

Model F350 Sectional Test & Drain, 1-1/4 Inch NPT x 5.6K (80K) Test Orifice For Use With Field Fabricated Sectional Control Arrangements

General Description

Figure 1 illustrates a typical sectional control arrangement that is utilized for the flow control, inspection, testing, and draining of feed mains to sections of wet pipe automatic sprinkler systems. A typical application is in a multi-story building where waterflow alarm devices are required on each floor at each riser.

The Model F350 Sectional Test & Drain (Ref. Figure 2) with an integral sight glass assembly, provides a simplified means for testing of waterflow alarm devices and draining of feed mains. It is typically utilized for connection to a common inside drain where it is not practical to terminate an inspector's test connection outside of a building. The F350 has a smooth bore corrosion resistant test orifice equivalent to that of a 5.6K (80K) orifice sprinkler, and it is provided with 1-1/4 inch NPT pipe size connections that make it suitable for use as a sectional drain connection with up to a 3-1/2 inch (DN80) size feed main. Additional features of the F350 include:

- Pre assembled indicating type valve arrangement;
- Installation in any position;
- Dual handle control to provide positive-stop positioning for test, drain and shut-off;
- A unique, self-cleaning sight glass assembly that provides a positive indication of flow, even in dimly lit areas without a flashlight;
- Visual flow indicator for both alarm test (partial flow) and flow test (full flow conditions) vibrates to provide a positive indication of flow even in dimly lit areas.

The Model F350 Sectional Test & Drain is a redesignation for the Gem Model F350.

WARNINGS

*The Model F350 Sectional Test & Drain 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 these devices.***

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 Listed. FM Approved.

Maximum Service Pressure

175 psi (12,1 bar)

Shut-Off Valve

A stainless steel quarter turn ball valve. Corrosion resistant copper alloys with glass filled PTFE seals.

Dual-Orifice Valve

A chrome plated, corrosion resistant bronze quarter turn ball valve with a 5.6K (80K) smooth bore test orifice.

Sight Glass Assembly

A red painted cast iron body with dual glass lenses mounted in plated steel, NPT threaded inserts.

Thread Connections

All of the F350 pipe thread connections are assembled with a Teflon* based pipe joint sealant and each assembly is factory tested to 350 psi (24,1 bar).

Installation

NOTES

The Model F350 Sectional Test & Drain must be installed in a readily visible and accessible location, preferably not over seven feet above the floor.

Wet pipe fire protection systems must be maintained at a minimum temperature of 40°F (40°C).

The outlet of the F350 must be connected to a drain sized to accept full flow during a sectional flow test.

The Model F350 Sectional Test & Drain is to be installed in accordance with the following criteria:

Step 1. Apply pipe thread sealant sparingly to male pipe threads only. Use of a Teflon* based pipe joint sealant is recommended.

Step 2. The F350 may be installed in any position; however, the arrow on the Label must point in the direction of flow (towards drain) and there must be no restriction to the full movement of the valve handles (Ref. Figure 2).

Step 3. To prevent distortion of the valve bodies, make the inlet pipe connection by wrenching on the Shut-off Valve only and make the outlet pipe connection by wrenching on the Sight Glass Assembly fitting only.

Step 4. Do not use the F350 to force a pipe-line into position. Doing so may result in distortion of the valves.

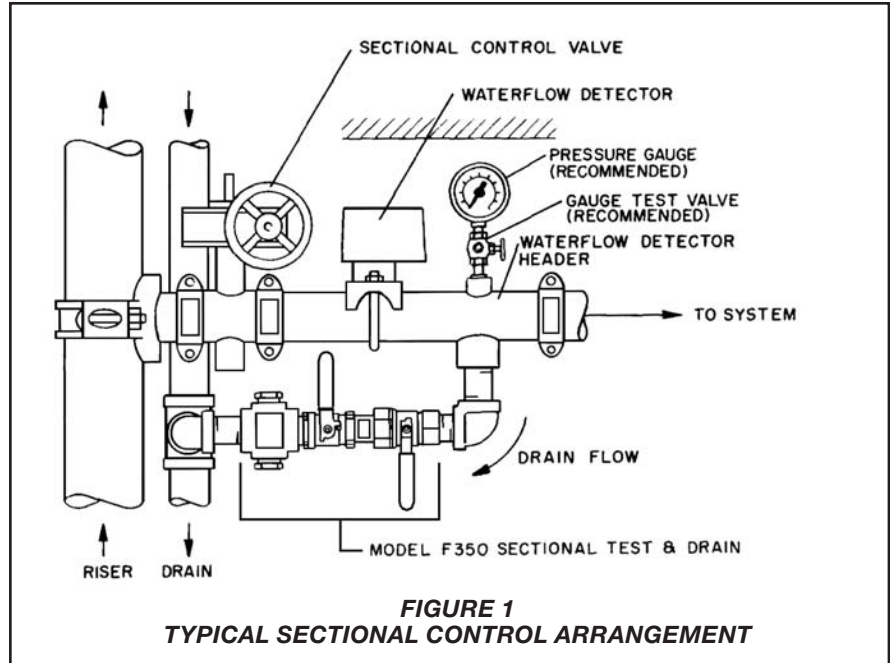


FIGURE 1
TYPICAL SECTIONAL CONTROL ARRANGEMENT

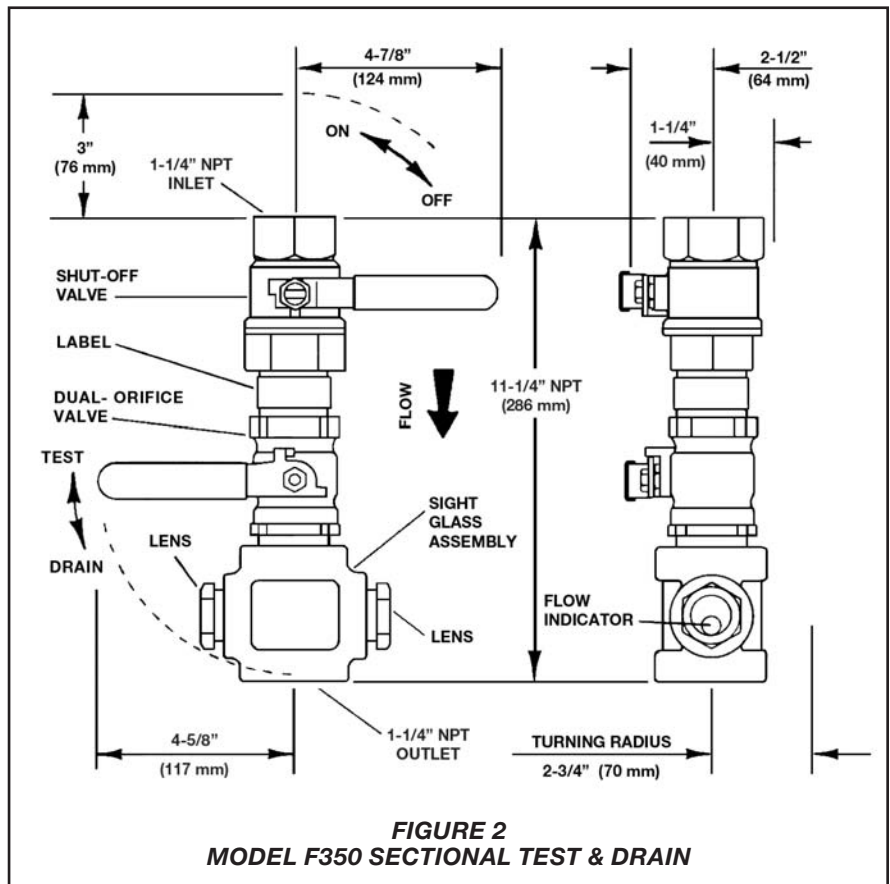


FIGURE 2
MODEL F350 SECTIONAL TEST & DRAIN

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Care and Maintenance

The Model F350 Sectional Test & Drain does not require any regularly scheduled maintenance. However, the following procedures, as applicable and in addition to any specific requirements of the NFPA, may be used to perform an alarm test of a sectional waterflow detector, to perform a sectional flow test, or to drain a section of the sprinkler system (after closing the sectional control valve). Any impairments 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 F350 Sectional Test & Drain. The complete assembly must be replaced if there is any indication of malfunction. With the exception of the Sight Glass Assembly, no attempt is to be made to disassemble and clean the F350 Sectional Test & Drain.

Before testing alarms, notification must be given to the owner and the fire department, central station or other signal station to which the alarms are connected.

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 affected fire protection systems must be obtained from the proper authorities and all personnel who may be affected by this decision 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.

Sectional Alarm Test:

Step 1. Position the Dual-orifice Valve handle in the Test position.

Step 2. Position the Shut-off Valve handle in the "ON" position. Water is then permitted to flow through the test orifice to simulate the flow from an individual 5.6K (80K) orifice sprinkler located downstream of the water-flow detector (Ref. Figure 1).

Step 3. Observe the Flow Indicator located within the Sight Glass Assembly and check for vibratory movement that indicates water flow.

Step 4. After verifying proper operation of the waterflow detector, return the Shut-off Valve handle to the "OFF" position.

Sectional Flow Test:

Step 1. Position the Dual-orifice Valve handle in the "DRAIN" position.

Step 2. Make note of the static water pressure at the inlet to the F350 Sectional Test & Drain.

Step 3. Position the Shut-off Valve handle in the "ON" position. Water from the system will then be permitted to flow through the drain orifice.

Step 4. Observe the Flow Indicator located within the Sight Glass Assembly and check for vibratory movement that indicates water flow.

Step 5. Make note of the residual (flowing) water pressure at the inlet to the F350 Sectional Test & Drain.

If the static or residual pressure readings vary significantly from those previously recorded or expected, then the reasons for the variations should be investigated and resolved.

Step 6. After the sectional flow test is completed, slowly return the Shut-off Valve handle to the "OFF" position.

Sectional Drain:

Step 1. Close the sectional control valve.

Step 2. Position the Dual-orifice Valve handle in the "DRAIN" position,

Step 3. Position the Shut-off Valve handle in the "ON" position. Water from the system will then be permitted to drain through the drain orifice.

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 Procedure

Orders must include the description and Part Number (P/N). Contact your local distributor for availability.

Sectional Test & Drain:

Specify: 1-1/4 inch NPT Model F350 Sectional Test & Drain with K5.6 (K80) test orifice, P/N 54-350-1-001.