

# N 314 ECM

## Single row cylindrical roller bearing, N design

Single row cylindrical roller bearings are designed to accommodate high radial loads in combination with high speeds. Having two integral flanges on the inner ring and no flanges on the outer ring, N design bearings can accommodate axial displacement in both directions. An important feature is the separable design, which facilitates mounting and enables the bearing components to be interchanged.

- High radial load carrying capacity
- Low friction
- Long service life
- Accommodate axial displacement in both directions
- Separable design



## Overview

### Dimensions

|                  |        |
|------------------|--------|
| Bore diameter    | 70 mm  |
| Outside diameter | 150 mm |
| Width            | 35 mm  |

### Performance

|                           |              |
|---------------------------|--------------|
| Basic dynamic load rating | 236 kN       |
| Basic static load rating  | 228 kN       |
| Reference speed           | 4 800 r/min  |
| Limiting speed            | 5 600 r/min  |
| SKF performance class     | SKF Explorer |

### Properties

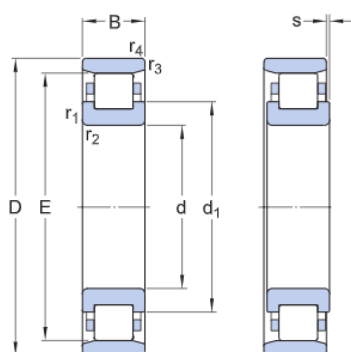
|                                      |                    |
|--------------------------------------|--------------------|
| Bearing part                         | Complete bearing   |
| Axial displacement capability        | In both directions |
| Number of rows                       | 1                  |
| Locating feature, bearing outer ring | None               |
| Bore type                            | Cylindrical        |
| Cage                                 | Machined metal     |
| Number of flanges, outer ring        | 0                  |
| Number of flanges, inner ring        | 2                  |
| Loose flange                         | None               |
| Radial internal clearance            | CN                 |
| Coating                              | Without            |
| Sealing                              | Without            |
| Lubricant                            | None               |
| Relubrication feature                | Without            |

# Technical Specification

SKF performance class

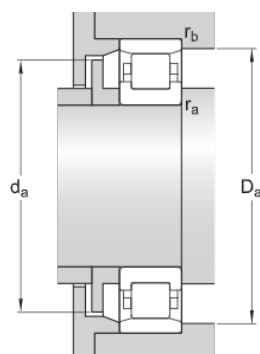
SKF Explorer

## Dimensions



|                  |             |                                 |
|------------------|-------------|---------------------------------|
| d                | 70 mm       | Bore diameter                   |
| D                | 150 mm      | Outside diameter                |
| B                | 35 mm       | Width                           |
| d <sub>1</sub>   | ≈ 97.3 mm   | Shoulder diameter of inner ring |
| E                | 133 mm      | Raceway diameter of outer ring  |
| r <sub>1,2</sub> | min. 2.1 mm | Chamfer dimension               |
| r <sub>3,4</sub> | min. 2.1 mm | Chamfer dimension               |
| s                | max. 1.8 mm | Permissible axial displacement  |

## Abutment dimensions



|                |             |                              |
|----------------|-------------|------------------------------|
| d <sub>a</sub> | min. 82 mm  | Diameter of spacer sleeve    |
| d <sub>a</sub> | max. 130 mm | Diameter of spacer sleeve    |
| D <sub>a</sub> | min. 136 mm | Diameter of housing abutment |
| D <sub>a</sub> | max. 138 mm | Diameter of housing abutment |
| r <sub>a</sub> | max. 2 mm   | Radius of fillet             |
| r <sub>b</sub> | max. 2 mm   | Radius of fillet             |

## Calculation data

|                           |                |        |
|---------------------------|----------------|--------|
| Basic dynamic load rating | C              | 236 kN |
| Basic static load rating  | C <sub>0</sub> | 228 kN |
| Fatigue load limit        | P <sub>u</sub> | 29 kN  |

|                     |       |             |
|---------------------|-------|-------------|
| Reference speed     |       | 4 800 r/min |
| Limiting speed      |       | 5 600 r/min |
| Minimum load factor | $k_r$ | 0.12        |
| Limiting value      | $e$   | 0.2         |
| Calculation factor  | $Y$   | 0.6         |

## Mass

|      |         |
|------|---------|
| Mass | 3.23 kg |
|------|---------|

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