

# Globe Valve Bodies, Screwed, Two & Three Way



## DESCRIPTION

1/2" to 2" screwed, single seated, 2-way and 3-way, 232 PSIG body rated, hot and chilled water and low pressure steam globe valves.

## APPLICATION

Valves for 2-way or 3-way mixing configuration in commercial and industrial heating, ventilation and air conditioning systems.

## FEATURES

- 232 PSIG body rated
- Hot & chilled water
- Steam, up to 22 PSI
- 3-way for mixing application
- Equal percentage flow characteristic
- High turndown ratio
- Maintenance free
- Two-year warranty



certified ISO 9001

## SPECIFICATIONS

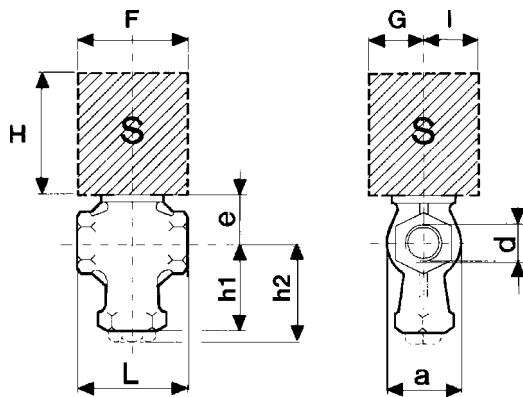
<b>Physical</b>		- 3/4" to 2"	Cast iron, G25
Body rating	232 PSIG (1600 kPa)	- packing	Viton O-ring w/graphited teflon scraper rings
<b>Media</b>		- stem	CrNi stainless steel
Water temperature		- plug	Brass w/contoured-type profile for straight-way, V-port-type profile for angle-way
- w/MVB actuator	14°F to 248°F (-10°C to 120°C)	- seat	Cast iron, G25
- w/MVB actuator and spacer (MVBHT)	14°F to 284°F (-10°C to 140°C)	Stem stroke	0.65 in. (16.5 mm), max. 0.73 in. (18.5 mm)
- w/MVL actuator	14°F to 302°F (-10°C to 150°C)	Leakage	
Glycol added	Max. 50% of water contents	- straight-way	0... 0.03% of Cv
	"Note: Keep stem and packaging free from icing"	- angle-way	0... 2% of Cv
Steam temperature		<b>Stroke Cv</b>	
- w/MVB actuator	Up to 248°F (120°C)	- straight-way	Equal percentage
- w/MVB actuator and spacer (MVBHT)	Up to 284°F (140°C)	- angle-way	Linear
- w/MVL actuator	Up to 302°F (150°C)	Turndown ratio	Greater than 50:1
- steam gage pressure	Max. 22 PSIG (152 kPa)	Max. flow	590 ft/min (3 m/sec)
<b>Pipe Connection</b>	Screwed, NPT, female	<b>Valve Actuator</b>	
<b>Material/Characteristics</b>		<b>Compatibilities</b>	MVB, MVL, MVL..A/C and others
Valve body			
- 1/2"	Brass		

Size Inch (mm)	Flow Coefficient Cv (Kv)	Maximum Differential Pressure PSIG (kPa)	Maximum Close Off Pressure w/Actuators			Part Numbers	
			MVB.. PSIG (kPa)	MVL.. + AG31 PSIG (kPa)	MVL.. A/C + AG31 PSIG (kPa)	2-Way	3-Way
1/2 (15)	1.16 (1.0)	29 (200)	145.0 (1000)	145.0 (1000)	145.0 (1000)	<b>VSB11-PS6</b>	<b>VMB11-PS6</b>
1/2 (15)	1.87 (1.6)	29 (200)	145.0 (1000)	145.0 (1000)	145.0 (1000)	<b>VSB1-PS6</b>	<b>VMB1-PS6</b>
1/2 (15)	2.92 (2.5)	29 (200)	145.0 (1000)	145.0 (1000)	145.0 (1000)	<b>VSB15-PS6</b>	<b>VMB15-PS6</b>
1/2 (15)	4.67 (4.0)	29 (200)	145.0 (1000)	145.0 (1000)	145.0 (1000)	<b>VSB2-PS6</b>	<b>VMB2-PS6</b>
3/4 (20)	7.35 (6.3)	29 (200)	145.0 (1000)	145.0 (1000)	145.0 (1000)	<b>VSB3-PS6</b>	<b>VMB3-PS6</b>
1 (25)	9.34 (8.0)	29 (200)	94.3 (650)	145.0 (1000)	145.0 (1000)	<b>VSB4-PS6</b>	<b>VMB4-PS6</b>
1 1/4 (32)	18.67 (16.0)	29 (200)	58.0 (400)	145.0 (1000)	87.0 (600)	<b>VSB5-PS6</b>	<b>VMB5-PS6</b>
1 1/2 (40)	25.67 (22.0)	29 (200)	36.3 (250)	116.0 (800)	58.0 (400)	<b>VSB6-PS6</b>	<b>VMB6-PS6</b>
2 (50)	35.00 (30.0)	29 (200)	29.0 (200)	87.0 (600)	43.5 (300)	<b>VSB8-PS6</b>	<b>VMB8-PS6</b>
2 (50)	46.67 (40.0)	29 (200)	29.0 (200)	87.0 (600)	43.5 (300)	<b>VSB8A-PS6</b>	<b>VMB8A-PS6</b>

Outside Valve Body Dimensions, Inch (mm)					Weight lbs. (kg)		
Size d	a	L	e	2-Way h2	3-Way h1	2-Way	3-Way
1/2 (15) 3/4 (20)	2.13 (54)	3.15 (80) 3.35 (85)	0.67 (17.0) 1.36 (34.5)	2.76 (70.0) 3.11 (79.0)	2.76 (70.0) 2.66 (67.5)	2.7 (1.2) 2.7 (1.2)	2.4 (1.1) 2.4 (1.1)
1 (25) 1 1/4 (32)	2.44 (62) 2.76 (70)	3.74 (95) 4.25 (108)	1.56 (39.5) 1.71 (43.5)	3.27 (83.0) 3.54 (90.0)	2.85 (72.5) 3.09 (78.5)	3.5 (1.6) 4.6 (2.1)	3.3 (1.5) 4.4 (2.0)
1 1/2 (40) 2 (50)	3.19 (81) 3.82 (97)	4.72 (120) 5.59 (142)	2.01 (51.0) 2.15 (54.5)	3.86 (98.0) 4.37 (111.0)	3.37 (85.5) 3.82 (97.0)	6.2 (2.8) 9.0 (4.1)	6.0 (2.7) 8.8 (4.0)
"A" 2 (50)	3.82 (97)	7.64 (194)	2.15 (54.5)	4.37 (111.0)	3.82 (97.0)	11.2 (5.1)	11.0 (5.0)

**OPTIONS**

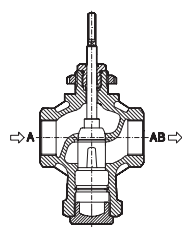
- **AG31**  
Linkage kit  
For coupling MVL..., MVL.../C actuators to VSB/VMB valves
- **244**  
Stem heater for  
3/4" to 2" valves  
For media temperature below 14°F (-10°C) to avoid freeze-up of actuator/valve stem, 24 VAC, 25 VA



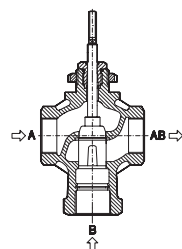
**S = Space requirement for actuator mounting, Inch (mm)**

Actuator	H	F	G	I
MVB..	11.81 (300)	5.90 (150)	7.48 (190)	6.30 (160)
MVL..	14.61 (371)	8.66 (220)	1.18 (30)	5.83 (148)
MVL.../C	14.61 (371)	8.66 (220)	2.28 (58)	5.83 (148)

**VALVE PIPING & OPERATION**



**2-Way**



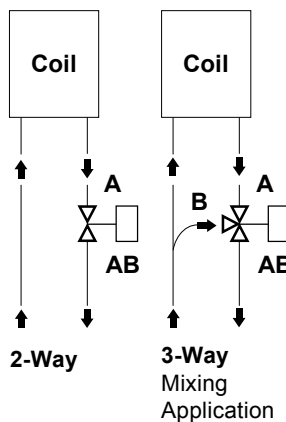
**3-Way**

Valve stem down, direct way **A to AB** is open.

MVL.../C spring return actuator action at power failure:

- MVL...C, direct way **A to AB** will be open.
- MVL...A, direct way **A to AB** will be closed.

Valve markings on body for  
2-way: **A** and **AB**  
3-way: **A**, **B** and **AB**



To avoid valve clogging, all dirt, metal shavings, slag, sand, etc. located inside of piping must be removed / flushed out prior to installing the valve.

Avoid installing the valve in a location where it will be subjected to vibration.

The valve can be installed in any position except in the valve stem downwards position.

Mount valve horizontally if valve media temperature is above 248°F (120°C).

3-way valves should be piped only as mixing configuration (flow input **A** and **B** to output **AB**).

