

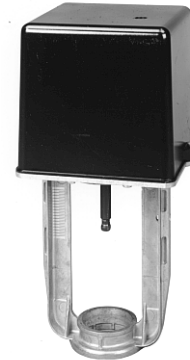
## Electric Valve Actuators

### Description

VA-3100 Series Electric Valve Actuators use a synchronous motor to accurately position Johnson Controls VG2000 Series Cast Iron Flanged Globe Valves in HVAC and industrial applications. These non-spring return electric actuators have a 675 lb (3,000 N) force output for on/off (floating) or proportional control. Integral auxiliary switches are available for indicating end stop position or to perform switching functions. Position feedback is also available through an isolated 2,000 ohm potentiometer. All models feature a manual hand crank for manual positioning of the valve, independent of a power supply.

### Features

- synchronous motor with pressure switches provides a constant running speed and establishes fixed closeoff forces
- two-bolt coupler clamp provides quick and easy coupling of the actuator to the valve stem
- on/off (floating) or proportional control allows optimal choice of control signal
- adjustable starting point, span, and action (proportional control model only) provides application flexibility and allows for easy sequencing from only one output signal
- 0 to 10 VDC position feedback signal (proportional control model only) provides accurate valve position indication in response to an input signal up to 10 VDC
- auxiliary switches and feedback potentiometer available on select models provides independent verification of actuator position
- manual hand crank allows for manual positioning of the valve, independent of a power supply



**VA-3100 Series Electric Valve Actuator**

### Repair Information

If the VA-3100 Series Electric Valve Actuator fails to operate within its specifications, replace the unit. For a replacement actuator, contact the nearest Johnson Controls® representative.

### Selection Charts

#### VA-3100 Series Electric Valve Actuators

Description	Actuator Model		
	VA-3100-AGA	VA-3100-AGC	VA-3100-HGC
On/Off (Floating) Control	■	■	—
Proportional Control	—	—	■
Feedback:			
2,000 Ohm Potentiometer	—	■	—
Two Auxiliary Switches	—	■	■
Stem and Valve Size:			
"M" Stem (3/8 in.), 2-1/2 through 4 in. Valves	■	■	■
"N" Stem (1/2 in.), 5 and 6 in. Valves	■	■	■

#### Accessories for VA-3100 Series (Order Separately)

Code Number	Description	Ship. Wt. lb <sup>a</sup>
VA-3100-101	Auxiliary Switch Cam Adjusting Wrench (Used on VA-3100 Series Electric Actuators – One Wrench is Supplied with Each Actuator)	0.1
VA-3100-500	Mounting Kit for Field Mounting VA-3100 Series Electric Actuators to 2-1/2 through 4 in. VG2000 Series Cast Iron Flanged Globe Valves with 3/8 in. "M" Stem (Kit Includes One Stem Jam Nut, One Yoke Adaptor, One Packing Nut, One 2-1/4 in. Length Stem Adaptor for 2-1/2 in. Valves, and One 2-1/2 in. Length Stem Adaptor for 3 and 4 in. Valves)	3.0
VA-3100-501	Mounting Kit for Field Mounting VA-3100 Series Electric Actuators to 5 and 6 in. VG2000 Series Cast Iron Flanged Globe Valves with 1/2 in. "N" Stem (Kit Includes One Stem Jam Nut, One Yoke Adaptor, One Packing Nut, and One Stem Adaptor)	3.5

a. lb x 0.454 = kg.

### Technical Specifications

VA-3100 Series Electric Valve Actuators		
Force Output		675 lb (3,000 N)
Power Requirements	On/Off (Floating) Control Models	20 to 28 VAC, 60 Hz; 16 VA Minimum
	Proportional Control Models	20 to 28 VAC, 60 Hz; 18 VA Minimum
Input Signal	On/Off (Floating) Control Models	20 to 28 VAC, 60 Hz
	Proportional Control Models	0 to 10 VDC
Input Impedance	Proportional Control Models Only	5,600 Ohms
Feedback Signal	VA-3100-AGC Only	0 to 2,000 Ohms
	VA-3100-HGC Only	Approximately 9 VDC Span (0.5 VDC with Valve Stem Fully Down; 9.5 VDC with Valve Stem Fully Up)
Switch Contact Rating		5 A, 24 VAC
Maximum Stroke		1-21/32 in. (42 mm)
Nominal Timing for 1 in. Stroke		92 Seconds
Ambient Operating Temperature Limits (Limited by the Actuator)	On/Off (Floating) Control Models	14 to 140°F (-10 to 60°C)
	Proportional Control Models	14 to 122°F (-10 to 50°C)
Agency Compliance		UL 873 Listed, File E27734; CSA C22.2 No. 139 Certified; CE Directive (89/336 EU)
Enclosure Rating		NEMA 3/3R, IP 54
Shipping Weight		9.7 lb (4.4 kg)