



**3" Model A\***  
**4" & 6"**  
**Model F-3 and G-3**  
**Dry Pipe Valve**

**Installation**  
**and**  
**Maintenance Guide**

4077 AIRPARK DRIVE • STANDISH, MICHIGAN 48658  
PHONE 989-846-4583 • 800-248-0278  
FAX 989-846-9231 • 800-846-9211  
[www.globesprinkler.com](http://www.globesprinkler.com)

# GLOBE DRY PIPE VALVE INSTALLATION AND MAINTENANCE GUIDE

## Table of Contents

Globe Dry Pipe Valves	1
General Description	1
Technical Data	1
Trouble-Shooting	1
3" Model A* Dry Pipe Valve Assembly and Parts List	2
3" Model A* Dry Pipe Valve Basic Trim Setup	4
4" & 6" Model F-3 and G-3 Dry Pipe Valve Assembly and Parts List	5
4" Model F-3 and G-3 Dry Pipe Valve Trim Arrangement	11
6" Model F-3 and G-3 Dry Pipe Valve Trim Arrangement	12
Model F-3 and G-3 Dry Pipe Valve Operation	6
Model F-3 and G-3 Dry Pipe Valve Maintenance	7
Model C Accelerator and Anti-Flooding Device Assembly and Parts List	9
Optional Alarm Pressure Switch Trim	13

\* Formerly known as Model D

# GLOBE DRY PIPE VALVE INSTALLATION AND MAINTENANCE GUIDE

## GENERAL DESCRIPTION

Globe Fire Sprinkler Corporation Dry Pipe Valves are essentially differential or differential mechanical control valves for use in dry pipe systems. They are the vital control units in dry pipe automatic sprinkler systems where supervisory air under pressure is used to prevent freezing that would certainly occur with ordinary wet pipe systems. The Dry Pipe Valve is the connecting link between the source of water supply and the automatic sprinkler, and must react promptly when it receives a signal from the protected area that a fire condition has developed and water is therefore quickly needed. This signal is generated by the opening of one or more sprinklers which causes a quick drop in the system supervisory air pressure resulting in a loss of the differential ratio.

Globe Fire Sprinkler Corporation Model C Accelerator and Anti-Flooding Device are designed to be used in conjunction with dry pipe valves in dry pipe systems. The Model C Accelerator is used to reduce the time lag normally associated with the opening of a dry pipe valve after one or more system sprinklers have operated, resulting in faster water discharge from the opened sprinkler(s). The Model C Anti-Flooding Device is used to help ensure the proper operation of the accelerator by preventing most waterborne foreign objects from entering the accelerator.

Globe Dry Pipe Valves, Accelerators, and Anti-Flooding Devices are designed and manufactured to the standards and/or requirements of Underwriters Laboratories Inc., Underwriters' Laboratories of Canada, Factory Mutual Research Corp. and the City of New York Department of Buildings, and they conform to the design/usage requirements of NFPA 25.

## IMPORTANT NOTES

1. Any dry pipe valve, accelerator and anti-flooding device should be carefully tested, examined, and cleaned periodically in accordance with NFPA 25. After testing, the accelerator must be fully drained of any water.
2. It is most important to ensure a clean water supply free of debris and solid particles such as sand, gravel, or mud.
3. If, during the annual inspection of dry pipe valves, accelerators or anti-flooding devices, sediment or free particles of matter are noted, a further examination of internal valve parts becomes necessary.
4. All deposits should be removed from all operating parts and ports. Vent holes through retaining ring screws, should be thoroughly cleaned and flushed with clean water.
5. Where difficulty in performance is experienced, the manufacturer or his authorized representative shall be contacted if any field adjustment is to be made.
6. When an electric alarm switch is used without a mechanical water motor, an alarm line air bleeder should be added to prevent trapped air pockets from delaying an alarm. The bleeder should consist of a restricting orifice of approximately 1/8" diameter and copper tubing of sufficient length to run to the drip cup.

## TROUBLE-SHOOTING

1. Check all valves to see if they are open or shut according to instructions.
2. If the dry pipe valve leaks priming water:
  - A) Check for debris between the brass seat and the rubber seat.
  - B) Check for proper tightness of the retaining ring, clamping ring, and memory washer nut.
  - C) Check for rips or tears in the "Bellofram."
  - D) Make sure that the clapper lever is latched under the locking stud.
  - E) Remove trim pipe to expose the atmospheric discharge tube. If water seeps from around the tube, it is an indication that the packing is loose.
3. If the dry pipe valve trips when supply water is turned on:
  - A) If the locking stud has been removed, check for proper seating in the valve body.
  - B) Check for the proper air to water pressure ratio.
  - C) Velocity check must be horizontal and the ball must move freely.
  - D) Check the air and water gauges for proper function.
  - E) If an accelerator is used, be sure it is drained and set up according to instructions.
  - F) Check for obstructions in the trim piping.
4. If there is no air to the accelerator:
  - A) Check for proper installation of the anti-flooding device.
  - B) Make sure that the check valve in the trim is in the proper position.
5. Accelerator won't trim or is too sensitive:
  - A) Check accelerator for contamination.
6. Accelerator won't set:
  - A) Check for torn diaphragm.
  - B) Check air gauge for proper function.
7. Accelerator trips for no apparent reason after being installed for a period of time:
  - A) Check system for leaks.
  - B) Air compressor settings not proper.

























