

FireLock™ Dry Accelerator

Series 746-LPA and Series 746



Series 746-LPA



Series 746

1.0 PRODUCT DESCRIPTION

Application

- The Series 746-LPA/Series 746 FireLock Dry Accelerator is a quick-opening device that is rated to 300 psi/2065 kPa/21 Bar working pressure and is compatible with all sizes of Victaulic FireLock NXT™ Series 768N Dry Valves and Series 769N Actuated Valves with Preaction Trim. A built-in check valve allows rapid pressure equalization during system charging and fast response to variations in system air pressure.
- The Series 746-LPA/Series 746 is equipped with all required parts and can be piped into existing trim without additional modifications. It attaches to the air supply's trim at the inlet of a Victaulic Series 776 Low-Pressure Actuator, Series 767 Electric/Pneumatic Actuator, or a Series 798 Double-Pneumatic Actuator.

Function

	Series 746-LPA	Series 746
Valve Pressure	13psi/90kPa - 18psi/124 kPa	25psi/175kPa - 45psi/310kPa
Activation Range	3-5 psi/21-34 kPa	3-5 psi/21-34 kPa

- The Series 746-LPA/Series 746 speeds the operation of a sprinkler control valve by sensing the rapid decay of system pressure and exhausting air from the upper chamber of the actuating device.
- System air pressure in the upper and lower chambers sets the dry accelerator in the closed position, which holds pressure in the air chamber of the actuating device. When a sprinkler opens and system air pressure releases, the air evacuates from the lower chamber faster than it does from the upper air chamber. As the air pressure in the lower chamber decreases, the pressure in the upper air chamber remains relatively higher.
- When a 3 – 5 psi/21 – 34 kPa differential occurs, the Series 746-LPA/Series 746 opens and vents the lower chamber's air into the atmosphere. This action also exhausts the air quickly from the actuator, which causes the sprinkler control valve to operate.

2.0 CERTIFICATION/LISTINGS



- The FireLock Dry Accelerator is certified as an optional system component of the Series 768N Dry Valve or Series 769N Preaction Valve.

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

3.0 SPECIFICATIONS – MATERIAL

Body: Bronze per CDA-836 (85-5-5-5)

Diaphragm: EPDM

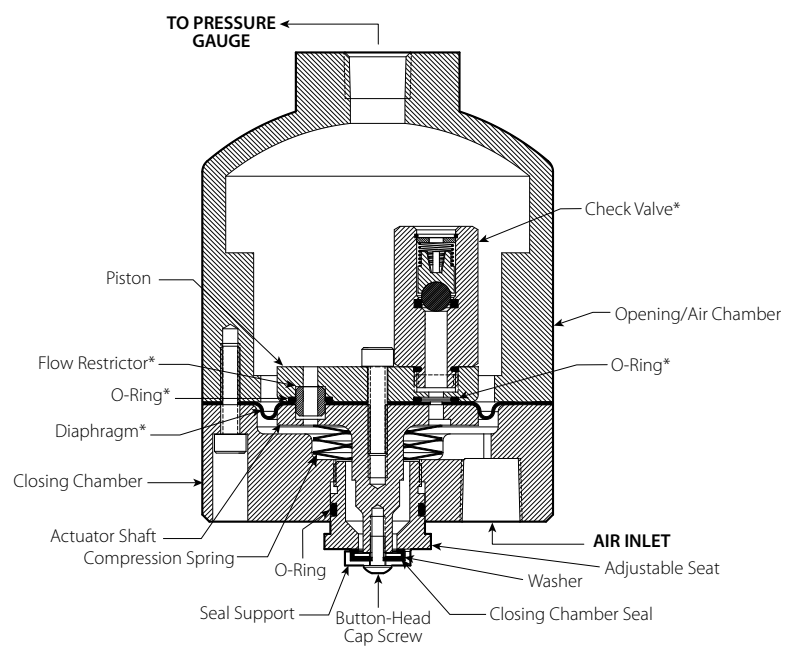
Seal: EPDM

Spring: Type 316 Stainless Steel

Restrictor: Porous Stainless Steel

Bolts: Type 316 Stainless Steel

O-ring: EPDM

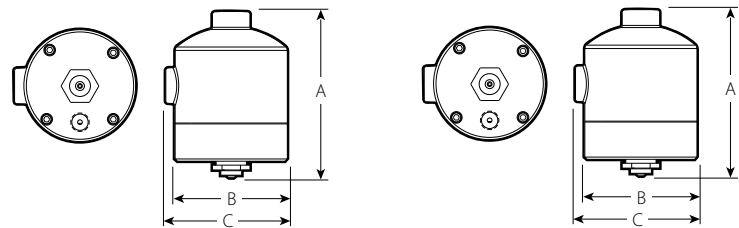


**CROSS-SECTION WITH UPPER CHAMBER ROTATED
45° AND BOLT REMOVED FOR CLARITY**

Illustration is exaggerated for clarity

** Denotes components that can be replaced in the field*

4.0 DIMENSIONS



Series 746-LPA

Series 746

Dimensions			Weight
A	B	C	Approximate (Each)
inches	inches	inches	lb
mm	mm	mm	kg
4.45	3.00	3.25	5.0
113	76	83	2.2

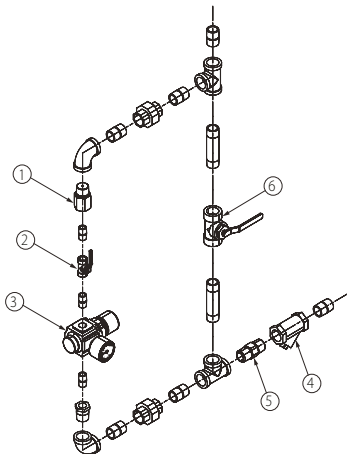
Series 757 Regulated Air Maintenance Trim Assembly

(For use with tank mounted air compressors or shop air systems)

- When a Series 746-LPA/Series 746 Dry Accelerator is used with a Series 776 Low-Pressure Actuator, Series 767 electric/pneumatic actuator, or a Series 798 Double-Pneumatic Actuator, the air maintenance trim assembly MUST be used with the air regulator.

Bill of Materials

- 1/8"/3.2 mm Restrictor
- Slow Fill Ball Valve (Normally Open)
- Air Regulator
- Strainer (100 Mesh)
- Spring-Loaded, Soft-Seated Ball Check Valve
- Fast Fill Ball Valve (Normally Closed)



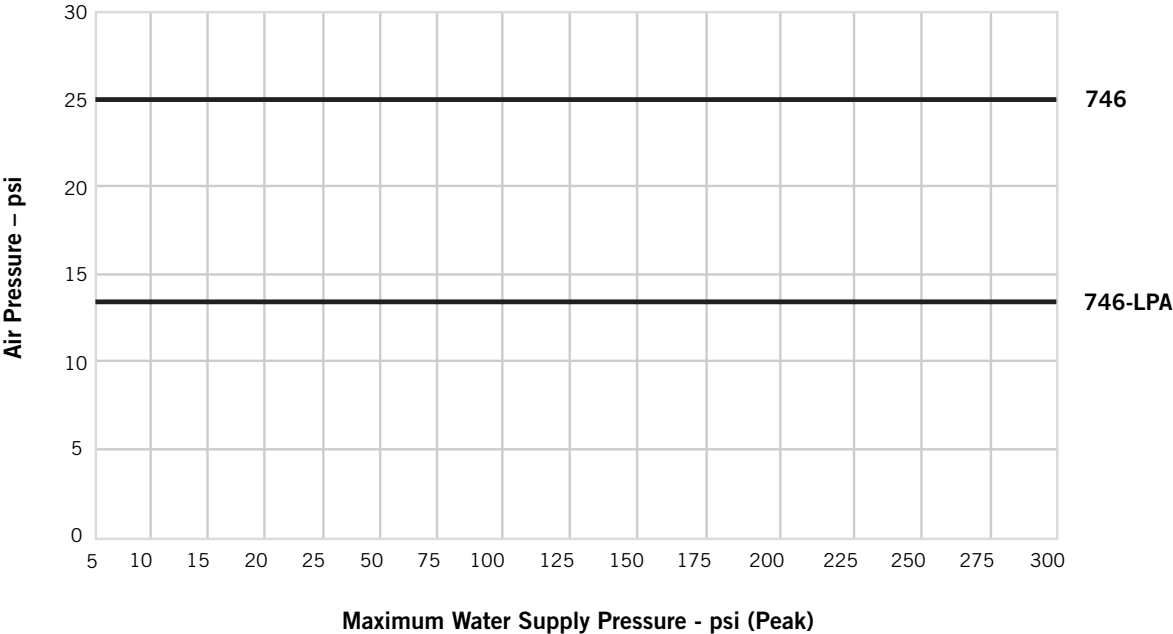
- In the event that a compressor becomes inoperative, a properly sized tank-mounted compressor provides the greatest protection for systems that contain a Series 746-LPA/Series 746 FireLock Dry Accelerator. In this situation, air can be supplied continuously to the sprinkler system for an extended time period.
- If multiple valves are installed with a common air supply, isolate the system by using a spring-loaded, soft-seat check valve to ensure air integrity for each system.

5.0 PERFORMANCE

Recommended Minimum Air Pressures

Series 746-LPA/ Series 746 FireLock Dry Accelerators

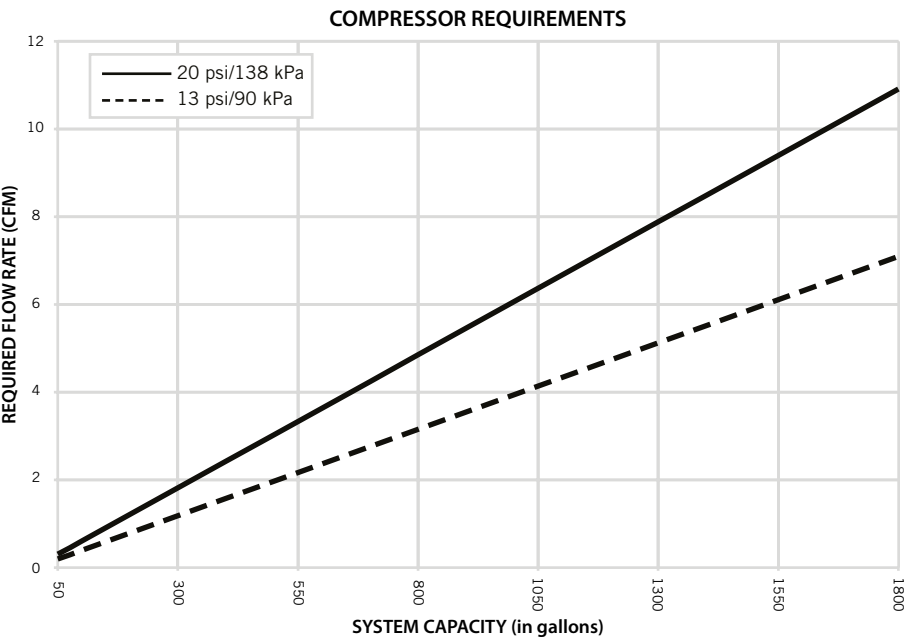
For systems containing Series 776 Low-Pressure Actuators, Series 767 Electric/Pneumatic Actuators, or Series 798 Double-Pneumatic Actuators:



NOTES

- When a Series 746-LPA/ Series 746 Dry Accelerator is used with a Series 776 Low-Pressure Actuator, Series 767 Electric/Pneumatic Actuator, or a Series 798 Double-Pneumatic Actuator, the air maintenance trim assembly **MUST** be used with the air regulator.
- Systems operating at air pressures higher than 18 psi (124 kPa) should use the Series 746 Dry Accelerator

Compressor And Air Maintenance Trim Requirements



5.0 PERFORMANCE (CONTINUED)

Shop Air or Tank-Mounted Air Compressors

Compressor Requirements and Settings for FireLock NXT Valves Installed with a Series 746-LPA Dry Accelerator

The Series 7C7 Air Compressor Assembly with integrated Series 757P Air Maintenance Trim Assembly SHALL NOT be used on a FireLock NXT Valve installed with a Series 746 or 746-LPA Dry Accelerator, unless a tank and air regulator are added.

In the event a compressor becomes inoperative, a properly sized tank-mounted air compressor provides the greatest protection for systems installed with a Series 746-LPA Dry Accelerator. In this situation, air can be supplied continuously to the sprinkler system for an extended time period.

The air regulator of the Series 757 Regulated AMTA is a relief-type design. Any pressure in the system that is above the set point of the air regulator will be released. Therefore, charging the air regulator above the set point could cause premature operation of a valve installed with a Series 746-LPA Dry Accelerator.

NOTE

- The Series 757 Regulated AMTA shall be used with a tank-mounted air compressor to supply air to a FireLock NXT Valve when the Series 746-LPA Dry Accelerator is used. The use of an air regulator with a base- or riser-mounted air compressor could cause short cycling, resulting in premature wear of the compressor.

6.0 NOTIFICATIONS



**WARNING**

- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained intermediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

- These products shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.
- The installer shall understand the use of this product and why it was specified for the particular application.
- The installer shall understand common industry safety standards and potential consequences of improper product installation.

Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

7.0 REFERENCE MATERIALS

- [30.23: FireLock™ Series 745 Fire-Pac Submittal](#)
- [31.80: FireLock NXT™ Series 768N Dry Valve Submittal](#)
- [31.81: FireLock NXT™ Series 769N Deluge Device Submittal](#)
- [31.82: FireLock NXT™ Preaction Trim Series 769N Submittal](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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Note

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.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

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