VB-3000Q Series

2-Way and 3-Way Brass Globe Valve Bodies

General

The VB-3000 Series brass 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 hot water and chilled water coils and heat exchangers in air handling units, chillers, boilers and cooling towers.

The VB-3000 Series valve bodies are designed with BSP threaded connections in 2-way and 3-way configurations. NPT threaded connections are available as options.

All VB-3000 Series valve bodies are operated by VA-3500 or VA-3600 Series intelligent actuators which are ordered separately. The actuators are designed specifically for mounting directly to the VB-3000 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 accomplish best valve performance.

Specifications

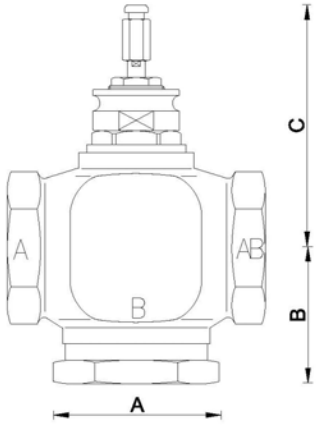
Valve Body Pressure Rating		1,600 kPa, PN16 (232 PSI)	
Service		Chilled and hot water, up to 50% Glycol solutions (standard version) Steam (high temperature version only)	
Flow Coefficient		See Table 1: Model Number Selection Guide	
Valve Size		25 to 65 mm, 2-way or 3-way	
Flow Characteristic		Service 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	Casting brass	High intensity casting brass
	Stem	Stainless Steel 302 (1Cr18Ni9)	Stainless Steel 302 (1Cr18Ni9)
	Sealing	Fluon filler and O-ring Nitrile rubber sealing combination	Fluon filler and O-ring Nitrile rubber sealing combination
	Plate	Forging brass with nitrile rubber gasket	High intensity forging brass with Fluor gasket
Fluid Temperature Limits		2 to 94°C (36 to 201ºF)	2 to 180°C (36 to 356ºF)
Piping Connections		BSP (NPT 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	Configura-tion	Connection Size		Flow Coefficient		Standard Valves Maximum Close-off (ΔP) kPa (PSI)		Steam Valves Maximum Close-off (ΔP) kPa (PSI)		Stroke mm
			mm	inches	Kv	Cv	With VA-31xx Actuator	With VA-32xx Actuator	With VA-31xx Actuator	With VA-32xx Actuator	
VB-3200-25Q	VB-3200-25QV	2-Way	25	1”	8	9	1000 (145)	1400(203)	800 (116)	1200(174)	15
VB-3200-32Q	VB-3200-32QV		32	1-1/4”	16	19	750 (108)	1100 (159)	600 (87)	1000 (145)	19
VB-3200-40Q	VB-3200-40QV		40	1-1/2”	25	29	500 (72)	800 (116)	400 (58)	700 (101)	19
VB-3200-50Q	VB-3200-50QV		50	2”	40	46	300 (43)	500 (72)	200 (29)	400 (58)	22
VB-3200-65Q	VB-3200-65QV		65	2-1/2”	63	74	200 (29)	350 (50)	200 (29)	350 (50)	22
VB-3300-25Q	VB-3300-25QV	3-Way	25	1”	8	9	1000 (145)	1400(203)	800 (116)	1200(174)	15
VB-3300-32Q	VB-3300-32QV		32	1-1/4”	16	19	750 (108)	1100 (159)	600 (87)	1000 (145)	19
VB-3300-40Q	VB-3300-40QV		40	1-1/2”	25	29	500 (72)	800 (116)	400 (58)	700 (101)	19
VB-3300-50Q	VB-3300-50QV		50	2”	40	46	300 (43)	500 (72)	200(29)	400 (58)	22
VB-3300-65Q	VB-3300-65QV		65	2-1/2”	63	74	200 (29)	350 (50)	200(29)	350 (50)	22

Figure 1: Dimensions in mm



Model Number	A	B	C	Weight kg (lb)
VB-3200-25Q(V)	110	63	124	3.1 (6.8)
VB-3200-32Q(V)	120	69	124	3.5 (7.7)
VB-3200-40Q(V)	130	71	127	4.1 (9.0)
VB-3200-50(V)	145	77	130	5.5 (12.1)
VB-3200-65Q(V)	175	83	137	7.9 (17.4)
VB-3300-25Q(V)	110	63	124	3.6 (7.9)
VB-3300-32Q(V)	120	69	124	4.0 (8.8)
VB-3300-40Q(V)	130	71	127	4.5 (9.9)
VB-3300-50Q(V)	145	77	130	5.9 (13.0)
VB-3300-65Q(V)	175	83	137	8.1 (17.9)

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 90º 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

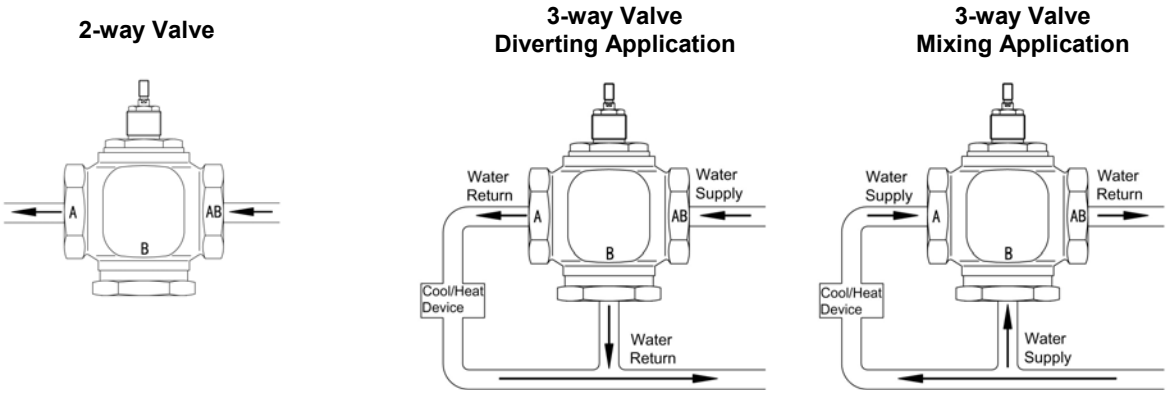
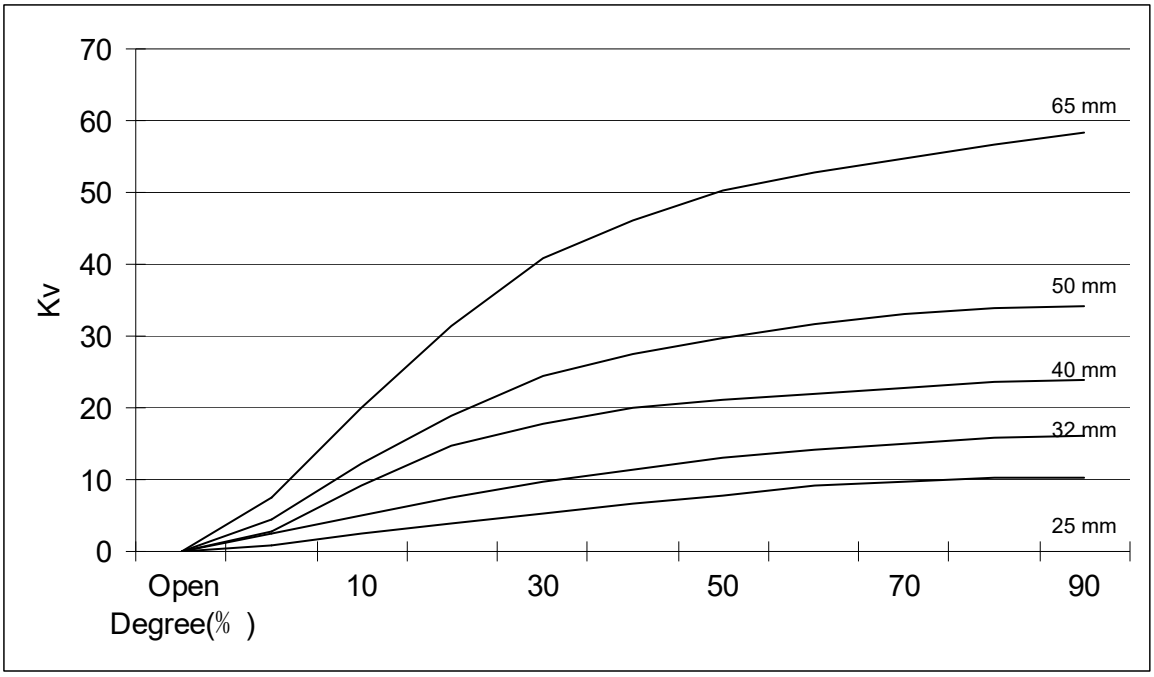


Figure 3: Flow Characteristic



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