

# Piezo Rotation Stage | PR-20PM

The PR-20 is an ultra-compact rotational piezo stage. Low profile, high load and high stiffness are achieved through the use of a crossed roller bearing and patented multi-phase piezo motor, which allows for smooth 360° travel. The PR-20 can be fully integrated with high resolution absolute encoder. Vacuum versions are available. The PR-20 is compatible with MMC-100\* and MMC-110\*\* controllers.

## KEY FEATURES

- Closed loop absolute encoder resolution to <math><1 m^\circ</math>
- Crossed roller bearings
- Continuous 360° motion
- Load capacity up to 0.1 kg
- Low profile, 15 mm height
- Vacuum version available

## TECHNICAL DATA

<b>Travel range [°]</b>	<b>360°, limitless</b>	
<b>Flatness (bearings) [μm]</b>	± 20	
<b>Eccentricity (bearings) [μm]</b>	± 20	
<b>Wobble [μrad]</b>	± 500	
<b>Weight [g]</b>	15	
<b>Motor option</b>	<b>Piezo Motor</b>	
<b>Speed, max [°/s]</b>	10 (MMC-100), 25 (MMC-110)	
<b>Encoder option</b>	<b>None (open loop)</b>	<b>Absolute (BiSS C)**</b>
<b>Resolution, typical [m°]</b>	0.01	< 1
<b>Repeatability, bi-directional [m°]</b>	n/a	± 5
<b>Repeatability, uni-directional [m°]</b>	n/a	5
<b>Materials</b>	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)	

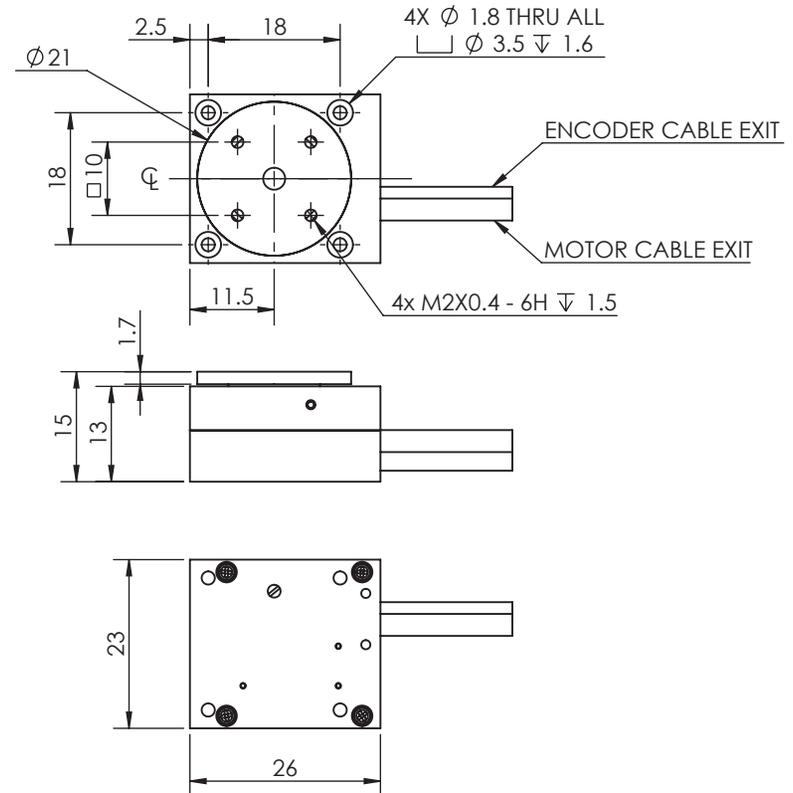
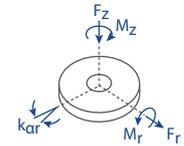
## ORDERING INFORMATION

PR-20- 1 1 0

<b>DRIVE</b>	Piezo Motor.....	1
<b>TRAVEL</b>	360° .....	1
<b>ENCODER</b>	None .....	0
	Absolute (BiSS C)** .....	5
<b>LIMIT SWITCH</b>	None .....	0
<b>ENVIRONMENT</b>	Atmospheric .....	0
	High Vacuum, 10 <sup>-6</sup> mbar .....	6
	Ultra High Vacuum, 10 <sup>-9</sup> mbar .....	9

\* Open Loop Only  
\*\* Only compatible with MMC-110 controller

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>cr</sub> [μrad/N-m]
PM-002	1	1	0.01	0.01	-



• all dimensions are in millimeters

Specifications are subject to change without notice.