

# Zone Globe Valve Bodies, Screwed, Two & Three Way



## DESCRIPTION

3/4" to 1 1/2" screwed, single seated 2-way and 3-way, 232 PSIG body rated, hot and chilled water valves.

## APPLICATION

Valves for 2-way or 3-way mixing configuration in heating, ventilation and air conditioning systems; i.e. fan coil units, reheat of VAV/VVT boxes, base boards, and other AC units.

## FEATURES

- 232 PSIG body rated
- Hot & chilled water
- 3-way for mixing application
- 3-way bypass with reduced Cv's for balanced system pressure
- High turndown ratio
- Spring return w/o actuator
- External manual override, screw-on cap
- Easy valve actuator pop-on
- Maintenance free
- Two-year warranty



## SPECIFICATIONS

### Physical

Body rating 232 PSIG (1600 kPa)

### Media

Water temperature 41°F to 203°F (5°C to 95°C)  
 - w/ MVT actuator  
 Glycol added Max. 50% of water contents

### Pipe Connection

Screwed, NPT, female

### Material/Characteristics

Valve body Cast iron, G25  
 - packing Double O-ring, buna N  
 - stem CrNi stainless steel  
 - plug Brass w/ contoured-type profile for straight-way, V-port type profile for angle-way  
 - seat Cast iron, machined  
 Stem stroke 0.22 in. (5.5 mm)

### Leakage

- straight-way 0...0.03% of Cv  
 - angle-away 0...2% of Cv

### Stroke Cv

- straight or angle-away Linear  
 Turndown ratio > 50:1

### Turndown ratio (Rangeability)

Max. flow 590 ft/min (3 m/sec)

### Spring return

Springs back to stem-up, refer to table "Valve Action"

### Manual override

With optional black cap "VST-CAP"

### Valve Actuator

MVT actuator series

### Compatibilities

Easy pop-on, screw connection

### Manufacturing

ISO 9000 certified

### Listings/Approvals

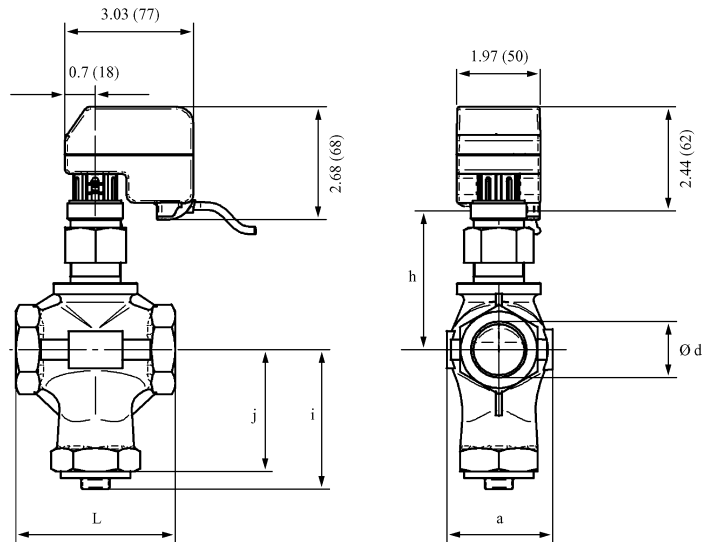
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### Warranty

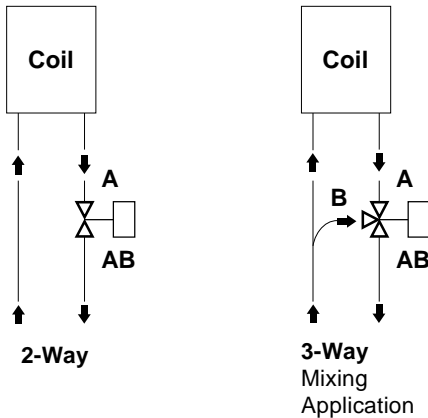
Two-year material and workmanship

Size	Flow Coefficient		Max. Differential Pressure	Max. Close-Off Pressure w/ MVT Actuators	Part Numbers	
	2 + 3-Way Straight A to AB	3-Way Angle B to AB			2-Way	3-Way
Inch (mm)	Cv (Kv)	Cv (Kv)	PSIG (kPa)	PSIG (kPa)		
3/4" (20)	7.35 (6.3)	6.42 (5.5)	36 (250)	36 (250)	VSBT3-PS6	VMBT3-PS6
1" (25)	11.67 (10.0)	10.50 (9.0)	22 (150)	22 (150)	VSBT4-PS6	VMBT4-PS6
1 1/4" (32)	16.33 (14.0)	12.83 (11.0)	13 (70)	13 (70)	VSBT5-PS6	VMBT5-PS6
1 1/2" (40)	21.00 (18.0)	19.83 (17.0)	8.7 (60)	8.7 (60)	VSBT6-PS6	VMBT6-PS6

Valve Body Dimensions, Inch (mm)						Weight lbs. (kg)
Size Ø d	L	a	h	2-way i	3-way j	
3/4"	3.3 (85)	2.1 (54)	3.1 (78)	3.1 (79)	2.7 (68)	2.43 (1.1)
1"	3.7 (95)	2.4 (62)	3.3 (83)	3.3 (83)	2.9 (73)	3.30 (1.5)
1 1/4"	4.3 (108)	2.8 (70)	3.4 (87)	3.5 (90)	3.1 (79)	4.41 (2.0)
1 1/2"	4.7 (120)	3.2 (81)	3.7 (94)	3.9 (98)	3.4 (86)	5.95 (2.7)



**VALVE PIPING & OPERATION**



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 body should be piped up without the actuator assembled.

The valve can be piped in horizontal or vertical position, but not in the valve stem downwards position.

2-way valves must be piped with flow input **A** to output **AB**.

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

If piped incorrectly, valve performance may falter.

Valve Action	Without actuator coupled	MVT actuator coupled
Port A to AB	closed, stem-up (spring return)	Control signal increased/decreased
<b>VSBT</b> 2-way, and <b>VMBT</b> 3-way	closed, stem-up (spring return)	moves into 0...100% open/closed position, in case of power failure stays in last position of operation

The valve can be manually opened, closed or put in any position by screwing the black cap up or down the valve stem. This operation is possible only if the actuator is not assembled.

