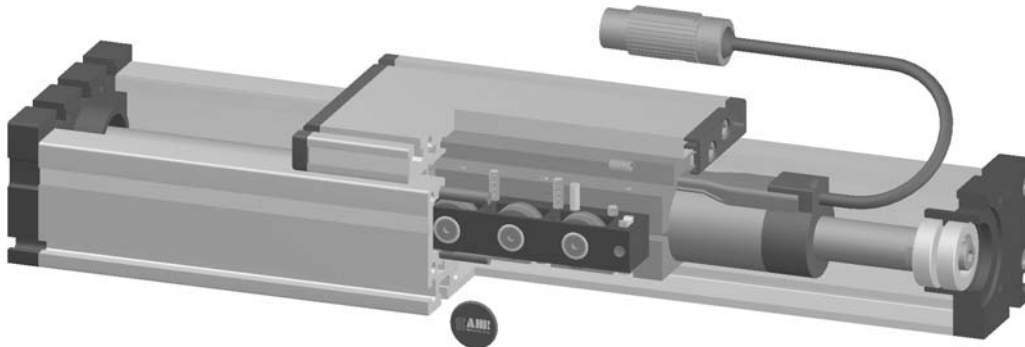


Positioning system DLP 120, 160

Specifications

Linear motor drive



Function:

The unit consists of a rectangular aluminium profile with two integrated roller guides. The unit DLP is based on the principle of a linear motor. The stator rod (secondary part), which is mounted at the bearing blocks at the end of the unit, is fitted with permanent magnets. The actuator (primary part) is mounted under the carriage and drives the carriage directly. It has got an AC winding, a positioning transmitter and heat detectors against overcharge. Several carriages (primary parts) can be driven independently on one guiding profile.

Fitting position: As required

Carriage mounting: By T-slots.

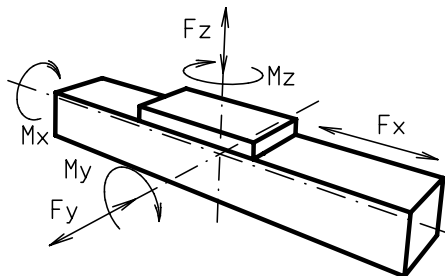
Unit mounting: By T-slots and mounting sets. The linear axis can be combined with any T-slot profile.

Carriage support: In the standard version, the carriage runs on 8 rollers which can be adjusted and serviced at a central servicing position. Repeatability and accuracy $\pm 0,1$ mm.

9.1



Forces and torques	Size	120		160	
	Forces/Torques	static	dynamic	static	dynamic
F_y (N)		1100	900	3000	2000
F_z (N)		1250	1000	3500	2800
M_x (Nm)		150	125	400	320
M_y (Nm)		140	120	360	300
M_z (Nm)		100	90	180	150
All forces and torques related to the following:					
existing values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_z}{F_{z_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1$					
values of table					
Moving force without current					
N	20				
Motor size	1	2	1		
Motor	P01-37x120	P01-37x240	P01-48x240		
Speed					
max. (m/sec)	4,0	3,1	1,8 / 3,1		
Motor specifications F_x for					
permanent (N)	72V	72V	72V		
Max. (N) (1 sek.)	30	55	150		
	160	204	580 / 345		
Geometrical moments of inertia of aluminium profile					
I_x mm ⁴	6,6x10 ⁵		22,2x10 ⁵		
I_y mm ⁴	38,6x10 ⁵		122,8x10 ⁵		
Elastic modulus N/mm ²	70000		70000		



For life-time calculation of rollers use our CD-ROM or homepage!

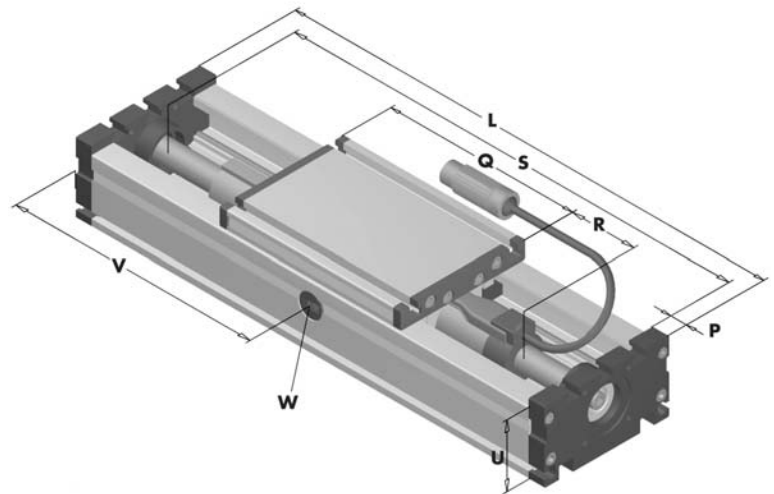
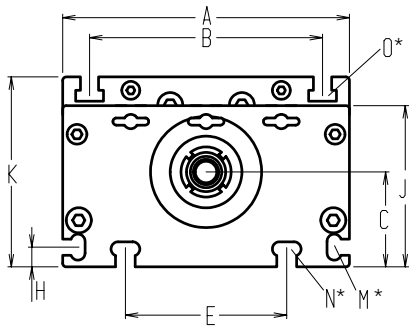
Formula: DLP

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

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

Positioning system DLP 120, 160

Dimensions (mm)



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

*For slide-nuts refer to chapter 2.2 page 2 $V = Q + 100 \text{ mm}$ $W = \text{servicing position}$

Size □	A	B	C	E	H	J	K	M for	N for	O for	P	R	Q Motor size 1 / 2	U
DLP 120	120	96	39	78	10	68	79	M 5	M 6	M 6	29	71/191	156 / 156	60
DLP 160	160	130	53	90	11	90	106	M 6	M 8	M 8	30	89,5	200	80

380+80 Stroke

Stainless version upon request.

Motor size
1

DLP 120	Motor size 1 (P01-37x120)									
Motor length	227									
Stroke S*	280+80	380+80	480+80	580+80	680+80	780+80	980+80	1180+80	1380+80	
Length L	651	751	851	951	1051	1151	1351	1551	1751	
Carriage weight with actuator (Kg)	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	
Total weight (Kg)	8,2	9,1	9,9	10,8	11,7	12,6	14,4	16,1	17,9	
DLP 120	Motor size 2 (P01-37x240)									
Motor length	347									
Stroke S*	160+80	260+80	360+80	460+80	560+80	660+80	860+80	1060+80	1260+80	
Length L	651	751	851	951	1051	1151	1351	1551	1751	
Carriage weight with actuator (Kg)	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	
Total weight (Kg)	9,2	10,1	11,0	11,9	12,8	13,7	15,4	17,2	19,0	
DLP 160	Motor size 1 (P01-48x240)									
Motor length	290									
Stroke S*	180+80	300+80	390+80	480+80	600+80	690+80	900+80	1080+80	1290+80	
Length L	620	740	830	920	1040	1130	1340	1520	1730	
Carriage weight with actuator (Kg)	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	
Total weight (Kg)	17,9	20,9	21,5	23,1	25,2	26,8	30,5	33,6	37,2	

S* = working way + overrun limit switcher
80mm overrun with reduced force

For standard carriage length see 'Q' in table.

The carriages can be delivered in any non-standard length upon request; the longer the carriage, the greater the load capacity. Digital - controllers, linear - encoder and power supplies refer to chapter 9.1 page 12 - 14.

DLP 120 380+80 1

Pos. 1 2

Sample ordering code:

DLP120, standard body profile, motor size 1, 380+80 mm stroke

