

J Series Electric Zone Valves

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 Heating, Ventilating, and Air Conditioning (HVAC) applications. The synchronous motor design 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.

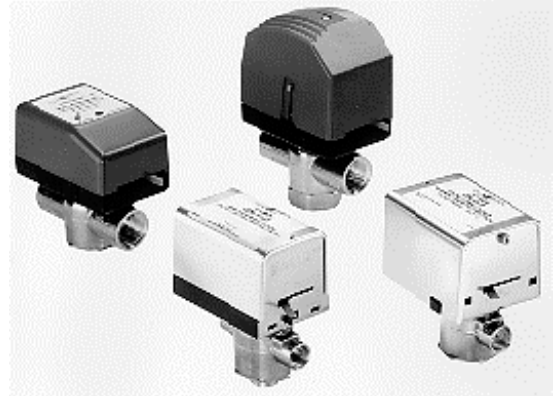


Figure 1: J Series Electric Zone Valves

Features and Benefits	
<input type="checkbox"/> Quick and Simple Actuator Removal	Eases installation and provides quick actuator replacement during service
<input type="checkbox"/> Bubble-Tight Shutoff	Conserves energy and accurately controls zone temperature for increased comfort
<input type="checkbox"/> High Closeoff Pressure Actuator Option Available	Satisfies demanding requirements of high-pressure pumping systems
<input type="checkbox"/> Interchangeable Actuators	Allow field conversion from normally open to normally closed without re-piping
<input type="checkbox"/> Choice of End Connections	Provides increased versatility and replacement capability
<input type="checkbox"/> Choice of Control Signals (On/Off, floating, or 0-10 VDC/0-20 mA signals)	Meets the needs of most applications

Table 1: Ordering Data, J Series Electric Zone Valves

J	Electric Zone Valve																																						
1	T	Valve Type and Temperature Rating	T = On/Off, Standard Temperature S = On/Off, High Temperature/Steam M = Modulating, Standard Temperature																																				
	2	Valve Configuration	2 = Two-Way 3 = Three-Way Mixing/Diverting																																				
	3	Valve Size	2 = 1/2 in. 3 = 3/4 in. 4 = 1 in. 5 = 1-1/4 in.																																				
	4	Valve End Connections	1 = Sweat: 1/2, 3/4, 1, and 1-1/4 in. 2 = Threaded (NPT): 1/2, 3/4, and 1 in. 4 = Inverted Flare: 3/4 in. only <i>(On/Off Valves Only)</i> <i>Note: Inverted flare fittings are sold separately; refer to Table 2 for ordering details.</i>																																				
	5	Cv	<table border="1"> <thead> <tr> <th>Valve Size</th> <th>Two-Way</th> <th>Three-Way</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">On/Off Valve Types</td> </tr> <tr> <td>1/2 in. Threaded and Sweat Only</td> <td>1 = 1.0 2 = 2.5 3 = 3.5</td> <td>3 = 4.0</td> </tr> <tr> <td>3/4 in. Threaded and Sweat Only</td> <td>2 = 2.5 3 = 3.5</td> <td>5 = 5.0</td> </tr> <tr> <td>3/4 in. Inverted Flare Only</td> <td>3 = 3.5</td> <td>3 = 4.0</td> </tr> <tr> <td>1 in. Sweat Only</td> <td>7 = 8.0</td> <td>7 = 8.0</td> </tr> <tr> <td>1 in. Threaded Only, and 1-1/4 in. Sweat Only</td> <td>7 = 8.0</td> <td>7 = 8.0</td> </tr> <tr> <td colspan="3" style="text-align: center;">Modulating Valve Types</td> </tr> <tr> <td>1/2 in. Threaded and Sweat Only</td> <td>1 = 1.0 2 = 2.0 3 = 4.0</td> <td>1 = 1.0 2 = 2.0 3 = 4.0</td> </tr> <tr> <td>3/4 in. Threaded and Sweat Only</td> <td>2 = 2.0 3 = 4.0 7 = 7.5</td> <td>2 = 2.0 3 = 4.0 7 = 7.5</td> </tr> <tr> <td>1 in. Threaded and Sweat Only</td> <td>3 = 4.0 7 = 8.0</td> <td>3 = 4.0 7 = 8.0</td> </tr> <tr> <td>1-1/4 in. Sweat Only</td> <td>7 = 8.0</td> <td>7 = 8.0</td> </tr> </tbody> </table>	Valve Size	Two-Way	Three-Way	On/Off Valve Types			1/2 in. Threaded and Sweat Only	1 = 1.0 2 = 2.5 3 = 3.5	3 = 4.0	3/4 in. Threaded and Sweat Only	2 = 2.5 3 = 3.5	5 = 5.0	3/4 in. Inverted Flare Only	3 = 3.5	3 = 4.0	1 in. Sweat Only	7 = 8.0	7 = 8.0	1 in. Threaded Only, and 1-1/4 in. Sweat Only	7 = 8.0	7 = 8.0	Modulating Valve Types			1/2 in. Threaded and Sweat Only	1 = 1.0 2 = 2.0 3 = 4.0	1 = 1.0 2 = 2.0 3 = 4.0	3/4 in. Threaded and Sweat Only	2 = 2.0 3 = 4.0 7 = 7.5	2 = 2.0 3 = 4.0 7 = 7.5	1 in. Threaded and Sweat Only	3 = 4.0 7 = 8.0	3 = 4.0 7 = 8.0	1-1/4 in. Sweat Only	7 = 8.0	7 = 8.0
Valve Size	Two-Way	Three-Way																																					
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1-1/4 in. Sweat Only	7 = 8.0	7 = 8.0																																					
	6	$(kv = Cv \times 0.857)$																																					

1 2 3 4 5 6 7 8 9 10 11 12 13 Field

Example: Electric zone valve, On/Off, standard temperature, two-way, 3/4 in. sweat ends, 3.5 Cv

J	T	2	3	1	3							
Valve					Actuator							

Table 2: Ordering Data, Adding a Factory Mounted Electric Actuator

1	2	3	4	5	6	7								
J	T	2	3	1	3	G								
							Actuator Type and Pressure Rating	G = Standard Closeoff Pressure <i>(On/Off Valve Types Only)</i> H = High Closeoff Pressure <i>(On/Off Valve Types Only)</i> T = Three-Wiring Floating <i>(Modulating Valve Types Only)</i> P = Proportional <i>(Modulating Valve Types Only)</i>						
							1	Spring Action	1 = Spring Return Normally Closed <i>(Two-Way and Three-Way Valves)</i> 2 = Spring Return Normally Open <i>(Two-Way Valves Only)</i> 3 = Non-Spring Return <i>(Modulating Valve Types Only)</i> Note: Three-way spring return valves are shipped from the factory in the normally closed configuration (Port B closed); for normally open configuration, simply turn the valve around.					
							3	Actuator Temperature Rating	3 = Standard Temp <i>(JT & JM Series Valves Only)</i> 4 = High Temp/Steam <i>(JS Series Valves Only)</i>					
							A	Voltage	A = 24 VAC, 60 Hz <i>(All Valve Types)</i> B = 120 VAC, 60 Hz <i>(On/Off Valve Types Only)</i>					
							0	2	Electrical Leads	02 = 18 in. Wire Leads <i>(On/Off Valves Only)</i> 00 = No Leads <i>(Modulating Valves Only)</i>				
							0	Options	0 = None T = Three-Wire Signal Time-out <i>(Non-Spring Modulating Valve Types Only)</i>					
1	2	3	4	5	6	7	8	9	10	11	12	13 = Field		
J	T	2	3	1	3	G	1	3	A	0	2	0		
													Example: Electric zone valve, On/Off, standard temperature, two-way, 3/4 in. sweat ends, 3.5 Cv, standard closeoff pressure spring return electric actuator, normally closed, 24 VAC, 60 Hz, 18 in. wire leads.	
Valve						Actuator								

When ordering an actuator only add a J to the beginning of the actuator code above

Example: **JG13A020** standard closeoff pressure spring return electric actuator, normally closed, 24 VAC, 60 Hz, 18 in. wire leads.

Table 3: Two-Way, Spring Return, On/Off Control, Standard Closeoff Pressure

Valve	Size in.	Cv	Closeoff psig*	Spring Return Closed		Spring Return Open	
				JG13A020 Standard Temperature JG14A020 High Temperature 24 VAC	JG13B020 Standard Temperature JG14B020 High Temperature 120 VAC	JG23A020 Standard Temperature JG24A020 High Temperature 24 VAC	JG23B020 Standard Temperature JG24B020 High Temperature 120 VAC
Sweat End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)							
JT2211	1/2	1	60	JT2211G13A020	JT2211G13B020	JT2211G23A020	JT2211G23B020
JT2212	1/2	2.5	40	JT2212G13A020	JT2212G13B020	JT2212G23A020	JT2212G23B020
JT2213	1/2	3.5	25	JT2213G13A020	JT2213G13B020	JT2213G23A020	JT2213G23B020
JT2312	3/4	2.5	40	JT2312G13A020	JT2312G13B020	JT2312G23A020	JT2312G23B020
JT2313	3/4	3.5	25	JT2313G13A020	JT2313G13B020	JT2313G23A020	JT2313G23B020
JT2417	1	8.0	17	JT2417G13A020	JT2417G13B020	JT2417G23A020	JT2417G23B020
JT2517	1-1/4	8.0	17	JT2517G13A020	JT2517G13B020	JT2517G23A020	JT2517G23B020
NPT End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)							
JT2221	1/2	1	60	JT2221G13A020	JT2221G13B020	JT2221G23A020	JT2221G23B020
JT2222	1/2	2.5	40	JT2222G13A020	JT2222G13B020	JT2222G23A020	JT2222G23B020
JT2223	1/2	3.5	25	JT2223G13A020	JT2223G13B020	JT2223G23A020	JT2223G23B020
JT2322	3/4	2.5	40	JT2322G13A020	JT2322G13B020	JT2322G23A020	JT2322G23B020
JT2323	3/4	3.5	25	JT2323G13A020	JT2323G13B020	JT2323G23A020	JT2323G23B020
JT2427	1	8.0	17	JT2427G13A020	JT2427G13B020	JT2427G23A020	JT2427G23B020
Inverted Flare End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)							
JT2343	3/4	3.5	25	JT2343G13A020	JT2343G13B020	JT2343G23A020	JT2343G23B020
Sweat End Connections – High Temperature (32 to 250°F fluid temperature, 15 psi steam, 32 to 169°F ambient temperature)							
JS2211	1/2	1	60	JS2211G14A020	JS2211G14B020	JS2211G24A020	JS2211G24B020
JS2212	1/2	2.5	40	JS2212G14A020	JS2212G14B020	JS2212G24A020	JS2212G24B020
JS2213	1/2	3.5	25	JS2213G14A020	JS2213G14B020	JS2213G24A020	JS2213G24B020
JS2312	3/4	2.5	40	JS2312G14A020	JS2312G14B020	JS2312G24A020	JS2312G24B020
JS2313	3/4	3.5	25	JS2313G14A020	JS2313G14B020	JS2313G24A020	JS2313G24B020
JS2417	1	8.0	17	JS2417G14A020	JS2417G14B020	JS2417G24A020	JS2417G24B020
JS2517	1-1/4	8.0	17	JS2517G14A020	JS2517G14B020	JS2517G24A020	JS2517G24B020
NPT End Connections – High Temperature (32 to 250°F fluid temperature, 15 psi steam, 32 to 169°F ambient temperature)							
JS2221	1/2	1	60	JS2221G14A020	JS2221G14B020	JS2221G24A020	JS2221G24B020
JS2222	1/2	2.5	40	JS2222G14A020	JS2222G14B020	JS2222G24A020	JS2222G24B020
JS2223	1/2	3.5	25	JS2223G14A020	JS2223G14B020	JS2223G24A020	JS2223G24B020
JS2322	3/4	2.5	40	JS2322G14A020	JS2322G14B020	JS2322G24A020	JS2322G24B020
JS2323	3/4	3.5	25	JS2323G14A020	JS2323G14B020	JS2323G24A020	JS2323G24B020
JS2427	1	8.0	17	JS2427G14A020	JS2427G14B020	JS2427G24A020	JS2427G24B020
Inverted Flare Conn. – High Temperature (32 - 250°F fluid temperature, 15 psi steam, 32 - 169°F ambient temperature)							
JS2343	3/4	3.5	25	JS2343G14A020	JS2343G14B020	JS2343G24A020	JS2343G24B020

* Closeoff Pressures listed are for units dated coded 0301 or later. For dated codes 0252 and earlier, refer to Table 13.

Table 4: Two-Way, Spring Return, On/Off Control, High Closeoff Pressure

				Spring Return Closed		Spring Return Open	
Valve	Size in.	Cv	Closeoff psig	JH13A020 Standard Temperature JH14A020 High Temperature 24 VAC	JH13B020 Standard Temperature JH14B020 High Temperature 120 VAC	JH23A020 Standard Temperature JH24A020 High Temperature 24 VAC	JH23B020 Standard Temperature JH24B020 High Temperature 120 VAC
Sweat End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)							
JT2211	1/2	1	75	JT2211H13A020	JT2211H13B020	JT2211H23A020	JT2211H23B020
JT2212	1/2	2.5	50	JT2212H13A020	JT2212H13B020	JT2212H23A020	JT2212H23B020
JT2213	1/2	3.5	30	JT2213H13A020	JT2213H13B020	JT2213H23A020	JT2213H23B020
JT2312	3/4	2.5	50	JT2312H13A020	JT2312H13B020	JT2312H23A020	JT2312H23B020
JT2313	3/4	3.5	30	JT2313H13A020	JT2313H13B020	JT2313H23A020	JT2313H23B020
JT2417	1	8.0	20	JT2417H13A020	JT2417H13B020	JT2417H23A020	JT2417H23B020
JT2517	1-1/4	8.0	20	JT2517H13A020	JT2517H13B020	JT2517H23A020	JT2517H23B020
NPT End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)							
JT2221	1/2	1	75	JT2221H13A020	JT2221H13B020	JT2221H23A020	JT2221H23B020
JT2222	1/2	2.5	50	JT2222H13A020	JT2222H13B020	JT2222H23A020	JT2222H23B020
JT2223	1/2	3.5	30	JT2223H13A020	JT2223H13B020	JT2223H23A020	JT2223H23B020
JT2322	3/4	2.5	50	JT2322H13A020	JT2322H13B020	JT2322H23A020	JT2322H23B020
JT2323	3/4	3.5	30	JT2323H13A020	JT2323H13B020	JT2323H23A020	JT2323H23B020
JT2427	1	8.0	20	JT2427H13A020	JT2427H13B020	JT2427H23A020	JT2427H23B020
Inverted Flare End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)							
JT2343	3/4	3.5	30	JT2343H13A020	JT2343H13B020	JT2343H23A020	JT2343H23B020
Sweat End Connections – High Temperature (32 to 250°F fluid temperature, 15 psi steam, 32 to 169°F ambient temperature)							
JS2211	1/2	1	75	JS2211H14A020	JS2211H14B020	JS2211H24A020	JS2211H24B020
JS2212	1/2	2.5	50	JS2212H14A020	JS2212H14B020	JS2212H24A020	JS2212H24B020
JS2213	1/2	3.5	30	JS2213H14A020	JS2213H14B020	JS2213H24A020	JS2213H24B020
JS2312	3/4	2.5	20	JS2312H14A020	JS2312H14B020	JS2312H24A020	JS2312H24B020
JS2313	3/4	3.5	30	JS2313H14A020	JS2313H14B020	JS2313H24A020	JS2313H24B020
JS2417	1	8.0	20	JS2417H14A020	JS2417H14B020	JS2417H24A020	JS2417H24B020
JS2517	1-1/4	8.0	20	JS2517H14A020	JS2517H14B020	JS2517H24A020	JS2517H24B020
NPT End Connections – High Temperature (32 to 250°F fluid temperature, 15 psi steam, 32 to 169°F ambient temperature)							
JS2221	1/2	1	75	JS2221H14A020	JS2221H14B020	JS2221H24A020	JS2221H24B020
JS2222	1/2	2.5	50	JS2222H14A020	JS2222H14B020	JS2222H24A020	JS2222H24B020
JS2223	1/2	3.5	30	JS2223H14A020	JS2223H14B020	JS2223H24A020	JS2223H24B020
JS2322	3/4	2.5	50	JS2322H14A020	JS2322H14B020	JS2322H24A020	JS2322H24B020
JS2323	3/4	3.5	30	JS2323H14A020	JS2323H14B020	JS2323H24A020	JS2323H24B020
JS2427	1	8.0	20	JS2427H14A020	JS2427H14B020	JS2427H24A020	JS2427H24B020
Inverted Flare Conn. – High Temperature (32 - 250°F fluid temperature, 15 psi steam, 32 - 169°F ambient temperature)							
JS2343	3/4	3.5	30	JS2343H14A020	JS2343H14B020	JS2343H24A020	JS2343H24B020

Table 5: Three-Way, Spring Return, On/Off Control, Standard Closeoff Pressure

				Spring Return – Port “B” Closed	
Valve	Size in.	Cv	Closeoff psig *	JG13A020 Standard Temperature JG14A020 High Temperature 24 VAC	JG13B020 Standard Temperature JG14B020 High Temperature 120 VAC
Sweat End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)					
JT3213	1/2	4.0	25	JT3213G13A020	JT3213G13B020
JT3315	3/4	5.0	20	JT3315G13A020	JT3315G13B020
JT3417	1	8.0	17	JT3417G13A020	JT3417G13B020
JT3517	1-1/4	8.0	17	JT3517G13A020	JT3517G13B020
NPT End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)					
JT3223	1/2	4.0	25	JT3223G13A020	JT3223G13B020
JT3325	3/4	5.0	20	JT3325G13A020	JT3325G13B020
JT3427	1	8.0	17	JT3427G13A020	JT3427G13B020
Inverted Flare End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)					
JT3343	3/4	4.0	25	JT3343G13A020	JT3343G13B020
Sweat End Connections – High Temperature (32 to 250°F fluid temperature, 15 psi steam, 32 to 169°F ambient temperature)					
JS3213	1/2	4.0	25	JS3213G14A020	JS3213G14B020
JS3315	3/4	5.0	20	JS3315G14A020	JS3315G14B020
JS3417	1	8.0	17	JS3417G14A020	JS3417G14B020
JS3517	1-1/4	8.0	17	JS3517G14A020	JS3517G14B020
NPT End Connections – High Temperature (32 to 250°F fluid temperature, 15 psi steam, 32 to 169°F ambient temperature)					
JS3223	1/2	4.0	25	JS3223G14A020	JS3223G14B020
JS3325	3/4	5.0	20	JS3325G14A020	JS3325G14B020
JS3427	1	8.0	17	JS3427G14A020	JS3427G14B020
Inverted Flare Conn. – High Temperature (32 - 250°F fluid temperature, 15 psi steam, 32 - 169°F ambient temperature)					
JS3343	3/4	4.0	25	JS3343G14A020	JS3343G14B020

* Closeoff Pressures listed are for units dated coded 0301 or later. For dated codes 0252 and earlier refer to Table 13.

Table 6: Three-Way, Spring Return, On/Off Control, High Closeoff Pressure

				Spring Return – Port “B” Closed	
Valve	Size in.	Cv	Closeoff psig	JH13A020 Standard Temperature JH14A020 High Temperature 24 VAC	JH13B020 Standard Temperature JH14B020 High Temperature 120 VAC
Sweat End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)					
JT3213	1/2	4.0	30	JT3213H13A020	JT3213H13B020
JT3315	3/4	5.0	25	JT3315H13A020	JT3315H13B020
JT3417	1	8.0	20	JT3417H13A020	JT3417H13B020
JT3517	1-1/4	8.0	20	JT3517H13A020	JT3517H13B020
NPT End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)					
JT3223	1/2	4.0	30	JT3223H13A020	JT3223H13B020
JT3325	3/4	5.0	25	JT3325H13A020	JT3325H13B020
JT3427	1	8.0	20	JT3427H13A020	JT3427H13B020
Inverted Flare End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 104°F ambient temperature)					
JT3343	3/4	4.0	30	JT3343H13A020	JT3343H13B020
Sweat End Connections – High Temperature (32 to 250°F fluid temperature, 32 to 169° ambient temperature)					
JS3213	1/2	4.0	30	JS3213H14A020	JS3213H14B020
JS3315	3/4	5.0	25	JS3315H14A020	JS3315H14B020
JS3417	1	8.0	20	JS3417H14A020	JS3417H14B020
JS3517	1-1/4	8.0	20	JS3517H14A020	JS3517H14B020
NPT End Connections – High Temperature (32 to 250°F fluid temperature, 32 to 169°F ambient temperature)					
JS3223	1/2	4.0	30	JS3223H14A020	JS3223H14B020
JS3325	3/4	5.0	25	JS3325H14A020	JS3325H14B020
JS3427	1	8.0	20	JS3427H14A020	JS3427H14B020
Inverted Flare Conn. – High Temperature (32 - 250°F fluid temperature, 32 - 169°F ambient temperature)					
JS3343	3/4	4.0	30	JS3343H14A020	JS3343H14B020

Table 7: Non-Spring Return, Modulating Control

				24 VAC	
Valve	Size in.	Cv	Closeoff psig	JT33A00T Three Wire Floating	JP33A000 0 to 10 VDC or 4 to 20 mA Proportional
Two-Way – Sweat End Connections – Non-Spring Return (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM2211	1/2	1.0	50	JM2211T33A00T	JM2211P33A000
JM2212	1/2	2.0	50	JM2212T33A00T	JM2212P33A000
JM2213	1/2	4.0	35	JM2213T33A00T	JM2213P33A000
JM2312	3/4	2.0	50	JM2312T33A00T	JM2312P33A000
JM2313	3/4	4.0	35	JM2313T33A00T	JM2313P33A000
JM2317	3/4	7.5	35	JM2317T33A00T	JM2317P33A000
JM2413	1	4.0	35	JM2413T33A00T	JM2413P33A000
JM2417	1	8.0	35	JM2417T33A00T	JM2417P33A000
JM2517	1-1/4	8.0	35	JM2517T33A00T	JM2517P33A000
Two-Way – NPT End Connections – Standard Temperature (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM2221	1/2	1.0	50	JM2221T33A00T	JM2221P33A000
JM2222	1/2	2.0	50	JM2222T33A00T	JM2222P33A000
JM2223	1/2	4.0	35	JM2223T33A00T	JM2223P33A000
JM2322	3/4	2.0	50	JM2322T33A00T	JM2322P33A000
JM2323	3/4	4.0	35	JM2323T33A00T	JM2323P33A000
JM2327	3/4	7.5	35	JM2327T33A00T	JM2327P33A000
JM2427	1	8.0	35	JM2427T33A00T	JM2427P33A000
Three-Way – Sweat End Connections – High Temperature (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM3211	1/2	1.0	50	JM3211T33A00T	JM3211P33A000
JM3212	1/2	2.0	50	JM3212T33A00T	JM3212P33A000
JM3213	1/2	4.0	35	JM3213T33A00T	JM3213P33A000
JM3312	3/4	2.0	50	JM3312T33A00T	JM3312P33A000
JM3313	3/4	4.0	35	JM3313T33A00T	JM3313P33A000
JM3317	3/4	7.5	35	JM3317T33A00T	JM3317P33A000
JM3413	1	4.0	35	JM3413T33A00T	JM3413P33A000
JM3417	1	8.0	35	JM3417T33A00T	JM3417P33A000
JM3517	1-1/4	8.0	35	JM3517T33A00T	JM3517P33A000
Three-Way – NPT End Connections – High Temperature (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM3221	1/2	1.0	50	JM3221T33A00T	JM3221P33A000
JM3222	1/2	2.0	50	JM3222T33A00T	JM3222P33A000
JM3223	1/2	4.0	35	JM3223T33A00T	JM3223P33A000
JM3322	3/4	2.0	50	JM3322T33A00T	JM3322P33A000
JM3323	3/4	4.0	35	JM3323T33A00T	JM3323P33A000
JM3327	3/4	7.5	35	JM3327T33A00T	JM3327P33A000
JM3427	1	8.0	35	JM3427T33A00T	JM3427P33A000

Note: Pipe the JM Series Modulating Three-Way Electric Zone Valves in a mixing configuration only.

Table 8: Spring Return Closed, Modulating Control

				24 VAC	
Valve	Size in.	Cv	Closeoff (psig) Operating/Power Failure	JT13A000 Three Wire Floating	JP13A000 0 to 10 VDC or 4 to 20 mA Proportional
Two-Way – Sweat End Connections – Spring Return Closed (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM2211	1/2	1.0	50/50	JM2211T13A000	JM2211P13A000
JM2212	1/2	2.0	50/20	JM2212T13A000	JM2212P13A000
JM2213	1/2	4.0	35/20	JM2213T13A000	JM2213P13A000
JM2312	3/4	2.0	50/20	JM2312T13A000	JM2312P13A000
JM2313	3/4	4.0	35/20	JM2313T13A000	JM2313P13A000
JM2317	3/4	7.5	35/15	JM2317T13A000	JM2317P13A000
JM2413	1	4.0	35/20	JM2413T13A000	JM2413P13A000
JM2417	1	8.0	35/15	JM2417T13A000	JM2417P13A000
JM2517	1-1/4	8.0	35/15	JM2517T13A000	JM2517P13A000
Two-Way – NPT End Connections – Spring Return Closed (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM2221	1/2	1.0	50/50	JM2221T13A000	JM2221P13A000
JM2222	1/2	2.0	50/20	JM2222T13A000	JM2222P13A000
JM2223	1/2	4.0	35/20	JM2223T13A000	JM2223P13A000
JM2322	3/4	2.0	50/20	JM2322T13A000	JM2322P13A000
JM2323	3/4	4.0	35/20	JM2323T13A000	JM2323P13A000
JM2327	3/4	7.5	35/15	JM2327T13A000	JM2327P13A000
JM2427	1	8.0	35/15	JM2427T13A000	JM2427P13A000
Three-Way – Sweat End Connections – Spring Return Port “B” Closed (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM3211	1/2	1.0	50/50	JM3211T13A000	JM3211P13A000
JM3212	1/2	2.0	50/20	JM3212T13A000	JM3212P13A000
JM3213	1/2	4.0	35/20	JM3213T13A000	JM3213P13A000
JM3312	3/4	2.0	50/20	JM1312T13A000	JM1312P13A000
JM3313	3/4	4.0	35/20	JM1313T13A000	JM1313P13A000
JM3317	3/4	7.5	35/15	JM1317T13A000	JM1317P13A000
JM3413	1	4.0	35/20	JM3413T13A000	JM3413P13A000
JM3417	1	8.0	35/15	JM3417T13A000	JM3417P13A000
JM3517	1-1/4	8.0	35/15	JM3517T13A000	JM3517P13A000
Three-Way – NPT End Connections – Spring Return Port “B” Closed (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM3221	1/2	1.0	50/50	JM3221T13A000	JM3221P13A000
JM3222	1/2	2.0	50/20	JM3222T13A000	JM3222P13A000
JM3223	1/2	4.0	35/20	JM3223T13A000	JM3223P13A000
JM3322	3/4	2.0	50/20	JM1322T13A000	JM1322P13A000
JM3323	3/4	4.0	35/20	JM1323T13A000	JM1323P13A000
JM3327	3/4	7.5	35/15	JM1327T13A000	JM1327P13A000
JM3427	1	8.0	35/15	JM3427T13A000	JM3427P13A000

Note: Pipe the JM Series Modulating Three-Way Electric Zone Valves in a mixing configuration only.

Table 9: Spring Return Open, Modulating Control

				24 VAC	
Valve	Size in.	Cv	Closeoff psig	JT23A000 Three Wire Floating	JP23B000 0 to 10 VDC or 4 to 20 mA Proportional
Two-Way – Sweat End Connections – Spring Return Open (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM2211	1/2	1.0	50	JM2211T23A000	JM2211P23A000
JM2212	1/2	2.0	50	JM2212T23A000	JM2212P23A000
JM2213	1/2	4.0	35	JM2213T23A000	JM2213P23A000
JM2312	3/4	2.0	50	JM2312T23A000	JM2312P23A000
JM2313	3/4	4.0	35	JM2313T23A000	JM2313P23A000
JM2317	3/4	7.5	35	JM2317T23A000	JM2317P23A000
JM2413	1	4.0	35	JM2413T23A000	JM2413P23A000
JM2417	1	8.0	35	JM2417T23A000	JM2417P23A000
JM2517	1-1/4	8.0	35	JM2517T23A000	JM2517P23A000
Two Way – NPT End Connections – Spring Return Open (32 to 200°F fluid temperature, 32 to 125°F ambient temperature)					
JM2221	1/2	1.0	50	JM2221T23A000	JM2221P23A000
JM2222	1/2	2.0	50	JM2222T23A000	JM2222P23A000
JM2223	1/2	4.0	35	JM2223T23A000	JM2223P23A000
JM2322	3/4	2.0	50	JM2322T23A000	JM2322P23A000
JM2323	3/4	4.0	35	JM2323T23A000	JM2323P23A000
JM2327	3/4	7.5	35	JM2327T23A000	JM2327P23A000
JM2427	1	8.0	35	JM2427T23A000	JM2427P23A000

Application Overview

J Series Electric Zone Valves control the flow of saturated steam, hot water, and chilled water through coils and heat exchangers of all types, in a wide range of Heating, Ventilating, and Air Conditioning (HVAC) applications. A variety of models handle all water system control needs, as well as saturated steam applications of 15 psig (103 kPa) or lower. The J Series is designed to withstand the high moisture conditions found in many concealed fan coil installations.

IMPORTANT: The J Series Electric Zone Valves are intended to control the flow of saturated steam, hot water, and chilled water under normal operating conditions. Where failure or malfunction of a J Series Electric Zone Valve could lead to an abnormal operating condition that could cause personal injury or damage to the equipment or other property, other devices (limit or safety controls) or systems (alarm or supervisory systems) intended to warn of, or protect against, failure or malfunction of a J Series Electric Zone Valve must be incorporated into and maintained as part of the control system.

Valve Body Features

The J Series valve body features an integral seat, and is available in normally open, normally closed, and three-way mixing/diverting styles. The one-piece body design permits high pressure ratings: 300 psig (2,067 kPa).

The valves are available with the following end connections:

- 1/2, 3/4, 1, and 1-1/4 in. O.D. sweat (solder joints for copper tubing)
- 1/2, 3/4, and 1 in. internal threaded (NPT)
- inverted flare fittings (copper tubing with a flare nut for union connections)

Valve Action

JT and JS Series On/Off Electric Zone Valves are operated by a hysteresis synchronous motor. When the thermostat is satisfied, a spring returns the valve to the normal position. On two-way valves, the paddle assembly closes against the flow as illustrated in Figure 2. For three-way valves, refer to Figure 3.

JM Series Modulating Electric Zone Valves feature a magnetic clutch to extend the life of the motor and gear train, a manual operating lever/position indicator, and easy to use terminal blocks. All floating models come with a time-out feature, which automatically cuts off the control signal after 3 minutes of continuous operation. Proportional models are provided with jumper selectable operating range and action. All units are shipped with the action jumper in the DA position.

Temperature Ratings

JS and JT On/Off Series Electric Zone Valves are available in two temperature ranges:

Standard Temperature Rating for chilled water (up to 50% glycol) and hot water from 32 to 200°F (0 to 93°C), in an ambient temperature of 32 to 104°F (0 to 40°C).

High Temperature Rating for chilled water, hot water from 32 to 250°F (121°C) in an ambient temperature of 169°F (76°C), and saturated steam (250°F at 15 psig; 121°C at 103 kPa).

JM Series Modulating Electric Zone Valves are available in a single temperature range:

Standard Temperature Rating for chilled water (up to 50% glycol) and hot water from 32 to 200°F (0 to 93°C), in an ambient temperature of 32 to 125°F (0 to 52°C).

Manual Operating Lever

All J Series Electric Zone Valves (except normally open two-way models) are equipped with a manual operating lever. This lever:

- allows the valve to be opened for system flushing before it is put into operation
- prevents damage to the paddle on three-way valves, and allows flushing of the system by maintaining the valve in the mid-position
- resets to normal position the first time the valve is cycled

Note: The manual lever cannot be used to close the bypass port on three-way valves.

End Connections for Inverted Flare Valves

Inverted flare fittings must be ordered separately to adapt inverted flare J Series Electric Zone Valves to 1/2, 3/4, and 1 in. copper piping; refer to Table 10 for a list of fittings available. This style of end connection eliminates the need for precision-cut lengths of copper tubing. These close-quarter fittings make installation easy without the use of tube benders or flaring tools. The inverted flare fittings are sweated onto the copper tubing; valve installation consists of simple wrench connections.

Advantages of the inverted flare construction include:

- Installation with no possibility of heat damage during the soldering operation.
- Easy removal, if necessary, to clean the system or make repairs.
- The fittings can withstand the high temperatures of silver soldering.
- When used for replacement work, labor is saved because the old valve can be removed using the fittings, rather than cutting or unsweating.

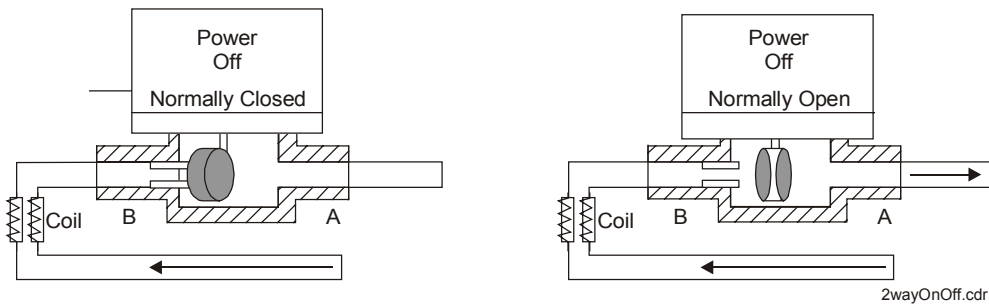


Figure 2: Flow Diagrams for Two-Way JT and JS Series On/Off Electric Zone Valves

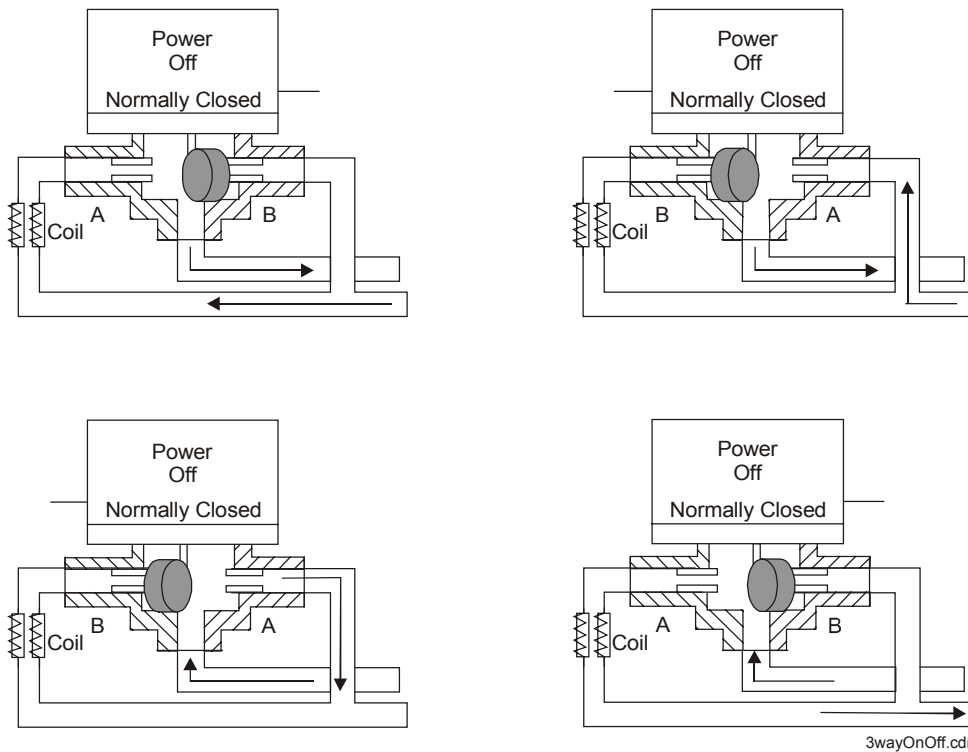


Figure 3: Flow Diagrams for Three-Way JS and JT Series On/Off Electric Zone Valves

Note: Pipe the JS and JT Series Zone valves in mixing or diverting applications.

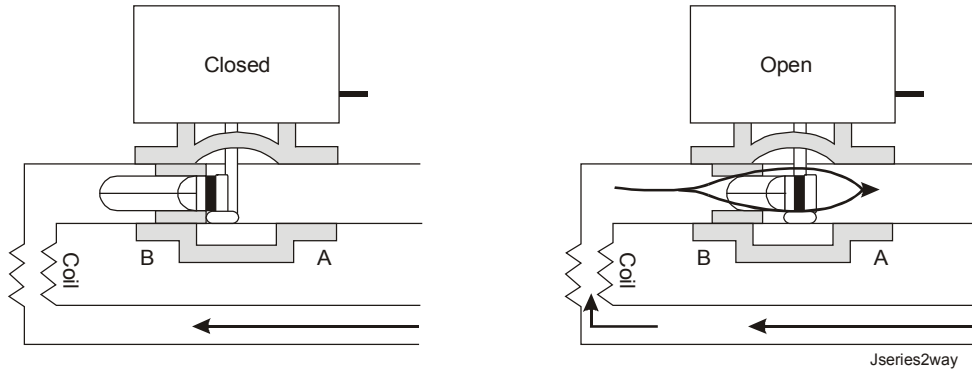


Figure 4: Flow Diagrams for Two-Way JM Series Modulating Electric Zone Valves

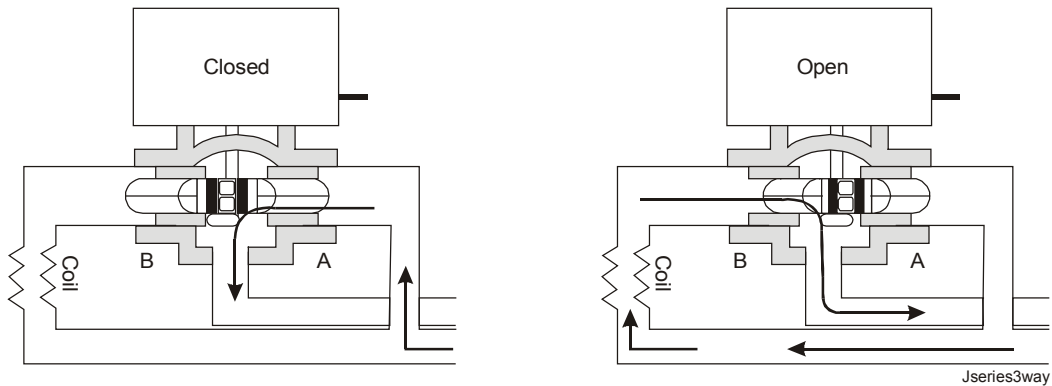


Figure 5: Flow Diagrams for Three-Way JM Series Modulating Electric Zone Valves

Note: Pipe the JM Series Modulating Electric Zone Valves in a mixing configuration only.

Installation

Wire the zone valves in accordance with local, national, and regional electrical code requirements. Protect the actuator housing from moisture. In horizontal piping applications, mount the valve within 85° of the upright position.

Solder connections require a lead or tin-based solder with a melting point below 600°F (316°C). Avoid overheating the end connections.

Repair Information

Available repair parts for J Series Electric Zone Valves include replacement valve bodies, replacement actuators, and the end connections included in Table 10. Do not attempt any other field repairs. To order a replacement valve body only, create the required code number using fields 1 through 6 from Table 1. To order a replacement actuator only, create the required code number using fields 7 through 13 from Table 2, and add the letter “J” to the front of the resulting code number.

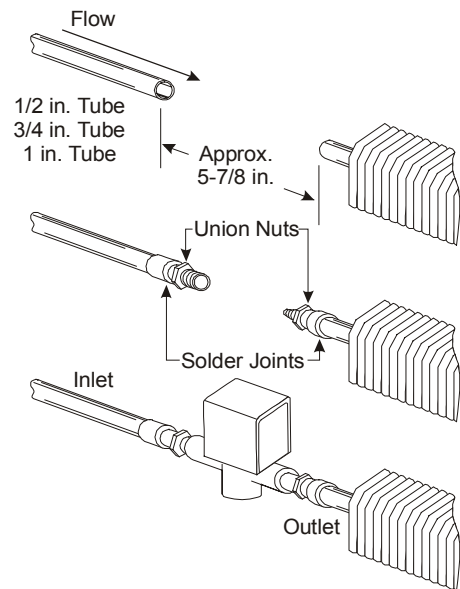


Figure 6: Installation of Inverted Flare J Series Electric Zone Valves

Table 10: 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	-----



Figure 7: Inverted Flare Fittings (Order Separately)

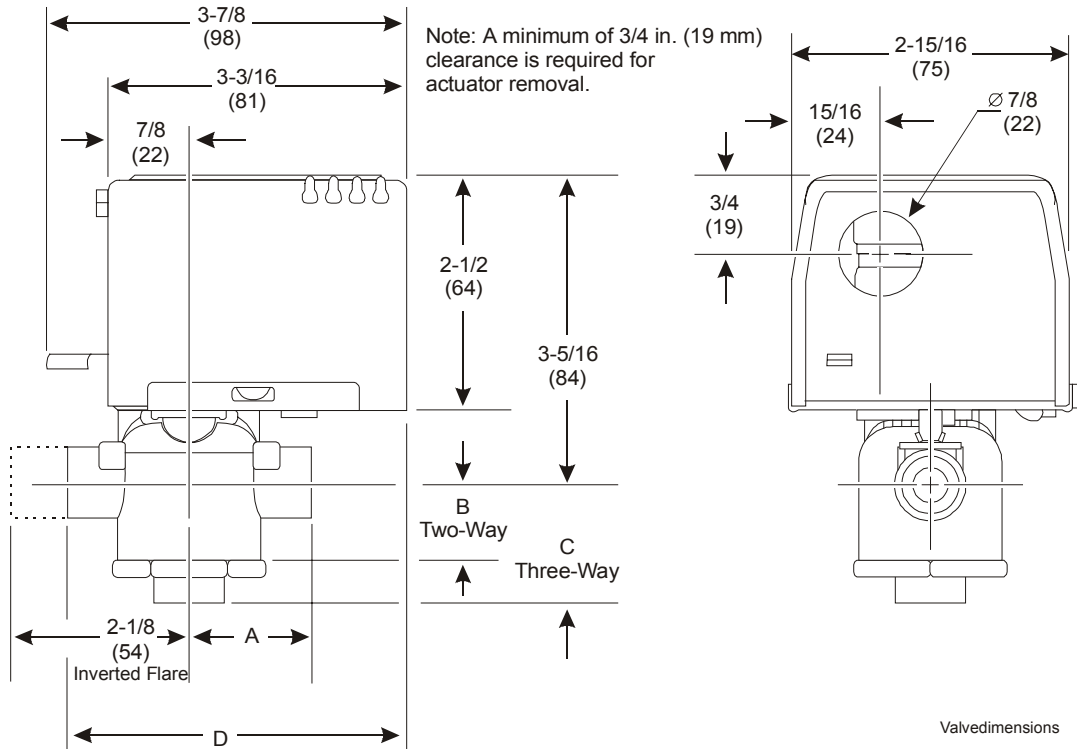


Figure 8: JT and JS Series On/Off Electric Zone Valve Dimensions, in. (mm)

Table 11: JT and JS Series On/Off Electric Zone Valve Dimensions, in. (mm)

Valve Size	A	B (Two-Way Models)	C (Three-Way Models)	D (Standard Closeoff Models)	D (High Closeoff Models)
1/2 in. Sweat	1-5/16 (33)	15/16 (24)	1-5/16 (33)	3-5/16 (84)	3-5/8 (92)
3/4 in. Sweat	1-3/8 (35)	15/16 (24)	1-11/16 (43)	3-3/8 (86)	3-3/4 (95)
1 in. Sweat	1-11/16 (43)	15/16 (24)	1-11/16 (43)	3-5/8 (92)	4 (102)
1-1/4 in. Sweat	1-7/8 (48)	1 (25)	1-13/16 (46)	3-11/16 (94)	4-1/8 (105)
1/2 in. Threaded (NPT)	1-3/8 (35)	15/16 (24)	1-5/16 (33)	3-3/8 (86)	3-5/8 (92)
3/4 in. Threaded (NPT)	1-11/16 (43)	15/16 (24)	1-7/16 (37)	3-5/8 (92)	4 (102)
1 in. Threaded (NPT)	1-7/8 (48)	1 (25)	1-11/16 (43)	3-11/16 (94)	4-1/8 (105)
3/4 in. Inverted Flare	1-3/8 (35)	15/16 (24)	1-5/16 (33)	4-1/8 (105)	4-1/8 (105)

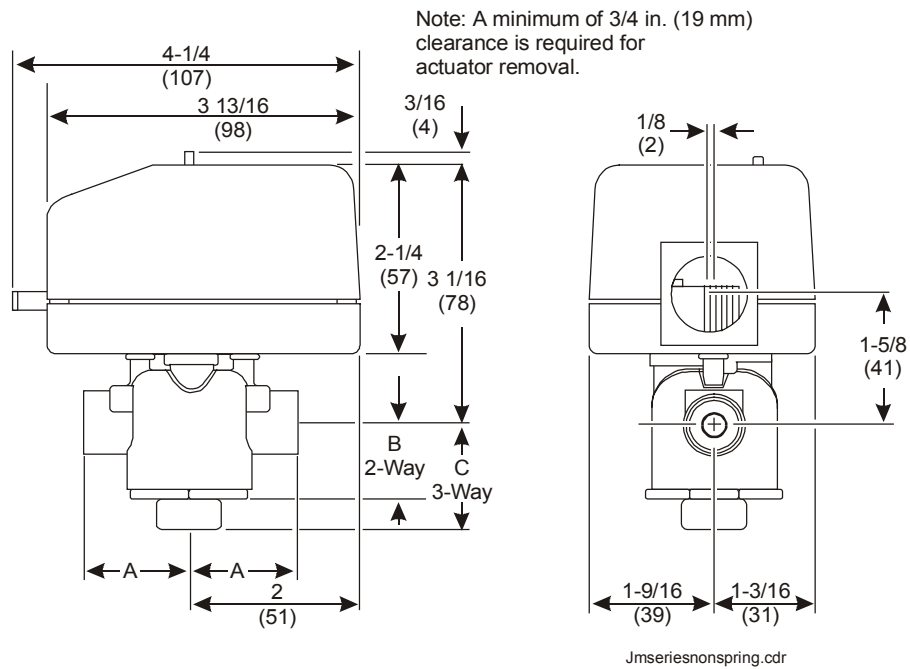


Figure 9: JM Series Non-Spring Return Modulating Electric Zone Valve Dimensions, in. (mm)

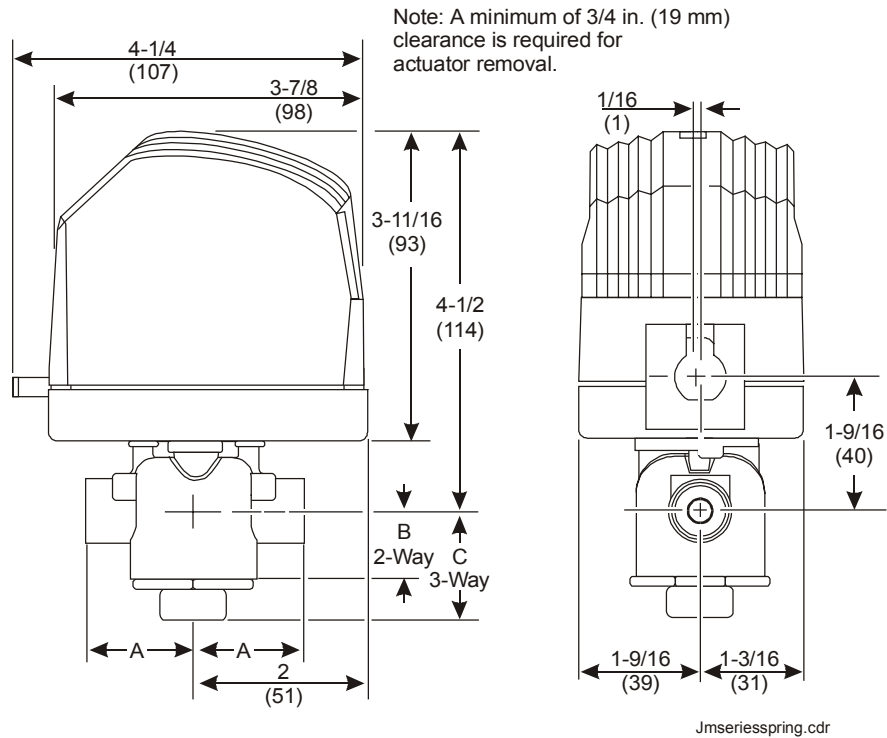


Figure 10: JM Series Spring Return Modulating Electric Zone Valve Dimensions, in. (mm)

Table 12: JM Series Modulating Electric Zone Valve Dimensions, in. (mm)

Valve Size	A	B	C
1/2 in. Sweat	1-5/16 (33)	15/16 (24)	1-5/16 (33)
3/4 in. Sweat	1-3/8 (35)	15/16 (24)	1-11/16 (43)
1 in. Sweat	1-11/16 (43)	15/16 (24)	1-11/16 (43)
1-1/4 in. Sweat	1-7/8 (48)	1 (25)	1-13/16 (46)
1/2 in. Threaded (NPT)	1-3/8 (35)	15/16 (24)	1-5/16 (33)
3/4 in. Threaded (NPT)	1-11/16 (43)	15/16 (24)	1-7/16 (37)
1 in. Threaded (NPT)	1-7/8 (48)	1 (25)	1-11/16 (43)

Table 13: Maximum Closeoff Pressures, JT and JS Series On/Off Zone Valves

Valve Size	Two-Way		Three-Way		Two-Way		Three-Way	
	Cv (kv)	Closeoff psig (kPa)	Cv (kv)	Closeoff psig (kPa)	Cv (kv)	Closeoff psig (kPa)	Cv (kv)	Closeoff psig (kPa)
JT and JS Series On/Off Electric Zone Valves – Standard Closeoff (Date Code 0301 or later)								
Sweat End Connections					Threaded (NPT) End Connections			
1/2 in.	1.0 (0.9)	60 (413)	4.0 (3.4)	25 (172)	1.0 (0.9)	60 (413)	4.0 (3.4)	25 (172)
	2.5 (2.2)	40 (275)			2.5 (2.2)	40 (275)		
	3.5 (3.0)	25 (172)			3.5 (3.0)	25 (172)		
3/4 in.	2.5 (2.2)	40 (275)	5.0 (4.3)	20 (138)	2.5 (2.2)	40 (275)	5.0 (4.3)	20 (138)
	3.5 (3.0)	25 (172)			3.5 (3.0)	25 (172)		
1 in.	8.0 (7.5)	17 (117)	8.0 (7.5)	17 (117)	8.0 (7.5)	17 (117)	8.0 (7.5)	17 (117)
1-1/4 in.	8.0 (7.5)	17 (117)	8.0 (7.5)	17 (117)				
Inverted Flare End Connections								
3/4 in.	3.5 (3.0)	25 (172)	4.0 (3.4)	25 (172)				
JT and JS Series On/Off Electric Zone Valves – Standard Closeoff (Date Code 0252 or earlier)								
Sweat End Connections					Threaded (NPT) End Connections			
	1.0 (0.9)	50 (350)	4.0 (3.4)	20 (137)	1.0 (0.9)	50 (350)	4.0 (3.4)	20 (137)
	2.5 (2.2)	30 (210)			2.5 (2.2)	30 (210)		
	3.5 (3.0)	20 (137)			3.5 (3.0)	20 (137)		
	2.5 (2.2)	30 (210)	5.0 (4.3)	13 (90)	2.5 (2.2)	30 (210)	5.0 (4.3)	13 (90)
	3.5 (3.0)	20 (137)			3.5 (3.0)	20 (138)		
	8.0 (7.5)	15 (103)	8.0 (7.5)	15 (103)	8.0 (7.5)	15 (103)	8.0 (7.5)	15 (103)
	8.0 (7.5)	15 (103)	8.0 (7.5)	15 (103)				
	3.5 (3.0)	20 (137)	4.0 (3.4)	20 (140)				
JT and JS Series On/Off Electric Zone Valves – High Closeoff								
Sweat End Connections					Threaded (NPT) End Connections			
1/2 in.	1.0 (0.9)	75 (525)	4.0 (3.4)	30 (210)	1.0 (0.9)	75 (525)	4.0 (3.4)	30 (210)
	2.5 (2.2)	50 (350)			2.5 (2.2)	50 (350)		
	3.5 (3.0)	30 (210)			3.5 (3.0)	30 (210)		
3/4 in.	2.5 (2.2)	50 (350)	5.0 (4.3)	25 (172)	2.5 (2.2)	50 (350)	5.0 (4.3)	25 (172)
	3.5 (3.0)	30 (210)			3.5 (3.0)	30 (210)		
1 in.	8.0 (7.5)	20 (137)	7.0 (6.0)	15 (103)	8.0 (7.5)	20 (137)	8.0 (7.5)	20 (137)
1-1/4 in.	8.0 (7.5)	20 (137)	7.5 (6.5)	20 (137)				
Inverted Flare End Connections								
3/4 in.	3.5 (3.0)	20 (137)	4.0 (3.4)	20 (137)				

Note: Date Codes have the following format:

YY WW

YY = Year (03 = 2003)

WW = Week of the Year

Table 14: Maximum Closeoff Pressures – JM Series Modulating Electric Zone Valves

Valve Size	Sweat End Connections			Threaded (NPT) End Connections		
	Cv (kv)		Closeoff psig (kPa)	Cv (kv)		Closeoff psig (kPa)
	Two-Way	Three-Way	Operating Mode	Two-Way	Three-Way	Operating Mode
JM Series Modulating Electric Zone Valves – Non-Spring Return						
1/2 in.	1.0 (0.9)	1.0 (0.9)	50 (344)	1.0 (0.9)	1.0 (0.9)	1.0 (0.9)
	2.0 (1.8)	2.0 (1.8)	50 (344)	2.0 (1.8)	2.0 (1.8)	2.0 (1.8)
	4.0 (3.5)	4.0 (3.5)	35 (242)	4.0 (3.5)	4.0 (3.5)	4.0 (3.5)
3/4 in.	2.0 (1.8)	2.0 (1.8)	50 (344)	2.0 (1.8)	2.0 (1.8)	2.0 (1.8)
	4.0 (3.5)	4.0 (3.5)	35 (242)	4.0 (3.5)	4.0 (3.5)	4.0 (3.5)
	7.5 (6.4)	7.5 (6.4)	35 (242)	7.5 (6.4)	7.5 (6.4)	7.5 (6.4)
1 in.	4.0 (3.4)	4.0 (3.4)	35 (242)	8.0 (7.5)	8.0 (7.5)	8.0 (6.9)
	8.0 (7.5)	8.0 (7.5)	35 (242)			
1-1/4 in.	8.0 (7.5)	8.0 (7.5)	35 (242)			
JM Series Modulating Electric Zone Valves – Spring Return Closed						
	Two-Way	Three-Way	Operating Mode/ Power Failure Mode	Two-Way	Three-Way	Operating Mode/ Power Failure Mode
1/2 in.	1.0 (0.9)	1.0 (0.9)	50 (344)/50 (344)	1.0 (0.9)	1.0 (0.9)	50 (344)/50 (344)
	2.0 (1.8)	2.0 (1.8)	50 (344)/20 (137)	2.0 (1.8)	2.0 (1.8)	50 (344)/20 (137)
	4.0 (3.5)	4.0 (3.5)	35 (240)/20 (137)	4.0 (3.5)	4.0 (3.5)	35 (240)/20 (137)
3/4 in.	2.0 (1.8)	2.0 (1.8)	50 (344)/20 (137)	2.0 (1.8)	2.0 (1.8)	50 (344)/20 (137)
	4.0 (3.5)	4.0 (3.5)	35 (240)/20 (137)	4.0 (3.5)	4.0 (3.5)	35 (240)/20 (137)
	7.5 (6.4)	7.5 (6.4)	35 (240)/15 (103)	7.5 (6.4)	7.5 (6.4)	35 (240)/15 (103)
1 in.	4.0 (3.4)	4.0 (3.4)	35 (240)/20 (137)	8.0 (7.5)	8.0 (7.5)	35 (240)/15 (103)
	8.0 (7.5)	8.0 (7.5)	35 (240)/15 (103)			
1-1/4 in.	8.0 (7.5)	8.0 (7.5)	35 (240)/15 (103)			
JM Series Modulating Electric Zone Valves – Spring Return Open						
	Two-Way		Operating Mode	Two-Way	Three-Way	Operating Mode
1/2 in.	1.0 (0.9)		50 (344)	1.0 (0.9)		50 (344)
	2.0 (1.8)		50 (344)	2.0 (1.8)		50 (344)
	4.0 (3.5)		35 (240)	4.0 (3.5)		35 (240)
3/4 in.	2.0 (1.8)		50 (344)	2.0 (1.8)		50 (344)
	4.0 (3.5)		35 (240)	4.0 (3.5)		35 (240)
	7.5 (6.4)		35 (240)	7.5 (6.4)		35 (240)
1 in.	4.0 (3.4)		35 (240)	8.0 (7.5)		35 (240)
	8.0 (7.5)		35 (240)			
1-1/4 in.	8.0 (7.5)		35 (240)			

Technical Specifications

Product	J Series Electric Zone Valves	
Service*	Hot Water, Chilled Water, 50% Glycol Solutions, and 15 psig (103 kPa) Saturated Steam for HVAC Systems	
End Connections	Threaded (NPT), Sweat (all Models) Inverted Flare (JT and JS On/Off Series Only)	
Fluid Temperature Limits	Standard JT Series	32 to 200°F (0 to 93°C) Water in an Ambient Temperature of 32 to 104°F (0 to 40°C)
	Standard JM Series	32 to 200°F (0 to 93°C) Water in an Ambient Temperature of 32 to 125°F (0 to 52°C)
	High JS Series	32 to 250°F (0 to 121°C) Water in an Ambient Temperature of 32 to 169°F (0 to 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	
Valve Cv (kv) and Closeoff Pressure Ratings	JT and JS On/Off	See Table 13.
	JM Modulating	See Table 14.
Cycle Times	JT and JS Series	Power Stroke: 9 to 11 Seconds, Spring Return: 4 to 5 Seconds
	JM Series	Full Open to Full Close: 150 Seconds
Leakage	JT and JS Series	Bubble-Tight Shutoff
	JM Series	0.01% of Maximum Flow per ANSI/FCI 70-2 Class IV
Materials	Body	Forged Brass
	Stem	Brass (Hard Chrome Plated)
	Base Plate and Bearing Plate	Stainless Steel
	Actuator Housing (JT and JS Series)	Stainless Steel
	Actuator Cover (JT and JS Series)	Aluminum
	Actuator Housing (JM Series)	High Temperature Plastic
	Valve Operating Paddle (JT and JS Series)	Standard Temperature Models: Buna-N Rubber High Temperature Models: Saturated Nitrile
	Valve Plug/Paddle (JM Series)	High Temperature Thermoplastic/Rubber
Control Signal	JT and JS On/Off	24 VAC or 120 VAC, Two-Wire On/Off
	JM Modulating	“T” Type, Three-Wire Floating, 24 VAC at 60 Hz “P” Type Proportional Control Factory Setting: 0 to 10 VDC (1 to 9 VDC Actual), 0 to 5 VDC, 5 to 10 VDC jumper selectable
Control Action	JM Modulating	“P” Type Proportional Control Factory Setting: Direct Acting valve opens port “B” as signal increases. Jumper selectable
Input Impedance	JM Modulating	“P” Type Proportional Control Voltage Input: 200,000 ohms Current Input: 300 ohms

Continued on Next Page . . .

Technical Specifications (Continued)

Agency Approvals		All Actuators UL Listed, File E6688, CNN XAPX (U.S.) XAPX7 (Canada), CE Mark
Power Requirements	JT and JS Series	24 VAC, 60 Hz (6.5W), 7 VA or 120 VAC, 60 Hz (6.5W), 7 VA
	JM Series	"T" Type Floating Control: 24 VAC, 60 Hz, 1.2 VA "P" Type Proportional Control: 24 VAC, 60 Hz, 1.6 VA
Electrical Connections	JT and JS Series	18 in. (457 mm) Wire Leads
	JM Series	Terminal Block
Shipping Weight	JT and JS Series	1.0 lbs (454 g), maximum, actuator and valve body
	JM Series	1.9 lbs (860 g), maximum, actuator and valve body

* Proper water treatment is recommended; refer to VDI 2035 Standard.

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.



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