NCF 2944 CVSingle row full complement cylindrical roller bearing, NCF design

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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	220 mm
Outside diameter	300 mm
Width	48 mm

Performance

Basic dynamic load rating	550 kN
Basic static load rating	1 060 kN
Reference speed	900 r/min
Limiting speed	1 200 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

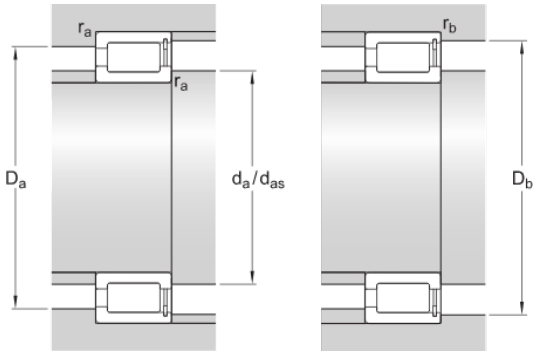
Radial internal clearance	CN
Tolerance class	Normal
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

Technical Specification

NOT FOUND

Dimensions

d	220 mm	Bore diameter
D	300 mm	Outside diameter
B	48 mm	Width
d_1	≈ 247 mm	Shoulder diameter inner ring
D_1	≈ 274 mm	Shoulder diameter outer ring
E	283 mm	Raceway diameter outer ring
s	max. 3 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. 1.5 mm	Chamfer dimension



Abutment dimensions

d_a	min. 231 mm	Abutment diameter shaft
d_{as}	243 mm	Abutment diameter shaft
D_a	max. 289 mm	Abutment diameter housing
D_b	max. 291 mm	Abutment diameter housing
r_a	max. 2 mm	Fillet radius
r_b	max. 1.5 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	550 kN
Basic static load rating	C_0	1 060 kN
Fatigue load limit	P_u	106 kN
Reference speed		900 r/min
Limiting speed		1 200 r/min
Calculation factor	k_r	0.2
Limiting value	e	0.3
Calculation factor	Y	0.4

Mass

Mass bearing	9.65 kg

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