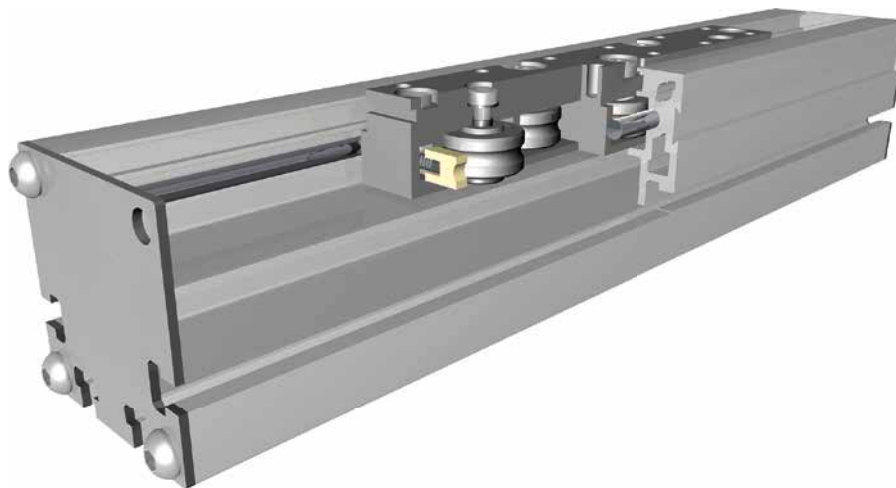


Positioning system LLR 60

Roller guide without drive



Function:

The guide body consists of an aluminium square profile, with an integrated roller guide. This roller guide can be driven by a pneumatic cylinder or other additional drives or it serves as a load carrying slide unit.

Fitting position:

As required. Max. length 6.000 mm without joints.

Carriage mounting:

By tapped holes.

Unit mounting:

By T-slots and mounting sets. The linear axis can be combined with any T-slot profile.

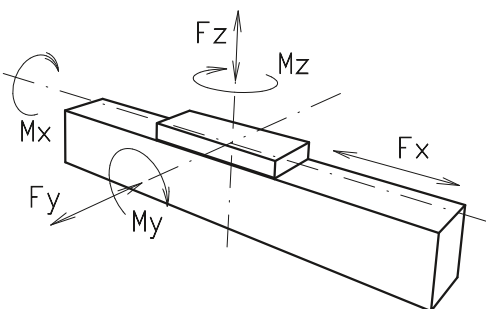
Belt performance:

HTD with steel reinforcement, no backlash when changing direction, repeatability ± 0,1 mm.

Carriage support:

The carriage runs on 5 rollers which can be adjusted and serviced at each central servicing position. Two grease nipples at the carriage enable relubrication of the positioning system.

Forces and torques



Size	60	
	static	dynamic
Forces/Torques		
F_x (N)	1073	960
F_y (N)	780	650
F_z (N)	1170	845
M_x (Nm)	20	13
M_y (Nm)	78	65
M_z (Nm)	52	39
All forces and torques related to the following:		
existing values	$\frac{F_y}{F_{y_{dyn}}} + \frac{F_z}{F_{z_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1$	
table values		
No-load torque		
Nm	0,6	
Speed		
(m/s) max	4	
Tensile force		
permanent (N)	1050	
0,2 s (N)	1150	
Geometrical moments of inertia of aluminium profile		
I_x mm ⁴	4,47x10 ⁵	
I_y mm ⁴	5,59x10 ⁵	
Elastic modulus N/mm ²	70000	

15.1

Formula: LLR

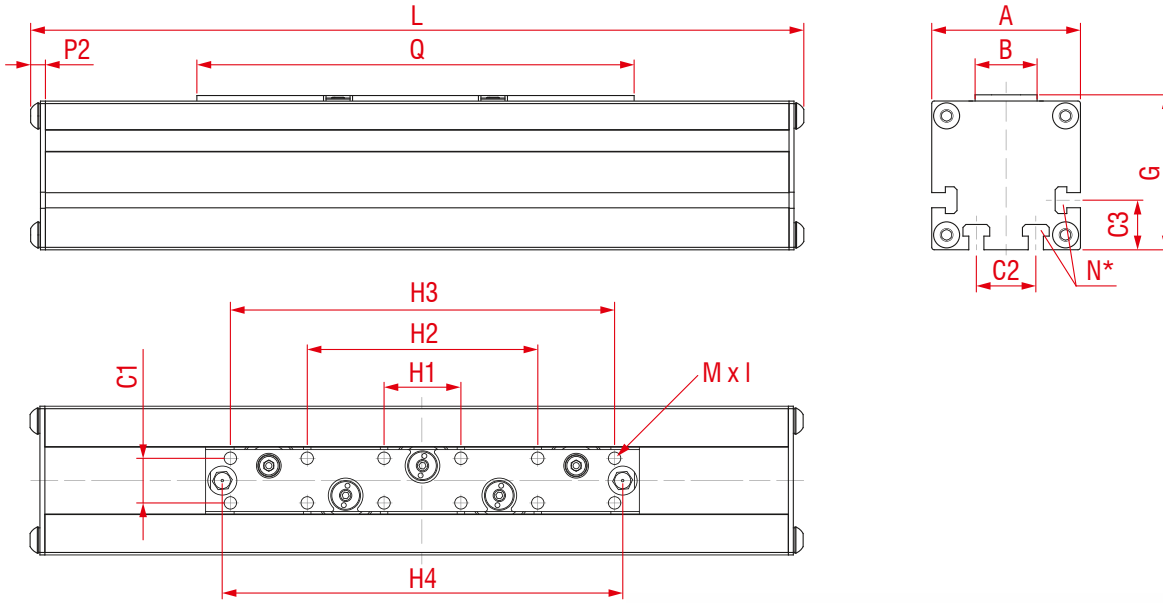
For life-time calculation of rollers use our homepage.

$$f = \frac{F \cdot l^3}{E \cdot I \cdot 192}$$

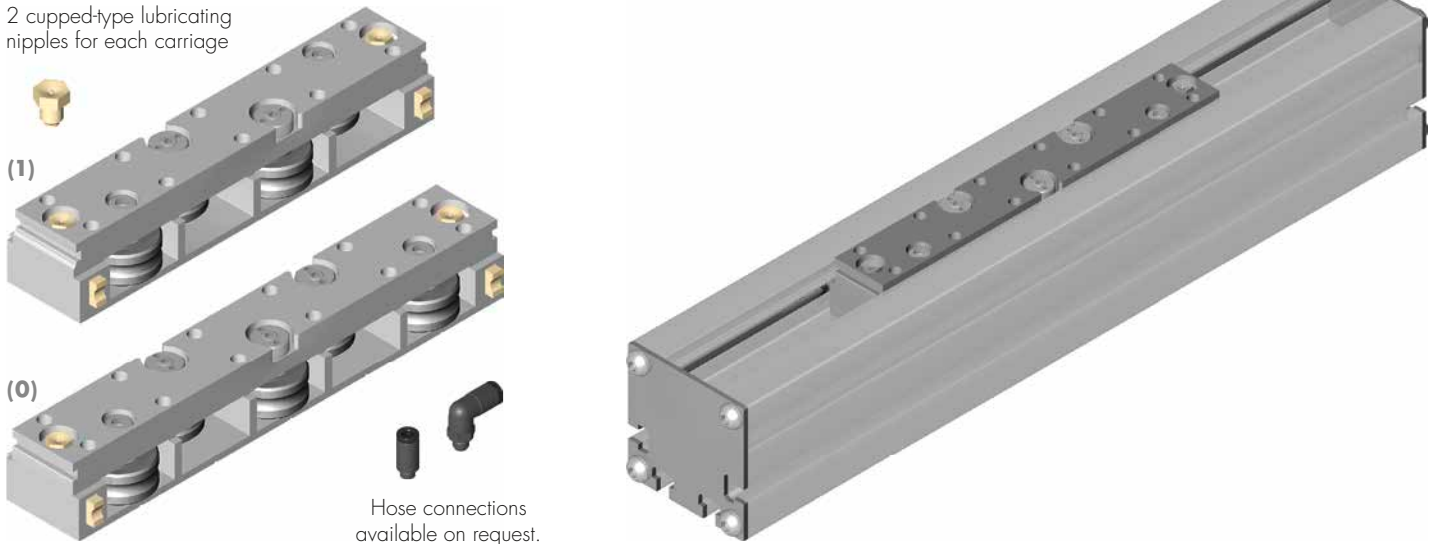
- f = deflection (mm)
- F = load (N)
- l = free length (mm)
- E = elastic modulus 70000 (N/mm²)
- I = second moment of area (mm⁴)

Positioning system LLR 60

Dimensions (mm)



2 cupped-type lubricating nipples for each carriage



Hose connections available on request.

*For slide nuts refer to chapter 2.2 page 2

Size □	Basic length L	A □	B	C1	C2	C3	G	H1	H2	H4	M x l	N for	P2	Q	Basic weight	Weight per 100 mm
LLR 60	187	60	25	18	24	20	62	31	93	161,5	M6	M5	6	175	1,145 kg	0,377 kg

0 Choice of guide body profile:

- (0) Standard (2) corrosion-protected guide rods and screws
- (4) expanded corrosion-protected version (depending on the availability of components)

0 Choice of carriages:



Carriage	L	Q	H1	H2	H3	H4
Version (0)	187	175	31	93	155	161,5
Version (1)	158	144	62	---	124	130,5

LLR 60 0 0 0 0 0 0 1 01500 — Basic length + stroke = total length

Pos. 1 2 3 4 5 6 7

Sample ordering code:

LLR60, standard body profile, carriage (0), 1312 mm stroke

15.1