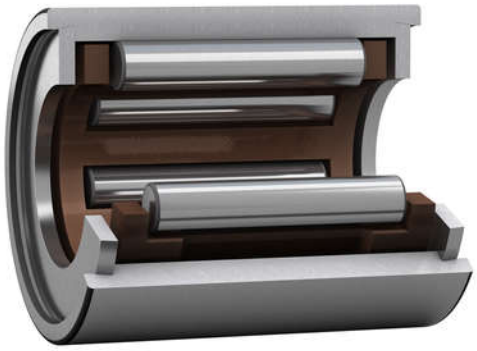
NK 8/16 TN



Single row needle roller bearing with machined rings, with flanges, without inner ring

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 non-separable closure rings that act as flanges to guide the bearing axially.

- 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	8 mm
Outside diameter	15 mm
Width	16 mm

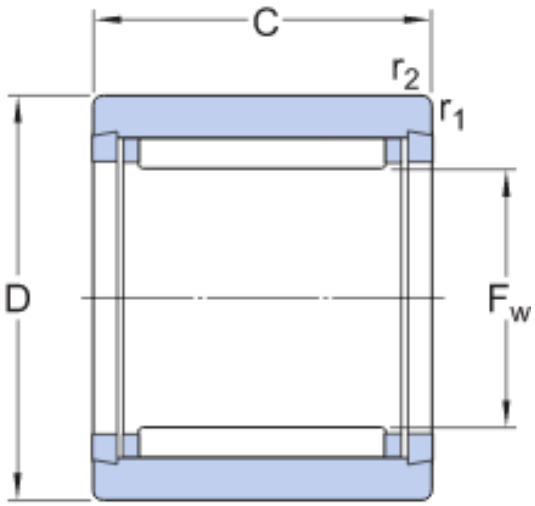
Performance

Basic dynamic load rating	5.01 kN
Basic static load rating	5.85 kN
Limiting speed	36 000 r/min
Reference speed	32 000 r/min

Properties

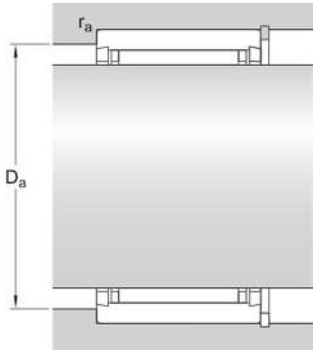
Aligning feature	Without
Bearing part	Bearing without inner ring
Cage	Non-metallic
Coating	Without
Lubricant	None
Material, bearing	Bearing steel
Number of flanges, outer ring	2
Number of rows	1
Outer ring type	Machined (solid)
Relubrication feature	Without
Sealing	Without
Sealing type	Not applicable
Tolerance class	Normal

Technical Specification



Dimensions

F_w	8 mm	Diameter under rollers
D	15 mm	Outside diameter
C	16 mm	Width
$r_{1,2}$	min. 0.3 mm	Chamfer dimension outer ring



Abutment dimensions

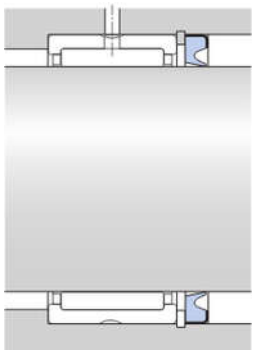
D_a	max. 13 mm	Abutment diameter housing (with flanges)
r_a	max. 0.3 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	5.01 kN
Basic static load rating	C_0	5.85 kN
Fatigue load limit	P_u	0.67 kN
Reference speed		32 000 r/min
Limiting speed		36 000 r/min

Mass

Mass bearing	0.012 kg



Associated seals

G 8x15x3	Radial shaft seal with a low cross-sectional height, single lip
SD 8x15x3	Radial shaft seal with a low cross-sectional height, double lip

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