

# K 42X50X20 Single 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	42 mm
Outside diameter	50 mm
Outside diameter of needle roller complement	50 mm
Width	20 mm

## Performance

Basic dynamic load rating	33.6 kN
Basic static load rating	57 kN
Reference speed	9 500 r/min
Limiting speed	11 000 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

## Technical Specification



### Dimensions

$F_w$	42 mm	Diameter under rollers
$E_w$	50 mm	Outside diameter roller complement
$U$	20 mm	Width needle roller and cage assembly

### Calculation data

Basic dynamic load rating	$C$	33.6 kN
Basic static load rating	$C_0$	57 kN
Fatigue load limit	$P_u$	7.1 kN
Reference speed		9 500 r/min
Limiting speed		11 000 r/min

### Mass

Mass needle roller and cage assembly	0.053 kg
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