



# NUP 311 ECJ Single row cylindrical roller bearing, NUP design

## Single row cylindrical roller bearing, NUP design

Single row cylindrical roller bearings are designed to accommodate high radial loads in combination with high speeds. Having two integral flanges on the outer ring and one integral flange and one loose flange ring on the inner ring, NUP design bearings can locate the shaft axially 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
- Locate the shaft axially in both directions
- Separable design

## Overview

### Dimensions

Bore diameter	55 mm
Outside diameter	120 mm
Width	29 mm

### Performance

Basic dynamic load rating	156 kN
Basic static load rating	143 kN
Reference speed	6 000 r/min
Limiting speed	7 000 r/min
SKF performance class	SKF Explorer

### Properties

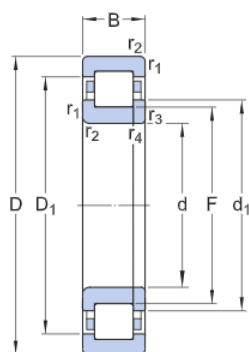
Bearing part	Complete bearing
Axial displacement capability	None
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Sheet metal
Number of flanges, outer ring	2
Number of flanges, inner ring	1
Loose flange	Inner ring loose flange
Radial internal clearance	CN
Coating	Without

Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification

SKF performance class

SKF Explorer

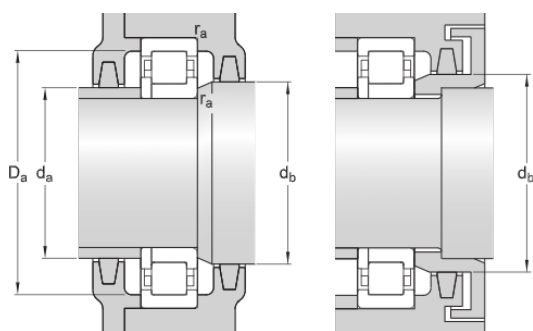


## Dimensions

d	55 mm	Bore diameter
D	120 mm	Outside diameter
B	29 mm	Width
d <sub>1</sub>	≈ 77.5 mm	Shoulder diameter of inner ring
D <sub>1</sub>	≈ 100.3 mm	Shoulder diameter of outer ring
F	70.5 mm	Raceway diameter of inner ring
r <sub>1,2</sub>	min. 2 mm	Chamfer dimension
r <sub>3,4</sub>	min. 2 mm	Chamfer dimension of loose flange ring

## Abutment dimensions

d <sub>ε</sub>	min. 65 mm	Diameter of spacer sleeve
d <sub>t</sub>	min. 80 mm	Diameter of shaft abutment
D <sub>ε</sub>	max. 109.2 mm	Diameter of housing abutment
r <sub>a</sub>	max. 2 mm	Radius of fillet



## Calculation data

Basic dynamic load rating	C	156 kN
Basic static load rating	C <sub>0</sub>	143 kN
Fatigue load limit	P <sub>u</sub>	18.6 kN

Reference speed		6 000 r/min
Limiting speed		7 000 r/min
Minimum load factor	$k_r$	0.15
Limiting value	$e$	0.2
Calculation factor	$\gamma$	0.6

## Mass

Mass		1.53 kg
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