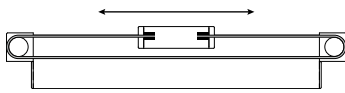


BELT DRIVE

 INDEPENDENT INSTALLATION POSITION

 HIGHER PROFILE STABILITY

 HIGHER FORCE FIXTURE

 LONG TRAVERSE PATH
**Function:**

The guide body consists of an aluminium square profile with lateral, parallel, form-fit, internal hardened steel rods. The guide carriage, which is driven along the shafts by a timing belt, moves on the guide body with internal linear ball bearings that are adjustable free of play. The advantage of this system: The timing belt is guided within the profile, so that the system is independent of the mounting position. Due to the rectangular profile high torques and loads can be taken up. In addition, a very high stability and low deflection are ensured for long axis systems. The belt tension can be easily readjusted via a tensioning device within the carriage. This device also helps to adjust the symmetry of the carriages in applications where two parallel linear units are used.

Fitting position:

As required, max. length 6.000 mm without joints.

Carriage mounting:

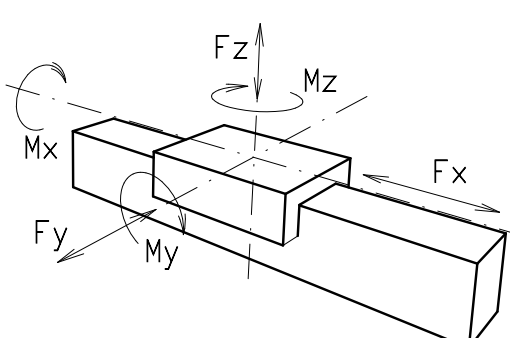
By T-slots.

Unit mounting:

By T-slots or tapped holes in the bearing block, mounting sets.

Belt type:

HTD with steel reinforcement, no backlash when changing direction, repeatability: $\pm 0,1$ mm.

Forces and torques	Size	60		60 S	
	Forces/Torques	static	dynamic	static	dynamic
	F_x (N)	894	800	894	800
	F_y (N)	3000	2000	4100	3100
	F_z (N)	1700	1100	2160	1600
	M_x (Nm)	67	43	88	65
	M_y (Nm)	90	70	190	140
	M_z (Nm)	120	100	230	170
	All forces and torques relate 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		0,7		
Speed					
(m/s) max	5		7		
Tensile force					
permanent (N)	900		900		
0,2 s (N)	1000		1000		
Geometrical moments of inertia of aluminium profile					
I_x mm ⁴	2,8 x 10 ⁶		2,8 x 10 ⁶		
I_y mm ⁴	9,6 x 10 ⁵		9,6 x 10 ⁵		
E-Modulus N/mm ²	70000		70000		

For life-time calculation of rollers use our homepage.

Driving torque:

$$M_o = \frac{F \cdot P \cdot S_i}{2000 \cdot \pi} + M_n$$

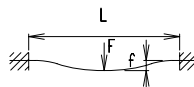
$$P_o = \frac{M_o \cdot n}{9550}$$

F = force (N)
 P = pulley action perimeter (mm)
 S_i = safety factor 1,2 ... 2
 M_n = no-load torque (Nm)
 n = rpm pulley (min⁻¹)
 M_o = driving torque (Nm)
 P_o = motor power (KW)

Deflection:

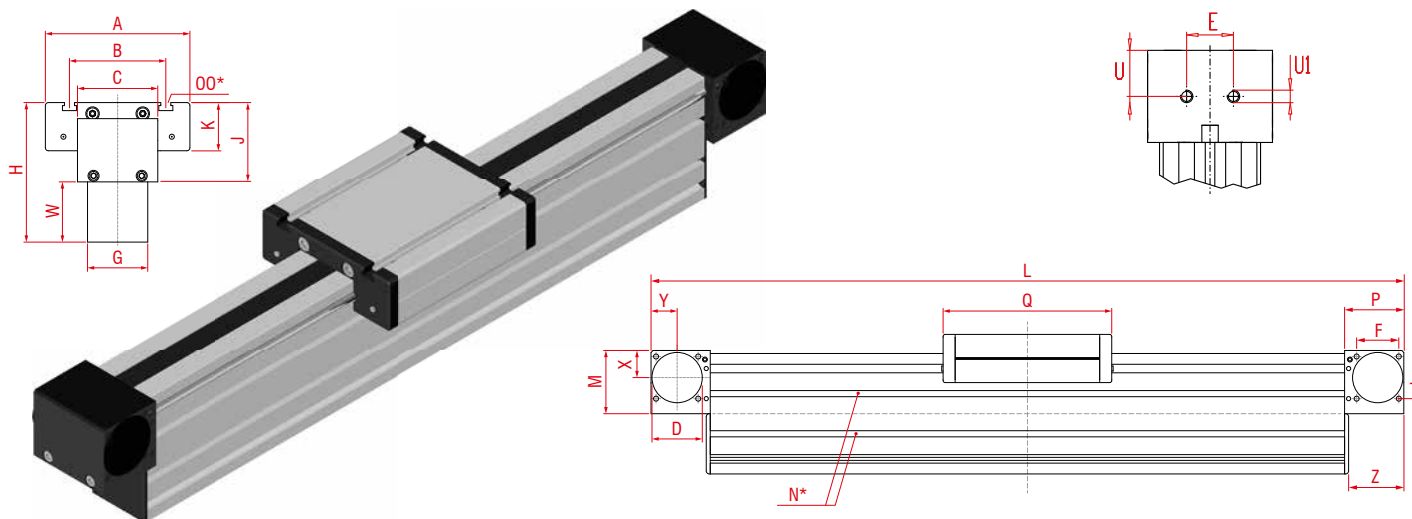
$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$

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



Positioning MLZ 60 (S) W

Dimensions (mm)



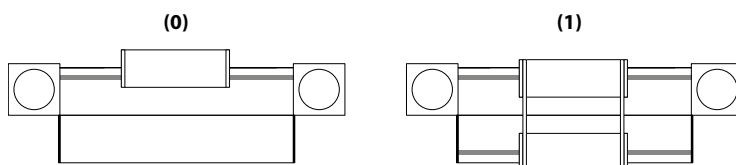
Increasing the carriage length will increase the basic length by the same amount.

Size	Basic length L	A	B	C	D -0,05	E	F	G	H	J	K	M	N for	OO for	P	Q	T	U	U1	W	X	Y	Z	Basic weight	Weight per 100 mm
MLZ 60 W	290	144	96	80	47	30	42	60	139	79	48	63	M5	M8	59	168	M6	29,5	M8	60	27	26	55	5,2 kg	0,8 kg
MLZ 60S W	315	170	108	80	47	30	42	60	143	83	52	63	M5	M8	59	194	M6	29,5	M8	60	27	26	55	6,2 kg	0,8 kg

0 Choice of guide body profile:

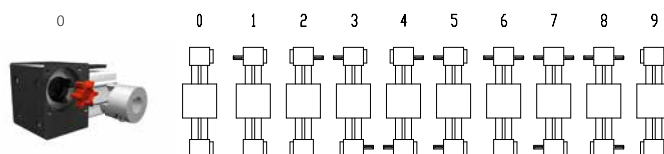
- (0) Standard (2) corrosion-protected guide rods and screws
- (4) expanded corrosion-protected version (depending on the availability of components)

0 Choice of carriages:



Size	Version 1	
	Q	L
60	184	306
60 S	214	336

0 Drive version:



Version 9 is the same as 0, but with double sided coupling claw.

The standard version is supplied without shaft.

Belt table

Code No.	Size	Belt	mm/rev.	Number of teeth
0 4	60 (S)	5M25	130	26

* effective toothed belt width

Shaft dimensions / Coupling claw

Size	Shaft \varnothing h6 x length	Key	Coupling
60 (S)	14 x 35	5x5x28	14

MLZ 60 W 1 0 0 0 0 4 1 1500

Pos. 1 2 3 4 5 6 7

Basic length + stroke = total length

Sample ordering code:

MLZ 60 W, standard body profile, standard carriage, coupling claw on one side, 1210 mm stroke

