



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

## 313 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    | 65 mm  |
| Outside diameter | 140 mm |
| Width            | 33 mm  |

## Performance

|                           |             |
|---------------------------|-------------|
| Basic dynamic load rating | 102 kN      |
| Basic static load rating  | 90 kN       |
| Reference speed           | 9 000 r/min |
| Limiting speed            | 5 300 r/min |

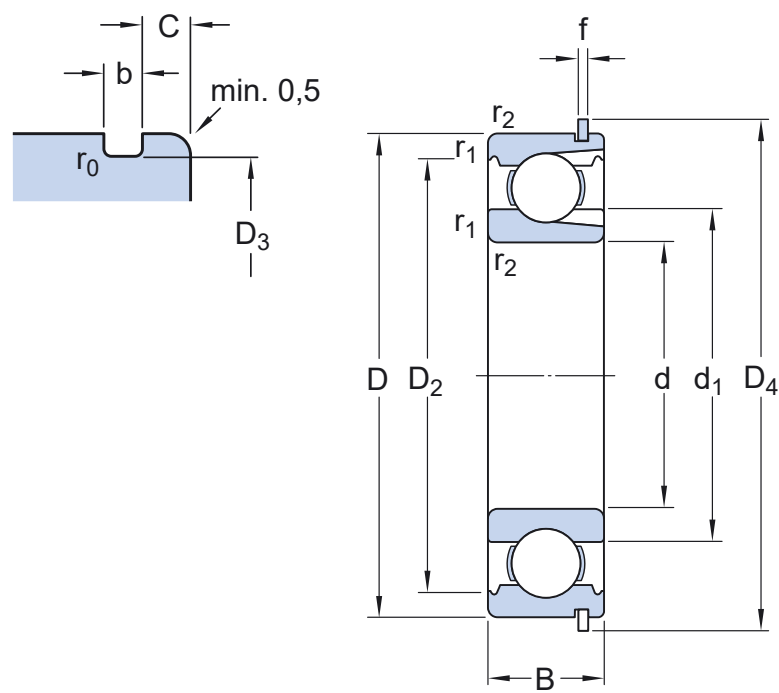
## Properties

|                                      |                    |
|--------------------------------------|--------------------|
| 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                              | Without            |
| Lubricant                            | None               |
| Relubrication feature                | Without            |

## Logistics

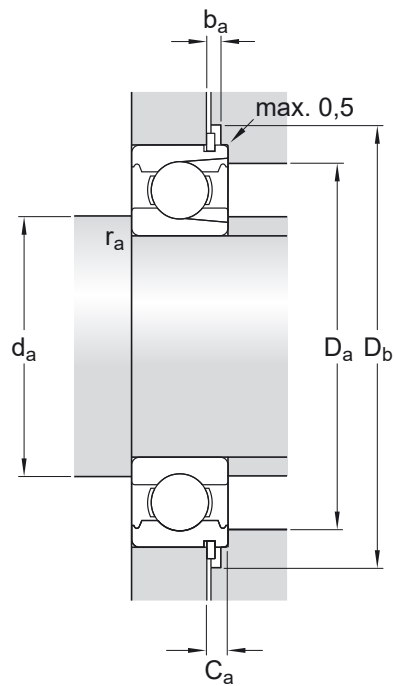
|                    |             |
|--------------------|-------------|
| Product net weight | 2.34 kg     |
| eClass code        | 23-05-08-01 |
| UNSPSC code        | 31171504    |

# Technical specification



## Dimensions

|                  |             |  |
|------------------|-------------|--|
| d                | 65 mm       | Bore diameter  |
| D                | 140 mm      | Outside diameter                                       |
| B                | 33 mm       | Width  |
| d <sub>1</sub>   | ≈ 88.35 mm  | Shoulder diameter                                      |
| D <sub>2</sub>   | ≈ 121.3 mm  | Recess diameter  |
| D <sub>3</sub>   | 135.23 mm   | Diameter of snap ring groove                           |
| D <sub>4</sub>   | 149.7 mm    | Outside diameter of snap ring                          |
| b                | 3.1 mm      | Width of snap ring groove                              |
| C                | 4.9 mm      | Distance from outer ring side face to snap ring groove |
| f                | 2.82 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. 2.1 mm | Chamfer dimension                                      |



## Abutment dimensions

|       |              |   |
|-------|--------------|---|
| $d_a$ | min. 77 mm   | Diameter of shaft abutment                                |
| $D_a$ | max. 128 mm  | Diameter of housing abutment                              |
| $D_b$ | min. 151 mm  | Diameter of snap ring recess in the housing               |
| $b_a$ | min. 3.5 mm  | Width of snap ring recess in the housing                  |
| $C_a$ | max. 7.72 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     | 102 kN      |
| Basic static load rating  | $C_0$ | 90 kN       |
| Fatigue load limit        | $P_u$ | 3.75 kN     |
| Reference speed           |       | 9 000 r/min |
| Limiting speed            |       | 5 300 r/min |
| Minimum load factor       | $k_r$ | 0.05        |

## Included products

## 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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