

## PLI-90A Pico-Liter Injector



- Femtoliter to microliter injections
- 3 pressures: inject, balance, and clear
- Digital readouts for injection count, time, and pressure
- Reliable optically encoded circuit for setting injection time

The PLI-90A Pico-Liter Injector reliably delivers ejections from femtoliters to nanoliters through micropipettes by applying a regulated pressure for a digitally set period of time.

Pressure to the pipette is controlled precisely through a multi-turn regulator, and is reported digitally for high reproducibility. Injection time is set using an optically encoded circuit which allows fine and coarse settings from a single knob.

The system timer can be controlled in three ways; via a front panel push button, foot switch, or external trigger input BNC.

The PLI-90A is ideal for the user who does not require vacuum for filling pipette barrels, or if a holding pipette is not essential to your application.

### Three Pressure Capabilities

The PLI-90A features three positive pressure capabilities that allow the user to:

- Eject precise quantities of fluids
- Create a balance pressure which prevents backflow into the micropipette following an injection
- Clear a micropipette of blocking material

### Balance

In addition to the ejection pressure, the Pico-Liter Injector offers a secondary balance pressure. This adjustable pressure maintains a positive pressure on the injection pipette both before and after injections. This prevents dilution due to capillary action and aids in the prevention of clogging. Wasteful continuous injection is avoided when using a secondary balance pressure.

### Clear

A high-pressure pulse can be used for clearing a clogged pipette. This is especially useful when working with pipettes sized for smaller volume injections.

### Features

#### Electrical Connectors

BNC type connectors are available at the front panel to ease integrating the Pico-Liter Injector with other equipment. Synchronization of injections with other apparatus or recording devices is therefore possible.

#### Selection Guideline

The PLI-90A is available in two packages: **Basic** and **Plus**

The **Basic** unit is supplied with an input hose, output hose, and input hose adapter.

The **Plus** unit also includes a foot switch and pipette holder.

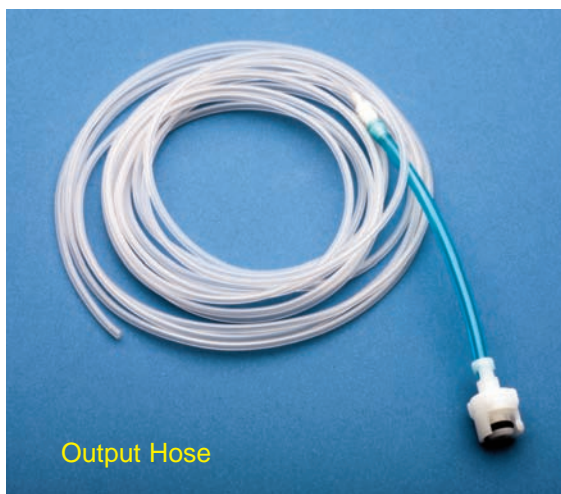
# PLI-90A Pico-Liter Injector

## PLI-90A Specifications

|                             |  |
|-----------------------------|--|
| Input Gas Pressure          | 75 PSI Recommended, 105 PSI Maximum  |
| Injection Pressure          | 0.2 to 60 PSI (413 kPa), regulated   |
| Balance Pressure            | 0.1 to 3.5 PSI (68.9 kPa) regulated, multi-turn control, other ranges available on request |
| Clearing Pressure           | Input gas pressure, unregulated  |
| Injection Time              | 0.01 to 99.99 Seconds  |
| Injection Time Accuracy     | ±0.01% (Crystal Time Base)   |
| Duration Mode               | Internally timed or externally gated   |
| Time Trigger                | Front panel, foot switch, or external TTL pulse (BNC)                                      |
| Pressure Units              | PSI /kPa switch selectable   |
| Pressure Monitor Output     | BNC, front panel, 10 mV/PSI or 1 mV/kPa  |
| Pressure Readout            | Inject, balance, clear, output port  |
| Pressure Display Resolution | 3½ Digits, 0.1 PSI or 1 kPa  |
| Injection Count Display     | 0 to 9999 Injections   |
| Power Input                 | External 9VDC @ 400mA (min) Power Supply universal input 90 to 264 VAC                     |
| Weight                      | 5.44 kg (12 lb)  |
| Dimensions (HxWxD)          | 89 x 432 x 250 mm (H x W x D)  |
| Warranty                    | One year, parts & labor  |



Pipette Holder (65-0013)



Output Hose

## Ordering Information

| Cat. No. | Model        | Product  |
|----------|--------------|--|
| 64-1738  | PLI-90A      | PLI-90A Basic Pico Injector with Injection, Balance, and Clear Pressures; Comes with the following: Input Hose, Output Hose, Input Hose Adapter, and universal power supply  |
| 64-1739  | PLI-90A Plus | PLI-90A Plus Pico Injector with Injection, Balance, Clear, and Pressures; Comes with the following: input Hose, Output Hose, Foot Switch (65-0029), Pipette Holder (65-0013), Input Hose Adapter, and universal power supply |

## Pipette Holders/Adapter Parts

|         |              |   |
|---------|--------------|---|
| 65-0013 | (PLI-PH1)    | Stainless Steel Pipette Holder, 130 mm L for 1.0 - 1.5 mm OD Glass Pipette                  |
| 65-0014 | (PLI-PH1A)   | Stainless Steel Pipette Holder, 80 mm L for 1.0 - 1.5 mm OD Glass Pipettes                  |
| 65-0017 | (PLI-SRG)    | Silicone rubber gasket replacement for use with PLI-PH-1 and PLI-PH-1A, 10.2 cm             |
| 65-0015 | (PLI-SRG1.5) | Silicone rubber gasket replacement for use with 1.5 mm glass pipettes                       |
| 65-0018 | (PLI-SSB)    | Stainless Steel Bushing Replacement for use with PLI-PH-1 and PLI-PH-1A Pipette Holders     |
| 65-0019 | (PLI-PC)     | Stainless Steel Pipette Cap Replacement for use with PLI-PH-1 and PLI-PH-1A Pipette Holders |
| 65-0020 | (PLI-HN)     | Stainless Steel Hose Nut Replacement for use with PLI-PH-1 and PLI-PH-1A Pipette Holders    |
| 65-0020 | (PLI-HN)     | Stainless Steel Hose Nut Replacement for use with PLI-PH-1 and PLI-PH-1A Pipette Holders    |
| 65-0021 | (PLI-PH-KIT) | Pipette holder hardware replacement kit for use with PLI-PH-1 and PLI-PH-1A pipette holders |



Rear Panel