

VG7000 Series Brass Trim Globe Valves with MP82 Series Pneumatic Actuators

Description

VG7000 Series Brass Trim Globe Valves with MP82 Series Pneumatic Actuators control hot or chilled water or 38 psig saturated steam.

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

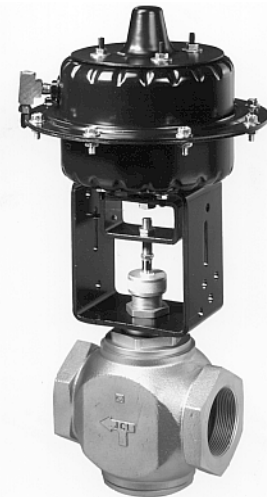
Features

- industrial-grade, drawn-steel actuator fits VG7000 valves 1 through 2 in.
- corrosion-resistant, electro-painted finish
- effective diaphragm area: 25 sq. in.
- controls: hot or chilled water, 38 psig saturated steam
- valve trim: brass

- maximum supply air pressure: 25 psig (172 kPa)
- fluid temperature: 35 to 284°F (2 to 140°C), 38 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 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.



MP82 Series Pneumatic Actuator Mounted on a VG7441 Brass Globe Valve

Selection Chart

| Actuator Code Number | 1 and 1-1/4 in. | | MP822C001A | | MP822D001A | | MP822E001A | |
|--|-----------------|------|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| | 1-1/2 and 2 in. | | MP823C001A | | MP823D001A | | MP823E001A | |
| Spring Range | | | 3 to 7 psig | | 4 to 8 psig | | 9 to 13 psig | |
| Valve Code Number | Size, in. | Cv | Closeoff psig | Code Number | Closeoff psig | Code Number | Closeoff psig | Code Number |
| Two-Way Normally Open — NPT End Connections (To specify a factory-mounted pneumatic positioner, change 00 at the end of the code number to 01.) | | | | | | | | |
| VG7241NT | 1 | 11.6 | 279 | VG7241NT+822C00 | 257 | VG7241NT+822D00 | 148 | VG7241NT+822E00 |
| VG7241PT | 1-1/4 | 18.5 | 170 | VG7241PT+822C00 | 157 | VG7241PT+822D00 | 90 | VG7241PT+822E00 |
| VG7241RT | 1-1/2 | 28.9 | 109 | VG7241RT+823C00 | 100 | VG7241RT+823D00 | 58 | VG7241RT+823E00 |
| VG7241ST | 2 | 46.2 | 70 | VG7241ST+823C00 | 64 | VG7241ST+823D00 | 37 | VG7241ST+823E00 |
| Two-Way Normally Closed — NPT End Connections (To specify a factory-mounted pneumatic positioner, change 00 at the end of the code number to 01.) | | | | | | | | |
| VG7441NT | 1 | 11.6 | 70 | VG7441NT+822C00 | 96 | VG7441NT+822D00 | 223 | VG7441NT+822E00 |
| VG7441PT | 1-1/4 | 18.5 | 40 | VG7441PT+822C00 | 55 | VG7441PT+822D00 | 128 | VG7441PT+822E00 |
| VG7441RT | 1-1/2 | 28.9 | 25 | VG7441RT+823C00 | 34 | VG7441RT+823D00 | 79 | VG7441RT+823E00 |
| VG7441ST | 2 | 46.2 | 16 | VG7441ST+823C00 | 21 | VG7441ST+823D00 | 50 | VG7441ST+823E00 |
| Three-Way Mixing — NPT End Connections (To specify a factory-mounted pneumatic positioner, change 00 at the end of the code number to 01.) | | | | | | | | |
| VG7842NT | 1 | 11.6 | 279/70 | VG7842NT+822C00 | 257/96 | VG7842NT+822D00 | 148/223 | VG7842NT+822E00 |
| VG7842PT | 1-1/4 | 18.5 | 170/40 | VG7842PT+822C00 | 157/55 | VG7842PT+822D00 | 90/128 | VG7842PT+822E00 |
| VG7842RT | 1-1/2 | 28.9 | 109/25 | VG7842RT+823C00 | 100/34 | VG7842RT+823D00 | 58/79 | VG7842RT+823E00 |
| VG7842ST | 2 | 46.2 | 70/16 | VG7842ST+823C00 | 64/21 | VG7842ST+823D00 | 37/50 | VG7842ST+823E00 |

Note: For optional V-9502-95 Positioner, change **00** at the end of the code number to **01**.

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

Technical Specifications

| VG7000 Series Brass Trim Globe Valves with MP82 Series Pneumatic Actuators | | |
|--|-------------------------|--|
| Service¹ | | Hot Water, Chilled Water, 50/50 Glycol Solutions, and Steam for HVAC Systems |
| Fluid Temperature Limits | Water | 35 to 284°F (2 to 140°C) |
| | Steam | 38 psig (262 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 | 38 psig (262 kPa) Saturated Steam at 284°F (140°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 30 psig (207 kPa) for 1-1/2 and 2 in. Valves |
| | Steam | 15 psig (103 kPa) |
| Flow Characteristics | Two-Way Valves | Equal Percentage |
| | Three-Way Valves | Linear Flow Characteristics |
| Rangeability² | | > 100:1 According to EN60534-2-4 |
| Leakage | | 0.01% 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 | 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.