



# NA 4909 Single row needle roller bearing with machined rings, with flanges

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Single row needle roller bearings incorporate cylindrical rollers that are small in diameter relative to their length. Owing to their large number of rollers, the bearings have a high load carrying capacity. 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
- Separable design

## Overview

### Dimensions

Bore diameter	45 mm
Outside diameter	68 mm
Width	22 mm

### Performance

Basic dynamic load rating	45.7 kN
Basic static load rating	78 kN
Reference speed	7 500 r/min
Limiting speed	8 500 r/min

### Properties

Bearing part	Complete bearing
Number of rows	1
Outer ring type	Machined (solid)
Aligning feature	Without
Cage	Sheet metal
Number of flanges, outer ring	2
Radial internal clearance	CN
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without

Lubricant	None
Relubrication feature	With

# Technical Specification



## Dimensions

d	45 mm	Bore diameter
D	68 mm	Outside diameter
B	22 mm	Width
F	52 mm	Raceway diameter inner ring
$r_{1,2}$	min. 0.6 mm	Chamfer dimension outer ring
s	max. 1 mm	Permissible axial displacement from the normal position of one bearing ring relative to the other

## Abutment dimensions

$d_a$	min. 49 mm	Smallest permissible abutment diameter shaft, bearings with flanges
$D_a$	max. 64 mm	Abutment diameter housing (with flanges)
$r_a$	max. 0.6 mm	Fillet radius



## Calculation data

Basic dynamic load rating	C	45.7 kN
Basic static load rating	$C_0$	78 kN
Fatigue load limit	$P_u$	9.65 kN
Reference speed		7 500 r/min
Limiting speed		8 500 r/min

## Mass

Mass bearing

0.27 kg

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