

# ISCO 500X Syringe Pump



**Brand:** Teledyne ISCO  
**Product Code:** isco-500x  
**Availability:** Call for availability

## Description

The 500x syringe pump provides precise, predictable flow and pressure control at flow rates from sub-microliter up to 204 mL/min. Exceptional low-flow stability at up to 5,000 psi (345 bar) makes this the ideal pump for high pressure applications from deep well core analysis to a wide range of chemical applications.

The SyriXus controller has backlit keypad and 4-line LCD display, 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. Control the pump remotely using driver for LabVIEW™ software, in addition to pump controller. The 500x pump module has a single-ratio drive train with auto-lubricating gears for long life and low maintenance. Special fittings are used to prevent leaks and ensure safety at maximum pressure.

Wetted materials are compatible with most aqueous and organic liquids, corrosive solutions, heated fluids, liquefied gases, viscous fluids, or slurries and pastes. Hastelloy cylinders are available for chemical compatibility of corrosive solutions. Single and continuous valve packages are 100% Hastelloy for full compatibility. 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

- 500X pump has 1/8" NPT inlet and outlet ports for rapid, low-restriction filling and dispensing and easy connection in process and pilot-plant plumbing.
- 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.
- 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
- 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 for flow chemistry
- Chemical/reactant feed in chemical process development, catalyst evaluation, plastic extrusion and formulation
- Accurate metering of liquefied gases

## Options and Accessories

- Hastelloy 276 cylinder for added corrosion resistance
- Temperature control jacket (i.e. cylinder cooling for filling with liquefied gas)
- High-temperature and High accuracy pressure transducers and seals up to 200 °C compatible (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: 5007.38 mL
- Flow Range: 0.001 to 204 mL/min
- Flow Accuracy: 0.5% of setpoint
- Displacement Resolution: 31.71 nL
- Pressure Range: 10 to 5,000 psi (0.7 to 345 bar)
- Standard Pressure Accuracy: 0.5% Full Scale
- Optional Pressure Accuracy: 0.1% Full Scale
- Wetted Materials: Nitronic 50, PTFE, Hastelloy C-276
- Plumbing Ports: 1/8" 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 - 73.3 lb (33.3 kg), Controller - 6.5 lb (3.0 kg)