Springless Diaphragm Valves
for High Performance

DP Series

- Suitable for ultrahigh-purity applications
- 316L VIM-VAR stainless steel body
- Low-pressure and high-pressure models
- VCR®, tube butt weld, and modular surface-mount end connections
- Manual or pneumatic actuation

Swagelok®

Contents

Features

Seat

Fully contained PCTFE seat design provides:

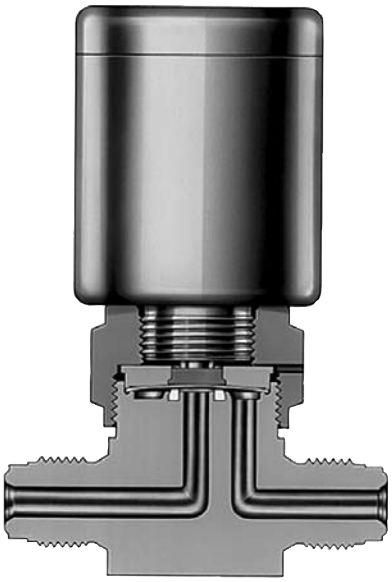
- excellent resistance to swelling and contamination
- improved helium leak test performance
- minimal particle generation
- long cycle life.

Diaphragm

- Elgiloy® material for strength and corrosion resistance
- Optimal design for long cycle life

Body

- 316L VIM-VAR stainless steel body material for ultrahigh-purity applications
- Fully swept flow path
  - minimizes entrapment areas
  - facilitates purging
  - maximizes flow capacity.



Models

Low-Pressure

- Pressure rating: 250 psig (17.2 bar)
- Temperature rating: –10 to 150°F (–23 to 65°C)
- Flow coefficient: 0.27

High-Pressure

- Pressure rating: 3045 psig (210 bar)
- Temperature rating: –10 to 150°F (–23 to 65°C)
- Flow coefficient: 0.20

Technical Data

Model	Working Pressure psig (bar)		Temperature Rating °F (°C)		Flow Coefficient (C_v)	Orifice in. (mm)	Internal Volume in.^{3} (cm^3)	Pneumatic Actuator	
	Operating	Burst	Operating	Short-Term Bakeout				Actuation Pressure psig (bar)	Air Displacement in.^{3} (cm^3)
Low-pressure	Vacuum to 250 (17.2)	3200 (220)	–10 to 150 (–23 to 65)	302 (150) (valve open)	0.27	0.16 (4.1)	0.086 (1.4) (body with BW4 ends)	60 to 120 (4.2 to 8.2)	0.09 (1.5)
High-pressure	Vacuum to 3045 (210)	12 200 (840)			0.20			70 to 120 (4.9 to 8.2)	0.47 (7.7)

See **Options and Accessories,** page 12, for high-temperature seat materials.

Materials of Construction

High-Pressure Pneumatic Actuator Shown

Component	Material Grade/ASTM Specification	
	Low-Pressure	High-Pressure
Body and integral end connections	*316L VIM-VAR SS/ SEMI F20-0305 Ultrahigh-Purity*①	
Welded VCR end connections	*316L VAR SS/ SEMI F20-0305 High-Purity*①	
Swagelok tube fittings	*316 SS/A276*	
Seat	*PCTFE/D1430*	
Diaphragm	*Elgiloy/AMS 5876*	
Support diaphragm	Silver-plated Elgiloy /AMS 5876	
Washer	—	S17700
Bonnet	S17400 SS	
Bonnet nut	316 SS	
Pneumatic Actuator		
Cylinder, cap, pistons	Aluminum	
O-rings	Buna N	
Springs	S17700 SS	
Button	316 SS	
Manual Actuator		
Actuator	316 SS	
Button	—	316 SS
Directional handle	Nylon with stainless steel insert	
Integral lockout handle	Glass-filled nylon with stainless steel base	
Round handle	Polyester with stainless steel insert	
Toggle handle	316 SS with epoxy coating	—

Wetted components listed in *italics*.

O-rings are lubricated with PTFE-based lube; no lubricants on wetted components.

① 20 % minimum elongation allowed.

Process Specifications

See Swagelok *Ultrahigh-Purity Process Specification (SC-01),* MS-06-61, Swagelok *Photovoltaic Process Specification (SC-06),* MS-06-64, and Swagelok *Special Cleaning and Packaging (SC-11),* MS-06-63, for details on processes, process controls, and process verification.

Cleaning	Assembly and Packaging	Process Designator	Process Specification	Wetted Surface Roughness (R_a)	Testing
Ultrahigh-purity cleaning with a continuously monitored, deionized water, ultrasonic cleaning system	Performed in ISO Class 4 work areas; valves are double bagged and vacuum sealed in cleanroom bags.	P	*Ultrahigh-Purity Process Specification (SC-01)*	Electropolished and finished to an average of 5 µin. (0.13 µm)	Inboard helium leak tested to a rate of 1×10^{-9} std cm^3/s at the seat, envelope, and all seals. The DP series design has been helium leak tested to maximum leak rate of 1×10^{-10} std cm^3/s.
High-purity cleaning with a continuously monitored, deionized water, ultrasonic cleaning system	Performed in specially cleaned areas; valves are individually bagged.	P6	*Photovoltaic Process Specification (SC-06)*		
Special cleaning with non–ozone-depleting chemicals	Performed in specially cleaned areas; valves are individually bagged.	P1	*Special Cleaning and Packaging (SC-11)*		

Performance Specifications

See the *DP Series Diaphragm Valve Technical Report,* MS-06-15, for more information on helium leak testing, particle counting, moisture analysis, hydrocarbon analysis, ionic cleanliness, and lab cycle testing data.

Flow Data

Pressure Drop to Atmosphere psig (bar)	Low-Pressure Models C_v = 0.27		High-Pressure Models C_v = 0.20	
	Water U.S. gal/min (L/min)	Air std ft^3/min (std L/min)	Water U.S. gal/min (L/min)	Air std ft^3/min (std L/min)
10 (0.68)	0.85 (3.2)	3.0 (86)	0.63 (2.4)	2.3 (64)
50 (3.4)	1.9 (7.2)	8.1 (230)	1.4 (5.4)	6.0 (170)
100 (6.8)	2.7 (10.2)	14.3 (410)	2.0 (7.6)	10.6 (300)

Actuation Options

Manual Actuators

- Low-pressure valves have blue handles as standard.
- High-pressure valves have white handles as standard.
- Seven handle colors are available; see **Options and Accessories—Handle Colors**, page 12.

Directional

- Quick, quarter-turn actuation
- Handle shape provides visual indication of OPEN and CLOSED position
- Available on high- and low-pressure models

Integral Lockout

- Quick, quarter-turn actuation
- Lockable in the CLOSED position for safety
- Handle shape and window indicator provides visual indication of OPEN and CLOSED position.
- Available on high- and low-pressure models

Round

- Quick, quarter-turn actuation
- Handle with window provides visual indication of OPEN and CLOSED positions
- Available on high- and low-pressure models

Toggle

- Spring-loaded toggle design for quick actuation
- Lockable in the CLOSED position for safety
- Handle position provides visual indication of OPEN and CLOSED positions
- Narrow handle profile allows close parallel mounting of valves
- Available on low-pressure models with PCTFE seats

Pneumatic Actuators

- Normally open pneumatic actuators are marked with a green ring on top of the cylinder.

High-Pressure Pneumatic Actuator

Low-Pressure Pneumatic Actuator

IGC II Modular Surface-Mount Valves

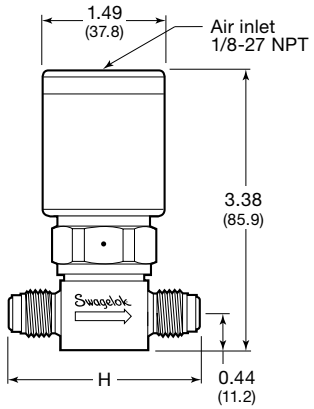
- 1.5 in. C-seal design
- Low-pressure valves: directional, integral lockout, round, toggle, and pneumatic actuators
- High-pressure valves: directional and integral lockout handles
- Available in two- or three-port configurations
- For more information on IGC II integrated gas components, see the *IGC II Integrated Gas Components—Substrates, Manifolds, Mounting Components, and Assembly Hardware* catalog, MS-02-135.

Ordering Information and Dimensions

Dimensions, in inches (millimeters), are for reference only and are subject to change.

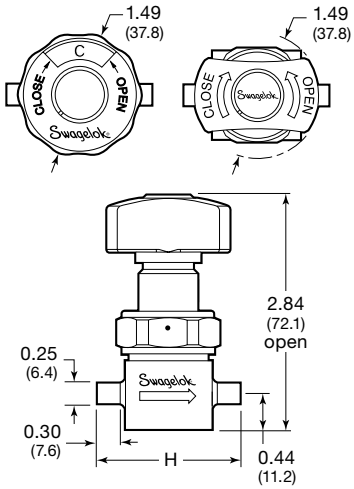
Low-Pressure Valves

Pneumatic Actuator



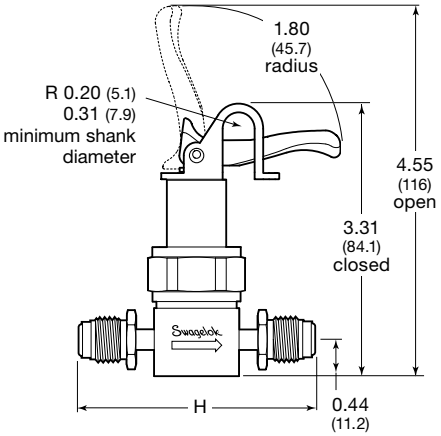
Integral Male VCR Fittings

Round Handle **Directional Handle**

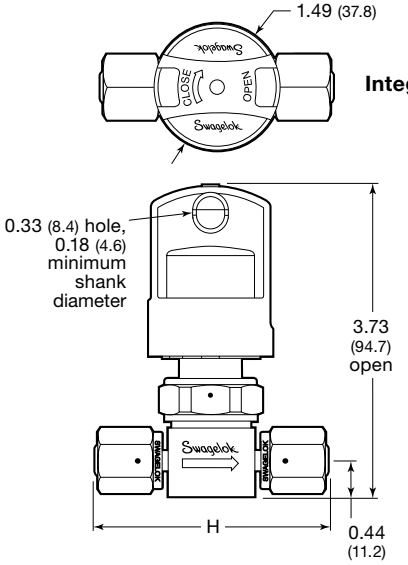


Tube Butt Weld Ends

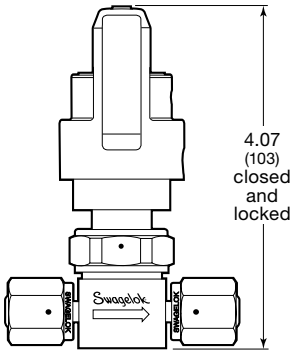
Toggle Handle



Rotatable Male VCR Fittings

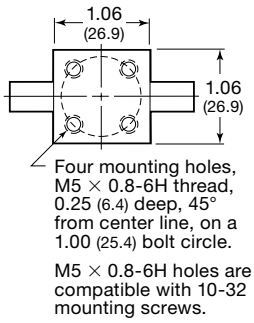


Integral Lockout Handle



Female VCR Fittings

Bottom



End Connection Inlet and Outlet	Basic Ordering Number①	H in. (mm)
1/4 in. tube butt weld 0.30 in. (7.6 mm) tube stub, 0.035 in. wall	6LVV-DPBW4-	1.74 (44.2)
1/4 in. tube butt weld 0.26 in. (6.6 mm) tube stub, 0.035 in. wall	6LVV-DPBW4S-	1.61 (40.9)
6 mm tube butt weld, 1 mm wall	6LVV-DPBW6M-	1.74 (44.2)
1/4 in. female VCR fitting	6LVV-DPFR4-	2.78 (70.6)
1/4 in. rotatable male VCR fitting	6LVV-DPMR4-	
1/4 in. integral male VCR fitting	6LVV-DPVR4-	2.30 (58.4)
1/4 in. Swagelok tube fitting	6LVV-DPS4-②	2.46 (62.5)
6 mm Swagelok tube fitting	6LVV-DPS6M-②	2.45 (62.2)

① Low-pressure valves have blue handles. For other colors, see **Options and Accessories—Handle Colors**, page 12.

② Not available with **P, P1,** or **P6** processing; omit process designator from ordering number.

To order, add a process designator, **P, P1,** or **P6** (see page 3), to the basic ordering number, then specify the actuator style as shown:

- For a **directional handle,** no additional designators are required.

  Example: 6LVV-DPBW4-P
- For an **integral lockout handle,** insert **L.**

  Example: 6LVV-DP**L**BW4-P
- For a **round handle,** insert **R.**

  Example: 6LVV-DP**R**BW4-P
- For a **toggle handle,** insert **T.**

  Example: 6LVV-DP**T**VR4-P
- For a **pneumatic actuator,** add **-C** for normally closed actuation or **-O** for normally open actuation.

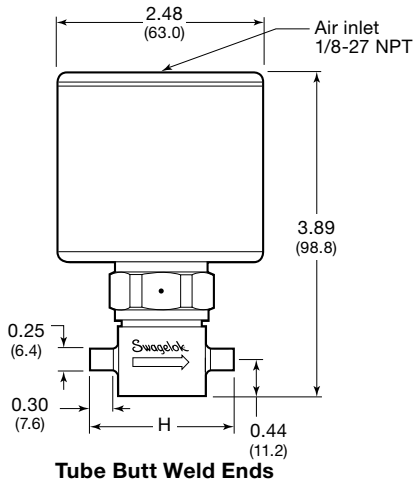
  Example: 6LVV-DPBW4-P**-C**

Ordering Information and Dimensions

Dimensions, in inches (millimeters), are for reference only and are subject to change.

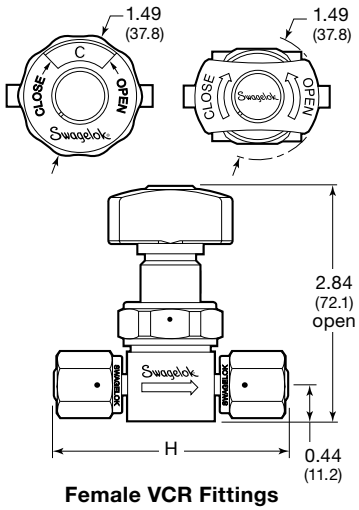
High-Pressure Valves

Pneumatic Actuator

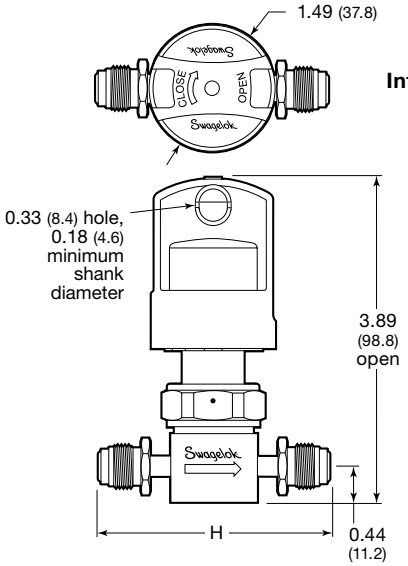


Tube Butt Weld Ends

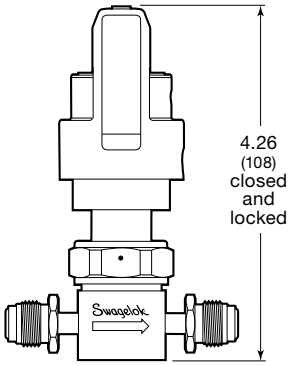
Round Handle **Directional Handle**



Female VCR Fittings

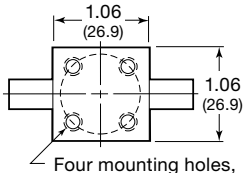


Integral Lockout Handle



Rotatable Male VCR Fittings

Bottom



Four mounting holes, M5 × 0.8-6H thread, 0.25 (6.4) deep, 45° from center line, on a 1.00 (25.4) bolt circle.

M5 × 0.8-6H holes are compatible with 10-32 mounting screws.

End Connection Inlet and Outlet	Basic Ordering Number①	H in. (mm)
1/4 in. tube butt weld 0.30 in. (7.6 mm) tube stub, 0.035 in. wall	6LVV-DPHBW4-	1.74 (44.2)
1/4 in. tube butt weld short 0.26 in. (6.6 mm) tube stub, 0.035 in. wall	6LVV-DPHBW4S-	1.61 (40.9)
6 mm tube butt weld, 1 mm wall	6LVV-DPHBW6M-	1.74 (44.2)
1/4 in. female VCR fitting	6LVV-DPHFR4-	2.78 (70.6)
1/4 in. rotatable male VCR fitting	6LVV-DPHMR4-	
1/4 in. integral male VCR fitting	6LVV-DPHVR4-	2.30 (58.4)
1/4 in. Swagelok tube fitting	6LVV-DPHS4-②	2.46 (62.5)
6 mm Swagelok tube fitting	6LVV-DPHS6M-②	2.45 (62.2)

① High-pressure valves have white handles. For other colors, see **Options and Accessories—Handle Colors,** page 12.

② Not available with **P, P1,** or **P6** processing; omit process designator from ordering number.

To order, add a process designator, **P, P1,** or **P6** (see page 3), to the basic ordering number, then specify the actuator style as shown:

- For a **directional handle,** no additional designators are required.

  Example: 6LVV-DPHBW4-P
- For an **integral lockout handle,** insert **L.**

  Example: 6LVV-DPH**L**BW4-P
- For a **round handle,** insert **R.**

  Example: 6LVV-DPH**R**BW4-P
- For a **pneumatic actuator,** add **-C** for normally closed actuation or **-O** for normally open actuation.

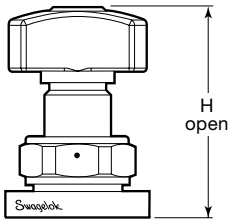
  Example: 6LVV-DPHBW4-P**-C**

Ordering Information and Dimensions

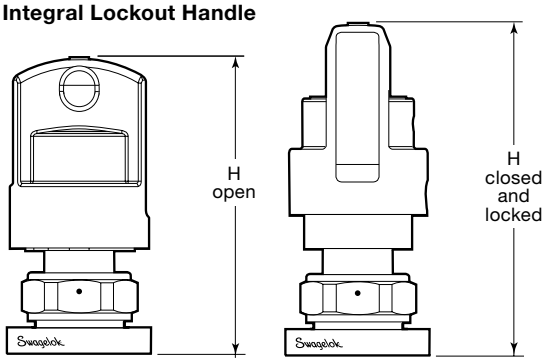
Dimensions, in inches (millimeters), are for reference only and are subject to change.

IGC II Modular Surface-Mount Valves

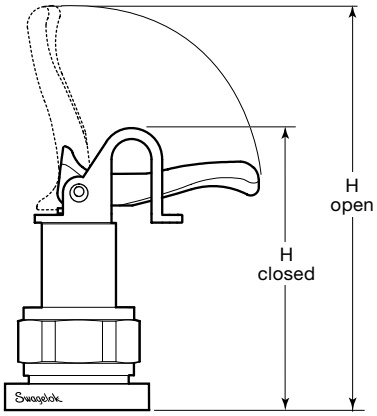
Directional and Round Handles



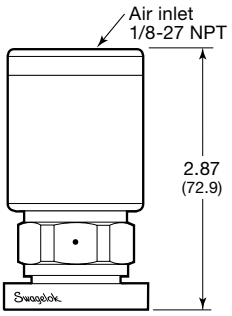
Integral Lockout Handle



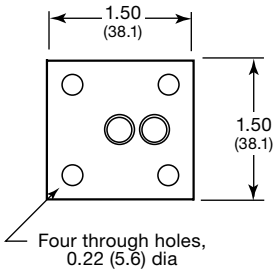
Toggle Handle



Pneumatic Actuator



Bottom



Dimensions

For other valve dimensions, see **Ordering Information and Dimensions** for low-pressure or high-pressure valves on pages 5 and 6.

Handle Type	Dimensions, in. (mm)			
	Low-Pressure		High-Pressure	
	H Open	H Closed	H Open	H Closed
Directional and round	2.36 (59.9)	2.34 (59.4)	2.36 (59.9)	2.34 (59.4)
Integral lockout	3.25 (82.6)	3.59① (91.2)	3.41 (86.6)	3.78① (96.0)
Toggle	2.83 (71.9)	4.04 (103)	—	

① Closed and locked position.

Low-Pressure Models

Actuation	Ordering Numbers	
	2 Port	3 Port
Directional handle	6LVV-MSM-DP-2-P	6LVV-MSM-DP-3-P
Integral lockout handle	6LVV-MSM-DPL-2-P	6LVV-MSM-DPL-3-P
Round handle	6LVV-MSM-DPR-2-P	6LVV-MSM-DPR-3-P
Toggle handle	6LVV-MSM-DPT-2-P	6LVV-MSM-DPT-3-P
Pneumatic, normally closed	6LVV-MSM-DP-2-P-C	6LVV-MSM-DP-3-P-C
Pneumatic, normally open	6LVV-MSM-DP-2-P-O	6LVV-MSM-DP-3-P-O

High-Pressure Models

Actuation	Ordering Numbers	
	2 Port	3 Port
Directional handle	6LVV-MSM-DPH-2-P	6LVV-MSM-DPH-3-P
Integral lockout handle	6LVV-MSM-DPHL-2-P	6LVV-MSM-DPHL-3-P
Round handle	6LVV-MSM-DPHR-2-P	6LVV-MSM-DPHR-3-P

Multiport and Elbow Valves

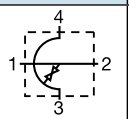
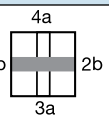
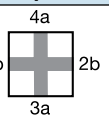
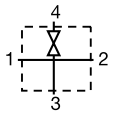
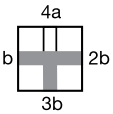
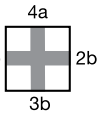
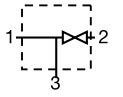
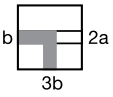
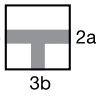
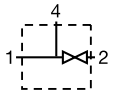
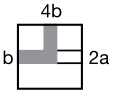
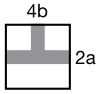
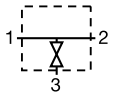
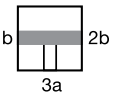
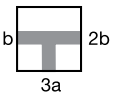
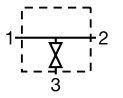
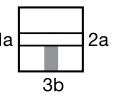
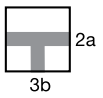
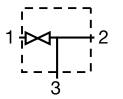
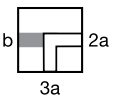
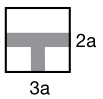
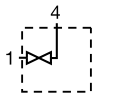
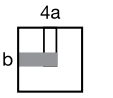
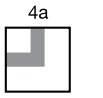
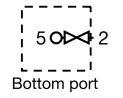
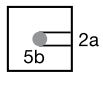
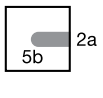
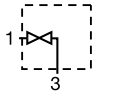
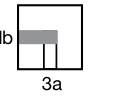
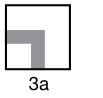
To customize a valve to meet your system requirements, select designators for:

- multiport or elbow flow path
- end connections for each port
- process specification
- actuator (manual or pneumatic)

Flow Path

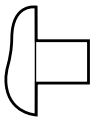
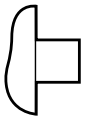
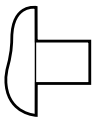
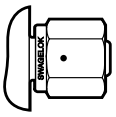
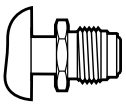
Select a flow path as viewed from the top of the valve. Insert the flow path designator in the valve ordering number, as shown on the next page.

- An **a** next to the port number in the Flow Path column indicates a port **above** the valve seat.
- A **b** next to the port number in the Flow Path column indicates a port **below** the valve seat.

Ports	Schematic	Flow Path		Designator
		Closed	Open	
4				D
				E
3				A
				B
				C
				F
				G
2				L
				N
				R

End Connections

Select an end connection for each port on the body in numerical order. Insert the end connection designator in the valve ordering number in the same sequence it is selected.

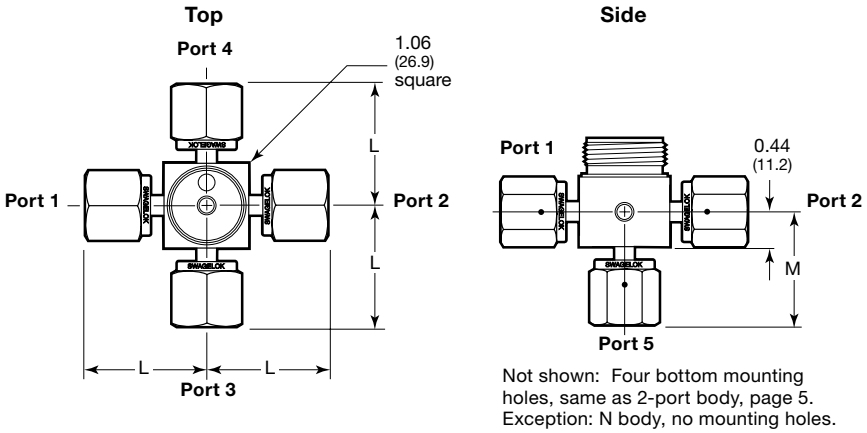
End Connection		Designator
1/4 in. tube butt weld, 0.30 in. (7.6 mm) tube stub, 0.035 in. wall		1
1/4 in. tube butt weld, 0.26 in. (6.6 mm) short tube stub, 0.035 in. wall		F
6 mm tube butt weld, 1 mm wall		4
1/4 in. female VCR fitting		3
1/4 in. rotatable male VCR fitting		2

Process Specification and Actuator

See **Process Specifications,** page 3, for process descriptions. See **Ordering Information,** next page, for selection details.

Dimensions

Dimensions, in inches (millimeters), are for reference only and are subject to change.



Not shown: Four bottom mounting holes, same as 2-port body, page 5. Exception: N body, no mounting holes.

End Connection	Dimensions, in. (mm)	
	L	M
1/4 in. tube butt weld, 0.30 in. (7.6 mm) tube stub, 0.035 in. wall	0.87 (22.1)	0.76 (19.3)
1/4 in. tube butt weld, 0.26 in. (6.6 mm) tube stub, 0.035 in. wall	0.81 (20.6)	0.70 (17.8)
6 mm tube butt weld, 1 mm wall	0.87 (22.1)	0.76 (19.3)
1/4 in. female VCR fitting	1.39 (35.3)	1.28 (32.5)
1/4 in. rotatable male VCR fitting	1.39 (35.3)	1.63 (41.4)

Ordering Information

Build a valve ordering number by combining the designators in the sequence shown.

6LVV – **DP C 1 1 3 P – C**

Material
316L VIM-VAR stainless steel

Series

Low-Pressure Diaphragm Valve
- **DP** = Pneumatic or directional handle
- **DPL** = Integral lockout handle
- **DPR** = Round handle
- **DPT** = Toggle handle

High-Pressure Diaphragm Valve
- **DPH** = Pneumatic or directional handle
- **DPHL** = Integral lockout handle
- **DPHR** = Round handle

Flow Path
See page 8.

End Connections
See page 8.
- **Port 1**
- **Port 2**
- **Port 3**
- **Port 4**
- **Port 5**

Actuation

Pneumatic
- **C** = Normally closed
- **O** = Normally open
- **CM** = Normally closed with indicator switch

Manual (Handle Color)
- **BK** = Black
- **BL** = Blue①
- **GR** = Green
- **OR** = Orange
- **RD** = Red
- **WH** = White①
- **YW** = Yellow

① No designator or final dash (–) is required for a blue handle on a low-pressure valve or a white handle on a high-pressure valve.

Process
- **P** = Swagelok *Ultrahigh-Purity Process Specification (SC-01)*
- **P1** = Swagelok *Special Cleaning and Packaging (SC-11)*
- **P6** = Swagelok *Photovoltaic Process Specification (SC-06)*

Example Ordering Numbers

Ordering Number	6LVV-DPR22P-RD	6LVV-DPHD1313P1-O	6LVV-DPLA323P6
Material	316L VIM-VAR stainless steel		
Series	Low-pressure, pneumatic or directional handle	High-pressure, pneumatic or directional handle	Low-pressure, integral lockout handle
Flow path	2-port, R pattern	4-port, D pattern	3-port, A pattern
Port 1 end connection	1/4 in. rotatable male VCR fitting	1/4 in. tube butt weld	1/4 in. female VCR fitting
Port 2 end connection	—	1/4 in. female VCR fitting	1/4 in. rotatable male VCR fitting
Port 3 end connection	1/4 in. rotatable male VCR fitting	1/4 in. tube butt weld	1/4 in. female VCR fitting
Port 4 end connection	—	1/4 in. female VCR fitting	—
Process	Swagelok *Ultrahigh-Purity Process Specification (SC-01)*	Swagelok *Special Cleaning and Packaging (SC-11)*	Swagelok *Photovoltaic Process Specification (SC-06)*
Actuator	Red directional handle	Normally open	Blue integral lockout handle

Multivalve Manifolds

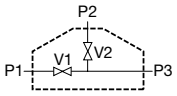
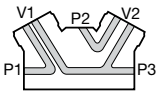
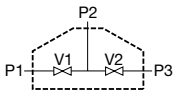
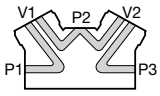
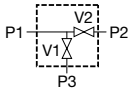
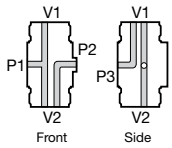
To customize a multivalve manifold to meet your system requirements, select designators for:

- flow path
- end connections for each port
- process
- actuator (manual or pneumatic).

Flow Path

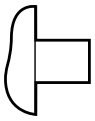
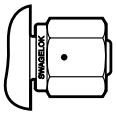
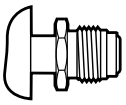
Select a flow path. Insert the flow path designator in the manifold ordering number, as shown on the next page.

- P1, P2, and P3 designate port numbers.
- V1 and V2 designate valve numbers.

Manifold	Schematic	Flow Path	Designator
2-valve, 3-port monoblock			1V
			2V
2-valve, 3-port double pattern			1D

End Connections

Select an end connection for each port on the body in numerical order. Place the end connection designator in the valve ordering number in the same sequence it is selected.

End Connection		Designator
1/4 in. tube butt weld, 0.30 in. (7.6 mm) tube stub, 0.035 in. wall		3
1/4 in. female VCR fitting		2
1/4 in. rotatable male VCR fitting		1

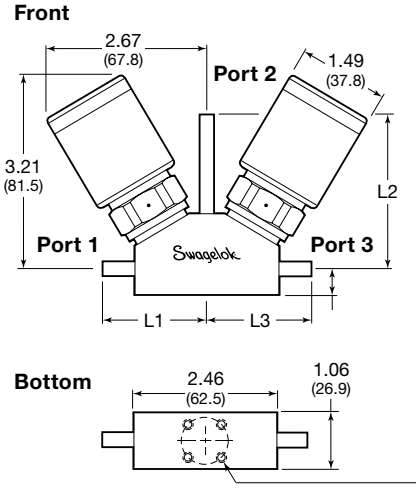
Process Specification and Actuator

See **Process Specifications,** page 3, for process descriptions. See **Ordering Information,** next page, for selection details.

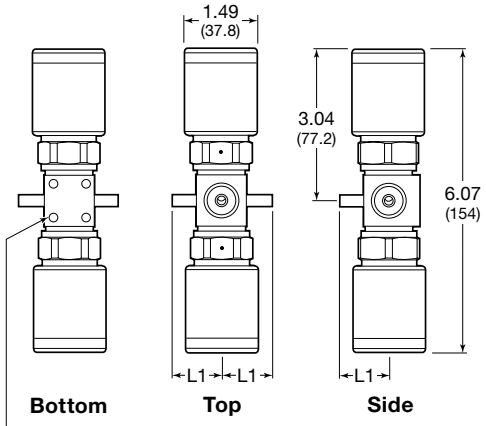
Dimensions

Dimensions, in inches (millimeters), are for reference only and are subject to change.

1V and 2V Multivalve Manifolds



1D Multivalve Manifold



Four bottom mounting holes, M5 × 0.8-6H thread, 0.25 (6.4) deep, located 45° from center line, on a 1.00 (25.4) bolt circle.
M5 × 0.8-6H holes are compatible with 10-32 mounting screws.

End Connection	Dimensions, in. (mm)			
	2-Valve, 3-Port Monoblock			2-Valve, 3-Port Double Pattern
	L1	L2	L3	L1
1/4 in. tube butt weld, 0.30 in. (7.6 mm) tube stub, 0.035 in. wall	1.81 (46.0)	2.79① (70.9) 4.04② (103)	1.81 (46.0)	0.87 (22.1)
1/4 in. female VCR fitting	2.03 (51.6)	2.66① (67.6) 3.91② (99.3)	2.03 (51.6)	1.39 (35.3)
1/4 in. rotatable male VCR fitting	2.39 (60.7)	3.35① (85.1) 4.60② (117)	2.39 (60.7)	

① Low-pressure manifold.
② High-pressure manifold.

Ordering Information

Build a multivalve manifold ordering number by combining the designators in the sequence shown below.

6LVV – **PH 1V 3 3 3 P1 – A B**

Material
316L VIM-VAR stainless steel

Series

Low-Pressure Diaphragm Valve
P = Pneumatic or directional handle
PL = Integral lockout handle
PR = Round handle
PT = Toggle handle

High-Pressure Diaphragm Valve
PH = Pneumatic or directional handle
PHL = Integral lockout handle
PHR = Round handle

Flow Path
1V = 2-valve, 3-port monoblock
2V = 2-valve, 3-port monoblock
1D = 2-valve, 3-port double pattern

End Connections
Select a designator for each port on the valve. See page 10.
Port 1
Port 2
Port 3

Process
P = Swagelok *Ultrahigh-Purity Process Specification (SC-01)*
P1 = Swagelok *Special Cleaning and Packaging (SC-11)*
P6 = Swagelok *Photovoltaic Process Specification (SC-06)*

Actuation
Add a designator for each valve.

Pneumatic
A = Normally closed
B = Normally open
C = Normally closed with indicator switch

Manual (Handle Color)
T = Black
U = Blue
S = Green
V = Orange
W= Red
X = White
Y = Yellow

Example Ordering Numbers

Ordering Number	6LVV-P2V323P1-AB	6LVV-PHL1D212P-SW	6LVV-PT1V333P6-UU
Material	316L VIM-VAR stainless steel		
Series	Low-pressure, pneumatic or directional handle	High-pressure, integral lockout handle	Low-pressure, toggle handle
Flow path	2 valve, 3-port monoblock, 2V	2 valve, 3-port double pattern, 1D	2 valve, 3-port monoblock, 1V
Port 1 end connection	1/4 in. tube butt weld	1/4 in. female VCR fitting	1/4 in. tube butt weld
Port 2 end connection	1/4 in. female VCR fitting	1/4 in. rotatable male VCR fitting	1/4 in. tube butt weld
Port 3 end connection	1/4 in. tube butt weld	1/4 in. female VCR fitting	1/4 in. tube butt weld
Process	Swagelok *Special Cleaning and Packaging (SC-11)*	Swagelok *Ultrahigh-Purity Process Specification (SC-01)*	Swagelok *Photovoltaic Process Specification (SC-06)*
Valve 1 actuator	Normally closed	Green integral lockout handle	Blue toggle handle
Valve 2 actuator	Normally open	Red integral lockout handle	Blue toggle handle

Options and Accessories

Handle Colors (excluding multivalve manifolds)

Seven handle colors are available for color coding of process lines.

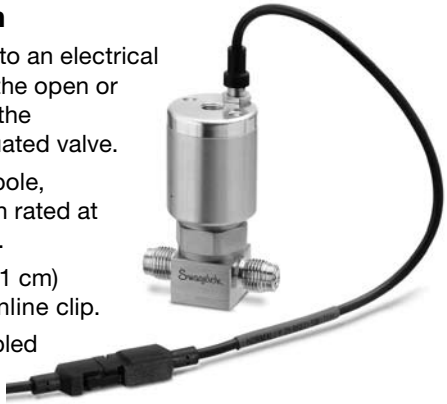
Select a basic kit ordering number and add a color designator.

Handle Kit	Basic Ordering Number
Directional	NY-5K-DP-
Integral lockout	NY-5K-DPL-
Round handle replacement	PY-5QK-DPR-
Round handle retrofit	PY-5K-DPR-

Color	Designator
Black	BK
Blue	BL
Green	GR
Orange	OR
Red	RD
White	WH
Yellow	YW

Example: **NY-5K-DP-RD** for a red directional handle kit.

Indicator Switch



- Transmits a signal to an electrical device, indicating the open or closed position of the pneumatically actuated valve.
- Features a single-pole, single-throw switch rated at 1/2 A for 115 V (ac).
- Includes a 24 in. (61 cm) wire lead with an inline clip.
- Is available assembled on any normally closed and high-pressure, normally open, pneumatically actuated DP series valve, or as a kit for field assembly.

Factory-Assembled Indicator Switches

To order a valve with an indicator switch, add **M** for a normally open switch or **M-2** for a normally closed switch to the valve ordering number.

Examples: 6LVV-DPFR4-P-C**M**
6LVV-DPHBW4-P-C**M-2**

Indicator Switch Kits

To order a kit for an existing valve, use ordering number **MS-ISK-DP-CM** for a normally open switch or **MS-ISK-DP-CM-2** for a normally closed switch.

Kits include actuator and switch.

Safe Product Selection
When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Caution: Do not mix or interchange parts with those of other manufacturers.

High-Temperature Seat Material—Polyimide

- Temperature rating is from 50 to 300°F (10 to 150°C).
- Fluorocarbon FKM O-rings in pneumatic actuator are included.
- All other materials and ratings remain the same.

To order, insert **V** in the valve ordering number.

Examples: 6LVV-DP**V**C111P-C
6LVV-DPH**V**BW4P-C

Maintenance Kits

Diaphragm Replacement Kits

- Include two diaphragms and replacement instructions.
- Are available for high- or low-pressure valves.

Ordering number: **E-3DK-DP**

Actuator Replacement Kits

Include actuator and service instructions.

Select a kit ordering number:

Actuator Replacement Kit	Ordering Numbers	
	Low-Pressure	High-Pressure
Directional handle	NY-DP-K1-BL	NY-DPH-K1-WH
Integral lockout handle	NY-DPL-K1-BL	NY-DPHL-K1-WH
Round handle	PY-DPR-K1-BL	PY-DPHR-K1-WH
Toggle handle	SS-DPT-K1-BL	—
Pneumatic normally closed	A-DP-K1-C	A-DPH-K1-C
Pneumatic normally open	A-DP-K1-O	A-DPH-K1-O
High-temperature pneumatic normally closed	A-DPV-K1-C	A-DPHV-K1-C
High-temperature pneumatic normally open	A-DPV-K1-O	A-DPHV-K1-O

⚠ **Do not interchange high- and low-pressure actuators.**

Oxygen Service Hazards

For more information about hazards and risks of oxygen-enriched systems, see the Swagelok *Oxygen System Safety* technical report, MS-06-13.

Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit swagelok.com or contact your authorized Swagelok representative.

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