

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 |

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products. © 2014 Johnson Controls, Inc.

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.