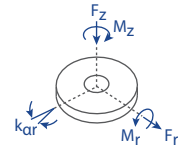


Rotation Stage | PR-160PM

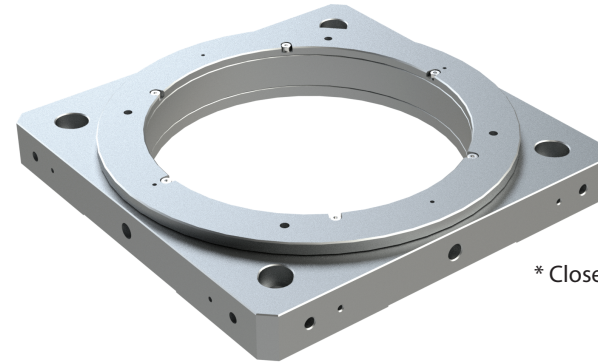
The PR-160 is a rotation stage with unlimited travel and a 120 mm aperture. The crossed roller bearing ensures smooth motion and high stability. It utilizes our patented multi-phase piezo motor resulting in high speed (> 3 %/s) and high blocking torque. The PR-160 can be combined with the linear PPS-110 stage with an adapter bracket. Versions capable of operation in vacuum (10^{-9} mbar) are available. The PR-160 is compatible with the MMC-103 and MMC-110 controllers.

| Load, max | F_r [N] | F_z [N] | M_r [N-m] | M_z [N-m] | k_{qr} [rad/N-m] |
|-----------|-----------|-----------|-------------|-------------|--------------------|
| PM-005R | 20 | 100 | 5 | 0.3 | 150 |



KEY FEATURES

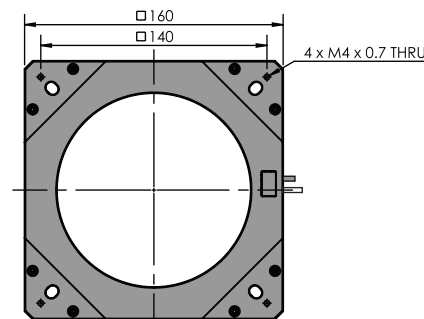
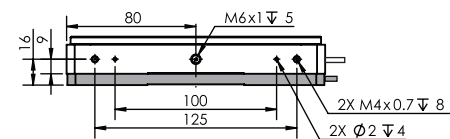
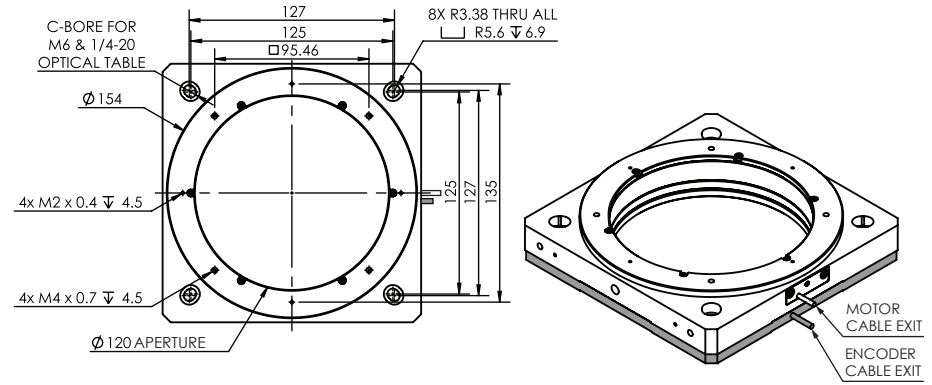
- Continuous 360° motion
- 10 μ° closed loop encoder resolution
- Load capacity up to 10 kg
- 120 mm clear aperture
- Crossed roller bearing
- Low profile, 23 mm height in open loop, 30 mm closed loop
- Vacuum versions available
- Available with closed carriage



* Closed carriage option available

TECHNICAL DATA

| | | | |
|--|---|----------------------|------------------|
| Travel range [°] | 360°, limitless | | |
| Flatness (bearings) [μ m] | ± 10 | | |
| Eccentricity (bearings) [μ m] | ± 10 | | |
| Wobble [μ rad] | ± 200 | | |
| Weight [g], Open Loop | 900 | | |
| Weight [g], Closed Loop | 1100 | | |
| Motor option | Piezo Motor | | |
| Speed, max [°/s] | 3 (MMC-110) | | |
| Encoder option | None (open loop) | Analog (1 V_{pp}) | Digital (RS-422) |
| Resolution, typical [μ°] | 5 | 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) | | |



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

ORDERING INFORMATION

PR-160- 1 1

| | | |
|---------------------|---|---|
| DRIVE | Piezo Motor, PM-005R | 1 |
| TRAVEL | 360° | 1 |
| ENCODER | None | 0 |
| | Analog (1 V_{pp}) | 2 |
| | Digital (RS-422) | 3 |
| LIMIT SWITCH | None | 0 |
| | †Magnetic | 1 |
| ENVIRONMENT | Atmospheric | 0 |
| | High Vacuum, 10^{-6} mbar | 6 |
| | Ultra High Vacuum, 10^{-9} mbar | 9 |

†Only available in open loop

Specifications are subject to change without notice.