



N 309 ECP

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
Limiting speed	8 500 r/min
Reference speed	7 500 r/min
SKF performance class	SKF Explorer

Properties

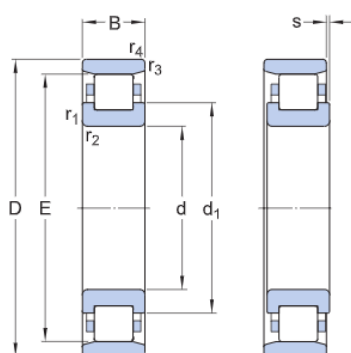
Axial displacement capability	In both directions
Bearing part	Complete bearing
Bore type	Cylindrical
Cage	Non-metallic
Coating	Without
Locating feature, bearing outer ring	None
Loose flange	None
Lubricant	None
Number of flanges, inner ring	2
Number of flanges, outer ring	0
Number of rows	1
Radial internal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

Relubrication feature	Without
Sealing	Without

Technical Specification

SKF performance class

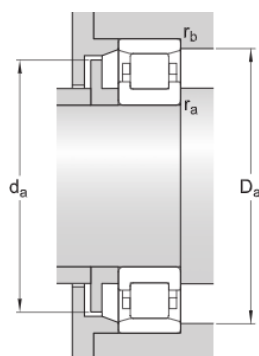
SKF Explorer



Dimensions

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	25 mm	Width
d_1	≈ 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	Y	0.6

Mass

Mass		0.88 kg
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