



SPECIAL APPLICATIONS



fire protection
TECHNOLOGIES



GASEOUS
SUPPRESSION



WATER
SUPPRESSION



FOAM
SUPPRESSION



EXPLOSION
PROTECTION



FIRE
DETECTION



MILITARY
& DEFENCE



SPECIAL
APPLICATIONS



SUPPORT
SERVICES

DRY CHEMICAL

The cost incurred to shut down a production line due to a fire can exceed the cost of the actual fire damage. With dry chemical fire suppression systems, fires in process equipment can be rapidly detected, extinguished and production resumed.

Depending on the nature of the equipment under protection, dry chemical systems can be activated manually or automatically using fusible links or heat and smoke detectors.

Dry Chemical powder is an extremely effective fire fighting agent that suppresses fire by inhabiting the chain reaction of combustion and coating the surface of the burning material. The coating separates the fuel from the oxygen supply, and prevents re-flash. Typical hazards protected include dip tanks, flammable liquid storage areas, mechanical rooms, exhaust ducts, quench tanks and coating equipment.

VEHICLE SYSTEMS

Fires have the potential to occur in just about every type of vehicle engine compartment ranging from a below engine pool fire to a pressurised hydraulic line spray fire or combination thereof. Engine compartments contain a variety of potential ignition sources from electrical to superheated engine surfaces. Additionally, an engine compartment suppression agent must also be capable of dealing with suppression in turbulent conditions. It is critical that these fires be detected and suppressed rapidly to minimise property loss and potentially human lives. CrossFire, the new technically advanced ACAF single-agent dual-action CAF - CAF mist suppression system has been developed and designed to perform this task.

To enhance the fire suppression capability of the two individual agents, a single control device delivers both CAF and CAF mist to the fire through separate nozzles that are positioned to deliver foam and foam mist in one integrated stream. The combination of the two sprays with one agent strengthens the suppression capabilities of both components into the creation of a single more effective suppression system. This, in tandem with state of the art system components and fire detection make for a highly advanced, very effective fire suppression system. The CrossFire system is designed as a compact self-contained, stored energy system. As most vehicles have limited storage space and capacity, the system is developed and designed to minimise equipment installation and storage space while utilising environmentally friendly, fluorine free, foam concentrate.

COMPRESSED AIR FOAM

Compressed Air Foam Automatic Fire Suppression Systems (CAFS), are proven to effectively suppress flammable liquid fires in commercial, industrial and hazardous environments. They are engineered to meet and exceed the most stringent industry standards. CAFS systems perform when and where they are needed!

At the heart of each ACAF® system is our world renowned, Compressed Air Foam Generator. This generator creates a unique, non-toxic, biodegradable foam, from a foam-water solution. Pressurised Nitrogen is used to create the compressed air foam (CAF) and to power the system.

Our specially designed and patented valve assembly creates the CAF upon activation and maintains control of the system. The result is an expanded foam material that consists of small uniform bubbles.

ACAF® pre-engineered fire suppression systems are made up of single or multiple CAF generator assemblies. This factory built assembly is sized to the number of nozzles it may supply. Larger hazardous areas can be protected by combining multiple CAF generators. CAF generators may be supplied by pressure tanks for self-contained supply systems or a foam proportioner for a fixed water supply system.

These types of foam fire suppression systems are particularly suited to deluge type systems protecting machinery and pumps, aircraft hangars, heliports, rim seal protection of floating roof tanks etc.

MARINE & OFFSHORE

There may be significant differences in size and usage but all marine vessels, boats and offshore oil rigs have one thing in common, an absolute commitment to avoiding a fire on board. The obvious implications of a fire at sea, coupled with highly flammable materials and compact spaces mean even small fires can be dangerous. The proximity of the galley and the engine compartment to passengers and crew requires dedicated marine fire suppression systems that can automatically suppress offshore fires in an instant.

Fire Protection Technologies offer a wide range of fire detection and suppression systems that are specifically designed and approved to prevent catastrophic fire aboard marine vessels. These systems range from wet chemical and water mist systems to protect the galley to various gaseous and water mist systems to protect engine spaces, as well as specific systems to protect control rooms, communications centres and the like. These fire suppression systems are complemented by a wide range of state of the art fire detection systems to ensure rapid detection and suppression of fires.

VAPOUR MITIGATION

Some of the biggest safety challenges facing the operation of refineries or petro-chemical facilities are controlling toxic or corrosive vapour cloud releases, suppression of hydrocarbon fires, and the protection and cooling of structures or other exposures. Manual and remote controlled monitor (water cannon) systems provide a solution by using directed, large flow streams. There are many benefits to installing these systems in your petrochemical facilities.

These advantages include:

- Remote controlled monitors allow fires or vapour releases to be managed from a safe distance; minimising exposure to personnel
- Gets water on the fire immediately
- Reduced staffing in plants due to advanced automation results in fewer employees available for the fire brigades

With years of experience designing, engineering and manufacturing fire fighting and vapour mitigation systems for industrial applications, we understand the challenges faced in petro-chemical environments. Our specialised monitors flow up to 7,500 lpm and produce a wide range of stream patterns for maximum coverage.



SPECIAL APPLICATIONS



“EVERY SOLUTION FOR YOUR SPECIAL HAZARD PROBLEMS”

“With our extensive range of products we can protect even the most unusual risks”

Our **Extensive Product Range** is not limited to the protection of large assets such as data centres, road tunnels, oil refineries or critical switch rooms etc. We also have products to protect small hazards economically.

We can provide fire detection and suppression solutions for hazards such as postal drop boxes, auto teller machines, EDM machines, wave solder machines, lathes, small engine spaces, portable generator sets and individual electrical switchboards etc.

Fire detection methods include linear heat and spark detection as well as specialised smoke and flame detection. Fire suppression techniques involve the use of various gases, wet and dry chemicals as well as water mist and foam.

MICRO ENVIRONMENT PROTECTION

These systems are small, self-contained detection and suppression systems requiring no external electrical power or fire detection system. They are ideal for the protection of critical equipment, electrical switchboards and various types of enclosures.

Two system configurations are available, a direct system that delivers the agent through the detection tube directly to the fire, or the indirect system using the detection tube to detect the fire and discharging the agent through a pipe network with nozzles.

This unique detection system can be installed through the smallest or most complex enclosures to ensure detection is always close at hand. The system can be utilised anywhere that fire poses a risk and it is flexible enough for virtually any industrial equipment, traditional as well as emergency vehicles, storage compartments, control cabinets or various types of remote installations.

OXYGEN REDUCTION

Oxygen reduction systems operate on the principle that most materials will not ignite in an atmosphere of 17% oxygen content. The solution therefore, is to maintain the oxygen concentration below this level continuously, then a fire cannot start. This technology is often called “Fire Prevention” rather than “Fire Protection”, since a fire will not occur when an oxygen reduction system is installed.

The oxygen concentration is reduced by a controlled injection of nitrogen. This is all possible due to the special properties inherent in nitrogen. It is non-toxic and at 78.09% volume nitrogen forms the major

component of our atmosphere. It is very easy to generate sufficient nitrogen supplies continuously on site, eliminating the need for high pressure nitrogen cylinders.

This oxygen reduction technology is ideal for the protection of risks such as museums, rare book stores, data centres, cold stores, warehouses, data and film archives etc. and is completely safe for occupied spaces.

KITCHEN PROTECTION

Contemporary commercial cooking environments requiring the use of healthier vegetable oils with lower auto ignition temperatures coupled with highly insulated, slow-cooling appliances, have increased the difficulty of extinguishing fires in kitchens.

Water Mist and Wet Chemical fire suppression systems have been designed to protect commercial kitchens and exhaust hoods from the dangers of fire. A self-contained restaurant fire suppression system incorporates discharge nozzles over the appliance and along the entire length of the kitchen hood.

Heat detection devices located behind filters, run the entire length of the hood and activate automatically at a pre-determined temperature. These systems are fully automatic and require no power to operate and protect the hood 24 hours a day.

OUR COMMITMENT *“To provide our customers with the best possible service, the highest quality products and the right solution for your needs”*

PRODUCTS:

Gaseous Suppression



ProInert™ (IG-01, IG-55, IG-100, IG-541)
Novec 1230™ Fluid (FK-5-1-12)
FM-200® (HFC-227ea.)
Carbon Dioxide (CO₂)
Hybrid Systems (N₂ / Water)
Pressure Relief Vents
Enclosure Integrity Testing Equipment
Pipe & Fittings

Water Suppression



Water Mist - High Pressure
Water Mist - Intermediate Pressure
Water Mist - Low Pressure
Hybrid Systems (Water / N₂)
Monitors & Delivery Systems
High Speed Deluge

Foam Suppression



Foam Concentrates
Foam Proportioning
Foam Delivery Systems
Foam Concentrate Testing

Explosion Protection



Explosion Suppression
Explosion Isolation
Explosion Vents & Pressure Relief
Spark Suppression
Explosibility Testing

Support Services



Design / Engineering:

- Design Services
- Project Documentation
- Project Management
- Cost Analysis
- System Hydraulics

Technical Support:

- Design Verification
- Commissioning
- Hazard / Risk Analysis
- Product After Sales Service
- Field Support

Fire Detection



Linear Heat Detection - Digital
Linear Heat Detection - Fibre Optic
Linear Heat Detection - Micro Chip
Flame Detection
Video Imaging Detection
Spark Detection
Control & Indicating Equipment
Thermal Imaging Detection

Military & Defence



Military Vehicles
Naval Vessels

Special Applications



Micro Environment
Oxygen Reduction
Kitchen Protection Systems
Dry Chemical
Vehicle Systems
Compressed Air Foam
Marine & Offshore
Vapour Mitigation

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