

M-311 – M-318

Series of Miniature Translation Stages



- **Extremely Compact**
- **All-Stainless-Steel Construction**
- **X, XY and XYZ Versions**
- **Optional PiezoMike for Nanometer Resolution**
- **4 mm Clear Aperture**
- **Linear Ball Bearings**

The M-310 series of translation stages are our smallest micrometer-driven positioners. The carriage is spring pre-loaded against the micrometer tip for elimination of backlash. M-310 series stages are available in one-, two- or three-axis

configurations. The latter consists of a two-axis stage, an angle bracket and a one-axis stage. Please note that an XY unit cannot be separated into two one-axis stages. The vertical stage in the M-313 XYZ assembly supports the load

through the micrometer spindle (not the preload springs) providing excellent stability.

PiezoMike Option

Versions with PiezoMike drive provide an additional 25 µm fine range for remotely controlled ultra-high resolution (e.g. scanning or tracking). See page 7-86 for further details.

A special version with piezo block NanoActuators is available as product number F-111 (see page 8-22 in the "Photonics" section, for more examples of M-310 series stages in photonics alignment and packaging).

Notes

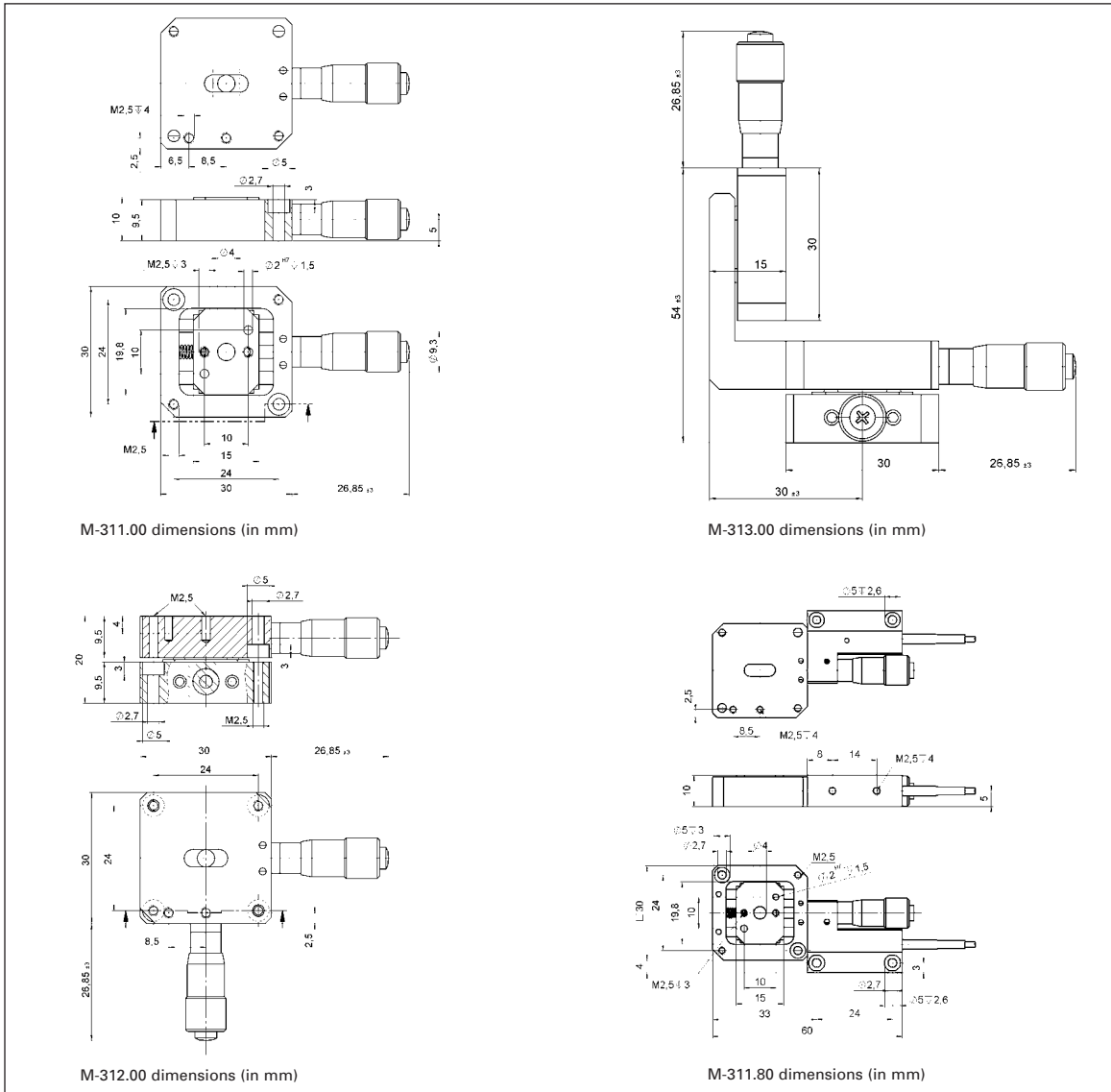
See "Accessories", page 7-92 ff. for adapters, brackets, etc.

Ordering Information

- M-311.00**
Miniature Translation Stage, 6 mm
 - M-312.00**
XY Miniature Translation Stage, 6 mm
 - M-313.00**
XYZ Miniature Translation Stage, 6 mm
 - M-311.80**
Miniature Translation Stage with PiezoMike Drive, 6 mm
 - M-312.80**
XY Miniature Translation Stage with PiezoMike Drive, 6 mm
 - M-313.80**
XYZ Miniature Translation Stage with PiezoMike Drive, 6 mm
- Accessories**
- M-318.20**
Angle Bracket (F-010 fiber holder → M-313)
 - M-318.30**
Combination Plate 30 x 30 mm
 - M-318.00**
Z-axis Mounting Bracket (included in M-313)
 - M-318.40**
Adapter Plate for Honeycomb Tables, 1" & 25 mm

Ask about custom designs!





Piezo Actuators

Nanopositioning & Scanning Systems

Active Optics / Steering Mirrors

Tutorial: Piezo-electrics in Positioning

Capacitive Position Sensors

Piezo Drivers & Nanopositioning Controllers

Hexapods / Micropositioning

Photonics Alignment Solutions

Motion Controllers

Ceramic Linear Motors & Stages

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Technical Data

Models	M-311.00	M-311.80	Units	Notes see page 7-106
Travel range	6	6	mm	
Piezo fine travel range	-	25	µm	
Min. incremental motion (piezo drive)	-	0.01	µm	A4
Min. incremental motion (micrometer drive)	1	1	µm	A4
Backlash	2	2	µm	
Straightness	0.4	0.4	µm	
Max. normal load capacity	4	4	kg	B1
Max. push/pull force	20 / 1	20 / 1	N	B2
Drive	M-619	P-853		
Micrometer pitch	0.5	0.5	mm/rev.	
Weight	58	100	g	
Body material	N -S	N -S		L
Recommended piezo driver (codes explained p. 6-11)	-	A, C, G		