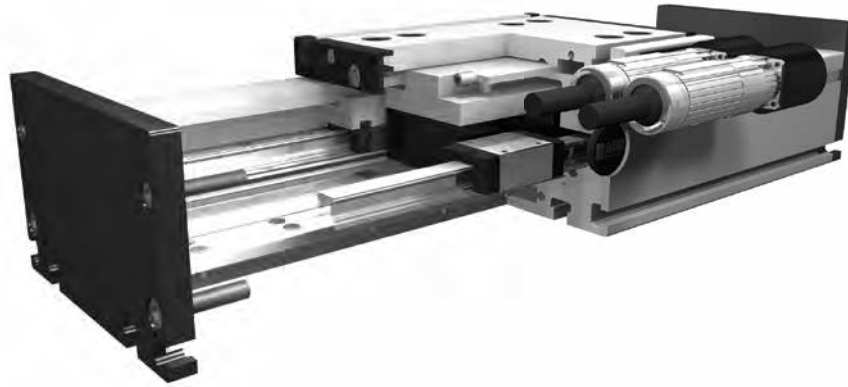


Positioning system DSM 120, 160, 200

Linear motor drive



Function:

This unit consists of a rectangular aluminium profile with 2 integrated rail guidance. The linear motor DSM unit is based on the principle of a linear, synchronous AC motor.

The guiding profile is fitted with permanent magnets as stator (secondary part). The carriage is fitted with the actuator (primary part). The magnetic attraction causes a force between carriage and guiding profile also in the absence of current. This force can be used for the initial tension of the bearings. Several carriages (primary parts) can be driven independently on one guiding profile.

Fitting position: As required. Max. length 6.000 mm without joints.

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 4 runner blocks which can be serviced at a central servicing position. For longer carriages the number of runner blocks can be increased.
Repeatability ± 0,05mm mm. Repeated accuracy max. ± 0,05mm bis 4.000 mm, ± 0,1 >4.000 mm.

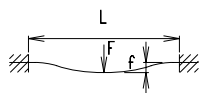
10.1

Forces and torques	Size	120		160			200		
	Motor size	1	2	1	2	3	1	2	3
<p> F_z = external force by load F_a = magnetic attraction force F_{zm} = maximum force in consideration of motor power $F_{zm} = F_z + F_a$ </p>	permitted dyn.Forces*	10000 km		10000 km			10000 km		
	F_a (N)	600	1200	1200	1800	5500	3600	5500	11000
	F_{zm} (N)	820	1640	1590	2800	7030	4990	7640	13860
	F_z (N)	650	500	1775	1775	3550	4092	4092	8184
	M_x (Nm)	35	32	160	128	153	357	231	462
	M_y (Nm)	40	58	373	351	532	769	556	1540
	M_z (Nm)	40	57	222	261	328	585	654	906
	Number of runner blocks	6	8	4	4	8	4	4	8
All forces and torques related to the following:									
existing values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_{zm}}{F_{zm_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1,5$									
table values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_{zm}}{F_{zm_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1,5$									
Motor specifications F_x									
Motor size	1	2	1	2	3	1	2	3	
Carriage weight (kg)	1,4	2,7	4,8	5,3	7,1	10,9	11,4	16,9	
Weight primary part (kg)	0,7	1,4	1,4	3,7	5,2	4,5	6,4	8,4	
permanent (N)	61	115	115	271	406	383	574	766	
Max. (N) 1s	162	323	323	607	911	868	1301	1735	
Moving force without current									
N	15	15	30	30	60	40	40	80	
Geometrical moments of inertia of aluminium profile									
I_x mm ⁴	5,60 x10 ⁵		2,13 x10 ⁶			4,81 x10 ⁶			
I_y mm ⁴	34,19 x10 ⁵		12,3 x10 ⁶			26,0 x10 ⁶			
Elastic modulus N/mm ²	70000		70000			70000			

* referred to life-time

Deflection:

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

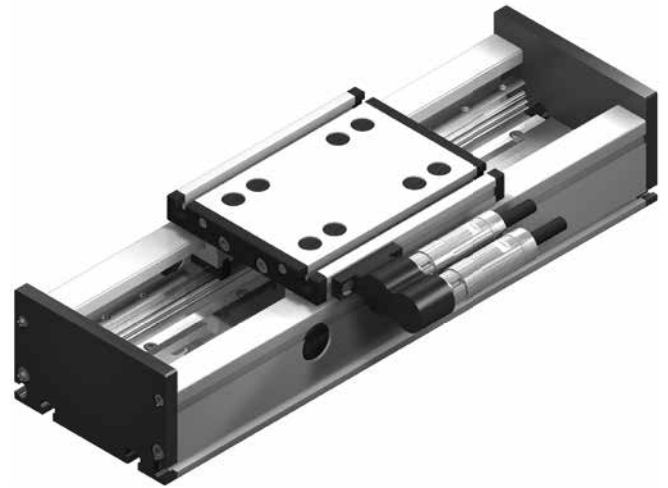
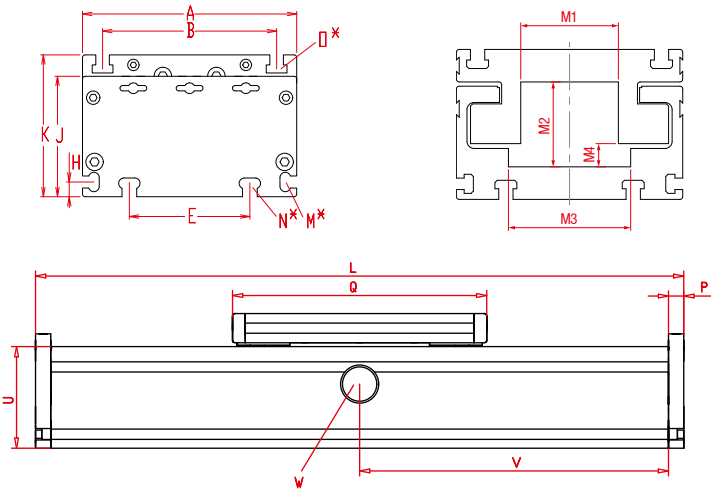


- f = deflection (mm)
- F = load (N)
- L = free length (mm)
- E = elastic modulus 70000 (N/mm²)
- I = second moment of area (mm⁴)

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Positioning system DSM 120, 160, 200

Dimensions (mm)



$V = Q + 100 \text{ mm}$

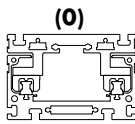
W = servicing position

*For slide nuts refer to chapter 2.2 page 2

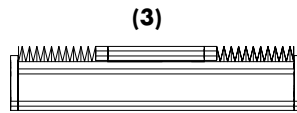
Increasing the carriage length will increase the basic length by the same amount.

Size □	Basic length L	A	B	E	H	J	K	M for	N for	O for	P	U	Basic weight Motor size 1/2/3	Weight per 100 mm Motor size 1/2/3
DSM 120	Q + 30	120	96	78	10	68	79	M 5	M 6	M 6	10	60	4,8/6,9 kg	1,0/1,0
DSM 160	Q + 30	160	130	90	11	90	106	M 6	M 8	M 8	12	80	12,4/16,7/22,6 kg	1,7/2,0/2,0 kg
DSM 200	Q + 35	200	160	140	15	110	129	M 8	M 10	M 10	15	100	30,0 /33,0 /44,2kg	3,1/3,1/3,1 kg

0 Choice of guide body profile:



without internal profile and cover bands



with bellows

Size	M1	M2	M3	M4
DS 120	52	45	64	13
DS 160	70	60	85	17
DS 200	84	77	100	15

Helper table for provided motors

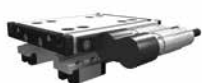
Stainless version upon request.

1 Measurement system:

- (1) Measurement system LE100 5V Resolution 0.05
- (2) Measurement system LE100 10,5-30V Resolution 0.05
- (3) Hall sensor
- (4) Measurement system provided by customer

1 Plug:

- (1) Plug Pos. 1
- (2) Plug Pos. 2
- (3) open unconnected cable end



1 Motor size:

- (1) Motor size 1 with Q_1
 - (2) Motor size 2 with Q_2
 - (3) Motor size 3 with Q_3
 - (4) Supply with Q_1^*
 - (5) Supply with Q_2^*
 - (6) Supply with Q_3^*
- * = provided by customer

Dimensioning criteria for motor output						
	$I_p \square$	$b_p \square$	$h_{ps} \square$	Q_1	Q_2	Q_3
120	Q - 70	55	38	196	276	-
160	Q - 70	71	50	316	360	461
200	Q - 70	85	62	410	444	610

I_p = length primary part; b_p = width primary part;
 h_{ps} = height primary part + height secondary part
 + interspaces primary-/secondary part

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. For linear encoder refer to chapter 9.1.

1500 Basic length + stroke = total length

DSM 160 0 0 1 1 0 0 1 01500

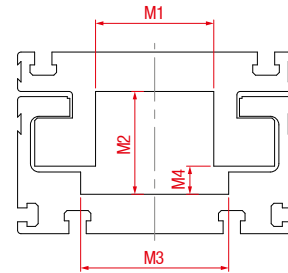
Pos. 1 2 3 4 5 6 7

Sample ordering code:

DSM160, Linear motor, standard body profile, Measurement system LE100 5V, Plug Pos. 1, motor size 1, 1154 mm stroke

Positioning system DSM 160P, 200P

Linear motor drive



Function:

This unit consists of a rectangular aluminium profile with 2 integrated rail guidance. The linear motor DSM unit is based on the principle of a linear, synchronous AC motor.

The guiding profile is fitted with permanent magnets as stator (secondary part). The carriage is fitted with the actuator (primary part). The magnetic attraction causes a force between carriage and guiding profile also in the absence of current. This force can be used for the initial tension of the bearings. Several carriages (primary parts) can be driven independently on one guiding profile. A special design of the carriage geometry results in the guiding profile being covered. This prevents small parts from falling into the system, so that clean-room applications are possible.

Fitting position:

As required. Max. length 3.000 mm without joints.

Carriage mounting:

By threaded holes.

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 4 runner blocks which can be serviced at a central servicing position. For longer carriages the number of runner blocks can be increased. Repeatability ± 0,05mm mm. Repeated accuracy max. ± 0,05mm up to 3.000 mm

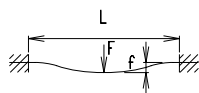
10.1

Forces and torques	Size	160			200			
	Motor size	1	2	3	1	2	3	
<p> F_z = external force by load F_o = magnetic attraction force F_{zm} = maximum force in consideration of motor power $F_{zm} = F_z + F_o$ </p>	permitted dyn.Forces*	10000 km			10000 km			
	F_n (N)	1200	1800	5500	3600	5500	11000	
	F_{zm} (N)	1590	2800	7030	4990	7640	13860	
	F_z (N)	1775	1775	3550	4092	4092	8184	
	M_x (Nm)	160	128	153	357	231	462	
	M_y (Nm)	373	351	532	769	556	1540	
	M_z (Nm)	222	261	328	585	654	906	
	Number of runner blocks	4	4	8	4	4	8	
	All forces and torques related to the following:							
	existing values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_{zm}}{F_{zm_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1,5$							
table values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_{zm}}{F_{zm_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1,5$								
Motor specifications Fx								
Motor size	1	2	3	1	2	3		
Carriage weight (kg)	4,8	5,3	7,1	10,9	11,4	16,9		
Weight primary part (kg)	1,4	3,7	5,2	4,5	6,4	8,4		
permanent (N)	115	271	406	383	574	766		
Max. (N) 1s	323	607	911	868	1301	1735		
Moving force without current								
N	30	30	60	40	40	80		
Geometrical moments of inertia of aluminium profile								
I_x mm ⁴	2,13 x10 ⁶			4,81 x10 ⁶				
I_y mm ⁴	12,3 x10 ⁶			26,0 x10 ⁶				
Elastic modulus N/mm ²	70000			70000				

* referred to life-time

Deflection:

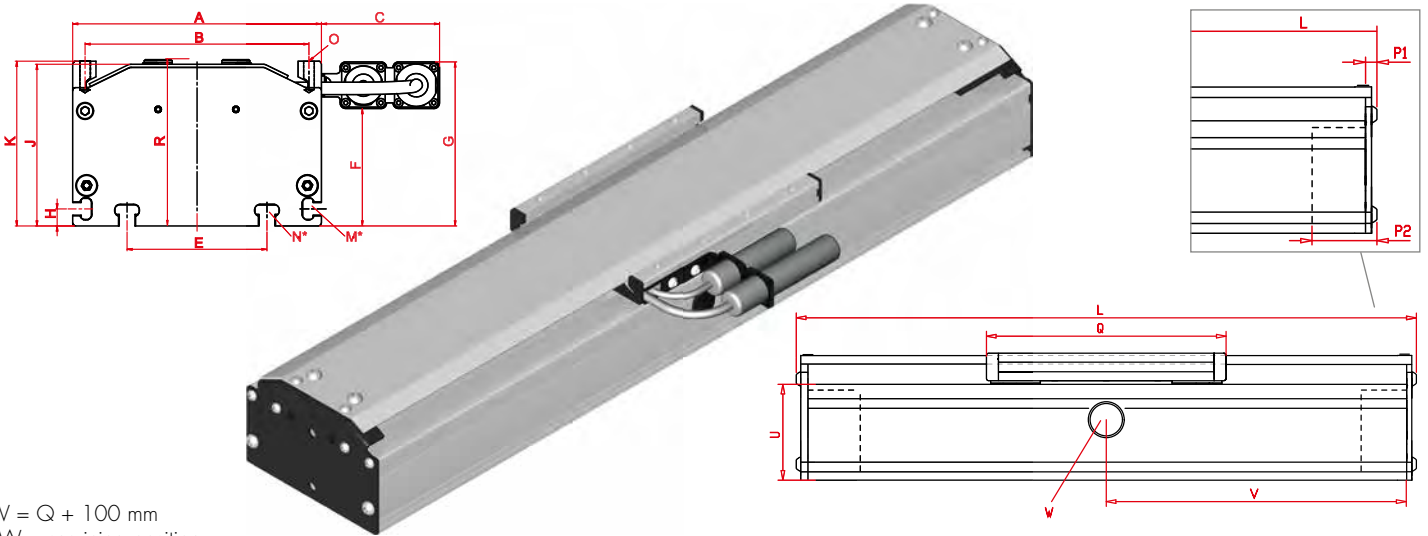
$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$



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

Positioning system DSM 160P, 200P

Dimensions (mm)



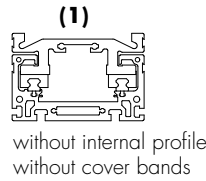
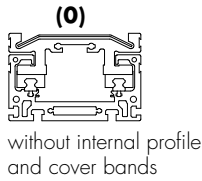
V = Q + 100 mm
W = servicing position

*For slide nuts refer to chapter 2.2 page 2

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

Size □	Basic length L	A	B	C	E	F	G	H	J	K	M for	N for	O for	R	P1	P2	U	Basic weight Motor size 1/2/3	Weight per 100mm Motor size 1/2/3
DSM 160P	Q + 108	160	144	76	90	76	106	11	104	106	M 6	M 8	M 8	107	9	57	80	12,1/15/20	1,7/2,1/2,1
DSM 200P	Q + 126	200	182	76	140	96	126	15	128	129	M 8	M 10	M 10	130	10	62	100	26,1/29,6/36,8	2,8/2,8/2,8

0 Choice of guide body profile:



Size	M1	M2	M3	M4
DS 120	52	45	64	13
DS 160	70	60	85	17
DS 200	84	77	100	15

Helper table for provided motors

Stainless version upon request.

1 Measurement system:

- (1) Measurement system LE100/1 5V Resolution 0.05
- (2) Measurement system LE100/1 10,5-30V Resolution 0.05
- (3) Hall sensor
- (4) Measurement system provided by customer

1 Plug:



1 Motor size:

- (1) Motor size 1 with Q₁
 - (2) Motor size 2 with Q₂
 - (3) Motor size 3 with Q₃
 - (4) Supply with Q₁*
 - (5) Supply with Q₂*
 - (6) Supply with Q₃*
- * = provided by customer

Dimensioning criteria for motor output						
	l _p □	b _p □	h _{ps} □	Q ₁	Q ₂	Q ₃
160	Q-70	71	50	316	360	461
200	Q-70	85	62	410	444	610

l_p = length primary part; b_p = width primary part;
h_{ps} = height primary part + height secondary part + interspaces primary-/secondary part

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. For linear encoder refer to chapter 9.1.

1500 Basic length + stroke = total length

DSM 160P 0 0 1 1 0 0 1 01500

Pos. 1 2 3 4 5 6 7

Sample ordering code:

DSM160P, Linear motor, standard body profile, Measurement system LE100/1 5V, Plug Pos. 1, motor size 1, 1094mm stroke


Linear system ALLM 203, 204

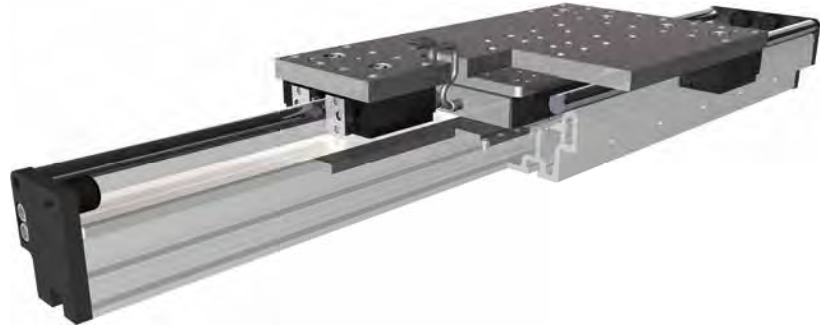
LINEAR MOTOR DRIVE

 ROLLER GUIDE

 HEAVY LOAD

 HIGH LOAD CAPACITY

 LINEAR MOTOR



Function:

This unit consists of an aluminium profile with hardened steel spindles mounted on top of the profile. The carriage, which has internal linear ball bearings that can be adjusted free of play, moves along the unit. The linear-motor ALLM unit is based on the principle of a linear, synchronous AC motor. The guiding profile is fitted with permanent magnets as stator. The carriage is fitted with the actuator. The magnetic attraction causes a force between carriage and guiding profile also in the absence of current. This force can be used for the initial tension of the bearings. Several carriages can be driven independently on one guiding profile.

Fitting position:

As required. Max. length 5.000 mm without joints.

Carriage mounting:

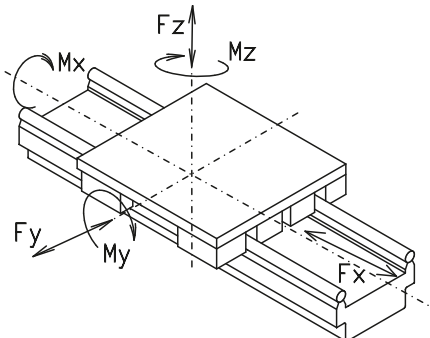
By tapped holes.

Unit mounting:

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

Carriage support:

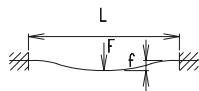
In the standard version, the carriage runs on 8 rollers which can be adjusted and serviced. For longer carriages the number of rollers can be increased. Repeatability $\pm 0,05$ mm.

Forces and torques	Size		ALLM 203		ALLM 204		
	Forces/Torques		static	dynamic	static	dynamic	
	F_y (N)		23000	18400	30000	24000	
	F_z (N)		11000	8800	16250	13000	
	M_x (Nm)		1200	950	1870	1500	
	M_y (Nm) Motor 1		3060	2450	5000	4000	
	M_z (Nm) Motor 1		6250	5100	9500	7600	
	M_y (Nm) Motor 2		4010	3210	6520	5220	
	M_z (Nm) Motor 2		8340	6670	12180	9750	
	All forces and torques related to the following:						
	existing values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_z}{F_{z_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1$						
	table values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_z}{F_{z_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1$						
Transverse force without current							
N		35		45			
Moved mass (g) without motor		43	48	55	62		
Speed							
Motor size / weight (kg)		1 / 17,2	2 / 25,5	1 / 17,2	2 / 25,5		
(m/s) max		8	8	8	8		
Thrust							
permanent (N)		2600	3900	2600	3900		
Max. (N)		4000	6010	4000	6010		
Geometrical moments of inertia of aluminium profile							
I_x mm ⁴		2,26 x 10 ⁷		2,98 x 10 ⁷			
I_y mm ⁴		8,75 x 10 ⁷		10,22 x 10 ⁷			
Elastic modulus N/mm ²		70000		70000			

For life-time calculation of rollers use our homepage.

Deflection:

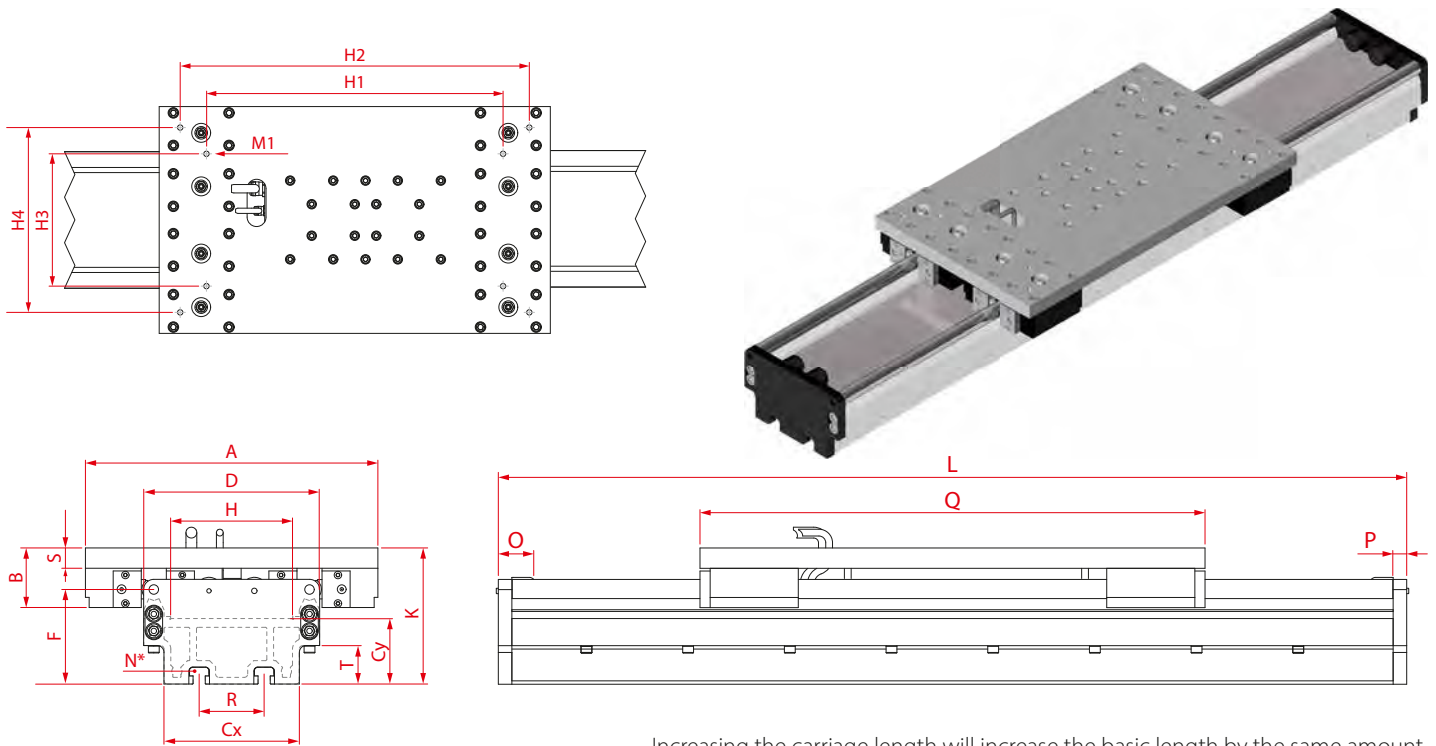
$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$



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

Linear system ALLM 203, 204

Dimensions (mm)



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

Size	Basic length L motor size	A	B	Cx	Cy	D	F	H	K	M1	N for	O	P	R	S	T	Basic weight motor size	Weight per 100 mm
ALLM 203	865	432	88	200	97	260	139,6	180,5	200,6	M12	M16	60	20	96	30	57	110	5,6 kg
ALLM 204	925	480	102,5	200	97	270	139,6	180,5	217,6	M12	M16	60	20	96	30	57	136	6,5 kg

Carriage	Q motor size	H1	H2	H3	H4
ALLM 203	745	565	665	252	352

3 Guide rod size:
(3) Ø=30 (4) Ø=40

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)

1 Measurement system:
(1) Measurement system LE100 5V Resolution 0.05 (2) Measurement system LE100 10,5-30V Resolution 0.05 (3) Hall sensor (4) Measurement system provided by customer

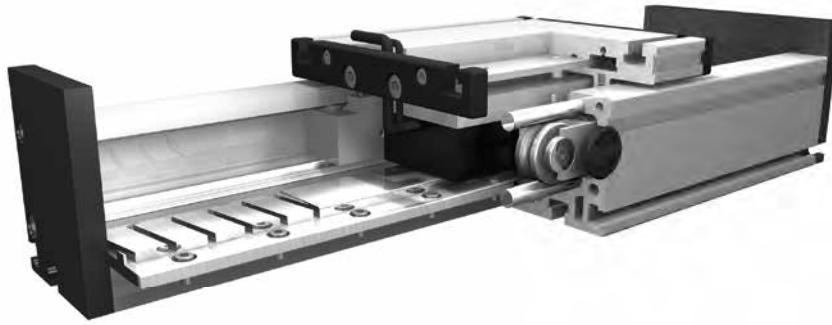
0 Motor size:
(0) Motor size 1 (2) without Motor, for Motorsize 1

ALLM 20 3 0 0 1 0 0 0 0 2000 — Basic length + stroke = total length

Sample ordering code:
ALLM203, guide rods 30 mm, standard body profile, Measurement system LE100 5V, motor size 1, 1135 mm stroke.

Positioning system DLM 120, 160, 200

Linear motor drive



Function:

This unit consists of a rectangular aluminium profile with 2 integrated roller guides. The linear motor DLM unit is based on the principle of a linear, synchronous AC motor.

The guiding profile is fitted with permanent magnets as stator (secondary part). The carriage is fitted with the actuator (primary part). The magnetic attraction causes a force between carriage and guiding profile also in the absence of current. This force can be used for the initial tension of the bearings. Several carriages (primary parts) can be driven independently on one guiding profile.

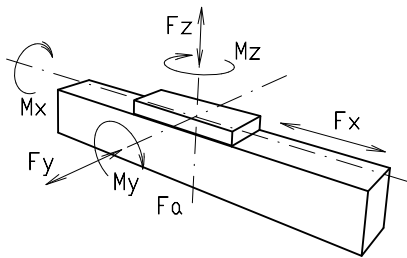
Fitting position: As required. Max. length 6.000 mm without joints.

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 10 or 12 rollers which can be adjusted and serviced at a central servicing position. For longer carriages the number of rollers can be increased. Repeatability $\pm 0,05$ mm. Repeated accuracy max. $\pm 0,05$ bis 4.000 mm, $\pm 0,1$ >4.000 mm.

Forces and torques



F_z = external force by load

F_a = magnetic attraction force

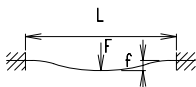
F_{zm} = maximum force in consideration of motor power

$F_{zm} = F_z + F_a$

Size	120			160			200		
Motor size	1	2	3	1	2	3	1	2	3
Forces/Torques $_{dyn}$									
F_a (N)	600	1200	1800	1200	1800	5500	3600	5500	11000
F_{zm} (N)	820	1640	2460	1590	8800	7030	5000	7500	13800
F_x (N)	700	700	470	1500	1000	450	3300	2200	1200
M_x (Nm)	180	90	60	280	190	130	600	400	220
M_y (Nm)	50	100	70	320	210	140	640	420	230
M_z (Nm)	22	33	50	90	100	120	200	170	210
Number of rollers	10	12	12	12	12	12	12	12	12
All forces and torques related to the following:									
existing values	$\frac{F_y}{F_{y_{dyn}}} + \frac{F_{zm}}{F_{zm_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1,5$								
table values									
Motor specifications F_x									
Motor size	1	2	3	1	2	3	1	2	3
Carriage weight (kg)	1,7	2,5	3,1	5,1	4,7	5,4	9,4	10,5	12,7
Weight primary part (kg)	0,7	1,4	2,0	1,4	3,7	5,2	4,5	6,4	8,4
permanent (N)	61	115	173	115	271	406	383	574	766
Max. (N) (1s)	162	323	485	323	607	911	868	1301	1735
Moving force without current									
N	3	5	6	5	8	9	7	11	12
Speed									
(m/s) max	4			6			6		
Geometrical moments of inertia of aluminium profile									
I_x mm ⁴	$6,6 \times 10^5$			$22,2 \times 10^5$			$63,8 \times 10^5$		
I_y mm ⁴	$38,6 \times 10^5$			$122,0 \times 10^5$			$335,0 \times 10^5$		
Elastic modulus N/mm ²	70000			70000			70000		

Deflection:

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



f = deflection (mm)

F = load (N)

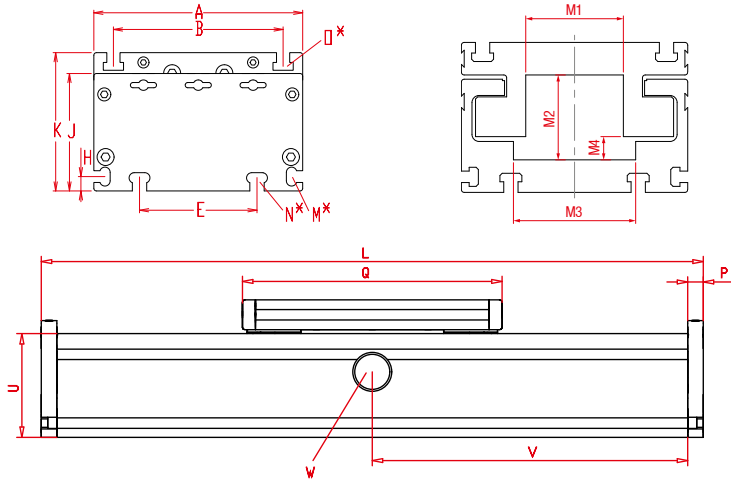
L = free length (mm)

E = elastic modulus 70000 (N/mm²)

I = second moment of area (mm⁴)

Positioning system DLM 120, 160, 200

Dimensions (mm)



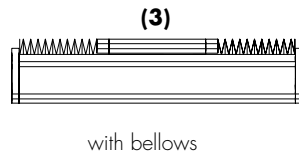
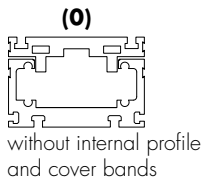
V = Q + 100 mm
W = servicing position

*For slide nuts refer to chapter 2.2 page 2

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

Size	Basic length L	A	B	E	H	J	K	M for	N for	O for	P	U	Basic weight Motor size 1/2/3	Weight per 100 mm Motor size 1/2/3
DLM 120	Q + 30	120	96	78	10	68	79	M 5	M 6	M 6	10	60	5,2/7,2/9,2 Kg	1,0/1,0/1,0 Kg
DLM 160	Q + 30	160	130	90	11	90	106	M 6	M 8	M 8	12	80	12,6/15,6/20,7 Kg	1,6/2,0/2,0 Kg
DLM 200	Q + 35	200	160	140	15	110	129	M 8	M 10	M 10	15	100	26,9/30,5/37,9 Kg	2,6/2,6/2,6 Kg

0 Choice of guide body profile:



Size	M1	M2	M3	M4
DL 120	52	45	64	12
DL 160	70	60	85	18
DL 200	85	77	100	15

Helper table for provided motors

Stainless version upon request.

1 Measurement system:

- (1) Measurement system LE100 5V Resolution 0.05
- (2) Measurement system LE100 10,5-30V Resolution 0.05
- (3) Hall sensor
- (4) Measurement system provided by customer

1 Plug:



1 Motor size:

- (1) Motor size 1 with Q₁
 - (2) Motor size 2 with Q₂
 - (3) Motor size 3 with Q₃
 - (4) Supply with Q₁*
 - (5) Supply with Q₂*
 - (6) Supply with Q₃*
- * = provided by customer

Dimensioning criteria for motor output						
	I _p □	b _p □	h _{ps} □	Q ₁	Q ₂	Q ₃
120	Q - 70	55	38	196	276	372
160	Q - 70	71	50	316	360	461
200	Q - 70	85	62	410	444	610

I_p = length primary part; b_p = width primary part;
h_{ps} = height primary part + height secondary part + interspaces primary-/secondary part

For standard carriage length see 'Q' in table.
For linear encoder refer to chapter 9.1.

1500 Basic length + stroke = total length

DLM	160	0	0	1	1	0	0	1	01500
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Pos. 1 2 3 4 5 6 7

Sample ordering code:

DLM160, Bahr Modultechnik Linearmotor, standard body profile, Measurement system LE100 5V, Plug Pos. 1, motor size 1, 1154 mm stroke.

Positioning system DLVM 200

Linear motor drive



Function:

This unit consists of a rectangular aluminium profile with 2 integrated roller guides. The linear motor DLVM unit is based on the principle of a linear, synchronous AC motor.

The guiding profile is fitted with permanent magnets as stator (secondary part). The carriage is fitted with the actuator (primary part). The magnetic attraction causes a force between carriage and guiding profile also in the absence of current. This force can be used for the initial tension of the bearings. Several carriages (primary parts) can be driven independently on one guiding profile.

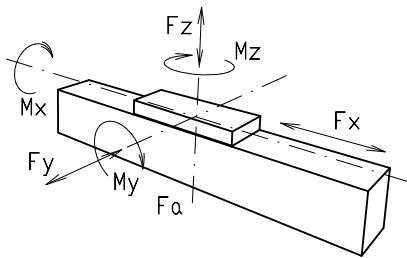
Fitting position: As required. Max. length 6.000 mm without joints.

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. For longer carriages the number of rollers can be increased.
Repeatability $\pm 0,05$ mm. Repeated accuracy max. $\pm 0,05$ bis 4.000 mm, $\pm 0,1$ >4.000 mm.

Forces and torques



F_z = external force by load

F_a = magnetic attraction force

F_{zm} = maximum force in consideration of motor power

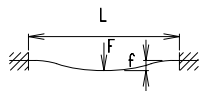
$F_{zm} = F_z + F_a$

Size	200
Motor size	3
Forces/Torques _{dyn}	
F_{zm} (N)	11000
F_{zm} (N)	13800
F_y (N)	1200
M_z (Nm)	220
M_y (Nm)	230
M_x (Nm)	210
Number of rollers	12
All forces and torques related to the following:	
existing values	$\frac{F_y}{F_{y_{dyn}}} + \frac{F_{zm}}{F_{zm_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1,5$
table values	
Motor specifications F_x	
Motor size	3
Carriage weight (kg)	12,7
Weight primary part (kg)	8,4
permanent (N)	766
Max. (N) (1s)	1735
Moving force without current	
N	12
Speed	
(m/s) max	6
Geometrical moments of inertia of aluminium profile	
I_x mm ⁴	$6,38 \times 10^6$
I_y mm ⁴	$33,5 \times 10^6$
Elastic modulus N/mm ²	70000

For life-time calculation of rollers use our homepage.

Deflection:

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



f = deflection (mm)

F = load (N)

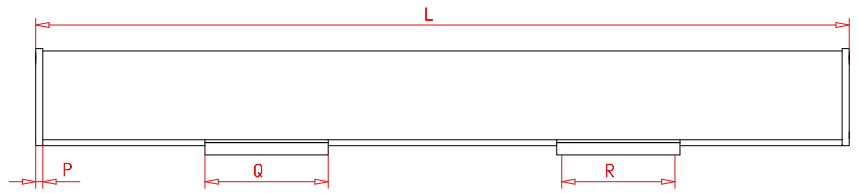
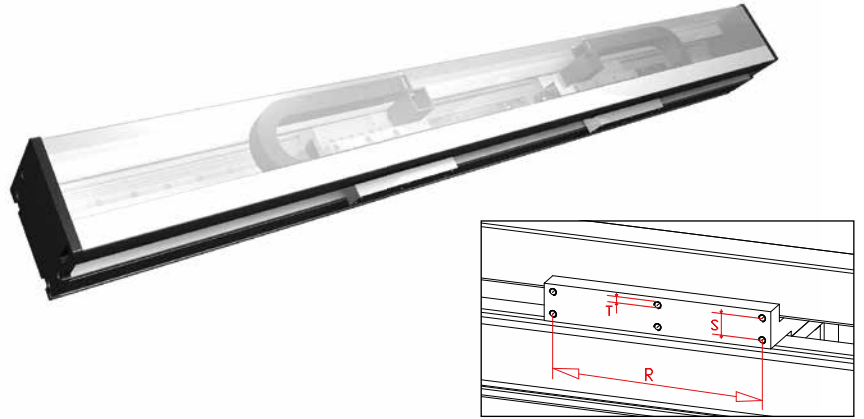
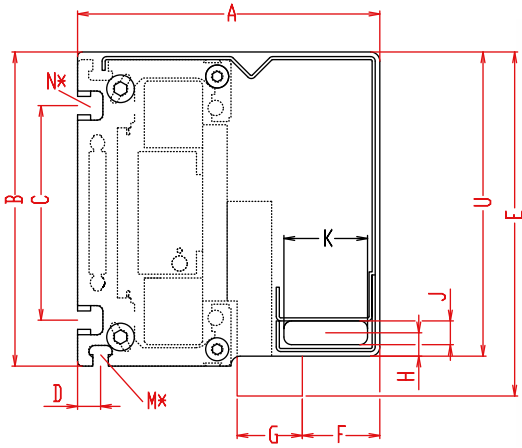
L = free length (mm)

E = elastic modulus 70000 (N/mm²)

I = second moment of area (mm⁴)

Positioning system DLVM 200

Dimensions (mm)



*For slide nuts refer to chapter 2.2 page 2

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

Size	Basic length L	A	B	C	D	E	F	G	H	J	K	M for	N for	P	Q	R	S	T for	U	Basic weight	Weight per 100 mm
DLVM 200	602	197	205	140	15	224,5	50,5	42,5	15	15,5	54,5	M 8	M10	15	260	240	25	M8	198,5	39,4 kg	2,8 kg

10.1

1500 Basic length + stroke = total length

DLVM	200	0	0	0	0	0	0	0	1	01500
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Pos. 1 2 3 4 5 6 7

Sample ordering code:
DLVM200, 898 mm stroke.

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