

Microtranslation Stage

Precision Crossed Roller Guides, PiezoMike Option, XY(Z) Combinations



M-105

- Travel range to 18 mm
- Stainless steel construction
- XY and XYZ combinations
- Optional PiezoMike with 10 nm resolution
- Optional motor drives

The M-105-linear stages are available in various configurations and allow travel ranges up to 18 mm. They have crossed roller bearings that allow a guiding accuracy of better than 2 μm . The motion platform is preloaded with springs against the precision micrometer screw to suppress backlash.

With the XYZ version, the Z axis is mounted with an adapter bracket so that the load acts in the direction of the spring preload.

Application fields

Manual sample manipulation.

Specifications

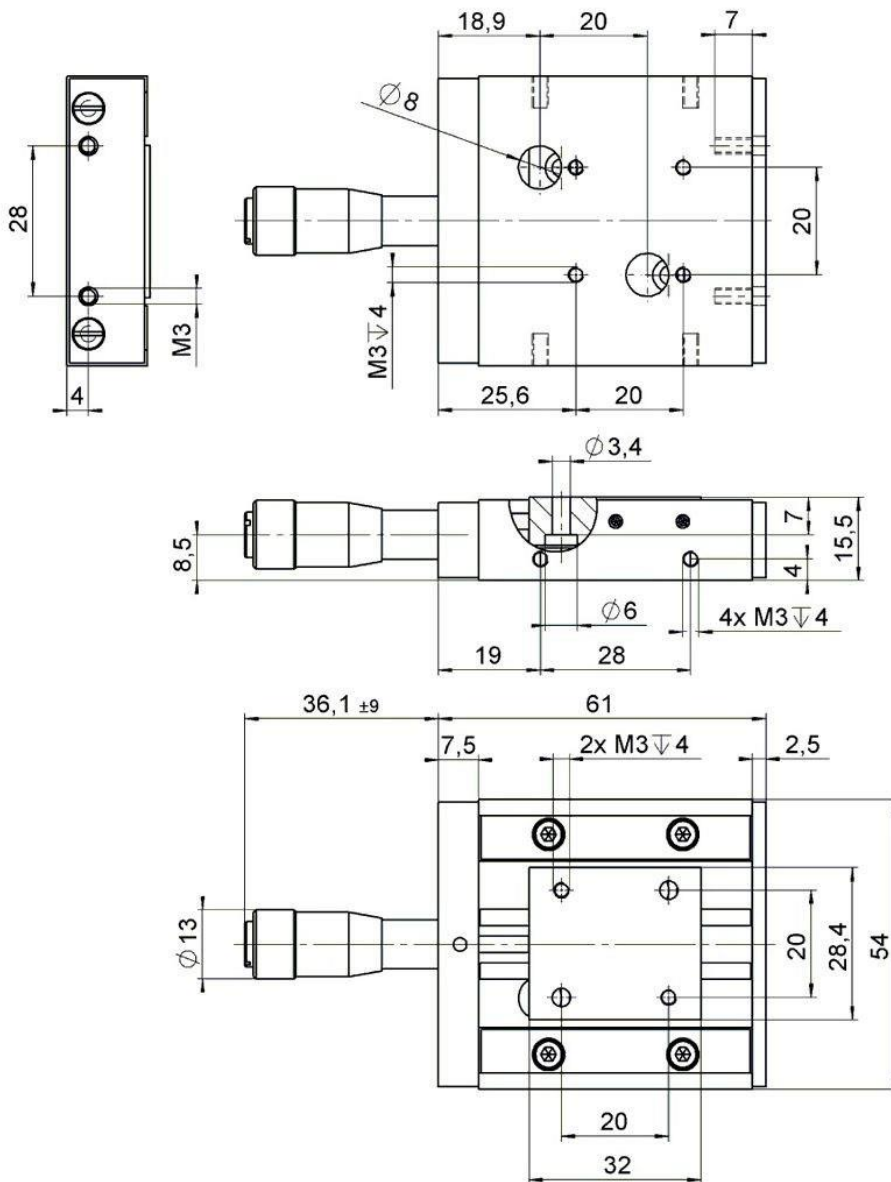
	M-105.10	M-105.1P**	Unit	Tolerance
Travel range	18	18	mm	
Piezo fine travel range	–	30	µm	
Minimum incremental motion (piezo drive)	–	0.01	µm	
Minimum incremental motion (micrometer screw)*	1	1	µm	
Backlash	2	2	µm	
Straightness	2	2	µm	
Flatness	2	2	µm	
Load capacity	100	100	N	max.
Push/pull force	20 / 4	20 / 4	N	max.
Lateral force	25	25	N	max.
Drive	Micrometer screw	P-854.00		
Drive screw pitch (coarse / fine)	0.5 / –	0.5 / –	mm	
Mass	0.32	0.38	kg	
Housing material	St	St		
Recommended piezo driver	–	E-610, E-500 system		

* Motorized versions achieve up to 50 nm.

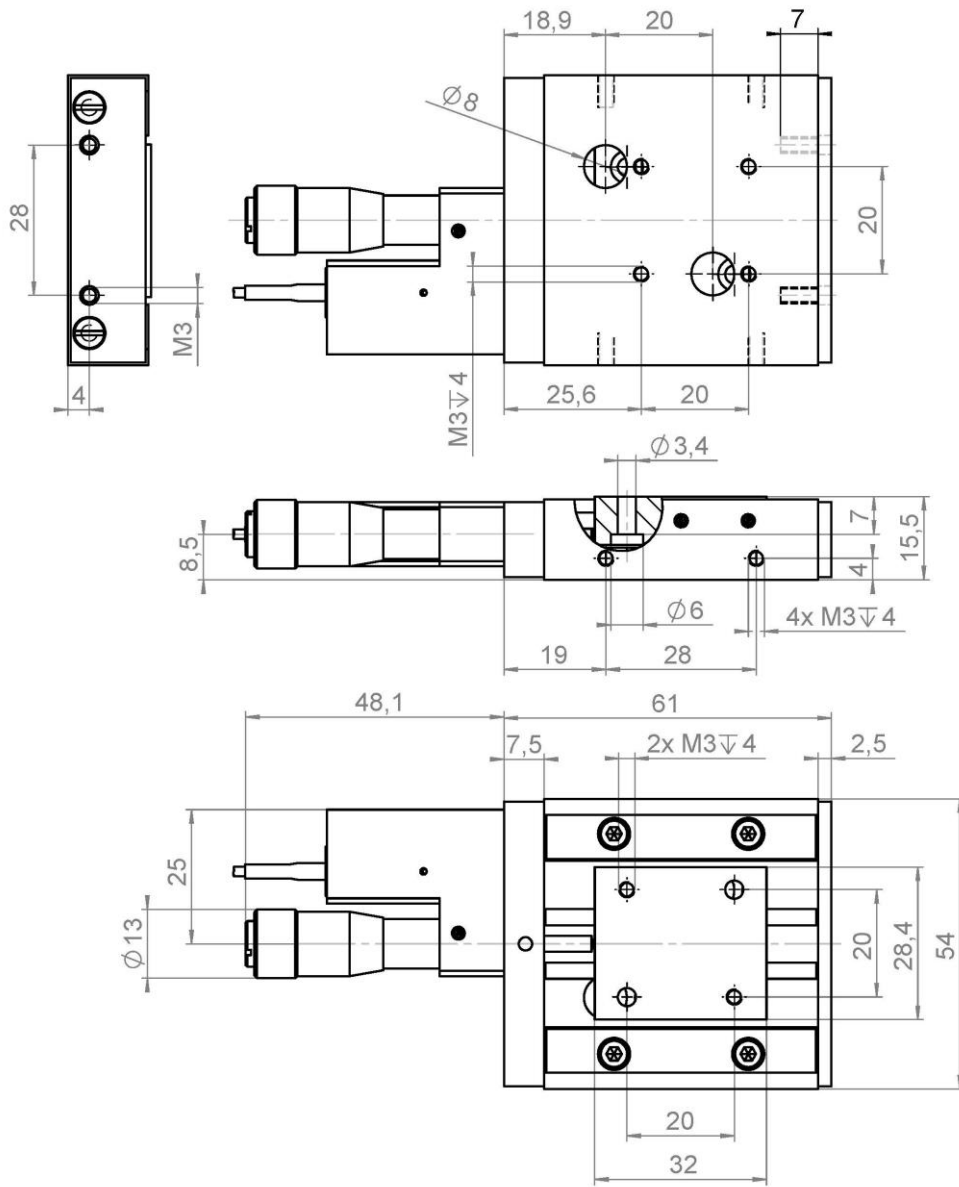
** The M-105.2P and M-105.3P versions are XY respective XYZ combinations of the M-105.1P.

Ask about customized versions.

Drawings / Images



M-105.10, dimensions in mm



M-105.1P, dimensions in mm

Ordering Information

M-105.10

Microtranslation stage, 18 mm, non-lockable micrometer screw

M-105.11

Microtranslation stage, 18 mm, with lockable Micrometer screw

M-105.1B

Microtranslation stage, 18 mm, without drive

M-105.1P

Microtranslation stage, 18 mm, PiezoMike drive

M-105.2P

XY Microtranslation stage, 18 mm, PiezoMike drive

M-105.3P

XYZ Microtranslation stage, 18 mm, PiezoMike drive (with M-009.10 bracket for side mounting)