

Elevation Stage | ES-50SM

The ES-50 elevation stage is designed for applications with limited space conditions. The ES-50 stage is driven by a 2-phase stepper motor and is equipped with two mechanical limit switches. Two pre-loaded ball slides assure smooth motion and high stiffness. The ES-50 allows for a highly rigid XZ or XYZ setup without the need for adapter brackets when combined with the VT-50 series of linear stages. Versions capable of operation in vacuum (10^{-6} mbar) are available. The ES-50 is compatible with the MMC-200 controller.

KEY FEATURES

- Travel range of 10 mm
- 50 nm closed loop encoder resolution
- Load capacity up to 1 kg
- Ball slide bearings
- Integrated mechanical limit switches
- Vacuum versions available

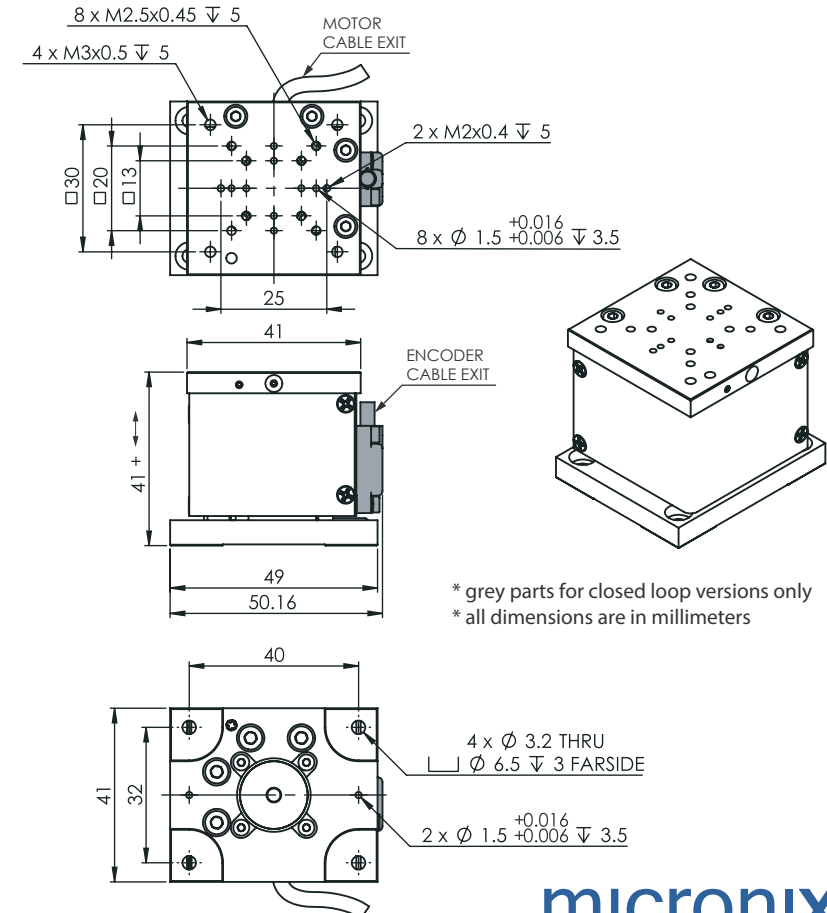
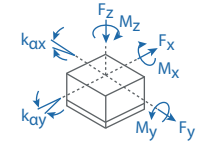
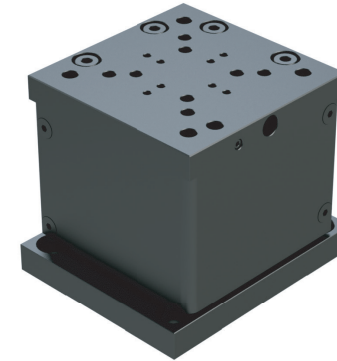
TECHNICAL DATA

Travel range [mm]	10		
Straightness / Flatness [μm]	± 4		
Pitch [μrad]	± 300		
Yaw [μrad]	± 300		
Weight [g], Open Loop	175		
Weight [g], Closed Loop	195		
Motor option	2-Phase Stepper Motor		
Speed, max [mm/s]	5		
Encoder option	None (open loop)	Analog (1 V _{pp})	Digital (RS-422)
Resolution, typical [μm]	0.5	0.05	0.05
Repeatability, bi-directional [μm]	± 2	± 0.2	± 0.2
Repeatability, uni-directional [μm]	0.5	0.2	0.2
Materials	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)		

ORDERING INFORMATION

	ES-50-	1	1	1
DRIVE	Stepper Motor, SM-001	1		
TRAVEL	10 mm	1		
ENCODER	None	0		
	Analog (1 V _{pp})	2		
	Digital (RS-422)	3		
LIMIT SWITCH	Mechanical	1		
ENVIRONMENT	Atmospheric	0		
	High Vacuum, 10^{-6} mbar	6		

Load, max	F _x [N]	F _y [N]	F _z [N]	M _x [N-m]	M _y [N-m]	M _z [N-m]	k _{ax} [$\mu\text{rad/N-m}$]	k _{ay} [$\mu\text{rad/N-m}$]
SM-001	5	5	10	1	1	1	-	-



Specifications are subject to change without notice.