

Nano-F Series

Features

- ▶ Compact objective lens focusing element
- ▶ Interchangeable, quick mount adapters
- ▶ 100 μm or 200 μm ranges of motion
- ▶ Compatible with all microscopes
- ▶ Closed loop control
- ▶ **pico**™ sensor technology

Typical Applications

- ▶ Microscope focusing element
- ▶ Confocal imaging
- ▶ Auto focus
- ▶ STORM and PALM imaging

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Nano-F200 constructed from aluminum.



Nano-F100 constructed from aluminum.



Compatible Software Packages



Image-Pro
AMS

Analog motion control



MetaMorph™
USB and analog motion control

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



Product Description

The Nano-F Series are nanopositioner focusing elements with 100 or 200 microns of travel. Internal position sensors utilizing proprietary **pico**™ technology provide absolute, repeatable position measurement and picometer accuracy under closed loop control. The Nano-F Series offer an alternative to microscope stage Z-axis motion or can be used to provide automated microscope thermal expansion compensation. It can be used as a stand-alone item or in conjunction with other Mad City Labs nanopositioning systems. The Nano-F Series devices are

constructed from aluminum and brass with integrated sensors for absolute position control. The quick mount adapter threads directly into the microscope so that the nanopositioner can be clamped onto the adapter without rotation. The interchangeable threads on the quick mount adapter allow the Nano-F Series to be used on all microscopes. The desired threads on the quick mount adapter are specified for each system when it is ordered. Extra adapters can be ordered separately.

Quick mount adapters allow the Nano-F Series to be used with a variety of microscopes and lenses. Stocked adapters include M25, RMS, and M32 (Nano-F200 only) threads.

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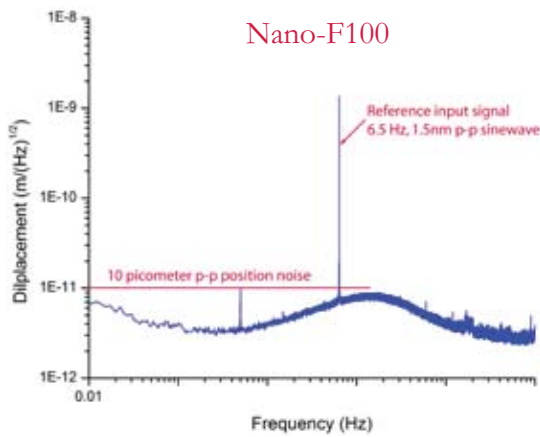
Technical Specifications

Range of motion (Nano-F100).....	100 μm
Range of motion (Nano-F200).....	200 μm
Resolution (100/200 μm).....	0.2 / 0.4 nm
Resonant Frequency (100 and 200 μm)....	500 Hz $\pm 20\%$
Stiffness.....	1.0 N/ μm
Recommended max. load*.....	0.5 kg
Body Material	Al and Brass
Threaded Adapters.....	M25, RMS, M32 (F200 only)
Controller	Nano-Drive™

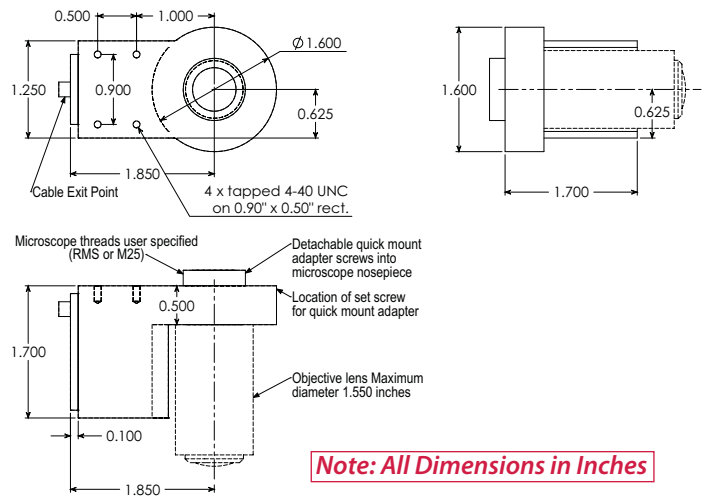
* Larger load requirements should be discussed with our engineering staff.

Note: See page 11 for custom high speed lens positioning systems.

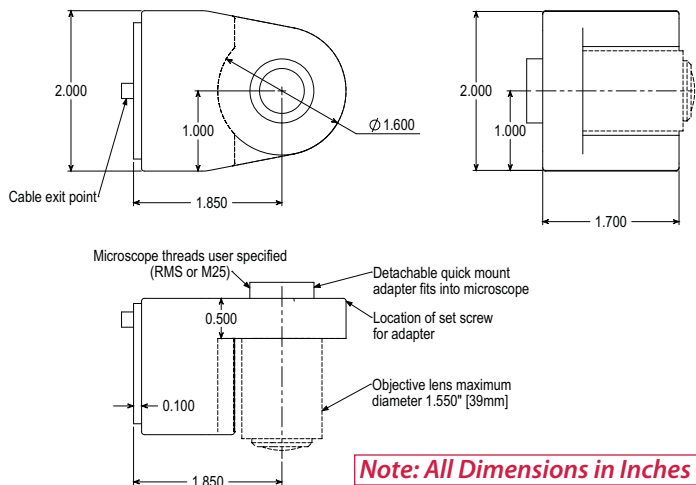
Low Position Noise



Nano-F100 with RMS or M25 adapters



Nano-F200 with RMS or M25 adapters



Nano-F200 with M32 adapters

