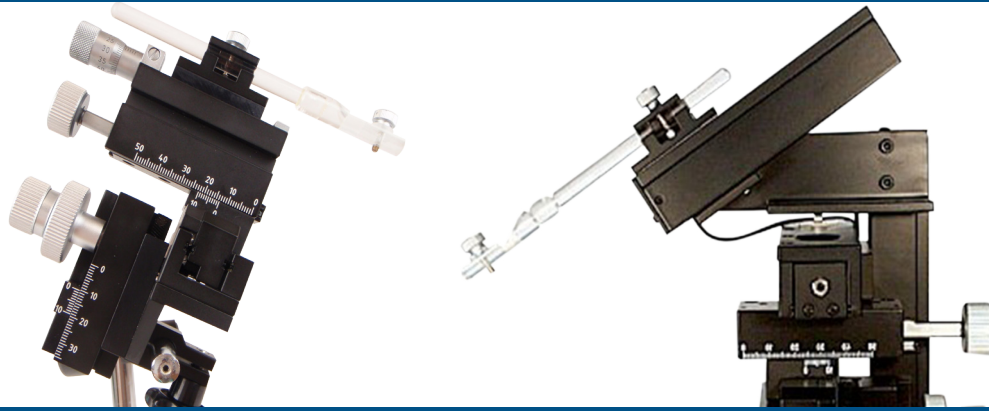




APPLIED SCIENTIFIC
INSTRUMENTATION

Micromanipulators



Märzhäuser Micromanipulators

ASI offers Märzhäuser's line of micromanipulators and piezo devices. The micromanipulators are built to demanding specifications and are a standard within the scientific community. The piezo devices are used for piercing cell walls quickly and precisely. We offer both manual and motorized micromanipulators with a wide range of features and configurations. We can also order manipulators that we do not keep in stock, such as the MD4, MMJ, and PZ10 micromanipulators from Märzhäuser.

MM33

The popular MM33 Micromanipulator (pictured above left) is a small and compact unit for manual manipulation in all three axes. The scales on the slides allow readings of the coarse adjustment with an accuracy of 0.1 mm. The additional x-axis fine control is achieved with a micrometer screw with a resolution of 10 μm . The range of travel is 37 mm in the x-axis, 20 mm in the y-axis, and 25 mm in the z-axis. The fine control has a travel of 10 mm. The micromanipulator is supplied with either a 10 mm or a 12 mm clamp for attachment. An 80° tilting base is offered as an option.

The MM33 is commonly used with ASI's MPPI-3 Milli-Pulse Pressure Injector for injecting a wide range of cells including oocytes, zebrafish, and other embryos.

DC-3K

The DC3-K Micromanipulator (pictured above right) is equipped with manual as well as motorized drives in all 3 axes. Since this micromanipulator does not have to be operated by hand, but rather through the motor controls, it provides a smooth vibration-free positioning of injection tools or electrodes even under highest magnifications and when working with structures smaller than one micron. The manual adjustment capabilities of this manipulator are the same as the MM33, and can be read from scales to a resolution of 0.1 mm. The motorized motion of the three fine adjustment slides are driven by means of precision micrometer screws with 10 μm readout resolutions and DC motors. With the MS-314 Control Unit, below, resolution is approximately 500 nm.

The DC-3KS version has the additional capability of a swing-in / swing-out x-axis platform. This allows for the rapid and easy exchange and cleaning of tools without losing time for readjustment.