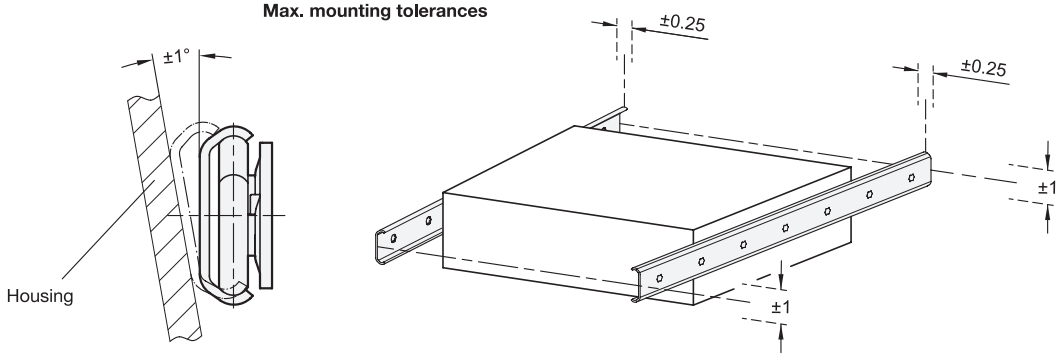
General installation information

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

- The mounting surfaces of cam roller linear guide rail systems (guide rails and cam roller carriages) must be level, parallel and at right angles as well as correctly aligned to each other. If end stops are used, they must be positioned such that they are reached as simultaneously as possible.
- Mounting holes should be applied in such a way that twisting or warping of the guide rails during installation is excluded. 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 cam roller linear guide rail systems are mounted, they must be checked to ensure smooth running. In case of discrepancies, such as sticking or warping, the cause has to be determined and eliminated through appropriate actions.

Max. mounting tolerances

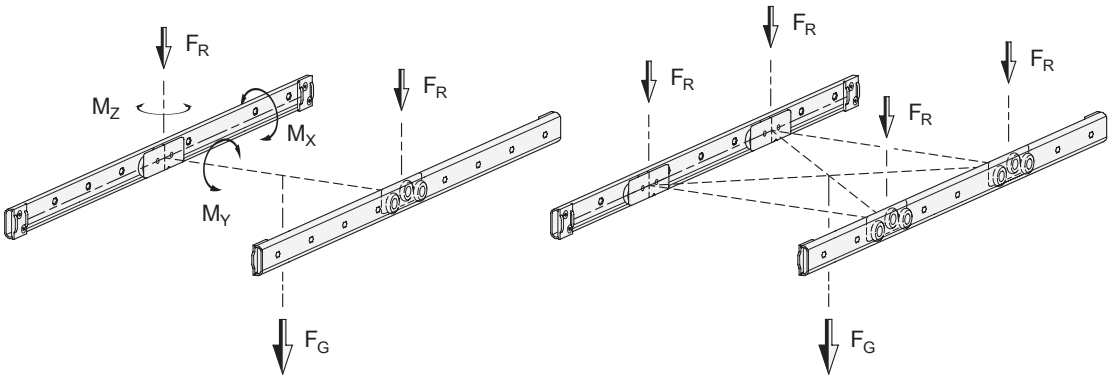


Load capacity

The maximum load capacity of the cam roller 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 function must be tested in a test setup. The overall width as well as the rigidity of the application also play a role and can have a negative impact on the load capacity and wear properties.

In order 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 is subjected to the load. To prevent mix-ups, this side is marked with a notch on the base body of the carriage.

The total load FG of the application should be transmitted to the cam roller carriage as centrally as possible. Impacts and shock loads as well as strong vibrations acting on the cam roller linear guide rail systems are to be avoided. The application or absorption of torques in the M_X and M_Z directions via the cam roller carriage is not intended.



Metric table

Dimensions in: millimeters - *inches*

h_1	F_R per cam roller carriage		M_Y per cam roller carriage	
	3 rollers	5 rollers	3 rollers	5 rollers
29 *1.14*	425 N *95.54 lbf*	650 N *146 lbf*	7 N *1.57 lbf*	21 N *4.72 lbf*
37 *1.46*	800 N *180 lbf*	1150 N *259 lbf*	13 N *2.92 lbf*	40 N *8.99 lbf*

Travel speed

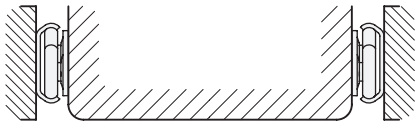
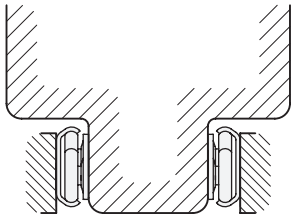
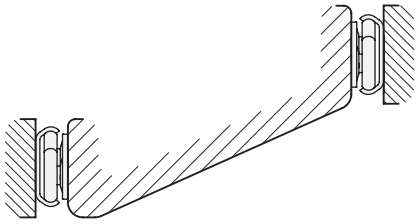
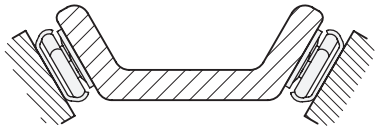
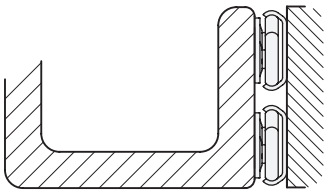
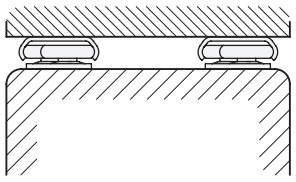
The permissible travel speed of the cam roller linear guide rail systems is 0.3 m/s. If end stops are used, the speed must be reduced significantly before reaching the stop to avoid damage. If large static or dynamic forces occur in the direction of travel, these must be absorbed by additonal stops since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

Installation position

Cam roller linear guide rail systems are preferably side-mounted and installed in pairs in a horizontal position. This ensures that the highest possible stability and torsional stiffness is achieved in the smallest installation space. The performance features are optimum in this installation position and wear is reduced to a minimum..

In contrast to telescopic slides, cam rollers can be used in a vertical position 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 carriage can be inserted correctly into the guide rail.

The top and / or bottom mount of the rail is also possible with certain restrictions. The maximum load for this load case is specified as 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, the function under load is to be checked in a test setup.

	Side mount, on both sides	
Favorabe		
	Side mount, vertical offset, on both sides	**Side mount, inclined offset, on both sides**
Acceptable		
	Side mount, on one side	**Top and / or bottom mount, on both sides**
Unfavorable		

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 are to be positioned as precisely as possible to keep any possible offset between the guide rails to a minimum.
- If necessary, the guide rails can be cut to any length. When sawing, care should be taken to not deform the profile cross-section. We recommend using a clamp. After cutting, the cut surfaces are to be deburred and cleaned before lubricating the running surfaces.