

# Furon® Precision Dispense Pump (PDP)

0 to 40mL



- Superior accuracy and reliability
- Ideal for high-purity applications
- Designed for aggressive or corrosive media
- Virgin PTFE wetted flow path
- 100% Elastomer-Free



# Unprecedented Accuracy and Repeatability

The Furon® Precision Dispense Pump (PDP) utilizes cutting edge technology to deliver extremely accurate doses of media with unprecedented repeatability. Our patented PTFE rolling diaphragm technology coupled with precision stepper motor control enables precise dispensing of aggressive or ultra-pure media and eliminates the requirement for expensive flow controllers.

The Furon® PDP features Zero Displacement Valve technology that enables pulsation-free dispensing. Additionally, a fully programmable suck-back capability provides complete control over residual drops of liquid, assuring superior recipe accuracy and maximizing chemical efficiency.

Our Furon® PDP is a fully-integrated system driven by its own on-board microprocessor. The PDP may be operated on its own via the intuitive Graphical User Interface (GUI), or controlled remotely via the built-in RS-485 interface.

All wetted surfaces are Fluoroloy®-T and Fluoroloy® 646 to suit dispensing of ultra-pure chemicals used in the semiconductor, pharmaceutical, and medical industries. Metallic free wetted flow path eliminates the potential of ionic contamination. Additionally, the wetted flow path is 100% elastomer-free, ensuring long life and further reducing the potential for contamination.

Furon® PDP pumps are designed for long life and are maintenance-free, maximizing the end user's up-time.

## Operational Specifications

Fluid Inlet Pressure	60 PSIG max @ 22°C
Suction Lift Capacity	6' of H <sub>2</sub> O @ 22°C
Outlet Pressure	60 PSIG max @ 22°C
Media Temperature Range	5-50°C
Dispense Volume	0.1- 40.0mL, fully programmable
Dispense Speed	0.01-10mL/sec
Fill Speed	0.01-10mL/sec
Accuracy <sup>†</sup>	± 0.010mL (Mode1) ± 0.010mL (Mode 2)
Repeatability <sup>†</sup>	0.005mL (Mode1) 0.020mL (Mode 2)
Resolution	0.001mL
Air Pressure Requirements	0.22 SCFM W/Customer supplied vacuum 0.46 SCFM W/Built-in vacuum generator (Standard)
Power Requirements	1.0 A @ 24 VDC max.

<sup>†</sup> In Mode 1, it is assumed that the dispense volume is < 100% of full stroke. In Mode 2, it is assumed that the dispense volume is < 50% of full stroke.

## General Specifications

### Materials:

Pump Body: Fluoroloy®-T  
Diaphragm: Fluoroloy® 646  
Electronics Housing: Polypropylene

### Fluid Connections:

1/8" FlareGrip II

### PC Interface:

PC-Compatible Graphical User Interface  
Software (optional)

Pump may also be remotely controlled via built-in RS-485 interface or Logic Controller

### Operating Modes:

Mode 1: Pump holding reservoir is refilled after each dispense cycle

Mode 2: Pump holding reservoir is refilled only when insufficient volume remains to complete the next dose.

### Regulatory Compliance:

Compliant with EU Electromagnetic Interference (EMC) and Machinery Directive (MD) requirements.



## Features and Benefits

- Cutting-edge technology assures accurate and precise delivery of media
- Meets the semiconductor industry's ultra high purity chemical requirements
- Easy setup and control via intuitive Graphical User Interface
- Programmable suckback feature maximizes use of expensive chemistries
- 0 to 40mL dispense volume
- Stepper motor driven for precise dispense volume and flow rate control
- Robust, elastomer-free design reduces maintenance requirements
- Customizable for a wide variety of applications
- Capable of storing up to four custom recipes
- Built-in vacuum generation provides for efficient use of CDA supply
- Patented Zero Displacement Valve technology ensures smooth, surge-free shut-off
- Remotely controllable via RS-485 PC interface or Logic Controller
- CE compliant

## Furon® PDP Improves Flow Control of Your Sensitive Media

Our Furon® PDP Pump is designed for accurately controlling and measuring the flow of a wide variety of fluids used in the semiconductor, pharmaceutical, medical, and chemical processing Industries. With its revolutionary design, the Furon® PDP is a fully integrated flow control solution, eliminating the

need for mass flowmeters, external flow sensors, or other secondary measuring devices. Additionally, the microprocessor-based, on-board controller provides accurate point-of-use data, constantly tracking and logging critical process parameters.

## Maximize System Up-Time

Designed for durability and reliability, the Furon® PDP will withstand two years of typical usage without the need for expensive preventive maintenance. In contrast, competing designs require frequent replacement of tubing, syringes, o-rings,

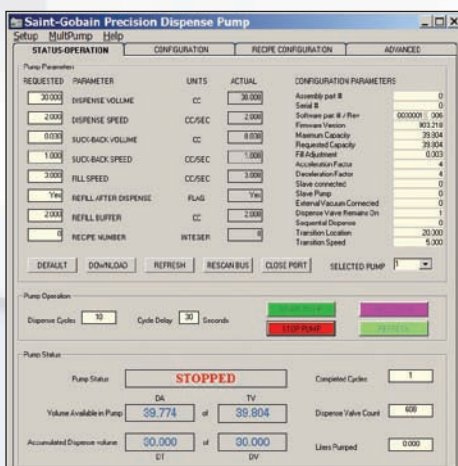
and other consumable components. By eliminating these consumable components, the Furon PDP extends maintenance intervals, allowing the end user to effortlessly maximize their system up-time.

## Accuracy, Repeatability, and Control

The Furon® PDP utilizes our patented and industry-proven PTFE rolling diaphragm technology to accurately dispense fluids with extreme precision. Competing dispense pumps tend to become far less accurate and repeatable as key components begin to wear. Suckback valve technology prevents residual drops of media from escaping from the pump,

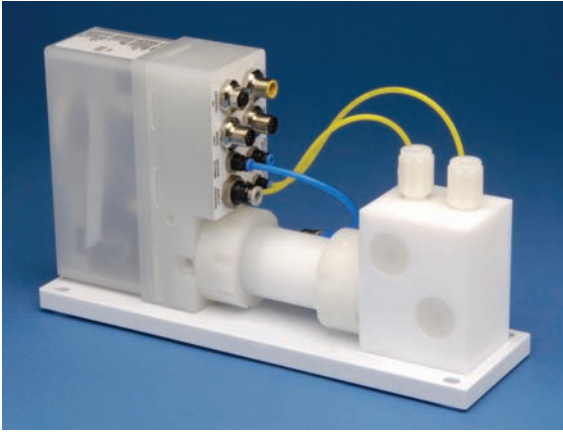
providing more precise recipe control than competing technologies and maximizing the use of your expensive process chemicals. Additionally, our patented Zero Displacement Valves technology allows for a smooth, surge-free shut-off of fluid flow after every dispense cycle.

## Intuitive Graphical User Interface (GUI)

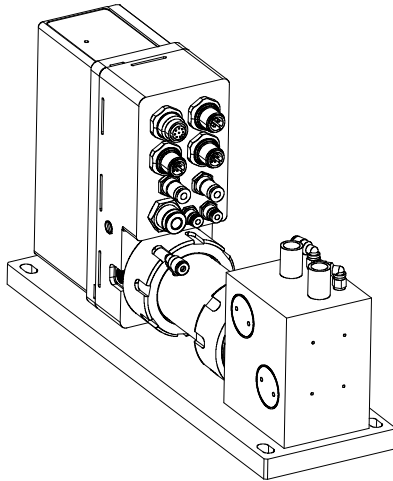


Our intuitive and user-friendly Graphical User Interface (GUI) allows for easy setup and operation. Basic operating parameters can be input and changed "on the fly." Additionally, the GUI provides real-time point of use data such as amount of fluid dispensed, dispense rates, and amount of fluid remaining in the holding vessel. Custom recipe storage allows for easy integration with Programmable Logic Controllers.

# Furon® Precision Dispense Pump (PDP) 0 to 40mL



## Dimensions



Vertical configuration shown.  
Horizontal configuration also available. Please consult factory for further information.

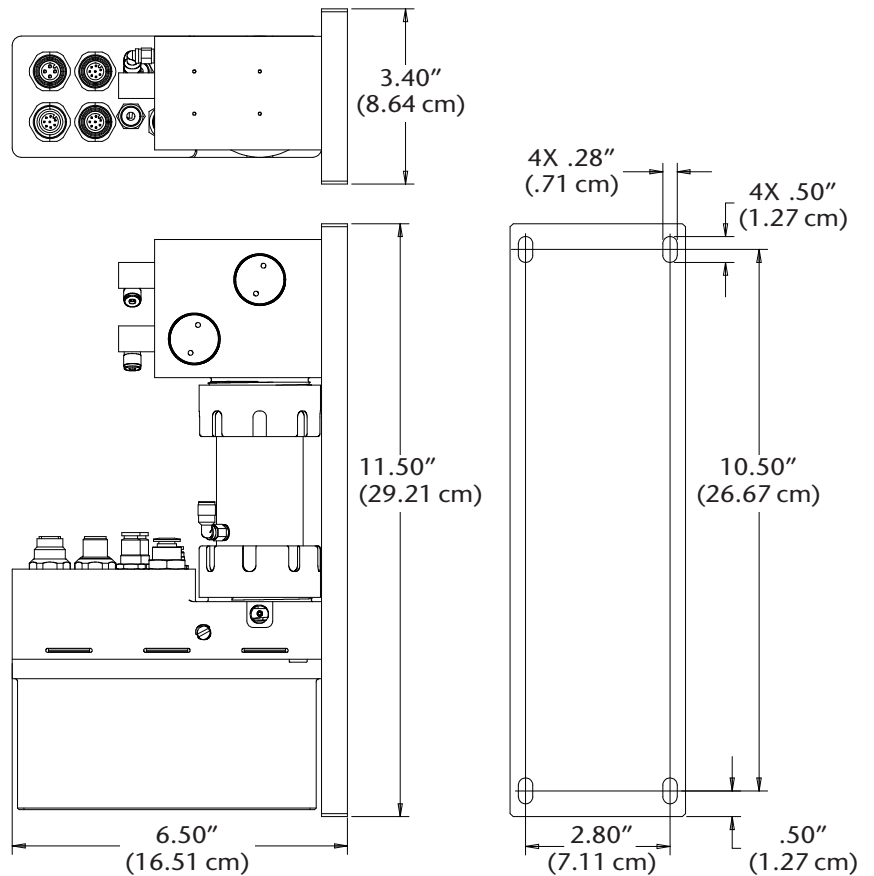
Approximate weight: 6.1 lb (2.8 kg)

Saint-Gobain Performance Plastics-USA  
Polymer Products

7301 Oranewood Avenue  
Garden Grove, CA 92841-1411  
Tel: (714) 630-5818  
Fax: (714) 688-2614  
USA Toll Free: (800) 833-5661

Saint-Gobain Performance Plastics-France  
Polymer Products

41 Boulevard des Bouvets  
Nanterre F-92000, France  
Tel: 33/(0) 1 55 68 59 59  
Fax: 33/(0) 1 55 68 59 68



  
**PERFORMANCE PLASTICS**



U.S. Patent No. 7,335,003  
Furon® is a registered trademark.

**12-month Limited Warranty:** For a period of 12 months from the date of first sale, Saint-Gobain Performance Plastics Corporation warrants this product to be free from defects in manufacturing. This company's only obligation will be to provide replacement product for any material proven to have such a defect, or at SGPLL's option, to refund the purchase price thereof. User assumes all other risks, if any, including the risk of injury, loss or damage, whether direct, consequential or incidental, arising out of the use, misuse, or inability to use this product. SAINT-GOBAIN PERFORMANCE PLASTICS DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Saint-Gobain Performance Plastics reserves the right to change product specifications without prior notice.

NOTE: Saint-Gobain Performance Plastics Corporation does not assume any responsibility or liability for any advice furnished by it, or for the performance or results of any installation or use of the product or of any final product into which the product may be incorporated by the purchaser and/or user.