

NCF 3005 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	25 mm
Outside diameter	47 mm
Width	16 mm

Performance

Basic dynamic load rating	31.9 kN
Basic static load rating	35.5 kN
Reference speed	7 000 r/min
Limiting speed	9 000 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

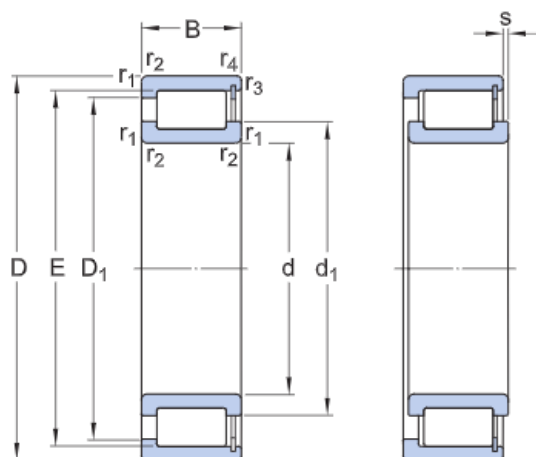
Lubricant

None

Relubrication feature

Without

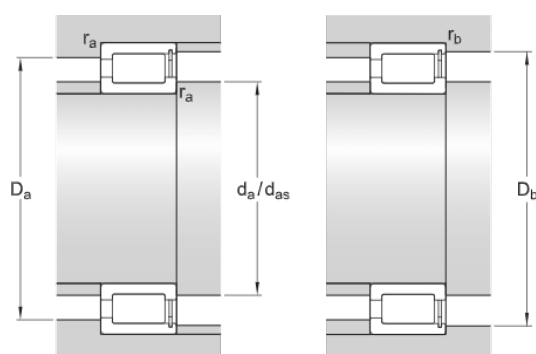
Technical Specification



Dimensions

d	25 mm	Bore diameter
D	47 mm	Outside diameter
B	16 mm	Width
d_1	≈ 34 mm	Shoulder diameter inner ring
D_1	≈ 39 mm	Shoulder diameter outer ring
E	42.51 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

Abutment dimensions



d_a	min. 29 mm	Abutment diameter shaft
d_{as}	32.3 mm	Abutment diameter shaft
D_a	max. 43 mm	Abutment diameter housing
D_b	max. 44 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	31.9 kN
Basic static load rating	C ₀	35.5 kN
Fatigue load limit	P _u	3.8 kN
Reference speed		7 000 r/min
Limiting speed		9 000 r/min
Calculation factor	k _r	0.3
Limiting value	e	0.3
Calculation factor	Y	0.4

Mass

Mass bearing	0.12 kg
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