

CROSS CENTERED MOTION SYSTEM **LMVX** series

DATA SHEET

LMVX motorized linear system is based on a centered XY architecture with direct linear motor. It is suitable for the movement of machining and measurement heads (laser and optic systems, gripper and pick&place device, cameras) till a weight of 2kg. It could be easily assembled in structures and basement performed by the final user, based on the final product need.

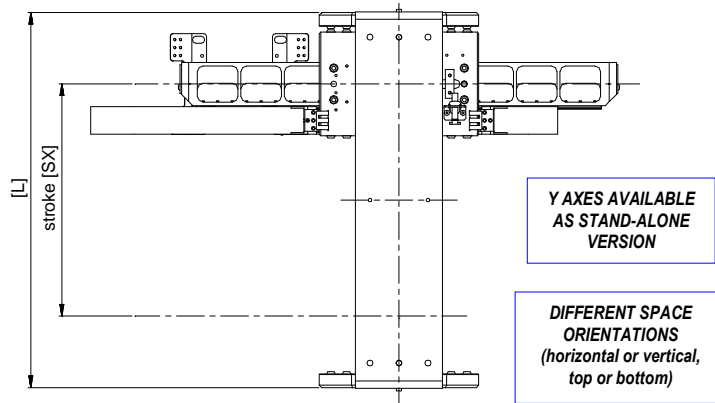
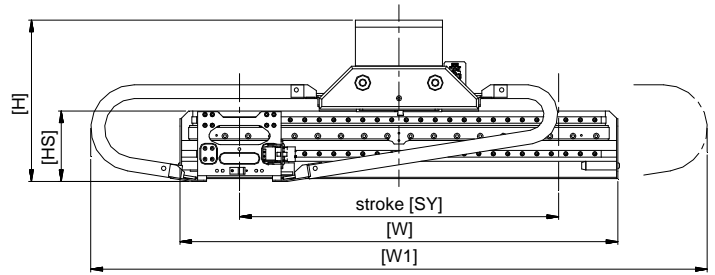
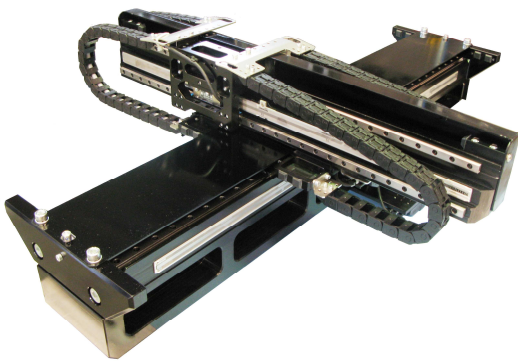
LMVX series uses rolling linear guides, achieving an optimum compromise between performances (till 2g acceleration) and first investment costs.

The system is supplied with direct linear motors and optical linear encoders.

The system can work with more than one Y axes, and either top and bottom layout.

Drivers and Axis control cards are optional.

The work range goes from 271x248mm to 1.167x632mm.



MAIN SPECIFICATIONS	MU	X axes	Y axes
chassis	-	black anodized aluminium	
bearings tecnology	-	linear rolling	
environment temperature	-	-10°C ÷ +30°C	
environment humidity	-	24% ÷ 50%	
total mass	kg	configuration dependent info available soon	
total mass of the moving parts	kg	c.d. - i.a.s.	1.7 (1)
cooling	kg	forced air (optional)	
accessories		cable chains, carter	

MOTOR SPECIFICATIONS (4)	MU	X axes	Y axes
linear motor tecnology	N	ironcore	ironless
nominal input voltage U	VDC	300	300
force constant K _t	N/Arms	26	16
back EMF constant K _v (5)	V/(m/s)	15	13.1
electrical resistance R ₂₀ (5)	Ω	2.9	2.78
inductance L ₁ (5)	mH	12.2	1.58
peak current I _p	Arms	16.6	11.2
continous current I _c (1)	Arms	2.57	2.3 @80°C

PERFORMANCES	MU	X axes	Y axes
linear motor	N	ironcore	ironless
peak force F _p (2)	N	279	130
continous force F _c (2)	N	64.5	34 @80°C
maximum payload M (3)	kg	2.0	
maximum speed V _{mx} (2)	m/s	2.0	
maximum acceleration a _{mx} (2)	m/s ²	2.0	
position accuracy / repeteability (2)	µm	up to ±20 / up to ±10	
orthogonality	arcsec	± 30	

LINEAR ENCODER SPECIFICATIONS (6)	MU	X axes	Y axes
tecnology	-	optical	
type	-	incremental with zero	
period	µm	up to 20	
accuracy	µm	up to ±5	
supply	V	1 V ±5%	
signal		1 Vpp or TTL	

NOTES: (1) w/o tools (2) depending on strokes configuration, axes space orientation, payload, encoder, drive and controller best performances with ETEL drives and controllers (error mapping available)
 (3) possibility to move higher payload, after verification of performances and lifetime of linear rolling guides.

X axes size	X-06	X-08	X-10	X-12	X-14	X-16	X-18	X-20
available strokes [SX] (mm)	271	399	527	655	783	911	1039	1167
total length [L] (mm)	466	594	722	850	978	1106	1234	1362

Y axes size	Y-06	Y-08	Y-10	Y-12	Y-14	Y-16
available strokes [SY] (mm)	248	317	376	440	504	632
width [W] (mm)	394	458	522	586	650	778

MASS AND DIMENSIONAL FULL SPECIFICATIONS SOON AVAILABLE
 (PLEASE CONTACT MAGER TECHNICAL SERVICE)

LIGHTER VERSIONS SOON AVAILABLE

NOTES