

# NJ 203 ECP



## Single row cylindrical roller bearing, NJ 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 on the inner ring, NJ design bearings can accommodate axial displacement in one direction. 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 one direction
- Separable design

## Overview

### Dimensions

Bore diameter	17 mm
Outside diameter	40 mm
Width	12 mm

### Performance

Basic dynamic load rating	20 kN
Basic static load rating	14.3 kN
Reference speed	20 000 r/min
Limiting speed	22 000 r/min
SKF performance class	SKF Explorer

### Properties

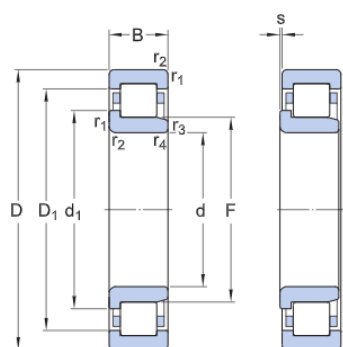
Bearing part	Complete bearing
Axial displacement capability	In one direction
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Non-metallic
Number of flanges, outer ring	2
Number of flanges, inner ring	1
Loose flange	None
Radial internal clearance	CN
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

# Technical Specification

SKF performance class

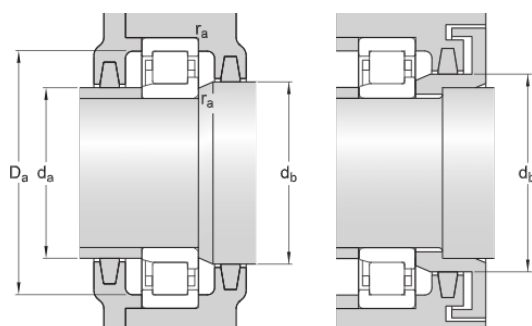
SKF Explorer

## Dimensions



d	17 mm	Bore diameter
D	40 mm	Outside diameter
B	12 mm	Width
d <sub>1</sub>	≈ 25 mm	Shoulder diameter of inner ring
D <sub>1</sub>	≈ 32 mm	Shoulder diameter of outer ring
F	22.1 mm	Raceway diameter of inner ring
r <sub>1,2</sub>	min. 0.6 mm	Chamfer dimension
r <sub>3,4</sub>	min. 0.3 mm	Chamfer dimension
s	max. 1 mm	Permissible axial displacement

## Abutment dimensions



d <sub>a</sub>	min. 20.7 mm	Diameter of spacer sleeve
d <sub>a</sub>	max. 21.1 mm	Diameter of spacer sleeve
d <sub>b</sub>	min. 27 mm	Diameter of shaft abutment
D <sub>a</sub>	max. 36 mm	Diameter of housing abutment
r <sub>a</sub>	max. 0.6 mm	Radius of fillet

## Calculation data

Basic dynamic load rating	C	20 kN
Basic static load rating	C <sub>0</sub>	14.3 kN

Fatigue load limit	$P_u$	1.73 kN
Reference speed		20 000 r/min
Limiting speed		22 000 r/min
Minimum load factor	$k_r$	0.15
Limiting value	$e$	0.2
Calculation factor	$Y$	0.6

## Mass

Mass		0.069 kg
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