

Series 767 Electric/Pneumatic Double Interlock Actuator

PRODUCT DESCRIPTION



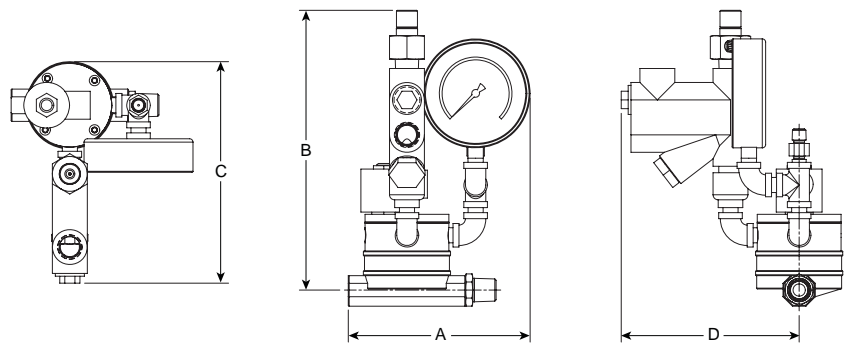
Series 767 introduces a new concept in actuator design, featuring a single trip point for the pneumatic event, regardless of supply water pressure, and an integral electric solenoid. The Series 767 Electric/Pneumatic Double Interlock low pressure actuator is designed to trigger systems using the Series 769 FireLock NXT Preaction valve, per 30.82. This new design allows you to set the system without having to activate the solenoid.

This single, compact unit has a 1/2" (15 mm) water inlet and is for use on all Series 769 FireLock NXT Preaction valves up to 300 psi/2065 kPa. Series 767 includes all the fittings necessary for installation.



See Victaulic
publication 10.01
for details.

DIMENSIONS



| Nominal Size Inches/ mm | Diameter Inches/ mm | Dimensions – Inches/mm | | | | Aprx. Weight Each Lbs./kg |
|----------------------------------|---------------------------|------------------------|-------|------|------|---------------------------------|
| | | A | B | C | D | |
| 1/2 | 0.84 | 6.75 | 10.25 | 8.25 | 6.50 | 2.5 |
| 15 | 21.3 | 171 | 260 | 210 | 165 | 1.1 |

MATERIAL SPECIFICATIONS

Lower Chamber: Durable cast bronze UNS C36000

Middle and Upper Chambers: 360 brass

Internal Components: 360 brass

Seals: EPDM

Fasteners: 316 series stainless steel

Springs: Stainless steel

Electrical: 24V DC Normally Closed

Strainer: 360 Brass and 300 series stainless steel

Eyelets: 360 Brass

O-ring: Buna

Diaphragms: EPDM

OPERATION

The Series 767 Electric/Pneumatic Actuator is a single-unit device used in the actuation of Series 758 Preaction Valves with double-interlock electric/pneumatic trim.

Diaphragms separate the Series 767 into four chambers. The upper and upper-middle chambers control the actuation, while the lower and lower-middle chambers act as the water control valve.

During system charging, air pressure enters the upper-middle chamber of the Series 767. Pulling up on the auto vent, which is located on the Series 767 trim, sets the air pressure in this upper-middle chamber. Water supply pressure from the piston charge line enters the upper chamber, and the normally closed solenoid, which is built into the Series 767, sets this water pressure. **There is no need to activate the solenoid in order to set the system.**

The system air pressure in the upper-middle chamber exerts a closing force on the middle chamber of the Series 767. Additionally, the water supply pressure from the piston charge line exerts a closing force on the middle diaphragm through a piston that connects the upper and middle diaphragms. These pressures close the water path of the lower-middle chamber.

When the piston charge line is open, water enters the lower chamber of the Series 767; this water flows to the lower-middle chamber through the inlet. The middle diaphragm traps water in the lower-middle chamber. Supply water pressure in the upper chamber and system air pressure in the upper-middle chamber hold the lower-middle diaphragm assembly closed.

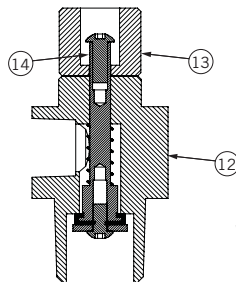
Since the area of the lower diaphragm is greater than the area of the lower chamber, the lower chamber seals; therefore, no water flows to the actuator's outlet, and the water pressure creates a seal.

When system air pressure decays to 7 psi (45 kPa), the auto vent's compression spring exerts a force greater than the air pressure in the upper-middle chamber. The auto vent opens, and all air pressure in the upper-middle chamber evacuates. During this condition, the Series 767 will not operate, since the water pressure in the upper chamber maintains a closing force on the water seal of the lower-middle chamber.

Likewise, if there is an electrical detection event, the solenoid on the upper chamber will activate and cause the upper chamber's water pressure to release. The Series 767 will not operate, since the upper-middle chamber's air pressure exerts a closing force on the lower-middle chamber's water seal.

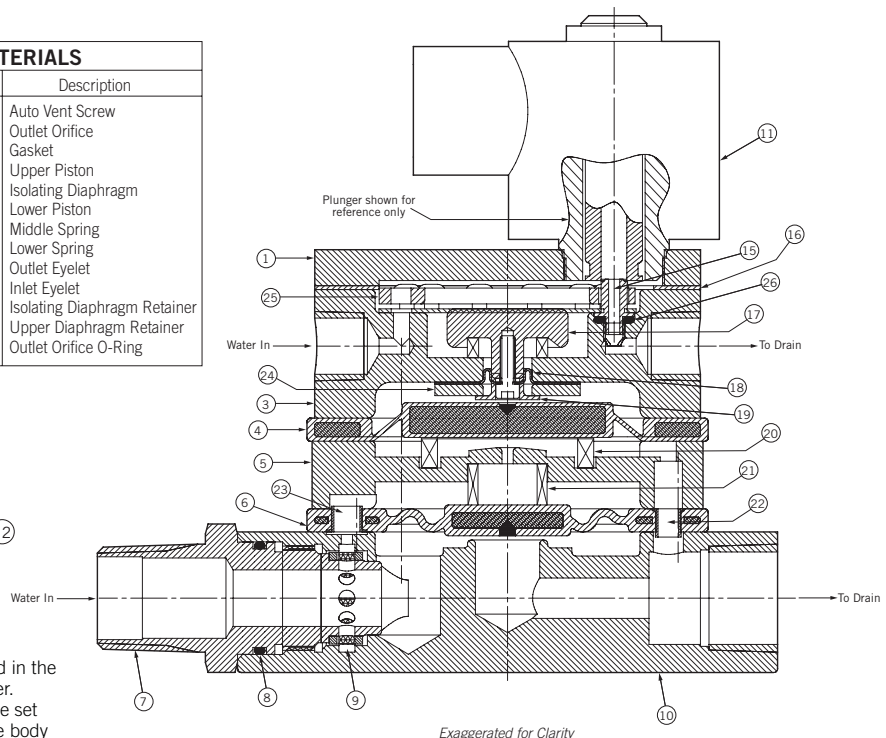
The Series 767 will actuate only when an electrical detection and loss of system air pressure occur. During this condition, the closing force on the lower-middle diaphragm's water seal is removed, and the lower-middle chamber's water pressure releases. This allows the lower diaphragm to lift and water to flow from the Series 767's inlet to the outlet. This water flow releases water pressure from the control valve's piston and allows the piston to retract. The control valve's clapper opens, and water flows into the sprinkler system.

| BILL OF MATERIALS | | | |
|-------------------|----------------------|------|------------------------------|
| Item | Description | Item | Description |
| 1 | Upper Chamber | 14 | Auto Vent Screw |
| 2 | Upper Diaphragm | 15 | Outlet Orifice |
| 3 | Upper-Middle Chamber | 16 | Gasket |
| 4 | Middle Diaphragm | 17 | Upper Piston |
| 5 | Lower-Middle Chamber | 18 | Isolating Diaphragm |
| 6 | Lower Diaphragm | 19 | Lower Piston |
| 7 | Strainer Assembly | 20 | Middle Spring |
| 8 | Strainer O-Ring | 21 | Lower Spring |
| 9 | Strainer Screen | 22 | Outlet Eyelet |
| 10 | Lower Chamber | 23 | Inlet Eyelet |
| 11 | Solenoid Valve | 24 | Isolating Diaphragm Retainer |
| 12 | Auto Vent | 25 | Upper Diaphragm Retainer |
| 13 | Auto Vent Sleeve | 26 | Outlet Orifice O-Ring |



The auto vent, shown above, is located in the trim of the upper-middle chamber.

NOTE: The auto vent is shown in the set position with the sleeve resting on the body and the screw elevated.



This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.