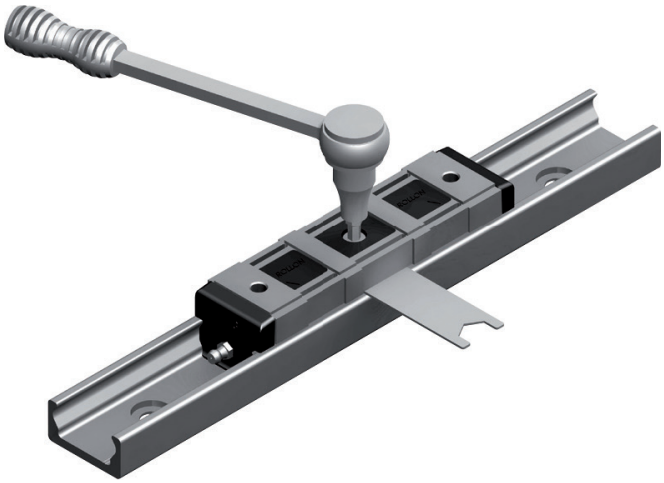
Installation Instructions

Adjusting the Sliders

Normally the linear guides are delivered as a system consisting of rail and adjusted sliders. If rail and slider are delivered separately or if the slider is installed in another raceway, the preload must be set again.

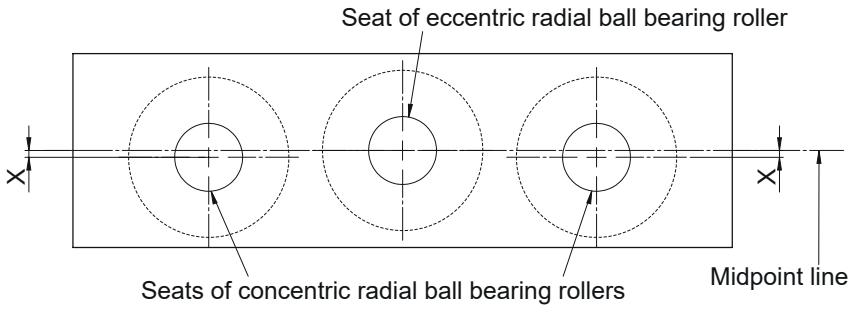
Setting the preload:

1. Check the cleanliness of the tracks.
2. Insert the slider in the rail (CSW sliders should be inserted without wipers). Slightly loosen the fixing screws of the roller pins to be adjusted.
3. Position the slider on one end of the rail.
4. For the U rails there must be a thin support (e.g. set key) under the ends of the slider body to ensure the horizontal alignment of the slider in the flat raceways.
5. Insert the flat key on the side with the triangular symbol combined with a red mark of the screw head (N-series slider), or on the side with a circle symbol (CSW-slider) between rail and slider.
6. By turning the flat key clockwise, the roller to be adjusted is pressed against the upper track and the slider is then without play. Avoid a preload that is too high. It generates increased wear and reduces the service life.
7. While holding the correct position of the roller pin with the adjustment key, the fixing screw can be carefully tightened. The exact tightening torque will be checked later.
8. Move the slider in the rail and check the preload over the entire length of the rail. It should move easily and the slider should not have play at any location of the rail.
9. For sliders with more than 3 rollers, repeat this process with each eccentric roller pin. Always start with the first roller pin after the one with the red marking. Make sure that all roller pins have uniform contact to the raceways.
10. Now tighten the fixing screws with the specified tightening torque from the table while the flat key holds the angle adjustment of the pin. A special thread in the roller pin secures the set position.
11. Now install the wiper of the CSW-sliders and ensure a proper lubrication of the raceways.

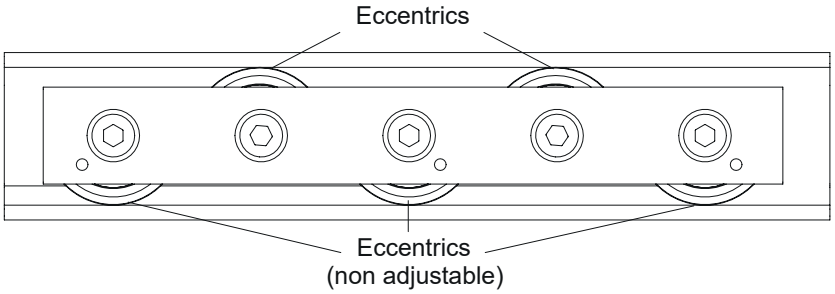


Slider size	Tightening torque Nm
18	3
28	7
43	12
63	35

Use of radial ball bearings



Slider size	x (mm)
18	0.40
28	0.45
43	0.60
63	0.55



Rail installation with reference surface as support

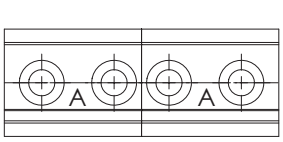
1. Remove unevenness, burrs and dirt from the support surface.
2. Press the rail against the support surface and insert all screws without tightening them.
3. Start tightening the fixing screws to the specified torque on one end of the rail while continuing to hold pressure on the rail against the support surface.

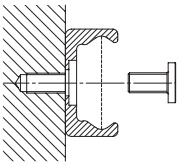
Screw type	Tightening torque Nm
M4 (T..., U... 18)	3
M5 (T..., U... 28)	9
M8 (T..., U..., K... 43)	22
M8 (T..., U..., K... 63)	35

Installation of Joined Rails

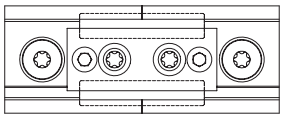
After the fixing holes for the rails are made in the load-bearing structure, the joined rails can be installed according to the following procedure:

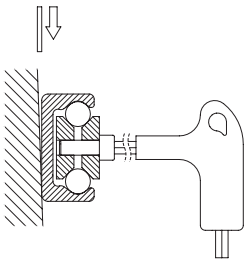
1. Fix the individual rails on the mounting surface by tightening all screws except for each last one on the rail joint.
2. Install the end fixing screws without tightening them.



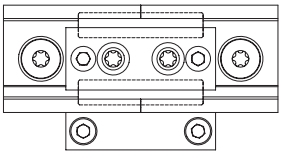


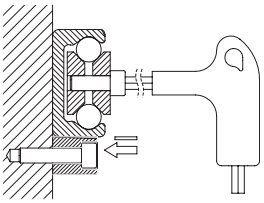
3. Place the alignment fixture on the rail joint and tighten both set screws uniformly, until the race-ways are aligned.
4. After the previous step (3) it must be checked if both rail backs lie evenly on the mounting surface. If a gap has formed there, this must be shimmed.



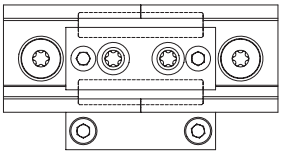


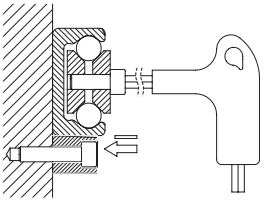
5. The bottom of the rails should be supported in the area of the transition. Here a possible existing gap must be looked for, which must be closed if necessary for correct support of the rail ends by shims.





6. Insert the key through the holes in the align-ment fixture and tighten the screws on the rail ends.
7. For rails with 90° countersunk holes, tighten the remaining screws starting from the rail joint in the direction of the rail center. For rails with cylindrical counter-sunk holes, first adjust the rail to an external reference, then proceed as described above.
8. Remove the alignment fixture from the rail.





Remarks

- The sliders are equipped with rollers that are in alternating contact with both sides of the raceway. Markings on the body around the roller pins indicate correct arrangement of the rollers to the external load.
- By a simple adjustment of the eccentric rollers, the slider has clearance set by the desired preload in the rail.
- Rails in joined design are available for longer transverse distances.
- The K-rails are not suitable for vertical installation.
- Screws of property class 10.9 must be used.
- Differences in screw sizes must be observed.
- Ensure that the fixing holes of the adjacent construction are sufficiently countersunk during rail installation.