

Piezo XY Stage | PPX-50

The PPX-50 is a low profile, long travel, integrated XY stage with an open aperture and a height of only 17.5 mm. Crossed roller bearings guarantee smooth and stable motion for loads up to 30 N. It utilizes a multi-phase piezo motor resulting in high speed (> 10 mm/s) and high blocking force (> 2 N). The PPX-50 is available in open loop or with a linear encoder with a closed-loop resolution of 2 nm. Versions capable of operation in vacuum (10^{-9} mbar) are available. The PPX-50 is compatible with the MMC-100 and MMC-110 controllers.

KEY FEATURES

- Travel range of 28 x 28 mm
- Max open aperture 19 x 19 mm, min 9.5 x 9.5 mm
- Closed loop encoder resolution of 2 nm
- Load capacity up to 3 kg
- Crossed roller bearings
- Low profile, 17.5mm height
- Vacuum and non-magnetic versions available

TECHNICAL DATA

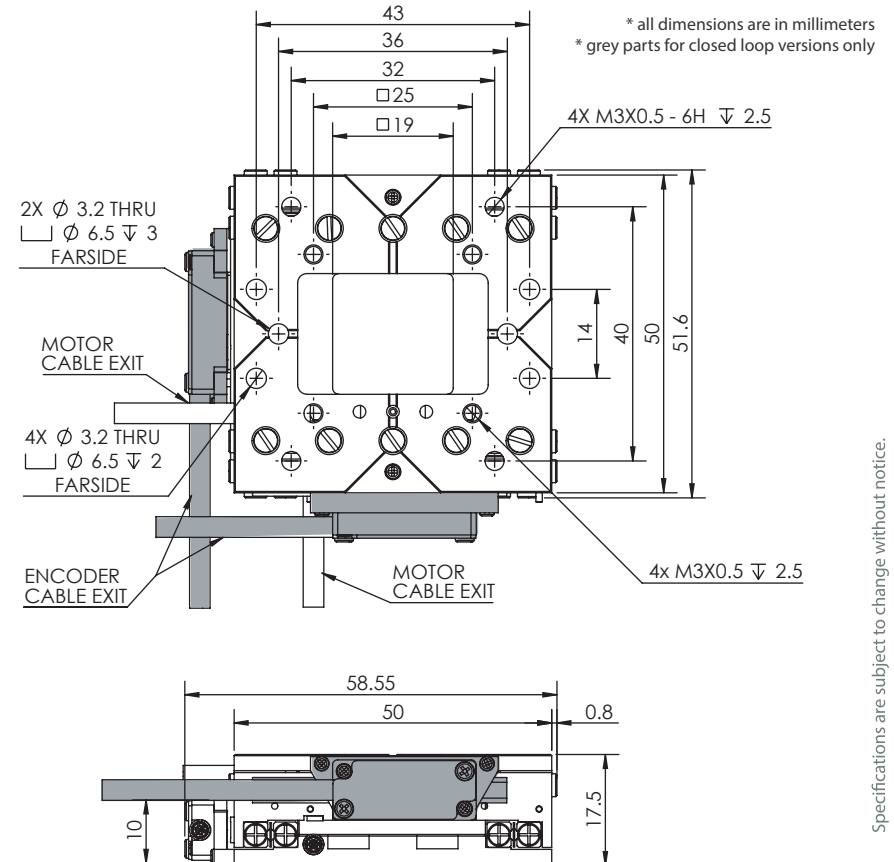
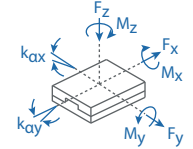
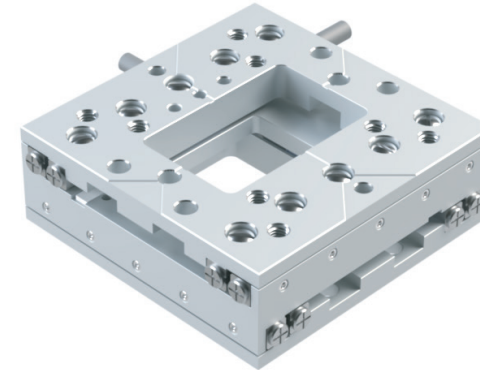
Travel range [mm]	28 x 28		
Straightness / Flatness [μm]	± 3.5		
Pitch [μrad]	± 200		
Yaw [μrad]	± 100		
Weight [g], Open Loop	110		
Weight [g], Closed Loop	115		
Motor option	Piezo Motor		
Speed, max [mm/s]	2 (MMC-100), 10 (MMC-110)		
Encoder option	None (open loop)	Analog (1 V_{pp})	Digital (RS-422)
Resolution, typical [nm]	1	10	2
Repeatability, bi-directional [nm]	n/a	± 50	± 50
Repeatability, uni-directional [nm]	n/a	50	50
Materials	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)		

ORDERING INFORMATION

PPX-50- **1** **1** **0**

DRIVE	Piezo Motor, PM-002.....	1
TRAVEL	28x28 mm	1
ENCODER	None	0
	Analog (1 V _{pp})	2
	Digital (RS-422)	3
LIMIT SWITCH	None	0
	ENVIRONMENT	Atmospheric
	High Vacuum, 10^{-6} mbar	6
	Ultra High Vacuum, 10^{-9} mbar	9
	Non-Magnetic	M

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} [$\mu\text{rad/N-m}$]
PM-002	2	2	30	0.6	0.6	0.6	-	-



Specifications are subject to change without notice.