

CORE Protection Fire System Specification

The CORE Protection system is a water-based fire suppression system for use in commercial kitchens. The system is ETL listed to UL Standard 300 and ULC/ORD-C1254.6-1995. The CORE Protection system can be mounted in the integral cabinet on the end of the hood or offered as a wall-mount package.

The system is capable of automatic detection and actuation and/or remote manual actuation. The detection portion of the fire suppression system allows for automatic detection by means of an electric thermal detector(s) located in the hood duct connection. The Fenwal Firestat is a device installed in the hood's duct connection that measures temperature. The standard temperature setting is 360°F, but other temperatures are available. If a temperature higher than the set point is sensed, the Firestat contacts will close and energize the fire system. The manual actuation device, push station, is provided to allow for manual activation of the fire system.

A microprocessor-based control board provides all necessary monitoring, timing and supervision functions required for the reliable operation of the system. All devices that are critical for proper operation are supervised and includes the electric thermal detector(s), manual actuation device(s) and electric water solenoids. The control board also detects faults within the system and will alert the user of the specific fault. With the electric fire detection, a battery backup system is provided. The battery powers the automatic detection and manual actuation device circuits, as well as monitoring those devices.

The basic system consists of Total Flood Protection for Appliance coverage and Duct & Plenum Coverage. The plenum protection spray bar extends the full length of the hood immediately behind the filters offering the water-based protection for the duct and plenum. The plenum bar is ¾" brass and copper compression fittings and copper piping with nozzles that spray directly toward the back of the hood. Nozzle(s) covering the riser(s) will be ¼" NPT and is a wide angle, high flow nozzle. All fittings and pipe used in the manifold and plenum coverage will be brass and copper. This system is listed for unlimited duct protection for up to a 100-inch perimeter duct.

The Total Flood Protection line runs the entire length of the hood and is aligned with the hazard zone of the appliances. The Total Flood Protection line is 1" brass and copper compression fittings and copper piping along with 3/8" chrome-plated steel for the appliance protection drops. Fittings and pipe used for the total flood protection will be either black iron, copper, stainless steel, or chrome plated steel. The extinguishing agent for the CORE Protection System is water injected with surfactant. Upon fire system activation, water is sprayed along the length of the plenum and into the duct as well as along the appliance hazard zone underneath the hood.

Flow rate for the hood, when in a fire condition, would be 1.5 gallons per minute per foot of hood. Operating pressure for water lines, both hot water and dedicated line, is 30 to 70 psi, depending on the system configuration. The maximum static pressure cannot exceed 125 psi; pressure reducing valves can be utilized to meet the correct operating water pressure.

A system owner's guide is available containing basic information pertaining to system operation and maintenance. A detailed technical manual is also available including system description, design, installation and maintenance procedures. The system is installed and serviced by authorized distributors that are trained by the manufacturer.

Certifications

The CORE Protection Fire System is ETL Listed under Report number 3132231SAT-004 to UL Standard 300 and ULC/ORD-C1254.6-1995; meets requirements of NFPA 96 (Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment); NFPA 17A (Standard on Wet Chemical Extinguishing Systems).

