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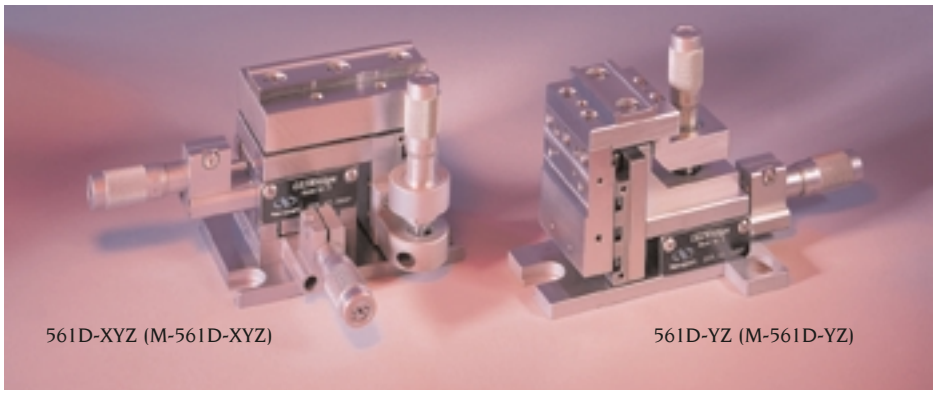
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ULTRAlign™ Precision Multi-Axis Positioning System



561D-XYZ (M-561D-XYZ) 561D-YZ (M-561D-YZ)

561 and 562 Series ULTRAlign™ Linear Stages feature stainless steel construction for superior long-term stability, with thermally matched, hardened steel crossed-roller bearings for unsurpassed performance. The crossed-roller bearings and precision-manufactured bearing reference surfaces provide exceptionally linear travel, with angular deviation better than 100 µrad about any axis. We measure each stage on a six-axis interferometer to ensure performance.

561/562 Series Stages are ultra-high performance positioners. They were originally designed for precision fiber optic alignment, one of the most demanding precision positioning applications. Today, they are finding increasing applications in other fields as well. In addition to the three-axis XYZ positioners shown here, optional tilt and rotation stages can be added to the 561 and 562 (see page 215). With up to six degrees of freedom, high-performance ULTRAlign stages offer a superior positioning solution.

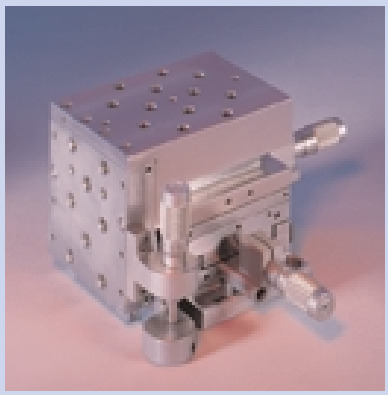
The robust design of the 562 Series Stages makes them ideally suited for repetitive, high-use industrial manufacturing and research applications. These stages have greater thermal immunity due to their higher mass. And larger diameter bearings increase the stiffness of the stage. Oversized loads and complicated platform configurations can easily be accommodated, since all actuators are located below the top surface level. Generous hole patterns, with your choice of English (1/4-20) or metric (M6) threads, provide convenient mounting options.

Each 561/562 stage axis is equipped with a non-influencing locking mechanism to maintain sub-micron positioning when locking or unlocking. Specially designed actuator mounting blocks allow quick and easy actuator changes, on any axis, at any time. Both right- and left-handed stages are available for ergonomic actuator placement. And a choice of manual, motorized, or electrostrictive actuators will meet every positioning need.

The height of ULTRAlign 561D-XYZ and 561D-YZ stages can be matched to the height of the 562-XYZ by using the 561-ADPT Adaptor (see page 218). This will allow you to use both series of stages in one system.

Key Features

- *Stainless steel construction for the ultimate long-term stability*
- *Hardened steel, crossed-roller bearings for high rigidity and precision motion*
- *Angular deviation better than 100 µrad about any axis–guaranteed*
- *Compatible with Newport manual, motorized, and electrostrictive actuators*
- *Left- and right-handed configurations*



Model 562 with SM-13 micrometers. Vertical platform translates to within 0.031 in. (0.79 mm) of work surface. Order micrometers separately.

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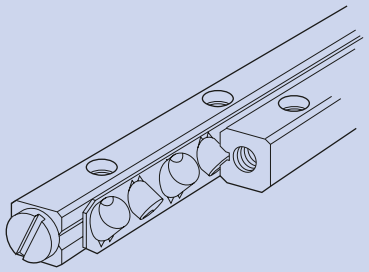
Specifications

	561 Series	562 Series
Maximum Travel X, Z axis [in. (mm)]	0.25 (6)	0.5 (13)
Maximum Travel Y axis [in. (mm)]	0.5 (13)	0.5 (13)
Angular Deviation (µrad)	<100	<100
Load Capacity [lb (N)]	5 (22)	35 (156)
Optical Axis Height [in. (mm)]	3.125 (79.4)	3.875 (98.4)

Ordering Information

Model (Metric)	Actuators Required*	Price
561D-XYZ (M-561D-XYZ)	3	$1,223
561D-XYZ-LH (M-561D-XYZ-LH)	3	$1,223
561D-YZ (M-561D-YZ)	2	$922
562-XYZ (M-562-XYZ)	3	$1,404
562-XYZ-LH (M-562-XYZ-LH)	3	$1,404

* Actuators must be ordered separately
Left-handed versions contain "-LH" in the Model number
For **Vacuum Compatible** versions (50% price premium at time of order), append 'V' to the part no., eg., 562-XYZV. Please see page 837 for specifics.



Preloaded crossed-roller bearings provide repeatable, zero stick-slip linear motion with negligible side-play. The roller strips hold cylindrical rollers alternately inclined 90° to assure constant linear contact with the hardened and ground ways.



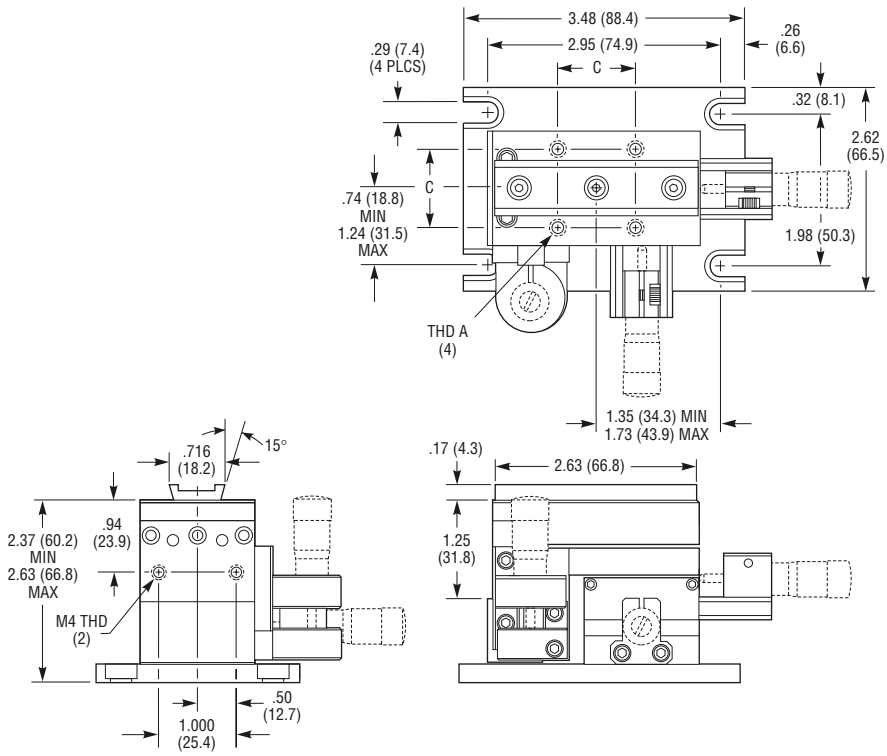
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Recommended Actuators

Manual Drives	Description	561 Series	562 Series	Travel* (mm)	Sensitivity (µm)
AJS Series	Fine Adjustment Screw	•	•	6–13	0.6–0.9
HPS Series	Fine Adjustment Screw	•	•	13	0.75–0.9
SM-06	Micrometer	•		6	1
SM-13	Micrometer	•	•	13	1
HR-6	High-Resolution Micrometer	•		6	0.5
HR-13	High-Resolution Micrometer	•	•	13	0.5
DM-6L	Differential Micrometer	•		6	0.1
DM-13	Differential Micrometer	•	•	13	0.1
DM-13L	Differential Micrometer	•	•	13	0.1
DS-4F	High-Precision Adjuster	•		8	0.02
Motorized Drives					
850G Series	Motorized Actuator	•	•	50	1
CMA Series	Motorized Actuator	•	•	12.5	0.2–0.5
PM500-1A Series	Motorized Actuator	•	•	25	0.05–0.1
AD Series	Electrostrictive Actuator	•	•	13	0.04-0.06

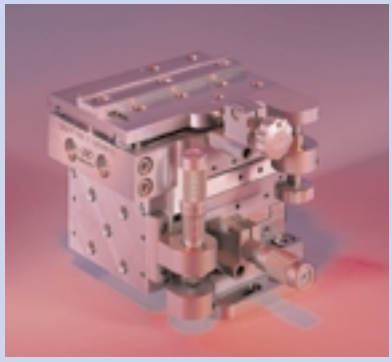
* Travel on 561 X and Z axis is limited to 6 mm

Model 561D-XYZ

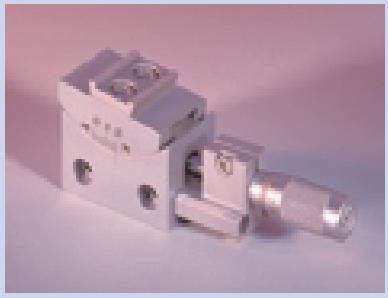


	Thread	Dimension [in. (mm)]
Model (Metric)	B	C
561D-XYZ (M-561D-XYZ)	8-32 (M4)	1.000 (25.0)
561D-XYZ-LH (M-561D-XYZ-LH)	8-32 (M4)	1.000 (25.0)

Related Products



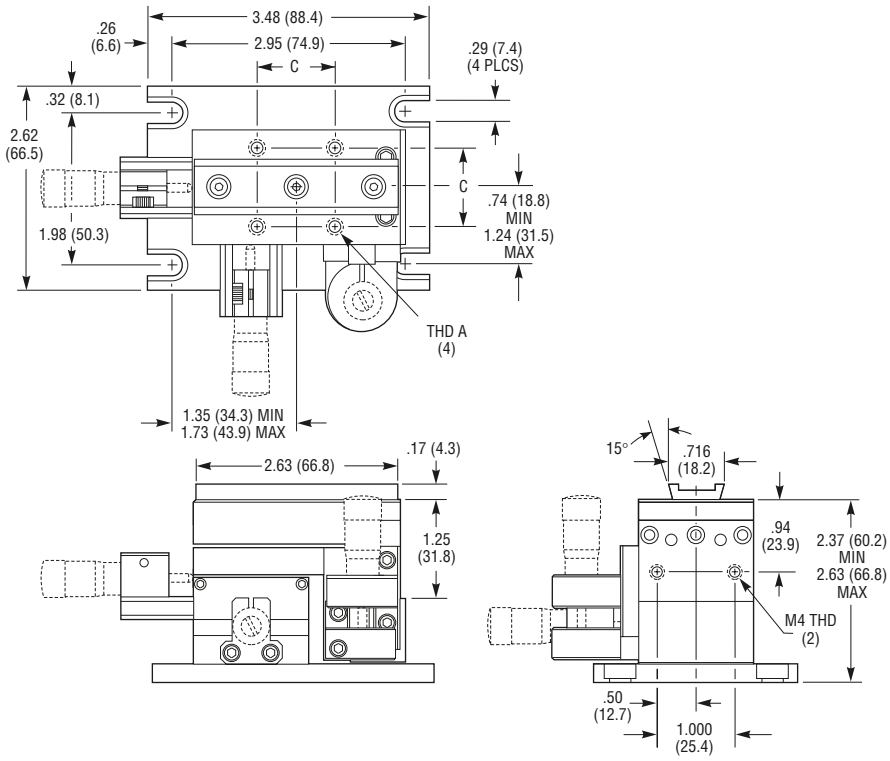
Model 562 configured with Tip/Tilt stage (see page 215 for details).



561-GON Miniature Goniometer. For this and other ULTRAlign™ accessories, see page 215

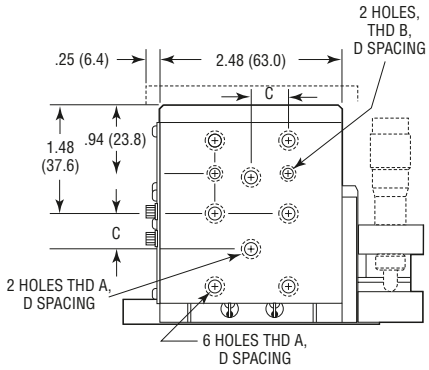
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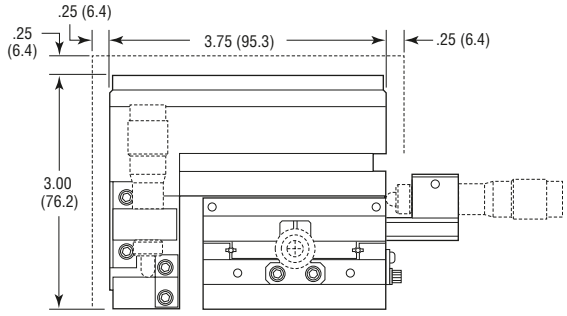
Model 561D-XYZ-LH

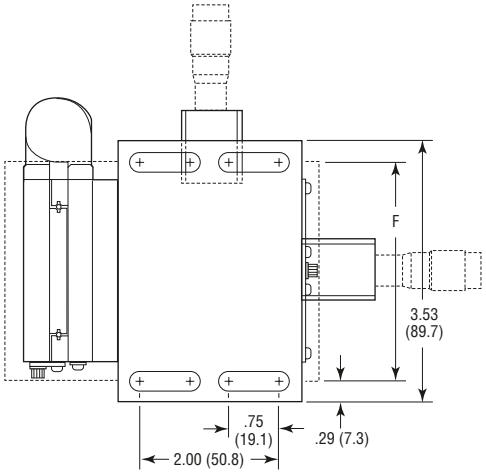


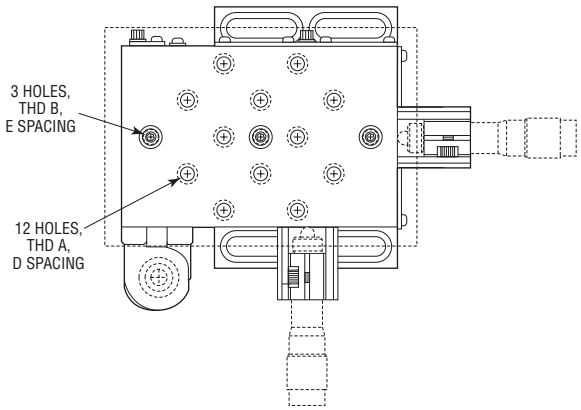
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Model 562-XYZ









	Thread		Dimension [in. (mm)]			
Model (Metric)	A	B	C	D	E	F
562-XYZ (M-562-XYZ)	1/4-20 (M6)	8-32 (M4)	0.500 (12.5)	1.000 (25.0)	1.500 (37.5)	3.0 (75)
562-XYZ-LH (M-562-XYZ-LH)	1/4-20 (M6)	8-32 (M4)	0.500 (12.5)	1.000 (25.0)	1.500 (37.5)	3.0 (75)

See our website for CAD files.

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