

LXY-150 Datasheet

150mm Linear Motor XY Stage

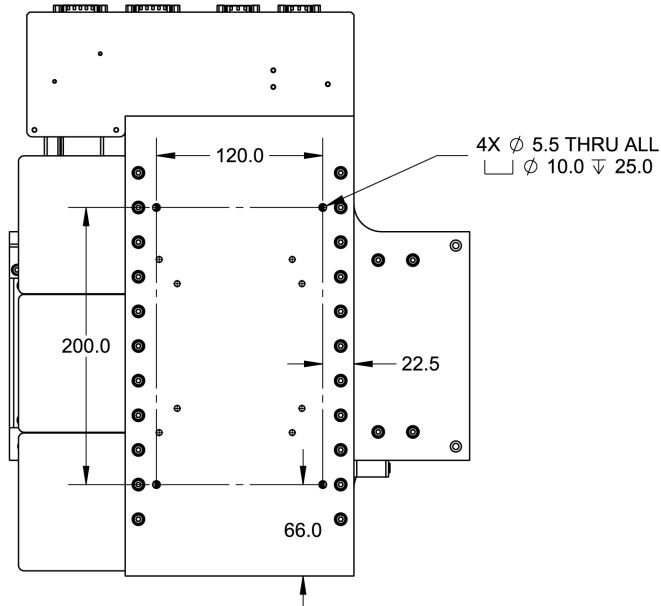
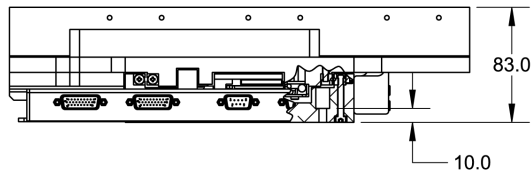
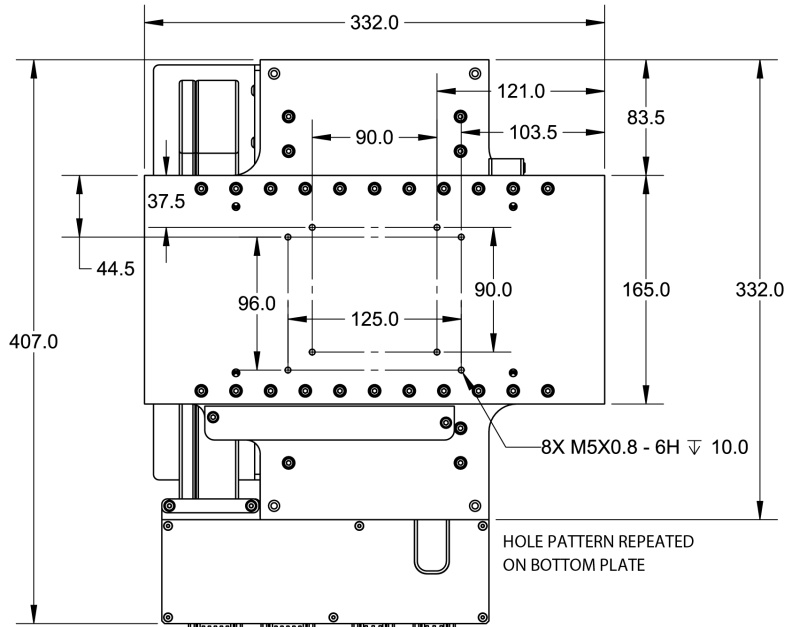
FEATURES

- 150mm XY Travel
- Ironless Linear Motors
- Optical Limit Switches and Home Index
- Variety of Encoder Options
- Low Profile Design
- Crossed Roller Bearings
- Integrated Cable Management



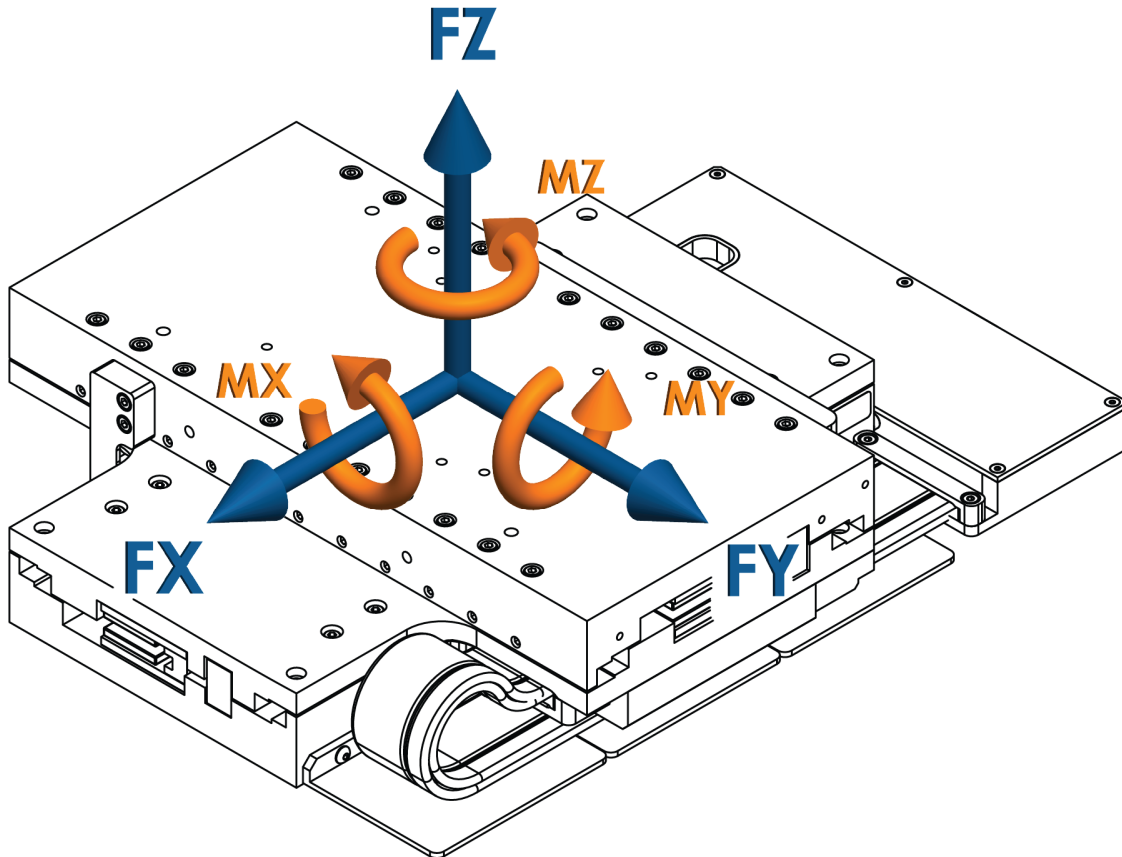
The LXY is a 150 mm XY stage engineered for high-precision planar motion. Each axis is driven by an ironless linear motor, delivering exceptionally smooth, zero-cogging motion with high acceleration and bandwidth. High-stiffness crossed roller bearings guide the motion with incredible smoothness and rigidity. The direct-drive design eliminates backlash, while integrated linear encoders provide excellent accuracy, resolution, and repeatability. The result is a low-profile, high-performance stage ideal for demanding applications in metrology, photonics, semiconductor inspection, and precision automation.

LXY-150 Dimensions



LXY Ordering Options

LXY Ordering Options	
Product Series	LXY: Closed Aperture XY Stage
Stage Travel (mm) ¹	150
Drive Type	LM: Direct Drive Linear Motor
Motor Code	G: Ironless Linear Servo Motor
Feedback Code	L: Linear Encoder, 1Vpp, 25 periods/mm, Limits and Index M: Linear Encoder, RS422, 10,000 cts/mm, Limits and Index
Precision Grade	S: Standard Precision P: High Precision ²
Additional Options	0: No Additional Options
Customizations	00: Standard Product 01-99: Custom Stage, Customer Specific ³
Example Part Number	LXY-150-LM-G-M-P-0-03
Notes	1: Custom travels may be available, maximum 150mm 2: Contact Griffin Motion for high precision specification options 3: Common customizations include: custom hole patterns and cleanroom preparation



LXY-150 Performance Specifications

LXY-150 Specifications	
Mechanical Accuracy ($\pm\mu\text{m}$) ^{1,4}	10.0
Calibrated Accuracy ($\pm\mu\text{m}$) ^{3,4}	2.0
Bi-Directional Repeatability (μm) ^{1,4}	1.0
Straightness (μm) ⁵	7.0
Flatness (μm) ⁵	15.0
Pitch ($\pm\text{arc-sec}$) ^{1,4}	15.0
Yaw ($\pm\text{arc-sec}$) ^{1,4}	7.0
Orthogonality (arc-sec) ⁵	10.0
Maximum Velocity (mm/s)	300
Maximum Motor Force (N)	140
Load Capacity (kg)	10
X Moving Mass (kg)	9.3
Y Moving Mass (kg)	4.8
Stage Mass (kg)	15.0

Notes:

1. Specification is verified via laser interferometer on every stage
2. Slope correction may be required to compensate for linear scaling errors in the screws. Correction factor will be provided to the customer
3. In order to have a stage calibrated and verified, Griffin Motion must perform the controls configuration
4. Improved specifications are available by ordering the "P" precision grade
5. Specification may be verified by laser interferometer upon request

