

BioPrecision2

Motorized Stages for Inverted Microscopes

Designed for Inverted Microscopes

For inverted microscope applications the BioPrecision2 stages feature lightweight, efficient design without sacrificing precision and performance. Fitting stages for inverted microscopes is particularly challenging due to unique characteristics of each microscope and the wide range of applications. LEP offers two different BioPrecision2 stages for inverted microscopes. The Standard Inverted BioPrecision2 Stages are carefully designed to provide the highest performance in the most compact envelope. For applications that require unobstructed accessibility to the top of the stage the Flat-Top Stage features an open top plate. Each LEP BioPrecision2 stage is specifically designed for compatibility with the microscope.



96S106 Stage

The BioPrecision2 Difference

BioPrecision2 stages represent the state of the art for microscope positioning. The design is the product of more than 20 years experience with precision positioning for microscopy. Proprietary features make the stage lighter and more precise while maintaining focus on ergonomics and microscope compatibility. The BioPrecision2 technology features a stepper motor driven precision ballscrew providing a minimum step resolution of 50nm.

Speed performance is not compromised with high resolution. Maximum speed in the standard configuration is 60mm/sec. All BioPrecision2 stages utilize corrosion resistant stainless steel hardware, precision ground crossed roller bearings and low detent stepper motors with CNC machined aircraft grade aluminum parts anodized to strict military specifications.

“When you’re working with nanometers, every detail is important!”

Accessories

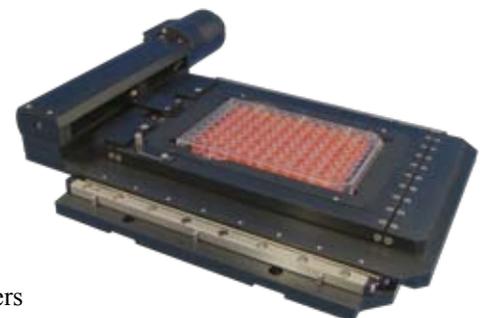
The BioPrecision2 Inverted Stages can become the workhorse of the lab. LEP offers specimen holders for almost any type of specimen. From standard 1”x3” glass slide to petri dishes of all size holders are available. Non-standard specimens are also supported with custom designs. The inverted stages can also be fitted with a piezo focusing insert for high performance applications.

Customize

BioPrecision2 Stages can be customized with encoder options and specimen holders. Linear encoders enhance the performance of the stage by providing direct feedback of stage position. LEP offers two resolutions of linear encoders: 0.1µm and 0.05µm. For most applications 0.1µm resolution encoders provide superior performance. For specialized applications the 0.05µm (50nm) encoder resolution adds additional performance.

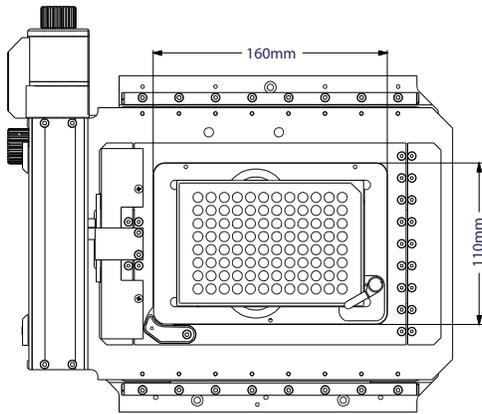
A full range of specimen holders is available for the BioPrecision2 inverted stages. Standard types include well plate, glass slide and petri dish holders. We can also offer customized holders for almost any type of specimen.

The BioPrecision2 Inverted Stage family includes the standard and flat-top stages. The flat-top stage offers an open top plate for mounting chambers and better specimen access.

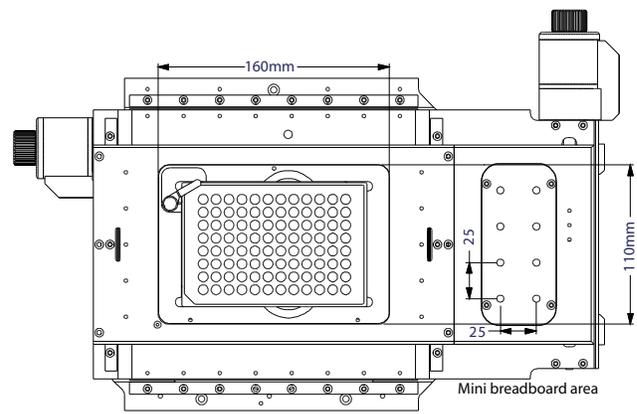


96S108 Stage

Stage Layout



96S108 Standard Stage with 99A063 Well Plate Holder



96S106 Flat-top Stage 99A063 Well Plate Holder

Performance

Position Feedback Option		Resolution (minimum)	Leadscrew Pitch	Max. Speed (mm/sec)	Repeatability	Accuracy	Straightness Flatness	Travel
Standard Open loop		50nm	2 mm	60 mm/sec	0.75 μ m	6 μ m	1 μ m/25mm	120x100mm
Rotary Encoder	-RE	200nm			0.60 μ m			
Linear Encoder	-LE	100nm			0.25 μ m			
High Res. Linear Encoder	-LE2	50nm	1 mm	30 mm/sec	0.20 μ m	2 μ m		

Stage performance can vary greatly depending upon physical and environmental factors such as specimen mass, temperature variation and the stability of the microscope. Consult an LEP applications specialist to assess the stage performance for your application.

Ordering Information

BioPrecision2 Inverted Stages are microscope specific. Each stage is specified with a unique catalog number. Use the chart to determine the correct stage for your microscope.

96SXXX - YY - ZZ	
<p>Stage type</p> <p>106 = flat-top inverted</p> <p>108 = conventional inverted</p>	<p>Encoder option</p> <p>none = no encoder</p> <p>RE = rotary encoder</p> <p>LE = 0.1μm linear encoder</p> <p>LE2 = 0.05μm linear encoder</p>
<p>Microscope type</p> <p>L1 = Leica DMIR, DMI4000, DMI5000, DMI6000</p> <p>N1 = Nikon Diaphot 200/300, TE 200/300</p> <p>N2 = Nikon TE2000</p> <p>N3 = Nikon Ti</p>	<p>O3 = Olympus IX series</p> <p>Z2 = Zeiss 100/135/200</p> <p>Z3 = Zeiss AxioObserver</p>

Accessories

Ludl Electronic Products offers a wide array of specimen holders and custom features for the BioPrecision2 Inverted stages. Please contact LEP with your requirements for more information.