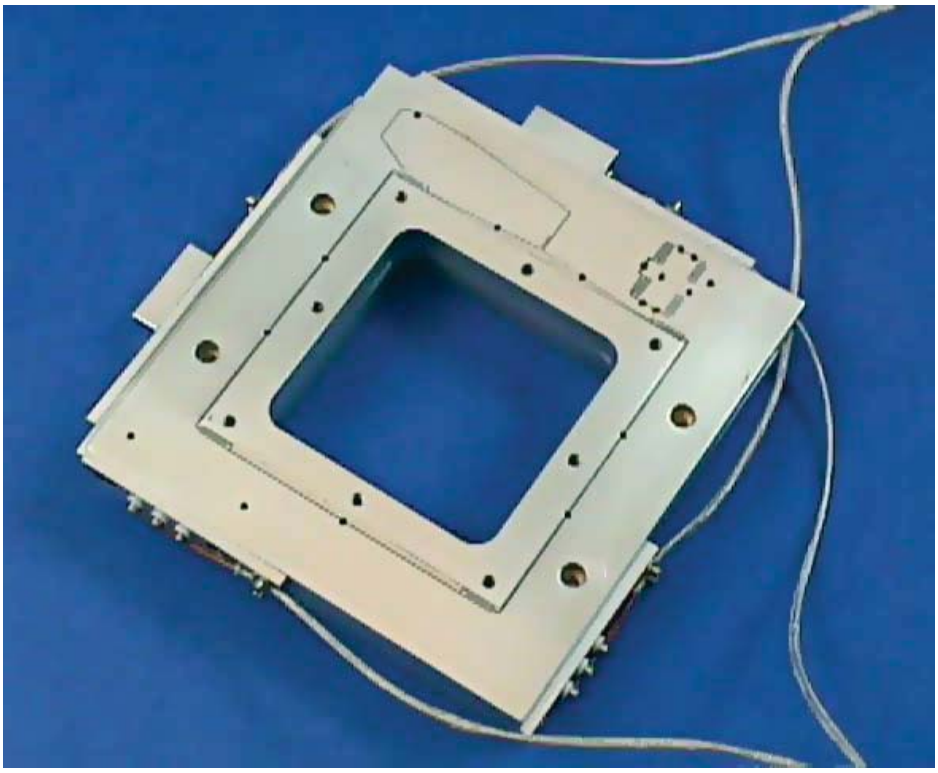
Nano-UHV100

Features

- *UHV compatible construction*
- *Two axis (XY), large aperture*
- *100 µm x 100 µm ranges of motion*
- *Bakeable to 100° C*
- *Titanium or invar construction*
- *pico™ sensor technology*
- *Closed loop control*

Typical Applications

- *X-ray, VUV, and optical microscopy*
- *Surface metrology*
- *UHV atomic scale microscopy*



Nano-UHV100 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.

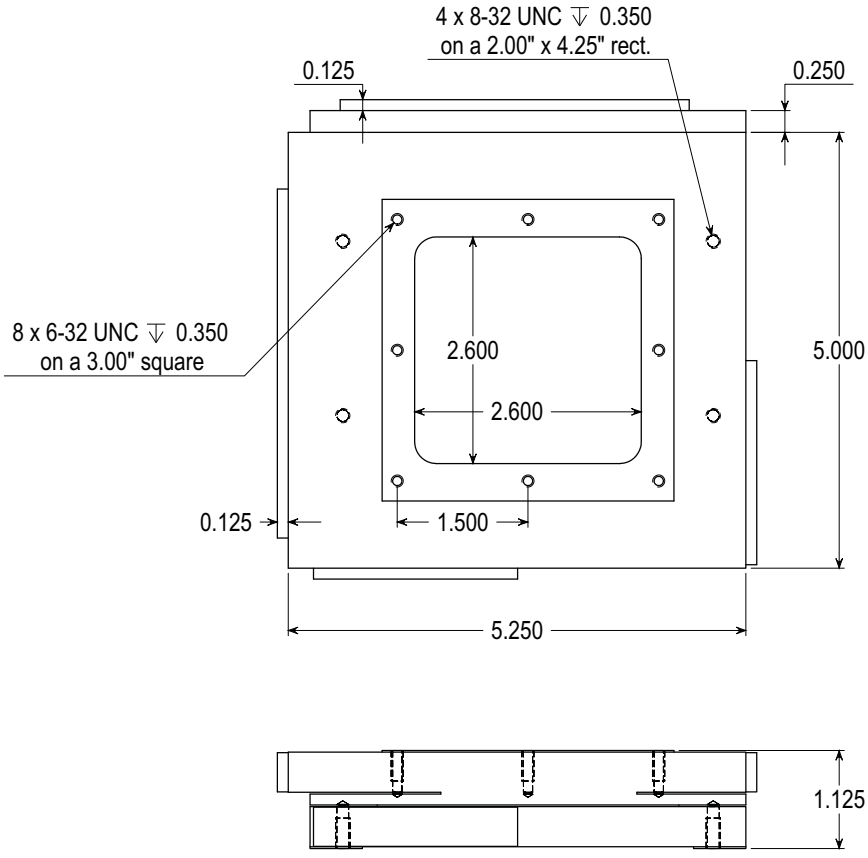
Product Description

The Nano-UHV100 is a two axis UHV compatible nanopositioning stage constructed from titanium or invar. Made entirely from UHV compatible materials, the Nano-UHV100 can be baked to 100°C for vacuum applications in the 10^{-10} Torr range. The large (2.6" x 2.6") center aperture makes the Nano-UHV100 ideal for vacuum microscopy applications. Internal position sensors utilizing proprietary pico™ technology provide absolute, repeatable position measurement with picometer accuracy. Cable lengths and connectors are customized for the actual installation. Connector wiring is compatible with MDC electrical feedthrough flanges - compatibility with other types of flanges may be requested.

Technical Specifications

Range of motion (X) ..... 100 µm
Range of motion (Y) ..... 100 µm
Resolution (XY) ..... 0.2 nm
Resonant Frequency (X) ..... 500 Hz ±20%
Resonant Frequency (Y) ..... 250 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
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