

# Rotation Stage | PR-100

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The PR-100 is a rotation stage with unlimited travel and a 50 mm aperture. The mutually preloaded ball bearings ensures smooth motion and high stability. It utilizes our patented multi-phase piezo motor resulting in high speed (> 25 %/s) and high blocking torque. Operation in vacuum ( $10^{-9}$  mbar) and non-magnetic versions are available. The PR-100 is compatible with the MMC-100 and MMC-110 controllers.

## KEY FEATURES

- Continuous 360° motion
- 5  $\mu$  closed loop encoder resolution
- Load capacity up to 10 kg
- 50 mm clear aperture
- Dual, mutually preloaded ball bearings
- Low profile, 29 mm height in open loop, 45.5 mm in closed loop
- Vacuum and non-magnetic versions are optional
- Available with closed carriage

## TECHNICAL DATA

<b>Travel range [°]</b>	<b>360°, limitless</b>		
<b>Flatness (bearings) [<math>\mu</math>m]</b>	$\pm 5$		
<b>Eccentricity (bearings) [<math>\mu</math>m]</b>	$\pm 5$		
<b>Wobble [<math>\mu</math>rad]</b>	$\pm 100$		
<b>Weight [g]</b>	135		
<b>Motor option</b>	<b>Piezo Motor</b>		
<b>Speed, max [°/s]</b>	2 (MMC-100), 20 (MMC-110)		
<b>Encoder option</b>	<b>None (open loop)</b>	<b>Analog (1 V<sub>pp</sub>)</b>	<b>Digital (RS-422)</b>
<b>Resolution, typical [<math>\mu</math>°]</b>	1	50	5
<b>Repeatability, bi-directional [<math>\mu</math>°]</b>	n/a	$\pm 0.2$	$\pm 200$
<b>Repeatability, uni-directional [<math>\mu</math>°]</b>	n/a	0.2	200
<b>Materials</b>	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)		

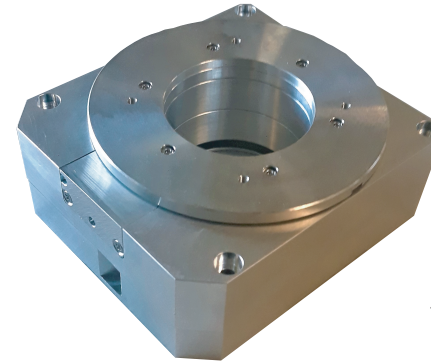
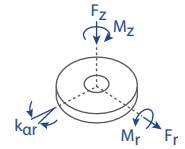
## ORDERING INFORMATION

PR-100- **1** **1** | | | |

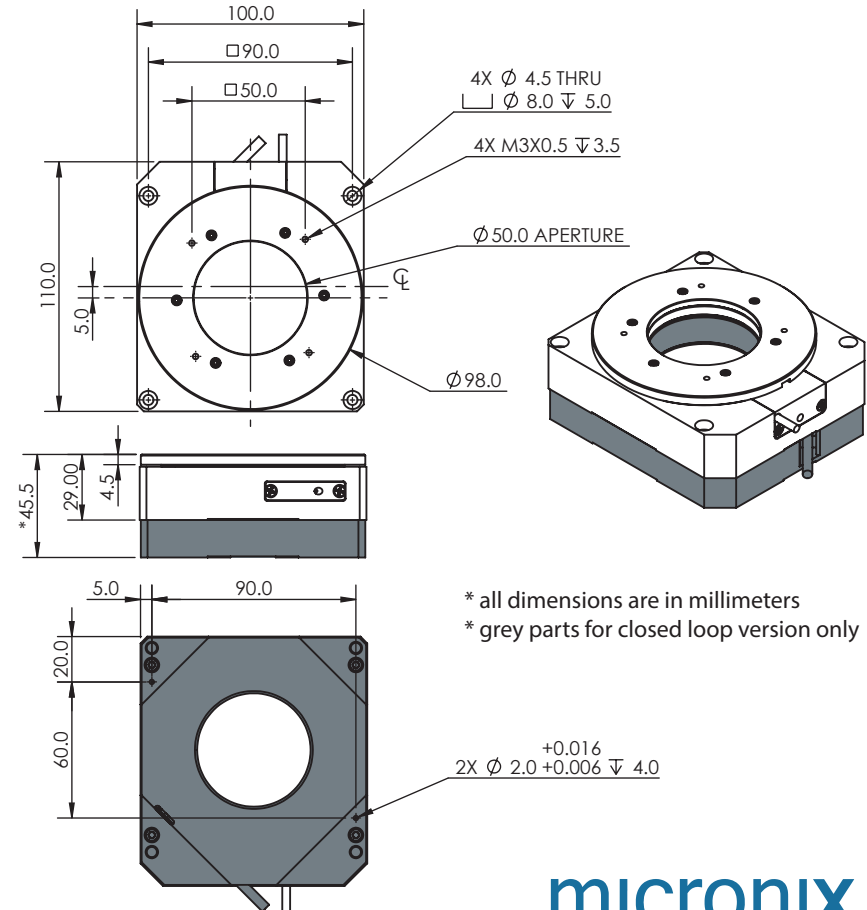
<b>DRIVE</b>	Piezo Motor, PM-007R .....	1
<b>TRAVEL</b>	360° .....	1
<b>ENCODER</b>	None .....	0
	Analog (1 V <sub>pp</sub> ) .....	2
	Digital (RS-422) .....	3
<b>HOME SWITCH</b>	None .....	0
	Magnetic <sup>†</sup> .....	1
<b>ENVIRONMENT</b>	Atmospheric .....	0
	High Vacuum, 10 <sup>-6</sup> mbar .....	6
	Ultra High Vacuum, 10 <sup>-9</sup> mbar .....	9

<sup>†</sup>Only available in open loop

Load, max	F <sub>r</sub> [N]	F <sub>z</sub> [N]	M <sub>r</sub> [N-m]	M <sub>z</sub> [N-m]	k <sub>qr</sub> [ $\mu$ rad/N-m]
PM-007R	20	50	5	0.25	200



\* Closed carriage option available



Specifications are subject to change without notice.