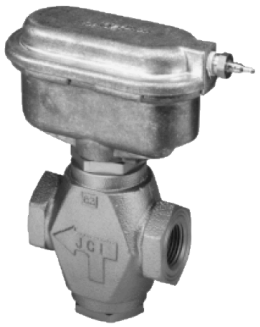
VG7000 Series Brass Trim Globe Valves with V-3801 Compact Pneumatic Actuators Catalog Page

2020-07-17 LIT-1900081

Description

Figure 1: V-3801-8001 Pneumatic Actuator Mounted on VG7842 Brass Globe Valve



VG7000 Series Brass Trim Globe Valves with V-3801 Compact Pneumatic Actuators control hot or chilled water or 15 psig saturated steam.

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

Features

- Compact; fits in tight spaces such as baseboard radiators and convectors
- Rugged actuator die-cast enclosure, enclosed spring
- Effective diaphragm area: 4 sq. In.
- Controls: hot or chilled water, 15 psig saturated steam
- Valve trim: brass
- Valve stem: stainless steel
- Maximum supply air pressure: 25 psig (172 kPa)
- Fluid temperature: 35°F to 248°F (2°C to 120°C)
- Valve body static pressure rating: ANSI Class 250
- Factory or field assembly

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 chart

Table 1: Selection chart

Actuator code number			V-3801-8001					
Mounting kit			VG7000-1010		VG7000-1011		VG7000-1012	
Spring Range			3 psig to 6 psig		4 psig to 8 psig		9 psig 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								
VG7241CS	1/2	0.73	186	VG7241CS+3801B	157	VG7241CS+3801D	84	VG7241CS+3801E
VG7241ES	1/2	1.8	186	VG7241ES+3801B	157	VG7241ES+3801D	84	VG7241ES+3801E
VG7241GS	1/2	4.6	105	VG7241GS+3801B	89	VG7241GS+3801D	48	VG7241GS+3801E
VG7241LS	3/4	7.3	67	VG7241LS+3801B	56	VG7241LS+3801D	30	VG7241LS+3801E
Two-way normally closed — NPT end connections								
VG7441CS	1/2	0.73	37	VG7441CS+3801B	57	VG7441CS+3801D	158	VG7441CS+3801E
VG7441ES	1/2	1.8	37	VG7441ES+3801B	57	VG7441ES+3801D	158	VG7441ES+3801E
VG7441GS	1/2	4.6	18	VG7441GS+3801B	28	VG7441GS+3801D	76	VG7441GS+3801E
VG7441LS	3/4	7.3	11	VG7441LS+3801B	16	VG7441LS+3801D	45	VG7441LS+3801E
Three-way mixing — NPT end connections								
VG7842CS	1/2	0.73	186 / 37	VG7842CS+3801B	157 / 57	VG7842CS+3801D	84 / 158	VG7842CS+3801E
VG7842ES	1/2	1.8	186 / 37	VG7842ES+3801B	157 / 57	VG7842ES+3801D	84 / 158	VG7842ES+3801E
VG7842GS	1/2	4.6	105 / 18	VG7842GS+3801B	89 / 28	VG7842GS+3801D	48 / 76	VG7842GS+3801E
VG7842LS	3/4	7.3	67 / 11	VG7842LS+3801B	56 / 16	VG7842LS+3801D	30 / 45	VG7842LS+3801E
Two-way normally open — union sweat end connections								
VG7281CS	1/2	0.73	186	VG7281CS+3801B	157	VG7281CS+3801D	84	VG7281CS+3801E
VG7281ES	1/2	1.8	186	VG7281ES+3801B	157	VG7281ES+3801D	84	VG7281ES+3801E
VG7281GS	1/2	4.6	105	VG7281GS+3801B	89	VG7281GS+3801D	48	VG7281GS+3801E
VG7281LS	3/4	7.3	67	VG7281LS+3801B	56	VG7281LS+3801D	30	VG7281LS+3801E
Two-way normally closed — union sweat end connections								
VG7481CS	1/2	0.73	37	VG7481CS+3801B	57	VG7481CS+3801D	158	VG7481CS+3801E
VG7481ES	1/2	1.8	37	VG7481ES+3801B	57	VG7481ES+3801D	158	VG7481ES+3801E
VG7481GS	1/2	4.6	18	VG7481GS+3801B	28	VG7481GS+3801D	76	VG7481GS+3801E
VG7481LS	3/4	7.3	11	VG7481LS+3801B	16	VG7481LS+3801D	45	VG7481LS+3801E
Three-way mixing — union sweat end connections								
VG7882CS	1/2	0.73	186 / 37	VG7882CS+3801B	157 / 57	VG7882CS+3801D	84 / 158	VG7882CS+3801E
VG7882ES	1/2	1.8	186 / 37	VG7882ES+3801B	157 / 57	VG7882ES+3801D	84 / 158	VG7882ES+3801E
VG7882GS	1/2	4.6	105 / 18	VG7882GS+3801B	89 / 28	VG7882GS+3801D	48 / 76	VG7882GS+3801E
VG7882LS	3/4	7.3	67 / 11	VG7882LS+3801B	56 / 16	VG7882LS+3801D	30 / 45	VG7882LS+3801E
Two-way normally open — 3/8 in. union sweat end connections								
VG7271CS	1/2	0.73	186	VG7271CS+3801B	157	VG7271CS+3801D	84	VG7271CS+3801E
VG7271ES	1/2	1.8	186	VG7271ES+3801B	157	VG7271ES+3801D	84	VG7271ES+3801E
VG7271GS	1/2	4.6	105	VG7271GS+3801B	89	VG7271GS+3801D	48	VG7271GS+3801E
Two-way normally closed — 3/8 in. union sweat end connections								
VG7471CS	1/2	0.73	37	VG7471CS+3801B	57	VG7471CS+3801D	158	VG7471CS+3801E
VG7471ES	1/2	1.8	37	VG7471ES+3801B	57	VG7471ES+3801D	158	VG7471ES+3801E
VG7471GS	1/2	4.6	18	VG7471GS+3801B	28	VG7471GS+3801D	76	VG7471GS+3801E
Three-way mixing — 3/8 in. union sweat end connections								
VG7872CS	1/2	0.73	186 / 37	VG7872CS+3801B	157 / 57	VG7872CS+3801D	84 / 158	VG7872CS+3801E
VG7872ES	1/2	1.8	186 / 37	VG7872ES+3801B	157 / 57	VG7872ES+3801D	84 / 158	VG7872ES+3801E
VG7872GS	1/2	4.6	105 / 18	VG7872GS+3801B	89 / 28	VG7872GS+3801D	48 / 76	VG7872GS+3801E
Two-way normally open — 3/4 in. union sweat end connections								
VG7291CS	1/2	0.73	186	VG7291CS+3801B	157	VG7291CS+3801D	84	VG7291CS+3801E

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Table 1: Selection chart

Actuator code number			V-3801-8001					
Mounting kit			VG7000-1010		VG7000-1011		VG7000-1012	
Spring Range			3 psig to 6 psig		4 psig to 8 psig		9 psig to 13 psig	
Valve code number	Size, in.	Cv	Closeoff psig	Code number	Closeoff psig	Code number	Closeoff psig	Code number
VG7291ES	1/2	1.8	186	VG7291ES+3801B	157	VG7291ES+3801D	84	VG7291ES+3801E
VG7291GS	1/2	4.6	105	VG7291GS+3801B	89	VG7291GS+3801D	48	VG7291GS+3801E
Two-way normally closed — 3/4 in. union sweat end connections								
VG7491CS	1/2	0.73	37	VG7491CS+3801B	57	VG7491CS+3801D	158	VG7491CS+3801E
VG7491ES	1/2	1.8	37	VG7491ES+3801B	57	VG7491ES+3801D	158	VG7491ES+3801E
VG7491GS	1/2	4.6	18	VG7491GS+3801B	28	VG7491GS+3801D	76	VG7491GS+3801E
Three-way mixing — 3/4 in. union sweat end connections								
VG7892CS	1/2	0.73	186 / 37	VG7892CS+3801B	157 / 57	VG7892CS+3801D	84 / 158	VG7892CS+3801E
VG7892ES	1/2	1.8	186 / 37	VG7892ES+3801B	157 / 57	VG7892ES+3801D	84 / 158	VG7892ES+3801E
VG7892GS	1/2	4.6	105 / 18	VG7892GS+3801B	89 / 28	VG7892GS+3801D	48 / 76	VG7892GS+3801E
Two-way normally open — union globe end connections								
VG7251CS	1/2	0.73	186	VG7251CS+3801B	157	VG7251CS+3801D	84	VG7251CS+3801E
VG7251ES	1/2	1.8	186	VG7251ES+3801B	157	VG7251ES+3801D	84	VG7251ES+3801E
VG7251GS	1/2	4.6	105	VG7251GS+3801B	89	VG7251GS+3801D	48	VG7251GS+3801E
VG7251LS	3/4	7.3	67	VG7251LS+3801B	56	VG7251LS+3801D	30	VG7251LS+3801E
Two-way normally closed — union globe end connections								
VG7451CS	1/2	0.73	37	VG7451CS+3801B	57	VG7451CS+3801D	158	VG7451CS+3801E
VG7451ES	1/2	1.8	37	VG7451ES+3801B	57	VG7451ES+3801D	158	VG7451ES+3801E
VG7451GS	1/2	4.6	18	VG7451GS+3801B	28	VG7451GS+3801D	76	VG7451GS+3801E
Two-way normally open — union angle end connections								
VG7551CS	1/2	0.73	186	VG7551CS+3801B	157	VG7551CS+3801D	84	VG7551CS+3801E
VG7551ES	1/2	1.8	186	VG7551ES+3801B	157	VG7551ES+3801D	84	VG7551ES+3801E
VG7551GS	1/2	4.6	105	VG7551GS+3801B	89	VG7551GS+3801D	48	VG7551GS+3801E
VG7551LS	3/4	7.3	67	VG7551LS+3801B	56	VG7551LS+3801D	30	VG7551LS+3801E

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Technical specifications

Table 2: Technical specifications

VG7000 Series Brass Trim Globe Valves with V-3801 Compact Pneumatic Actuators		
Service[1]		Hot water, chilled water, 50/50 glycol solutions, and steam for HVAC systems
Fluid temperature limits	Water	35°F to 248°F (2°C to 120°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 248°F (120°C)
Valve body pressure/temperature rating		Meets requirements of ANSI B16.15, Class 250
Maximum recommended operating pressure drop	Water	35 psig (241 kPa)
	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		-20°F to 150°F (-29°C 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: 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.

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.

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Single point of contact

APAC	Europe	NA/SA
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