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Bellows-Sealed Valves



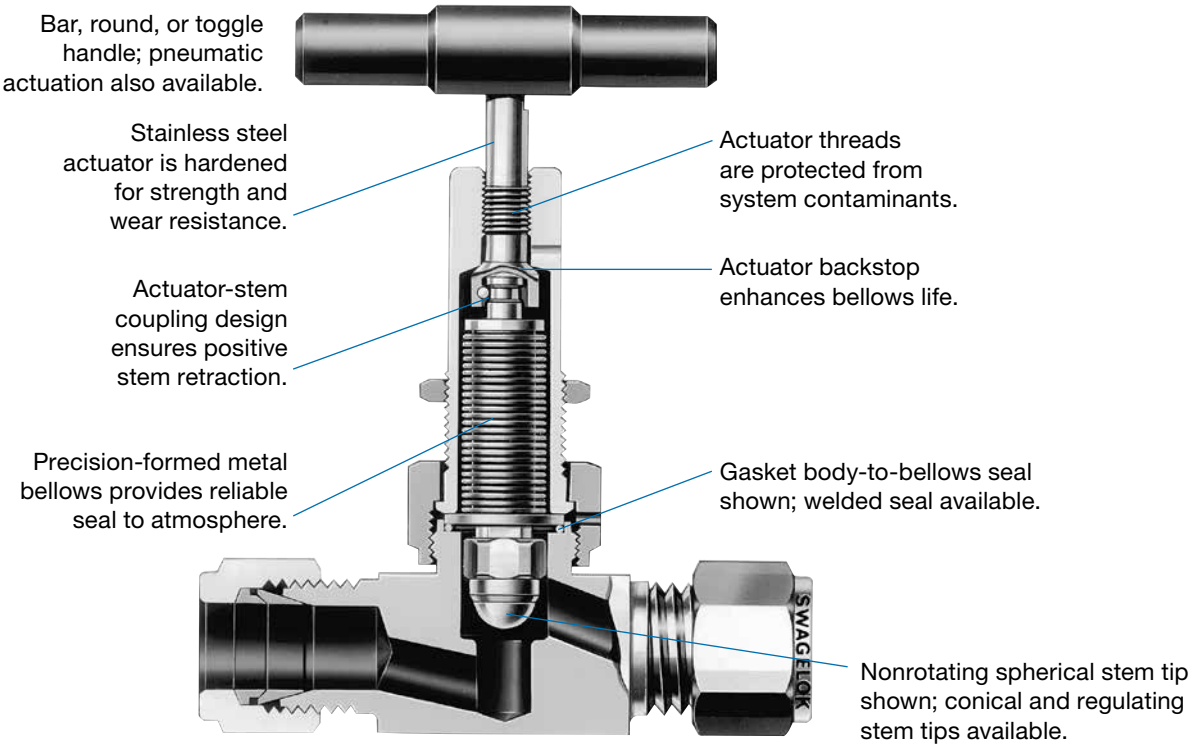
B Series

- Working pressures up to 1000 psig (68.9 bar)
- Temperatures up to 900°F (482°C)
- 1/4, 3/8, 1/2, and 3/4 in.; 6, 10, and 12 mm end connections
- Brass, stainless steel, and alloy 400 materials

Swagelok

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Features

Swagelok® B series bellows-sealed valves are available in a variety of models for system versatility.

- Gasketed or welded body-to-bellows seals
- Stem tips for shutoff or regulating service
- Flow coefficients (C_v) from 0.12 to 1.2
- Variety of end connections:
  - Swagelok tube fittings—1/4 to 1/2 in. and 6 to 12 mm
  - Tube socket weld ends—1/4 to 1/2 in.
  - Tube butt weld ends—1/4 to 3/4 in.
  - Female VCR® face seal fittings—1/4 and 1/2 in.
  - Integral male VCR face seal fittings—1/4 and 1/2 in.
- Panel and bottom mounting

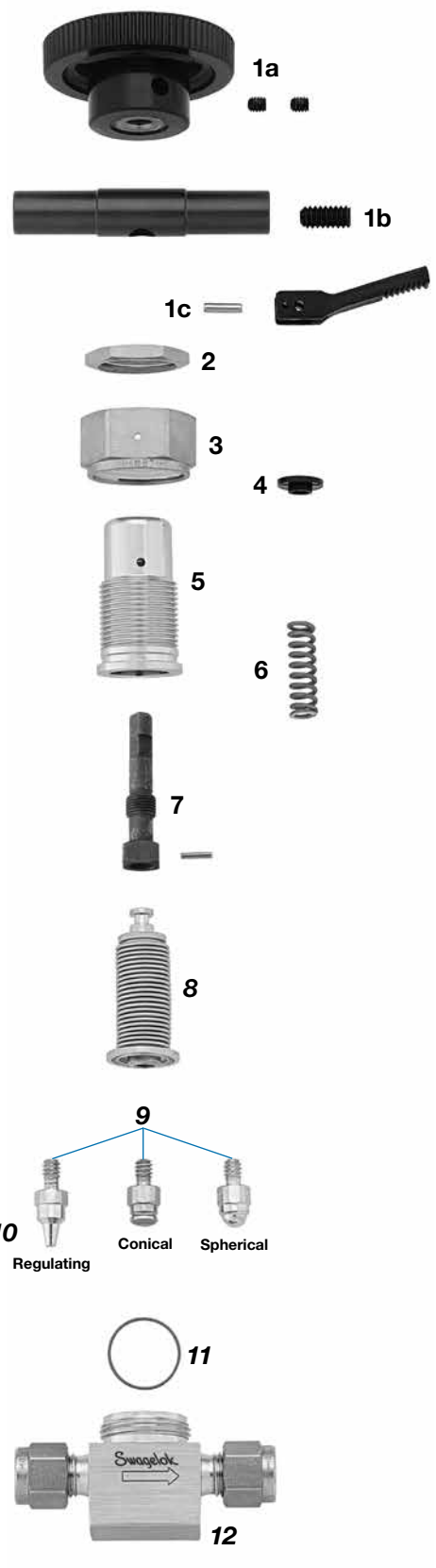
Technical Data

Body-to-Bellows Seal	Valve Body Materials	Stem Tip	Handle Type	C_v①	Internal Volume① in.³ (cm³)	Series②
Gasket	Brass, 316 SS, alloy 400	Metal (regulating)	Round	0.20	0.16 (2.6)	4BRG
		PCTFE (conical)		0.36	0.10 (1.6)	4BK
			Bar	1.0	0.24 (3.9)	6BK
				1.2	0.26 (4.3)	8BK
			Toggle	0.36	0.11 (1.8)	4BKT
		Metal (spherical in brass and 316 SS; conical in alloy 400)	Round	0.36	0.10 (1.6)	4BG
			Bar	1.0	0.24 (3.9)	6BG
				1.2	0.26 (4.3)	8BG
Weld	316 SS, alloy 400	Metal (regulating)	Round	0.12	0.16 (2.6)	4BRW
		Metal (spherical in 316 SS; conical in alloy 400)		0.33	0.10 (1.6)	4BW
			Bar	1.0	0.24 (3.9)	6BW
				1.1	0.26 (4.3)	8BW

① Determined using valves with Swagelok tube fitting end connections.

② **R** designates regulating stem tip; **G** designates gasket body-to-bellows seal; **K** designates PCTFE stem tip (conical); **T** designates toggle handle; **W** designates welded body-to-bellows seal.

Materials of Construction



Component		Series	Valve Body Materials		
			Brass①	316 SS	Alloy 400
			Material Grade/ASTM Specification		
1a	Handle	4BG, 4BRG, 4BK, 4BW, 4BRW	Green phenolic		
	Set screws		Alloy steel/ANSI 18.3		
1b	Handle	6BG, 8BG, 6BK, 8BK, 6BW, 8BW	Green anodized aluminum 2024-T4/B211		
	Set screw		Alloy steel/ANSI 18.3		
1c	Handle	4BKT	Black nylon		
	Handle pin		302 SS		
2	Panel mount nut	All	Brass/B16	316 SS/B783	
3	Bonnet nut	All except 4BKT	Brass/B16	Silver-plated 316 SS/A479	
		4BKT	Silver-plated brass/B16		
4	Washer	4BKT	Nylon		
5	Bonnet	All	Brass/B16	316 SS/A479	
6	Spring	4BKT	S17700/AMS 5678		
7	Actuator	All except 4BKT	416 SS/A582		
		4BKT	303 SS/A582		
	Actuator pin	All	420 SS		
8	*Stem*	*All*	*316 SS/A479*		*Alloy 400/B164*
	Bellows	*All*	*321 SS/A269*		*Alloy 400/B165*
	Weld ring	*All*	*316 SS/A479*		*Alloy 400/B164*
9	*Stem adapter*	*All*	*316 SS/A479*		*Alloy 400/B164*
10	*Stem tip*	*4BRG, 4BRW*	*Chrome-plated 316 SS/A479 (regulating)*		*Alloy K-500/AMS 4676 (regulating)*
		4BK, 6BK, 8BK, 4BKT	*PCTFE/D1430 (conical)*		
		4BG, 6BG, 8BG, 4BW, 6BW, 8BW	*Cobalt-based alloy (spherical)*		*Alloy K-500/AMS 4676 (conical)*
11	*Gasket*	*4BG, 6BG, 8BG, 4BRG*	*Silver-plated 316 SS/A580*		*Silver-plated alloy 400/AMS 4730*
		4BK, 6BK, 8BK, 4BKT	*PTFE-coated 316 SS/A580*		*PTFE-coated alloy 400/AMS 4730*
12	*Body*	*All*	*Brass/B16*	*316 SS/A479*	*Alloy 400/B164*
	Wetted lubricant	*4BG, 6BG, 8BG, 4BW, 6BW, 8BW*	*Fluorinated-based (spherical stem tip, pneumatically actuated valves)*		—
	Nonwetted lubricant	All	Molybdenum disulfide-based		

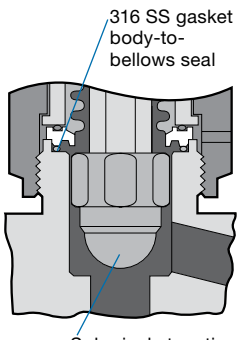
Wetted components listed in *italics*.

Additional stem tip options available. See **Options,** page 10.

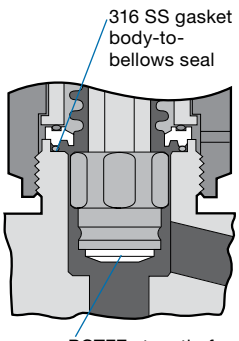
① Valves with welded body-to-bellows seal (4BRW, 4BW, 6BW, 8BW) not available in brass.

Gasket Seal

BG Series

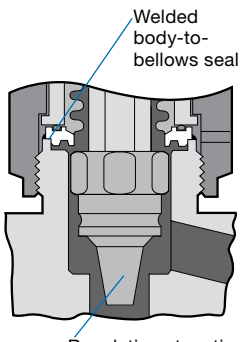


BK Series



Welded Seal

BW Series



Pressure-Temperature Ratings

BG, BRG, BW, and BRW Series

G designates gasket body-to-bellows seal; **R** designates regulating stem tip; **W** designates welded body-to-bellows seal.

BRW series valves are not recommended for shutoff above 600°F (315°C).

Ratings apply to manual valves and to valves with 5 series pneumatic actuators. For actuator ratings, see page 8.

Material	Brass①		316 SS		Alloy 400
Series	BG	BRG	BW	BRW, BG, BRG	BW, BRW, BG, BRG
Temperature, °F (°C)	Working Pressure, psig (bar)				
–20 (–28) to 100 (37)	1000 (68.9)	450 (31.0)	1000 (68.9)	1000 (68.9)	700 (48.2)
200 (93)	710 (48.9)	350 (24.1)	830 (57.1)	830 (57.1)	610 (42.0)
300 (148)	430 (29.6)	250 (17.2)	660 (45.4)	660 (45.4)	530 (36.5)
400 (204)	150 (10.3)	150 (10.3)	500 (34.4)	500 (34.4)	450 (31.0)
500 (260)	—	—	450 (31.0)	450 (31.0)	375 (25.8)
600 (315)	—	—	400 (27.5)	400 (27.5)	—
650 (343)	—	—	360 (24.8)	—	—
700 (371)	—	—	330 (22.7)	—	—
750 (398)	—	—	300 (20.6)	—	—
800 (426)	—	—	260 (17.9)	—	—
850 (454)	—	—	230 (15.8)	—	—
900 (482)	—	—	200 (13.7)	—	—

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok *Tubing Data,* MS-01-107.

① Due to the brass bonnet threads, cycle life of brass valves may be reduced when operated frequently at pressures above 450 psig (31.0 bar). Brass valves only available with manual or 1 series pneumatic actuators.

Handle Temperature Gradient

316 SS Valves

When Valve Seat Is	Valve Handle Is
600°F (315°C)	195°F (90°C)
900°F (482°C)	275°F (135°C)

BK Series

K designates PCTFE stem tip.

Ratings apply to manual valves and to valves with 1 series or 5 series pneumatic actuators. For actuator ratings, see page 8.

Actuation Mode	Manual and 5 Series Pneumatic Actuators			1 Series Pneumatic Actuators		
				Normally Closed	Normally Open	Double Acting
Material	Brass①	316 SS	Alloy 400	Brass,① 316 SS, Alloy 400		
Temperature, °F (°C)	Working Pressure, psig (bar)					
–20 (–28) to 100 (37)	1000 (68.9)	1000 (68.9)	700 (48.2)	125 (8.6)	500 (34.4)	700 (48.2)
200 (93)	710 (48.9)	830 (57.1)	610 (42.0)	125 (8.6)	500 (34.4)	700 (48.2)②

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok *Tubing Data,* MS-01-107.

① Due to the brass bonnet threads, cycle life of brass valves may be reduced when operated frequently at pressures above 450 psig (31.0 bar). Brass valves only available with manual or 1 series pneumatic actuators.

② 610 psig (42.0 bar) for alloy 400 valves with double-acting pneumatic actuators.

BKT Series

K designates PCTFE stem tip; **T** designates toggle handle.

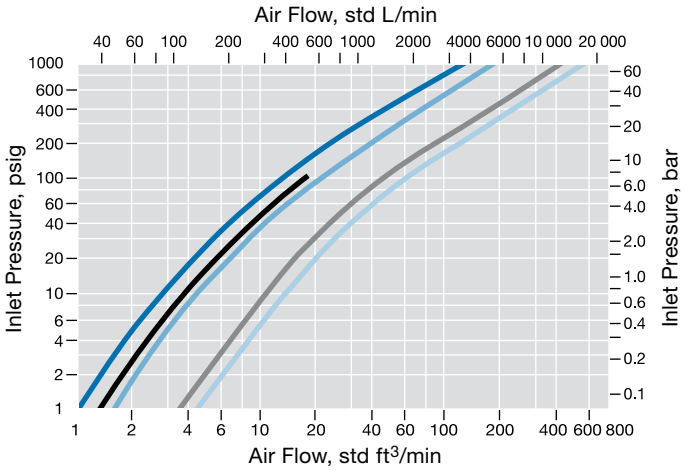
100 psig (6.8 bar) at –20 to 200°F (–28 to 93°C).

Flow Data at 70°F (20°C)

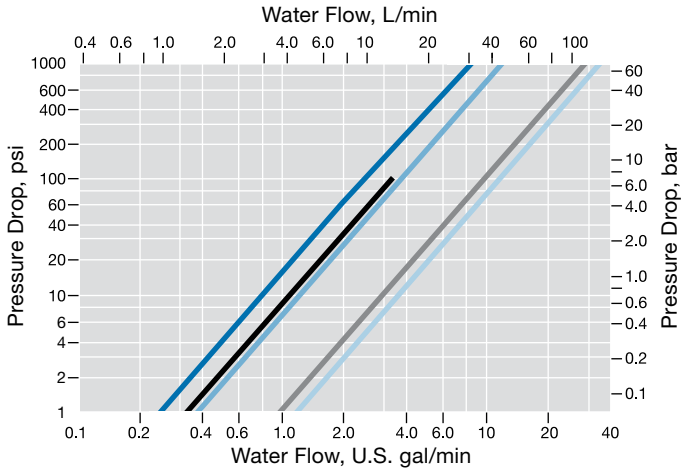
R designates regulating stem tip; **G** designates gasket body-to-bellows seal; **W** designates welded body-to-bellows seal; **K** designates PCTFE stem tip; **T** designates toggle handle.



Air



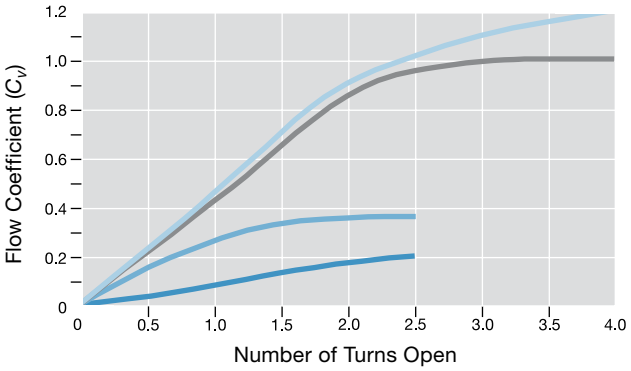
Water



Flow Coefficient at Turns Open

Maximum number of turns open for valves with welded body-to-bellows seal:

- 4BRW, 4BW—1.5 turns
- 6BW, 8BW—3 turns



Testing

Every B series valve is factory tested with helium for 5 s to a maximum leak rate of 4×10^{-9} std cm³/s at the seat, envelope, and all seals.

Cleaning and Packaging

Swagelok B series valves with VCR end connections and all BK series valves are processed in accordance with Swagelok *Special Cleaning and Packaging (SC-11),* MS-06-63, to ensure compliance with product cleanliness requirements stated in ASTM G93 Level C.

Swagelok B series valves with other end connections are processed in accordance with Swagelok *Standard Cleaning and Packaging (SC-10),* MS-06-62; special cleaning and packaging are available as an option.

Ordering Information and Dimensions

Stainless Steel Valves

Select an ordering number.

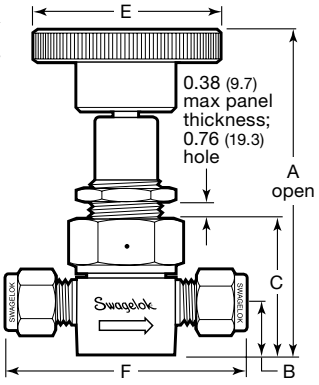
Brass and Alloy 400 Valves

Replace **SS** with **B** for brass or **M** for alloy 400.

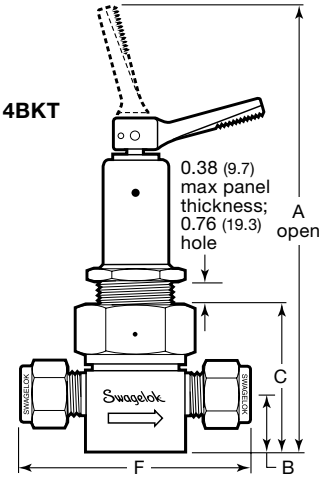
Example: **B**-4BG

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

4BG, 4BK
4BW, 4BRG
4BRW



4BKT

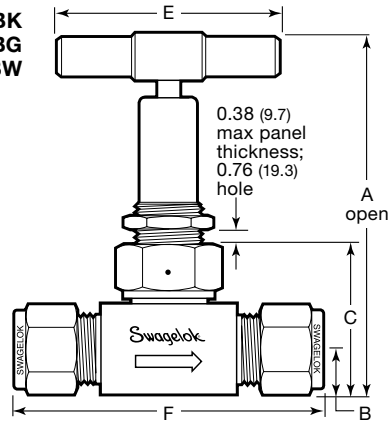


End Connections		Ordering Number	Series	Dimensions, in. (mm)										
Type	Size			Orifice	A	B	C	D	E	F	G	H	J	K
Fractional Swagelok tube fitting	1/4 in.	SS-4BG	4BG	0.16 (4.1)	3.64 (92.5)	0.56 (14.2)	1.45 (36.8)	1.00 (25.4)	1.88 (47.8)	2.46 (62.5)	1.06 (26.9)	1.00 (25.4)	—	—
		SS-4BK	4BK											
		SS-4BW	4BW											
		SS-4BRG	4BRG		4.18 (106)									
		SS-4BRW	4BRW											
		SS-4BKT	4BKT		4.50 (114)				—					
	3/8 in.	SS-6BG	6BG	0.26 (6.6) port	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	3.09 (78.5)	1.57 (39.9)	1.13 (28.7)		
		SS-6BK	6BK											
		SS-6BW	6BW											
	1/2 in.	SS-8BG	8BG	0.30 (7.6)	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	3.30 (83.8)	1.57 (39.9)	1.13 (28.7)		
		SS-8BK	8BK											
		SS-8BW	8BW											
Metric Swagelok tube fitting	6 mm	SS-6BG-MM	4BG	0.16 (4.1)	3.64 (92.5)	0.56 (14.2)	1.45 (36.8)	1.00 (25.4)	1.88 (47.8)	2.46 (62.5)	1.06 (26.9)	1.00 (25.4)	—	—
		SS-6BK-MM	4BK											
		SS-6BW-MM	4BW											
		SS-6BKT-MM	4BKT		4.50 (114)				—					
	10 mm	SS-10BG-MM	6BG	0.28 (7.1) port	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	3.11 (79.0)	1.57 (39.9)	1.13 (28.7)		
		SS-10BK-MM	6BK											
		SS-10BW-MM	6BW											
	12 mm	SS-12BG-MM	8BG	0.30 (7.6)	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	3.30 (83.8)	1.57 (39.9)	1.13 (28.7)		
		SS-12BK-MM	8BK											
		SS-12BW-MM	8BW											
Tube butt weld	1/4 in.	SS-4BG-BW4	4BG	0.10 (2.5)	3.64 (92.5)	0.56 (14.2)	1.45 (36.8)	1.00 (25.4)	1.88 (47.8)	1.68 (42.7)	1.00 (25.4)		0.25 (6.4)	—
		SS-4BK-BW4	4BK											
		SS-4BW-BW4	4BW											
		SS-4BKT-BW4	4BKT		4.50 (114)				—					
	3/8 in.	SS-6BG-BW6	6BG	0.19 (4.8)	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	2.18 (55.4)	1.50 (38.1)	1.13 (28.7)	0.38 (9.7)	
		SS-6BK-BW6	6BK											
		SS-6BW-BW6	6BW											
	1/2 in.	SS-8BG-BW8	8BG	0.26 (6.6)	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	2.18 (55.4)	1.50 (38.1)	1.13 (28.7)	0.50 (12.7)	
		SS-8BK-BW8	8BK											
		SS-8BW-BW8	8BW											

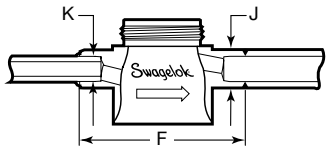
Dimensions shown with Swagelok tube fitting nuts finger-tight.
J = tube butt weld diameter; **K** = tube socket weld diameter.

Ordering Information and Dimensions

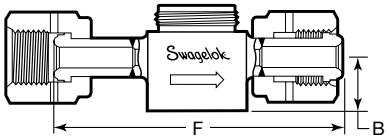
6BG, 6BK
6BW, 8BG
8BK, 8BW



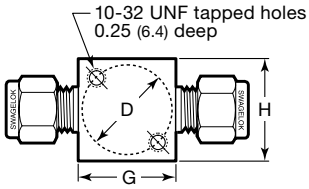
Tube Socket Weld and Tube Butt Weld Ends



Butt Welded Female VCR Fitting Ends



Bottom



End Connections		Ordering Number	Series	Dimensions, in. (mm)										
Type	Size			Orifice	A	B	C	D	E	F	G	H	J	K
Tube socket weld and tube butt weld	1/4 and 3/8 in.	SS-4BG-TW	4BG	0.16 (4.1)	3.64 (92.5)	0.56 (14.2)	1.45 (36.8)	1.00 (25.4)	1.88 (47.8)	1.68 (42.7)	1.00 (25.4)		0.38 (9.7)	0.25 (6.4)
		SS-4BK-TW	4BK											
		SS-4BW-TW	4BW											
		SS-4BRG-TW	4BRG		4.18 (106)									
		SS-4BRW-TW	4BRW											
	3/8 and 1/2 in.	SS-6BG-TW	6BG	0.28 (7.1) port	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	2.27 (57.7)	1.51 (38.4)	1.13 (28.7)	0.50 (12.7)	0.38 (9.7)
		SS-6BK-TW	6BK											
		SS-6BW-TW	6BW											
	1/2 and 3/4 in.	SS-8BG-TW	8BG	0.30 (7.6)	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	2.27 (57.7)	1.50 (38.1)	1.13 (28.7)	0.75 (19.1)	0.50 (12.7)
		SS-8BK-TW	8BK											
		SS-8BW-TW	8BW											
Butt welded female VCR fitting	1/4 in.	SS-4BG-V51	4BG	0.16 (4.1)	3.64 (92.5)	0.56 (14.2)	1.45 (36.8)	1.00 (25.4)	1.88 (47.8)	2.76 (70.1)	1.00 (25.4)		—	—
		SS-4BK-V51	4BK											
		SS-4BW-V51	4BW											
	1/2 in.	SS-6BG-V19	6BG	0.30 (7.6)	4.19 (106)	0.50 (12.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	5.19 (132)	1.51 (38.4)	1.13 (28.7)		
		SS-6BK-V19	6BK											
		SS-6BW-V19	6BW											
		SS-8BK-V19①	8BK							4.49 (114)	1.50 (38.1)			
		SS-8BG-V47	8BG			0.57 (14.5)				3.12 (79.2)	1.25 (31.8)			
		SS-8BK-V47	8BK											
		SS-8BW-V47	8BW											
Integral male VCR fitting	1/4 in.	SS-4BK-VCR	4BK	0.16 (4.1)	3.64 (92.5)	0.44 (11.2)	1.45 (36.8)	1.00 (25.4)	1.88 (47.8)	2.24 (56.9)	1.00 (25.4)		—	—
	1/2 in.	SS-8BG-VCR SS-8BK-VCR	8BK	0.29 (7.4) port	4.19 (106)	0.46 (11.7)	1.57 (39.9)	1.13 (28.7)	2.50 (63.5)	3.00 (76.2)	1.50 (38.1)	1.13 (28.7)		

J = tube butt weld diameter; **K** = tube socket weld diameter.

① End connections are socket welded.

Pneumatic Actuators

Features

- Reliable piston design for enhanced cycle life
- Low actuation pressures
- Aluminum and stainless steel components



1 Series

5 Series

Actuator Series

- 1 series actuator for BK series valves with brass, stainless steel, and alloy 400 bodies
- 5 series actuator for BG, BK, and BW series valves with stainless steel and alloy 400 bodies—not for valves with brass bodies

Actuation Modes

Normally closed—air opens, spring closes

Normally open—air closes, spring opens

Double acting—air opens and closes

Materials of Construction

Component	Actuator Series	
	1	5
	Material	
Housing	Aluminum	Cast aluminum
External hardware	Stainless steel	
O-rings	Fluorocarbon FKM	

Technical Data

Valve Series	Valve C_v ①	Actuator Series	Pressure Rating psig (bar)	Temperature Rating °F (°C)	Air Displacement in.³ (cm³)	Weight lb (kg)
4BK	0.30	1	40 to 150 (2.7 to 10.3)	–10 to 300 (–23 to 148)	0.068 (1.11)	N/A
6BK	0.86					
8BK	0.96					
4BK, 4BG	0.36	5	50 to 150 (3.4 to 10.3)		0.83 (13.6)	C—6.7 (3.0) O—4.6 (2.1) D—4.5 (2.0)
4BW	0.33					
6BK, 6BG, 6BW	1.0					
8BK, 8BG	1.2					
8BW	1.1					

① Determined using valves with Swagelok tube fitting end connections.

Ordering Information

Actuators with Stainless Steel Valves

Add an actuator series designator, then an actuation mode designator to the valve ordering number.

Example: SS-4BG-**5C**

Actuator Series	Designator	Actuation Mode	Designator
1	-1	Normally closed	C
		Normally open	O
5	-5	Double acting	D

Actuators with Alloy 400 or Brass Valves

Replace **SS** with **M** for alloy 400 or **B** for brass.

Example: **M**-4BG-5C

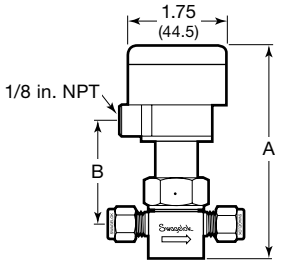
5 series actuators cannot be used with brass valves.

Pneumatic Actuators

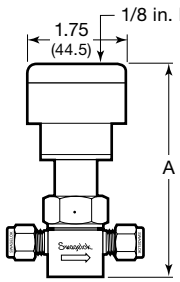
Dimensions

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

1 Series

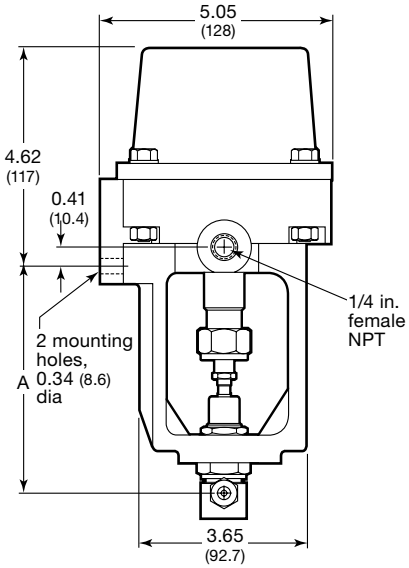


Normally Closed and Double Acting

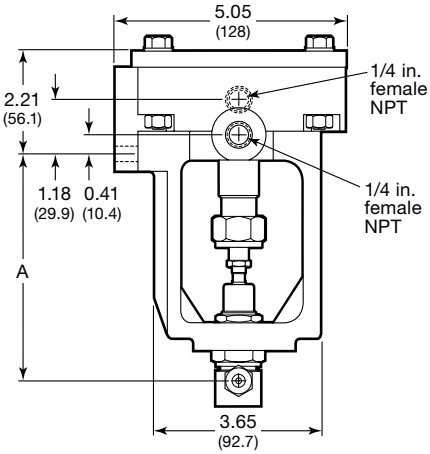


Normally Open

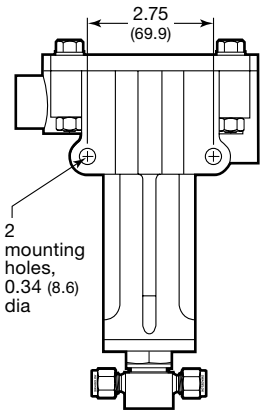
5 Series



Normally Closed, Side



Normally Open and Double Acting, Side



Normally Open and Double Acting, Back

1 Series

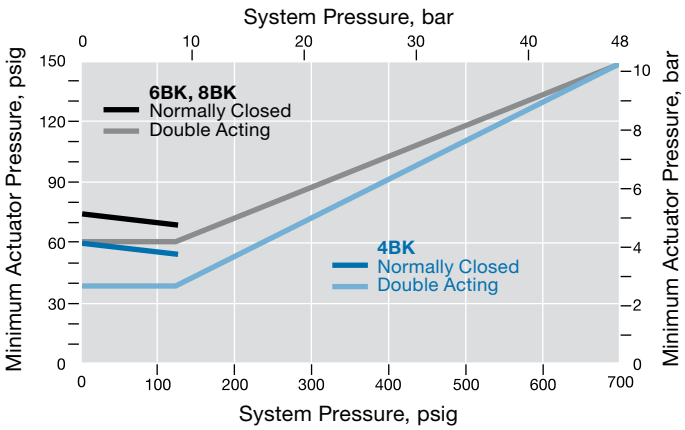
Valve Series	Dimensions, in. (mm)	
	A	B
4BK	3.65 (92.7)	1.72 (43.7)
6BK, 8BK	3.76 (95.5)	1.90 (48.3)

5 Series

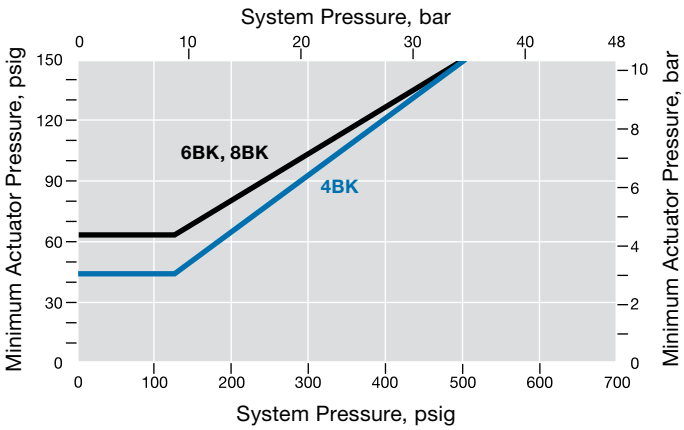
Valve Series	A in. (mm)
4BG, 4BK, 4BW	4.87 (124)
6BG, 6BK, 6BW, 8BG, 8BK, 8BW	5.05 (128)

Pneumatic Actuator Performance

1 Series Normally Closed and Double Acting



1 Series Normally Open



5 Series

The minimum actuation pressure for normally closed, normally open, and double-acting actuators is 50 psig (3.5 bar).

Options and Accessories

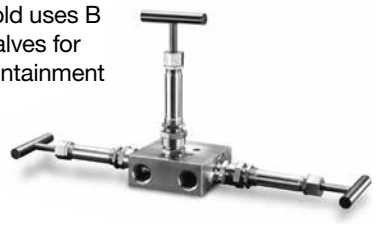
Special Cleaning and Packaging (SC-11)

Swagelok B series valves with VCR end connections and all BK series valves are processed in accordance with Swagelok *Special Cleaning and Packaging (SC-11),* MS-06-63, to ensure compliance with product cleanliness requirements stated in ASTM G93 Level C.

To order special cleaning and packaging for B series valves with other end connections, add **-SC11** to the valve ordering number.

Example: SS-4BG-**SC11**

Bellows-Sealed 3-Valve Manifolds



The Swagelok 3-valve manifold uses B or U series bellows-sealed valves for systems with difficult fluid containment requirements.

For more information, see the Swagelok *Bellows-Sealed 3-Valve Manifolds—V3 Series* catalog, MS-02-07.

BG, BK, and BW Series

Vacuum Stem Tip/Adapters



Vacuum stem tip/adapters help eliminate gas pockets or trapped volumes. Features include:

- Slotted adapter threads
- Vented adapter cavity
- Copper stem tip on BG and BW series
- PCTFE stem tip on BK series
- Pressure rating equal to that of the standard valve
- Temperature rating of 200°F (93°C) for BK series
- Temperature rating of 400°F (204°C) for BG and BW series.

To order, add an adapter designator to the valve ordering number.

Valve Series	Vacuum Stem Tip/Adapter Designator
BG, BW	-VD
BK	-VA

Example: B-4BG-**VD**

BG and BK Series

Polyimide Stem Tips

- Provide soft-seat shutoff for temperatures up to 400°F (204°C) or where PCTFE is not compatible with the system fluid
- Are available in manually or pneumatically actuated BG and BK series valves
- Are rated to the same pressure as the standard valve.

To order, add **-VP** to the valve ordering number.

Example: SS-4BG-**VP**

Copper Stem Tips

- Provide metal soft-seat shutoff for temperatures up to 400°F (204°C) or where PCTFE is not compatible with the system fluid
- Are available in manually or pneumatically actuated BG and BK series valves
- Are rated to the same pressure as the standard valve.

To order, add **-CU** to the valve ordering number.

Example: SS-4BG-**CU**

4BKT Series

Colored Toggle Handles

Black handles are standard for toggle-operated 4BKT series valves. For other colors, add a handle color designator to the valve ordering number.

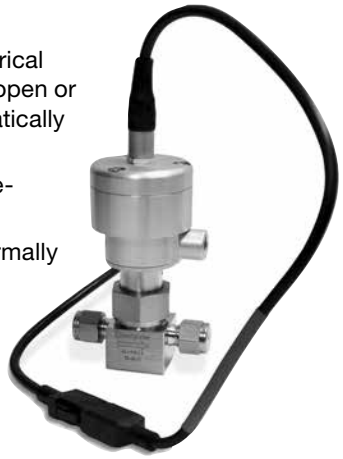
Example: SS-4BKT-**BL**

Handle Color	Designator
Blue	-BL
Green	-GR
Orange	-OG
Red	-RD
White	-WH
Yellow	-YW

Pneumatic Actuator Options and Accessories

1 Series (BK Series)

Indicator Switches



- Transmit a signal to an electrical device indicating either the open or closed position of a pneumatically actuated valve.
- Feature a single-pole, single-throw switch rated at:
  - 1/2 A for 115 V (ac) for normally open switch;
  - 1/4 A for 115 V (ac) for a normally closed switch;
  - –40 to 185°F (–40 to 85°C) temperature.
- Include a 24 in. (61 cm) wire lead with an inline clip.
- Are available factory assembled on normally closed BK series valves with 1 series pneumatic actuators or in kits 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: SS-4BK-1C**M**
SS-4BK-1C**M-2**

Indicator Switch Kits for Field Assembly

To order a kit for an existing valve, use ordering number **MS-ISK-BK-1CM** for a normally open switch or **MS-ISK-BK-1CM-2** for a normally closed switch.

5 Series (BG, BK, and BW Series)

Microswitches



- Signal OPEN or CLOSED position of valve to panel or process controller
- Feature single-pole, double-throw switch
- Meet NEMA standard for type 1 and type 3 enclosures
- Include stainless steel mounting bracket
- Are available factory assembled on BG, BK, and BW series valves with 5 series pneumatic actuators or in kits for field assembly.

Factory-Assembled Microswitches

To order a valve with a microswitch, add **M** to the valve ordering number.

Example: SS-4BG-5C**M**

Microswitch Kits for Field Assembly

To order a kit for an existing valve, use ordering number **MS-5CMK-4B** for 4B series valves or **MS-5CMK-8B** for 6B and 8B series valves.

Actuator Conversion Kits

The actuator conversion kit converts a B series valve with a Swagelok 3 series pneumatic actuator to a valve with a 5 series pneumatic actuator.

Valve Series	Actuation Mode	Actuator Conversion Kit Ordering Number
4BG, 4BK, 4BW	Normally closed	MS-5CK-4B
	Normally open	MS-5OK-4B
	Double acting	MS-5DK-4B
6BG, 6BK, 6BW, 8BG, 8BK, 8BW	Normally closed	MS-5CK-8B
	Normally open	MS-5OK-8B
	Double acting	MS-5DK-8B

Maintenance Kits

Stem tip/adapter kits, bellows kits, and gasket kits are available for BG, BRG, BK, and BKT series valves. See the Swagelok *Bellows-Sealed Valve Maintenance Kits* catalog, MS-02-66.

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.

⚠ **To increase service life, ensure proper valve performance, and prevent leakage, apply only as much torque as is required to achieve positive shutoff.**

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.

⚠ **WARNING**
Do not mix/interchange Swagelok products or components not governed by industrial design standards, including Swagelok tube fitting end connections, with those of other manufacturers.

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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