

G220B-K, 2-Way, Globe Valve, Bronze Trim



Technical Data

Service	chilled or hot water, up to 60% glycol, steam
Flow Characteristic	modified equal percentage
Controllable Flow Range	stem up - open A to AB
Size [mm]	0.75" [20]
End Fitting	NPT female ends
Body	bronze
Stem	stainless steel
Stem Packing	EPDM O-ring
Seat	bronze
Plug	brass
Body Pressure Rating [psi]	ANSI 250
ANSI Class	ANSI 250 (up to 400 psi below 150°F)
Max Inlet Pressure (Steam)	35 psi (241 kPa)
Media Temperature Range (Water)	20°F to 280°F [-7°C to 138°C]
Media Temperature Range (Steam)	32°F to 280°F [0°C to 138°C]
Maximum Differential Pressure (Steam)	20 psi (103 kPa)
Max Differential Pressure (Water)	35 psi (241 kPa)
Rangeability	100:1
Cv	7.5
Leakage	ANSI Class VI
Servicing	repack kits available

Flow Pattern



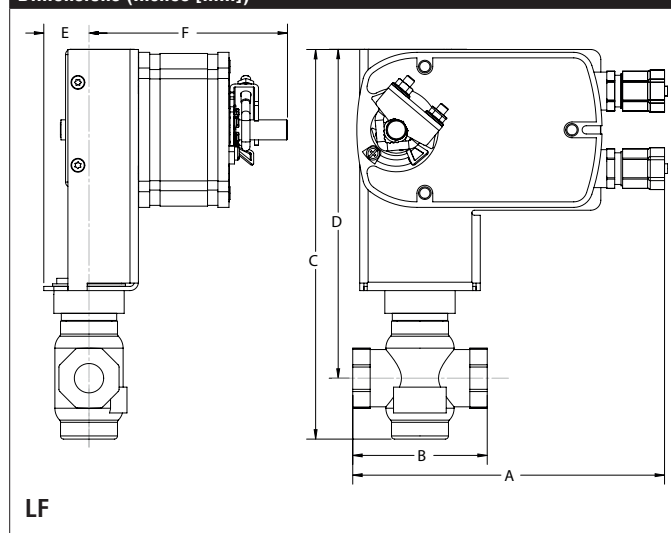
Application

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 hydronic systems with variable flow. Bronze and stainless steel trim valves can be used for steam applications, depending on actuator and close-off combinations.

Suitable Actuators

	Non-Spring	Spring	Electronic Fail-Safe
G220B-K	LVB(X)	LF	LVKB(X)

Dimensions (Inches [mm])



A	B	C	D	E	F
7.8" [200]	3.4" [86]	9.69" [246]	8.18" [208]	1.18" [30]	4.94" [125]

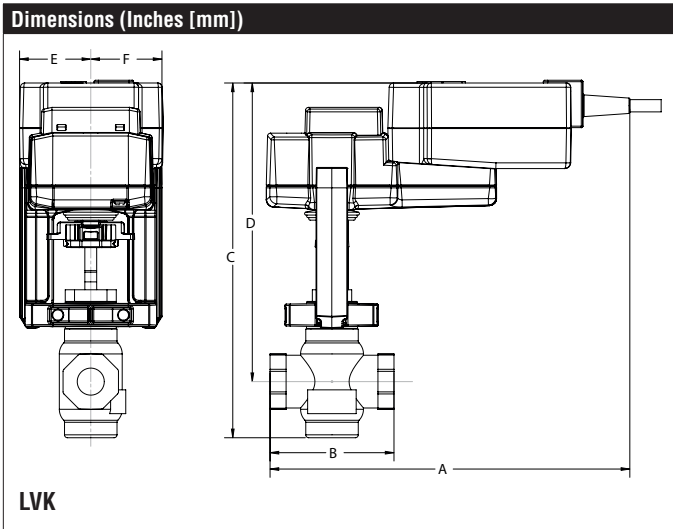
Piping

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 G2 and G3 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 the valve stem 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.

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A	B	C	D	E	F
8.6" [218]	3.4" [86]	8.9" [226.1]	7.39" [188]	1.93" [49]	



A	B	C	D	E	F
9.7" [247]	3.4" [86]	9.6" [244]	8.06" [205]	1.93" [49]	

LF24-SR-S US, Valve Actuator

Modulating, Spring Return, 24 VAC for 2 to 10 VDC or 4 to 20 mA Control Signal



Technical Data	
Power Supply	24 VAC \pm 20%, 50/60 Hz, 24 VDC \pm 10%
Power Consumption Running	2.5 W
Power Consumption Holding	1 W
Transformer Sizing	5 VA (class 2 power source)
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	2 to 10 VDC, 4 to 20 mA w/ ZG-R01 (500 Ω , 1/4 W resistor)
Input Impedance	100 k Ω for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA
Feedback Output U	2 to 10 VDC (max 0.7 mA) for 95°
Angle of Rotation	90°
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)
Running Time (Motor)	150 sec constant, independent of load
Running Time (Fail-Safe)	<25 sec @ -4°F to 122°F [-20°C to 50°C], < 60 sec @ -22°F [-30°C]
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
Agency Listings†	cULus acc. To UL 873 and CAN/CSA C22.2 No. 24-93
Noise Level (Motor)	<50 dB (A)
Noise Level (Fail-Safe)	<62 dB (A)
Servicing	maintenance free
Quality Standard	ISO 9001
Auxiliary Switch	1 x SPDT, 3A resistive (0.5A inductive) @ 250 VAC, adjustable 0° to 95° (double insulated)

†Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

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Wiring Diagrams

✂ INSTALLATION NOTES

- Actuators with appliance cables are numbered.
- Provide overload protection and disconnect as required.
- Actuators may also be powered by 24 VDC.
- Only connect common to negative (-) leg of control circuits.
- A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 2 to 10 VDC.
- Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.
- One built-in auxiliary switch (1x SPDT), for end position indication, interlock control, fan startup, etc.
- 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.
- 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.

