

NU 312 ECM/HC5C3



Hybrid single row cylindrical roller bearing, NU design

Hybrid single row cylindrical roller bearings are designed to accommodate high radial loads in combination with high speeds. With rings made of bearing steel and rollers made of bearing grade silicon nitride, the bearings are electrically insulating. The ceramic rollers not only protect against electric current damage, but also extend bearing service life by offering enhanced bearing performance, even under difficult operating conditions. Having two integral flanges on the outer ring and no flanges on the inner ring, NU design bearings can accommodate axial displacement in both directions. The separable design facilitates mounting and enables the bearing components to be interchanged.

- High radial load carrying capacity
- Protected against electric current damage
- Low friction and long service life
- Accommodate axial displacement in both directions
- Separable design

Overview

Dimensions

Bore diameter	60 mm
Outside diameter	130 mm
Width	31 mm

Performance

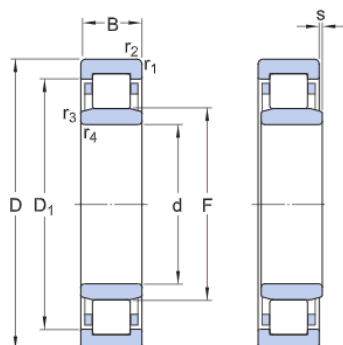
Basic dynamic load rating	151 kN
Basic static load rating	160 kN
Reference speed	5 000 r/min
Limiting speed	8 000 r/min

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	Machined metal
Number of flanges, outer ring	2
Number of flanges, inner ring	0
Loose flange	None
Radial internal clearance	C3
Material, bearing	Hybrid
Coating	Without

Sealing	Without
Lubricant	None
Relubrication feature	Without

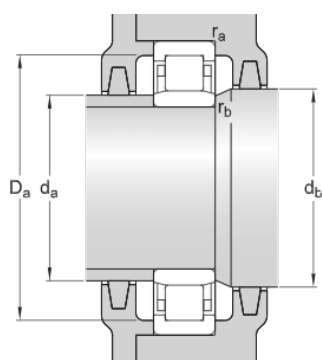
Technical Specification



Dimensions

d	60 mm	Bore diameter
D	130 mm	Outside diameter
B	31 mm	Width
D ₁	≈ 110 mm	Shoulder diameter outer ring
F	77 mm	Raceway diameter inner ring
s	max. 2.1 mm	Permissible axial displacement from the normal position of one bearing ring relative to the other
r _{1,2}	min. 2.1 mm	Chamfer dimension
r _{3,4}	min. 2.1 mm	Chamfer dimension

Abutment dimensions



da	min. 72 mm	Abutment diameter shaft
da	max. 74 mm	Abutment diameter shaft
db	min. 79 mm	Abutment diameter shaft
Da	max. 118.1 mm	Abutment diameter housing
ra	max. 2 mm	Fillet radius
rb	max. 2 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	151 kN
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Basic static load rating	C_0	160 kN
Fatigue load limit	P_u	18 kN
Reference speed		5 000 r/min
Limiting speed		8 000 r/min
Calculation factor	k_r	0.15

Mass

Mass bearing	1.43 kg
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