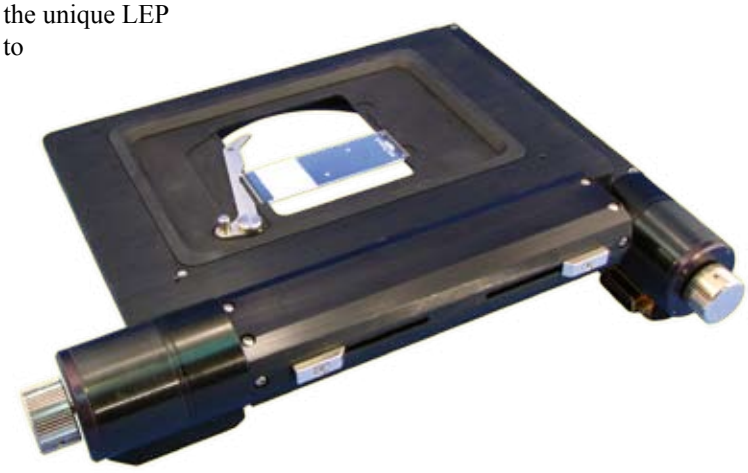
BioPrecision2

Motorized Stages for Upright Microscopes

Designed for the Microscopist

For upright microscope applications the BioPrecision2 stages feature lightweight, efficient design without sacrificing precision and performance. The working height of the stage is specifically designed to be compatible with Köhler illumination with high aperture condensers. The extra large sub-stage aperture provides trouble-free clearance for large sub-stage condensers. The wide specimen insert configuration allows for free use of high magnification short working distance objectives without risk of interference. Performance is assured with optional high resolution linear encoders to provide the highest precision without affecting microscope usability. Finally, the unique LEP mounting system ensures that the stage mounts to each microscope at the correct height and with proper clearance.



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. Many proprietary features make the stage lighter and more precise while maintaining ergonomics and microscope compatibility. The BioPrecision2 positioning mechanism features a stepper motor driven precision recirculating ball leadscrew providing a minimum step resolution of 25nm. Speed performance is not compromised with high resolution; the maximum speed is 30mm/sec.

High grade components and superior construction techniques combine ensuring stage stability, accuracy and reliability. 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!”

Customize

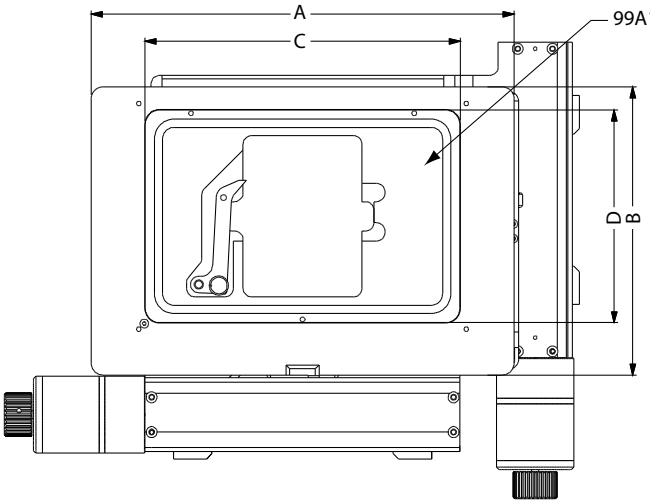
BioPrecsion2 Stages can be customized with encoder options and specimen holders. Linear encoders enhance the performance of the stage by providing direct feedback of stage position. LEP offers two resolutions of linear encoders: 0.1µm and 0.05µm. For most requirements 0.1µm resolution provides superior performance offering repeatability of 0.25µm (approximately +/- 1 encoder count). For specialized applications the 0.05µm (50nm) encoder resolution adds additional performance.

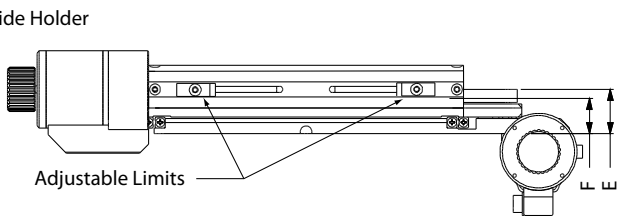
A full range of specimen holders is available for the BioPrecision2 stages. Common stage inserts include glass slide holders for 1”x3” and 2”x3” slides as well as holders for other types of specimens. LEP also offers custom inserts for unique applications.

The BioPrecision2 Upright Stage family includes extended travel stages. For applications that require larger or multiples of specimens to be mounted to the stage, the BioPrecision2ex Stages are available in 6”x4” and 10”x4” versions.

- Low Profile
- High Performance
- Precision Ballscrew
- Crossed Roller Bearings
- Adjustable Limits
- Linear Encoder
- Embedded Digital ID

Dimensions





Model	Top (X) Length A	Top (Y) Width B	Aperture Length C	Aperture Width D	Focus Height* E	Stack Height F
96S100	231	157	172	116	19	24
96S101	231	172	172	116	19	24

** adapters are designed to match focus height to microscope dimensions in mm (+/- 0.5mm)*

Performance

Base Model Number	Travel Range	Max. Speed	Weight	Straightness Flatness
96S100	100x75mm	30mm/sec	2.7kg	1µm/25mm
96S101	100x100mm	30mm/sec	2.8kg	1µm/25mm

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.

Position Feedback Option		Resolution *(minimum)*	Repeatability	Accuracy
Standard Open loop		25nm	0.75µm	6µm
Rotary Encoder	-RE	100nm	0.60µm	6µm
Linear Encoder	-LE	100nm	0.25µm	2µm
High Res. Linear Encoder	-LE2	50nm	0.20µm	2µm

Adapters

BioPrecision2 stages require a microscope specific adapter ring. The following is a short list of common microscopes and adapters. Contact sales representative for compatibility information.

Cat. Num.	Microscope Application
99A200	LEICA DMLA&DMLB
99A201	ZEISS/REICHERT
99A202	OLYMPUS BH, NIKON
99A203	OLYMPUS BX
99A205	NIKON E800, E1000
99A206	LEICA DMRB, DM4000/5000/6000
99A207	NIKON E400/600

Cat. Num.	Microscope Application
99A209	NIKON E800M, E1000M
99A210	OLYMPUS AX80
99A211	NIKON 80i/90i FEMALE DOVETAIL
99A212	NIKON 50i, 80i
99A213	ZEISS AXIOIMAGER
99A214	NIKON LV100

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