

Features

- ▶ UHV compatible construction
- ▶ Three axis (XYZ)
- ▶ $200\ \mu\text{m} \times 200\ \mu\text{m} \times 200\ \mu\text{m}$ motion
- ▶ Bakeable to 100°C
- ▶ Titanium and 316SS construction
- ▶ **pico** sensor technology
- ▶ Closed loop control

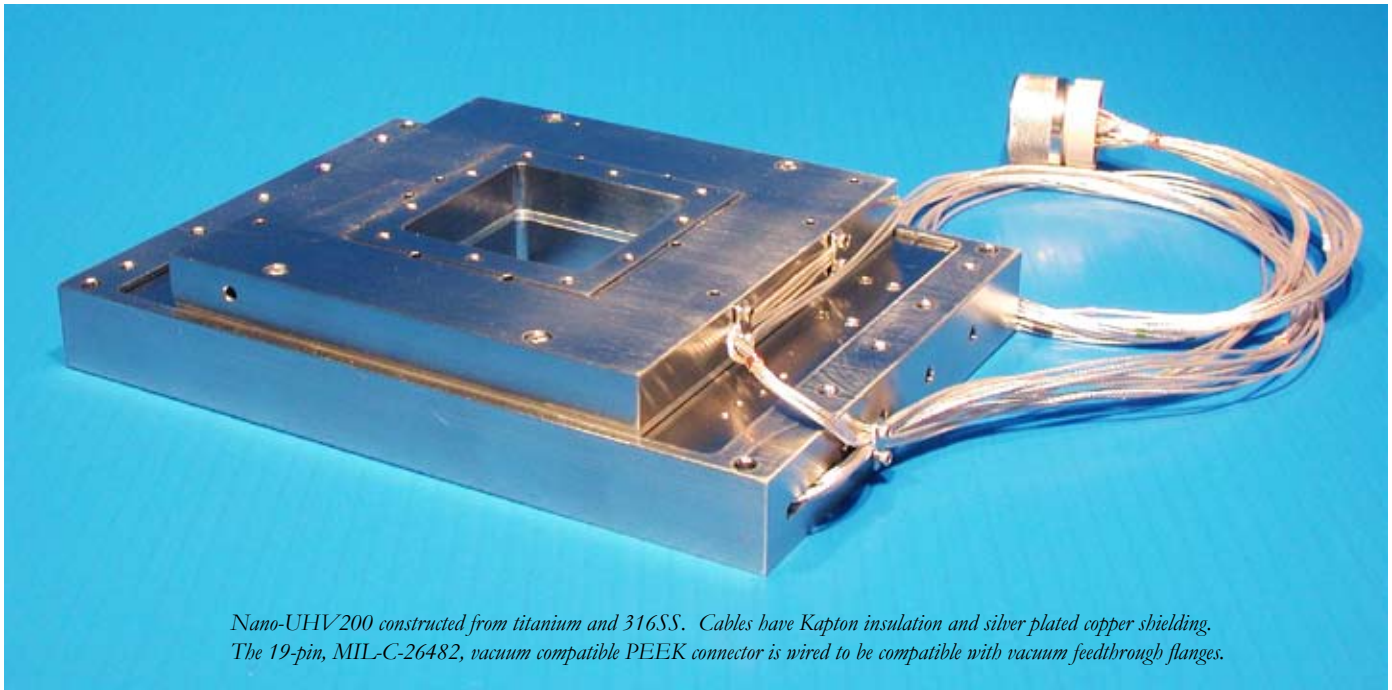
Typical Applications

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

LabVIEW Compatible USB Interfaces



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



Nano-UHV200 constructed from titanium and 316SS. Cables have Kapton insulation and silver plated copper shielding. The 19-pin, MIL-C-26482, vacuum compatible PEEK connector is wired to be compatible with vacuum feedthrough flanges.

Product Description

The Nano-UHV200 is a three axis UHV compatible nanopositioning system constructed from titanium and 316 stainless steel. Made entirely from non-magnetic UHV compatible materials, the Nano-UHV200 is bakeable to 100°C for vacuum applications in the 10^{-10} Torr range. A 2 inch x 2 inch center aperture provides an optical pathway or access for sample holders. 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)	200 μm
Range of motion (Y)	200 μm
Range of motion (Z)	200 μm
Resolution (XYZ).....	0.4 nm
Resonant Frequency (X)	300 Hz $\pm 20\%$
Resonant Frequency (Y)	150 Hz $\pm 20\%$
Resonant Frequency (Z)	175 Hz $\pm 20\%$
Stiffness.....	2 N/ μm
$\theta_{\text{roll}}, \theta_{\text{pitch}}$ (typical).....	$\leq 1 \mu\text{rad}$
θ_{yaw} (typical)	$\leq 3 \mu\text{rad}$
Recommended max. load (horizontal)*	0.5 kg
Recommended max. load (vertical)*	0.2 kg
Body Material	Titanium and 316 SS
Controller	Nano-Drive [®]

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

