

Isco Syringe Pumps

Model 1000D Syringe Pump

Large Volume Precision Fluid Delivery

The new 1000D syringe pump from Isco delivers accurate, repeatable flows of virtually any fluid from liquefied gases to tar. The new model features 1 liter volume capacity, flow rates to 408 ml/minute, and pressures up to 2000 psi. A new cylinder wash system protects the seals from deposits. Options for corrosive fluids and high temperature operation make these pumps versatile for many applications. Programmable modes of operation include single pump constant flow or constant pressure for batch feeding, and dual-pump continuous flow for long term applications.



Isco Series D pumps handle a wide range of applications that are difficult or impossible with ordinary pumps. Typical applications for the new 1000D include:

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



Isco Series D pumps have very low operating costs – typical maintenance is only once-a-year lubrication and seal replacement. Dual-syringe configurations provide stable, continuous flow with alternating delivery and refill. External control and monitoring are supported via serial communication and analog I/O.



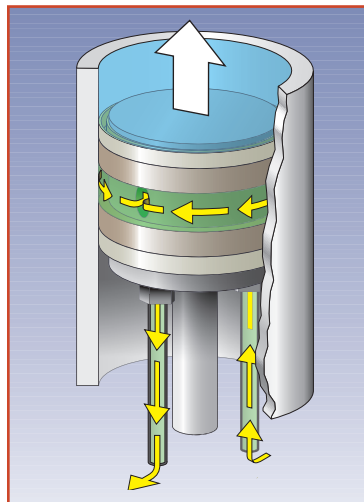
Standard Controller Features

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



The 1000D includes a seal and cylinder wash feature that allows a rinse solution to be circulated between the seals. This protects the seals and cylinder walls against abrasion from salt or other material that may crystallize or precipitate from the solution in the pump.

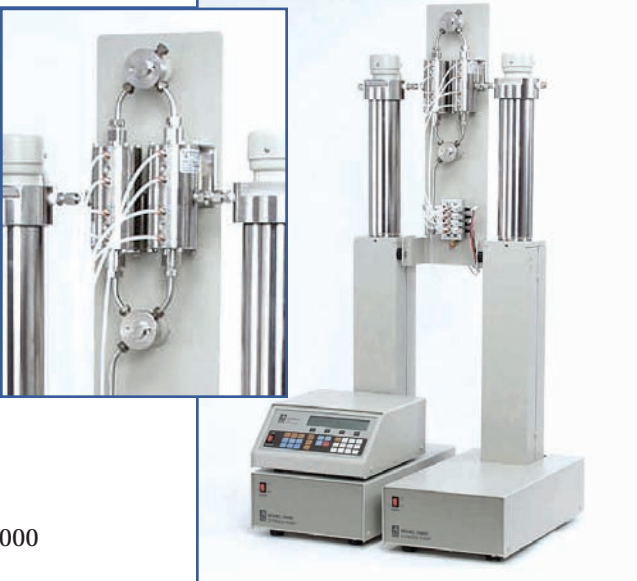


1000D Specifications	
Pump module:	1000D
Capacity:	1015 mL
Flow range (ml/min):	100 µl/min – 408 ml/min
Flow accuracy:	± 0.5% of setpoint, (maximum 1.5 µl/min seal leakage)
Displacement resolution:	63.42 nl
Motor stability:	± 0.001% per year
Pressure range:	0.7 - 137.9 bar (10 - 2,000 psi)
Standard pressure accuracy:	0.5% FS
Optional pressure accuracy:	0.1% FS
Wetted materials (standard):	Nitronic 50, Hastelloy C-276, Titanium, Gold, Graphite filled PTFE, TFE, Inert polymers
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):	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
Standards conformity:	EN61010-1, EN61326:1998, UL6101A-1, CSA1010

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

1000D 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 inputs and outputs for flow rate and pressure control
- Dual Pump Continuous Flow System -Air Valves-A1000
- Hazardous Location Systems available



A1000 continuous flow system.

1000D Ordering Information	
1000D Pump Module Only.....	68-1240-052
D Series Controller Only.....	68-1240-110
1000D Pump and Controller.....	68-1240-114
A1000 Dial Pump Continuous Flow System	68-9000-217



Teledyne Isco, Inc., 4700 Superior Street, Lincoln, NE 68504 USA
 Toll free: (800) 228-4373 (USA and Canada) • Phone: (402) 464-0231 • Fax: (402) 465-3022
 e-mail: iscoinfo@teledyne.com • www.isco.com