

LM9-LM Series Datasheet

Linear Motor Positioning Stage

FEATURES

- 300-1000mm Travels Available
- High Force Ironless Linear Motor
- Optical Limit Switch and Home Index
- High Resolution Linear Encoder, 1Vpp and RS422 Available
- Heavy Duty Construction
- Recirculating Linear Bearings
- Silicone Side Seals



The LM9-LM is a heavy duty linear stage ideal for applications in optics, microscopy, medical device, and more. Offering micron-level precision, excellent repeatability, and exceptional stability, the LM9-LM ensures smooth and reproducible movements with high levels of positioning accuracy. Crafted with high-quality materials, precision-engineered components and durable side seals, the LM9-LM is built to last, making it a reliable choice for demanding industrial settings. Invest in the LM9-LM linear stage and redefine the possibilities for precision motion in your application.

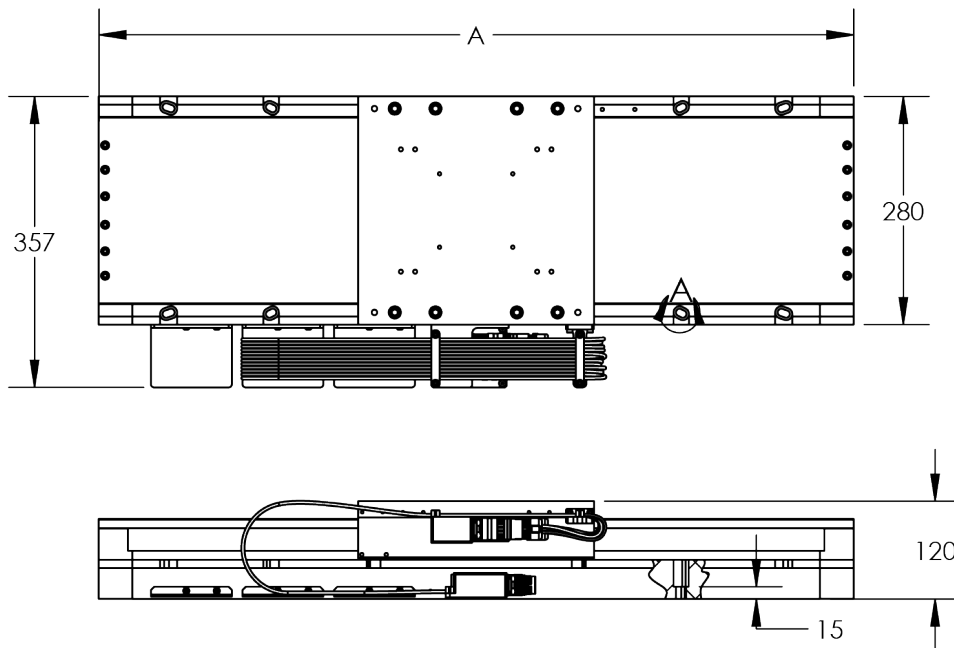
Ordering Options and Dimensions

Stage Series	Stage Travel (mm)	Drive Type	Motor Code	Feedback Code	Precision Grade	Additional Options	Custom Features
LM9	300, 400, 500, 600, 800, 1000 ¹	LM-Linear Motor	V-Ironless, HV Winding	U-1Vpp, 25 Periods/mm, Limits and Index	S- Standard	F-Side Seals	00-None
				CC- RS422, 0.1µm, Limits and Index	P- Precision ²		Any Other ³

Example Part Number: LM9-500-LM-V-U-S-F-00

Notes:

- Other custom travels may be available upon request, not longer than 1000mm.
- Non-standard ordering option, contact Griffin Motion for more information.
- Common customizations include cleanroom preparation, stainless hardware and custom mounting holes. Many other customizations are also available, contact Griffin Motion for more information.



Stage Travel (mm)	Stage Length "A" (mm)
300	728
400	828
500	928
600	1028
800	1228
1000	1428

LM9-LM Performance Specifications

Nominal Travel (mm)	300	400	500	600	800	1000
Mechanical Accuracy (μm) ³	± 8.0	± 10.0	± 12.0	± 14.0	± 16.0	± 18.0
Calibrated Accuracy (μm) ¹	± 2.0					
Bi-Directional Repeatability (μm) ³	1.0					
Maximum Velocity (mm/s)	2,000					
Continuous Motor Force, (N)	199					
Peak Motor Force, (N)	990					
Maximum Load, Y Direction (N) ²	1500					
Maximum Load, Z Direction (N) ²	2000					
Maximum Moment About X (Nm) ²	400					
Maximum Moment About Y (Nm) ²	750					
Maximum Moment About Z (Nm) ²	250					
Moving Mass (kg)	12.0					
Flatness (Z Motion) (μm) ²	± 3.0	± 4.0	± 5.0	± 6.0	± 7.0	± 8.0
Straightness (Y Motion) (μm) ²	± 3.0	± 4.0	± 5.0	± 6.0	± 7.0	± 8.0
Pitch Motion (arc-sec) ³	± 5.0	± 6.0	± 7.5	± 9.0	± 12.0	± 15.0
Yaw Motion (arc-sec) ³	± 5.0	± 6.0	± 7.5	± 9.0	± 12.0	± 15.0
Stage Mass (kg)	56.5	62.5	68.5	74.5	87	98.5
Notes						
1. In order to have a stage calibrated and verified, Griffin Motion must perform the controls configuration.						
2. See coordinate convention below.						
3. Specification is verified on every stage via laser measurement. Other specifications can be verified upon request. A custom part number may be required, additional charges may apply.						
4. Improved accuracy, repeatability, flatness, straightness, pitch, and yaw are available with "P" Precision Grade.						

