

Description

The VG7000 Series Bronze Globe Valves accurately regulate the flow of water or steam in response to the demand of a controller in HVAC systems. These valves are available in normally open, normally closed, and three-way mixing configurations. Both electric and pneumatic actuators are available.

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

Features

- size ranges of 1/2 in. through 2 in. with several styles of electric and pneumatic actuators offer a broad selection
- American National Standards Institute (ANSI) Class 250 (pressure/temperature) standard compliant

Selection Charts

VG7000 Series Valve Bodies

- tight shutoff testing ensures occupant comfort and energy conservation
- standard Johnson Controls[®] Ring Pack Packings provide industry-leading reliability and operating life
- complete actuator interchangeability allows easy field retrofit or mounting using standardized mounting kits
- all valve sizes available with brass trim or stainless steel trim for use in saturated steam applications up to 100 psig

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.



VG7000 Series Bronze Control Valve

	Cv	End Connections ¹								
Size, in.				Union Sweat (3/8 in. Copper Tubing)	Union Sweat (3/4 in. Copper Tubing)	Union Globe	Union Angle	NPT		
Two-Way	Push-	Down-to-Close								
		Brass Trim						Stainless Steel Trim		
1/2	0.73	VG7241CT	VG7281CT	VG7271CT	VG7291CT	VG7251CT	VG7551CT	VG7243CT		
1/2	1.8	VG7241ET	VG7281ET	VG7271ET	VG7291ET	VG7251ET	VG7551ET	VG7243ET		
1/2	4.6	VG7241GT	VG7281GT	VG7271GT	VG7291GT	VG7251GT	VG7551GT	VG7243GT		
3/4	7.3	VG7241LT	VG7281LT		—	VG7251LT	VG7551LT	VG7243LT		
1	11.6	VG7241NT	VG7281NT		—	VG7251NT	VG7551NT	VG7243NT		
1-1/4	18.5	VG7241PT	VG7281PT		—	VG7251PT	VG7551PT	VG7243PT		
1-1/2	28.9	VG7241RT	VG7281RT	_	—	VG7251RT	VG7551RT	VG7243RT		
2	46.2	VG7241ST	VG7281ST		—	—	—	VG7243ST		
1-1/2	28.9	3/8 in. M Stem Or	ly Available in 1-	1/2 and 2 in. NPT Stainles	ss Steel Trim			VG7243RM		
2	46.2	2						VG7243SM		
Two-Way	Push-	Down-to-Open						•		
		Brass Trim						Stainless Steel Trim		
1/2	0.73	VG7441CT	VG7481CT	VG7471CT	VG7491CT	VG7451CT	—	VG7443CT		
1/2	1.8	VG7441ET	VG7481ET	VG7471ET	VG7491ET	VG7451ET	—	VG7443ET		
1/2	4.6	VG7441GT	VG7481GT	VG7471GT	VG7491GT	VG7451GT	—	VG7443GT		
3/4	7.3	VG7441LT	VG7481LT		—	—	—	VG7443LT		
1	11.6	VG7441NT	VG7481NT		—	—	—	VG7443NT		
1-1/4	18.5	VG7441PT	VG7481PT		—	—	—	VG7443PT		
1-1/2	28.9	VG7441RT	VG7481RT		—	—	—	VG7443RT		
2	46.2	VG7441ST	VG7481ST		—	—	—	VG7443ST		
1-1/2	28.9	3/8 in. M Stem Or	nly Available in 1-	1/2 and 2 in. NPT Stainles	ss Steel Trim			VG7443RM		
2	46.2							VG7443SM		
Three-Wa	y Mixir	ng								
		Brass Trim						Stainless Steel Trim		
1/2	0.73	VG7842CT	VG7882CT	VG7872CT	VG7892CT	—	—	VG7844CT		
1/2	1.8	VG7842ET	VG7882ET	VG7872ET	VG7892ET	—	—	VG7844ET		
1/2	4.6	VG7842GT	VG7882GT	VG7872GT	VG7892GT	—	—	VG7844GT		
3/4	7.3	VG7842LT	VG7882LT	—	—	—	—	VG7844LT		
1	11.6	VG7842NT	VG7882NT	_	—	—	—	VG7844NT		
1-1/4	18.5	VG7842PT	VG7882PT	_	-	—	—	VG7844PT		
1-1/2	28.9	VG7842RT	VG7882RT	—	-	—	—	VG7844RT		
2	46.2	VG7842ST	VG7882ST	—	—	—	—	VG7844ST		
1-1/2	28.9	3/8 in. M Stem Or	nly Available in 1-	1/2 and 2 in. NPT Stainles	ss Steel Trim	1	1	VG7844RM		
2	46.2	7						VG7844SM		

1. All actuators except MP84 Series use the 1/4 in. T stem. MP84 Series pneumatic actuators require the 3/8 in. M stem.

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products. © 2018 Johnson Controls. www.johnsoncontrols.com

Pneumatic Actuators for VG7000 Series Brass Trim Valve Bodies

Pneum	atic Act	uators for VG7	7000 Series Bra	ass Trim Valve	Bodies							
Actuator Code Number					V-3000-8012 E V-3000-8003 E	MP822C00 (3 to 7) MP822D00 (4 to 8) MP822E00 (9 to 13)						
						MP823C00 (3 to 7) MP823D00 (4 to 8) MP823E00 (9 to 13)		1-1/2 and 2 in.				
Tempe Range	erature	35°F to 248°F 15 psig Satur	(2°C to 120°C) ated Steam),	35°F to 284°F 38 psig Satura	35°F to 284°F (2°C to 140°C) 38 psig Saturated Steam						
Spring	Range	3 to 6	4 to 8	9 to 13	3 to 6	4 to 8	9 to 13	3 to 7	4 to 8	9 to 13		
Valve	Size	Mounting Kit	1									
1/2 an	d 3/4 in.	_	VG7000-1011	VG7000-1012	VG7000-1001	VG7000-1002	VG7000-1003					
1 and	1-1/4 in.				VG7000-1004	VG7000-1005	VG7000-1006	MP8000-	6702	1		
1-1/2 a	nd 2 in.	1.			VG7000-1007	VG7000-1008	VG7000-1009					
Positio		Not Available						V-9502-95				
Size, in.	Cv	Not Available V-9502-90 (V-3000-8012 Only) V-9502-95 Closeoff Pressure, psig V V										
	av Norma	ally Open										
1/2	0.73	186	157	84	365	339	191			[
1/2	1.8	186	157	84	365	339	191					
1/2	4.6	105	89	48	225	192	108					
3/4	7.3	67	56	30	144	122	69					
1	11.6				90	76	42	279	257	148		
1-1/4	18.5				55	47	26	170	157	90		
1-1/2	28.9				35	30	16	109	100	58		
2	46.2				22	19	11	70	64	37		
Two-Wa	ay Norma	ally Closed	1			1						
1/2	0.73	37	57	158	100	142	348			1		
1/2	1.8	37	57	158	100	142	348					
1/2	4.6	18	28	76	49	68	168					
3/4	7.3	11	16	45	29	41	100					
1	11.6				17	25	65	70	96	223		
1-1/4	18.5				10	14	37	40	55	128		
1-1/2	28.9				6	9	23	25	34	79		
2	46.2				4	6	14	16	21	50		
	Vay Mixir	•										
1/2	0.73	186/37	157/57	84/158	365/100	339/142	191/348					
1/2	1.8	186/37	157/57	84/158	365/100	339/142	191/348					
1/2	4.6	105/18	89/28	48/76	225/49	192/68	108/168					
3/4	7.3	67/11	56/16	30/45	144/29	122/41	69/100	070/70	057/00	4.40 / 000		
1	11.6				90/17	76/25	42/65	279/70	257/96	148/223		
1-1/4 1-1/2	18.5 28.9				55/10 35/6	47/14 30/9	26/37 16/23	170/40	157/55 100/34	90/128 58/79		
-												
2	46.2				22/4	19/6	11/14	70/16	64/21	37/50		

1. To prevent finger injury, V-3000-8003 actuators with enclosed springs are used in applications where the valve is exposed to the public. Typical applications include control of hot water or steam radiators.



Pneumatic Actuators for VG7000 Series Stainless Steel Trim Valve Bodies

or Iumhor	V-3000-8012 Exp			1/2 and	MP843C00 (3 to 7)		1-1/2		
	V-3000-8003 Enclosed Spring ¹			MP821E00 (9 to 13) MP822C00 (3 to 7) 1 and		3/4 In.	MP843E00 (9 to 13) n		and 2 in.
						1 and 1-1/4 in.			
						1-1/2 and 2 in.			
		35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam			35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam				
Range	3 to 6	4 to 8	9 to 13	3 to 6	4 to 8	9 to 13	3 to 7	4 to 8	9 to 13
Size	Mounting Kit								
	-	VG7000-1002	VG7000-1003	MP8000-67	01		Not Rec	ommended	
-1/4 in.	VG7000-1004	VG7000-1005	VG7000-1006	MP8000-67	02				
nd 2 in.	VG7000-1007	VG7000-1008	VG7000-1009				MP8000-6703		
ner	V-9502-90 (V-30	00-8012 Only)		V-9502-95			V-9502-9	5	
Cv	Closeoff Pressu	ire, psig		_					
y Norma	lly Open								
0.73	299	255	143	308	308	308			
1.8	299	255	143	308	308	308			
4.6	169	144	81	308	308	275			
7.3	108	92	52	304	304	175			
11.6	67	57	32	209	193	111			
18.5	41	35	19	128	118	68			
28.9				82	75	43	165	152	88
46.2				52	48	28	106	97	56
y Norma	Ily Closed	-		-	-				
0.73	75	106	261	280	308	308			
		106	261	280	308				
-		51	126	135	183				
-		-	-	-		-			
-	-	-	-						
	7	11	28						
				-	-				121
				12	16	37	24	33	76
	-	1			1				
-							_		
-									
-									
	41//	33711	19/20	82/19	75/25	43/59	165/39	152/53	88/121
28.9									
	rature Range size 3/4 in. -1/4 in. nd 2 in. nd 2 in. ner Cv y Norma 0.73 1.8 4.6 7.3 11.6 18.5 28.9 46.2 y Norma 0.73 1.8 4.6 7.3 11.6 18.5 28.9 46.2 y Norma	Iumber V-3000-8003 Environment rature 35°F to 338°F (2 100 psig Satura Range 3 to 6 Size Mounting Kit 13/4 in. VG7000-1001 -1/4 in. VG7000-1004 nd 2 in. VG7000-1007 rer V-9502-90 (V-30) Cv Closeoff Pressu y Normally Open 0.73 0.73 299 1.8 299 4.6 169 7.3 108 11.6 67 18.5 41 28.9 - 46.2 - y Normally Closed 0.73 0.73 75 1.8 75 4.6 36 7.3 22 11.6 13 18.5 7 28.9 - 46.2 - 90/75 1.8 299/75 1.6 169/36 7.3 108/22 108/22<	Iumber V-3000-8003 Enclosed Spring ¹ rature 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam Range 3 to 6 4 to 8 size Mounting Kit I3/4 in. VG7000-1001 VG7000-1002 -1/4 in. VG7000-1004 VG7000-1005 nd 2 in. VG7000-1007 VG7000-1008 ner V-9502-90 (V-300-8012 Only) VG Cv Closeoff Pressure, psig VG7000-1008 ner V-9502-90 (V-300-8012 Only) VG Cv Closeoff Pressure, psig VG700-1008 y Normally Open 255 14.6 169 0.73 299 255 14.6 1.8 299 255 4.6 169 144 7.3 108 92 11.6 67 57 18.5 41 35 28.9 106 14 7.3 22 1 1.8 75 106 1.8 7 1	Number V-3000-8003 Enclosed Spring1 rature 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam Range 3 to 6 4 to 8 9 to 13 Size Mounting Kit 1 13/4 in. VG7000-1001 VG7000-1002 VG7000-1003 -1/4 in. VG7000-1004 VG7000-1005 VG7000-1006 nd 2 in. VG7000-1007 VG7000-1008 VG7000-1009 ner V-9502-90 (V-3000-8012 Only) VC Coscoff Pressure, psig y Normally Open 255 143 14 0.73 299 255 143 1.8 299 255 143 1.6 67 57 32 11.6 67 57 32 18.5 141 35 19 28.9 106 261 1.8 75 106 261 1.8 75 106 261 1.8 75 106 261 1.8 75 11 <t< td=""><td>Number V-3000-8003 Enclosed Spring¹ MP821E00 MP822D00 MP822D00 MP822D00 MP823D00 MP823D00 rature 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam MP800-67 314 in VG7000-1001 VG7000-1002 VG7000-1003 MP800-67 -1/4 in VG7000-1007 VG7000-1008 VG7000-1009 V9502-95 Cv Closeoff Pressure, psig V-9502-95 V V9502-95 Cv Closeoff Pressure, psig V9502-95 143 308 1.8 299 255 143 308 1.8 108 92 52 304 1.8 75 106 261<td>Number V-3000-8003 Enclosed Spring¹ MP821D00 (4 to 8) MP821C00 (9 to 13) MP822C00 (3 to 7) MP822D00 (4 to 8) MP822D00 (4 to 8) MP823D00 (4 to 8) MP823D00 (4 to 8) MP823D00 (9 to 13) rature 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (2°C to 17 MP823D00 (4 to 8) MP823E00 (9 to 13) rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature NG7000-1001 VG7000-1002 VG7000-1006 MP8000-6701 r1/4 in. VG7000-1004 VG7000-1008 VG7000-1009 ner V-9502-90 (V-3000-8012 Only) V-9502-95 Cv Closeoff Pressure, psig V-9502-95 fv Closeoff Pressure, psig 308 308 11.6 169 144 81 308 308 13.8 299 255 143 308 308 14.6 16 35 19 128<!--</td--><td>httmber v-3000-8003 Enclosed Spring1 MP821D00 (4 to 8) MP821D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP823D00 (4 to 8) MP823D0 (4 to 8) MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-60 (73 MP8000-60 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-60 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (75 MP8</td><td>Number V-3000-8003 Enclosed Spring1 MP821D00 (4 to 8) MP822D00 (4 to 8) MP82D00 (4 to 8) MP8000 (4 to 8) MP800 (4 to 8) MP800 (4 to 8) MP800 (4</td><td>Humber V-3000-8003 Enclosed Spring¹ MP821D00 (4 to 8) MP822C00 (3 to 7) MP822C00 (3 to 7) MP822C00 (3 to 7) MP822C00 (4 to 8) MP822C00 (4 to 8) MP822C0 (1 3) Aind MP822C0 MP82</td></td></td></t<>	Number V-3000-8003 Enclosed Spring ¹ MP821E00 MP822D00 MP822D00 MP822D00 MP823D00 MP823D00 rature 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (3°C to 170°C), 100 psig Saturated Steam MP800-67 314 in VG7000-1001 VG7000-1002 VG7000-1003 MP800-67 -1/4 in VG7000-1007 VG7000-1008 VG7000-1009 V9502-95 Cv Closeoff Pressure, psig V-9502-95 V V9502-95 Cv Closeoff Pressure, psig V9502-95 143 308 1.8 299 255 143 308 1.8 108 92 52 304 1.8 75 106 261 <td>Number V-3000-8003 Enclosed Spring¹ MP821D00 (4 to 8) MP821C00 (9 to 13) MP822C00 (3 to 7) MP822D00 (4 to 8) MP822D00 (4 to 8) MP823D00 (4 to 8) MP823D00 (4 to 8) MP823D00 (9 to 13) rature 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (2°C to 17 MP823D00 (4 to 8) MP823E00 (9 to 13) rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature NG7000-1001 VG7000-1002 VG7000-1006 MP8000-6701 r1/4 in. VG7000-1004 VG7000-1008 VG7000-1009 ner V-9502-90 (V-3000-8012 Only) V-9502-95 Cv Closeoff Pressure, psig V-9502-95 fv Closeoff Pressure, psig 308 308 11.6 169 144 81 308 308 13.8 299 255 143 308 308 14.6 16 35 19 128<!--</td--><td>httmber v-3000-8003 Enclosed Spring1 MP821D00 (4 to 8) MP821D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP823D00 (4 to 8) MP823D0 (4 to 8) MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-60 (73 MP8000-60 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-60 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (75 MP8</td><td>Number V-3000-8003 Enclosed Spring1 MP821D00 (4 to 8) MP822D00 (4 to 8) MP82D00 (4 to 8) MP8000 (4 to 8) MP800 (4 to 8) MP800 (4 to 8) MP800 (4</td><td>Humber V-3000-8003 Enclosed Spring¹ MP821D00 (4 to 8) MP822C00 (3 to 7) MP822C00 (3 to 7) MP822C00 (3 to 7) MP822C00 (4 to 8) MP822C00 (4 to 8) MP822C0 (1 3) Aind MP822C0 MP82</td></td>	Number V-3000-8003 Enclosed Spring ¹ MP821D00 (4 to 8) MP821C00 (9 to 13) MP822C00 (3 to 7) MP822D00 (4 to 8) MP822D00 (4 to 8) MP823D00 (4 to 8) MP823D00 (4 to 8) MP823D00 (9 to 13) rature 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam 35°F to 338°F (2°C to 17 MP823D00 (4 to 8) MP823E00 (9 to 13) rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature 3 to 6 4 to 8 9 to 13 3 to 6 4 to 8 rature NG7000-1001 VG7000-1002 VG7000-1006 MP8000-6701 r1/4 in. VG7000-1004 VG7000-1008 VG7000-1009 ner V-9502-90 (V-3000-8012 Only) V-9502-95 Cv Closeoff Pressure, psig V-9502-95 fv Closeoff Pressure, psig 308 308 11.6 169 144 81 308 308 13.8 299 255 143 308 308 14.6 16 35 19 128 </td <td>httmber v-3000-8003 Enclosed Spring1 MP821D00 (4 to 8) MP821D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP823D00 (4 to 8) MP823D0 (4 to 8) MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-60 (73 MP8000-60 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-60 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (75 MP8</td> <td>Number V-3000-8003 Enclosed Spring1 MP821D00 (4 to 8) MP822D00 (4 to 8) MP82D00 (4 to 8) MP8000 (4 to 8) MP800 (4 to 8) MP800 (4 to 8) MP800 (4</td> <td>Humber V-3000-8003 Enclosed Spring¹ MP821D00 (4 to 8) MP822C00 (3 to 7) MP822C00 (3 to 7) MP822C00 (3 to 7) MP822C00 (4 to 8) MP822C00 (4 to 8) MP822C0 (1 3) Aind MP822C0 MP82</td>	httmber v-3000-8003 Enclosed Spring1 MP821D00 (4 to 8) MP821D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP822D00 (4 to 8) MP823D00 (4 to 8) MP823D0 (4 to 8) MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-60 (73 MP8000-60 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-60 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (73 MP8000-67 (75 MP8	Number V-3000-8003 Enclosed Spring1 MP821D00 (4 to 8) MP822D00 (4 to 8) MP82D00 (4 to 8) MP8000 (4 to 8) MP800 (4 to 8) MP800 (4 to 8) MP800 (4	Humber V-3000-8003 Enclosed Spring ¹ MP821D00 (4 to 8) MP822C00 (3 to 7) MP822C00 (3 to 7) MP822C00 (3 to 7) MP822C00 (4 to 8) MP822C00 (4 to 8) MP822C0 (1 3) Aind MP822C0 MP82

1. To prevent finger injury, V-3000-8003 actuators with enclosed springs are used in applications where the valve is exposed to the public. Typical applications include control of hot water or steam radiators.

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products. © 2018 Johnson Controls. www.johnsoncontrols.com



Non-Spring-Return Electric Actuators for VG7000 Series Valve Bodies

g-itelu		tors for VG7000 Seri			1/47040 404 0					
nber	VA-7150-1001 On/Off (Floating) VA-7152-1001 0 to 10 VDC Proportional			g)	VA7810-AGA-2 On/Off (Floating Control) VA7810-AGC-2 On/Off (Floating Control) with Two Switches VA7810-HGA-2 0 to 10 VDC Proportional Control VA7810-HGC-2 0 to 10 VDC Proportional Control with Two Switches					
				oportional						
	VA-7153-1001 On/Off (Floating with Feedback)								
ure		•								
	Stainless Steel:	35°F to 338°F (2°C to	o 170°C), 100 psig	Saturated Steam						
	None									
e	Requires T Stem	1								
Cv	Closeoff Pressure, psig									
	Brass Trim	Stainless Steel Trim	Brass Trim	Stainless Steel Trim	Brass Trim	Stainless Steel Trim				
).73		239		308		308				
.8						308				
-						283				
-						180				
						114				
						70				
						45				
-		13	45	28	46	28				
						308				
-						308				
						308				
-				-	010	201				
-				-	-	133				
	-		-			76				
					-	47				
-	22	14	40	29	47	30				
-	245/245	220/208		208/208		308/308				
.73 1.8	345/345	239/308		308/308		308/308				
	216/257	135/161		278/308		283/308				
16		100/101		210/000						
l.6		86/96		177/197		180/201				
7.3	138/153	86/96	179/209	177/197	182/213	180/201				
7.3 11.6	138/153 86/100	54/63	179/209	112/131	182/213	114/133				
7.3	138/153		179/209 109/120 70/74		182/213 111/122 71/76					
	ure ormally .73 .8 .6 .3 1.6 8.5 8.9 6.2 ormally .73 .8 .6 .3 1.6 8.5 8.9 6.2 0.73 .8 .6 .3 1.6 8.5 8.9 6.2 Mixing .73	AberOn/Off (Floating)VA-7152-1001 0 to 10 VDC ProposeVA-7153-1001 On/Off (Floating) with FeedbackURBrass Trim: 35°F Stainless Steel:NoneStainless Steel:NoneRequires T StemStainless Steel:NoneStainless Steel:NoneStainless Steel:Stainless Steel:NoneStainless Steel:Stainless Steel:<	None VA-7153-1001 0 to 10 VDC Proportional VA-7153-1001 On/Off (Floating) with Feedback VA-7153-1001 On/Off (Floating) with Feedback ure Brass Trim: 35°F to 284°F (2°C to 140 Stainless Steel: 35°F to 338°F (2°C to None Stainless Steel: 35°F to 338°F (2°C to None None Requires T Stem Common (2°C) Brass Trim Stainless Steel Trim Stainless Steel: 35°F to 338°F (2°C to None Stainless Steel Stainless Steel: 35°F to 338°F (2°C to Stainless Steel: 35°F to 338°F (2°C to Stainless Steel Stainless Steel Stainless Steel: 35°F to 338°F (2°C to Stainless Steel Stainless Steel Stainless Steel: 35°F to 338°F (2°C to Stainless Steel Stainless Steel Stainless Steel: 35°F to 338°F (2°C to Stainless Steel Stainless Steel Stainless Steel: 35°F to 338°F (2°C to Stainless Steel Stainless Steel Stainless Steel: 35°F to 338°F (2°C to Stainless Steel Stainless Steel Stainless Steel: 35°F to 338°F (2°C to Stainless Steel Stainless Steel Stainless Steel: 35°F to 345 Stainless Steel<	Dn/Off (Floating) On/Off (Floating) VA-7152-1001 0 to 10 VDC Proportional VA-7202-1001 0 to 10 VDC Proportional VA-7153-1001 On/Off (Floating) with Feedback VA-7203-1001 On/Off (Floating) with Feedback Brass Trim: 35°F to 284°F (2°C to 140°C), 38 psig Satu Stainless Steel: 35°F to 338°F (2°C to 170°C), 100 psig None Requires T Stem Varia Closeoff Pressure, psig Brass Trim Brass Trim Stainless Steel Trim Brass Trim 345 239 .6 216 .16 86 .5 52 .3 138 .6 21 .73 345 .308 - .6 257 .16 100 .6 257 .36 22 .36 22 .36 22 .36 22 .44 46	Index On/Off (Floating) On/Off (Floating) VA-7152-1001 0 to 10 VDC Proportional VA-7202-1001 0 to 10 VDC Proportional VA-7203-1001 0n/Off (Floating) with Feedback VA-7153-1001 On/Off (Floating) with Feedback VA-7203-1001 On/Off (Floating) with Feedback VA-7203-1001 On/Off (Floating) with Feedback Brass Trim: 35°F to 284°F (2°C to 140°C), 38 psig Saturated Steam Stainless Steel: 35°F to 338°F (2°C to 170°C), 100 psig Saturated Steam None Requires T Stem Coseoff Pressure, psig Cr Closeoff Pressure, psig Stainless Steel Trim Stainless Steel Trim Stainless Steel Trim 345 239 308 308 308 .6 216 135 278 308 .3 138 86 177 44 .6 52 33 109 68 .8 94 21 70 44 .6 277 161 308 308 .8 345 308 308 308 .8 345 308 308 308 .9 345 <td< td=""><td>hber hber vOn/Off (Floating)On/Off (Floating)On/Off (Floating) VA7810-AGC-2 On/Off (Floating) with Two SwitcOn/Off (Floating) VA7810-AGC-2 0 to 10 VDC ProportionalOn/Off (Floating) vVA7810-AGC-2 O to 10 VDC ProportionalVA7810-AGC-2 O to 10 VDC ProportionalVICE V VVA7810-AGC-2 O to 10 VDC ProportionalVA7810-AGC-2 O to 10 VDC ProportionalVA7810-AGC-2 O to 10 VDC ProportionalVICE V VVA7810-AGC-2 O to 10 VDC ProportionalVICE VVA7810-AGC-2 O to 10 VDC ProportionalVICE V VVA7810-AGC-2 O to 10 VDC ProportionalVICE VVICE VVICE VVICE VVICE VVICE VVIC</td></td<>	hber hber vOn/Off (Floating)On/Off (Floating)On/Off (Floating) VA7810-AGC-2 On/Off (Floating) with Two SwitcOn/Off (Floating) VA7810-AGC-2 0 to 10 VDC ProportionalOn/Off (Floating) vVA7810-AGC-2 O to 10 VDC ProportionalVA7810-AGC-2 O to 10 VDC ProportionalVICE V VVA7810-AGC-2 O to 10 VDC ProportionalVA7810-AGC-2 O to 10 VDC ProportionalVA7810-AGC-2 O to 10 VDC ProportionalVICE V VVA7810-AGC-2 O to 10 VDC ProportionalVICE VVA7810-AGC-2 O to 10 VDC ProportionalVICE V VVA7810-AGC-2 O to 10 VDC ProportionalVICE VVICE VVICE VVICE VVICE VVICE VVIC				



Spring-Return Electric Actuators for VG7000 Series Valve Bodies

Actuato		VA-4233-AGA-2	for VG7000 Series V		1	14 2000 110 1 -1				
Code Number		Floating Contro		VA7820-HGA-2		VA7830-HGA-2 ¹				
		VA-4233-AGC-2			oportional Control		0 to 10 VDC Proportional Control			
		Floating Contro		VA7820-HGC-2			VA7830-HGC-2 ¹			
		with Two Switch			oportional Control		portional Control			
		VA-4233-BGA-2		with Two Switc	hes	with Two Switch	ies			
		On/Off Control								
		VA-4233-BGC-2								
		On/Off Control								
		with Two Switch	nes							
		VA-4233-GGA-2								
		0 to 10 VDC Pro	portional Control							
		VA-4233-GGC-2								
			portional Control							
		with Two Switch	nes							
		Spring-Return V		Spring-Return	•	Spring-Return Valve Stem Down				
Tempera	ature		F to 284°F (2°C to 140							
Range			35°F to 338°F (2°C to	o 170°C), 100 psig	Saturated Steam					
Linkage		None								
Stem Ty	-	Requires T Stem								
Size, in.	CV	Closeoff Pressu Brass Trim	Stainless Steel	Brass Trim	Stainless Steel	Brass Trim	Stainless Steel			
		Brass Irim	Trim	Brass Irim	Trim	Brass Irim	Trim			
	Normall									
1/2	0.73	345	230	—	308	—	308			
1/2	1.8	345	230	—	308	—	308			
1/2	4.6	208	130	—	283	—	283			
3/4	7.3	132	82	—	180	—	180			
1	11.6	63	39	182	114	182	114			
1-1/4	18.5	38	24	111	70	111	70			
1-1/2	28.9			71	45	71	45			
2	46.2			46	28	46	28			
Two-Way	Normall	ly Closed		1	1	1				
1/2	0.73	345	224	—	308	—	308			
1/2	1.8	345	224		308	1_	308			
1/2	4.6	173	108	_	308		308			
3/4	7.3	103	64		201		201			
1	11.6	66	41	213	133	213	133			
1-1/4	18.5	38	24	122	76	122	76			
1-1/2	28.9			76	47	76	47			
2	46.2	1		47	30	47	30			
	ay Mixing	<u> </u>		**		**	00			
1/2	0.73	345/345	230/224		308/308		308/308			
1/2	1.8	345/345	230/224		308/308	<u> </u>	308/308			
1/2	4.6	208/173	130/108		283/308		283/308			
3/4	7.3	132/103	82/64		180/201		180/201			
1	11.6	63/66	39/41	182/213	114/133	 182/213	114/133			
		38/38	24/24	111/122	70/76	111/122	70/76			
1-1/4		30/30	24/24	111/122	10/10	111/122	10/10			
1-1/4	18.5			71/76	15/17	71/76	15/17			
1-1/4 1-1/2 2	28.9 46.2			71/76 46/47	45/47 28/30	71/76 46/47	45/47 28/30			

 VA7820 and VA7830 spring-return actuators ship from the factory already set for 0-10 VDC proportional control. These actuators have field-selectable switches that allow the actuators to be used for on/off control or three-wire floating control.

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products. © 2018 Johnson Controls. www.johnsoncontrols.com

Technical Specifications

	VG7000 Se	eries Bronze Globe Valves for	Assembly in t	the Field				
Service ¹		Hot Water, and Chilled Water, and Steam with up to 50% Glycol Solution						
		Cv						
Valve Body Sizes	1/2 in. (DN15)	0.73, 1.8, 4.6						
Available	3/4 in. (DN20)	7.3						
	1 in. (DN25)	11.6						
	1-1/4 in. (DN32)	18.5						
	1-1/2 in. (DN40)	28.9						
	2 in. (DN50)	46.2						
Stem Travel		1/2 in. and 3/4 in. Valves	1 in. and 1-1/4 i	n. Valve	1-1/2 in. and 2 in. Valves			
	Two-Way and Three-Way	5/16 in.	1/2 in.		3/4 in.			
		Brass Trim		Stainless Steel	Trim			
End Connections		NPT, Union Sweat, Globe and Angle		NPT				
Materials	Body	Cast Bronze – C84400		Cast Bronze – C83600				
	Stem	Stainless Steel		Stainless Steel				
	Plug	Brass		Stainless Steel				
	Seat	3/4 in. through 2 in.: Machined from Body 1/2 in.: Brass Seat		Stainless Steel Replaceable Seat				
	Disk	Ethylene Propylene Diene Monomer (EPDM)		Stainless Steel				
	Packing	Self-Adjusting Ethylene Propylene Terpolymer (EPT) U-Cups		Spring-Loaded Polytetrafluoroethylene (PTFE)				
Flow	Two-Way	Equal Percentage		Equal Percentag	e			
Characteristic	Three-Way	Linear		Linear				
Ratings	Body	ANSI Class 250 ²		ANSI Class 250 ³				
	Leakage (Percent of Maximum Flow)	0.01%		0.05%				
	Fluid Temperature, Body Only ⁴	35°F to 284°F (2°C to 140°C)		35°F to 338°F (2°C to 170°C)				
	Maximum Steam Pressure, Saturated Steam	38 psig (262 kPa)		100 psig (690 kPa)				
	Maximum Pressure Drop, Valve Open	35 psig (1/2 in. through 1-1/4 in.) 30 psig (1-1/2 in. and 2 in. Valves)		35 psig (1/2 in. through 1-1/4 in.) 30 psig (1-1/2 in. and 2 in. Valves)				
Compliance	Canada	CRN: 0C1099.9087YTN						

1. Refer to the VDI 2035 Guideline for recommended proper water treatment.

2. 400 psig (2,758 kPa) for fluid temperatures between 35 and 150°F (2 and 66°C); decreasing to 365 psig (2,515 kPa) at 248°F (120°C).

3. 400 psig (2,758 kPa) for fluid temperatures between 35 and 150°F (2 and 66°C); decreasing to 308 psig (2,122 kPa) at 338°F (170°C).

4. Refer to appropriate actuator literature for ambient limitations due to the actuator.



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 to the State of California reproductive harm. For n

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: 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

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products. © 2018 Johnson Controls. www.johnsoncontrols.com