



NKI 15/20 Single row needle roller bearing with machined rings, with flanges

Single row needle roller bearing with machined rings, with flanges

Single row needle roller bearings incorporate cylindrical rollers that are small in diameter relative to their length. Owing to their large number of rollers, the bearings have a high load carrying capacity. The outer ring includes two integral flanges to guide the bearing axially and an annular groove with one or more lubrication holes to facilitate relubrication.

- High radial load carrying capacity
- High stiffness
- Low cross-sectional height
- Accommodate axial displacement in both directions
- Separable design

Overview

Dimensions

| | |
|------------------|-------|
| Bore diameter | 15 mm |
| Outside diameter | 27 mm |
| Width | 20 mm |

Performance

| | |
|---------------------------|--------------|
| Basic dynamic load rating | 16.5 kN |
| Basic static load rating | 25.5 kN |
| Reference speed | 20 000 r/min |
| Limiting speed | 24 000 r/min |

Properties

| | |
|-------------------------------|------------------|
| Bearing part | Complete bearing |
| Number of rows | 1 |
| Outer ring type | Machined (solid) |
| Aligning feature | Without |
| Cage | Sheet metal |
| Number of flanges, outer ring | 2 |
| Radial internal clearance | CN |
| Tolerance class | Normal |
| Material, bearing | Bearing steel |
| Coating | Without |
| Sealing | Without |

| | |
|-----------------------|------|
| Lubricant | None |
| Relubrication feature | With |

Technical Specification



Dimensions

| | | |
|-----------|-------------|---------------------------------------------------------------------------------------------------|
| d | 15 mm | Bore diameter |
| D | 27 mm | Outside diameter |
| B | 20 mm | Width |
| F | 19 mm | Raceway diameter inner ring |
| $r_{1,2}$ | min. 0.3 mm | Chamfer dimension outer ring |
| s | max. 0.5 mm | Permissible axial displacement from the normal position of one bearing ring relative to the other |

Abutment dimensions

| | | |
|-------|-------------|---------------------------------------------------------------------|
| d_a | min. 17 mm | Smallest permissible abutment diameter shaft, bearings with flanges |
| D_a | max. 25 mm | Abutment diameter housing (with flanges) |
| r_a | max. 0.3 mm | Fillet radius |



Calculation data

| | | |
|---------------------------|-------|--------------|
| Basic dynamic load rating | C | 16.5 kN |
| Basic static load rating | C_0 | 25.5 kN |
| Fatigue load limit | P_u | 3.05 kN |
| Reference speed | | 20 000 r/min |
| Limiting speed | | 24 000 r/min |

Mass

Mass bearing

0.049 kg

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