

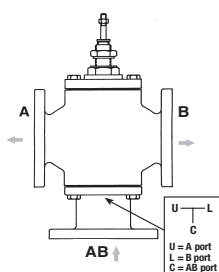
G7100D, 3-Way, Diverting Flanged Globe Valve



Technical Data

| | |
|-----------------------------------|--|
| Service | chilled, hot water, up to 60% glycol |
| Flow Characteristic | linear |
| Controllable Flow Range | stem up - open AB to B |
| Size [mm] | 4" [100] |
| End Fitting | 125 lb flanged |
| Body | cast iron - ASTM A126 Class B (ASME B16.1) |
| Stem | stainless steel |
| Stem Packing | NLP EPDM (no lip packing) |
| Seat | 316 stainless steel |
| Plug | bronze |
| Body Pressure Rating [psi] | ANSI 125 |
| ANSI Class | ANSI 125 (up to 175 psi below 150°F) |
| Number of Bolt Holes | 8 |
| Max Inlet Pressure (Water) | 150 psi (1034 kPa) @ 250°F |
| Media Temperature Range (Water) | 32°F to 300°F [0°C to 149°C] |
| Max Differential Pressure (Water) | 25 psi (172 kPa) |
| Rangeability | 50:1 |
| Cv | 154 |
| Weight | 138 lb [62.6 kg] |
| Leakage | ANSI Class III |
| Servicing | Repack/Rebuild kits available |

Flow Pattern



Application

This valve is typically used in Large Air Handling Units on heating or cooling coils. This valve is suitable for use in a hydronic system with variable flow. These valves are to be used in Diverting applications only.

Suitable Actuators

| | Non-Spring | Spring | Electronic Fail-Safe |
|--------|------------|--------|----------------------|
| G7100D | EVB(X) | AFB(X) | AVKB(X) |

Dimensions (Inches [mm])



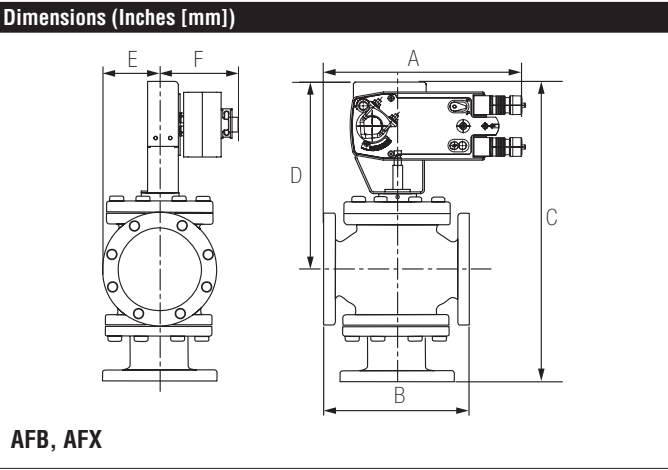
EVB, EVX, RVB, RVX

| A | B | C | D | E | F |
|-------------|-----------|--------------|--------------|------------|---|
| 13.7" [348] | 13" [330] | 29.69" [754] | 19.75" [502] | 4.5" [114] | |

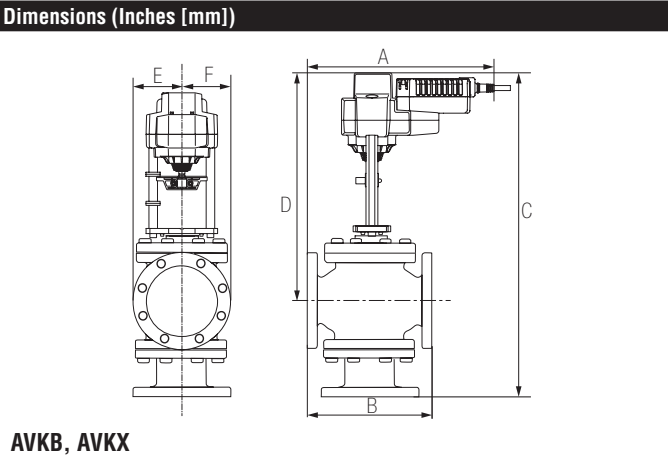
Piping

The valves 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. The preferred mounting position of the valve is with the valve stem vertical above the valve body, for maximum life. However, the assemblies can be mounted with valve stem vertical above the valve or up to 45 degrees in relation to the horizontal 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.

G7100D, 3-Way, Diverting Flanged Globe Valve



| A | B | C | D | E | F |
|-------------|-----------|-----------|--------------|------------|-------------|
| 13.7" [348] | 13" [330] | 28" [711] | 18.25" [464] | 4.5" [114] | 5.25" [135] |



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|-------------|-----------|--------------|--------------|------------|---|
| 13.7" [348] | 13" [330] | 29.69" [754] | 19.75" [502] | 4.5" [114] | |

AFBUP-S-X1

On/Off, Spring Return, 24 VAC/DC



| Technical Data | |
|-----------------------------------|---|
| Power Supply | 24...240 VAC +10% / -20%, 50/60 Hz, 24...125 VDC ±10% |
| Power Consumption Running | 7.5 W |
| Power Consumption Holding | 3.5 W |
| Transformer Sizing | 7 VA @ 24 VAC (class 2 power source), 8.5 VA @ 120 VAC, 18 VA @ 240 VAC |
| Electrical Connection | (2) 3ft [1m], 18 GA appliance cables with 1/2" conduit connectors |
| Overload Protection | electronic throughout 0° to 95° rotation |
| Operating Range Y | on/off |
| Feedback Output U | No Feedback |
| Angle of Rotation | 95°, adjustable with mechanical end stop, 35° to 95° |
| Direction of Rotation (Motor) | reversible with built-in switch |
| Direction of Rotation (Fail-Safe) | reversible with CW/CCW mounting |
| Position Indication | visual indicator, 0° to 95° (0° is full spring return position) |
| Manual Override | 5 mm hex crank (3/16" Allen), supplied |
| Running Time (Motor) | <75 sec |
| Running Time (Fail-Safe) | <20 sec |
| Humidity | max. 95% RH non-condensing |
| Ambient Temperature Range | -22°F to 122°F [-30°C to 50°C] |
| Storage Temperature Range | -40°F to 176°F [-40°C to 80°C] |
| Housing | NEMA 2, IP54, UL enclosure type 2 |
| Housing Material | zinc coated metal and plastic casing |
| Agency Listings† | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC |
| Noise Level (Motor) | <50 dB (A) |
| Noise Level (Fail-Safe) | <62 dB (A) |
| Servicing | maintenance free |
| Quality Standard | ISO 9001 |
| Weight | 4.6 lb [2.1 kg] |
| Auxiliary Switch | 2 x SPDT, 3A resistive (0.5A inductive) @ 250 VAC, one set at +10°, one adjustable 10° to 90° |

†Rated Impulse Voltage 4kV, Type of Action 1.AA.B, Control Pollution Degree 3.

Date created, 01/19/2017 - Subject to change. © Belimo Aircontrols (USA), Inc.

Wiring Diagrams

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.

- Meets cULus requirements without the need of an electrical ground connection.
- Actuators with appliance cables are numbered.
- Universal Power Supply (UP) models can be supplied with 24 VAC up to 240 VAC, or 24 VDC up to 125 VDC.
- Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.
- Provide overload protection and disconnect as required.
- Actuators may also be powered by 24 VDC.
- Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- Actuators may be powered in parallel. Power consumption must be observed.
- Parallel wiring required for piggy-back applications.

