

N 311 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	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	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
Coating	Without
Sealing	Without

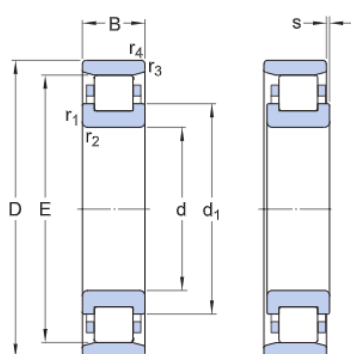
Lubricant	None
Relubrication feature	Without

Technical Specification

SKF performance class

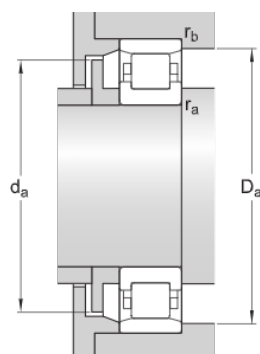
SKF Explorer

Dimensions



d	55 mm	Bore diameter
D	120 mm	Outside diameter
B	29 mm	Width
d ₁	≈ 77.5 mm	Shoulder diameter of inner ring
E	106.5 mm	Raceway diameter of outer ring
r _{1,2}	min. 2 mm	Chamfer dimension
r _{3,4}	min. 2 mm	Chamfer dimension
s	max. 2 mm	Permissible axial displacement

Abutment dimensions



d _a	min. 65 mm	Diameter of spacer sleeve
d _a	max. 104 mm	Diameter of spacer sleeve
D _a	min. 109 mm	Diameter of housing abutment
D _a	max. 111 mm	Diameter of housing abutment
r _a	max. 2 mm	Radius of fillet
r _b	max. 2 mm	Radius of fillet

Calculation data

Basic dynamic load rating	C	156 kN
Basic static load rating	C ₀	143 kN
Fatigue load limit	P _u	18.6 kN

Reference speed		6 000 r/min
Limiting speed		7 000 r/min
Minimum load factor	k_r	0.12
Limiting value	e	0.2
Calculation factor	Y	0.6

Mass

Mass		1.46 kg
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