# Nano-View®/M Series

Features

‣ *Manual micropositioning with nanopositioning*
‣ *1" (25mm) 2-axis coarse positioning*
‣ *2-axis or 3-axis nanopositioning*
‣ *Large aperture*
‣ *Retrofit to inverted microscopes*
‣ *pico sensor technology*
‣ *Closed loop control*

Typical Applications

‣ *Optical microscopy, easy to retrofit*
‣ *Confocal imaging*
‣ *Fluorescence imaging*
‣ *Single molecule spectroscopy*
‣ *Particle tracking*
‣ *Nanomanipulation*
‣ *STORM and PALM imaging*
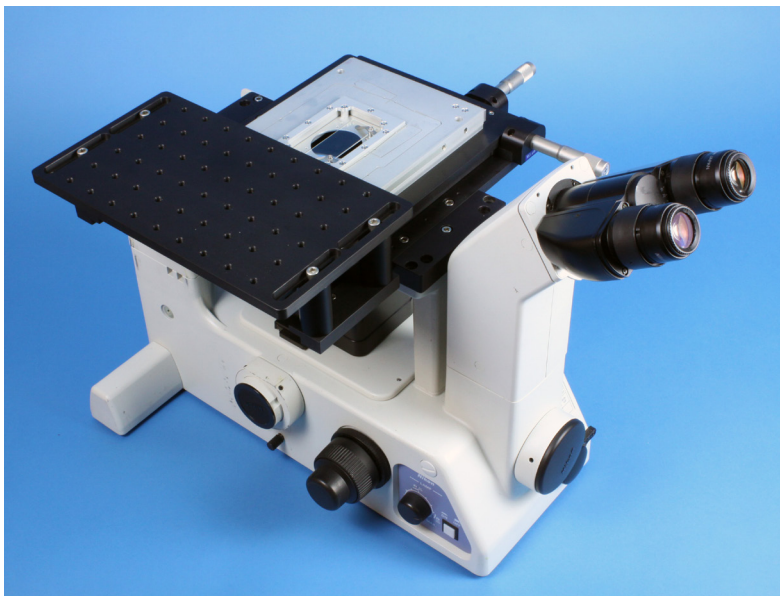
Nano-View®/M 100-3 System with optional breadboard assembly.
3-axis nanopositioning
2-axis micropositioning

Compatible Software Packages

Image-Pro *AMS*
USB and analog motion control

LabVIEW

Examples, tutorial, and Nano-Route® 3D supplied with Nano-Drive® USB interfaces.

MetaMorph®
USB and analog motion control

µManager THE OPEN SOURCE MICROSCOPY SOFTWARE
USB motion control

SLIDEBOOK 5.0
Analog motion control, 1 or 2 axes.

Nano-View®/M systems include re-entrant sample holders.
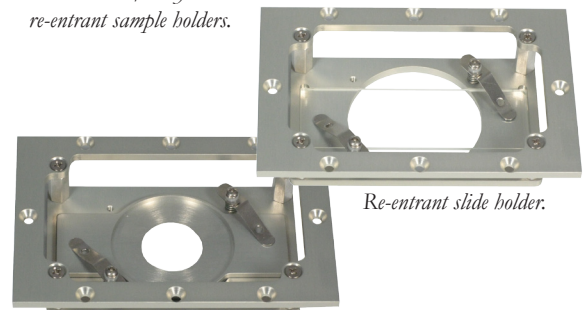
Re-entrant slide holder.

Re-entrant coverslip/petri dish holder.

Product Description

The Nano-View®/M is a fully integrated positioning system for use with inverted optical microscopes. Easy to operate and affordable, the Nano-View®/M combines a manual micrometer driven, two axis, linear motion stage with high resolution, long range nanopositioners - either ultra-low profile or ultra-high speed. A stable blocking force of 10 N built into each axis of the coarse positioning stage provides a secure base for precision nanopositioning. The overall height of the Nano-View®/M with the low profile nanopositioners is only slightly more than standard manual XY stages. An optional breadboard assembly with threaded mounting holes ($^1/_4$-20 on a 1 inch pattern or M6 on a 25mm pattern) is a convenient

mounting surface for probes. Nanopositioner ranges of motion extend up to 300 microns per axis (X,Y and Z). Internal position sensors utilizing proprietary *pico* technology provide absolute, repeatable position measurement. The Nano-View®/M system includes the Nano-Drive® controller and is compatible with user written LabVIEW software. Standard Nano-View®/M systems are offered for the following inverted microscopes: Olympus IX/IX2 Series, Nikon TE2000/Ti Series, Leica DMI Series, and Zeiss Axiovert/Axio Observer Series. Nano-View®/M systems designed to fit other setups, including direct mounting to optical tables, may also be requested.

Technical Specifications

Low Profile Nanopositioners

Axes of motion ....XY or XYZ

Ranges of motion (XY or XYZ) .... 100/200/300 µm

Resolution (100/200/300 µm) .... 0.2/0.4/0.6 nm

Resonant Frequencies

X axis (100/200/300 µm) ....400/350/300 Hz ±20%

Y axis (100/200/300 µm) ....400/350/300 Hz ±20%

Z axis (100/200/300 µm) ....400/300/200 Hz ±20%

Stiffness...1.0 N/µm

θ_{roll} , θ_{pitch}(typical) .... ≤1 µrad

θ_{yaw} (typical) .... ≤3 µrad

Recommended max. load (horizontal)* ....0.5 kg

Body Material ....Al, Invar or Titanium

Controller .... Nano-Drive®

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

High Speed Nanopositioner

Axes of motion ....XYZ

Ranges of motion (XY).. 75 µm

Range of motion (Z) .... 50 µm

Resolution (50/75 µm)................................0.1/0.15 nm

Resonant Frequency (XYZ) .... 1000 Hz ±20%

Stiffness...1.0 N/µm

θ_{roll} , θ_{pitch}(typical) .... ≤1 µrad

θ_{yaw} (typical) .... ≤3 µrad

Recommended max. load (horizontal)* .... 100 g

Body Material .... Aluminum

Controller .... Nano-Drive®85

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

Micropositioning Stage

Axes of motion .... XY

Ranges of motion (XY)...25mm

Graduations .... 10 µm

Vernier graduations .... 1 µm

Body Material .... Aluminum

12 x tapped 4-40 UNC ▽ 0.220
on a 3.70" x 2.50" rect.

1.125

3.300

2.100

Cable Exit

Manual Micrometer

Manual Micrometer

Mounting holes
and base dimensions
dependent on
microscope model

Note: All Dimensions in Inches
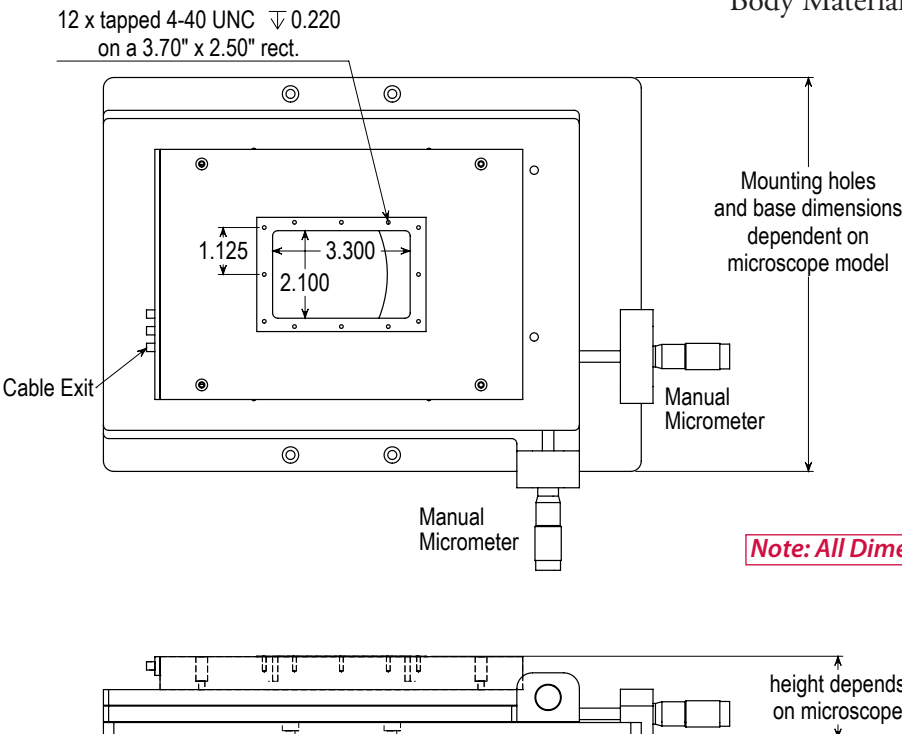
Note: Additional informa-tion regarding the built-in nanopositioning systems can be found on the catalog pages which describe the Nano-LPS Series, the Nano-BioS Series, and the Nano-LPQ.

height depends
on microscope