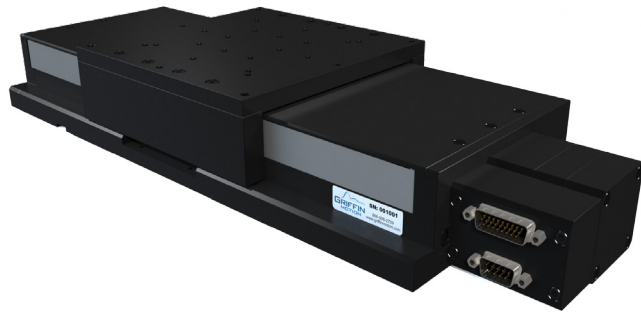


LM3-BS Series Datasheet

Linear Motor Positioning Stage

FEATURES

- 100-300mm Travels Available
- Brushless DC Motor
- Precision Ground Ballscrew
- Optical Limit and Home Switches
- High Resolution Rotary Encoder
- Recirculating Linear Bearings
- Optional Power-Off Brake
- Silicone Side Seals



The LM3-BS is a light-duty linear stage ideal for applications in optics, microscopy, medical device, and more. Offering micron-level precision, excellent repeatability, the LM3-BS ensures smooth and reproducible movements with high levels of positioning accuracy. Crafted with high-quality materials, precision-engineered components and durable side seals, the LM3-BS is built to last. The optional power-off brake allows for vertical operation. Invest in the LM3-BS linear stage and redefine the possibilities for precision motion in your light-duty application.

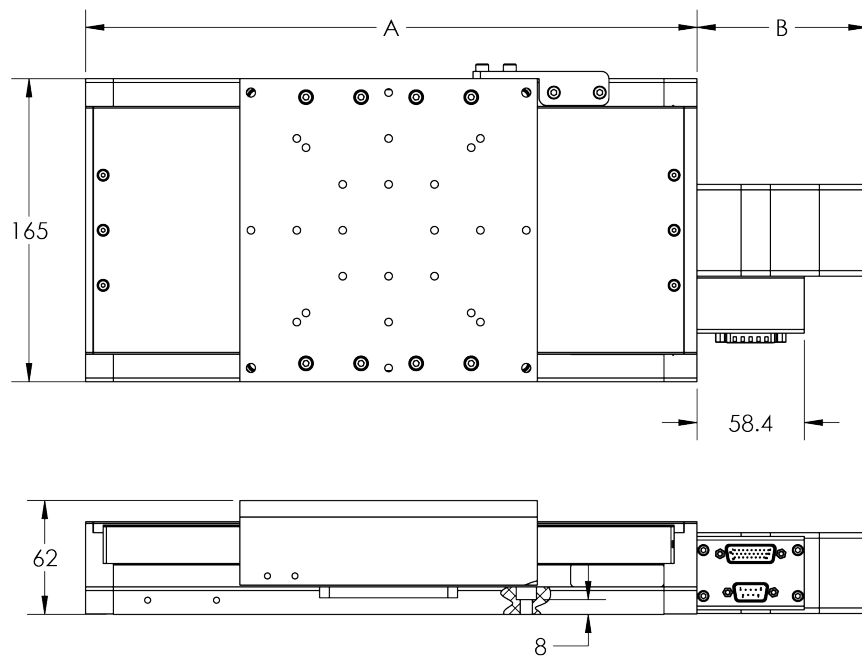
Ordering Options and Dimensions

Stage Series	Stage Travel (mm)	Drive Type	Motor Code	Feedback Code	Precision Grade	Additional Options	Custom Features
LM3	100, 150, 200, 250, 300 ¹	BS-Precision ground Ballscrew, 2mm/rev	A-NEMA17, Brushless DC	H-RS422 Rotary Encoder, 16,000 cts/rev	S- Standard	F-Side Seals	00-None
		BF-Precision ground Ballscrew, 5mm/rev ²	M-NEMA17, Brushless DC, High Torque		P- Precision ²	G- Side Seals and Brake	Any Other ³

Example Part Number: LM3-300-BS-A-H-S-F-00

Notes:

1. Other custom travels may be available upon request, not longer than 300mm.
2. Non-standard ordering option, contact Griffin Motion for more information.
3. 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)
100	333
150	383
200	433
250	483
300	533

Stage Configuration(mm)	Motor Stack Length "B" (mm)
A-H-S-F	58.4
A-H-S-G	92.6
M-H-S-F	110.7
M-H-S-G	130.7

LM3-BS Performance Specifications

Nominal Travel (mm)	100	150	200	250	300
Mechanical Accuracy (μm) ³	± 6.0	± 8.0	± 10.0	± 12.0	± 14.0
Calibrated Accuracy (μm) ¹	± 4.0				
Bi-Directional Repeatability (μm) ³	2.0				
Maximum Velocity (mm/s)	150 (300 for "BF" Ballscrew)				
Maximum Force, X Direction (N) ²	150 (250 for "M" Motor)				
Maximum Force, Y Direction (N) ²	200				
Maximum Force, Z Direction (N) ²	440				
Maximum Moment About X (Nm) ²	50				
Maximum Moment About Y (Nm) ²	50				
Maximum Moment About Z (Nm) ²	25				
Moving Mass (kg)	1.79				
Flatness (Z Motion) (μm) ²	± 4.0	± 6.0	± 8.0	± 10.0	± 12.0
Straightness (Y Motion) (μm) ²	± 4.0	± 6.0	± 8.0	± 10.0	± 12.0
Pitch Motion (arc-sec) ³	± 6.0	± 8.0	± 10.0	± 12.0	± 14.0
Yaw Motion (arc-sec) ³	± 6.0	± 8.0	± 10.0	± 12.0	± 14.0
Stage Mass (kg) ⁵	6.05	6.74	7.28	7.81	8.34

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.
5. Mass is representative only of "A-H-S-F" Configurations. Others will vary slightly.

