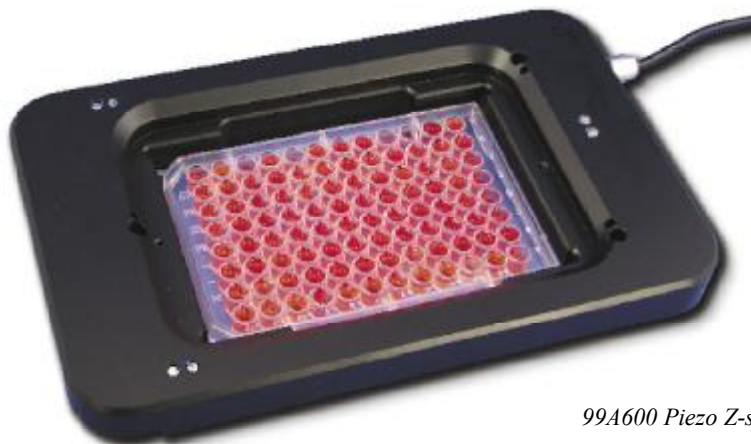


# Piezo Z-Stage

“The New Standard for High Performance Piezo Microscope Focusing”



99A600 Piezo Z-stage

## Piezo Z-stage

Advances in image processing and image acquisition have redefined the requirements for rapid, precise focus control. The LEP Piezo Z-stage insert addresses these requirements and provides the highest performance in a convenient form-factor that is easily adapted to most inverted microscope stages.

The insert provides a stable platform for large and small specimens including industry standard multi-well plates, 1”x3” and 2”x3” glass slides as well as culture dishes. The flexible design of the LEP Piezo Z-stage enables the use of custom specimen holders for many different specialized applications as well as general microscopy. With either 200 or 500 microns of travel the Piezo Z-stage can provide high performance focus control for a wide range of applications.

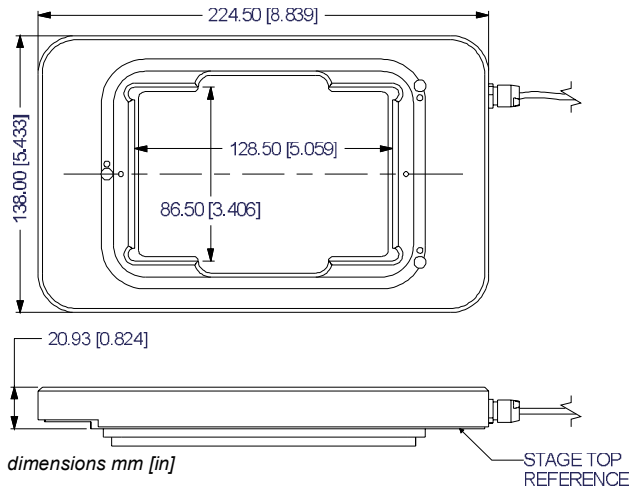
The Piezo Z-stage integrates with the MAC 5000 automation controller system. Additional control boxes are not necessary. A dedicated MAC 5000 module provides full 16 bit resolution, digital position feedback and sophisticated electronic triggering options. An additional analog control interface is also provided for high speed synchronized operation. Digital control of the SGS position feedback eliminates manual offset adjustments for long-term accuracy.

Software bridge commands for the Piezo Z-stage are compatible with standard MAC 5000 motor commands. Most software developed for the standard motorized focus, will integrate transparently.

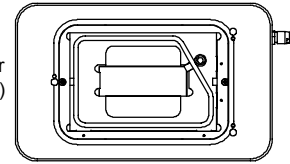


99A600 Piezo Z-stage with 99S106 BioPrecision2 inverted stage

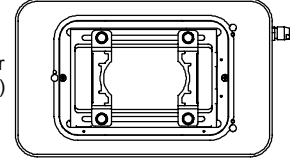
## Piezo Z-stage



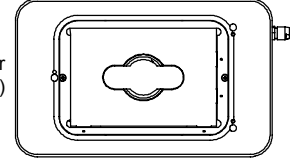
Single Slide Holder  
99A610 (included)



Adjustable Slide/Dish Holder  
99A611 (optional)



36mm Dish Holder  
99A612 (optional)



## Performance Characteristics

	99A600 Piezo Z-stage	99A601 Piezo Z-stage
Travel Range	200 $\mu\text{m}$	500 $\mu\text{m}$
Repeatability	1 nm	4 nm
Accuracy (full travel)	0.5 %	1 %
Resolution	16 bit	16 bit
Settling time (5 $\mu\text{m}$ move 150g load)	25ms	37ms
Maximum Load	500 g	400 g

**Note on characteristics:** General characteristics are provided for reference. The complex dynamics of the Piezo transducers and feedback systems make the performance dependent upon characteristics specific to the sample and application.

## Ordering Information

The Piezo Z-stage can be an add-on to an existing MAC 5000 system or as a stand-alone unit when included with the 995001 MAC 5000 base system.

Part Number	Description
<i>add-on for existing MAC 5000 system</i>	
99A600	Piezo Z-stage insert for LEP Inverted stage with 200 micron travel
99A601	Piezo Z-stage insert for LEP Inverted stage with 500 micron travel
73005063	MAC 5000 Piezo control module
<i>example: 200 micron travel stand-alone system</i>	
99A600	Piezo Z-stage insert for LEP inverted stage
995001	MAC 5000 base system, includes power supply and interface
73005063	MAC 5000 Piezo control module



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