

# 6018 NR Deep groove ball bearing with snap ring



## 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    | 90 mm  |
| Outside diameter | 140 mm |
| Width            | 24 mm  |

## Performance

|                           |              |
|---------------------------|--------------|
| Basic dynamic load rating | 60.5 kN      |
| Basic static load rating  | 50 kN        |
| Reference speed           | 10 000 r/min |
| Limiting speed            | 6 300 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                 |
| Tolerance class                      | Normal             |
| Material, bearing                    | Bearing steel      |
| Coating                              | Without            |
| Sealing                              | Without            |
| Lubricant                            | None               |

Relubrication feature

Without

# Technical Specification

SKF performance class

SKF Explorer

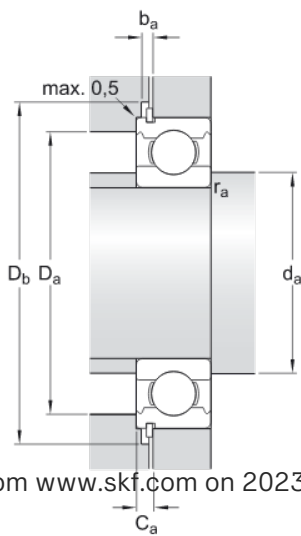


## Dimensions

|           |                     |  |
|-----------|---------------------|--|
| d         | 90 mm               | Bore diameter  |
| D         | 140 mm              | Outside diameter                                       |
| B         | 24 mm               | Width  |
| $d_1$     | $\approx 105.95$ mm | Shoulder diameter                                      |
| $D_2$     | $\approx 128.3$ mm  | Recess diameter  |
| $D_3$     | 135.23 mm           | Diameter of snap ring groove                           |
| $D_4$     | 149.7 mm            | Outside diameter of snap ring                          |
| b         | 3.1 mm              | Width of snap ring groove                              |
| C         | 3.71 mm             | Distance from outer ring side face to snap ring groove |
| f         | 2.82 mm             | Width of snap ring                                     |
| $r_0$     | max. 0.6 mm         | Bottom radius of snap ring groove                      |
| $r_{1,2}$ | min. 1.5 mm         | Chamfer dimension                                      |

## Abutment dimensions

|       |             |   |
|-------|-------------|---|
| $d_a$ | min. 97 mm  | Diameter of shaft abutment                  |
| $D_a$ | max. 133 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. 6.53 mm | Distance from outer ring side face to snap ring back face |
| $r_a$ | max. 1.5 mm  | Radius of shaft or housing fillet                         |

## Calculation data

|                           |       |              |
|---------------------------|-------|--------------|
| Basic dynamic load rating | $C$   | 60.5 kN      |
| Basic static load rating  | $C_0$ | 50 kN        |
| Fatigue load limit        | $P_u$ | 1.96 kN      |
| Reference speed           |       | 10 000 r/min |
| Limiting speed            |       | 6 300 r/min  |
| Minimum load factor       | $k_r$ | 0.025        |
| Calculation factor        | $f_0$ | 16           |

## Mass

|              |        |
|--------------|--------|
| Mass bearing | 1.2 kg |
|--------------|--------|

## Included products

|           |        |
|-----------|--------|
| Snap ring | SP 140 |
|-----------|--------|

## Tolerance class

|                        |        |
|------------------------|--------|
| Dimensional tolerances | P6     |
| Radial run-out         | Normal |

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