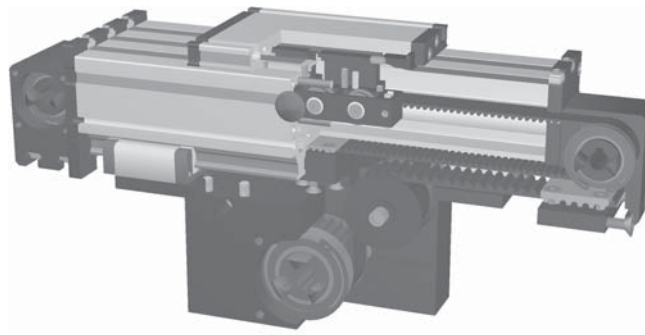


Modular Linear Actuator DLZT 120, 160, 200

Telescopic Belt Drive



Function:

This unit consists of a rectangular aluminium hollow section with internal guide rods and an outside profile rail guide. The rail guide carriage and the roller guided carriage are running in opposite directions. The pulleys include maintenance-free ball bearings. The belt is tensioned by a tensioning device in the carriage. The other fixed belt is tensioned by a simple device in the bearing blocks. The carriage with the drive block (with motor) is screwed to the crosshead. A T-slot profile is screwed to the carriage as an extension arm which can be adjusted to any length (see functional diagram in chapter 3).

Fitting length: As required. Max. length 3,000 mm single/extrusion.

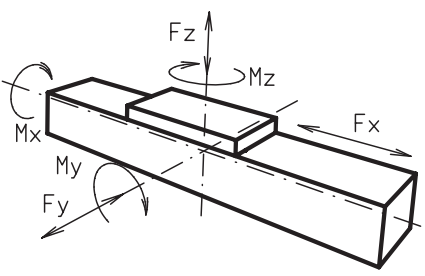
Unit mounting: T-slots in the carriage, extension arm

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

Carriage support: In the standard version, the carriage runs on 8 rollers which can be adjusted and serviced at a central servicing position. For longer carriages the number of rollers can be increased.



6

Forces and Torques	Size	120		160		200	
	Forces/Torques	static	dynamic	static	dynamic	static	dynamic
	F_x (N)	825	660	TBD	TBD	TBD	TBD
	F_y (N)	1100	900	TBD	TBD	TBD	TBD
	F_z (N)	1250	1000	TBD	TBD	TBD	TBD
	M_x (Nm)	150	125	TBD	TBD	TBD	TBD
	M_y (Nm)	140	120	TBD	TBD	TBD	TBD
	M_z (Nm)	100	90	TBD	TBD	TBD	TBD
	No-load torque						
Nm	6		TBD		TBD		
Speed							
(m/sec) max	4		TBD		TBD		
Tensile force							
permanent (N)	825		TBD		TBD		
0,2 sec (N)	1000		TBD		TBD		
Geometrical moments of inertia of aluminium profile							
I_x mm ⁴	$6,6 \times 10^5$		TBD		TBD		
I_y mm ⁴	$38,6 \times 10^5$		TBD		TBD		
Elastic modulus N/mm ²	70000		TBD		TBD		

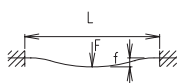
Formula: DLZT

Driving torque:

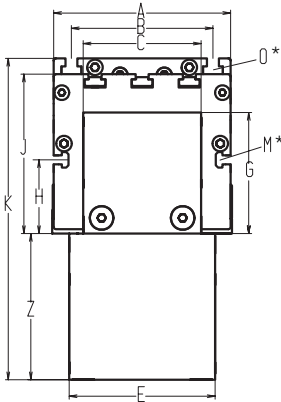
$$M_o = \frac{F \cdot P \cdot S}{2000 \cdot \pi} + M_{leer}$$

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

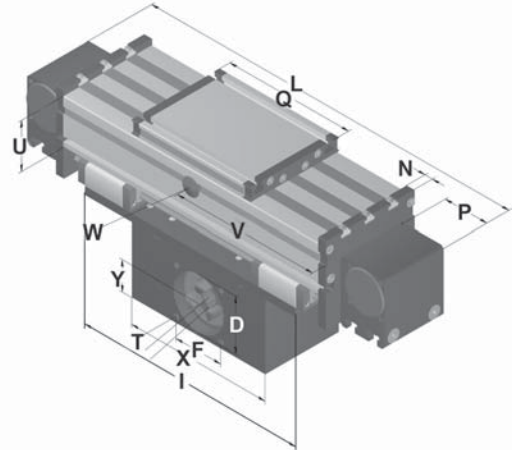
F = force (N)
 P = pulley action perimeter (mm)
 S = safety factor 1,2 ... 2
 M_{leer} = no-load torque (Nm)
 n = rpm pulley (min⁻¹)
 M_o = driving torque (Nm)
 P_o = motor power (KW)

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


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



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



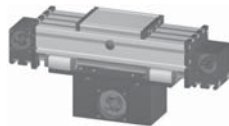
*For T-nuts refer to accessory section

W = servicing position

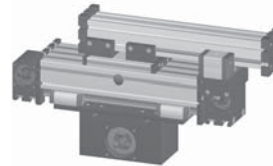
Size	Basic length L	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	Q	T	U	X	Y	Z	Basic weight	Additional Weight per 100 mm
DLZT 120	460	120	96	80	68	100	60	82	50	284	108	218	M 5	10	M 6	59	156	M 8	60	180	39	100	TBD	TBD
DLZT 160	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
DLZT 200	460	120	96	80	68	100	60	82	50	284	108	218	M 5	10	M 6	59	156	M 8	60	180	39	100	TBD	TBD

Choice of guide body profile:

0 (0)



(1)

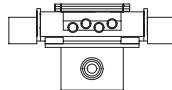


Stainless guide body profile upon request.

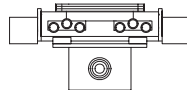
Choice of carriages:

0

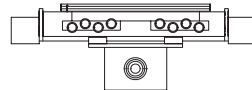
(0)



(1)



(2)



Size	Version 0		Version 1		Version 2	
	Q	L	Q	L	Q	L
120	156	460	>236	>540	>316	>620
160	TBD	TBD	TBD	TBD	TBD	TBD
200	TBD	TBD	TBD	TBD	TBD	TBD

Coupling - Selection of shaft mounting:

0



1

2

3

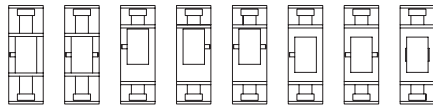
4

5

6

7

8



9 is as 0, but with jaw couplings on both sides.

The standard version is supplied without shaft. A shaft can be retrofitted by inserting in the pulley bore and securing with 2 locking rings or tension sets (size 200).

Belt table

Code No.	Size	Belt	mm/rev.	Number of teeth
0 7	120	8M30	192	24
TBD	TBD	TBD	TBD	TBD
TBD	TBD	TBD	TBD	TBD

Shaft dimensions

Size	Shaft ø h6 x length	Key
120	22 x 45	6x6x40
160	TBD	TBD
200	TBD	TBD

Basic length + stroke = total length

DLZT 120 6 0 0 0 0 7 2 01500

Pos. 1 2 3 4 5 6 7

Inductive proximity switch sets, which can be mounted inside of the square profile, are available as accessories. Coupling and a special plug are mounted from the outside. See accessory section.



Sample ordering code:

DLZT 120, standard body profile, standard carriage, jaw coupling at one side, 1040 mm stroke.