

100HL_f

Hazardous Location Syringe Pump

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, T3B or Zone 2, II 3G EEx nC IIC T3 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.

10,000 psi (690 bar) approved by UL for Class I, Division 2 Environments

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.

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

Chemical Compatibility

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

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

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

100HL_f Specifications

Pump Module:	100HL _f
Capacity:	102 mL
Flow Range (mL/min):	0.01 μ L–60 mL/min*
Flow Accuracy:	+ 0.3% of setpoint, (Maximum 0.25 μ L/min seal leakage)
Displacement Resolution:	3.86 nL/stop
Pressure Range:	10–10,000 psi (0.7–689.5 bar)
Standard Pressure Accuracy:	0.5% FS, typical at constant temperature
Optional Pressure Accuracy:	0.1% FS, typical at constant temperature
Wetted Materials (Standard):	Nitronic 50, Graphite filled PTFE, TFE, Hastelloy C-276, Inert Polymers, Gold, Titanium
Plumbing Ports:	1/8" Valco
Operating Temperature:	5–40 °C Ambient
Power Required:	100 Vac, 117 Vac, 234 Vac, 50/60 Hz (specify)
Dimensions (H x W x D)	39.8 x 10.7 x 18.4 in (101 x 27 x 47 cm)
Weight:	Pump unit—72.3 lb (32.8 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

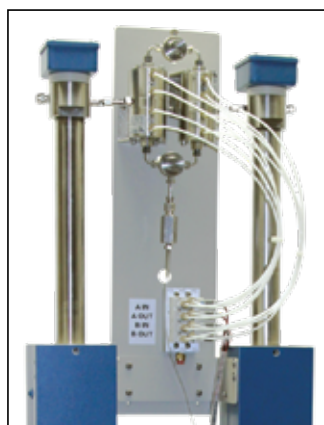
*Maximum flow rate is dependent upon operating pressure. (See manual for additional information.)

100HL_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

100HL _f Pump Module, Nitronic	68-1260-014
HL _f Series Controller, Basic	68-1260-013
HL _f Series Controller with 4-20mA (only)	68-1260-011
Continuous Flow Air Valves, Nitronic.....	60-1247-141
Manual Refill Kit.....	68-1247-077
Manual Outlet Kit.....	68-1247-078
Temperature Control Jacket	68-1247-047



HL_f Continuous Flow System

