

Fire Protection For The “Micro-Environment”

Fire protection is an important part of a building’s safety measures. Classified under the “life safety” category, fire alarm systems are elaborate electronic networks of smoke detectors, manual pull stations and sprinkler piping. Additional protection may be provided for areas where vital equipment is present—equipment that cannot be exposed to the water that is used to suppress fires from a conventional system. Total “flood” fire protection systems were designed for this type of applications. Although highly effective at protecting life, these systems are very expensive.

Fire protection for critical equipment that falls into the “micro-environment” category (250 cubic feet or less) has long been viewed as impractical and cost prohibitive. This type of equipment may be important for a variety of reasons such as its importance to workflow, the data that is stored in it, or its overall cost. Although this equipment is located in a room with “general” building fire protection, the damage resulting from a fire within the equipment itself may cause tremendous damage before the fire grows large enough to activate the building’s fire alarm.

Today, new technology in fire detection and suppression equipment has revolutionized the protection of the micro-environment. Systems from Firetrace International (www.firetrace.com) use linear, pneumatic heat detection from a flexible, pressurized tube that is routed throughout a piece of vital equipment. This tubing is temperature sensitive and ruptures when exposed to fire. The rupture forms a “nozzle” that allows the fire suppression agent to flow directly from its storage cylinder to the fire’s source, stopping the fire before it grows. These systems are mounted “on-board” the equipment, require no electricity, and provide fire protection that is intended to “save” the asset from excessive damage.

Although the building that houses critical equipment will always be protected with a fire alarm/sprinkler system, fire protection for specific, critical equipment should not be overlooked. Replacement or repair can take weeks, even months, as the equipment may be highly specialized and not easily found. Supplemental fire protection is truly a necessity in protecting the interiors of equipment that is vital to the operations of a business.