Table 3.7 Outer rings (Unit: μm)

Nominal Outside diameter D mm over	incl.	Outer ring radial runout Kea class 0	class 6	class 5 max.	class 4	class 2	Outside surface inclination SD class 5	class 4 max.	class 2	Outside ring axial runout Sea⑥ class 5	class 4 max.	class 2	Outer ring width deviation ΔCs all type	Outer ring width variation VCs class 0,6	class 5	class 4 max.	class 2
6	18	15	8	5	3	1.5	8	4	1.5	8	5	1.5	Identical to ΔBs of inner ring of same bearing	Identical to ΔBs and VBs of inner ring of same bearing	5	2.5	1.5
18	30	15	9	6	4	2.5	8	4	1.5	8	5	2.5			5	2.5	1.5
30	50	20	10	7	5	2.5	8	4	1.5	8	5	2.5			5	2.5	1.5
50	80	25	13	8	5	4.0	8	4	1.5	10	5	4.0			6	3.0	1.5
80	120	35	18	10	6	5.0	9	5	2.5	11	6	5.0			8	4.0	2.5

Note: ⑤ The dimensional difference ΔDs of outer diameter to be applied for classes 4 and 2 is the same as the tolerance of dimensional difference ΔDmp of average outer diameter. However, the dimensional difference is applied to diameter series 0,1,2,3 and 4 against Class 4, and also to all the diameter series against Class 2.
⑥ To be applied in case snap rings are not installed on the bearings.
⑦ To be applied for Track Roller Bearings.

Symbols: Kea: radial runout of assembled bearing inner ring and assembled bearing outer ring, respectively.
SD: outside inclination variation: variation in inclination of outside cylindrical surface to outer ring side face.
Sea: side face runout of assembled bearing inner ring and assembled bearing outer ring, respectively.
ΔCs: deviation of single inner ring width or single outer ring width from the nominal (ΔBs = Bs - B etc.)
VCs: ring width variation: difference between the largest and smallest single widths of inner ring and of outer ring, respectively.

4. Bearing fits

Track rollers are precision machine elements. These products must be very carefully handled before and during fitting. Their trouble-free operation depends largely on the care taken during fitting

4.1 Compatibility and miscibility

The anti-corrosive preservation oil used for rolling bearings is compatible and miscible with oils and greases with a mineral oil base. Compatibility should be checked if the following are used:
- synthetic lubricants
- thickeners other than lithium or lithium complex soaps.

If there is an incompatibility, the anti-corrosive oil should be washed out before greasing. particularly in the following cases:
- lubricants based on PTFE/alkoxyfluoroether
- lubricants with a polycarbamide thickener

and if
- the lubricant is changed
- the rolling bearings are contaminated.

If in doubt, please contact the relevant lubricant manufacturer.

4.2 Guidelines for fitting

- The assembly area must be kept clean and free from dust
- Protect bearings from dust, contaminants and moisture
  - contaminants have a detrimental influence on the running and operating life of rolling bearings
- Inspect the housing bore and shaft/axis seating for
  - dimensional and geometrical tolerances
  - cleanliness

- Lightly oil the bearing ring seating surfaces or rub with solid lubricant
- Do not cool the bearings excessively
  - Moisture due to condensation can lead to corrosion in the bearings and bearing seatings
- After fitting
  - charge ungreased rolling bearings with lubricant
  - check the correct functioning of the bearing arrangement.

4.3 Fitting tools
- Induction heating device (see figure below)
- Heating cupboard
  - heating up to + 80 °C

Mechanical or hydraulic press
  - fitting sleeves should be used which cover the whole circumference of the bearing ring end faces
- Hammer and fitting sleeve
  - light hammer blows should be centrally directed on the fitting sleeve

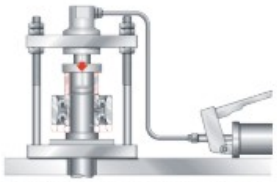
Note: Fitting forces must never be directed through the rolling elements. Direct blows on the bearing rings must be avoided.

Heating with an induction heater

4.4 Dismantling guidelines
- Dismantling should be taken into consideration in the original design of the bearing location
- If the bearings are to be reused:
  - direct blows on the bearing rings should be avoided
  - dismantling forces should not be applied through the rolling elements
  - bearings should be carefully cleaned once dismantled
  - do not use a concentrated or hard flame.

4.5 Fitting and dismantling of yoke type track rollers (ball type)
- If the tolerance zone is unfavourable: the bearing should be pressed into place using a fitting press (see figure below)
  - The inner ring must be fitted such that the pressing-in force is distributed uniformly on theend face of the inner ring.

Note: Fitting forces must not be directed through the rolling elements.
It must be ensured that the seals are not damaged during fitting.
- Track rollers must be secured axially according to the advice given

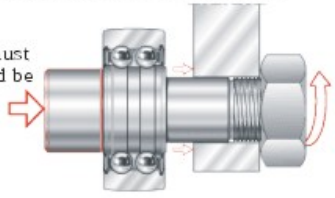


Fitting of the yoke type track roller using a fitting press

Note: Extraction forces must not be directed through the outer ring. This could damage the rolling elements and seals.

4.6 Fitting and dismantling of stud type track rollers (ball type)
Stud type track rollers are fitted and dismantled by methods similar to those used for yoke type track rollers (see figure below).
  -

Note: The tightening torques given in the dimension table must be observed. Only then can the permissible radial load be ensured.
Screws and nuts of grade ≥ 8.8 must be used.



Fitting of a stud type track roller