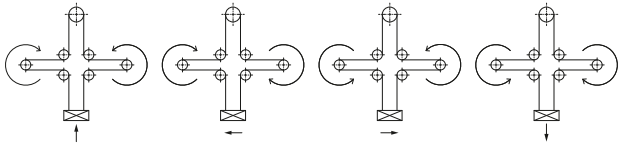
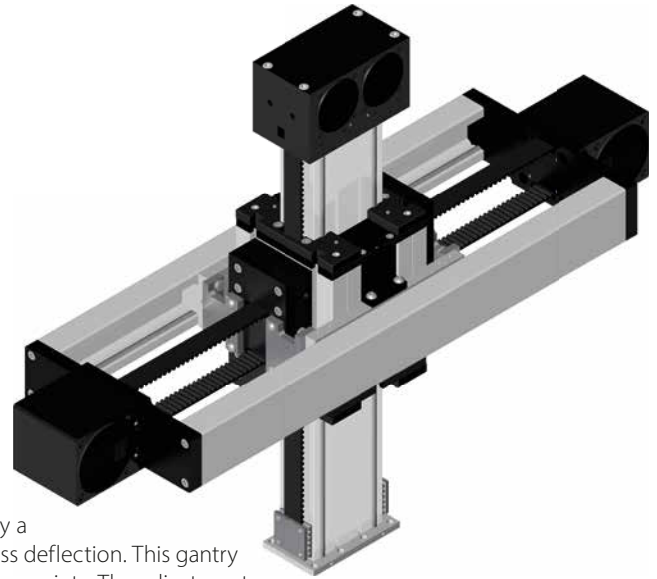


Linear system **ELZI 60 SW**

X/Z - PORTAL - REINFORCED VERSION

- ✔ BELT DRIVE
- ✦ COMPACT DESIGN
- 🔧 GRIPPER ADAPTATION
- ⚙️ HIGH SPEED

3.1



Function:

X/Y-gantry system that consists of a double guided X-axis and a vertical Z-axis. Compared to the ELZI series (standard version), the vertical Z-axis is reinforced by a rectangular profile, which absorbs higher torques, ensures greater stability and less deflection. This gantry system is driven by only one single timing belt that runs through various deflection points. The adjustment is realized by two motors whose coordinates are diagonally orientated to these deflection points. Key advantageous: this compact design allows high accelerations due to low movable masses.

- Fitting position:** As required, max. length for x-axes 2000mm, for z-axis 2000mm
- Unit mounting:** By tapped holes in the bearing block, mounting sets.
- Belt type:** HTD with steel reinforcement, no backlash when changing direction, repeatability: ± 0,1 mm.

Forces and torques	Size		
	60 S		
	Forces/torques		
	static	dynam.	
	F_x (N)	1900	1800
	F_z (N)	1600	1200
	M_x (Nm)	67	43
	M_y (Nm)	190	140
M_z (Nm)	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 horizontal movement			
Nm	2 x 1,1		
Speed			
(m/s) max	5		
Tensile force			
Dauer (N)	1900		
0,2 s (N)	2090		
Geometrical moments of inertia of aluminium profile			
I_x mm ⁴ (X-/Z-Achse)	4,06x10 ⁵ / 9,6x10 ⁵		
I_y mm ⁴ (X-/Z-Achse)	24,3x10 ⁵ / 2,8 x10 ⁶		
E-Modul N/mm ²	70000		

For life-time calculation of rollers use our homepage.

Driving torque:

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

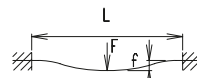
$$P_o = \frac{M_o \cdot n}{9550}$$

- 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:

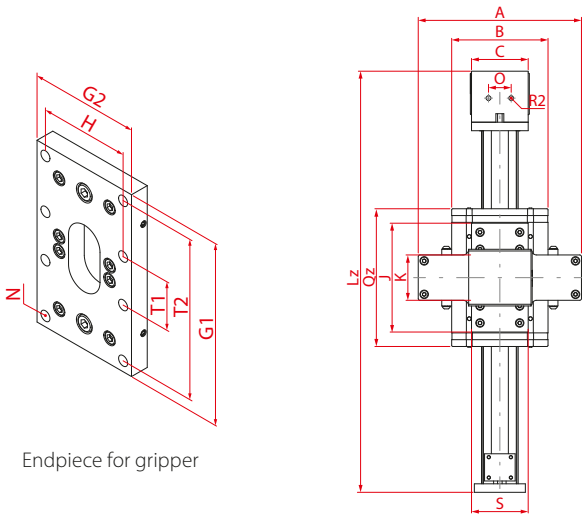
$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$

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

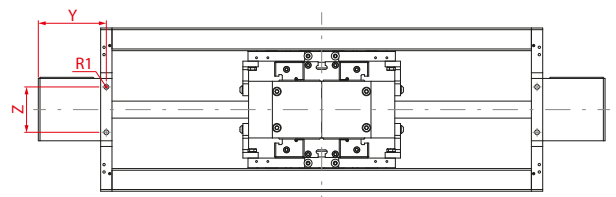
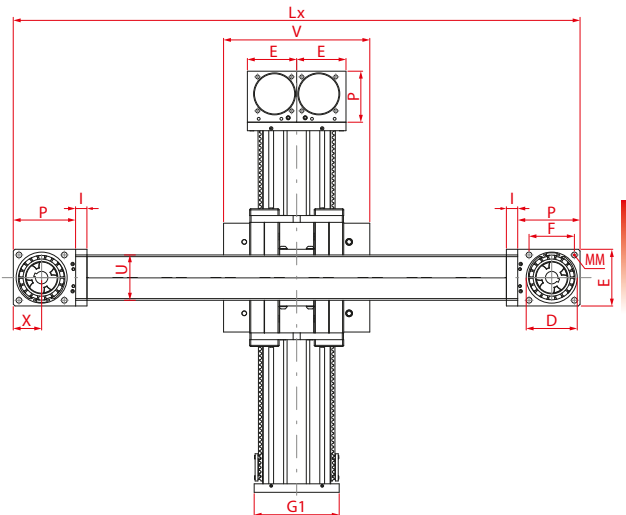


Linear system **ELZI 60 SW**

Dimensions (mm)



Endpiece for gripper



3.1

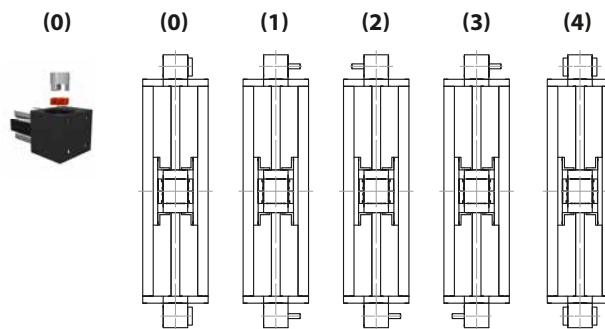
Size	G1	G2	H	N ∅	T1	T2
60 S	150	90	74	8,6	40	132

Size	X-Axis		Z-Axis	
	Profile	moving mass	Profile	moving mass
60 S	2x UL 80	26,3 kg	EL 60	11,7 kg

Size	Basic length		A	B	C	D -0,05	E	F	I	J	K	MM for	O	P	Qz	R1	R2	S	U	X	Y	Z	Basic weight	Weight per 100 mm X-/Z-Achse
	Lx	Lz																						
ELZI 60 SW	540	420	288	170	100	90	100	80	20	195	80	M10	40	110	243	M10	M10	100	80	50	120	80	35 kg	1,15 kg / 0,85 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 Drive version:



Belt table:

Code No.	Size	Belt	mm/rev.	Number of teeth
0 6	60	8M30	224	28

Shaft dimensions / Coupling claw:

Size	Shaft ∅ h6 x length	Key	Coupling
60 S	22x45	6x6x35	24

ELZI 60SW 0 0 0 0 0 6 1 1500 — X-Achse Basic length + stroke = total length

ELZI 60SW 1 0 0 0 0 6 1 700 — Z-Achse Basic length + stroke = total length

Pos. 1 2 3 4 5 6 7

Sample ordering code:

ELZI 60-SW, with standard body profile, standard carriage, coupling claw on one side, stroke X = 960 mm / Z = 280 mm

