

K 50X58X25 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 | 50 mm |
| Outside diameter | 58 mm |
| Outside diameter of needle roller complement | 58 mm |
| Width | 25 mm |

Performance

| | |
|---------------------------|-------------|
| Basic dynamic load rating | 41.8 kN |
| Basic static load rating | 81.5 kN |
| Reference speed | 8 000 r/min |
| Limiting speed | 9 000 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 | 50 mm | Diameter under rollers |
| E_w | 58 mm | Outside diameter roller complement |
| U | 25 mm | Width needle roller and cage assembly |

Calculation data

| | | |
|---------------------------|-------|-------------|
| Basic dynamic load rating | C | 41.8 kN |
| Basic static load rating | C_0 | 81.5 kN |
| Fatigue load limit | P_u | 10.2 kN |
| Reference speed | | 8 000 r/min |
| Limiting speed | | 9 000 r/min |

Mass

| | |
|--------------------------------------|---------|
| Mass needle roller and cage assembly | 0.09 kg |
|--------------------------------------|---------|

Associated products

| | |
|--|------------|
| Designation associated G design radial shaft seal with a low cross-sectional height | G 50x58x4 |
| Designation associated SD design radial shaft seal with a low cross-sectional height | SD 50x58x4 |

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