

# ISCO 1000x Syringe Pump



**Brand:** Teledyne ISCO  
**Product Code:** isco-1000d  
**Availability:** Call for availability

## Description

The 1000x syringe pump from Teledyne ISCO delivers accurate, repeatable flows of a wide variety of fluids. This model features 1 liter volume capacity, flow rates up to 408 mL/min, and pressures up to 2,000 psi (138 bar). Cylinder wash ports are standard to protect 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 continuous processing, batch feeding, and dual-pump continuous flow for long term applications.

Teledyne ISCO SyriXus pumps handle a wide range of applications that are difficult or impossible with ordinary pumps and 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. Trust in the Teledyne ISCO SyriXus pumps for proven reliable design. Known for years of performance, it can delivery fluid or pressurized gas for long term experiments. Or hold pressure constant in the system at a simple click of the button.

## Standard Features

- 1000X's piston wash gland reduces effects of abrasive particles on seals and cylinder

- Integral button-style pressure transducer in cylinder cap assures excellent stability and repeatability.
- Rugged single-ratio drive train has auto-lubricating gears to assure long life and low maintenance.
- Each ISCO SyriXus syringe pump is bench tested at the factory.
- Cylinder wash system protects the seals from deposits.
- Exclusive "Smart Key" controller. All ISCO SyriXus pumps use the same controller that can operate any four pump modules, either independently or together. Operating modes include:
  - Single pump independent constant flow or pressure
  - Single pump flow - or pressure - ramp programming
  - Single pump dispensing
  - Dual pump continuous constant flow or pressure
  - Dual pump concentration gradients
  - Four-pump configured systems
- RS-232/485 serial interface for computer control or monitoring of operating parameters.
- Redundant safety is designed in. All SyriXus pumps have mechanical and electrical fail-safes, in addition to the factory default or user-set limits.
- Corrosion resistance. Nitronic 50 - the standard material for cylinders, pistons, and caps - is an austenitic stainless steel with outstanding strength and corrosion resistance.
- Standard seals are heavy-duty, graphite-impregnated Teflon, providing very long life under harsh operating conditions.

## Applications

- Precision fluid addition in research and manufacturing processes
- Chemical/reactant feed in chemical process development, catalyst evaluation, plastic formulation
- Single pump deliver up to 1L or unlimited volume with dual continuous flow

## Options and Accessories

- Temperature control jacket (i.e. cylinder cooling for filling with liquefied gas)
- High-temperature and high-accuracy pressure transducers optional (200 °C maximum, 0.1% linear accuracy)
- Drivers for LabVIEW™—National Instruments

- 4-20 mA inputs and outputs for flow rate and pressure control
- Hazardous Location Systems available??

## Specifications

- Capacity: 1,015 mL
- Flow Range: 0.001 - 408 mL/min
- Flow Accuracy: 0.5% of setpoint
- Displacement Resolution: 25.38 nL/stop
- Pressure Range: 10 to 2,000 psi (0.7 to 137.9 bar)
- Standard Pressure Accuracy: 0.5% Full Scale
- Optional Pressure Accuracy: 0.1% Full Scale
- Wetted Materials: Nitronic 50, PTFE, C-276
- Plumbing Ports: 1/4" NPT
- Operating Temperature: 5 to 40 °C Ambient
- Power Requirements: 100 VAC, 117 VAC, 234 VAC, 50/60 Hz
- Dimensions (H x W x D): 40.3 x 10.7 x 18.4 inch (102 x 27 x 47 cm)
- Weight: Pump - 84.9 lb (38.5 kg), Controller - 6.5 lb (3.0 kg?)