

B2...VS Series, 2-Way, Ball Valve Bronze Body, Stainless Steel Ball and Stem



- Live-load packing set
- Stainless steel ball & stem
- Blow-out proof stem design

Application

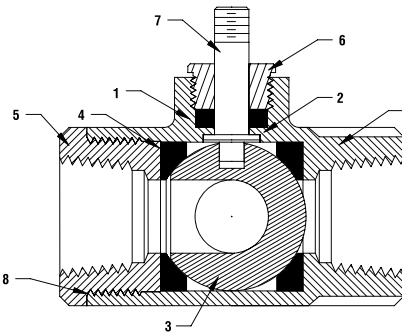
This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV Box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

This valve is designed with MFT functionality which facilitates the use of various control input.

- Up to 35 psi steam
- 1/2" - 600 PSIG WOG, Cold Non-Shock.
- Federal Specification: WW-V-35C, Type II
Composition: BZ
Style: 3

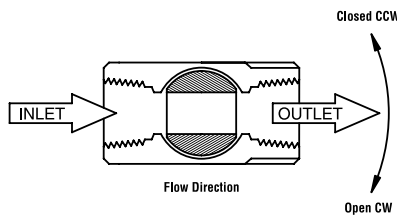
| Technical Data | |
|---------------------|---|
| Media | chilled or hot water, glycol, 35# steam |
| Flow characteristic | modified equal percentage |
| Action | 90° rotation valve open CW, valve closed CCW |
| Sizes | 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3" |
| Type of end fitting | SAE NPT (female connections) |
| Materials: | |
| 1 Stem Packing | Reinforced PTFE |
| 2 Stem Bearing | Reinforced PTFE |
| 3 Ball | 316 Stainless Steel |
| 4 Seat (x2) | Reinforced PTFE w/ Durafill |
| 5 Retainer | B16 (3/4" - 1") Brass B584 (1 1/4" - 3") Brass |
| 6 Gland | B16 Brass |
| 7 Stem | 316 Stainless Steel |
| 8 Jam Nut | Stainless Steel |
| 9 Body Seal | PTFE (1-1/4" to 3") |
| 10 Body | B584-C84400 Bronze |

| Cv | Valve Nominal Size | | Type | Suitable Return Actuators | |
|-----|--------------------|---------|-------------|---------------------------|------------|
| | Inches | DN [mm] | | Spring | Non-Spring |
| 1 | 1/2 | 15 | B2050VS-01 | LF Series | LM Series |
| 2 | 1/2 | 15 | B2050VS-02 | | |
| 4 | 1/2 | 15 | B2050VS-04 | | |
| 15 | 1/2 | 15 | B2050VS-15 | NF | NM |
| 30 | 3/4 | 20 | B2075VS-30 | | |
| 51 | 3/4 | 20 | B2075VS-51 | | |
| 43 | 1 | 25 | B2100VS-43 | AF Series | AM Series |
| 68 | 1 | 25 | B2100VS-68 | | |
| 48 | 1 1/4 | 32 | B2125VS-48 | | |
| 84 | 1 1/2 | 40 | B2150VS-84 | | |
| 177 | 1 1/2 | 40 | B2150VS-177 | GM Series | SY Series |
| 108 | 2 | 50 | B2200VS-108 | | |
| 389 | 2 | 50 | B2200VS-389 | | |
| 503 | 2 1/2 | 65 | B2250VS-503 | | |
| 370 | 3 | 80 | B2300VS-370 | | |



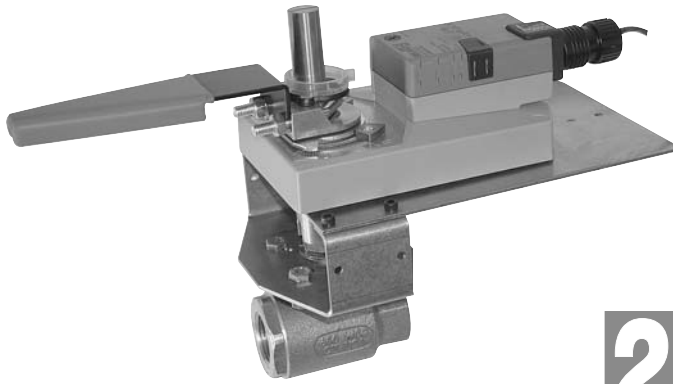
| | |
|------------------------------------|---------------------------------|
| Pressure rating | 600 psig WOG |
| Media temp. range | -22°F to 280°F (-30°C to 138°C) |
| Close-off pressure | 600 psig @ 100°F |
| Maximum differential pressure (ΔP) | <600 psig |

Flow Patterns



IM40006 - 05/10 - Subject to change. © Belimo Aircontrols (USA), Inc.

GMB24-3-X1 Actuators, On/Off, Floating Point

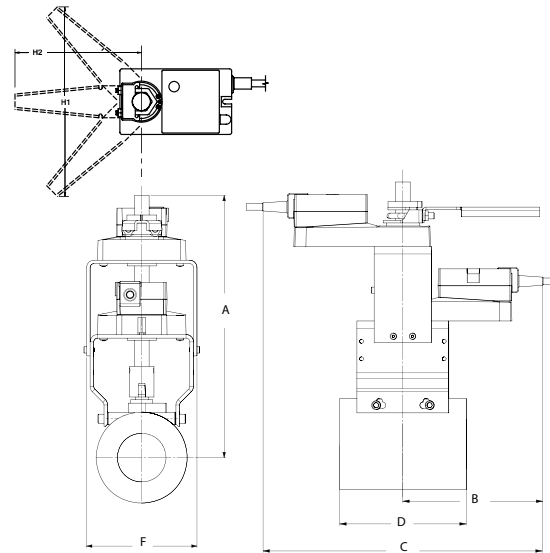


Models

GMB24-3-X1
2*GMB24-3-X1

| Technical Data | |
|-----------------------|---|
| Control | on/off, floating point |
| Power supply | 24 VAC ± 20% 50/60 Hz 24 VDC ± 10% |
| Power consumption | running 4 W holding 2 W |
| Transformer sizing | 6 VA (Class 2 power source) |
| Electrical connection | 3 ft [1m] 18 GA plenum rated cable ½" conduit connector |
| Overload protection | electronic throughout stroke |
| Angle of rotation | 95° |
| Direction of rotation | reversible with switch |
| Position indication | reflective visual indicator (snap-on) |
| Running time | 150 seconds, constant independent of load |
| Humidity | 5 to 95% RH non-condensing |
| Ambient temperature | -22°F to 122°F [-30°C to 50°C] |
| Housing | NEMA 2/IP54 with cable entry down |
| Housing material | UL94-5V (flammability rating) |
| Agency listings | cULus according to UL 60730-1A/-2-14, CAN/CSA E60730-1, CSA C22.2 No. 24-93, CE according to 89/336/EEC |
| Noise level | <45 dB(A) |
| Quality standard | ISO 9001 |

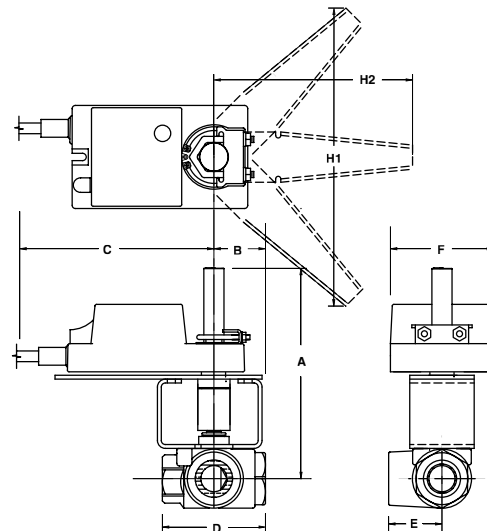
Dimensions with 2-Way Valve



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| Valve Nominal Size | | Dimensions (Inches) | | | | | | | | | |
|--------------------|------|---------------------|---------|------|------|-------|------|------|------|------|--|
| Valve Body | COP | Inches | DN [mm] | A | B | C | D | F | H1 | H2 | |
| B2150VS-177 | 400 | 1½ | 40 | 8.65 | 7.00 | 8.50 | 4.80 | 4.60 | 9.75 | 8.50 | |
| B2200VS-389 | 400 | 2 | 50 | 8.65 | 7.00 | 8.50 | 5.40 | 4.60 | 9.75 | 8.50 | |
| B2300VS-370 | 400 | 3 | 80 | 8.65 | 7.00 | 8.50 | 6.80 | 4.60 | 9.75 | 8.50 | |
| 2*B2250VS-503 | 200 | 2½ | 65 | 8.65 | 7.00 | 11.90 | 6.50 | 5.62 | 9.75 | 8.50 | |
| B2250VSS-503 | 1000 | 2½ | 65 | 8.65 | 7.00 | 8.50 | 6.80 | 4.60 | 9.75 | 8.50 | |
| 2*B2300VSS-370 | 1000 | 3 | 80 | 8.65 | 7.00 | 8.50 | 6.80 | 4.60 | 9.75 | 8.50 | |

Dimensions with 3-Way and 2*GM Valve



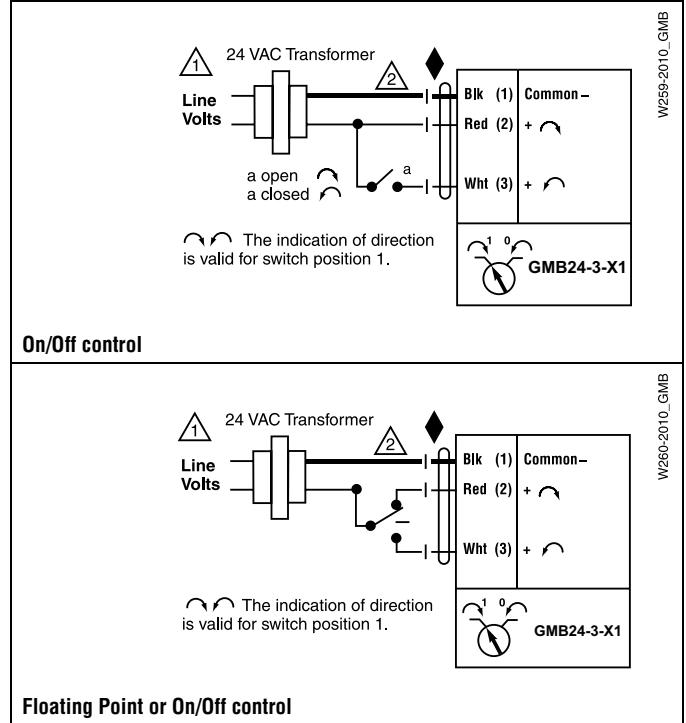
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| Valve Nominal Size | | Dimensions (Inches) | | | | | | | | | |
|--------------------|-----|---------------------|---------|-------|------|------|------|------|------|--------|--------|
| Valve Body | COP | Inches | DN [mm] | A | B | C | D | E | F | H1 | H2 |
| B332VS | 200 | 1¼ | 32 | 7.00 | 2.00 | 8.00 | 4.44 | 2.25 | 6.25 | 9.75 | 8.50 |
| B340VS | 75 | 1½ | 40 | 7.00 | 2.00 | 8.00 | 4.44 | 2.25 | 6.25 | 9.75 | 8.50 |
| B350VS | 75 | 2 | 50 | 15.00 | 8.00 | 8.00 | 5.38 | 2.75 | 6.25 | 9.25 | 8.50 |
| B350VS | 200 | 2 | 50 | 15.00 | 8.00 | 8.00 | 5.38 | 2.75 | 6.25 | 9.75** | 8.50** |

**Handles not available on spring return series or dual mounted actuators

Wiring Diagrams

- 1 Provide overload protection and disconnect as required.
- 2 Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by 24 VDC.
- 4 Position feedback cannot be used with Triac sink controller. The actuator internal common reference is not compatible.
- 5 Control signal may be pulsed from either the Hot (source) or the Common (sink) 24 VAC line.
- 7 Contact closures A & B also can be triacs.
- 8 For triac sink the common connection from the actuator must be connected to the hot connection of the controller.



Piping

The valve should be mounted in a weather-protected area in a location that is within the ambient limits of the actuator. Allow sufficient room for valve with actuator and for service. Allow 6" for cover removal and 12" for complete actuator removal. The assembly can be mounted with the actuator vertical or horizontal in relation to the pipe. The actuators should never be mounted underneath the valve, as condensation can build up and result in a failure of the actuators. Do not reverse flow direction.

APPLICATION NOTES

- ◆ Meets cULus or UL and CSA requirements without the need of an electrical ground connection.

WARNING Live Electrical Components!

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.