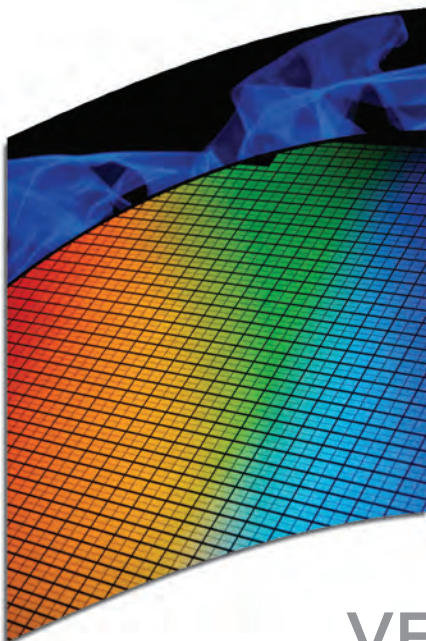
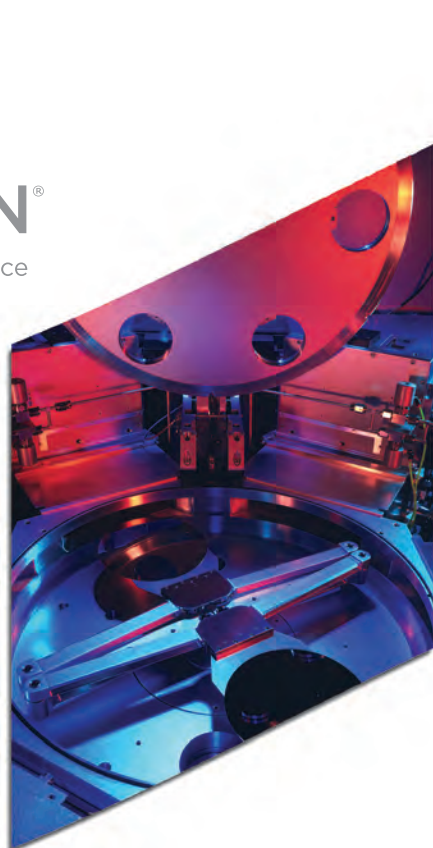


Micro-E | High Purity & Fluid Handling Solutions

FURON[®]
Pure Performance



VERILON[™]
Fluid Performance


SAINT-GOBAIN

Purity Performance Innovation

Saint-Gobain Performance Plastics is a world renowned manufacturer of high-performance fluoropolymer products for the most demanding fluid handling applications. Through our FurOn® and VersilOn™ product lines, we offer unmatched solutions to meet your needs in demanding markets such as Microelectronics, where high purity, safety, and reliability are critical. With a strong engineering focus on Research and Development, we pioneer application-specific material solutions and unique processing techniques for a wide variety of high-purity systems. Our experienced team of engineers works closely with our customers to develop molded, extruded, machined, and/or cleanroom assembled products, ensuring a rapid product development cycle. Whether you're updating a current OEM tool to stay ahead of the competition or launching the next generation product to your marketplace, Saint-Gobain presents a wealth of resources to meet your needs in every aspect of the product development and production process.

We Offer:

- Skilled senior-level engineering team with decades of experience in tool design, part design, materials processing, and materials selection for polymers and fluoropolymers
- Vertically integrated clean manufacturing facilities, which provide complete process control from extruding and molding, to machining, to final assembly and test for reliable turnkey solutions

Global Products – Local Supports

We provide our worldwide customer base with technical support, customer service, and local inventory throughout North America, Asia and Europe, supported by manufacturing facilities in Europe and the United States.

Ordering information

You can contact our customer service department in one of the following countries:

- China (+8621) 5472 1568
- Europe (+33) 3 85 20 27 00
- Japan (+84) 42 352 2102
- Korea (+82) 2 6098 0180
- Southeast Asia (+66) 922 536 094 sales.flsea@saint-gobain.com
- Taiwan (+886) 2 2503 4201
- United States (800) 833-5661 (714) 630-5818

For additional information on our products, or to request literature or CAD drawings, please visit our website at www.furon.com or www.processsystems.saint-gobain.com

Manufacturing Capabilities & Expertise

Saint-Gobain's capabilities include injection, extrusion, compression, isostatic, and endothermic molding for a wide range of polymers ranging from commodity grade resins to highly engineered polymers and fluoropolymers. Our extensive process knowledge coupled with assembly in a state-of-the art, build-clean environment and premium raw material ensures our products meet or exceed the most stringent cleanliness requirements of the Semiconductor and other highly demanding industries.

We offer an extensive product line of high-purity fluid handling components. Featuring the FurOn® and VersilOn™ lines of fluoropolymer-based fluid handling components, our standard product line includes pumps, valves, fittings, accessories such as pressure regulators and static mixers, high-purity piping, and high-purity tubing with simple or complex shapes such as convoluted or corrugated. In addition to our standard products, we utilize our unparalleled expertise in designing custom fluid handling systems to our customers' exact requirements for each specific application. We are experienced at solving the most challenging fluid handling problems, from ultra-pure chemistry to abrasive slurries to extremely harsh or aggressive liquids coupled with demanding process conditions on flow, pressure and temperature.

Applications

Chemical Delivery

- Superior flow performance
- High pressure capability

Chemical Delivery

BCD

Wafer Processing

- Compact
- Meet or exceed industry requirement

Wafer Processing

WP

Slurry

- Reduce impact on slurry
- Easy to clean

Slurry

CMP

Precision Dispense

- Superior Accuracy & Precision
- Focus on repeatability

Precision Dispense

μL

High Temperature

- Suitable with high temperature process
- Optimal safety

High Temperature

°F/°C

Valves

Our newest generation of FurOn® valves is constructed from high-purity, injection molded fluoropolymers including high-purity Perfluoroalkoxy (PFA). Our engineering expertise and patent-protected technologies allow us to provide the Semiconductor industry with valves that are 100% O-Ring free, metal free and/or maintenance free, ensuring optimal safety, system performance, and media purity.





FURON® UPX-2000 Valve

Configuration	2-Way & 3-Way
Orifice Size	1/4", 1/2", 3/4"
Standard	Flare Grip II
Connection Types	Pillar Super 300 Fuse Bond
Connection Size	1/4", 3/8", 1/2", 3/4", 1"
Actuation Type	Pneumatic Manual Multi-Turn Manual Quarter-Turn
Max. Operating Pressure	100 PSIG (6.9 bar)
Max. Operating Temperature	203°F (95°C) 356°F (180°C) (High Temp)
C _v Factor	0.8 – 7.0
Leak Detection Port	YES

Features/Benefits:

- 100 PSIG rated forward and back-pressure in 2-way & 3-way configuration
- Metal-free & O-ring design
- Furon SCR spring and bellows protection specifically rated for concentrated for HF & HCl and other aggressive applications
- True dual containment with leak dection



FURON® Q-Valve

Configuration	2-Way
Orifice Size	1/4", 1/2", 3/4"
Standard	Flare Grip II
Connection Types	Pillar Super 300 Fuse Bond
Connection Size	1/4", 3/8", 1/2", 3/4", 1"
Actuation Type	Pneumatic Manual Multi-Turn Manual Quarter-Turn
Max. Operating Pressure	80 PSIG (5.5 bar)
Max. Operating Temperature	182°F (82°C)
C _v Factor	0.8 – 9.4
Leak Detection Port	YES

Features/Benefits:

- 100% PFA, HP and virgin PTFE wetted flow path
- Integrated visual position indication
- Designed to be maintenance friendly
- Bi-directional flow
- Metal-free & O-ring design



FURON® UPM-1000 Valve

Configuration	2-Way & 3-Way
Orifice Size	1/4", 1/2", 3/4"
Standard	Flare Grip II
Connection Types	Pillar Super 300 Sanitech Fuse Bond
Connection Size	1/4", 3/8", 1/2", 3/4", 1"
Actuation Type	Pneumatic Manual Multi-Turn Manual Quarter-Turn
Max. Operating Pressure	100 PSIG (6.9 bar)
Max. Operating Temperature	203°F (95°C) 356°F (180°C) High Temp Version
C _v Factor	0.8 – 7.0
Leak Detection Port	YES

Features/Benefits:

- Comprehensive offering of orifice sizes, actuation styles and port configurations
- 100 PSIG (6.9 bar) forward and back-pressure rating
- 2-way and 3-way configurations
- Slurry and high temperature versions available



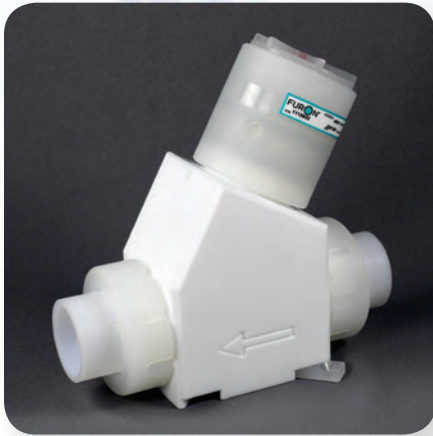


FURON® 1" INL Valve

Configuration	2-Way
Orifice Size	1"
Standard	Fuse Bond
Connection Types	Flare Grip II
Connection Size	1/2", 3/4", 1", 1-1/4"
Actuation Type	Pneumatic Manual Multi-Turn
Max. Operating Pressure	100 PSIG (6.9 bar)
Max. Operating Temperature	212°F (100°C)
C _v Factor	Up to 15
Leak Detection Port	YES

Features/Benefits:

- 15 C_v Flow Factor
- Fully swept, low shear internal flow path
- Quick-release, non metallic, 8-position mounting base
- 100% PFA HP and Virgin PTFE wetted flow path



FURON® 1-1/2" HRDV Valve

Configuration	2-Way
Orifice Size	1-1/2"
Standard	Fuse Bond
Connection Types	
Connection Size	1-1/2"
Actuation Type	Pneumatic
Max. Operating Pressure	60 PSIG (4.1 bar)
Max. Operating Temperature	212°F (100°C)
C _v Factor	31
Leak Detection Port	YES

Features/Benefits:

- 60 PSIG PFA HP and Virgin PTFE wetted flow path
- Patented rolling diaphragm technology
- High flow factor, C_v 31
- Visual position indicator
- Furon O-ring free port connections



FURON® 2" HGV/HGVM Valve

Configuration	2-Way
Orifice Size	2"
Standard	Fuse Bond
Connection Types	
Connection Size	1-1/2", 2"
Actuation Type	Pneumatic Manual Multi-Turn
Max. Operating Pressure	80 PSIG (5.5 bar)
Max. Operating Temperature	212°F (100°C)
C _v Factor	52
Leak Detection Port	YES

Features/Benefits:

- Maximum flow rating of C_v 52
- Fully swept flow path supports no-hold-up volume
- Visual position indication
- Leak detection capability





FURON® HPVM Valve

Configuration	2-Way or 3-Way
Orifice Size	3/16", 1/4"
Standard	Flare Grip II
Connection Types	Pillar Super 300 Fuse Bond
Connection Size	1/8", 1/4", 3/8", 1/2"
Actuation Type	Pneumatic Manual Quarter-Turn Manual Multi-Turn
Max. Operating Pressure	80 PSIG (5.5 bar)
Max. Operating Temperature	176°F (80°C)
C _v Factor	0.5 – 0.8
Leak Detection Port	Yes/No

Features/Benefits:

- High-purity PFA or PTFE wetted flow path and PTFE diaphragm
- 80 PSIG (5.5 bar) forward/back-pressure rating
- Available in pneumatic normally closed, normally open, multi-turn, toggle and quarter-turn actuation



FURON® CDV Valve

Configuration	2-Way & 3-Way
Orifice Size	1/2"
Standard	Flare Grip II
Connection Types	Pillar Super 300 Fuse Bond
Connection Size	3/8", 1/2", 3/4"
Actuation Type	Pneumatic Manual Multi-Turn Manual Quarter-Turn
Max. Operating Pressure	90 PSIG (6.2 bar)
Max. Operating Temperature	182°F (82°C)
C _v Factor	3.0
Leak Detection Port	YES

Features/Benefits:

- High-purity PFA wetted flow path with virgin PTFE diaphragm
- 90 PSIG (6.2 bar) rated forward and back pressure
- 2-way and 3-way configurations
- Available in pneumatic normally closed, normally open, multi-turn, and toggle actuation



FURON® J-Series Valve

Configuration	2-Way
Orifice Size	3/4"
Standard	Flare Grip II
Connection Types	Fuse Bond
Connection Size	1/2", 3/4", 1"
Actuation Type	Pneumatic Manual Multi-Turn
Max. Operating Pressure	85 PSIG (5.9 bar)
Max. Operating Temperature	203°F (95°C)
C _v Factor	7.2
Leak Detection Port	YES

Features/Benefits:

- Maximum flow rating of C_v-7.2
- Fully swept flow path supports no-hold-up volume
- Visual position indication
- Leak detection capability



FURON® RDVM & SMDVM Self-Manifolding Distribution Valves

Configuration	2-Way
Orifice Size	1"
Standard	Flare Grip II
Connection Types	Fuse Bond
Connection Size	1/2", 3/4", 1", 1-1/4"
Actuation Type	Pneumatic Manual Multi-Turn
Max. Operating Pressure	100 PSIG (6.9 bar)
Max. Operating Temperature	212°F (100°C)
C _v Factor	Up to 15.0
Leak Detection Port	YES

Features/Benefits:

- Maximum flow rating of C_v-15
- Minimal inventory requirements
- Available in pneumatic or manual-actuated versions
- Flexible design to meet a wide range of customer requirements
- May be assembled without special tools





FURON® Mini Check Valve

Configuration	2-Way
Orifice Size	1/16", 1/8", 3/16", 1/4", 3/8"
Standard	Flare Grip II
Connection Types	Pillar Super 300
Connection Size	1/8", 1/4", 3/8", 1/2"
Actuation Type	Media
Max. Operating Pressure	120 PSIG (8.3 bar)
Max. Operating Temperature	203°F (95°C)
C _v Factor	.1 – 1.90

Features/Benefits:

- 100% high-purity PFA construction
- Cracking pressure less than 1 PSIG (0.07 bar)
- High-purity PFA spring
- O-ring free design



FURON® Large Check Valve

Configuration	2-Way
Orifice Size	1/2", 3/4"
Standard	Flare Grip II
Connection Types	Pillar Super 300 Fuse Bond
Connection Size	1/2", 3/4", 1"
Actuation Type	Media
Max. Operating Pressure	150 PSIG (10.3 bar)
Max. Operating Temperature	250°F (121°C)
C _v Factor	3.7 – 7.5

Features/Benefits:

- 100% high-purity PFA construction
- High flow capability (3.7-7.5 C_v)
- Cracking pressure less than 1 PSIG (0.07 bar)
- High-purity PFA spring
- O-ring free design



FURON® 2" HGV Check Valve

Configuration	2-Way
Orifice Size	2"
Standard	Flare Grip II
Connection Type	Fuse Bond
Connection Size	2"
Actuation Type	Media
Max. Operating Pressure	100 PSIG (6.8 bar)
Max. Operating Temperature	250°F (121°C)
C _v Factor	32

Features/Benefits:

- 100% high-purity fluoropolymer construction
- High flow capability (32 C_v)
- Zero dead volume body seal with no wetted thread areas
- Cracking pressure less than 1 PSIG (0.07 bar)
- O-ring free design





FURON® Stopcock Molded Valve

Configuration	2-Way & 3-Way
Orifice Size	5/16", 5/32"
Standard	Flare Grip II
Connection Types	Male NPT
Connection Size	1/8", 1/4", 3/8", 1/2"
Actuation Type	Manual
Max. Operating Pressure	45 PSIG (3 bar)
Max. Operating Temperature	140°F (60°C)
C _v Factor	0.44–4.68
Leak Detection Port	NO

Features/Benefits:

- 100% high-purity PTFE and PFA wetted flow path
- O-ring free design
- 3-way valves available in both "L" and "T" configuration
- Panel mount versions are available



FURON® DVX Valve

Configuration	2-Way & 3-Way
Orifice Size	1/4"
Standard	Female NPT
Connection Types	
Connection Size	1/4"
Actuation Type	Electrical, 24 VDC Electrical, 115 VAC
Max. Operating Pressure	100 PSIG (6.9 bar)
Max. Operating Temperature	176°F (90°C)
C _v Factor	0.6
Leak Detection Port	No

Features/Benefits:

- Double diaphragm seals for strict permeation control
- 100% PFA HP and virgin PTFE wetted flow path
- Available in 24 VDC and 115 VAC configurations



FURON® Metering Valve

Configuration	2-Way
Orifice Size	1/16"
Standard	Grab Seal
Connection Types	Flare Grip II Female NPT
Connection Size	1/8", 1/4"
Actuation Type	Manual Multi-Turn
Max. Operating Pressure	75 PSIG (5.2 bar)
Max. Operating Temperature	212°F (100°C)
C _v Factor	0.2 – 0.5
Leak Detection Port	NO

Features/Benefits:

- 100% virgin PTFE wetted parts for high-purity and corrosion resistance
- Fine thread on needle stem allows for precise metering and flow control
- Bonnets and packing easily removable for cleaning
- Straight through flow path



FURON® Precision Plug Valve

Configuration	2-Way
Orifice Size	1/16", 1/8", 3/16", 1/4"
Standard	Grab Seal
Connection Types	Grab Seal II Female NPT
Connection Size	1/8", 1/4"
Actuation Type	Manual Multi-Turn
Max. Operating Pressure	75 PSIG (5.2 bar)
Max. Operating Temperature	212°F (100°C)
C _v Factor	0.2 – 0.5
Leak Detection Port	NO

Features/Benefits:

- 100% virgin PTFE wetted parts for high-purity and corrosion resistance
- Bubble tight sealing
- Suitable for both liquid and gas applications
- Straight through flow path minimizes pressure drop





FURON® Suckback Valve

Configuration	2-Way
Orifice Size	1/8", 1/4", 3/8", 1/2"
Standard	Flare Grip II
Connection Types	Pillar Super 300
Connection Size	1/8", 1/4", 3/8", 1/2", 3/4"
Actuation Type	Pneumatic
Max. Operating Pressure	60 PSIG (4.1 bar)
Max. Operating Temperature	266°F (130°C)
C _v Factor	2.3 – 7.2
Leak Detection Port	YES

Features/Benefits:

- All virgin PTFE/high-purity molded PFA wetted flow path
- Eliminates dripping of dispense media from nozzles
- Adjustable suckback capacity permits precise metering of dispense media
- Repeatability of suckback amount allows identical dispense media over time



FURON® Relief Valve

Configuration	2-Way
Orifice Size	3/8" (HPV Style); 1/4", 3/8", 1/2" (RV Style)
Standard	Flare Grip II
Connection Types	Pillar Super 300
Connection Size	1/4" (HPV Style); 1/4", 3/8", 1/2" (RV Style)
Actuation Type	Media
Max. Operating Pressure	80 PSIG (5.5 bar) (HPV Style) 90 PSIG (6.2 bar) (RV Style)
Max. Operating Temperature	176°F (80°C)
C _v Factor	0.5
Leak Detection Port	NO

Features/Benefits:

- All virgin PTFE/high-purity molded PFA wetted flow path
- Protects upstream equipment from overpressure conditions
- Adjustable pressure relief setting from 10–90 PSIG
- Ideal for corrosive or aggressive media



FURON® Dilution Drain Valve

Configuration	2-Way
Orifice Size	1/2"
Standard	Flare Grip II
Connection Types	Pillar Super 300
Connection Size	1/2", 3/4"
Actuation Type	Media
Max. Operating Pressure	60 PSIG (4.1 bar)
Max. Operating Temperature	302°F (150°C)
C _v Factor	2.5

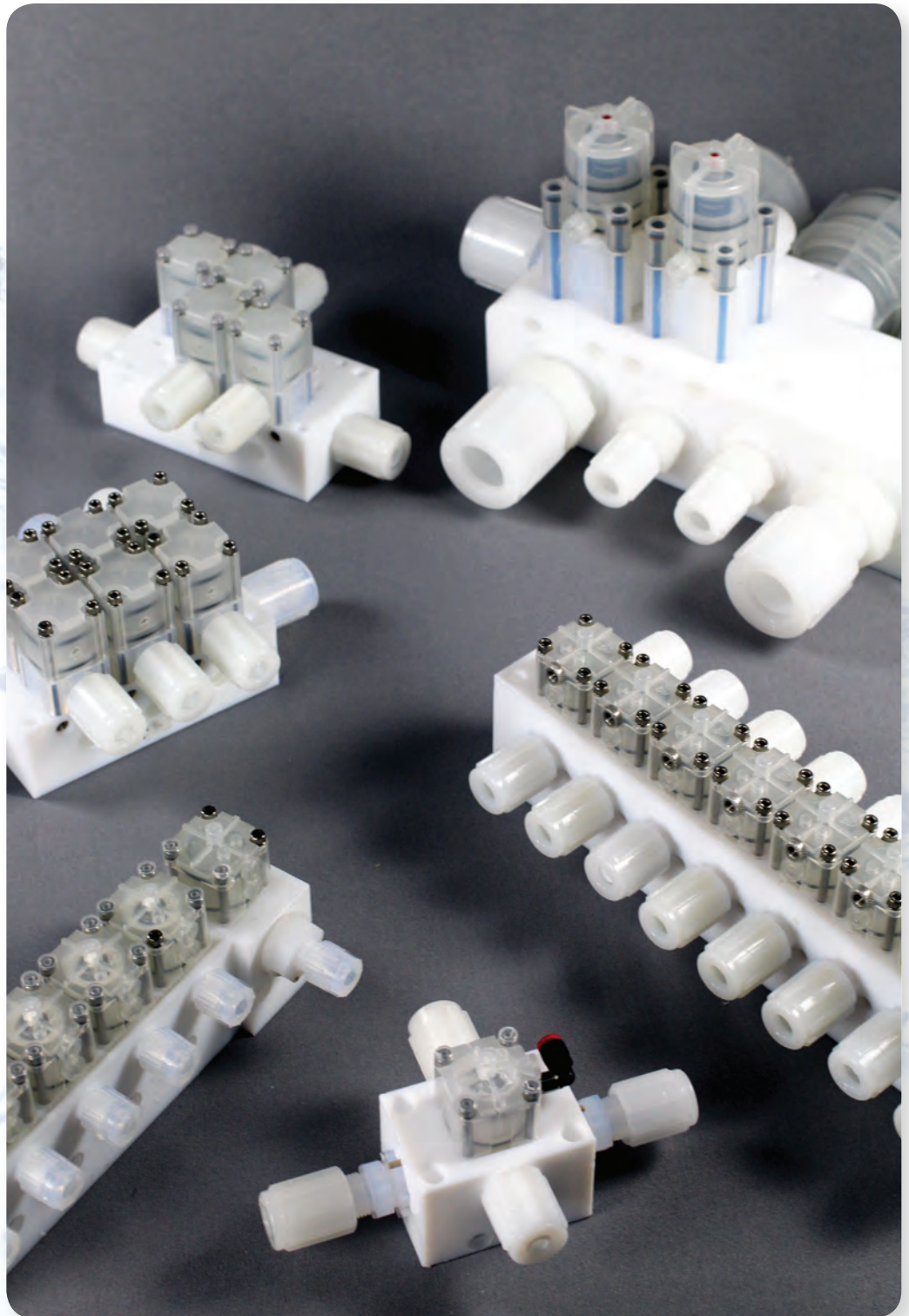
Features/Benefits:

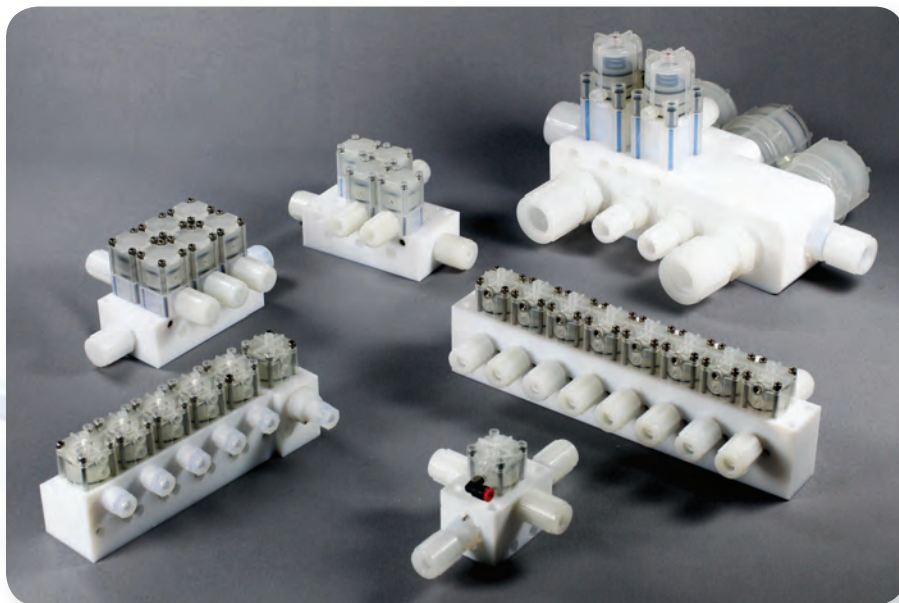
- Metal free design
- Simple & compact design
- Adjustable dilution ratio



Manifolds

The FurOn® integrated manifold product line features multiple function components in a single, pre-tested package that is easily installed into your system. Saint-Gobain engineers the most reliable valves in the world, delivering superior performance in limitless combinations and configurations while providing an optimum cost of ownership for end user. Our dedicated manifold resources will support you in the development of all critical fluid applications. Every FurOn® integrated manifold system benefits from 100% fluoropolymer wetted flow paths and cleanroom assembly, ensuring world-class quality and reliability. In addition, the FurOn® integrated manifold systems provide a substantial reduction in footprint and allow you to reduce the number of connections in your system, reducing potential leak and entrapment points for safer operation.





Configuration	2-Way or 3-Way
Orifice Size	3/16" to 2"
Standard	Flare Grip II
Connection Types	Fuse Bond Pillar Super 300
Connection Size	1/8" to 2"
Actuation Type	Pneumatic Toggle Manual Quarter-Turn Manual Multi-Turn
Max. Operating Pressure	100 PSIG (6.8 bar)
Max. Operating Temperature	Up to 356°F (180°C) for High Temp Version
C _v Factor	.5 to 52
Leak Detection Port	YES

Features/Benefits:

- Custom engineered to end user's exact specification
- Space savings more than 50% compared to discrete valves
- Significantly reduces number of connections between valves
- Endless design possibilities integrating a wide variety of valves and other flow components such as check valve, pressure regulators, static mixers



FURON® Integrated Vessels

Configuration	2-Way or 3-Way
Orifice Size	Up to 1"
Standard	Flare Grip II
Connection Types	Fuse Bond Pillar Super 300
Connection Size	Up to 1"
Actuation Type	Pneumatic Manual Quarter-Turn Manual Multi-Turn
Max. Operating Pressure	85 PSIG (5.9 bar)
Max. Operating Temperature	212 °F (100 °C)
C _v Factor	Up to 7.2
Leak Detection Port	YES

Features/Benefits:

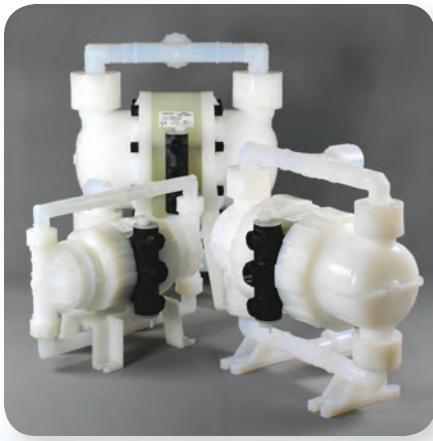
- Custom engineered to end user's exact specification
- Pre-tested
- Significantly reduces number of connections between valves
- Endless design possibilities integrating a wide variety of valves and other flow components such as check valve, pressure regulators, static mixers



Pumps

Saint-Gobain is a global leader in dependable, fluoropolymer-based pumps designed specifically for delivery of high-purity and/or aggressive fluids. Our pneumatically-operated Astipure II pumps feature 100% metal free & O-Ring free construction, eliminating any possibility of ionic contamination caused by exposure of corrosive chemicals to such components. Our PV series offers a cost-effective solution for handling corrosive or aggressive media in your drain, sump or industrial applications. In addition to chemical delivery pumps, we offer a wide range of dosing pumps through three product lines: PDP, MDP & PPRD. These pumps provide a solution for dosing from a fraction of a microliter up to 80 milliliters per stroke with an emphasis of reproducibility. Our Furon Precision Dispense Pump offers unparalleled accuracy and reliability in dispensing doses and features an embedded microprocessor-based controller to offer unmatched driving & control capability from your tool.





FURON® Astipure II Bellows Pumps

Pump Mechanism	Bellows
Max. Flow Rate	4 GPM (15 lpm) 8 GPM (30 lpm) 16 GPM (60 lpm) 26 GPM (100 lpm)
Connection Type	Flare Grip II Tube End
Connection Size	1/2", 3/4", 1"
Max Suction Head	10 feet (3m) 12 feet (3.5m) 14 feet (4m)
Max. Back Pressure	80 PSIG (5.5 bar)
Max. Air Pressure	72.5 PSIG (5 bar)
Max. Operating Temperature	212°F (100°C)

Features/Benefits:

- Constructed from 100% high-purity fluoropolymer materials
- 100% Elastomer free
- Field-proven reliability in aggressive chemicals and slurries
- 2-year warranty, extendable to 6 years with preventive maintenance
- Designed to be maintenance friendly
- Flexible driving system



FURON® High Temperature Bellows Pumps

Pump Mechanism	Bellows
Max. Flow Rate	5 GPM (20 lpm) 13 GPM (50 lpm)
Connection Type	Flare Grip II
Connection Size	3/4", 1"
Max Suction Head	11.5 feet (3.5m) 16.5 feet (5m)
Max. Back Pressure	58 PSIG (4 bar)
Max. Air Pressure	72.5 PSIG (5 bar)
Max. Operating Temperature	350°F (180°C)

Features/Benefits:

- Capable of handling media temperatures up to 350° F (180° C)
- Designed to be maintenance friendly
- Flow rates up to 13 GPM (50 lpm)
- 100% high-purity PTFE/PFA construction



FURON® PV Series Pumps

Pump Mechanism	Bellows
Max. Flow Rate	8 GPM (30 lpm) 16 GPM (60 lpm)
Connection Type	Flare Grip II
Connection Size	3/4", 1"
Max Suction Head	12 feet (3.5m) 14 feet (4m)
Max. Back Pressure	80 PSIG (5.5 bar)
Max. Air Pressure	72.5 PSIG (5 bar)
Max. Operating Temperature	212°F (100°C)

Features/Benefits:

- Cost effective solution for handling corrosive or aggressive media in industrial applications
- Ideal for sump or drain application
- 100% PTFE/PFA construction
- 2-year warranty, extendable to 6 years with preventive maintenance
- Flexible driving system



FURON® Turbo Pump

Pump Mechanism	Impeller
Control Mechanism	Magnetic Drive Motor
Max. Discharge Flow Rate	4.5 GPM (18 lpm)
Required Inlet Fluid Pressure	15–60 PSIG (1–4 bar)
Max. Media Temperature	122°F (50°C)
Power Requirements	115/230 VAC Single Phase
Max. Power Consumption	7.4 Amps

Features/Benefits:

- Seal-free magnetically coupled turbine pump
- High output pressure
- Ideal for use as a booster pump in DI water systems
- PTFE and alumina ceramic wetted parts





FURON® Precision Dispense Pump (PDP)

Pump Mechanism	Rolling Diaphragm
Control Mechanism	Electronic with Pneumatic Valves
Dispense Volume	0.1 – 40.0 mL
Dispense Speed	0.01 – 10 mL/sec
Accuracy	± 10 µL
Max. Suction Head	6' (1.83 m)
Max. Back Pressure	60 PSIG (4.1 bar)
Max. Air Pressure	60 PSIG (4.1 bar)
Max. Air Consumption	0.46 SCFM
Max. Operating Temperature	122°F (50°C)

Features/Benefits:

- Superior accuracy and reliability
- Virgin PTFE wetted flow path
- 100% Elastomer free
- Ideal for high-purity fluid dispensing applications
- Suitable for use with aggressive, corrosive, and ultrapure media



FURON® Pneumatic Dispensing Pumps (PPRD)

Pump Mechanism	Bellows
Control Mechanism	Pneumatic
Dispense Volume	6 – 40 mL (PPRD1) 8 – 80 mL (PPRD2)
Max. Dispense Speed	0.5 GPM (120 l/hr) 1 GPM (240 l/hr)
Accuracy	± 1%
Max. Suction Head	6' (1.83 m)
Max. Back Pressure	60 PSIG (4 bar)
Max. Air Pressure	72.5 PSIG (5 bar)
Max. Air Consumption	3.5 SCFM
Max. Operating Temperature	212°F (100°C)

Features/Benefits:

- Designed for dosing small amounts of liquid (up to 80 mL)
- High-purity PTFE/PFA construction
- Accuracy ± 1% per dose
- Suitable for use with aggressive or corrosive media



FURON® Mini-Dispense Pump (MDP)

Pump Mechanism	Rolling Diaphragm
Control Mechanism	Pneumatic
Dispense Volume	0 – 10.0 mL 0 – 0.5 mL
Accuracy	± 1%
Max. Suction Head	6' (1.83 m)
Max. Discharge Pressure	60 PSIG (4.1 bar)
Max. Air Pressure	60 PSIG (4.1 bar)
Max. Air Consumption	0.46 SCFM
Max. Operating Temperature	122°F (50°C)

Features/Benefits:

- Efficiently dispenses small amounts of liquid (up to 10 mL)
- Suitable for use in aggressive, corrosive, and ultrapure liquids
- Easy manual adjustments for shot size and dispense speed
- Compact footprint



Accessories

Decades of interaction with industry users combined with our premium engineering knowledge led Saint-Gobain to develop a wide range of specific components ranging from gauge protectors to precision pressure regulators, all of which are crucial to customers' applications in the Semiconductor industry. Our broad product offering provides you with a comprehensive single source for high-purity fluid handling products. Our vast experience in injection molding of PFA and processing PTFE, coupled with state-of-the-art equipment assures an accurate and repeatable manufacturing process. This assures that our products meet or exceed the most stringent Semiconductor industry standards for purity and ionic extractables to satisfy your critical fluid handling requirements.





FURON® 1/4" UPRP Precision Pressure Regulator

Actuation	Manual & Pneumatic
Orifice Size	1/4", 1/2"
Standard Connection Types	Flare Grip II Pillar Super 300 Fuse Bond
Connection Sizes	1/4", 3/8", 1/2"
Max. Operating Temperature	194°F (90°C)
Max. Operating Pressure	120 PSIG (8 bar)
Pressure Regulation Range	10 – 60 PSIG (0.7 – 4.0 bar)

Features/Benefits:

- Designed for fluid temperatures up to 194°F (90°C)
- Composed of all virgin PTFE/Fluoroloy®T and PFA wetted flow paths
- Integral leak detection port is standard
- PTFE isolation bellows provides secondary containment



FURON® 1" UPRP Precision Pressure Regulator

Actuation	Pneumatic
Orifice Size	1"
Standard Connection Types	Flare Grip II Pillar Super 300 Fuse Bond
Connection Sizes	3/4", 1"
Max. Operating Temperature	194°F (90°C)
Max. Operating Pressure	100 PSIG (7 bar)
Pressure Regulation Range	10 – 60 PSIG (0.7 – 4.0 bar)

Features/Benefits:

- Designed for fluid temperatures up to 194°F (90°C)
- Composed of all virgin PTFE/Fluoroloy®T and PFA wetted flow paths
- Integral leak detection port is standard
- PTFE isolation bellows provides secondary containment



FURON® UPBM Back Pressure Regulator

Actuation Type	Manual & Pneumatic
Orifice Size	1/4", 1/2"
Standard Connection Types	Flare Grip II Pillar Super 300 Fuse Bond
Connection Size	1/4", 3/8", 1/2", 3/4"
Max. Operating Temperature	194°F (90°C)
Max. Operating Pressure	120 PSIG (8.3 bar)
Pressure Regulation Range	10–60 PSIG (0.7–4.0 bar)

Features/Benefits:

- Maintains pre-determined pressure on the inlet side (back pressure)
- Designed for fluid temperatures up to 194°F (90°C)
- Composed of all virgin PTFE and PFA wetted flow paths
- Integral leak detection port is standard





FURON® Static Mixer

Max. Flow Rate	1/2": 5.3 GPM (20 l/min) 1": 13.2 GPM (50 l/min)
Max. Pressure Drop	1/2": 9.0 PSID 1": 10.0 PSID
C _v	1/2": 1.75 1": 4.1
Media Operating Temperature	41°F to 212°F (5°C) to (100°C)
Media Operating Pressure	90 PSIG (6 bar) max. at room temperature

Features/Benefits:

- Mixes two or more chemistries with no moving parts
- Ideal for high-purity mixing applications
- Constructed from 100% virgin PTFE and high-purity PFA
- Compact design



FURON® Air & Liquid Actuated Aspirators

Actuation	Air or Liquid
Input Media Pressure	5 to 60 PSIG (0.3 to 0.4 bar)
Flow at Outlet Port*	.5 to 2.5 GPM (1.9 to 9.5 LPM)
Standard Connection Types	Flare FNPT
Connection Sizes	3/8", 1/2"

Features/Benefits:

- 100% PTFE wetted parts
- Extremely reliable – no moving parts
- Easy to use & install



FURON® Single & Double Diaphragm Molded Gauge Protectors

Max. Media Temperature	302°F (150°C)
Max. Media Pressure	120 PSIG (8 bar)
Accuracy	5% of Full Scale
End Connection	1/4" FNPT
Gauge Connection	1/4" FNPT
Fill Fluid	DI Water (standard)
Materials	PTFE/PFA

Features/Benefits:

- Proprietary diaphragm seals with zero hold-up volume or elastomers
- Variety of optional mounts including fuse bonded flow-thru tee option
- 100% non-metallic construction
- All molded high-purity PFA body; PTFE diaphragm
- Single or double diaphragm construction



FURON® Pistol Pete & Recirc Spray Guns

Body Materials	PTFE, High-Purity PFA
Hose Materials	High-Purity PFA FEP Polypropylene
Max. Media Pressure	100 PSIG (7 bar)
Spray Patterns	Standard (DI Water) Cone Fan Jug Fill Nitrogen Blow-off

Features/Benefits:

- 100% virgin PTFE wetted fluid path
- No exposed metal components
- Shutoff pressure to 80 PSIG
- Varied spray pattern and spray nozzle interchangeability



Fittings

Through our FurOn® fitting line, Saint-Gobain offers a broad range of high-purity fluoropolymer fittings for the Semiconductor industry. Our FurOn® fitting product line contains industry standard FlareGrip II® and FuseBond™ fittings, as well as fittings related to more specific applications such as our dual Containment fittings, Grab Seal fittings, and some unique patent protected fittings such as our No-O-Ring union. Our broad fitting offering provides unique flexibility & modularity in your high-purity PFA pipe manifold systems. We offer decades of experience of injection molding of PFA and processing of PTFE, coupled with state-of-the-art equipment to assure accurate repeatable processes. This assures that our products meet or exceed the most stringent Semiconductor industry standards for purity and ionic extractables to satisfy your critical fluid handling requirements.





FURON® Flare Grip II

Configurations	Unions (Union Adapters, Reducers, Panel, Straight Tube Union) Elbows (45° Union, Adapters, Reducers) Tees (Union, Reducer, Branch, Run)
Body Material	High-Purity PFA
Nut Material	PVDF, PFA
Connection Sizes	1/8", 1/4", 3/8", 1/2", 3/4", 1"
Max. Operating Pressure	150 PSIG (10.3 bar)
Max. Operating Temperature	302°F (150°C)

Features/Benefits:

- Available in a large variety of size and configuration
- Interchangeable and compatible with most industry fluid handling systems
- Minimal dead space for fluid entrapment



FURON® Dual Containment

Configurations	Path Through Flare Fitting Front Seal Bulkhead Rear Seal Bulkhead
Body Material	High-Purity PFA
Nut Material	PVDF, PFA
Connection Sizes	1/8", 1/4", 3/8", 1/2", 3/4", 1"

Features/Benefits:

- Available in a large variety of size and configuration
- Optimal safety for your process and users



FURON® Fuse Bond

Configurations	Unions (Union Adapters, Reducers, O-ringless, Union) Elbows (45° Union, Adapters, Reducers) Tees (Union, Reducer, Branch)
Body Material	High-Purity PFA
Nut Material	N/A
Connection Sizes	1/4", 1/2", 3/4", 1", 2"

Features/Benefits:

- Lower hold-up volume due to reduced fitting size
- Manufactured from 100% virgin high-purity PFA
- O-ring free unions feature leaktight patent-protected tongue and groove seal and are rated for 120 PSIG system pressure at 300°F (148°C)



FURON® Grab Seal

Configurations	Unions (Union Adapters, Reducers, Panel, Straight Tube Union) Elbows (45° Union, Adapters, Reducers) Tees (Union, Reducer, Branch, Run)
Body Material	High-Purity PFA
Nut Material	ETFE
Connection Sizes	1/8", 1/4", 3/8", 1/2", 3/4", 1"

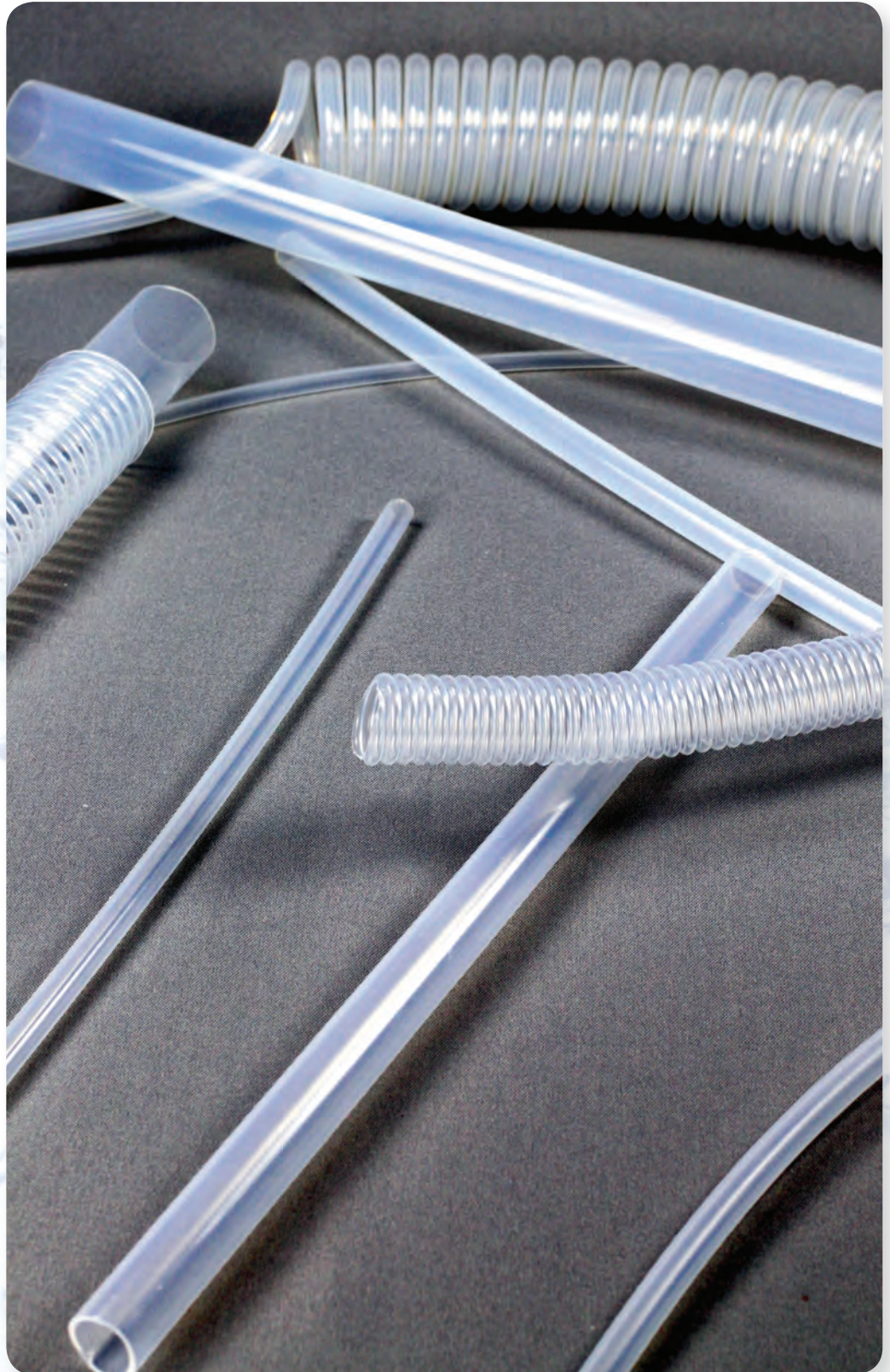
Features/Benefits:

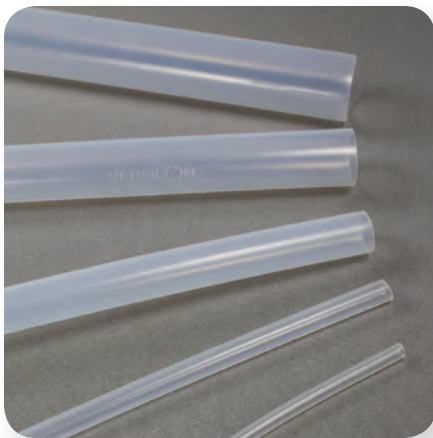
- Single design for ease of installation
- No special tools required



Tubing

Saint-Gobain offers a wide range of tubing for demanding applications in multiple industries through a number of different brands such as VersilOn™. For the Semiconductor industry, our offering in fluoropolymer tubing is grouped under the Versilon brand and features a diversity of size from a fraction of an inch up to several inches, as well as shapes from very basic to very complex, including convoluted, corrugated or multi-lumen tubing. In essence we could say that it is physically possible to manufacture it, there would be no better company than Saint-Gobain to partner with.



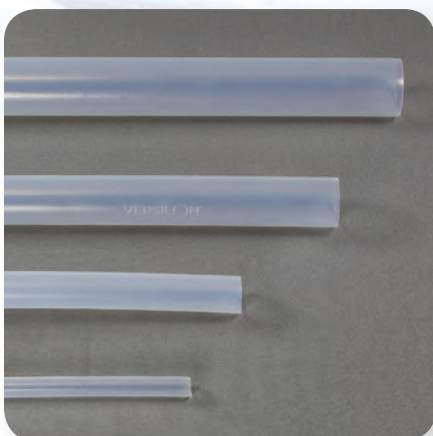


VERSILON™ HP PFA 400 High-Purity PFA Tubing

Material	High-Purity PFA
Max. Operating Pressure	250 PSIG (17.2 bar)
Max. Operating Temperature	500°F (260°C)
Standard Sizes (OD)	1/8", 1/4", 3/8", 1/2", 3/4" 1", 1-1/4", 1-1/2", 2"
Wall Thickness	0.030" – 0.060"

Features/Benefits:

- Non-contaminating laser scribing for positive identification of size, material and 100% lot traceability
- Controlled production environment for premium purity
- Tube ends capped to prevent ID contamination
- Site redundancy for safer & nimble production capability

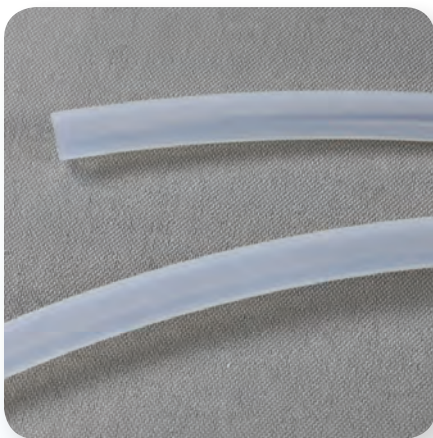


VERSILON™ HP PFA 400 UC High-Purity PFA Tubing

Material	High-Purity PFA
Max. Operating Pressure	250 PSIG (17.2 bar)
Max. Operating Temperature	500°F (260°C)
Standard Sizes (OD)	1/8", 1/4", 3/8", 1/2", 3/4" 1", 1-1/4", 1-1/2", 2"
Wall Thickness	0.030" – 0.060"

Features/Benefits:

- Dedicated raw material with less than 5 ppb iron
- Non-contaminating laser scribing for positive identification of size, material and 100% lot traceability
- Improved surface roughness from inner tube
- Site redundancy for safer & nimble production capability
- Tube ends capped to prevent ID contamination



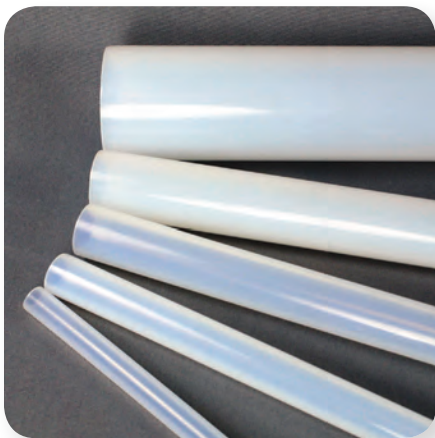
VERSILON™ High-Purity PFA Tubing

Material	High-Purity PFA
Max. Operating Pressure	250 PSIG (17.2 bar)
Max. Operating Temperature	500°F (260°C)
Standard Sizes (OD)	1/8", 1/4", 3/8", 1/2", 3/4" 1", 1-1/4", 1-1/2", 2"
Wall Thickness	0.030" – 0.060"

Features/Benefits:

- Process all type of standard & custom of raw material from industry leader
- Standard & custom product to meet your special needs
- Optional clean room production
- Site redundancy for safer & nimble production capability



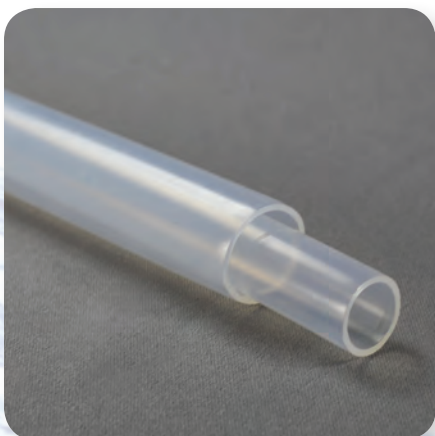


VERSILON[®] HP PFA Pipe

Material	High-Purity PFA
Max. Operating Pressure	250 PSIG (17.2 bar)
Max. Operating Temperature	500°F (260°C)
Standard Sizes (OD)	1/8", 1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 3", 4", 5", 6"
Wall Thickness	0.068" – 0.154"
Standard Length	10' (3m)

Features/Benefits:

- Manufactured from virgin high-purity PFA
- Nominal sizes standard in 10' lengths
- Custom packaging and conditioning
- Site redundancy for safer & nimble production capability

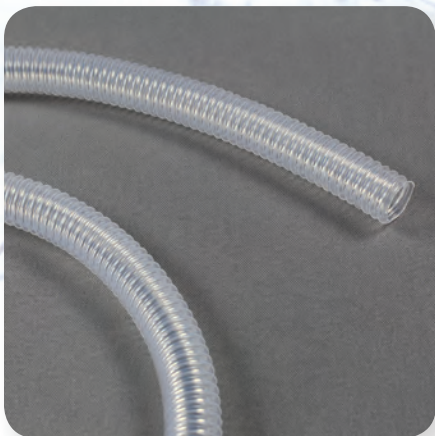


VERSILON[®] HP PFA Coax

Material	High-Purity PFA Inner Tube
Max. Operating Pressure	250 PSIG (17.2 bar)
Max. Operating Temperature	400°F (204°C)
Standard Sizes (OD)	1/8", 1/4", 3/8", 1/2", 3/4", 1", 1-1/4"
Wall Thickness	0.030" – 0.060"
Max Continuous Length	500' (152.4m)

Features/Benefits:

- Saves installation time
- Continuous lengths up to 500'
- Provides superior chemically resistant dual containment
- Compatible with Furon[®] Dual Containment flare fittings
- Custom material & dimension for outer tube

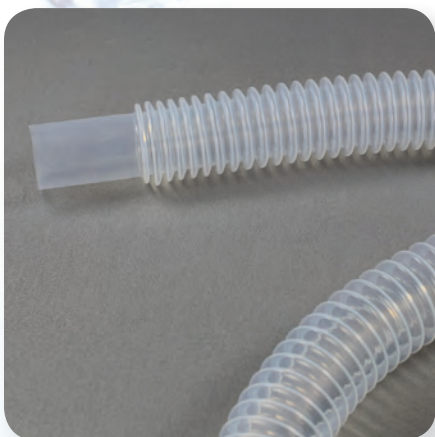


VERSILON[®] ConvoFlex

Material	FEP, PFA, PTFE
Standard Sizes (OD)	From 1/4" to 4"
Max Continuous Length	500' (152.4m)

Features/Benefits:

- Highly flexible
- Self draining
- Produced in continuous roll and can be cut at will



VERSILON[®] CT-Flex

Material	FEP, PFA
Standard Sizes (OD)	From 1/4" to 2"
Max Continuous Length	12' (3.6m)

Features/Benefits:

- Cuff and corrugation location are fully adjustable to match customer need
- Does not kink
- Higher resistance to vacuum or pressure than convoluted tubing
- Cuff end for easy & safe installation



A World Leader in High Performance Materials



Saint-Gobain Performance Plastics is the world's leading producer of engineered high-performance polymer products for all industries. With more than 50 locations in 17 countries, Saint-Gobain is positioned to provide innovative products and comprehensive service to a world wide customer base.

Parent company, Compagnie de Saint-Gobain is one of the world's top 100 industrial corporations and a leader in the development and production of engineered materials. Established in France in 1665 the company is a leading producer of flat glass, packaging, insulation, building materials, abrasives, reinforcements, industrial ceramics and piping.

Saint-Gobain Process Systems

Saint-Gobain's Process Systems business unit helps customers achieve safety, performance and brand assurance through a broad range of capabilities that rely on superior engineering and customer support.

Our product applications include those in the food, beverage, habitat, aerospace, chemical and electronics sectors. We are helping customers in all of these industries achieve goals in innovation, efficiency, sustainability and product integrity through customized solutions such as flexible tubing, gaskets, seals, hoses, fittings, pumps, valves and manifolds.



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5,575,311; 5,967,173; 5,652,391; 5,993,176; 7,335,003

For additional literature and technical
information scan the QR codes below



Micro-Electronics



Process Systems

NOTE: The data and details given in this document are correct and up to date. This document is intended to provide information about the product and possible applications. This document is not the product specification and does not provide specific features, nor does it guarantee product performance in specific applications. Saint-Gobain cannot anticipate or control the conditions of the field and for this reason strongly recommends that practical tests are conducted to ensure that the product meets the requirements of a specific application.

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