

# High Purity Diaphragm Valve Program



**bürkert**  
FLUID CONTROL SYSTEMS



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# High Purity Diaphragm Valve Program



Design and Development



Forging



Machining



Polishing



Certification

# High Purity Diaphragm Valve Standard Body

## 2-way Diaphragm Valve

316L Forgings and Machined Block (100mm)  
4mm to 100mm Orifice to BPE Standards  
1/8" to 4" US Tube OD and Tri-Clamp® Connections



## Diaphragm Zero Static Tee Valve

316L Machined Block to BPE Standards  
4mm to 100mm Orifice  
1/8" to 4" US Tube OD and Tri-Clamp® Connections



## Diaphragm Diverter Valve

316L Machined Block to BPE Standards  
4mm to 100mm Orifice  
1/8" to 4" US Tube OD and Tri-Clamp® Connections



## Diaphragm Tank Bottom Valve

316L Weld Forging, Machined Block to BPE Standards  
4mm to 100mm Orifice  
1/8" to 4" US Tube OD and Tri-Clamp® Connections



## SAP and GMP Tandem Diaphragm Valve

316L Welded Forging to BPE Standards  
4mm to 100mm Orifice  
1/8" to 4" US Tube OD and Tri-Clamp® Connections  
All Configurations, Dimension Table for Fabricators



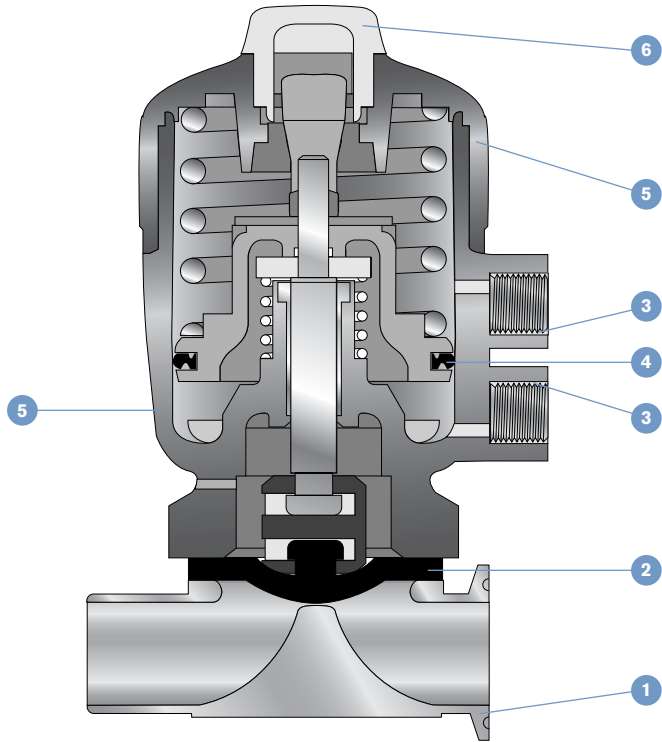
All styles available in BPE finish specifications SVF1 through SVF6 ( 10 to 25 Ra, and EP )

Available Certifications include: Profilometer Data, USP, FDA, 3A  
Metallurgy Mill Test Report

Connections on request to DIN, ISO and SMS standards.

# High Purity Diaphragm Valve Operators

## Automatic Operators



- 1. Valve body:** Forged 316L stainless steel
- 2. Diaphragm:**
  - EPDM
  - FKM
  - CSM (Hypalon)
  - TFM & EPDM
- 3. Air connection inserts:** 303 SS
- 4. Cylinder seal:**
  - PPS Actuator – FKM
  - PA Actuator – Perbunan (NBR)
- 5. Actuator housing:**
  - PPS (Polyphenylene Sulphide)
  - PA (Polyamide, optional)
- 6. Position indication:**
  - PPS Actuator – Ultrason®
  - PA Actuator – Polycarbonate

Ambient temperature

PA-Actuator: 14°F to 140°F

PPS-Actuator: 41°F to 284°F

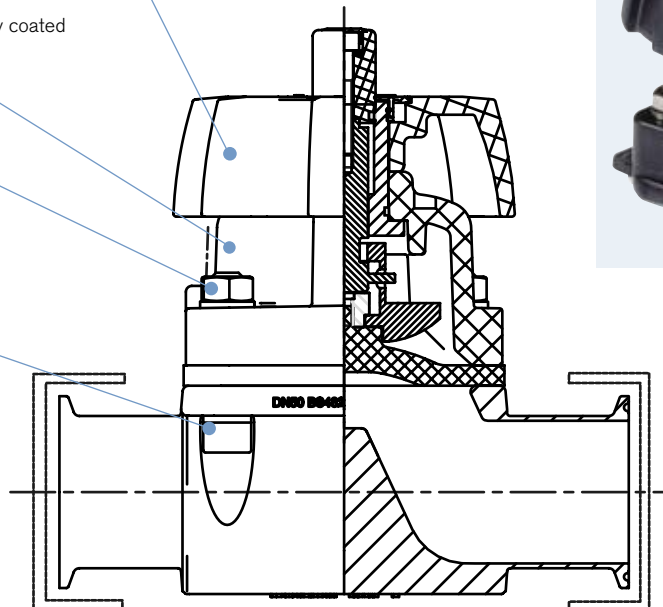
## Manual Operators

DN 8-50: PPS or stainless steel 316  
 DN 65-100: Grey cast iron, white epoxy coated

DN 8-50: PPS or stainless steel 316  
 DN 65-100: Grey cast iron, white epoxy coated

Stainless steel 316

Stainless steel 316



# High Purity Diaphragm

## TFM 1600 Diaphragms

Temperature Rating: -30°F to 295°F Continuous Steam  
SIP for 10 minutes to 330°F

Temperature ratings are an approximation to provide reasonable life under normal conditions. All applications are subject to variations due to process, CIP and SIP chemicals and procedures and should be proved through testing.

This product complies with FDA for food contact and is certified to US Pharmacopoeia 24, Section <88>. The Burkert TFM diaphragm complies with 21CFR 177.1550 (a) and exceeds requirements in USP XXIV Class VI Biological Reactivity testing. ID numbers are molded onto the diaphragm, allowing traceability to the original raw material blend.



## # 7 EPDM Peroxide Cured Diaphragms

Temperature Rating: -40°F to 250°F Continuous  
Steam/SIP for 10 minutes at 250°F  
Other Process 10 minutes to 302°F

Temperature ratings are an approximation to provide reasonable life under normal conditions. All applications are subject to variations due to process, CIP and SIP chemicals and procedures and should be proved through testing.

This product complies with FDA for food contact and is certified to US Pharmacopoeia 24, Section <88>. The Burkert EPDM diaphragm complies with 21CFR 177.2600 and exceeds requirements in USP XXIV Class VI Biological Reactivity testing. ID numbers are molded onto the diaphragm, allowing traceability to the original raw material blend.

# Diaphragm Valve Accessories

Valve Positioning and Position Indication with  
Bus Options: DeviceNet, PROFIBUS DP, PROFIBUS PA, HART, AS-I and (others)

## Position Indicator



**Type 1062**  
Electrical position feedback. Available with mechanical or inductive switches



**Type 1060**  
Electrical Feedback Signaller with optical position indication



**Type 1071**  
External magnetic inductive position feedback (requires magnetic position)

## Continuous Control Head



**Type 1067**  
SIDE Control 3-wire with integrated PID for continuous control and positioner



**Type 8630**  
TOP Control with integrated PID for continuous control and positioner



**Type 8635**  
SIDE Control 2-wire with integrated PID for continuous control and positioner

## Banjo Valves



**Type 300**  
Solenoid banjo valve



**Type 6012**  
Solenoid banjo valve



**Type 6014**  
Solenoid banjo valve

## Stroke Limiter



**Min./Max. Stroke Limiter**  
Minimum/Maximum stroke limitation with optical position indication



**Max. Stroke Limiter**  
Maximum stroke limitation

## ON/OFF Control HEAD



**Type 8631**  
TOP Control with control functions and AS-i option



**Type 8633**  
Mini TOP with control functions and AS-i option

## AirLINE



**Type 8644**  
PHOENIX INLINE Remote Process Actuation Control System



**Type 8644**  
Rockwell Point I/O System Remote Process Actuation Control System



**Type 8644**  
Siemens ET 200s Remote Process Actuation Control System



**Type 8644**  
WAGO I/O System 750 Remote Process Actuation Control System

## NAMUR Valves



**Type 6517**  
Solenoid NAMUR valve



**Type 6519**  
Solenoid NAMUR valve Intrinsically safe solenoid valve, EEx ia IIC T6



**Type 5470**  
Solenoid NAMUR valve Intrinsically safe solenoid valve, EEx ia IIC T6, P < 0.8 W



**Type 6520**  
Intrinsically safe solenoid valve, optionally for Profibus PA, P < 10 mW

## I/O Box



**Type 8642/8643**  
PROFIBUS PA or Fieldbus Foundation H1 Intrinsically safe EEx ia IIC T6  
4 outputs for pilot valves  
8 inputs for NAMUR switches  
Options:  
- FM / CSA approval

## Manual Override



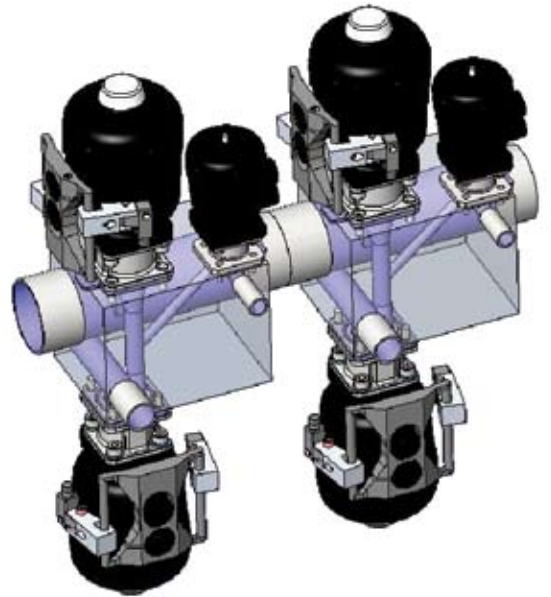
With optical position indication for Normally Closed valves

# Diaphragm Valve Custom Solutions



From Burkert,  
Diaphragm Valve Form and Function...

...is only limited by...



...our imagination!

# Diaphragm Valve Technical Data

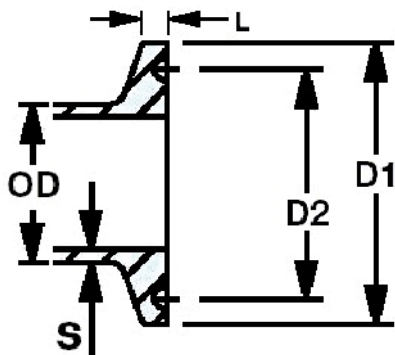
## Pressure Ratings – All Automatic Diaphragm Valve Types



Valve Size	Actuator	Pressure Ratings												C <sub>v</sub>
		NC		EPDM NO		DA		NC		TEFLON NO		DA		
		PSI [Max]	Pilot	PSI [Max]	Pilot	PSI [Max]	Pilot	PSI [Max]	Pilot	PSI [Max]	Pilot	PSI [Max]	Pilot	
1/4"	C(40)	150	70	150	60	150	60	150	70	130	80	130	80	1
3/8"	C(40)	150	70	150	60	150	60	150	70	130	80	130	80	1
1/2"	E(63) D(50)	125	70	150	70	150	70							5
1/2"	E(63)	150	70	150	60	150	60	150	70	150	70	150	70	5
3/4"	F(80)	150	70	150	60	150	60	150	80	150	60	150	60	8
1.0"	F(80)	150	80	150	80	150	80	110	80	130	80	130	80	14
1.5"	H(125)	150	80	150	70	150	70	150	80	150	75	150	75	35
2.0"	H(125)	115	80	150	80	150	80	100	80	100	80	100	80	60
2.5"	H(125)	115	80	150	80	150	80	100	80	100	80	100	80	60
This valve is a 2" orifice body formed to 2.5" OD connections														
3.0"	K(175)	70	80	70	80	70	80	65	80	65	60	65	60	185
3.0"	L(225)	140	80	140	80	140	80	140	80	100	60	100	60	
4.0"	L(225)	60	80	60	60	60	60	50	80	60	60	60	60	270

# Diaphragm Valve Technical Data

Dimensions – All Diaphragm Valve Types, US Tri-Clamp® Connections



Port Size	OD	D1	D2	L	S, wall	
					inch	gauge
1/4"	0.250	0.992	0.797	0.143	0.035	20
3/8"	0.375	0.992	0.797	0.143	0.035	20
1/2"	0.500	0.992	0.797	0.143	0.065	16
3/4"	0.750	0.992	0.797	0.143	0.065	16
1.0"	1.000	1.984	1.718	0.112	0.065	16
1.5"	1.500	1.984	1.718	0.112	0.065	16
2.0"	2.000	2.516	2.218	0.119	0.065	16
2.5"	2.500	3.047	2.781	0.112	0.065	16
3.0"	3.000	3.579	3.281	0.112	0.065	16
4.0"	4.000	4.682	4.344	0.112	0.083	14

## Diaphragm Valve Part Number Code

Valve Type	
Code	Description
2031	Diaphragm Valve Automatic
3233	Diaphragm Valve Manual
2033	Tank Bottom Valve Auto
3235	Tank Bottom Valve Manual
2032	Zero Static Tee Automatic
3234	Zero Static Tee Manual
2731	Diaphragm Control Valve
2732	Zero Static Control Valve
2733	Tank Bottom Control Valve
SYST	Multi Orifice Custom

Circuit Function	
Code	Description
A	Normally Closed
B	Normally Open
I	Double Acting
0	Manual

Valve Flow Path/Position	
Code	Description
2	2 Way / 2 Position
3	3 Way / 2 Position
6	2 Way / 3 Position

Orifice Size	
Code	Description
04,0	5/32" (4mm)
06,0	1/4" (6mm)
08,0	5/16" (8mm)
10,0	3/8" (10mm)
15,0	1/2" (15mm)
20,0	3/4" (20mm)
25,0	1" (25mm)
32,0	1.25" (32mm)
40,0	1.5" (40mm)
50,0	2" (50mm)
65,0	2.5" (65mm)
80,0	3" (80mm)
0100	4" (100mm)

Diaphragm Material	
Code	Description
ES	TFM-EPDM Steam, USP VI
AU	EPDM USP Class VI

Body Material	
Code	Description
VS	Forged 316L, BPE
VI	Mach Block 316L, BPE
VG	Cast 316L <1% Ferrite
VH	Mach Block 316L, AISI

Port Type / Size	
Code	Description
TG40	Tri-Clamp®, 1/4" OD tube
TG41	Tri-Clamp®, 3/8" OD tube
TG42	Tri-Clamp®, 1/2" OD tube
TG43	Tri-Clamp®, 3/4" OD tube
TG44	Tri-Clamp®, 1" OD tube
TG45	Tri-Clamp®, 1 1/2" OD tube
TG46	Tri-Clamp®, 2" OD tube
TG47	Tri-Clamp®, 2 1/2" OD tube
TG48	Tri-Clamp®, 3" OD tube
TG49	Tri-Clamp®, 4" OD tube
SA90	Butt Weld, 1/4" OD tube
SA91	Butt Weld, 3/8" OD tube
SA92	Butt Weld, 1/2" OD tube
SA93	Butt Weld, 3/4" OD tube
SA94	Butt Weld, 1" OD tube
SA95	Butt Weld, 1 1/2" OD tube
SA96	Butt Weld, 2" OD tube
SA97	Butt Weld, 2 1/2" OD tube
SA98	Butt Weld, 3" OD tube
SA99	Butt Weld, 4" OD tube
TC40	Tri-Clamp®, ISO 8mm
TC41	Tri-Clamp®, ISO 10mm
TC42	Tri-Clamp®, ISO 15mm
TC43	Tri-Clamp®, ISO 20mm
TC44	Tri-Clamp®, ISO 25mm
TC45	Tri-Clamp®, ISO 32mm
TC46	Tri-Clamp®, ISO 40mm
TC47	Tri-Clamp®, ISO 50mm
TC48	Tri-Clamp®, ISO 65mm
TC49	Tri-Clamp®, ISO 80mm
TC50	Tri-Clamp®, ISO 100mm
SA40	Butt 8, ISO (13,5 OD)
SA41	Butt 10, ISO (17,2 OD)
SA42	Butt 15, ISO (21,3 OD)
SA43	Butt 20, ISO (26,9 OD)
SA44	Butt 25, ISO (33,7 OD)
SA45	Butt 32, ISO (42,4 OD)
SA46	Butt 40, ISO (48,3 OD)
SA47	Butt 50, ISO (60,3 OD)
SA48	Butt 65, ISO (76,1 OD)
SA49	Butt 80, ISO (88,9 OD)
SA39	Butt 100, ISO (114,3 OD)
INT	Internal for Multi Orifice

Options	
Code	Description
8630	Positioner Type 8630
1067	Positioner Type 1067
1062	Pos Switch, Type 1062
4AAA	4 3A Drain Holes

Internal Finish	
Code	Description
NOF1	SF1 15 Ra Avg, 280 Grit
NO14	SF2 20 Ra Avg, 240 Grit
NOF3	SF3 25 Ra Avg, 180 Grit
NO20	SF4 10 Ra Avg, 330 Grit, EP
NO17	SF5 15 Ra Avg, 280 Grit, EP
NOF6	SF6 20 Ra Avg, 240 Grit, EP

External Finish	
Code	Description
NO01	Glass Bead, 64 Ra Avg
NO19	Polished, 64 Ra Avg
NO09	EP, 128 Ra Avg
NO15	EP, 35 Ra Avg
NO13	As Cast, Machined, Forged

Construction	
Code	Description
W	Weld Construction
B	Mono Block
SAX	Sterile Access
GMX	Good Manufacturing
( x = 1,2,3... or A, B, C, D )	

Actuator Version	
Code	Description
C	PA Automatic
D	PPS Automatic
F	PA Control Actuator
I	PPS Control Actuator
D050	PPS Wheel, PPS Bonnet
D051	PPS Wheel, SS Bonnet
D052	SS Wheel, SS Bonnet
D058	ZST- PPS w/ SS Bonnet
D085	White Epoxy Cast Iron
HA24	Locking Device

Auto Actuator Size	
Code	Description
C	40 mm
D	50 mm
E	63 mm
F	80 mm
G	100 mm
H	125 mm
K	175 mm
L	225 mm

# Diaphragm Valve Part Number Configuration



**Part Number Configuration Example - Two Port Body**

2031	A	2	25,0	ES	VS	TG44	C - F	NO14	NO01	XXX	XXX	XXX
Valve Type	Circuit Function	Valve Positions	Orifice Size	Diaphragm Material	Body Material	Port Type / Size	Actuator Version / Size	Internal Finish	External Finish	Options		



**Part Number Configuration Example - Multi Port Body**

2032	A	2	25,0	ES	B	VI	SA94	SA94	C - F	NO14	NO01	XXX	XXX
Valve Type	Circuit Function	Valve Positions	Orifice Size	Diaphragm Material	Construction	Body Material	Port 1 & 2 Type	Port 3 Type / Size	Actuator Version / Size	Internal Finish	External Finish	Options	

[For Port over 3, please provide a schematic description]

# Diaphragm Valve Part Number Configuration



## Part Number Configuration Example - Multi Orifice Body

SYST	B	2	3	ES	VI	NO14	NO13
Valve Type	Construction	Number of Orifices	Number of Ports	Diaphragm Material	Body Material	Internal Finish	External Finish

First segment describes the body.



2031	A	2	25,0	SA94	SA94	-	C - F	XXX	XXX
Valve Type	Circuit Function	Valve Positions	Orifice Size	Port Type (as needed)	Port Type (as needed)	Actuator Version / Size	Options		

Subsequent segments describe each orifice and connected ports.

2031	A	2	25,0	SA94	SA94	-	C - F	XXX	XXX
Valve Type	Circuit Function	Valve Positions	Orifice Size	Port Type (as needed)	Port Type (as needed)	Actuator Version / Size	Options		

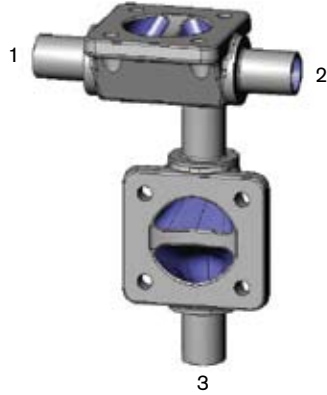
Add segments for each additional orifice.

[For Port over 3, please provide a schematic description]

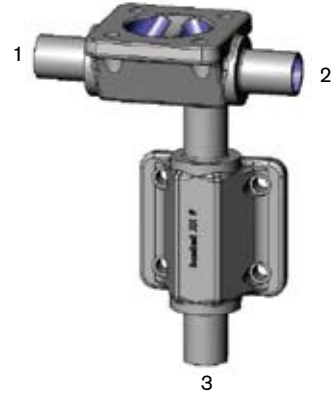
# Tandem Diaphragm Valve Configurations

## Good Manufacturing Practice

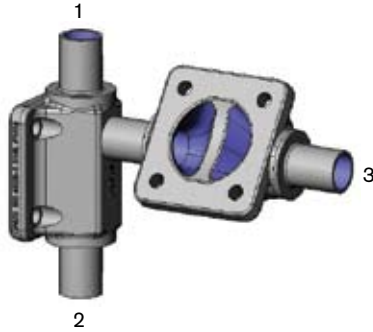
GMP 1



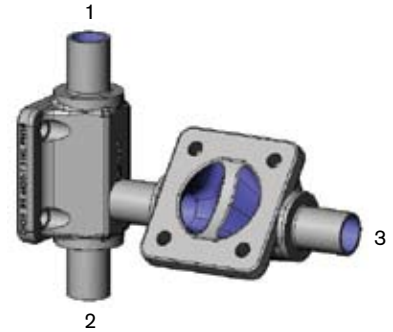
GMP 2



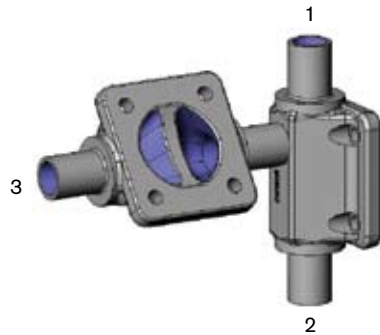
GMP 3



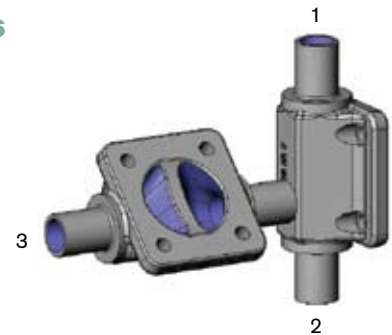
GMP 4



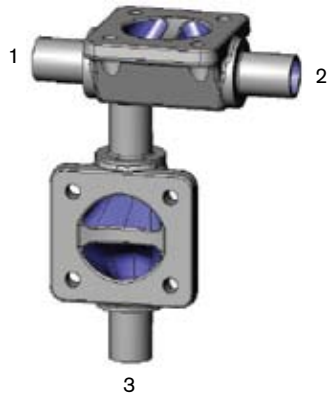
GMP 5



GMP 6



GMP 7



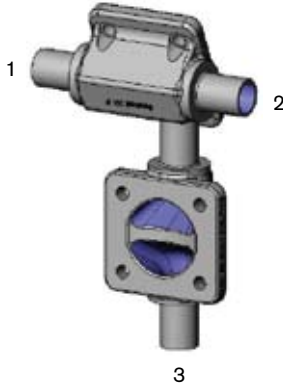
GMP 8



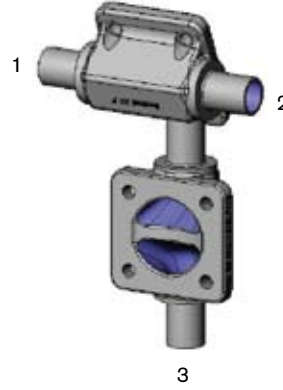
# Tandem Diaphragm Valve Configurations

## Sterile Access Port

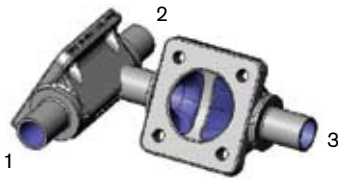
SAP 1



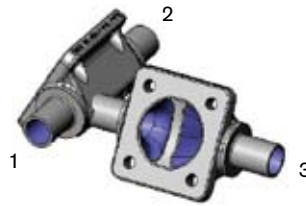
SAP 2



SAP 3



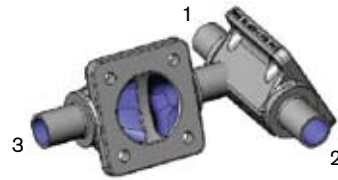
SAP 4



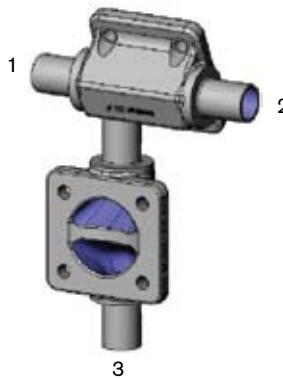
SAP 5



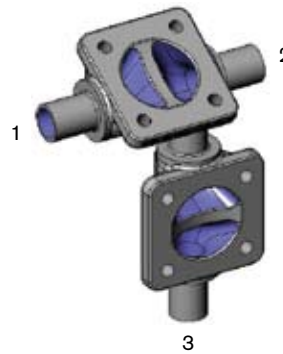
SAP 6



SAP 7



SAP 8



# Diaphragm Valve Porting Only Configurations

## Single Valve, Ported

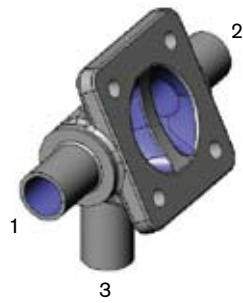
GMP A



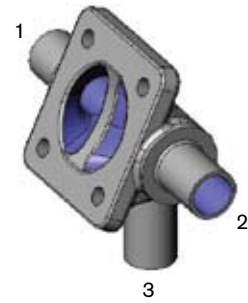
GMP B



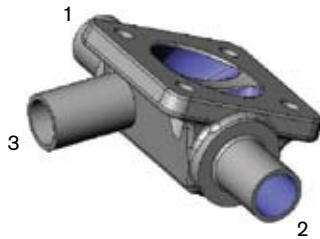
SAP A



SAP B



SAP C

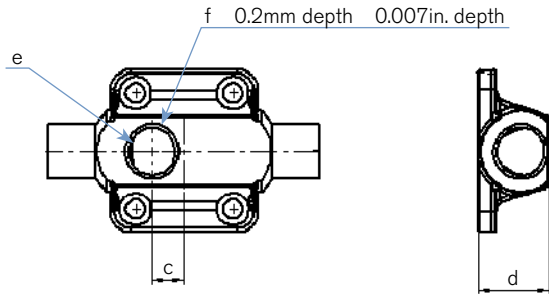


SAP D

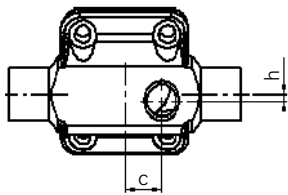


# Diaphragm Valve Porting Data

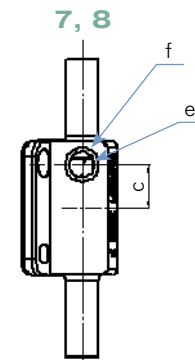
## GMP Forms 1, 2, 3, 4, 5, 6, 7, 8



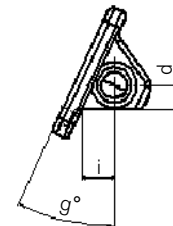
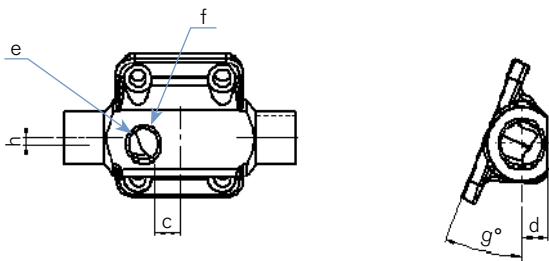
## SAP Forms 3, 5



## SAP Forms



## SAP Forms 4, 6



# Diaphragm Valve Porting Data

## GMP Configurations

Orifice (mm)	Ends OD (in)	Port OD (in)	Form 1 2 7 8		Form 3 4 5 6 A B		All forms	
			c (mm)	c (mm)	d (mm)	e (inch)	f (inch)	
8	0.250	0.250	9.0	5.5	14.0	0.180	0.258	
8	0.375	0.250	8.5	5.5	16.0	0.180	0.258	
		0.375	7.0	7.0		0.305	0.383	
15	0.500	0.250	12.5	5.5	20.0	0.180	0.258	
		0.375	11.0	7.0		0.305	0.383	
		0.500	9.0	9.0		0.370	0.508	
20	0.750	0.250	17.0	6.0	28.0	0.180	0.258	
		0.375	15.5	7.5		0.305	0.383	
		0.500	14.5	8.5		0.370	0.508	
		0.750	12.0	12.0		0.620	0.758	
25	1.000	0.250	22.5	6.5	33.0	0.180	0.258	
		0.375	21.0	8.0		0.305	0.383	
		0.500	20.0	9.0		0.370	0.508	
		0.750	17.0	12.0		0.620	0.758	
		1.000	15.0	15.0		0.870	1.008	
40	1.500	0.250	31.0	7.5	49.0	0.180	0.258	
		0.375	29.5	9.0		0.305	0.383	
		0.500	29.0	10.0		0.370	0.508	
		0.750	25.5	13.0		0.620	0.758	
		1.000	23.0	16.5		0.870	1.008	
		1.500	24.5	24.5		1.370	1.508	
50	2.000	0.250	40.0	10.0	62.0	0.180	0.258	
		0.375	38.0	11.5		0.305	0.383	
		0.500	37.0	12.5		0.370	0.508	
		0.750	34.5	15.5		0.620	0.758	
		1.000	32.0	19.0		0.870	1.008	
		1.500	26.0	25.0		1.370	1.508	
50	2.500	0.250	40.0	10.0	68.0	0.180	0.258	
		0.375	38.0	11.5	68.0	0.305	0.383	
		0.500	37.0	12.5	68.0	0.370	0.508	
		0.750	34.5	15.5	68.0	0.620	0.758	
		1.000	32.0	18.5	68.0	0.870	1.008	
		1.500	26.0	26.0	67.5	1.370	1.508	
80	2.500	0.250	61.0	13.5	86.0	0.180	0.258	
		0.375	60.0	15.0		0.305	0.383	
		0.500	59.0	15.5		0.370	0.508	
		0.750	56.0	19.0		0.620	0.758	
		1.000	53.5	22.0		0.870	1.008	
		1.500	46.0	28.5		1.370	1.508	
		2.000	40.0	35.0		1.870	2.008	
		2.500	40.5	40.5		2.374	2.508	
80	3.000	0.250	61.0	12.5	92.0	0.180	0.258	
		0.375	60.0	14.0		0.305	0.383	
		0.500	59.0	14.5		0.370	0.508	
		0.750	56.0	18.0		0.620	0.758	
		1.000	53.5	21.0		0.870	1.008	
		1.500	46.0	27.0		1.370	1.508	
		2.000	40.0	33.5		1.870	2.008	
		2.500	40.5	40.5		2.374	2.508	
100	4.000	0.250	78.0	12.0	120.0	0.180	0.258	
		0.375	75.0	13.5		0.305	0.383	
		0.500	75.0	14.5		0.370	0.508	
		0.750	72.0	17.5		0.620	0.758	
		1.000	69.0	21.0		0.870	1.008	
		1.500	63.0	27.0		1.370	1.508	
		2.000	56.0	33.5		1.870	2.008	
		2.500	50.0	40.0		2.374	2.508	

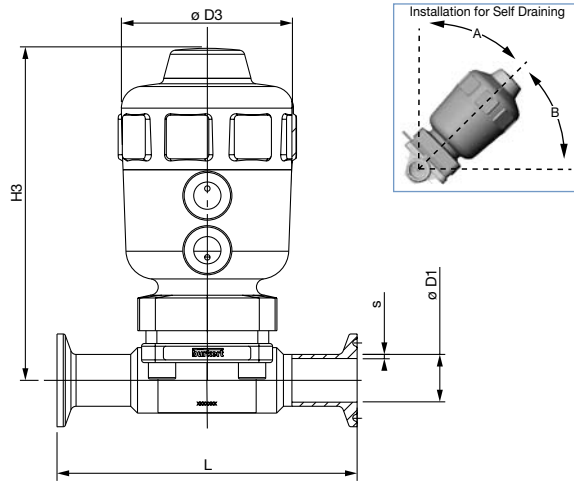
## Diaphragm Valve Porting Data

## SAP Configurations

Orifice (mm)	Ends OD (in)	Port OD (in)	Form 1 2 7 8 A B			Form 3 4 5 6 C D			All forms		
			c (mm)	d (mm)	i (mm)	c (mm)	d (mm)	h (mm)	e (inch)	f (inch)	g (deg)
8	0.250	0.250	11.0	6.0	8.6	6.0	4.0	0.0	0.180	0.258	35
8	0.375	0.250	8.0	6.0	8.0	6.0	5.5	2.0	0.180	0.258	30
		0.375	11.0		8.0	0.0	5.5	0.0	0.305	0.383	
15	0.500	0.250	16.0	9.0	12.0	9.0	7.0	3.0	0.180	0.258	25
		0.375	17.0		12.0			1.5	0.305	0.383	
		0.500	18.0		12.0			0.0	0.370	0.508	
20	0.750	0.250	20.0	14.0	16.5	20.0	11.0	6.0	0.180	0.258	25
		0.375	20.0	14.0	16.5	20.0		4.0	0.305	0.383	
		0.500	15.5	14.0	16.5	15.0		3.5	0.370	0.508	
		0.750	19.0	13.0	16.5	14.5		0.0	0.620	0.758	
25	1.000	0.250	25.0	15.0	18.0	25.0	14.0	8.5	0.180	0.258	23
		0.375	25.0		18.0	25.0	14.0	7.0	0.305	0.383	
		0.500	20.0		18.0	20.0	14.0	7.0	0.370	0.508	
		0.750	20.0		18.0	20.0	14.0	3.0	0.620	0.758	
		1.000	21.0		18.0	19.0	13.5	0.5	0.870	1.008	
40	1.500	0.250	30.0	21.0	29.0	30.0	19.5	15.0	0.180	0.258	24
		0.375	30.0		29.0	30.0		13.5	0.305	0.383	
		0.500	30.0		29.0	30.0		12.5	0.370	0.508	
		0.750	25.0		29.0	25.0		9.5	0.620	0.758	
		1.000	25.0		29.0	25.0		6.5	0.870	1.008	
		1.500				25.0		0.0	1.370	1.508	
50	2.000	0.250	40.0	27.0	38.0	40.0	26.0	21.5	0.180	0.258	22
		0.375	40.0		38.0	40.0		20.0	0.305	0.383	
		0.500	40.0		38.0	40.0		19.0	0.370	0.508	
		0.750	35.0		38.0	35.0		16.0	0.620	0.758	
		1.000	35.0		38.0	35.0		12.5	0.870	1.008	
		1.500	35.0		38.0	32.0		6.0	1.370	1.508	
50	2.500	0.250	30.0	33.0	30.0				0.180	0.258	8
		0.375	20.0		30.0				0.305	0.383	
		0.500	28.0		30.0				0.370	0.508	
		0.750	26.0		30.0				0.620	0.758	
80 SAP 1 & 7 Only	2.500	0.250	70.0	35.0	45.0	70.0	34.0	28.0	0.180	0.258	26
		0.375	70.0		45.0	70.0		26.0	0.305	0.383	
		0.500	70.0		45.0	70.0		25.5	0.370	0.508	
		0.750	55.0		45.0	55.0		22.5	0.620	0.758	
		1.000	55.0		45.0	55.0		19.0	0.870	1.008	
		1.500	50.0		45.0	50.0		13.0	1.370	1.508	
		2.000	54.5		45.0	40.0		6.5	1.870	2.008	
		2.500				48.0		0.0	2.374	2.508	
		80	3.000	0.250	61.0	42.0	50.0				0.180
0.375	60.0			50.0				0.305	0.383		
0.500	60.0			50.0				0.370	0.508		
0.750	56.0			50.0				0.620	0.758		
1.000	56.0			50.0				0.870	1.008		
1.500	50.0			50.0				1.370	1.508		
2.000	54.0			50.0				1.870	2.008		
100 SAP 1 & 7 Only	4.000	0.250	78.0	54.0	50.0				0.180	0.258	20
		0.375	75.0		50.0				0.305	0.383	
		0.500	78.0		50.0				0.370	0.508	
		0.750	72.0		50.0				0.620	0.758	
		1.000	72.0		50.0				0.870	1.008	
		1.500	72.0		50.0				1.370	1.508	
		2.000	70.0		50.0				1.870	2.008	
		2.500	65.0		50.0				2.374	2.508	

# Diaphragm Valve Technical Data

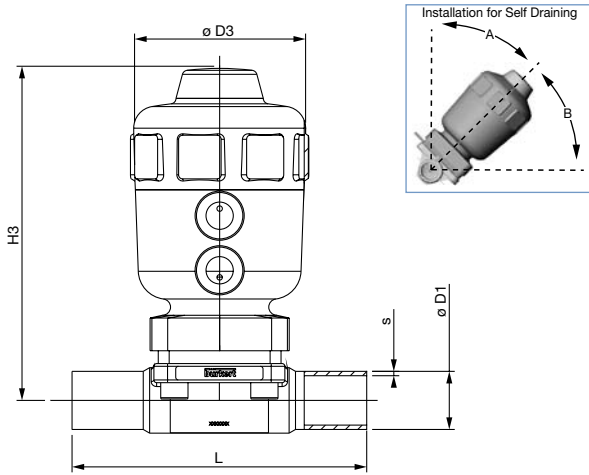
## Dimensions - Basic Diaphragm Valve, Tri-Clamp® Connection, Automatic Operator



Valve Size (Actuator)	L (short)	D1	S	H3	D3	Drain Angle	
						A	B
1/2" (E-63)	3.50	0.50	16 ga	5.50	3.25	65°	25°
3/4" (F-80)	4.00	0.75	16 ga	6.75	4.00	65°	25°
1.0" (F-80)	4.50	1.00	16 ga	7.00	4.00	67°	23°
1.5" (H-125)	5.50	1.50	16 ga	10.75	6.00	66°	24°
2.0" (H-125)	6.25	2.00	16 ga	11.00	6.00	68°	22°
2.5" (H-125)	7.50	2.50	16 ga	11.00	6.00	82°	8°
3.0" (K-175)	8.75	3.00	16 ga	16.00	8.25	72°	18°
4.0" (L-225)	12.00	4.00	14 ga	16.00	10.25	70°	20°

# Diaphragm Valve Technical Data

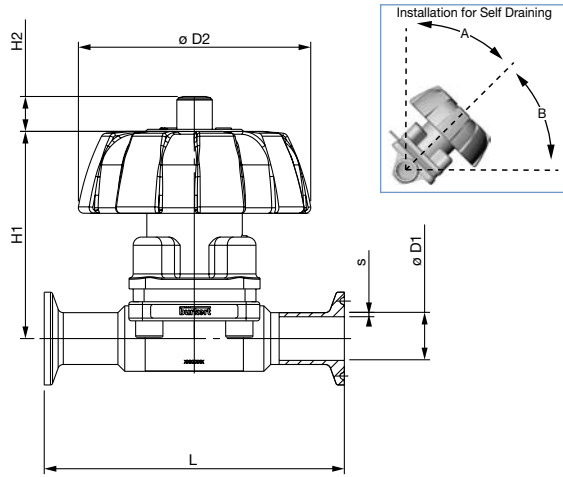
## Dimensions - Basic Diaphragm Valve, Butt Weld Connection, Automatic Operator



Valve Size (Actuator)	L	D1	S	H3	D3	Drain Angle	
						A	B
1/2" (E-63)	4.25	0.50	16 ga	5.50	3.25	65°	25°
3/4" (F-80)	4.60	0.75	16 ga	6.75	4.00	65°	25°
1.0" (F-80)	5.00	1.00	16 ga	7.00	4.00	67°	23°
1.5" (H-125)	6.25	1.50	16 ga	10.75	6.00	66°	24°
2.0" (H-125)	7.50	2.00	16 ga	11.00	6.00	68°	22°
2.5" (H-125)	7.50	2.50	16 ga	11.00	6.00	82°	8°
3.0" (K-175)	9.85	3.00	16 ga	16.00	8.25	72°	18°
4.0" (L-225)	11.60	4.00	14 ga	16.00	10.25	70°	20°

# Diaphragm Valve Technical Data

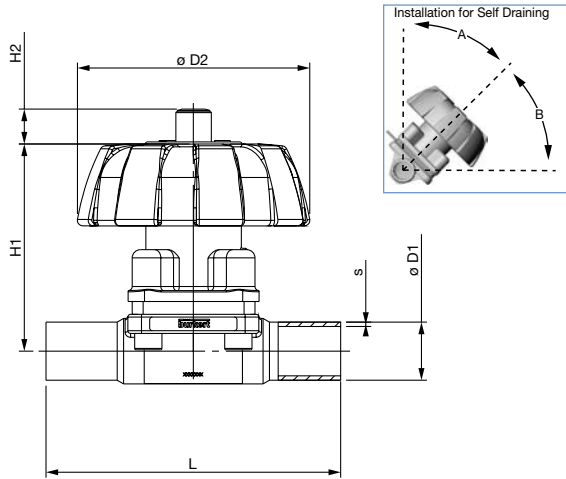
## Dimensions - Basic Diaphragm Valve, Tri-Clamp® Connection, Manual Operator



Valve Size	L (short)	D1	S	H1	H2	D2	Drain Angle	
							A	B
1/2"	3.50	0.50	16 ga	3.50	0.25	3.00	65°	25°
3/4"	4.00	0.75	16 ga	3.75	0.50	3.00	65°	25°
1.0"	4.50	1.00	16 ga	3.75	0.50	3.00	67°	23°
1.5"	5.50	1.50	16 ga	4.50	0.75	4.50	66°	24°
2.0"	6.25	2.00	16 ga	5.25	1.00	4.50	68°	22°
2.5"	7.50	2.50	16 ga	5.25	1.00	4.50	82°	8°
3.0"	8.75	3.00	16 ga	10.00	0.00	8.75	72°	18°
4.0"	12.00	4.00	14 ga	11.75	0.00	11.50	70°	20°

# Diaphragm Valve Technical Data

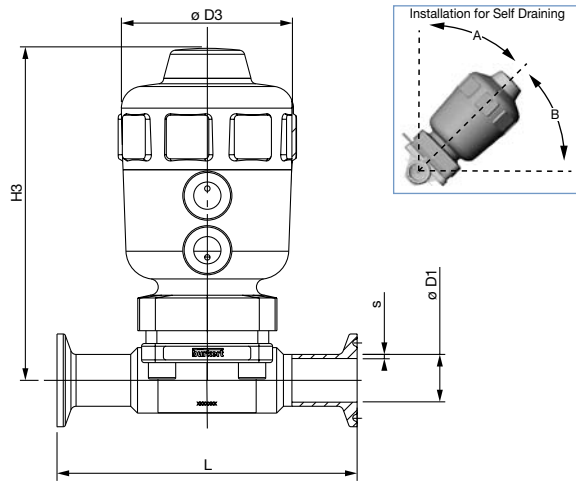
## Dimensions - Basic Diaphragm Valve, Butt Weld Connection, Manual Operator



Valve Size	L	D1	S	H1	H2	D2	Drain Angle	
							A	B
1/2"	4.25	0.50	16 ga	3.50	0.25	3.00	65°	25°
3/4"	4.60	0.75	16 ga	3.75	0.50	3.00	65°	25°
1.0"	5.00	1.00	16 ga	3.75	0.50	3.00	67°	23°
1.5"	6.25	1.50	16 ga	4.50	0.75	4.50	66°	24°
2.0"	7.50	2.00	16 ga	5.25	1.00	4.50	68°	22°
2.5"	7.50	2.50	16 ga	5.25	1.00	4.50	82°	8°
3.0"	9.85	3.00	16 ga	10.00	0.00	8.75	72°	18°
4.0"	11.60	4.00	14 ga	11.75	0.00	11.50	70°	20°

# Diaphragm Valve Technical Data

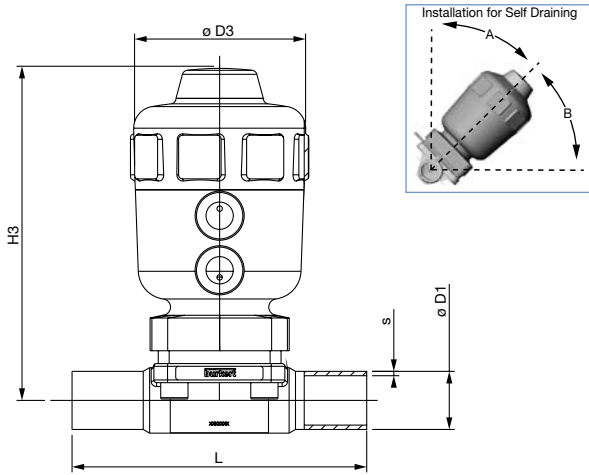
## Dimensions - Bio Tech Diaphragm Valve, Tri-Clamp® Connection, Automatic Operator



Valve Size (Actuator)	L	D1	S	H3	D3	Drain Angle	
						A	B
1/4" (C-40)	2.54	0.250	20 ga	3.35	2.10	55°	35°
3/8" (C-40)	3.50	0.375	20 ga	3.35	2.10	60°	30°

# Diaphragm Valve Technical Data

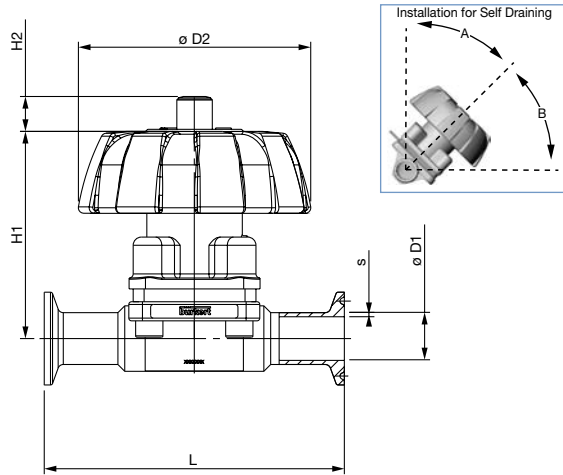
## Dimensions - Bio Tech Diaphragm Valve, Butt Weld Connection, Automatic Operator



Valve Size (Actuator)	L	D1	S	H3	D3	Drain Angle	
						A	B
1/4" (C-40)	3.07	0.250	20 ga	3.35	2.10	55°	35°
3/8" (C-40)	3.50	0.375	20 ga	3.35	2.10	60°	30°

# Diaphragm Valve Technical Data

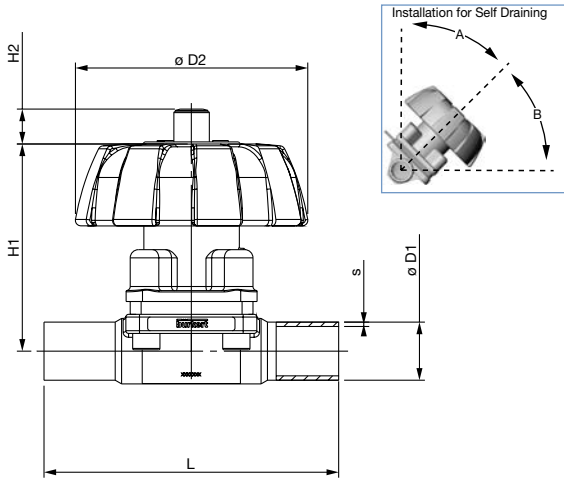
## Dimensions - Bio Tech Diaphragm Valve, Tri-Clamp® Connection, Manual Operator



Valve Size	L	D1	S	H1	H2	D2	Drain Angle	
							A	B
1/4"	2.54	0.250	20 ga	2.20	0.00	1.38	55°	35°
3/8"	3.50	0.375	20 ga	2.20	0.00	1.38	60°	30°

# Diaphragm Valve Technical Data

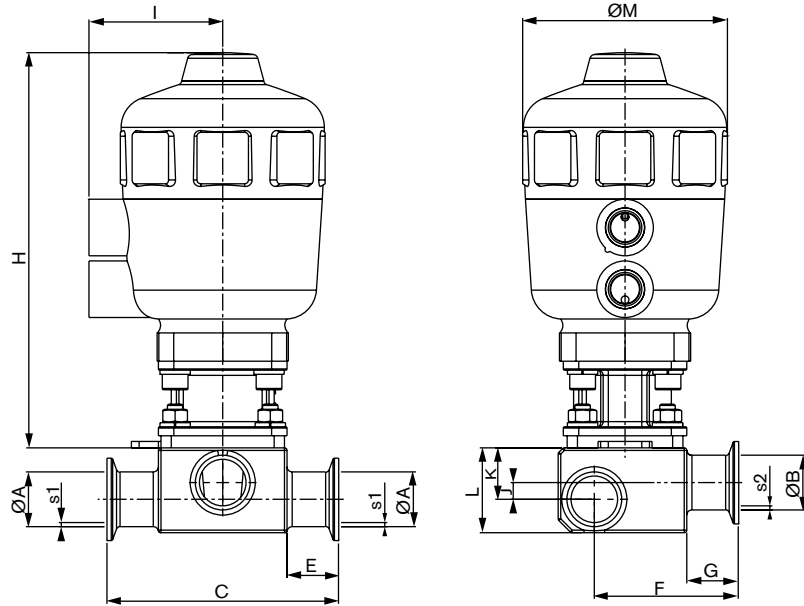
## Dimensions - Bio Tech Diaphragm Valve, Butt Weld Connection, Manual Operator



Valve Size	L	D1	S	H1	H2	D2	Drain Angle	
							A	B
1/4"	3.07	0.250	20 ga	2.20	0.00	1.38	55°	35°
3/8"	3.50	0.375	20 ga	2.20	0.00	1.38	60°	30°

# Diaphragm Valve Technical Data

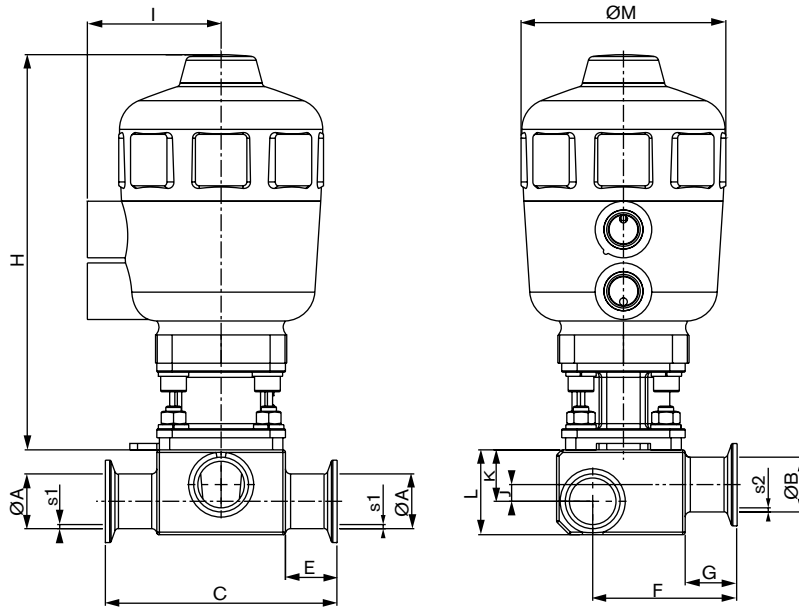
## Dimensions - Zero Static Tee, Tri-Clamp® Connection, Automatic Operator



Valve Size	Valve Block							Tee		Line		Actuator		
	C	E	F	G	J	K	L	B	S2	A	S1	H	I	M
1/2" T x 1/2" Line	5.80	1.90	3.15	1.90	0.00	0.53	1.10	0.50	16ga	0.50	16ga	6.00	2.00	3.00
1/2" T x 3/4" Line	5.80	1.90	3.25	1.90	0.20	0.73	1.18	0.50	16ga	0.75	16ga	6.00	2.00	3.00
1/2" T x 1.0" Line	5.80	1.90	3.40	1.90	0.50	1.02	1.77	0.50	16ga	1.00	16ga	6.00	2.00	3.00
1/2" T x 1.5" Line	6.60	2.30	3.65	1.90	0.67	1.22	2.28	0.50	16ga	1.50	16ga	6.00	2.00	3.00
1/2" T x 2.0" Line	6.60	2.30	3.90	1.90	0.85	1.38	2.48	0.50	16ga	2.00	16ga	6.00	2.00	3.00
1/2" T x 2.5" Line	6.60	2.30	4.00	1.70	0.95	1.50	3.00	0.50	16ga	2.50	16ga	6.00	2.00	3.00
1/2" T x 3.0" Line	6.60	2.10	4.40	1.90	1.44	2.00	3.78	0.50	16ga	3.00	16ga	6.00	2.00	3.00
1/2" T x 4.0" Line	6.60	2.30	4.90	1.90	1.63	2.17	4.33	0.50	16ga	4.00	14ga	6.00	2.00	3.00
3/4" T x 3/4" Line	6.75	2.10	3.75	2.10	0.00	0.71	1.30	0.75	16ga	0.75	16ga	6.00	2.00	3.00
3/4" T x 1.0" Line	6.75	2.10	4.00	2.10	0.24	0.95	1.77	0.75	16ga	1.00	16ga	6.00	2.00	3.00
3/4" T x 1.5" Line	6.75	2.10	4.00	2.10	0.47	1.18	2.09	0.75	16ga	1.50	16ga	6.00	2.00	3.00
3/4" T x 2.0" Line	6.75	2.10	4.35	2.10	0.75	1.46	2.60	0.75	16ga	2.00	16ga	6.00	2.00	3.00
3/4" T x 2.5" Line	6.75	2.10	4.60	2.10	0.87	1.58	3.00	0.75	16ga	2.50	16ga	6.00	2.00	3.00
3/4" T x 3.0" Line	6.75	2.10	4.90	2.10	1.06	1.77	3.47	0.75	16ga	3.00	16ga	6.00	2.00	3.00
3/4" T x 4.0" Line	6.75	2.10	5.40	2.10	1.54	2.24	4.41	0.75	16ga	4.00	14ga	6.00	2.00	3.00
1.0" T x 1.0" Line	7.15	2.30	4.00	2.10	0.32	1.10	1.77	1.00	16ga	1.00	16ga	7.40	2.40	4.00
1.0" T x 1.5" Line	7.50	2.30	4.30	2.10	0.63	1.42	2.36	1.00	16ga	1.50	16ga	7.40	2.40	4.00
1.0" T x 2.0" Line	7.50	2.30	4.50	2.10	0.95	1.73	3.00	1.00	16ga	2.00	16ga	7.40	2.40	4.00
1.0" T x 2.5" Line	7.50	2.30	4.75	2.10	1.10	1.89	3.54	1.00	16ga	2.50	16ga	7.40	2.40	4.00
1.0" T x 3.0" Line	7.50	2.30	5.00	2.10	1.26	2.00	3.74	1.00	16ga	3.00	16ga	7.40	2.40	4.00
1.0" T x 4.0" Line	7.50	2.30	5.50	2.10	1.54	2.32	4.41	1.00	16ga	4.00	14ga	7.40	2.40	4.00

# Diaphragm Valve Technical Data

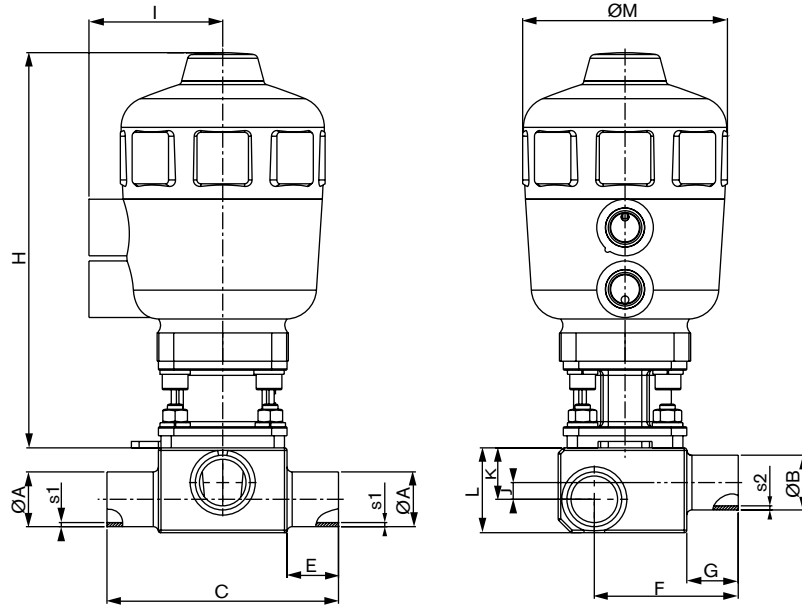
## Dimensions - Zero Static Tee, Tri-Clamp® Connection, Automatic Operator



Valve Size	Valve Block							Tee		Line		Actuator		
	C	E	F	G	J	K	L	B	S2	A	S1	H	I	M
1.5" T x 1.5" Line	8.15	2.10	4.80	2.10	0.24	1.38	2.36	1.50	16ga	1.50	16ga	9.60	2.90	5.00
1.5" T x 2.0" Line	8.15	2.10	5.00	2.10	0.48	1.61	2.68	1.50	16ga	2.00	16ga	9.60	2.90	5.00
1.5" T x 2.5" Line	8.60	2.30	5.50	2.25	0.55	1.97	3.35	1.50	16ga	2.50	16ga	9.60	2.90	5.00
1.5" T x 3.0" Line	7.80	2.00	5.60	2.25	1.00	2.20	3.82	1.50	16ga	3.00	16ga	9.60	2.90	5.00
1.5" T x 4.0" Line	7.80	2.00	6.10	2.25	1.44	2.60	4.65	1.50	16ga	4.00	14ga	9.60	2.90	5.00
2.0" T x 2.0" Line	9.65	2.30	5.60	2.25	0.30	1.70	3.00	2.00	16ga	2.00	16ga	11.30	3.30	6.20
2.0" T x 2.5" Line	9.65	2.30	5.90	2.25	0.56	1.97	3.35	2.00	16ga	2.50	16ga	11.30	3.30	6.20
2.0" T x 3.0" Line	9.65	2.30	6.10	2.25	1.00	2.20	3.86	2.00	16ga	3.00	16ga	11.30	3.30	6.20
2.0" T x 4.0" Line	9.65	2.30	6.60	2.25	1.20	2.60	4.80	2.00	16ga	4.00	14ga	11.30	3.30	6.20
2.5" T x 2.5" Line	9.65	2.30	5.90	2.25	0.56	1.97	3.35	2.50	16ga	2.50	16ga	11.30	3.30	6.20
2.5" T x 3.0" Line	9.65	2.30	6.15	2.25	0.80	2.20	3.94	2.50	16ga	3.00	16ga	11.30	3.30	6.20
2.5" T x 4.0" Line	9.65	2.30	6.60	2.25	1.20	2.60	4.72	2.50	16ga	4.00	14ga	11.30	3.30	6.20
3.0" T x 3.0" Line	12.20	2.30	7.30	2.25	0.65	2.64	4.33	3.00	16ga	3.00	16ga	13.60	4.50	8.25
3.0" T x 4.0" Line	12.20	2.30	7.80	2.25	1.16	3.15	5.32	3.00	16ga	4.00	14ga	13.60	4.50	8.25
4.0" T x 4.0" Line	12.80	2.60	8.50	2.25	0.02	2.48	4.60	4.00	14ga	4.00	14ga	13.50	4.50	10.00

# Diaphragm Valve Technical Data

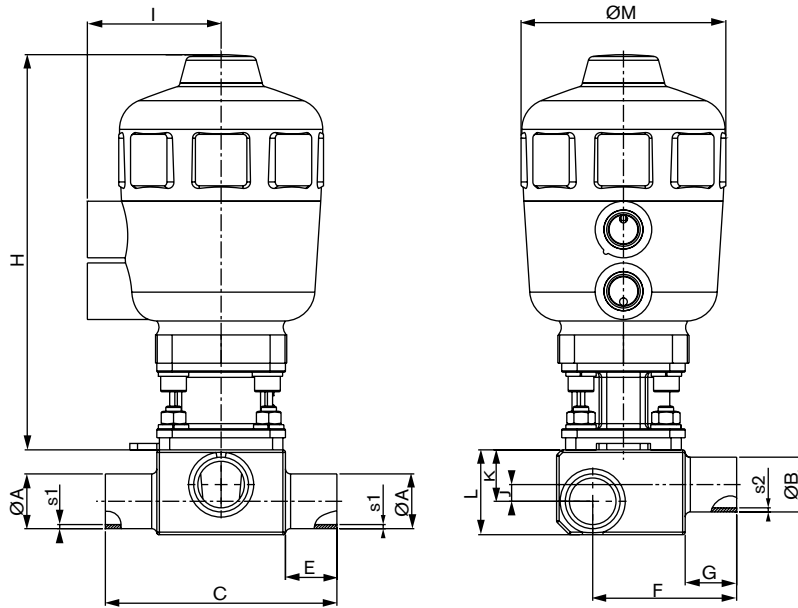
## Dimensions - Zero Static Tee, Butt Weld Connection, Automatic Operator



Valve Size	Valve Block						Tee			Line		Actuator		
	C	E	F	G	J	K	L	B	S2	A	S1	H	I	M
1/2" T x 1/2" Line	3.50	0.80	2.00	0.80	0.00	0.53	1.10	0.50	16ga	0.50	16ga	6.00	2.00	3.00
1/2" T x 3/4" Line	3.50	0.80	2.20	0.80	0.20	0.73	1.18	0.50	16ga	0.75	16ga	6.00	2.00	3.00
1/2" T x 1.0" Line	3.50	0.80	2.30	0.80	0.50	1.02	1.77	0.50	16ga	1.00	16ga	6.00	2.00	3.00
1/2" T x 1.5" Line	4.30	1.20	2.50	0.80	0.67	1.22	2.28	0.50	16ga	1.50	16ga	6.00	2.00	3.00
1/2" T x 2.0" Line	4.30	1.20	2.80	0.80	0.85	1.38	2.48	0.50	16ga	2.00	16ga	6.00	2.00	3.00
1/2" T x 2.5" Line	4.30	1.20	2.80	0.60	0.95	1.50	3.00	0.50	16ga	2.50	16ga	6.00	2.00	3.00
1/2" T x 3.0" Line	4.30	1.20	3.25	0.80	1.44	2.00	3.78	0.50	16ga	3.00	16ga	6.00	2.00	3.00
1/2" T x 4.0" Line	4.30	1.20	3.75	0.80	1.63	2.17	4.33	0.50	16ga	4.00	14ga	6.00	2.00	3.00
3/4" T x 3/4" Line	4.50	1.00	2.60	1.00	0.00	0.71	1.30	0.75	16ga	0.75	16ga	6.00	2.00	3.00
3/4" T x 1.0" Line	4.50	1.00	2.90	1.00	0.24	0.95	1.77	0.75	16ga	1.00	16ga	6.00	2.00	3.00
3/4" T x 1.5" Line	4.50	1.00	3.00	1.00	0.47	1.18	2.09	0.75	16ga	1.50	16ga	6.00	2.00	3.00
3/4" T x 2.0" Line	4.50	1.00	3.50	1.00	0.75	1.46	2.60	0.75	16ga	2.00	16ga	6.00	2.00	3.00
3/4" T x 2.5" Line	4.50	1.00	3.50	1.00	0.87	1.58	3.00	0.75	16ga	2.50	16ga	6.00	2.00	3.00
3/4" T x 3.0" Line	4.50	1.00	3.75	1.00	1.06	1.77	3.47	0.75	16ga	3.00	16ga	6.00	2.00	3.00
3/4" T x 4.0" Line	4.50	1.00	4.20	1.00	1.54	2.24	4.41	0.75	16ga	4.00	14ga	6.00	2.00	3.00
1.0" T x 1.0" Line	4.90	1.00	2.90	1.00	0.32	1.10	1.77	1.00	16ga	1.00	16ga	7.40	2.40	4.00
1.0" T x 1.5" Line	5.30	1.20	3.15	1.00	0.63	1.42	2.36	1.00	16ga	1.50	16ga	7.40	2.40	4.00
1.0" T x 2.0" Line	5.30	1.20	3.40	1.00	0.95	1.73	3.00	1.00	16ga	2.00	16ga	7.40	2.40	4.00
1.0" T x 2.5" Line	5.30	1.20	3.65	1.00	1.10	1.89	3.54	1.00	16ga	2.50	16ga	7.40	2.40	4.00
1.0" T x 3.0" Line	5.30	1.20	3.65	1.00	1.26	2.00	3.74	1.00	16ga	3.00	16ga	7.40	2.40	4.00
1.0" T x 4.0" Line	5.30	1.20	3.65	1.00	1.54	2.32	4.41	1.00	16ga	4.00	14ga	7.40	2.40	4.00

# Diaphragm Valve Technical Data

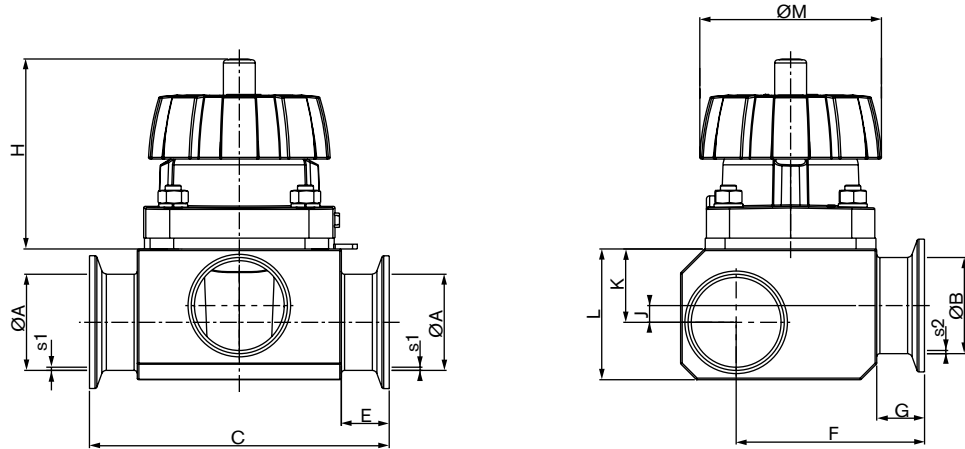
## Dimensions - Zero Static Tee, Butt Weld Connection, Automatic Operator



Valve Size	Valve Block							Tee		Line		Actuator		
	C	E	F	G	J	K	L	B	S2	A	S1	H	I	M
1.5" T x 1.5" Line	6.00	1.00	3.75	1.00	0.24	1.38	2.36	1.50	16ga	1.50	16ga	9.60	2.90	5.00
1.5" T x 2.0" Line	6.00	1.00	4.00	1.00	0.48	1.61	2.68	1.50	16ga	2.00	16ga	9.60	2.90	5.00
1.5" T x 2.5" Line	6.30	1.20	4.40	1.20	0.55	1.97	3.35	1.50	16ga	2.50	16ga	9.60	2.90	5.00
1.5" T x 3.0" Line	5.60	0.86	4.50	1.10	1.00	2.20	3.82	1.50	16ga	3.00	16ga	9.60	2.90	5.00
1.5" T x 4.0" Line	5.60	0.86	5.00	1.10	1.44	2.60	4.65	1.50	16ga	4.00	14ga	9.60	2.90	5.00
2.0" T x 2.0" Line	7.40	1.20	4.50	1.20	0.30	1.70	3.00	2.00	16ga	2.00	16ga	11.30	3.30	6.20
2.0" T x 2.5" Line	7.40	1.20	4.75	1.20	0.56	1.97	3.35	2.00	16ga	2.50	16ga	11.30	3.30	6.20
2.0" T x 3.0" Line	7.40	1.20	5.00	1.20	1.00	2.20	3.86	2.00	16ga	3.00	16ga	11.30	3.30	6.20
2.0" T x 4.0" Line	7.40	1.20	5.50	1.20	1.20	2.60	4.80	2.00	16ga	4.00	14ga	11.30	3.30	6.20
2.5" T x 2.5" Line	7.40	1.20	4.75	1.20	0.56	1.97	3.35	2.50	16ga	2.50	16ga	11.30	3.30	6.20
2.5" T x 3.0" Line	7.40	1.20	5.00	1.20	0.80	2.20	3.94	2.50	16ga	3.00	16ga	11.30	3.30	6.20
2.5" T x 4.0" Line	7.40	1.20	5.50	1.20	1.20	2.60	4.72	2.50	16ga	4.00	14ga	11.30	3.30	6.20
3.0" T x 3.0" Line	10.00	1.20	6.20	1.20	0.65	2.64	4.33	3.00	16ga	3.00	16ga	13.60	4.50	8.25
3.0" T x 4.0" Line	10.00	1.20	6.70	1.20	1.16	3.15	5.32	3.00	16ga	4.00	14ga	13.60	4.50	8.25
4.0" T x 4.0" Line	11.60	1.50	7.40	1.20	0.02	2.48	4.60	4.00	14ga	4.00	14ga	13.50	4.50	10.00

# Diaphragm Valve Technical Data

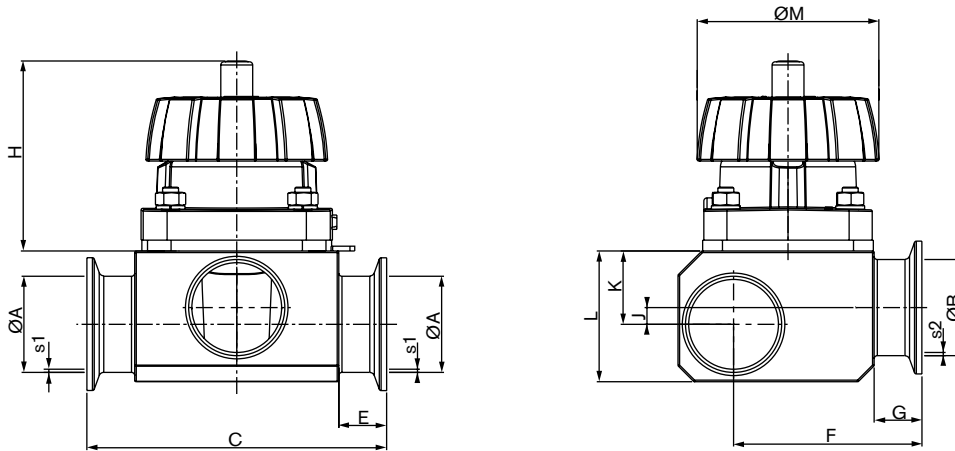
## Dimensions - Zero Static Tee, Tri-Clamp® Connection, Manual Operator



Valve Size	Valve Block							Tee		Line		Actuator	
	C	E	F	G	J	K	L	B	S2	A	S1	H	M
1/2" T x 1/2" Line	5.80	1.90	3.15	1.90	0.00	0.53	1.10	0.50	16ga	0.50	16ga	3.50	3.00
1/2" T x 3/4" Line	5.80	1.90	3.25	1.90	0.20	0.73	1.18	0.50	16ga	0.75	16ga	3.50	3.00
1/2" T x 1.0" Line	5.80	1.90	3.40	1.90	0.50	1.02	1.77	0.50	16ga	1.00	16ga	3.50	3.00
1/2" T x 1.5" Line	6.60	2.30	3.65	1.90	0.67	1.22	2.28	0.50	16ga	1.50	16ga	3.50	3.00
1/2" T x 2.0" Line	6.60	2.30	3.90	1.90	0.85	1.38	2.48	0.50	16ga	2.00	16ga	3.50	3.00
1/2" T x 2.5" Line	6.60	2.30	4.00	1.70	0.95	1.50	3.00	0.50	16ga	2.50	16ga	3.50	3.00
1/2" T x 3.0" Line	6.60	2.10	4.40	1.90	1.44	2.00	3.78	0.50	16ga	3.00	16ga	3.50	3.00
1/2" T x 4.0" Line	6.60	2.30	4.90	1.90	1.63	2.17	4.33	0.50	16ga	4.00	14ga	3.50	3.00
3/4" T x 3/4" Line	6.75	2.10	3.75	2.10	0.00	0.71	1.30	0.75	16ga	0.75	16ga	3.75	3.00
3/4" T x 1.0" Line	6.75	2.10	4.00	2.10	0.24	0.95	1.77	0.75	16ga	1.00	16ga	3.75	3.00
3/4" T x 1.5" Line	6.75	2.10	4.00	2.10	0.47	1.18	2.09	0.75	16ga	1.50	16ga	3.75	3.00
3/4" T x 2.0" Line	6.75	2.10	4.35	2.10	0.75	1.46	2.60	0.75	16ga	2.00	16ga	3.75	3.00
3/4" T x 2.5" Line	6.75	2.10	4.60	2.10	0.87	1.58	3.00	0.75	16ga	2.50	16ga	3.75	3.00
3/4" T x 3.0" Line	6.75	2.10	4.90	2.10	1.06	1.77	3.47	0.75	16ga	3.00	16ga	3.75	3.00
3/4" T x 4.0" Line	6.75	2.10	5.40	2.10	1.54	2.24	4.41	0.75	16ga	4.00	14ga	3.75	3.00
1.0" T x 1.0" Line	7.15	2.30	4.00	2.10	0.32	1.10	1.77	1.00	16ga	1.00	16ga	3.75	3.00
1.0" T x 1.5" Line	7.50	2.30	4.30	2.10	0.63	1.42	2.36	1.00	16ga	1.50	16ga	3.75	3.00
1.0" T x 2.0" Line	7.50	2.30	4.50	2.10	0.95	1.73	3.00	1.00	16ga	2.00	16ga	3.75	3.00
1.0" T x 2.5" Line	7.50	2.30	4.75	2.10	1.10	1.89	3.54	1.00	16ga	2.50	16ga	3.75	3.00
1.0" T x 3.0" Line	7.50	2.30	5.00	2.10	1.26	2.00	3.74	1.00	16ga	3.00	16ga	3.75	3.00
1.0" T x 4.0" Line	7.50	2.30	5.50	2.10	1.54	2.32	4.41	1.00	16ga	4.00	14ga	3.75	3.00

# Diaphragm Valve Technical Data

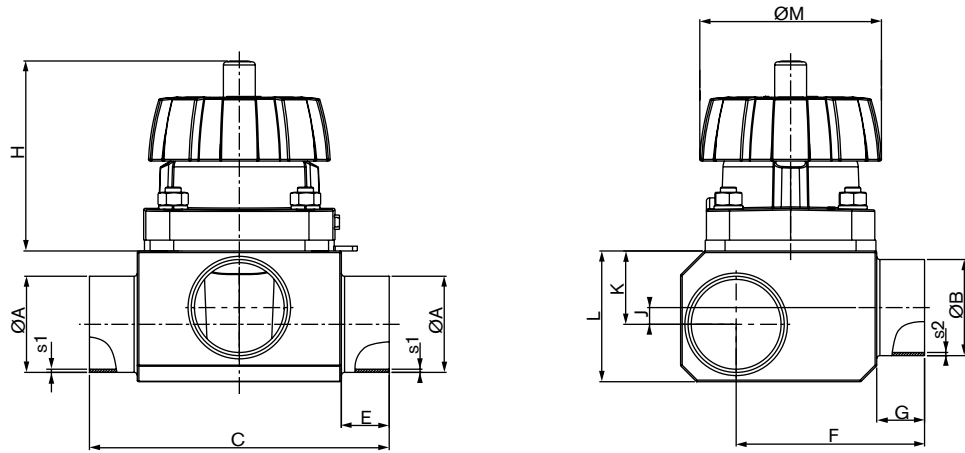
## Dimensions - Zero Static Tee, Tri-Clamp® Connection, Manual Operator



Valve Size	Valve Block							Tee		Line		Actuator	
	C	E	F	G	J	K	L	B	S2	A	S1	H	M
1.5" T x 1.5" Line	8.15	2.10	4.80	2.10	0.24	1.38	2.36	1.50	16ga	1.50	16ga	4.50	4.50
1.5" T x 2.0" Line	8.15	2.10	5.00	2.10	0.48	1.61	2.68	1.50	16ga	2.00	16ga	4.50	4.50
1.5" T x 2.5" Line	8.60	2.30	5.50	2.25	0.55	1.97	3.35	1.50	16ga	2.50	16ga	4.50	4.50
1.5" T x 3.0" Line	7.80	2.00	5.60	2.25	1.00	2.20	3.82	1.50	16ga	3.00	16ga	4.50	4.50
1.5" T x 4.0" Line	7.80	2.00	6.10	2.25	1.44	2.60	4.65	1.50	16ga	4.00	14ga	4.50	4.50
2.0" T x 2.0" Line	9.65	2.30	5.60	2.25	0.30	1.70	3.00	2.00	16ga	2.00	16ga	5.25	4.50
2.0" T x 2.5" Line	9.65	2.30	5.90	2.25	0.56	1.97	3.35	2.00	16ga	2.50	16ga	5.25	4.50
2.0" T x 3.0" Line	9.65	2.30	6.10	2.25	1.00	2.20	3.86	2.00	16ga	3.00	16ga	5.25	4.50
2.0" T x 4.0" Line	9.65	2.30	6.60	2.25	1.20	2.60	4.80	2.00	16ga	4.00	14ga	5.25	4.50
2.5" T x 2.5" Line	9.65	2.30	5.90	2.25	0.56	1.97	3.35	2.50	16ga	2.50	16ga	10.00	8.75
2.5" T x 3.0" Line	9.65	2.30	6.15	2.25	0.80	2.20	3.94	2.50	16ga	3.00	16ga	10.00	8.75
2.5" T x 4.0" Line	9.65	2.30	6.60	2.25	1.20	2.60	4.72	2.50	16ga	4.00	14ga	10.00	8.75
3.0" T x 3.0" Line	12.20	2.30	7.30	2.25	0.65	2.64	4.33	3.00	16ga	3.00	16ga	10.00	8.75
3.0" T x 4.0" Line	12.20	2.30	7.80	2.25	1.16	3.15	5.32	3.00	16ga	4.00	14ga	10.00	8.75
4.0" T x 4.0" Line	12.80	2.60	8.50	2.25	0.02	2.48	4.60	4.00	14ga	4.00	14ga	10.00	11.50

# Diaphragm Valve Technical Data

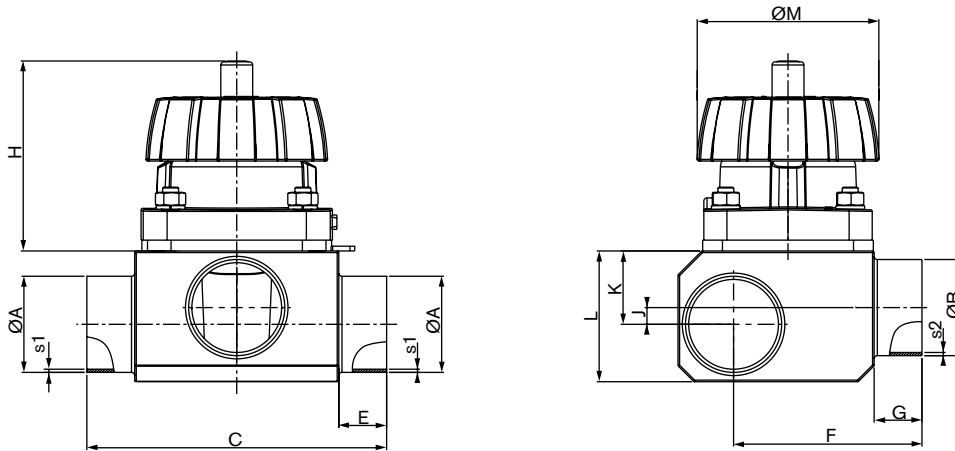
## Dimensions - Zero Static Tee, Butt Weld Connection, Manual Operator



Valve Size	Valve Block							Tee		Line		Actuator	
	C	E	F	G	J	K	L	B	S2	A	S1	H	M
1/2" T x 1/2" Line	3.50	0.80	2.00	0.80	0.00	0.53	1.10	0.50	16ga	0.50	16ga	3.50	3.00
1/2" T x 3/4" Line	3.50	0.80	2.20	0.80	0.20	0.73	1.18	0.50	16ga	0.75	16ga	3.50	3.00
1/2" T x 1.0" Line	3.50	0.80	2.30	0.80	0.50	1.02	1.77	0.50	16ga	1.00	16ga	3.50	3.00
1/2" T x 1.5" Line	4.30	1.20	2.50	0.80	0.67	1.22	2.28	0.50	16ga	1.50	16ga	3.50	3.00
1/2" T x 2.0" Line	4.30	1.20	2.80	0.80	0.85	1.38	2.48	0.50	16ga	2.00	16ga	3.50	3.00
1/2" T x 2.5" Line	4.30	1.20	2.80	0.60	0.95	1.50	3.00	0.50	16ga	2.50	16ga	3.50	3.00
1/2" T x 3.0" Line	4.30	1.00	3.25	0.80	1.44	2.00	3.78	0.50	16ga	3.00	16ga	3.50	3.00
1/2" T x 4.0" Line	4.30	1.20	3.75	0.80	1.63	2.17	4.33	0.50	16ga	4.00	14ga	3.50	3.00
3/4" T x 3/4" Line	4.50	1.00	2.60	1.00	0.00	0.71	1.30	0.75	16ga	0.75	16ga	3.75	3.00
3/4" T x 1.0" Line	4.50	1.00	2.90	1.00	0.24	0.95	1.77	0.75	16ga	1.00	16ga	3.75	3.00
3/4" T x 1.5" Line	4.50	1.00	3.00	1.00	0.47	1.18	2.09	0.75	16ga	1.50	16ga	3.75	3.00
3/4" T x 2.0" Line	4.50	1.00	3.50	1.00	0.75	1.46	2.60	0.75	16ga	2.00	16ga	3.75	3.00
3/4" T x 2.5" Line	4.50	1.00	3.50	1.00	0.87	1.58	3.00	0.75	16ga	2.50	16ga	3.75	3.00
3/4" T x 3.0" Line	4.50	1.00	3.75	1.00	1.06	1.77	3.47	0.75	16ga	3.00	16ga	3.75	3.00
3/4" T x 4.0" Line	4.50	1.00	4.20	1.00	1.54	2.24	4.41	0.75	16ga	4.00	14ga	3.75	3.00
1.0" T x 1.0" Line	4.90	1.00	2.90	1.00	0.32	1.10	1.77	1.00	16ga	1.00	16ga	3.75	3.00
1.0" T x 1.5" Line	5.30	1.20	3.15	1.00	0.63	1.42	2.36	1.00	16ga	1.50	16ga	3.75	3.00
1.0" T x 2.0" Line	5.30	1.20	3.40	1.00	0.95	1.73	3.00	1.00	16ga	2.00	16ga	3.75	3.00
1.0" T x 2.5" Line	5.30	1.20	3.65	1.00	1.10	1.89	3.54	1.00	16ga	2.50	16ga	3.75	3.00
1.0" T x 3.0" Line	5.30	1.20	3.65	1.00	1.26	2.00	3.74	1.00	16ga	3.00	16ga	3.75	3.00
1.0" T x 4.0" Line	5.30	1.20	3.65	1.00	1.54	2.32	4.41	1.00	16ga	4.00	14ga	3.75	3.00

# Diaphragm Valve Technical Data

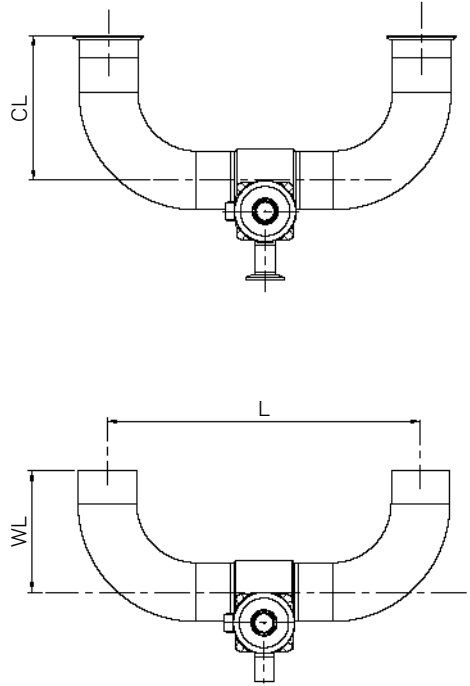
## Dimensions - Zero Static Tee, Butt Weld Connection, Manual Operator



Valve Size	Valve Block							Tee		Line		Actuator	
	C	E	F	G	J	K	L	B	S2	A	S1	H	M
1.5" T x 1.5" Line	6.00	1.00	3.75	1.00	0.24	1.38	2.36	1.50	16ga	1.50	16ga	4.50	4.50
1.5" T x 2.0" Line	6.00	1.00	4.00	1.00	0.48	1.61	2.68	1.50	16ga	2.00	16ga	4.50	4.50
1.5" T x 2.5" Line	6.30	1.20	4.40	1.20	0.55	1.97	3.35	1.50	16ga	2.50	16ga	4.50	4.50
1.5" T x 3.0" Line	5.60	0.86	4.50	1.10	1.00	2.20	3.82	1.50	16ga	3.00	16ga	4.50	4.50
1.5" T x 4.0" Line	5.60	0.86	5.00	1.10	1.44	2.60	4.65	1.50	16ga	4.00	14ga	4.50	4.50
2.0" T x 2.0" Line	7.40	1.20	4.50	1.20	0.30	1.70	3.00	2.00	16ga	2.00	16ga	5.25	4.50
2.0" T x 2.5" Line	7.40	1.20	4.75	1.20	0.56	1.97	3.35	2.00	16ga	2.50	16ga	5.25	4.50
2.0" T x 3.0" Line	7.40	1.20	5.00	1.20	1.00	2.20	3.86	2.00	16ga	3.00	16ga	5.25	4.50
2.0" T x 4.0" Line	7.40	1.20	5.50	1.20	1.20	2.60	4.80	2.00	16ga	4.00	14ga	5.25	4.50
2.5" T x 2.5" Line	7.40	1.20	4.75	1.20	0.56	1.97	3.35	2.50	16ga	2.50	16ga	10.00	8.75
2.5" T x 3.0" Line	7.40	1.20	5.00	1.20	0.80	2.20	3.94	2.50	16ga	3.00	16ga	10.00	8.75
2.5" T x 4.0" Line	7.40	1.20	5.50	1.20	1.20	2.60	4.72	2.50	16ga	4.00	14ga	10.00	8.75
3.0" T x 3.0" Line	10.00	1.20	6.20	1.20	0.65	2.64	4.33	3.00	16ga	3.00	16ga	10.00	8.75
3.0" T x 4.0" Line	10.00	1.20	6.70	1.20	1.16	3.15	5.32	3.00	16ga	4.00	14ga	10.00	8.75
4.0" T x 4.0" Line	11.60	1.50	7.40	1.20	0.02	2.48	4.60	4.00	14ga	4.00	14ga	10.00	11.50

# Diaphragm Valve Technical Data

## Dimensions - ZST U-Bend, Tri-Clamp® and Butt Weld

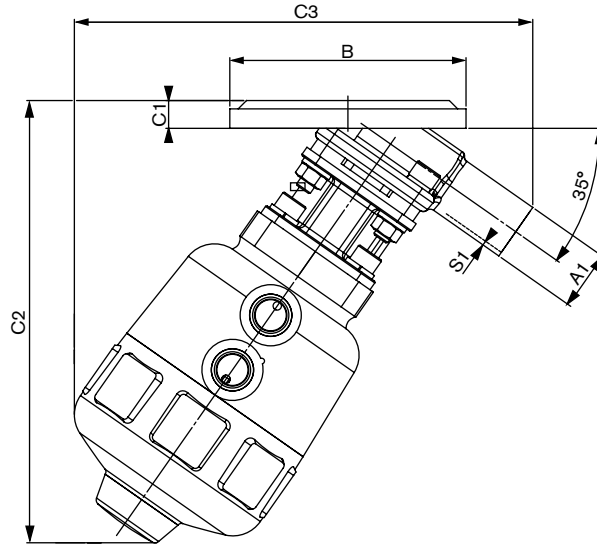


Valve Size	L	CL	WL
1/2" U x 1/2" T	-	-	-
3/4" U x 1/2" T	-	-	-
3/4" U x 3/4" T	9.50	1.63	3.00
1.0" U x 1/2" T	9.50	2.00	3.00
1.0" U x 3/4" T	9.50	2.00	3.00
1.0" U x 1.0" T	9.50	2.00	3.00
1.5" U x 1/2" T	11.00	2.75	3.75
1.5" U x 3/4" T	11.00	2.75	3.75
1.5" U x 1.0" T	11.00	2.75	3.75
1.5" U x 1.5" T	12.00	2.75	3.75
2.0" U x 1/2" T	13.00	3.50	4.75
2.0" U x 3/4" T	13.00	3.50	4.75
2.0" U x 1.0" T	13.00	3.50	4.75
2.0" U x 1.5" T	14.00	3.50	4.75
2.0" U x 2.0" T	15.00	3.50	4.75
2.5" U x 1/2" T	14.50	4.25	5.50
2.5" U x 3/4" T	14.50	4.25	5.50
2.5" U x 1.0" T	14.50	4.25	5.50
2.5" U x 1.5" T	15.50	4.25	5.50
2.5" U x 2.0" T	16.50	4.25	5.50
2.5" U x 2.5" T	16.50	4.25	5.50

Valve Size	L	CL	WL
3.0" U x 1/2" T	16.00	5.00	6.25
3.0" U x 3/4" T	16.00	5.00	6.25
3.0" U x 1.0" T	16.00	5.00	6.25
3.0" U x 1.5" T	17.00	5.00	6.25
3.0" U x 2.0" T	18.00	5.00	6.25
3.0" U x 2.5" T	18.00	5.00	6.25
3.0" U x 3.0" T	20.50	5.00	6.25
4.0" U x 1/2" T	19.50	6.60	8.00
4.0" U x 3/4" T	19.50	6.60	8.00
4.0" U x 1.0" T	19.50	6.60	8.00
4.0" U x 1.5" T	20.50	6.60	8.00
4.0" U x 2.0" T	21.50	6.60	8.00
4.0" U x 2.5" T	21.50	6.60	8.00
4.0" U x 3.0" T	24.00	6.60	8.00

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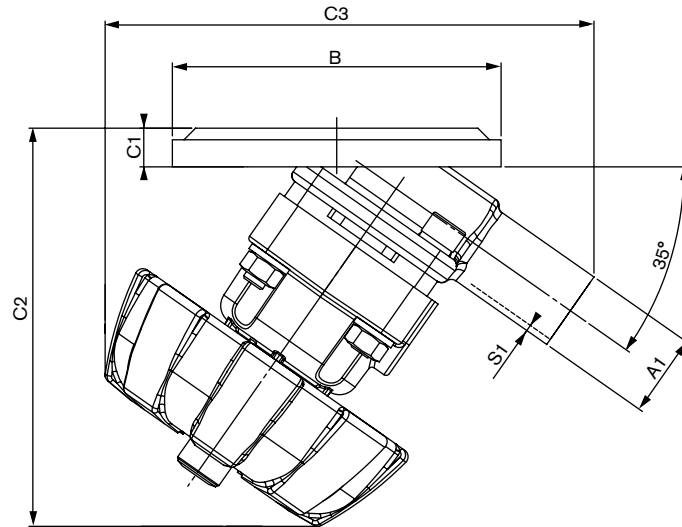
## Dimensions - Tank Bottom Valve, Tri-Clamp® and Butt Weld, Automatic Operator



Valve Size	Valve Block				Line	
	C1	C2	C3	B	A1	S1
Tank x 3/8" Line	0.32	6.30	6.50	1.97	0.375	20ga
Tank x 1/2" Line	0.47	6.30	6.50	3.35	0.500	16ga
Tank x 3/4" Line	0.47	7.48	7.72	3.35	0.750	16ga
Tank x 1.0" Line	0.63	7.87	8.27	4.72	1.000	16ga
Tank x 1.5" Line	0.71	10.08	10.63	5.91	1.500	16ga
Tank x 2.0" Line	0.87	12.60	12.60	7.09	2.000	16ga
Tank x 2.5" Line	0.87	12.60	14.00	7.09	2.500	16ga
Tank x 3.0" Line	0.79	16.34	17.32	8.86	3.000	16ga
Tank x 4.0" Line	1.18	16.97	17.95	11.73	4.000	14ga

# Diaphragm Valve Technical Data

## Dimensions - Tank Bottom Valve, Tri-Clamp® and Butt Weld, Manual Operator



Valve Size	Valve Block				Line	
	C1	C2	C3	B	A1	S1
Tank x 3/8" Line	0.32	2.64	2.64	1.97	0.375	20ga
Tank x 1/2" Line	0.47	4.02	4.20	3.35	0.500	16ga
Tank x 3/4" Line	0.47	4.33	4.72	3.35	0.750	16ga
Tank x 1.0" Line	0.63	4.61	5.00	4.72	1.000	16ga
Tank x 1.5" Line	0.71	5.79	7.05	5.91	1.500	16ga
Tank x 2.0" Line	0.87	6.34	7.60	7.09	2.000	16ga
Tank x 2.5" Line	0.87	12.60	14.00	7.09	2.500	16ga
Tank x 3.0" Line	0.79	11.54	13.54	8.86	3.000	16ga
Tank x 4.0" Line	1.18	14.09	16.26	11.73	4.000	14ga

**Burkert Fluid Control Systems**

2602 McGaw Avenue  
Irvine, California 92614  
Tel. 949-223-3100  
Fax 949-223-3198  
[www.burkert-usa.com](http://www.burkert-usa.com)