

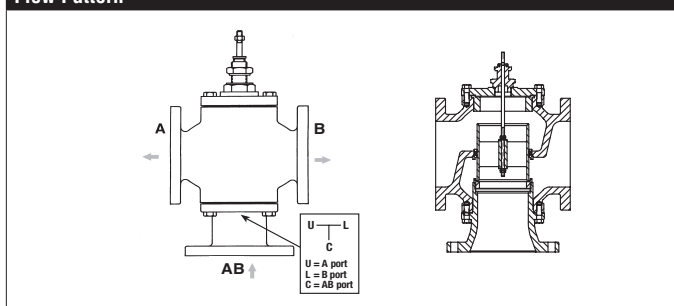
G780D, 3-Way, Diverting Flanged Globe Valve



Technical Data

Service	chilled, hot water, up to 60% glycol
Flow Characteristic	linear
Controllable Flow Range	stem up - open AB to B
Size [mm]	3" [80]
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	4
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	85
Weight	78 lb [35.4 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
G780D	EVB(X)	AFB(X)	AVKB(X)

Dimensions (Inches [mm])



EVB, EVX, RVB, RVX

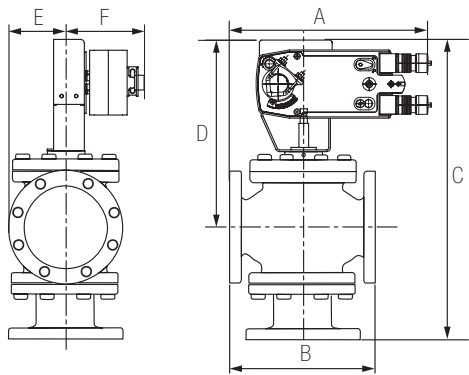
A	B	C	D	E	F
12.2" [310]	10" [254]	27.27" [693]	19" [483]	3.94" [100]	

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.

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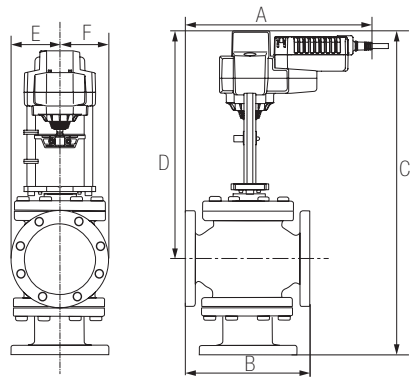
Dimensions (Inches [mm])



AFB, AFX

A	B	C	D	E	F
12.2" [310]	10" [254]	25.6" [650]	17.75" [451]	3.94" [100]	5.25" [135]

Dimensions (Inches [mm])



AVKB, AVKX

A	B	C	D	E	F
12.2" [310]	10" [254]	27.27" [693]	19" [483]	3.94" [100]	

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.

