

Precision Piezo Stage | PPS-50 NEW

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The precision piezo stage PPS-50 allows nanopositioning of high loads. Crossed roller bearings assure high stiffness for loads up to 30N. It is fully integrated with our patented multi-phase piezo motor, and optional high resolution encoder (up to 1 nm resolution). The PPS-50 can also be combined with our rotary and goniometer stages for ultimate motion flexibility. The PPS-50 is compatible with our MMC-100 and MMC-110 controllers.

KEY FEATURES

- Standard travel range of up to 100 mm
- Closed loop encoder resolution to 1 nm
- Optional absolute optical encoder
- Load capacity up to 3kg
- Crossed roller bearing (anti-creep)
- Low profile, 15mm height
- Vacuum and non-magnetic versions available

TECHNICAL DATA

Travel range [mm]	26	50	75	100
Straightness / Flatness [μm]	± 2	± 3	± 4	± 5
Pitch [μrad]				
Yaw [μrad]				
Weight [g], Open Loop	170	300	400	500
Weight [g], Closed Loop	180	310	410	510
Motor option	Piezo Motor			
Speed, max [mm/s]	2(MMC-100), 5 (MMC-110)			
Encoder option	None (open loop)	Digital (RS-422)	Absolute (BiSS C)	
Resolution, typical [nm]	1	1	10	
Repeatability, bi-directional [nm]	n/a	± 20	± 50	
Repeatability, uni-directional [nm]	n/a	20	± 50	
Materials	aluminum, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)			

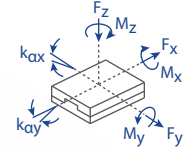
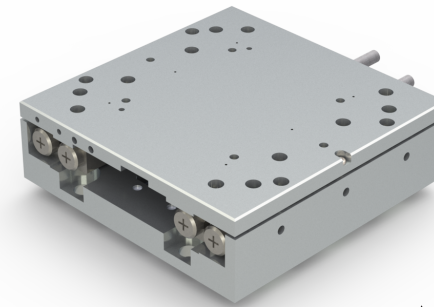
ORDERING INFORMATION

	PPS-50-	1				
DRIVE	Piezo Motor, PM-002	1				
TRAVEL	26 mm	1				
	50 mm	2				
	75 mm	3				
	100 mm	4				
ENCODER	None	0				
	Digital (RS-422)	3				
	*Absolute (BiSS C).....	5				
LIMIT SWITCH	None	0				
	Magnetic (Open Loop Only).....	1				
ENVIRONMENT	Atmospheric	0				
	High Vacuum (10^{-6} mbar).....	6				
	†High Vacuum (10^{-9} mbar).....	9				

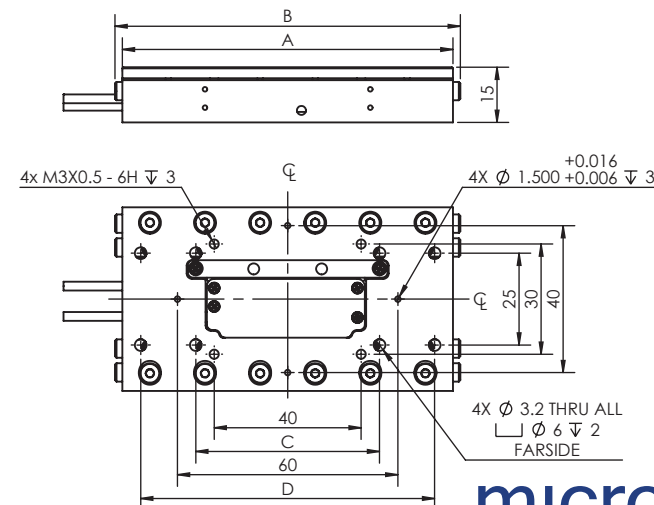
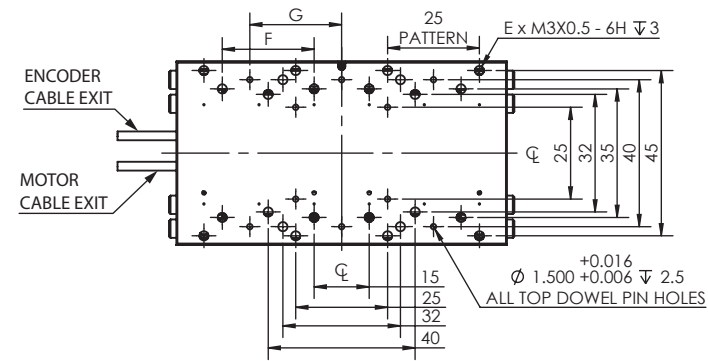
† Only available with encoder options 0 or 3

* With MMC-110 only

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	3	10	30	1	1	1	-	-



TRAVEL	A	B	C	D	E	F	G
26	50	-	-	45	16	-	-
51	90	94	50	80	24	25	25
75	120	124	80	110	28	25	50
100	150	154	80	145	48	35	50



Specifications are subject to change without notice.