

Integra® Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way, Leak Detection and Position Indication Options



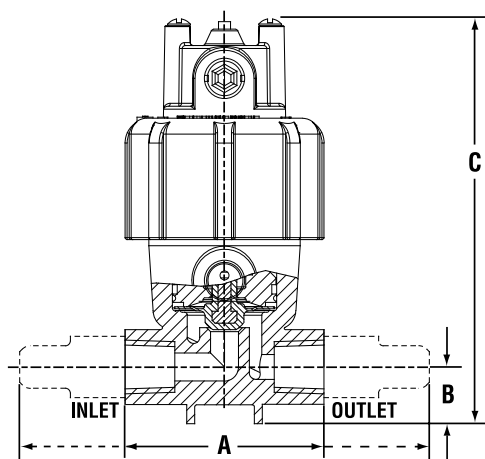
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- No external metal parts.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosive chemical handling applications.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Unique top loading design allows for field service.
- Piston shaft is encapsulated in PFA diaphragm to isolate it from corrosive fluids.
- Unique body design allows for 100% cavity drainage to prevent fluid entrapment.
- Espy® sensors can be added to allow electronic monitoring of valve position and valve body seal integrity.

Ordering Information*

Part Number	Valve Type	Flow Factor C _v K _v	Port Connection	A	Dimensions B	C	Repair Kit
Leak Detection and Position Indication Options							
202-69-01	Normally closed	.90 12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-155
202-71-01†	Normally closed	.90 12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-155
202-72-01†	Normally closed	.90 12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-155
202-179-01†	Normally closed	.24 3.4	1/4" Flaretek® flared tube	3.12" (79.2 mm)	0.49" (12.4 mm)	3.99" (101.3 mm)	202-155
Leak Detection Option							
202-74-01	Normally open	.90 12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-156
202-76-01†	Normally open	.90 12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-156
202-77-01†	Normally open	.90 12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-156
202-181-01†	Normally open	.24 3.4	1/4" Flaretek® flared tube	3.12" (79.2 mm)	0.49" (12.4 mm)	3.99" (101.3 mm)	202-156

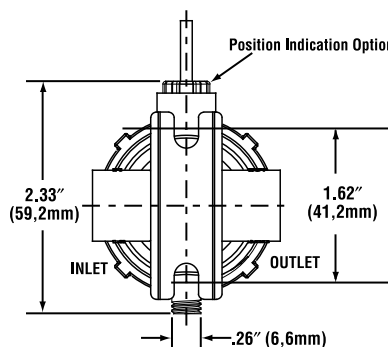
Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

Dimensions



Mounting Information

Bottom View



Refer to page 88 for stand alone mounting base ordering information.

*Refer to page 400 for Sensing Option Ordering Information.
†Also available with PFA (-3) and CPFA (-6) nuts.

Integra® Pneumatically Operated Diaphragm Valves

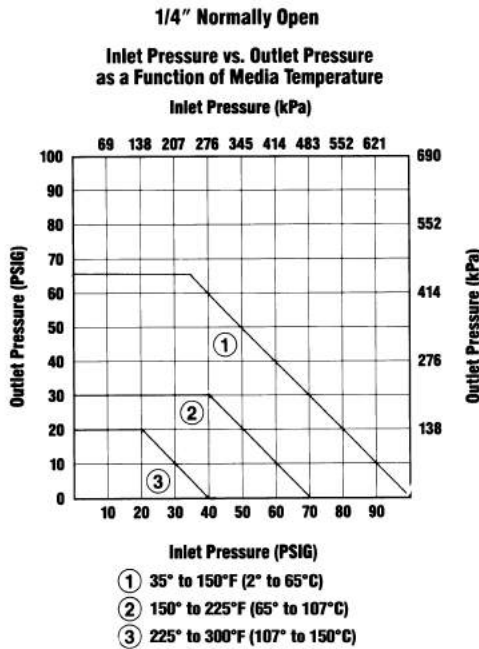
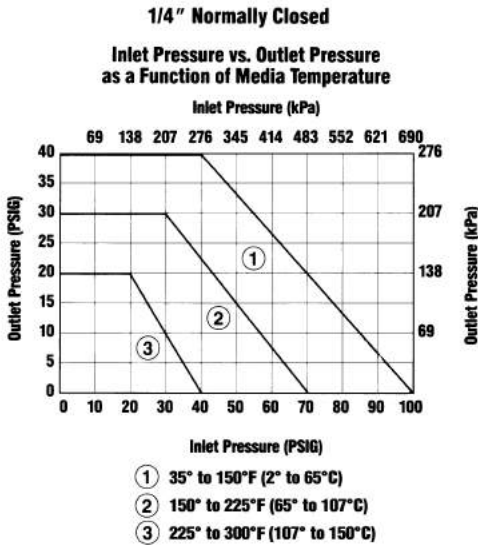
1/4" Orifice, 2-way, Leak Detection and Position Indication Options

Specifications

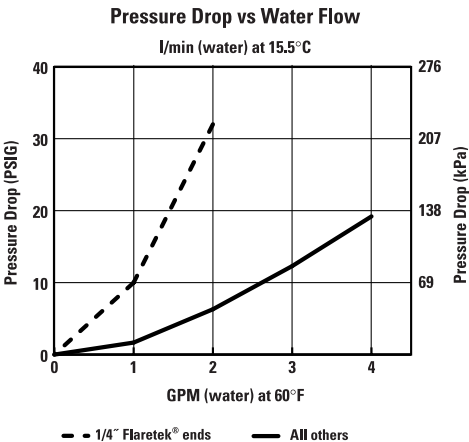
Pressure range:	29" Hg vacuum (980 mbar) to 100 PSIG (689.5 kPa) at 0 outlet pressure. (See graph)
Temperature range:	35° to 150°F (2° to 65°C), ambient 35° to 300°F (2° to 150°C), fluid 35° to 75°F (2° to 24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	50 PSIG (344.7 kPa) minimum to 70 PSIG (482.6 kPa) maximum normally closed. 60 PSIG (413.7 kPa) minimum to 70 PSIG (482.6 kPa) maximum normally open.
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.

Actual valve performance varies with pressure and temperature.
Refer to actual ratings in performance charts.

Performance Data



Note: Graphs are not applicable for valves with ECTFE external components. Consult the factory for more information.

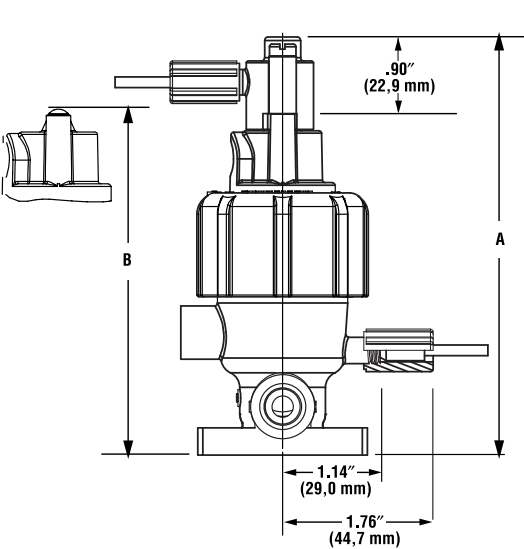


Integra® Pneumatically Operated Diaphragm Valves

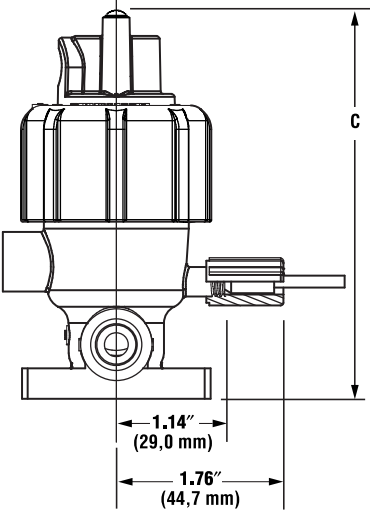
1/4" Orifice, 2-way, Leak Detection and Position Indication Options

Sensing Option Dimensional Information*

Body dimensions for normally closed valves with and without position indication and leak detection



Body dimensions for normally open valves with and without leak detection



Ordering Information

Part Number	Dimensions		
	A	B	C
202-69-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-71-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-72-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-74-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-76-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-77-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-179-01*	4.80" (121.9 mm)	3.99" (101.3 mm)	3.99" (101.3 mm)
202-181-01*	4.80" (121.9 mm)	3.99" (101.3 mm)	3.99" (101.3 mm)

*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way, High Pressure, Leak Detection and Position Indication Options



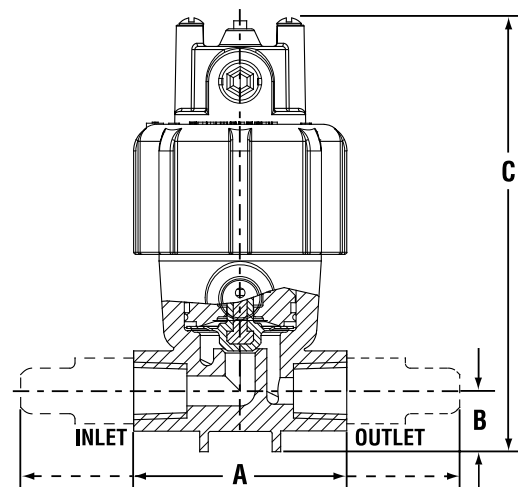
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- Higher performance with greater back (outlet) pressure capability.
- No external metal parts.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosive chemical handling applications.
- Unique top loading design allows for field service.
- Piston shaft is encapsulated in PFA diaphragm to isolate it from corrosive fluids.
- Unique body design allows for 100% cavity drainage to prevent entrapment of fluids.
- Espy® sensors can be added to allow electronic monitoring of valve position and valve body seal integrity.

Ordering Information*

Part Number	Valve Type	Flow Factor		Port Connection	A	Dimensions			Repair Kit
		C _v	K _v			B	C		
Leak Detection and Position Indication Options									
202-130-01	Normally closed	.90	12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-157	
202-123-01†	Normally closed	.90	12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-157	
202-124-01†	Normally closed	.90	12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-157	
202-180-01†	Normally closed	.24	3.4	1/4" Flaretek® flared tube	3.12" (79.2 mm)	0.49" (12.4 mm)	3.99" (101.3 mm)	202-157	
Leak Detection Option									
202-74-01	Normally open	.90	12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-156	
202-76-01†	Normally open	.90	12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-156	
202-77-01†	Normally open	.90	12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	0.57" (14.5 mm)	4.08" (103.6 mm)	202-156	
202-181-01†	Normally open	.24	3.4	1/4" Flaretek® flared tube	3.12" (79.2 mm)	0.49" (12.4 mm)	3.99" (101.3 mm)	202-156	

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

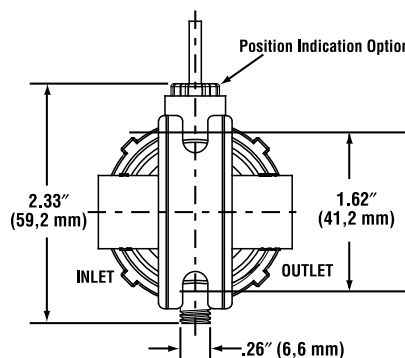
Dimensions



*Refer to page 400 for Sensing Option Ordering Information.
†Also available with PFA (-3) and CPFA (-6) nuts.

Mounting Information

Bottom View



Refer to page 88 for stand alone mounting base ordering information.

Integra[®] Pneumatically Operated Diaphragm Valves

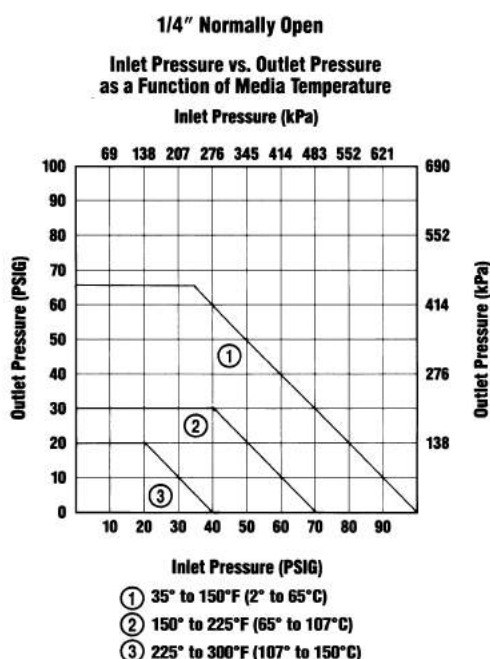
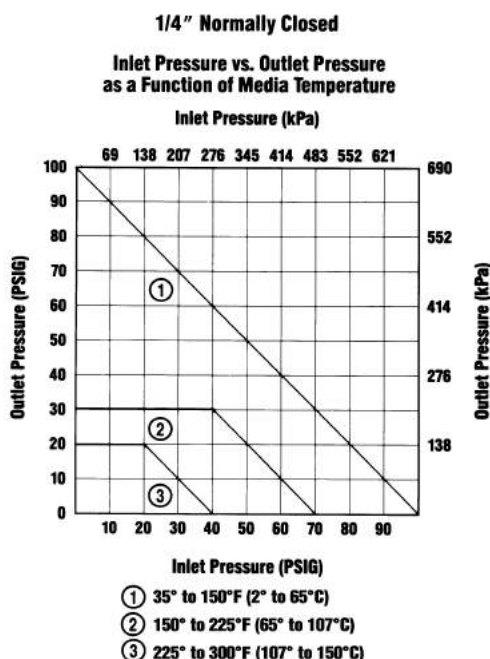
1/4" Orifice, 2-way, High Pressure, Leak Detection and Position Indication Options

Specifications

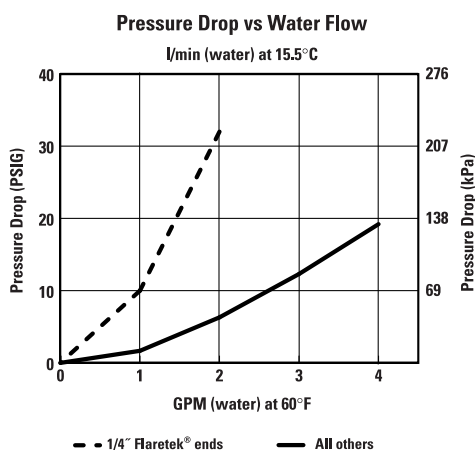
Pressure range:	29" Hg vacuum (980 mbar) to 100 PSIG (689.5 kPa) at 0 outlet pressure. (See graph)
Temperature range:	35° to 150°F (2° to 65°C), ambient 35° to 300°F (2° to 150°C), fluid 35° to 75°F (2° to 24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	60 PSIG (414 kPa) minimum to 70 PSIG (482.6 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton [®] .

Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.

Performance Data



Note: Graphs are not applicable for valves with ECTFE external components. Consult the factory for more information.

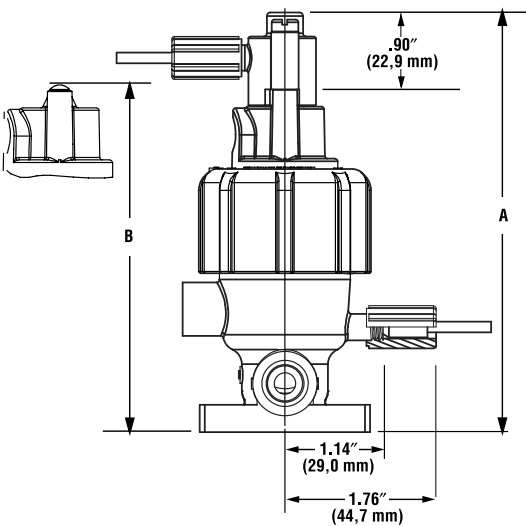


Integra® Pneumatically Operated Diaphragm Valves

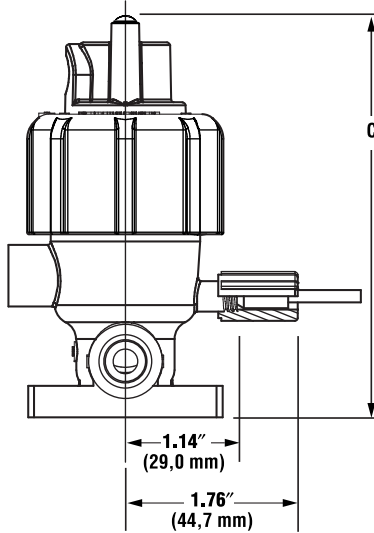
1/4" Orifice, 2-way, High Pressure, Leak Detection and Position Indication Options

Sensing Option Dimensional Information*

Body dimensions are normally closed valves with and without position indication and leak detection



Body dimensions for normally open valves with and without leak detection



Ordering Information

Part Number	Dimensions		
	A	B	C
202-130-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-123-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-124-01*	4.89" (124.2 mm)	4.08" (103.6 mm)	4.08" (103.6 mm)
202-180-01*	4.80" (121.9 mm)	3.99" (101.3 mm)	3.99" (101.3 mm)

*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically Operated Diaphragm Valves

1/4" Orifice, Sampling, Position Indication Option



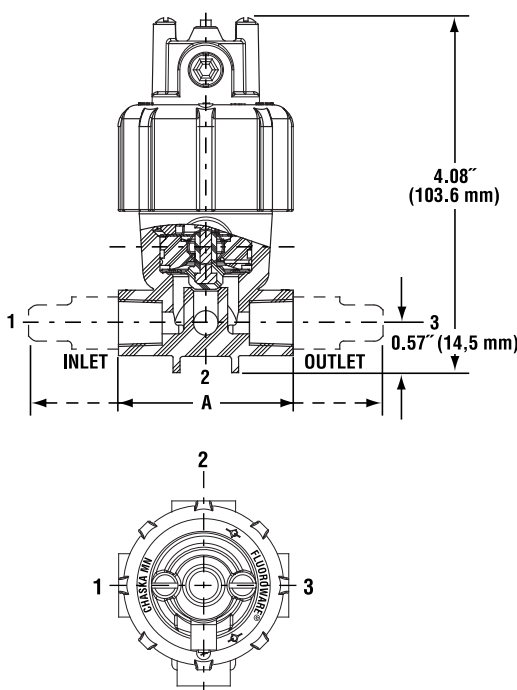
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- Allows continuous flow through parallel ports. When actuated, the sample port opens allowing fluid to flow out or in.
- No external metal parts.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosive chemical handling applications.
- Unique top loading design allows for field service.
- Piston shaft is encapsulated in PFA diaphragm to isolate it from corrosive fluids.
- Unique body design allows for 100% cavity drainage to prevent entrapment of fluids.
- Addition of Espy® sensors allows electronic monitoring of valve position.

Ordering Information*

Part Number	Valve Type	Flow Factor				Port Connection	Dimension A	Repair Kit
		From Port 1 to Port 3		From Port 1 or 3 to Port 2				
		C _v	K _v	C _v	K _v			
202-79-01	Normally closed	.95	13.6	.90	12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	202-155
202-81-01†	Normally closed	.95	13.6	.90	12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	202-155
202-82-01†	Normally closed	.95	13.6	.90	12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	202-155

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

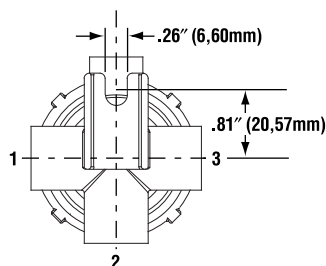
Dimensions



*Refer to page 400 for Sensing Option Ordering Information.
†Also available with PFA (-3) and CPFA (-6) nuts.

Mounting Information

Bottom View



Integra® Pneumatically Operated Diaphragm Valves

1/4" Orifice, Sampling, Position Indication Option

Specifications

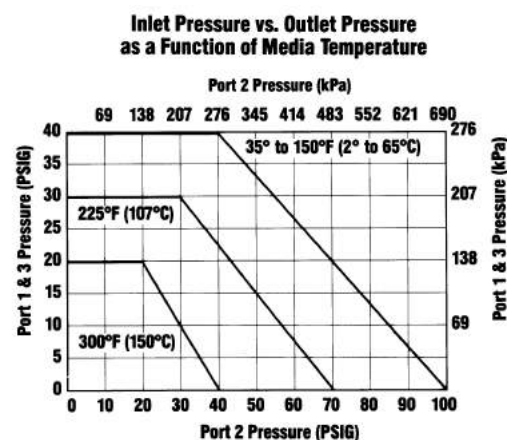
Pressure range:	29" Hg vacuum (980 mbar) to 40 PSIG (275.8 kPa) at 0 outlet pressure (Port 2). Refer to the Performance Chart below for details.
Temperature range:	35° to 150°F (2° to 65°C), ambient 35° to 300°F (2° to 150°C), fluid 35° to 75°F (2° to 24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	50 PSIG (344.7 kPa) minimum to 70 PSIG (482.6 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.

Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.

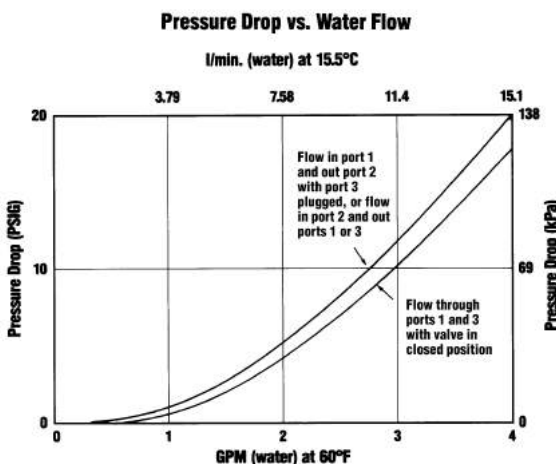
Function

Port 1 and 3 provide continuous flow through the valve. Port 2 draws a sample or injects a fluid to this continuous flow. Sample flow and pressure as a function of the continuous flow are shown in the following graphs.

Performance Data



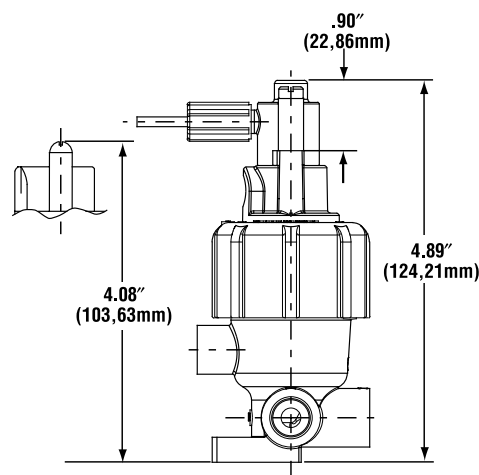
Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.



*Refer to page 400 for Sensing Option Ordering Information.

Sensing Option Dimensional Information*

Body dimensions with and without leak detection.



Integra® Pneumatically Operated Diaphragm Valves

1/4" Orifice, Sampling, High Pressure, Position Indication Option



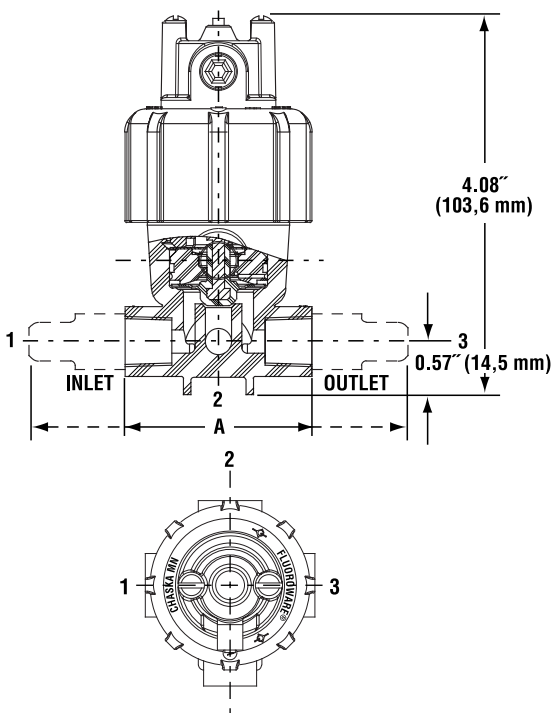
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- Realize higher performance from new Integra® valves with greater back (outlet) pressure capability.
- No external metal parts.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosive chemical handling applications.
- Unique top loading design allows for field service.
- Piston shaft is encapsulated in PFA diaphragm to isolate it from corrosive fluids.
- Unique body design allows for 100% cavity drainage to prevent entrapment of fluids.
- Adding Espy® sensors allows for electronic monitoring of valve position.

Ordering Information*

Part Number	Valve Type	Flow Factor				Port Connection	Dimension A	Repair Kit
		From Port 1 to Port 3		From Port 1 or 3 to Port 2				
		C _v	K _v	C _v	K _v			
202-131-01	Normally closed	.95	13.6	.90	12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	202-157
202-126-01†	Normally closed	.95	13.6	.90	12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	202-157
202-127-01†	Normally closed	.95	13.6	.90	12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	202-157

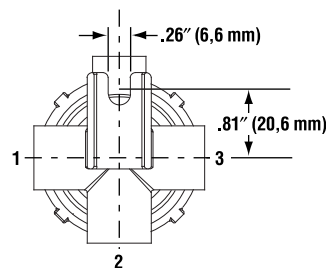
Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

Dimensions



Mounting Information

Bottom View



*Refer to page 400 for Sensing Option Ordering Information.
†Also available with PFA (-3) and CPFA (-6) nuts.

Integra® Pneumatically Operated Diaphragm Valves

1/4" Orifice, Sampling, High Pressure, Position Indication Option

Specifications

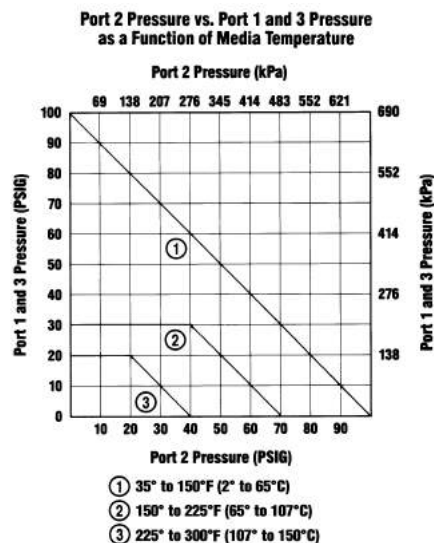
Pressure range:	29" Hg vacuum (980 mbar) to 100 PSIG (689.5 kPa) at 0 outlet pressure (Port 2). Refer to the Performance Chart below for details.
Temperature range:	35° to 150°F (2° to 65°C), ambient 35° to 300°F (2° to 150°C), fluid 35° to 75°F (2° to 24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	60 PSIG (414 kPa) minimum to 70 PSIG (482.6 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.

Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.

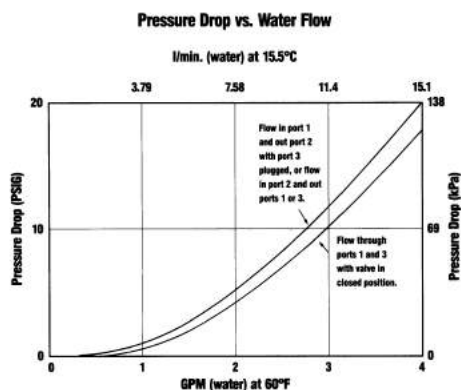
Function

Ports 1 and 3 provide continuous flow through the valve. Port 2 draws a sample or injects a fluid to this continuous flow. Sample flow and pressure as a function of the continuous flow are shown in the following graphs.

Performance Data



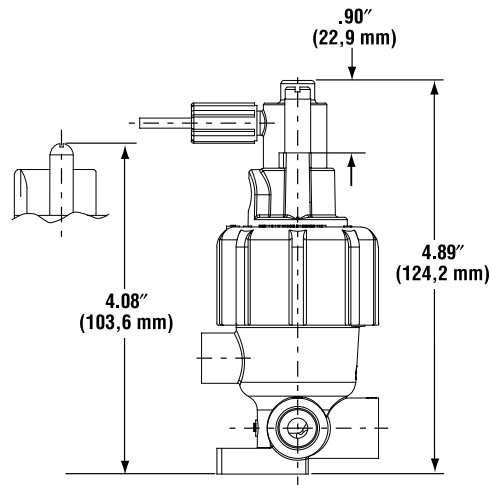
Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.



*Refer to page 400 for Sensing Option Ordering Information.

Sensing Option Dimensional Information*

Body dimensions with and without position indication



Integra® Pneumatically Operated Diaphragm Valves

1/4" Orifice, 3-way, Position Indication Option



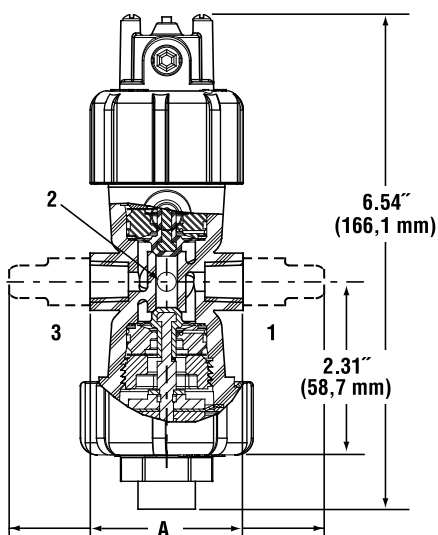
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- Three-ported directional valve enables simplification of piping system design while minimizing its footprint.
- All PFA wetted surfaces for ultrapure and corrosion resistant performance.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- No external metal parts.
- Unique top loading design provides for easy field service.
- Valve body design allows significant cavity drainage to minimize fluid entrapment.
- Integrally molded Flaretek® flared tube and PureBond® fusible pipe port connection options.
- Adding Espy® sensors allows for electronic monitoring of valve position.

Ordering Information*

Part Number	Flow Factor		Port Connection	Dimension A	Repair Kit
	C _v	K _v			
202-84-01	.90	12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	202-161
202-86-01†	.90	12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	202-161
202-87-01†	.90	12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	202-161

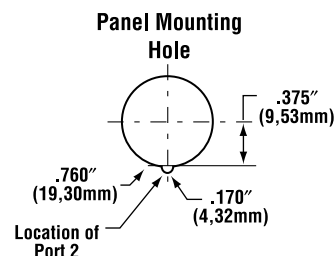
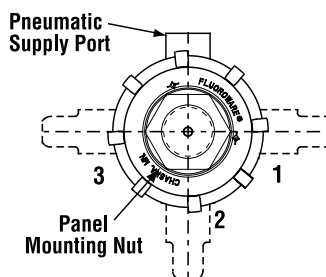
Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

Dimensions



Mounting Information

Bottom View



Panel Mount Instructions - Panel thickness must be within .12" (3.0 mm) to .38" (9.5 mm). After installing on panel, tighten panel mounting nut to 20.0 inch•lbs. (2.25 N•m) torque, or 1/4-turn beyond hand tight.

*Refer to page 400 for Sensing Option Ordering Information.
†Also available with PFA (-3) and CPFA (-6) nuts.

Integra® Pneumatically Operated Diaphragm Valves

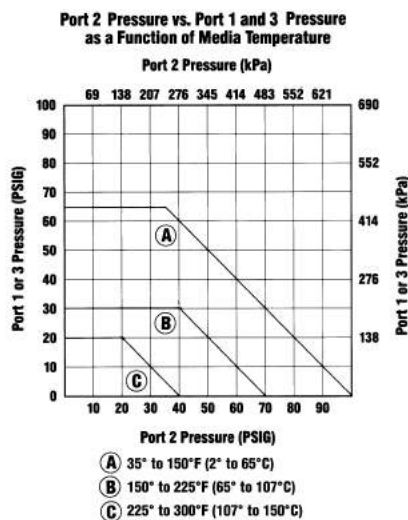
1/4" Orifice, 3-way, Position Indication Option

Specifications

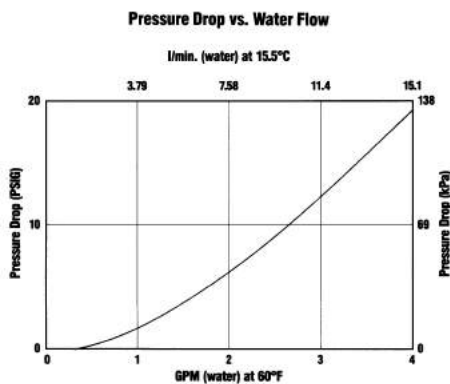
Pressure range:	80 PSIG (552 kPa) at 70°F (21°C) media temperature 60 PSIG (414 kPa) at 212°F (100°C) media temperature 20 PSIG (138 kPa) at 300°F (150°C) media temperature 120 PSIG (827 kPa) proof pressure
Temperature range:	35° to 150°F (2° to 65°C), ambient 35° to 300°F (2° to 150°C), fluid 35° to 75°F (2° to 24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	60 PSIG (413.7 kPa) maximum to 70 PSIG (482.6 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.

Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.

Performance Data



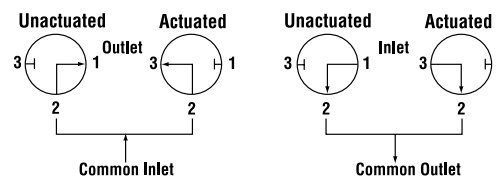
Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.



*Refer to page 400 for Sensing Option Ordering Information.

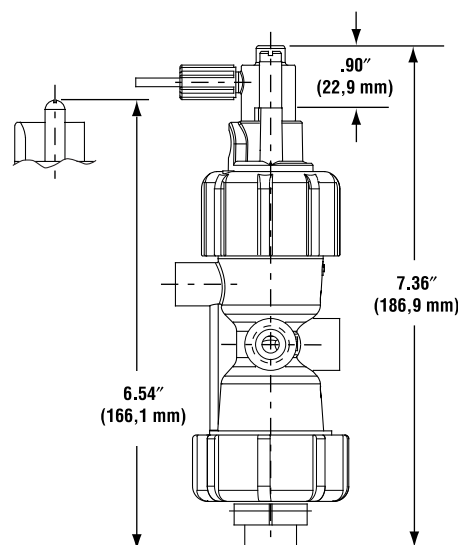
Function

Valve can be used with either common inlet or common outlet. In unactuated position flow is through Ports 2 and 1. In actuated position flow is through Ports 2 and 3.



Sensing Option Dimensional Information*

Body dimensions with and without position indication



Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 2-way, Leak Detection and Position Indication Options



- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- No external metal parts.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosive chemical handling applications.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Unique top loading design allows for field service.
- Piston shaft is encapsulated in PFA diaphragm to isolate it from corrosive fluids.
- Unique body design allows for 100% cavity drainage to prevent fluid entrapment.
- Espy® sensors can be added for electronic monitoring of valve position and valve body seal integrity.

Ordering Information*

Part Number	Valve Type	Flow Factor C _v K _v	Port Connection	A	Dimensions B	C	Repair Kit
Leak Detection and Position Indication Options							
202-58-01*	Normally closed	3.0 42.8	1/2" PureBond® fusible pipe	5.75" (146.0 mm)	0.73" (18.5 mm)	4.22" (107.2 mm)	202-152
202-59-01*	Normally closed	3.0 42.8	3/4" PureBond® fusible pipe	5.75" (146.0 mm)	0.73" (18.5 mm)	4.22" (107.2 mm)	202-152
202-66-01*†	Normally closed	2.0 28.6	1/2" Flaretek® flared tube	4.40" (111.8 mm)	0.57" (14.5 mm)	4.06" (103.1 mm)	202-152
202-60-01*†	Normally closed	3.0 42.8	3/4" Flaretek® flared tube	5.27" (133.9 mm)	0.73" (18.5 mm)	4.22" (107.2 mm)	202-152
202-66-SI-01*†	Normally closed	2.0 28.6	1/2" Flaretek® flared tube "SS" inlet**	4.64" (117.9 mm)	0.57" (14.5 mm)	4.06" (103.1 mm)	202-152
202-66-SO-01*†	Normally closed	2.0 28.6	1/2" Flaretek® flared tube "SS" outlet**	4.64" (117.9 mm)	0.57" (14.5 mm)	4.06" (103.1 mm)	202-152
202-60-SI-01*†	Normally closed	3.0 42.8	3/4" Flaretek® flared tube "SS" inlet**	5.54" (140.7 mm)	0.73" (18.5 mm)	4.22" (107.2 mm)	202-152
202-60-SO-01*†	Normally closed	3.0 42.8	3/4" Flaretek® flared tube "SS" outlet**	5.54" (140.7 mm)	0.73" (18.5 mm)	4.22" (107.2 mm)	202-152
Leak Detection Option							
202-62-01*	Normally open	3.0 42.8	1/2" PureBond® fusible pipe	5.75" (146.0 mm)	0.73" (18.5 mm)	3.89" (98.8 mm)	202-116
202-63-01*	Normally open	3.0 42.8	3/4" PureBond® fusible pipe	5.75" (146.0 mm)	0.73" (18.5 mm)	3.89" (98.8 mm)	202-116
202-67-01*†	Normally open	2.0 28.6	1/2" Flaretek® flared tube	4.40" (111.8 mm)	0.57" (14.5 mm)	3.72" (94.5 mm)	202-116
202-64-01*†	Normally open	3.0 42.8	3/4" Flaretek® flared tube	5.27" (133.9 mm)	0.73" (18.5 mm)	3.89" (98.8 mm)	202-116
202-67-SI-01*†	Normally open	2.0 28.6	1/2" Flaretek® flared tube "SS" inlet**	4.64" (117.9 mm)	0.57" (14.5 mm)	3.72" (94.5 mm)	202-116
202-67-SO-01*†	Normally open	2.0 28.6	1/2" Flaretek® flared tube "SS" outlet**	4.64" (117.9 mm)	0.57" (14.5 mm)	3.72" (94.5 mm)	202-116
202-64-SI-01*†	Normally open	3.0 42.8	3/4" Flaretek® flared tube "SS" inlet**	5.54" (140.7 mm)	0.73" (18.5 mm)	3.89" (98.8 mm)	202-116
202-64-SO-01*†	Normally open	3.0 42.8	3/4" Flaretek® flared tube "SS" outlet**	5.54" (140.7 mm)	0.73" (18.5 mm)	3.89" (98.8 mm)	202-116

** "SS" = "SpaceSaver" (Dimension A with "SS" nut.)

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

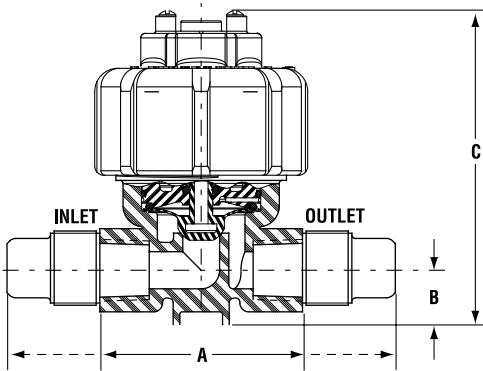
*Refer to page 400 for Sensing Option Ordering Information.

†Also available with PFA (-3) and CPFA (-6) nuts.

Integra® Pneumatically Operated Diaphragm Valves

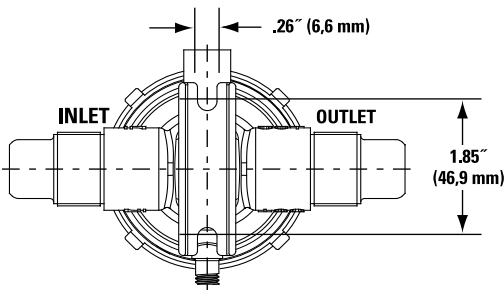
1/2" Orifice, 2-way, Leak Detection and Position Indication Options

Dimensions



Mounting Information

Bottom View



Refer to page 88 for stand alone mounting base ordering information.

Specifications

Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa) at 0 outlet pressure.
Temperature range:	75° to 150°F (24° to 65°C), ambient 75° to 150°F (24° to 65°C) fluid, normally open 75° to 300°F (24° to 150°C), fluid, normally closed 75°F (24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	Normally closed valves: 35 PSIG (241.3 kPa) minimum to 70 PSIG (482.6 kPa) maximum. Normally open valves: 40 PSIG (275.8 kPa) minimum to 70 PSIG (482.6 kPa) maximum.
Pneumatic supply port:	1/8" FNPT (Normally open valve is piloted through top of valve.)
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel, Viton®.

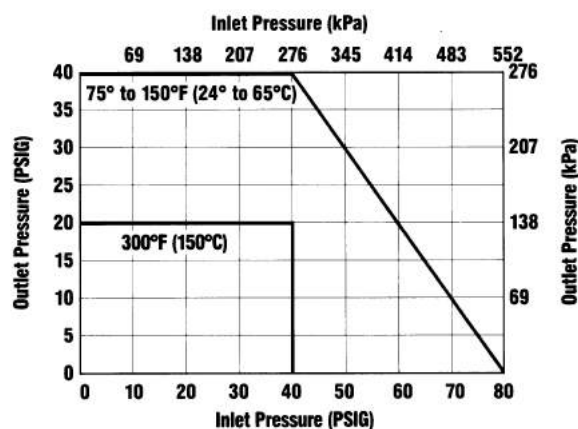
Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.

Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 2-way, Leak Detection and Position Indication Options

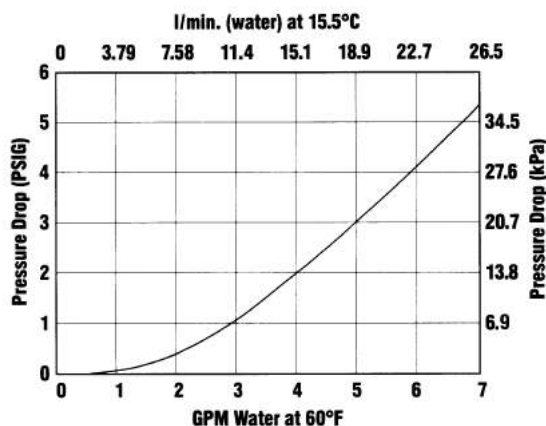
Performance Data

**Inlet Pressure vs. Outlet Pressure
as a Function of Media Temperature**



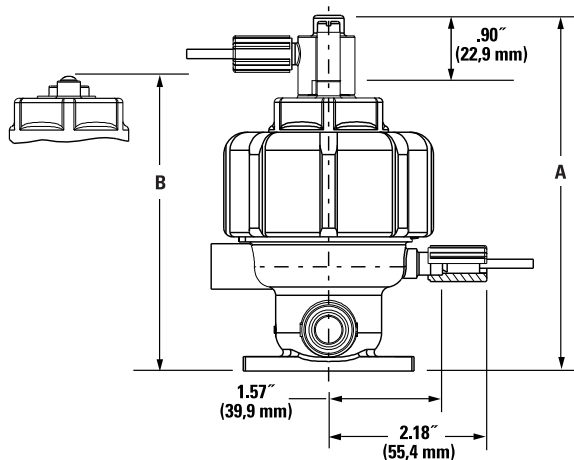
Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.

Pressure Drop vs. Water Flow

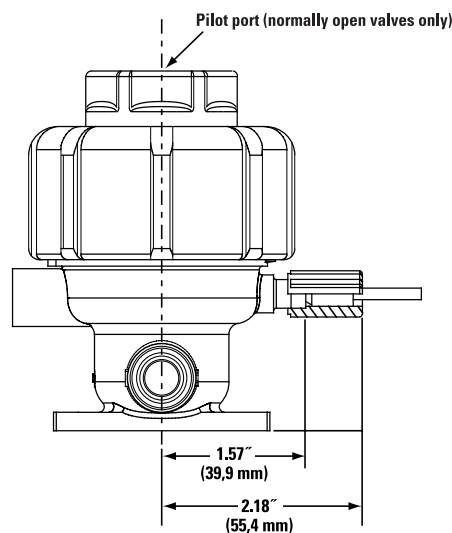


Sensing Option Dimensional Information*

Body dimensions on normally closed valves with and without position indication and lead detection



Body dimensions on normally open valves with and without leak detection



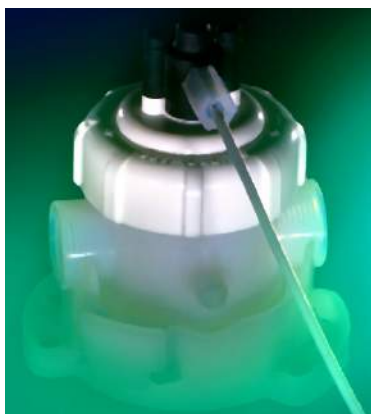
Ordering Information

Part Number	Dimensions	
	A	B
202-58-01*	5.05" (128.3 mm)	4.22" (107.2 mm)
202-59-01*	5.05" (128.3 mm)	4.22" (107.2 mm)
202-60-01*	5.05" (128.3 mm)	4.22" (107.2 mm)
202-60-SI-01*	5.05" (128.3 mm)	4.22" (107.2 mm)
202-60-SO-01*	5.05" (128.3 mm)	4.22" (107.2 mm)
202-66-01*	4.89" (124.2 mm)	4.06" (103.1 mm)
202-66-SI-01*	4.89" (124.2 mm)	4.06" (103.1 mm)
202-66-SO-01*	4.89" (124.2 mm)	4.06" (103.1 mm)

*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 2-way, High Pressure, Leak Detection and Position Indication Options



- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- Rated from 29" Hg vacuum to 120 PSIG (980 mbar to 827.3 kPa) inlet/outlet pressure.
- All PFA valve body and high purity fluoropolymer wetted components provides noncontaminating fluid stream and chemically compatible construction.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- No metals or elastomers in secondary containment chamber means lower contamination potential in the event of a media leak or exposure to a harsh external environment.
- Patent-pending secondary containment diaphragm isolates the coated spring from the secondary containment and external media.
- Stand-alone mounting base enables you to easily install and remove valve without tools.
- Espy® sensors can be added to allow electronic monitoring of valve position and valve body seal integrity.

Ordering Information*

Part Number	Valve Type	Flow Factor C _v K _v		Port Connection	Dimension A
Leak Detection and Position Indication Options					
D8-2C-8F†	Normally closed	1.9	27.2	1/2" Flaretek®	5.28" (134.1 mm)
D8-2C-8P	Normally closed	3.2	45.7	1/2" PureBond®	4.50" (114.3 mm)
D8-2C-8S1**†	Normally closed	1.9	27.2	1/2" "SpaceSaver" on Port 1	5.28" (134.1 mm)
D8-2C-12F†	Normally closed	3.2	45.7	3/4" Flaretek®	5.52" (140.2 mm)
D8-2C-12P	Normally closed	3.2	45.7	3/4" PureBond®	4.50" (114.3 mm)
D8-2C-12S1**†	Normally closed	3.2	45.7	3/4" "SpaceSaver" on Port 1	5.52" (140.2 mm)
Leak Detection Option					
D8-2U-8F†	Normally open	1.9	27.2	1/2" Flaretek®	5.28" (134.1 mm)
D8-2U-8P	Normally open	3.2	45.7	1/2" PureBond®	4.50" (114.3 mm)
D8-2U-8S1**†	Normally open	1.9	27.2	1/2" "SpaceSaver" on Port 1	5.28" (134.1 mm)
D8-2U-12F†	Normally open	3.2	45.7	3/4" Flaretek®	5.52" (140.2 mm)
D8-2U-12P	Normally open	3.2	45.7	3/4" PureBond®	4.50" (114.3 mm)
D8-2U-12S1**†	Normally open	3.2	45.7	3/4" "SpaceSaver" on Port 1	5.52" (140.2 mm)

**Port 1 can be used as either the inlet or outlet port.

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

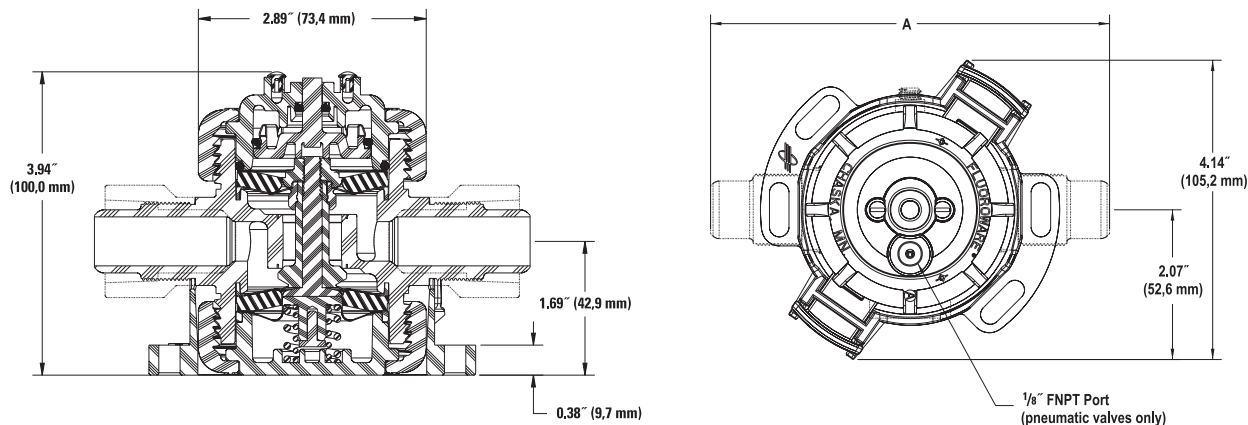
Refer to page 400 for Sensing Option Ordering Information.

†Also available with PFA (-3), CPFA (-6) and FlareLock® II (-II) nuts.

Integra[®] Pneumatically Operated Diaphragm Valves

1/2" Orifice, 2-way, High Pressure, Leak Detection and Position Indication Options

Dimensions

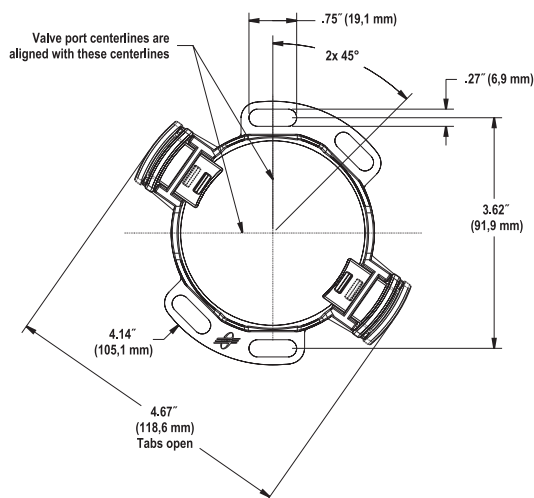


Position Indication

Valve Type	Valve Status	Red Indicator Position
Normally Closed	Unactuated (closed)	Up
Normally Closed	Actuated (open)	Down
Normally Open	Unactuated (closed)	Up
Normally Open	Actuated (open)	Down

Mounting Base Dimensions

Bottom View



Refer to page 88 for stand alone mounting base ordering information.

Field Repair

These valves are not field repairable. Contact the factory for repair information.

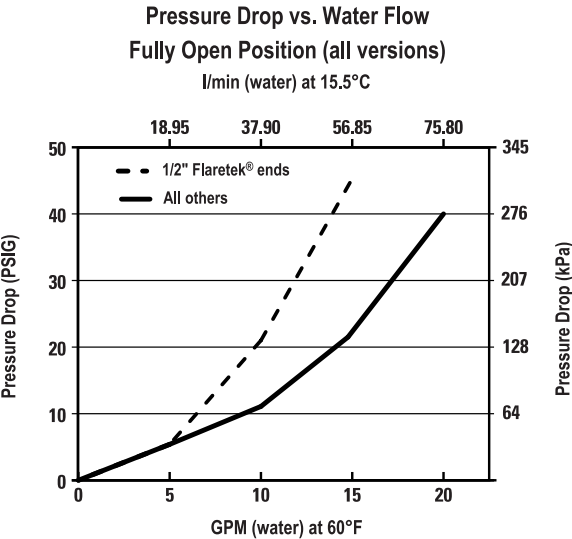
Integra[®] Pneumatically Operated Diaphragm Valves

1/2" Orifice, 2-way, High Pressure, Leak Detection and Position Indication Options

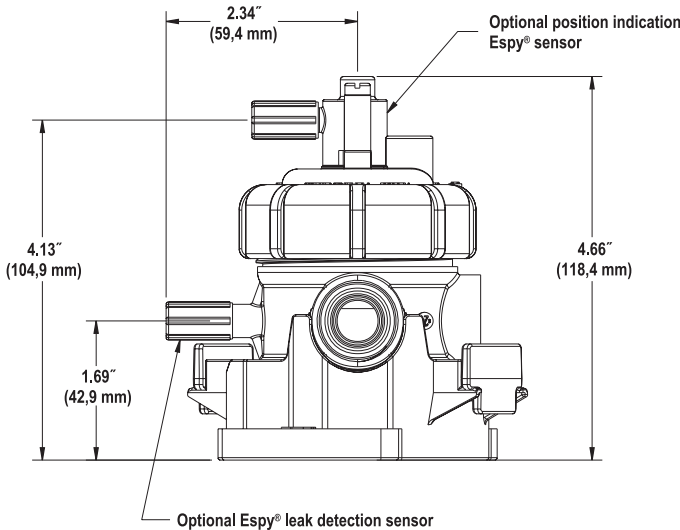
Specifications

Pressure range:	29" Hg vacuum to 120 PSIG (980 mbar to 827.3 kPa) inlet and outlet at 73°F (23°C) 29" Hg vacuum to 60 PSIG (980 mbar to 414 kPa) inlet and outlet at 230°F (110°C)
Temperature range:	73° to 230°F (23° to 110°C), media 73° to 150°F (23° to 65°C), ambient 75°F (24°C) for ECTFE external components, ambient and fluid
Pneumatic Supply Pressure:	65 to 85 PSIG (448 to 586 kPa)
Pneumatic Supply Port:	1/8" FNPT
Materials:	All wetted surfaces are PFA and PTFE. Secondary containment is PFA, PVDF, PTFE, PEEK™ and carbon-fiber reinforced PEEK™. Mounting base is polyethylene.

Performance Data



Sensing Option Dimensional Information*



*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 2-way, Adjustable Bypass, Position Indication Option



- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- Valve design allows ultrapure water to continuously bypass the diaphragm, eliminating water stagnation and bacteria formation in the valve.
- Manually adjustable, integral needle valve provides precise control of bypass flow.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- All wetted parts are PFA and PTFE.
- No external metal components.
- Unique top loading design allows for field service.
- Espy® sensor can be added for electronic monitoring of valve position.

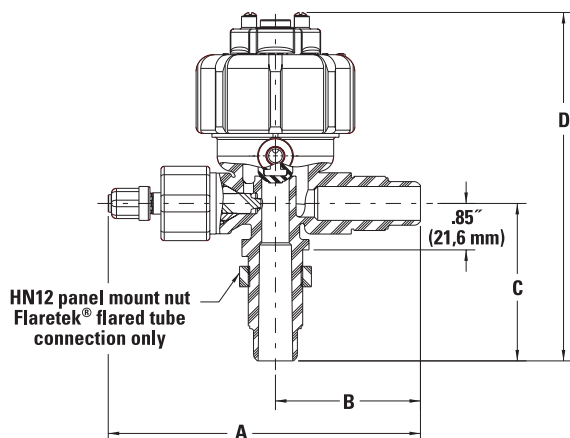
Ordering Information*

Part Number	Valve Type	Flow Factor		Port Connection
		C _v	K _v	
202-128-01†	Normally closed	3.0	42.8	3/4" Flaretek®
202-129-01	Normally closed	3.0	42.8	3/4" PureBond®

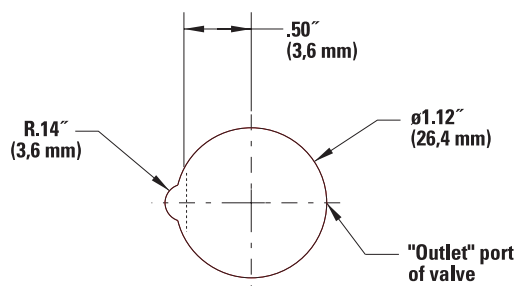
Part Number	Bypass Open A	Bypass Closed A	B	Dimensions		Repair Kit
				C	D	
202-128-01	5.86" (148.8 mm)	5.55" (141.0 mm)	2.63" (66.8 mm)	2.88" (73.2 mm)	6.36" (161.5 mm)	202-152
202-129-01	6.18" (157.0 mm)	5.88" (149.4 mm)	2.87" (72.9 mm)	2.35" (59.7 mm)	5.97" (151.6 mm)	202-152

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

Dimensions



Mounting Information



Panel Mount Instructions – Panel thickness range of 0.12" (3.0 mm) to 0.63" (16 mm). After installing on panel, tighten panel mounting nut 11 inch•lbs (1.24N•m) torque, or 1/4-turn beyond hand tight.

*Refer to page 400 for Sensing Option Ordering Information.
†Also available with PFA (-3) and CPFA (-6) nuts.

Integra® Pneumatically Operated Diaphragm Valves

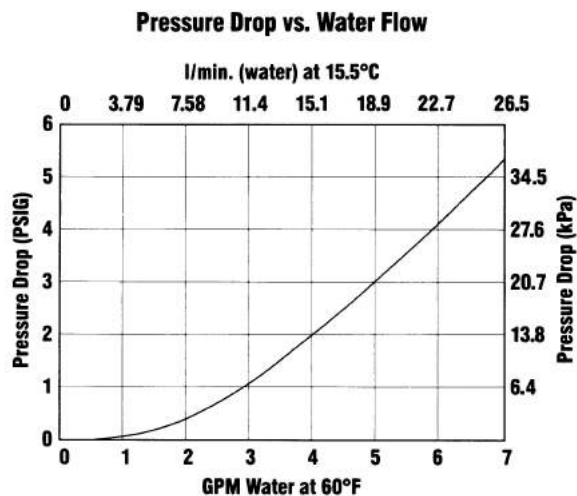
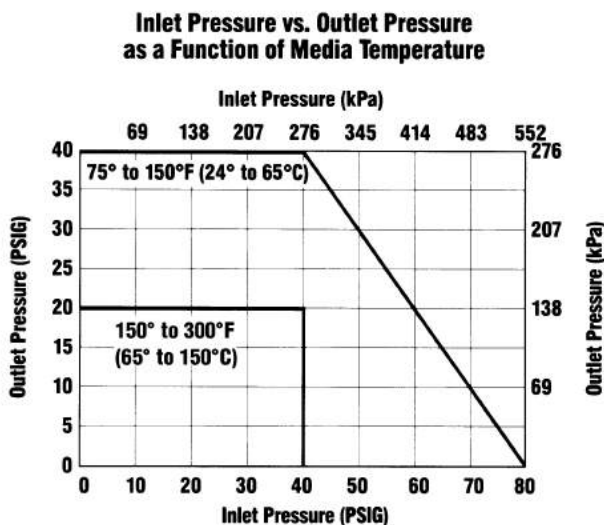
1/2" Orifice, 2-way, Adjustable Bypass, Position Indication Option

Specifications

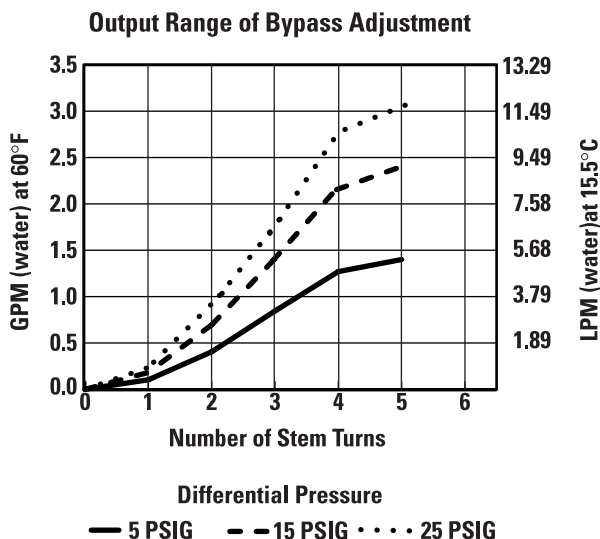
Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa) at 0 outlet pressure.
Temperature range:	75° to 150°F (24° to 65°C), ambient 75° to 300°F (24° to 150°C), fluid, normally closed 75°F (24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	Normally closed valves: 35 PSIG (241.3 kPa) minimum to 70 PSIG (482.6 kPa) maximum.
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA and PTFE. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.

Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.
Bypass feature does not completely close providing constant bypass flow.

Performance Data



Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.

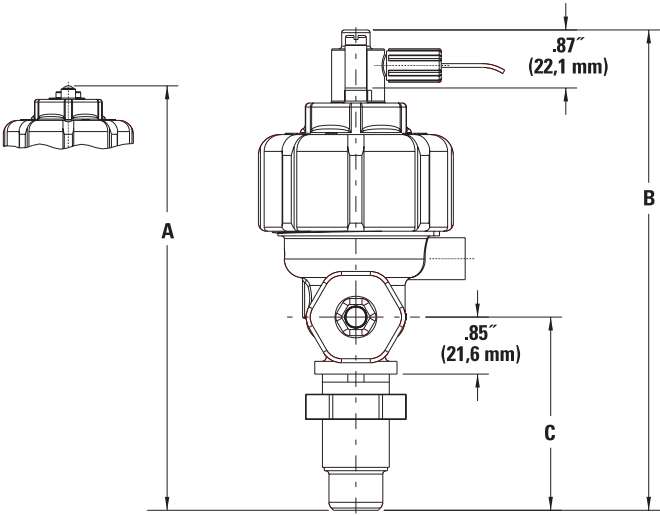


Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 2-way, Adjustable Bypass, Position Indication Option

Sensing Option Dimensional Information*

Body dimensions with and without position indication



Ordering Information

Part Number	Dimensions		
	A	B	C
202-128-01*	6.36" (161.5 mm)	7.19" (182.6 mm)	2.88" (73.2 mm)
202-129-01*	5.97" (151.6 mm)	6.80" (172.7 mm)	2.35" (59.7 mm)

*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 2-way, Adjustable Bypass, Restricted Flow Option



- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- Valve design allows ultrapure water to continuously bypass the diaphragm, thus eliminating water stagnation in the valve and preventing bacteria formation.
- Manually adjustable, integral needle valve provides precise control of bypass flow.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- All wetted parts are PFA and PTFE for the ultimate in high purity fluid containment.
- No external metal components.
- Unique top loading design allows for field service.
- Restricted flow option allows manual adjustment of full open flow.

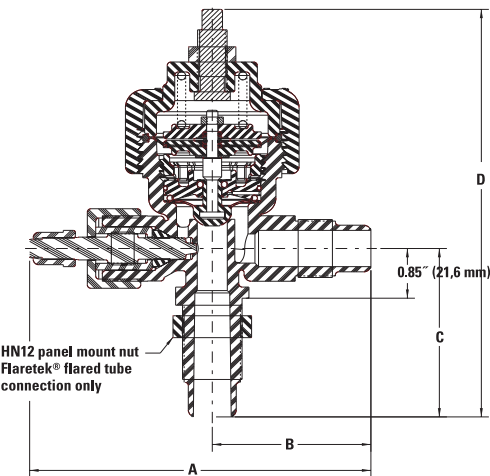
Ordering Information

Part Number	Valve Type	Flow Factor		Port Connection
		C _v	K _v	
202-158-01†	Normally Closed	3.0	42.8	3/4" Flaretek®
202-149-01	Normally Closed	3.0	42.8	3/4" PureBond®

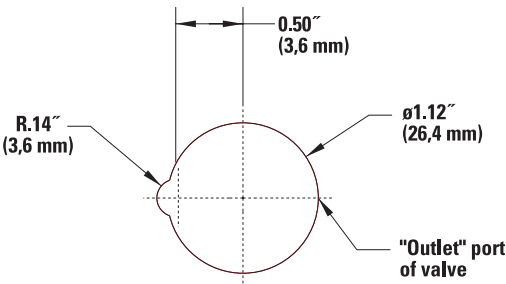
Part Number	Dimensions						Repair Kit
	Bypass Open A	Bypass Closed A	B B	C	D (fully open)		
202-158-01	5.86" (148.8 mm)	5.55" (141.0 mm)	2.60" (66.0 mm)	2.90" (73.7 mm)	7.00" (177.8 mm)		202-152
202-149-01	6.18" (157.0 mm)	5.88" (149.4 mm)	2.90" (73.7 mm)	2.40" (61.0 mm)	6.40" (162.6 mm)		202-152

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

Dimensions



Mounting Information



Panel Mount Instructions – Panel thickness range of 0.12" (3.0 mm) to 0.63" (16.0 mm). After installing on panel, tighten panel mounting nut to 11 inch•lbs (1.24 N•m) torque, or 1/4-turn beyond hand tight.

†Also available with PFA (-3) and CPFA (-6) nuts.

1/2" ORIFICE INTEGRA® VALVES

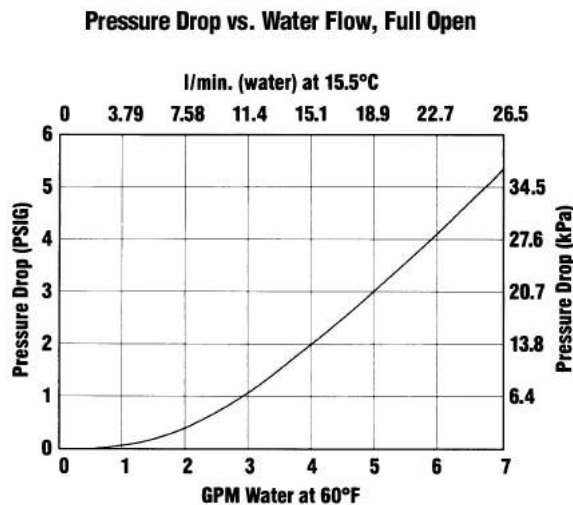
Specifications

Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts. The restricted flow option is also available with Integra® 1/2" orifice, 2-way pneumatic normally closed valves.

Output Range of Bypass Adjustment

Number of Stem Turns	GPM (water) at 60°F (5 PSIG)	GPM (water) at 60°F (15 PSIG)	GPM (water) at 60°F (25 PSIG)	LPM (water) at 15.5°C (5 PSIG)	LPM (water) at 15.5°C (15 PSIG)	LPM (water) at 15.5°C (25 PSIG)
0	0.0	0.0	0.0	0.0	0.0	0.0
1	0.1	0.2	0.3	0.4	0.8	1.2
2	0.4	0.6	0.9	1.6	2.4	3.6
3	0.8	1.4	1.8	3.2	5.6	7.2
4	1.3	2.2	2.8	4.8	8.4	10.4
5	1.4	2.4	3.1	5.1	9.1	11.1

Differential Pressure
 — 5 PSIG - - - 15 PSIG 25 PSIG



ENTEGRIS, INC. Customer Service Tel. 952-556-4196 Customer Service Fax 952-556-8022 www.entegrisfluidhandling.com

Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, Sampling, Normally Closed, Position Indication Option



- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- No external metal components.
- All wetted parts are PFA providing chemical resistance suitable for use in high purity, highly corrosive chemical handling applications.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Straight-through flow path for low pressure loss and minimum dead volume.
- Pneumatic, normally closed actuator configuration with red indicator for visual determination of valve status.
- Includes stand-alone mounting base for easy valve installation.
- Espy® sensor can be added for electronic monitoring of valve position.

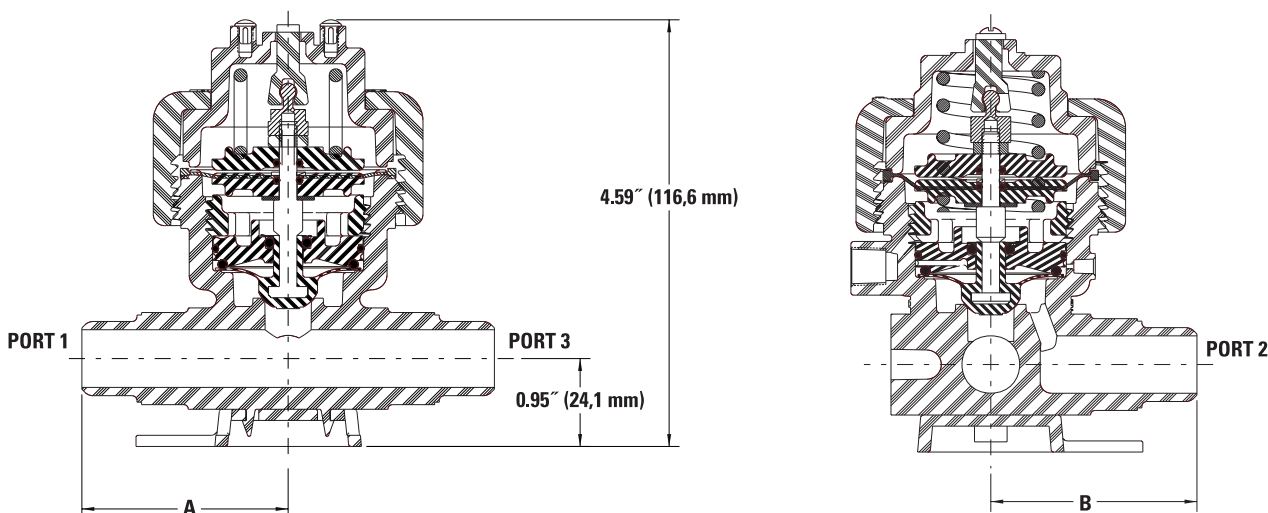
Ordering Information

Part Number	Flow Factor		Ports 1 and 3	A	Port 2	B	Repair Kit
MA8-3C-01	2.3	32.8	3/4" PureBond®	2.25" (57.2 mm)	3/4" PureBond®	2.25" (57.2 mm)	202-152
MA8-3C-02†	2.3	32.8	3/4" PureBond®	2.25" (57.2 mm)	3/4" Flaretek®	2.21" (56.1 mm)	202-152
MA8-3C-03†	1.8	25.7	3/4" PureBond®	2.25" (57.2 mm)	1/2" Flaretek®	2.10" (53.3 mm)	202-152
MA8-3C-04†	2.3	32.8	3/4" Flaretek®	2.21" (56.1 mm)	3/4" Flaretek®	2.21" (56.1 mm)	202-152
MA8-3C-05†	1.8	25.7	3/4" Flaretek®	2.21" (56.1 mm)	1/2" Flaretek®	2.10" (53.3 mm)	202-152

Note: Contact the factory for other port connections.

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

Dimensions



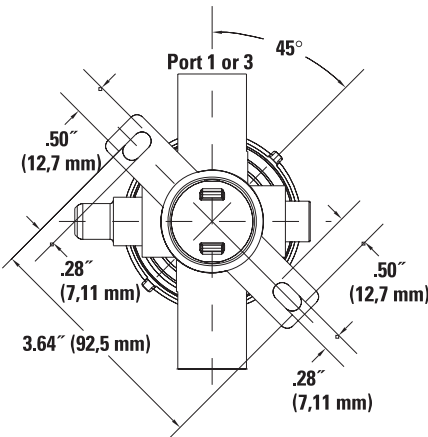
†Also available with PFA (-3) and CPFA (-6) nuts.

Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, Sampling, Normally Closed, Position Indication Option

Mounting Information

Bottom View



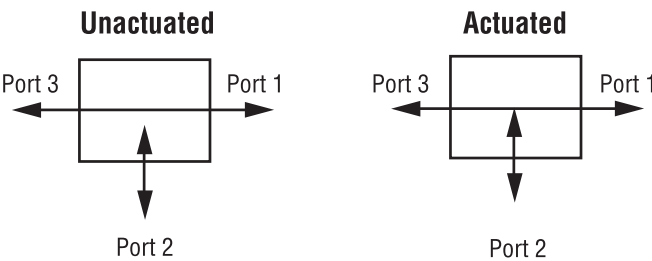
Specifications

Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa) at 0 outlet pressure
Temperature range:	75° to 150°F (24° to 65°C), ambient 75° to 212°F (24° to 100°C), fluid 75°F (24°C) for ECTFE external components, ambient and fluid
Pneumatic supply range:	35 PSIG (241.3 kPa) minimum to 70 PSIG (482.6 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®. Mounting base is high density polyethylene.

Function

Ports 1 and 3 provide continuous flow through the valve in either direction. Port 2 draws a sample from or injects fluid to this continuous flow when the valve is open.

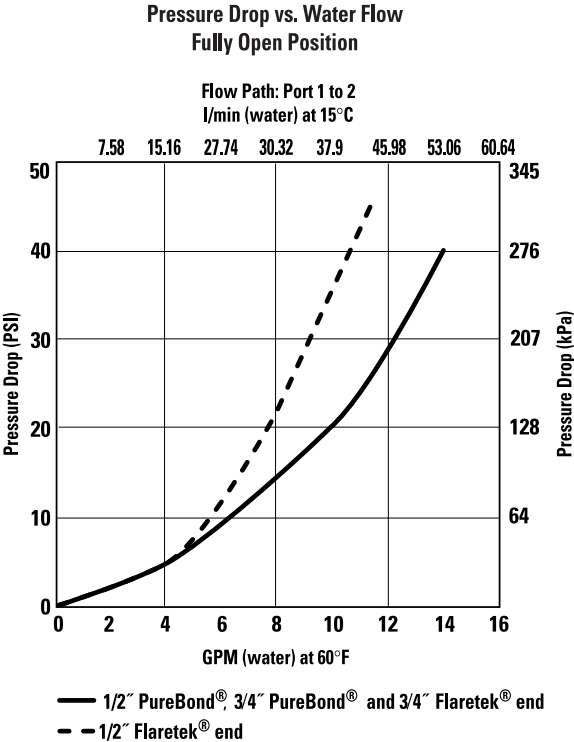
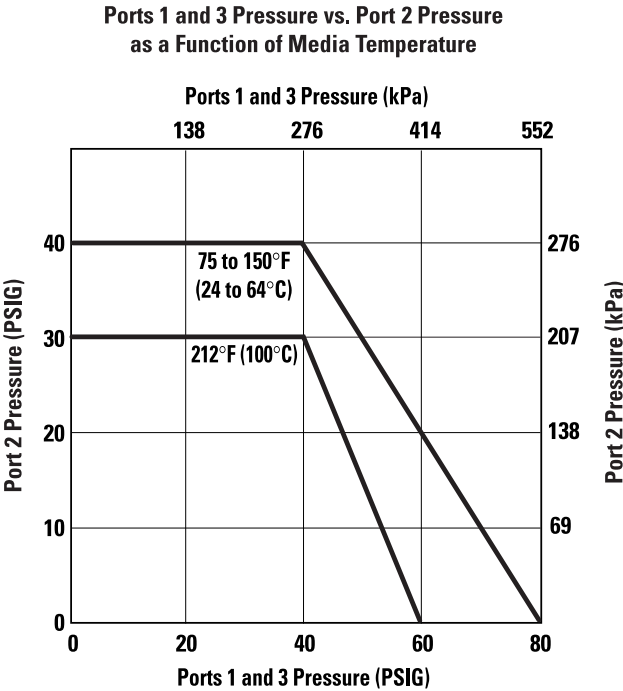
Flow Path



Integra[®] Pneumatically Operated Diaphragm Valves

1/2" Orifice, Sampling, Normally Closed, Position Indication Option

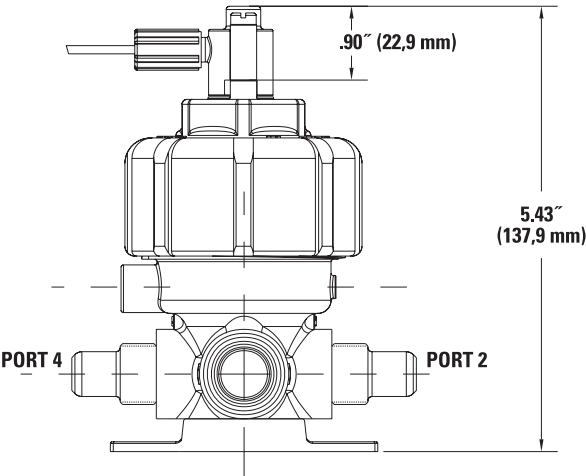
Performance Data



Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.

Sensing Option Dimensional Information*

Body dimensions for normally closed valves with and without position indication



*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically Operated Diaphragm Valve

1/2" Orifice, 3-way, Leak Detection and Position Indication Options



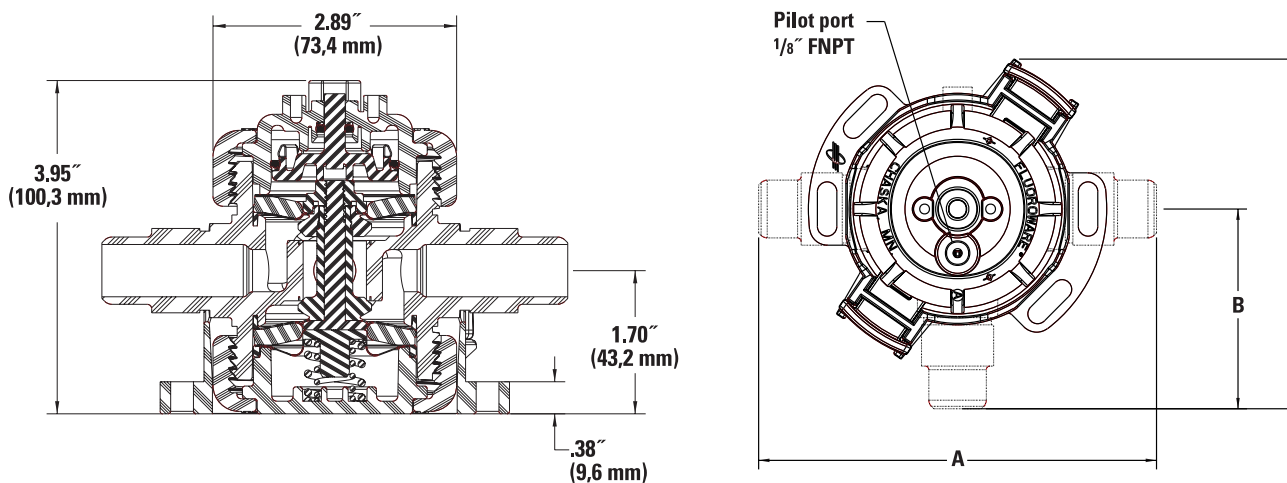
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- All PFA valve body and high purity fluoropolymer wetted components for use in high purity, highly corrosive chemical handling applications.
- No metals or elastomers in secondary containment area for improved reliability and cleanliness.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Compact design saves valuable equipment space.
- Secondary containment diaphragm isolates springs from secondary containment area and external media.
- Optional Espy® sensors can be added for electronic monitoring of valve position and valve body seal integrity.
- Stand-alone mounting base provides easy valve installation and removal.

Ordering Information*

Part Number	Port Connection	Dimensions		
		A	B	C
D8-3C-8F†	1/2" Flaretek®	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3C-8P*	1/2" PureBond®	4.50" (114.3 mm)	2.25" (57.2 mm)	4.32" (109.7 mm)
D8-3C-8S1†	1/2" "SpaceSaver" on Port 1	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3C-8S2†	1/2" "SpaceSaver" on Port 2	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3C-8S3†	1/2" "SpaceSaver" on Port 3	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3C-12F†	3/4" Flaretek®	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3C-12P*	3/4" PureBond®	4.50" (114.3 mm)	2.25" (57.2 mm)	4.32" (109.7 mm)
D8-3C-12S1†	3/4" "SpaceSaver" on Port 1	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3C-12S2†	3/4" "SpaceSaver" on Port 2	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3C-12S3†	3/4" "SpaceSaver" on Port 3	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

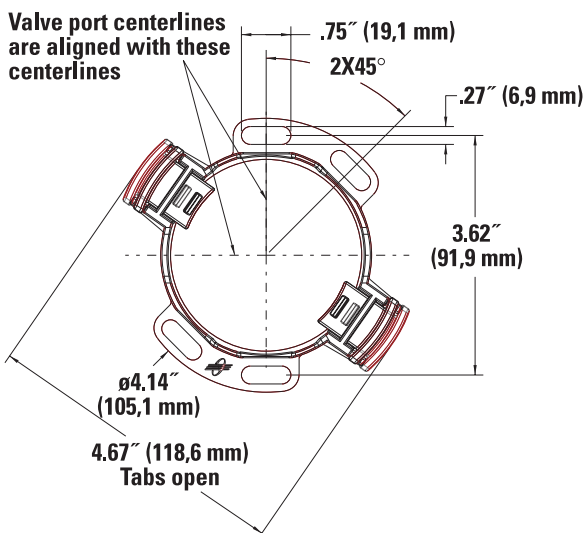
Dimensions



*Refer to page 400 for Sensing Option Ordering Information.
 †Also available with PFA (-3), CPFA (-6) and FlareLock® II (-II) nuts.

1/2" Orifice, 3-way, Leak Detection and Position Indication Options

Mounting Information

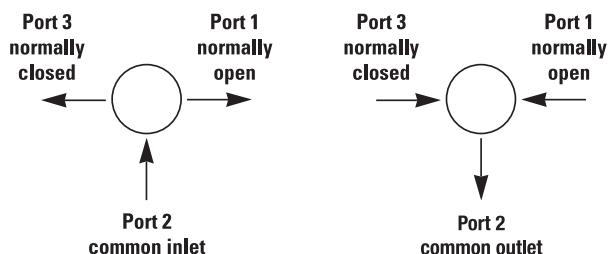


Specifications

Pressure range at:	73°F (23°C) Fluid	185°F (85°C) Fluid
Common port	29" Hg vacuum to 120 PSIG (980 mbar to 827 kPa)	29" Hg vacuum to 90 PSIG (980 mbar to 621 kPa)
Port 3	29" Hg vacuum to 90 PSIG (980 mbar to 621 kPa)	29" Hg vacuum to 70 PSIG (980 mbar to 483 kPa)
Port 1	29" Hg vacuum to 60 PSIG (980 mbar to 414 kPa)	29" Hg vacuum to 45 PSIG (980 mbar to 310 kPa)
Temperature range:	73° to 150°F (23° to 65°C), ambient 75°F (24°C) for ECTFE external components, ambient and fluid	
Pneumatic supply range:	65 PSIG (448 kPa) minimum to 85 PSIG (586 kPa) maximum	
Pneumatic supply port:	1/8" FNPT	
Materials:	All wetted parts are PFA and PTFE. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, coated stainless steel, PTFE and Viton®. Secondary containment is PFA, PVDF, PTFE, PEEK and carbon-filled PEEK. Mounting base is polyethylene.	
Typical flow factor:	1.9 C _v (27.2 K.) 1/2" Flaretek® and Flaretek® "SpaceSaver" port connections 3.2 C _v (45.7 K.) for all other port connections	

Port Configurations

- Port 1 is the normally open port
- Port 2 is the common port
- Port 3 is the normally closed port

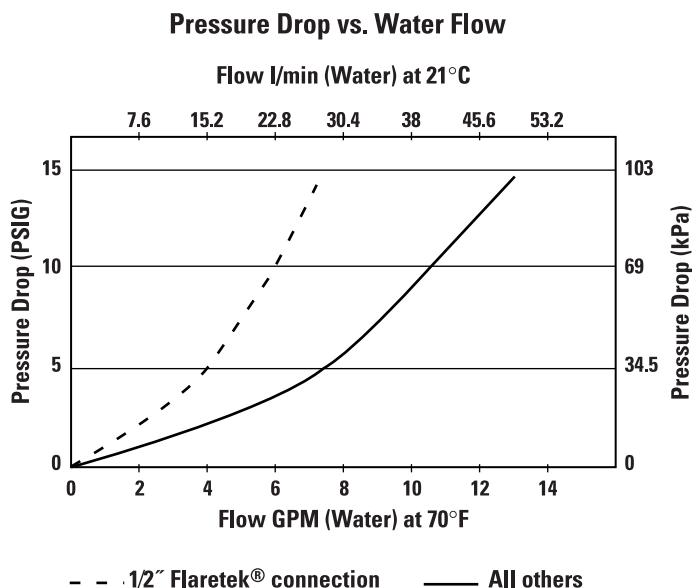


Note: The red position indicator is UP when the valve is unactuated.

Integra® Pneumatically Operated Diaphragm Valve

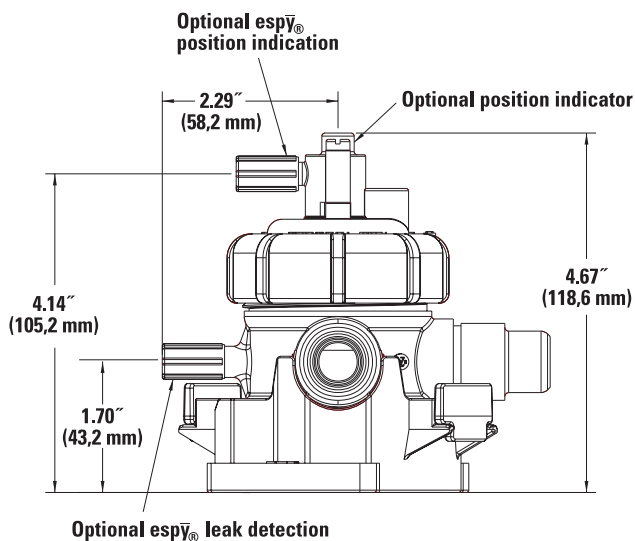
1/2" Orifice, 3-way, Leak Detection and Position Indication Options

Performance Data



Sensing Option Dimensional Information*

Body dimensions with and without position indication and leak detection



*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically Operated Diaphragm Valve

1/2" Orifice, 3-way, Reverse Porting, Leak Detection and Position Indication Options



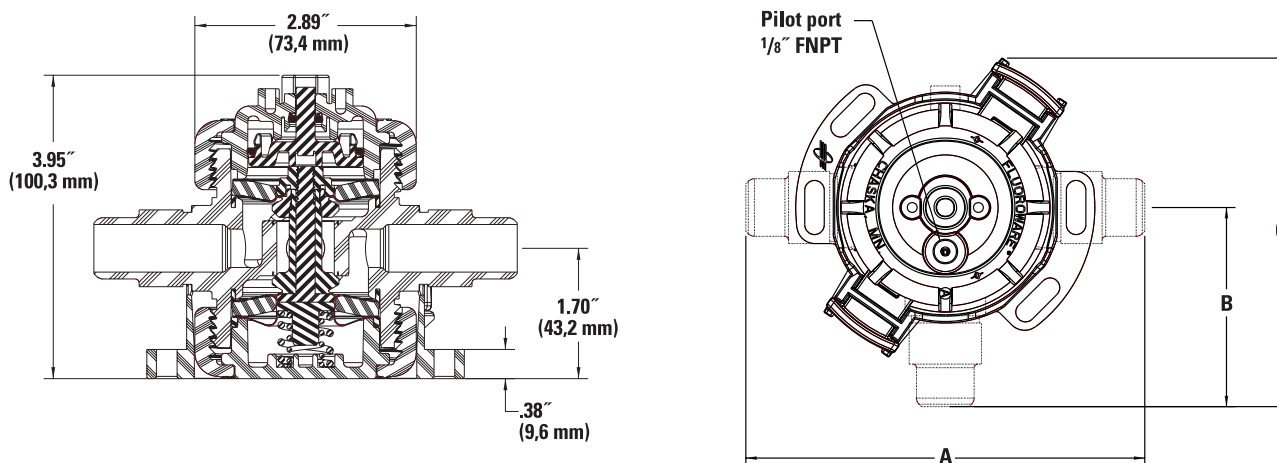
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- All PFA valve body and high purity fluoropolymer wetted components for use in high purity, highly corrosive chemical handling applications.
- No metals or elastomers in secondary containment area for improved reliability and cleanliness.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Compact design saves valuable equipment space.
- Reverse porting configurations provide additional application flexibility.
- Secondary containment diaphragm isolates springs from secondary containment area and external media.
- Optional Espy® sensors can be added for electronic monitoring of valve position and valve body seal integrity.
- Stand-alone mounting base provides easy valve installation and removal.

Ordering Information*

Part Number	Port Connection	Dimensions		
		A	B	C
D8-3C-8F-1C†	1/2" Flaretek®	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3C-8P-1C*	1/2" PureBond®	4.50" (114.3 mm)	2.25" (57.2 mm)	4.32" (109.7 mm)
D8-3C-8S1-1C†	1/2" "SpaceSaver" on Port 1	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3C-8S2-1C†	1/2" "SpaceSaver" on Port 2	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3C-8S3-1C†	1/2" "SpaceSaver" on Port 3	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3C-12F-1C†	3/4" Flaretek®	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3C-12P-1C*	3/4" PureBond®	4.50" (114.3 mm)	2.25" (57.2 mm)	4.32" (109.7 mm)
D8-3C-12S1-1C†	3/4" "SpaceSaver" on Port 1	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3C-12S2-1C†	3/4" "SpaceSaver" on Port 2	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3C-12S3-1C†	3/4" "SpaceSaver" on Port 3	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

Dimensions

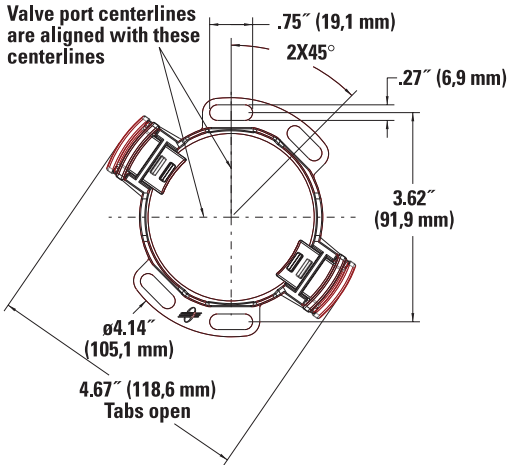


*Refer to page 400 for Sensing Option Ordering Information.
†Also available with PFA (-3) and CPFA (-6) nuts.

Integra® Pneumatically Operated Diaphragm Valve

1/2" Orifice, 3-way, Reverse Porting, Leak Detection and Position Indication Options

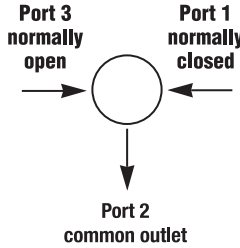
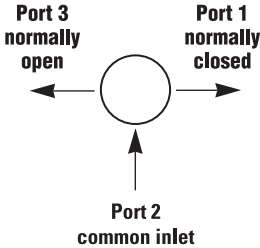
Mounting Information



Specifications

Pressure range at:	73°F (25°C)	185°F (85°C)
Common port	29" Hg vacuum to 120 PSIG (980 mbar to 827 kPa)	29" Hg vacuum to 90 PSIG (980 mbar to 621 kPa)
Port 3	29" Hg vacuum to 90 PSIG (980 mbar to 621 kPa)	29" Hg vacuum to 70 PSIG (980 mbar to 483 kPa)
Port 1	29" Hg vacuum to 60 PSIG (980 mbar to 414 kPa)	29" Hg vacuum to 45 PSIG (980 mbar to 310 kPa)
Temperature range:	73° to 150°F (23° to 65°C), ambient 75°F (24°C) for ECTFE external components, ambient and fluid	
Pneumatic supply range:	65 PSIG (448 kPa) minimum to 85 PSIG (586 kPa) maximum	
Pneumatic supply port:	1/8" FNPT	
Materials:	All wetted parts are PFA and PTFE. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, coated stainless steel, PTFE and Viton®. Secondary containment is PFA, PVDF, PTFE, PEEK and carbon-filled PEEK. Mounting base is polyethylene.	
Typical flow factor:	1.9 C _v (27.2 K _v) 1/2" Flaretek® and Flaretek® "SpaceSaver" port connections 3.2 C _v (45.7 K _v) for all other port connections	

Port Configurations
Port 1 is the normally closed port
Port 2 is the common port
Port 3 is the normally open port

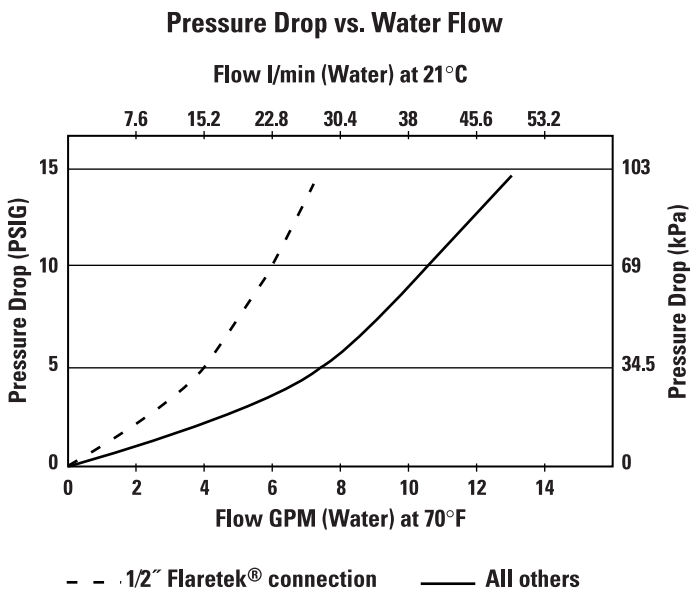


Note: The red position indicator is UP when the valve is unactuated.

Integra[®] Pneumatically Operated Diaphragm Valve

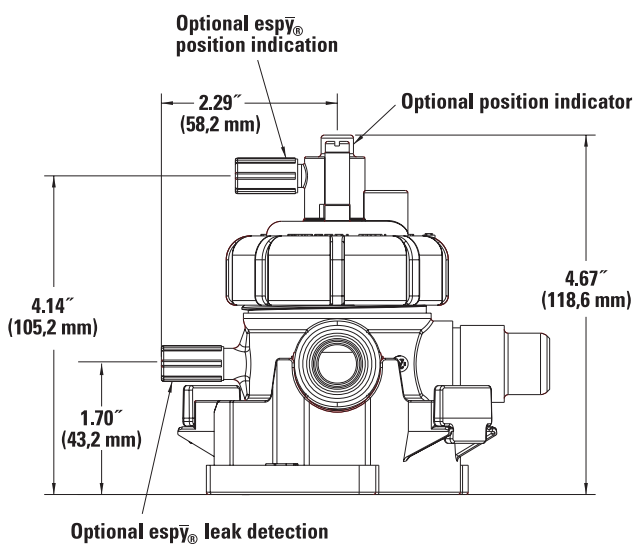
1/2" Orifice, 3-way, Reverse Porting, Leak Detection and Position Indication Options

Performance Data



Sensing Option Dimensional Information*

Body dimensions with and without position indication and leak detection



*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 4-port, Normally Closed, Position Indication Option



- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- All wetted parts are PFA providing chemical resistance suitable for use in high purity, highly corrosive chemical handling applications.
- Straight-through flow path for low pressure loss and minimum dead volume.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Pneumatic, normally closed actuator configuration with red indicator for visual determination of valve status.
- No external metal components.
- Unique 4-port design allows sample and purge functions with fewer components.
- Includes stand-alone mounting base for easy valve installation.
- Espy® sensor can be added for electronic monitoring of valve position.

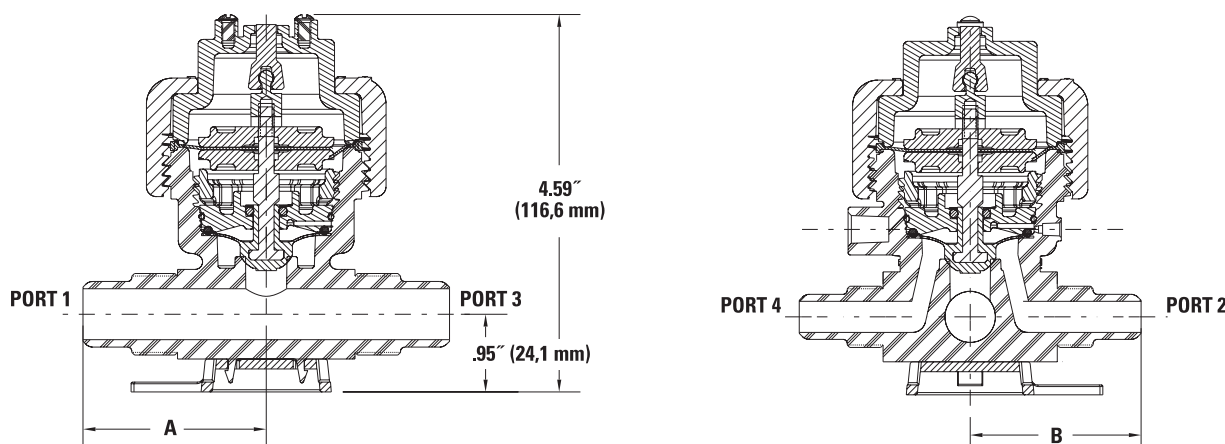
Ordering Information*

Part Number	Flow Factor		Ports 1 and 3	A	Ports 2 and 4	B
	From Port 1 or 3 to Port 2 or 4	C_v K_v				
MA8-4C-02†		1.8 25.7	3/4" PureBond®	2.25" (57.2 mm)	1/2" Flaretek®	2.10" (53.3 mm)
MA8-4C-04†		1.8 25.7	3/4" Flaretek®	2.21" (56.1 mm)	1/2" Flaretek®	2.10" (53.3 mm)

Note: Custom Integra® valve configurations are also available. Contact the factory for information.

Note: To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.

Dimensions



*Refer to page 400 for Sensing Option Ordering Information.

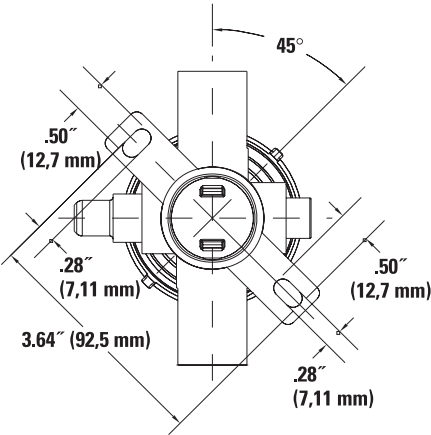
†Also available with PFA (-3) and CPFA (-6) nuts.

Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 4-port, Normally Closed, Position Indication Option

Mounting Information

Bottom View



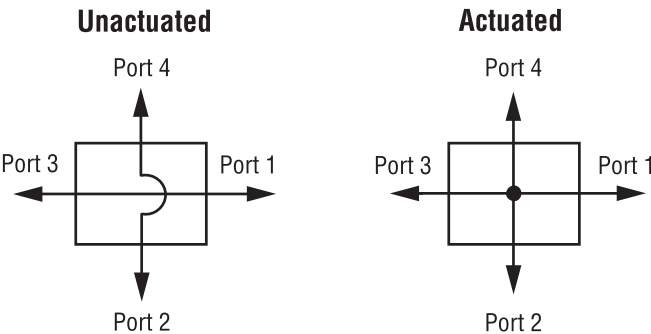
Specifications

Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa) at 0 outlet pressure
Temperature range:	75° to 150°F (24° to 65°C), ambient
	75° to 212°F (24° to 100°C), fluid
	75°F (24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	35 PSIG (241.3 kPa) minimum to 70 PSIG (482.6 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®. Mounting base is high density polyethylene.

Function

Ports 1 and 3 provide continuous flow through the valve in either direction. Port 2 and 4 draw a sample from or inject fluid into the continuous flow when the valve is open. Ports 2 and 4 also provide continuous flow through the valve separate from Ports 1 and 3.

Flow Path

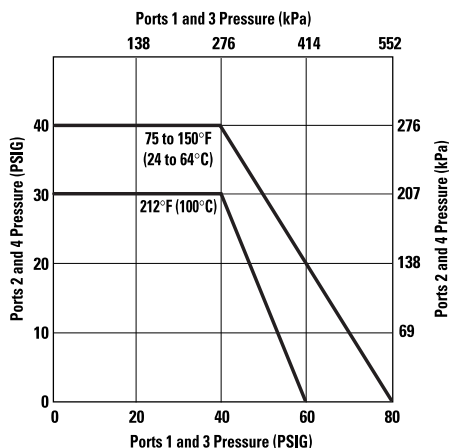


Integra® Pneumatically Operated Diaphragm Valves

1/2" Orifice, 4-port, Normally Closed, Position Indication Option

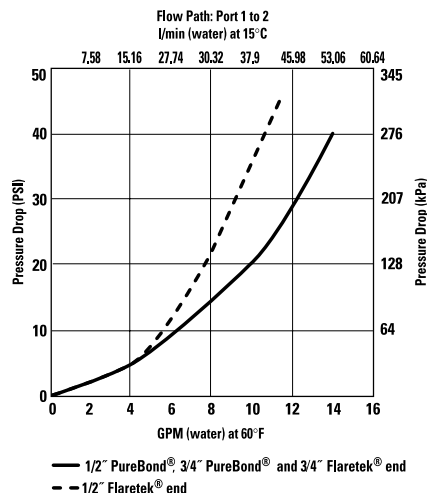
Performance Data

Ports 1 and 3 Pressure vs. Ports 2 and 4 Pressure
as a Function of Media Temperature

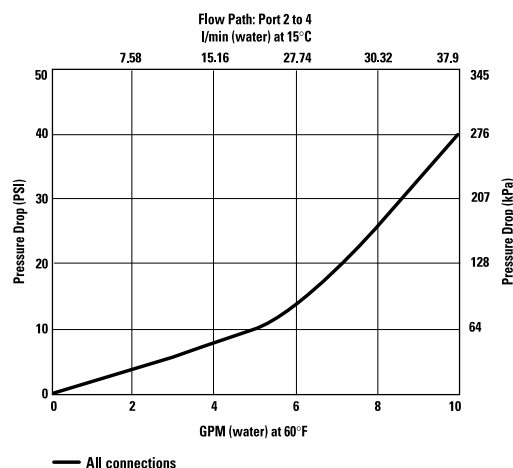


Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.

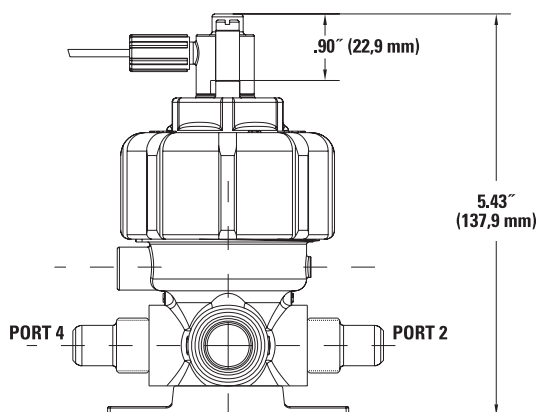
Pressure Drop vs. Water Flow
Fully Open Position



Pressure Drop vs. Water Flow
Port 2 to 4



Sensing Option Dimensional Information*



*Refer to page 400 for Sensing Option Ordering Information.

Integra[®] Pneumatically and Manually Operated Diaphragm Valve

1/2" Orifice, Custom Configurations



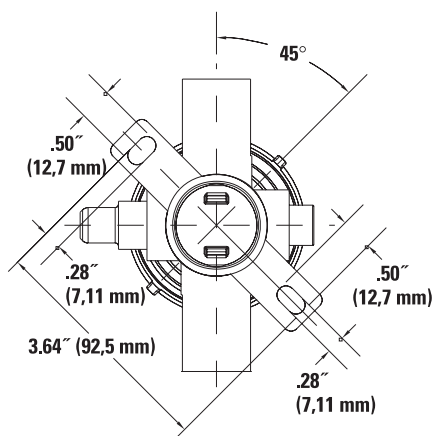
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity highly corrosive chemical handling applications.
- Customized flow path geometries and port connections including 1/2" and 3/4" Flaretek[®] and PureBond[®] provide design flexibility.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Several operator styles including pneumatic normally open, pneumatic normally closed, manual 1/4-turn and manual multi-turn are available to meet your application requirements.
- The molded body design results in reduced footprint, saving valuable equipment space.
- Stand-alone mounting base provides easy valve installation.
- Espy[®] sensor can be added for electronic monitoring of valve position.

Ordering Information

Custom Integra[®] valve configurations are individually quoted. Contact your local Entegris distributor or Entegris, Inc. with your configuration requirements. A part number is assigned at the time of order.

Mounting Information

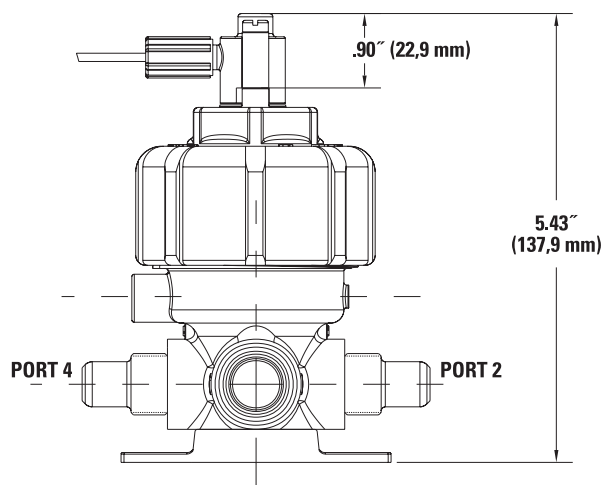
Bottom View



Each custom valve is equipped with a polyethylene mounting base for easy installation.

Sensing Option Dimensional Information*

(Pneumatic normally closed valves only)



*Refer to page 400 for Sensing Option Ordering Information.

Integra® Pneumatically and Manually Operated Diaphragm Valve

1/2" Orifice, Custom Configurations

Specifications

Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa), Pressure relationships between ports depend on the flow path geometry.
Temperature range:	75° to 150°F (24° to 65°C), ambient 75° to 212°F (24° to 100°C), fluid, multi-turn 75° to 212°F (24° to 100°C), fluid, normally closed 75°F (24°C) for ECTFE external components, ambient and fluid
Pneumatic supply pressure:	Normally closed valves: 35 PSIG (241.3 kPa) minimum to 70 PSIG (482.6 kPa) maximum Normally open valves: 40 PSIG (275.8 kPa) minimum to 70 PSIG (482.6 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.
Flow range:	1.8 to 2.3 C _v (25.7 to 32.8 K _v), dependent on flow geometry and port connection.

Configuration Capabilities

1. Blank molded body

We start with a blank molded body

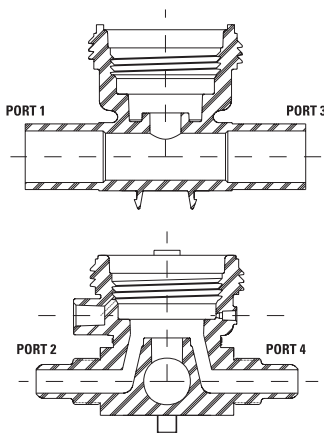


2. Configure internal flow path and port connections

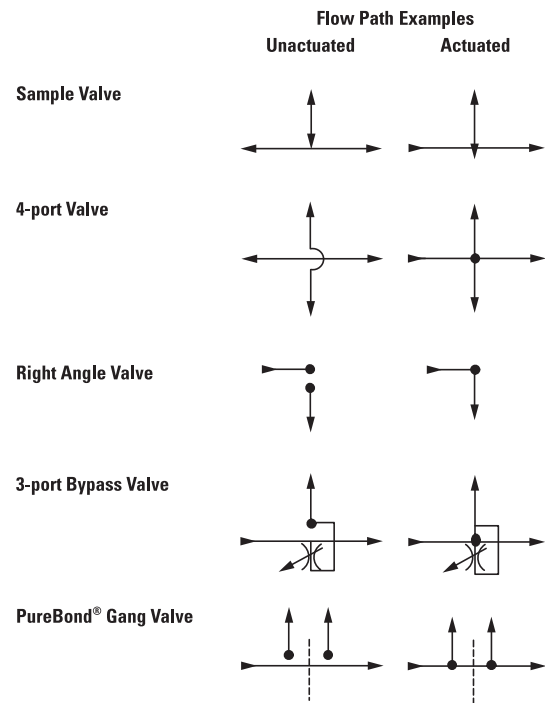
Then, we configure the flow path and port connections to your specifications.

Port Connections:

1/2" Flaretek® 3/4" Flaretek®
1/2" Flaretek® "SpaceSaver" 3/4" Flaretek® "SpaceSaver"
1/2" PureBond® 3/4" PureBond®



3. Custom Flow Path Examples



4. Install operator

And finally, we install the operator of your choice and test the valve for functionality.

Operator choices: Pneumatic normally open
Pneumatic normally closed
Manual 1/4-turn
Manual multi-turn

Repair Kits

Custom valves use standard Integra® valve repair kits with respective actuation. Contact the factory for repair information.

Integra® Pneumatically Operated Diaphragm Valves

3/4" Orifice, 2-way

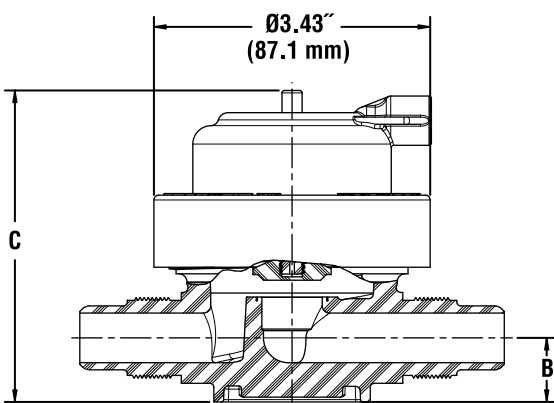


- Innovative diaphragm design (patent pending) maximizes stroke, enabling a very high flow rate with a small footprint.
- Unique internal radius enables a fully swept flow path, decreased pressure drop and reduced shear.
- All wetted surfaces are PFA and PTFE providing chemical resistance suitable for use with high purity chemicals, solvents and deionized water.
- External, nonwetted components are made from PVDF material providing higher chemical resistance and reliability.
- No external metal parts, and no metals or elastomers in secondary containment chamber means lower contamination potential in the event of a media leak or exposure to harsh external environments.
- Red indicator provides visual determination of valve status.
- Includes integral mounting base for easy valve installation.
- Available with industry standard port connections including Flaretek® and PureBond®, enabling easy integration into a variety of systems.

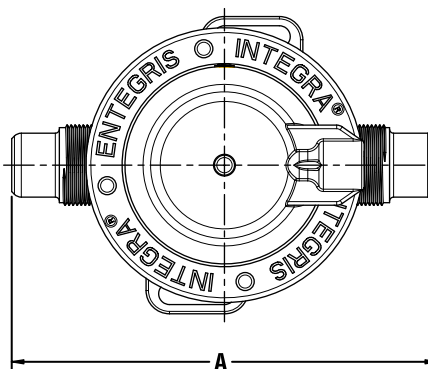
Ordering Information

Part Number	Flow Factor		Port Connection	A	Dimensions		Repair Kit
	C _v	K _v			B	C	
Normally Closed							
DS12-2C-12F	7.0	100.0	3/4" Flaretek®	5.27" (133.9 mm)	0.80" (20.3 mm)	3.87" (98.3 mm)	DS12-NC-RKIT
DS12-2C-12P	7.0	100.0	3/4" PureBond®	6.59" (167.4 mm)	0.80" (20.3 mm)	3.87" (98.3 mm)	DS12-NC-RKIT
DS12-2C-16F	8.0	114.2	1" Flaretek®	5.74" (145.8 mm)	0.96" (24.4 mm)	4.23" (107.4 mm)	DS12-NC-RKIT
DS12-2C-16P	8.5	121.4	1" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	4.23" (107.4 mm)	DS12-NC-RKIT
Normally Open							
DS12-2U-12F	7.0	100.0	3/4" Flaretek®	5.27" (133.9 mm)	0.80" (20.3 mm)	3.87" (98.3 mm)	DS12-NO-RKIT
DS12-2U-12P	7.0	100.0	3/4" PureBond®	6.59" (167.4 mm)	0.80" (20.3 mm)	3.87" (98.3 mm)	DS12-NO-RKIT
DS12-2U-16F	8.0	114.2	1" Flaretek®	5.74" (145.8 mm)	0.96" (24.4 mm)	4.23" (107.4 mm)	DS12-NO-RKIT
DS12-2U-16P	8.5	121.4	1" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	4.23" (107.4 mm)	DS12-NO-RKIT

Dimensions



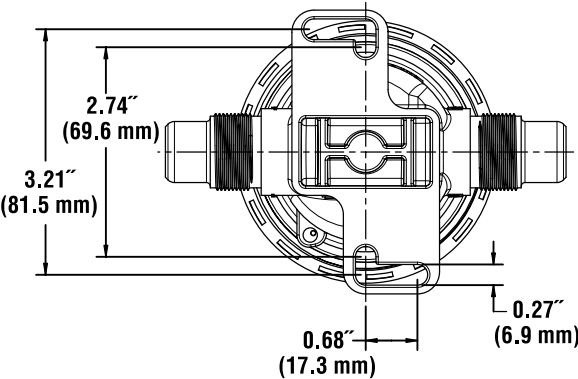
Top View



Integra® Pneumatically Operated Diaphragm Valves

3/4" Orifice, 2-way

Mounting Information

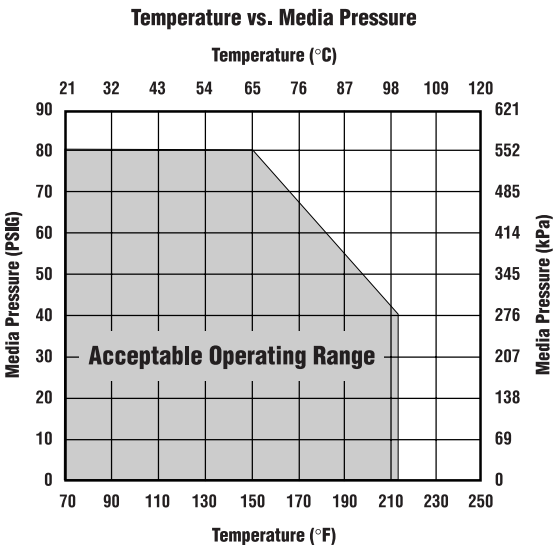
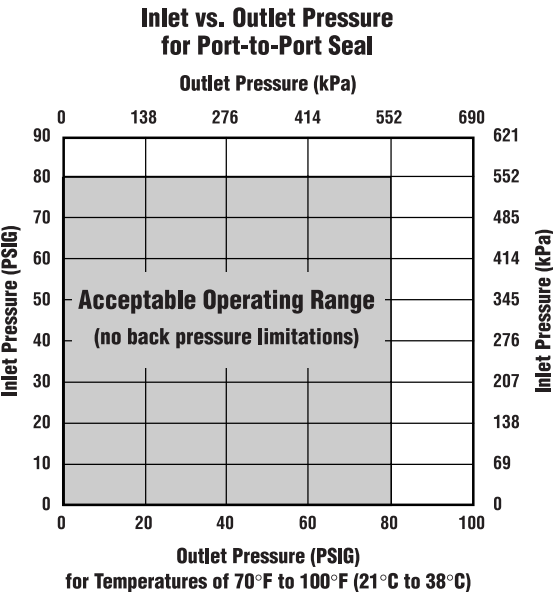


Specifications

Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa) 80 PSIG (551.6 kPa) rating at inlet or outlet port
Temperature range:	70° to 100°F (21° to 38°C), ambient 70° to 212°F (21° to 100°C), fluid
Pneumatic supply pressure:	
Normally closed:	65 PSIG (448.2 kPa) minimum to 80 PSIG (551.6 kPa) maximum
Normally open:	70 PSIG (482.6 kPa) minimum to 80 PSIG (551.6 kPa) maximum, 70 PSIG (482.6 kPa) maximum at maximum media temperature 70 PSIG (482.6 kPa) maximum at maximum media temperature
Pneumatic supply port:	1/8" FNPT (Normally closed valves)
Materials:	All wetted parts are PFA or PTFE. Exterior parts are PVDF.

Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.

Performance Data



Integra® Pneumatically Operated Diaphragm Valves

1" Orifice, 2-way

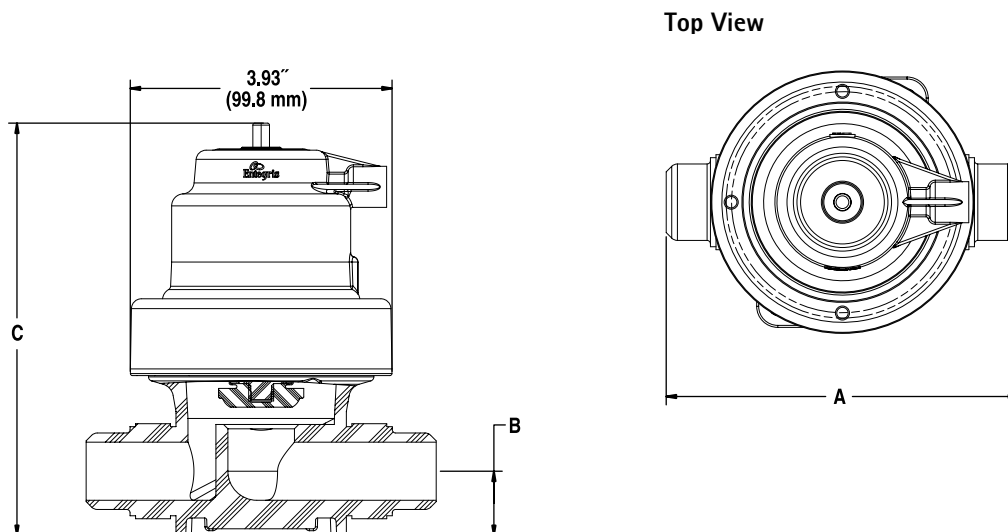


- Ideal for high flow, chemical distribution applications.
- No external metal parts.
- All wetted surfaces are PFA and PTFE providing chemical resistance suitable for use with high purity chemicals, solvents and deionized water.
- Very high flow rate with a small footprint.
- Vacuum rated.
- Available with fully characterized industry standard port connections including Flaretek®, FlareLock® II and PureBond® enabling easy integration into a variety of systems.
- Includes integral mounting base for easy valve installation.

Ordering Information

Part Number	Flow Factor C _v K _v	Port Connection	A	Dimensions B	C	Repair Kit
Normally Closed						
DS16-2C-12F*	7.2 102.8	3/4" Flaretek®	5.08" (129.0 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NC-RKIT
DS16-2C-12P	10.4 148.5	3/4" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NC-RKIT
DS16-2C-16F*	12.4 177.0	1" Flaretek®	5.26" (133.6 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NC-RKIT
DS16-2C-16P	13.6 194.2	1" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NC-RKIT
Normally Open						
DS16-2U-12F*	7.2 102.8	3/4" Flaretek®	5.08" (129.0 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT
DS16-2U-12P	10.4 148.5	3/4" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT
DS16-2U-16F*	12.4 177.0	1" Flaretek®	5.26" (133.6 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT
DS16-2U-16P	13.6 194.2	1" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT

Dimensions

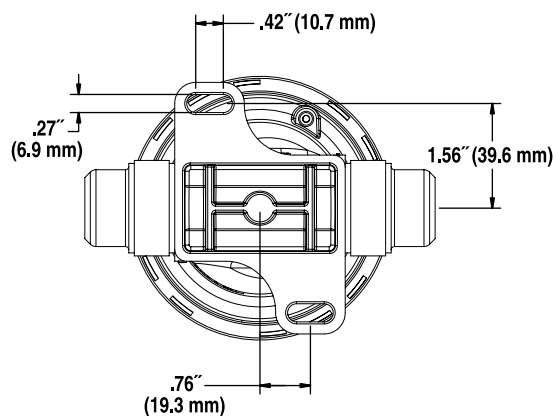


*Also available with PFA (-3) and FlareLock® (-II) nuts.

Integra® Pneumatically Operated Diaphragm Valves

1" Orifice, 2-way

Mounting Information



Specifications

Pressure range:	29" Hg to 80 PSIG (980 mbar to 552 kPa) @ 70°F (21°C) fluid temperature
	29" Hg to 40 PSIG (980 mbar to 276 kPa) @ 200°F (93°C) fluid temperature
Ambient temperature:	100°F (38°C)
Pneumatic supply pressure:	50 PSIG (345 kPa) minimum to 80 PSIG (552 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA and PTFE. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, Viton® and PEEK™. The springs are coated stainless steel.

Integra® Pneumatically Operated Distribution Valves

1" Orifice, Sampling, Normally Closed or Normally Open



- Ideal for high flow, chemical distribution applications.
- No external metal parts.
- All wetted surfaces are PFA and PTFE providing chemical resistance suitable for use with high purity chemicals, solvents and deionized water.
- Very high flow rate with a small footprint.
- Vacuum rated.
- Straight through flow path for low pressure loss and minimum dead volume.
- Pneumatic, normally open or normally closed actuator configuration with red indicator for visual determination of valve status.
- Available with industry standard port connections including Flaretek®, FlareLock II® and PureBond®, enabling easy integration into a variety of systems.
- Includes integral mounting base for easy valve installation.

Ordering Information*

Part Number	Flow Factor C _v K _v	Port 1 Connection	Port 2 (sampling) Connection	Port 3 Connection
Normally Closed				
DS16-SC-12F12F	7.2 102.8	3/4" Flaretek®	3/4" Flaretek®	3/4" Flaretek®
DS16-SC-12P12F	7.2 102.8	3/4" PureBond®	3/4" Flaretek®	3/4" PureBond®
DS16-SC-16F12F	7.2 102.8	1" Flaretek®	3/4" Flaretek®	1" Flaretek®
DS16-SC-16P12F	7.2 102.8	1" PureBond®	3/4" Flaretek®	1" PureBond®
DS16-SC-16PF12F	7.2 102.8	1" PureBond®	3/4" Flaretek®	1" Flaretek®

Normally Open				
DS16-SU-12F12F	7.2 102.8	3/4" Flaretek®	3/4" Flaretek®	3/4" Flaretek®
DS16-SU-12P12F	7.2 102.8	3/4" PureBond®	3/4" Flaretek®	3/4" PureBond®
DS16-SU-16F12F	7.2 102.8	1" Flaretek®	3/4" Flaretek®	1" Flaretek®
DS16-SU-16P12F	7.2 102.8	1" PureBond®	3/4" Flaretek®	1" PureBond®
DS16-SU-16PF12F	7.2 102.8	1" PureBond®	3/4" Flaretek®	1" Flaretek®

Part Number	A	Dimensions B	C	Repair Kit
Normally Closed				
DS16-SC-12F12F	5.08" (129.0 mm)	0.96" (24.4 mm)	5.83" (148.1 mm)	DS16-NC-RKIT
DS16-SC-12P12F	6.59" (167.4 mm)	0.96" (24.4 mm)	5.83" (148.1 mm)	DS16-NC-RKIT
DS16-SC-16F12F	5.26" (133.6 mm)	0.96" (24.4 mm)	5.83" (148.1 mm)	DS16-NC-RKIT
DS16-SC-16P12F	6.59" (167.4 mm)	0.96" (24.4 mm)	5.83" (148.1 mm)	DS16-NC-RKIT
DS16-SC-16PF12F	4.79" (121.7 mm)	0.96" (24.4 mm)	5.83" (148.1 mm)	DS16-NC-RKIT

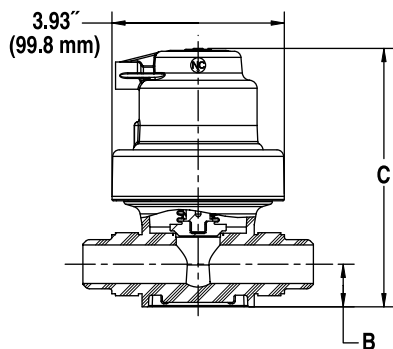
Normally Open				
DS16-SU-12F12F	5.08" (129.0 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT
DS16-SU-12P12F	6.59" (167.4 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT
DS16-SU-16F12F	5.26" (133.6 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT
DS16-SU-16P12F	6.59" (167.4 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT
DS16-SU-16PF12F	4.79" (121.7 mm)	0.96" (24.4 mm)	6.17" (156.7 mm)	DS16-NO-RKIT

*Also available with PFA (-3) and FlareLock II (-II) nuts.

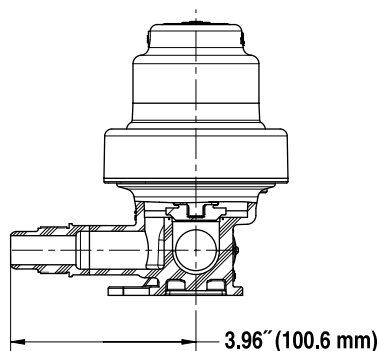
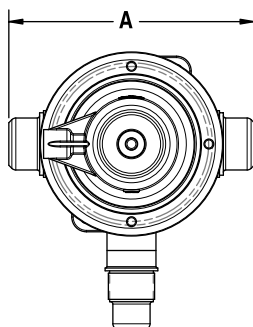
Integra® Pneumatically Operated Distribution Valves

1" Orifice, Sampling, Normally Closed or Normally Open

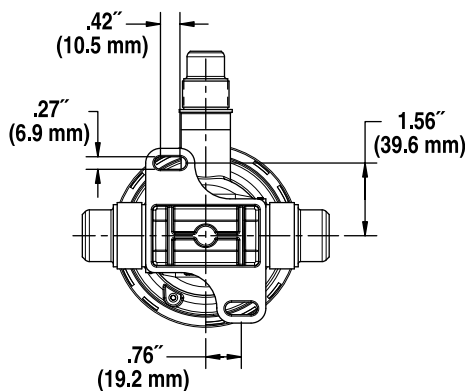
Dimensions



Top View



Mounting Information

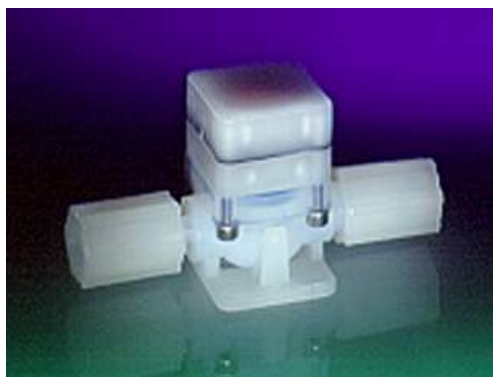


Specifications

Pressure range:	29" Hg to 80 PSIG (980 mbar to 552 kPa) @ 70°F (21°C) fluid temperature 29" Hg to 40 PSIG (980 mbar to 276 kPa) @ 200°F (93°C) fluid temperature
Ambient temperature:	100°F (38°C)
Pneumatic supply pressure:	50 PSIG (345 kPa) minimum to 80 PSIG (552 kPa) maximum
Pneumatic supply port:	1/8" FNPT
Materials:	All wetted parts are PFA and PTFE. Exterior actuator parts are PVDF. Interior actuator parts are PVDF and Viton®. The springs are fluoropolymer coated stainless steel.

Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way



- Compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- The smallest all-PFA wetted valve available for high purity fluid handling applications.
- Significantly reduces footprint with maximized C_v .
- Available with industry standard port connections including Flaretek®, Flaretek® "SpaceSaver", PureBond® or FNPT.

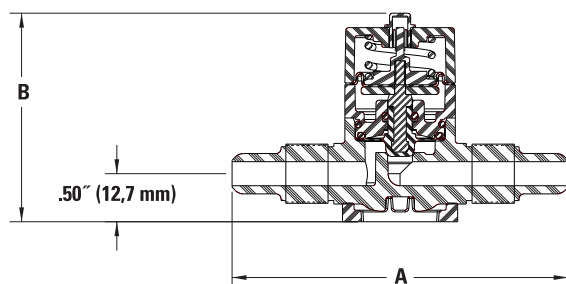
Ordering Information

Part Number	Flow Factor		Port Connection	Dimensions	
	C _v	K _v		A	B
Normally Closed					
SG4-2C-4F	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)	2.13" (54.1 mm)
SG4-2C-4P	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)	2.13" (54.1 mm)
SG4-2C-4SI	.29	4.2	1/4" Flaretek®, "SpaceSaver" inlet*	3.56" (90.4 mm)	2.13" (54.1 mm)
SG4-2C-4SO	.29	4.2	1/4" Flaretek®, "SpaceSaver" outlet*	3.56" (90.4 mm)	2.13" (54.1 mm)
SG4-2C-6F	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)	2.13" (54.1 mm)
SG4-2C-6SI	.65	9.3	3/8" Flaretek®, "SpaceSaver" inlet*	3.76" (95.5 mm)	2.13" (54.1 mm)
SG4-2C-6SO	.65	9.3	3/8" Flaretek®, "SpaceSaver" outlet*	3.76" (95.5 mm)	2.13" (54.1 mm)
Normally Open					
SG4-2U-4F	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)	1.90" (48.3 mm)
SG4-2U-4P	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)	1.90" (48.3 mm)
SG4-2U-4SI	.29	4.2	1/4" Flaretek®, "SpaceSaver" inlet*	3.56" (90.4 mm)	1.90" (48.3 mm)
SG4-2U-4SO	.29	4.2	1/4" Flaretek®, "SpaceSaver" outlet*	3.56" (90.4 mm)	1.90" (48.3 mm)
SG4-2U-6F	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)	1.90" (48.3 mm)
SG4-2U-6SI	.65	9.3	3/8" Flaretek®, "SpaceSaver" inlet*	3.76" (95.5 mm)	1.90" (48.3 mm)
SG4-2U-6SO	.65	9.3	3/8" Flaretek®, "SpaceSaver" outlet*	3.76" (95.5 mm)	1.90" (48.3 mm)

*Dimension A with "SpaceSaver" nut.

Note: Contact the factory if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.

Dimensions

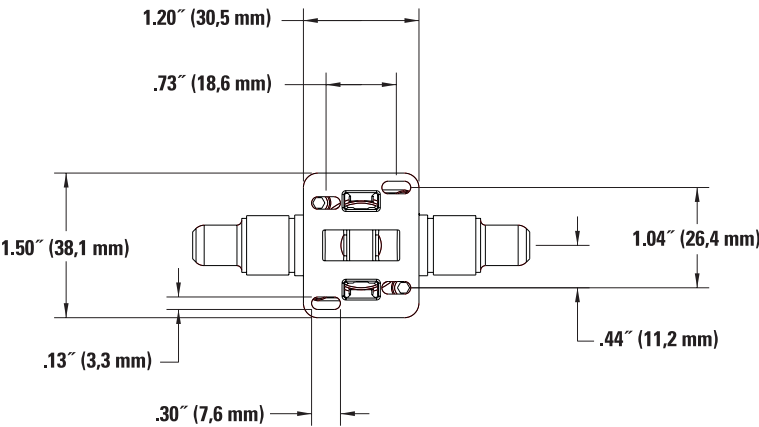


Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way

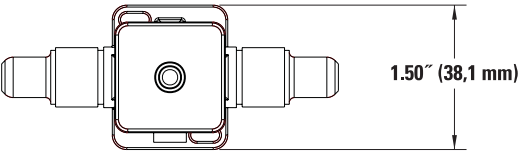
Mounting Information

Bottom View



Mounting base reorder number: 01-003444

Top View

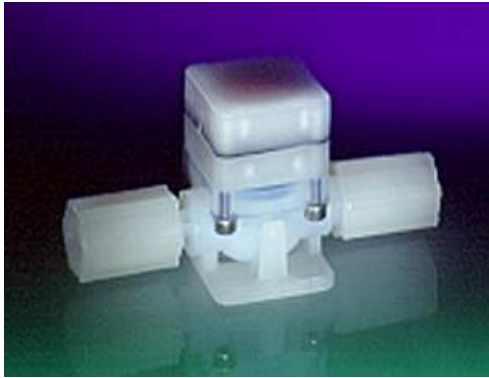


Specifications

Temperature range:	73° to 122°F (23° to 50°C), ambient 70° to 212°F (21° to 100°C), fluid
Media pressure at:	
70°F (21°C)	Inlet 80 PSIG (552 kPa) Outlet 40 PSIG (276 kPa)
212°F (100°C)	Inlet 40 PSIG (276 kPa) Outlet 20 PSIG (138 kPa)
Pneumatic supply pressure:	50 PSIG (335 kPa) minimum to 70 PSIG (483 kPa) maximum
Pneumatic supply port:	10-32 UNF
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF and stainless steel fasteners. Interior actuator parts are PVDF, stainless steel and Viton®. The mounting base is PVDF.

Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way, High Pressure, Normally Closed

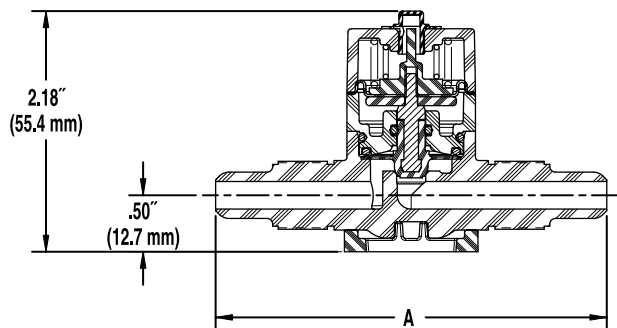


- Compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- The smallest all-PFA wetted valve available for high purity fluid handling applications.
- Significantly reduces footprint with maximized C_v .
- Available with industry standard port connections including Flaretek®, PureBond® or FNPT.

Ordering Information

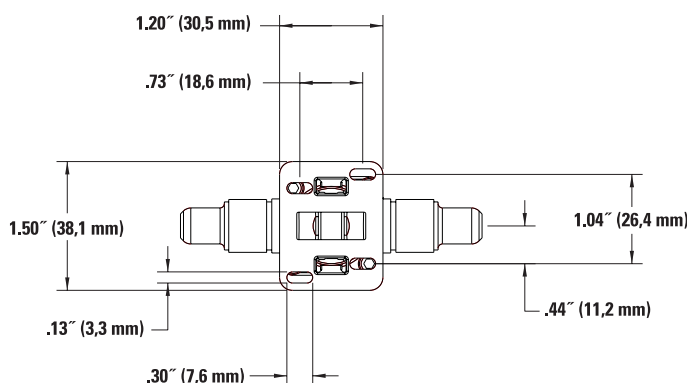
Part Number	Flow Factor		Port Connection	Dimensions	
	C_v	K_v		A	B
SG4-2C-4F-HP	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)	2.13" (54.1 mm)
SG4-2C-4P-HP	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)	2.13" (54.1 mm)
SG4-2C-6F-HP	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)	2.13" (54.1 mm)

Dimensions

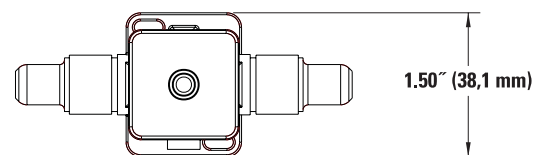


Mounting Information

Bottom View



Top View



Mounting base reorder number: 01-003444

Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way, High Pressure, Normally Closed

Specifications

Temperature range:	73° to 122°F (23° to 50°C), ambient 70° to 212°F (21° to 100°C), fluid
Media pressure:	0-80 PSIG (0-552 kPa) at 70°F (21°C) maximum at any port 0-40 PSIG (0-276 kPa) at 212°F (100°C) maximum at any port
Pneumatic supply pressure:	60 PSIG (414 kPa) minimum to 70 PSIG (483 kPa) maximum
Pneumatic supply port:	10-32 UNF
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF and stainless steel fasteners. Interior actuator parts are PVDF, stainless steel and Viton®. The mounting base is PVDF.

Galtek® SG Series Pneumatically Operated Diaphragm Flow Control Valves

1/4" Orifice, 2-way, Restricted Open



- Compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- The smallest all-PFA wetted valve available for high purity fluid handling applications.
- Significantly reduces footprint with maximized C_v .
- The restricted open feature enables users to adjust and control flow through the valve.
- Available with industry standard port connections including Flaretek®, Flaretek® "SpaceSaver", PureBond® or FNPT.

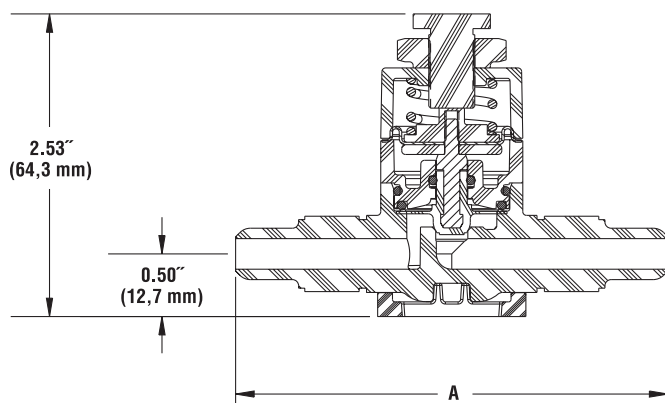
Ordering Information

Part Number	Flow Factor		Port Connection	Dimension
	C _v	K _v		A
Normally Closed				
SG4-2C-4F-RO	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)
SG4-2C-4P-RO	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)
SG4-2C-4SI-RO	.29	4.2	1/4" Flaretek®, "SpaceSaver" inlet*	3.36" (85.3 mm)
SG4-2C-4SO-RO	.29	4.2	1/4" Flaretek®, "SpaceSaver" outlet*	3.36" (85.3 mm)
SG4-2C-6F-RO	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)
SG4-2C-6SI-RO	.65	9.3	3/8" Flaretek®, "SpaceSaver" inlet*	3.50" (88.9 mm)
SG4-2C-6SO-RO	.65	9.3	3/8" Flaretek®, "SpaceSaver" outlet*	3.50" (88.9 mm)
Normally Open				
SG4-2U-4F-RO	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)
SG4-2U-4P-RO	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)
SG4-2U-4SI-RO	.29	4.2	1/4" Flaretek®, "SpaceSaver" inlet*	3.36" (85.3 mm)
SG4-2U-4SO-RO	.29	4.2	1/4" Flaretek®, "SpaceSaver" outlet*	3.36" (85.3 mm)
SG4-2U-6F-RO	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)
SG4-2U-6SI-RO	.65	9.3	3/8" Flaretek®, "SpaceSaver" inlet*	3.50" (88.9 mm)
SG4-2U-6SO-RO	.65	9.3	3/8" Flaretek®, "SpaceSaver" outlet*	3.50" (88.9 mm)

*Dimension A with "SpaceSaver" nut.

Note: Contact the factory if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.

Dimensions

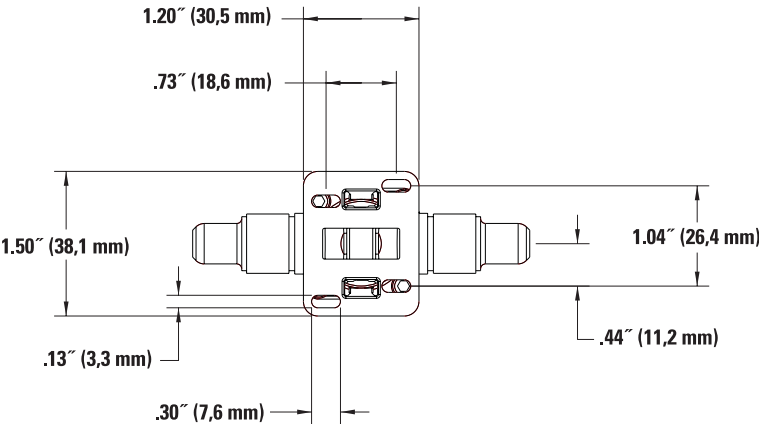


Galtek® SG Series Pneumatically Operated Diaphragm Flow Control Valves

1/4" Orifice, 2-way, Restricted Open

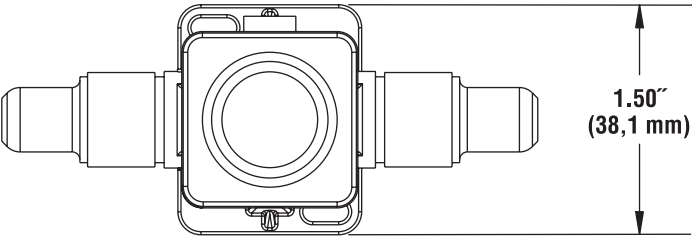
Mounting Information

Bottom View



Mounting base reorder number: 01-003444

Top View



Specifications

Temperature range:		73° to 122°F (23° to 50°C), ambient
		70° to 212°F (21° to 100°C), fluid
Media pressure at:		
70°F (21°C)		Inlet 80 PSIG (552 kPa) Outlet 40 PSIG (276 kPa)
212°F (100°C)		Inlet 40 PSIG (276 kPa) Outlet 20 PSIG (138 kPa)
Pneumatic supply pressure:		50 PSIG (335 kPa) minimum to 70 PSIG (483 kPa) maximum
Pneumatic supply port:		10-32 UNF
Materials:		All wetted parts are PFA. Exterior actuator parts are PVDF and stainless steel fasteners. Interior actuator parts are PVDF, stainless steel and Viton®. The mounting base is PVDF.

Galtek® SG Series Pneumatically Operated Diaphragm Flow Control Valves

1/4" Orifice, 2-way, Restricted Closed



- Compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- The smallest all-PFA wetted valve available for high purity fluid handling applications.
- Significantly reduces footprint with maximized C_v .
- The restricted close feature enables users to create a bypass by restricting the valve from closing. This valve will completely close manually.
- Available with industry standard port connections including Flaretek®, Flaretek® "SpaceSaver", PureBond® or FNPT.

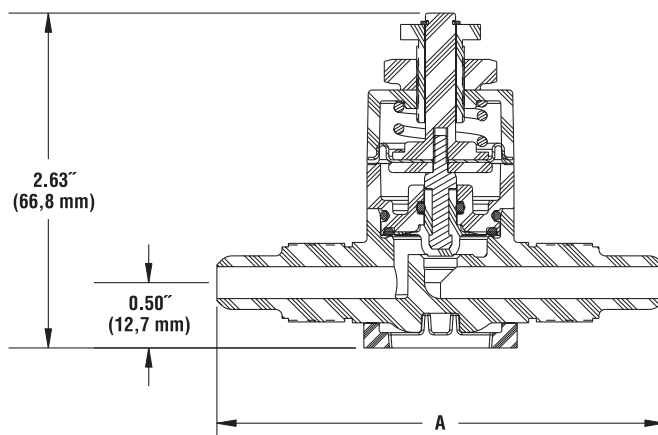
Ordering Information

Part Number	Flow Factor		Port Connection	Dimension
	C _v	K _v		A
Normally Closed				
SG4-2C-4F-RC	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)
SG4-2C-4P-RC	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)
SG4-2C-4SI-RC	.29	4.2	1/4" Flaretek®, "SpaceSaver" inlet*	3.36" (85.3 mm)
SG4-2C-4SO-RC	.29	4.2	1/4" Flaretek®, "SpaceSaver" outlet*	3.36" (85.3 mm)
SG4-2C-6F-RC	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)
SG4-2C-6SI-RC	.65	9.3	3/8" Flaretek®, "SpaceSaver" inlet*	3.50" (88.9 mm)
SG4-2C-6SO-RC	.65	9.3	3/8" Flaretek®, "SpaceSaver" outlet*	3.50" (88.9 mm)

*Dimension A with "SpaceSaver" nut.

Note: Contact the factory if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.

Dimensions

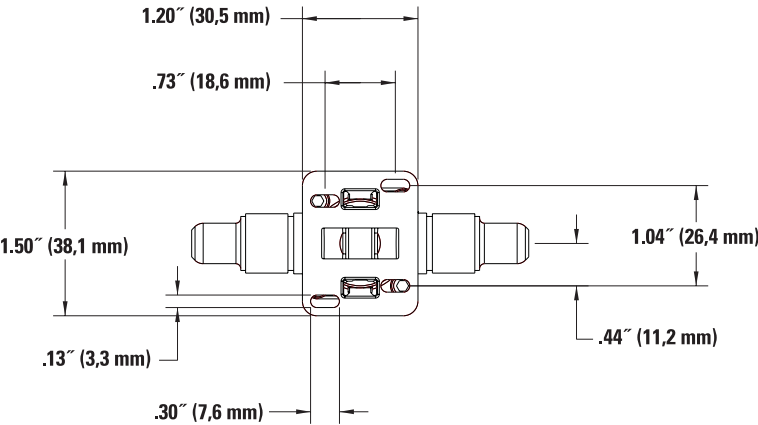


Galtek® SG Series Pneumatically Operated Diaphragm Flow Control Valves

1/4" Orifice, 2-way, Restricted Closed

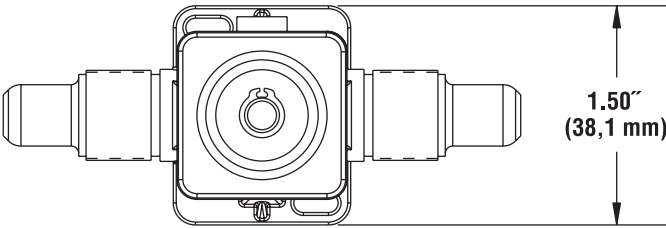
Mounting Information

Bottom View



Mounting base reorder number: 01-003444

Top View



Specifications

Temperature range:	73° to 122°F (23° to 50°C), ambient
	70° to 212°F (21° to 100°C), fluid
Media pressure at:	
	70°F (21°C) Inlet 80 PSIG (552 kPa)
	Outlet 40 PSIG (276 kPa)
	212°F (100°C) Inlet 40 PSIG (276 kPa)
	Outlet 20 PSIG (138 kPa)
Pneumatic supply pressure:	50 PSIG (335 kPa) minimum to 70 PSIG (483 kPa) maximum
Pneumatic supply port:	10-32 UNF
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF and stainless steel fasteners. Interior actuator parts are PVDF, stainless steel and Viton®. The mounting base is PVDF.

Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way, Adjustable Suckback



- Compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- The smallest all-PFA wetted valve available for high purity fluid handling applications.
- Significantly reduces footprint with maximized C_v .
- The suckback feature enables users to draw fluid backwards.
- Available with industry standard port connections including Flaretek®, Flaretek® "SpaceSaver", PureBond® or FNPT.

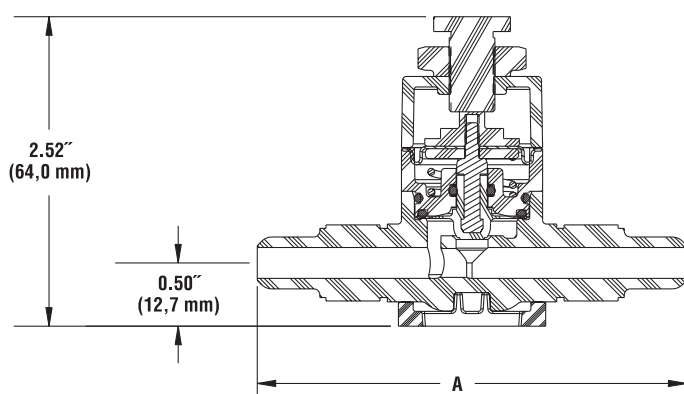
Ordering Information

Part Number	Flow Factor		Port Connection	Dimension
	C _v	K _v		A
Normally Open				
SG4-2U-4F-ASB	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)
SG4-2U-4P-ASB	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)
SG4-2U-4SI-ASB	.29	4.2	1/4" Flaretek®, "SpaceSaver" inlet*	3.36" (85.3 mm)
SG4-2U-4SO-ASB	.29	4.2	1/4" Flaretek®, "SpaceSaver" outlet*	3.36" (85.3 mm)
SG4-2U-6F-ASB	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)
SG4-2U-6SI-ASB	.65	9.3	3/8" Flaretek®, "SpaceSaver" inlet*	3.50" (88.9 mm)
SG4-2U-6SO-ASB	.65	9.3	3/8" Flaretek®, "SpaceSaver" outlet*	3.50" (88.9 mm)

*Dimension A with "SpaceSaver" nut.

Note: Contact the factory if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.

Dimensions

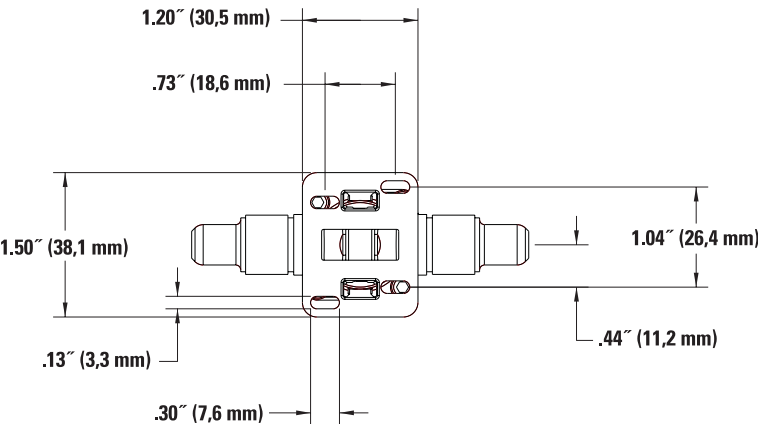


Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way, Adjustable Suckback

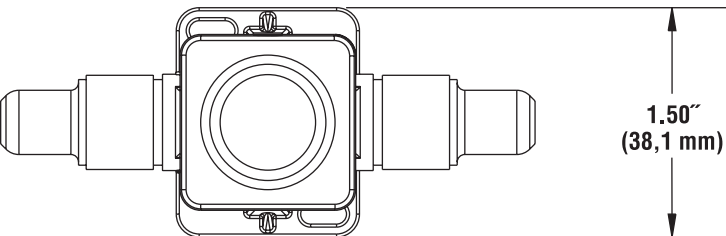
Mounting Information

Bottom View



Mounting base reorder number: 01-003444

Top View

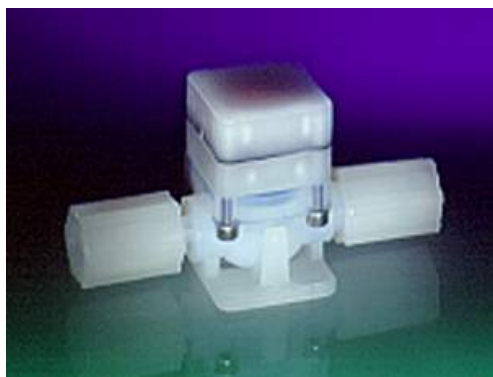


Specifications

Temperature range:		73° to 122°F (23° to 50°C), ambient
		70° to 212°F (21° to 100°C), fluid
Media pressure at:		
70°F (21°C)	Inlet	80 PSIG (552 kPa)
	Outlet	40 PSIG (276 kPa)
212°F (100°C)	Inlet	40 PSIG (276 kPa)
	Outlet	20 PSIG (138 kPa)
Pneumatic supply pressure:		50 PSIG (335 kPa) minimum to 70 PSIG (483 kPa) maximum
Pneumatic supply port:		10-32 UNF
Materials:		
All wetted parts are PFA. Exterior actuator parts are PVDF and stainless steel fasteners. Interior actuator parts are PVDF, stainless steel and Viton®. The mounting base is PVDF.		

Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way, Nonadjustable Suckback



- Compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- The smallest all-PFA wetted valve available for high purity fluid handling applications.
- Significantly reduces footprint with maximized C_v .
- The suckback feature enables users to draw fluid backwards.
- Available with industry standard port connections including Flaretek®, Flaretek® "SpaceSaver", PureBond® or FNPT.

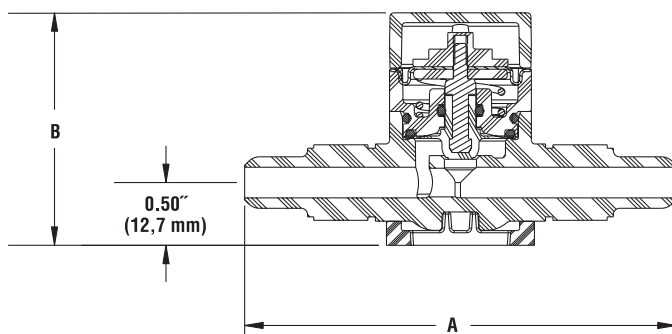
Ordering Information

Part Number	Flow Factor		Port Connection	Dimensions	
	C _v	K _v		A	B
Normally Closed					
SG4-2C-4F-SB	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)	2.13" (54.1 mm)
SG4-2C-4P-SB	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)	2.13" (54.1 mm)
SG4-2C-4SI-SB	.29	4.2	1/4" Flaretek®, "SpaceSaver" inlet*	3.36" (85.3 mm)	2.13" (54.1 mm)
SG4-2C-4SO-SB	.29	4.2	1/4" Flaretek®, "SpaceSaver" outlet*	3.36" (85.3 mm)	2.13" (54.1 mm)
SG4-2C-6F-SB	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)	2.13" (54.1 mm)
SG4-2C-6SI-SB	.65	9.3	3/8" Flaretek®, "SpaceSaver" inlet*	3.50" (88.9 mm)	2.13" (54.1 mm)
SG4-2C-6SO-SB	.65	9.3	3/8" Flaretek®, "SpaceSaver" outlet*	3.50" (88.9 mm)	2.13" (54.1 mm)
Normally Open					
SG4-2U-4F-SB	.29	4.2	1/4" Flaretek®	3.36" (85.3 mm)	1.90" (48.3 mm)
SG4-2U-4P-SB	.65	9.3	1/4" PureBond®	2.68" (68.1 mm)	1.90" (48.3 mm)
SG4-2U-4SI-SB	.29	4.2	1/4" Flaretek®, "SpaceSaver" inlet*	3.36" (85.3 mm)	1.90" (48.3 mm)
SG4-2U-4SO-SB	.29	4.2	1/4" Flaretek®, "SpaceSaver" outlet*	3.36" (85.3 mm)	1.90" (48.3 mm)
SG4-2U-6F-SB	.65	9.3	3/8" Flaretek®	3.50" (88.9 mm)	1.90" (48.3 mm)
SG4-2U-6SI-SB	.65	9.3	3/8" Flaretek®, "SpaceSaver" inlet*	3.50" (88.9 mm)	1.90" (48.3 mm)
SG4-2U-6SO-SB	.65	9.3	3/8" Flaretek®, "SpaceSaver" outlet*	3.50" (88.9 mm)	1.90" (48.3 mm)

*Dimension A with "SpaceSaver" nut.

Note: Contact the factory if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.

Dimensions

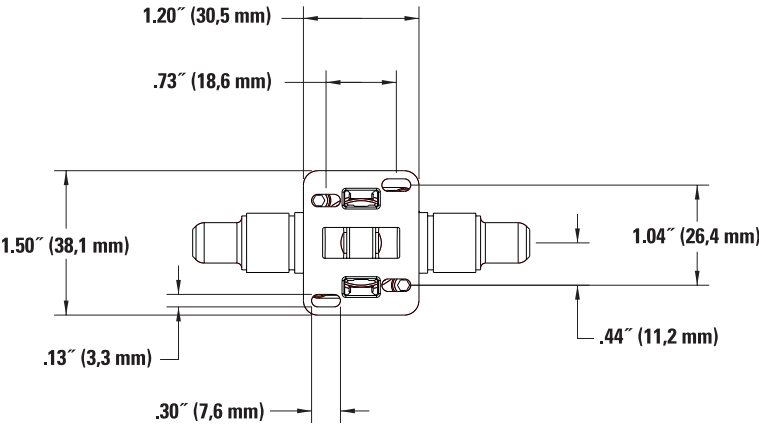


Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 2-way, Nonadjustable Suckback

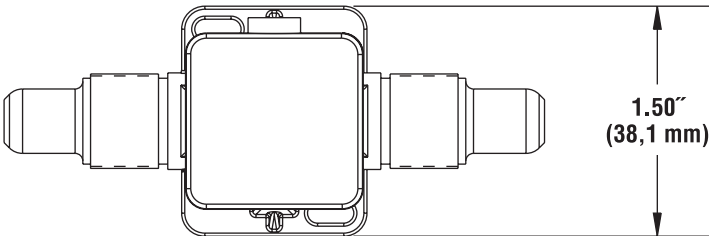
Mounting Information

Bottom View



Mounting base reorder number: 01-003444

Top View



Specifications

Temperature range:	73° to 122°F (23° to 50°C), ambient 70° to 212°F (21° to 100°C), fluid
Media pressure at:	
70°F (21°C)	Inlet 80 PSIG (552 kPa) Outlet 40 PSIG (276 kPa)
212°F (100°C)	Inlet 40 PSIG (276 kPa) Outlet 20 PSIG (138 kPa)
Pneumatic supply pressure:	50 PSIG (335 kPa) minimum to 70 PSIG (483 kPa) maximum
Pneumatic supply port:	10-32 UNF
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF and stainless steel fasteners. Interior actuator parts are PVDF, stainless steel and Viton®. The mounting base is PVDF.

Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 3-way



- Compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- This 3-way valve (patent-pending) has an all-PFA valve body and high purity fluoropolymer wetted components providing a noncontaminating fluid stream and chemically compatible construction.
- Significantly reduces footprint, saving valuable equipment space.
- Accommodates industry standard port connections including Flaretek®, Flaretek® "SpaceSaver", PureBond® or FNPT.
- Stand-alone mounting base enables you to easily install and remove the valve without tools.

Ordering Information

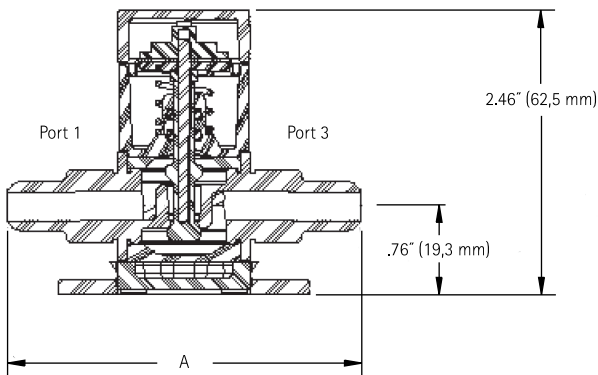
Part Number	Flow Factor		Port Connection	Dimensions		
	C _v	K _v		A	B	C
SG4-3C-4F	0.28	4.0	1/4" Flaretek®	2.81" (71.4 mm)	2.26" (57.4 mm)	1.46" (37.1 mm)
SG4-3C-4P	0.60	8.6	1/4" PureBond®	3.00" (76.2 mm)	2.30" (58.4 mm)	1.50" (38.1 mm)
SG4-3C-4S2*	0.28	4.0	1/4" Flaretek® "SpaceSaver" on Port 2	2.81" (71.4 mm)	2.50" (63.5 mm)**	1.70" (43.2 mm)**
SG4-3C-6F	0.60	8.6	3/8" Flaretek®	3.05" (77.5 mm)	2.33" (59.2 mm)	1.53" (38.9 mm)
SG4-3C-6S2*	0.60	8.6	3/8" Flaretek® "SpaceSaver" on Port 2	3.05" (77.5 mm)	2.60" (66.0 mm)**	1.80" (45.7 mm)**

*Other "SpaceSaver" versions available by special order.

**Dimension A with "SpaceSaver" nut.

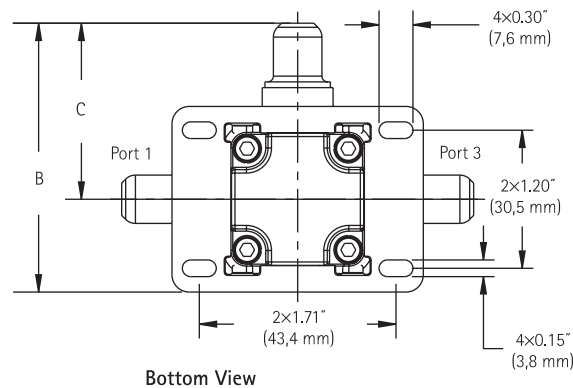
Note: Contact the factory if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.

Dimensions



Mounting Information

Bottom View



Mounting base reorder number: 01-006010.

Galtek® SG Series Pneumatically Operated Diaphragm Valves

1/4" Orifice, 3-way

Specifications

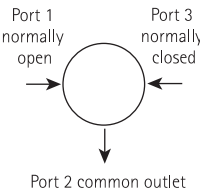
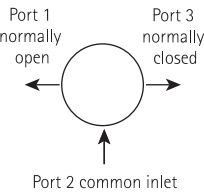
Temperature range:	73° to 122°F (23° to 50°C), ambient 70° to 212°F (21° to 100°C), fluid	
Media pressure at:		
70°F (21°C)	Common	80 PSIG (552 kPa)
	Normally closed (Port 3)	60 PSIG (414 kPa)
	Normally open (Port 1)	60 PSIG (414 kPa)
212°F (100°C)	Common	40 PSIG (276 kPa)
	Normally closed (Port 3)	30 PSIG (207 kPa)
	Normally open (Port 1)	30 PSIG (207 kPa)
Pneumatic supply pressure:	50 PSIG (335 kPa) minimum to 70 PSIG (483 kPa) maximum	
Pneumatic supply port:	10-32 UNF	
Materials:	All wetted parts are PFA and PTFE. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.	

Port Configurations

Port 1 is the normally open port

Port 2 is the common port

Port 3 is the normally closed port



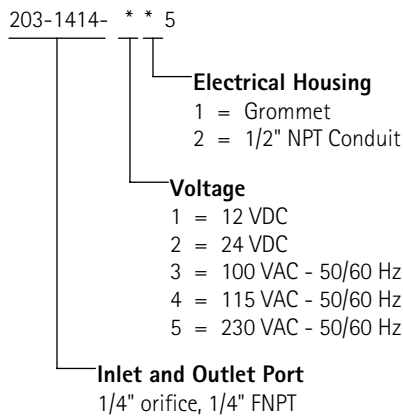
Galtek[®] Solenoid Operated Diaphragm Valves

1/4" Orifice, 2-way, Normally Closed

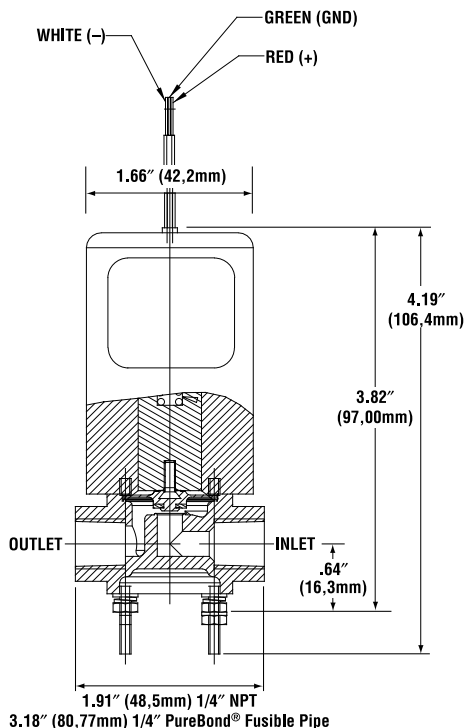


- All wetted parts are PFA and Kalrez[®] for high purity and corrosion resistance.
- Wide range of voltages to select from.
- Powerful but compact coil design.

Ordering Information

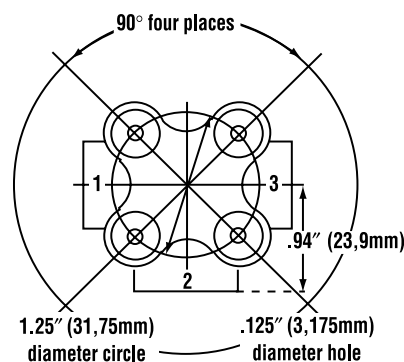


Dimensions



Mounting Information

Bottom View



Panel Mount Instructions - Valve may be mounted to a customer supplied bracket using the 4-40 screws which extend at the base of the valves. Maximum panel thickness 0.25" (6.4 mm).

Galtek[®] Solenoid Operated Diaphragm Valves

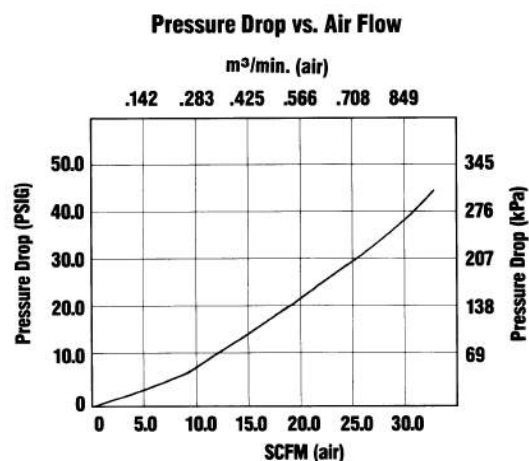
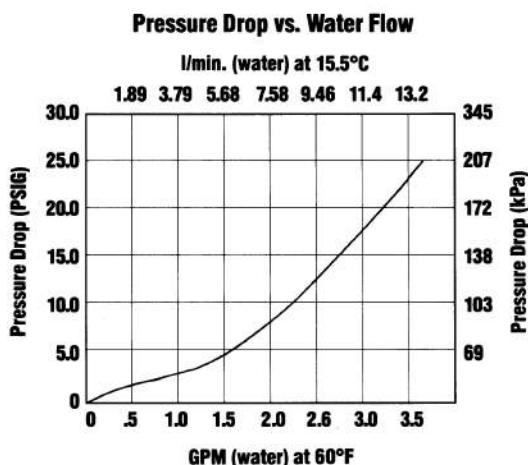
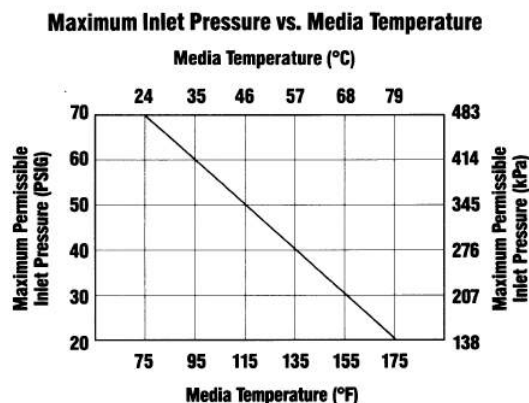
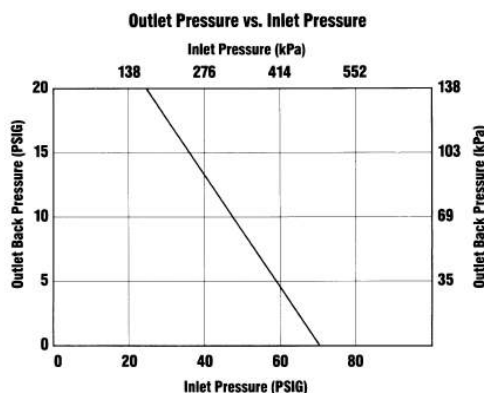
1/4" Orifice, 2-way, Normally Closed

Specifications

Pressure range:	27" Hg vacuum (913 mbar) to 70 PSIG (483 kPa) at 0 outlet pressure. Refer to performance data.
Temperature range:	0° to 100°F (-18° to 37°C), ambient, (for continuous duty) 0° to 175°F (-18° to 79°C), fluid
Flow factor:	.74 C _v (10.6 K _v)
Cycle speed:	.2 seconds
Materials:	All wetted parts are PFA, with a Kalrez [®] seal. Additional materials used for nonwetted parts include stainless steel.
Coil temperature:	190°F (88°C) for continuous duty with ambient and fluid at 70°F (21°).
Electrical specifications of solenoid operator:	1% difference between inrush and holding current
Wire leads:	Red: Voltage source, length 12" (305 mm) White: Neutral, length 12" (305 mm) Green: Ground, length 12" (305 mm)

Voltages	Inrush/Holding Current, AMPS	Watts
12 VDC	1.00	12
24 VDC	.50	12
100 VAC - 50/60 Hz	.15	15
115 VAC - 50/60 Hz	.13	15
230 VAC - 50/60 Hz	.065	15

Performance Data



Galtek® Solenoid Operated Diaphragm Valves

1/4" Orifice, 2-way, Normally Open



- All wetted parts are PFA and Kalrez® for high purity and corrosion resistance.
- A wide range of voltages to select from.
- Powerful but compact coil design.
- Grommet style housing for leads.

Ordering Information

203-2414- * 13

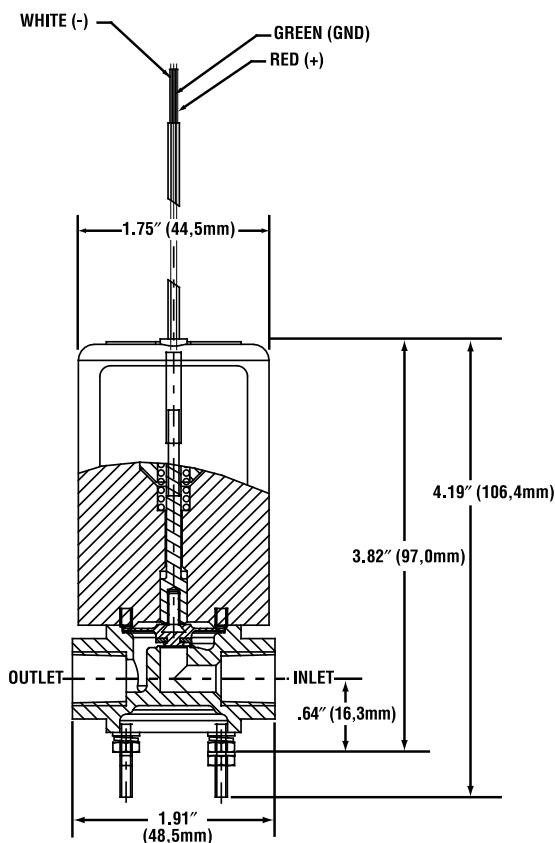
Voltage

- 1 = 12 VDC
- 2 = 24 VDC
- 3 = 115 VAC - 50/60 Hz

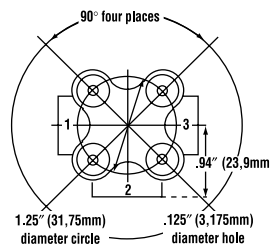
Port Connection

1/4" FNPT

Dimensions



Mounting Information



Panel Mount Instructions - Valve may be mounted to a customer supplier bracket using the 4-40 screws which extend at the base of the valves. Maximum panel thickness 0.25" (6.4 mm).

Galtek® Solenoid Operated Diaphragm Valves

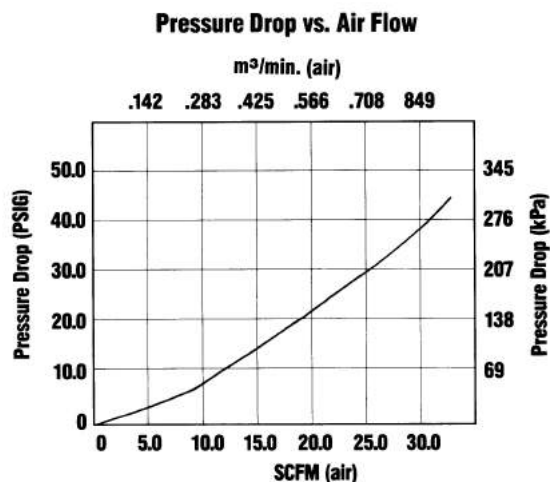
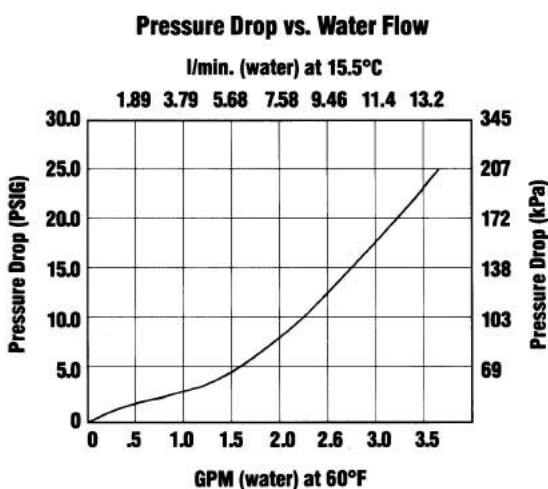
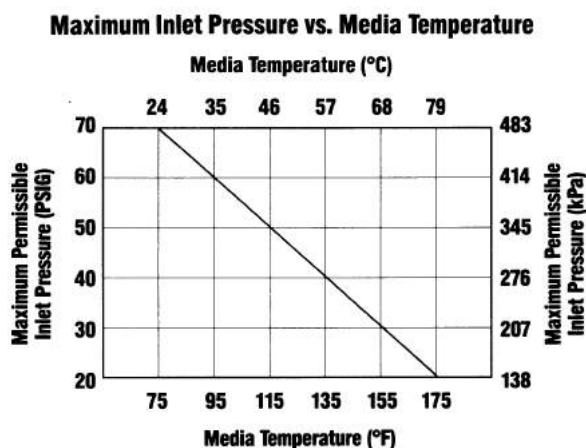
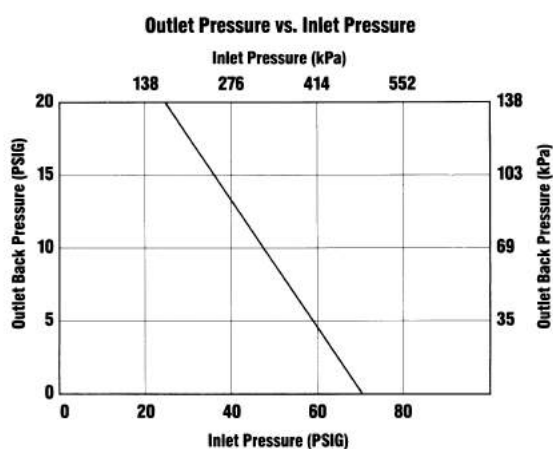
1/4" Orifice, 2-way, Normally Open

Specifications

Pressure range:	See performance charts.
Temperature range:	0° to 100°F (-18° to 37°C), ambient 0° to 175°F (-18° to 79°C), fluid
Flow factor:	.74 C _v (10.6 K _v)
Typical cycle speed:	.2 seconds
Materials:	All wetted parts are PFA, with a Kalrez® seal. Additional materials used for nonwetted parts include stainless steel.
External coil temperature:	170°F (76°C) for continuous duty with ambient and fluid at 75°F (24°C).
Electrical specifications of solenoid operator:	1% difference between inrush and holding current
Wire leads:	Red: Voltage source, length 12" (305 mm) White: Neutral, length 12" (305 mm) Green: Ground, length 12" (305 mm)

Voltages	Inrush/Holding Current, AMPS	Watts
12 VDC	1.00	12
24 VDC	.50	12
115 VAC - 50/60 Hz	.13	15

Performance Data



Galtek® Solenoid Operated Diaphragm Valves

1/4" Orifice, 3-way



- All wetted parts are PFA or Kalrez® for high purity and corrosion resistance.
- Wide range of voltages available.
- Powerful and compact coil design.

Ordering Information

Grommet Electrical Housing

203-3414 - * 1 5 1/4" FNPT Ports

Voltage

- 1 = 12 VDC
- 2 = 24 VDC
- 3 = 100 VAC - 50/60 Hz
- 4 = 115 VAC - 50/60 Hz
- 5 = 230 VAC - 50/60 Hz

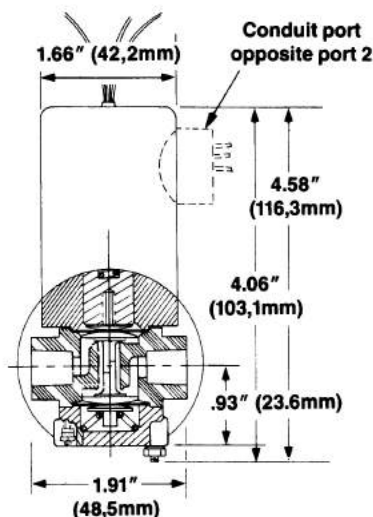
1/2" NPT Conduit Electrical Housing

203-3414 - * 2 5 1/4" FNPT Ports

Voltage

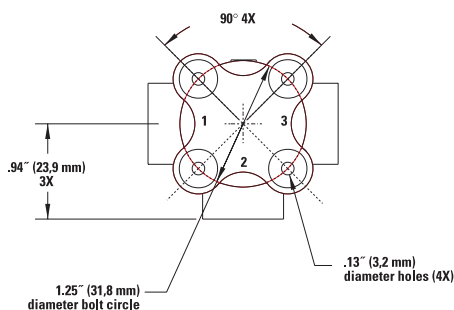
- 2 = 24 VDC
- 4 = 115 VAC - 50/60 Hz

Dimensions



Mounting Information

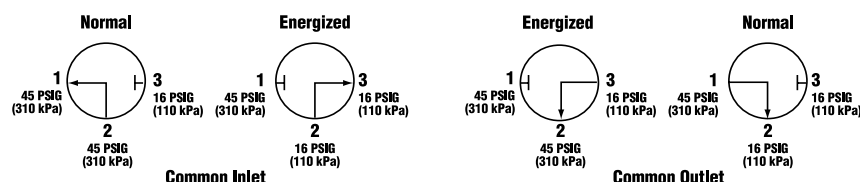
Bottom View



Panel Mount Instructions - Valve may be mounted to a customer supplied bracket using the 4-40 screws which extend at base of valve. Maximum panel thickness 0.25" (6.4 mm).

Function

Valve can be used with either a common inlet or common outlet.



Galtek® Solenoid Operated Diaphragm Valves

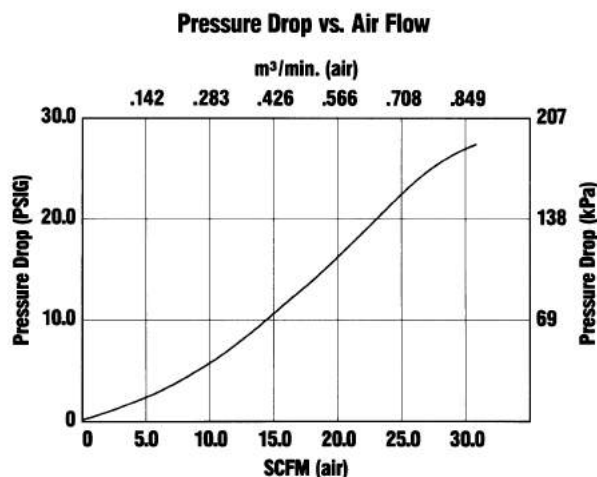
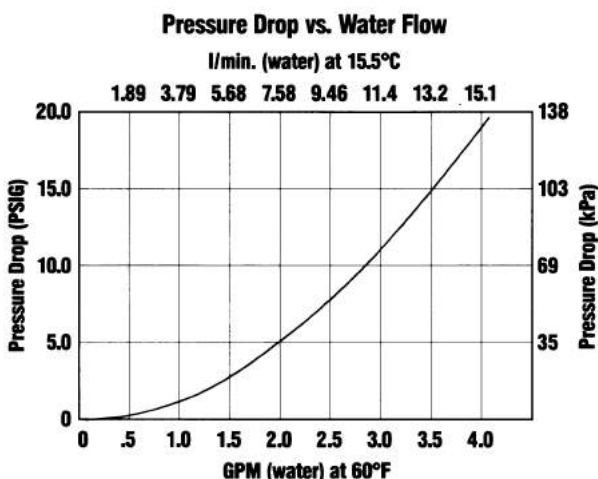
1/4" Orifice, 3-way

Specifications

Pressure range:	27" Hg vacuum (913 mbar) to 45 PSIG (310 kPa) (See functions diagram below).
Temperature range:	0° to 100°F (-18° to 37°C), ambient for continuous duty 0° to 175°F (-18° to 79°C), fluid
Flow factor:	When using inlet Port 2, .88 C _v (12.6 K _v) When using inlet Port 1 or 3, .76 C _v (10.9 K _v)
Cycle speed:	.2 seconds
Materials:	All wetted parts are PFA with Kalrez® seals. Additional materials used for nonwetted parts include: PVDF, Tefzel® and stainless steel.
Coil temperature:	190°F (88°C) for continuous duty with ambient and fluid at 70°F (21°C).
Electrical specifications of solenoid operator:	1% difference between inrush and holding current
Wire leads:	Red: Voltage source, length 12" (305 mm) White: Neutral, length 12" (305 mm) Green: Ground, length 12" (305 mm)

	Inrush/Holding	
Voltages	Current, AMPS	Watts
12 VDC	1.00	12
24 VDC	.50	12
100 VAC-50/60 Hz	.15	15
115 VAC-50/60 Hz	.13	15
230 VAC-50/60 Hz	.065	15

Performance Data



Stack Valves

Model 704, 2-way, Normally Closed Pneumatic



- All wetted parts are 100% virgin HyQ® PTFE for high purity and corrosion resistance.
- Small footprint.
- Stackable design offers configuration flexibility.
- High C_v .
- Full back pressure rated.
- Self-aligning hemispherical poppet ensures leak-proof seal integrity.
- Low actuation pressure requirements.

Ordering Information

Part Number	Orifice	Flow Factor		Port Connection
		C_v	K_v	
704-26	1/4"	1.00	14.3	3/8" Flaretek®
704-28	3/8"	2.90	41.4	1/2" Flaretek®

Specifications

Operating pressure:	0 to 120 PSIG (0 to 827 kPa) maximum any port
Actuator pressure:	50 to 90 PSIG (345 to 621 kPa)
Temperature range:	0° to 140°F (-17° to 60°C), ambient PVC actuator 0° to 300°F (-17° to 149°C), media
Pneumatic supply port:	.125-27 NPT

Stack Valves

Model 704, 2-way, Normally Closed Pneumatic

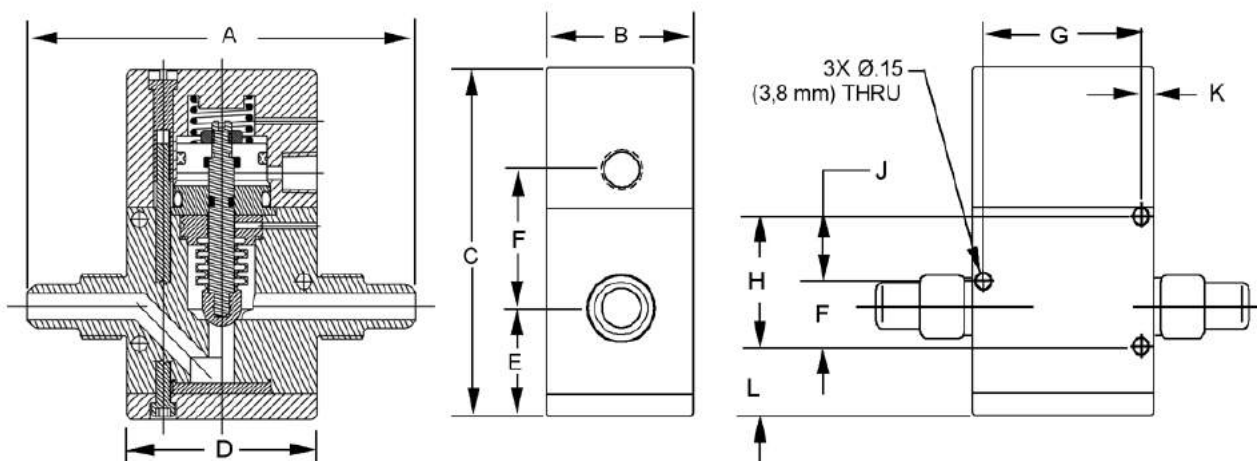
Dimensions

Part

Number	A	B	C	D	E	F
704-26	3.76" (95.5 mm)	1.15" (29.2 mm)	3.38" (85.9 mm)	1.84" (46.7 mm)	1.09" (27.7 mm)	1.29" (32.8 mm)
704-28	4.63" (117.6 mm)	1.62" (41.1 mm)	3.86" (98.0 mm)	2.17" (55.1 mm)	1.34" (34.0 mm)	1.22" (31.0 mm)

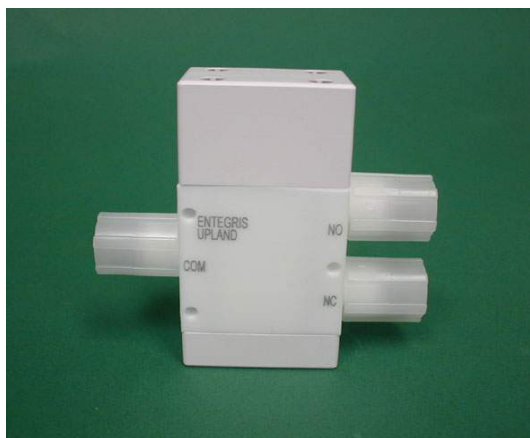
Part

Number	G	H	J	K	L
704-26	1.59" (40.4 mm)	1.20" (30.5 mm)	0.60" (15.2 mm)	0.12" (3.0 mm)	0.73" (18.5 mm)
704-28	1.89" (48.0 mm)	1.38" (35.1 mm)	0.45" (11.4 mm)	0.14" (3.6 mm)	0.75" (19.0 mm)



Stack Valves

Model 704, 3-way, Pneumatic



- All wetted parts are 100% virgin HyQ[®] PTFE for high purity and corrosion resistance.
- Small footprint.
- Stackable design offers configuration flexibility.
- High C_v.
- Full back pressure rated.
- Self-aligning hemispherical poppet ensures leak-proof seal integrity.
- Low actuation pressure requirements.

Ordering Information

Part Number	Orifice	Flow Factor		Port Connection
		C _v	K _v	
704-36	1/4"	1.10	15.7	3/8" Flaretek [®]
704-38	3/8"	3.10	44.3	1/2" Flaretek [®]

Specifications

Operating pressure:	0 to 120 PSIG (0 to 827 kPa) maximum any port
Actuator pressure:	50 to 90 PSIG (345 to 621 kPa)
Temperature range:	0° to 140°F (-17° to 60°C), ambient PVC actuator 0° to 300°F (-17° to 149°C), media
Pneumatic supply port:	.125-27 NPT

Stack Valves

Model 704, 3-way, Pneumatic

Dimensions

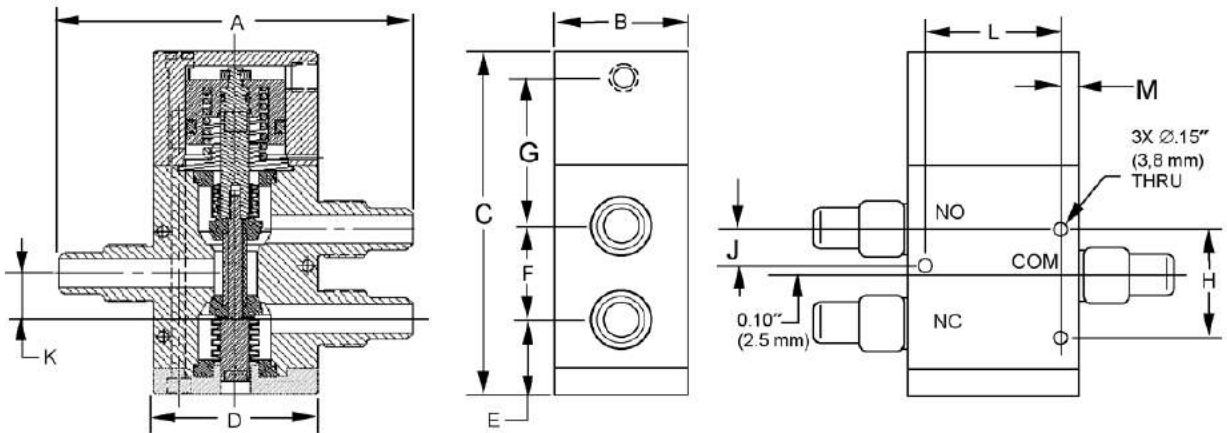
Part

Number	A	B	C	D	E	F
704-36	3.76" (95.5 mm)	1.15" (29.2 mm)	3.38" (85.9 mm)	1.84" (46.7 mm)	0.79" (20.1 mm)	1.09" (27.7 mm)
704-38	4.63" (117.6 mm)	1.62" (41.1 mm)	4.48" (113.8 mm)	2.17" (55.1 mm)	0.99" (25.1 mm)	1.17" (29.7 mm)

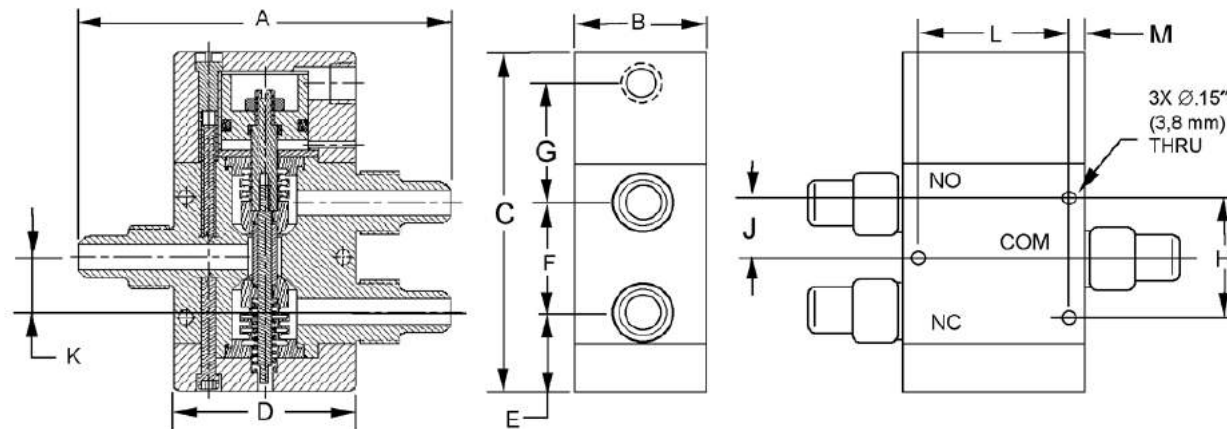
Part

Number	G	H	J	K	L	M
704-36	1.19" (30.2 mm)	1.20" (30.5 mm)	0.60" (15.2 mm)	0.54" (13.7 mm)	1.59" (40.4 mm)	0.12" (3.0 mm)
704-38	1.99" (50.5 mm)	1.38" (35.1 mm)	0.45" (11.4 mm)	0.59" (15.0 mm)	1.89" (48.0 mm)	0.14" (3.6 mm)

704-38 Drawing

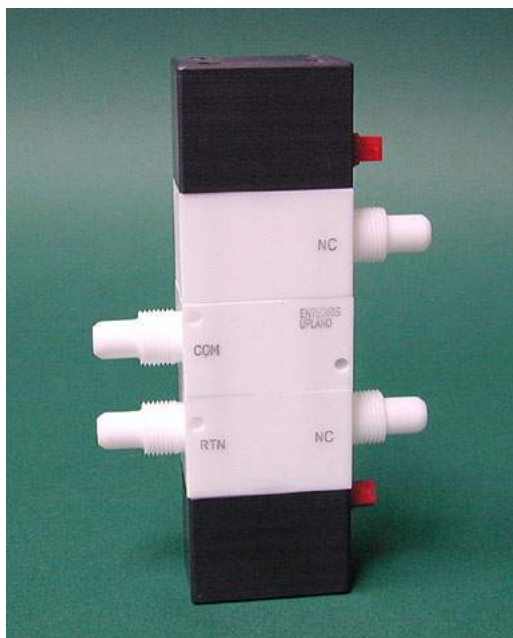


704-36 Drawing



Stack Valves

Model 704D, 1/4" Orifice, 4-port, 3-way Pneumatic



- All wetted parts are 100% virgin HyQ® PTFE for high purity and corrosion resistance.
- Small footprint.
- Stackable design offers configuration flexibility.
- High C_v.
- Full back pressure rated.
- Self-aligning hemispherical poppet ensures leak-proof seal integrity.
- Low actuation pressure requirements.

Ordering Information

Part Number	Orifice	Flow Factor C _v K _v		Port Connection Upper NC & Common	Port Connection Lower NC & Return
704D-346	1/4"	1.00	14.3	3/8" Flaretek®	3/8" Flaretek®
704D-348	1/4"	1.00	14.3	3/8" Flaretek®	1/2" Flaretek®

Specifications

Operating pressure:	0 to 120 PSIG (0 to 827 kPa) maximum any port
Actuator pressure:	50 to 90 PSIG (345 to 621 kPa)
Temperature range:	0° to 140°F (-17° to 60°C), ambient PVC actuator 0° to 300°F (-17° to 149°C), media
Pneumatic supply port:	2X .125-27 NPT

Stack Valves

Model 704D, 1/4" Orifice, 4-port, 3-way Pneumatic

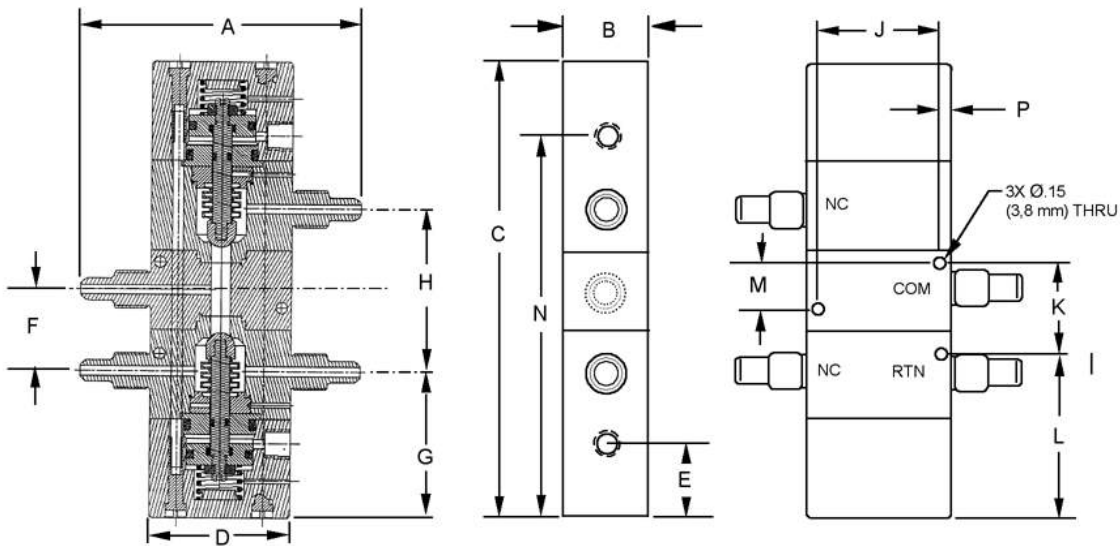
Dimensions

Part

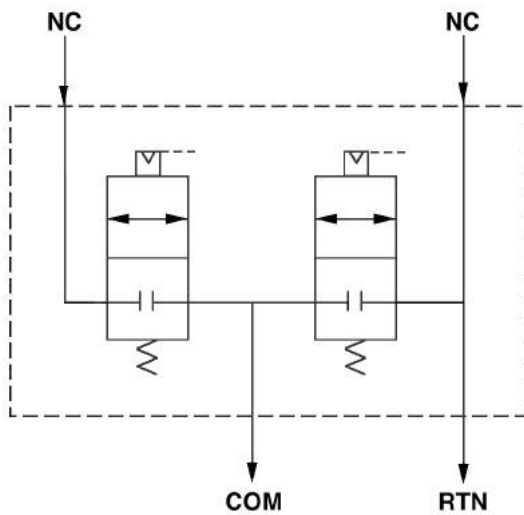
Number	A	B	C	D	E	F	G
704D-346	3.76" (95.5 mm)	1.15" (29.2 mm)	6.09" (154.7 mm)	1.84" (46.7 mm)	1.09" (27.7 mm)	1.08" (27.4 mm)	1.96" (49.8 mm)
704D-348	4.10" (104.1 mm)	1.15" (29.2 mm)	6.09" (154.7 mm)	1.84" (46.7 mm)	1.09" (27.7 mm)	1.08" (27.4 mm)	1.96" (49.8 mm)

Part

Number	H	J	K	L	M	N	P
704D-346	2.17" (55.1 mm)	1.59" (40.4 mm)	1.20" (30.5 mm)	2.20" (55.9 mm)	0.60" (15.2 mm)	5.10" (129.5 mm)	0.12" (3.0 mm)
704D-348	2.17" (55.1 mm)	1.59" (40.4 mm)	1.20" (30.5 mm)	2.20" (55.9 mm)	0.60" (15.2 mm)	5.10" (129.5 mm)	0.12" (3.0 mm)

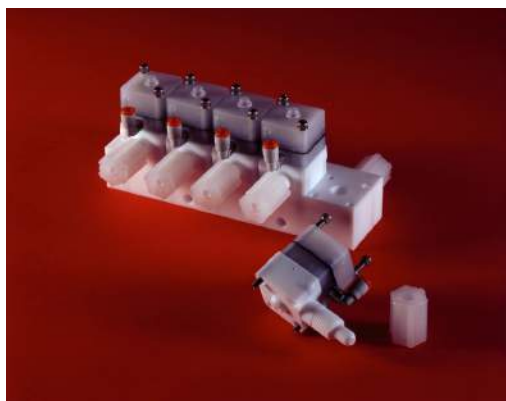


ISO Flow Diagram



Dymension[®] Surface Mount Manifold Valves

Incorporating FlareMount[™] Sealing Technology



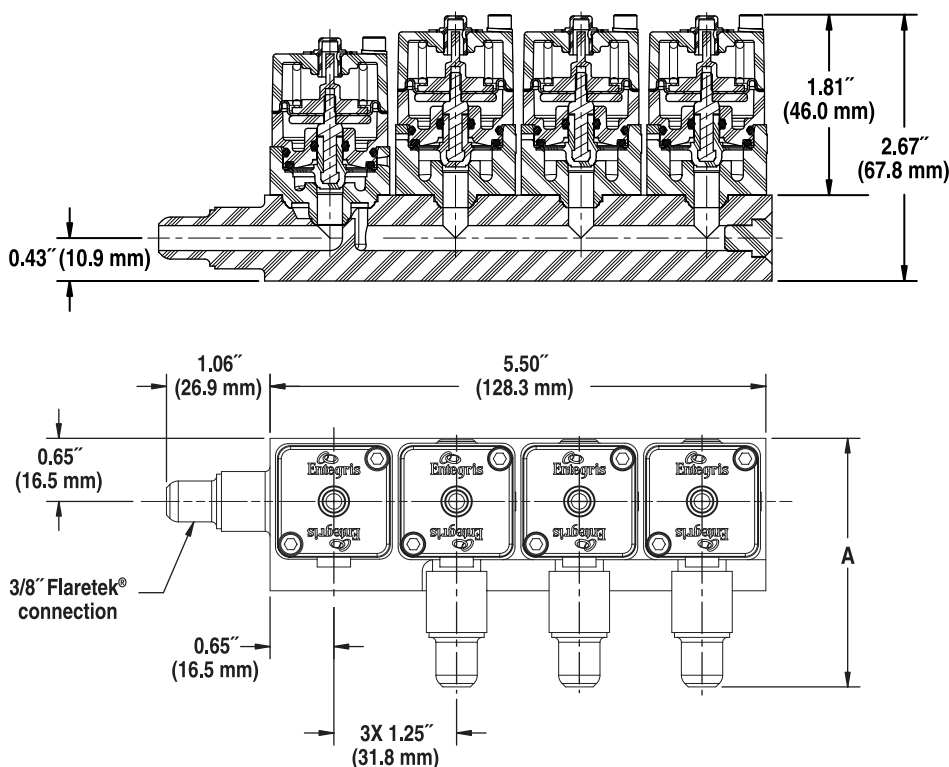
- Dymension[®] surface mount valve manifolds incorporate tongue & groove and FlareMount[™] technology, a modular method of mounting valves to a manifold block using proven Flaretek[®] fitting sealing technology.
- The surface mount method enables you to replace or change a single valve as needed, lowering your cost of ownership.
- FlareMount[™] sealing technology provides a robust, leak-free seal without introducing additional parts like gaskets and o-rings.
- Surface mount manifolds are available with a dual FlareMount[™] interface. This dual sealing technology has integral inlet and outlet ports that redirect fluid into the manifold block without seals, gaskets or o-rings.
- Manifold blocks are available in PFA or proprietary HyQ[®] PTFE, providing chemical resistance and high purity fluid handling.
- Small footprint saves valuable equipment space.

Ordering Information

Dymension[®] valve manifolds are built to your specifications. To begin the quoting process for your custom valve block contact your local Entegris distributor or Entegris, Inc. with your configuration requirements. A part number is assigned at the time of order.

Dimensions

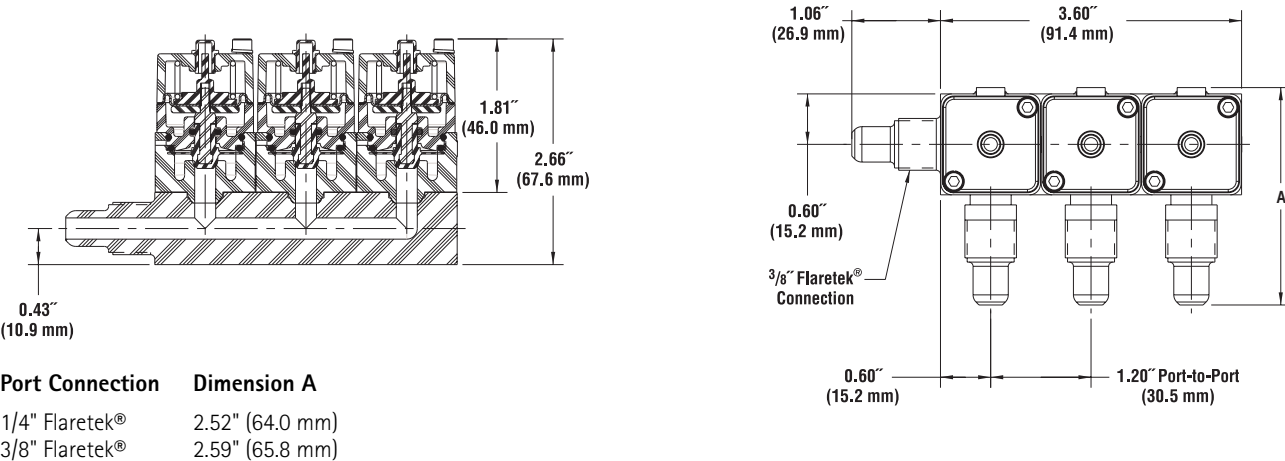
An example of a surface mount manifold with single and dual FlareMount[™] seals



Dymension[®] Surface Mount Manifold Valves

Incorporating FlareMount[™] Sealing Technology

An example of a surface mount manifold with single FlareMount[™] seal



Specifications

Temperature range:	73° to 122°F (23° to 50°C), ambient
	70° to 212°F (21° to 100°C), fluid
Media pressure (SG Platform) at:	
	70°F (21°C)
	Inlet 80 PSIG (552 kPa)
	Outlet 40 PSIG (276 kPa)
	212°F (100°C)
	(PFA manifold bodies only)
	Inlet 40 PSIG (276 kPa)
	Outlet 20 PSIG (138 kPa)
Pneumatic supply pressure:	
	SG Platform
	50 PSIG (335 kPa) minimum to 70 PSIG (483 kPa) maximum
	Stack platform
	50 PSIG (335 kPa) minimum to 90 PSIG (621 kPa) maximum
Pneumatic supply port:	10-32 UNF (M5) up to 1/4"
Materials:	All wetted parts are PFA and PTFE. Exterior actuator parts are PVDF or PVC, fasteners are stainless steel. Interior actuator parts are PVDF, stainless steel and Viton [®] .