

## 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. FM Approved combinations of control valves and fire detection system(s) are listed under AUTOMATIC WATER CONTROL VALVES.

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 listed for a specific valve under AUTOMATIC WATER CONTROL VALVES shall be used in FM Approved systems.

Electrically operated deluge sprinkler systems are FM Approved on a component basis. Only the major, compatible components listed for a specific valve under AUTOMATIC WATER CONTROL VALVES 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 identified in the listing by an asterisk (\*) have either hydraulic or pneumatic rate-of-rise fire detection and are FM Approved as complete systems *Only the listed components for a specific manufacturer shall be used in an FM Approved system.*

### Viking Deluge Sprinkler System

Viking Deluge Sprinkler System. Consists of an automatic water control valve with one of the following combinations of model, size, and end connections:

Valve Model	Size, inches NPS	End connections
E-1, E-2	2 3, 4, 6	Threaded Flanged, Flanged x Grooved
E-3, E-4	1 1/2	Threaded
F-1, F-2	1 1/2, 2, 2 1/2 3, 4, 6 8	Threaded, Grooved Flanged, Grooved, Flanged x Grooved Flanged, Grooved

Major system components include:

- Priming Valve (Normally Open)
- Strainer
- 1/16" Restricted Orifice
- Spring Loaded Check Valve
- Alarm Test Valve (Normally Closed)
- Auxiliary Drain Valve (Normally Closed)
- Model D-1 or D-4 Drip Check Valve
- Drain Check Valve 05781A
- Alarm Shut Off Valve (Normally Open)
- Model D-1 or D-2 or C-1 pressure-operated relief valve (PORV)
- Model C-1 or C-2 emergency release
- Priming Pressure Water Gauge and Valve
- Water Supply Pressure Water Gauge and Valve
- Flow Test Valve (Normally Closed)
- Water Supply Control Valv
- Alarm pressure switch and/or water motor alarm
- For hydraulic release systems, the components include:
  - Model C-1 or C-2 thermostatic rate-of rise release and/or fixed temperature release and/or pilot head (sprinkler)
- For pneumatic release systems, the components include:
  - Model H-1 or R-1 pneumatic actuator
  - Air pressure gauge and valve
  - Soft seat check valve
  - Pressure switch
  - Model C-1 or C-2 thermostatic rate-of rise release and/or fixed temperature release and/or pilot head (sprinkler)

- o Air supply
- For electric release systems, the components include:
  - o Solenoid valve, part no. 11591, 11592, 11593, 11594, 11596, 11601, 11602, 13843, or 13844
  - o System control panel
  - o Electric detection system

Optional system components include:

- Speed Control Assembly, Model A-1
- Model E-1 Accelerator
- Model D-2 Air Pressure Maintenance Device
- TRIMPAC Models B-1, B-1B, B-1S, B-2, B-2B, B-2S, B-8, B-8B and B-2S
- Viking Total Pac enclosure, for sizes 1-1/2 through 6 inch NPS with electric release
- Deluge Sprinkler Systems, which utilize the angle type main water control valves, are available factory assembled in the Viking Total Pac2 enclosure, a second generation enclosure which replaces the Total Pac. The Total Pac2 is available in several configurations: 1) the system fully enclosed on legs with an access door and a built in electrical control panel (when electric activation required); 2) the valve system fully enclosed on legs with an access door and a remote control panel; 3) the valve system assembled to a skid and used with a remote control panel.

<b>Company Name:</b>	Viking Corp The
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<b>Listing Country:</b>	United States of America
<b>Certification Type:</b>	FM Approved