

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.

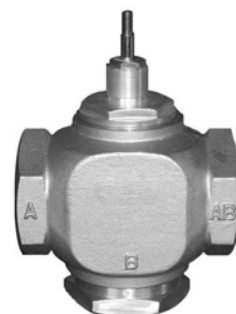
All VB-3000 Series valve bodies are

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.



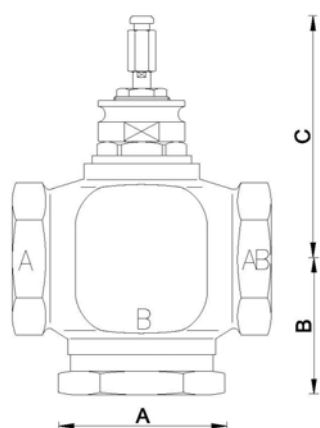
Specifications

| | | | |
|----------------------------|---------|---|--|
| 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 201°F) | 2 to 180°C (36 to 356°F) |
| Piping Connections | | BSP (NPT optional) | |
| Port Configuration | | Push-down-to-open | |
| Ambient Conditions | | Operating: -20 to 50°C (-4 to 122°F), 0-95% non-condensing Storage: -40 to 86°C (-40 to 186°F), 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 | | 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 | 74 | 1000 (145) | 1400(203) | 800 (116) | 1200(174) | 15 |
| VB-3300-32Q | VB-3300-32QV | | 32 | 1-1/4" | 16 | 117 | 750 (108) | 1100 (159) | 600 (87) | 1000 (145) | 19 |
| VB-3300-40Q | VB-3300-40QV | | 40 | 1-1/2" | 25 | 187 | 500 (72) | 800 (116) | 400 (58) | 700 (101) | 19 |
| VB-3300-50Q | VB-3300-50QV | | 50 | 2" | 40 | 292 | 300 (43) | 500 (72) | 200(29) | 400 (58) | 22 |
| VB-3300-65Q | VB-3300-65QV | | 65 | 2-1/2" | 63 | 643 | 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-3200-50Q(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 90° 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

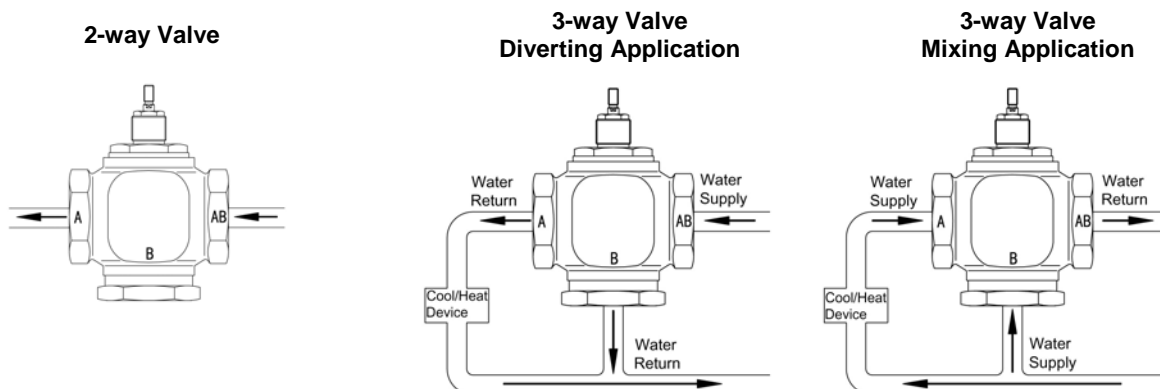
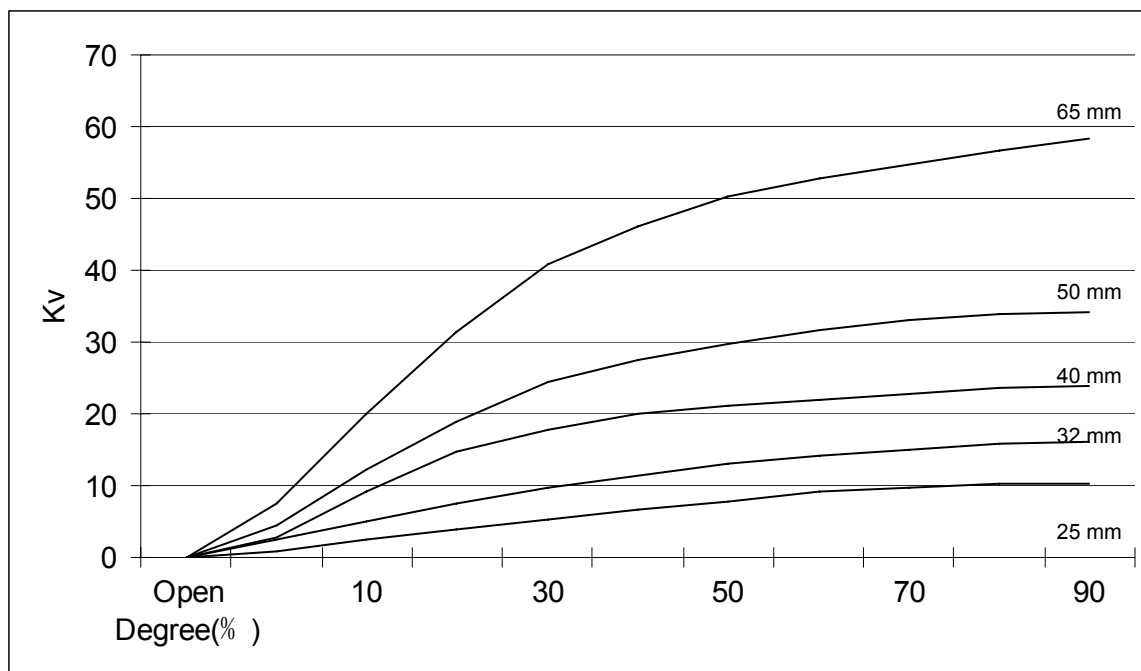


Figure 3: Flow Characteristic



Mega Controls Limited

Room 2505, Trend Centre

29 Cheung Lee Street, Chai Wan, Hong Kong

Phone: +852 2896 7277 Fax: +852 2896 7234

E-mail: sales@megacontrols.com

Website: www.megacontrols.com