



V-3801-8001 Pneumatic Valve Actuator

The V-3801-8001 Pneumatic Valve Actuator is designed to accurately position steam or water valve modulating plugs in response to a pneumatic signal from a controller. The small, oval top makes the V-3801-8001 ideally suited for 1/2 and 3/4 inch valve applications with restricted mounting space. This actuator has a molded synthetic rubber diaphragm design. The molded diaphragm provides a constant effective area throughout the actuator stroke. All parts are protected by a sturdy die-cast aluminum housing.

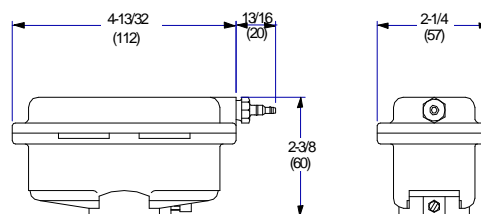


Figure 1: V-3801-8001 Pneumatic Valve Actuator

Features and Benefits	
<input type="checkbox"/> Compact Design	Fits in restricted mounting spaces
<input type="checkbox"/> Easy Mounting	Single set screw design provides easy assembly
<input type="checkbox"/> Rolling Diaphragm Design	Constant effective diaphragm area throughout stroke for optimal force output

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 will move 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-3801-8001 Pneumatic Actuator should not be confused with the V-3802-1 Pneumatic Actuator. The V-3801-8001 is ideally suited for use on 1/2 and 3/4 inch VG7000 Series Bronze Valves. The V-3802-1 and V-3801-8001 are not interchangeable.

Application Note

The V-3801-8001 is not recommended for sequencing because its relatively small size and small output force may result in unacceptable spring shift. Where pneumatic sequencing is required, the V-3000 Series Actuators are recommended.

Mounting

The V-3801-8001 Pneumatic Actuator can be field mounted to VG7000 Series Bronze Valves using the spring adaptor kits listed in Table 1. The V-3801-8001 can also be ordered factory mounted to the VG7000 Series Bronze Valves.



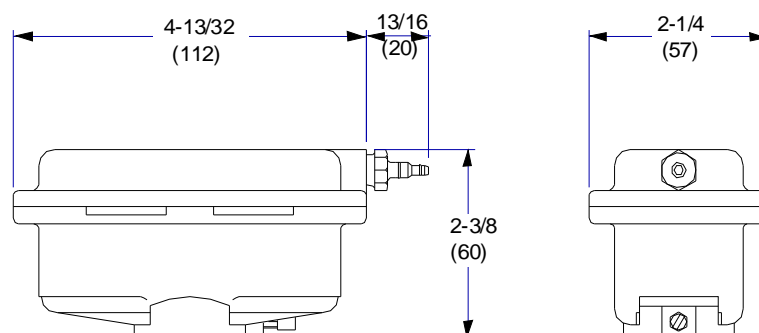
WARNING: Do not connect control pressure to the V-3801-8001 until it is installed on the valve. Personal injury and/or damage to the actuator will occur if the actuator is stroked when it is not firmly mounted to the valve.

Accessories

Table 1: Spring Kits (Order Separately)

Description	Code Number
Kit with 3 to 6 psig Spring	VG7000-1010
Kit with 4 to 8 psig Spring	VG7000-1011
Kit with 9 to 13 psig Spring	VG7000-1012
Kit with Three Springs: 3 to 6, 4 to 8, 9 to 13 psig (Includes hardware to adapt one valve only)	VG7000-1015

Dimensions



**Figure 2: V-3801-8001 Pneumatic Actuator,
in. (mm)**

Repair Information

Field repairs cannot be made. For a replacement actuator, contact the nearest Johnson Controls branch office or wholesale distributor.

Specifications

Product	V-3801-8001 Pneumatic Valve Actuator
Maximum Control Pressure	30 psig (207 kPa)
Air Connection	1/8 in. NPT Barbed Fitting for 5/32 in. O.D. Poly tubing
Ambient Operating Temperature Limits	-20 to 150°F (-29 to 66°C)*
Maximum Storage Temperature	150°F (66°C)
Effective Diaphragm Area	4 sq in.
Materials	Housing: Die-cast Aluminum Diaphragm: Synthetic Rubber
Shipping Weight	0.5 lb (0.23 kg)

* For use on steam systems with 15 psig (103 kPa) or less inlet pressure.

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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