NUP 311 ECP

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
Limiting speed	7 000 r/min
Reference speed	6 000 r/min
SKF performance class	SKF Explorer

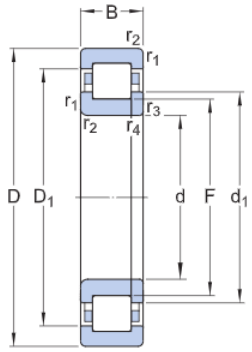
Properties

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

Relubrication feature	Without
Sealing	Without

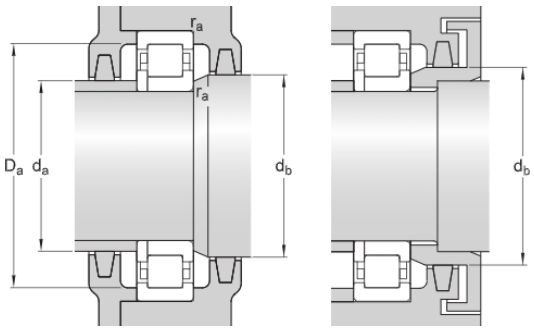
Technical Specification

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
D_1	≈ 100.3 mm	Shoulder diameter of outer ring
F	70.5 mm	Raceway diameter of inner ring
$r_{1,2}$	min. 2 mm	Chamfer dimension
$r_{3,4}$	min. 2 mm	Chamfer dimension of loose flange ring



Abutment dimensions

d_a	min. 65 mm	Diameter of spacer sleeve
d_b	min. 80 mm	Diameter of shaft abutment
D_a	max. 109.2 mm	Diameter of housing abutment
r_a	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	0.15
Limiting value	e	0.2
Calculation factor	Y	0.6

Mass

Mass	1.5 kg

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