

Piezo Rotation Stage | PR-50CR

NEW

Preliminary

Available Q2, 2026

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The PR-50CR is an ultra-low-profile piezo rotation stage designed for applications where space, height, and stiffness are critical. With a height under 16mm and a 22 mm clear aperture, it supports compact system designs without sacrificing performance. Powered by Micronix's patented multi-phase piezo motor, the PR-50CR achieves rotational speeds up to 15°/s, with a dual-motor configuration option for increased torque. Vacuum-compatible versions down to 10^{-9} mbar are available, and it is compatible with the MMC-100, MMC-110, MMX-Series, and NanoDrive controllers.

KEY FEATURES

- Continuous 360° motion
- 10 μ Digital Encoder Resolution
- Load capacity up to 3 kg
- 22mm clear aperture
- Ultra-low profile, height under 16 mm
- Vacuum versions available

TECHNICAL DATA

Travel range [°]	360, limitless		
Flatness (bearings) [μ m]	± 10		
Eccentricity (bearings) [μ m]	± 10		
Wobble [μ rad]	± 300		
Weight [g], Open Loop	96		
Weight [g], Closed Loop	105		
Motor option	Piezo Motor		
Speed, max [°/s]	>5 (MMC-100), 15 (MMC-110 & NanoDrive)		
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)		

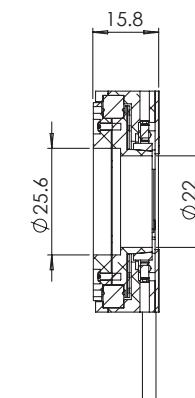
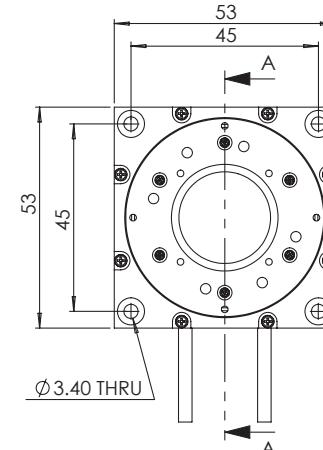
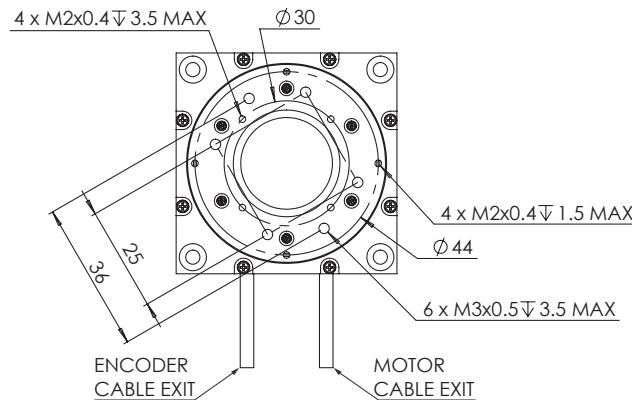
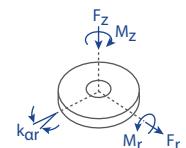
ORDERING INFORMATION

PR-50CR- **1** **1**

DRIVE	Piezo Motor, PM-002R	1
	Piezo Motor, High Force [†]	5
TRAVEL	360°	1
ENCODER	None	0
	Analog (1 V _{pp}) ^{††}	2
	Digital (RS-422)	3
HOME SWITCH	None	0
ENVIRONMENT	Atmospheric	0
	High Vacuum, 10^{-6} mbar	6
	Ultra High Vacuum, 10^{-9} mbar	9

[†] MMC-110 only
^{††} MMC-100 and MMC-110 Only

Load, max	F_T [N]	F_Z [N]	M_T [N·m]	M_Z [N·m]	k_{ar} [μ rad/N·m]
PM-002R	20	30	5	0.05	TBD
PM-High Force	20	30	5	0.10	TBD



* all dimensions are in millimeters

SECTION A-A
micronix USA
PRECISION MOTION SOLUTIONS

Specifications are subject to change without notice.