High-Expansion Foam Systems

Superior protection for large spaces

- Flexibility in fighting various classes of fires
- Ability to suppress fires in large areas
- Ability to suppress fires with local application
- High-expansion ratio saves costs and reduces system footprint
- Wide variety of applications

In applications that require the protection of large spaces, CHEMGUARD High-Expansion Foam Systems have the ability to provide superior fire suppression by flooding areas with large quantities of foam that separate the liquid fuel from the air it needs to burn.

High-Expansion Foam Systems have been installed as added protection for Liquid Natural Gas (LNG) facilities where it is used as a fire suppressant and for controlling vapors released from an accidental LNG spill. Blanketing spills with high-expansion foam is an effective method for reducing and controlling fire intensity and decreasing LNG vapor generation.

Combat three-dimensional fires

When high-expansion foam is discharged into a fire compartment, three suppression mechanisms simultaneously occur:

- The large mass of discharging foam fills voids and seals the area involved in the fire and helps to prevent fresh air from reaching the base of the flames. The foam mass maintains an oxygen deficient area until the fire is suppressed.
- The steam generated is a result of the radiant heat from the fire evaporating the water in the foam blanket. This conversion to steam absorbs large quantities of heat. The resulting steam-air mixture is well below the oxygen level that is required to support continued combustion.
- The cooling effect of the foam occurs as the bubbles break and release water onto hot surfaces. The surface tension of the draining water is lowered and the cooling and wetting effect of the draining water penetrates Class “A” type materials more rapidly than water. This cools the burning material to below its ignition temperature.

Generate large volumes of foam

CHEMGUARD high-powered, high-expansion foam generators quickly deliver large volumes of high- or medium-expansion foam to a hazard or hazard area. These generators are primarily used for firefighting in aircraft hangars, mines, ships, vehicles and military installations.

APPLICATIONS FOR HIGH-EXPANSION FOAM PRODUCTS

- Aircraft hangars
- Basements, cellars and enclosed spaces
- Cable tunnels
- Communications switching stations
- Engine test cells
- Flammable liquid storage
- Gas turbine generators
- Hazardous waste storage
- Machinery spaces
- Mining
- Paper product and tire warehouses
- Power stations
- Ship holds and engine rooms
- Transformer rooms

The CHEMGUARD Standard Model Water Powered (WP) High-Expansion Foam Generators are designed to expand foam solution into millions of tiny stable bubbles. These generators are powered by the foam solution driving a hydraulic (water) motor and require no other source of power. The expansion of the foam solution is achieved by spraying solution onto a stainless steel screen then forcing air through the screen to produce a mass of foam bubbles. The continuous flow of the foam solution and the movement of air through the screen generates large volumes of foam.

The final authority in fire protection

A global leader in foam fire protection solutions, CHEMGUARD offers engineering and design expertise, quality manufacturing and unmatched customer support. CHEMGUARD foam agents and hardware can meet your fire suppression needs for a broad range of applications.

A Passion for Protection

Dedicated customer support. Extensive product portfolio. Engineering excellence. Trusted, proven brands. Tyco Fire Protection Products offers all of these attributes, plus a passion for protection. It's what drives us to create solutions to help safeguard what matters most — your valued people, property and business.

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