

V-3000-8011 (Exposed) and V-3000-8003 (Enclosed) Pneumatic Valve Actuators

The V-3000-8011 and V-3000-8003 Pneumatic Valve Actuators are designed to accurately position steam or water valve modulating plugs in response to a pneumatic signal from a controller. A V-9502 Valve Positioner can be ordered separately for use with the V-3000-8011 only, in applications where sequential operation is desired or additional positioning power is necessary. The actuators have a molded synthetic rubber diaphragm design. This molded diaphragm provides a constant effective area throughout the actuator stroke. All parts are protected by a sturdy die-cast aluminum housing.

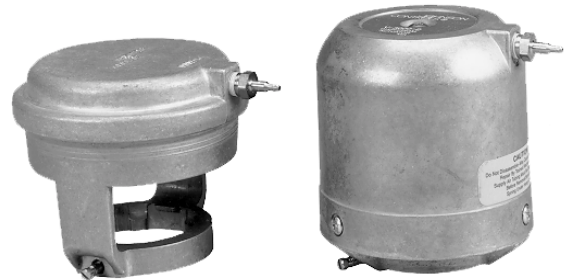


Figure 1: V-3000-8011 (Exposed) and V-3000-8003 (Enclosed) Pneumatic Valve Actuators

Two models are available: the exposed model (V-3000-8011) is designed for installations in a protected location, and the enclosed model (V-3000-8003) is designed for installation in a location where the actuator could be subjected to tampering.

Features and Benefits	
<input type="checkbox"/> Universal Valve Mounting Design	Compatible for use on all Johnson Controls valves with V-3000 mounting configurations
<input type="checkbox"/> Rolling Diaphragm Design	Constant effective diaphragm area throughout the actuator stroke for optimal force output
<input type="checkbox"/> Integral Stroke Position Indicator	Provides visual reference to valve position

Operation

Air pressure from a pneumatic controller is applied to the diaphragm of the actuator, which moves the piston against the valve stem. The piston moves the valve stem and plug until the diaphragm pressure balances the valve return spring force and the fluid forces. Reducing the air pressure permits the valve spring to return the valve plug to its normal position. With no control air pressure applied to the diaphragm, the valve is in the normal position.

Interchangeability

The V-3000-8011 and V-3000-8003 Pneumatic Valve Actuators should not be confused with the V-3000-1, V-3000-8001, and V-3000-2 Pneumatic Valve Actuators. The V-3000-8011 and V-3000-8003 can replace the V-3000-1, V-3000-8001, and V-3000-2. However, it is important to note that the V-3000-1 and V-3000-2 cannot replace the V-3000-8001, V-3000-8011, or V-3000-8003 on VG7000 Series Bronze Valves, or on valves with an upper spring seat with an outside diameter greater than 1-3/4 in. (44 mm), as illustrated in Figure 2.

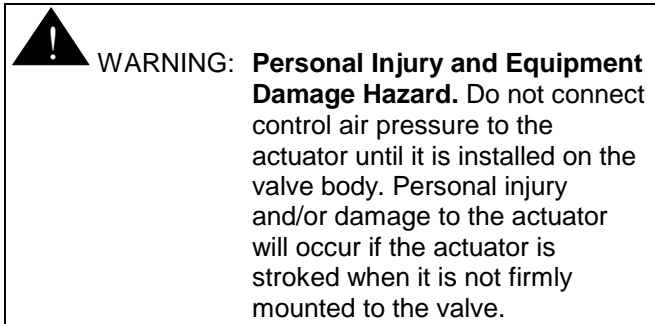
Valve Compatibility

The following valve code number series are compatible with V-3000-8011 and V-3000-8003 Pneumatic Valve Actuators:

- VG7000 Series
- VTM Series
- V-3752 Series
- V-3754 Series
- V-3762 Series
- V-3766 Series
- V-3966 Series
- V-3974 Series
- V-4324 Series
- V-4332 Series
- V-4334 Series
- V-4440 Series

Mounting

The V-3000 Series Pneumatic Valve Actuators can be easily field mounted to the valve bonnet with a single setscrew. The actuators can also be ordered factory mounted to VG7000 Series Bronze Control Valves. The V-9502 can be purchased separately and field mounted to the V-3000-8011. A positioner is not available for the V-3000-8003 Pneumatic Valve Actuator.



Dimensions

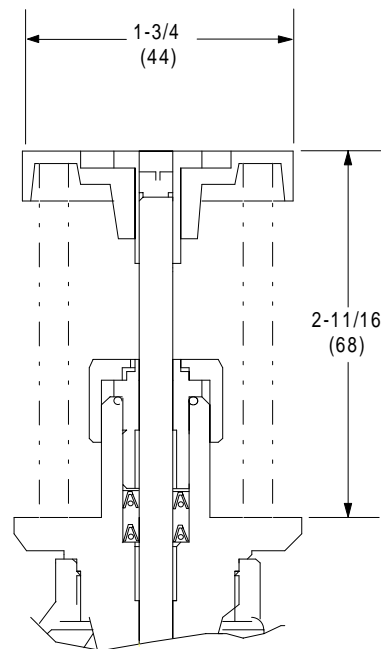


Figure 2: Upper Spring Plate, in. (mm)

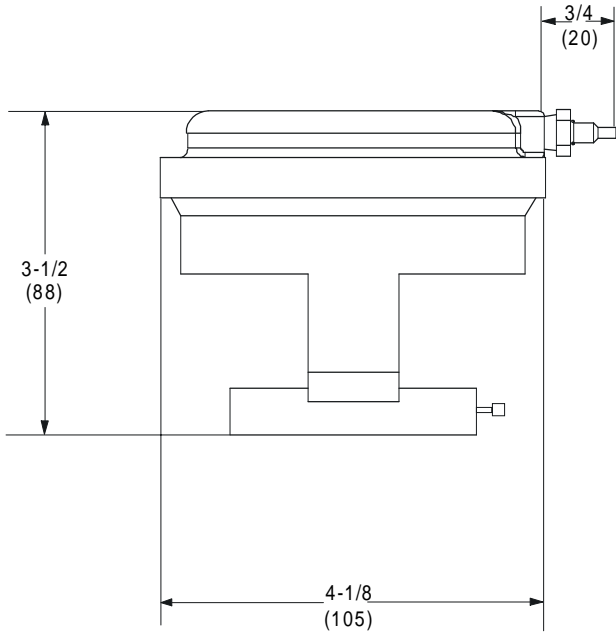


Figure 3: V-3000-8011 Pneumatic Valve Actuator, in. (mm)

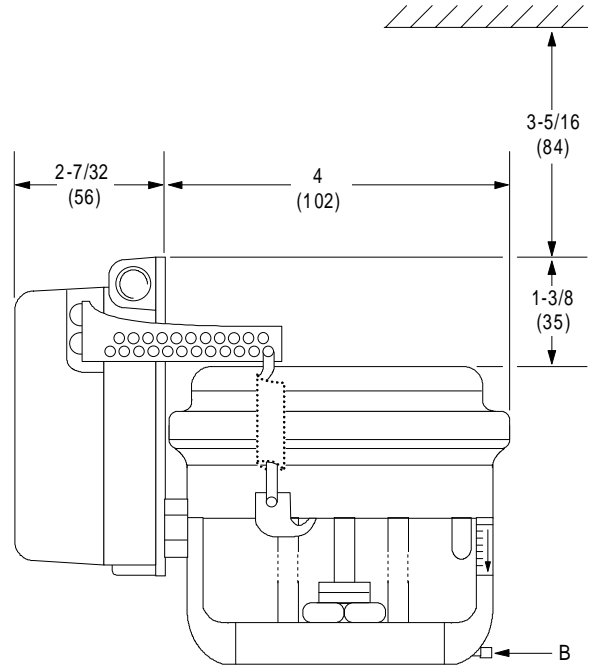


Figure 4: V-3000-8011 Pneumatic Valve Actuator with V-9502-90 Valve Positioner, in. (mm)

Repair Information

Field repairs cannot be made to the V-3000-8011 Pneumatic Valve Actuator; however, replacement diaphragms are available for the V-3000-8003 Actuator (order V-3000-601 separately). For a replacement pneumatic valve actuator, contact the nearest Johnson Controls branch office or wholesale distributor.

Table 1: Repair Parts

Item	Description	Shipping Weight lb*	Code Number
A	Diaphragm: V-3000-8003 Only	0.09	V-3000-601
B	10-32 x 1/2 UNF-2A Set Screw	0.01	V-3100-643

*lb x 0.454 = kg

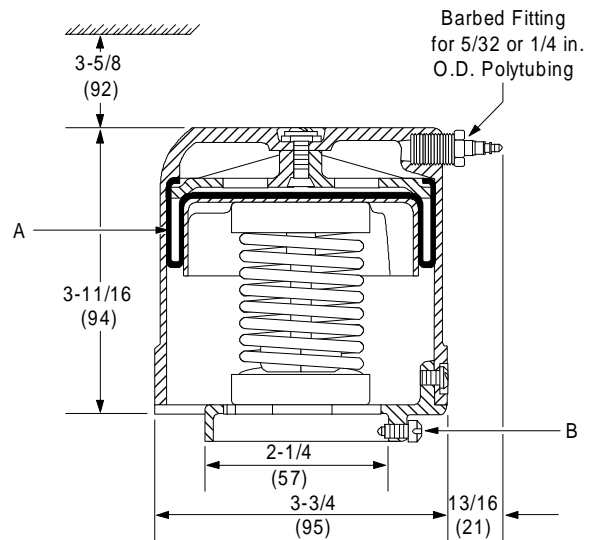


Figure 5: Enclosed V-3000-8003 Pneumatic Valve Actuator, in. (mm)

Table 2: Accessories for V-3000-8011 Exposed Pneumatic Valve Actuator Only (Order Separately)

Description	Code Number
Positioner: Less Spring, Will Mount to V-3000-8011 Only*	V-9502-90
Positioner Springs: 5/16 in. Stroke (8 mm Lift), 3 psi (21 kPa) Span 1/2 in. Stroke (13 mm Lift), 5 psi (34 kPa) Span 3/4 in. Stroke (19 mm Lift), 10 psi (69 kPa) Span	V-9502-6801 V-9502-6801 V-9502-6801
5/16 in. Stroke (8 mm Lift), 8 psi (55 kPa) Span 1/2 in. Stroke (13 mm Lift), 12 psi (83 kPa) Span 3/4 in. Stroke (19 mm Lift), 4 psi (28 kPa) Span	V-9502-6802 V-9502-6802 V-9502-6803
Valve Spring Kits: Refer to the specific valve product bulletin for spring kit code numbers.	---

* The positioner kit includes the positioner and all necessary field mounting hardware.

Specifications

Models	V-3000-8011 Pneumatic Valve Actuator (Exposed) V-3000-8003 Pneumatic Valve Actuator (Enclosed)
Maximum Control Pressure	25 psig (172 kPa)
Air Connection	Barb Fitting: 5/32 or 1/4 in. x 1/8 in. NPT
Ambient Operating Temperature Limits	-20 to 150°F (-29 to 66°C)
Maximum Storage Temperature	150°F (66°C)
Effective Diaphragm Area	8 sq in.
Materials	Housing: Die-cast Aluminum Diaphragm: Molded Synthetic Rubber
Shipping Weight	V-3000-8011: 0.9 lb (0.40 kg) V-3000-8003: 1 lb (0.5 kg)

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



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