

M-631 · M-632 · M-633

Precision Micrometer Drives with Non-Rotating Tips

>> Click [http://www.pi.ws/fwd/Micropositioning for the Latest Specs on these Products](http://www.pi.ws/fwd/Micropositioning%20for%20the%20Latest%20Specs%20on%20these%20Products)



M-631, M-632, M-633 Micrometers with non-rotating tips

- 10, 25 and 50 mm Travel
- Pitch 0.5 mm/Rev.
- Low-Friction Construction
- 1 µm Manual Sensitivity
- Sub-nm Resolution with Optional PZT Actuator

M-631 through M-633 micrometer drives feature an extremely low-stiction, low-friction construction allowing for ultra-high resolution.

Non-Rotating Tip

The non-rotating-tip design offers the following advantages over conventional rotating-tip micrometer drives:

- Elimination of torque-induced stage platform tilt
- Elimination of wear at the contact point
- Elimination of tip-angle-dependent wobble

M-631 through M-633 micrometer drives are also employed in the PI DC-Mike and Stepper-Mike motorized actuators featuring sub-micron resolution (see page 7-76 and page 7-84). All models come with standard flat tips. See page 7-85 for spherical tips and other options.

High-Resolution Piezo Option

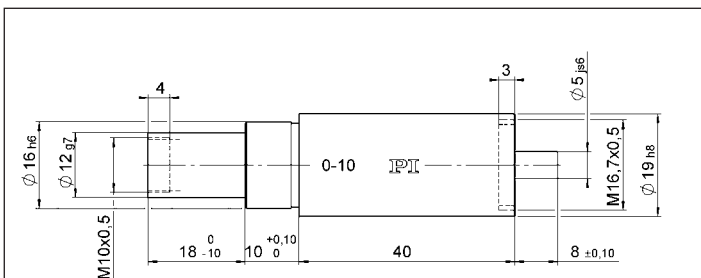
An optional piezo tip provides 20 µm travel with sub-nanometer resolution for dynamic

Ordering Information

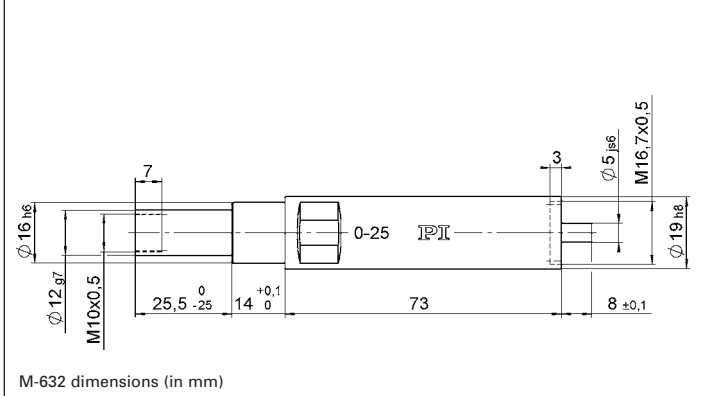
M-631.00	Micrometer with non-rotating tip, 10 mm
M-632.00	Micrometer with non-rotating tip, 25 mm
M-633.00	Micrometer with non-rotating tip, 50 mm

scanning and tracking (see page 1-33).

For mounting, the micrometers are clamped around the 19 mm section. Clamping around the 16 mm diameter section should only have a supporting function; high forces at this point will increase friction and reduce accuracy and resolution. For the same reason lateral forces on the tip must be avoided.



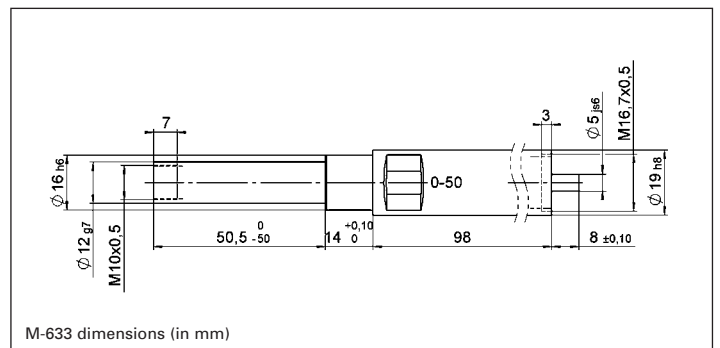
M-631 dimensions (in mm)



M-632 dimensions (in mm)

Technical Data

Models	M-631	M-632	M-633	Units	Notes
Travel range	10	25	50	mm	see page 7-106
Manual sensitivity	1	1	1	µm	
Backlash	2	2	2	µm	
Max. push/pull force	50	50	50	N	
Max. lateral force	0.02	0.02	0.02	N (at tip)	
Drive screw pitch	0.5	0.5	0.5	mm	
Weight	0.1	0.15	0.2	kg	



M-633 dimensions (in mm)