

NCF 2940 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	200 mm
Outside diameter	280 mm
Width	48 mm

Performance

Basic dynamic load rating	528 kN
Basic static load rating	965 kN
Reference speed	1 000 r/min
Limiting speed	1 300 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

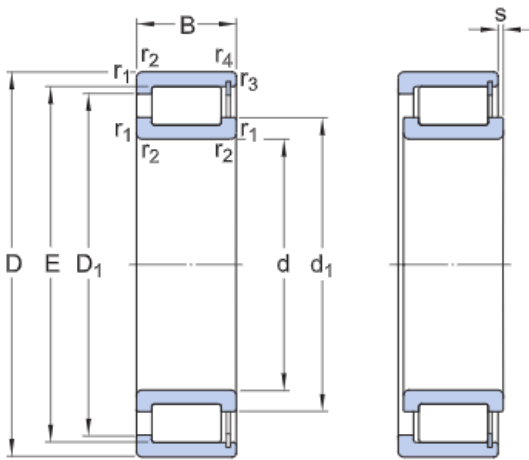
Lubricant

None

Relubrication feature

Without

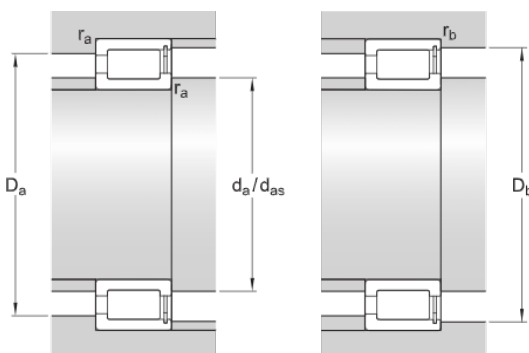
Technical Specification



Dimensions

d	200 mm	Bore diameter
D	280 mm	Outside diameter
B	48 mm	Width
d_1	≈ 226 mm	Shoulder diameter inner ring
D_1	≈ 253 mm	Shoulder diameter outer ring
E	262 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. 211 mm	Abutment diameter shaft
$d_{aε}$	222 mm	Abutment diameter shaft
D_a	max. 269 mm	Abutment diameter housing
D_b	max. 271 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	528 kN
Basic static load rating	C_0	965 kN
Fatigue load limit	P_u	100 kN
Reference speed		1 000 r/min
Limiting speed		1 300 r/min
Calculation factor	k_r	0.2
Limiting value	e	0.3
Calculation factor	Y	0.4

Mass

Mass bearing		9.38 kg
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