

# Nano-UHV50

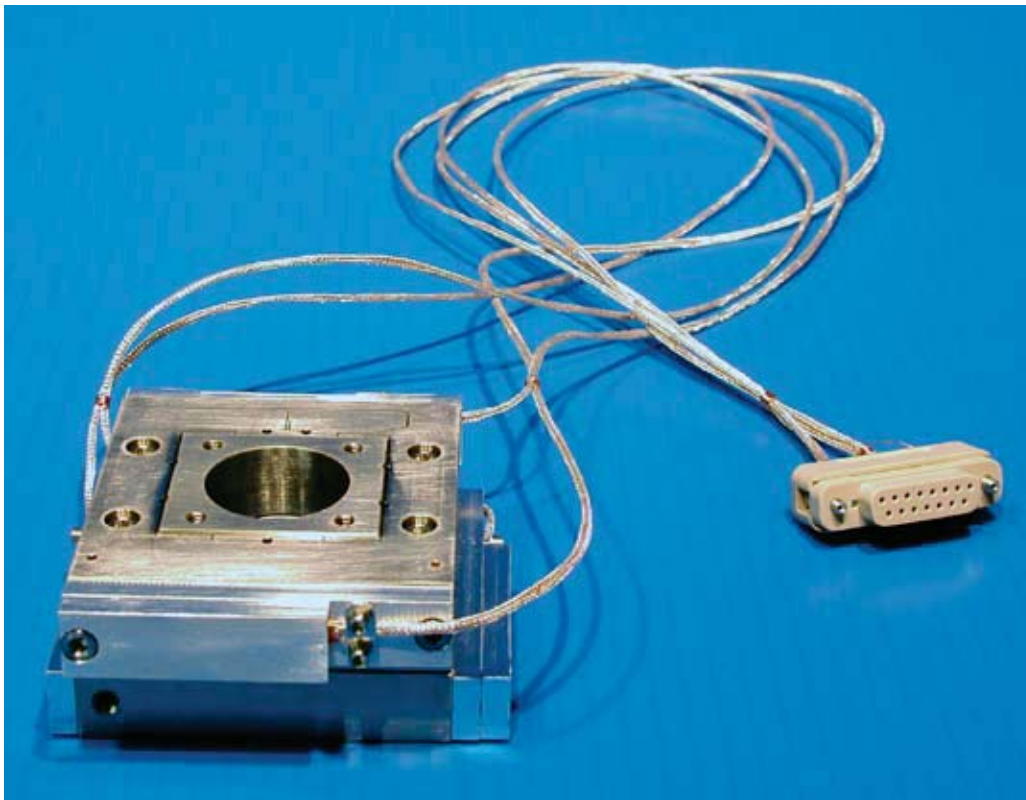
## Features

- ▶ UHV compatible construction
- ▶ Two axis (XY)
- ▶  $50\ \mu\text{m} \times 50\ \mu\text{m}$  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

02.583.2511 פז"מ-טק (1991) בע"מ  
<Michael.Storch@pazam-tech.co.il>



### LabVIEW Compatible USB Interfaces



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

פז"מ-טק (1991) בע"מ

מייקל סטורץ' | 02.583.2511

PaZaM-tech@pobox.com

www.PaZaM-tech.co.il

*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.*

## 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  $100^\circ\text{C}$  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

**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) .....	50 $\mu\text{m}$
Range of motion (Y) .....	50 $\mu\text{m}$
Resolution (XY) .....	0.1 nm
Resonant Frequency (X) .....	500 Hz $\pm 20\%$
Resonant Frequency (Y) .....	250 Hz $\pm 20\%$
Stiffness .....	0.5 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.

פז"מ-טק (1991) בע"מ

מייקל סטורץ | 02.583.2511

PaZaM-tech@pobox.com

www.PaZaM-tech.co.il

