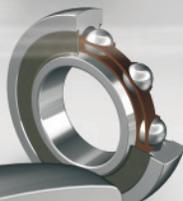


# 13. GUIDE ROLLERS



ROLLING BEARINGS

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## INTRODUCTION:

## 13. Guide rollers, support rollers

## 13.1. Guide rollers

## 13.1.1. Dimension series:

- **RBL..(...)** - single-row and double-row with spherical or flat surface of the outer ring, sealed with steel shields or rubber seals (...) – **..ZZ, ..F2RS, ..FZZ**
- **RBT..F2RS** - double-row, with spherical surface of the outer ring, with rubber seals and with threaded mandrel in spite of the bore in the inner ring

## 13.1.2. Designations

- **F** - outer spherical surface of ring
- **R** - inner ring extended on both sides

## 13.1.3. Basic features

The construction of guide rollers is based on deep-groove ball bearings of 60- and 62-series (single-row, narrow) or on 30-, 32- and 33-series angular-contact ball bearings (wide, double-row). Rollers are equipped with plastic seals or steel protective plates. Makes with flat track surface as well as makes with spherical track surface are available. Guide rollers are deceptively similar in their design to ball bearings or self-aligning bearings, but their outer ring, owing to its solid structure, can constitute the outer interacting track. Guide rollers with a mandrel are in fact ready-to-mount inseparable support rollers, which in spite of an inner ring are equipped with a solid mandrel. It has a thread, so the rollers can be quickly and easily mounted on interacting machine elements.

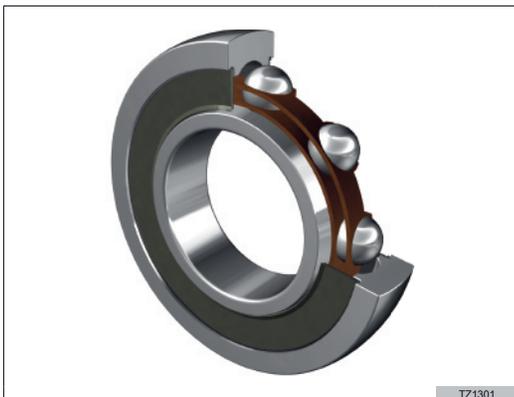


Fig.40 Guide roller with a hole

## 13.2. Needle and cylindrical support rollers and support rollers of push rods with threaded mandrel

## 13.2.1. Dimension series

## Support rollers:

- **STO..NA22..2RS** – without axial guiding and with inner ring
- **NA40..V RNA40..V** – without axial guiding and with or without (R) inner ring
- **RSTO..RNA22..2RS** – without axial guiding and without inner ring
- **NATR..** – with axial guiding, with guiding side-rings
- **NATV..** – with axial guiding, with the full complement of rolling elements
- **NUTR..** – NATV equivalent, in which needles have been replaced with roller.



Fig.41a Support roller with a hole

## Support rollers of push rods with a mandrel:

- **KR..** – with inner threaded mandrel
- **KRV..** – KR equivalent with the full complement of rolling elements
- **NUKR..** – with inner threaded mandrel, construction based on the NUTR roller

## 13.2.2. Basic features

Support rollers are in fact needle or cylindrical roller bearings with modified construction, with thick-walled outer ring. Exactly this structure allows them to carry higher radial loads than it is in the case of guide rollers constructed on the base of ball bearings. Decisively higher load carrying

capacity is obtained at cost of worse rotational performance. Rollers of push rods are ready-to-mount inseparable support rollers, which possess a solid mandrel in spite of an inner ring.

It has a thread, so the push rod rollers can be quickly and easily mounted on interacting machine elements.

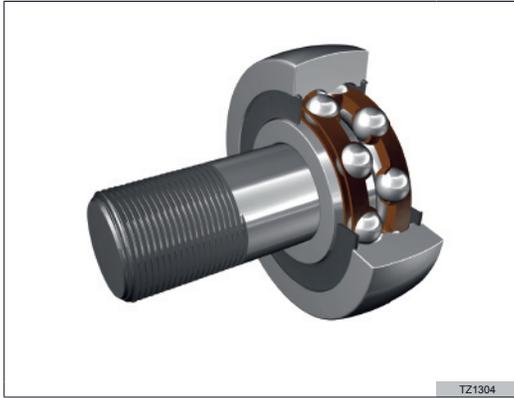


Fig.41b Guide roller with a mandrel



Fig.42 Support roller with a mandrel