



# N 309 ECPSingle row cylindrical roller bearing, N design

## 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	45 mm
Outside diameter	100 mm
Width	25 mm

### Performance

Basic dynamic load rating	112 kN
Basic static load rating	100 kN
Reference speed	7 500 r/min
Limiting speed	8 500 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	Non-metallic
Number of flanges, outer ring	0
Number of flanges, inner ring	2
Loose flange	None
Radial internal clearance	CN
Tolerance class	Normal
Coating	Without
Sealing	Without

Lubricant

None

Relubrication feature

Without

# Technical Specification

SKF performance class

SKF Explorer



## Dimensions

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	25 mm	Width
$d_1$	$\approx 64.4$ mm	Shoulder diameter of inner ring
E	88.5 mm	Raceway diameter of outer ring
$r_{1,2}$	min. 1.5 mm	Chamfer dimension
$r_{3,4}$	min. 1.5 mm	Chamfer dimension
s	max. 1.7 mm	Permissible axial displacement

## Abutment dimensions

$d_a$	min. 54 mm	Diameter of spacer sleeve
$d_a$	max. 86 mm	Diameter of spacer sleeve
$D_a$	min. 91 mm	Diameter of housing abutment
$D_a$	max. 92.3 mm	Diameter of housing abutment
$r_a$	max. 1.5 mm	Radius of fillet
$r_b$	max. 1.5 mm	Radius of fillet



## Calculation data

Basic dynamic load rating	C	112 kN
Basic static load rating	$C_0$	100 kN
Fatigue load limit	$P_u$	12.9 kN

Reference speed		7 500 r/min
Limiting speed		8 500 r/min
Minimum load factor	$k_r$	0.12
Limiting value	$e$	0.2
Calculation factor	$\gamma$	0.6

## Mass

Mass		0.88 kg
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