

Pure Fit™ Tube Clamps



Advanced Tube Clamps
for the Most Demanding Applications

Pure Fit™ TC

Standard Size Tube Clamps



Pure-Fit® TC

Pure-Fit® TC Tube Clamps represent a new generation of clamping technology for the pharmaceutical industry. They feature an outer body with no sharp edges, eliminating the potential for snags, scratches and punctures; a press-down locking system that is fully encapsulated to guard against untimely or unwanted release; a side release mechanism that facilitates secure, single-handed installation and operation; and an integral bore hole for absolute lock-out capabilities. Pure-Fit® TC's innovative design allows for complete flow stoppage, and the clamp can be installed over the tube in the normal fashion or put together after the tube is already part of a completed assembly.

Pure-Fit® TC Characteristics

Pure-Fit® TC Tube Clamps are constructed from high performance thermoplastic materials (PVDF or polypropylene), and come in two standard sizes (3/8" and 3/4") to accommodate a wide range of tubing products.

Pure-Fit® TC Compatibility

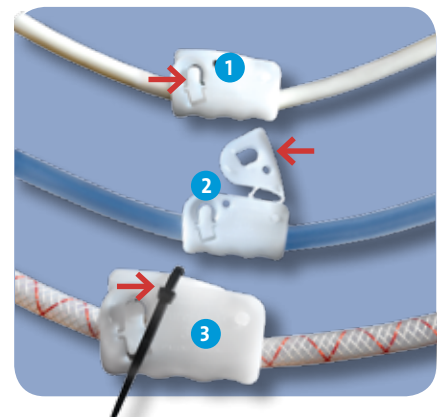
Pure-Fit® TC Tube Clamps are autoclavable and sterilizable and meet all USP Class VI criteria. They have been physically tested to meet the most demanding applications.

Pure-Fit® TC and TCL Typical Physical Properties

Property	Polypropylene	PVDF
Tensile Strength, psi (MPa) ASTM D638-91	4,800 (33.1)	6,300 (43.4)
Flexural Modulus, psi (MPa) ASTM D790-92	145,000 (999.7)	290,000 (1,999.5)
Hardness (Shore D) ASTM D2240-91	72	78
Heat Deflection ASTM D648-82		
°F (°C) @66 psi	189 (87)	266 (130)
°F (°C) @264 psi	—	221 (105)
Water Absorption (%) ASTM D570-81	0.01	0.03
Maximum Recommended Working Temperature °F (°C)	200 (93)	275 (135)

Pure-Fit® TC Features/Benefits

- Provides complete fluid stoppage
- Smooth edges and corners help prevent punctures and ruptures
- Can be installed on or over tubing or finished assemblies
- High degree of leverage accommodates tubing with different durometers
- Can be utilized in the flow position
- Single-hand installation capability for ease of operation
- Unique top locking mechanism and side release prevent unwanted openings
- Integral bore hole for lock-out capabilities
- Available in PVDF or polypropylene
- Custom colors and identification available
- All materials completely animal derivative-free and BPA-free
- Autoclavable and sterilizable (autoclave not recommended for polypropylene clamps)



- 1 Squeeze to release.
- 2 Press down to lock.
- 3 Thread cable tie through bore hole for total lock out.

Pure Fit™ TCL

Large Tube Clamps



Pure-Fit® TCL

Pure-Fit® TCL Large Tube Clamps provide the same innovative clamping technology as Pure-Fit® TC, but are designed to accommodate large diameter and thick wall tubing applications. Pure-Fit® TCL is compatible with standard, braided (reinforced) and multilayer tubing. In addition to providing complete fluid stoppage, Pure-Fit® TCL can be utilized in the flow position and features an integral bore hole for absolute lock-out capabilities.

Pure-Fit® TCL Characteristics

Pure-Fit® TCL is constructed from animal derivative-free and BPA-free PVDF. Pure-Fit® TCL is available in two sizes to accommodate a wide range of thick wall tubing and can be used with up to 2.0" O.D. tubing.

Pure-Fit® TCL Compatibility

Pure-Fit® TCL is fully autoclavable and sterilizable and meets all USP Class VI criteria.

Pure-Fit® TCL Features/Benefits

- Compatible with large diameter, thick wall, reinforced and multilayer tubing
- Provides complete fluid stoppage
- Smooth edges and corners help prevent punctures and ruptures
- Can be installed on or over tubing or finished assemblies
- High degree of leverage accommodates tubing with different durometers
- Can be utilized in the flow position
- Integral bore hole for lock-out capabilities
- Available in PVDF
- Custom colors and identification available
- All materials completely animal derivative-free and BPA-free
- Fully autoclavable and sterilizable

Pure-Fit® TC and TCL Typical Applications

- Biopharmaceutical manufacturing
- Drug delivery and discovery
- Laboratory functions
- Pharmaceutical processes
- Medical systems
- Assemblies and tubing set
- Peristaltic pump sets

Pure-Fit® TC Selection Guide

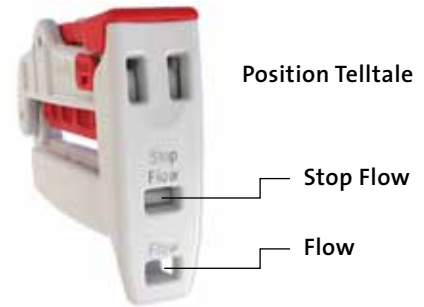
Part Number	Material	Tubing Range, O.D. (Inches)	Minimum, Wall Section (Inches)
PFTC375PP	Polypropylene	1/8 – 3/8	.030
PFTC375PVDF	PVDF	1/8 – 3/8	.030
PFTC750PP	Polypropylene	3/8 – 3/4	.060
PFTC750PVDF	PVDF	3/8 – 3/4	.060

Pure-Fit® TCL Selection Guide

Part Number	Material	Tubing Range, O.D. (Inches)	Tubing Range, Wall (Inches)
PFTCL150	PVDF	3/4 – 2	1/16 – 1/8
PFTCL250	PVDF	3/4 – 2	1/8 – 1/4

Pure-Fit® TCL Clamping Properties

The tests below were conducted using Saint-Gobain Performance Plastics' standard silicone tubing, Sani-Tech® STHT-C-500-4 (0.5" ID x 0.75" OD x 0.125" wall) and Sani-Tech® STHT-C-1000-6 (1.00" ID x 1.5" OD x 0.25" wall), and braid-reinforced silicone hose, Sani-Tech® STHT-R-0500 (0.5" ID x 0.875" OD x 0.187" wall) and Sani-Tech® STHT-R-1000 (1.00" ID x 1.375" OD x 0.187" wall).



	STHT-C-500-4 0.5" ID x 0.75" O.D. x 0.125" Wall	STHT-R-0500 0.5" ID x 0.875" O.D. x 0.187" Wall	STHT-C-1000-6 1.00" ID x 1.5" O.D. x 0.25" Wall	STHT-R-1000 1.00" ID x 1.375" O.D. x 0.187" Wall
Pure-Fit® TCL part number	PFTCL150 (white)	PFTCL250 (red)	PFTCL250 (red)	PFTCL250 (red)
Clamp holding force				
Pressure Only, psi	56*	102.33	76.50	40
Pressure with Liquid, psi	55*	101.83	76.50	40
Drop testing of liquid-filled assembly from a distance of 5 feet				
"Flow" Position, Cam Lever Closed	Pass	Pass	Pass	Pass
"Stop Flow" Position, Cam Lever Closed	Pass	Pass	Pass	Pass
"Stop Flow" Position, Cam Lever Closed, Pressurized	Pass	Pass	Pass	Pass
Average % free flow				
Free Flow, No Clamp	100%	100%	100%	100%
"Flow" Position, Cam Lever Closed	100%	100%	76%	76%
"Stop Flow" Position, Cam Lever Opened	100%	75%	53%	53%
"Stop Flow" Position, Cam Lever Closed	0%	0%	0%	0%
Flow rates, time to empty, sec.				
Free Flow, No Clamp	58.58	58.58	8.73	8.73
"Flow" Position, Cam Lever Closed	58.50	44.38	11.50	11.50
"Stop Flow" Position, Cam Lever Opened	58.55	58.57	16.47	16.47
"Stop Flow" Position, Cam Lever Closed	No flow	No flow	No flow	No flow

* determined by tubing

How to Operate Pure-Fit® TCL

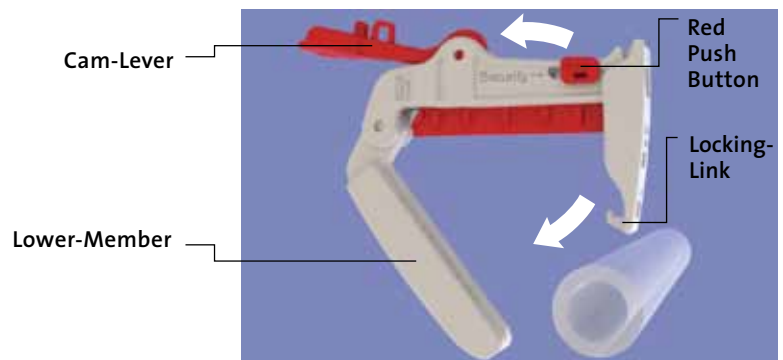
1

- Starting from the closed position, simultaneously press and hold the two Red Push Buttons.



2

- While pressing the Red Push Buttons, pull the Cam-Lever back toward the hinge of the clamp.
- Pull the Lower-Member away from the Locking-Link.



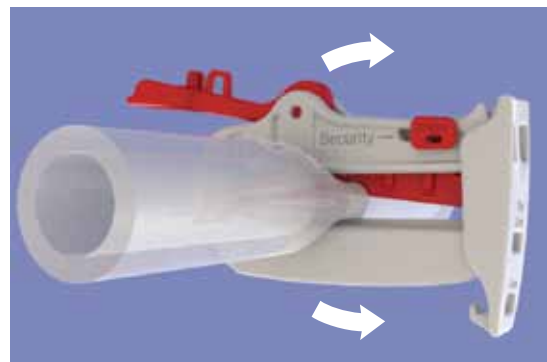
3

- Position the tube in the gate, as close as possible to the hinge of the clamp.



4

- Push Lower-Member to the desired position ("Flow" or "Stop Flow").
- Rotate the Cam-Lever to the closed position.



5

- The tubing is now held in the "Flow" position or locked in the "Stop Flow" position (rendering shows "Stop Flow" position).



For more than four decades, Saint-Gobain Performance Plastics and its family of companies have supplied the world with innovative, high-performance polymer products for the most demanding applications. Our tradition of excellence goes back more than 300 years through our parent company, Compagnie de Saint-Gobain, one of the world's top 100 industrial corporations, with operations in 64 countries. This successful corporation has been built with the single purpose of serving the customer and a commitment to quality and leadership in each of the industries served.



www.microindustries.ie



BIOPHARMACEUTICAL PRODUCTS MANUFACTURING FACILITIES

Saint-Gobain Performance Plastics
700 Warner Blvd.
Taunton, MA 02780
Tel: (800) 722-7106
Tel: (508) 823-7701
Fax: (508) 823-1438

Saint-Gobain Performance Plastics
 2664 Gilchrist Road
 Akron, OH 44305
 Tel: (800) 798-1554
 Tel: (330) 798-9240
 Fax: (330) 798-6968

Saint-Gobain Performance Plastics
 4451 110th Avenue North
 Clearwater, FL 33762
 Tel: (800) 541-6880
 Tel: (727) 531-4191
 Fax: (727) 530-5603

Saint-Gobain Performance Plastics
 Grindwell Norton Ltd,
 Devanahalli Road,
 Off Old Madras Road,
 Bangalore, 560049, India
 Tel: +91 80 28472900
 Fax: +91 80 280472616

Saint-Gobain Performance Plastics
 460 Milltown Road
 Bridgewater, NJ 08807
 Tel: (800) 435-3992
 Tel: (908) 218-8888
 Fax: (908) 218-9009

Saint-Gobain Performance Plastics
 3910 Terry-Diane Street
 Beaverton, MI 48612
 Tel: (888) 387-0067
 Tel: (989) 435-9533
 Fax: (989) 435-2355

Saint-Gobain Performance Plastics
 La Mothe-aux-Aulnaies
 F-89120 Charny, France
 Tel: (33) 3-86-63-78-78
 Fax: (33) 3-86-63-77-77

Saint-Gobain Performance Plastics
 Saint-Gobain KK
 10801-5, Haramura,
 Suwa-gun
 Nagano 391-0106 Japan
 Tel: (81) 266-79-6400
 Fax: (81) 266-70-1001

Consult a Saint-Gobain Performance Plastics Sales Representative for the product and material formulation that best suits your specific application needs.

WWW.BIOPHARM.SAINT-GOBAIN.COM



Pure-Fit® is a registered trademark.
 Patent Number 7,434,779 B2

WARNING: The content of Saint-Gobain tubing materials is not certified by the FDA for implant devices and is neither designed nor intended to be used in medical applications involving permanent implantation in the human body or permanent contact with body fluids or tissues. Failure to comply with this warning may lead to serious bodily injury or death.

IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Saint-Gobain Performance Plastics materials for all intended uses. Laboratory, field or clinical tests must be conducted in accordance with applicable requirements in order to determine the safety and effectiveness for use of materials in any particular application. If intended for medical use, it is the user's responsibility to ensure that the materials to be used comply with all applicable medical regulatory requirements.

Limitation of Liability: Except for products for which Saint-Gobain Performance Plastics (SGPPL) has established a specific written warranty, the products described herein are sold by SGPPL without any guarantee and/or warranty, oral or written. User assumes all risk, 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 these products.

SAINT-GOBAIN PERFORMANCE PLASTICS DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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.