

MP-225 MOTORIZED MICROMANIPULATOR



The **MP-225** is one of the newer members in the Sutter Instrument Company micromanipulator line. Production and design changes have allowed us to produce a motorized manipulator that is a more affordable alternative to the industry standard **MP-285**. While the **MP-225** feature set is less comprehensive than the **MP-285**, it includes the most popular features with a user interface that is simpler to use. The mechanical design utilizes a miniature stepper motor and integral anti-backlash gear head. Pre-loaded ball bearing slides provide smooth movement throughout the 25mm of travel. The controller uses low-noise, linear-drive output circuitry identical to that found in the **MP-285**. The methodology for mounting pipette holders

and headstages used with the **MP-285** has been maintained in the **MP-225** to allow for cross compatibility.

The **MP-225** is designed primarily for positioning patch and intracellular recording pipettes. We have retained and refined the features most desired for this type of work. An extended version of the popular rotary optical encoder (ROE) is the sole input device available with the **MP-225**. Like the **MP-285**, the manipulator has a synthetic 4th axis for diagonal advancement of the pipette; 16 different angles are selectable via DIP switches. Speed and resolution of movement are easily selected with a multiple position thumbwheel, allowing fast/course movement and slow/ultra-fine

movement in 10 increments. Two commonly used robotic movements have been incorporated for user convenience. A single button press can initiate a move to a Home position for pipette exchange or to a user defined Work position for quick location of the pipette near the recording location. A display on the ROE gives position location. As all controls

are located on the ROE, the controller can be moved to a less accessible area of your setup and does not need to occupy prime space in an equipment rack.

As always, our technical support team is available to address your particular needs and answer all questions before and after your purchase.

FEATURES**> MP-225**

Highly stable for experiments intolerant of pipette drift.

Submicron (62.5nm) minimal resolution for fine movement.

Convenient thumbwheel selects resolution/speed of movement.

25mm of motorized travel on all three axes.

4th axis for coaxial movement of pipette, angle selected by DIP switches on ROE.

ROE button press actuates move to Home position for pipette exchange.

ROE button press actuates move to Work position near recording location.

Continuous display (in microns) of axes positions located on ROE.

DIP switches on ROE select direction of movement produced by turn of ROE knob.

Modularized, compact design easily adaptable to your setup.

Universal mounting system for headstage or pipette holder.

Mounting adapters included with manipulator.

SPECIFICATIONS**> MP-225****Travel**

25mm on all three axes

Resolution

Six microstep sizes selectable (um/ustep): 0.0625, 0.125, 0.25, 0.5, 1.0 and 2.0.

Finer movement settings use the 62.5nm microstep size but fewer microsteps are commanded per encoder knob turn

Maximum Speed

2.0mm/sec

Long Term Stability

1-2 um/hour maximum

Drive Mechanism

Integral miniature stepper motor anti-backlash gearhead

Dimensions

Mechanical: 4in x5.5in x 6in
10cm x 15cm x 15.5cm

Controller: 4in x 16in x 12.25in
10cm x 40.5cm x 31cm

Weight

Manipulator: 2.95lbs /1.3kg

Controller: 10lb 11oz/4.5kg

Electrical

115/230 Volts

50/60 Hertz power line



US PRICES
> MP-225

*International prices are 5% higher.
 Prices subject to change without notice.*

U.S. PRICES

Motorized Micromanipulator

MP-225 Includes manipulator, table top controller unit, extended ROE, cables, rod holder, 4in dovetail extension, mounting adapter plate, hinged headstage mount, screws, hex wrench, power cord and manual* **\$ 6,500**

For detailed information on mounting our micromanipulators, refer to the Mounting Systems section or phone for assistance.

** Indicate right- or left-handed set-up when ordering.*

ACCESSORIES

285RBI	Rotating base	\$ 300
X285300	Right angle adapter	\$ 45
X285305	Z-axis vertical extension	\$ 45
X285310	Z-axis horizontal extension	\$ 45