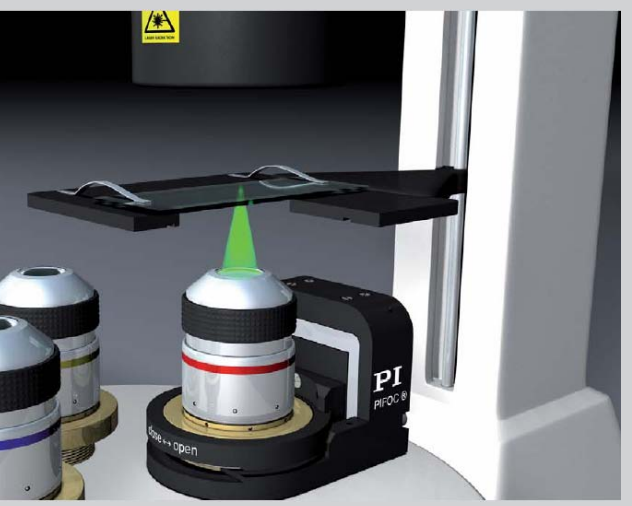
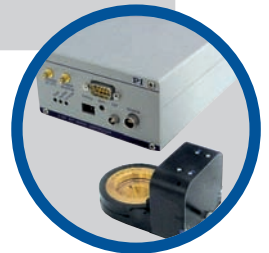
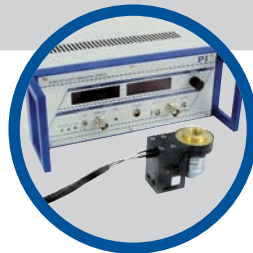


PIFOC[®] Piezo Z-Stages & Objective Scanners

Image Faster



- Ultra-Fast Z-Steps with Patented Piezo Ceramic Drives
- Up to 20X Faster Step-&-Settle Than Stepper Motor Drives
- System Includes Everything You Need:
Piezo-Mechanics, Controller, Adapters
- Compatible with all Major Image Acquisition Packages
- Legendary PI Performance, Reliability & Robustness
- Capacitive Position Feedback as used in
NIST Reference Class Nanometrology Systems
- Objective Scanners Available: No Sample Disturbance
- From the Inventor of Piezo-Z Scanners

PIFOC[®] Microscope Automation Piezo-Z Stage

Image Faster



P-737 piezo Z-stage for high-resolution microscopy, shown with multiwell plate

- High-Speed Piezo Z-Motion with Travel Ranges to 250 μm
- Nanometer Resolution
- Large Clear Aperture to Accommodate Specimen Holders
- Perfect Mechanical Fit to XY OEM Manual or Motorized Stages
- Typically 10 to 20 Times Faster Step-and-Settle than Classical Stepper Motor Drives

PIFOC[®] P-737 high-speed vertical positioning systems are designed for use with XY microscopy stages – OEM manual stages as well as aftermarket motorized stages.

While the XY stage positions the sample, the piezo-actuator-based P-737 moves the sample along the optical axis to quickly and precisely adjust the focus. Vertical stepping with an accuracy in the nanometer range takes only a few milliseconds.

Application Examples

- Fluorescence microscopy
- Confocal microscopy
- Biotechnology
- 3D Imaging
- Autofocus systems
- Medical technology

The large aperture is designed to accommodate a variety of specimen holders including slides or multiwell plates.

High-Speed Z-Steps for Fast Focus Control and Z-Stack Acquisition

The immediate response of the solid-state piezo drives enables rapid Z-steps with typically 10 to 20 times faster step-and-settle times than classical stepper motor drives. This leads to more image acquisition speed and throughput.

Closed-Loop Position Control for High-Precision and Stability

For high stability and repeatability, P-737 stages are equipped with position sensors. High-resolution, absolute measuring displacement sensors (SGS) are applied to appropriate places on the drive train and feed the platform

Ordering Information

P-737.1SL
PIFOC[®] Nanofocusing Z-Stage for Microscope Sample Holder, 100 μm , SGS, LEMO Connector, for Microscope Stages

P-737.2SL
PIFOC[®] Nanofocusing Z-Stage for Microscope Sample Holder, 200 μm , SGS, LEMO Connector, for Microscope Stages

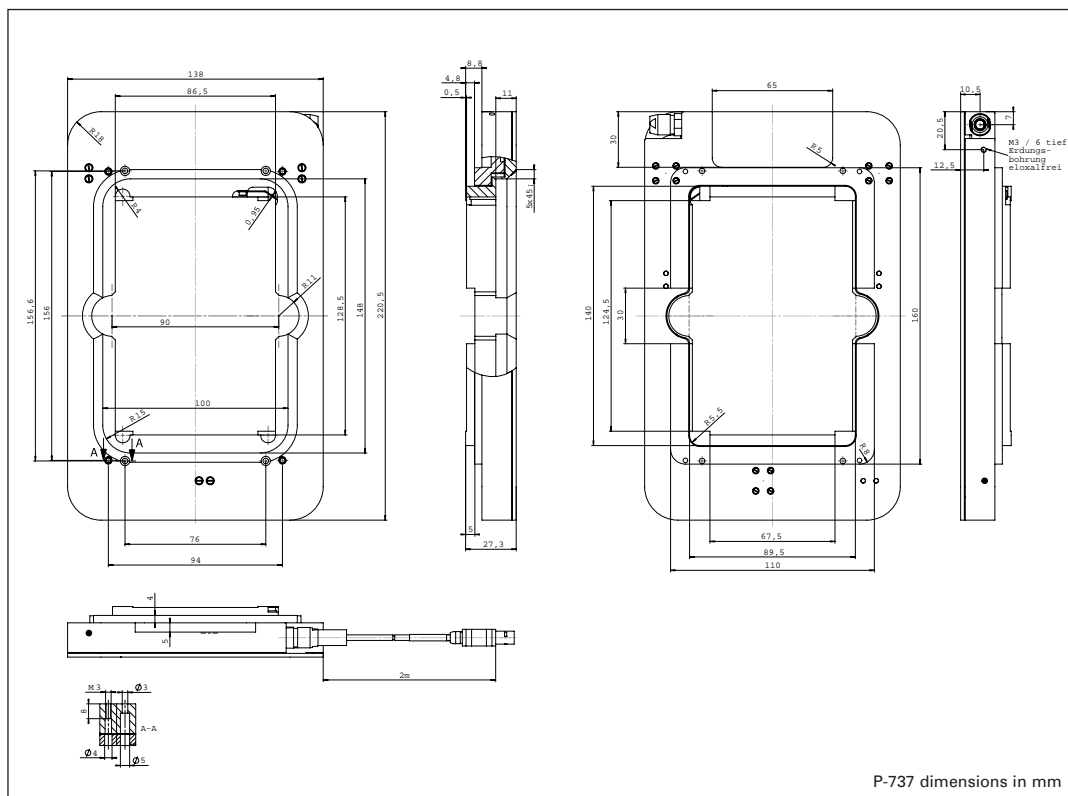
Versions with up to 500 μm travel or with direct-measuring, high-resolution capacitive sensors on request.

Ask about custom designs!

position information back to a piezoelectric controller. The sensors are connected in a full-bridge configuration to eliminate thermal drift, and assure optimal position stability and rapid response with nanometer resolution.

For More Information:

Contact your PI applications specialist.



P-737 dimensions in mm

PIFOC® Objective Scanner Systems

Image Faster



- From the Inventor of Piezo-Z Scanners for Fast Z-Stack / Focus Control
- Choice of Travel Ranges / Controllers
 - 100 μm or 400 μm
 - Display Controller or Compact Controller
- Custom Tuning for Fastest Possible Speed (to 7 msec per Step)
- System Includes Everything You Need:
 - Mechanics, Controller, Adapters, Distance Cases
- Legendary PI Performance, Reliability & Robustness
- Compatible w/ all Major Image Acquisition Packages
- Capacitive Feedback as used in NIST Reference Class Nanometrology Systems
- ISO 9001 Quality from the Global Leader in Nanopositioning
- UL and CSA Certified

Z-Stack Imaging & Focusing: Faster with Piezo Z-Scanners

PIFOC® piezo-actuated Z-scanners achieve typically 10 times higher focusing speed & precision than motorized drives and

thus provide higher-quality images faster.

Scanning the Objective

The compact, light and stiff objective scanner design pro-

vides very fast response and does not disturb the sample.

Compatible with Imaging Software

PIFOC® controllers come with a high-bandwidth analog inter-

face for extremely fast response and compatibility with all major image acquisition packages.

About PI

PI, the global leader in nanopositioning, has been ISO 9001 certified since 1994 and employs more than 400 people world wide. PI's patented piezo technology provides longer lifetime and higher performance than any other piezo device on the market. PIFOC® was invented by PI 15 years ago and has since become the global standard in objective scanners, with thousands of units installed in the field.

PIFOC® Objective Scanner System Configurations:

Display Controller

Full featured E-665 PIFOC® controller with display and additional manual control. 36W piezo power.

100 μm Scanning Range

P-721 PIFOC® scanner for ultra-fast Z-Stack imaging/focusing

400 μm Scanning Range

P-725 PIFOC® scanner for fast focusing/Z-stack imaging



PIFOC® 100D System



PIFOC® 400D System

Compact Controller

E-625 PIFOC® economical controller. 14W piezo power.



PIFOC® 100 System



PIFOC® 400 System

All PIFOC® systems include the piezo objective scanner, a controller and two distance cases. To order, specify part number and objective thread (e.g. PIFOC® 100D, M25 x 0.75)

PI (Physik Instrumente) L.P.

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Email: info@pi-usa.us
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