

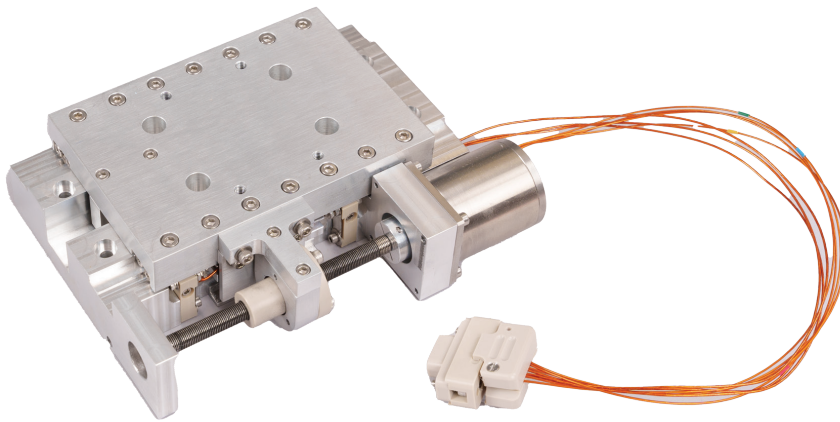
# MMP-UHV50

## Features

- ▶ *Modular linear micropositioner*
- ▶ *Range of motion: 50mm*
- ▶ *190nm step size*
- ▶ *Zero Power feature*
- ▶ *High native precision & accuracy*
- ▶ *UHV compatible, bakeable*
- ▶ *Overheat protection*

## Typical Applications

- ▶ *Complex, programmed motion control*
- ▶ *High precision positioning*
- ▶ *Automation*



## Product Description

The MMP-UHV50 is a ultra-high vacuum (UHV) compatible micropositioning system. The MMP-UHV50 stage is constructed from unanodized aluminum and uses vacuum compatible components such as Kapton wire, PEEK electrical connector and NyeTorr 6300 lubricant. The design has been carefully considered to eliminate sources of virtual leaks and includes overheat protection while in operation. The stage is bakeable to 100°C.

The MMP-UHV50 has a travel range of 50mm with a minimum step size of 190nm. The maximum speed is 2mm/sec. The stage has a maximum vertical payload of 2kg and incorporates features such as limit switches and overheat protection. In addition, the MMP-UHV50 uses Zero Power when not in motion which improves stability and minimizes heating. The system has high native repeatability and accuracy (see table) making this an ideal positioner for high precision positioning in UHV. The MMP-UHV50 can be mounted horizontally or vertically and can be mounted together to form two axis positioners.

The included Micro-Drive®UHV controller connects to a PC via a standard USB port and can be controlled via the supplied LabVIEW based software and user written software via the supplied DLL file (e.g. C++, Python). Complex motion profiles can be programmed and sophisticated control parameters such as automatic acceleration and deceleration is employed to achieve high stability and native accuracy. Optional wireless gamepad control is also available.

## Technical Specifications

Range of motion .....	50mm	Recommended max. load (vertical) .....	2 kg
Range of motion (MMP50) .....	50mm	Body Material .....	Aluminum
Step Size .....	190 nm	Cable material .....	Kapton®
Maximum Speed .....	2 mm/sec	Electrical connector .....	PEEK 9D female
Native Accuracy* .....	±5µm	Baking temperature (max.) .....	100°C
Native Repeatability .....	±1µm	Controller .....	Micro-Drive®-UHV
Overheat protection .....	YES	Controller interface .....	USB
Temperature sensor .....	K-type thermocouple		

\* For 1mm steps

