

Powermite Globe Valves



A-135

Valves

Ranging from 1/2 to 1 inch (Cv range of 0.4 to 10), Powermite Globe Valves provide more choices for applications, featuring direct-coupled technology for connection of valve body and actuator without tools. Other features include a compact housing design, actuators capable of handling a variety of media, and a wide variety of options and end connections. For ease of product selection and ordering, the Powermite valves and actuators follow the same sizing and selection process as the Flowrite.

The Powermite Globe Valve line features:

MZ Series

- Close-off up to 70 PSI
- Electronic Non-Spring Return actuators only
 - 0 to 10 V
 - Floating control
- Low leakage rate (ANSI Class IV)

MT Series for Terminal Unit Control

- Close-off up to 160 PSI
- Pneumatic and Electronic actuators
 - 3 to 8 psig spring range
 - 8 to 13 psig spring range
 - 10 to 15 psig spring range
 - Floating Spring Return or Non-Spring Return electronic actuators
 - 0 to 10 V or 40 to 20 mA Spring Return or Non-Spring Return electronic actuators
 - Low leakage rate (ANSI Class IV)



A photograph of two men in a server room. They are both wearing blue polo shirts and blue jeans. The man on the left is holding a laptop, and the man on the right is pointing at the screen. They are standing in front of large, silver, cylindrical server racks. The room has a clean, industrial look with a light-colored floor.

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Siemens offers a 5-year warranty on valves, actuators, damper actuators, sensors and thermostats.

SIEMENS

Two-way Valves

1/2 to 1-inch

Normally Open or Normally Closed



Powermite MZ Series
Two-way Globe Valve

A-137

Valves

Description

The Powermite MZ Series Two-way Globe Valves are designed to work with the SSB MZ Series Actuator with a 7/32-inch (5.5 mm) stroke.

Features

- Direct-coupled universal bonnet/no tools required for installation
- ANSI Leakage Class IV (0.01% of Cv)
- ANSI Class 250 body
- Variety of actuators available
 - 0 to 10 V non-spring return
 - Floating control non-spring return
- Choice of end connections
- Greater than 100:1 rangeability for $C_v \geq 1$
- Orderable as a valve only or as a complete valve/actuator assembly

Applications

The Powermite MZ Series Two-way Globe Valves are used for control of hot or chilled water for convectors, fan coil units, unit conditioners, radiation, reheat coils, and similar terminal units requiring an actuator that delivers a minimum of 45 lbf. (200 N) of force.

Recommendation:

Use only with the MZ Series SSB Valve Actuators.

Specifications

Valve Size	 1/2 to 1" (15 to 25 mm)
Body Style	 Globe
Seat Style	 Metal to Metal
Action	 NO/NC
Valve Body Rating	 ANSI Class 250
Stem Travel (Stroke)	 7/32" (5.5 mm)
Materials	
Body	 Forged Brass C37700 (1/2 and 3/4 inch) or UNS CA 844 Bronze (1 inch)
Trim	 Brass
Stem	 Stainless Steel ASTM A 582 Type 303
Packing	 EPDM O-rings
Controlled Medium	 Water, Glycol Solutions up to 50%
Medium Temperature Range	 35° to 250°F (2° to 120°C)

Max. Recommended Differential Pressure for Modulating Service	25 psig (173 kPa)
Rangeability	
Cv<1	>50:1
Cv≥1	>100:1
Close-off Ratings	According to ANSI/FCI 70-2
Leakage Rate	Class IV (0.01% of Cv)
Flow Characteristics	Modified Equal Percentage
Mounting Location	NEMA 1 (Interior Only)

Refer back to the Selection Charts at the beginning of this section to make sure the configuration is valid.

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Valves

Valve Product Ordering

Normally Open/Normally Closed, Brass Trim



Connection	Valve Size in. (mm)	Flow Rate Cv (Kvs)	Normally Open Part No.	Normally Closed Part No.
Internal thread x Internal thread	1/2 (15)	0.4 (0.34)	599-01115	599-01100
	1/2 (15)	0.63 (0.54)	599-01117	599-01102
	1/2 (15)	1 (0.85)	599-01119	599-01104
	1/2 (15)	1.6 (1.37)	599-01121	599-01106
	1/2 (15)	2.5 (2.14)	599-01123	599-01108
	1/2 (15)	4 (3.42)	599-01126	599-01110
	3/4 (20)	6.3 (5.38)	599-01129	599-01112
	1 (25)	10 (8.55)	599-01131	599-01114

There are no repair parts for this product. Replace the entire valve body if inoperative.

Actuator Product Ordering

Description			Part No.	Actuator Prefix Code
	Electro-Mechanical	24 V, Floating Non-Spring Return	S55180-A150 (SSB131.09U)	254
		24 V, 0-10 V Non-Spring Return	S55180-A151 (SSB161.05U)	255

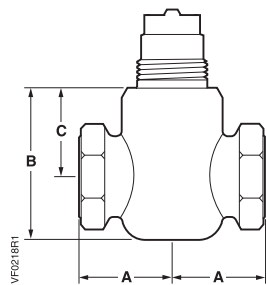
Accessories & Service Kits

A-305

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Dimensions



Internal NPT by Internal NPT
(ITxIT)

Valve Size in.	Dimensions			Weight
	A	B	C	
1/2" (15 mm)	1-3/8" (35 mm)	2-1/4" (57 mm)	1-5/16" (33 mm)	1.3 lb. (0.6 kg)
3/4" (20 mm)	1-5/8" (41 mm)	2-3/8" (59 mm)	1-5/16" (33 mm)	1.8 lb. (0.8 kg)
1" (25 mm)	1-15/16" (49 mm)	2-3/4" (69 mm)	1-9/16" (39 mm)	2.6 lb. (1.2 kg)



Siemens offers a 5-year warranty on valves and actuators.

A-140



A more durable butterfly valve design that lasts even longer

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even longer



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Factory tested



Up to 5 Million
Repositions
for longer life



Up to 100 Thousand
Full strokes

SIEMENS

Three-way Mixing Valves

1/2 to 1-inch



Powermite MZ Series
Three-way Globe Valve

A-141

Valves

Description

The Powermite MZ Series Three-way Globe Valves are designed to work the SSB MZ Series Actuator with a 7/32-inch (5.5 mm) stroke.

Features

- Direct-coupled universal bonnet/no tools required for installation
- ANSI Leakage Class IV (0.01% of Cv)
- ANSI Class 250 body
- Variety of actuators available
 - 0 to 10 V non-spring return
 - Floating control non-spring return
- Choice of end connections
- Greater than 100:1 rangeability for $C_v \geq 1$
- Orderable as a valve only or as a complete valve/actuator assembly

Applications

The Powermite MZ Series Three-way Globe Valves are used for mixing of hot or chilled water for convectors, fan coil units, unit conditioners, radiation, reheat coils, and similar terminal units requiring an actuator that delivers a minimum of 45 lbf. (200 N) force.

Recommendation:

Use only with the MZ Series SSB Valve Actuators.

Specifications

Valve Size	1/2 to 1" (15 to 25 mm)
Body Style	Globe
Seat Style	Metal to Metal
Action	Three-way Mixing
Valve Body Rating	ANSI Class 250
Stem Travel (Stroke)	7/32" (5.5 mm)
Materials	
Body	Forged Brass C37700 (1/2 and 3/4 inch) or UNS CA 844 Bronze (1 inch)
Trim	Brass
Stem	Stainless Steel ASTM A582 Type 303
Packing	EPDM O-rings
Controlled Medium	Water, Glycol Solutions up to 50%
Medium Temperature Range	35° to 250°F (2° to 120°C)

Max. Recommended Differential Pressure for Modulating Service	25 psig (173 kPa)
Rangeability	
Cv<1	>50:1
Cv≥1	>100:1
Close-off Ratings	According to ANSI/FCI 70-2
Leakage Rate	Class IV (0.01% of Cv)
Flow Characteristics	
A→AB	Modified Equal Percentage
B→AB	Linear
Mounting Location	NEMA 1 (Interior Only)



Refer back to the Selection Charts at the beginning of this section to make sure the configuration is valid.

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Valves

Valve Product Ordering

Water Mixing, Brass Trim



Valve Size		Flow Rate		Part No.
in.	(mm)	Cv	(Kvs)	
1/2	(15)	0.4	(0.34)	599-01132
1/2	(15)	0.63	(0.54)	599-01133
1/2	(15)	1	(0.85)	599-01134
1/2	(15)	1.6	(1.37)	599-01135
1/2	(15)	2.5	(2.14)	599-01136
1/2	(15)	4	(3.42)	599-01137
3/4	(20)	6.3	(5.38)	599-01138
1	(25)	10	(8.55)	599-01139

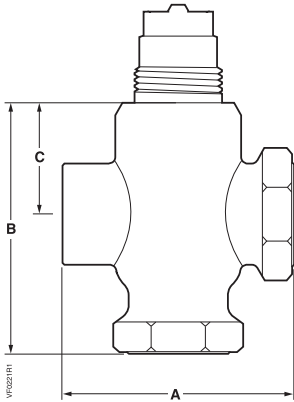
There are no repair parts for this product. Replace the entire valve body if inoperative.

Actuator Product Ordering

Description		Part No.	Actuator Prefix Code
	24 V, Floating Non-Spring Return	S55180-A150 (SSB131.09U)	254
	24 V, 0-10 V Non-Spring Return	S55180-A151 (SSB161.05U)	255

Dimensions and Weights

Valve Size in.	Dimensions			Weight
	A	B	C	
1/2" (15 mm)	2-3/4" (70 mm)	2-15/16" (74 mm)	1-5/16" (33 mm)	1.5 lb. (0.7 kg)
3/4" (20 mm)	3-1/4" (83 mm)	2-3/8" (59 mm)	1-5/16" (33 mm)	2.3 lb. (1.05 kg)
1" (25 mm)	3-7/8" (98 mm)	3-15/16" (99 mm)	1-9/16" (39 mm)	3.3 lb. (1.5 kg)



Accessories & Service Kits

A-305

SSB Valve Actuator

*24 Vac, Floating Control,
24 Vac /dc, 0-10V Control
Non-Spring Return*



Powermite MZ Series
SSB Electronic Valve Actuator

A-143

Valves

Description

The Powermite SSB131.09U Electronic Valve Actuator requires a 24 Vac supply and uses floating control to control a valve. The Powermite SSB161.05U Electronic Valve Actuator requires a 24 Vac/dc supply and receives a 0 to 10 Vdc control signal to proportionally control a valve. These actuators are designed to work with Powermite MZ Series Valves with a 7/32-inch (5.5 mm) stroke and a threaded valve bonnet that fits the actuator.

Features

- UL-listed for plenum installations
- Direct-coupled for installation without tools
- Close-off up to 70 PSI on 1/2-inch valve
- Non-spring return
- Self-calibration to valve stroke with modulating SSB161.05U
- Manual override
- Visual LED motion and position indication
- Orderable as an actuator only or as a complete valve/actuator assembly

Applications

The Powermite SSB Electronic Valve Actuators are for use in heating and cooling HVAC applications with Powermite Valves that need 45 lbf. (200 N) of nominal force.

Recommendation:

Use only with the MZ Series valve bodies.

Specifications

Operating Voltage		Nominal Stroke	7/32" (5.5 mm)
SSB131.09U.....	24 Vdc ±20%	Nominal Force.....	45 lbf. (200 N)
SSB161.05U.....	24 Vac ±15% or 24 Vdc ±20%	Agency Approvals	UL/cUL, UL 67030
Frequency		Ambient Temperature	
50/60 Hz		Operation.....	34° to 122°F (1° to 50°C)
Power Supply		Transport and Storage	-13° to 158°F (-25° to 70°C)
Earth Ground Isolating, Class 2, 24 Vac Transformer		Ambient Humidity.....	0 to 95% RH, Non-condensing
Power Consumption		Wiring Connection.....	Terminal Block for Plenum Cable (Accessory Available for 3/8-inch Flex Conduit)
SSB131.09U.....	1.0 VA (ac)	Mounting Location	NEMA 2/IP20 (Interior Only)
SSB161.05U.....	3.0 VA (ac), 1.2W (dc)		
Control Signal (Y)			
SSB131.09U.....	floating (Y1, Y2) 24 ac		
SSB161.05U.....	modulating (Y) 0 to 10 Vdc		
Running Time			
SSB131.09U.....	88 sec (±25%)		
SSB161.05U.....	27.5 sec. (±25%)		

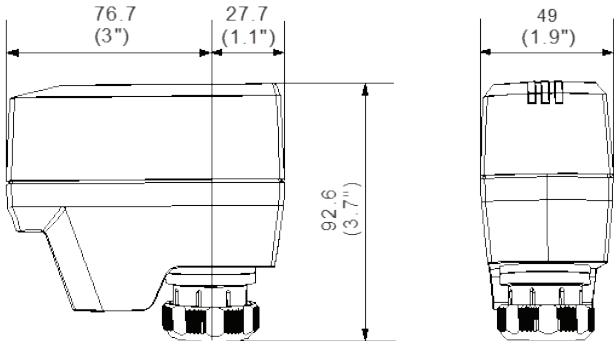
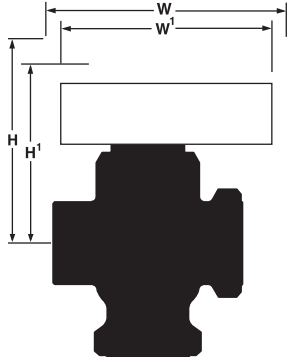
Product Ordering

Description	Part No.	Actuator Prefix Code
Floating	S55180-A150 (SSB131.09U)	254
0 to 10 V	S55180-A151 (SSB161.05U)	255
There are no repair parts for this product. Replace the entire actuator if inoperative.		

Dimensions

Valve Size in.	Center Line to Top of Actuator	Service Height	Actual Width	Service Width
	H ¹	H	W ¹	W
1/2" (15 mm)	4.9" (125 mm)	12.9" (328 mm)	4.1" (104 mm)	12.1" (307 mm)
3/4" (20 mm)	4.9" (125 mm)	12.9" (328 mm)	4.1" (104 mm)	12.1" (307 mm)
1" (25 mm)	5.2" (131 mm)	13.2" (335 mm)	4.1" (104 mm)	12.1" (307 mm)

Service height and width are the recommended dimensions to allow access to the product.



Dimensions shown in inches (mm)