

## Two- and Three-Way Zone Valves

1/2 to 1" Brass Body

Normally Open/Normally Closed/Diverting



Two-Way NPT Zone Valve.



Three-Way Sweat Zone Valve.

### Description

Two- and Three-Way Zone Valves have a 1/10-inch (2.5 mm) stroke. The Zone Valves work with any SFA/SFP Series, SSA/SSP Series electric actuator, or with the STA/STP Series Thermic actuator. The actuators accept one of either 24 Vac or 120 Vac power supply signal to provide on/off, floating or 0 to 10 Vdc control.

### Features

- All metal plug and seat for superior control
- Direct-coupled universal bonnet — install actuators without tools
- Sweat or NPT end connections
- Order separately or with an actuator as a complete assembly

### Applications

Typical applications for Two- and Three-Way Zone Valves are hot or chilled water for zones with radiators; floor heating via manifolds; fan coil units; cooling ceilings; wall-mounted boilers; and VAV applications.

#### Recommendation:

Use only with Zone Valve Actuators.

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## Two- Three-Way Zone Valve Specifications

**Line Size** ..... 1/2-inch to 1-inch (15 mm to 25 mm)  
**Body Style** ..... Globe  
**Action**  
 2-way ..... NO/NC Determined by Actuator  
 3-way ..... Diverting/Mixing (Limited Application)  
**Valve Body Rating** ..... ANSI Class 125  
**Stem Travel (Stroke)** ..... 1/10-inch (2.5 mm)  
**Materials**  
 Body ..... Brass  
 Trim ..... Brass  
 Stem ..... Stainless Steel ASTM A582 Type 303  
 Packing ..... EPDM O-rings

**Controlled Medium** ..... Water, Glycol Solutions to 50%  
**Medium Temperature Range** ..... 34 to 230°F (1 to 110°C)  
**Maximum Inlet Pressure** ..... 125 psig  
**Leakage Rate** ..... ANSI Class III  
**Close-off Ratings** ..... According to ANSI/FCI 70-2  
**Flow Characteristic** ..... Linear

## Zone Valve Body Product Ordering

Nominal Valve Size		Flow Rate		Part No.	
Inch	mm	Cv	(Kvs)	NPT	Sweat
<b>Two-Way Valve Bodies</b>					
0.5	15	1.0	(0.85)	<b>599-00210</b>	<b>599-00510</b>
0.5	15	2.5	(2.15)	<b>599-00211</b>	<b>599-00511</b>
0.5	15	4.0	(3.4)	<b>599-00214</b>	<b>599-00514</b>
0.75	20	4.1	(3.5)	<b>599-00212</b>	<b>599-00512</b>
1.00	25	7.0	(6.0)	<b>599-00213</b>	<b>599-00513</b>
<b>Three-Way Valve Bodies</b>					
0.5	15	1.0	(0.85)	<b>599-00230</b>	<b>599-00530</b>
0.5	15	2.5	(2.15)	<b>599-00231</b>	<b>599-00531</b>
0.5	15	4.0	(3.4)	<b>599-00234</b>	<b>599-00534</b>
0.75	20	4.1	(3.5)	<b>599-00232</b>	<b>599-00532</b>
1.00	25	7.0	(6.0)	<b>599-00233</b>	<b>599-00533</b>

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## Zone Valve Actuator Product Ordering

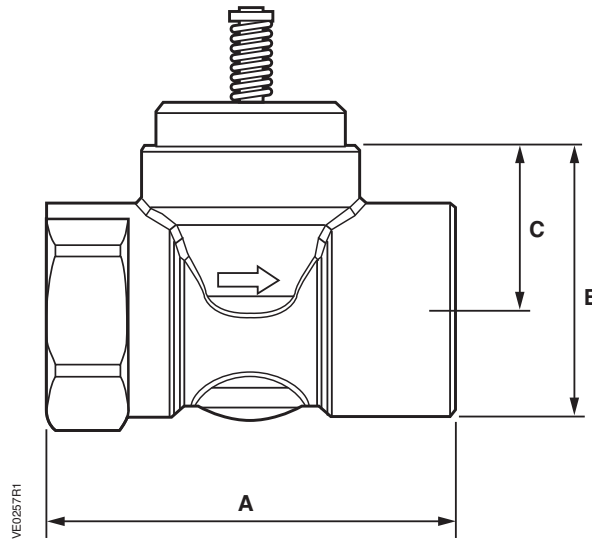
Description		Part No.	Actuator Prefix Code
Two-Way Valves	Three-Way Valves		
<b>Normally Open</b>			
24 Vac, 0 to 10 Vdc, Modulating	24 Vac, 0-10 Vdc, Modulating	<b>SSP61U</b>	248
24 Vac/dc, 2-Position, Spring Return	24 Vac/dc, 2-Position, Fail AB→A	<b>STP73U</b>	347
24 Vac, 2-Position, Spring Return	24 Vac, 2-Position, Fail AB→A	<b>SFP71U</b>	243
120 Vac, 2-Position, Spring Return	120 Vac, 2-Position, Fail AB→A	<b>SFP11U</b>	241
208 Vac, 2-Position, Spring Return	208 Vac, 2-Position, Fail AB→A	<b>SFP208U/25*</b>	**
277 Vac, 2-Position, Spring Return	277 Vac, 2-Position, Fail AB→A	<b>SFP277U/25*</b>	**
<b>Normally Closed</b>			
24 Vac, Floating	24 Vac, Floating	<b>SSA81U</b>	244
24 Vac, 0 to 10 Vdc, Modulating	24 Vac, 0-10 Vdc, Modulating	<b>SSA61U</b>	245
24 Vac/dc, 2-Position, Spring Return	24 Vac/dc, 2-Position, Fail AB→B	<b>STA73U</b>	346
24 Vac, 2-Position, Spring Return	24 Vac, 2-Position, Fail AB→B	<b>SFA71U</b>	242
120 Vac, 2-Position, Spring Return	120 Vac, 2-Position, Fail AB→B	<b>SFA11U</b>	240
208 Vac, 2-Position, Spring Return	208 Vac, 2-Position, Fail AB→B	<b>SFA208U/25*</b>	**
277 Vac, 2-Position, Spring Return	277 Vac, 2-Position, Fail AB→B	<b>SFA277U/25*</b>	**

\*Part numbers with /25 come with 8.2 ft. (2.5m) leads.

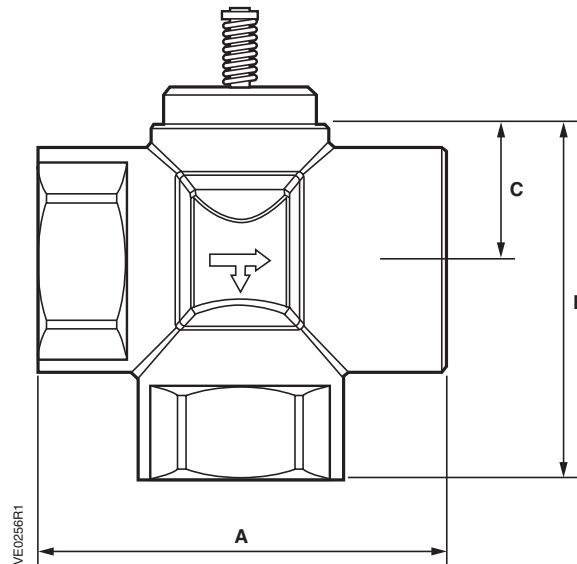
\*\*Actuator only; not available as an assembly.

# Dimensions

## Two-Way Zone Valve Body



## Three-Way Zone Valve Body



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Valve Size in. (mm)	2-Way Valve				3-Way Valve				
	A	B	C	Weight lb. (kg)	A	B	C	Weight lb. (kg)	
NPT									
0.5 (15)	2.76 (70)	1.63 (41.5)	1.00 (25.4)	0.82 (0.37)	2.76 (70)	2.34 (59.5)	1.00 (25.4)	1.08 (0.49)	
0.75 (20)	2.76 (70)	1.77 (45)	1.00 (25.4)	0.99 (0.45)	2.76 (70)	2.34 (59.5)	1.00 (25.4)	1.26 (0.57)	
1.0 (25)	3.50 (89)	2.10 (54)	1.00 (25.4)	1.68 (0.76)	3.50 (89)	2.85 (67.3)	1.00 (25.4)	2.14 (0.97)	
Sweat									
0.5 (15)	2.66 (66)	1.48 (38)	1.00 (25.4)	0.60 (0.27)	2.66 (68)	2.26 (57.5)	1.00 (25.4)	0.71 (0.32)	
0.75 (20)	2.76 (70)	1.63 (41.5)	1.00 (25.4)	0.71 (0.32)	2.76 (70)	2.34 (59.5)	1.00 (25.4)	0.86 (0.39)	
1.00 (25)	3.50 (89)	1.77 (45)	1.00 (25.4)	1.06 (0.48)	3.50 (89)	2.65 (67)	1.00 (25.4)	1.24 (0.56)	

Table expressed in inches (mm).