

NCF 3004 CV



Single row full complement cylindrical roller bearing, NCF design

Single row full complement cylindrical roller bearings are designed to accommodate very high radial loads in combination with moderate speeds. The bearings incorporate a maximum number of rollers as they are not equipped with a cage. Having two integral flanges on the inner ring and one flange on the outer ring, NCF design bearings can accommodate axial displacement in one direction. A retaining ring on the outer ring holds the bearing together. The retaining ring should not be loaded axially during operation.

- Very high radial load carrying capacity
- High radial stiffness
- Long service life
- Locate the shaft axially in one direction

Overview

Dimensions

Bore diameter	20 mm
Outside diameter	42 mm
Width	16 mm

Performance

Basic dynamic load rating	28.1 kN
Basic static load rating	28.5 kN
Reference speed	8 500 r/min
Limiting speed	10 000 r/min

Properties

Bearing part	Complete bearing
Axial displacement capability	In one direction
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Without
Design	Non-separable
Number of flanges, outer ring	1
Number of flanges, inner ring	2
Loose flange	None
Radial internal clearance	CN
Coating	Without
Sealing	Without

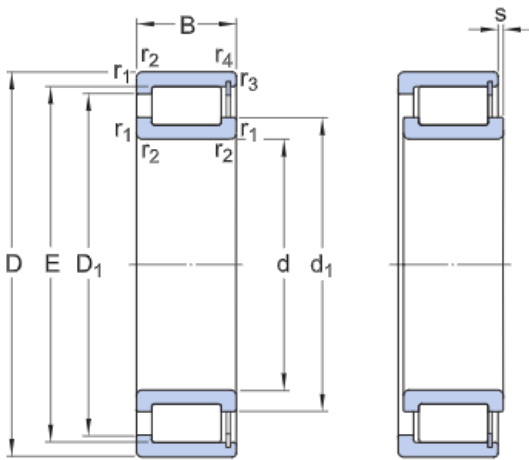
Lubricant

None

Relubrication feature

Without

Technical Specification

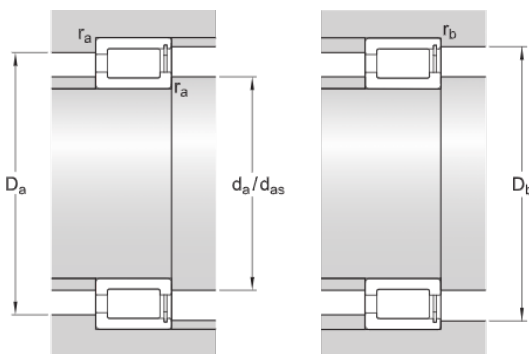


Dimensions

d	20 mm	Bore diameter
D	42 mm	Outside diameter
B	16 mm	Width
d ₁	≈ 29 mm	Shoulder diameter inner ring
D ₁	≈ 33 mm	Shoulder diameter outer ring
E	36.81 mm	Raceway diameter outer ring
s	max. 1.5 mm	Permissible axial displacement from the normal position of one bearing ring relative to the other
r _{1,2}	min. 0.6 mm	Chamfer dimension
r _{3,4}	min. 0.3 mm	Chamfer dimension

Parameter r_{3,4} has either the value specified here or the same value as r_{1,2}.

Abutment dimensions



d _a	min. 24 mm	Abutment diameter shaft
d _{aε}	26.9 mm	Abutment diameter shaft
D _a	max. 38 mm	Abutment diameter housing
D _b	max. 39 mm	Abutment diameter housing
r _a	max. 0.6 mm	Fillet radius
r _b	max. 0.3 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	28.1 kN
Basic static load rating	C ₀	28.5 kN

Fatigue load limit	P_u	3.1 kN
Reference speed		8 500 r/min
Limiting speed		10 000 r/min
Calculation factor	k_r	0.3
Limiting value	e	0.3
Calculation factor	Y	0.4

Mass

Mass bearing		0.11 kg
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