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Diaphragm Valves



Innovative Solutions ... time tested results

The ITT 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 a process proven stainless steel diaphragm valve to high purity markets around the globe.

The 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.

Whether your process is manufacturing large molecule drugs for the Biopharm industry, bio-fuels, cosmetics or any high purity or aseptic process, ITT will combine decades of experience with cutting edge technology and a dash of ingenuity to provide value added solutions for your processing needs.

Global presence ... local feel

World class manufacturing facilities and engineering resources located throughout the world allows Pure-Flo to support customers with local expertise backed up by the strength and reliability of a global corporation.

Partnership for success

Consistently atop the Forbes lists for best run companies, ITT is a strong, ethical company with visions and values that reflect those of our customers and our employees. By forming partnerships with our customers based on respect, responsibility and integrity your success will be our success.








Product Details - Diaphragm Valve Bodies

			
Type	Forged (2-Way)	Wrought ² (Block Bodies)	Cast
Size Range	0.5-4 in. DN15-100	0.5-6 in. DN15-DN150	0.5-6 in. DN15-150
End Connections	<ul style="list-style-type: none"> • Tri-Clover Tri-Clamp[®] • 14, 16, 18, 20 O.D. Gauge Tubing • Schedule 5, 10, 40 Piping • ISO Ends • SMS 1146 Ends • DIN 11850 Ends 	<ul style="list-style-type: none"> • Tri-Clover Tri-Clamp[®] • 14, 16, 18, 20 O.D. Gauge Tubing • Schedule 5, 10, 40 Piping • ISO Ends • SMS 1146 Ends • DIN 11850 Ends 	<ul style="list-style-type: none"> • Tri-Clover Tri-Clamp[®] • 14, 16, 18, 20 O.D. Gauge Tubing • Schedule 5, 10, 40 Piping • ISO Ends • SMS 1146 Ends • DIN 11850 Ends
Material	316L Stainless Alloy Tri Certified to ASTM A182 Grade 316L, S9, EN 10222-5 EN 1.4435, BN2	316L Stainless Alloy ASTM A479, A240, 316L	316L Stainless Alloy ASTM A351 Grade CF 3M
Special Alloys ¹		C22, C276, AL6XN	
Dimensional Standards	USOD Tubing, Pipe, ISO/DIN/SMS	USOD Tubing, Pipe, ISO/DIN	USOD Tubing, Pipe

¹ Other materials available upon request

² Standard on tank bottom valves, divert valves and any block bodied fabrications.

Product Details - Diaphragms

							
Type	B	17	P	TM17	W1	E1	TM17E
Material	Black Butyl Rubber	EPDM ¹	Buna N	PTFE	White Butyl Rubber	EPDM ¹	PTFE Enhanced Backing
Size Range							
0.25" (DN 8)	•	•		•		•	•
0.375" (DN 10)	•	•		•		•	•
0.5" (DN15)	•	•	•	•	•	•	•
0.75" (DN20)	•	•	•	•	•	•	•
1" (DN25)	•	•	•	•	•	•	•
1.5 (DN32/40)	•	•	•	•	•	•	•
2" (DN50)	•	•	•	•	•	•	•
2.5" (DN65)	•	•	•	•	•	•	•
3" (DN80)	•	•	•	•	•	•	•
4" (DN100)	•	•	•	•	•	•	•
6" (DN150)	•		•	•	•		•
Temperature	-20–250°F -29–121°C	-22–302°F ² -30–150°C ²	10–180°F -12–82°C	-4–329°F -20–165°C	0–225°F -18–107°C	-22–302°F ² -30–150°C ²	-4–329°F -20–165°C
Compliance	FDA USDA	FDA USP	FDA USDA	FDA USP	FDA USDA	FDA USP	FDA USP

¹ For high temperature and/or high cycle applications, contact ITT.

² Temperature range is as follows:

- 4–194°F (-20–90°C) for liquid applications
- 22–285°F (-30–140°C) for continuous steam
- 22–302°F (-30–150°C) for intermittent steam

Product Details - Manually Operated Topworks

							
Type	Bio-Pure	Bio-Pure COP	Bio-Tek	903	913	963	970
Size Range							
0.25-0.5 (DN8-15)	•	•					
BT (DN8-15)			•				
0.5" (DN15)				•	•	•	•
0.75" (DN20)				•	•	•	•
1" (DN25)				•	•	•	•
1.5 (DN32/40)				•	•	•	•
2" (DN50)				•	•	•	•
2.5" (DN65)				•	•	•	
3" (DN80)				•	•	•	
4" (DN100)				•	•	•	
Material	Bonnet: 316 Stainless Steel Handwheel: Polyethersulfone (PES)	Bonnet: 316 Stainless Steel Handwheel: Polyethersulfone (PES)	Bonnet: 316 Stainless Steel Handwheel: Polyarylsulfone (PAS)	Cast Iron coated White Epoxy or PVDF	Bonnet and Handwheel: 316 Stainless Steel	Bonnet and Handwheel: Glass reinforced polyarylsulfane (PAS)	Bonnet: 316 Stainless Steel Handwheel: Glass reinforced polyarylsulfane (PAS)
Maximum Service Pressure	150 psi 10.34 bar	150 psi 10.34 bar	150 psi 10.34 bar	0.5–1": 200 psig 13.8 bar	0.5–1": 200 psig 13.8 bar	150 psig 10.34 bar	0.5–1": 200 psig 13.8 bar
				1.5–2": 175 psig 12.1 bar	1.5–2": 175 psig 12.1 bar		1.5–2": 175 psig 12.1 bar
				3–4": 150 psig 10.3 bar	3–4": 150 psig 10.3 bar		
Maximum Service Temperature	220°F (104°C)	220°F (104°C)	220°F (104°C)	See page D-10	See page D-10	300°F (149°C)	See page D-10
Autoclavable	Yes	Yes	Yes	No	No	Yes	Yes
Sealed Option	No	No	Yes	Yes	Yes	Yes	No




Product Details - Pneumatic Actuators

							
Type	Advantage Excel - Series S	Advantage Excel - Series S	Advantage 2.0 and Advantage Actuator	Advantage Actuator Series 47	Advantage Actuator Series 33	Advantage Piston Actuator (APA)	Dia-Flo Actuator
Size Range							
BP - 0.25-0.5 (DN8-15)	•						
BT - 0.25-0.5 (DN8-15)			•				
0.5" (DN15)		•	•			•	•
0.75" (DN20)		•	•			•	•
1" (DN25)		•	•			•	•
1.5 (DN32/40)		•	•			•	•
2" (DN50)		•	•			•	•
2.5" (DN65)				•	•		•
3" (DN80)				•	•		•
4" (DN100)				•	•		•
Material	316 Stainless Steel	316 Stainless Steel	Bonnet: 316 Stainless Steel Cylinder Cover: Glass reinforced polyarylsulfane (PAS)	Bonnet: Nylon coated ductile iron Cylinder Cover: Vinyl-Ester Thermoset	Bonnet: Nylon coated ductile iron Cylinder Cover: Vinyl-Ester Thermoset	Bonnet: 316 Stainless Steel Cylinder Cover: Polybutylene terephthalate (PBT)	Bonnet: Ductile iron Cylinder Cover: Aluminum
Maximum Service Pressure	150 psig 10.34 bar	150 psig 10.34 bar	150 psig 10.34 bar	150 psig 10.34 bar	150 psig 10.34 bar	150 psig 10.34 bar	See Dia-Flo Catalog
Maximum Service Temperature	300°F (149°C)	300°F (149°C)	300°F (149°C)	300°F (149°C)	300°F (149°C)	292°F (145°C)	
Autoclavable	Yes	Yes	Yes	No	No	No	No
Sealed Option	No	Yes	Yes	Yes	Yes	No	Yes

Product Details - Automation

				
Type	VSP	SP2	SP3	Positioner
Size Range				
0.25" (DN 8)	●	●	●	
0.375" (DN 10)	●	●	●	
0.5" (DN15)	●	●	●	
0.75" (DN20)	●	●	●	●
1" (DN25)	●	●	●	●
1.5 (DN32/40)	●	●	●	●
2" (DN50)	●	●	●	●
2.5" (DN65)		●		●
3" (DN80)		●		●
4" (DN100)		●		●
Cover Material	Polysulfone, FDA compliant	Polyarylsulfone (PAS) Thermoplastic FDA compliant (Transparent Plastic)	Polysulfone, FDA compliant	Aluminum Brass Stainless Steel
Base Housing Material	Polyamide, FDA compliant	Polyarylsulfone (PAS) Thermoplastic FDA compliant. (Black Plastic)	Polyamide, FDA compliant	Aluminum Brass Stainless Steel
Temperature Rating	140°F (60°C)	150°F (65°C)	140°F (60°C)	150°F (65°C)
Autoclavable	No	No	No	No
Electric Connection	One M20 conduit port (1/2" NPT adapter available).	Two 1/2" NPT conduit ports	One 1/2" NPT conduit port	N/A
Rotation	360°	Increments of 45°	360°	
Mechanics	Proximity and Mechanical Switches	Proximity and Mechanical Switches	Proximity and Mechanical Switches	Proportioned valve control
Approvals	FM / CSA / Cenelec Zones 0, 1, 2 / UL	FM / CSA / Cenelec Zones 0, 1, 2 / UL	FM / CSA / Cenelec Zones 0, 1, 2 / UL	

Product Details - Control

			
Type	Solenoid	Transducer	Network Block
Size Range			
0.25" (DN 8)	•	•	•
0.375" (DN 10)	•	•	•
0.5" (DN15)	•	•	•
0.75" (DN20)	•	•	•
1" (DN25)	•	•	•
1.5 (DN32/40)	•	•	•
2" (DN50)	•	•	•
2.5" (DN65)	•	•	•
3" (DN80)	•	•	•
4" (DN100)	•	•	•
Cover Material		Aluminum	
Base Housing Material	Brass Polyamide Stainless	Aluminum	Glass filled nylon
Temperature Rating	-10-100°C	-40-160°F	-40-70°C
Autoclavable	No	No	No
Electric Connection	DIN 43650		
Protection	IP65		IP65