



ITT

Pure-Flo®

# Hygienic Diaphragm Valves



*Engineered for life*

[www.ittpureflo.com](http://www.ittpureflo.com)



# ITT

# Pure-Flo®

## ITT Pure-Flo Capabilities

The Pure-Flo® valve product line began in 1978 as an extension to the venerable ITT Dia-Flo product line. Since then ITT Pure-Flo has been delivering to the Biopharm industry a reliable and process proven stainless steel hygienic diaphragm valve.

The ITT Pure-Flo® brand has earned a reputation for innovation, quality and performance. Providing products from standard forged valves to the most innovative block technology, each and every Pure-Flo valve is engineered to the highest standards.



◆ Lancaster, Pennsylvania

◆ Kirkham, United Kingdom

Lancaster, Pennsylvania is the primary facility for the manufacture of standard Pure-Flo hygienic diaphragm valves and custom designs. Our two shift operation allows for operational flexibility, while our management team brings the technical skills and industry experience necessary for your specific project.

Pure-Flo, UK commands a leadership role throughout Europe with its comprehensive understanding of both European and American codes and standards, seamlessly employing the two to eliminate complexity for our clients. The UK facility mirrors capabilities in the US and meets the market's needs for greater proximity to the source of valve manufacturing.



## 2 Way Valve Bodies

ITT Pure-Flo has developed a line of valve bodies that addresses the needs of the Bioprocessing and Pharmaceutical industries for high quality, welded and quick disconnect process systems. Valve bodies are available in a complete range of mechanically polished and electropolished internal surface finishes as well as a variety of hygienic clamp and weld end configurations. This wide range of options makes it easier for customers to satisfy system design requirements and comply with US and international standards.

The size range, dimensional standards, as well as stainless alloys available for the various Pure-Flo® body types are as follows:

	Forged	Wrought	Cast
<b>ANSI Size</b>	Bio-Tek, 1/2"-4"	Bio-Tek, 1/2"-6"*	1/2"-6"
<b>DIN/ISO Size</b>	DN6-DN100	DN6-DN100	DN15-DN150
<b>316L Stainless Alloy</b>	Dual certified to ASTM A182 Grade 316L, S9 EN 10222-5 EN 1.4435 <sup>1</sup>	ASTM A479, 316L	ASTM A351 Grade CF 3M
<b>Dimensional Standards</b>	OD Tubing, Pipe, ISO/DIN/SMS	OD Tubing, Pipe, ISO/DIN	OD Tubing, Pipe, ISO/DIN

\* Standard on tank bottom valves, divert valves and any block bodied fabrications.

<sup>1</sup> EN 10222-5 EN 1.4435 supercedes DIN 17440, 1.4435





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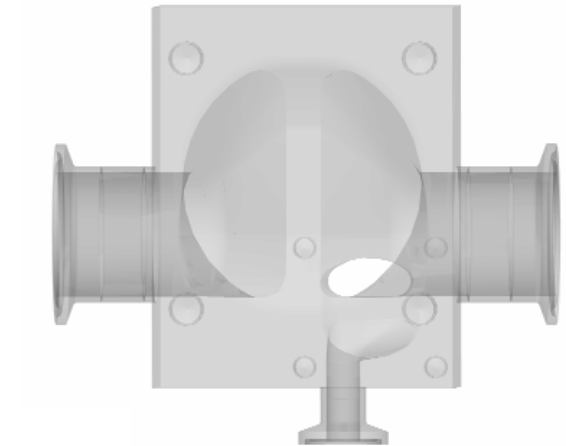
## Integral Block Bodies

ITT Pure-Flo has a long history of developing innovative solutions to satisfy the needs of the Biopharm industry. 3D modeling allows ITT Pure-Flo to develop block body designs that meet the most demanding requirements for:

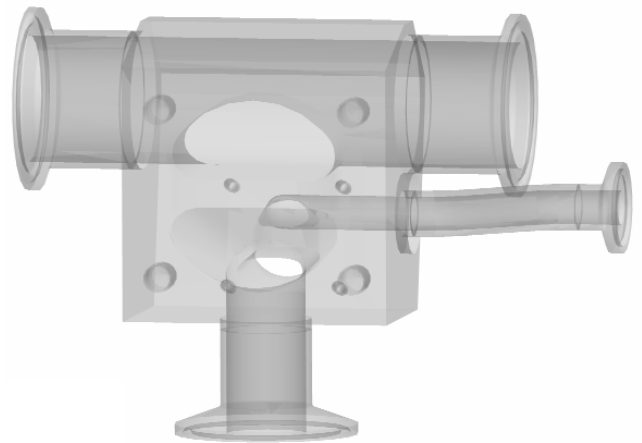
- Minimal contact surfaces
- Minimal internal volume
- Minimal hold-up and deadlegs
- Increased product purity
- Reduced CIP cycle times

Pure-Flo block body design benefits:

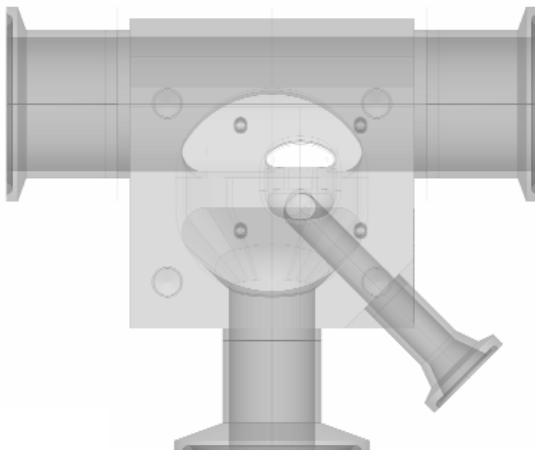
- Cost effective
- Reduces installation time
- Reduces expensive field welds
- Minimizes process piping footprints
- Utilizes standard Pure-Flo® actuation and diaphragms



Integral Sterile Access (ISG)



Zero Static Downstream Purge (ZDP)



ZeroStatic Back to Back Sample (ZSBBS)



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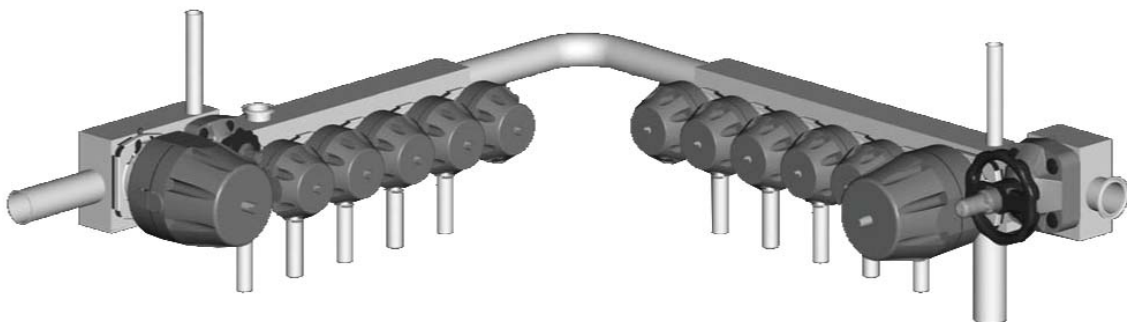
3-Way Divert Valve, Chromatography Valve, and Crossover Valve

“I need fourteen valves to fit in a small space - some vertical with bottom outlets, some vertical with top outlets, some horizontal, various weir sizes, and a couple additional outlets for good measure.”

This request came to ITT Pure-Flo from a BioPharm OEM designing a system that would be located in a small confined space. Therefore, they needed all the above requirements in minimal dimensions. The customer had considered welding all the valves in series. However when all the dimen-

sions were added up the overall length of the assembly created problems. More importantly the significant hold up volume was unacceptable.

Working in tandem with the OEM engineers, ITT Pure-Flo developed a design that addressed all the concerns surrounding the valve. The final design resulted in two machined blocks replacing the original fourteen valves. This significantly reduced dead-leg and hold-up volume and reduced the overall length of the assembly by 50 percent!





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### Topworks

Available in a wide variety of manual and pneumatic actuation to suit most any requirement, the Pure-Flo® actuator product line is designed and constructed to meet the most stringent applications within the Pharmaceutical and Bioprocessing industries. All styles are constructed of FDA compliant materials and feature:

- Compact designs
- Durability and reliability
- Excellent chemical resistance and washdown capability
- Ease of maintenance



### Automation and Control

The Pure-Flo® selection of positioning and switch products are engineered and tested to provide consistent and reliable performance on Pure-Flo® valves. The worldwide network of ITT Pure-Flo Distribution is available to assist in the specification and application of Pure-Flo® automation and control products.





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## Diaphragms

ITT has manufactured diaphragm valves for nearly 50 years and takes great pride in its reputation for supplying the highest quality hygienic diaphragm valves to the BioPharm industry. As the name suggests, the diaphragm is the most critical component of a diaphragm valve. Diaphragms provide positive shut-off between process fluids, protects the process from the environment and in some cases protects the environment from the process. Only Pure-Flo® diaphragms guarantee trouble free performance.



### Genuine ITT Diaphragms Feature:

- Engineered safety
- Reliability
- Industry proven performance
- Reduced total cost of ownership
- Complete product range
- Pure-Flo Topworks compatibility
- Material traceability
- Original Equipment Manufacturer (OEM) materials and specifications
- Global availability
- Global technical support
- Preventative maintenance program development assistance

### Regulatory Compliance:

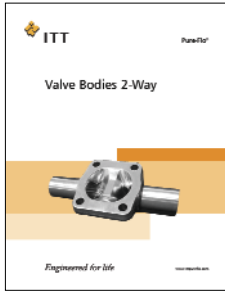
- FDA 21CFR Part 177
- Current US Pharmacopeia Class VI
- Pressure Equipment Directive 97/23/EC
- EMEA/410/01 - TSE/BSE (Transmitting Animal Spongiform Encephalopathy) compliance



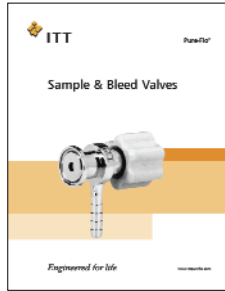
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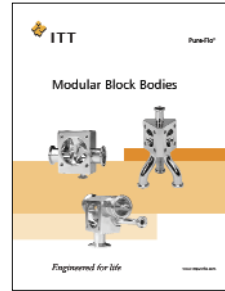
For more information on Pure-Flo® products, order any of the brochures below at [www.ittpureflo.com/litrequest.html](http://www.ittpureflo.com/litrequest.html)



Valve Bodies 2-Way  
(PFVB-06)



Sample & Bleed Valves  
(S&BV-06)



Modular Block Bodies  
(PFMBB-06)



Diaphragms  
(PFDA-08)



Topworks  
(PFTOP-06)



Automation & Control  
(PFA&C-07)



General Engineering  
(PFENG-06)



How to Order  
(PFORD-06)

## ITT Pure-Flo Facilities

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