

VG7000 Series

LIT-1900092

Stainless Steel Trim Globe Valves with M9216 Series Electric Actuators

Description

VG7000 Series Stainless Steel Trim Globe Valves with M9216 Series Electric Actuator control hot or chilled water, or steam.

Features

- spring return – stem up or stem down
- 180 lb force provides tight closeoff
- packing: spring-loaded PTFE and elastomer V-rings
- manual opener
- fits VG7000 valves 1/2 through 2 in.
- valve body static pressure rating: ANSI Class 250
- optional auxiliary switches available
- factory or field assembly
- voltage: 20 to 30 VAC, 50/60 Hz, 12 VA

Repair Information

If the VG7000 Stainless Steel Trim Globe Valve with M9216 Series Spring Return Actuator fails to operate within its specifications, replace the unit. For a replacement valve or actuator, contact the nearest Johnson Controls® representative.



M9216 Series Electric Actuator with M9000-500 linkage mounted on VG7844 Brass Globe Valve

Selection Charts

VG7000 Stainless Steel Trim Globe Valve with M9216 Series Electric Actuators, Less Auxiliary Switches

Actuator Code				M9216-AGA-2	M9216-HGA-2	M9216-AGA-2	M9216-HGA-2
Actuator Input				On/Off (Floating)	0 to 10 VDC Proportional	On/Off (Floating)	0 to 10 VDC Proportional
Temperature Range				35 to 338°F Fluid Temperature, 100 psig Saturated Steam			
Valve	Size	Cv	Closeoff	Spring Return – Stem Up		Spring Return – Stem Down	
Two-Way Push-Down-to-Close – NPT End Connections							
VG7243CT	1/2"	0.73	308	VG7243CT+926AGA	VG7243CT+926HGA	VG7243CT+946AGA	VG7243CT+946HGA
VG7243ET	1/2"	1.8	308	VG7243ET+926AGA	VG7243ET+926HGA	VG7243ET+946AGA	VG7243ET+946HGA
VG7243GT	1/2"	4.6	278	VG7243GT+926AGA	VG7243GT+926HGA	VG7243GT+946AGA	VG7243GT+946HGA
VG7243LT	3/4"	7.3	177	VG7243LT+926AGA	VG7243LT+926HGA	VG7243LT+946AGA	VG7243LT+946HGA
VG7243NT	1"	11.6	112	VG7243NT+926AGA	VG7243NT+926HGA	VG7243NT+946AGA	VG7243NT+946HGA
VG7243PT	1-1/4"	18.5	68	VG7243PT+926AGA	VG7243PT+926HGA	VG7243PT+946AGA	VG7243PT+946HGA
VG7243RT	1-1/2"	28.9	44	VG7243RT+926AGA	VG7243RT+926HGA	VG7243RT+946AGA	VG7243RT+946HGA
VG7243ST	2"	46.2	28	VG7243ST+926AGA	VG7243ST+926HGA	VG7243ST+946AGA	VG7243ST+946HGA
Three-Way Mixing – NPT End Connections							
VG7844CT	1/2"	0.73	308 / 308	VG7844CT+926AGA	VG7844CT+926HGA	VG7844CT+946AGA	VG7844CT+946HGA
VG7844ET	1/2"	1.8	308 / 308	VG7844ET+926AGA	VG7844ET+926HGA	VG7844ET+946AGA	VG7844ET+946HGA
VG7844GT	1/2"	4.6	278 / 308	VG7844GT+926AGA	VG7844GT+926HGA	VG7844GT+946AGA	VG7844GT+946HGA
VG7844LT	3/4"	7.3	177 / 197	VG7844LT+926AGA	VG7844LT+926HGA	VG7844LT+946AGA	VG7844LT+946HGA
VG7844NT	1"	11.6	112 / 131	VG7844NT+926AGA	VG7844NT+926HGA	VG7844NT+946AGA	VG7844NT+946HGA
VG7844PT	1-1/4"	18.5	68 / 75	VG7844PT+926AGA	VG7844PT+926HGA	VG7844PT+946AGA	VG7844PT+946HGA
VG7844RT	1-1/2"	28.9	44 / 46	VG7844RT+926AGA	VG7844RT+926HGA	VG7844RT+946AGA	VG7844RT+946HGA
VG7844ST	2"	46.2	28 / 29	VG7844ST+926AGA	VG7844ST+926HGA	VG7844ST+946AGA	VG7844ST+946HGA

VG7000 Series Stainless Steel Trim Globe Valves with M9216 Series Electric Actuators (Continued)

VG7000 Stainless Steel Trim Globe Valve with M9216 Series Electric Actuators and Two Auxiliary Switches

Actuator Code				M9216-AGC-2	M9216-HGC-2	M9216-AGC-2	M9216-HGC-2
Actuator Input				On/Off (Floating)	0 to 10 VDC Proportional	On/Off (Floating)	0 to 10 VDC Proportional
Temperature Range				35 to 284°F Fluid Temperature, 38 psig Saturated Steam			
Valve	Size	Cv	Closeoff	Spring Return – Stem Up		Spring Return – Stem Down	
Two-Way Push-Down-to-Close – NPT End Connections							
VG7243CT	1/2"	0.73	308	VG7243CT+926AGC	VG7243CT+926HGC	VG7243CT+946AGC	VG7243CT+946HGC
VG7243ET	1/2"	1.8	308	VG7243ET+926AGC	VG7243ET+926HGC	VG7243ET+946AGC	VG7243ET+946HGC
VG7243GT	1/2"	4.6	278	VG7243GT+926AGC	VG7243GT+926HGC	VG7243GT+946AGC	VG7243GT+946HGC
VG7243LT	3/4"	7.3	177	VG7243LT+926AGC	VG7243LT+926HGC	VG7243LT+946AGC	VG7243LT+946HGC
VG7243NT	1"	11.6	112	VG7243NT+926AGC	VG7243NT+926HGC	VG7243NT+946AGC	VG7243NT+946HGC
VG7243PT	1-1/4"	18.5	68	VG7243PT+926AGC	VG7243PT+926HGC	VG7243PT+946AGC	VG7243PT+946HGC
VG7243RT	1-1/2"	28.9	44	VG7243RT+926AGC	VG7243RT+926HGC	VG7243RT+946AGC	VG7243RT+946HGC
VG7243ST	2"	46.2	28	VG7243ST+926AGC	VG7243ST+926HGC	VG7243ST+946AGC	VG7243ST+946HGC
Three-Way Mixing – NPT End Connections							
VG7844CT	1/2"	0.73	308 / 308	VG7844CT+926AGC	VG7844CT+926HGC	VG7844CT+946AGC	VG7844CT+946HGC
VG7844ET	1/2"	1.8	308 / 308	VG7844ET+926AGC	VG7844ET+926HGC	VG7844ET+946AGC	VG7844ET+946HGC
VG7844GT	1/2"	4.6	278 / 308	VG7844GT+926AGC	VG7844GT+926HGC	VG7844GT+946AGC	VG7844GT+946HGC
VG7844LT	3/4"	7.3	177 / 197	VG7844LT+926AGC	VG7844LT+926HGC	VG7844LT+946AGC	VG7844LT+946HGC
VG7844NT	1"	11.6	112 / 131	VG7844NT+926AGC	VG7844NT+926HGC	VG7844NT+946AGC	VG7844NT+946HGC
VG7844PT	1-1/4"	18.5	68 / 75	VG7844PT+926AGC	VG7844PT+926HGC	VG7844PT+946AGC	VG7844PT+946HGC
VG7844RT	1-1/2"	28.9	44 / 46	VG7844RT+926AGC	VG7844RT+926HGC	VG7844RT+946AGC	VG7844RT+946HGC
VG7844ST	2"	46.2	28 / 29	VG7844ST+926AGC	VG7844ST+926HGC	VG7844ST+946AGC	VG7844ST+946HGC

Technical Specifications

VG7000 Stainless Steel Trim Globe Valves with M9216 Series Spring Return Actuators		
Service ¹	Hot Water, Chill Water, 50/50 Glycol Solutions and Steam for HVAC Systems	
Fluid Temperature Limits	Water	35 to 338°F (2 to 170°C)
	Steam	100 psig (690 kPa) Saturated Steam
Maximum Allowable Pressure Temperature	Water	400 psig (2,756 kPa) Up to 150°F (66°C) decreasing to 308 psig (2,122 kPa) at 248°F (120°C)
	Steam	100 psig (690 kPa) Saturated Steam
Valve Body Pressure/ Temperature Rating	Meets Requirements of ANSI B16.15, Class 250	
Maximum Recommended Operating Pressure Drop	Water	35 psig (241 kPa) for ½ through 1-1/4 in. valves 30 psig (207 kPa) for 1-1/2 and 2 in. valves
	Steam	100 psig (690 kPa)
Flow Characteristics	Two-Way Valves	Equal Percentage
	Three-Way Valves	Linear Flow Characteristics
Rangeability ²	25:1	
Leakage	0.05% of Maximum Flow per ANSI/FCI 70-2, Class 4	
Actuator Ambient Operating Temperature Limits	23 to 131°F (-5 to 55°C)	
Actuator Input Signal	M9216-AGx-2	24 VAC Three-Wire Floating Control
	M9216-HGx-2	0 to 10 VDC Proportional Control, 0 to 10 VDC Feedback
Actuator Power Requirements	24 VAC (20 to 30 VAC), 50/60 Hz, 12 VA Nominal	
Materials	Body	Cast Bronze
	Bonnet	Brass
	Stem	Stainless Steel
	Plug	Stainless Steel
	Seat	Stainless Steel
	Packing	Spring-Loaded PTFE and Elastomer V-Rings

1. Refer to VDI 2035 Standard for recommended proper water treatment.

2. Rangeability is defined as the ratio of maximum controllable flow to minimum controllable flow.