Mad-Deck™

Features

- *XYZ motion*
- *Proprietary intelligent control for stability*
- *High native precision & accuracy*
- *Nanopositioner compatible*
- *Optional encoders: 50 nm resolution*
- *Many models available*

Typical Applications

- *Single Molecule Microscopy*
- *Electrophysiology*
- *Multi-Photon Microscopy*
- *Interferometric Scattering Microscopy*
- *Scanning NV Magnetometry*
- *Automation*

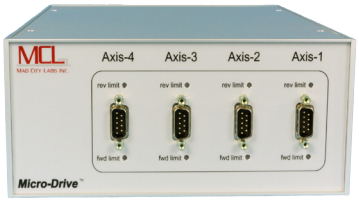
Compatible Software Packages

LabVIEW

Examples supplied for the Micro-Drive™ controller

µManager
Open Source Microscopy Software

USB motion control



Mad-Deck™ with optional breadboards for mounting probes or other accessories. Breadboard position is easily adjusted and breadboards can be removed if not needed. The Micro-Drive™4 cwith USB digital interface allows the Mad-Deck™ to be conttrolled via LabView software as well as other 3rd party software.

Product Description

The Mad-Deck™ is a versatile stage platform designed for a variety of advanced microscopy techniques. It is ideal for microscopy and imaging applications that require free access above and below the sample plane. The Mad-Deck™ is available in a variety of models, all of which have automated Z axis travel. The Z-axis has been specifically designed to ensure planar motion. The heart of the Mad-Deck™ is our proprietary intelligent control resulting in ultra-precise and high stability stepper motor movement. These attributes also make the Mad-Deck™ compatible with our closed loop piezo nanopositioning systems allowing users to implement nanoscale imaging and microscopy techniques.

The Mad-Deck™ is designed for use on all optical tables and can be customized for your application via standard options: encoders, breadboards, riser plinths, sample holders, etc.

The Mad-Deck™ is driven by the Micro-Drive™ controller which utilizes a USB digital interface. This allows users to use the supplied LabView based software or develop their own VIs for automation. In addition, the Micro-Drive™ is compatible with other 3rd party software.

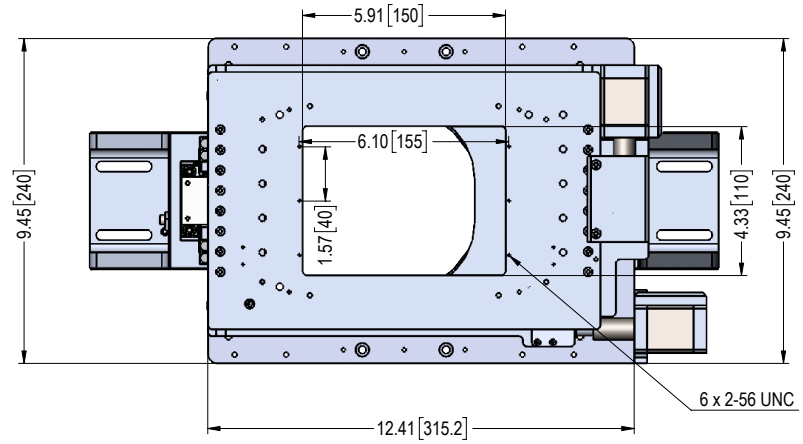
Technical Specifications

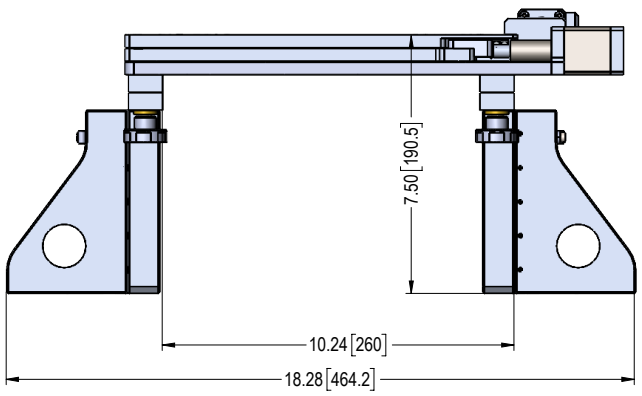
Model	Travel (XY)	Travel (Z)	Manual Axes	Motorized Axes
Mad-Deck™	25x25 mm	24 mm	—	XYZ
Mad-Deck™/LT	50x50 mm	49 mm	—	XYZ
Mad-Deck™/M	25x25 mm	24 mm	XY	Z
Mad-Deck™/Z	—	24 mm	—	Z

Encoder Resolution (optional) ..... 50 nm
Step Size ..... 95 nm
Maximum Speed ..... 1.5 mm/sec†
Native Accuracy ..... < 1 µm
Native Repeatability ..... < 100 nm
Recommended max. load* ..... 5 kg
Body Material ..... Aluminum
Controller ..... Micro-Drive™

† Higher speed stages also available by custom request.

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





Note: All Dimensions in Inches [mm]