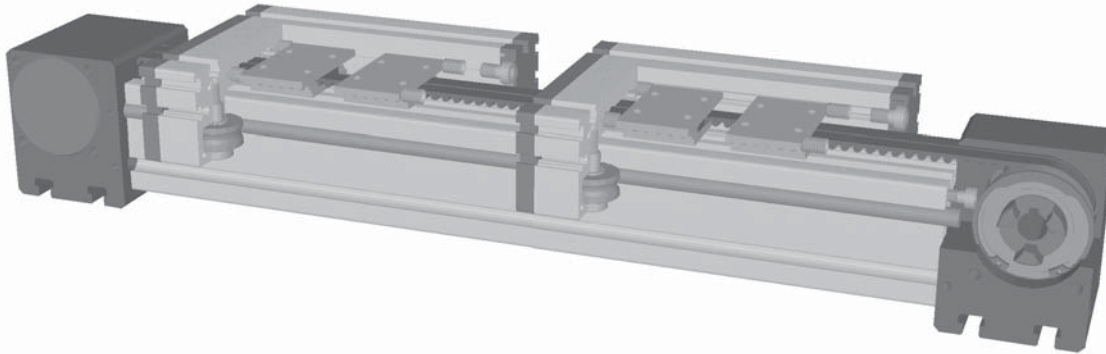


Modular Linear Actuator ELZZ 60, 80 80S, 100, 125

Belt Drive with Separately Driven Carriages

3



Function:

Same functions as ELZ but each carriage can be moved separately by its own belt drive. This unit has independent pulleys and belt for each carriage.

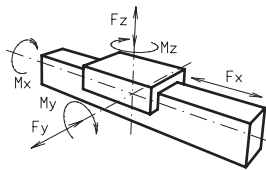
Fitting length: As required. Max. length 4,000 mm single/extrusion.

Carriage mounting: T-slots

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

Belt type: HTD with steel reinforcement minimizes backlash on reversal,

Forces and torques	Size	ELZZ 60		ELZZ 80		ELZZ 80 S		ELZZ 100		ELZZ 125	
	Forces/Torques	static	dynamic	static	dynamic	static	dynamic	static	dynamic	static	dynamic
F_x (N)		298	250	679	500	679	500	1210	1100	1900	1800
F_y (N)		3000	2000	3000	2000	4600	3600	8000	6500	12000	9000
F_z (N)		1700	1100	1700	1100	3000	2600	3600	2200	6000	4500
M_x (Nm)		67	43	90	55	170	140	300	230	600	450
M_y (Nm)		90	70	110	80	270	230	400	270	750	600
M_z (Nm)		120	100	150	120	300	220	750	500	1350	1150
No-load torque											
Nm		0,6		0,9		1,2		1,4		1,8	
Speed											
(m/sec) max		5		6		8		10		10	
Tensile force											
permanent (N)		298		679		679		1210		1900	
0,2 sec (N)		333		746		746		1331		2090	
Geometrical moments of inertia of aluminium profile											
I_x mm ⁴		6,79x10 ⁵		18,99x10 ⁵		18,99x10 ⁵		44,4x10 ⁵		101,5x10 ⁵	
I_y mm ⁴		6,97x10 ⁵		18,97x10 ⁵		18,97x10 ⁵		44,8x10 ⁵		101,5x10 ⁵	
E-Modulus N/mm ²		70000		70000		70000		70000		70000	



Formula: ELZZ

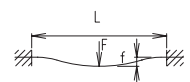
Driving torque:

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

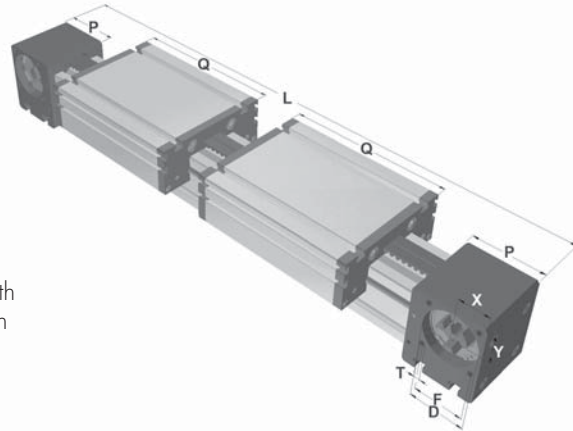
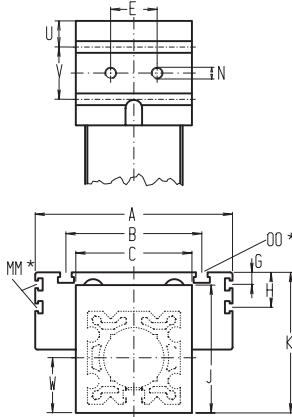
$$P_o = \frac{M_o \cdot n}{9550}$$

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

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



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



3



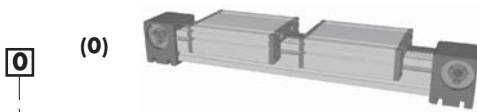
*For T-nuts refer to the accessory section

Size	Basic length L	A	B	C	D	E	F	G	H	J	K	MM	N	OO	P	Q	T	U	V	W	X	Y	Basic weight	Additional Weight per 100 mm
ELZZ 60	460	144	96	80	47	30	42	-	-	82	90	-	M8	M8	59	168	M6	14	30	41	27	26	7,4 kg	0,62 kg
ELZZ 80	570	170	117	100	68	40	60	10	30	110	121	M6	M10	M10	90	194	M8	22,5	45	51	39	38	12,8 kg	1,00 kg
ELZZ 80S	610	190	126	100	68	40	60	12,5	30	110	122	M6	M10	M8	90	214	M8	22,5	45	51	39	38	14,8 kg	1,00 kg
ELZZ 100	830	230	155	130	90	50	80	-	30	135	155	M10	M12	M10	110	300	M10	64	50	65	50	50	33,0 kg	1,60 kg
ELZZ 125	990	295	200	160	110	60	100	-	30	167	191	M10	M12	M12	130	365	M10	40	50	82	60	60	52,0 kg	2,10 kg

Choice of guide body profile:

- 0** (0) standard (1) stainless guide rods (2) stainless guide rods and screws (3) stainless guide rods, rollers and screws

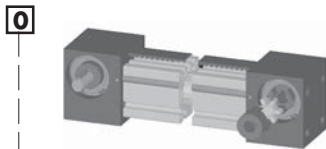
Choice of carriages:



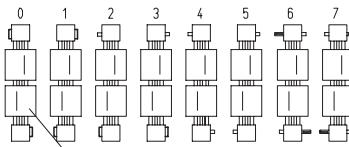
For standard carriage length see 'Q' in table. The carriages can be provided in any non-standard length on request; the longer the carriage, the greater the load capacity.

Top and bottom carriages are rigidly joined, thus enabling high loads to be applied. This increases the basic length by 1.2-1.6. For thickness of jointing plate refer to accessory section.

Coupling - shaft mounting:



The standard version is supplied without shaft.



connected with the left belt

- Jaw coupling on one side
- Standard-shaft
- Short shaft

Belt table

Code No.	Size	Belt	mm/rev.	Number of teeth
0 2	60	5M09	130	26
0 5	80 (S)	8M12	192	24
0 6	100	8M20	256	32
0 7	125	8M30	304	38

Short Shaft dimensions

Size	Shaft \varnothing h6 x length	Key
60	10 x 27	3x3x25
80 (S)	14 x 35	5x5x28
100	18 x 45	6x6x40
125	22 x 45	6x6x40

Short Shaft dimensions

Size	Shaft \varnothing h6 x length	Key
60	14 x 35	5x5x28
80 (S)	18 x 45	6x6x40
100	22 x 45	6x6x40
125	30 x 55	8x7x40

Basic length + stroke = total length

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

Sample ordering code:
ELZZ 60 with standard body profile, standard carriage and jaw coupling on one side, 1040 mm stroke