

## MPPI-3 Pressure Injector



The Milli-Pulse Pressure Injector, MPPI-3 produces gas pressure pulses to an injection pipette. The unit offers precise linear control of both pressure and pulse duration. Alternatively, an external source such as a signal generator can be used to control the pulse width and rate.

The MPPI-3 provides three methods to initiate the pressure pulse, in either Trigger or Gated mode:

- Front panel push buttonswitch
- External TTL input signal
- Optional footswitch

Continuous output allows fine-tuning of the flow rate and clearing clogs from pipettes. Maximum input pressure is 100 psi (690 kPa). The output pressure is adjustable from 0 up to 100 psi. An internal gas filter increases for reliability and ease of maintenance.

The MPPI-3 has an input for an optional Back Pressure Unit (BPU). This option prevents any reverse flow in a pipette caused by capillary action after a pulse by providing an adjustable (0-to-15 psi or 0-to-100 kPa) back pressure.

The new MPPI-3 case allows stacking of multiple controllers. The compact size and low cost makes the MPPI-3 an ideal choice for your pressure injection needs.

### Optional Accessories for the MPPI -3

- Back Pressure Unit (BPU)
- Micropipette Holder Kit
- Footswitch

## Specifications

<b>Input Pressure Range</b>	100 psi (0 to 690 kPa)
<b>Output Pressure Range</b>	Regulated 0 to 100 psi (0 to 690 kPa) (Maximum output depends upon input pressure)
<b>Output Pulse Range</b>	<b>Four user-settable ranges:</b> 5 ms to 100 ms, 5 ms to 100 ms, 5 ms to 10 s, 5 ms to 60 s Minimum duration limited by the pneumatic solenoid valve to approximately 5 ms
<b>Output Pulse Setting</b>	Via front panel 10-turn calibrated dial
<b>Output Pulse Accuracy</b>	0.4% of full scale (crystal controlled)
<b>Output Pulse Repeatability</b>	0.4% of full scale (1% over the life of the valve)
<b>Output Pressure Gauge</b>	Front panel analog gauge: 0 to 100 psi (0 to 690 kPa)
<b>Valve Life Expectancy</b>	100 million cycles
<b>Modes of Operation</b>	Continuous flow, Timed Pulse Duration flow control, Gated flow control
<b>Control Options</b>	Front panel pushbutton switch, external TTL input signal, footswitch or other type of manual switch
<b>Output Sync</b>	Allows monitoring of the valve control and the daisy-chaining of multiple controllers, as well as synchronizing the injection pulse with micromanipulators and piezo cell penetrators
<b>Gas Input and Back Pressure Fitting</b>	1/8" (3.18 mm) Barbed hose fittings
<b>Gas Output Fitting</b>	1/16" (1.59 mm) Barbed hose fitting
<b>Recommended Gas</b>	Nitrogen or clean dry compressed air (Internally-mounted input gas filter provided)
<b>Power Requirements</b>	Power Module: 100 to 240 VAC, 50 to 60 Hz, 0.5 A (Direct Power Connection: 12 VDC, 1.5 A, 18 W)
<b>Size</b>	2.7" H x 8.2" W x 8.5" D (69 mm x 209 mm x 216 mm)
<b>Weight</b>	2.4 lb (1100 g)

