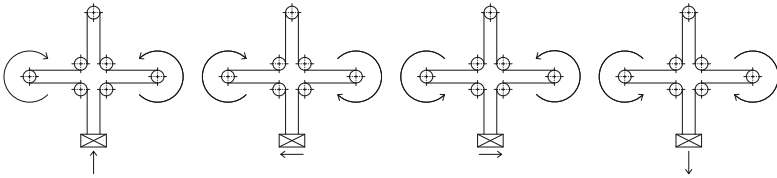
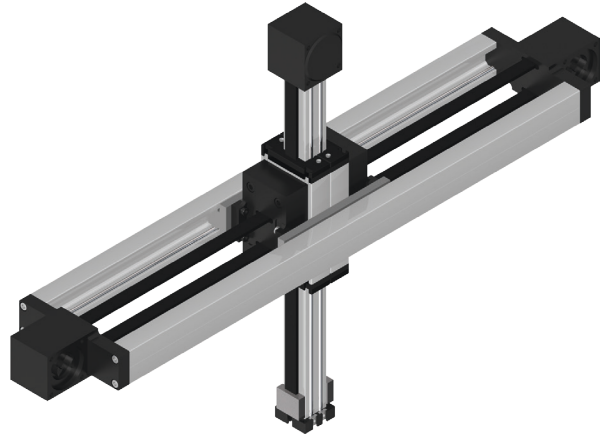


Linear system ELZI 30, 40, 60



X/Z - PORTAL

- VARIOUS DEFLECTION POINTS
- HIGH ACCELERATION
- COMPACT DESIGN



Function:

X/Z gantry consisting of a double guide in the horizontal X level and a vertical Z axis. The belt is fixed and tensioned at the load end. The unit is driven by a rotating belt, which remains connected through various deflection points. The movement is realised by two motors. The coordinate lies diagonal to the deflection points of the X axes and the Z axis. Advantage: Only small masses are moved and thus it is possible to achieve high accelerations.

Fitting position:

As required
 ELZI 30: max. length for x-axes 2000mm, for z-axis 1000mm
 ELZI 40: max. length for x-axes 2500mm, for z-axis 1500mm
 ELZI 60: max. length for x-axes 3000mm, 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	ELZI 30		ELZI 40		ELZI 60	
	Forces/torques	static	dynam.	static	dynam.	static	dynam.
	F_x (N)	390	350	894	800	1900	1800
	F_z (N)	180	160	1200	900	1600	1200
	M_x (Nm)	15	9	25	20	67	43
	M_y (Nm)	20	13	32	22	90	70
	M_z (Nm)	23	18	35	25	120	100
	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 $\frac{F_y}{F_{y_{dyn}}} + \frac{F_z}{F_{z_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1$						
No-load torque horizontal movement							
	Nm	2 x 0,4		2 x 0,6		2 x 1,1	
Speed							
	(m/s) max	2		4		5	
Tensile force							
	permanent (N)	390		894		1900	
	0,2 s (N)	480		1000		2090	
Geometrical moments of inertia of aluminium profile							
	I_x mm ⁴ (X-/Z-Achse)	0,31x10 ⁵ / 0,41x10 ⁵		1,12x10 ⁵ / 1,32x10 ⁵		4,06x10 ⁵ / 6,79x10 ⁵	
	I_y mm ⁴ (X-/Z-Achse)	1,70x10 ⁵ / 0,40x10 ⁵		7,20x10 ⁵ / 1,34x10 ⁵		24,3x10 ⁵ / 6,97x10 ⁵	
	E-Modulus N/mm ²	70000		70000		70000	

For life-time calculation of rollers use our homepage.

Driving torque:

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

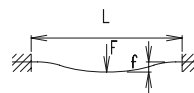
$$P_o = \frac{M_o \cdot n}{9550}$$

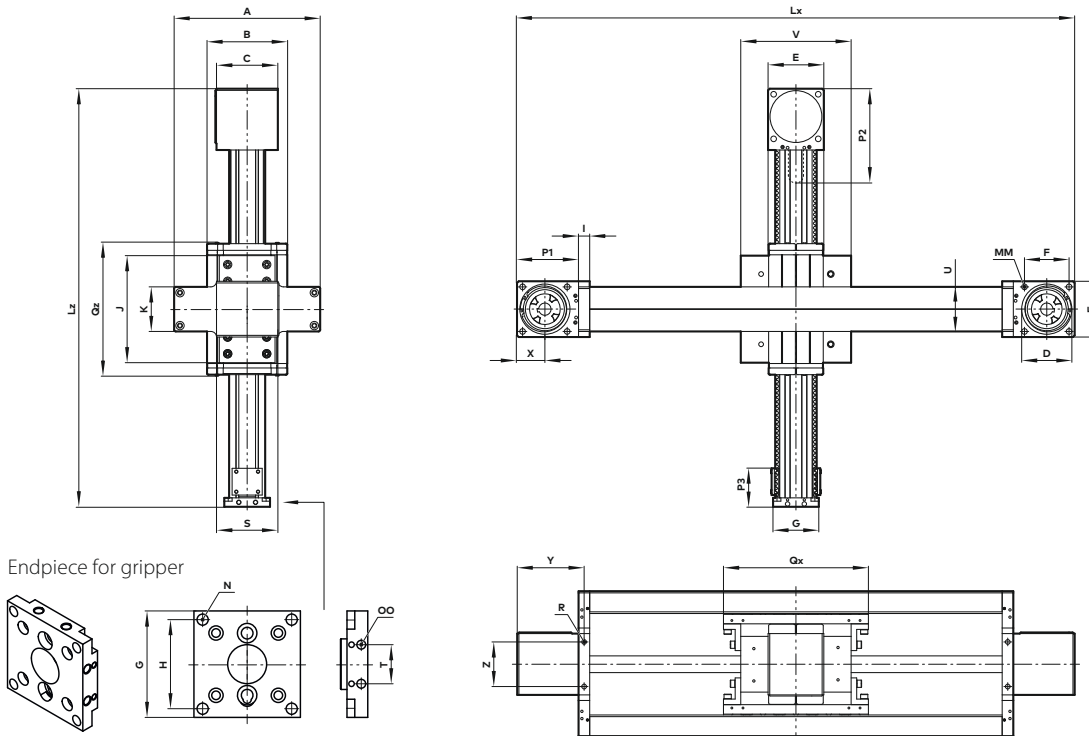
- F = force (N)
- P = pulley action perimeter (mm)
- S_i = safety factor 1,2 ... 2
- M_n = no-load torque (Nm)
- n = rpm pulley (min⁻¹)
- M_o = driving torque (Nm)
- P_o = motor power (KW)

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)





Size	X-Axis	
	Profile	moving mass
30	2 x UL40	4,5 kg
40	2 x UL60	7,0 kg
60	2 X UL80	19,0 kg

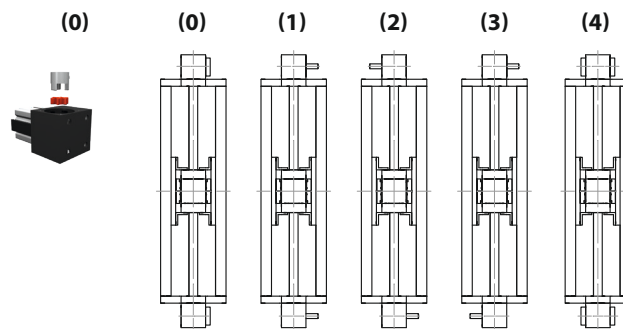
Size	Z-Axis	
	Profile	moving mass
30	EL30	1,0 kg
40	EL40	2,4 kg
60	EL60	6,5 kg

Size	Basic length		A	B	C	D -0,05	E	F	G	H	I	J	K	MM for	N Ø	OO for	P1	P2	P3	Qx	Qz	Basic weight	Weight per 100 mm X-/Z-axis
	Lx	Lz																					
ELZI 30	290	280	137	70	51	47	52	42	42	35	15	114	40	M6	4,2	M6	55	95	40	140	144	5,20 kg	0,32/0,18 kg
ELZI 40	380	310	187	100	70	55	70	55	58	47	20	125	60	M6	6,6	M6	70	100	45	194	165	11,5 kg	0,68/0,3 kg
ELZI 60	525	460	262	144	110	90	100	80	82	69	20	192	80	M10	8,5	M8	110	155	70	260	235	33,0 kg	1,13/0,67 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	R	S	T	U	V	X	Y	Z
ELZI 30	M6	60	-	40	146	26,5	62,5	35
ELZI 40	M8	70	18	60	194	33	80	50
ELZI 60	M10	100	30	80	260	50	120	80

- 0** Drive version:



Belt table:

Code No.	Size	Belt	mm/rev.	Number of teeth
0 3	30	5M15	120	24
0 4	40	5M25	160	32
0 6	60	8M30	224	28

Shaft dimensions / Coupling claw:

Size	Shaft ø h6 x length	Key	Coupling
30	10x27	3x3x25	9
40	14x35	5x5x28	14
60	22x45	6x6x35	24

ELZI 40 0 0 0 0 0 4 1 1500 — X-Axis Basic length + stroke = total length
ELZI 40 1 0 0 0 0 4 1 700 — Z-Axes Basic length + stroke = total length

Pos. 1 2 3 4 5 6 7

Sample ordering code:
 ELZI 40, with standard body profile, coupling claw on one side, stroke X = 1120 / Z = 410mm