



# NK 21/16 Single row needle roller bearing with machined rings, with flanges, without inner ring

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Single row needle roller bearings without an inner ring consist of an outer ring with a needle roller and cage assembly. They are an excellent choice for compact bearing arrangements in applications where hardened and ground raceways can be provided on the shaft. The outer ring includes two integral flanges to guide the bearing axially and an annular groove with one or more lubrication holes to facilitate relubrication.

- High radial load carrying capacity
- High stiffness
- Low cross-sectional height
- Accommodate axial displacement in both directions

## Overview

### Dimensions

Bore diameter of needle roller complement	21 mm
Outside diameter	29 mm
Width	16 mm

### Performance

Basic dynamic load rating	13.8 kN
Basic static load rating	20.4 kN
Reference speed	19 000 r/min
Limiting speed	22 000 r/min

### Properties

Bearing part	Bearing without inner ring
Number of rows	1
Outer ring type	Machined (solid)
Aligning feature	Without
Cage	Sheet steel
Number of flanges, outer ring	2
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without

Lubricant	None
Relubrication feature	With

# Technical Specification



## Dimensions

$F_w$	21 mm	Diameter under rollers
$D$	29 mm	Outside diameter
$C$	16 mm	Width
$r_{1,2}$	min. 0.3 mm	Chamfer dimension outer ring

## Abutment dimensions



$D_a$	max. 27 mm	Abutment diameter housing (with flanges)
$r_a$	max. 0.3 mm	Fillet radius

## Calculation data

Basic dynamic load rating	$C$	13.8 kN
Basic static load rating	$C_0$	20.4 kN
Fatigue load limit	$P_u$	2.45 kN
Reference speed		19 000 r/min
Limiting speed		22 000 r/min

## Mass

Mass bearing

0.028 kg

## Associated seals



G  
21x29x4

Radial shaft seal with a low cross-sectional height, single lip

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