



QUICK RESPONSE

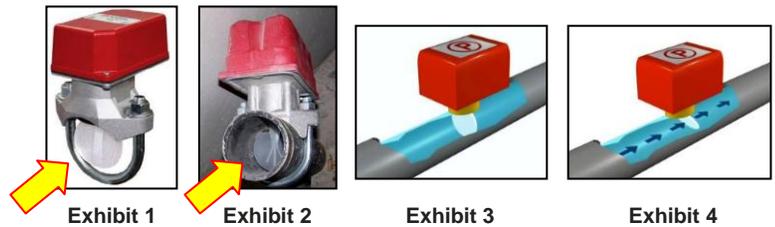
Saving life and property through effective licensing, plan review, and inspection of fire protection systems.

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Paddle-Type Flow Switch

Paddle-type, also known as **vane-type**, **flow switches** are used in wet sprinkler systems to detect the flow of water and to send an alarm signal.

The **flow switch** is usually mounted on the main fire sprinkler riser (and in some case secondary as well). It has a plastic vane or paddle, which installs through an opening in the wall of the pipe (**Exhibits 1 and 2**). When water flows through the pipe the **flow switch** paddle is deflected by the running water (**Exhibits 3 and 4**). This movement triggers the switch to close and send an alarm signal. To minimize false alarms due to pressure surges or air trapped in the sprinkler system, a mechanical delay is often used to postpone switch activation. Most time delays are adjustable from 0 to 90 seconds.



For optimal performance **flow switches** should be mounted in an area where there is adequate clearance for installation, removal and inspection. It is important that the **flow switch** is installed in the proper flow direction, which is indicated by an arrow on the product.



Exhibit 5

Flow switches should be installed at an adequate height above the floor to prevent damage. When installing a **flow switch** on horizontal pipe, the switch should be placed on top of the pipe to avoid build up of rust or other particles from collecting and interfering with the actuation of the device. When installing a **flow switch** on vertical pipes, make sure the switch is installed in an area where there is an upward flow.

For the accurate detection of water flow, **flow switches** should be installed at the proper distance from fittings that change the direction of flow in the pipe, from a drain, or from a valve. The manufacturer of the device provides these proper distances.

Paddle-type flow switches are to be installed in wet systems only. The impact from the sudden high-velocity surge of water when a dry-pipe valve trips could damage the **flow switch**; in addition, it could totally disengage the paddle and carry it downstream until it lodges in the piping, causing an obstruction. **Exhibit 5** shows a **paddle-type flow switch** improperly installed on a dry system.