

VG7000 Series Stainless Steel Trim Globe Valves with VA-4233 Series Spring-Return Electric Actuators

Description

VG7000 Series Stainless Steel Trim Globe Valves with VA-4233 Series Spring-Return Electric Actuators control hot or chilled water, or steam.

Refer to the *VG7000 Series Bronze Control Valves Product Bulletin (LIT-977140)* for important product application information.

Features

- spring return stem up
- 61 lb force provides tight shutoff
- packing spring-loaded PTFE and elastomer V-rings
- manual opener
- fits VG7000 Series valves 1/2 through 1-1/4 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 Series Globe Valve fails to operate within its specifications, replace the valve body, actuator, or entire assembly. For replacement parts, contact the nearest Johnson Controls® representative.



VA-4233 Electric Actuator
Mounted on a VG7441 Brass Globe Valve

Selection Charts

VG7000 Series Valve Assemblies with VA-4233 Series Spring-Return Electric Actuators, Less Auxiliary Switches

Actuator Code Number				VA-4233-AGA-2	VA-4233-BGA-2	VA-4233-GGA-2
Actuator Input				Floating	On/Off	0 to 10 VDC Proportional
Temperature Range				35 to 250°F (2 to 121°C), 15 psig Saturated Steam		
Valve Code Number	Size, in.	Cv	Closeoff psig	Spring Return Stem Up		
Two-Way Push-Down-to-Close — NPT End Connections						
VG7243CT	1/2	0.73	230	VG7243CT+423AGA	VG7243CT+423BGA	VG7243CT+423GGA
VG7243ET	1/2	1.8	230	VG7243ET+423AGA	VG7243ET+423BGA	VG7243ET+423GGA
VG7243GT	1/2	4.6	130	VG7243GT+423AGA	VG7243GT+423BGA	VG7243GT+423GGA
VG7243LT	3/4	7.3	82	VG7243LT+423AGA	VG7243LT+423BGA	VG7243LT+423GGA
VG7243NT	1	11.6	39	VG7243NT+423AGA	VG7243NT+423BGA	VG7243NT+423GGA
VG7243PT	1-1/4	18.5	24	VG7243PT+423AGA	VG7243PT+423BGA	VG7243PT+423GGA
Two-Way Push-Down-to-Open — NPT End Connections						
VG7443CT	1/2	0.73	224	VG7443CT+423AGA	VG7443CT+423BGA	VG7443CT+423GGA
VG7443ET	1/2	1.8	224	VG7443ET+423AGA	VG7443ET+423BGA	VG7443ET+423GGA
VG7443GT	1/2	4.6	108	VG7443GT+423AGA	VG7443GT+423BGA	VG7443GT+423GGA
VG7443LT	3/4	7.3	64	VG7443LT+423AGA	VG7443LT+423BGA	VG7443LT+423GGA
VG7443NT	1	11.6	41	VG7443NT+423AGA	VG7443NT+423BGA	VG7443NT+423GGA
VG7443PT	1-1/4	18.5	24	VG7443PT+423AGA	VG7443PT+423BGA	VG7443PT+423GGA
Three-Way Mixing — NPT End Connections						
VG7844CT	1/2	0.73	230 / 224	VG7844CT+423AGA	VG7844CT+423BGA	VG7844CT+423GGA
VG7844ET	1/2	1.8	230 / 224	VG7844ET+423AGA	VG7844ET+423BGA	VG7844ET+423GGA
VG7844GT	1/2	4.6	130 / 108	VG7844GT+423AGA	VG7844GT+423BGA	VG7844GT+423GGA
VG7844LT	3/4	7.3	82 / 64	VG7844LT+423AGA	VG7844LT+423BGA	VG7844LT+423GGA
VG7844NT	1	11.6	39 / 41	VG7844NT+423AGA	VG7844NT+423BGA	VG7844NT+423GGA
VG7844PT	1-1/4	18.5	24 / 24	VG7844PT+423AGA	VG7844PT+423BGA	VG7844PT+423GGA

VG7000 Series Stainless Steel Trim Globe Valves with VA-4233 Series Spring-Return Electric Actuators (Continued)

VG7000 Series Valve Assemblies with VA-4233 Series Spring-Return Electric Actuators and Two Auxiliary Switches

Actuator Code Number				VA-4233-AGC-2	VA-4233-BGC-2	VA-4233-GGC-2
Actuator Input				Floating	On/Off	0 to 10 VDC Proportional
Temperature Range				35 to 250°F (2 to 121°C), 15 psig Saturated Steam		
Valve Code Number	Size, in.	Cv	Closeoff psig	Spring Return Stem Up		
Two-Way Push-Down-to-Close — NPT End Connections						
VG7243CT	1/2	0.73	230	VG7243CT+423AGC	VG7243CT+423BGC	VG7243CT+423GGC
VG7243ET	1/2	1.8	230	VG7243ET+423AGC	VG7243ET+423BGC	VG7243ET+423GGC
VG7243GT	1/2	4.6	130	VG7243GT+423AGC	VG7243GT+423BGC	VG7243GT+423GGC
VG7243LT	3/4	7.3	82	VG7243LT+423AGC	VG7243LT+423BGC	VG7243LT+423GGC
VG7243NT	1	11.6	39	VG7243NT+423AGC	VG7243NT+423BGC	VG7243NT+423GGC
VG7243PT	1-1/4	18.5	24	VG7243PT+423AGC	VG7243PT+423BGC	VG7243PT+423GGC
Two-Way Push-Down-to-Open — NPT End Connections						
VG7443CT	1/2	0.73	224	VG7443CT+423AGC	VG7443CT+423BGC	VG7443CT+423GGC
VG7443ET	1/2	1.8	224	VG7443ET+423AGC	VG7443ET+423BGC	VG7443ET+423GGC
VG7443GT	1/2	4.6	108	VG7443GT+423AGC	VG7443GT+423BGC	VG7443GT+423GGC
VG7443LT	3/4	7.3	64	VG7443LT+423AGC	VG7443LT+423BGC	VG7443LT+423GGC
VG7443NT	1	11.6	41	VG7443NT+423AGC	VG7443NT+423BGC	VG7443NT+423GGC
VG7443PT	1-1/4	18.5	24	VG7443PT+423AGC	VG7443PT+423BGC	VG7443PT+423GGC
Three-Way Mixing — NPT End Connections						
VG7844CT	1/2	0.73	230/224	VG7844CT+423AGC	VG7844CT+423BGC	VG7844CT+423GGC
VG7844ET	1/2	1.8	230/224	VG7844ET+423AGC	VG7844ET+423BGC	VG7844ET+423GGC
VG7844GT	1/2	4.6	130/108	VG7844GT+423AGC	VG7844GT+423BGC	VG7844GT+423GGC
VG7844LT	3/4	7.3	82/64	VG7844LT+423AGC	VG7844LT+423BGC	VG7844LT+423GGC
VG7844NT	1	11.6	39/41	VG7844NT+423AGC	VG7844NT+423BGC	VG7844NT+423GGC
VG7844PT	1-1/4	18.5	24/24	VG7844PT+423AGC	VG7844PT+423BGC	VG7844PT+423GGC

Technical Specifications

VG7000 Series Stainless Steel Trim Globe Valves with VA-4233 Series Spring-Return Electric Actuators		
Service ¹	Hot Water, Chilled Water, 50/50 Glycol Solutions, and Steam for HVAC Systems	
Fluid Temperature Limits	Water	35 to 250°F (2 to 121°C)
	Steam	15 psig (103 kPa) Saturated Steam
Maximum Allowable Pressure/Temperature	Water	400 psig (2,756 kPa) up to 150°F (66°C) Decreasing to 365 psig (2,515 kPa) at 248°F (120°C)
	Steam	15 psig (103 kPa) Saturated Steam at 250°F (121°C)
Valve Body Pressure/Temperature Rating	Meets Requirements of ANSI B16.15, Class 250	
Maximum Recommended Operating Pressure Drop	Water	35 psig (241 kPa) for 1/2 through 1-1/4 in. Valves
	Steam	15 psig (103 kPa)
Flow Characteristics	Two-Way Valves	Equal Percentage
	Three-Way Valves	Linear Flow Characteristics
Rangeability ²	> 25:1 According to EN60534-2-4 for the 1/2 in. Size, Cv 0.73, Valve Bodies > 100:1 According to EN60534-2-4 for All Other Valves	
Leakage	0.01% of Maximum Flow per ANSI/FCI 70-2, Class 4	
Actuator Ambient Operating Temperature Limits	-4 to 122°F (-20 to 50°C)	
Actuator Input Signal	VA-4233-AGx-2	24 VAC or 24 VDC Three-Wire Floating Control
	VA-4233-BGx-2	24 VAC or 24 VDC Two-Wire On/Off Control
	VA-4233-GGx-2	0(2) 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	Brass
	Seat	Brass against Molded Elastomeric Disk
	Packing	Self-Adjusting Ethylene Propylene Rubber (EPR) Ring Pack U-Cups
Compliance	Canada	CRN: 0C1099.9087YTN

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

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