



# NCF 2944 CV Single 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

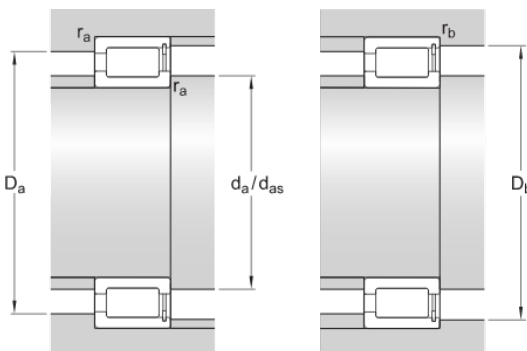


## Dimensions

d	220 mm	Bore diameter
D	300 mm	Outside diameter
B	48 mm	Width
$d_1$	$\approx$ 247 mm	Shoulder diameter inner ring
$D_1$	$\approx$ 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	$k_f$	0.2
Limiting value	e	0.3
Calculation factor	Y	0.4

## Mass

Mass bearing		9.65 kg
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