

# BioPrecision2ex

## Extended Travel

High Performance Motorized Stages for Microscopy

Whether due to a complex imaging protocol, long term experiment or unattended throughput requirements the **BioPrecision2ex** Extended Travel stages offer the ability to scan large areas or multiple slides with high performance in a package that is compatible with most conventional microscopes. There are two standard extended travel stages; the 250mm x 100mm stage with the capacity for up to 8 slides and the 150mm x 100mm stage which offers the ability to mount 5 slides to the slide holder. Both stages feature ergonomic low profile leadscrew housings, high reliability stepper motor drive, cross roller anti-migration guide bearings and options for either rotary or linear encoders.

The lightweight, efficient design provides an increased operating envelope without sacrificing precision and performance. The oversized specimen insert platform allows for free use of high magnification objective lenses without risk of interference. For easy mounting a unique adapter ring ensures that the stage mounts to each microscope at the correct height and with proper clearance. Encoder options allow for the stage performance to be tailored to specific requirements and price range.

Linear encoders provide the highest stability and accuracy for demanding applications. Applications such as extended time-lapse, image tiling and distance measurement yield

the best results when linear encoders provide the position feedback. The **BioPrecision2ex** linear encoder option is embedded into the stage rather than simply mounted as an afterthought to provide high precision performance without adversely affecting microscope compatibility.

Rotary encoders add increased reliability and positioning repeatability. The **BioPrecision2ex** rotary encoder mounts directly to the leadscrew shaft effectively eliminating motor hysteresis and stepping errors. While the overall stage

accuracy is still very dependent upon the precision leadscrew, the rotary encoder improves sub-micron repeatability and accuracy in addition to adding robustness by eliminating the chance of unexpected position loss or motor stalling.

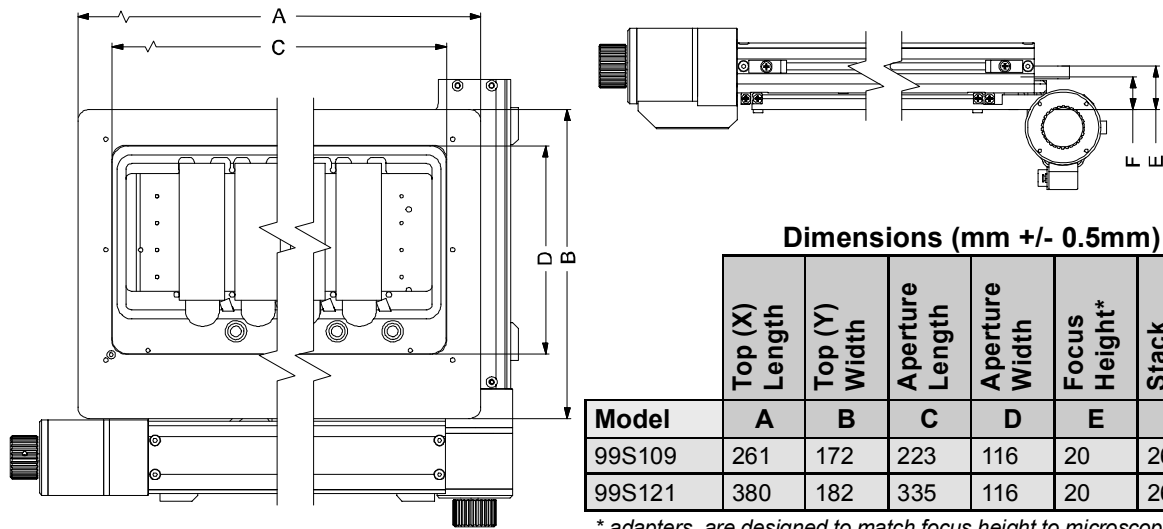
### Features

- Adjustable end-limits
- Universal mounting flange
- Linear/rotary encoder options
- Low profile



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## Physical Dimensions



\* adapters are designed to match focus height to microscope

## Performance Specifications

Base Model Number	Travel Range	Speed	Weight**	Straightness Flatness	Feedback Option	Resolution (min)	Repeatability	Accuracy
99S109	150x100mm	60mm/sec	2.58kg	1µm/25mm	Standard Open loop	50nm	3µm	16µm
					-RE Rotary Encoder	200nm	2µm	12µm
					-LE Linear Encoder	100nm	0.25µm	3µm
99S121	250x100mm	60mm/sec	3.75kg	1µm/25mm	Standard Open loop	50nm	3µm	16µm
					-RE Rotary Encoder	200nm	2µm	12µm
					-LE Linear Encoder	100nm	0.25µm	4µm

\* specifications when used with Ludl Electronic Products MAC 5000 automation controller

\*\* weight can vary with exact stage configuration

## System Configuration

A typical **BioPrecision2ex** system includes a MAC 5000 controller, **BioPrecision2ex** stage and specimen holder. Each stage includes an adapter ring that is determined at the time of order based on the specified microscope.

Standard slide holder options include the part number *99A196 8 position holder* for the 250x100mm stage and the *99A178 5 position slide holder* for the 150x100mm stage.

The basic XY stage system can be expanded by adding MAC 5000 modules and automation accessories from our catalog. Contact your LEP dealer for a comprehensive list of components and stage accessories.



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