VG7000 Series Brass Trim Globe Valves with VA-715x Series Electric Actuators Catalog Page

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LIT-1900084

Description

Figure 1: VA-715x Series Electric Actuator mounted on a VG7842 Brass Globe Valve



VG7000 Series Brass Trim Globe Valves with VA-715x Series Non-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

- 90 lb force provides tight closeoff
- Direct coupled no linkage required
- Magnetic clutch protects gearing, ensures tight closeoff
- Controls hot water, chilled water, or steam
- Fits VG7000 Series valves 1/2 through 2 in.
- Valve body static pressure rating:ANSI Class 250
- Factory or field assembly
- Voltage: 24 VAC, 50/60 Hz, 4.7 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.

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Selection chart

Table 1: VG7000 Brass Trim Globe Valve with VA-715x Series Non-Spring-Return Electric Actuator

Actuator code number				VA-7150-1001	VA-7153-1001	VA-7152-1001
Actuator input				On/off (floating)	On/off (floating) with feedback	0 to 10 VDC proportional
Temperature range				35°F to 284°F fluid temperature, 38 psig saturated steam		
Valve code number	Size, in.	Cv	Closeoff psig	Non-spring return		
Two-way push-down-to-close — NPT End Connections						
VG7241CT	1/2	0.73	345	VG7241CT+7150G	VG7241CT+7153G	VG7241CT+7152G
VG7241ET	1/2	1.8	345	VG7241ET+7150G	VG7241ET+7153G	VG7241ET+7152G
VG7241GT	1/2	4.6	216	VG7241GT+7150G	VG7241GT+7153G	VG7241GT+7152G
VG7241LT	3/4	7.3	138	VG7241LT+7150G	VG7241LT+7153G	VG7241LT+7152G
VG7241NT	1	11.6	86	VG7241NT+7150G	VG7241NT+7153G	VG7241NT+7152G
VG7241PT	1-1/4	18.5	52	VG7241PT+7150G	VG7241PT+7153G	VG7241PT+7152G
VG7241RT	1-1/2	28.9	34	VG7241RT+7150G	VG7241RT+7153G	VG7241RT+7152G
VG7241ST	2	46.2	21	VG7241ST+7150G	VG7241ST+7153G	VG7241ST+7152G
Three-way mixing — NPT End Connections						
VG7842CT	1/2	0.73	345 / 345	VG7842CT+7150G	VG7842CT+7153G	VG7842CT+7152G
VG7842ET	1/2	1.8	345 / 345	VG7842ET+7150G	VG7842ET+7153G	VG7842ET+7152G
VG7842GT	1/2	4.6	216 / 257	VG7842GT+7150G	VG7842GT+7153G	VG7842GT+7152G
VG7842LT	3/4	7.3	138 / 153	VG7842LT+7150G	VG7842LT+7153G	VG7842LT+7152G
VG7842NT	1	11.6	86 / 100	VG7842NT+7150G	VG7842NT+7153G	VG7842NT+7152G
VG7842PT	1-1/4	18.5	52 / 57	VG7842PT+7150G	VG7842PT+7153G	VG7842PT+7152G
VG7842RT	1-1/2	28.9	34 / 36	VG7842RT+7150G	VG7842RT+7153G	VG7842RT+7152G
VG7842ST	2	46.2	21 / 22	VG7842ST+7150G	VG7842ST+7153G	VG7842ST+7152G
Two-way push-down-to-close — Union Sweat End Connections						
VG7281CT	1/2	0.73	345	VG7281CT+7150G	VG7281CT+7153G	VG7281CT+7152G
VG7281ET	1/2	1.8	345	VG7281ET+7150G	VG7281ET+7153G	VG7281ET+7152G
VG7281GT	1/2	4.6	216	VG7281GT+7150G	VG7281GT+7153G	VG7281GT+7152G
VG7281LT	3/4	7.3	138	VG7281LT+7150G	VG7281LT+7153G	VG7281LT+7152G
VG7281NT	1	11.6	86	VG7281NT+7150G	VG7281NT+7153G	VG7281NT+7152G
VG7281PT	1-1/4	18.5	52	VG7281PT+7150G	VG7281PT+7153G	VG7281PT+7152G
VG7281RT	1-1/2	28.9	34	VG7281RT+7150G	VG7281RT+7153G	VG7281RT+7152G
VG7281ST	2	46.2	21	VG7281ST+7150G	VG7281ST+7153G	VG7281ST+7152G
Three-way mixing — Union Sweat End Connections						
VG7882CT	1/2	0.73	345 / 345	VG7882CT+7150G	VG7882CT+7153G	VG7882CT+7152G
VG7882ET	1/2	1.8	345 / 345	VG7882ET+7150G	VG7882ET+7153G	VG7882ET+7152G
VG7882GT	1/2	4.6	216 / 257	VG7882GT+7150G	VG7882GT+7153G	VG7882GT+7152G
VG7882LT	3/4	7.3	138 / 153	VG7882LT+7150G	VG7882LT+7153G	VG7882LT+7152G
VG7882NT	1	11.6	86 / 100	VG7882NT+7150G	VG7882NT+7153G	VG7882NT+7152G
VG7882PT	1-1/4	18.5	52 / 57	VG7882PT+7150G	VG7882PT+7153G	VG7882PT+7152G
VG7882RT	1-1/2	28.9	34 / 36	VG7882RT+7150G	VG7882RT+7153G	VG7882RT+7152G
VG7882ST	2	46.2	21 / 22	VG7882ST+7150G	VG7882ST+7153G	VG7882ST+7152G
Two-way push-down-to-close — 3/8 in. Union Sweat End Connections						
VG7271CT	1/2	0.73	345	VG7271CT+7150G	VG7271CT+7153G	VG7271CT+7152G
VG7271ET	1/2	1.8	345	VG7271ET+7150G	VG7271ET+7153G	VG7271ET+7152G
VG7271GT	1/2	4.6	216	VG7271GT+7150G	VG7271GT+7153G	VG7271GT+7152G
Three-way mixing — 3/8 in. Union Sweat End Connections						
VG7872CT	1/2	0.73	345 / 345	VG7872CT+7150G	VG7872CT+7153G	VG7872CT+7152G
VG7872ET	1/2	1.8	345 / 345	VG7872ET+7150G	VG7872ET+7153G	VG7872ET+7152G

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Table 1: VG7000 Brass Trim Globe Valve with VA-715x Series Non-Spring-Return Electric Actuator

Actuator code number				VA-7150-1001	VA-7153-1001	VA-7152-1001
Actuator input				On/off (floating)	On/off (floating) with feedback	0 to 10 VDC proportional
Temperature range				35°F to 284°F fluid temperature, 38 psig saturated steam		
Valve code number	Size, in.	Cv	Closeoff psig	Non-spring return		
VG7872GT	1/2	4.6	216 / 257	VG7872GT+7150G	VG7872GT+7153G	VG7872GT+7152G
Two-way push-down-to-close — 3/4 in. Union Sweat End Connections						
VG7291CT	1/2	0.73	345	VG7291CT+7150G	VG7291CT+7153G	VG7291CT+7152G
VG7291ET	1/2	1.8	345	VG7291ET+7150G	VG7291ET+7153G	VG7291ET+7152G
VG7291GT	1/2	4.6	216	VG7291GT+7150G	VG7291GT+7153G	VG7291GT+7152G
Three-way mixing — 3/4 in. Union Sweat End Connections						
VG7892CT	1/2	0.73	345 / 345	VG7892CT+7150G	VG7892CT+7153G	VG7892CT+7152G
VG7892ET	1/2	1.8	345 / 345	VG7892ET+7150G	VG7892ET+7153G	VG7892ET+7152G
VG7892GT	1/2	4.6	216 / 257	VG7892GT+7150G	VG7892GT+7153G	VG7892GT+7152G
Two-way push-down-to-close — Union Globe End Connections						
VG7251CT	1/2	0.73	345	VG7251CT+7150G	VG7251CT+7153G	VG7251CT+7152G
VG7251ET	1/2	1.8	345	VG7251ET+7150G	VG7251ET+7153G	VG7251ET+7152G
VG7251GT	1/2	4.6	216	VG7251GT+7150G	VG7251GT+7153G	VG7251GT+7152G
VG7251LT	3/4	7.3	138	VG7251LT+7150G	VG7251LT+7153G	VG7251LT+7152G
VG7251NT	1	11.6	86	VG7251NT+7150G	VG7251NT+7153G	VG7251NT+7152G
VG7251PT	1-1/4	18.5	52	VG7251PT+7150G	VG7251PT+7153G	VG7251PT+7152G
VG7251RT	1-1/2	28.9	34	VG7251RT+7150G	VG7251RT+7153G	VG7251RT+7152G
Two-way push-down-to-close — Union Angle End Connections						
VG7551CT	1/2	0.73	345	VG7551CT+7150G	VG7551CT+7153G	VG7551CT+7152G
VG7551ET	1/2	1.8	345	VG7551ET+7150G	VG7551ET+7153G	VG7551ET+7152G
VG7551GT	1/2	4.6	216	VG7551GT+7150G	VG7551GT+7153G	VG7551GT+7152G
VG7551LT	3/4	7.3	138	VG7551LT+7150G	VG7551LT+7153G	VG7551LT+7152G
VG7551NT	1	11.6	86	VG7551NT+7150G	VG7551NT+7153G	VG7551NT+7152G
VG7551PT	1-1/4	18.5	52	VG7551PT+7150G	VG7551PT+7153G	VG7551PT+7152G
VG7551RT	1-1/2	28.9	34	VG7551RT+7150G	VG7551RT+7153G	VG7551RT+7152G

Technical specifications

Table 2: Technical specifications

VG7000 Series Brass Trim Globe Valves with VA-715x Series Electric Actuators		
Service[1]		Hot water, chilled water, 50/50 glycol solutions, and steam for HVAC systems
Fluid temperature limits	Water	35°F to 284°F (2°C 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
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

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Table 2: Technical specifications

VG7000 Series Brass Trim Globe Valves with VA-715x Series Electric Actuators		
Actuator ambient operating temperature limits		0°F to 140°F (-18°C to 60°C)
Actuator input signal	VA-7150-1001	24 VAC three-wire floating control
	VA-7152-1001	0 to 10 VDC proportional control
	VA-7153-1001	24 VAC three-wire floating control with 0 to 2,000 ohm feedback potentiometer for 25/32 in. valve stroke
Actuator power requirements	VA-7150-1001	24 VAC (20 to 30 VAC), 50/60 Hz, 2.7 VA nominal
	VA-7152-1001	24 VAC (20 to 30 VAC), 50/60 Hz, 4.7 VA nominal
	VA-7153-1001	24 VAC (20 to 30 VAC), 50/60 Hz, 2.7 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: 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 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

This product is made of copper alloy, which contains lead. The product is therefore not to be used on drinking water

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.

Single point of contact

APAC	Europe	NA/SA
JOHNSON CONTROLS	JOHNSON CONTROLS	JOHNSON CONTROLS
C/O CONTROLS PRODUCT MANAGEMENT	VOLTAWEG 20	507 E MICHIGAN ST
NO. 32 CHANGJIANG RD NEW DISTRICT	6101 XK ECHT	MILWAUKEE WI 53202
WUXI JIANGSU PROVINCE 214028	THE NETHERLANDS	USA
CHINA		

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