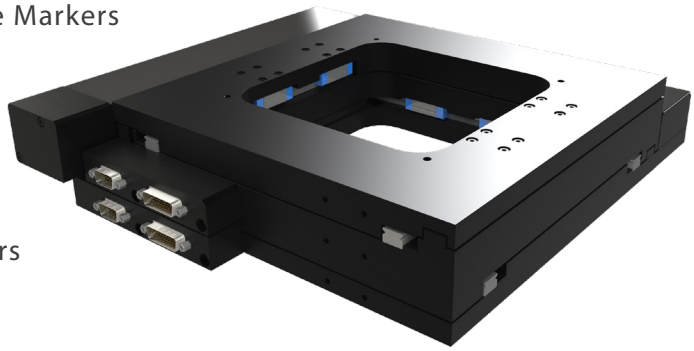
1040 CLASSIC ROAD | APEX, NC 27539
Phone: 919.577.6333| Email: sales@griffinmotion.com
www.griffinmotion.com

OXY-150 Datasheet

150mm Open-Frame XY Stage

FEATURES

- 150mm XY Travel
- Clear Aperture for Backlighting and 2-Sided Inspection
- Zero-Backlash Precision-Ground Ballscrew Drives
- Optical Limit Switches and Home Markers
- Variety of Encoder Options
- Low Profile Design
- Recirculating Linear Guides
- Integrated frameless servo motors



The OXY is an open-frame, high-precision planar motion stage designed primarily for microscopy applications. Each axis is side-driven by a precision-ground ballscrew coupled directly to the brushless motor. This provides a low-profile along with excellent accuracy, repeatability, stiffness and bandwidth. Multiple encoder options are available—including rotary, linear, and dual (rotary and linear)—to suit a wide range of accuracy, resolution, and interface requirements. Stepper motor variants are also available for more cost-sensitive applications.

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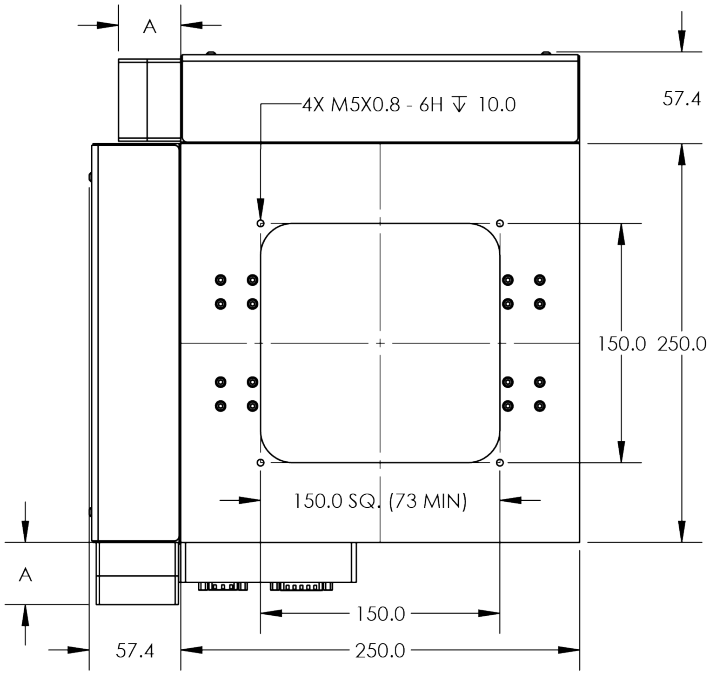
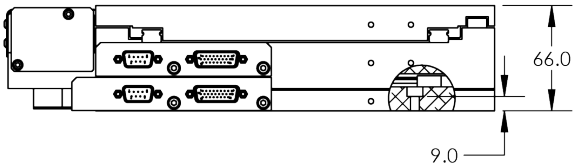
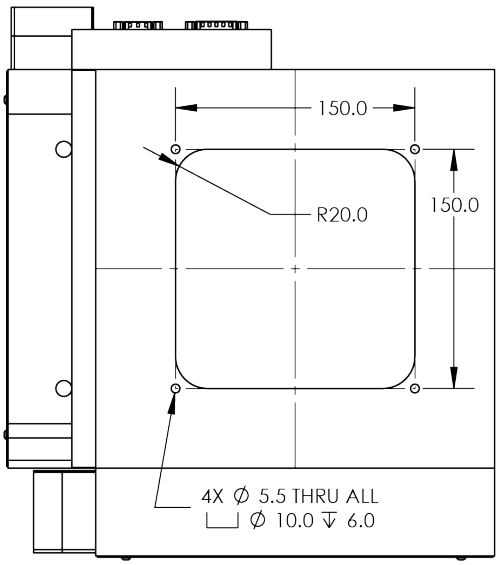
OXY-150 Dimensions







Feedback Dependent Dimensions	
Feedback Code*	A (mm)
H	58.5
L	39
M	
MM	
N	44 (HS), 60 (BS/BF)

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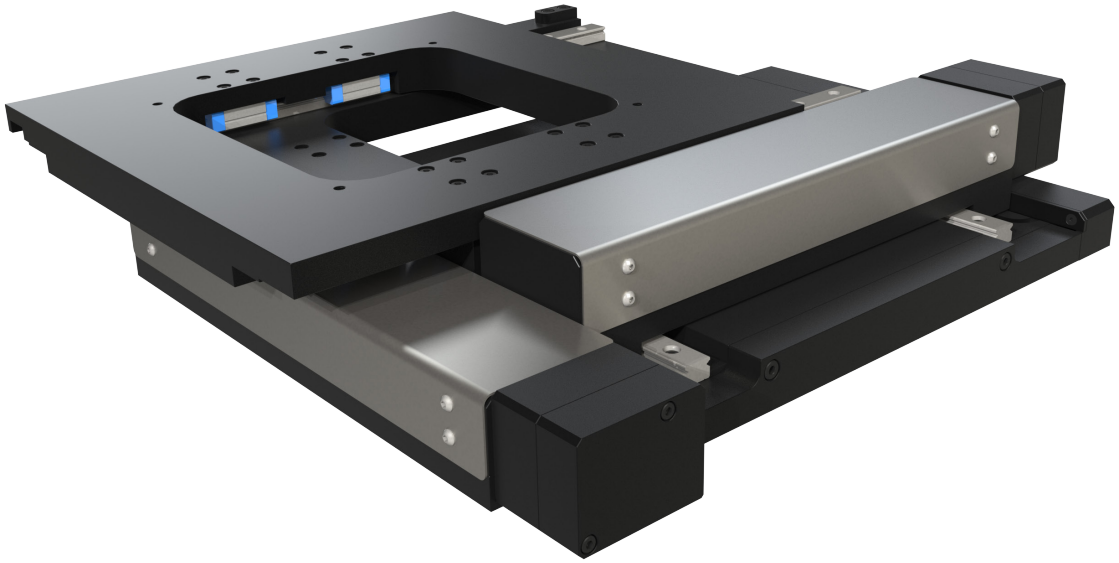
OXY Ordering Options

OXY Ordering Options	
Product Series	OXY: XY Stage
Stage Aperture	O: Open
Stage Travel (mm)[1]	150 300
Drive Type	BS: 2 mm/rev Precision-Ground Ballscrew BF: 5 mm/rev Precision-Ground Ballscrew HS: 3.175 mm/rev Leadscrew
Motor Code	A: NEMA17 BLDC, 24V Winding (BS/BF Only) B: Bipolar Stepper, 400 steps/rev (BS/BF Only) C: Bipolar Stepper, 200 steps/rev (HS Only) T: NEMA17 BLDC, 170V Winding (BS/BF Only)
Feedback Code	H: Rotary Encoder, RS422, 16,000 cts/rev, Limits, Index, and Home[2] L: Linear Encoder, 1Vpp, 25 periods/mm, Limits and Index M: Linear Encoder, RS422, 10,000 cts/mm, Limits and Index N: Limit and Home Only
Precision Grade	S: Standard Precision P: High Precision[3]
Additional Options	0: No Additional Options
Customizations	00: Standard Product 01-99: Custom Stage, Customer Specific[4]
Example Part Number	OXY-O-150-BF-T-M-S-0-07
Notes	1: Custom travels may be available, maximum 300mm 2: H may be paired with L, M or MM for dual-loop feedback 3: Contact Griffin Motion for high precision specification options 4: Common customizations include: custom hole patterns, dual-loop feedback, and cleanroom preparation



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OXY-150 Performance Specifications

OXY-150 Specifications				
Feedback Code	H	L/M	N (HS)	N(BS/BF)
Mechanical Accuracy (±µm)[1,4]	20.0[2]	12.0	40.0[2]	25.0[2]
Calibrated Accuracy (±µm)[3,4]	4.0	2.0	10.0	6.0
Bi-Directional Repeatability (µm)[1,4]	2.0	1.0	5.0	3.0
Straightness (µm)[5]	12.0			
Flatness (µm)[5]				
Pitch (±arc-sec)[1,4]	20.0			
Yaw (±arc-sec)[1,4]				
Orthogonality (arc-sec)[5]	10.0			
Maximum Velocity (mm/s)	120		25	
Maximum Motor Force (N)	120		75	120
Load Capacity (kg)	20.0			
X Moving Mass (kg)	7.0			
Y Moving Mass (kg)	2.5			
Stage Mass (kg)	10.0			

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