BUILT-IN COMPRESSOR WITH REMOTE USER INTERFACE AND FOOTSWITCH

TWO INDEPENDENT PRESSURE CHANNELS

NEGATIVE AND POSITIVE PRESSURE

TWO INJECTION MODES: PULSE AND CONTINUOUS

FOUR FUNCTIONS: HOLD, TRANSFER, INJECT, CLEAR

TRANSFER CHANNEL PROVIDES COMPENSATION PRESSURE FOR HIGH PRESSURE INJECTION

FOUR RANGE SETTINGS FOR TRANSFER / COMPENSATION PRESSURE

ROTARY CONTROLS FOR: COMPENSATION PRESSURE, HOLDING PRESSURE, INJECT PRESSURE, AND INJECT DURATION

XENOWORKS™ DIGITAL MICROINJECTOR

The **XenoWorks® Digital Microinjector** is designed for transgenic mammal workstations, and adherent cell, C. elegans, drosophila, zebrafish, xenopus and sea urchin injections. It is capable of holding oocytes and embryos 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 channels: Hold and Inject/Transfer, which are controlled via the remote user interface.

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

The injector/transfer port is a second channel for delivering both high-pressure for femtoliter to microliter volume injections, and gentle positive/negative pressure for embryonic stem (ES) cell transfer. The transfer channel has four range settings to optimize the system to each application and user preference. It also includes a Clear function which can be used if the pipette gets clogged. Two modes of injection, Continuous or Pulse, in combination with a balance pressure, are available on this channel. In the Continuous mode, the inject pressure is applied to the micropipette tip for as long as the hand-or foot-switch is held down. In the Pulse mode, the inject pressure is applied for a precisely timed duration, which can be set in 0.01 second increments. Both injection duration and pressure are easily selectable using rotary controls on the remote interface. Injections are executed using the inject key on the remote interface or the footswitch.

Optimal ergonomics are again a prime consideration. The remote interface unit provides access to all keys and rotary controls necessary to manipulate the parameters of the two pressure channels, while the separate compressor controller can be positioned away from the microscope to eliminate vibration.

In addition to pronuclear injection, the XenoWorks Digital Microinjector can be used for a variety of intracellular and extracellular applications including adherent and suspended cell microinjection.

BRE XenoWorks® Digital Microinjector
Includes: compressor module, footswitch, remote user interface, 2 micropipette holders with 2.4m ETFE tubing and fittings, spare tubing, connecting cables, and manual

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