

Image may differ from product. See technical specification for details.

K 45X50X17

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	45 mm
Outside diameter	50 mm
Outside diameter of needle roller complement	50 mm
Width	17 mm

Performance

Basic dynamic load rating	21.6 kN
Basic static load rating	46.5 kN
Reference speed	9 000 r/min
Limiting speed	10 000 r/min

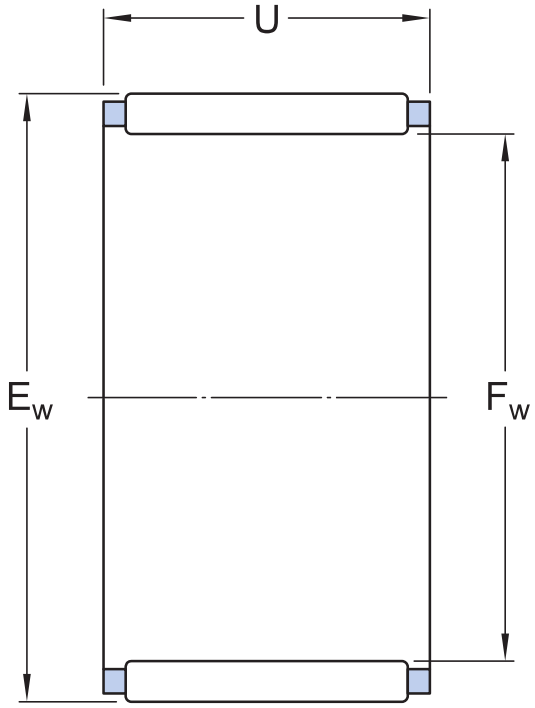
Properties

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

Logistics

Product net weight	0.031 kg
eClass code	23-05-09-03
UNSPSC code	31171512

Technical specification



Dimensions

F_w	45 mm	Diameter under rollers
E_w	50 mm	Outside diameter roller complement
U	17 mm	Width needle roller and cage assembly

Calculation data

Basic dynamic load rating	C	21.6 kN
Basic static load rating	C_0	46.5 kN
Fatigue load limit	P_u	5.6 kN
Reference speed		9 000 r/min
Limiting speed		10 000 r/min

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: gauges
- Radial internal clearance

DESIGN CONSIDERATIONS

- Shaft and housing tolerances

More Information

Product details

- Designs and variants
- General bearing specifications
- Loads
- Temperature limits
- Permissible speed
- Design considerations
- Designation system

Engineering information

- Principles of rolling bearing selection
- General bearing knowledge
- Bearing selection process
- Bearing failure and how to prevent it

Tools

- SimPro Quick
- Bearing Select
- Engineering Calculator
- LubeSelect for SKF greases
- Heater Selection Tool

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