

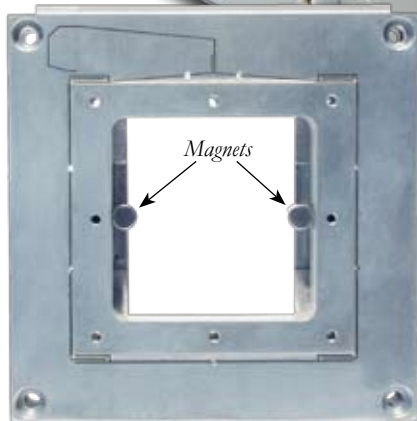
# Nano-H Series

## Features

- ▶ Aperture for microscopy: 2" x 2"
- ▶ Two axis motion
- ▶ 100  $\mu\text{m}$  or 50  $\mu\text{m}$  ranges of motion
- ▶ Compact size
- ▶ Economical
- ▶ **pico** sensor technology
- ▶ Closed loop control

## Typical Applications






- ▶ Optical microscopy
- ▶ AFM
- ▶ Fluorescence imaging
- ▶ Optical trapping



Nano-H100 with re-entrant microscope slide holder.  
High strength magnets hold the slide in place.

Nano-H100 (2-axis)  
constructed from aluminum.

**Compatible Software Packages**

 LabVIEW	 Image-Pro <sup>®</sup> AMS Analog motion control	 µManager THE OPEN SOURCE MICROSCOPY SOFTWARE USB motion control
Examples, tutorial, and Nano-Route <sup>®</sup> 3D sup- plied with Nano-Drive <sup>®</sup> USB interfaces.	 MetaMorph <sup>®</sup> USB and analog motion control	 SLIDERBOOK 5.0 Analog motion control, 1 or 2 axes.



## Product Description

The Nano-H Series is a compact 2-axis positioning stage which provides excellent positioning performance at an economical price. The large center aperture makes the Nano-H Series ideal for applications requiring transmitted beams, or the mounting of bulky components such as multiple fibers, optics, and metrology probes. Internal position sensors utilizing proprietary **pico** technology

provide absolute, repeatable position measurement and picometer resolution when operated with the Nano-Drive<sup>®</sup> controller. The Nano-H Series is available in custom ranges of motion and can be constructed from aluminum, invar or titanium.

## Technical Specifications

Range of motion (Nano-H100).....	100 $\mu\text{m}$ x 100 $\mu\text{m}$
Range of motion (Nano-H50).....	50 $\mu\text{m}$ x 50 $\mu\text{m}$
Resolution (Nano-H100).....	0.2 nm
Resolution (Nano-H50).....	0.1 nm
Resonant Frequency (X).....	500 Hz $\pm$ 20%
Resonant Frequency (Y).....	250 Hz $\pm$ 20%
Stiffness.....	1.0 N/ $\mu\text{m}$
$\theta_{\text{roll}}$ , $\theta_{\text{pitch}}$ (typical).....	$\leq 1$ $\mu\text{rad}$
$\theta_{\text{yaw}}$ (typical).....	$\leq 3$ $\mu\text{rad}$
Recommended max. load (horizontal)*.....	0.5 kg
Recommended max. load (vertical)*.....	0.2 kg
Body Material.....	Al, Invar or Titanium
Controller.....	Nano-Drive <sup>®</sup>

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

