



## TECHNICAL DATA

## DELUGE SYSTEM

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

### 1. DESCRIPTION

A Deluge System is a fixed fire-protection system which totally floods an area with pressurized water through a system of piping and open nozzles or sprinklers. The system piping is empty until the deluge valve is activated by a hydraulic, pneumatic, electric or manual release system.

### 2. APPLICATIONS

Regular deluge systems may be required to protect extra-hazard occupancies by creating a fire buffer zone or by cooling surfaces to prevent deformation or structural collapse. *Examples:* storage or process areas containing substances having a low flash point; areas in which fire may spread rapidly; tanks containing combustible solutions, transformers, equipment pits or product handling systems. Systems should be designed by qualified fire-protection engineers in conjunction with the approving bodies having jurisdiction. Foam-water deluge systems are those using foam-water sprinklers or spray nozzles and an air-foam concentrate which is introduced into the water at controlled rate on the system side of the deluge valve. Foam water systems are used to control and/or extinguish fires which require a smothering and cooling agent. *Examples:* extraction plants, aircraft hangars and areas where flammable-liquid spill fires may occur.

### 3. OPERATION

The Viking deluge valve prevents water from entering the system piping until required. The deluge valve is kept closed by a pressurized upper valve chamber. The pressure is maintained through a restriction on the service side. This upper chamber is also connected to the release line. When the pressure is relieved from the upper chamber through the release line, the clapper is lifted by the water pressure under the clapper. Water floods the system and rings alarm. For complete operation of individual Viking devices, see the applicable device pages in the Engineering and Design Data Book.

Viking Technical Data may be found on The Viking Corporation's Web site at <http://www.vikinggroupinc.com>. The Web site may include a more recent edition of this Technical Data Page.



**WARNING:** Cancer and Reproductive Harm-  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

### 4. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

### 5. AVAILABILITY

Viking deluge system components are available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

### 6. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.



# TECHNICAL DATA

## DELUGE SYSTEM

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

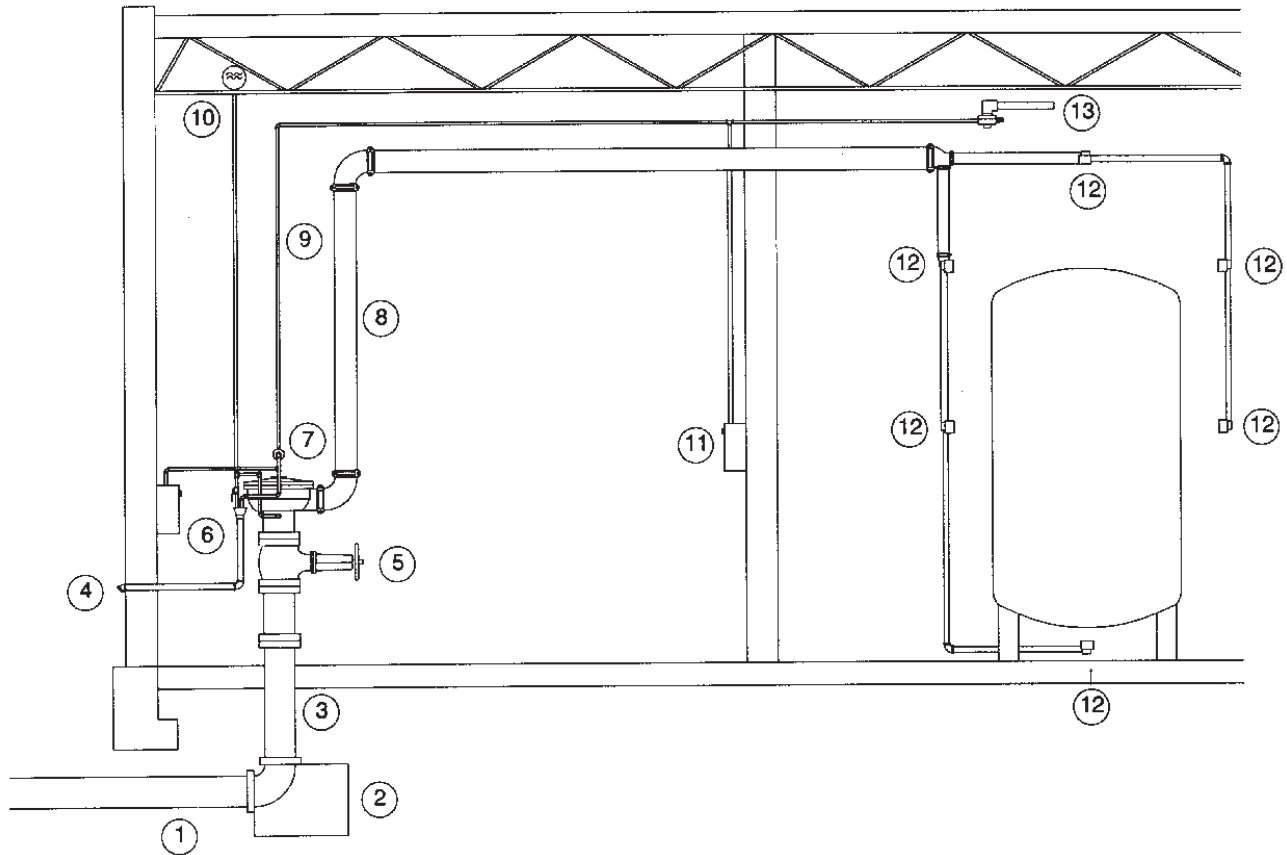


Figure 1

TABLE 1

Item	Description	Item	Description
1	Supply Main	8	System Piping
2	Thrust Block	9	Release System Piping
3	Riser to System	10	Water Motor Alarm
4	System Main Drain and Flow Test Drain	11	Emergency Release
5	OS&Y Supply Control Valve	12	Spray Nozzles
6	Emergency Release	13	Thermostatic Release
7	Deluge Valve with Required Trim and Release Equipment		