VB-7000 Series
2-Way and 3-Way Flanged Globe Valve Bodies

General

The VB-7000 Series flanged globe valve bodies are engineered specifically for temperature control applications requiring an equal percentage flow characteristic and a high degree of control precision. Common applications include steam or hot water and chilled water coils and heat exchangers in air handling units, chillers, boilers and cooling towers.

The VB-7000 Series valve bodies are designed with DIN flanged connections in 2-way and 3-way configurations. ANSI standard flanges are available as options.

All VB-7000 Series valve bodies are operated by VA-7000 or VA-7003 Series electric actuators which are ordered separately. The actuators are designed specifically for mounting directly to the VB-7000 Series valve bodies without the need of special tools.

Ordering

To order, specify complete model number.

It is highly recommended to order the valve body and actuator factory mounted to save calibration time in the field.

Specifications

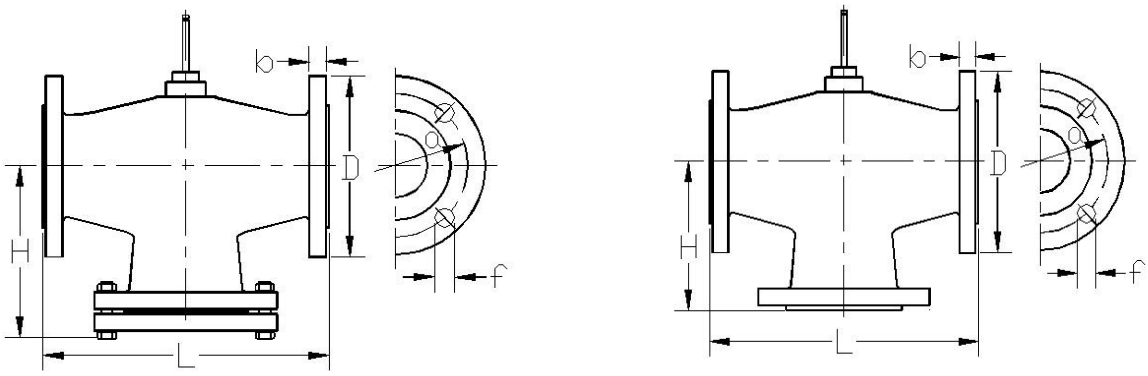
Valve Body Pressure Rating		1,600 kPa, PN16 (232 PSI)	
Service		Chilled and hot water, up to 50% Glycol solutions (standard version) Steam (high temperature version only)	
Flow Coefficient		See Table 1: Model Number Selection Guide	
Valve Size		65 to 200 mm, 2-way or 3-way	
Flow Characteristic		Service port A: Equal percentage Service port B: Linear (3-way only)	
Seat Leakage		Less than 0.05% of Cv (Kv) factor	
		Standard version (water)	High temperature version (water/steam)
Materials:	Body	HT250/Q235A	HT250/Q235A
	Stem	Stainless Steel 302 (1Cr18Ni9)	Stainless Steel 302 (1Cr18Ni9)
	Plug	Casting brass	High intensity casting brass and stainless steel seat
	Sealing	Polytetrafluoro-ethylene filler and stainless steel spring	Polytetrafluoro-ethylene filler and stainless steel spring
	Plate	Brass	Brass
Fluid Temperature Limits		2 to 95°C (36 to 203ºF)	2 to 180°C (36 to 356ºF)
Piping Connections		DIN standard PN16 flanges (ANSI standard flanges optional)	
Port Configuration		Push-down-to-open	
Ambient Conditions		Operating: -20 to 50ºC (-4 to 122ºF), 0-95% non-condensing	
		Storage: -40 to 86ºC (-40 to 186ºF), 0-95% non-condensing	
Shipping Weight		See Figure 1: Dimensions in mm	

The performance specifications above are nominal and subject to tolerances and application variables of generally acceptable industry standards. The manufacturer shall not be liable for damages resulting from misapplication or misuse of its products.

Table 1: Model Number Selection Guide

Water Valve Body Model Number	Steam Valve Body Model Number	Configuration	Connection Size		Flow Coefficient		Maximum Close-off (ΔP) kPa (PSI)		Stroke mm
			mm	inches	Kv	Cv	With VA-71xx Actuator	With VA-72xx Actuator	
VB-7200-65	VB-7200-65V	2-Way	65	2-1/2”	63	74	400 (57)	-	42
VB-7200-80	VB-7200-80V		80	3”	100	117	350 (50)	500 (71)	42
VB-7200-100	VB-7200-100V		100	4”	160	187	300 (43)	400 (57)	42
VB-7200-125	VB-7200-125V		125	5”	250	292	200 (28)	300 (43)	42
VB-7200-150	VB-7200-150V		150	6”	360	421	120 (17)	200 (28)	42
VB-7200-200	VB-7200-200V		200	8”	550	643	-	120 (17)	42
VB-7300-65	VB-7300-65V	3-Way	65	2-1/2”	63	74	400 (57)	-	42
VB-7300-80	VB-7300-80V		80	3”	100	117	350 (50)	500 (71)	42
VB-7300-100	VB-7300-100V		100	4”	160	187	300 (43)	400 (57)	42
VB-7300-125	VB-7300-125V		125	5”	250	292	200 (28)	300 (43)	42
VB-7300-150	VB-7300-150V		150	6”	360	421	120 (17)	200 (28)	42
VB-7300-200	VB-7300-200V		200	8”	550	643	-	120 (17)	42

Figure 1: Dimensions in mm



Model Number	L	H	D	b	a	f	Number of Bolt Holes	Weight kg (lb)
VB-7200-65 (V)	290	148	185	20	145	18	4	30 (66)
VB-7200-80 (V)	310	185	200	20	160	18	8	36 (79)
VB-7200-100 (V)	350	206	220	20	180	18	8	41 (90)
VB-7200-125 (V)	400	227	250	22	210	18	8	61 (134)
VB-7200-150 (V)	480	272	285	22	240	22	8	88 (194)
VB-7200-200 (V)	600	337	340	24	295	22	12	139(306)
VB-7300-65 (V)	290	148	185	20	145	18	4	25 (55)
VB-7300-80 (V)	310	155	200	20	160	18	8	30 (66)
VB-7300-100 (V)	350	174	220	20	180	18	8	36 (80)
VB-7300-125 (V)	400	195	250	22	210	18	8	52 (115)
VB-7300-150 (V)	480	238	285	22	240	22	8	77 (170)
VB-7300-200 (V)	600	300	340	24	295	22	12	118 (260)

Piping and Installation

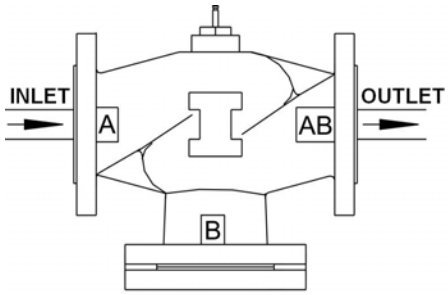
The valves can be mounted in horizontal or vertical piping. When installed in horizontal piping, the actuator must be above the valve body and can be tilted left or right but it must not be tilted below 60º from vertical.

Notes:

- Before mounting the valve, make sure that the pipes are clean and free from scores
- It is essential that the pipes are lined up squarely with the valve at each connection and free from vibration.
- For installation in plants with high temperature fluid, use expansion joints to avoid pipe buckling against the valve body.
- Valve must not be installed in explosive atmosphere.
- Make certain that there is no overhead water source that may drip onto valve actuator and the valve is not subject to steam or water jets.
- For maintenance purposes, install the valve with sufficient headroom to allow complete valve actuator removal.

Figure 2: Flow Directions

2-way Valves



3-way Valves (Mixing Application Only

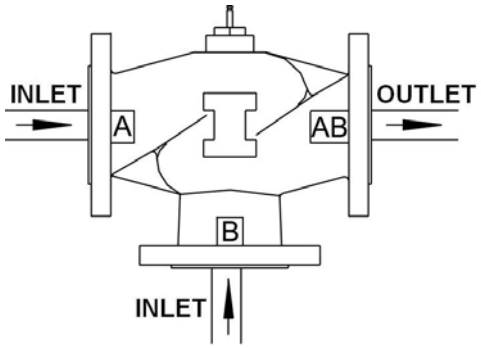
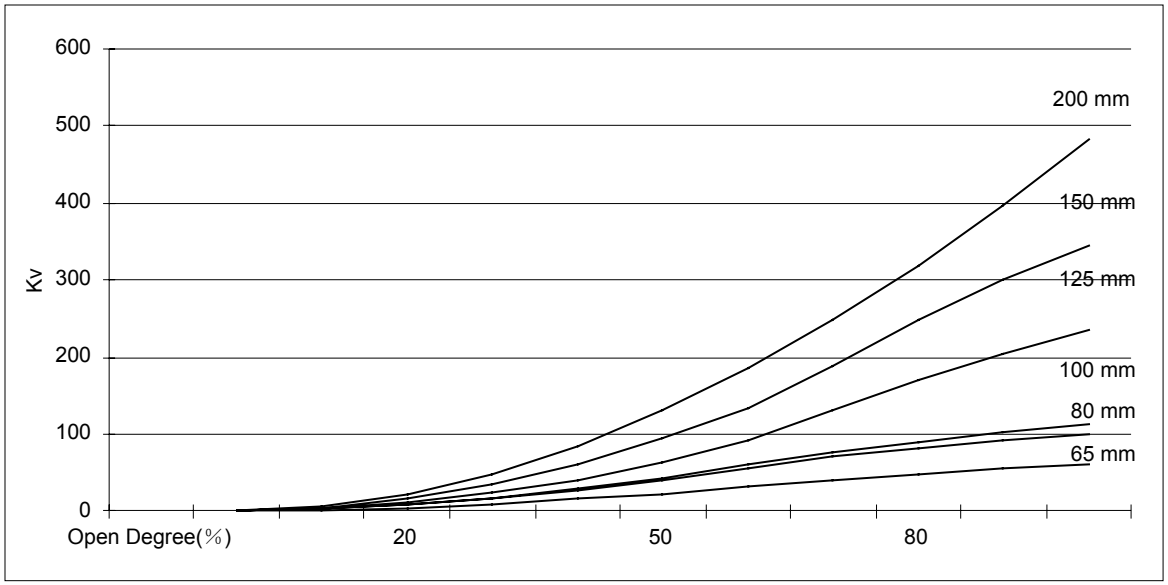


Figure 3: Flow Characteristics



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