



DESCRIPTION

The **Johnson Controls VG7000 Series Globe valves** are designed for hot water, chilled water, or steam control in HVAC systems. The globe design exhibits excellent control with two-way equal percentage and three-way linear response. The valves come in two- or three-way NPT thread configurations. All the valves can be fitted with many different control actuators (both electric and pneumatic) and with a variety of control signals, spring ranges, and failsafe operation.

FEATURES

- **Wide actuator selection, electric and pneumatic**
- **Corrosion protection with brass and optional SS trim**
- **Equal percentage and linear characteristics**
- **Longevity with over one million cycles tested**
- **Serviceability with in-place valve repacking**



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CONTROL VALVES

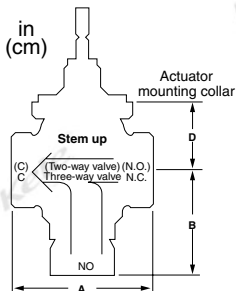
SPECIFICATIONS	
Size	1/2" to 2" FNPT
Cv Range	0.73 to 46.2
Stroke	
5/16" (8 mm)	1/2" and 3/4" valves
1/2" (13 mm)	1" and 1-1/4" valves
3/4" (19 mm)	1-1/2" and 2" valves
Flow Characteristic	Two-way equal percentage; three-way linear
Rangeability	25:1 per EN 60534-2-4
Leakage Rating	
Brass trim	ANSI Class IV, 0.01% of maximum flow per ANSI/FCI 70-2
Stainless trim	0.05% of maximum flow
Maximum Closeoff Pressure	Actuator dependant, see Ordering Information
Pressure Drop	Maximum recommended pressure drop for water is 35 psid (241 kPa) for 1/2" to 1-1/4" valves, 30 psid for 1-1/2" and 2" valves; for steam 15 psid (103 kPa) for brass trim valves and 100 psid (690 kPa) for stainless trim valves
Maximum Pressure Rating	
Brass trim with water	400 psi (2756 kPa) up to 150°F (66°C), decreasing to 365 psi (2515 kPa) at 248°F (120°C)
Brass trim with steam	35 psi (241 kPa) at 284°F (138°C);
Stainless trim with water	400 psi (2756 kPa) up to 150°F (66°C), decreasing to 308 psi (2122 kPa) at 338°F (170°C);
Stainless trim with steam	100 psi (241 kPa) at 338°F (170°C)
Pressure Rating	ANSI B16.15, Class 250 (EN 12360)
Materials Of Construction	Cast bronze body, stainless steel stem, brass trim models have brass plug, elastomer disc seat and rubber (EPR packing), stainless trim models have stainless plug/seat and spring-loaded PTFE/elastomer V-ring packing
Media Compatibility	Hot or chilled water; <50% glycol; steam 35 psig (Fluid Group 1 according to 67/548/EEC)
Media Temperature Range	
Water	35° to 248°F (2° to 120°C);
Steam	maximum 338°F (170°C) (actuator dependant), 35 psig
Actuator Mounting	Threaded mounting collar
Compatible Actuators	Electric VA-7000 or VA-4233 Series shown on following pages; pneumatic see V-3000, MP800 Series in PNEUMATICS & FITTINGS catalog section.
Operating Temperature	Actuator dependent, refer to following pages for specifications
Approvals	Actuator dependent, refer to following pages for specifications
Warranty	1 year



CONTROL VALVES

GLOBE VALVES VG7000 SERIES

DIMENSIONS



VALVE SIZE in (DN)*	WEIGHT lb (kg)	DIMENSIONS			
		A FACE TO FACE ALL VALVES	B LOWER VALVE		D ACTUATOR COLLAR ALL VALVES
			Two-way	Three-way	
1/2 (DN15)	2.2 (1.0)	3 (7.6)	13/16 (2.1)	1-13/16(4.6)	1-3/4 (4.4)
3/4 (DN20)	3.3 (1.5)	3-7/32 (8.1)	15/16 (2.4)	2-1/8 (5.4)	1-3/4 (4.4)
1 (DN25)	5.3 (2.4)	4-1/8 (10.4)	1-5/32 (2.9)	2-9/19 (6.5)	2-11/16 (6.8)
1-1/4 (DN32)	5.3 (2.4)	4-23/32 (11.9)	1-11/32 (3.4)	2-25/32 (7.0)	2-13/16 (7.1)
1-1/2 (DN40)	10.9 (5.0)	5-1/8 (13.0)	2-5/32 (5.5)	3-3/8 (8.5)	3-7/16 (8.7)
2 (DN50)	16.0 (7.3)	5-29/32 (15.0)	2-1/8 (5.3)	3-3/4 (9.5)	3-3/4 (9.5)

* DN is the European designation for the body size in metric units "cm."

ORDERING INFORMATION

MODEL	DESCRIPTION																																																																						
VG7	Globe valve NPT thread																																																																						
CODE	Configuration code for brass trim (Order codes 243, 443, 844 for stainless steel trim respectively)																																																																						
241	Two-way N.O. (stem down = closed)																																																																						
441	Two-way N.C. (stem down = open)																																																																						
842	Three-way mixing																																																																						
	<table><tr><th></th><th>VALVE</th><th>FLOW</th><th colspan="4">CLOSEOFF FOR ELECTRIC ACTUATORS (psid)</th></tr><tr><th>CODE</th><th>SIZE (FNPT)</th><th>Cv</th><th>715x</th><th>720x</th><th>423x</th><th>926x</th></tr><tr><td>CT</td><td>1/2"</td><td>0.73</td><td>345</td><td>N/A</td><td>345</td><td>N/A</td></tr><tr><td>ET</td><td>1/2"</td><td>1.8</td><td>345</td><td>N/A</td><td>345</td><td>N/A</td></tr><tr><td>GT</td><td>1/2"</td><td>4.6</td><td>216</td><td>N/A</td><td>208</td><td>N/A</td></tr><tr><td>LT</td><td>3/4"</td><td>7.3</td><td>138</td><td>N/A</td><td>132</td><td>N/A</td></tr><tr><td>NT</td><td>1"</td><td>11.6</td><td>86</td><td>N/A</td><td>63</td><td>N/A</td></tr><tr><td>PT</td><td>1-1/4"</td><td>18.5</td><td>52</td><td>N/A</td><td>38</td><td>111</td></tr><tr><td>RT</td><td>1-1/2"</td><td>28.9</td><td>N/A</td><td>70</td><td>N/A</td><td>71</td></tr><tr><td>ST</td><td>2"</td><td>46.2</td><td>N/A</td><td>45</td><td>N/A</td><td>46</td></tr></table>		VALVE	FLOW	CLOSEOFF FOR ELECTRIC ACTUATORS (psid)				CODE	SIZE (FNPT)	Cv	715x	720x	423x	926x	CT	1/2"	0.73	345	N/A	345	N/A	ET	1/2"	1.8	345	N/A	345	N/A	GT	1/2"	4.6	216	N/A	208	N/A	LT	3/4"	7.3	138	N/A	132	N/A	NT	1"	11.6	86	N/A	63	N/A	PT	1-1/4"	18.5	52	N/A	38	111	RT	1-1/2"	28.9	N/A	70	N/A	71	ST	2"	46.2	N/A	45	N/A	46
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ASSEMBLY CODE	VALVE SIZE AND PNEUMATIC ACTUATOR*
3008B	1/2" - 1", 3-6 psig, V-3000-8011 (with VG7000-100(1,4) spring kit)
3008D	1/2" - 1", 4-8 psig, V-3000-8011 (with VG7000-100(2,5) spring kit)
3008E	1/2" - 1", 9-13 psig, V-3000-8011 (with VG7000-100(3,6) spring kit)
821C	1/2" - 3/4", 3-7 psig, MP821C001 (SS trim only)
821D	1/2" - 3/4", 4-8 psig, MP821D001 (SS trim only)
821E	1/2" - 3/4", 9-13 psig, MP821E001 (SS trim only)
822C	1" - 1-1/4", 3-7 psig, MP822C001
822D	1" - 1-1/4", 4-8 psig, MP822D001
822E	1" - 1-1/4", 9-13 psig, MP822E001
823C	1-1/2" - 2", 3-7 psig, MP823C001
823D	1-1/2" - 2", 4-8 psig, MP823D001
823E	1-1/2" - 2", 9-13 psig, MP823E001
P	Pilot positioner installed for any of the above

*See V-3000/MP8000 catalog page for specs and close off ratings

ASSEMBLY CODE	VALVE SIZE AND ELECTRIC NON-SPRING RETURN **
7150G	1/2" - 1 1/4" VA-7150-1001, floating
7152G	1/2" - 1 1/4" VA-7152-1001, 0-10 VDC control
7200G	1-1/2" - 2" VA-7200-1001, floating
7202G	1-1/2" - 2" VA-7202-1001, 0-10 VDC / 0-20 mA control

**See VA-7000 catalog page for wiring and specs

ASSEMBLY CODE	VALVE SIZE AND ELECTRIC SPRING RETURN ***
423A	1/2" - 1-1/4" VA-4233-AGA-2, floating
423B	1/2" - 1-1/4" VA-4233-BGA-2, two-position
423G	1/2" - 1-1/4" VA-4233-GGA-2, 0-10 VDC proportional
72CHGA	1-1/4" - 2" VA-7820HGA-2 Two-position or floating, 0-10 VDC proportional, spring up
74CHGA	1-1/4" - 2" VA-7830HGA-2 Two-position or floating, 0-10 VDC proportional, spring down

***See VA-4233 catalog page for wiring and specs

VG7241

CT

3008E

P

Example: VG7241CT/3008EP 1/2" two-way N.O. 9-13 psig pneumatic valve with positioner

RELATED PRODUCTS

SSTAG
VG7000-6001
VG7000-6002

Stainless steel tag on bead chain, 1" x 2" dogtag, custom engraved per order
0.5" to 0.75" packing kit
1" to 2" packing kit