

Isco Syringe Pumps

Model A500HL Hazardous Location Continuous Flow Syringe Pump

**APPROVED BY UL/DEMKO FOR
CLASS I, DIV 2 OR ZONE 2 ENVIRONMENTS**

The Isco HL-Series pumps give you the same accurate, predictable flow and pressure control as our standard D-Series, while conforming to safety standards for use in UL Class I, Division 2, Groups A B C & D, T4 or Zone 2, II 3G EEx nC IIC T3 environments. HL-Series pumps eliminate the need for purge boxes or other additional safety devices.

The A500HL is the continuous flow version of our standard 500HL and consists of two 500HL pump modules, controller and an air valve package. Pressure matching during switch over delivers pulseless flow for an unlimited duration. Other operating modes are similar to the 500HL.

Wetted materials are compatible with most aqueous and organic liquids, corrosive solutions, heated fluids, liquefied gases, viscous fluids, or slurries and pastes. If needed, optional materials such as Hastelloy C-276 are available on request.



Applications

- Metering and dispensing in experiments and pilot plants where explosive conditions may occur
- 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
- Continuous flow or pressure with dual pump

External Interface

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

Chemical Compatibility

Wetted materials have been tested for compatibility with the following fluids.

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|---------------|----------------|
| ➤ ethane | ➤ ethylbenzene |
| ➤ butane | ➤ propane |
| ➤ diesel fuel | ➤ hexane |
| ➤ isopropanol | ➤ ammonia |
| ➤ benzene | ➤ acetonitrile |
| ➤ ethylene | ➤ propylene |
| ➤ butadiene | ➤ gasoline |
| ➤ jet fuel | ➤ methanol |
| ➤ acetone | ➤ heptane |



| A500 HL Specifications | |
|-------------------------------------|---|
| Pump module: | 500HL |
| Capacity: | 507 mL |
| Flow range (ml/min): | 0.001 – 79.3 ml/min for liquids |
| Flow accuracy: | ± 0.5% of setpoint, (maximum 1.0 µl/min seal leakage) |
| Displacement resolution: | 12.684 nL |
| Pressure range: | 0.7 - 258.6 bar (10 - 3,750 psi) |
| Standard pressure accuracy: | 0.5% FS |
| Optional pressure accuracy: | 0.1% FS |
| Wetted materials (standard): | Nitronic 50, Graphite filled PTFE, TFE, Hastelloy C-276, inert polymers, Titanium, Gold Ruby, Sapphire, Peek, 304 SST |
| Plumbing ports: | 1/8" Valco/1/8" 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): | 103cm x 27cm x 47cm (40.6" x 10.7" x 18.5") (pump only) |
| Weight: | Pump unit – 33.2 kg, Controller – 2.96 kg, valve package – 4.8 kg |
| Standards conformity: | UL 1604, CSA-213, EN50021, EN61326:1998, EN61010-1, ULL101A-1, CSA1010 |

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

A500 HL Options & Accessories

- Hastelloy 276 or Titanium cylinder for added corrosion resistance
- Temperature control jacket (i.e. cylinder cooling for filling with liquefied gas)
- High-temperature pressure transducers (200°C maximum)
- High-precision pressure transducers (0.1% linear accuracy)
- Drivers for LabVIEW - National Instruments
- 4-20 mA input for flow rate and pressure control



A500HL continuous flow system.

A500 HL Ordering Information

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| A500HL (continuous flow system)..... | 67-9000-204 |
| 500HL Syringe Pump (includes controller) | 67-9000-199 |
| 500HL Pump Module (only) | 68-1260-003 |
| HL Series Controller (only) | 68-1260-006 |



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