

Precision Stage with Linear Piezo Drive

FAST, SELF-LOCKING, LOW PROFILE



M-664

- Travel range 25 mm
- Only 15 mm profile height
- Linear encoder with 100 nm resolution
- Max. velocity 400 mm/s
- Self-locking at rest, no heat generation, no servo jitter

Precision-class micro translation stage

Integrated piezo-ceramic direct drive. Compact XY combinations available

PILine® piezo ultrasonic drive

Self-locking, with no heat generation at rest. Excellent start/stop dynamics. Crossed roller bearings. Non-contact limit and reference point switches

Direct-metrology linear encoder

High accuracy and repeatability

Application fields

Research and industry. For micromanipulation, quality assurance testing, biotechnology

Related Products

M-663 Ultra-compact Linear Stage
M-683 Dynamic Micropositioning Stage
M-122 Miniature Linear Stage
M-126 Precision Micro-Translation Stage
C-867 Controller for PILine®

Valid patents

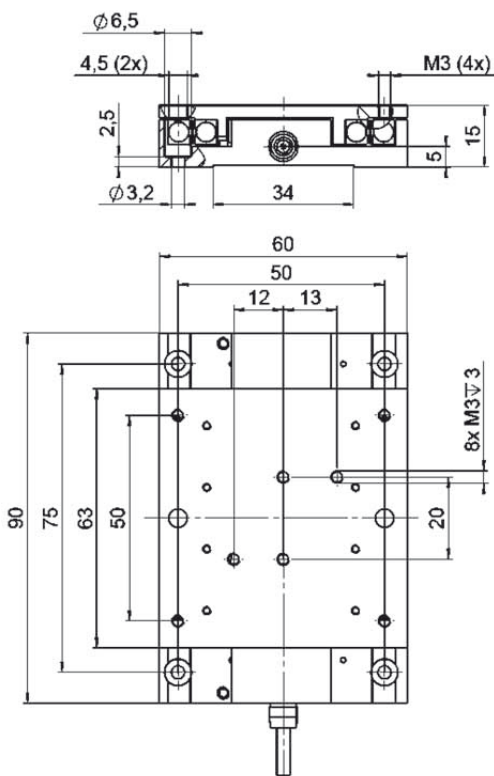
US Pat. No. 6,765,335B2
European Patent No. 1267425B1

Accessories

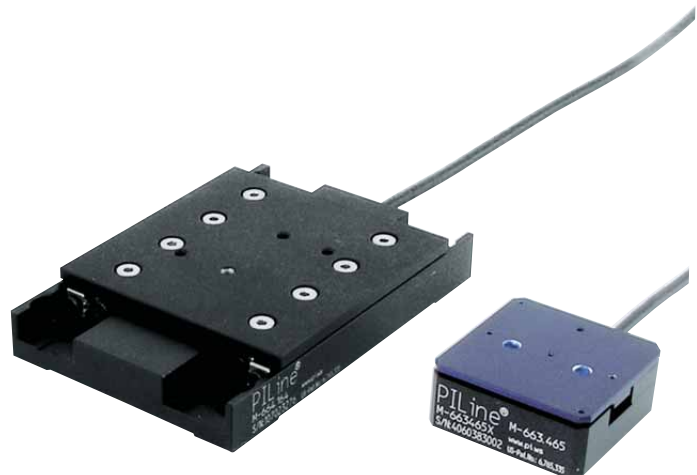
M-664.AP1 Adapter Plate for XY-mounting of M-664, 4 mm high

	M-664.164	Tolerance
Active axes	X	
Motion and positioning		
Travel range	25 mm	
Integrated sensor	Linear encoder	
Sensor resolution	0.1 μm	
Min. incremental motion	0.6 μm	typ.
Bidirectional repeatability	$\pm 1 \mu\text{m}$	typ.
Unidirectional repeatability	$\pm 0.2 \mu\text{m}$	typ.
Pitch	$\pm 75 \mu\text{rad}$	typ.
Yaw	$\pm 50 \mu\text{rad}$	typ.
Velocity	400 mm/s	max.
Reference point switch repeatability	1 μm	typ.
Mechanical properties		
Load capacity	25 N	max.
Push/pull force	2.5 N	max.
Holding force	2.5 N	max.
Drive properties		
Motor type	P-664 PILine® Ultrasonic Piezo Drive	
Limit and reference point switches	Hall-effect	
Miscellaneous		
Operating temperature range	0 to +50 °C	
Material	Al (black anodized)	
Dimensions	90 x 60 x 15 mm	
Mass	0.225 kg	$\pm 5 \%$
Cable length	1.5 m	$\pm 10 \text{ mm}$
Connector	MDR, 14-pin	
Recommended controller/driver	C-867 controller/driver	

Ask about custom designs!



M-664, dimensions in mm



The smallest closed-loop linear stages with self-locking PILine® drive: M-664 (right) and M-663 (left)