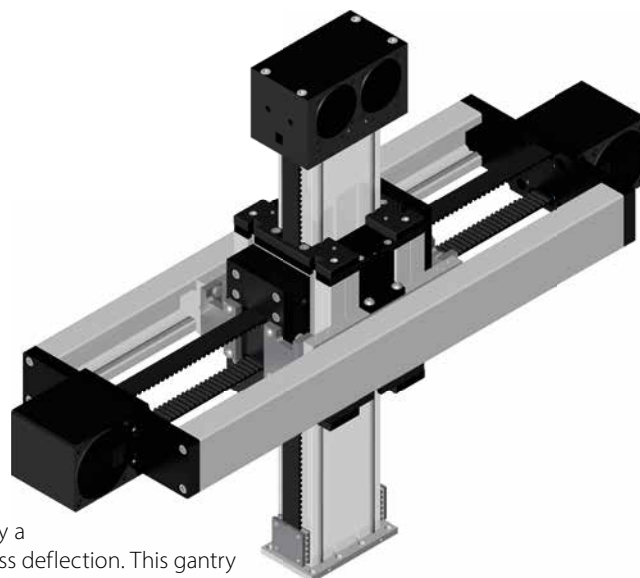
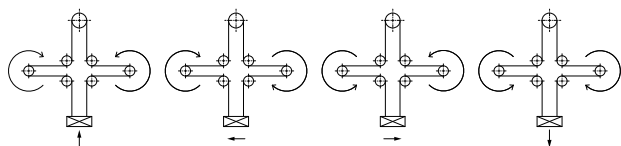


# Linear system **ELZI 60 SW**

## X/Z - PORTAL - REINFORCED VERSION

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



### 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		
	<b>Forces/torques</b>		
	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	
<b>All forces and torques relate to the following:</b>			
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			
<b>No-load torque horizontal movement</b>			
Nm	2 x 1,1		
<b>Speed</b>			
(m/s) max	5		
<b>Tensile force</b>			
Dauer (N)	1900		
0,2 s (N)	2090		
<b>Geometrical moments of inertia of aluminium profile</b>			
$I_x$ mm <sup>4</sup> (X-/Z-Achse)	4,06x10 <sup>5</sup> / 9,6x10 <sup>5</sup>		
$I_y$ mm <sup>4</sup> (X-/Z-Achse)	24,3x10 <sup>5</sup> / 2,8 x10 <sup>6</sup>		
E-Modul N/mm <sup>2</sup>	70000		

For life-time calculation of rollers use our homepage.

Driving torque:

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

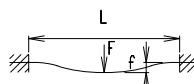
$$P_o = \frac{M_o \cdot n}{9550}$$

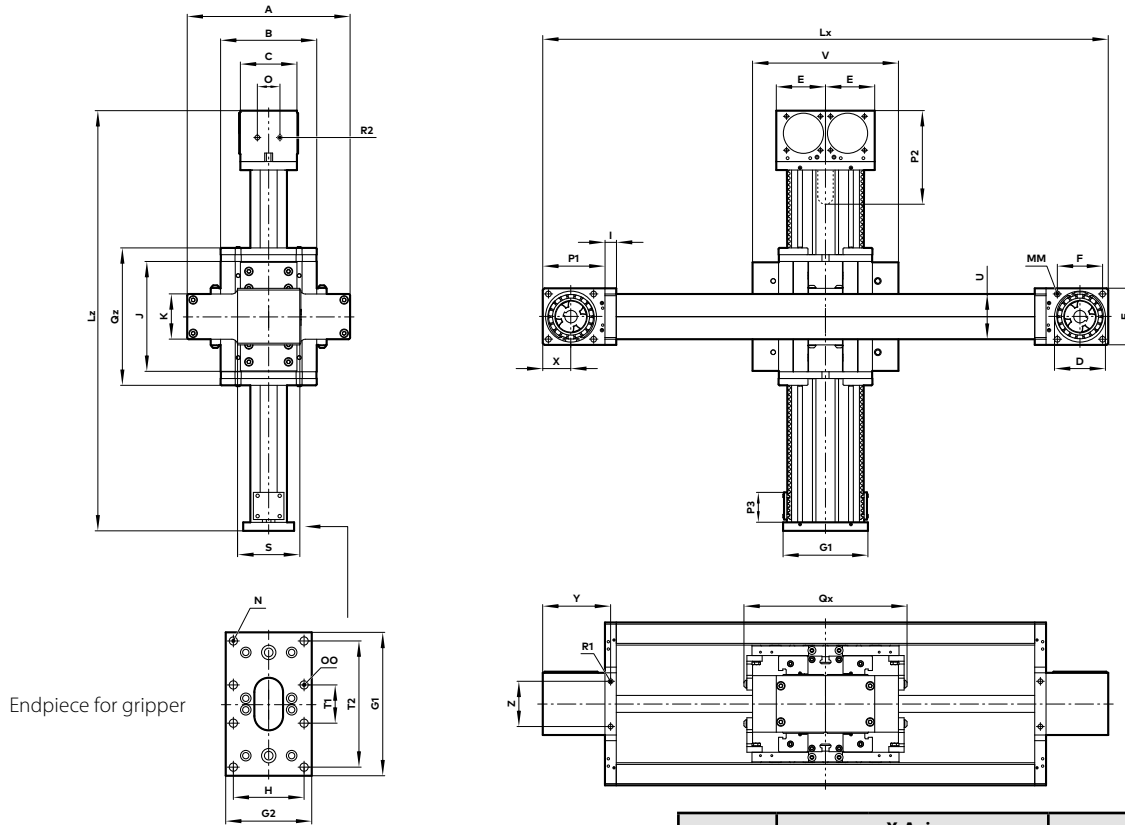
- F = force (N)
- P = pulley action perimeter (mm)
- $S_i$  = safety factor 1,2 ... 2
- $M_n$  = no-load torque (Nm)
- n = rpm pulley (min<sup>-1</sup>)
- $M_o$  = driving torque (Nm)
- $P_o$  = motor power (KW)

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/mm<sup>2</sup>)
- I = second moment of area (mm<sup>4</sup>)





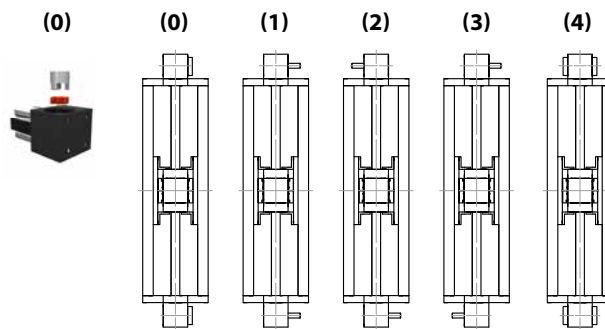
Size	X-Axis			Z-Axis	
	Profile	moving mass		Profile	moving mass
<b>60 S</b>	2x UL 80	26,3 kg		EL 60	11,7 kg

Size	Basic length		A	B	C	D -0,05	E	F	G1	G2	H	I	J	K	MM	N ∅	O	P1	P2	P3	Qx	Qz	R1	Basic weight	Weight per 100 mm X-/Z-Axis
	Lx	Lz																							
<b>ELZI 60 SW</b>	550	478	288	170	100	90	100	80	150	90	74	20	195	80	M10	8,6	40	110	165	70	278	243	M10	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)

Size	R2	S	T1	T2	U	V	X	Y	Z
<b>ELZI 60 SW</b>	M10	100	40	132	80	950	50	120	80

**0 Drive version:**



**Belt table:**

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

**Shaft dimensions / Coupling claw:**

Size	Shaft ∅ h6 x length	Key	Coupling
<b>60 S</b>	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 = 950 mm / Z = 280 mm