



Image may differ from product. See specification for details.

## NN 3015 KTN/SPW33

### Super-precision double row cylindrical roller bearing with tapered bore and lubrication feature

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. The tapered bore enables accurate adjustment of clearance or preload during mounting.

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

## Overview

### Dimensions

Bore diameter	75 mm
Outside diameter	115 mm
Width	30 mm

### Properties

Bearing part	Complete bearing
Number of rows	2
Bore type	Tapered 1:12
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	Annular groove and lubrication holes
Indicative product carbon footprint to manufacture	3.78 kg CO <sub>2</sub> e

### Performance

Basic dynamic load rating	96.8 kN
Basic static load rating	150 kN
Attainable speed for grease lubrication	7 500 r/min
Attainable speed for oil-air lubrication	8 500 r/min

### Logistics

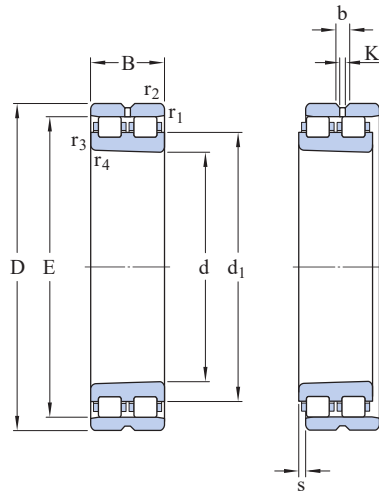
Product net weight	1.05 kg
eClass code	23-05-09-01
UNSPSC code	31171505



## Technical specification

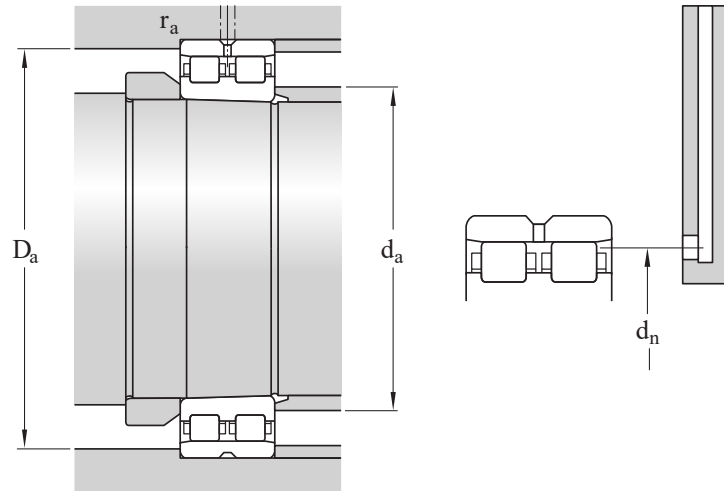
Bore type

Tapered 1:12



### Dimensions

$d$	75 mm	Bore diameter
$D$	115 mm	Outside diameter
$B$	30 mm	Width
$d_1$	90.6 mm	Shoulder diameter inner ring (NN design)
$E$	105 mm	Raceway diameter outer ring (NN design)
$b$	5.5 mm	Width annular lubrication groove at outer ring
$K$	3 mm	Diameter lubrication hole (outer ring)
$r_{1,2}$	min. 1.1 mm	Chamfer dimension outer ring
$r_{3,4}$	min. 0.6 mm	Chamfer dimension inner ring (bearing with tapered bore)
$s$	max. 2 mm	Permissible axial displacement from the normal position of one bearing ring relative to the other (all)



## Abutment dimensions

$d_a$	min. 81.5 mm	Abutment diameter shaft
$D_a$	min. 106 mm	Abutment diameter housing
$D_a$	max. 108.5 mm	Abutment diameter housing
$r_a$	max. 1 mm	Fillet radius
$d_n$	103.4 mm	Oil nozzle position (not for variants with TNHA cage)

## Calculation data

Basic dynamic load rating	C	96.8 kN
Basic static load rating	$C_0$	150 kN
Fatigue load limit	$P_u$	17.6 kN
Attainable speed for grease lubrication		7 500 r/min
Attainable speed for oil-air lubrication		8 500 r/min
Reference grease quantity	$G_{ref}$	6.3 cm <sup>3</sup>
Static radial stiffness (guideline value)		1 610 N/ $\mu$ m

## Tolerances and clearances

### PRODUCT DETAILS




- **Tolerances:** SP, UP, SP and UP for 1:12 tapered bore

- [Radial internal clearance: table](#)

## PRINCIPLES OF BEARING SELECTION AND APPLICATION

- [Chamfer dimensions](#)
- [Seat tolerances for standard conditions: shafts, housings](#)
- Values for ISO tolerance classes: [shafts, housings](#)
- Speed dependent initial grease fill → [Initial grease fill](#)

## More Information

 <b>Product details</b>	 <b>Engineering information</b>	 <b>Tools</b>
<a href="#">Designs and variants</a>	<a href="#">Principles of bearing selection and application</a>	<a href="#">SimPro Quick</a>
<a href="#">General bearing specifications</a>	<a href="#">General bearing knowledge</a>	<a href="#">SimPro Spindle</a>
<a href="#">Preload, clearance, and stiffness</a>	<a href="#">Bearing selection process</a>	<a href="#">Bearing Frequency Calculator</a>
<a href="#">Loads</a>	<a href="#">Bearing failure and how to prevent it</a>	<a href="#">LubeSelect for SKF greases</a>
<a href="#">Attainable speeds</a>		<a href="#">Heater selection tool</a>
<a href="#">Design considerations</a>		
<a href="#">Mounting</a>		
<a href="#">Designation system</a>		



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