



NKI 10/16 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	10 mm
Outside diameter	22 mm
Width	16 mm

Performance

Basic dynamic load rating	10.2 kN
Basic static load rating	12.5 kN
Reference speed	24 000 r/min
Limiting speed	28 000 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	10 mm	Bore diameter
D	22 mm	Outside diameter
B	16 mm	Width
F	14 mm	Raceway diameter inner ring
$r_{1,2}$	min. 0.3 mm	Chamfer dimension outer ring
s	max. 0.5 mm	Permissible axial displacement from the normal position of one bearing ring relative to the other

Abutment dimensions

d_a	min. 12 mm	Smallest permissible abutment diameter shaft, bearings with flanges
D_a	max. 20 mm	Abutment diameter housing (with flanges)
r_a	max. 0.3 mm	Fillet radius



Calculation data

Basic dynamic load rating	C	10.2 kN
Basic static load rating	C_0	12.5 kN
Fatigue load limit	P_u	1.5 kN
Reference speed		24 000 r/min
Limiting speed		28 000 r/min

Mass

Mass bearing

0.029 kg

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