

# Globe Valve Bodies, Flanged, Two-Way, Balanced



## DESCRIPTION

1" to 3" flanged, balanced, single-seated, 2-way, 363 PSIG body rated, high close-off globe valves for hot, super-heated and chilled water, and high pressure steam.

## APPLICATION

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

## FEATURES

- 363 PSIG body rated
- Hot & super-heated water
- Chilled water
- Low & high pressure steam
- Balanced inner valve
- High close-off pressure
- Equal percentage flow characteristic
- High turndown ratio

## SPECIFICATIONS

### Physical

Body rating 363 PSIG (2500 kPa)

### Media

- water temperature 14°F to 446°F (-10°C to 230°C)  
 - glycol added Max. 50% of water contents

Note: Keep stem and packaging free from icing  
 - diathermic oil temp., max 446°F (230°C)  
 (not applicable for VBS80)

- steam temperature, max 446°F (230°C)  
 - steam pressure, max 116 PSIG (800 kPa)

**Pipe Connection** Flanged, UNI

### Material/Characteristics

- body Spheroidal cast iron  
 - balancing chamber Teflon ring, w/steel spring  
 - packing Teflon  
 - stem Stainless steel, AISI 303  
 - plug Stainless steel, AISI 303  
 - seat Stainless steel, AISI 303

### Stem stroke

- 1" valve 0.65 in (16.5 mm)

- 1 1/4" to 2 1/2" valves 0.98 in (25 mm)

- 3" valves 1.77 in (45 mm)

Leakage 0...0.02% of Cv

**Stroke Cv** Equal percentage

Turndown ratio Greater than 50:1

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

### Standards

Compliance 97/23/CE PED directive

Control valves UNI 9753

Control flow characteristic IEC 534-2-4

### Valve Actuator

**Compatibilities** MVL, MVL..A/C and others

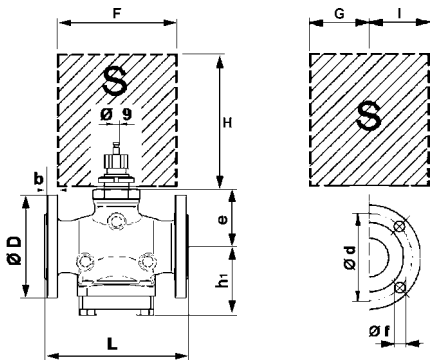


**VBS**

"363 PSIG, Balanced,  
HighClose-Off"

Size Inch (mm)	Flow Coefficient Cv (Kv)		Maximum Differential Pressure PSIG (kPa)	Maximum Close Off Pressure w/Actuators		Part Numbers 2-Way
				MVL.. PSIG (kPa)	MVL..A/C PSIG (kPa)	
1 (25)	4.67	(4.0)	116 (800)	363 (2500)	363 (2500)	<b>VBS25R</b> <b>VBS25I</b> <b>VBS25</b>
1 (32)	7.35	(6.3)	116 (800)	363 (2500)	363 (2500)	
1 (40)	11.67	(10)	116 (800)	363 (2500)	363 (2500)	
1 1/4 (32)	18.67	(16)	116 (800)	363 (2500)	363 (2500)	<b>VBS32</b> <b>VBS40</b> <b>VBS50</b> <b>VBS65</b>
1 1/2 (40)	29.18	(25)	116 (800)	363 (2500)	363 (2500)	
2 (50)	46.68	(40)	116 (800)	363 (2500)	363 (2500)	
2 1/2 (65)	73.52	(63)	116 (800)	363 (2500)	319 (2200)	
3 (80)	116.70	(100)	116 (800)	363 (2500)	261 (1800)	<b>VBS80</b>

Outside Valve Body Dimensions, Inch (mm)									Weight
Size	Ø D	b	Ø d	Ø f	Holes	L	e	h1	2-Way lbs. (kg)
1 (25)	4.33 (115)	0.71 (18)	3.35 (85)	0.55 (14)	4	6.30 (160)	3.27 (83)	3.27 (83)	13.3 (6)
1 1/4 (32)	5.51 (140)	0.71 (18)	3.94 (100)	0.71 (18)		7.09 (180)	4.84 (123)	4.02 (102)	22.1 (10)
1 1/2 (40)	5.91 (150)	0.71 (18)	4.33 (110)	0.71 (18)		7.87 (200)	4.84 (123)	4.09 (104)	24.3 (11)
2 (50)	6.50 (165)	0.79 (20)	4.92 (125)	0.71 (18)		9.06 (230)	4.84 (123)	4.33 (110)	35.3 (16)
2 1/2 (65)	7.28 (185)	0.87 (22)	5.71 (145)	0.71 (18)	8	10.63 (270)	5.79 (147)	4.88 (124)	44.1 (20)
3 (80)	7.87 (200)	1.02 (26)	6.30 (160)	0.71 (18)		12.21 (310)	6.54 (166)	5.47 (139)	83.8 (38)



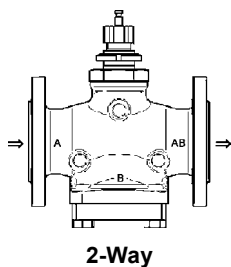
**S = Space requirement for actuator mounting, Inch (mm)**

Actuator	H	F	G	I
MVL..	14.61 (371)	8.66 (220)	1.18 (30)	5.83 (148)
MVL..A/C	14.61 (371)	8.66 (220)	2.28 (58)	5.83 (148)

**OPTIONS & ACCESSORIES**

- **245** Stem heater for VBS series, 1" to 3" valves. For media temperature below 14°F (-10°C) to avoid freeze-up of actuator/valve stem, 24 VAC, 75 VA
- **CF-DN25/NP40** 1" (25 mm)
- **CF-DN32/NP40** 1 1/4" (32 mm)
- **CF-DN40/NP40** 1 1/2" (40 mm)
- **CF-DN50/NP40** 2" (50 mm)
- **CF-DN65/NP40** 2 1/2" (65 mm)
- **CF-DN80/NP40** 3" (80 mm)
- **Companion flange** UNI flange 580 PSIG (4000 kPa), w/bolts, nuts and gasket

**VALVE PIPING & OPERATION**



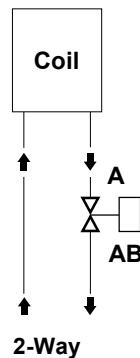
Valve markings on body: **A** and **AB**

*The special characteristic of these valves is that they can work under high close-off pressure and wherever low leakage is required. This makes them particularly suitable for applications with super-heated water (i.e., remote heating plants, boiler feeding, etc) and steam.*

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

MVL..A/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.



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.

When assembling valves on plants with high temperature media (i.e. steam, overheated water, diathermic oil) arrange for expansion joints to be mounted so as to avoid pipe expansions from overloading the valve body.

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

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

