# G6100C, 2-Way, Pressure Compensated Flanged Globe Valve

## 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. Bronze or stainless steel trim valves can be used for steam applications, depending on actuator and close-off combination.

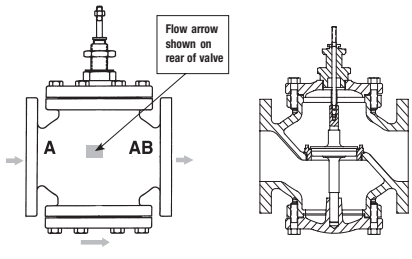
### Suitable Actuators

| | Non-Spring | Spring | Electronic fail-safe |
|---|---|---|---|
| G6100C | EVB(X) | 2*AFB(X) | AVKB(X) |

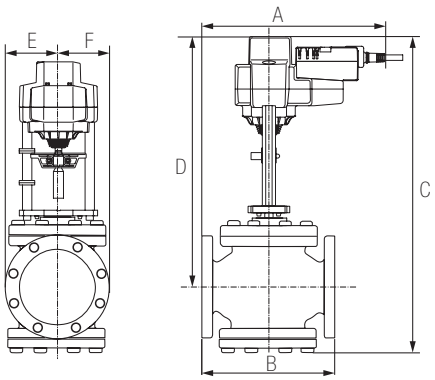
## Technical Data

| | |
|---|---|
| Media | chilled or hot water, up to 60% glycol, steam |
| Flow characteristic | equal percentage |
| Controllable flow range | stem up - open A – AB |
| Valve Size [mm] | 4" [100] |
| Pipe connection | 125 lb flanged |
| Housing | Cast iron - ASTM A126 Class B |
| Stem | stainless steel |
| Stem seal | NLP EPDM (no lip packing) |
| Seat | Stainless steel AISI 316 |
| Valve plug | brass |
| Body Pressure Rating | ANSI Class 125, up to 175 psi below 150°F |
| ANSI Class | 125 |
| Number of Bolt Holes | 8 |
| Maximum Inlet Pressure (Steam) | 35 psi [241 kPa] |
| Max Differential Pressure (Steam) | 15 psi [103 kPa] |
| Rangeability Sv | 98:1 |
| Cv | 170 |
| Weight | 125.69 lb [57 kg] |
| Media Temp Range (water) | 32...338°F [0...138°C] |
| Leakage rate | ANSI Class III |
| Maintenance | repack/rebuild kits available |

## Flow Pattern




## Dimensions (Inches [mm])




**EVB, EVX, RVB, RVX**

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 13.7" [349] | 13" [330] | 8135 | 19.8" [502] | 4.5" [114] | |

## Safety Notes

WARNING: For Belimo products sold in California: these products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see www.p65warnings.ca.gov.

## 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° 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.

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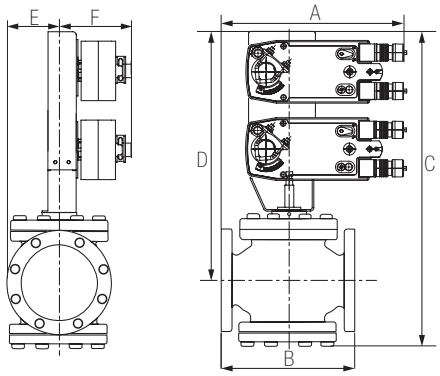
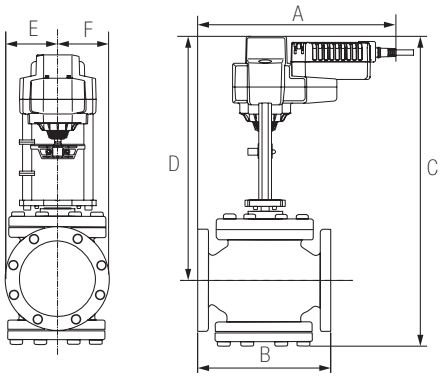
## Dimensions (Inches [mm])




**2*AFB, 2*AFX**

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 13.7” [349] | 13” [330] | 30” [762] | 23.2” [590] | 4.5” [114] | 5.3” [135] |

## Dimensions (Inches [mm])




**AVKB, AVKX**

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 13.7” [349] | 13” [330] | 26.6” [676] | 19.8” [502] | 4.5” [114] | |

# AVKB24-3

## On/Off, Floating Point, Electronic Fail-Safe, Linear, 24 V

| Technical Data | |
|---|---|
| Power Supply | 24 VAC ± 20%, 50/60 Hz |
| Power Consumption Running | 5 W |
| Power Consumption Holding | 2 W |
| Transformer Sizing | 9.5 VA (class 2 power source) |
| Electrical Connection | 3 ft, 18 GA plenum rated cable with 1/2" conduit connector protected NEMA 2 (IP54) |
| Overload Protection | electronic throughout full stroke |
| Electrical Protection | actuators are double insulated |
| Operating Range Y | on/off, floating point |
| Input Impedance | 100 k Ω (0.1 mA), 500 Ω, 1000 Ω (on/off) |
| Feedback Output U | No Feedback |
| Stroke | 1.25" [32 mm] |
| Linear Force | 450 lbf [2000 N force] |
| Direction of Rotation (Motor) | reversible with switch |
| Direction of Rotation (Fail-Safe) | reversible with switch |
| Position Indication | stroke indicator on bracket |
| Manual Override | 5 mm hex crank (3/16" Allen), supplied |
| Running Time (Motor) | 90 sec, constant independent of load |
| Running Time (Fail-Safe) | 35 sec |
| Bridge Time | 2 sec delay before fail-safe activates |
| Pre-charging Time | 5 to 20 seconds |
| Humidity | 5 to 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 | Aluminum die cast 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) | <60 dB (A) |
| Noise Level (Fail-Safe) | <60 dB (A) |
| Servicing | maintenance free |
| Quality Standard | ISO 9001 |
| Weight | 6.4 lb [2.9 kg] |

† Use flexible metal conduit. Push the listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control pollution degree 3.

## Wiring Diagrams

### INSTALLATION NOTES

Meets cULus requirements without the need of an electrical ground connection.

1 Provide overload protection and disconnect as required.

2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

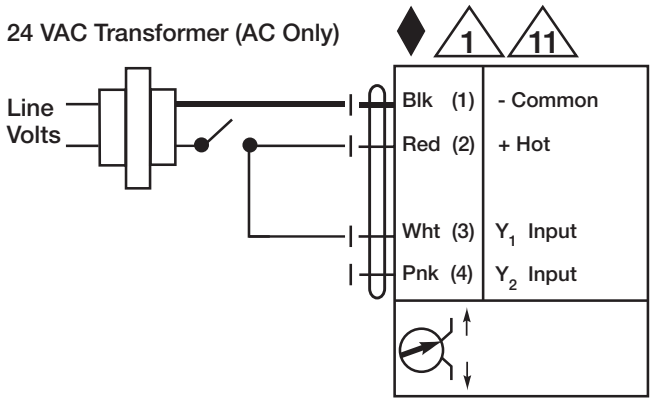
8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

11 Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

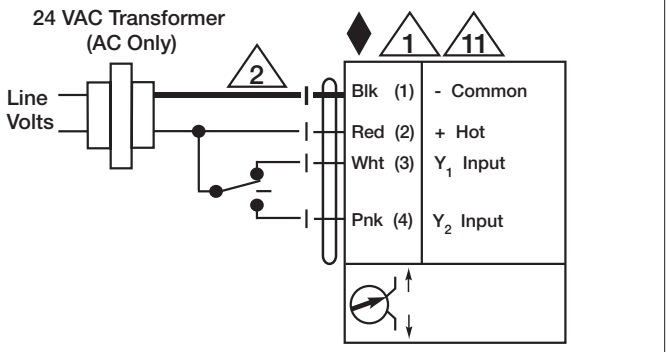
18 Actuators with plenum cable do not have numbers; use color codes instead.

### 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.




On/Off




Floating Point