



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

310 NR

Deep groove ball bearing with filling slots and snap ring

Single row deep groove ball bearings with filling slots and a snap ring 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.

- Snap ring facilitates axial location within housing
- 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	1.969 in
Outside diameter	4.331 in
Width	1.063 in

Performance

Basic dynamic load rating	14 478 lbf
Basic static load rating	11 690 lbf
Reference speed	11 000 r/min
Limiting speed	7 000 r/min

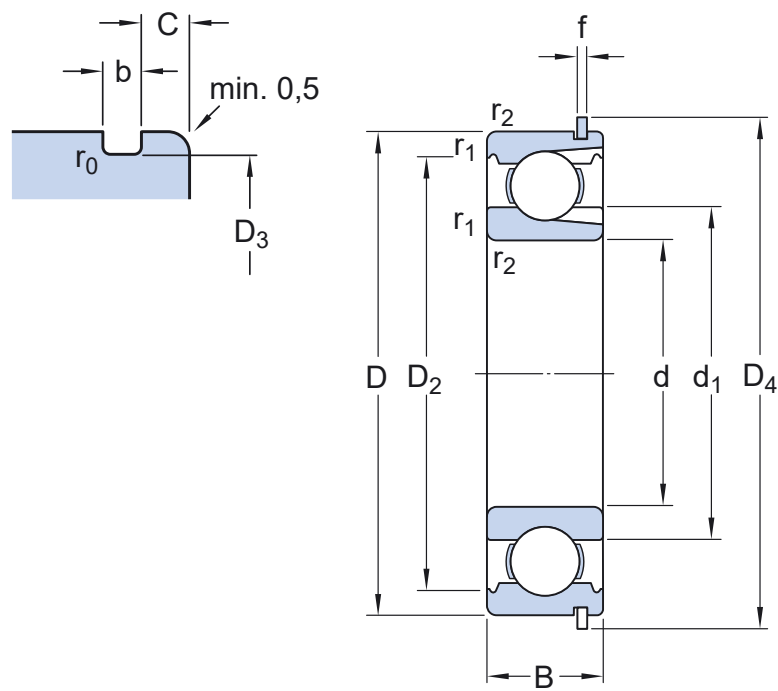
Properties

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	Without
Lubricant	None
Relubrication feature	Without

Logistics

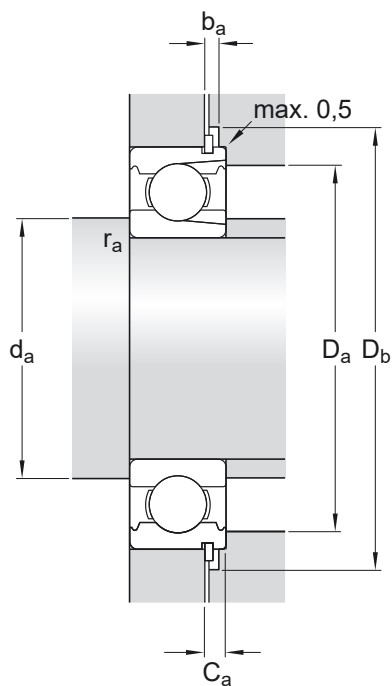
Product net weight	2.572 lb
eClass code	23-05-08-01
UNSPSC code	31171504

Technical specification



Dimensions

d	1.969 in	Bore diameter
D	4.331 in	Outside diameter
B	1.063 in	Width
d ₁	≈ 2.707 in	Shoulder diameter
D ₂	≈ 3.748 in	Recess diameter
D ₃	4.205 in	Diameter of snap ring groove
D ₄	4.591 in	Outside diameter of snap ring
b	0.106 in	Width of snap ring groove
C	0.129 in	Distance from outer ring side face to snap ring groove
f	0.097 in	Width of snap ring
r ₀	max. 0.024 in	Bottom radius of snap ring groove
r _{1,2}	min. 0.079 in	Chamfer dimension



Abutment dimensions

d_a	min. 2.402 in	Diameter of shaft abutment
D_a	max. 3.898 in	Diameter of housing abutment
D_b	min. 4.646 in	Diameter of snap ring recess in the housing
b_a	min. 0.118 in	Width of snap ring recess in the housing
C_a	max. 0.226 in	Distance from outer ring side face to snap ring back face
r_a	max. 0.079 in	Radius of shaft or housing fillet

Calculation data

Basic dynamic load rating	C	14 478 lbf
Basic static load rating	C_0	11 690 lbf
Fatigue load limit	P_u	495 lbf
Reference speed		11 000 r/min
Limiting speed		7 000 r/min

Included products

Snap ring	SP 110
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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
Single row deep groove ball bearings	Principles of rolling bearing selection	SKF Product select
Stainless steel deep groove ball bearings	General bearing knowledge	SimPro Quick
Single row deep groove ball bearings with filling slots	Bearing selection process	Bearing Frequency Calculator
Double row deep groove ball bearings	Bearing interfaces	LubeSelect for SKF greases
General bearing specifications	Seat tolerances for standard conditions	Heater selection tool
Loads	Selecting internal clearance	
Temperature limits	Lubrication	
Permissible speed	Sealing, mounting and dismounting	
Designation system	Bearing failure and how to prevent it	

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