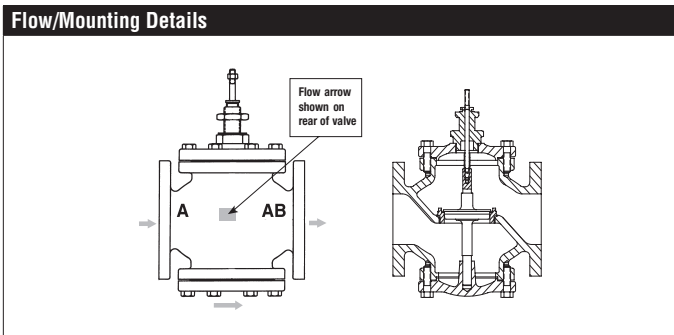


# G680C-250 Technical Data Sheet



| Technical Data                    |   |
|-----------------------------------|---|
| Fluid                             | chilled or hot water, up to 60% glycol, steam |
| Flow characteristic               | equal percentage                              |
| Controllable flow range           | stem up - open A – AB                         |
| Valve Size [mm]                   | 3" [80]                                       |
| Pipe connection                   | 250 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                        | bronze  |
| Body Pressure Rating              | ANSI Class 250, up to 280 psi below 350°F     |
| ANSI Class                        | 250   |
| Number of Bolt Holes              | 8   |
| Maximum Inlet Pressure (Steam)    | 35 psi [241 kPa]                              |
| Max Differential Pressure (Steam) | 15 psi [103 kPa]                              |
| Rangeability Sv                   | 91:1  |
| Cv                                | 90  |
| Weight                            | 74.97 lb [34 kg]                              |
| Fluid Temp Range (water)          | 32...350°F [0...176°C]                        |
| Leakage rate                      | ANSI Class III                                |
| Servicing                         | repack/rebuild kits available                 |



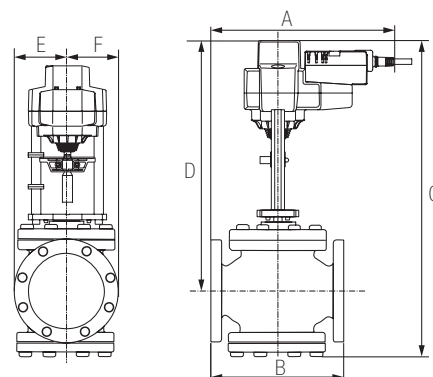
## Application

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 |
|-----------|------------|----------------|----------------------|
| G680C-250 | EVB(X)     | AF, (2*AFB(X)) | AVKB(X)              |

## Dimensions (Inches [mm])



**EVB, EVX, RVB, RVX**

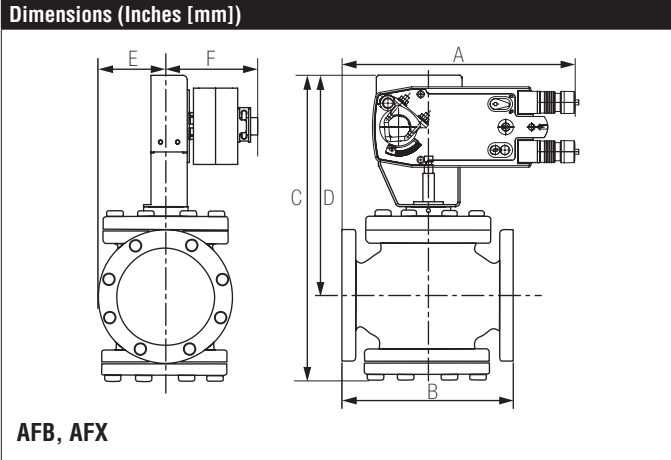
| A           | B           | C           | D           | E          | F |
|-------------|-------------|-------------|-------------|------------|---|
| 12.6" [320] | 10.7" [273] | 24.6" [626] | 19.3" [489] | 4.1" [105] |   |

## Safety Notes

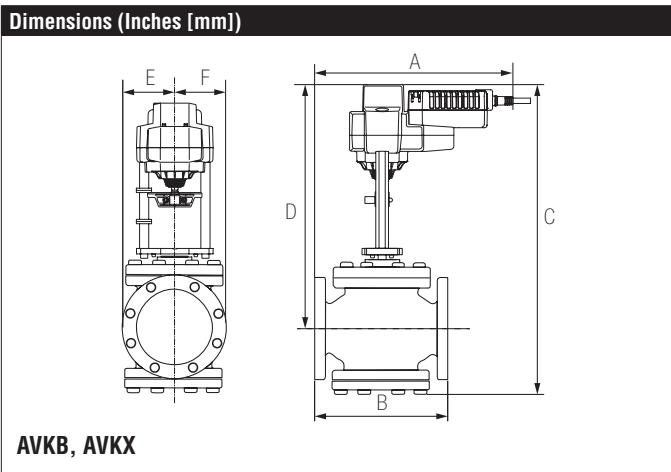
**WARNING:** This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

## Piping

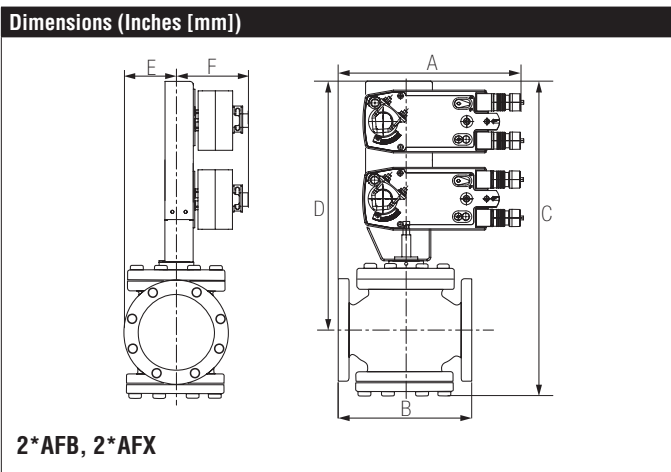
The valves should be mounted in a weather-protected area in a location that is within the ambient limits of the actuator. Allow sufficient room for valve with actuator and for service. The preferred mounting position of the valve is with the valve stem vertical above the valve body, for maximum life. 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.



| A           | B           | C           | D           | E          | F          |
|-------------|-------------|-------------|-------------|------------|------------|
| 12.6" [320] | 10.7" [273] | 22.7" [577] | 17.8" [453] | 4.1" [105] | 5.3" [135] |



| A           | B           | C           | D           | E          | F |
|-------------|-------------|-------------|-------------|------------|---|
| 12.6" [320] | 10.7" [273] | 24.6" [626] | 19.3" [489] | 4.1" [105] |   |



| A           | B           | C           | D           | E          | F          |
|-------------|-------------|-------------|-------------|------------|------------|
| 12.2" [310] | 10.7" [273] | 30.0" [762] | 25.1" [638] | 3.9" [100] | 5.3" [135] |

# EVB24-SR Technical Data Sheet

Modulating, Non-Spring Return, Linear, 24 V, for DC 2...10 V or 4...20 mA



5-year warranty



## Technical Data

|                                    |   |
|------------------------------------|---|
| Power Supply                       | 24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%  |
| Power consumption in operation     | 5 W   |
| Power consumption in rest position | 1.5 W   |
| Transformer sizing                 | 7.5 VA (class 2 power source)   |
| Electrical Connection              | 18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector, degree of protection NEMA 2 / IP54 |
| Overload Protection                | electronic throughout full stroke   |
| Electrical Protection              | actuators are double insulated  |
| Operating Range                    | 2...10 V, 4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)   |
| Input Impedance                    | 100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA   |
| Position Feedback                  | 2...10 V  |
| Stroke                             | 2" [50 mm]  |
| Actuating force motor              | 560 lbf [2500 N]  |
| Direction of motion motor          | selectable with switch 0/1  |
| Position indication                | Mechanically, with pointer  |
| Manual override                    | 5 mm hex crank (3/16" Allen), supplied  |
| Running Time (Motor)               | 90 s, constant, independent of load   |
| Ambient humidity                   | max. 95% r.H., non-condensing   |
| Ambient temperature                | -22...122°F [-30...50°C]  |
| Storage temperature                | -40...176°F [-40...80°C]  |
| Degree of Protection               | IP54, NEMA 2, UL Enclosure Type 2   |
| Housing material                   | Die cast aluminium and plastic casing   |
| Agency Listing                     | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU       |
| Noise level, motor                 | 60 dB(A)  |
| Servicing                          | maintenance-free  |
| Quality Standard                   | ISO 9001  |
| Weight                             | 5.73 lb [2.6 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**

- Actuators may also be powered by 24 VDC.
- A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 2 to 10 VDC.
- Actuators with plenum cable do not have numbers; use color codes instead.
- Meets cULus 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.

