High Purity, Corrosion-resistant Valve Products

Entegris offers the most complete line of high purity valve products available. No matter what your fluid control needs, Entegris can provide a fully characterized, reliable valve that meets your temperature, pressure, flow, size, configuration and installation specifications.

Diaphragm Valves

Integra® valves have PTFE or all molded PFA wetted surfaces for unmatched purity, chemical inertness and high temperature capabilities. These valves do not have any external metal parts that can corrode and represent a safety hazard in aggressive chemicals. 1/4", 1/2" and 1" sizes are available in manual or pneumatic 2-way, 3-way and sampling styles. Custom 4-port valves are available, as are remote position indication and leak detection options.

Integra® valves are available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems. Please consult the factory for more information.

Galtek® diaphragm valves have all-PFA wetted surfaces and a small physical size, ideally suiting them to high purity, corrosive applications where space is limited. Pneumatic or manual actuation is available in 2-way, 3-way and custom manifold configurations.

Plug Valves

The Magnaflo® plug valve can be used in the same applications as traditional ball valves. This unique valve couples corrosion resistance and a straight-through flow path, offering a high flow, durable solution to aggressive chemical handling. Unlike metal valves, the Magnaflo® valve's all polymer exterior is also corrosion resistant. Available in 1/4" or 1/2" manual versions.

Metering Valves

The Accuflo™ metering valve is the first metering valve to be fully molded from PFA. The all-PFA construction offers unrivaled durability in your corrosive environments. Configured as a five-turn, 1/4" manual valve, the Accuflo™ valve provides enhanced control for chemical, semiconductor and other applications requiring an adjusted flow, while also featuring a longer life than metal alloy valves.

Accessory Valves

Entegris offers a complete line of Galtek® control valves for your high purity, high corrosive fluid control applications. All wetted parts are made from PFA or PTFE providing corrosion resistance. Needle valves, stopcocks, solenoids, check valves and fast action plug valves are available in a wide variety of styles and sizes.

Valve Component CAD Library

Entegris has partnered with the Thomas Industrial Network to generate and host our 3D and 2D information. With this partnership, you have the ability to access product data that is compatible with today's CAD modeling packages. To decrease system design time, visit Entegris' Web site at *www.entegrisfluidhandling.com* for component specifications and CAD files, and then simply download the part directly into your design.

Integra® Manually Operated Diaphragm Valves

1/4" Orifice, 2-way, 1/4-turn, Leak Detection Option

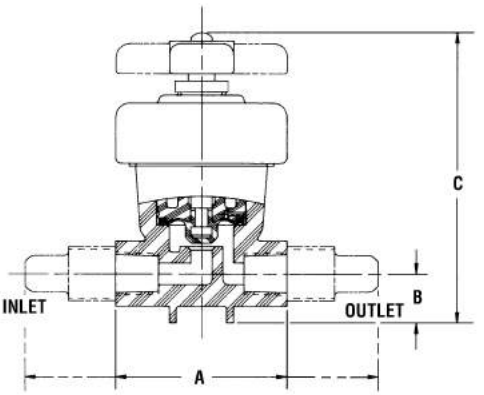
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- No external metal parts.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosive chemical handling applications.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Piston shaft is encapsulated in the PFA diaphragm to isolate it from corrosive fluids.
- Unique body design allows for 100% cavity drainage to prevent fluid entrapment.
- Requires only 1/4-turn from closed to fully open for fast actuation.
- Addition of an Espy® sensor allows electronic monitoring of valve diaphragm seal integrity.

Ordering Information*

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimensions A	Dimensions B	Dimensions C	Repair Kit
201-44-01	.90	12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	0.57" (14.5 mm)	3.39" (86.1 mm)	201-71
201-46-01†	.90	12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	0.57" (14.5 mm)	3.39" (86.1 mm)	201-71
201-47-01†	.90	12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	0.57" (14.5 mm)	3.39" (86.1 mm)	201-71
201-96-01†	.24	3.4	1/4" Flaretek® flared tube	3.12" (79.2 mm)	0.49" (12.4 mm)	3.30" (83.8 mm)	201-71

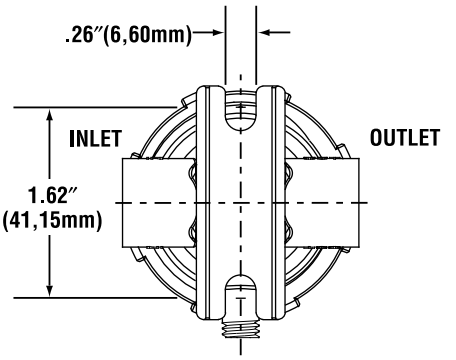
Note: *To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.*

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® Manually Operated Diaphragm Valves

1/4" Orifice, 2-way, 1/4-turn, Leak Detection Option

Specifications

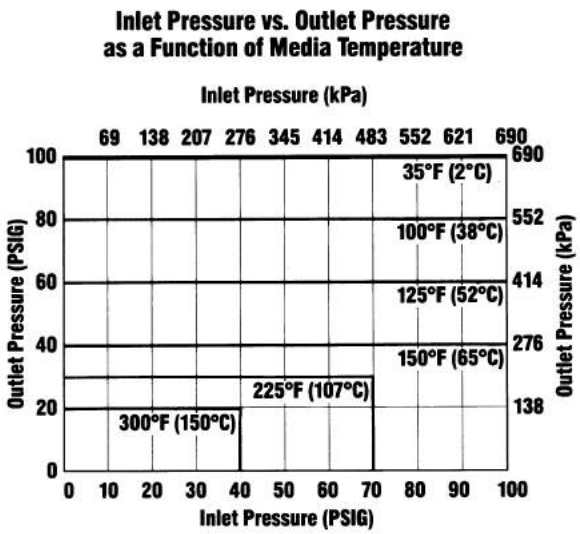
Pressure range:	29" Hg vacuum (980 mbar) to 100 PSIG (689.5 kPa)
Temperature range:	35° to 150°F (2° to 65°C), ambient 35° to 300°F (2° to 150°C), fluid 35° to 75°F (2° to 24°C) for ECTFE external components, ambient and fluid
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.

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

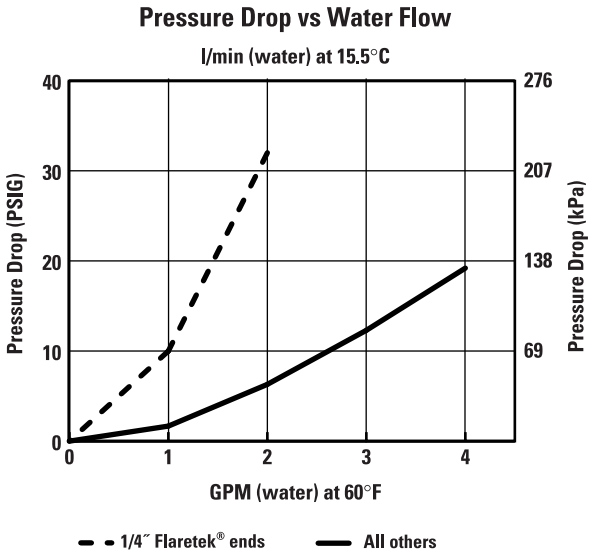
DO NOT move the adjustment nut on the valve. The adjustment is set at the factory. To set the adjustment nut, if altered in the field, use the following procedure.

1. Close the valve and connect 100 PSIG air pressure to the outlet port.
2. Turn the adjustment nut clockwise until leakage stops from the inlet port.
3. Turn the adjustment nut an additional 1/8 turn.

Performance Data



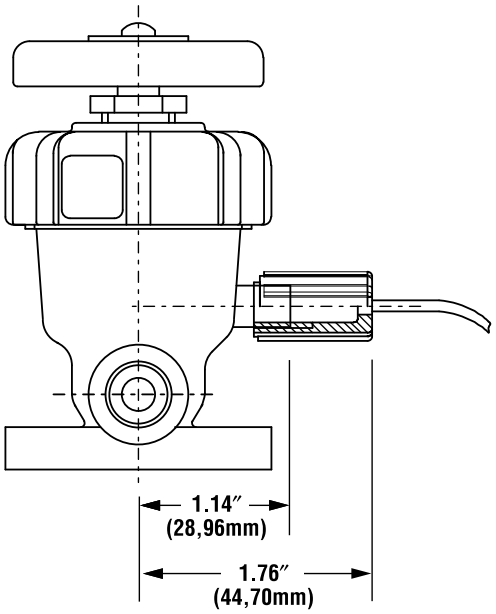
Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.



Refer to page 400 for Sensing Option Ordering Information.

Sensing Option Dimensional Information*

Body dimensions with and without leak detection.



Integra® Manually Operated Diaphragm Valves

1/4" Orifice, 2-way, Multi-turn, Leak Detection Option

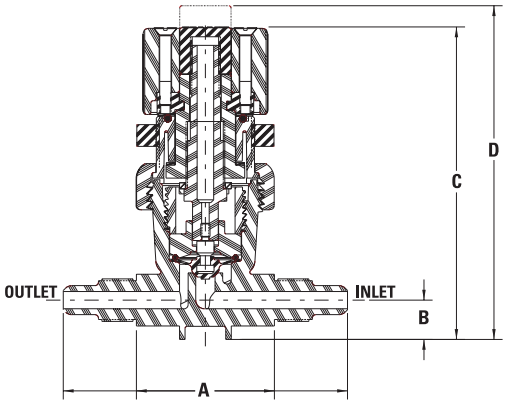
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- No external metal parts.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosive chemical handling applications.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Three and one-half complete turns fully opens or closes the valve for more precise control than a 1/4 turn valve.
- Slower actuation reduces water hammer affect on fluid stream.
- Red travel indicator allows quick visual determination of diaphragm position.
- Unique top loading design allows for field service.
- Addition of Espy® sensor allows electronic monitoring of valve diaphragm seal integrity.

Ordering Information*

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimensions A	Dimensions B	Dimensions Closed C	Dimensions Open D	Repair Kit
201-81-01†	0.75	11.0	1/2" Flaretek®	4.64" (117.9 mm)	0.57" (14.5 mm)	4.53" (115.1 mm)	4.84" (122.9 mm)	201-88
201-85-01	0.75	11.0	1/4" PureBond®	4.00" (101.6 mm)	0.57" (14.5 mm)	4.53" (115.1 mm)	4.84" (122.9 mm)	201-88
201-87-01†	0.75	11.0	3/8" Flaretek®	4.64" (117.9 mm)	0.57" (14.5 mm)	4.53" (115.1 mm)	4.84" (122.9 mm)	201-88
201-97-01†	0.24	3.4	1/4" Flaretek®	3.12" (79.2 mm)	0.49" (12.4 mm)	4.45" (113.0 mm)	4.76" (120.9 mm)	201-88

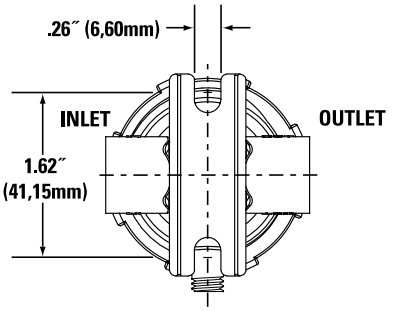
Note: *To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.*

Dimensions



Mounting Information

Bottom View



Panel Mount Instructions

Panel thickness must be within 0.12" (3.0 mm) to 0.38" (9.6 mm). The handle must be removed to panel mount. Place the valve fully in the closed position and remove the two screws holding the handle in place. Remove the handle, taking care not to disturb the position of the red indicator. To install the valve, remove the panel mount nut and insert the valve into the panel. Thread the panel mount onto the valve. Again, take care not to disturb the red indicator position. Place the handle on the valve, lining up the screw holes. Install the screws. After installing on panel, tighten panel mounting nut 40 inch•lbs (4.5 N•m) torque, or 1/8-turn beyond hand tight.

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® Manually Operated Diaphragm Valves

1/4" Orifice, 2-way, Multi-turn, Leak Detection Option

Specifications

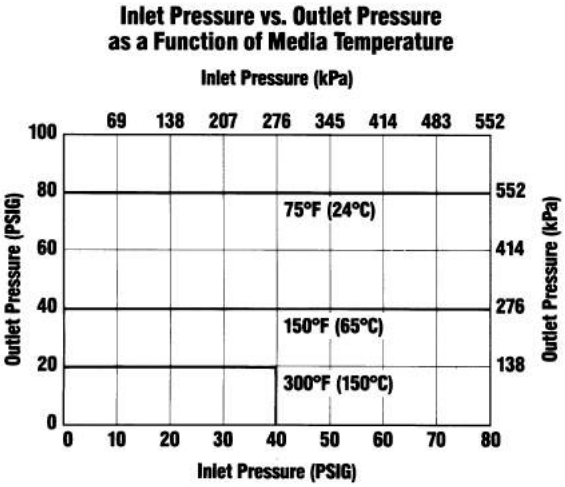
Pressure range:	29" Hg vacuum (980 mbar) to 100 PSIG (689.5 kPa)
Temperature range:	75° to 150°F (24° to 65°C), ambient 75° to 300°F (24° to 150°C), fluid 35° to 75°F (2° to 24°C) for ECTFE external components, ambient and fluid
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel and Viton®.

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

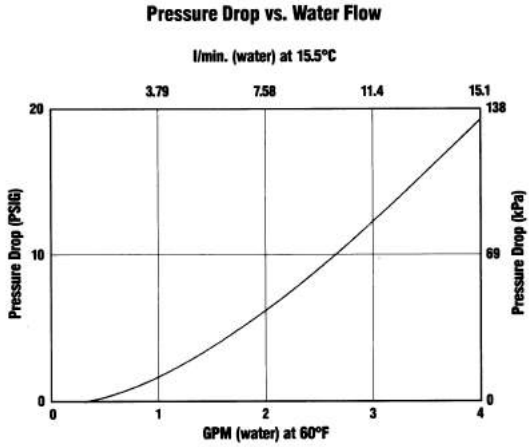
DO NOT move the adjustment nut on the valve, the adjustment nut is set at the factory. To set the adjustment nut, if altered in the field, use the following procedure:

1. Close the valve and connect 80 PSIG (551.6 kPa) air pressure to the outlet port.
2. Remove the two white screws and remove the handle.
3. Back off the red adjustment nut.
4. Put the handle back on and tighten until the leak stops. Tighten an additional ¼ turn.
5. Remove the handle taking care not to disturb the red indicator position.
6. Thread red adjustment nut until it stops, then back off the red adjustment nut to match hexes. Replace the handle.
7. Replace the two screws.

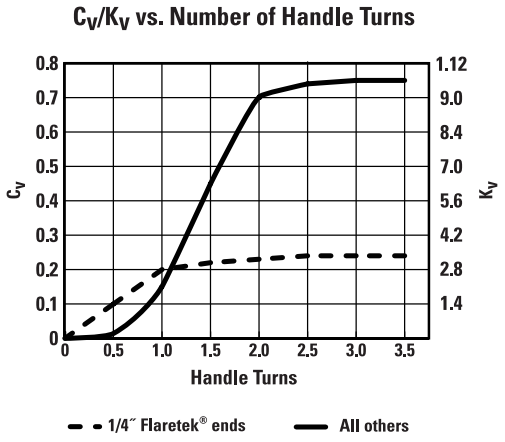
Performance Data



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

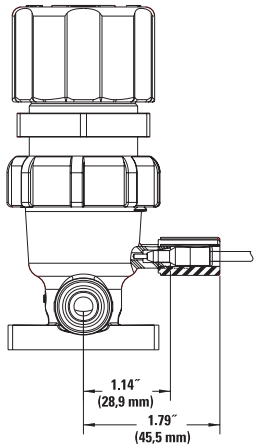


Refer to page 400 for Sensing Option Ordering Information.



Sensing Option Dimensional Information*

Body dimensions with and without leak detection.



Integra® Manually Operated Diaphragm Valves

1/4" Orifice, Sampling, 1/4-turn

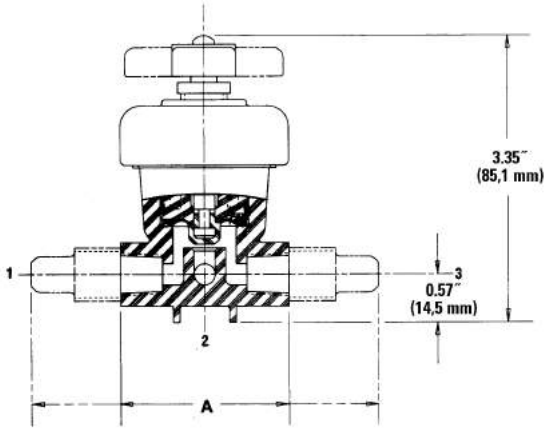
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- No external metal parts.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosive chemical 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 entrapment of fluids.
- Requires only 1/4-turn from closed to fully open for fast actuation.

Ordering Information

Part Number	Flow Factor From Port 1 to Port 3 C_v	Flow Factor From Port 1 to Port 3 K_v	Flow Factor From Port 1 or 3 to Port 2 C_v	Flow Factor From Port 1 or 3 to Port 2 K_v	Port Connection	Dimension A	Repair Kit
201-49	.95	13.6	.90	12.8	1/4" PureBond® fusible pipe	4.00" (101.6 mm)	201-71
201-51†	.95	13.6	.90	12.8	3/8" Flaretek® flared tube	4.12" (104.6 mm)	201-71
201-52†	.95	13.6	.90	12.8	1/2" Flaretek® flared tube	4.28" (108.7 mm)	201-71

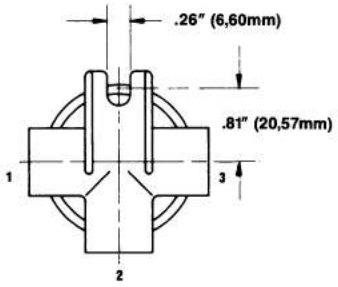
Note: *To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.*

Dimensions



Mounting Information

Bottom View



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

Integra® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, 1/4-turn, Leak Detection 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 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 repair.
- 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.
- Requires only 1/4-turn from closed to fully opened for fast actuation.
- Addition of Espy® sensor allows electronic monitoring of valve body seal integrity.

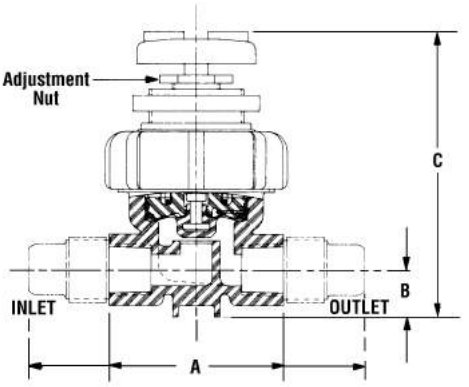
Ordering Information*

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimensions A	Dimensions B	Dimensions C	Repair Kit
201-34-01	3.0	42.8	1/2" PureBond® fusible pipe	5.75" (146.0 mm)	0.73" (18.5 mm)	4.45" (113.0 mm)	201-73
201-35-01	3.0	42.8	3/4" PureBond® fusible pipe	5.75" (146.0 mm)	0.73" (18.5 mm)	4.45" (113.0 mm)	201-73
201-36-01†	3.0	42.8	3/4" Flaretek® flared tube	5.27" (133.9 mm)	0.73" (18.5 mm)	4.45" (113.0 mm)	201-73
201-37-01†	2.0	28.6	1/2" Flaretek® flared tube	4.40" (111.8 mm)	0.57" (14.5 mm)	4.29" (109.0 mm)	201-73
201-36-SI-01†	3.0	42.8	3/4" Flaretek® flared tube, "SS" inlet**	5.54" (140.7 mm)	0.73" (18.5 mm)	4.45" (113.0 mm)	201-73
201-36-SO-01†	3.0	42.8	3/4" Flaretek® flared tube, "SS" outlet**	5.54" (140.7 mm)	0.73" (18.5 mm)	4.45" (113.0 mm)	201-73
201-37-SI-01†	2.0	28.6	1/2" Flaretek® flared tube, "SS" inlet**	4.64" (117.9 mm)	0.57" (14.5 mm)	4.29" (109.0 mm)	201-73
201-37-SO-01†	2.0	28.6	1/2" Flaretek® flared tube, "SS" outlet**	4.64" (117.9 mm)	0.57" (14.5 mm)	4.29" (109.0 mm)	201-73

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

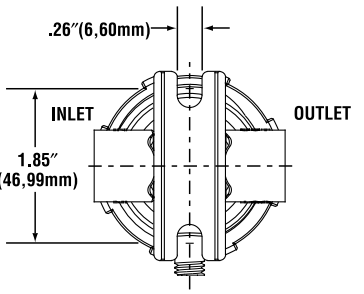
***Note:** To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.*

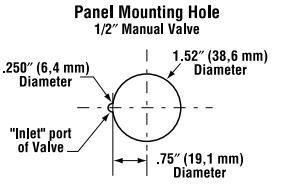
Dimensions



Mounting Information

Bottom View





Panel Mount Instructions - Panel thickness must be within 0.12" (3.0 mm) to 0.38" (9.6 mm). After installing on panel, tighten panel mounting nut 40 inch•lbs (4.5 N•m) torque, or 1/8-turn beyond hand tight.

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® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, 1/4-turn, Leak Detection Option

Specifications

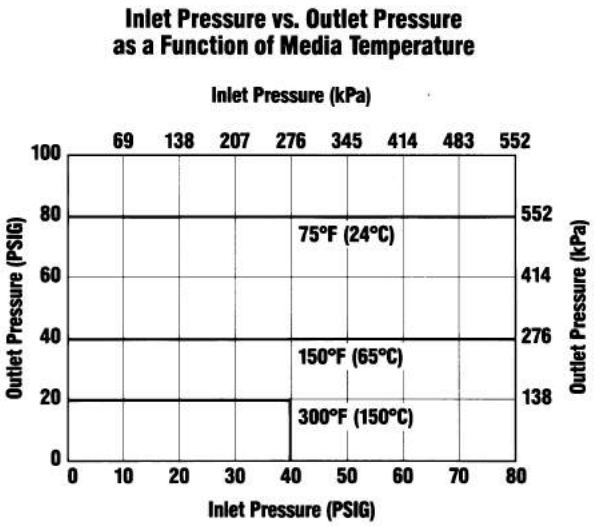
Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa)
Temperature range:	75° to 150°F (24° to 65°C), ambient 75° to 300°F (24° to 150°C), fluid 75°F (24°C) for ECTFE external components, ambient and fluid
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel, Viton®.

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

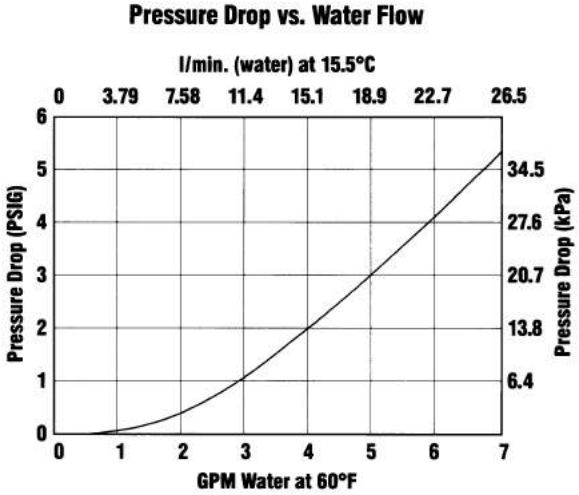
DO NOT move the adjustment nut on the valve. The adjustment is set at the factory. To set the adjustment nut, if altered in the field, use the following procedure:

1. Close the valve and connect 80 PSI air pressure to the outlet port.
2. Turn the adjustment nut clockwise until leakage stops from the inlet port.
3. Turn the adjustment nut an additional 1/8-turn.

Performance Data

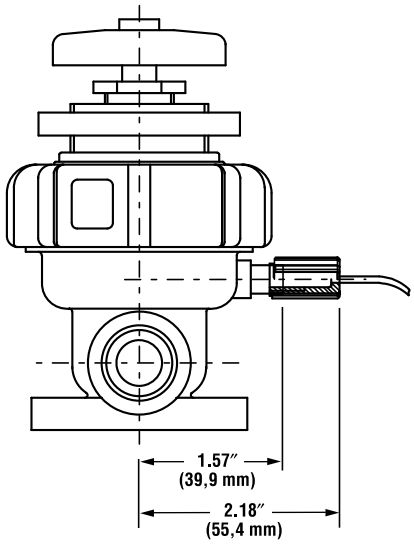


Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.



Sensing Option Dimensional Information*

Body dimensions with and without leak detection



Refer to page 400 for Sensing Option Ordering Information.

Integra® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, 1/4-turn, High Pressure, Leak Detection Option

- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- 1/4-turn fully closed to fully open.
- Rated from 29" Hg vacuum to 120 PSIG (980 mbar to 827.3 kPa) inlet/outlet pressure.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- All PFA valve body and high purity fluoropolymer wetted components provides noncontaminating fluid stream and chemically compatible construction.
- 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.
- In the event that the valve is not fully opened or is turned slightly from the fully open position, the valve automatically returns to the closed position, increasing installation safety.

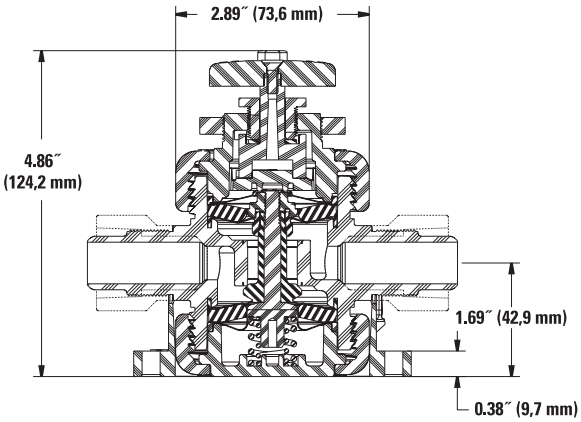
Ordering Information*

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimension A
D8-2Q-8F†	1.9	27.2	1/2" Flaretek®	5.28" (134.1 mm)
D8-2Q-8P	3.2	45.7	1/2" PureBond®	4.50" (114.3 mm)
D8-2Q-8S1**†	1.9	27.2	1/2" "SpaceSaver" on Port 1	5.28" (134.1 mm)
D8-2Q-12F†	3.2	45.7	3/4" Flaretek®	5.52" (140.2 mm)
D8-2Q-12P	3.2	45.7	3/4" PureBond®	4.50" (114.3 mm)
D8-2Q-12S1**†	3.2	45.7	3/4" "SpaceSaver" on Port 1	5.52" (140.2 mm)

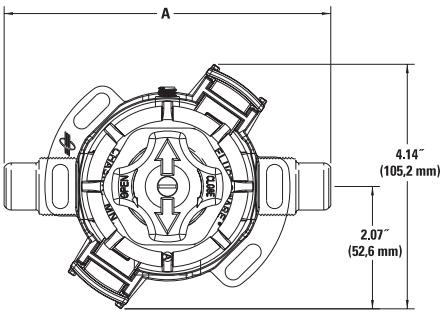
***Port 1 can be used as either the inlet or outlet port.*

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

Dimensions



Top View



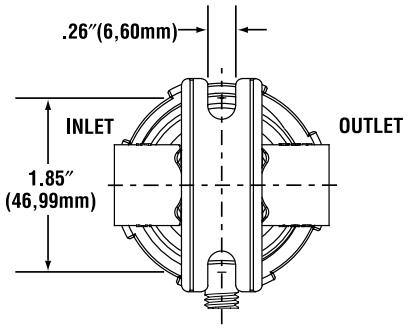
**Refer to page 400 for Sensing Option Ordering Information.*
†Also available with PFA (-3), CPFA (-6) and FlareLock® II (-II) nuts.

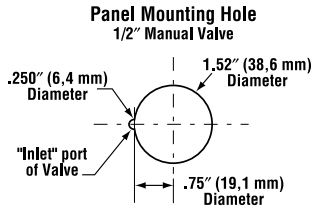
Integra® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, 1/4-turn, High Pressure, Leak Detection Option

Mounting Information

Bottom View





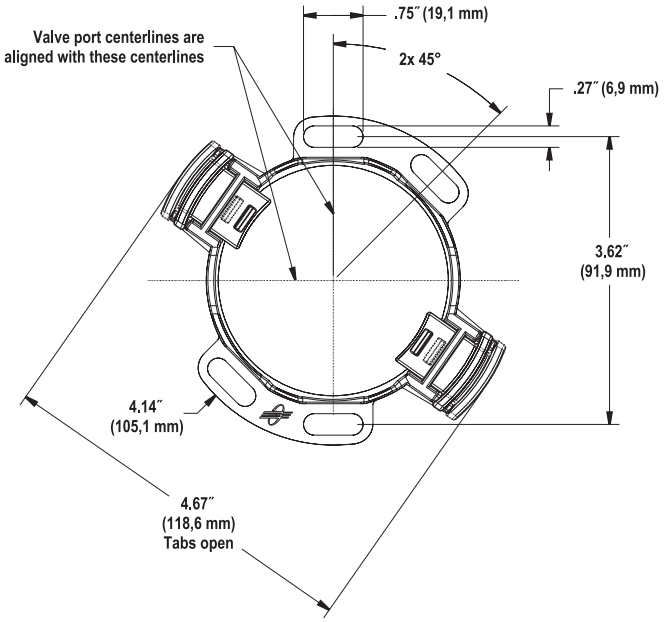
Panel Mount Instructions

1. Panel thickness must be within 0.12" (3.0 mm) to 0.38" (9.6 mm).
2. Remove handle, insert valve into the panel.
3. Tighten panel mounting nut 40 inch•lbs (4.5 N•m) torque, or 1/8-turn beyond hand tight.

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

Mounting Base Dimensions

Bottom View



Field Repair

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

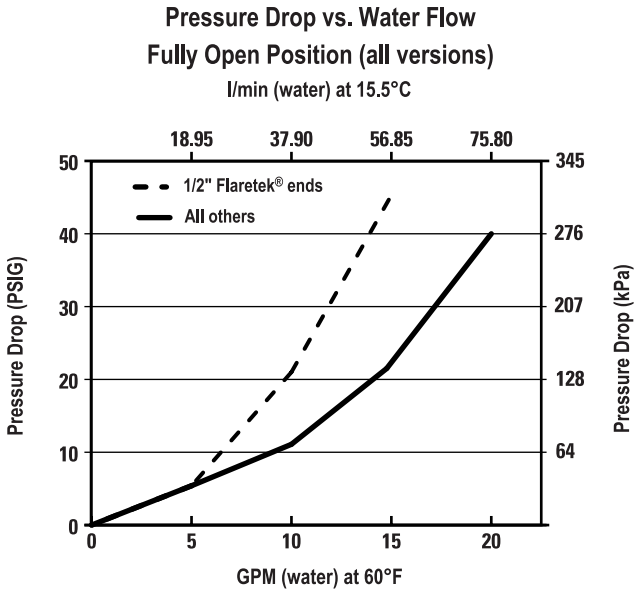
Integra® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, 1/4-turn, High Pressure, Leak Detection Option

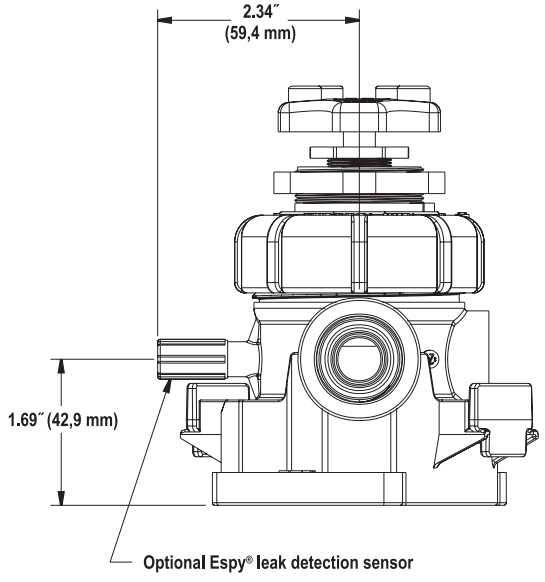
Specifications

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
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



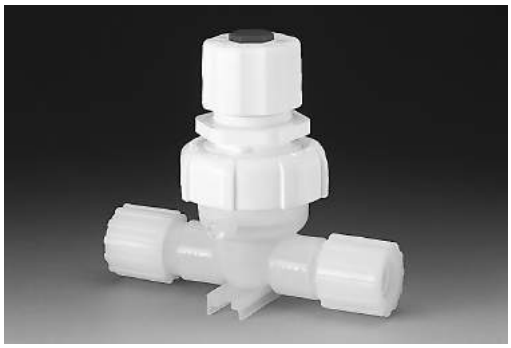
Sensing Option Dimensional Information*



Refer to page 400 for Sensing Option Ordering Information.

Integra® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, Multi-turn, Leak Detection 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.
- Three and one-half complete turns fully opens or closes the valve for more precise control than a 1/4-turn valve.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- Slower actuation reduces water hammer affect on fluid stream.
- Red travel indicator allows quick visual determination of diaphragm position.
- Field serviceable.
- Addition of Espy® sensor allows electronic monitoring of valve body seal integrity.
- All wetted parts are molded PFA providing chemical resistance suitable for use in high purity, high corrosion chemical handling applications.

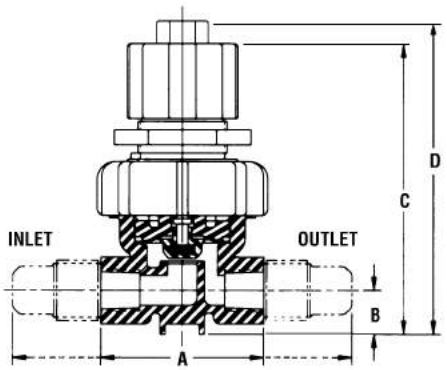
Ordering Information*

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimensions A	B	Closed Position C	Open Position D	Repair Kit
201-39-01*	3.0	42.8	1/2" PureBond® fusible pipe	5.75" (146.0 mm)	0.73" (18.5 mm)	4.90" (124.5 mm)	5.22" (132.6 mm)	201-74
201-40-01*	3.0	42.8	3/4" PureBond® fusible pipe	5.75" (146.0 mm)	0.73" (18.5 mm)	4.90" (124.5 mm)	5.22" (132.6 mm)	201-74
201-41-01*†	3.0	42.8	3/4" Flaretek® flared tube	5.27" (133.9 mm)	0.73" (18.5 mm)	4.90" (124.5 mm)	5.22" (132.6 mm)	201-74
201-42-01*†	2.0	28.6	1/2" Flaretek® flared tube	4.40" (111.8 mm)	0.57" (14.5 mm)	4.70" (119.4 mm)	5.02" (127.5 mm)	201-74
201-41-SI-01*†	3.0	42.8	3/4" Flaretek® flared tube, "SS" inlet**	5.54" (140.7 mm)	0.73" (18.5 mm)	4.90" (124.5 mm)	5.22" (132.6 mm)	201-74
201-41-SO-01*†	3.0	42.8	3/4" Flaretek® flared tube, "SS" outlet**	5.54" (140.7 mm)	0.73" (18.5 mm)	4.90" (124.5 mm)	5.22" (132.6 mm)	201-74
201-42-SI-01*†	2.0	28.6	1/2" Flaretek® flared tube, "SS" inlet**	4.64" (117.9 mm)	0.57" (14.5 mm)	4.70" (119.4 mm)	5.02" (127.5 mm)	201-74
201-42-SO-01*†	2.0	28.6	1/2" Flaretek® flared tube, "SS" outlet**	4.64" (117.9 mm)	0.57" (14.5 mm)	4.70" (119.4 mm)	5.02" (127.5 mm)	201-74

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

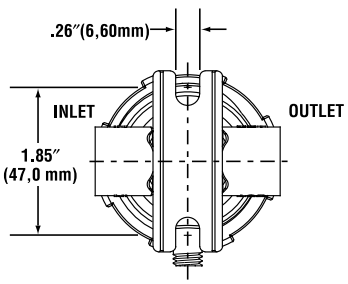
***Note:** To order valves with ECTFE external components and PFA nuts, simply add a "-EC" to the end of the part number.*

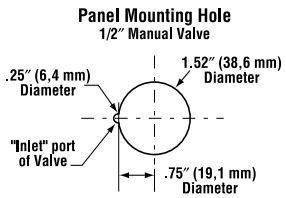
Dimensions



Mounting Information

Bottom View





Panel Mount Instructions - Panel thickness must be within 0.12" (3.0 mm) to 0.38" (9.6 mm). The handle must be removed to panel mount. Place the valve fully in the closed position and remove the two screws holding the handle in place. Remove the handle, taking care not to disturb the position of the red indicator. To install the valve, remove the panel mount nut and insert the valve into the panel. Thread the panel mount onto the valve. Again, take care not to disturb the red indicator position. Place the handle on the valve, lining up the screw holes. Install the screws. After installing on panel, tighten panel mounting nut 40 inch•lbs (4.5 N•m) torque, or 1/8-turn beyond hand tight.

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® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, Multi-turn, Leak Detection Option

Specifications

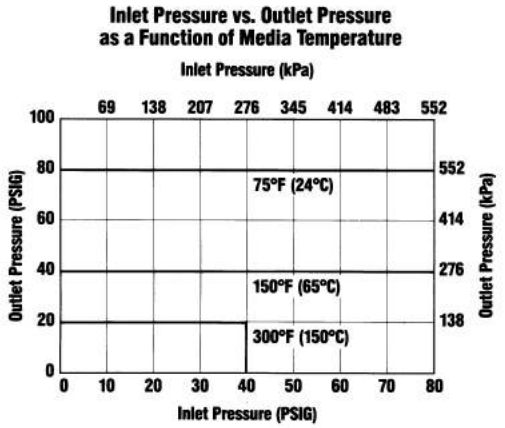
Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa)
Temperature range:	75° to 150°F (24° to 65°C), ambient 75° to 300°F (24° to 150°C), fluid 75°F (24°C) for ECTFE external components, ambient and fluid
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF. Interior actuator parts are PVDF, stainless steel, Viton®.

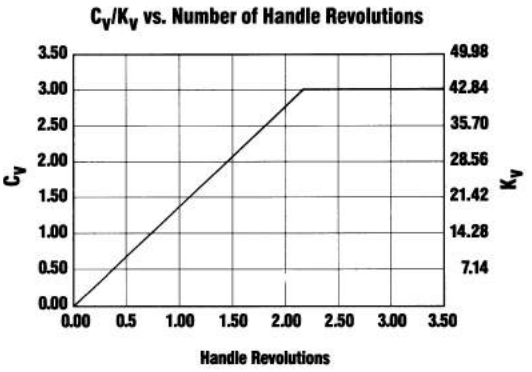
Note: Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.

DO NOT move the adjustment on the valve, the adjustment is set at the factory. To set the adjustment nut, if altered in the field, use the following procedure:

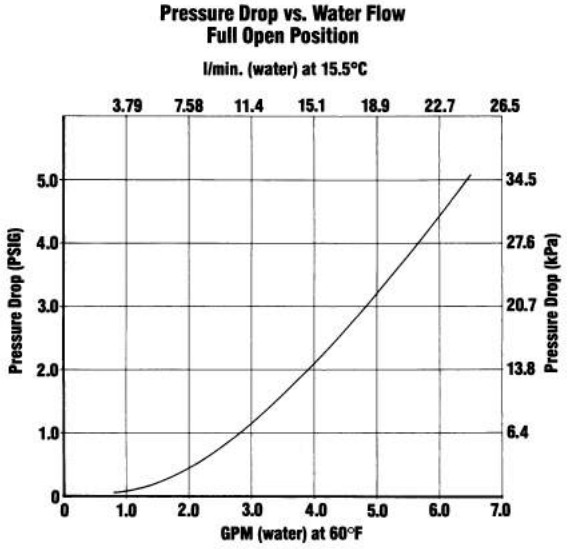
1. Close the valve and connect 80 PSIG (551.6 kPa) air pressure to the outlet port.
2. Remove the two white screws and remove the handle.
3. Back off the red adjustment nut.
4. Put the handle back on and tighten until the leak stops. Tighten an additional 1/4 turn.
5. Remove the handle taking care not to disturb the red indicator position.
6. Thread red adjustment nut until it stops, then back off the red adjustment nut to match hex. Replace the handle.
7. Replace the two screws.

Performance Data



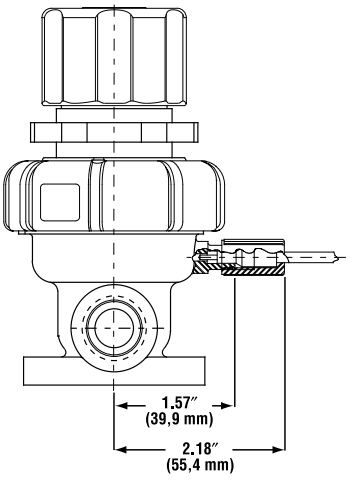


Note: Graph is not applicable for valves with ECTFE external components. Consult the factory for more information.



Sensing Option Dimensional Information*

Body dimensions with and without leak detection



Refer to page 400 for Sensing Option Ordering Information.

Integra® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, Multi-turn, High Pressure, Leak Detection Option

- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- 3 turns fully opens or closes the valve.
- Rated from 29" Hg vacuum to 120 PSIG (980 mbar to 827.3 kPa) inlet/outlet pressure.
- External, nonwetted components are available in ECTFE material for higher chemical resistance to oxygenated solvents and bases.
- All PFA valve body and high purity fluoropolymer wetted components provides noncontaminating fluid stream and chemically compatible construction.
- 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.

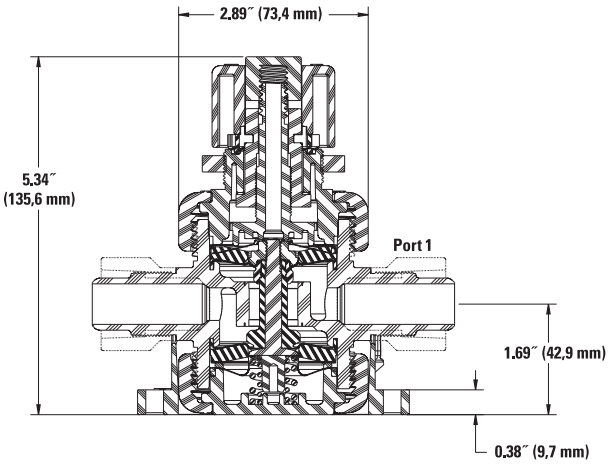
Ordering Information*

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimension A
D8-2M-8F†	1.9	27.2	1/2" Flaretek®	5.28" (134.1 mm)
D8-2M-8P	3.2	45.7	1/2" PureBond®	4.50" (114.3 mm)
D8-2M-8S1**†	1.9	27.2	1/2" "SpaceSaver" on Port 1	5.28" (134.1 mm)
D8-2M-12F†	3.2	45.7	3/4" Flaretek®	5.52" (140.2 mm)
D8-2M-12P	3.2	45.7	3/4" PureBond®	4.50" (114.3 mm)
D8-2M-12S1**†	3.2	45.7	3/4" "SpaceSaver"on Port 1	5.52" (140.2 mm)

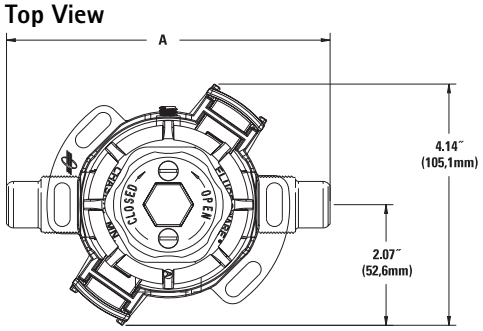
***Port 1 can be used as either the inlet or outlet port.*

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

Dimensions



Top View



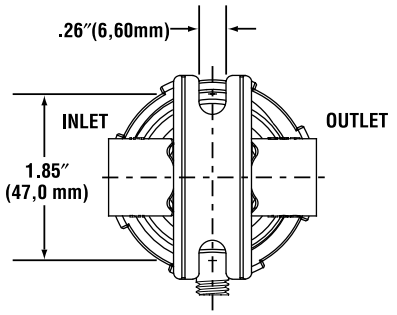
**Refer to page 400 for Sensing Option Ordering Information.*
†Also available with PFA (-3), CPFA (-6) and FlareLock® II (-II) nuts.

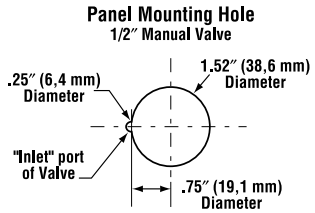
Integra® Manually Operated Diaphragm Valves

1/2" Orifice, 2-way, Multi-turn, High Pressure, Leak Detection Option

Mounting Information

Bottom View





Panel Mount Instructions

1. Panel thickness must be within 0.12" (3.0 mm) to 0.38" (9.6 mm).
2. Place the valve fully in the closed position and remove the two handle screws.
3. Remove the handle, taking care not to disturb the red indicator position.
4. To install the valve, remove the panel mount nut and insert the valve into the panel.
5. Thread the panel mount onto the valve.

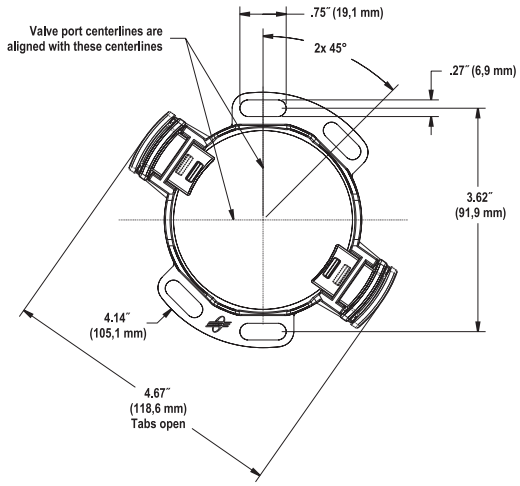
Again, take care not to disturb the red indicator position.

6. Screw the handle onto the valve.
7. After installing on panel, tighten panel mounting nut 40 inch•lbs (4.5 N•m) torque, or 1/8-turn beyond hand tight.

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

Mounting Base Dimensions

Bottom View



Field Repair

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

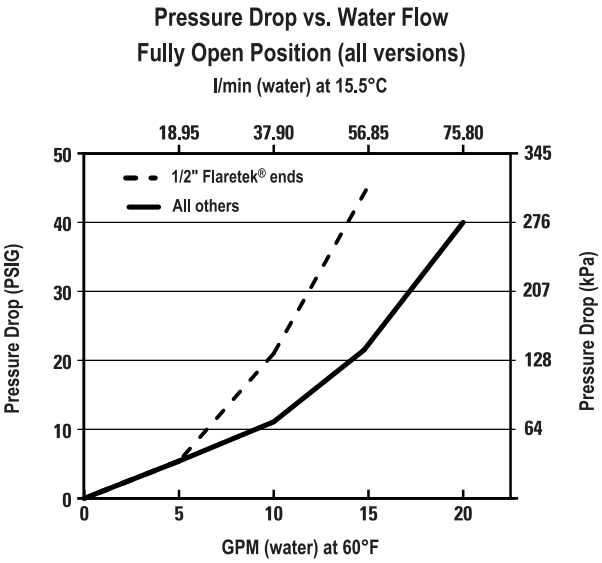
Integra® Manually Operated Diaphragm Valves

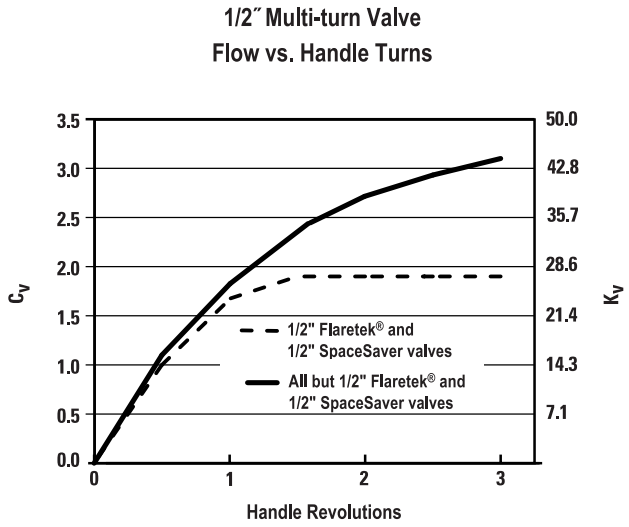
1/2" Orifice, 2-way, Multi-turn, High Pressure, Leak Detection Option

Specifications

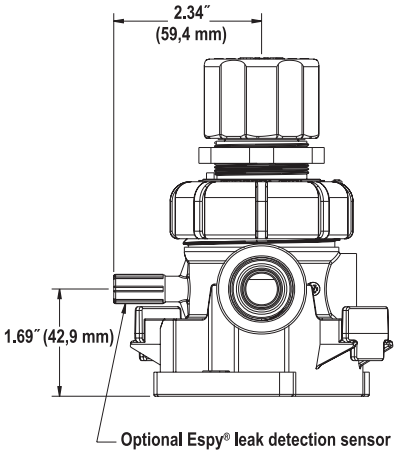
Pressure range:	29" Hg vacuum to 120 PSIG (980 mbar to 827.3 kPa) inlet and outlet at 73°F (23°C) 29" Hg vacuum to 60 PSIG (980 mbar to 414 kPa) inlet and outlet at 230°F (110°C)
Temperature range:	73° to 230°F (23° to 110°C), media 73° to 150°F (23° to 65°C), ambient 75°F (24°C) for ECTFE external components, ambient and fluid
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® Manually Operated Diaphragm Valves

1/2" Orifice, Sampling, Multi-turn

- 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.
- Three and one-half complete turns fully opens or closes the valve giving you more precise control than with 1/4-turn valves.
- Red position indicator allows visual determination of valve status.
- Includes stand-alone mounting base for easy valve installation.

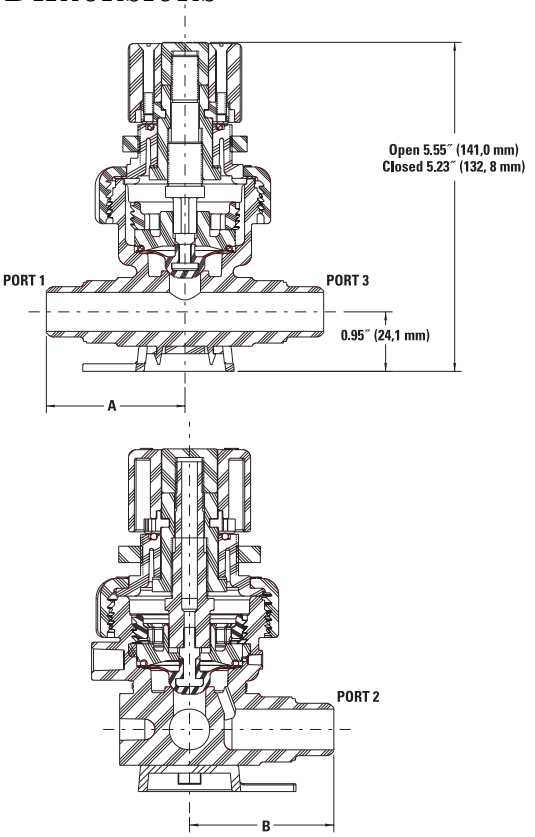
Ordering Information

Part Number	Ports 1 and 3	A	Port 2	B	Repair Kit
MA8-3M-01	3/4" PureBond®	2.25" (57.2 mm)	3/4" PureBond®	2.25" (57.2 mm)	201-74
MA8-3M-02†	3/4" PureBond®	2.25" (57.2 mm)	3/4" Flaretek®	2.21" (56.1 mm)	201-74
MA8-3M-03†	3/4" PureBond®	2.25" (57.2 mm)	1/2" Flaretek®	2.10" (53.3 mm)	201-74
MA8-3M-04†	3/4" Flaretek®	2.21" (56.1 mm)	3/4" Flaretek®	2.21" (56.1 mm)	201-74
MA8-3M-06†	3/4" Flaretek®	2.21" (56.1 mm)	1/2" Flaretek®	2.10" (53.3 mm)	201-74

Note: Contact the factory for other configurations.

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

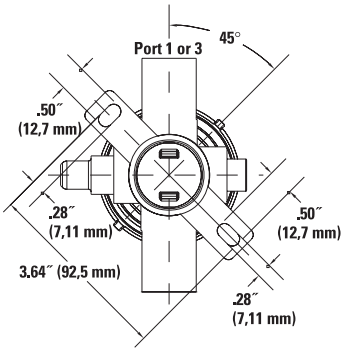
Dimensions



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

Mounting Information

Bottom View



Integra® Manually Operated Diaphragm Valves

1/2" Orifice, Sampling, Multi-turn

Specifications

Pressure range:	29" Hg vacuum (980 mbar) to 80 PSIG (551.6 kPa)
Temperature range:	75° to 150°F (24° to 65°C), ambient 75° to 212°F (24° to100°C), fluid 75°F (24°C) for ECTFE external components, ambient and fluid
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.

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

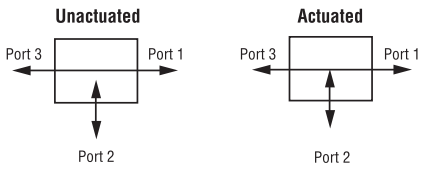
DO NOT move the adjustment on the valve, the adjustment is set at the factory. To set the adjustment nut, if altered in the field, use the following procedure:

1. Close the valve and connect 80 PSIG (551.6 kPa) air pressure to the outlet port.
2. Remove the two white screws and remove the handle.
3. Back off the red adjustment nut.
4. Put the handle back on and tighten until the lead stops. Tighten an additional 1/4-turn.
5. Remove the handle taking care not to disturb the red indicator position.
6. Thread red adjustment nut until it stops, then back off the red adjustment nut to match hexes. Replace the handle.
7. Replace the two screws.

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

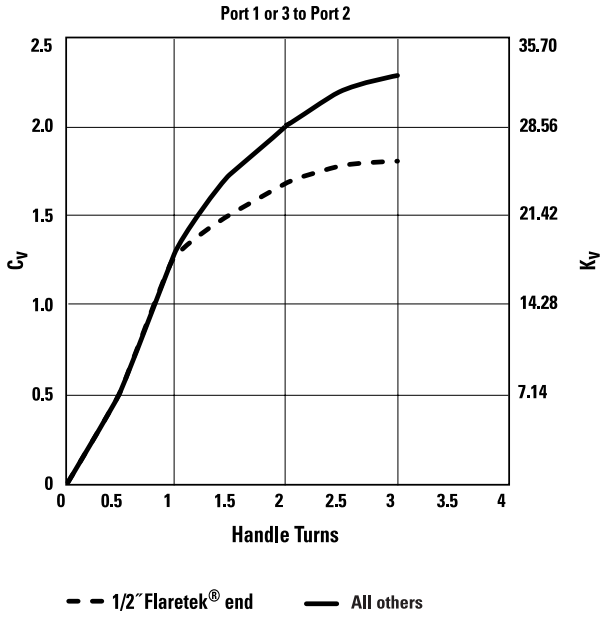


Integra® Manually Operated Diaphragm Valves

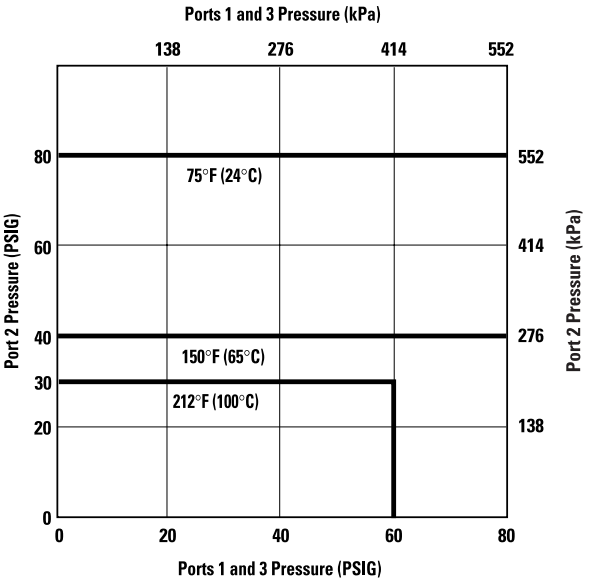
1/2" Orifice, Sampling, Multi-turn

Performance Data

C_V/K_V vs. Number of Handle Turns

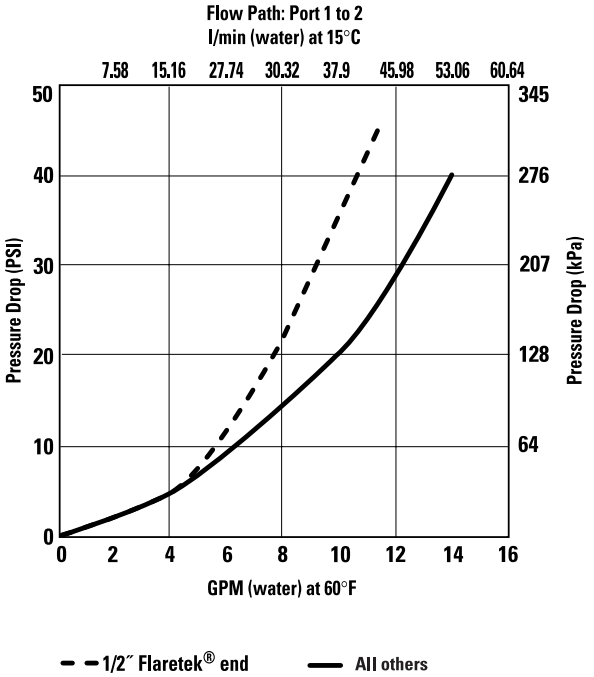


Ports 1 and 3 Pressure vs. Port 2 Pressure as a Function of Media Temperature



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



Integra® Manually Operated Diaphragm Valve

1/2" Orifice, 3-way, Leak Detection Option

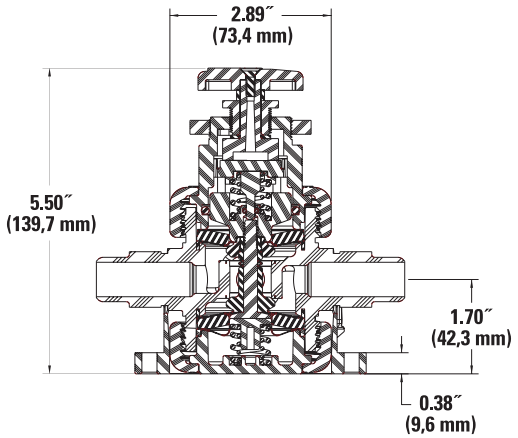
- Available compliant to SEMI Standard F57-0301, the specification for polymer components used in ultrapure water and liquid chemical distribution systems.
- All PFA valve body and high purity fluoropolymer wetted components for use in high purity, highly corrosive chemical handling applications.
- No 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.
- Requires only 1/4-turn from closed to fully open for fast actuation.
- Addition of Espy® sensor allows electronic monitoring of valve body seal integrity.
- Stand-alone mounting base provides easy valve installation and removal.
- Patented actuator design ensures reliable, long-term port-to-port seal without excessive loads.

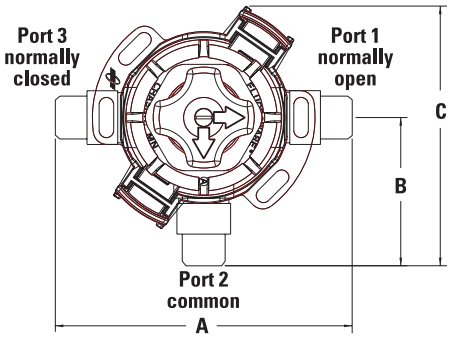
Ordering Information*

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimensions A	Dimensions B	Dimensions C
D8-3Q-8F*†	1.9	27.2	1/2" Flaretek®	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3Q-8P*	3.2	45.7	1/2" PureBond®	4.50" (114.3 mm)	2.25" (57.2 mm)	4.32" (109.7 mm)
D8-3Q-8S1*†	1.9	27.2	1/2" "SpaceSaver" on Port 1	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3Q-8S2*†	1.9	27.2	1/2" "SpaceSaver" on Port 2	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3Q-8S3*†	1.9	27.2	1/2" "SpaceSaver" on Port 3	5.28" (134.1 mm)	2.64" (67.1 mm)	4.71" (119.6 mm)
D8-3Q-12F*†	3.2	45.7	3/4" Flaretek®	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3Q-12P*	3.2	45.7	3/4" PureBond	4.50" (114.3 mm)	2.25" (57.2 mm)	4.32" (109.7 mm)
D8-3Q-12S1*†	3.2	45.7	3/4" "SpaceSaver" on Port 1	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3Q-12S2*†	3.2	45.7	3/4" "SpaceSaver" on Port 2	5.52" (140.2 mm)	2.76" (70.1 mm)	4.83" (122.7 mm)
D8-3Q-12S3*†	3.2	45.7	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



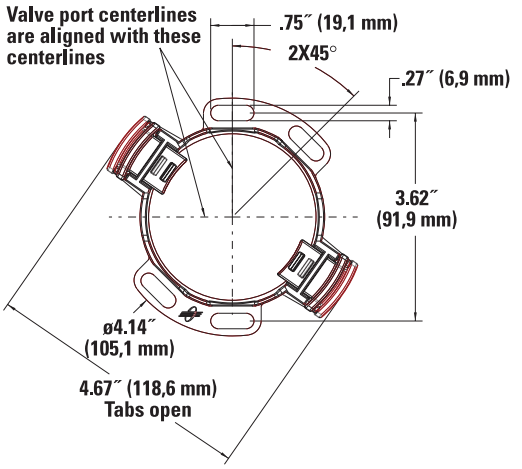


**Refer to page 400 for Sensing Option Ordering Information.*
†Also available with PFA (-3), CPFA (-6) and FlareLock® II (-II) nuts.

Integra® Manually Operated Diaphragm Valve

1/2" Orifice, 3-way, Leak Detection Option

Mounting Information

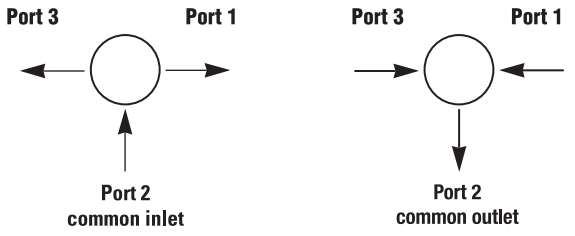


Specifications

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	
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, Viton®, PEEK™, polypropylene and carbon-filled PEEK™. Mounting base is polyethylene.	

Port Configurations

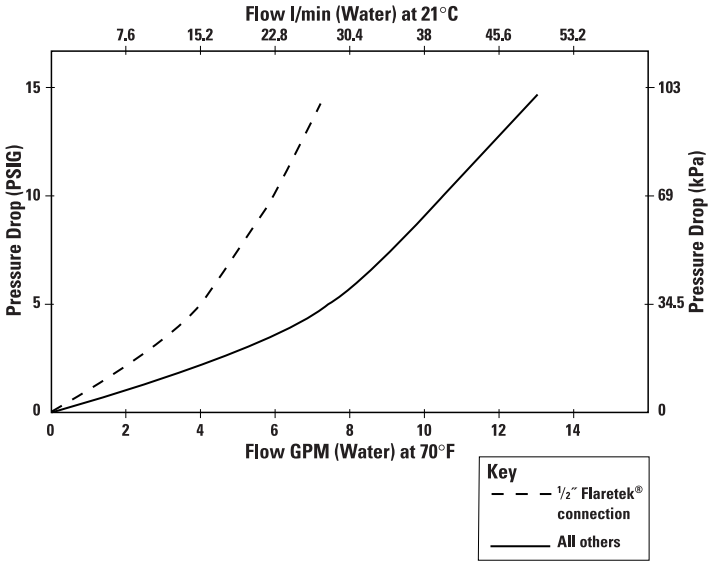
Port 2 is the common port



Integra® Manually Operated Diaphragm Valve

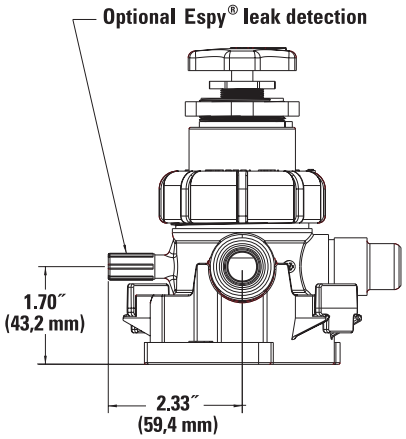
1/2" Orifice, 3-way, Leak Detection Option

Performance Data



Sensing Option Dimensional Information*

Body dimensions with and without leak detection.



**Refer to page 400 for Sensing Option Ordering Information.*

Integra® Manually Operated Diaphragm Valves

1/2" Orifice, 4-port, Multi-turn

- 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.
- Unique 4-port design allows sample and purge functions with fewer components.
- Three and one-half complete turns fully opens or closes the valve giving you more precise control than with 1/4-turn valves.
- Red position indicator allows visual determination of valve status.
- No external metal components.
- Includes stand-alone mounting base for easy valve installation.

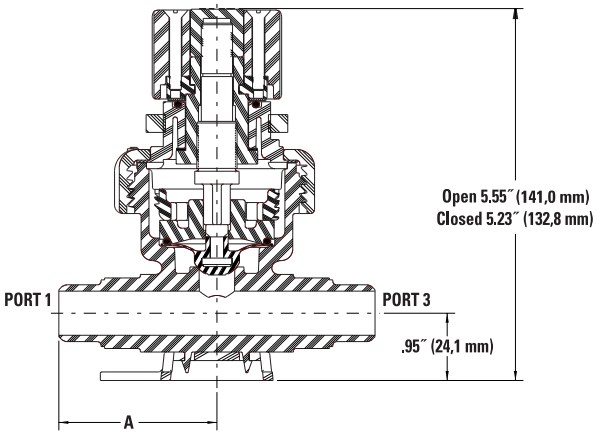
Ordering Information

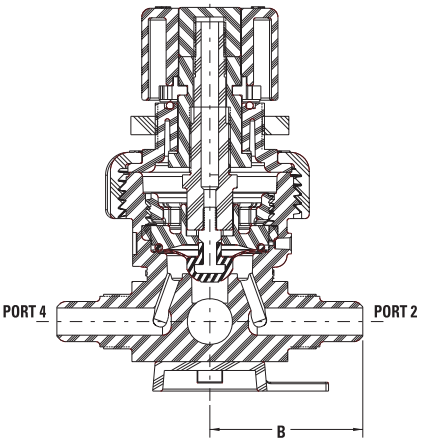
Part Number	Ports 1 and 3	Ports 2 and 4	Dimensions A	Dimensions B	Repair Kit
MA8-4M-01†	3/4" PureBond®	3/4" Flaretek®	2.25" (57.2 mm)	2.21" (56.1 mm)	201-74
MA8-4M-02†	3/4" PureBond®	1/2" Flaretek®	2.25" (57.2 mm)	2.10" (53.3 mm)	201-74
MA8-4M-03†	3/4" Flaretek®	3/4" Flaretek®	2.21" (56.1 mm)	2.21" (56.1 mm)	201-74
MA8-4M-04†	3/4" Flaretek®	1/2" Flaretek®	2.21" (56.1 mm)	2.21" (56.1 mm)	201-74

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





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

Integra® Manually Operated Diaphragm Valves

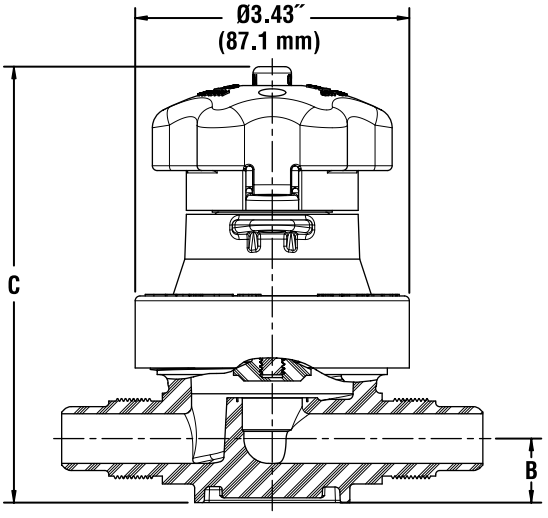
3/4" Orifice, 2-way, Multi-turn

- 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.
- Manual multi-turn with integral safety lock out and red indicator for 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.

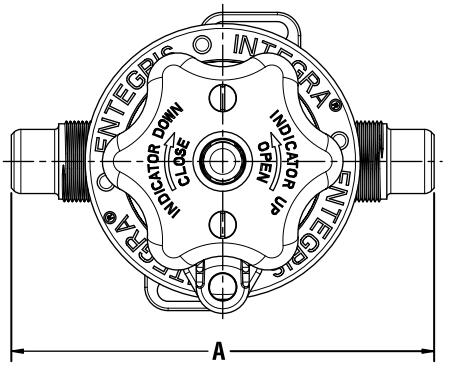
Ordering Information

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimensions A	Dimensions B	Dimensions C	Repair Kit
DS12-2ML-12F	7.0	100.0	3/4" Flaretek®	5.27" (133.9 mm)	0.80" (20.3 mm)	5.47" (138.9 mm)	DS12-MAN-RKIT-COMP
DS12-2ML-12P	7.0	100.0	3/4" PureBond®	6.59" (167.4 mm)	0.80" (20.3 mm)	5.47" (138.9 mm)	DS12-MAN-RKIT-COMP
DS12-2ML-16F	8.0	114.2	1" Flaretek®	5.74" (145.8 mm)	0.96" (24.4 mm)	5.83" (148.1 mm)	DS12-MAN-RKIT-COMP
DS12-2ML-16P	8.5	121.4	1" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	5.83" (148.1 mm)	DS12-MAN-RKIT-COMP

Dimensions



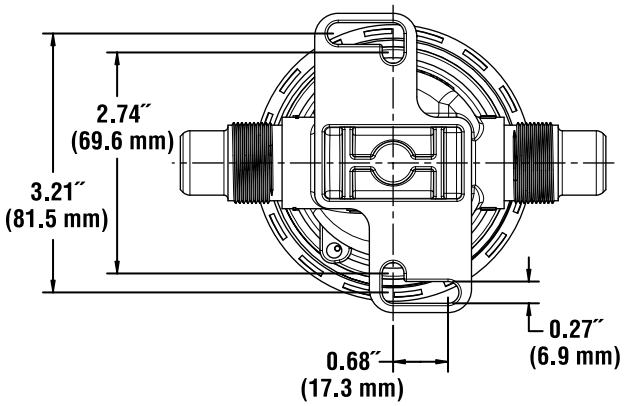
Top View



Integra® Manually Operated Diaphragm Valves

3/4" Orifice, 2-way, Multi-turn

Mounting Information

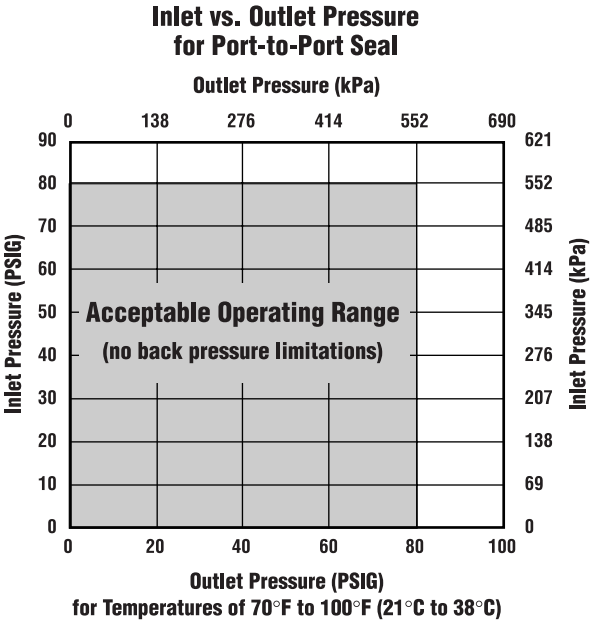


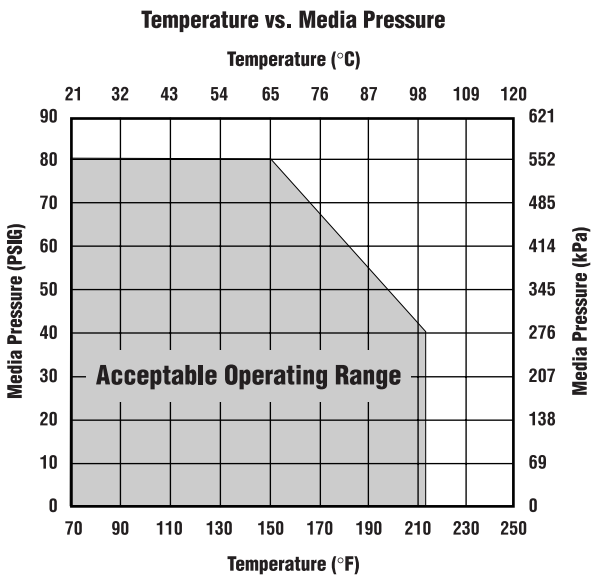
Specifications

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
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® Manually Operated Diaphragm Valves

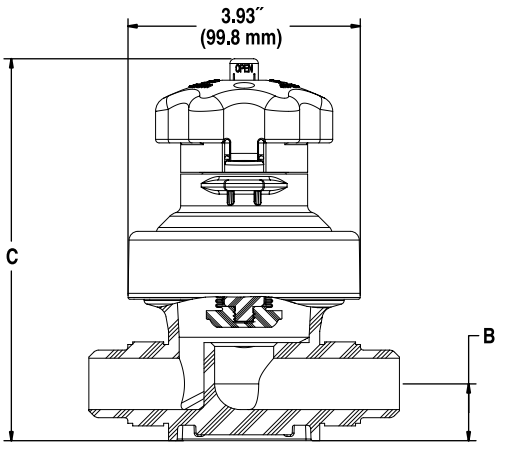
1" Orifice, 2-way, Multi-turn

- 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.
- Manual multi-turn with integral safety lock out/tag out is available in 2-way configurations.
- Available with fully characterized industry standard port connections including Flaretek®, FlareLock® II and PureBond® enables easy configuration into a variety of systems.
- Includes integral mounting base for easy valve installation.

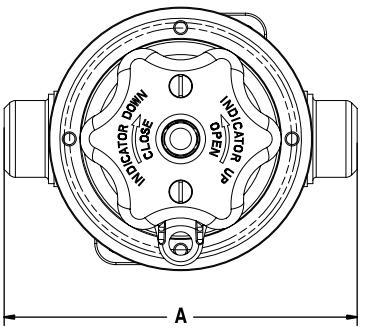
Ordering Information

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimensions A	Dimensions B	Dimensions C	Repair Kit
Manual Multi-turn with Lock Out							
DS16-2ML-12F*	7.2	102.8	3/4" Flaretek®	5.08" (129.0 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP
DS16-2ML-12P	10.4	148.5	3/4" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP
DS16-2ML-16F*	12.4	177.0	1" Flaretek®	5.26" (133.6 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP
DS16-2ML-16P	13.6	194.2	1" PureBond®	6.59" (167.4 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP

Dimensions



Top View

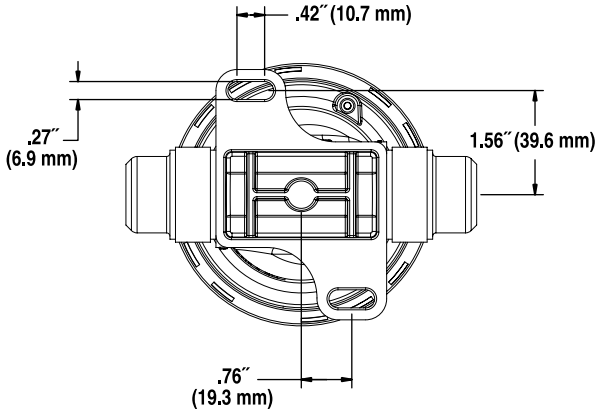


**Also available with PFA (-3) and FlareLock® (-II) nuts.*

Integra® Manually Operated Diaphragm Valves

1" Orifice, 2-way, Multi-turn

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)
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. The mounting base is polyethylene.

Integra® Manually Operated Diaphragm Valves

1" Orifice, Sampling, Multi-turn

- 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.
- Manual multi-turn with integral safety lock out/tag.
- 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	Flow Factor K_v	Port 1 Connection	Port 2 (sampling) Connection	Port 3 Connection
Manual Multi-turn with lock out					
DS16-SML-12F12F	7.2	102.8	3/4" Flaretek®	3/4" Flaretek®	3/4" Flaretek®
DS16-SML -12P12F	7.2	102.8	3/4" PureBond®	3/4" Flaretek®	3/4" PureBond®
DS16-SML-16F12F	7.2	102.8	1" Flaretek®	3/4" Flaretek®	1" Flaretek®
DS16-SML-16P12F	7.2	102.8	1" PureBond®	3/4" Flaretek®	1" PureBond®
DS16-SML-16PF12F	7.2	102.8	1" PureBond®	3/4" Flaretek®	1" Flaretek®

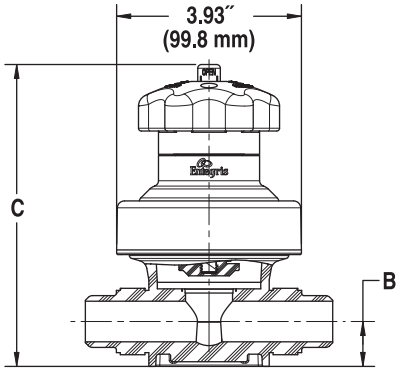
Part Number	Dimensions A	B	C	Repair Kit
Manual Multi-turn with lock out				
DS16-SML-12F12F	5.08" (129.0 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP
DS16-SML -12P12F	6.59" (167.4 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP
DS16-SML-16F12F	5.26" (133.6 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP
DS16-SML-16P12F	6.59" (167.4 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP
DS16-SML-16PF12F	4.79" (121.7 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)	DS16-MAN-RKIT-COMP

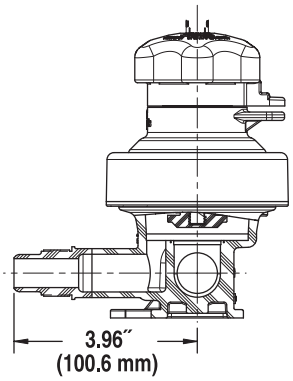
**Also available with PFA (-3) and FlareLock® II (-II) nuts.*

Integra® Manually Operated Diaphragm Valves

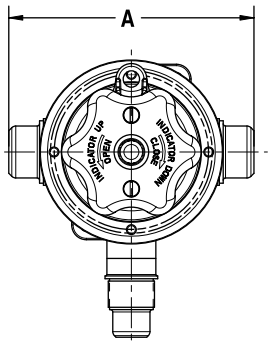
1" Orifice, Sampling, Multi-turn

Dimensions

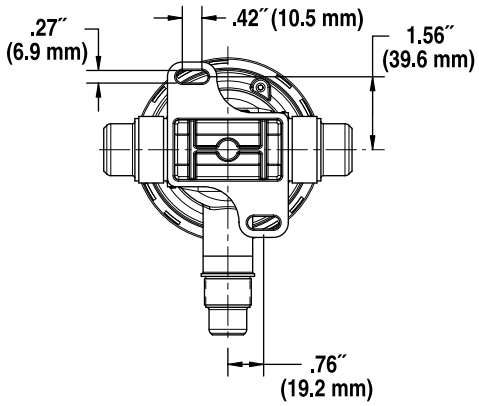




Top View



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)
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 Manually 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.
- Requires only 1/4-turn from closed to fully open for fast operation.
- Available with industry standard port connections including Flaretek®, Flaretek® "SpaceSaver", PureBond® or FNPT.

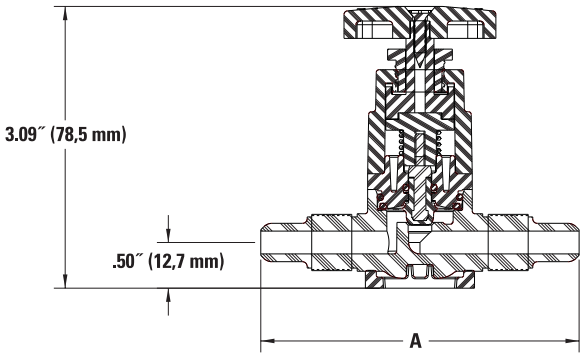
Ordering Information

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

**Dimension A with "SpaceSaver" nut.*

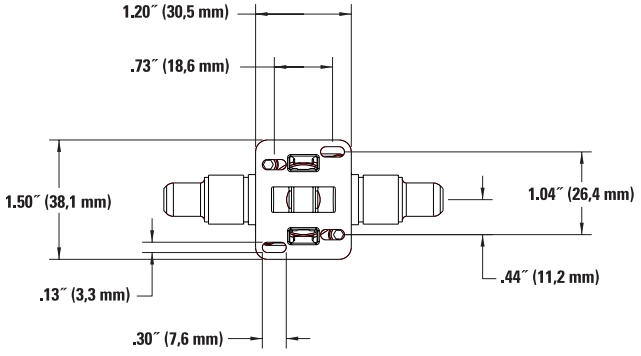
Note: Contact the factory if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.

Dimensions



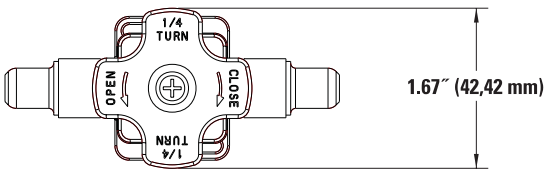
Mounting Information

Bottom View



Mounting base re-order number: 01-003444

Top View



Galtek® SG Series Manually Operated Diaphragm Valves

1/4" Orifice, 2-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)	Inlet 80 PSIG (552 kPa) Outlet 40 PSIG (276 kPa)
	212°F (100°C)	Inlet 40 PSIG (276 kPa) Outlet 20 PSIG (138 kPa)
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 Manually Operated Diaphragm Valves

1/4" Orifice, 2-way, Panel Mount

- 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.
- Accommodates industry standard port connections including Flaretek®, PureBond® or FNPT.
- Mounts through a panel up to 0.25" thick.
- Actuator design ensures reliable, long-term port-to-port seal without excessive loads.

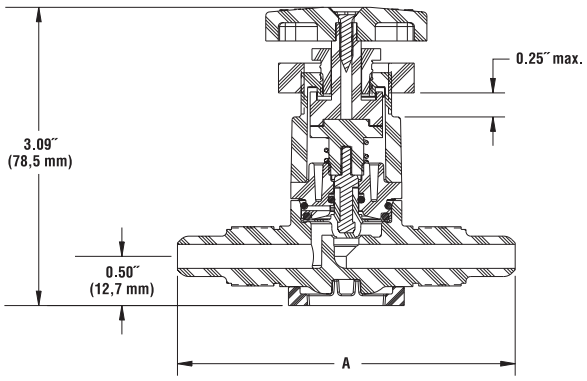
Ordering Information

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

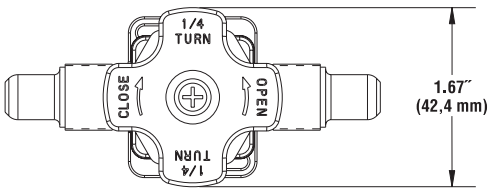
**Dimension A with "SpaceSaver" nut.*

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

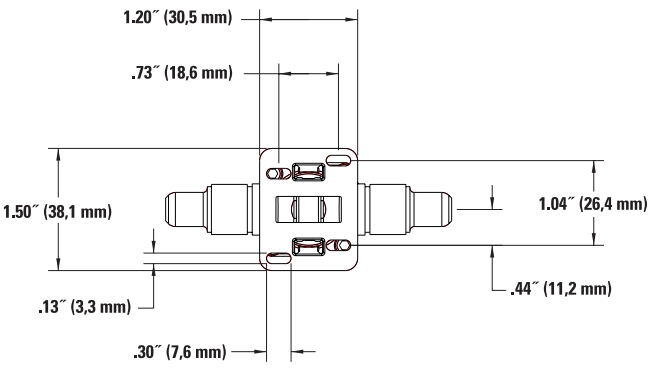
Dimensions



Top View



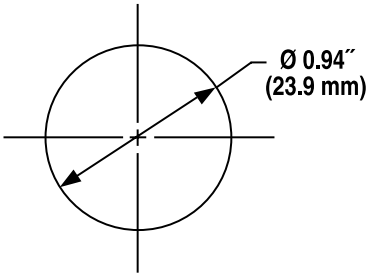
Bottom View



Galtek® SG Series Manually Operated Diaphragm Valves

1/4" Orifice, 2-way, Panel Mount

Mounting Information



Panel Mount Instructions - panel mounting hole diameter is 0.94" (23.9 mm).
Mounting base reorder number: 01-003444

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)
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 Manually Operated Diaphragm Valves

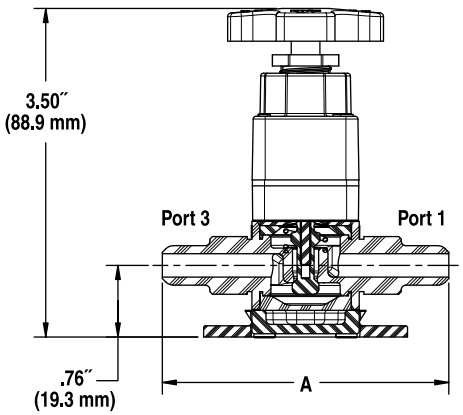
1/4" Orifice, 3-way, 1/4-turn

- 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®, PureBond® or FNPT.
- Stand-alone mounting base enables you to easily install and remove the valve without tools.
- Actuator design ensures reliable, long-term port-to-port seal without excessive loads.

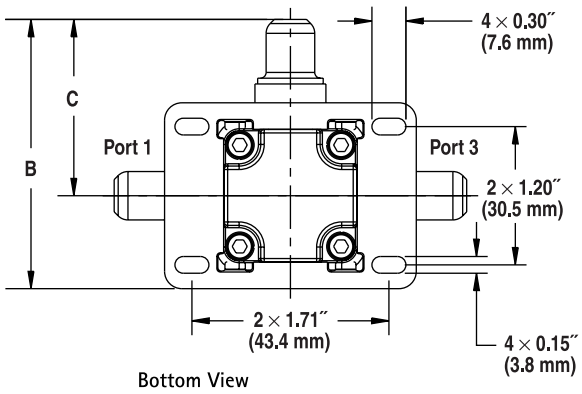
Ordering Information

Part Number	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimensions A	Dimensions B	Dimensions C
SG4-3Q-4F	0.28	4.0	1/4" Flaretek®	2.81" (71.4 mm)	2.26" (57.4 mm)	1.46" (37.1 mm)
SG4-3Q-4P	0.60	8.6	1/4" PureBond®	3.00" (76.2 mm)	2.30" (58.4 mm)	1.50" (38.1 mm)
SG4-3Q-6F	0.60	8.6	3/8" Flaretek®	3.05" (77.5 mm)	2.33" (59.2 mm)	1.53" (38.9 mm)

Dimensions



Mounting Information



Bottom View

Mounting base reorder number: 01-006010.

Galtek® SG Series Manually Operated Diaphragm Valves

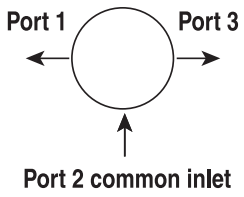
1/4" Orifice, 3-way, 1/4-turn

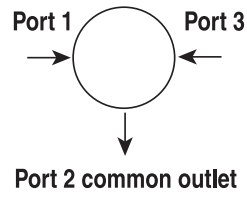
Specifications

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) Port 3: 60 PSIG (414 kPa) Port 1: 60 PSIG (414 kPa)
212°F (100°C)	Common: 40 PSIG (276 kPa) Port 3: 30 PSIG (207 kPa) Port 1: 30 PSIG (207 kPa)
Materials:	All wetted parts are PFA. Exterior actuator parts are PVDF and stainless steel fasteners. Interior actuator parts are PVDF, stainless steel and Viton®.

Port Configurations

Port 2 is the common port





Magnaflo® Plug Valves

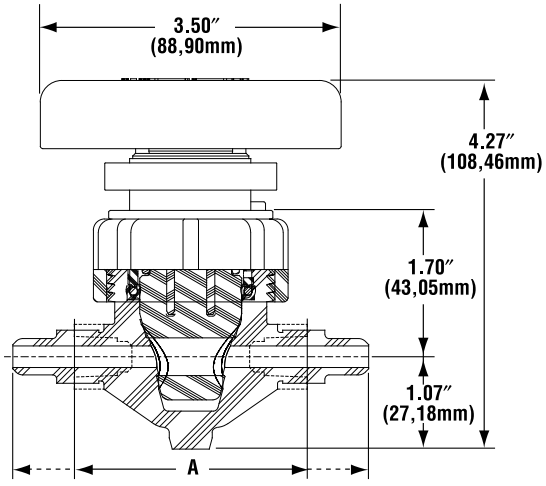
1/4" and 3/8" Orifice, 1/4-turn

- Straight through flow path.
- Bidirectional pressure capable.
- All wetted components are constructed of high purity PFA and PTFE materials for ultrapure and corrosion-resistant performance.
- Quarter turn manual operation.
- Panel mounting configuration is standard.

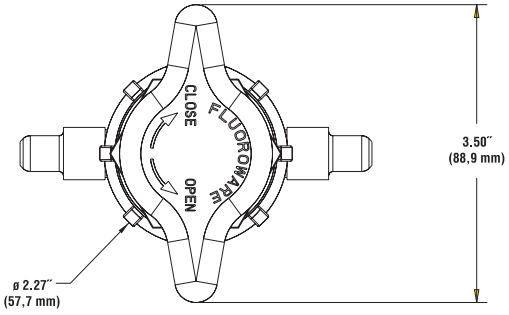
Ordering Information

Part Number	Orifice	Flow Factor C_v	Flow Factor K_v	Port Connection	Dimension A
BV4-4F	1/4"	.35	5.0	1/4" Flaretek® flared tube	4.00" (101.6 mm)
BV4-4P	1/4"	1.5	21.4	1/4" PureBond® fusible pipe	4.27" (108.5 mm)
BV4-6F	1/4"	1.5	21.4	3/8" Flaretek® flared tube	4.14" (105.2 mm)
BV6-8F	3/8"	4.0	57.1	1/2" Flaretek® flared tube	4.30" (109.2 mm)
BV6-8P	3/8"	4.0	57.1	1/2" PureBond® fusible pipe	5.27" (133.9 mm)
BV6-12F-01	3/8"	4.0	57.1	3/4" Flaretek® flared tube	4.38" (111.3 mm)

Dimensions

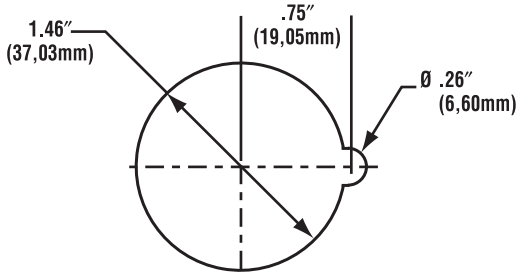


Top View



Mounting Information

Panel Mount



Panel Mount Instructions - Panel thickness must be within 0.10" (2.5 mm) to 0.25" (6.4 mm). To panel mount, the handle must be removed. Remove the screw holding the handle in place, then remove the handle. Remove the panel mount nut and insert valve into the panel. Thread the panel mount nut and insert valve into the panel. Thread the panel mount nut onto the valve and tighten nut to 40 inch•lbs (4.5N•m) torque, or 1/8-turn beyond hand tight. Reinstall handle. Be careful not to over tighten handle screw.

Magnaflo® Plug Valves

1/4" and 3/8" Orifice, 1/4–turn

Specifications

Maximum continuous use pressure:	100 PSIG (689 kPa) at ambient temperature, media
Peak pressure for short durations:	150 PSIG (1034 kPa) at ambient temperature, media
Maximum continuous temperature:	200° F (93° C) at 25 PSIG (172 kPa), media
Peak temperature for short durations:	400° F (204° C) at 10 PSIG (69 kPa), media
Materials:	All wetted parts are PFA and PTFE. Additional materials used for nonwetted parts include PVDF, PEEK™ and PTFE u-cup with Viton® energizer.

Performance Data