

# LINEAR GUIDES H01



- Bearing external forces, torque and bending moments
- Turning resistance
- Compatible with pneumatic guides
- Integrated Linear ball bearings or sintered bearings
- The load can be connected directly to the front plate



## **LINEAR GUIDES H01**

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Linear Module HM01-23x80	988
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LINEAR MODULE HM01-37x240	994
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Linear module HM01-48x360	998
/ PARTIISTS /	1001





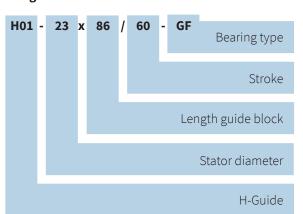
- 1. Mounting plate with counter bore for precise load mounting
- 2. Hardened or stainless steel shafts for precise positioning and quiet operation
- 3. Ballbearingsorsintered bushings, for highload masses and long life
- 4. Guide block with counter bores for uncomplicated, precise mounting of the Linear Module
- 5. Mechanical end stop (rear)
- 6. Linear motor stator with integrated bearings, temperature and position sensors. Available with IP67 connector or cable exit.
- 7. Clamping cylinder to secure the stator in the guide block.
- 8. T-slots in the guide block allow simple mounting of accessories.
- 9. Linear motor slider, guarantees maximum force and precise positioning.
- 10. Integrated linear coupling for simple mounting of the slider.



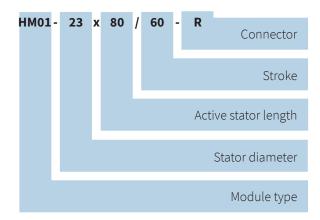
## **Linear Module HM01**

Complete HM01 linear modules, consisting of a H01 guide and P01 linear motor, are highly dynamic design components. Compact construction and free positioning have significant advantages, especially in textile and packaging machines, assembly and feeding technology, laboratory automation, and special machines and systems.

## Designation Linear Guide H01

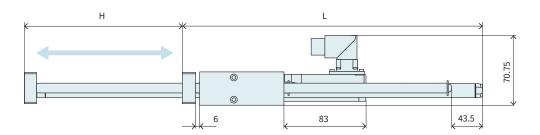


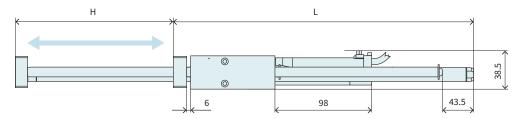
## **Designation Linear Module HM01**





## **LINEAR MODULE HM01-23x80**

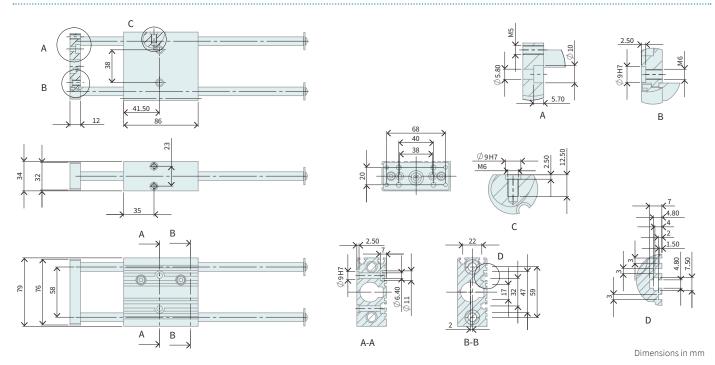




Linear Module	Bearing type		ke H inch)]		Parts L inch)]	Moving [g(	g Mass ¹ lb)]	Total W [g (l	
HM01-23x80/60	Ball bearings	60	(2.36)	205.5	(8.09)	405	(0.89)	1100	(2.43)
HM01-23x80/160	Ball bearings	160	(6.30)	305.5	(12.03)	610	(1.34)	1310	(2.88)
HM01-23x80/260	Ball bearings	260	(10.24)	435.5	(17.15)	860	(1.90)	1560	(2.43)
HM01-23x80/60-GF	Plain Bushings	60	(2.36)	205.5	(8.07)	405	(0.89)	1100	(2.43)
HM01-23x80/160-GF	Plain Bushings	160	( 6.30)	305.5	(12.03)	610	(1.34)	1310	(2.88)
HM01-23x80/260-GF	Plain Bushings	260	(10.24)	435.5	(17.15)	860	(1.90)	1560	(2.43)

<sup>&</sup>lt;sup>1</sup> Mass with moving slider

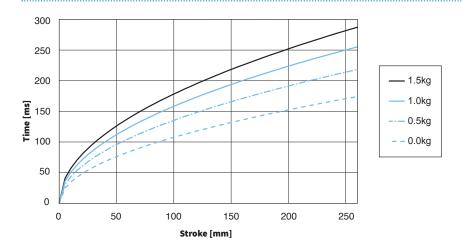
## **LINEAR GUIDES H01-23x86**



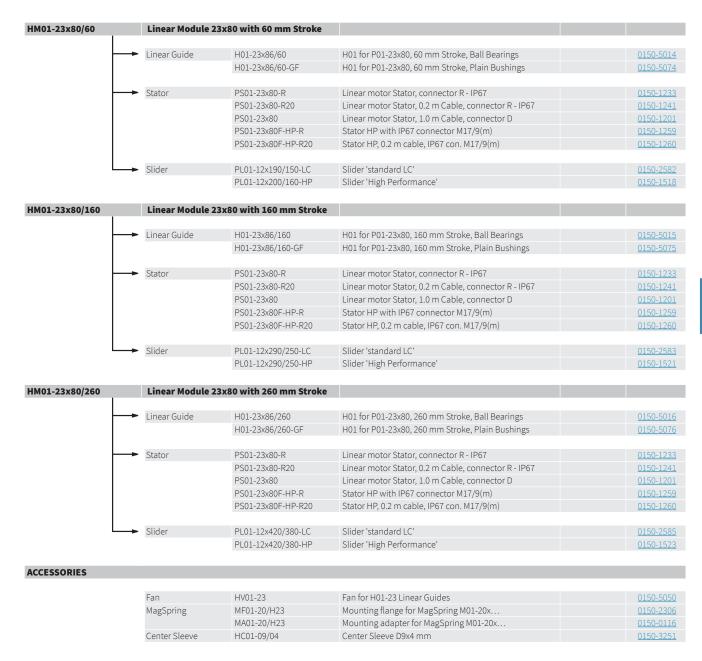
Materials	Guide Block & Front Plate	Guide Shaft	Bearing	Wipers
H01-23x86/ Ball Bearings	Anodized Aluminum	Hardened Steel	Steel	Nitrile Rubber
H01-23x86/GF Plain Bushings	Anodized Aluminum	Stainless Steel 1.4104	Sintered Bronze	Nitrile Rubber



#### **POSITIONING TIMES WITH HM01-23x80**

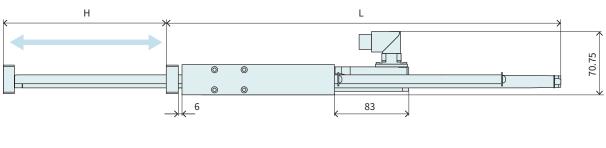


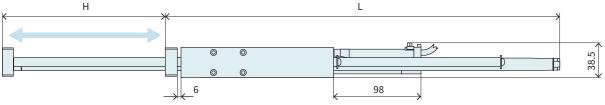
Minimum positioning times for horizontal motions with different load masses, controlled by an E1100-HC Servo Drive.





## **LINEAR MODULE HM01-23x160**



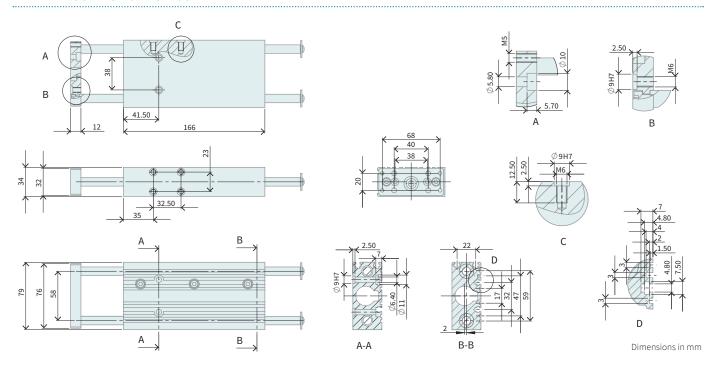


Linear Module	Bearing type		ke H inch)]	Moving [mm (	Parts L inch)]	Moving [g (		Total W [g (ll	
HM01-23x160/80	Ball bearings	80	(3.15)	305.5	(12.03)	610	(1.34)	1890	(4.17)
HM01-23x160/180	Ball bearings	180	(7.09)	435.5	(17.15)	860	(1.90)	2140	(4.72)
HM01-23x160/280	Ball bearings	280	(11.02)	495.5	(19.51)	1020	(2.25)	2300	(5.07)

HM01-23x160/80-GF	Plain Bushings	80	(3.15)	305.5	(12.03)	610	(1.34)	1890	(4.17)
HM01-23x160/180-GF	Plain Bushings	180	(7.09)	435.5	(17.15)	860	(1.90)	2140	(4.72)
HM01-23x160/280-GF	Plain Bushings	280	(11.02)	495.5	(19.51)	1020	(2.25)	2300	(5.07)

<sup>&</sup>lt;sup>1</sup> Mass with moving slider

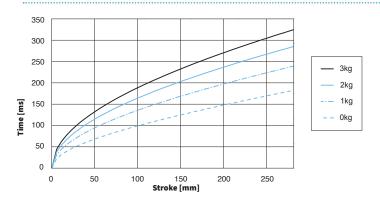
## **LINEAR GUIDES H01-23x166**



Materials	Guide Block & Front Plate	Guide Shaft	Bearing	Wipers
H01-23x166/ Ball Bearings	Anodized Aluminum	Hardened Steel	Steel	Nitrile Rubber
H01-23x166/GF Plain Bushings	Anodized Aluminum	Stainless Steel 1.4104	Sintered Bronze	Nitrile Rubber

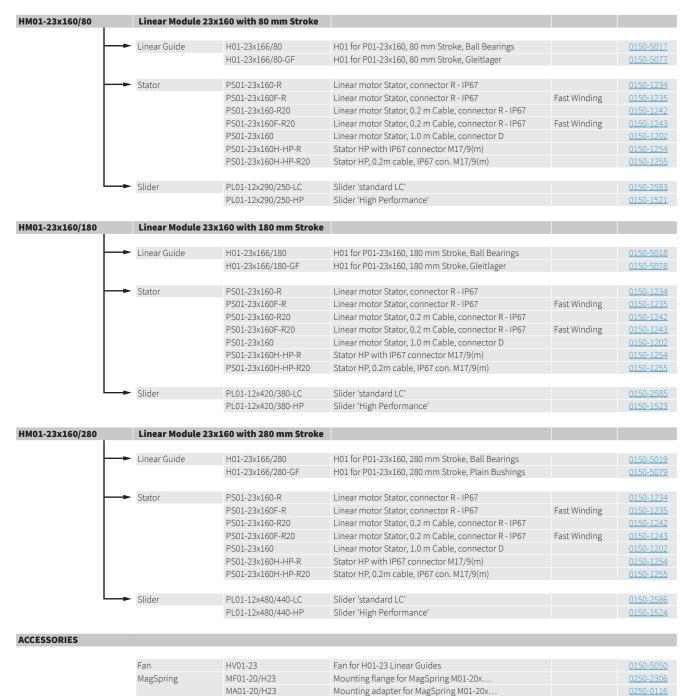


#### **POSITIONING TIMES WITH HM01-23x160**



Minimum positioning times for horizontal motions with different load masses, controlled by an E1100-HC Servo Drive.

#### **ORDERING INFORMATION**



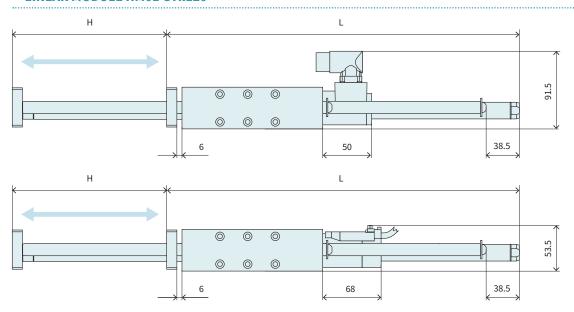
Center Sleeve D9x4mm

HC01-09/04

Center Sleeve



## **LINEAR MODULE HM01-37x120**



Linear Module	Bearing type		ke H (inch)]	_	Parts L inch)]		g Mass ¹ lb)]	Total W [g (l	
HM01-37x120/80	Ball bearings	80	(3.15)	318	(12.52)	1190	(2.62)	3260	(7.18)
HM01-37x120/180	Ball bearings	180	(7.09)	413	(16.26)	1600	(3.53)	3670	(8.09)
HM01-37x120/280	Ball bearings	280	(11.02)	518	(20.39)	2030	(4.46)	4100	(9.03)
HM01-37x120/80-GF	Plain Bushings	80	(3.15)	318	(12.52)	1190	(2.62)	3260	(7.18)
HM01-37x120/180-GF	Plain Bushings	180	(7.09)	413	(16.26)	1600	(3.53)	3670	(8.09)

518 (20.39)

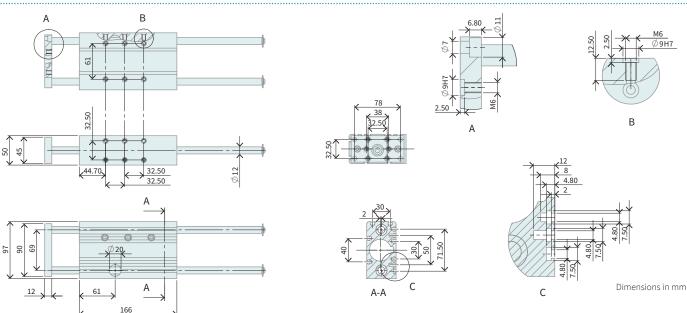
280 (11.02)

<sup>1</sup> Mass with moving slider

## **LINEAR GUIDES H01-37x166**

Plain Bushings

HM01-37x120/280-GF



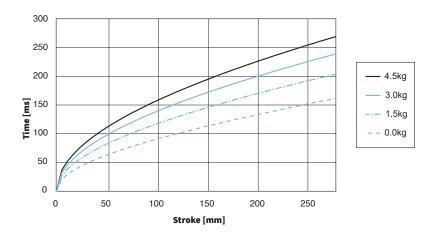
Materials	Guide Block & Front Plate	Guide Shaft	Bearing	Wipers
H01-37x166/ Ball Bearings	Anodized Aluminum	Hardened Steel	Steel	Nitrile Rubber
H01-37x166/GF Plain Bushings	Anodized Aluminum	Stainless Steel 1.4104	Sintered Bronze	Nitrile Rubber

 <sup>1600
 (3.53)
 3670
 (8.09)

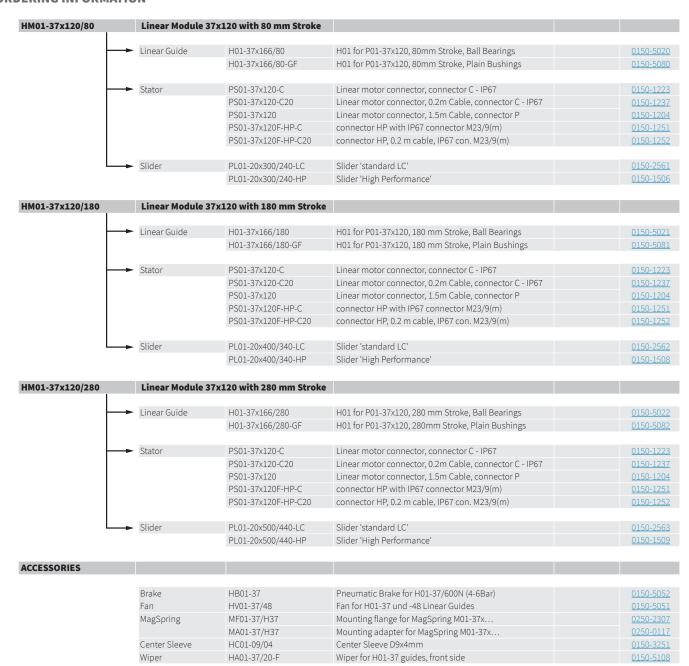
 2030
 (4.46)
 4100
 (9.03)</sup>



#### **POSITIONING TIMES WITH HM01-37x120**

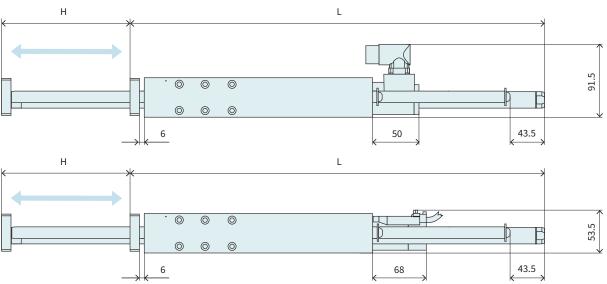


Minimum positioning times for horizontal motions with different load masses, controlled by an E1100-HC Servo Drive.





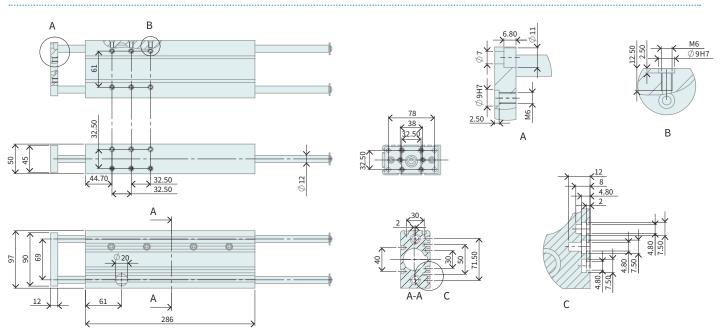
## **LINEAR MODULE HM01-37x240**



Linear Module	Bearing type		ke H inch)]	_	Parts L inch)]		g Mass ¹ lb)]	Total W [g (l	
HM01-37x240/60	Ball bearings	60	(2.36)	413	(16.26)	1600	(3.53)	5280	(11.63)
HM01-37x240/160	Ball bearings	160	(6.30)	518	(20.39)	2020	(4.44)	5690	(12.54)
HM01-37x240/260	Ball bearings	260	(10.24)	618	(24.33)	2420	(5.33)	6100	(13.43)
HM01-37x240/60-GF	Plain Bushings	60	(2.36)	413	(16.26)	1600	(3.53)	5280	(11.63)
HM01-37x240/160-GF	Plain Bushings	160	(6.30)	518	(20.39)	2020	(4.44)	5690	(12.54)
HM01-37x240/260-GF	Plain Bushings	260	(10.24)	618	(24.33)	2420	(5.33)	6100	(13.43)

<sup>1</sup> Mass with moving slider

## **LINEAR GUIDES H01-37x286**

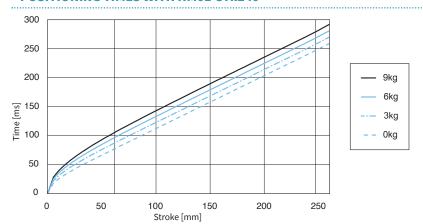


Dimensions in mm

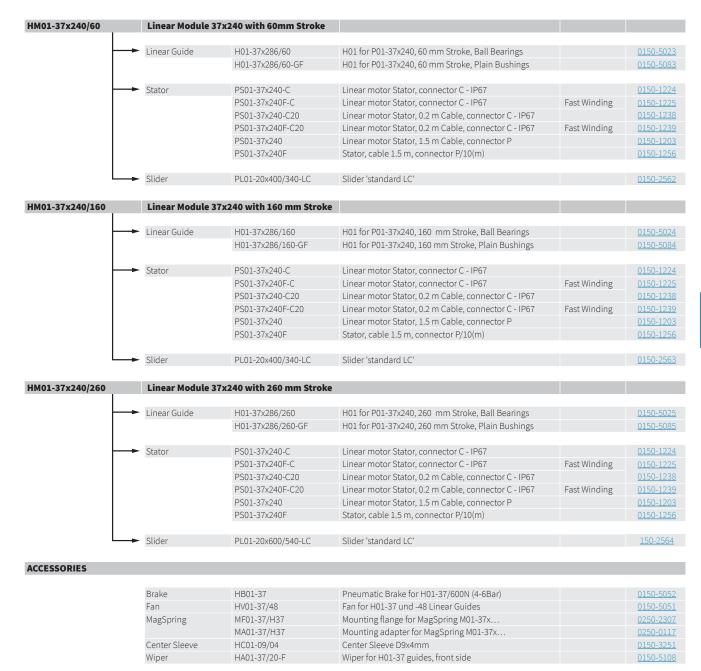
Materials	Guide Block & Front Plate	Guide Shaft	Bearing	Wipers
H01-37x286/ Ball Bearings	Anodized Aluminum	Hardened Steel	Steel	Nitrile Rubber
H01-37x286/GF Plain Bushings	Anodized Aluminum	Stainless Steel 1.4104	Sintered Bronze	Nitrile Rubber



#### **POSITIONING TIMES WITH HM01-37x240**

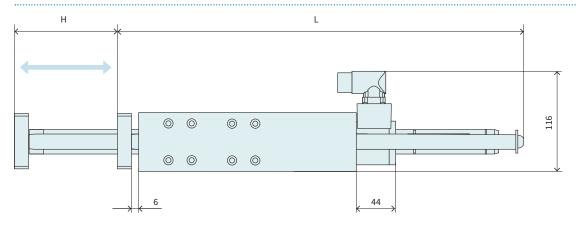


Minimum positioning times for horizontal motions with different load masses, controlled by an E1100-HC Servo Drive.





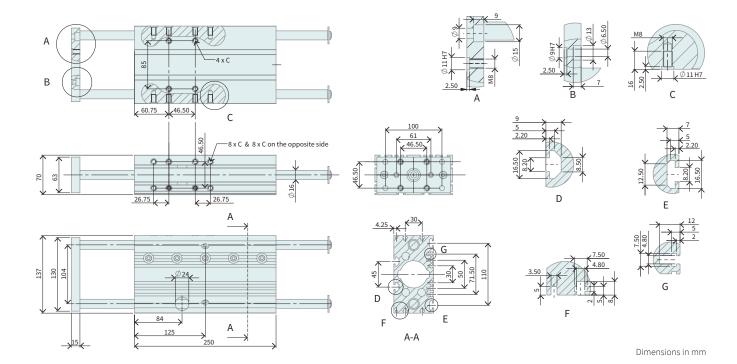
## **LINEAR MODULE HM01-48x240**



Linear Module	Bearing type		ke H (inch)]	_	Parts L inch)]	Moving [g (	g Mass ¹ lb)]	Total V [g (l	
HM01-48x240/120	Ball bearings	120	(4.72)	460	(18.11)	3400	(7.47)	8950	(19.66)
HM01-48x240/210	Ball bearings	210	(8.27)	550	(21.65)	4100	(9.02)	9650	(21.21)
HM01-48x240/330	Ball bearings	330	(12.99)	670	(26.38)	5050	(11.07)	10600	(23.26)
HM01-48x240/420	Ball bearings	420	(16.54)	760	(29.92)	5750	(12.61)	11300	(24.80)
HM01-48x240/120-GF	Plain Bushings	120	(4.72)	460	(18.11)	3400	(7.47)	8950	(19.66)
HM01-48x240/210-GF	Plain Bushings	210	(8.27)	550	(21.65)	4100	(9.02)	9650	(21.21)
HM01-48x240/330-GF	Plain Bushings	330	(12.99)	670	(26.38)	5050	(11.07)	10600	(23.26)
HM01-48x240/420-GF	Plain Bushings	420	(16.54)	760	(29.92)	5750	(12.61)	11300	(24.80)

<sup>&</sup>lt;sup>1</sup> Mass with moving slider

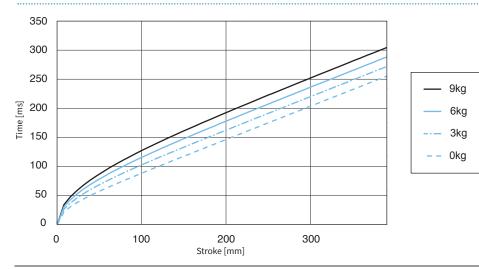
## **LINEAR GUIDES H01-48x250**



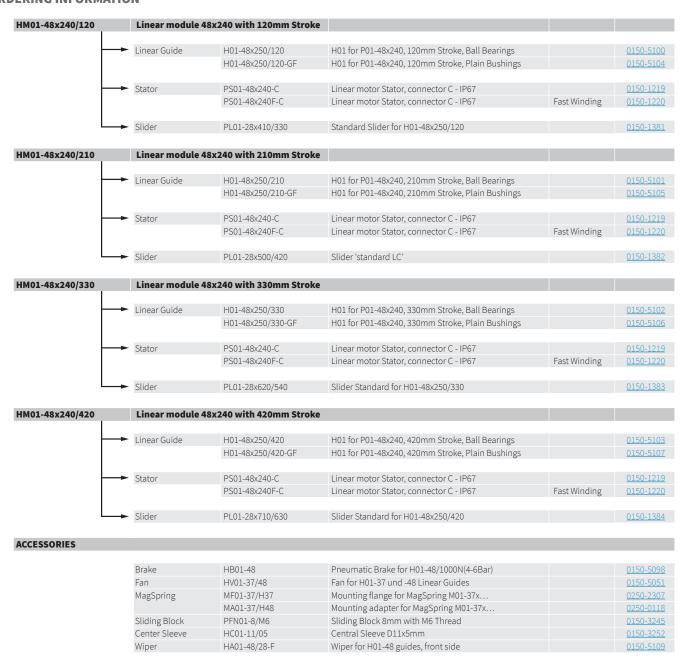
Materials	Guide Block & Front Plate	Guide Shaft	Bearing	Wipers
H01-48x250/ Ball Bearings	Anodized Aluminum	Hardened Steel	Steel	Nitrile Rubber
H01-48x250/GF Plain Bushings	Anodized Aluminum	Stainless Steel 1.4104	Sintered Bronze	Nitrile Rubber



#### **POSITIONING TIMES WITH HM01-48x240**

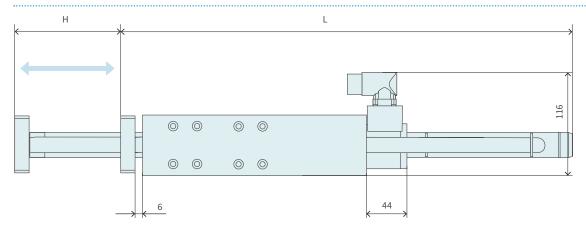


Minimum positioning times for horizontal motions with different load masses, controlled by an E1100-HC Servo Drive.





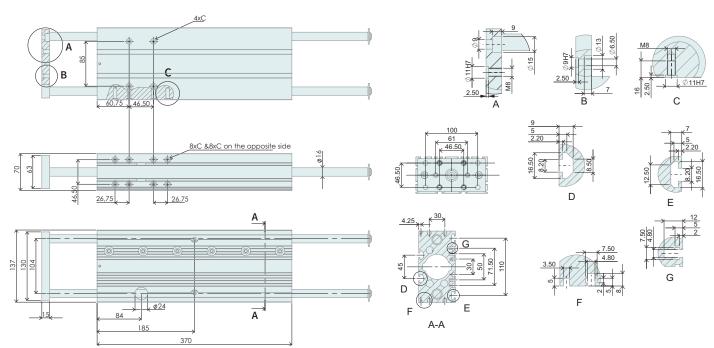
## Linear module HM01-48x360



Linear Module	Bearing type	Stroke H [mm (inch)]		Moving Parts L [mm (inch)]		Moving Mass¹ [g (lb)]		Total Weight [g (lb)]	
HM01-48x360/90	Ball bearings	90	(3.54)	521	(20.52)	4000	(8.84)	12300	(27.17)
HM01-48x360/210	Ball bearings	210	(8.27)	641	(25.25)	4910	(10.85)	13210	(29.18)
HM01-48x360/300	Ball bearings	300	(11.82)	731	(28.79)	5630	(12.44)	13930	(30.77)
HM01-48x360/510	Ball bearings	510	(20.01)	941	(37.06)	7300	(16.09)	15600	(34.39)
HM01-48x360/90-GF	Plain Bushings	90	(3.54)	521	(20.52)	4000	(8.84)	12300	(27.17)
HM01-48x360/210-GF	Plain Bushings	210	(8.27)	641	(25.25)	4910	(10.85)	13210	(29.18)
HM01-48x360/300-GF	Plain Bushings	300	(11.82)	731	(28.79)	5630	(12.44)	13930	(30.77)
HM01-48x360/510-GF	Plain Bushings	510	(20.01)	941	(37.06)	7300	(16.09)	15600	(34.39)

<sup>&</sup>lt;sup>1</sup> Mass with moving slider

## **LINEAR GUIDES H01-48x370**

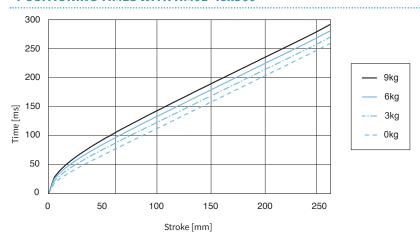


Dimensions in mm

Materials		Guide Block & Front Plate	Guide Shaft	Bearing	Wipers	
H01-48x370/	Ball Bearings	Anodized Aluminum	Hardened Steel	Steel	Nitrile Rubber	
H01-48x370/GF	Plain Bushings	Anodized Aluminum	Stainless Steel 1.4104	Sintered Bronze	Nitrile Rubber	



#### **POSITIONING TIMES WITH HM01-48x360**

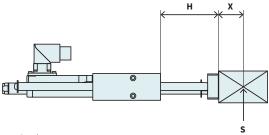


Minimum positioning times for horizontal motions with different load masses, controlled by an E1100-HC Servo Drive.





#### **MAXIMUM LOAD**



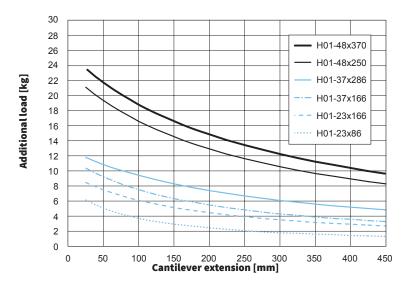
H = Stroke

X = Distance to center of gravity

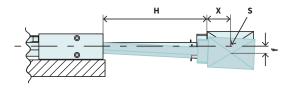
S = Center of gravity

Cantilever extension = H + X

The maximum load depends on the cantilever extension (maximum stroke A plus distance between the center of gravity of the working load and the mounting surface).



#### **VERTICAL DEFLECTION**



H = Stroke

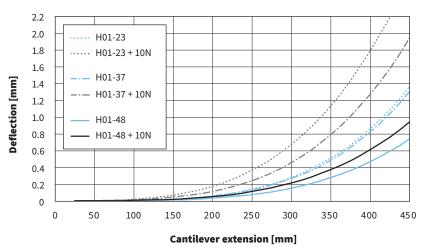
S = Center of gravity

X = Distance to center of gravity

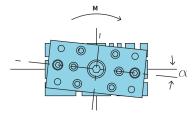
f = Deflection of theoretical axis

Total deflection = Static deflection + deflection under load Deflection measured at standstill, with 10N / 2.25lbf Load.

Deflection for smaller or larger load masses can be linearly extrapolated using the data for 10 N / 2.25 lbf.

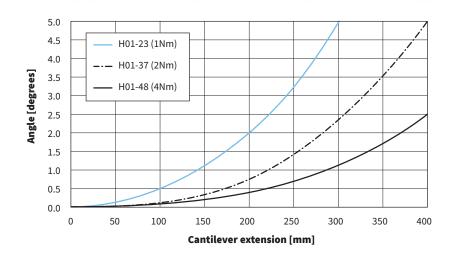


#### **ANGULAR DEFLECTION**

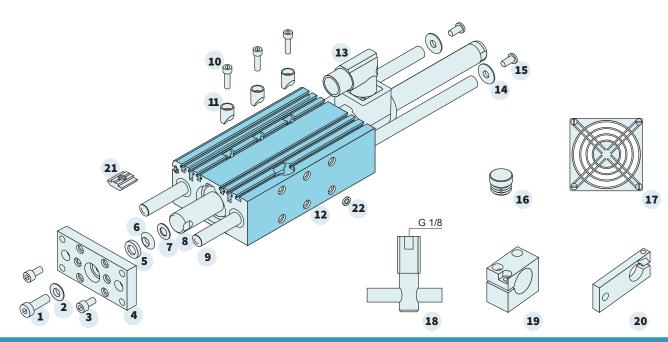


Angular deflection (twist) of the mounting plate depends on the torque load to be absorbed and the cantilever extension.

The angular deflection for smaller or larger torques can be linearly extrapolated from the deflection in the diagram.

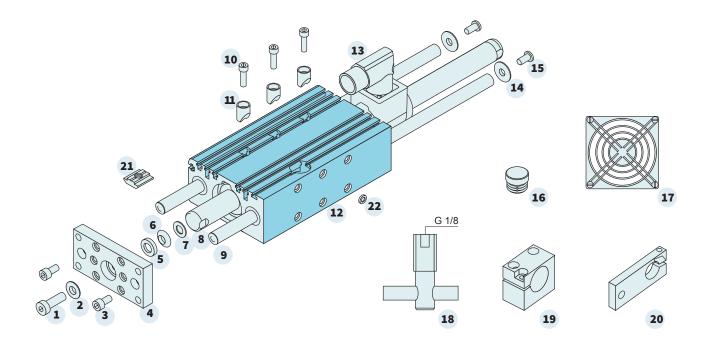






PARTS LIST													
	Linear Guide H01	H01-23x86		H01-23x166		H01-37x166		H01-37x286		H01-48x250		H01-48x370	
1	Slider screw	ISO 4762	M5x18	ISO 4762 M5x18		DIN7984 M8x25		DIN7984 M8x25		DIN7984 M10x35		DIN7984 M10x35	
2	Socket washer (f)	DIN 6319 c / M6		DIN 6319 c / M6		DIN 6319 c / M8		DIN 6319 c / M8		DIN 6319 c / M10		DIN 6319 c / M10	
3	Shaft screw	ISO 4762 M5x12		ISO 4762 M5x12		ISO 4762 M6x12		ISO 4762 M6x12		ISO 4762 M8x20		ISO 4762 M8x20	
4	Front plate	0150-5004		0150-5004		0150-5005		0150-5005		0150-5087		0150-5087	
5	Ball washer (r)	DIN 6319 d / M5		DIN 6319 d / M5		DIN 6319 d / M8		DIN 6319 d / M8		DIN 6319 d / M10		DIN 6319 c	I/M10
6	Socket washer (r)	DIN 6319 c / M5		DIN 6319 c / M5		DIN 6319 c / M8		DIN 6319 c / M8		DIN 6319 c / M10		DIN 6319 c / M10	
7	Dished washer	DIN 2093A 10/5,2/0,5		DIN 2093A 10/5,2/0,5		DIN 2093A 16/8,2/0,9		DIN 2093A 16/8,2/0,9		DIN 2093A 20/10,2/1,1		DIN 2093A 20/10,2/1,1	
8	Slider	PL01-12x		PL01-12x		PL01-20x		PL01-20x		PL01-28x		PL01-28x	
9	Hardened steel shafts for ball bearings	HL01-10x	Art-Nr.	HL01-10x	Art-Nr.	HL01-12x	Art-Nr.	HL01-12x	Art-Nr.	HL01-16x	Art-Nr.	HL01-16x	Art-Nr.
		160	0150-5006	260	0150-5007	260	0150-5010	360	0150-5011	440	0150-5090	487	0150-5119
		260	0150-5007	360	0150-5008	360	0150-5011	460	0150-5012	530	0150-5091	607	0150-5120
		360	0150-5008	460	0150-5009	460	0150-5012	560	0150-5013	650	0150-5092	697	0150-5121
										740	0150-5093	920	0150-5234
	Stainless steel shafts for plain bushings GF	160-GF	0150-5066	260-GF	0150-5067	260-GF	0150-5070	360-GF	0150-5071	440-GF	0150-5094	487-GF	0150-5127
		260-GF	0150-5067	360-GF	0150-5068	360-GF	0150-5071	460-GF	0150-5072	530-GF	0150-5095	607-GF	0150-5128
		360-GF	0150-5068	460-GF	0150-5069	460-GF	0150-5072	560-GF	0150-5073	650-GF	0150-5096	697-GF	0150-5129
										740-GF	0150-5097	920-GF	auf Anfrage
10	Clamping screw	ISO 4762 I	M5x18	ISO 4762 M5x18		ISO 4762 M5x18		ISO 4762 M5x18		ISO 4762 M6x25		ISO 4762 M6x25	
11	Clamping cylinder	0150-5	053	0150-50	53	0150-50	53	0150-50	)53	0150-5	086	0150-5086	
12	Guide block with ball bearings	0150-5000		0150-5001		0150-5002		0150-5003		0150-5088		0150-5194	
	Guide block with plain bushing GF	0150-5060		0150-5061		0150-5062		0150-5063		0150-5089		0150-5195	
13	Stator	Тур	Art-Nr.	Тур	Art-Nr.	Тур	Art-Nr.	Тур	Art-Nr.	Тур	Art-Nr.	Тур	Art-Nr.
		PS01-23x80-R	0150-1233	PS01-23x160-R	0150-1234	PS01-37x120-C	0150-1223	PS01-37x240-C	0150-1224	PS01-48x240-C	0150-1219	PS01-48x360F-C	0150-1269
		PS01-23x80-R20	0150-1241	PS01-23x160F-R	0150-1235	PS01-37x120-C20	0150-1237	PS01-37x240F-C	0150-1225	PS01- 48x240F-C	0150-1220		
		PS01-23x80	0150-1201	PS01-23x160-R20	0150-1242	PS01-37x120	0150-1204	PS01-37x240-C20	0150-1238				
				PS01-23x160F-R20	0150-1243			PS01-37x240F-C20	0150-1239				
				PS01-23x160	0150-1202			PS01-37x240	0150-1203				





14	Washer	5x20/1,5	5x20/1,5	6x20/1,5	6x20/1,5	8x30/2,0	8x30/2,0			
15	Shaft screw	ISO 7380 M5x12	ISO 7380 M5x12	ISO 7380 M6x12	ISO 7380 M6x12	ISO 7380 M8x16	ISO 7380 M8x16			
16	Brake hole cap			HDPE 20mm	HDPE 20mm	HDPE 24mm	HDPE 24mm			
Fa	Fan									
17	Set	0150-5050	0150-5050	0150-5051	0150-5051	0150-5051	0150-5051			
Br	Brake									
18	Pneumatic			0150-5052	0150-5052	0150-5098	0150-5098			
10	Brake			0130 3032	0130 3032	0130 3030	0130 3030			
Ма	Magspring									
19	Flange	0250-2306	0250-2306	0250-2307	0250-2307	0250-2307	0250-2307			
20	Adapter	0250-0116	0250-0116	0250-0117	0250-0117	0250-0118	0250-0118			
Accessories										
21	Sliding Block					0150-3245	0150-3245			
22	Center Sleeve	0150-3251	0150-3251	0150-3251	0150-3251	0150-3252	0150-3252			
23	Wiper			0150-5108	0150-5108	0150-5109	0150-5109			