



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

313-ZNR

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	2.559 in
Outside diameter	5.512 in
Width	1.299 in

Performance

Basic dynamic load rating	22 931 lbf
Basic static load rating	20 233 lbf
Reference speed	9 000 r/min
Limiting speed	5 300 r/min

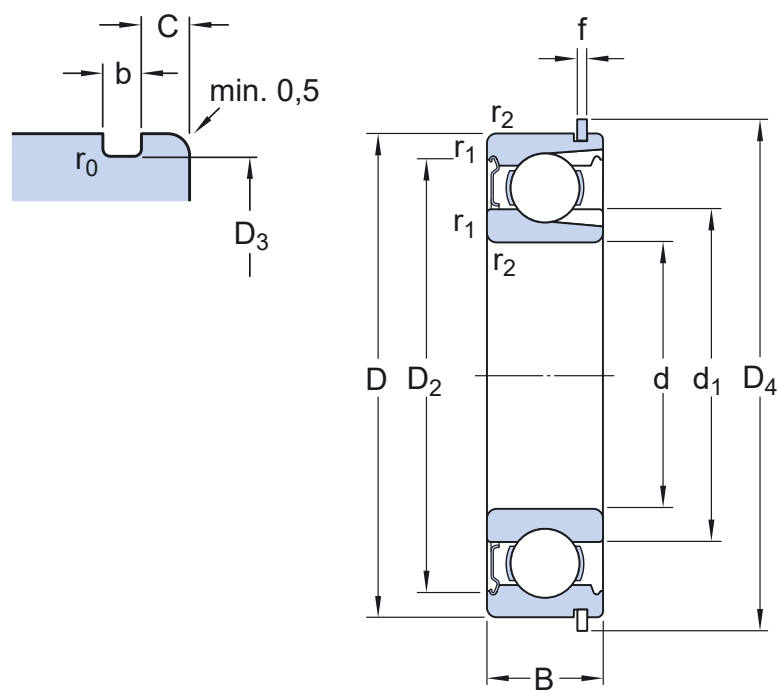
Properties

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 one side
Sealing type	Non-contact
Lubricant	None
Relubrication feature	Without

Logistics

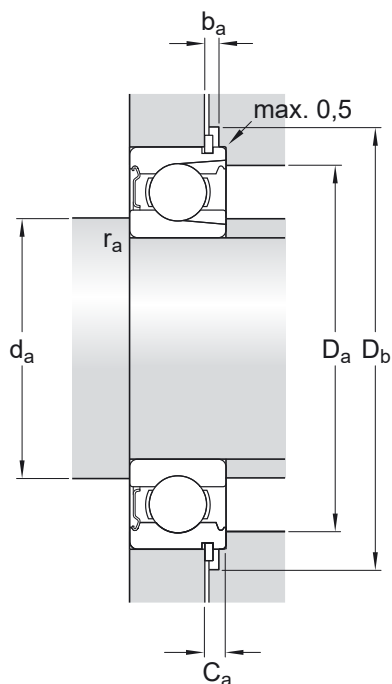
Product net weight	5.004 lb
eClass code	23-05-08-01
UNSPSC code	31171504

Technical specification



Dimensions

d	2.559 in	Bore diameter
D	5.512 in	Outside diameter
B	1.299 in	Width
d ₁	≈ 3.478 in	Shoulder diameter
D ₂	≈ 4.776 in	Recess diameter
D ₃	5.324 in	Diameter of snap ring groove
D ₄	5.894 in	Outside diameter of snap ring
b	0.122 in	Width of snap ring groove
C	0.193 in	Distance from outer ring side face to snap ring groove
f	0.111 in	Width of snap ring
r ₀	max. 0.024 in	Bottom radius of snap ring groove
r _{1,2}	min. 0.083 in	Chamfer dimension



Abutment dimensions

d_a	min. 3.031 in	Diameter of shaft abutment
d_a	max. 3.472 in	Diameter of shaft abutment
D_a	max. 5.039 in	Diameter of housing abutment
D_b	min. 5.945 in	Diameter of snap ring recess in the housing
b_a	min. 0.138 in	Width of snap ring recess in the housing
C_a	max. 0.304 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	22 931 lbf
Basic static load rating	C_0	20 233 lbf
Fatigue load limit	P_u	843 lbf
Reference speed		9 000 r/min
Limiting speed		5 300 r/min

Included products

Snap ring

SP 140

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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