Coffee Break Training - Fire Protection Series

Automatic Sprinklers: Ball Drip Orientation

No. FP-2009-17 April 28, 2009

Learning Objective: *The student shall be able to identify the correct placement of a ball drip valve.*

The brass-colored device in the upper right hand corner of the photograph is called a "ball drip" valve.

A ball drip is one type of automatic drain valve that may be attached to the supply pipe for the fire department connection on a water-based fire suppression system where a fire department connection is required. This might include sprinklers, standpipes, high-pressure mist systems, water-spray systems, or any other system where it is considered desirable that the fire department has the opportunity to supplement the system's pressure and volume.

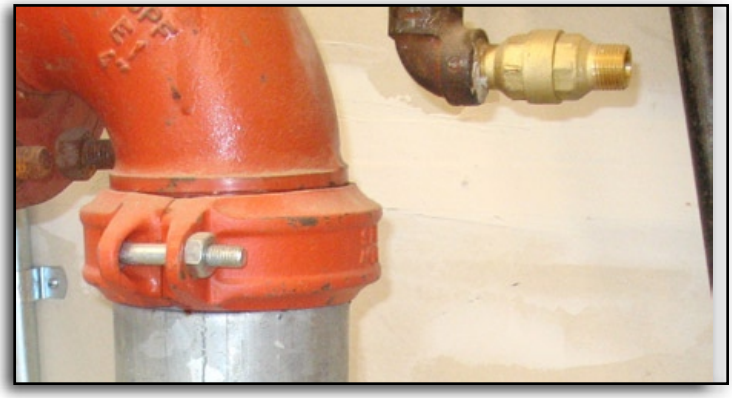

Photo courtesy of Freedom Fire Protection, Longmont, Colorado.

This "ball drip" valve is an automatic drain for the fire department connection pipe.

The valve's purpose is to automatically drain any water that might be trapped between the fire department connection and the first check valve in that pipe, especially if the pipe is in a location that is subject to freezing. The automatic drain should be installed at the lowest point of the fire department connection pipe.

A ball drip valve contains a small hollow brass ball that is inside the casing. When the fire department connection is pressurized, the ball is pushed against the drain hole allowing only a minimal amount of water to drip past. When the pressure is relieved, the ball floats out of the hole like a cork popping to the surface, and water drains from the fire department connection line.

The inspector should pay particular attention to the manufacturer and model of ball drip valve that is installed on a fire protection system. Some ball drip devices, like the one pictured, are listed **only** for installation in the horizontal position, some are listed **only** for a vertical installation, and some are listed for either orientation. If you have any questions, you should consult that manufacturer's product literature for the specific automatic drain valve to verify how it is intended to be installed.

For additional information, refer to NFPA® 13, *Standard for the Installation of Sprinkler Systems* Chapter 8 or NFPA® 14, *Standard for the Installation Standpipe Systems*.