

Piezo Positioner | PP-12

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The PP-12 is an ultra-compact linear piezo stage. Low profile and high load capacity are achieved through the use of a multi-phase piezo motor combined with a ball slide, which allows for smooth travel up to 4mm. The PP-12 can be directly X-Y mounted without the use of adapter plates. Vacuum versions are available. The PP-12 is compatible with the MMC-100 and MMC-110 controllers.

KEY FEATURES

- Travel range of up to 4 mm
- Closed loop encoder resolution of 20 nm
- Load capacity up to 0.25 kg
- Ball slide
- Low profile, 7 mm height
- Vacuum versions available

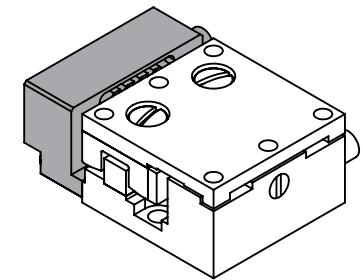
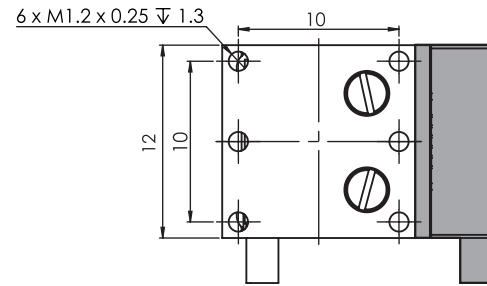
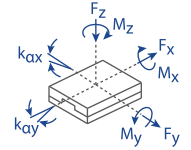
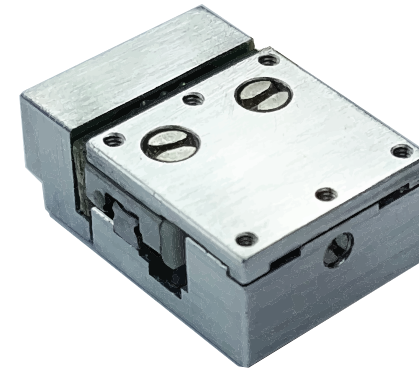
TECHNICAL DATA

| | | |
|---|---|------------------|
| Travel range [mm] | 4 | |
| Straightness / Flatness [μm] | ± 2 | |
| Pitch [μrad] | ± 150 | |
| Yaw [μrad] | ± 150 | |
| Weight [g] | 13 | |
| Motor option | Piezo Motor | |
| Speed, max [mm/s] | 1 (MMC-100), 3 (MMC-110) | |
| Encoder option | None (open loop) | Digital (RS-422) |
| Resolution, typical [nm] | 1 | 20 |
| Repeatability, bi-directional [nm] | n/a | ± 200 |
| Repeatability, uni-directional [nm] | n/a | 200 |
| Materials | aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request) | |

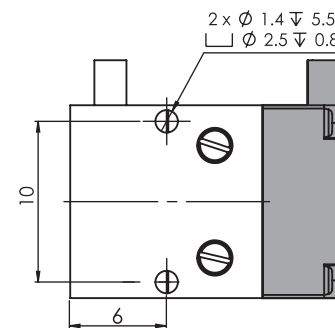
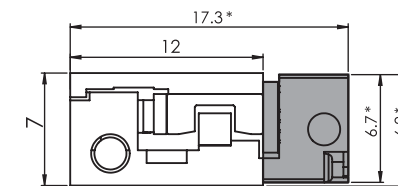
ORDERING INFORMATION

| | PP-12- | 1 | 1 | 0 | |
|---------------------|---|---|---|---|---|
| DRIVE | Piezo Motor, PM-002..... | 1 | | | |
| TRAVEL | 4 mm | 1 | | | |
| ENCODER | None | | 0 | | |
| | Digital | | 3 | | |
| LIMIT SWITCH | None | | | 0 | |
| ENVIRONMENT | Atmospheric | | | | 0 |
| | High Vacuum, 10^{-6} mbar | | | | 6 |
| | Ultra High Vacuum, 10^{-9} mbar | | | | 9 |

| Load, max | F_x [N] | F_y [N] | F_z [N] | M_x [N-m] | M_y [N-m] | M_z [N-m] | k_{ax} [$\mu\text{rad/N-m}$] | k_{ay} [$\mu\text{rad/N-m}$] |
|-----------|-----------|-----------|-----------|-------------|-------------|-------------|----------------------------------|----------------------------------|
| PM-002 | 1 | 1 | 1.5 | 0.1 | 0.1 | 0.1 | - | - |



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



Specifications are subject to change without notice.