

# Piezo Rotation Stage | PR-70PM

NEW

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Preliminary

The PR-70PM is a compact piezo rotation stage with unlimited travel and a 1 inch aperture. Steel crossed roller bearings ensure smooth motion and high stability. It uses our patented multi-phase piezo motor resulting in high resolution and high blocking torque. The PR-70PM can be combined with the linear PPX-50 or PPS-70 (51mm travel and up) stages without an adapter bracket. Versions capable of operation in vacuum ( $10^{-9}$  mbar) are available. The PR-70PM is compatible with the MMC-100, MMC-110, and NanoDrive controllers.

## KEY FEATURES

- Continuous 360° motion
- 5  $\mu$  closed loop digital encoder resolution
- Load capacity up to 3 kg
- 1" aperture
- Crossed roller bearing
- 28.2mm height
- Vacuum versions available

## TECHNICAL DATA

<b>Travel range [°]</b>	360, limitless		
<b>Flatness (bearings) [<math>\mu</math>m]</b>	$\pm 10$		
<b>Eccentricity (bearings) [<math>\mu</math>m]</b>	$\pm 10$		
<b>Wobble [<math>\mu</math>rad]</b>	$\pm 300$		
<b>Weight [g], Open Loop</b>	300		
<b>Weight [g], Closed Loop</b>	330		
<b>Motor option</b>	Piezo Motor		
<b>Speed, max [°/s]</b>	5 (MMC-100), 15 (MMC-110 and NanoDrive)		
<b>Encoder option</b>	None (Open Loop)	Digital (RS-422)	Absolute (BiSS C)
<b>Resolution, typical [<math>\mu</math>°]</b>	1	5	<50
<b>Repeatability, bi-directional [<math>\mu</math>°]</b>	n/a	$\pm 200$	$\pm 500$
<b>Repeatability, uni-directional [<math>\mu</math>°]</b>	n/a	200	500
<b>Materials</b>	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)		

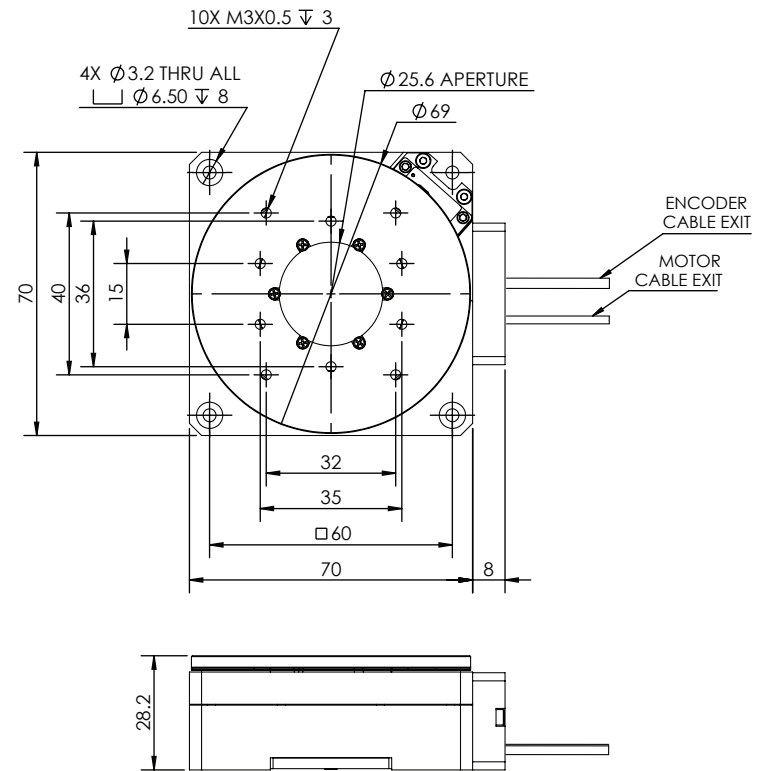
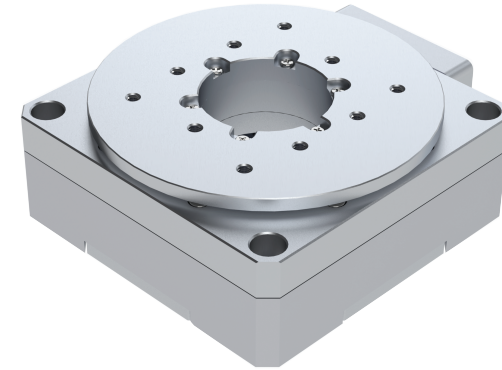
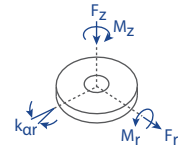
## ORDERING INFORMATION

PR-70-

<b>DRIVE</b>	Piezo Motor .....	1			
	Piezo Motor, High Force* .....	5			
<b>TRAVEL</b>	360° .....	1			
<b>ENCODER</b>	None .....	0			
	Digital (RS-422) .....	3			
	Absolute (BiSS C) .....	5			
<b>HOME SWITCH</b>	None .....	0			
	Magnetic** .....	1			
<b>ENVIRONMENT</b>	Atmospheric .....	0			
	High Vacuum, $10^6$ mbar .....	6			
	Ultra High Vacuum, $10^9$ mbar .....	9			

\* MMC-110 only  
\*\* Only available in open loop

Load, max	$F_r$ [N]	$F_z$ [N]	$M_r$ [N-m]	$M_z$ [N-m]	$k_{qr}$ [ $\mu$ rad/N-m]
PM-003R	20	30	5	0.05	150
PM-High Force	20	30	5	0.10	150



• all dimensions are in millimeters

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