

# PNA 40/62Alignment needle roller bearing, with an inner ring

## Alignment needle roller bearing, with an inner ring

Alignment needle roller bearings are self-aligning and offer a compact solution in applications where less space is available. Owing to their large number of rollers, they have a high load carrying capacity. Their internal design, where a convex outer ring meets two concave seating rings encased in a drawn sleeve, enables the bearings to compensate for initial errors of alignment. Bearings with an inner ring are used for applications where the shaft cannot be hardened and ground.

- High radial load carrying capacity
- Accommodate static initial misalignment
- Low cross-sectional height

## Overview

### Dimensions

| | |
|---|---|
| Bore diameter | 40 mm |
| Outside diameter | 62 mm |
| Width | 20 mm |

### Performance

| | |
|---|---|
| Basic dynamic load rating | 27.5 kN |
| Basic static load rating | 57 kN |
| Reference speed | 9 000 r/min |
| Limiting speed | 10 000 r/min |

### Properties

| | |
|---|---|
| Bearing part | Complete bearing |
| Number of rows | 1 |
| Outer ring type | Drawn cup with open ends |
| Aligning feature | With |
| 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 | Without |

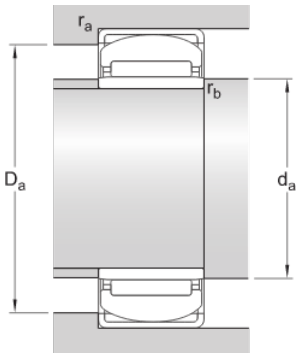
# Technical Specification

| Designation | PNA 40/62 |
|---|---|

NOT FOUND

## Dimensions

| | | |
|---|---|---|
| d | 40 mm | Bore diameter |
| D | 62 mm | Outside diameter |
| B | 20 mm | Width |
| F | 45 mm | Raceway diameter inner ring |
| $D_1$ | 58 mm | Shoulder diameter sleeve |
| r | min. 0.8 mm | Chamfer dimension sheet steel sleeve |
| $r_{1,2}$ | min. 0.3 mm | Chamfer dimension inner 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. 42 mm | Smallest permissible abutment diameter shaft |
| $D_a$ | min. 57 mm | Smallest permissible abutment diameter housing |
| $D_a$ | max. 58 mm | Largest permissible abutment diameter housing |
| $r_a$ | max. 0.8 mm | Fillet radius |
| $r_b$ | max. 0.3 mm | Fillet radius |

## Calculation data

| | | |
|---|---|---|
| Basic dynamic load rating | C | 27.5 kN |
| Basic static load rating | $C_0$ | 57 kN |
| Fatigue load limit | $P_u$ | 7.1 kN |
| Reference speed | | 9 000 r/min |
| Limiting speed | | 10 000 r/min |

## Mass

| | |
|---|---|
| Mass bearing | 0.23 kg |

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