

Precision Piezo XY Stage | PPX-50 NEW

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The PPX-50 is a low profile, long travel, integrated XY stage with an open aperture and a height of only 17.5 mm. Cross roller bearings guarantee smooth and stable motion for loads up to 30 N. It utilizes a multi-phase piezo motor resulting in high speed (> 5 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 1 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 resolution of 1 nm
- Load capacity up to 3 kg
- Steel cross roller bearings
- Low profile, 17.5 mm height
- Vacuum and non-magnetic versions available

TECHNICAL DATA

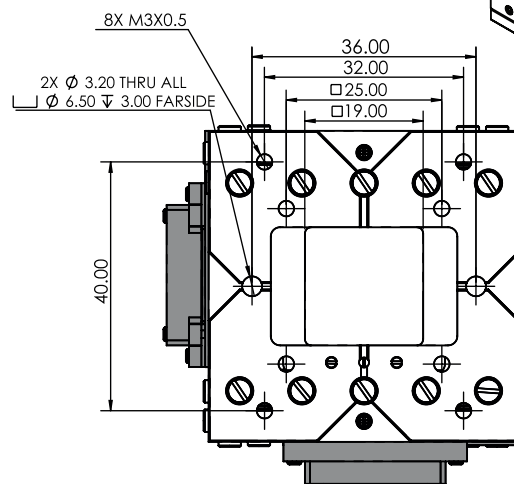
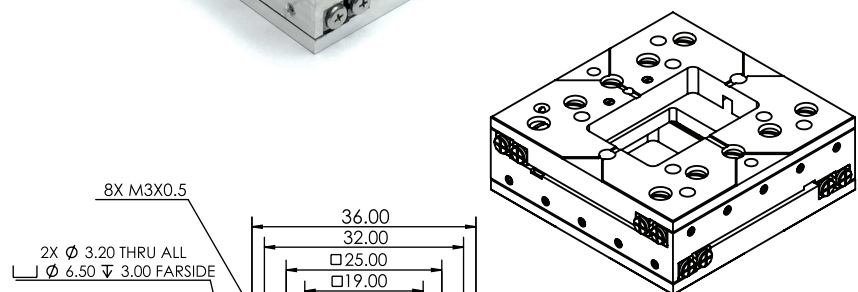
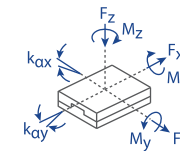
Travel range [mm]	28 x 28		
Straightness / Flatness [μm]	± 3.5		
Pitch [μrad]	± 200		
Yaw [μrad]	± 100		
Weight [g]	120		
Motor option	Piezo Motor		
Speed, max [mm/s]	2 (MMC-100), 5 (MMC-110)		
Encoder option	None (open loop)	Analog (1 V _{pp})	Digital (RS-422)
Resolution, typical [nm]	1	10	1
Repeatability, bi-directional [nm]	n/a	± 50	± 20
Repeatability, uni-directional [nm]	n/a	50	20
Accuracy [μm]	-	± 1	± 1
Materials	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)		

ORDERING INFORMATION

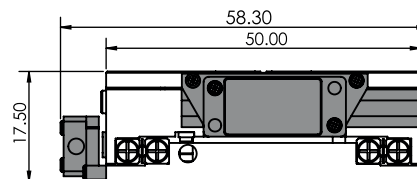
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DRIVE	Piezo Motor, PM-002.....	1
TRAVEL	28 mm	1
ENCODER	None	0
	Analog (1 V _{pp})	2
	Digital (RS-422)	3
LIMIT SWITCH	None	0
ENVIRONMENT	Atmospheric	0
	High Vacuum, 10^{-6} mbar	6
	Ultra High Vacuum, 10^{-9} mbar	9

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	-	-



* all dimensions are in millimeters
* grey parts are for closed loop versions only



Specifications are subject to change without notice.