

Deluge Sprinkler Systems

Deluge sprinkler systems have open sprinklers or open spray nozzles and are used where it is desirable to discharge water through all of the system's sprinklers or nozzles simultaneously. Prior to discharge there is no water in the sprinkler piping. The water supply is held back by a control valve which is operated manually or automatically by the actuation of a fire detection system. The fire detection system is required to be one of the following types: wet pilot sprinkler line, dry pilot sprinkler line, hydraulic rate-of-rise, pneumatic rate-of-rise or electric. Compatible FM Approved Release Control Panels for use with electric release deluge sprinkler system(s) are listed under RELEASE CONTROL PANEL COMPATIBILITY.

Automatic sprinklers are used on wet or dry pilot sprinkler lines. The dry pilot sprinkler line may also require a dry pilot actuator depending upon the type of automatic water control valve. When required, only the compatible dry pilot actuator noted in the sprinkler system listing shall be used in FM Approved systems.

Electrically operated deluge sprinkler systems are FM Approved on a component basis. Only the major, compatible components noted in the sprinkler system listing shall be used in an FM Approved system. FM Global installation acceptance may stipulate that only heat-actuated fire detection devices be used. Acceptance criteria by other jurisdictional authorities may vary.

Deluge sprinkler systems are FM Approved as complete systems. *Only the listed components for a specific manufacturer shall be used in an FM Approved system.*

Electric Actuation Deluge System

Electric Actuation Deluge System. Consists of Model DDX automatic water control valves in sizes 2, 2-1/2, 3, 4, 6 and 8 inch (50, 65, 80, 100, 150 and 200 mm) NPS. The system rated working pressure is dependent on the solenoid valve used. Grooved inlet and outlet connections available in all sizes. Flange end connections (Class 150 and Class 300) in sizes 4, 6 and 8 inch (100, 150 and 200mm) NPS. Installed vertically. Major trim components include:

- System Main Drain Valve:
 - o Model DDX automatic water control valves in sizes 2, 2-1/2, and 3 inch NPS a 1-1/4 inch NPS drain valve is used.
 - o Model DDX automatic water control valves in sizes 4, 6 and 8 inch NPS a 2 inch NPS drain valve is used.
 - Alarm test
 - Water supply pressure gauge
 - Push rod chamber supply connections
 - Model B hydraulic emergency station
 - Any compatible FM Approved Fire Alarm/Releasing Control Panel and associated batteries
 - Solenoid valve:
 - o Solenoid part number 6871020000 for systems rated at 175 psi (1205 kPa)
 - o Solenoid part number 6871020020 for systems rated at 250 psi (1725 kPa)
- Optional components include:
- Butterfly or OS&Y water supply control valve

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