

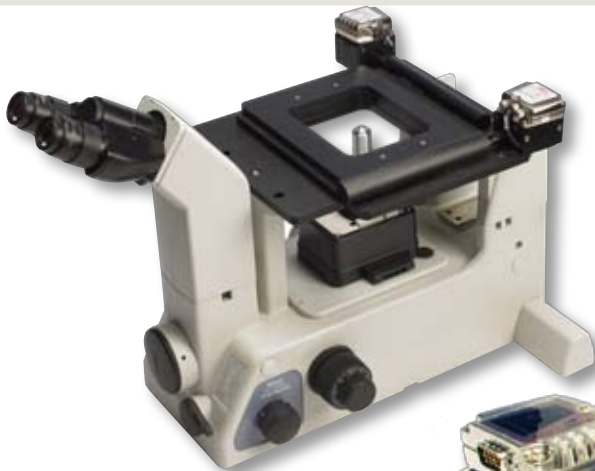
MicroStage Series

Features

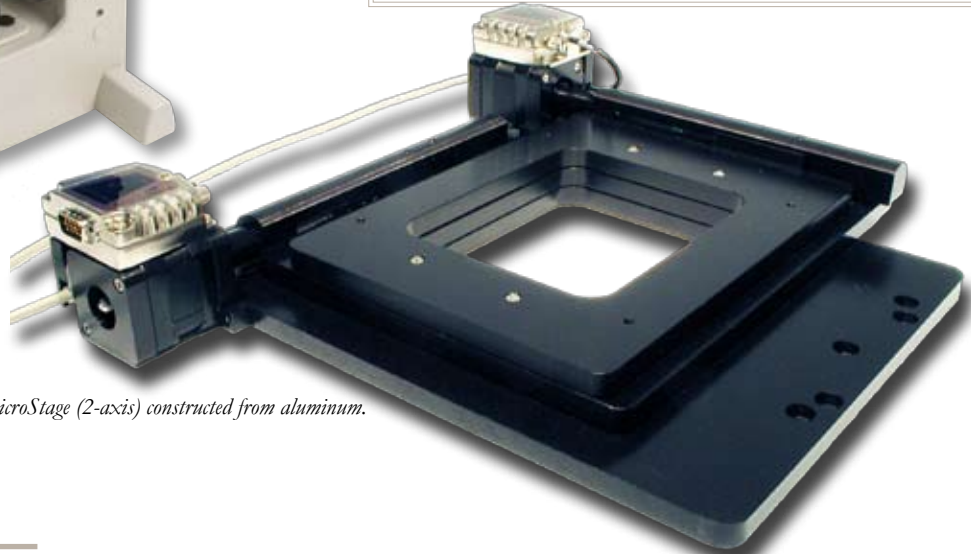
- ▶ Long range 2-axis motion: 25mm
- ▶ Precision encoders: 20 nm resolution
- ▶ Easily retrofit to inverted microscopes and customize for other optical setups
- ▶ LabVIEW compatible
- ▶ "Plug and Play" USB computer interface

Typical Applications

- ▶ Complex, programmed motion control
- ▶ Optical microscopy
- ▶ Micropositioning with high resolution position feedback



MicroStage (2-axis) mounted on a Nikon TE Series inverted microscope.



MicroStage (2-axis) constructed from aluminum.

Compatible Software Packages



LabVIEW



USB motion control



USB motion control

Examples supplied for the Micro-Drive controller

Product Description

The MicroStage is a precision, stepper motor driven, micropositioning system for inverted optical microscopes or customized for special mounting requirements. Long range (25 mm) linear positioning in two axes (XY) with high resolution and excellent repeatability. The MicroStage is also capable of high stability with less than 5nm drift after a single 150 micron motion (minimal stepper motor heating). The MicroStage-20E model provides high resolution (20 nm) linear encoders for real-time feedback of the actual stage position. The included MicroDrive controller connects to a PC via a standard USB port. Motion commands from the PC are translated into the final stepper motor drive signals. Signals from the two linear encoders are conditioned and are

available for USB transfer into the PC. The MicroDrive controller is LabVIEW compatible and the system is provided with a basic LabVIEW motion control routine for positioning in XY. Optional wireless joystick control is also available. Standard MicroStages are offered for the following inverted microscopes: Olympus IX/IX2 Series, Nikon TE2000/Ti Series, Leica DMI Series, and Zeiss Axiovert/Axio Observer Series. MicroStages designed to fit other setups, including direct mounting to optical tables, may also be requested.

Technical Specifications

Range of motion (X)	25 mm
Range of motion (Y)	25 mm
Encoder Resolution (MicroStage-20E)	20 nm
Step Size.....	95 nm
Maximum Speed	4 mm/sec
Motion Profile	
Motion ≥ 100 steps	Automatic accel/decel control
Motion < 100 steps	Constant 5ms/step
Recommended max. load*	5 kg
Body Material	Aluminum
Controller	Micro-Drive™

* Larger load requirements should be discussed with our engineering staff.



Micro-Drive™ controller used to operate the MicroStage. A standard USB port allows direct connection of the Micro-Drive™ controller to a PC. LabVIEW™ compatible.

