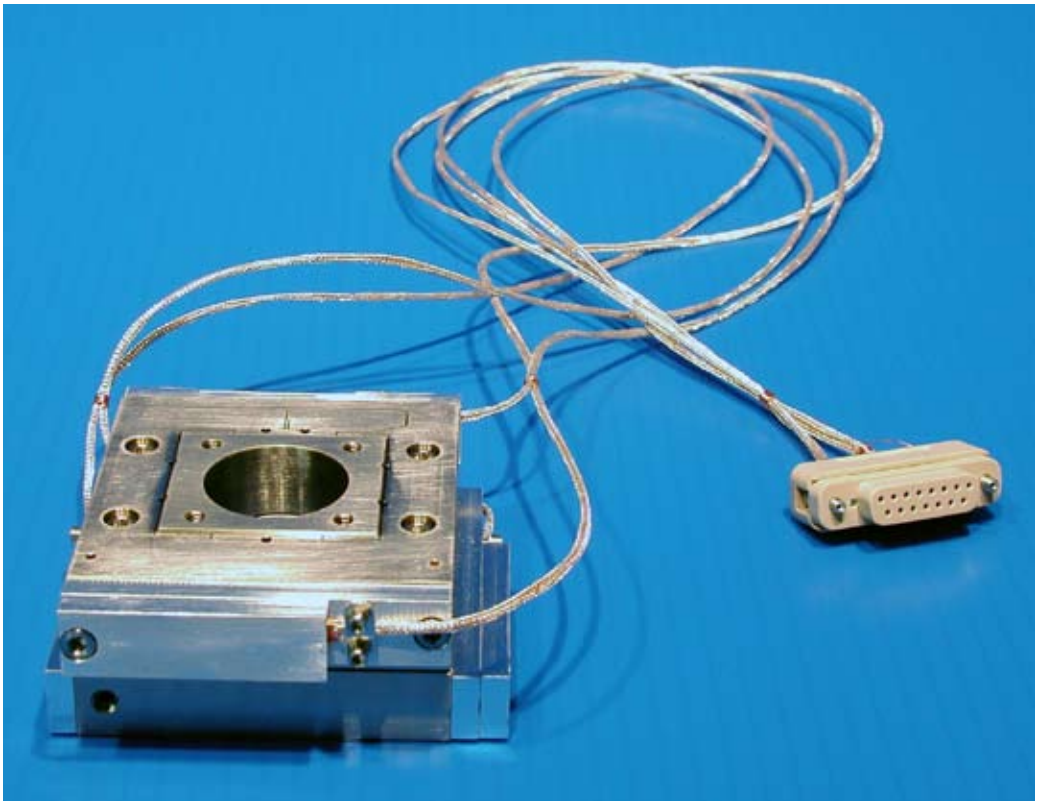
Nano-UHV50

Features

- *UHV compatible construction*
- *Two axis (XY)*
- *50 µm x 50 µm ranges of motion*
- *Bakeable to 100° C*
- *Titanium or invar construction*
- *picoQ® sensor technology*
- *Closed loop control*

Typical Applications

- *X-ray, VUV, and optical microscopy*
- *Surface metrology*
- *UHV atomic scale microscopy*
- *Special designs - just contact us with your requirements*



Nano-UHV50 constructed from titanium. Cables have Kapton insulation and silver plated copper shielding. The 15-pin, sub-D, vacuum compatible PEEK connector is wired to be compatible with vacuum feedthrough flanges.

LabVIEW Compatible USB Interfaces

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

Product Description

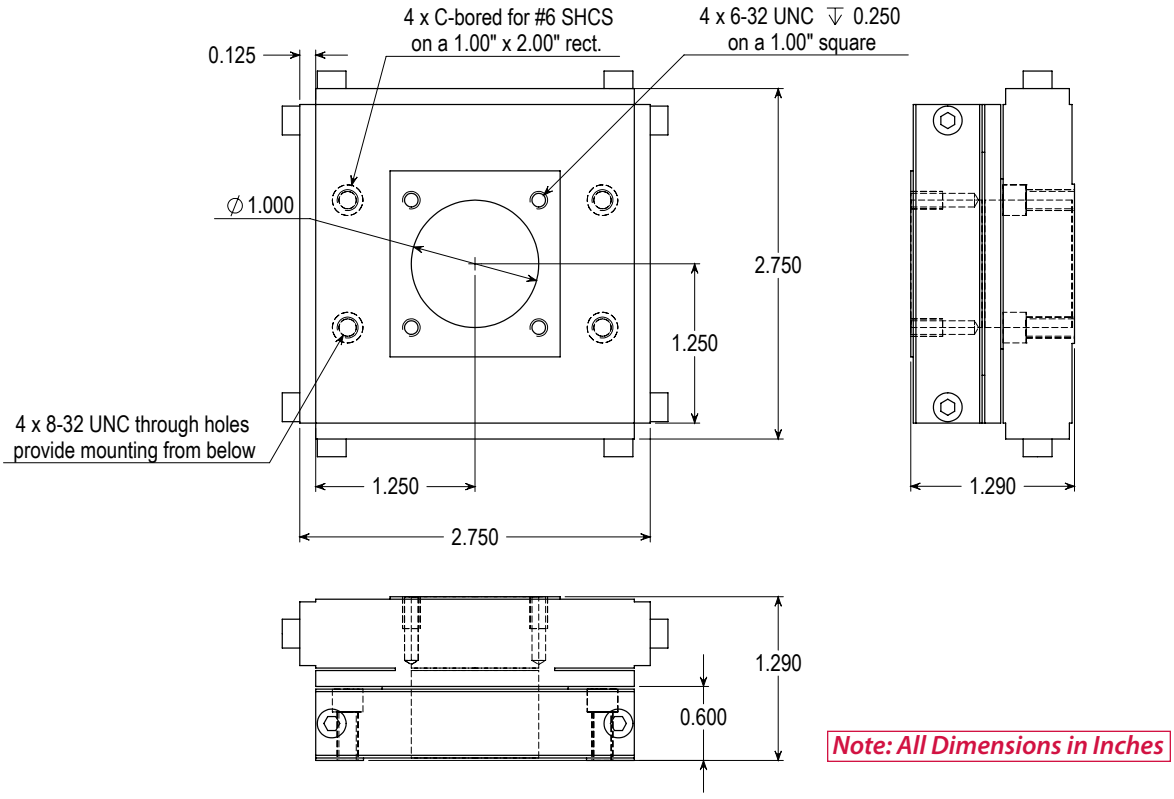
The Nano-UHV50 is a two axis UHV compatible nano-positioning system constructed from titanium or invar. Made entirely from UHV compatible materials, the Nano-UHV50 is bakeable to 100°C for vacuum applications in the 10^{-10} Torr range. A 1 inch (25mm) center aperture provides an optical pathway or access for sample holders. Internal position sensors utilizing proprietary picoQ® technology provide absolute, repeatable position measurement with picometer accuracy. Cable lengths and connectors are customized for the actual installation. Connector wiring is compatible with Accu-Glass Products electrical feedthrough flanges - compatibility with other types of flanges may be requested.

Note: Customized UHV stages are always welcome - just email or call to discuss your special requirements.

Technical Specifications

Range of motion (X) ..... 50 µm
Range of motion (Y) ..... 50 µm
Resolution (XY) ..... 0.1 nm
Resonant Frequency (X) ..... 500 Hz ±20%
Resonant Frequency (Y) ..... 250 Hz ±20%
Stiffness .....0.5 N/µm
θ_{roll} , θ_{pitch}(typical) ..... ≤1 µrad
θ_{yaw} (typical) ..... ≤3 µrad
Recommended max. load (horizontal)* .....0.5 kg
Recommended max. load (vertical)* .....0.2 kg
Body Material ..... Invar or Titanium
Controller ..... Nano-Drive®

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



Note: All Dimensions in Inches