K 3X5X9 TNSingle row needle roller and cage assembly



Single row needle roller and cage assembly

Needle roller and cage assemblies are self-contained, ready-to-mount bearings without inner and outer rings. In applications where the shaft and housing bore can serve as raceways, the assemblies can be used to create bearing arrangements that require minimal radial space. As the clearance of the bearing arrangement is only affected by the roller sorting and the finish of shaft and housing, very precise bearing arrangements can be achieved.

- High radial load carrying capacity
- High stiffness
- High precision
- Lowest cross-sectional height among rolling bearings
- Accommodate axial displacement in both directions

Overview

Dimensions

Bore diameter of needle roller complement	3 mm
Outside diameter	5 mm
Outside diameter of needle roller complement	5 mm
Width	9 mm

Performance

Basic dynamic load rating	1.68 kN
Basic static load rating	1.53 kN
Reference speed	40 000 r/min
Limiting speed	45 000 r/min

Properties

Bearing part	Needle roller and cage assembly
Number of rows	1
Outer ring type	Not applicable
Aligning feature	Without
Cage	Non-metallic
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

Technical Specification



Dimensions

F_w	3	mm	Diameter under rollers
E_w	5	mm	Outside diameter roller complement
U	9	mm	Width needle roller and cage assembly

Calculation data

Basic dynamic load rating	C	1.68 kN
Basic static load rating	C_0	1.53 kN
Fatigue load limit	P_u	0.153 kN
Reference speed		40 000 r/min
Limiting speed		45 000 r/min

Mass

Mass needle roller and cage assembly	0.0004 kg

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