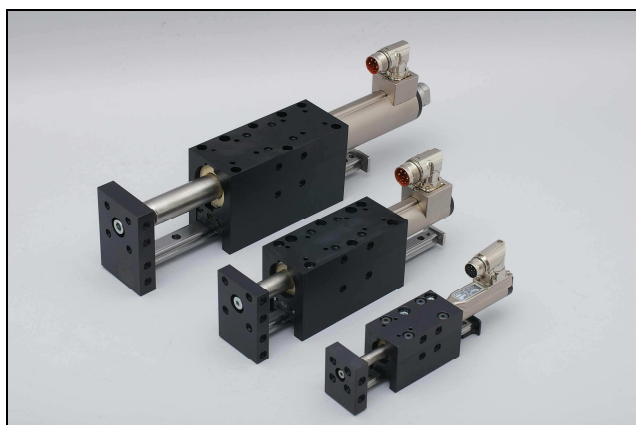


HighDynamic[®] Linear Modules HM01 with Tubular Linear Servo Drives

HighDynamic[®] linear modules are based on linear guides with ball carriages, which serve as a carrying element. This ensures high torsional stiffness, despite the low moving masses. Ball chains in the ball cages are responsible for a high maximum speed, high accelerations, a low noise level, as well as a long operational life.

The linear modules are all mechanically compatible with each other, making it easy to combine them into multi-axes systems.



Characteristics

- linear module system with **LinMot[®]** linear servo drives
- very low moving mass, high bending & torsional stiffness
- speed up to 5 m/s & acceleration up to 150 m/s²
- guide with precision profile rail, two ball carriages with ball chains
- positioning accuracy +/- 0,05 mm (+/- 0,001 mm optionally)
- modular mechanical interface
- many accessories and options

Limits **HighDynamic[®]** HM01 Linear Modules

Dimensions	HM01-23	HM01-37	HM01-48
max. velocity [m/s] ¹⁾	5		
max. acceleration [m/s ²] ¹⁾	150		
max. peak force [N] ²⁾	137	308	1.024
max. cont. force [N] with nat. cooling ³⁾	31	53	203
max. cont. force [N] with fan cooling ³⁾	48	100	354

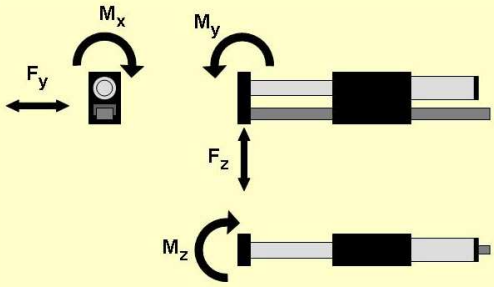
¹⁾ The indicated values are referring to the mechanical operating limits of the guiding system.

²⁾ The indicated values depend on the motor type, the controller type and the DC bus voltage.

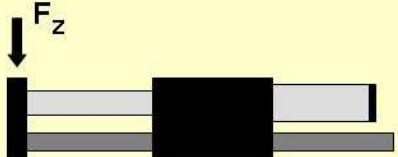
³⁾ The indications are a reference and depend on the used module.

Please feel free to contact us for an optimal kinematic design.

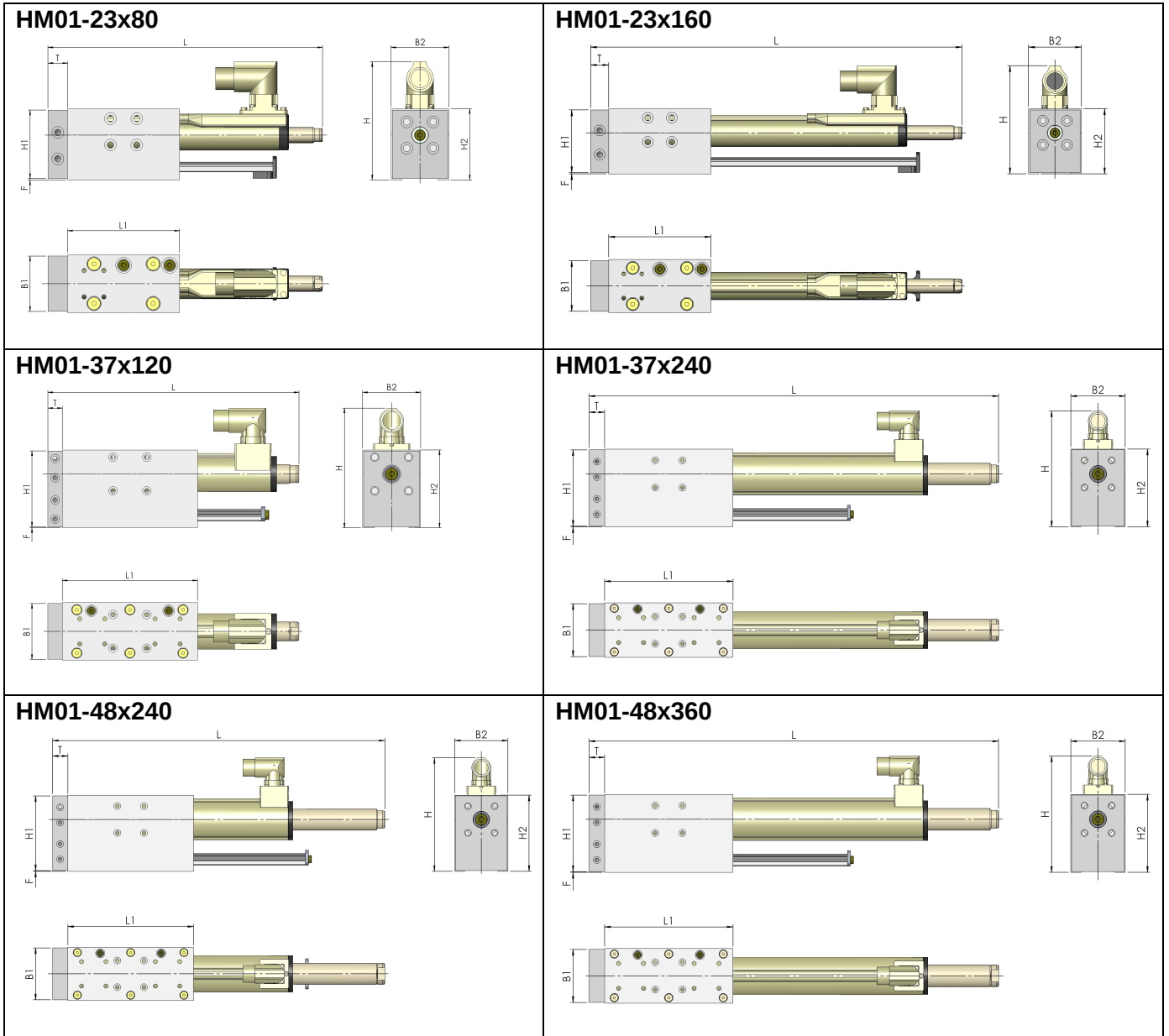
Forces & Torques Linear Modules

Dimensions	HM01-23	HM01-37	HM01-48
F_y (depending on stroke but not less than) [N]	250	1.000	1.500
F_z (dependig on stroke but not less than) [N]	250	1.500	2.500
M_x [Nm]	46	192	360
M_y [Nm]	78	440	723
M_z [Nm]	78	274	448
milage [km]	> 90.000	> 100.000	> 90.000
Displayed performance applies at maintenance intervalls every 5.000 km or every 6 months! Lubrication: - THK-grease AFA for general applications - Klübersynth UH1 14-151 for FDA applications			

Bending Stiffness Linear Modules

stroke [mm]	60	160	260
bending [mm]	HM01-23		
$F_z = 5 \text{ N}$	0,004	0,08	0,33
$F_z = 10 \text{ N}$	0,01	0,15	0,66
$F_z = 20 \text{ N}$	0,02	0,31	1,32
bending [mm]	HM01-37		
$F_z = 10 \text{ N}$	0,005	0,03	0,11
$F_z = 20 \text{ N}$	0,008	0,05	0,23
$F_z = 40 \text{ N}$	0,01	0,11	0,46
bending [mm]	HM01-48		
$F_z = 20 \text{ N}$	0,002	0,02	0,09
$F_z = 40 \text{ N}$	0,005	0,04	0,18
$F_z = 80 \text{ N}$	0,009	0,08	0,36
			

Dimensions *HighDynamic*® HM01 Linear Modules



HM01 main dimensions	L1 [mm]	B2 [mm]	H2 [mm]	T [mm]	B1 [mm]	H1 [mm]	F [mm]	H ¹⁾ [mm]	¹⁾ angle connector turnable 360°! STEP files available on demand
HM01-23x80	85	44	54	15	42	52	1	90	
HM01-23x160	85	44	54	15	42	52	1	90	
HM01-37x120	140	60	81	15	58	79	1	125	
HM01-37x240	140	60	81	15	58	79	1	125	
HM01-48x240	165	70	100	20	68	98	1	150	
HM01-48x360	165	70	100	20	68	98	1	150	

Available Variations **HM01 Linear Modules**

Attention: The HM01 linear modules consist of a HD01 linear guide plus a linear motor.

Example: HM01-WWxZZZ/YYY = HD01-WWxZZZ/YYY + suitable LinMot® motor.

HD01 HighDynamic® linear guide	nom. stroke [mm]	suitable LinMot® motor	slider length [mm]	moving mass without motor (slider) [g]	weight of complete module HM01 incl. motor [g]	L [mm]
HD01-23x80/60	60	P01-23x80/60x120-LC	190	198	868	209
HD01-23x80/160	160	P01-23x80/160x220-LC	290	263	1.018	309
HD01-23x80/260	260	P01-23x80/290x350-LC	420	328	1.193	439
HD01-23x160/80	80	P01-23x160/80x220-LC	290	263	1.203	309
HD01-23x160/180	180	P01-23x160/210x350-LC	420	328	1.378	439
HD01-23x160/280	280	P01-23x160/270x410-LC	480	393	1.493	499
HD01-37x120/40	40	P01-37x120/40x120-LC	240	468	2.945	260
HD01-37x120/80	80	P01-37x120/100x180-LC	300	540	3.157	320
HD01-37x120/180	180	P01-37x120/200x280-LC	400	684	3.531	420
HD01-37x120/280	280	P01-37x120/300x380-LC	500	756	3.833	520
HD01-37x240/80	80	P01-37x240/80x280-LC	400	540	4.032	420
HD01-37x240/180	180	P01-37x240/180x380-LC	500	684	4.406	520
HD01-37x240/280	280	P01-37x240/280x480-LC	600	756	4.718	620
HD01-48x240/120	120	P01-48x240/90x240	410	1.077	6.725	437
HD01-48x240/210	210	P01-48x240/180x330	500	1.329	7.397	527
HD01-48x240/330	330	P01-48x240/300x450	620	1.581	8.209	647
HD01-48x360/90	90	P01-48x360/60x210	500	1.077	8.095	527
HD01-48x360/210	210	P01-48x360/180x330	620	1.329	8.907	647
HD01-48x360/300	300	P01-48x360/270x420	710	1.581	9.579	737

HM01 linear modules can be delivered with any kind of **LinMot®** motor variations.

Accessories & Options

- centering elements
- MagSpring® with adaptor kits for vertical axes
- brakes with adaptor kits for vertical axes
- fan for forced cooling with adaptor
- external positioning sensor with adaptor

LinMot® & MagSpring® are registered
trademarks of NTI AG LinMot!
ss091117.doc
Rev.: 21.02.2018
Technical changes reserved!