



# NN 3018 TN9/SP Super-precision double row cylindrical roller bearing

## Super-precision double row cylindrical roller bearing

Super-precision double row cylindrical roller bearings in the NN 30 series provide a unique balance between load carrying capacity, rigidity and speed. Having three flanges on the inner ring and no flanges on the outer ring, the bearings can accommodate axial displacement in both directions. The separable design simplifies mounting and dismounting, particularly when load conditions require both rings to have an interference fit.

- Very high radial load carrying capacity
- High rigidity and high running accuracy
- Minimize noise, vibration and heat generation
- Accommodate axial displacement in both directions

## Overview

### Dimensions

Bore diameter	90 mm
Outside diameter	140 mm
Width	37 mm

## Performance

Basic dynamic load rating	138 kN
Basic static load rating	216 kN
Attainable speed for grease lubrication	6 300 r/min
Attainable speed for oil-air lubrication	7 000 r/min

## Properties

Bearing part	Complete bearing
Number of rows	2
Bore type	Cylindrical
Cage	Non-metallic
Design	NN
Number of flanges, outer ring	0
Number of flanges, inner ring	3
Loose flange	None
Radial internal clearance	C1
Tolerance class	Class SP (SP)
Material, bearing	Bearing steel
Coating	Without
Sealing	Without

Lubricant

None

Relubrication feature

Without

# Technical Specification

Bore type

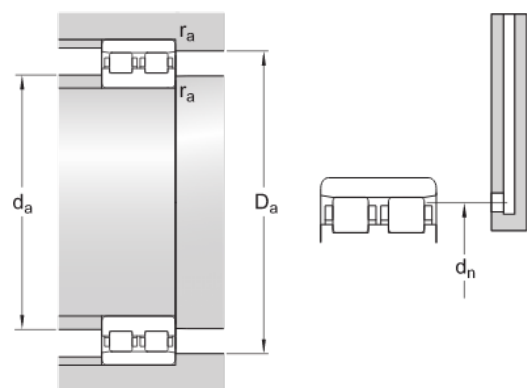
Cylindrical



## Dimensions

d	90 mm	Bore diameter
D	140 mm	Outside diameter
B	37 mm	Width
$d_1$	109.4 mm	Shoulder diameter inner ring (NN design)
E	127 mm	Raceway diameter outer ring (NN design)
$r_{1,2}$	min. 1.5 mm	Chamfer dimension outer ring
s	max. 2 mm	Permissible axial displacement from the normal position of one bearing ring relative to the other (all)

## Abutment dimensions



$d_a$	min. 98 mm	Abutment diameter shaft
$D_a$	min. 129 mm	Abutment diameter housing
$D_a$	max. 132 mm	Abutment diameter housing
$r_a$	max. 1.5 mm	Fillet radius
$d_n$	125.4 mm	Oil nozzle position (not for variants with TNHA cage)

## Calculation data

Basic dynamic load rating	C	138 kN
Basic static load rating	$C_0$	216 kN
Fatigue load limit	$P_u$	26 kN
Attainable speed for grease lubrication		6 300 r/min
Attainable speed for oil-air lubrication		7 000 r/min
Reference grease quantity	$G_{ref}$	11.1 cm <sup>3</sup>
Static radial stiffness (guideline value)		2 010 N/ $\mu$ m

## Mass

Mass bearing		1.95 kg
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