

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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Valves



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A MechTronics Controls Company

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 Phone (877) 632-4876



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 |
| Two-Way Valve Bodies | | | | | |
| 0.5 | 15 | 1.0 | (0.85) | 599-00210 | 599-00510 |
| 0.5 | 15 | 2.5 | (2.15) | 599-00211 | 599-00511 |
| 0.5 | 15 | 4.0 | (3.4) | 599-00214 | 599-00514 |
| 0.75 | 20 | 4.1 | (3.5) | 599-00212 | 599-00512 |
| 1.00 | 25 | 7.0 | (6.0) | 599-00213 | 599-00513 |
| Three-Way Valve Bodies | | | | | |
| 0.5 | 15 | 1.0 | (0.85) | 599-00230 | 599-00530 |
| 0.5 | 15 | 2.5 | (2.15) | 599-00231 | 599-00531 |
| 0.5 | 15 | 4.0 | (3.4) | 599-00234 | 599-00534 |
| 0.75 | 20 | 4.1 | (3.5) | 599-00232 | 599-00532 |
| 1.00 | 25 | 7.0 | (6.0) | 599-00233 | 599-00533 |

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Zone Valve Actuator Product Ordering

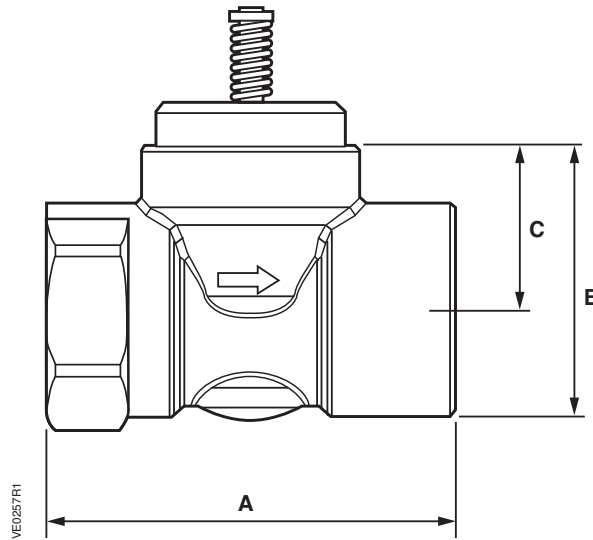
| Description | | Part No. | Actuator Prefix Code |
|--------------------------------------|----------------------------------|--------------------|----------------------|
| Two-Way Valves | Three-Way Valves | | |
| Normally Open | | | |
| 24 Vac, 0 to 10 Vdc, Modulating | 24 Vac, 0-10 Vdc, Modulating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

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

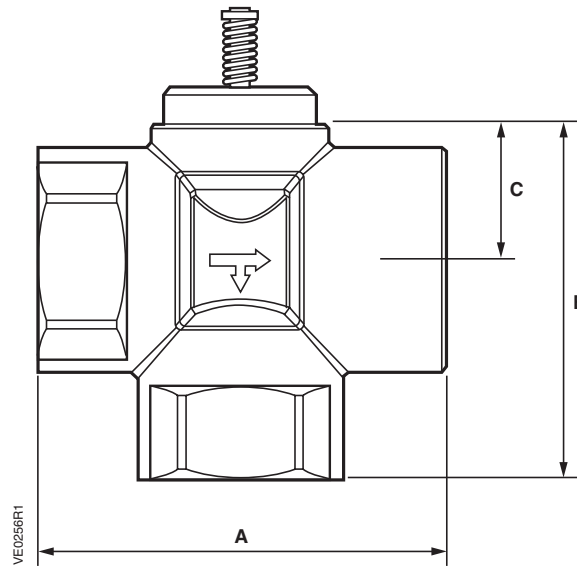
**Actuator only; not available as an assembly.

Dimensions

Two-Way Zone Valve Body



Three-Way Zone Valve Body



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Valves

| 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).