

G7...(S) 3-way Mixing Flanged Globe Valve, Bronze or Stainless Steel Trim

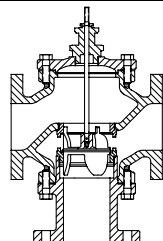
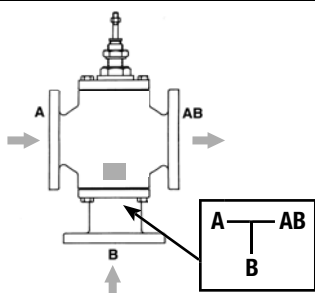


Technical Data

	G7	G7...S
Service	chilled or hot water, 60% glycol	chilled or hot water, 60% glycol
Flow characteristic	linear	
Action	stem up - open B to AB	
Sizes	2½" to 6"	
End fitting	125 lb. flanged	
Materials		
Body	iron	iron
Seat	bronze	stainless steel
Stem	stainless steel	stainless steel
Plug	bronze	stainless steel
Packing	NLP (no lip packing)	TFE V-ring
ANSI class	ANSI 125	
Leakage	Class III	
Max inlet Water	150 psi (1034kPa) @ 250°F	150 psi (1034kPa) @ 250°F
Media temperature Water	32°F to 350°F (0°C to 176°C)	32°F to 350°F (0°C to 176°C)
Maximum ΔP* Water	25 psi (172kPa)	50 psi (340kPa)
Rangeability	50:1	
Valve weights	G765(S) 64 lbs G780(S) 83 lbs G7100(S) 139 lbs G7125(S) 157 lbs G7150(S) 202 lbs	

*(50% or more open)

G7...(S) 3-way Flow Patterns



Flow Pattern is marked on valve.

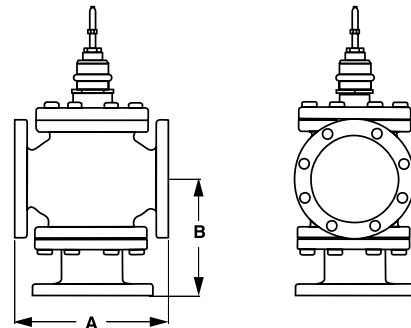
Stem Up = Open B to AB

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.

Valve Nominal Size		Type	Suitable Actuators			
C _v	Inches	3-way Flanged	Non-Spring	Spring		Electronic Fail-Safe
68	2½	G765(S)	NVG	GM Series	AF	APX Series
91	3	G780(S)				
190	4	G7100(S)				
280	5	G7125(S)				
340	6	G7150(S)				
						GK Series

Dimensions



D169-G73W

Valve Nominal Size			Dimensions (Inches [mm])	
Valve Body	Inches	DN [mm]	A	B
G765(S)	2½"	[65]	9.00" [229]	7.12" [181]
G780(S)	3"	[80]	10.00" [254]	8.00" [203]
G7100(S)	4"	[100]	13.00" [330]	9.87" [251]
G7125(S)	5"	[125]	15.75" [400]	9.25" [235]
G7150(S)	6"	[150]	17.75" [451]	9.87" [251]

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. For the NV Series, allow 6" for cover removal and 12" for complete actuator removal. The G6/G7 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.

EVB24-SR

Proportional, Non-Spring Return, Linear, 24 V, for 2 to 10 VDC or 4 to 20 mA



Technical Data

Power supply	24 VAC \pm 20% 50/60 Hz, 24 VDC \pm 10%
Power consumption running	6 W
Power consumption holding	3.5 W
Transformer sizing	7 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
Control	2-10 VDC
Operating Range Y	2 to 10 VDC, 4 to 20 mA (default)
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
Stroke	2" [50 mm]
Linear Force	562 lbf [2500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-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 UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<65dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† 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.

Application

For multiple control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size selection. All valve selections should be done in accordance with the flow parameters and system specifications. The actuator is mounted directly to the globe valve bonnet by means of its universal clamp and collar.

The actuator operates in response to a 2 to 10 VDC, or with the addition of a 500 resistor, a 4 to 20 mA control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

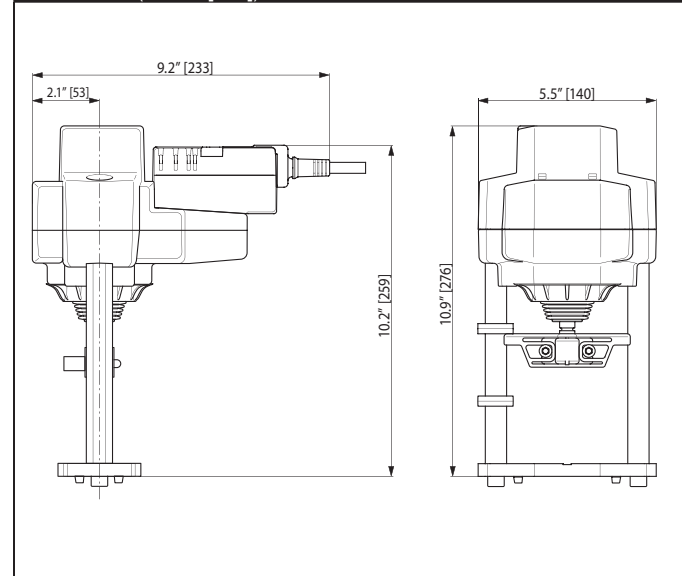
The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The EV series provides 50 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The EV... series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and -MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel. Along with the Adaption button on -MFT models will have a yellow Status light to confirm communication.

Dimensions (Inches [mm])



PT10401 - 01/13 - Subject to change. © Belimo Aircontrols (USA), Inc.

Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

✂️ INSTALLATION NOTES

- 3 Actuators may also be powered by 24 VDC.
- 7 a 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC
- 18 Actuators with plenum cable do not have numbers; use color codes instead.
- Meets cULus or UL and CSA Standard 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.

