

J Series Electric Zone Valves — Three-Way Spring Return, On/Off Control

Description

J Series Electric Zone Valves accurately control the flow of saturated steam, hot water, and chilled water through coils and heat exchanges of all types.

Refer to the *J Series Electric Zone Valves Product Bulletin (LIT-977282)* for important product application information.

Features

- forged brass body and hard chrome-plated brass stem
- provides economical control of hot or chilled water for fan coil, baseboard radiator, and VAV reheat applications
- On/Off control from a two-wire thermostat
- 300 psig system operating pressure
- 400 psig static pressure rating
- can be piped for mixing or diverting configuration



Standard Closeoff



High Closeoff

- buna-N (standard temperature) or nitrile disk (high temperature) provides tight closeoff
- 1/2, 3/4, and 1 in. line sizes

- sweat, NPT, or inverted flare end connections
- actuator can be factory or field installed
- actuator snaps in place for easy removal and assembly during installation

Selection Chart

Note: Three-way valves are shipped from the factory in the normally closed configuration (Port B closed); for normally open configuration, simply turn the valve around during installation.

| Valve Model Code Number | | | | | Actuator Model Code Number G Style Actuators have Standard Pressure Closeoff H Style Actuators have High Pressure Closeoff | | | |
|--|-----------|-----------|-----|----------------|--|----------------------|---|----------------------|
| | | | | | Standard Temperature Rating: 200°F (93°C) Fluid, 104°F (40°C) Ambient | | High Temperature Rating: 250°F (121°C) Fluid, 15 psig Steam, 169°F (76°C) Ambient | |
| Standard Temp | High Temp | Size, in. | Cv | Closeoff, psig | 24 VAC, 60 Hz | 120 VAC, 60 Hz | 24 VAC, 60 Hz | 120 VAC, 60 Hz |
| | | | | | JG13A020 JH13A020 | JG13B020 JH13B020 | JG14A020 JH14A020 | JG14B020 JH14B020 |
| Sweat Connections — Standard Pressure Closeoff | | | | | | | | |
| JT3213 | JS3213 | 1/2 | 4.0 | 25 | JT3213G13A020 | JT3213G13B020 | JS3213G14A020 | JS3213G14B020 |
| JT3315 | JS3315 | 3/4 | 5.0 | 20 | JT3315G13A020 | JT3315G13B020 | JS3315G14A020 | JS3315G14B020 |
| JT3417 | JS3417 | 1 | 8.0 | 17 | JT3417G13A020 | JT3417G13B020 | JS3417G14A020 | JS3417G14B020 |
| JT3517 | JS3517 | 1-1/4 | 8.0 | 17 | JT3517G13A020 | JT3517G13B020 | JS3517G14A020 | JS3517G14B020 |
| NPT Connections — Standard Pressure Closeoff | | | | | | | | |
| JT3223 | JS3223 | 1/2 | 4.0 | 25 | JT3223G13A020 | JT3223G13B020 | JS3223G14A020 | JS3223G14B020 |
| JT3325 | JS3325 | 3/4 | 5.0 | 20 | JT3325G13A020 | JT3325G13B020 | JS3325G14A020 | JS3325G14B020 |
| JT3427 | JS3427 | 1 | 8.0 | 17 | JT3427G13A020 | JT3427G13B020 | JS3427G14A020 | JS3427G14B020 |
| Inverted Flare Connections — Standard Pressure Closeoff | | | | | | | | |
| JT3343 | JS3343 | 3/4 | 4.0 | 25 | JT3343G13A020 | JT3343G13B020 | JS3343G14A020 | JS3343G14B020 |
| Sweat Connections — High Pressure Closeoff | | | | | | | | |
| JT3213 | JS3213 | 1/2 | 4.0 | 30 | JT3213H13A020 | JT3213H13B020 | JS3213H14A020 | JS3213H14B020 |
| JT3315 | JS3315 | 3/4 | 5.0 | 25 | JT3315H13A020 | JT3315H13B020 | JS3315H14A020 | JS3315H14B020 |
| JT3417 | JS3417 | 1 | 8.0 | 20 | JT3417H13A020 | JT3417H13B020 | JS3417H14A020 | JS3417H14B020 |
| JT3517 | JS3517 | 1-1/4 | 8.0 | 20 | JT3517H13A020 | JT3517H13B020 | JS3517H14A020 | JS3517H14B020 |
| NPT Connections — High Pressure Closeoff | | | | | | | | |
| JT3223 | JS3223 | 1/2 | 4.0 | 30 | JT3223H13A020 | JT3223H13B020 | JS3223H14A020 | JS3223H14B020 |
| JT3325 | JS3325 | 3/4 | 5.0 | 25 | JT3325H13A020 | JT3325H13B020 | JS3325H14A020 | JS3325H14B020 |
| JT3427 | JS3427 | 1 | 8.0 | 20 | JT3427H13A020 | JT3427H13B020 | JS3427H14A020 | JS3427H14B020 |
| Inverted Flare Connections — High Pressure Closeoff | | | | | | | | |
| JT3343 | JS3343 | 3/4 | 4.0 | 30 | JT3343H13A020 | JT3343H13B020 | JS3343H14A020 | JS3343H14B020 |

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J Series Electric Zone Valves — Three-Way Spring Return, On/Off Control (Continued)

Repair Parts

Inverted Flare Fittings

| Code Number | Description | Length, in. (mm) |
|-------------|--|------------------|
| J647-601 | For 1/2 in. (5/8 in. O.D.) Copper Tubing | 15/16 (24) |
| J647-602 | For 1/2 in. (5/8 in. O.D.) Copper Tubing | 1-11/16 (43) |
| J647-603 | For 1/2 in. (5/8 in. O.D.) Copper Tubing | 3 (76) |
| J647-604 | For 3/4 in. (7/8 in. O.D.) Copper Tubing | 1-27/32 (47) |
| J647-605 | For 1/2 in. (5/8 in. O.D.) Copper Tubing | 1-15/16 (49) |
| J647-606 | For 1 in. (1-1/8 in. O.D.) Copper Tubing | 2-3/8 (60) |



Technical Specifications

| J Series Electric Zone Valves — Three-Way Spring Return, On/Off Control | | | |
|---|-------------------------------------|---|-----------------------------------|
| Service¹ | | Hot Water, Chilled Water, and 50/50 Glycol Solutions for HVAC Systems | |
| Fluid Temperature Limits | Water | JT Series | 32 to 200°F (0 to 93°C) |
| | | JS Series | 32 to 250°F (0 to 121°C) |
| | Steam | JT Series | Not Rated for Steam Service |
| | | JS Series | 15 psig (103 kPa) Saturated Steam |
| Valve Body Pressure Rating | | 300 psig (2,067 kPa) | |
| Leakage | | Bubble-Tight Shutoff | |
| Ambient Operating Temperature Limits | JT Series | | 32 to 104°F (0 to 40°C) |
| | JS Series | | 32 to 169°F (0 to 76°C) |
| Cycle Time | | Power Stroke 9 to 11 Seconds, Spring Return 4 to 5 Seconds | |
| Control Signal | | 24 VAC or 120 VAC, 60 Hz, Two-Wire On/Off | |
| Power Requirements | | 7 VA | |
| Electrical Connection | | 18 in. (457 mm) Wire Leads | |
| Materials | Body | | Brass |
| | Stem | | Brass (Hard Chrome Plated) |
| | Base Plate and Bearing Plate | | Stainless Steel |
| | Actuator Housing | | Stainless Steel |
| | Actuator Cover | | Aluminum |
| | Valve Paddle | JT Series | Buna-N Rubber |
| | | JS Series | Saturated Nitrile |
| | Stem Seals | | Viton® O-Rings |

1. Refer to the VDI 2035 Guideline for recommended proper water treatment.