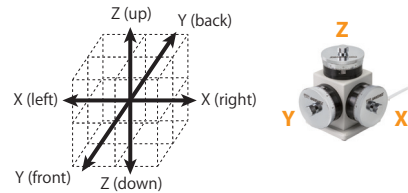


Optional Product

MMO-203 manipulator is recommended for its precise movement with easy to handle large control knobs. When diagonal movement on the X-Y plane is required, MMO-4 with Joystick controller is recommended.

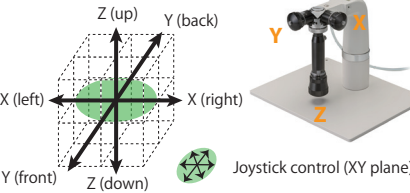
MMO-203



Precise positioning is easy with large 3D control knobs

- Approach and retract from object in the increment of 1μm without colliding/touching the surrounding object

MMO-4



Flexible Movement with Joystick Controller

- For the repetition of point to point and/or diagonal movement (Suitable for scratching the surface)

Glass Probe Production Tool

Static electricity-prone glass probe makes pick-up work much easier.
☞ Complete listing of products are available on our website.

G-1000 Glass Rods



Glass rods for probe production (200 pieces/pack)

PC-100 Puller



Make a probe by applying heat and pull.

MF2 Microforge



Cut in a desired thickness (Bending and Fire polish possible.)

*Lens is optional.

	Model No.	Product
Standard Set	NN-Q-2/L	Mounting Adaptor for Nikon FN1/ E600FN
	NO-Q	Mounting Adaptor for Olympus BX53M
	Customized Order	Customized Mounting Adaptor
	MN-4	Coarse Manipulator
	MMO-203	Three-axis Oil Hydraulic Micromanipulator
Desk-top Set	HI-9	Injection Holder (for Pneumatic Injector)
	Customized Order	Customized Magnetic Stand
	MN-4	Manipulator (Coarse)
	MMO-203	Three-axis Oil Hydraulic Micromanipulator
	HI-9	Injection Holder (for Pneumatic Injector)
Manual Set	IP	Iron Plate
	UMM-3FC	Micromanipulator
	B-8B	Ball Joint
	HI-9	Injection Holder (for Pneumatic Injector)
	GJ-8	Magnetic Stand
Options for Glass Probe Production	IP	Iron Plate
	G-1000	Glass Rod
	PC-100	Puller
	MF-2	Microforge
Optional Product	MMO-4	Three-axis Hanging Joystick Oil Hydraulic Micromanipulator

Optional lens for microforge MF2

MF2-LS1	Lens set 50x/100x
MF2-LS2	Lens set 75x/525x
MF2-LE15	15x Eyepiece set
MF2-LO35	35x Objective lens

NARISHIGE

NARISHIGE SCIENTIFIC INSTRUMENT LAB.
27-9 Minamikarasuyama 4-Chome Setagaya-ku
Tokyo 157-0062, Japan
Phone: +81(0)3 3308-8233 Fax: +81(0)3 3308-2005
E-mail: sales@narishige.co.jp

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<https://narishige-group.com>

NARISHIGE INTERNATIONAL USA, INC.
415 Bayview Avenue, Amityville, NY 11701, U.S.A.
Phone: 631-229-3320 Fax: 631-841-0066
Toll Free: 1-800-445-7914 (within the USA).
E-mail: info@narishige-usa.com

NARISHIGE INTERNATIONAL LTD.
Unit 7, Willow Business Park, Willow Way,
London SE26 4QP, U.K.
Phone: +44 (0) 20 8 699 9696
Fax: +44 (0) 20 8 291 9678
E-mail: eurosales@narishige.co.uk



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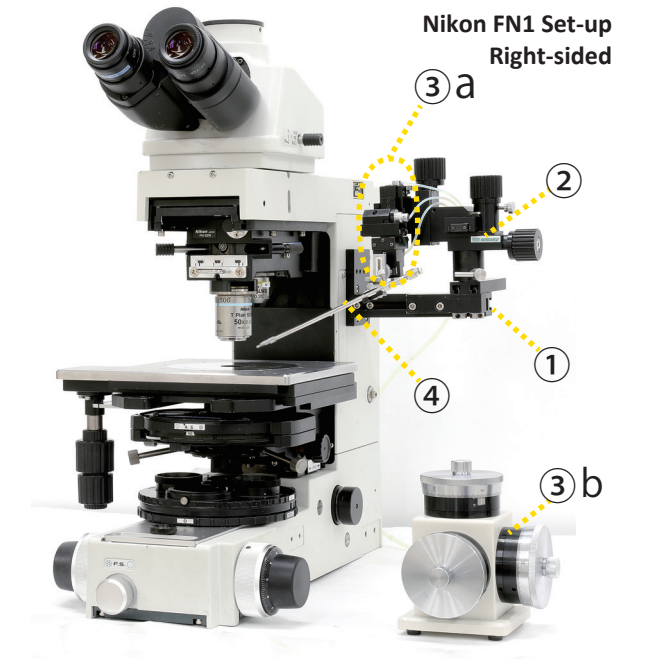
Pick-up Micromanipulation



Pick-up Micromanipulation

Standard Set

Sample size (reference): 1 to 10 micrometer
Total magnification: x100 ~ x500 (Upright microscopes/ Digital scopes)

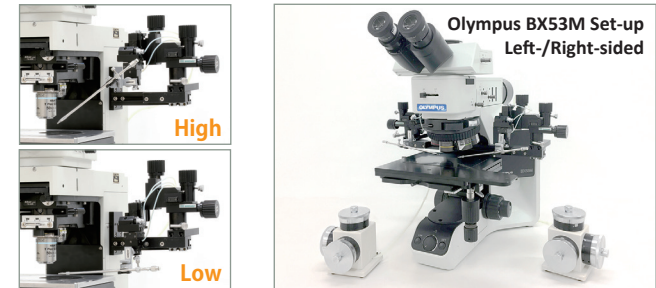


System for Pick-up under High Magnification

No.	Model No.	Product	Application
①	NN-Q-2/L NO-Q	Mounting adaptor for FN1 Mounting adaptor for BX53M	-To install the manipulator.
②	MN-4	Manipulator (Coarse)	-Move a probe in the FOV. -Scratch the sample surface.
③	3a.	MMO-203 Three-axis Oil Hydraulic Micromanipulator	Drive unit (Fine) -Approach to the sample
	3b.		Control unit (Fine) -Pick up/move samples
④	HI-9	Injection Holder	-To hold a probe.

* Microscope is not included and not available from Narishige.

Features



Freely adjust angle and height.

After purchasing one side, the other side can be purchased separately.

Mounting Adaptor for Industrial Microscopes

NIKON FN1/ E600FN		OLYMPUS BX53M
Left (convertible)		Microscope body: BX53MRF-S
Right (convertible)		Attached on Stage.
NN-Q-2L	NN-Q-2	NO-Q

*Adaptors for other microscopes would be custom-made. Refer to see the table below.
*When the body of BX53M is BX53MTRF-S, it will be the same adaptor as BX43/53.

NIKON		OLYMPUS			Other
LV100	LV150 LV150N	BX51	BX51M	BX43/53	Keyence
✓	✓	✓	✓	✓	✓

Desktop Set

Sample size (reference): 1 to 10 micrometer
Total magnification: x100 ~ x500 (Upright microscopes/ Digital scopes)

Desktop Set is available when adaptor can not be made.

No.	Model No.	Product	Application
①	-	Custom-made Magnetic Stand	-Customized stand aligned with stage/ focus plane of microscope
②	MN-4	Manipulator (Coarse)	-Move a probe in the FOV. -Scratch the sample surface.
③	3a.	MMO-203 Three-axis Oil Hydraulic Micromanipulator	Drive unit (Fine) -Approach to the sample
	3b.		Control unit (Fine) -Pick up/move samples
④	HI-9	Injection Holder	-To hold a probe.
⑤	IP	Iron Plate	-Heavy plate to hold magnetic stand. Place next to the microscope.

① Please contact us with the dimensions of stage, including the height from a desktop.

* Microscope is not included and not available from Narishige.

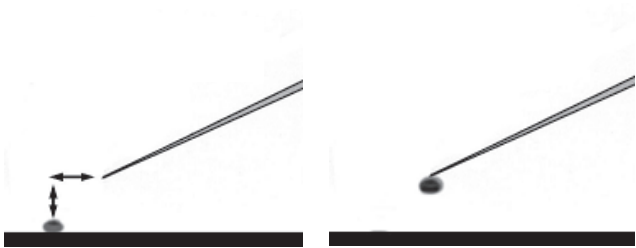
Pick-up Micromanipulation

The pick-up micromanipulation is the system that uses the manipulator set with microscope. Example of the most commonly used is that the probe picks a foreign micro-material on circuit board to be analyzed.


Keywords: Micro-sampling FIB Lift-out with TEM Analysis

Pick Up

Pick up samples with glass/metal probe with static electricity.

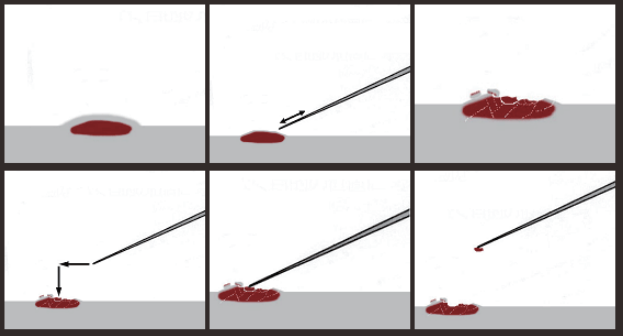


Move



Scratch/ Scrape

Using the knife or metal probe to cut and excavate buried sample, then pick up.



Questions?

Need a recommendation?

We are happy to help you choose the right equipment according to your application, microscope model and size of the sample. Please contact us at UK office: eurosales@narishige.co.uk or +44 (0) 20 8 291 9678

Japan office: sales@narishige.co.jp or +81 (0) 3 3308 8233

Complete listing of products are available on our website.

Manual Set

Sample size (reference): 100 micrometer to 1 millimeter
Total magnification: x40~ x100 (Stereo microscopes)



Easy-to-use manual set for pick-up

Simple and flexible setup with stereo microscope.

No.	Model	Product name	Application
①	UMM-3FC	Micromanipulator	-Equipped with both coarse and fine control XYZ-axis. Fine movement offers ease of control.
②	B-8B	Ball Joint	-Attach to manipulator to control positioning and angle of the probe.
③	HI-9	Injection Holder	-To hold a probe.
④	GJ-8	Magnetic Stand	-Stand for manipulator which can be tilted on the bar in a desired angle.
⑤	IP	Iron Plate	-Heavy plate to hold magnetic stand. Place next to the microscope.

* Microscope is not included and not available from Narishige.