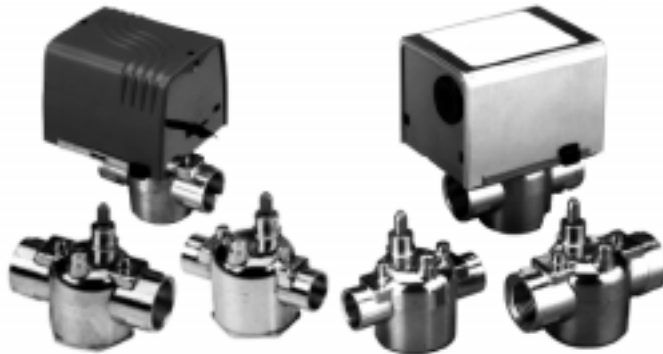


J Series

Electric Zone Valves for Assembly in the Field



J Series Electric Zone Valves

Description

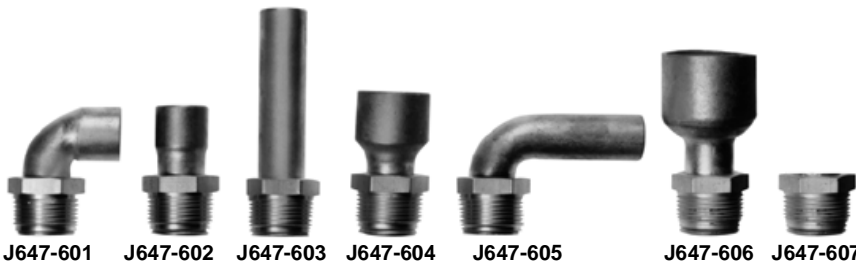
J Series Electric Zone Valves accurately control the flow of saturated steam, hot water, and chilled water through coils and heat exchangers of all types, in a wide range of HVAC applications. The spring return, two-position design with synchronous motor has been proven reliable in millions of installations worldwide. The actuator can be removed from the valve body quickly and easily, simplifying installation and servicing. No special linkage kit or commissioning is required.

Features

- quick and simple actuator removal eases installation and provides quick actuator replacement during service
- bubble-tight shutoff conserves energy and accurately controls zone temperature for increased comfort
- high closeoff pressure actuator option satisfies demanding requirements of high-rise buildings and high-pressure pumping systems
- interchangeable actuators allow field conversion from normally open to normally closed without re-piping
- choice of end connections provides increased versatility and replacement capability

Inverted Flare Fittings (Order Separately)

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)
J647-607	Inverted Flare Nut	-----



Inverted Flare Fittings

To Order

Specify the code number from the selection charts on this page and the following page.

Selection Chart: Valve Bodies

Size	Cv	Closeoff (psig)		Temperature Rating	
		Standard	High (a)	Standard (b)	High (c)
Two-Way, Sweat Connections					
1/2"	1.0	50	75	JT2211	JS2211
1/2"	2.5	30	50	JT2212	JS2212
1/2"	3.5	20	30	JT2213	JS2213
3/4"	2.5	30	50	JT2312	JS2312
3/4"	3.5	20	30	JT2313	JS2313
1"	7.0	10	15	JT2417	JS2417
1-1/4"	7.0	15	25	JT2517	JS2517
Two-Way, NPT Connections					
1/2"	1.0	50	75	JT2221	JS2221
1/2"	2.5	30	50	JT2222	JS2222
1/2"	3.5	20	30	JT2223	JS2223
3/4"	2.5	30	50	JT2322	JS2322
3/4"	3.5	20	30	JT2323	JS2323
1"	7.0	15	25	JT2427	JS2427
Two-Way, Inverted Flare Connections					
3/4"	3.5	20	30	JT2343	JS2343
Three-Way Mixing, Sweat Connections					
1/2"	4.0	20	30	JT3213	JS3213
3/4"	5.0	13	20	JT3315	JS3315
1"	7.0	10	15	JT3417	JS3417
1-1/4"	7.5	15	25	JT3517	JS3517
Three-Way Mixing, NPT Connections					
1/2"	4.0	20	30	JT3223	JS3223
3/4"	5.0	13	20	JT3325	JS3325
1"	7.5	15	25	JT3427	JS3427
Three-Way Mixing, Inverted Flare Connections					
3/4"	4.0	20	30	JT3343	JS3343

- (a) Normally Closed Valves Only
 (b) Standard = 200°F (93°C) Fluid, 104°F (40°C) Ambient
 (c) High = 250°F (121°C) Fluid, 169°F (76°C) Ambient

J Series Electric Zone Valves for Assembly in the Field (Continued)

Selection Chart: Electric Actuators

Valve Style	Closeoff Type	Temperature Rating			
		Standard ^(a)		High ^(b)	
		24 VAC, 60 Hz	120 VAC, 60 Hz	24 VAC, 60 Hz	120 VAC, 60 Hz
Two-Way N.C. and Three-Way Mixing	Standard Pressure	JG13A020	JG13B020	JG14A020	JG14B020
Two-Way N.O.		JG23A020	JG23B020	JG24A020	JG24B020
Two-Way N.C. and Three-Way Mixing	High Pressure	JH13A020	JH13B020	JH14A020	JH14B020
Two-Way N.O.		JH23A020	JH23B020	JH24A020	JH24B020

(a) Standard Temperature Rating = 200°F (93°C) Fluid, 104°F (40°C) Ambient

(b) High Temperature Rating = 250°F (121°C) Fluid, 169°F (76°C) Ambient

Repair Parts

Available repair parts for J Series Electric Zone Valves include replacement valve bodies, replacement actuators, and the end connections included in the Inverted Flare Fittings chart. No other field repairs should be attempted.

Specifications

J Series Electric Zone Valves					
Service ^(a)	Hot Water, Chilled Water, 50% Glycol Solutions, and 15 psig (103 kPa) Saturated Steam for HVAC Systems				
End Connections	Threaded (NPT), Sweat, or Inverted Flare				
Fluid Temperature Limits	Standard	200°F (93°C) Water in an Ambient Temperature of 104°F (40°C)			
	High	250°F (121°C) Water in an Ambient Temperature of 169°F (76°C) or 15 psig (103 kPa) Steam at 250°F (121°C)			
Valve Body Pressure Rating	300 psig (2,067 kPa) System Operating Pressure and 400 psig (2,756 kPa) Static Test Pressure				
Valve Cv (Kv) and Closeoff Pressure Ratings	Size	Two-Way Cv (Kv)	Three-Way Cv (Kv)	Standard Closeoff	High Closeoff
	1/2 in. Threaded and Sweat Only	1.0 (0.9)	-----	50 psig (345 kPa)	75 psig (517 kPa)
		2.5 (2.1)	-----	30 psig (207 kPa)	50 psig (345 kPa)
		3.5 (3.0)	4.0 (3.4)	20 psig (138 kPa)	30 psig (207 kPa)
	3/4 in. Threaded and Sweat Only	2.5 (2.1)	-----	30 psig (207 kPa)	50 psig (345 kPa)
		3.5 (3.0)	-----	20 psig (138 kPa)	30 psig (207 kPa)
	3/4 in. Inverted Flare Only	-----	5.0 (4.3)	13 psig (90 kPa)	20 psig (138 kPa)
1 in. Sweat Only	3.5 (3.0)	4.0 (3.4)	20 psig (138 kPa)	30 psig (207 kPa)	
1 in. Threaded Only, and 1-1/4 in. Sweat Only	7.0 (6.0)	7.0 (6.0)	10 psig (69 kPa)	15 psig (103 kPa)	
Cycle Times	Power Stroke	9 to 11 Seconds			
	Spring Return	4 to 5 Seconds			
Leakage	Bubble-Tight Shutoff				
Materials	Body	Forged Brass			
	Stem	Brass (Hard Chrome Plated)			
	Base Plate and Bearing Plate	Stainless Steel			
	Actuator Housing	Stainless Steel			
	Actuator Cover	Aluminum			
	Valve Operating Paddle	Standard Temperature Models: Buna-N Rubber High Temperature Models: Saturated Nitrile			
Stem Assembly O-Ring Seals	Viton™				
Agency Approvals	cUL and UL Listed (File No. MH7186), cUL and UL Recognized (File No. MH25807), CE Mark Compliant				
Electrical Requirements	24 VAC, 60 Hz (6.5W), 7 VA or 120 VAC, 60 Hz (6.5W), 7 VA				
Electrical Wiring	18 in. (457 mm) Wire Leads				

(a) Proper water treatment is recommended; refer to VDI 2035 Standard.