



Mounting of rolling bearings
Mounting of track rollers

Mounting of special types

Features Selection of the suitable mounting method is based not only on the bearing type but also on the adjacent construction and the relevant dimensions. In the case of some rolling bearing types, attention must be paid during mounting to particular features or a particular procedure must be applied, which is discussed in detail below. Further details are given in the product-specific catalogues and brochures. The decisive factor for correct mounting is, however, the mounting manual relating to the application.

Mounting of track rollers Track rollers are precision machine elements. These products must be handled very carefully before and during mounting. Their trouble-free operation depends largely on the care taken during mounting. The seating surfaces of the bearing rings must be lightly oiled or rubbed with solid lubricant.

After mounting, the bearings must be supplied with lubricant. Finally, the correct functioning of the bearing arrangement must be checked.

Mounting of yoke type track rollers If the tolerances are unfavourable, the yoke type track roller should be pressed onto the shaft using a mounting press, *Figure 1*. The inner ring must be mounted such that the pressing-in force is distributed uniformly over the end face of the inner ring.

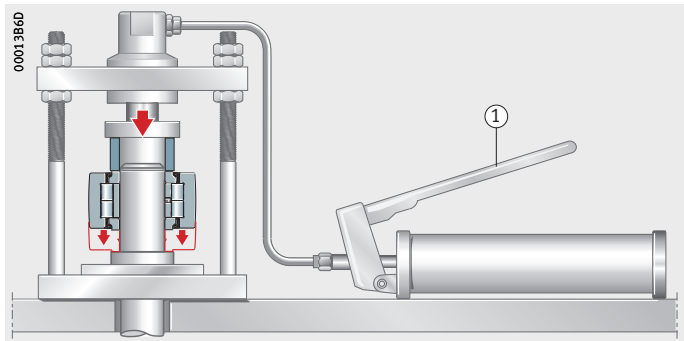


Yoke type track rollers RSTO and STO are not self-retaining. The outer ring and the needle roller and cage assembly are matched to each other and must not be interchanged during mounting with components from other bearings of the same size.

Lubrication hole The bearings must be mounted such that the lubrication hole is positioned in the unloaded zone. For yoke type track rollers PWTR and NNTR, there is no need for defined positioning of the lubrication hole.

① Mounting press

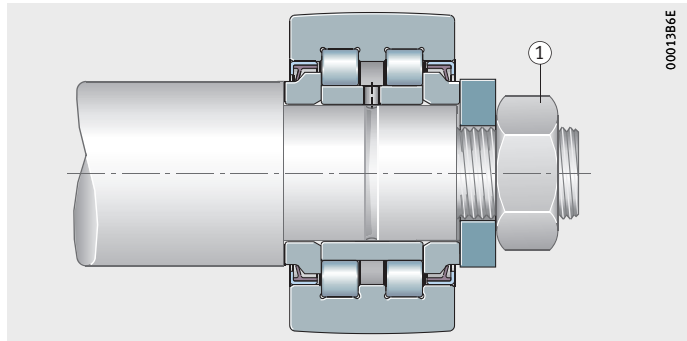
Figure 1
Mounting of yoke type track roller using a mounting press



Axial location Yoke type track rollers NUTR, PWTR and NNTR must be axially clamped in place, *Figure 2*.

① Hexagon nut

Figure 2
Axial location



Mounting of stud type track rollers

Stud type track rollers should be mounted using a mounting press if possible (similar to *Figure 1*, page 2).



Blows on the flange of the roller stud must be avoided.

Drive fit lubrication nipples for stud type track rollers

Stud type track rollers are supplied with loose drive fit lubrication nipples that must be pressed in correctly before mounting of the bearings, *Figure 3*.

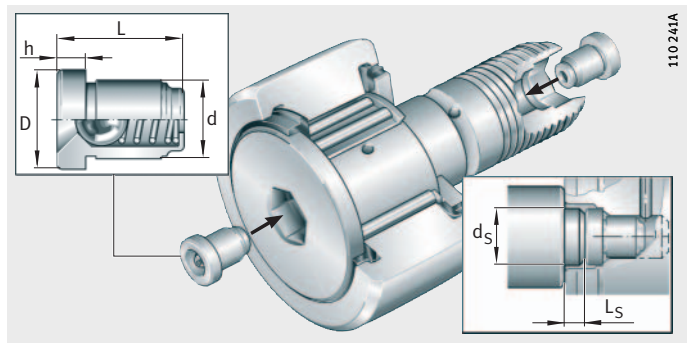


Only the lubrication nipples supplied may be used, see table.

If relubrication is to be carried out via the locating bore, the axial lubrication holes in the stud type track roller must be closed off using the lubrication nipples before mounting, *Figure 3*.

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Figure 3
Stud type track roller with drive fit lubrication nipple and dimensions for pressing mandrel



Drive fit lubrication nipples

Lubrication nipple	Dimensions in mm						Suitable for outside diameter D
	D	d	L	h	$d_s \pm 0,1$	L_s	
NIPA1	6	4	6	1,5 ¹⁾	–	–	16, 19
NIPA1×4,5	4,7	4	4,5	1	4,5	5	22 – 32
NIPA2×7,5	7,5	6	7,5	2	7,5	6	35 – 52
NIPA3×9,5	10	8	9,5	3	10	9	62 – 90

¹⁾ Projection of lubrication nipple.

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Axial location of stud type track rollers

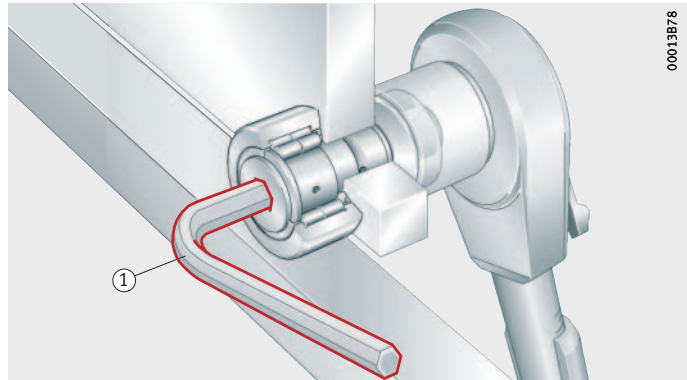
Stud type track rollers must be axially secured using a hexagon nut. The slot or hexagonal socket on the end of the roller stud can be used to hold the bearing by means of a key while tightening the fixing nut and to adjust the eccentric collar, *Figure 4*.

If heavy vibration occurs, self-locking nuts to DIN 985 or special locking washers can be used.



The tightening torque stated for the fixing nuts must be observed. It is only in this way that the permissible radial load can be ensured. If this cannot be adhered to, an interference fit is required.

For self-locking nuts, a higher tightening torque must be observed; the advice given by the nut manufacturer must be followed.



① Allen key

Figure 4
Holding the bearing
using an Allen key

Stud type track rollers with eccentric collar

The highest point on the eccentric collar is indicated on the roller stud side.

Commissioning and relubrication

Stud type track rollers have a lubrication hole for relubrication:

- on the flange side of the roller stud
- on the thread-side end face, from an outside diameter of 22 mm
- on the shank of the roller stud, from an outside diameter of 30 mm with an additional lubrication groove.



Stud type track rollers with an eccentric collar cannot be relubricated via the stud. The eccentric collar covers the lubrication hole.

For lubrication, only grease guns with needle point nozzles may be used that have an opening angle $\leq 60^\circ$, *Figure 5*.

Before commissioning, the lubrication holes and feed pipes must be filled with grease in order to ensure protection against corrosion; lubrication can be carried out at the same time.

Lubrication will be more difficult if a rolling element is located over the radial lubrication hole. Relubrication should therefore be carried out with the bearing still warm from operation and rotating if safe to do so, before the bearing comes to rest if safe to do so and before extended breaks in operation.

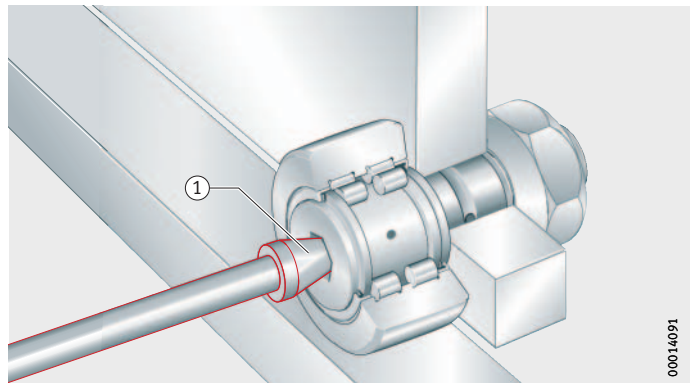
The grease used for relubrication must be the same as that used for initial greasing. If this is not possible, the miscibility and compatibility of the greases must be checked.

Relubrication should continue until a fresh collar of grease appears at the seal gaps. The old grease must be able to leave the bearing unhindered.

- ① Needle point nozzle, opening angle $\leq 60^\circ$

Figure 5

Relubrication using grease gun



Further information

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