



NKI 35/20 TN 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	35 mm
Outside diameter	50 mm
Width	20 mm

Performance

Basic dynamic load rating	29.7 kN
Basic static load rating	60 kN
Reference speed	10 000 r/min
Limiting speed	11 000 r/min

Properties

Bearing part	Complete bearing
Number of rows	1
Outer ring type	Machined (solid)
Aligning feature	Without
Cage	Non-metallic
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	35 mm	Bore diameter
D	50 mm	Outside diameter
B	20 mm	Width
F	40 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. 37 mm	Smallest permissible abutment diameter shaft, bearings with flanges
D_a	max. 48 mm	Abutment diameter housing (with flanges)
r_a	max. 0.3 mm	Fillet radius



Calculation data

Basic dynamic load rating	C	29.7 kN
Basic static load rating	C_0	60 kN
Fatigue load limit	P_u	7.5 kN
Reference speed		10 000 r/min
Limiting speed		11 000 r/min

Mass

Mass bearing

0.12 kg

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