

# Technical information for linear guide rails and the matching roller guide carriages

The linear guide rails can easily be precisely aligned, connected and mounted by using a parallel key. The parallel key is recessed into the rail so that the rails can be screwed directly onto a flat surface. In addition, the precise alignment using a parallel key makes it easier to pass over the butt joint. Thereby, all linear guide rails with keyway can be paired as desired.

## Distinction between the two roller guide carriages:

The roller guide carriages 21350 have a simple mechanism that permits a compensation of ca. 0.05 mm. Therefore, only straight linear guide rails (21355) can be traversed.

The compensating mechanism of the roller guide carriage 21351 permits a tolerance range of ca. 0.5 mm. This enables the carriage to travel on straight and curved linear guide rails. Here, the mechanism for tensioning is installed on one side of two rollers. The two opposite rollers are rigidly mounted.

## Service life:

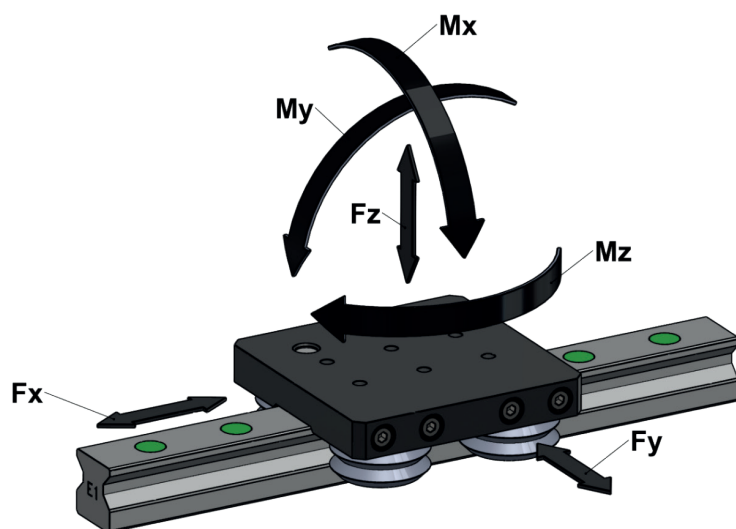
Due to the permissible forces and torques, the roller guide carriages have a service life of >100,000 km.

The service life depends on the lubrication condition and the amount of dirt. Therefore, this value may deviate.

## Straight linear guide rails:

The maximum length of L1 is  $L2-D1/2$ .

## Forces and torques:



Roller guide carriages	$F_y$ (N)	$F_z$ (N)	$M_x$ (Nm)	$M_y$ (Nm)	$M_z$ (Nm)
21350-2080	940	1510	34	34	30
21350-2120	940	1510	34	64	45
21350-3110	1970	3150	100	94	86
21350-3150	1970	3150	100	155	117
21351-2080	400	400	24	34	22
21351-2120	400	400	24	64	38
21351-3110	800	800	35	85	32
21351-3150	800	800	35	135	45

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## Benefits:

- Due to the mechanism integrated in the roller guide carriage, the rollers of the 21351 always adapt to the rail contour. This permits play-free travelling along straights and curves with constant displacement resistance.
- Due to the constant displacement resistance, there is no need to adjust the rollers to the rail width via an eccentric pin.
- The track roller guides wear out due to the rollers slipping on the rails. The constant tension force reduces wear because the roller always lies on the rail.
- The roller guide carriages can simply be pushed onto the rail. Here, all carriages travel evenly and without the rollers slipping on the rails.

## On request:

- Coated linear guide rails: The rails can be supplied with a diamond coating. This coating reduces friction, increases the hardness of the rail while simultaneously providing corrosion protection. Consequently, the guides have better dry-running properties and the service life is increased.
- Cover caps can also be supplied in other colours.