VG7000 Series

LIT-1900088

Stainless Steel Trim Globe Valves with MP82 Series Pneumatic Actuators

Description

VG7000 Series Stainless Steel Trim Globe Valves with MP82 Series Pneumatic Actuator control hot or chilled water, or 100 psig saturated steam.

Features

- industrial-grade, drawn-steel actuator
- corrosion-resistant, electro-painted finish
- effective diaphragm area: 25 sq in.
- controls: hot or chilled water, 100 psig saturated steam
- valve trim: stainless steel
- packing: spring-loaded PTFE and elastomer V-rings
- maximum supply air pressure: 25 psig (172 kPa)
- fluid temperature: 35 to 338°F (2 to 170°C), 100 psig saturated steam
- valve body static pressure rating: ANSI Class 250
- factory or field assembly
- For optional V-9502-95 Positioner, change “00” at the end of the code number to “01”

Repair Information

If the VG7000 Stainless Steel Trim Globe Valve with MP82 Series Pneumatic Actuator fails to operate within its specifications, replace the unit. For a replacement valve, contact the nearest Johnson Controls® representative.

MP82 Series Pneumatic Actuator mounted on VG7443 Brass Globe Valve

Selection Chart

VG7000 Stainless Steel Trim Globe Valve with MP82 Series Pneumatic Actuator

Actuator			MP821C001B (1/2 and 3/4 in.) MP822C001A (1 and 1-1/4 in.) MP823C001A (1-1/2 and 2 in.)		MP821D001B (1/2 and 3/4 in.) MP822D001A (1 and 1-1/4 in.) MP823D001A (1-1/2 and 2 in.)		MP821E001B (1/2 and 3/4 in.) MP822E001A (1 and 1-1/4 in.) MP823E001A (1-1/2 and 2 in.)	
Spring Range			3 to 7 psig		4 to 8 psig		9 to 13 psig	
Valve	Size	Cv	Closeoff	Code Number	Closeoff	Code Number	Closeoff	Code Number
Two-Way Normally Open — NPT End Connections (To specify a factory-mounted positioner, change “00” at the end of the code number to “01”.)								
VG7243CT	1/2”	0.73	308	VG7243CT+821C00	308	VG7243CT+821D00	308	VG7243CT+821E00
VG7243ET	1/2”	1.8	308	VG7243ET+821C00	308	VG7243ET+821D00	308	VG7243ET+821E00
VG7243GT	1/2”	4.6	308	VG7243GT+821C00	308	VG7243GT+821D00	275	VG7243GT+821E00
VG7243LT	3/4”	7.3	308	VG7243LT+821C00	304	VG7243LT+821D00	175	VG7243LT+821E00
VG7243NT	1”	11.6	209	VG7243NT+822C00	193	VG7243NT+822D00	111	VG7243NT+822E00
VG7243PT	1-1/4”	18.5	128	VG7243PT+822C00	118	VG7243PT+822D00	68	VG7243PT+822E00
VG7243RT	1-1/2”	28.9	82	VG7243RT+823C00	75	VG7243RT+823D00	43	VG7243RT+823E00
VG7243ST	2”	46.2	52	VG7243ST+823C00	48	VG7243ST+823D00	28	VG7243ST+823E00
Two-Way Normally Closed — NPT End Connections (To specify a factory-mounted positioner, change “00” at the end of the code number to “01”.)								
VG7443CT	1/2”	0.73	280	VG7443CT+821C00	308	VG7443CT+821D00	308	VG7443CT+821E00
VG7443ET	1/2”	1.8	280	VG7443ET+821C00	308	VG7443ET+821D00	308	VG7443ET+821E00
VG7443GT	1/2”	4.6	135	VG7443GT+821C00	183	VG7443GT+821D00	308	VG7443GT+821E00
VG7443LT	3/4”	7.3	81	VG7443LT+821C00	109	VG7443LT+821D00	252	VG7443LT+821E00
VG7443NT	1”	11.6	53	VG7443NT+822C00	72	VG7443NT+822D00	168	VG7443NT+822E00
VG7443PT	1-1/4”	18.5	30	VG7443PT+822C00	41	VG7443PT+822D00	96	VG7443PT+822E00
VG7443RT	1-1/2”	28.9	19	VG7443RT+823C00	25	VG7443RT+823D00	59	VG7443RT+823E00
VG7443ST	2”	46.2	12	VG7443ST+823C00	16	VG7443ST+823D00	37	VG7443ST+823E00
Three-Way Mixing — NPT End Connections (To specify a factory-mounted positioner, change “00” at the end of the code number to “01”.)								
VG7844CT	1/2”	0.73	308 / 280	VG7844CT+821C00	308 / 308	VG7844CT+821D00	308 / 308	VG7844CT+821E00
VG7844ET	1/2”	1.8	308 / 280	VG7844ET+821C00	308 / 308	VG7844ET+821D00	308 / 308	VG7844ET+821E00
VG7844GT	1/2”	4.6	308 / 135	VG7844GT+821C00	308 / 183	VG7844GT+821D00	275 / 308	VG7844GT+821E00
VG7844LT	3/4”	7.3	308 / 81	VG7844LT+821C00	304 / 109	VG7844LT+821D00	175 / 252	VG7844LT+821E00
VG7844NT	1”	11.6	209 / 53	VG7844NT+822C00	193 / 72	VG7844NT+822D00	111 / 168	VG7844NT+822E00
VG7844PT	1-1/4”	18.5	128 / 30	VG7844PT+822C00	118 / 41	VG7844PT+822D00	68 / 96	VG7844PT+822E00
VG7844RT	1-1/2”	28.9	82 / 19	VG7844RT+823C00	75 / 25	VG7844RT+823D00	43 / 59	VG7844RT+823E00
VG7844ST	2”	46.2	52 / 12	VG7844ST+823C00	48 / 16	VG7844ST+823D00	28 / 37	VG7844ST+823E00

VG7000 Series Stainless Steel Trim Globe Valves with MP82 Series Pneumatic Actuators (Continued)

Technical Specifications

VG7000 Stainless Steel Trim Globe Valves with MP82 Series Pneumatic 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 338°F (170°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		-20 to 150°F (-29 to 66°C)
Maximum Actuator Supply Pressure		25 psig (172 kPa) Maximum
Materials	**Body**	Cast Bronze
	Bonnet	Brass
	Stem	Stainless Steel
	Plug	Stainless Steel
	Seat	Stainless Steel
	Packing	Self Adjusting Ethylene Propylene Rubber (EPR) Ring Pack U-Cups

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.