General installation information

Follow the installation information below when mounting telescopic slides. Ideally this information should have already been taking into account in the design of the extensions. Doing so ensures smooth running, quiet, and low-wear operation of the slides over a long period of time and guarantees function in the long run.

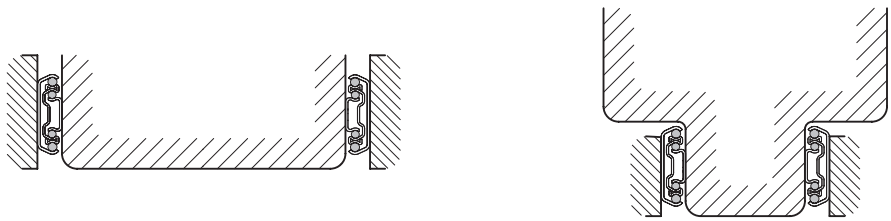
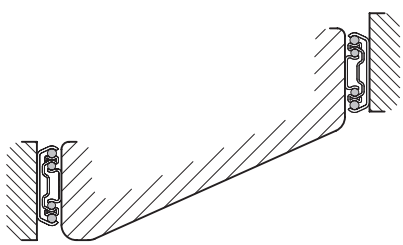
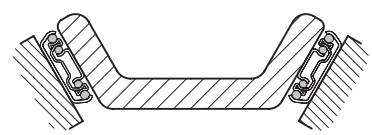
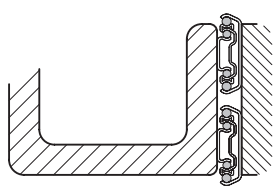
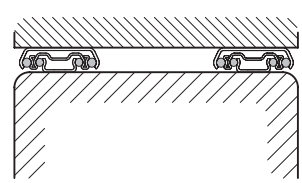
- Telescopic slides are generally installed in pairs so that the mounting surfaces of the housing and extension side are level, parallel, and perpendicular and have to be aligned with one another correctly in regard to position. Furthermore attention should be given to adequate stability of the receiving structure so as to keep geometric errors caused by elastic deformation as minimal as possible.
- Mounting holes should be applied in such a way that excludes twisting or warping of the slides during mounting. Also the slides need to be positioned in the direction of extraction in such a way that the extensions reach the end position at the same time on retraction and extraction. In this way, an equal amount of stress acts on the rubber stops and locking devices.
- The width of the respective slide installation spaces should be designed with a tolerance of +0.2 / +0.5 mm. The slides will then tension slightly in the direction of the middle of the extension. This promotes optimum performance and a long lifespan.
- Before mounting, the inner slides should be moved to the front and back stop position once to allow the ball cages to assume their intended position. Installation should also take place at room temperature.
- After mounting, check the telescopic slides and extensions for ease of movement. If something is wrong, such as sticking or warping, the cause has to be determined and eliminated through appropriate actions.

Mounting holes, mounting screws

In general, use all holes intended for mounting, when mounting telescopic slides. Doing so will ensure that the forces resulting from the maximum load capacity F_S (nominal load) can be transferred safely from the telescopic slides from and to the surrounding structure. Failure to use mounting screws reduces the specified load capacity accordingly.
The outer and inner slides have other openings and auxiliary holes in addition to the holes intended for mounting. The catalog drawings and the CAD data available for download do not show these holes to exclude confusion and design faults. These holes are needed, among other things, for the mounting of type-dependent component features, such as the self-retracting mechanisms.
Some slide variants have mounting options for screws of various sizes. In this case, all positions of a size or type should be used. Auxiliary holes, which ensure that all mounting holes can be reached, are found accordingly in the CAD data, but are not pictured in the catalog drawings.
The type and specification of suitable screws can be found on the respective catalog pages. It is generally recommended to use screws of tensile strength class 8.8 under consideration of the specified tightening torque.

Installation position

Telescopic slides are preferably installed arranged vertically and in pairs in a horizontal position. This ensures that the highest possible stability and torsional stiffness is reached in the smallest installation spaces and allows for absorption of the maximum load (nominal load). The performance features are optimum in this installation position, and wear is reduced to a minimum.
The horizontal or lying installation of the slide is likewise possible with certain restrictions. The maximum load in this case is only about 20 % to 25 % of the specified nominal load. The less favorable slide profile results, therefore, in considerably higher bending in the extended state. As a result, the ball cages may leave streaks on the heads of the mounting screws. In case of doubt, check the function under load in a test set-up.
Installing slides in a perpendicular position to the direction of extraction is not recommended because increased cage slip occurs in this case. This means that the upper and lower end position of the slide can be reached in some circumstances only with an increased amount of force after a few cycles since the force of gravity causes the ball cage to become dislocated from its correct position.
The following examples show possible installation positions of telescopic slides that are considered favorable or acceptable and some that are regarded as unfavorable and should, therefore, be avoided.

favorable	**vertically, on both sides**	
acceptable	**vertically shifted, on both sides**	
	vertically inclined, on both sides	
unfavorable	**vertically, on one side**	
	horizontally, on both sides