



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

## 6210 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	50 mm
Outside diameter	90 mm
Width	20 mm

## Performance

Basic dynamic load rating	37.1 kN
Basic static load rating	23.2 kN
Reference speed	15 000 r/min
Limiting speed	10 000 r/min
SKF performance class	SKF Explorer

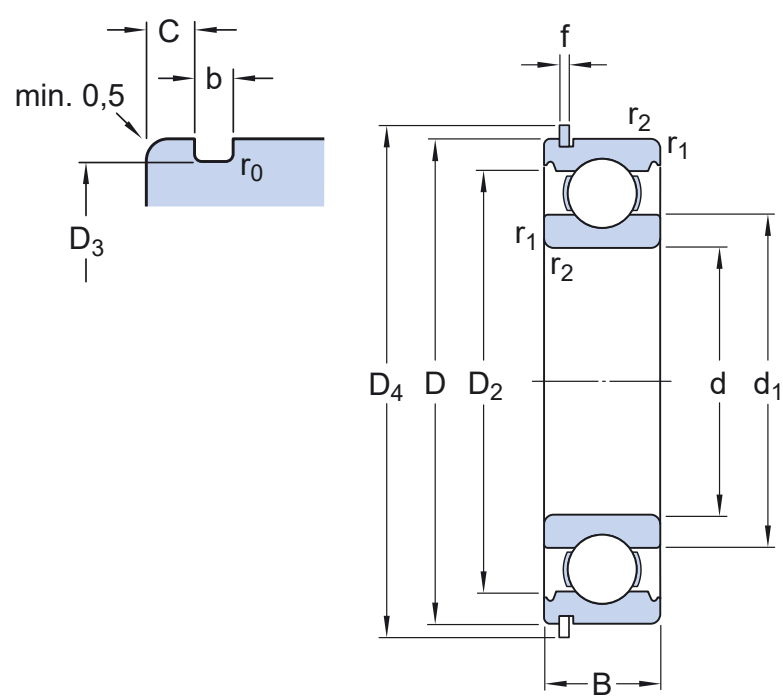
## Properties

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

## Logistics

Product net weight	0.456 kg
eClass code	23-05-08-01
UNSPSC code	31171504

# Technical specification



## Dimensions

d	50 mm	Bore diameter
t <sub>Δdmp</sub>	-0.01 – 0 mm	Deviation limits of mid-range bore diameter
D	90 mm	Outside diameter
t <sub>ΔDmp</sub>	-0.013 – 0 mm	Deviation limits of mid-range outside diameter
B	20 mm	Width
t <sub>ΔBs</sub>	-0.06 – 0 mm	Deviation limits of ring width
d <sub>1</sub>	≈ 62.51 mm	Shoulder diameter
D <sub>2</sub>	≈ 81.61 mm	Recess diameter
D <sub>3</sub>	86.79 mm	Diameter of snap ring groove
D <sub>4</sub>	96.5 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 <sub>0</sub>	max. 0.6 mm	Bottom radius of snap ring groove
r <sub>1,2</sub>	min. 1.1 mm	Chamfer dimension
P6 and tighter width tolerance		ISO tolerance class for dimensions



## Abutment dimensions

$d_a$	min. 57 mm	Diameter of shaft abutment
$D_a$	max. 83 mm	Diameter of housing abutment
$D_b$	min. 98 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 mm	Radius of shaft or housing fillet

## Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	C	37.1 kN
Basic static load rating	$C_0$	23.2 kN
Fatigue load limit	$P_u$	0.98 kN
Reference speed		15 000 r/min
Limiting speed		10 000 r/min
Minimum load factor	$k_r$	0.025
Calculation factor	$f_0$	14

## Tolerances of run-out

Range of section height at inner ring of assembled bearing	$t_{kia}$	10 $\mu\text{m}$
Range of section height at outer ring of assembled bearing	$t_{kea}$	18 $\mu\text{m}$
ISO tolerance class for geometrical tolerances		P6

### Included products

Snap ring	SP 90
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### Tolerances and clearances

#### 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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