

## **Model FSV-1 Fail-Safe Valve Trim Component For Model DV-5 Deluge Valve Used In Deluge and Preaction Systems**

### **General Description**

The Model FSV-1 Fail-Safe Valve (Ref. Figure 1) is intended for use with the Model DV-5 Deluge Valve in certain types of trim arrangements for deluge and preaction systems. Provided as part of specific DV-5 Valve trim arrangements, it is installed adjacent to the releasing devices (dry pilot actuator, solenoid valve, etc.). When properly installed, it is intended to prevent inadvertent resetting of the DV-5 Valve after initial operation of the DV-5 Valve.

#### **WARNING**

*The Model FSV-1 Fail-Safe Valve described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the National Fire Protection Association, in addition to the standards of any other authorities having jurisdiction. Failure to do so may impair the performance of this device.*

*The owner is responsible for maintaining their fire protection system and devices in proper operating condition. The installing contractor or sprinkler manufacturer should be contacted with any questions.*

### **Technical Data**

#### **Approvals**

UL and C-UL Listed, as well as FM Approved, as a valve trim component for the Model DV-5 Deluge Valve.

**Maximum Working Water Pressure**  
250 psi (17,2 bar).

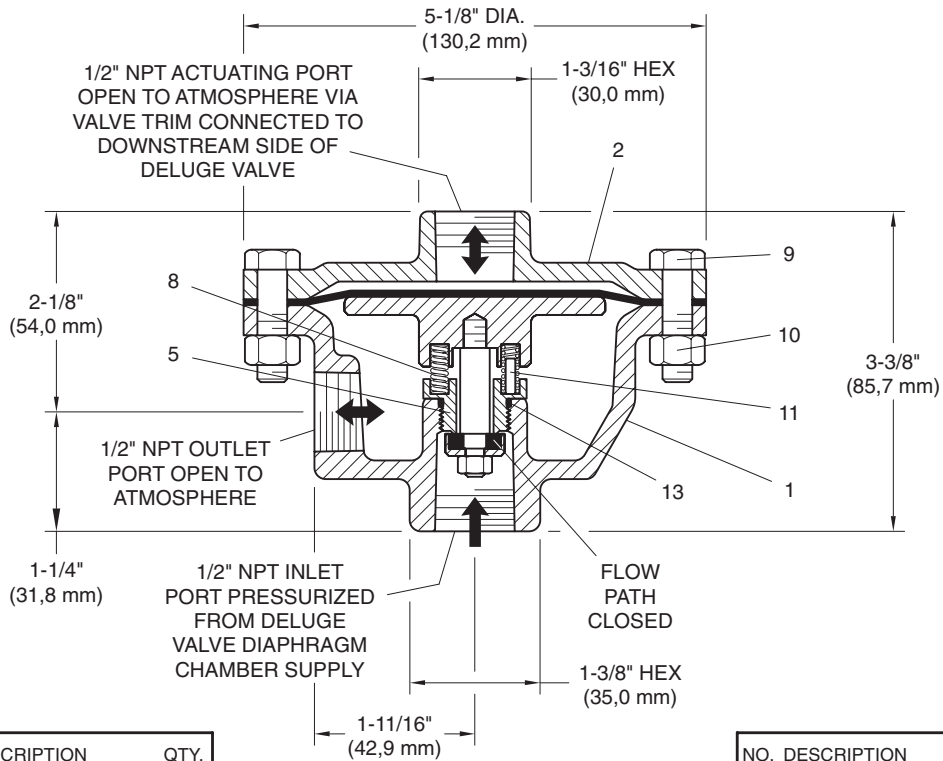
#### **Assembly**

The body and cover in Figure 1 are bronze. The elastomer water seal is Buna-N, and the diaphragm is nylon reinforced natural rubber.



### **Operation**

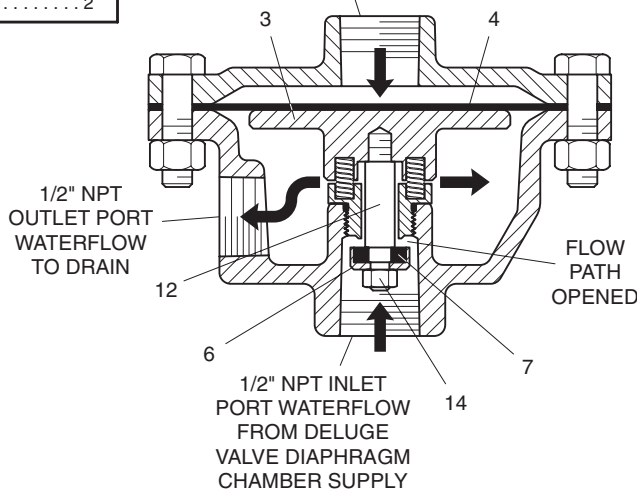
When the FSV-1 Fail-Safe Valve is in its closed position (Ref. Figure 1) it retains water pressure in the Diaphragm Chamber of the DV-5 Valve when the DV-5 is set for service. Upon operation of the DV-5 Valve, the piping downstream of the DV-5 Valve becomes pressurized. The Pilot Chamber of the FSV-1 is then pressurized via its trim connection to the downstream side of the DV-5 Valve. Pressurization of the Pilot Chamber opens the FSV-1 (Ref. Figure 1). After opening of the FSV-1, make-up pressure to the Diaphragm Chamber of the DV-5 Valve cannot occur. Even if the releasing device that originally released water from the Diaphragm Chamber were to close, the FSV-1 prevents the DV-5 Valve from inadvertently resetting after its initial opening. Upon operation, the FSV-1 will vent the DV-5 Diaphragm Chamber to atmosphere quicker than it can be repressurized through the 1/8 inch (3,2 mm) restriction in the diaphragm supply connection to the DV-5.



NO.	DESCRIPTION	QTY.
1	Valve Body	1
2	Valve Cover	1
3	Diaphragm Plate	1
4	Diaphragm	1
5	Valve Seat Ring	1
6	Valve Disc Retainer	1
7	Valve Disc	1
8	Spring	2
9	Hex Screw, M8 x 25	8
10	Hex Nut, M8	8
11	Spring Lead	2

**SET CONDITION**

1/2" NPT ACTUATING PORT PRESSURIZED BY WATERFLOW FROM DOWNSTREAM SIDE OF DELUGE VALVE



**ACTUATED CONDITION**

NO.	DESCRIPTION	QTY.
12	Valve Shaft	1
13	O-Ring	1
14	Hex Nut, M5	1

**NOTES:**

- Items 4 and 7 may be replaced and are included with Repair Parts Kit 92-343-1-028. All other parts are not replaceable.

**FIGURE 1 - MODEL FSV-1 FAIL-SAFE VALVE**

## Installation

Refer to the applicable technical data sheets describing the various options for installing the Model DV-5 Deluge Valve (i.e., deluge and preaction systems utilizing the Model DV-5 Deluge Valve).

## Setting Procedure

The Model FSV-1 Fail-Safe Valve automatically resets after the system piping downstream of the Model DV-5 Deluge Valve is drained and returned to its normal 0 psi gauge pressure.

## Care and Maintenance

Refer to the applicable technical data sheets describing the various options for performing care and maintenance procedures for the Model DV-5 Deluge Valve (i.e., deluge and preaction systems utilizing the Model DV-5 Deluge Valve).

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (e.g., NFPA 25), in addition to the standards of any authority having jurisdiction. The installing contractor or product manufacturer should be contacted relative to any questions.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes.

### NOTES

*Before closing a fire protection system control valve for inspection or maintenance work on the fire protection system that it controls, permission to shut down the effected fire protection system must first be obtained from the proper authorities and all personnel who may be affected by this action must be notified.*

After placing a fire protection system in service, notify the proper authorities and advise those responsible for monitoring proprietary and/or central station alarms.

## Limited Warranty

Products manufactured by Tyco Fire Products are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by Tyco Fire Products. No warranty is given for products or components manufactured by companies not affiliated by ownership with Tyco Fire Products or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association, and/or the standards of any other Authorities Having Jurisdiction. Materials found by Tyco Fire Products to be defective shall be either repaired or replaced, at Tyco Fire Products' sole option. Tyco Fire Products neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. Tyco Fire Products shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

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**THE FOREGOING WARRANTY IS MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

## Ordering Information

Orders for the FSV-1 and replacement parts must include the description and Part Number (P/N).

### FSV-1:

Specify: Model FSV-1 Fail-Safe Valve, P/N 52-343-1-001 .

### Replacement Parts:

Specify: (description) for use with Model FSV-1 Fail-Safe Valve, P/N (see Figure 1).

