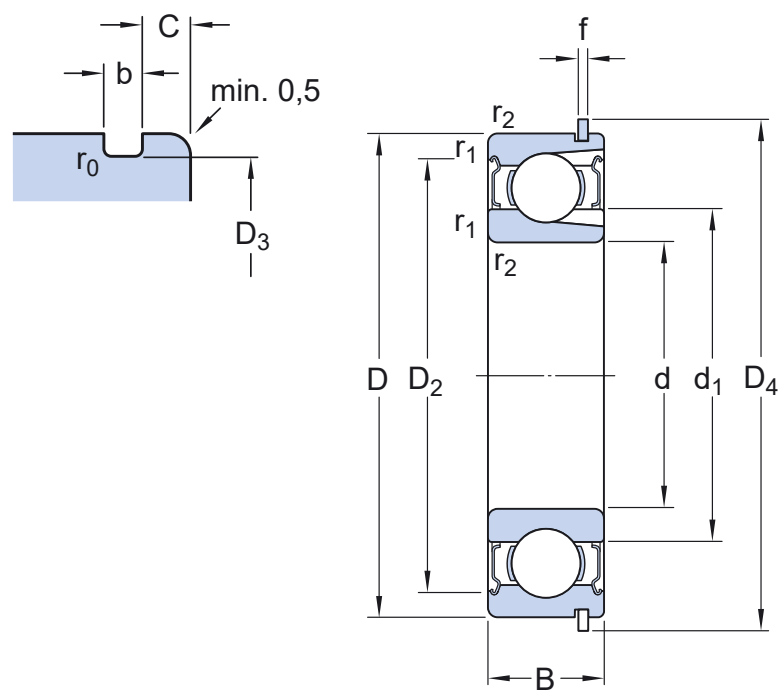
## Properties

Filling slots	With
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	Shield on both sides
Sealing type	Non-contact
Lubricant	Grease
Relubrication feature	Without

## Logistics

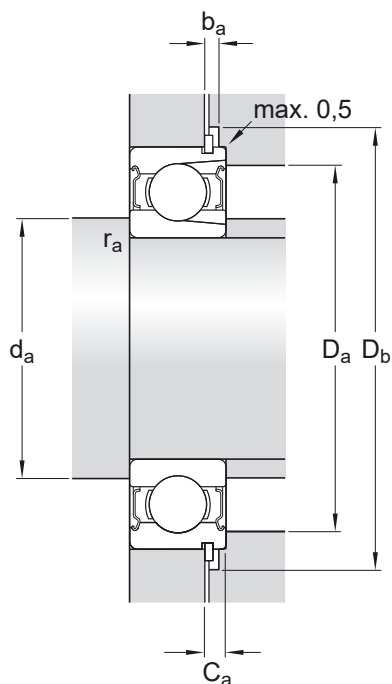
Product net weight	1.09 kg
eClass code	23-05-08-01
UNSPSC code	31171504

# Technical specification



## Dimensions

d	50 mm	Bore diameter
D	110 mm	Outside diameter
B	27 mm	Width
d <sub>1</sub>	≈ 68.76 mm	Shoulder diameter
D <sub>2</sub>	≈ 95.2 mm	Recess diameter
D <sub>3</sub>	106.81 mm	Diameter of snap ring groove
D <sub>4</sub>	116.6 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 <sub>0</sub>	max. 0.6 mm	Bottom radius of snap ring groove
r <sub>1,2</sub>	min. 2 mm	Chamfer dimension



## Abutment dimensions

$d_a$	min. 61 mm	Diameter of shaft abutment
$d_a$	max. 68.6 mm	Diameter of shaft abutment
$D_a$	max. 99 mm	Diameter of housing abutment
$D_b$	min. 118 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. 2 mm	Radius of shaft or housing fillet

## Calculation data

Basic dynamic load rating	C	64.4 kN
Basic static load rating	$C_0$	52 kN
Fatigue load limit	$P_u$	2.2 kN
Reference speed		11 000 r/min
Limiting speed		5 600 r/min
Minimum load factor	$k_r$	0.05

## Included products

Snap ring	SP 110
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## Tolerances and clearances

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### GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal (metric), P6, P5, Normal (inch)
- Radial internal clearance: Classes C2 to C5

## BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fits

# More Information

 Product details	 Engineering information	 Tools
<a href="#">Single row deep groove ball bearings</a>	<a href="#">Principles of rolling bearing selection</a>	<a href="#">SKF Product select</a>
<a href="#">Stainless steel deep groove ball bearings</a>	<a href="#">General bearing knowledge</a>	<a href="#">SimPro Quick</a>
<a href="#">Single row deep groove ball bearings with filling slots</a>	<a href="#">Bearing selection process</a>	<a href="#">Bearing Frequency Calculator</a>
<a href="#">Double row deep groove ball bearings</a>	<a href="#">Bearing interfaces</a>	<a href="#">LubeSelect for SKF greases</a>
<a href="#">General bearing specifications</a>	<a href="#">Seat tolerances for standard conditions</a>	<a href="#">Heater selection tool</a>
<a href="#">Loads</a>	<a href="#">Selecting internal clearance</a>	
<a href="#">Temperature limits</a>	<a href="#">Lubrication</a>	
<a href="#">Permissible speed</a>	<a href="#">Sealing, mounting and dismounting</a>	
<a href="#">Designation system</a>	<a href="#">Bearing failure and how to prevent it</a>	

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