

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.

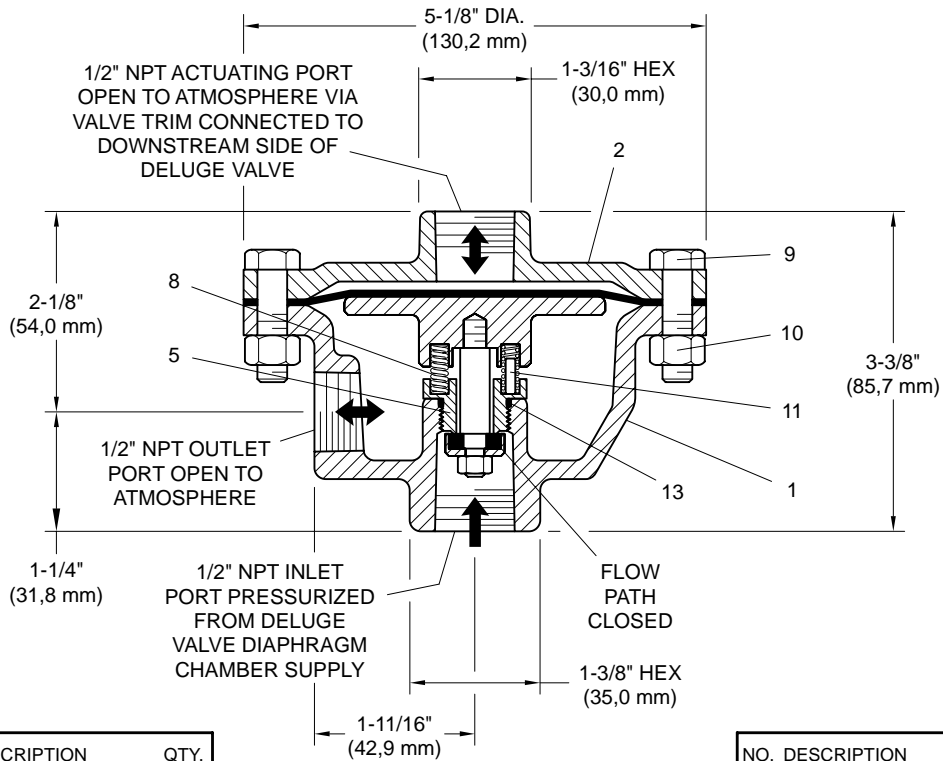


Installation

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.



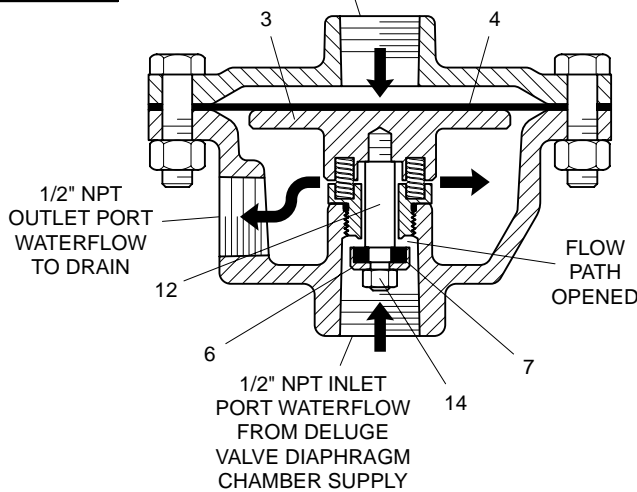
NO.	DESCRIPTION	QTY.
1	Valve Body	1
2	Valve Cover	1
3	Diaphragm Plate	1
4	Diaphragm	1
5	Valve Seat Ring	1
6	Valve Disc Retainer	1
7	Valve Disc	1
8	Spring	2
9	Hex Screw, M8 x 25	8
10	Hex Nut, M8	8

NO.	DESCRIPTION	QTY.
11	Spring Lead	2
12	Valve Shaft	1
13	O-Ring	1
14	Hex Nut, M5	1

NOTES:
 1. Unit is not field serviceable, no replacement parts are available.

SET CONDITION

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



ACTUATED CONDITION

FIGURE 1 - MODEL FSV-1 FAIL-SAFE VALVE

Care and Maintenance

The following inspection procedure must be performed as indicated, in addition to any specific requirements of the NFPA, and any impairment must be immediately corrected.

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

No attempt is to be made to repair an impaired Model FSV-1 Fail-Safe Valve. The complete assembly must be replaced if there is indication of malfunction.

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.

INSPECTION PROCEDURE

The Model FSV-1 Fail-Safe Valve must be inspected quarterly in accordance with the following instructions, and any impairment must be corrected by replacing the FSV-1.

Step 1. When in the set position there should not be any water leakage from the outlet connection to drain.

Step 2. During the quarterly test of the actuation devices, verify that the FSV-1 has operated correctly as evidenced by a continuous waterflow from its outlet to drain.

Limited Warranty

Products manufactured by Tyco Fire & Building Products (TFBP) 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 TFBP. No warranty is given for products or components manufactured by companies not affiliated by ownership with TFBP 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 TFBP to be defective shall be either repaired or replaced, at TFBP's sole option. TFBP neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. TFBP shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

In no event shall TFBP be liable, in contract, tort, strict liability or under any other legal theory, for incidental, indirect, special or consequential damages, including but not limited to labor charges, regardless of whether TFBP was informed about the possibility of such damages, and in no event shall TFBP's liability exceed an amount equal to the sales price.

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.

This limited warranty sets forth the exclusive remedy for claims based on failure of or defect in products, materials or components, whether the claim is made in contract, tort, strict liability or any other legal theory.

This warranty will apply to the full extent permitted by law. The invalidity, in whole or part, of any portion of this warranty will not affect the remainder.

Ordering Information

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

FSV-1:

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

