

RNU 307 ECPSingle row cylindrical roller bearing, NU design, without inner ring

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Single row cylindrical roller bearings of the NU design without an inner ring consist of an outer ring with a roller and cage assembly. They are typically used in applications where hardened and ground raceways are provided on the shaft. Without the inner ring, a larger shaft diameter can be used to provide a stronger, stiffer shaft. The bearings can accommodate axial displacement in both directions, limited only by the width of the raceway on the shaft.

- High radial load carrying capacity
- Enable a stronger, stiffer shaft
- Low friction
- Long service life
- Accommodate axial displacement in both directions

Overview

Dimensions

Bore diameter	46.2 mm
Outside diameter	80 mm
Width	21 mm

Performance

Basic dynamic load rating	75 kN
Basic static load rating	63 kN
Reference speed	9 500 r/min
Limiting speed	11 000 r/min
SKF performance class	SKF Explorer

Properties

Bearing part	Bearing without inner ring
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Non-metallic
Number of flanges, outer ring	2
Loose flange	None
Coating	Without

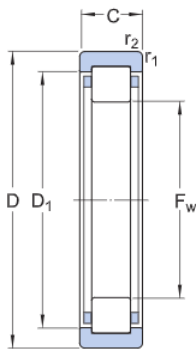
Sealing	Without
Lubricant	None
Relubrication feature	Without

Technical Specification

SKF performance class

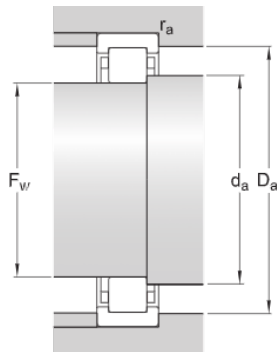
SKF Explorer

Dimensions



F_w	46.2 mm	Diameter under rollers
D	80 mm	Outside diameter
C	21 mm	Width
D_1	≈ 65.8 mm	Shoulder diameter outer ring
$r_{1,2}$	min. 1.5 mm	Corner radius

Abutment dimensions



d_a	max. 51 mm	Abutment diameter shaft
D_a	max. 72.2 mm	Abutment diameter housing
r_a	max. 1.5 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	75 kN
Basic static load rating	C_0	63 kN
Fatigue load limit	P_u	8.15 kN
Reference speed		9 500 r/min

Limiting speed		11 000 r/min
Calculation factor	k_f	0.15
Limiting value	e	0.2
Calculation factor	Y	0.6

Mass

Mass bearing		0.37 kg
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