

# Teledyne Isco Precision Syringe Pumps

## 500D High Pressure Syringe Pump

### 3,750 PSI FOR HIGH PRESSURE APPLICATIONS

The 500D syringe pump provides precise, predictable flow and pressure control at flow rates from sub-microliter to 204 ml/min. Exceptional low-flow stability at up to 3,750 psi makes this the ideal pump for high pressure applications from deep well core analysis to multi-dimensional capillary LC using small-bore packed capillary columns.

The D-series controller has a keypad and LCD, as well as built-in and optional interfaces for computer control and other devices. Programming is easy and flexible, with instant access to menu screens even when the pump is running. This allows you to change operating parameters on the fly. An optional extension cable lets you locate the controller up to 50 feet from the pump.

The 500D pump module has a single-ratio drive train with auto-lubricating gears for long life and low maintenance. Special fittings are used to prevent leaks and ensure safety at maximum pressure.

Wetted materials are compatible with most aqueous and organic liquids, corrosive solutions, heated fluids, liquefied gases, viscous fluids, or slurries and pastes.

### Applications

- Precision fluid addition in research and manufacturing processes
- Reactant feed in chemical process development, catalyst evaluation, plastic formulation
- Accurate metering of liquefied gases

### Standard Controller Features

#### Operating Modes

- Constant flow or pressure with up to three pumps
- Gradient LC programming
- Flow or pressure programming with a single pump
- Continuous flow or pressure with dual pump

#### External Interface

- RS232 serial interface
- Analog voltage inputs
- Digital inputs and outputs

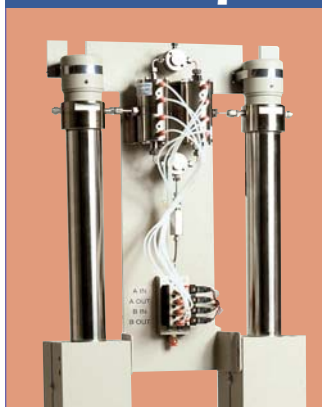


## 500D Specifications

|                                     |   |
|-------------------------------------|---|
| <b>Pump module:</b>                 | 500D  |
| <b>Capacity:</b>                    | 507.38 ml   |
| <b>Flow range (ml/min):</b>         | 0.001 – 204 ml/min  |
| <b>Flow accuracy:</b>               | ± 0.5% of setpoint, (Maximum 1.0 µl/min seal leakage)                   |
| <b>Displacement resolution:</b>     | 31.71 nl/step   |
| <b>Motor stability:</b>             | ± 0.001% per year   |
| <b>Pressure range:</b>              | 0.7 – 258.6 bar (10 – 3,750 psi)  |
| <b>Standard pressure accuracy:</b>  | 0.5% FS   |
| <b>Optional pressure accuracy:</b>  | 0.1% FS   |
| <b>Wetted materials (standard):</b> | Nitronic 50, Graphite filled PTFE, TFE, Hastelloy C-276, inert polymers |
| <b>Plumbing ports:</b>              | 1/8" NPT  |
| <b>Operating temperature:</b>       | 5 – 40° C Ambient   |
| <b>Power required:</b>              | 100 Vac, 117 Vac, 234 Vac, 50/60 Hz (specify)                           |
| <b>Dimensions (H x W x D):</b>      | 103 cm x 27 cm x 45 cm (40.6" x 10.7" x 17.9")                          |
| <b>Weight:</b>                      | Pump unit: 33.2 kg, Controller: 2.96 kg                                 |
| <b>Standards conformity:</b>        | EN1010-1, EN61326:1998, UL6101A-1, CSA1010                              |

Isco is continually improving its products and reserves the right to change specifications without notice.

## 500D Options & Accessories



500D Continuous Flow System

- Hastelloy 276 cylinder for added corrosion resistance
- Temperature control jacket (i.e. cylinder cooling for filling with liquefied gas)
- High-precision pressure transducers (0.1% linear accuracy)
- Drivers for LabVIEW - National Instruments
- 4-20 mA input for flow rate and pressure control

## 500D Ordering Information

|   |             |
|---|-------------|
| 500D Pump Module (only) .....   | 68-1240-025 |
| 500D Series Controller (only) .....   | 60-1240-026 |
| 500D Syringe Pump (includes controller) .....                                       | 67-1240-522 |
| A500 (continuous flow system with air valves).....                                  | 67-9000-061 |
| A500 (continuous flow system with air valves and Hastelloy) .....                   | 67-1240-267 |
| A500 (continuous flow system with air valves and high temperature package) .....    | 67-1240-268 |
| A500 (continuous flow system with air valves and temperature control jackets) ..... | 67-1240-269 |
| E500 (continuous flow system with electric valves) .....                            | 67-9000-192 |

