

# Sanitary Diaphragm Valve

## MANUALLY OPERATED



### DESCRIPTION

The type 501 is a compact diaphragm valve with many features which make it ideal for pharmaceutical and bio-processing applications.

### STANDARD FEATURES

- Compact design
- PPS bonnet with sanitary internals
- Autoclavable
- Visual position indicator
- FDA compliant diaphragms
- 316L stainless steel body
- Triclamp®, O.D. Tubing
- Size 1", 1.5", 2

### AVAILABLE OPTIONS

#### *Special Connections*

Hose barb, tube extensions, and others available upon request.

#### *Materials*

316L stainless steel

### TYPICAL APPLICATIONS

- Pharmaceutical Manufacturing
- Bioprocessing
- Cosmetic
- Brewery Service
- Food and Beverage
- Semiconductor
- High Purity Chemicals

# Type 501 Technical Data

Size (In.)	Nominal Diameter (mm)	Working Pressure (psi)	Cv-Value (gpm) O.D. Tubing	Body Configuration AA = Straight Through (Weir)	Weight* (lbs.) 501	Ref. No.
1.00	25	0-150	13.5	AA	TBA	02
1.50	40	0-150	46.8	AA	6.0	03
2.00	50	0-150	67.6	AA	6.5	05

**Max. Perm. Temperature of the Operating Medium:** 302° F (150° C) (Depending on diaphragm material)

The valve is completely sealed in both flow directions up to full operating pressure.

All pressure values are specified in psig.

\* Weight shown is for a diaphragm valve assembly.

Body Configuration	Ref. No.
2-way valve body	AA

Connection	Ref. No.
Butt weld OD tubing Sizes 1/4-3/8" 20 gauge .035" wall Sizes 1/2" 16 gauge .065" wall	428
Triclamp®	419
O.D. Tubing by Triclamp®	420
Extended O.D. Tubing	429
Extended O.D. Tubing by Triclamp®	421

Body Material	Ref. No.
Machined block	
Stainless Steel 316L = 1.4435 (ASTMA179)	SS

Diaphragm Material	Ref. No.
Ethylene-Propylene Rubber (EPDM) for saturated steam max 302° F	16
Modified Teflon® (TFM/EPDM) with Ethylene-Propylene backing	T1
All diaphragms listed conform to the FDA code of Federal Regulations paragraph 177.2600 of section 21; and US Pharmacopia Class VI.	

Control Function	Ref. No.
Manually operated	M

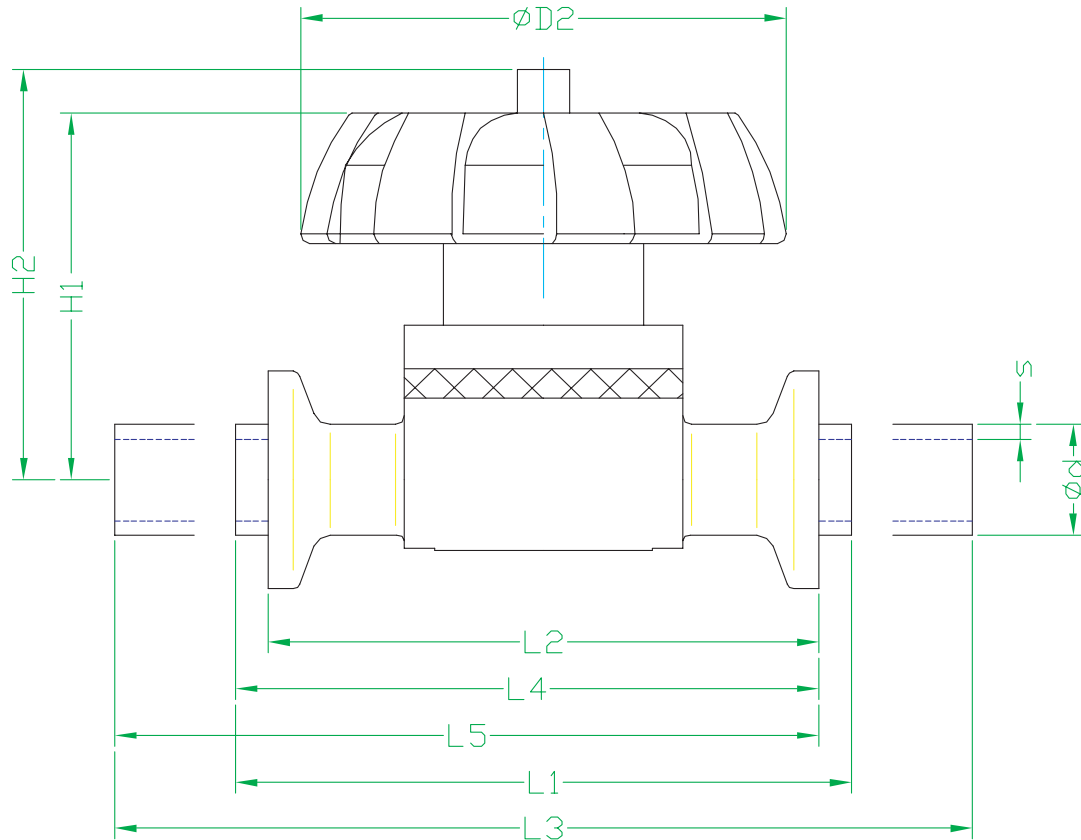
Surface Finish							Ref. No.
μ-in.		BPE Surface Designation	Ra Average [Note (1)]		Ra Max μ-in.	μ-in.	
			μ-in.	μm			
25	Mechanical	SFV3	25	0.625	30	0.750	06
20	Electro polish	SFV6	20	0.500	25	0.625	07E
20	Mechanical	SFV2	20	0.500	25	0.625	07
15	Electro polish	SFV5	15	0.375	20	0.500	08E
11	Mechanical	SFV1	15	0.375	20	0.500	09
10	Electro polish	SFV4	10	0.250	15	0.375	09E

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

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

Order Example	501	100	AA	419	SS	07	T1	M
Type of valve	501							
Size DN		100						
Body configuration			AA					
Connection (valve body)				419				
Body Material					SS			
Surface finish						07		
Diaphragm material							T1	
Control function								M

1" 316L SS Diaphragm Valve, sanitary clamp ends, Manual bonnet, Teflon backed EPDM diaphragm, 20 Ra.



**Take Out Dimension For Standard Connections**

Size	DN	Units	Con. Ref. No.				(428)	(419)	(429)	(420)	(421)
			Ød	s	H1	H2	L1	L2	L3	L4	L5
1	25	mm	25.40	1.65	115	126	120.00	114.30	203.20	117.15	158.75
		in	1.00	0.065	4.52	4.96	4.72	4.50	8.00	4.61	6.25
1-1/2	40	mm	38.10	1.65	140	155	153.00	139.70	234.95	146.35	187.33
		in	1.50	0.065	5.51	6.10	6.02	5.50	9.25	5.76	7.37
2	50	mm	50.8	1.65	150	166	173.00	158.75	266.70	165.88	212.73
		in	2.00	0.065	5.90	6.53	6.81	6.25	10.50	6.53	8.37

- L1 = Connection Code 59 = Standard butt-weld – Ref. No. 428
- L2 = Connection Code 80 = Standard clamp – Ref. No. 419
- L3 = Connection Code 94 = Standard butt-weld extension (AWF) – Ref. No. 429
- L4 = Connection Code 93 = Standard clamp X butt-weld – Ref. No. 420
- L5 = Connection Code 95 = Standard clamp X butt-weld extension (AWF) – Ref. No. 421

**Drain Angles**

Size	DN	Degrees
1"	25	60°
1-1/2"	40	63°
2"	50	70°

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

**Sanitary Process Components**

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