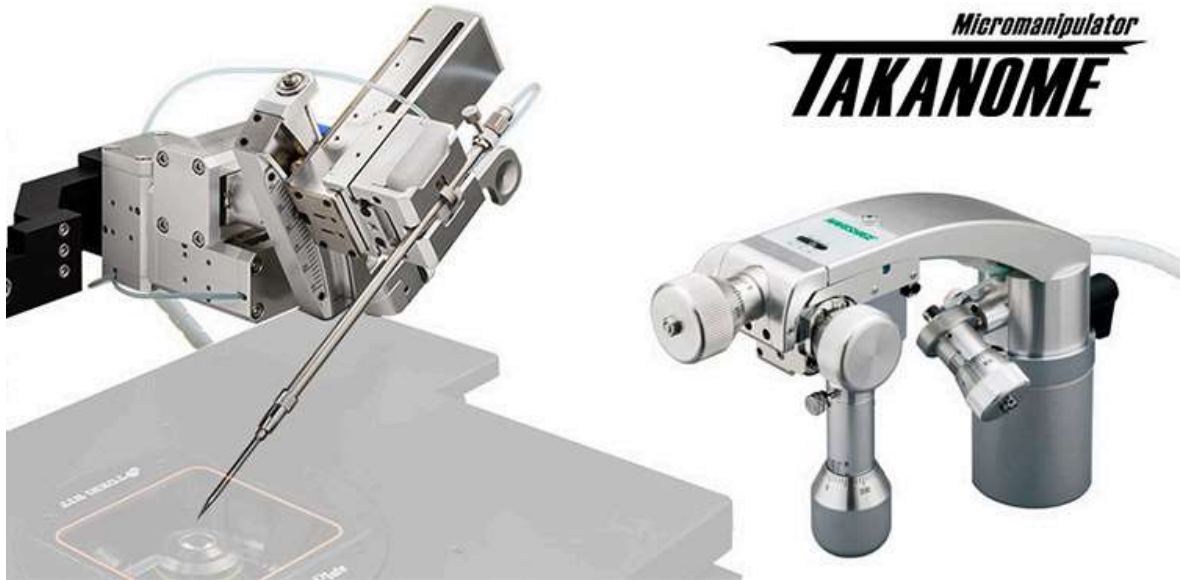


## MTK-1-O2/O3/N2/N3/N4/Z1/Z3/L2 Four-axis Hanging Joystick Oil Hydraulic Micromanipulator

**The optimal manipulator specifically made for handling suspension cells!**

Once having been set, the innovative fan-shaped driver never fails to return to where the pipette tip is supposed to be. The newly installed knob allows a pipette to move along its axis by using traditional and smooth oil hydraulic joystick. This manipulator will spare the laborious work of a pipette alignment with the optical axis, providing more time for objective operation.



\* This product is sold in the set of both handed manipulators and a dedicated adaptor.

### Setting Example



\* A microscope and injectors ([IM-11-2](#)) are not included.

### Easy attachment of a pipette

The injection holder is provided with an anchor (special clasp) that fits in the driver body, which enables a distance from a pipette tip to the anchor to be in a length. This function can be used for memorizing a regular position so that time for a pipette exchange will reduce and repeated pipette location is precise and stable.



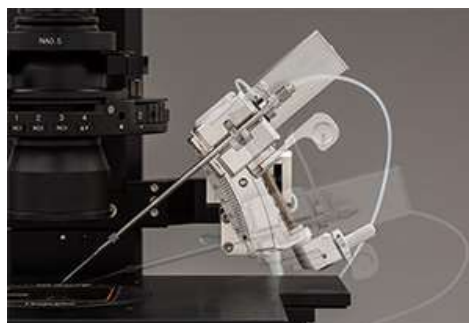
\* Design tolerance for attachment of a pipette is 10mm. Pipette location can be corrected within the tolerance so that it can be attached as usual manner.

## Pipette angle adjustment centered at the tip to stay in view

The pipette tip is designed for staying at the optical axis against any angles. So angle adjustment is hard to miss the tip in the field of view.



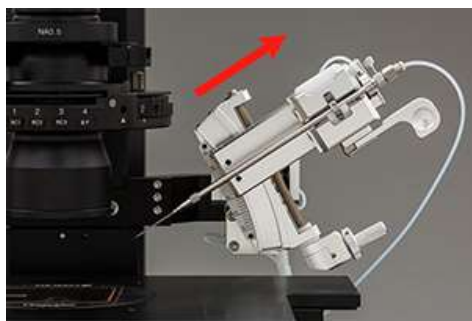
15°



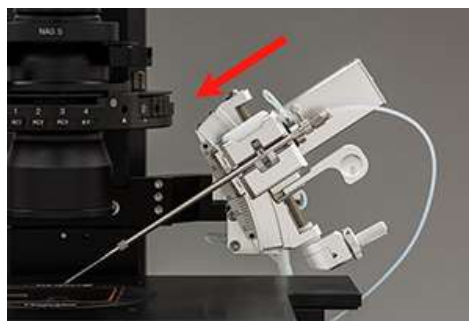
40°

## Simple and reliable motion from Home to Working position

50mm retracting margin enables easy exchange of a pipette. Breakage of pipettes is greatly reduced during the replacement.



Home position



Working position

## Microscope compatibility table

A dedicated adaptor for each microscope has been developed. It needs no adjustment for mounting so that it can be installed at best position without fail. Find an appropriate adaptor in the following table.

Supplier	Microscope	Model
Evident (Olympus)	IX71	MTK-1-O2
	IX73, IX83	MTK-1-O3
Nikon	ECLIPSE Ti	MTK-1-N2
	ECLIPSE Ts2R	MTK-1-N3
	ECLIPSE Ti2	MTK-1-N4
Carl Zeiss	Axio Observer 3/5/7	MTK-1-Z1
	Axiovert 5	MTK-1-Z3
Leica	DMI8	MTK-1-L2

\* In the event a special adaptor is required except for the above table, depending on the specifications of a stage, a plate insert, or thermos-plate, please contact Narishige for more information.

## Specification

Accessories included		Dedicated Mounting Adaptor IP Iron Plate × 2 units Positioning Gauge Anchor × 2 units Hex Wrench Pipette Scale × 2 sheets
Movement range	X/Y/Z-axis	Oil hydraulic control 10mm Full rotation of knob 250μm Minimum graduation 5μm
	T-axis (for holder)	Oil hydraulic control 10mm Full rotation of knob 1,000μm Minimum graduation 20μm
		Manual (Return and Home position) 50mm
		Incident angle 15 ~ 40°
Dimensions/Weight	Control unit	W85.6 × D225 ~ 235 × H151 ~ 171mm, Approx. 1.9kg
	Drive unit	W108 ~ 138 × D145 ~ 155 × H100 ~ 150mm, Approx. 820g
Hydraulic tube length		0.9m

Specifications are subject to change without notice.  
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