

Piezo Rotation Stage | PR-50

The PR-50 is a compact piezo rotation stage with unlimited travel and a 1 inch aperture. Two pre-loaded steel ball bearings ensure smooth motion and high stability. It utilizes our patented multi-phase piezo motor resulting in high speed (> 25 %/s) and high blocking torque. The PR-50 can be combined with the linear PPX-50, PPS-60, or VT-50 stages without an adapter bracket. Versions capable of operation in vacuum (10^{-9} mbar) are available. The PR-50 is compatible with the MMC-100 and MMC-110 controllers.

KEY FEATURES

- Continuous 360° motion
- 10 μ closed loop encoder resolution
- Load capacity up to 3 kg
- 1" aperture
- Mutually pre-loaded ball bearings
- Low profile, 20 mm height
- Vacuum versions available
- Available with closed carriage

TECHNICAL DATA

Travel range [°]	360°, limitless		
Flatness (bearings) [μm]	± 10		
Eccentricity (bearings) [μm]	± 10		
Wobble [μrad]	± 300		
Weight [g], Open Loop	100		
Weight [g], Closed Loop	135		
Motor option	Piezo Motor		
Speed, max [°/s]	15 (MMC-103), 25 (MMC-110)		
Encoder option	None (open loop)	Analog (1 V _{pp})	Digital (RS-422)
Resolution, typical [μ°]	1	50	10
Repeatability, bi-directional [μ°]	n/a	± 200	± 200
Repeatability, uni-directional [μ°]	n/a	200	200
Materials	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)		

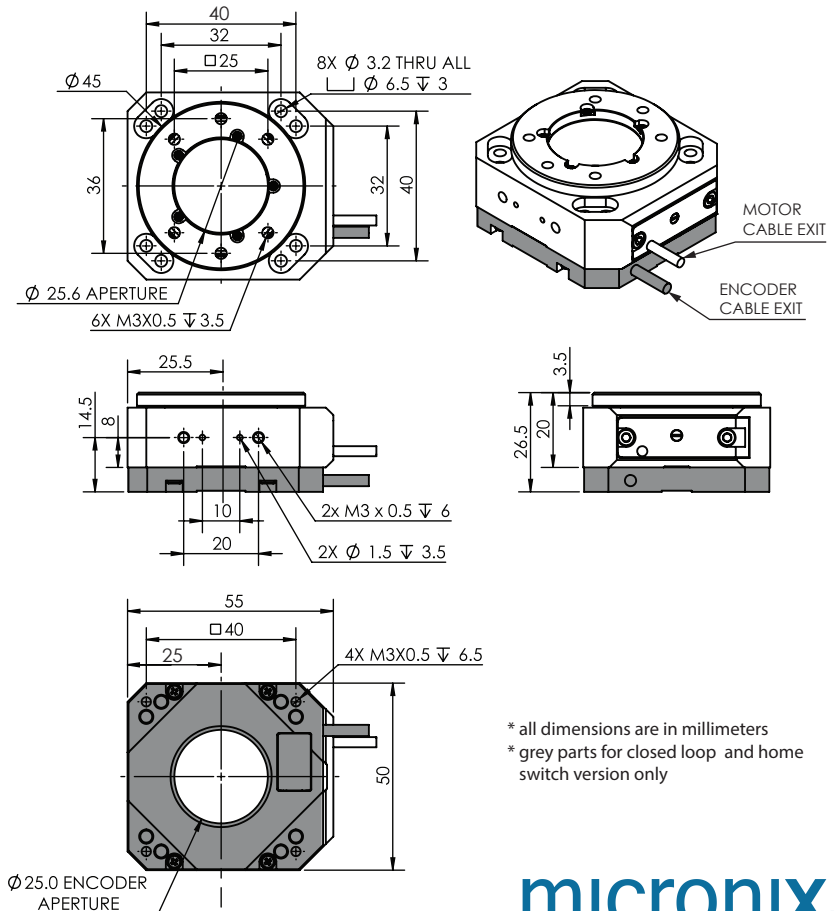
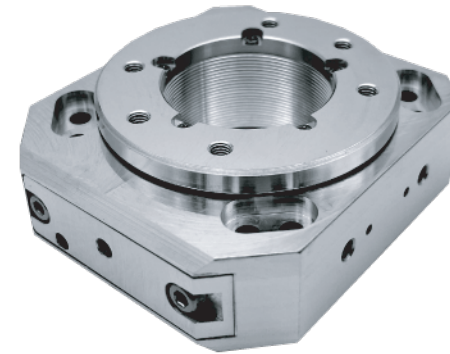
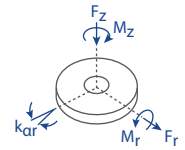
ORDERING INFORMATION

PR-50- 1 1

DRIVE	Piezo Motor, PM-003R	1
TRAVEL	360°	1
ENCODER	None	0
	Analog (1 V _{pp})	2
	Digital (RS-422)	3
†HOME SWITCH	None	0
	Magnetic	1
ENVIRONMENT	Atmospheric	0
	High Vacuum, 10 ⁻⁹ mbar	6
	Ultra High Vacuum, 10 ⁻⁹ mbar	9

† Only available in open loop

Load, max	F _r [N]	F _z [N]	M _r [N-m]	M _z [N-m]	k _{qr} [μ rad/N-m]
PM-003R	20	30	5	0.05	150



* all dimensions are in millimeters
* grey parts for closed loop and home switch version only

Specifications are subject to change without notice.