



# SKF® NN 3011 TN/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	55 mm
Outside diameter	90 mm
Width	26 mm

## Performance

Basic dynamic load rating	69.3 kN
Basic static load rating	96.5 kN
Attainable speed for grease lubrication	10 000 r/min
Attainable speed for oil-air lubrication	12 000 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

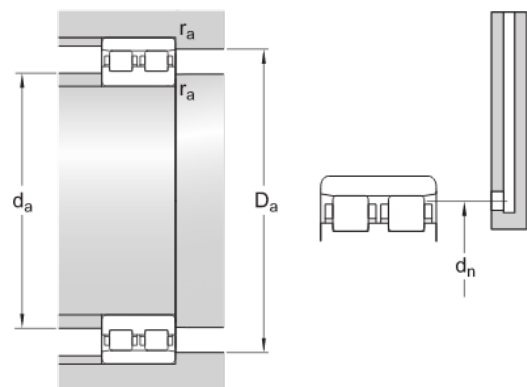
Cylindrical



## Dimensions

d	55 mm	Bore diameter
D	90 mm	Outside diameter
B	26 mm	Width
$d_1$	68.2 mm	Shoulder diameter inner ring (NN design)
E	81 mm	Raceway diameter outer ring (NN design)
$r_{1,2}$	min. 1.1 mm	Chamfer dimension outer ring
s	max. 1.5 mm	Permissible axial displacement from the normal position of one bearing ring relative to the other (all)

## Abutment dimensions



$d_a$	min. 61.5 mm	Abutment diameter shaft
$D_a$	min. 82 mm	Abutment diameter housing
$D_a$	max. 83.5 mm	Abutment diameter housing
$r_a$	max. 1 mm	Fillet radius
$d_n$	79.8 mm	Oil nozzle position (not for variants with TNHA cage)

## Calculation data

Basic dynamic load rating	C	69.3 kN
Basic static load rating	$C_0$	96.5 kN
Fatigue load limit	$P_u$	11.6 kN
Attainable speed for grease lubrication		10 000 r/min
Attainable speed for oil-air lubrication		12 000 r/min
Reference grease quantity	$G_{ref}$	3.6 cm <sup>3</sup>
Static radial stiffness (guideline value)		1 220 N/ $\mu$ m

## Mass

Mass bearing		0.6 kg
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