

Alternative Suppression Systems

Alternative Suppression Systems shall be installed in accordance with the International Building Code, International Fire Code, International Mechanical Code, and NFPA 12, 12A, 17, & 2001.

Submittal Requirements

1. Provide three (3) copies of plans and one (1) set of original equipment data sheets or a copy of the UL Directory page. These drawings and water calculations must be stamped by a licensed architect or professional engineer (Act 45 section 403.42a.c), and contain the name of the person who created the drawings, their phone number and their signature.
2. Drawings shall be legible, scaled with shop number and revision number and date, have compass points, and contain only fire suppression components.
3. All symbols shall conform to NFPA 170 (Fire Safety Symbols) standards where applicable. A symbol key shall be included in the submittal documentation for all symbols.
4. Note the specific type of fire suppression system (total flooding, local application, pre-engineered, etc.) and associated NFPA standards utilized in design.
5. Manual activation type and location.
6. Sequence of operations, including actuation of building fire alarm, and or the delayed or simultaneous operation of the agent.
7. Supervision type (electric or pneumatic).
8. Clearances to electrical hazards.
9. Method of actuation (automatic, normal or emergency).
10. Method of automatic detection (heat, flame, smoke, combustible vapors, abnormal condition in hazardous process trouble).
11. Method of operation (expellant gas releasing mechanisms, dry chemical discharge controls, shutdown of appliances and equipment).
12. Complete detection and suppression system with all devices labeled for type, size, quantity, location, and arrangement (pipe and fittings, nozzles, appliances, detectors, extinguishant type and containers, alarms and indicators).
13. Two sources of electric power.
14. For total flooding systems, denote dimensions of protected enclosures, method of closure for closable openings, area of unclosable openings.
15. For local applications systems, denote the location of the hazard, and the physical extent of the hazard.

Pre-Engineered Data or Hydraulic Calculations

1. For pre-engineered systems provide listed data (such as underwriters laboratories) denoting compliance and compatibility of the specific components and arrangement in the system.

2. For calculated systems provide the calculations denoting suppression chemical amount, piping type, size, length, and arrangement, nozzle descriptions and locations of flow points, and nozzle flow rates.
3. Location and function of detection devices, operating devices, auxiliary equipment, and electrical circuitry.
4. Battery calculations.
5. Reserve supply of extinguishment.