

## Sanitary Diaphragm Valve

### Description

The type 612 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 3/8", 1/2", 3/4"

### Typical Applications

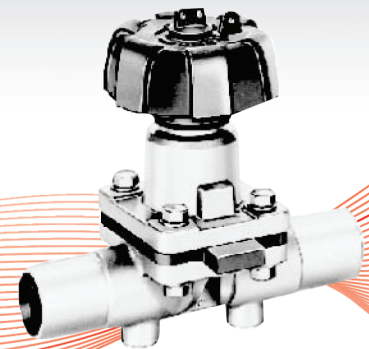
- Pharmaceutical manufacturing
- Bioprocessing
- Cosmetic
- Brewery Services
- Food and Beverage

### Also Available from Tri-Canada and Gemu

- Type 601/602 manual diaphragm valves (1/4", 3/8", 1/2")
- Type 671/673 manual diaphragm valves (1/2" - 6")
- 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

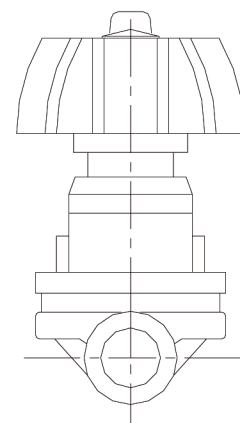
- Replacement diaphragms for ITT, Saunders and Gemu valves
- High purity hose assemblies
- BPE Spec tubing and fittings
- Fristam centrifugal pumps
- Class VI gaskets



**Type 612**

Available with Tri-Clamp connections from stock at

**Tri-Canada**



# Type 612 Technical & Dimensional Data

Size (In.)	Nominal bore (mm)	Body Configuration D=straight through	Working pressure (psi)	C <sub>v</sub> -value (gpm)		Connection  Welded spigots	Weight (lbs)
				ISO Connection	O.D. Tubing		
3/8	10	D	0 - 150	5.62	3.51	See table	1.0
1/2	15	D	0 - 150	7.02	4.10		1.5
3/4	20	D	0 - 150	-	5.60		1.9

Maximum permissible temperature of working medium:  
302° F / 150° C (Depending on the diaphragm material)

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

All pressures values are specified in psi above atmospheric. C<sub>v</sub> values may be different according to body, diaphragm and connection variants. Please see out data sheet "Technical Information"

Body Configuration	Ref.no.	Diaphragm material	Ref.no.
Tank bottom valve body 2-way valve body 2-way angled valve body Multiported valve body Zero Static T-Valve U-bend	B D E M T U	Ethylene-propylene Rubber for saturated steam: maximum permissible temperature 302° F / 150° C	EPDM 13
		Ethylene-propylene Rubber for saturated steam: maximum permissible temperature 302° F / 150° C	EPDM 16

Surface finish							Ref.no.
μ-in.		BPE Surface Designation	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

2nd generation, modified Teflon® with Ethylene-propylene backing (2-piece) TFM/EPDM 50

2nd generation, modified Teflon® with Ethylene-propylene backing TFM/EPDM 52

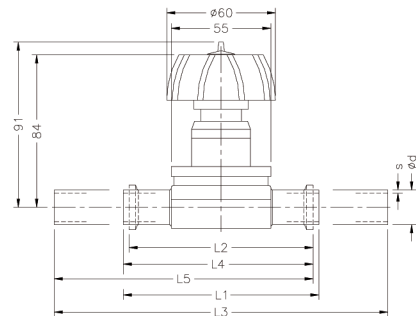
All diaphragms listed conform to the FDA code of Federal Regulations paragraph 177.2600 of section 21.

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 Dimension For Standard Connections

Size	DN	Units	Con. Ref. No.		(59)	(80)	(94)	(93)	(95)
			Ød	s	L1	L2	L3	L4	L5
3/8	10	mm	9.53	1.25	108.00	88.90	184.20	98.45	136.55
		in	0.375	0.049	4.252	3.500	7.252	3.876	5.376
1/2	15	mm	12.70	1.65	108.00	88.90	184.20	98.45	136.55
		in	0.500	0.065	4.252	3.500	7.252	3.876	5.376
3/4	20	mm	19.05	1.65	108.00	101.60	184.20	104.80	142.90
		in	0.750	0.065	4.252	4.000	7.252	4.126	5.626

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)



### Drain Angles

Size	DN	Degrees
3/8"	10	60°
1/2"	15	65°
3/4"	20	70°

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