



# NK 90/35 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	90 mm
Outside diameter	110 mm
Width	35 mm

## Performance

Basic dynamic load rating	101 kN
Basic static load rating	216 kN
Reference speed	4 500 r/min
Limiting speed	5 000 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

$F_w$	90 mm	Diameter under rollers
$D$	110 mm	Outside diameter
$C$	35 mm	Width
$r_{1,2}$	min. 1 mm	Chamfer dimension outer ring

## Abutment dimensions



$D_a$	max. 105 mm	Abutment diameter housing (with flanges)
$r_a$	max. 1 mm	Fillet radius

## Calculation data

Basic dynamic load rating	$C$	101 kN
Basic static load rating	$C_0$	216 kN
Fatigue load limit	$P_u$	28 kN
Reference speed		4 500 r/min
Limiting speed		5 000 r/min

## Mass

Mass bearing

0.63 kg

### Associated seals

90x110x10 HMS5 RG

Radial shaft seal



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