

XENOWORKS DIGITAL MICROINJECTOR



Designed primarily for transgenic mammal workstations, the **XenoWorks Digital Microinjector** is capable of holding oocytes and early embryos immobile while simultaneously providing a separate pressure channel for pronuclear microinjection of DNA or the gentle control of embryonic stem cells as they are transferred into blastocysts. The microinjector employs two independent pressure control channels.

The self-contained vacuum channel for gentle suspension-cell holding applications can be switched on and off as needed, and a responsive rotary control is used to dial the pressure up or down according to the degree of hold required.

A second channel is available which is capable of delivering both high-pressure for femtoliter-volume solution injection, and

gentle positive/negative pressure for transfer of embryonic stem cells. Two modes of injection are available on this channel; in Constant Flow mode, the inject pressure set is applied to the micropipette tip for as long as the hand- or foot-switch is held down. In Pulse mode, the inject pressure is applied for a precisely timed duration, which can be set in 0.1 second increments. Both injection duration and pressure are easily selectable using rotary controls on the remote interface.

Optimal ergonomics are again a prime consideration; the remote control unit provides access to all keys and rotary controls necessary to manipulate the parameters in the two pressure channels, while the separate compressor module can be shelf- or floor-mounted away from the microscope to eliminate vibration interference.

SPECIFICATIONS
> XENOWORKS
DIGITAL MICROINJECTOR

Hold Function

Hold pressure:
 -350 to +350 hPa

Inject Function

Inject modes: Transient or timed
Inject pressure: 0 to 5600 hPa in 70 hPa increments
Injection time: 0 to 10 seconds in 0.1sec increments
Inject activation: Transient; hand or foot switch
Clear pressure: Ramps from current Inject value to 5600 hPa at 1000 hPa/sec

Transfer Function

Transfer pressure:
 -175 to +175 hPa

Maximum Pressure

5600 hPa (Inject channel)

Controls

Tactile keys, rotary optical encoders 3 x 7-segment LED display

Tubing 2m ETFE

Micropipette Holder

Diameter: 4mm
 Accepts 1mm capillary glass (other sizes can be accommodated upon request)

Electrical

BRE110: 100-120 Volts, 60Hertz
 BRE220: 220-240 Volts, 50Hertz

Dimensions

Size:
 Compressor module
 407mm x 440mm x 150mm,
 User interface module
 164mm x 123mm x 70mm
Weight:
 Compressor module: 1504g,
 User interface module: 42g

FEATURES
> XENOWORKS
DIGITAL MICROINJECTOR

Four injection modes:
 Hold, Transfer, Inject, Clear

Two independent pressure channels

Rotary controls for continuous pressure adjustment

Integral compressor with remote control pad