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

2020-10-13

LIT-1900124

Description

Figure 1: VA-4233 Electric Actuator Mounted on a VG7441 Brass Globe Valve



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 through1-1/4 in.
- valve body static pressure rating: ANSI Class 250
- optional auxiliary switches available
- factory or field assembly
- voltage: 20 VAC 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.

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Selection charts

Table 1: 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 VDC to 10 VDC proportional
Temperature range				35°F to 250°F (2°C 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

Table 2: 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 VDC to 10 VDC proportional
Temperature range				35°F to 250°F (2°C 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

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Table 2: 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 VDC to 10 VDC proportional
Temperature range				35°F to 250°F (2°C to 121°C), 15 psig saturated steam		
Valve code number	Size, in.	Cv	Closeoff psig	Spring return stem up		
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

Table 3: Technical specification

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°F to 250°F (2°C 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 in. 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		0.05% of maximum flow
Actuator ambient operating temperature limits		-4°F to 122°F (-20°C 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) VDC to 10 VDC proportional control, 0 VDC to 10 VDC feedback
Actuator power requirements		24 VAC (20 VAC 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 Polytetrafluoroethylene (PTFE) and elastomer V-rings
Compliance	Canada	CRN: 0C22556.5

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.

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⚠ WARNING

This product is made of copper alloy, which contains lead. The product is therefore not to be used on drinking water.

⚠ WARNING

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, birth defects, or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

⚠ WARNING

WARNING: BRASS MAY CONTAIN LEAD

To fulfill our obligations towards Article 33, in accordance to the European REACH Regulation No 1907/2006 EC, we hereby inform you that this article contains the following Substances of Very High Concern mentioned on the Candidate list: Lead

Product warranty

This product is covered by a limited warranty, details of which can be found at www.johnsoncontrols.com/buildingswarranty.

Single point of contact

APAC	Europe	NA/SA
JOHNSON CONTROLS	JOHNSON CONTROLS	JOHNSON CONTROLS
C/O CONTROLS PRODUCT MANAGEMENT	VOLTAWEG 20	507 E MICHIGAN ST
NO. 32 CHANGJIANG RD NEW DISTRICT	6101 XK ECHT	MILWAUKEE WI 53202
WUXI JIANGSU PROVINCE 214028	THE NETHERLANDS	USA
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