

1000HL_f

Hazardous Location Syringe Pump

The Teledyne ISCO HL_f-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 environments. The hazardous location rating is achieved through internal design modifications including the use of brushless DC motors. This approach eliminates the need for purge boxes or other additional safety devices.

2,000 psi (138 bar) approved by UL for Class I, Division 2 Environments

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

The HL_f 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.

Chemical Compatibility

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

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



Applications:

- Metering and dispensing in experiments and pilot plants where explosive conditions may occur
- Precision fluid addition in research and manufacturing processes
- Chemical/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 four pumps
 - Continuous flow or pressure with dual pump
 - Flow or pressure programming with a single pump
 - Dispense mode
- External Interface
 - RS232/485 serial interface
 - Analog voltage inputs
 - Digital inputs and output
 - Ethernet/USB

1000HL_f Specifications

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|-------------------------------------|---|
| Pump Module: | 1000HL _f |
| Capacity: | 1015 mL |
| Flow Range (mL/min): | 1.0 µL–408 mL/min* |
| Flow Accuracy: | + 0.5% of setpoint, (Maximum 1.5 µL/min seal leakage) |
| Displacement Resolution: | 25.36 nL/stop |
| Pressure Range: | 10–2,000 psi (0.7–137.9 bar) |
| 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, Gold, Titanium |
| Plumbing Ports: | 1/4" 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) | 40.3 x 10.7 x 18.4 in (102 x 27 x 47 cm) |
| Weight: | Pump unit—84.9 lb (38.5 kg) Controller—6.5 lb (3.0 kg) |
| Standards Conformity: | UL 61010-1, ANSI/ISA 12.12.01-2012, CSA C22.2 No. 1010 and No. 213-M1987 |

*Maximum flow rate is dependent upon operating pressure. (See manual for additional information.)

1000HL_f Options & Accessories

- Temperature control jacket (i.e. cylinder cooling for filling with liquefied gas)
- Drivers for LabVIEW—National Instruments
- 4-20 mA inputs and outputs for flow rate and pressure control

Ordering Information

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| 1000HL _f Pump Module, Nitronic | 68-1260-016 |
| HL _f Series Controller, Basic | 68-1260-013 |
| HL _f Series Controller with 4-20mA (only) | 68-1260-011 |
| Continuous Flow Air Valves, Hastelloy | 68-1247-143 |
| Manual Refill Kit | 68-1247-117 |
| Manual Outlet Kit | 68-1247-118 |
| Temperature Control Jacket | 68-1247-115 |

1000HL_f
Continuous Flow
System



Teledyne ISCO

P.O. Box 82531, Lincoln, Nebraska, 68501 USA
Toll-free: (800) 228-4373 • Phone: (402) 464-0231 • Fax: (402) 465-3091

teledyneisco.com



Teledyne ISCO is continually improving its products and reserves the right to change product specifications, replacement parts, schematics, and instructions without notice.



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