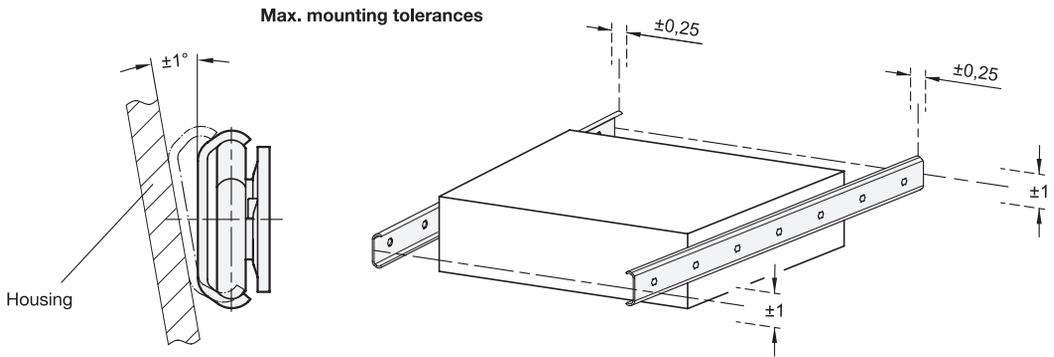


## General installation information

The following installation information should be taken into account in the design and assembly of linear guide rail systems. This ensures smooth running, quiet operation, low wear and proper function over prolonged use.

- The mounting surfaces of the linear guide rail systems (guide rails and cam roller carriages) must be level, parallel and at right angles as well as correctly situated relative to each other. If end stops are used, these must be positioned such that they are reached as simultaneously as possible.
- Fastening holes should be applied in such a way that excludes twisting or warping of the guide rails during mounting. The specified mounting tolerance of +0.2 / +0.5 mm results in tensile loading of the rail in the direction of the application center, which ensures optimal and low-wear running.
- After the linear guide rail systems are mounted, they must be checked to ensure smooth running. If something is wrong such as sticking or warping, the cause has to be determined and appropriately eliminated.

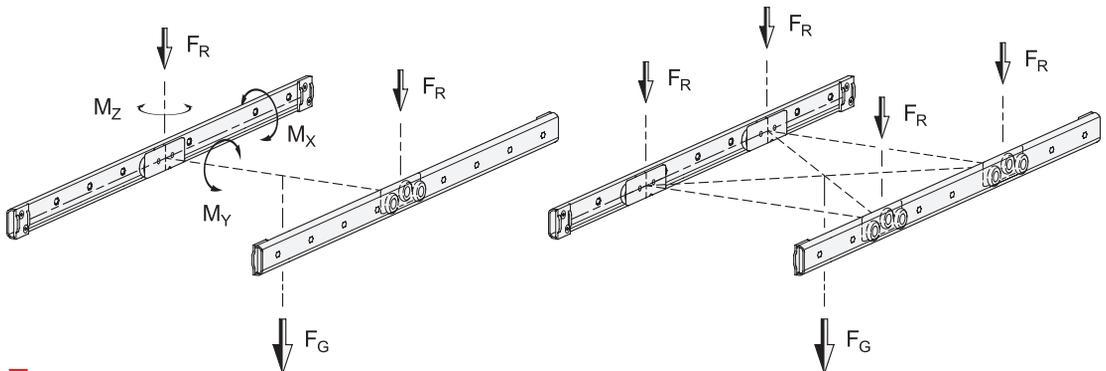


## Load capacity

The maximum load capacity of the linear guide rail systems corresponds to two cam roller carriages with 5 rollers. If higher loads are to be moved with additional cam roller carriages, the functioning must be tested in a test setup. The total width as well as the stiffness of the application also play a role and can negatively impact the load capacity and wear properties.

To achieve the specified nominal load  $F_R$ , the cam roller carriages must be installed such that the side with the larger number of rollers receives the load. To prevent mix-ups, this is marked with a notch on the base body of the carriage.

The total load  $F_G$  of the application must be transmitted to the cam roller carriages as centrally as possible. Sudden impacts and jolts as well as strong vibrations acting on the linear guide rail systems are to be avoided. The application or absorption of torque forces in the  $M_x$  and  $M_z$  directions via to the cam roller carriages is not intended.



| $h_1$ | $F_R$ per cam roller carriage in N |           | $M_y$ per cam roller carriage in N |           |
|-------|------------------------------------|-----------|------------------------------------|-----------|
|       | 3 rollers                          | 5 rollers | 3 rollers                          | 5 rollers |
| 29    | 425                                | 650       | 7                                  | 21        |
| 37    | 800                                | 1150      | 13                                 | 40        |

## Travel speed

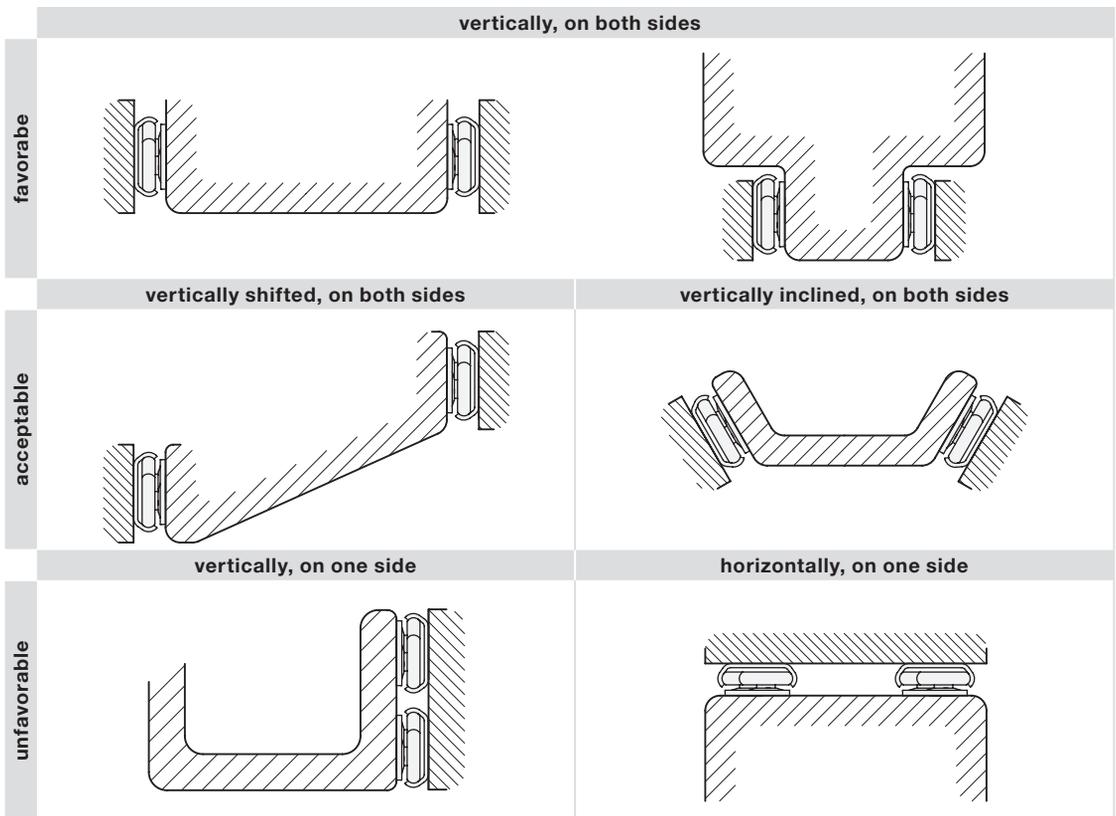
The maximum travel speed of the linear guide rail systems is 0.3 m/s. If end stops are used, the speed must be significantly reduced before reaching the stop to avoid damage. If large static or dynamic forces arise in the direction of travel, these must be absorbed by external stops since the end stops are not designed for this.

## Installation position

Linear guide rail systems are preferably installed vertically, in pairs, with a horizontal alignment. This results in the highest possible stability and torsional stiffness in the smallest installation space. The running properties are optimal in this arrangement, and wear is reduced to a minimum.

In contrast to telescopic slides, guide rollers can be used in a vertical orientation because no cage slip occurs since the design does not include a ball cage. It is only necessary to consider the direction in which the load acts so that the cam roller carriages can be inserted correctly into the guide rail.

The horizontal installation of the rail (lying down) is likewise possible with certain restrictions. The maximum load in this case is the nominal load FA. Due to the unfavorable rail cross-section, larger forces can be expected to widen the rail, which may lead to a collision between the cam roller carriages and the heads of the mounting screws. In case of doubt, check the function under load in a test set-up.



## Additional information on use

- For travel lengths exceeding the maximum standard length of the guide rails, multiple rails can be arranged in succession. In this case, the mounting holes for the guide rails must be positioned as precisely as possible to keep any possible offset between the guide rails to a minimum.
- The guide rails can be cut to any length, if necessary. When sawing, care should be taken to not deform the profile cross-section. We recommend using a clamp. After cutting, the cut surfaces must be deburred and cleaned before lubricating the running surfaces.

