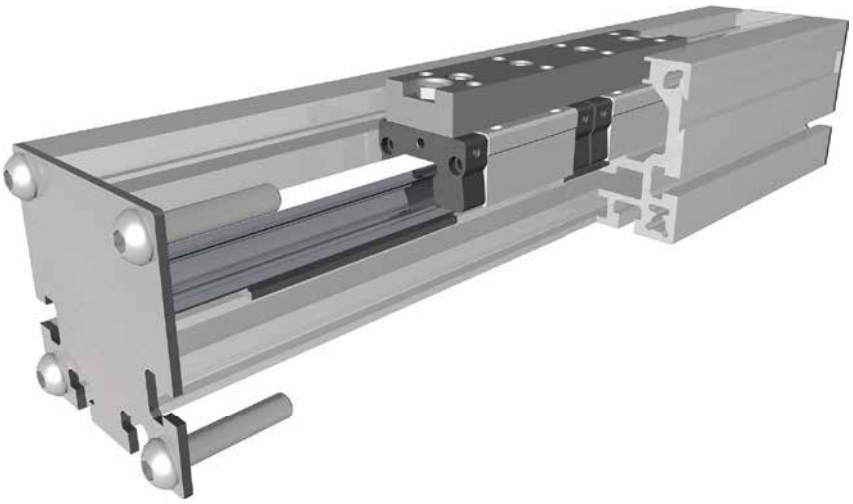
Positioning system LSR 60, 80

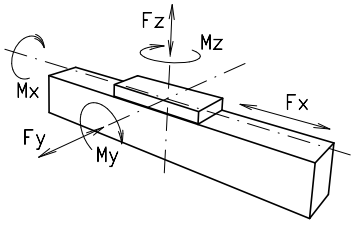
Rail guide without drive



Function:
The guide body consists of an aluminium square profile, with an integrated rail guide. This rail 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: In the standard version the carriage is positioned on two runner blocks which can be readjusted and maintained at each central servicing position. Two grease nipples at the carriage enable relubrication of the positioning system.

Forces and torques



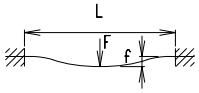
Size	60		80	
permitted dyn. Forces*	5000 km	10000 km	5000 km	10000 km
F_x (N)	–	–	–	–
F_y (N)	1410	990	3570	2550
F_z (N)	3520	2500	8500	6050
M_x (Nm)	33	23	107	75
M_y (Nm)	104	73	310	222
M_z (Nm)	100	70	296	210
All forces and torques related to the following: existing values / table values $\frac{Fy}{Fy_{dyn}} + \frac{Fz}{Fz_{dyn}} + \frac{Mx}{Mx_{dyn}} + \frac{My}{My_{dyn}} + \frac{Mz}{Mz_{dyn}} \leq 1$				
No-load torque				
Nm	0,6		1,0	
Speed				
(m/s) max	5		5	
Tensile force				
Dauer (N)	1050		1900	
0,2 s (N)	1150		2090	
Geometrical moments of inertia of aluminium profile				
I_x mm⁴	$4,37 \times 10^5$		$14,6 \times 10^5$	
I_y mm⁴	$5,78 \times 10^5$		$17,1 \times 10^5$	
Elastic modulus N/mm²	70000		70000	

For life-time calculation use our homepage.

** referred to life-time*

Deflection:

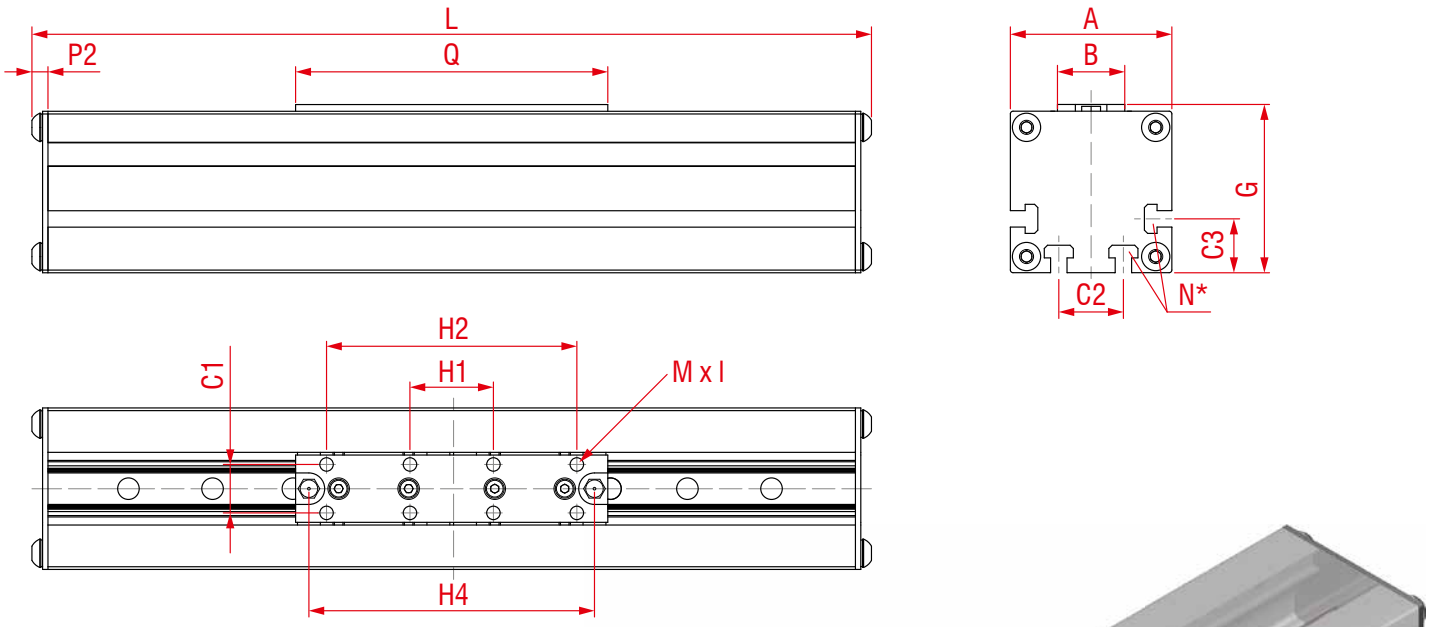
$$f = \frac{F * L^3}{E * I * 192}$$



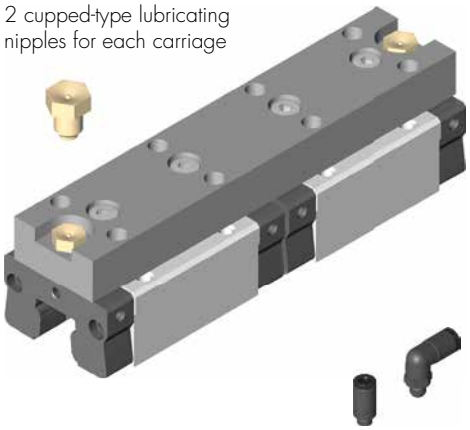
f = deflection (mm)
F = load (N)
L = free length (mm)
E = elastic modulus 70000 (N/mm²)
I = second moment of area (mm⁴)

Positioning system LSR 60, 80

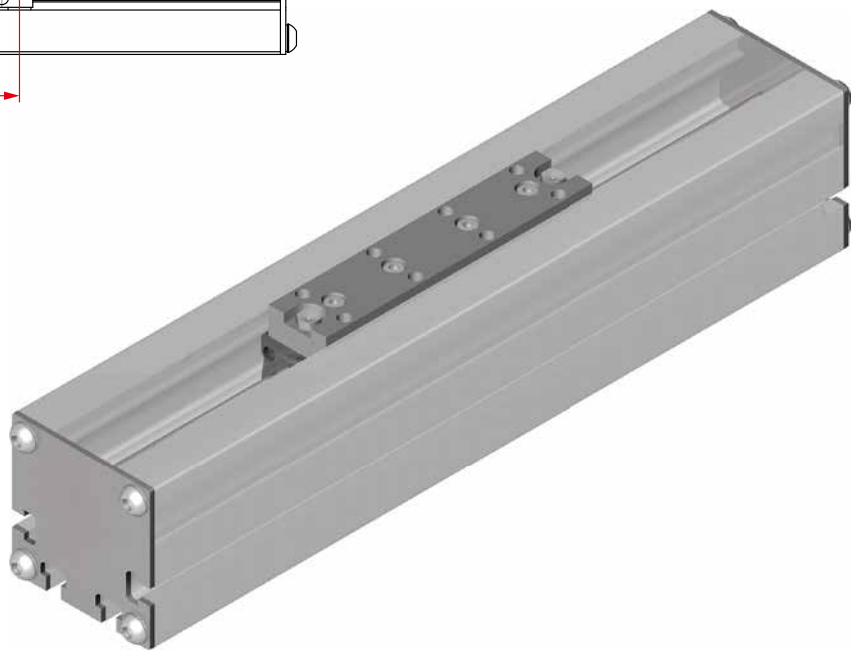
Dimensions (mm)



2 cupped-type lubricating nipples for each carriage



Hose connections available on request.



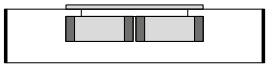
*For slide nuts refer to chapter 2.2 page 2

Size□	Basic lenght L	A □	B	C1	C2	C3	G	H1	H2	H4	Mxl	N for	P2	Q	Basic weight	Weight per 100 mm
LSR 60	162	60	25	18	24	20	62,5	31	93	106	M6 x 11	M5	6	116	1,54 kg	0,43 kg
LSR 80	166	80	25	18	30	22	83	40	120	133	M6 x 12	M6	8	149	2,19 kg	0,88 kg

0 **Choice of guide body profile:**
(0) Standard **(1)** corrosion-protected screws
(4) expanded corrosion-protected version
(depending on the availability of components)

0 **Choice of carriages:**

(0)



LSR	60	0	0	0	0	0	0	0	01500
	Pos.	1	2	3	4	5	6	7	

Basic length + stroke = total length

Sample ordering code:
LSR60, standard body profile, standard carriage, 1338 mm stroke

12.1