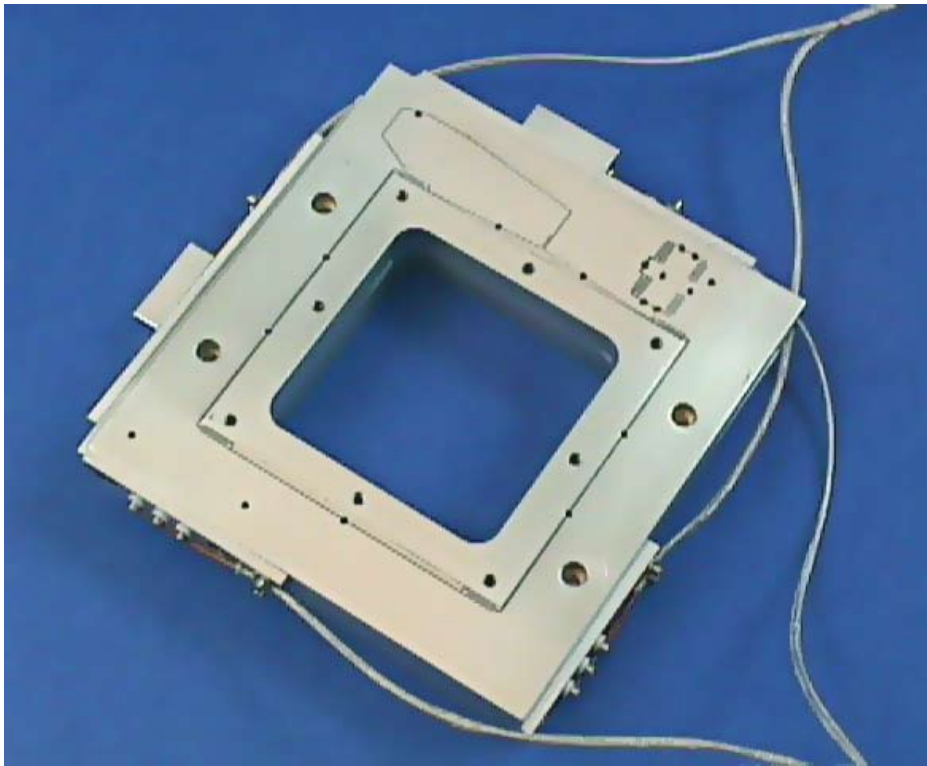


## Features

- ▶ UHV compatible construction
- ▶ Two axis (XY), large aperture
- ▶  $100\ \mu\text{m} \times 100\ \mu\text{m}$  ranges of motion
- ▶ Bakeable to  $100^\circ\text{C}$
- ▶ Titanium or invar construction
- ▶ **pico**™ sensor technology
- ▶ Closed loop control

## Typical Applications

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



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.

### LabVIEW Compatible USB Interfaces



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

## 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  $100^\circ\text{C}$  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 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) .....	100 $\mu\text{m}$
Range of motion (Y) .....	100 $\mu\text{m}$
Resolution (XY) .....	0.2 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 .....	Invar or Titanium
Controller .....	Nano-Drive™

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

