

Sanitary Diaphragm Valve

Description

The type 673 is a compact valve with many features which make it ideal for pharmaceutical and bio-processing applications.

Standard Features

- Compact Design
- Ultem® 1000 handwheel
- Stainless steel bonnet with sanitary internals
- Internal adjustable travel stop (U.S. Pat. 5 377 956)
- Adjustable minimum flow regulator
- Autoclavable
- Visual position indicator
- FDA compliant diaphragms
- Body material 316L stainless steel
- Triclamp®, O.D. Tubing, ISO, and DIN end connections
- Sizes 1/2" - 2"

Typical Applications

- Pharmaceutical manufacturing
- Bioprocessing
- Cosmetic
- Brewery Services
- Food and Beverage

Also Available from Tri-Canada and Gemu

- Type 601/602 manual diaphragm valves (1/4", 3/8", 1/2")
- Type 611/612 manual diaphragm valves (3/8" - 3/4")
- Type 687/695 air operated diaphragm valves (1/2" - 6")
- Cluster valve assemblies for both horizontal and vertical orientations
- Zero Static T-valves, Duplex, Multiported, Bottle Sampling, Tank Bottom, Side Sampling and custom fabrications upon request.

Other Biopharm Products available from Tri-Canada

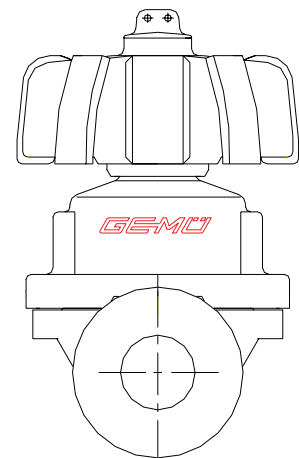
- Replacement diaphragms for ITT, Saunders and Gemu valves
- High purity hose assemblies
- BPE Spec tubing and fittings
- Fristam centrifugal pumps
- Class VI gaskets



Type 673

Available with Tri-Clamp connections from stock at

Tri-Canada



Type 673 Technical & Dimensional Data

Size (Inches)	Nominal diameter (mm)	Working pressure (psi)	Body configuration D=straight through (weir)	C _v -value (gpm)		Weight (lbs)
				ISO connection	O.D. Tubing	
1/2	15	0 - 150	D	12.3	5.9	2.9
3/4	20	0 - 150	D	15.2	12.3	2.9
1	25	0 - 150	D	31.6	13.5	2.9
1 1/4	32	0 - 150	D	50.3	29.3	6.0
1 1/2	40	0 - 150	D	58.5	46.8	6.0
2	50	0 - 150	D	74.9	67.6	10.3

All pressures are gauge pressures when applied upstream. The C_v values vary due to differences in valve construction (i.e., Port size, body material, diaphragm material, etc.)

Body Configuration	Ref.no.
Tank bottom valve body	B D E M T U
2-way valve body	
2-way angled valve body	
Multiported valve body	
Zero Static T-Valve	
U-bend	

Surface finish							Ref.no.
μ-in.	BPE Surface Designation	Ra Average [Note (1)]	Ra Average [Note (1)]		Ra Max		
			μ-in.	μm	μ-in.	μm	
32	Mechanical						3
25	Mechanical	SFV3	25	0.625	30	0.750	1502
20	E-pol	SFV6	20	0.500	25	0.625	1508
20	Mechanical	SFV2	20	0.500	25	0.625	1507
15	E-pol	SFV5	15	0.375	20	0.500	1537
11	Mechanical	SFV1	15	0.375	20	0.500	1536
10	E-pol	SFV4	10	0.250	15	0.375	1516

GENERAL NOTE: All Ra readings are taken across the grain.

NOTE: (1) The average Ra is derived from two readings taken at different locations.

Take Out Dimensions for Standard Connections

Size	DN	Units	Con. Ref. No.		(59)	(80)	(94)	(93)	(95)
			Ød	s	L1	L2	L3	L4	L5
1/2	15	mm	12.70	1.65	120.00	101.60	184.15	110.80	142.88
		in	0.500	0.065	4.724	4.000	7.250	4.362	5.625
3/4	20	mm	19.05	1.65	120.00	101.60	190.50	110.80	146.05
		in	0.750	0.065	4.724	4.000	7.500	4.362	5.750
1	25	mm	25.40	1.65	120.00	114.30	203.20	117.15	158.75
		in	1.000	0.065	4.724	4.500	8.000	4.612	6.250
1 1/2	40	mm	38.10	1.65	153.00	139.70	234.95	146.35	187.33
		in	1.500	0.065	6.024	5.500	9.250	5.762	7.375
2	50	mm	50.80	1.65	173.00	158.75	266.70	165.88	212.73
		in	2.000	0.065	6.811	6.250	10.500	6.531	8.375

- L1 = Connection Code 59 = Standard butt-weld
- L2 = Connection Code 80 = Standard clamp
- L3 = Connection Code 94 = Standard butt-weld extension (AWF)
- L4 = Connection Code 93 = Standard clamp X butt-weld
- L5 = Connection Code 95 = Standard clamp X butt-weld extension (AWF)

Working pressure: 0 - 150 psi

Maximum permissible temperature of working medium:
302°F / 150° C (depending on diaphragm material/cycle time)

The valve will seal against flow in either direction up to a working pressure of 150 psi (gauge pressure).

Diaphragm material	Ref.no.
2nd generation, modified Teflon® with Ethylene-propylene backing 2-piece molded closed	TFM/EPDM 5E
2nd generation, modified Teflon® with Silicone backing 2-piece molded closed	TFM/VMQ 5S
Ethylene-propylene Rubber for saturated steam maximum permissible temp. 302° F / 150° C	EPDM 13
Ethylene-propylene Rubber for saturated steam maximum permissible temp. 302° F / 150° C	EPDM 16
2nd generation, modified Teflon® with Ethylene-propylene backing (2-piece)	TFM/EPDM 50
2nd generation, modified Teflon® with Ethylene-propylene backing	TFM/EPDM 52

All diaphragms listed conform to the FDA code of Federal Regulations paragraph 177.2600 of section 21.

Drain Angles

Size	DN	Degrees
1/2	15	46°
3/4	20	55°
1	25	60°
1 1/4	32	65°
1 1/2	40	65°
2	50	70°

Drain angles are for BS O.D. Tubing only.

