



MLS-BS-50 Precision Motion Platform

FEATURES

- Velocities up to 50mm/sec
- 2µm accuracy
- Optional error mapping for increased accuracy
- Servo or stepper motor drive
- Linear encoder to .025µm resolution
- crossed roller bearings
- Stackable design for XY configuration

OPTIONS

- Stepper Motor
Max step resolution <.1 micron
- Servo Motor
- Linear or Rotary encoder
- Steel or Glass encoder scale
- Quadrature or sinusoidal encoder output
- Vacuum Preparation to 10⁻⁷ Torr
- Clean room preparation to Class 100



Linear Crossed Roller Bearing Ball screw Actuated Table

The MLS-BS Series compact crossed roller bearing stages are designed to meet the increasing demands of semiconductor, imaging, and biomedical equipment manufacturers. These reliable ball screw driven stages combine high speed and high accuracy in a cost effective and compact package for a variety of applications. The MLS-BS Series stages can be oriented vertically or stacked to create XY motion. The optional tooling plate is easily customized for different mounting options.

The lowest cost configuration which

utilizes open loop, stepper motor drive achieves sub micron repeatability and accuracy better than 10µm in a 50mm travel stage. With the addition of an optional linear encoder, repeatability of 0.5µm and accuracy of 2µm is guaranteed. Servo motor configuration allows for increased speed and load capabilities. A repeatable reference index for homing and integrated limit switches, for independent right and left end of travel limits, are included with the linear encoder option.

Model	MLS-BS-50
Travel	50mm
Drive	Ball Screw
Encoder resolution	0.025µm - 1.0µm
Accuracy Full Travel(µm)	
Open Loop	10.0
Encoder	2.0
Repeatability(µm)	
Open Loop	2.0
Encoder (0.1µm resolution)	0.5
Straightness(µm)	5.0
Flatness(µm)	5.0
Pitch(arc-sec)	20.0
Yaw(arc-sec)	10.0
Max Velocity(mm/s)	50.0
Ballscrew Lead (mm)	2
Stepper Motor Resolution	400 step/rev
Load Capacity (Kg)	10



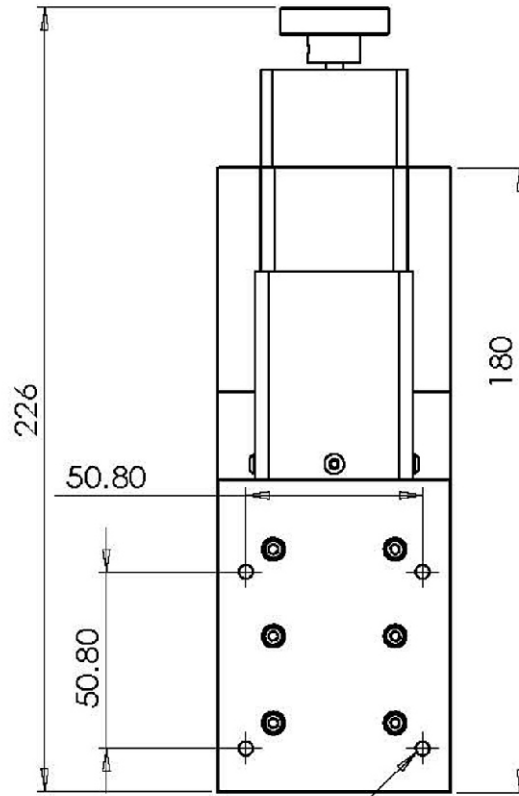
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Dimensions are in mm
Additional envelope dimensions are
available upon request.

Model #20502 Shown. Final envelope
depends on stage configuration.

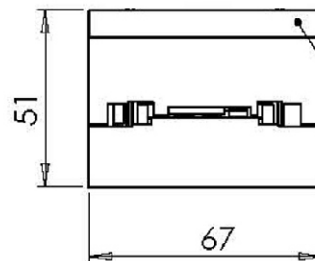
FEATURES

- Custom removable tooling plate available
- Payload mounting holes shown
- Stage mounting holes counter bored for #10 screw on 50.8mm square
- Up to 3 limit switch positions adjustable at factory



4 x #10-32 Payload mounting holes

Stage mounts through
CB holes on same pattern
through bottom plate



Removable tooling
plate