

# Xenopus Oocytes, Zebrafish Eggs, etc.

## Recommended Models for Microinjection under Low Magnification

### For use with Carl Zeiss Stemi2000

For performing microinjection under low magnification, a combination of a three-axis coarse manipulator and a single-axis fine micromanipulator to advance in the same direction as the micropipette points is typically used. To advance in the same direction as the micropipette by a fine micromanipulator, two types are available for use: Manual Control type and Hydraulic Control type. Select a micromanipulator model best-suited to the intended use.

### Manual + Oil Hydraulic M-152 + MMO-220A

A combination of a compact and lightweight three-axis manual manipulator and a single-axis oil hydraulic micromanipulator permits rapid positioning in three dimensions and vibration-free movement in the same direction as the micropipette points by remote control.

### Manual YOU-1

A three-dimensional coarse manipulator permits initial rapid positioning and a fine micromanipulator allows final precision approach. The fine micromanipulator permits independent angle adjustments allowing movements in the same direction as the injection holder points without having to tilt the three-dimensional coarse manipulator.

#### Typical Combinations

	Example 1	Example 2	YOU-1 configuration
Mounting Adaptor (Magnetic Stand)	NZ-4-2+NR2	GJ-1	GJ-1
Three-axis Coarse Manipulator	M-152	M-152	UM-3C
Single-axis Fine Micromanipulator	MMO-220A	MMO-220A	UM-1PF
Iron Plate	—	IP	IP

IP (Iron Plate) is not included in YOU-1 Manipulator Set. It is available as an option.

#### MMO-220A

Its compact drive unit can be used in combination with a manually operated manipulator. This model allows the drive unit to advance in the same direction as the micropipette points without vibration.

#### M-152

Compact, lightweight, simple coarse manipulator. A bar-mount system permits installation onto a mounting adaptor or magnetic stand.

#### MMO-220A Controller

Remote-control system. The controller can be placed in an easy-to-operate position. Permits vibration-free operation without having to touch the microscope.

#### NR2

Serves as a side mounting adaptor.

#### NZ-4-2

A manipulator mounting adaptor that's secured to the microscope simply by two mounting knobs.

#### YOU-1

A combination of a three-axis coarse manipulator and a single-axis fine micromanipulator capable of versatile operation. Comes standard with a magnetic stand and an injection holder.

