

Teledyne Isco Precision Syringe Pumps

500HV High Pressure Syringe Pump

FOR HIGH VISCOSITY CHEMICAL FEED APPLICATIONS

The 500HV 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 reactant feed in chemical process development, catalyst evaluation, plastic formulation, and precision fluid addition in research and manufacturing processes. Large 3/8" NPT inlet and outlet ports allow rapid, low-restriction filling and dispensing of viscous fluids, and provide easy connection in process and pilot-plant plumbing.

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 500HV 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 liquified 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



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500HV Specifications

Pump module:	500HV
Capacity:	507.38 ml
Flow range (ml/min):	0.00001 – 204 ml/min
Flow accuracy:	± 0.5% of setpoint, (Maximum 1.0 µl/min seal leakage)
Displacement resolution:	31.71 nl/step
Motor stability:	± 0.001% per year
Pressure range:	0.7 - 258.6 bar (10 - 3,750 psi)
Standard pressure accuracy:	0.5% FS
Wetted materials (standard):	Nitronic 50, Graphite filled PTFE, TFE, Hastelloy C-276, inert polymers
Plumbing ports:	3/8" NPT
Operating temperature:	5 - 40° C Ambient
Power required:	100 Vac, 117 Vac, 234 Vac, 50/60 Hz (specify)
Dimensions (H x W x D):	103 cm x 27cm x 45cm (40.6" x 10.7" x 17.9")
Weight:	Pump unit – 33.2 kg, Controller – 2.96 kg
Standards conformity:	EN1010-1, EN61326:1998, UL6101A-1, CSA1010

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

500HV Options & Accessories

- Temperature control jacket (i.e. cylinder cooling for filling with liquefied gas)
- Drivers for LabVIEW - National Instruments
- 4-20 mA input for flow rate and pressure control
- 4-20 mA output for monitoring flow rate, pressure, and volume
- Analog voltage output for monitoring flow rate and volume



500HV Ordering Information

500HV Syringe Pump (includes controller)	60-5364-229
500HV Pump Module (only)	60-5364-226
500D Series Controller (only)	68-1240-064
A500HV (continuous flow system)	60-5364-230



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