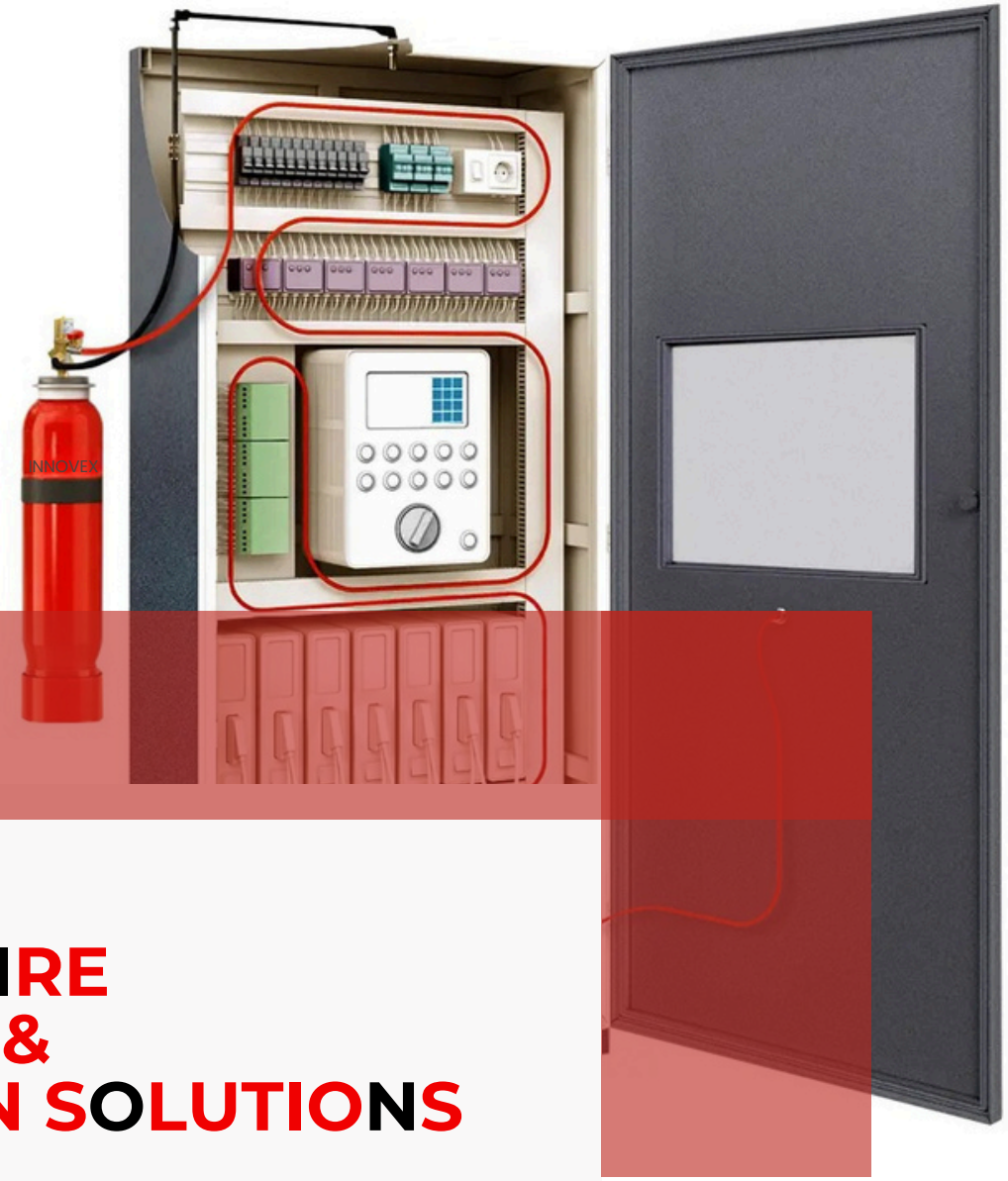
INNOVEX®



ADVANCED FIRE PROTECTION & SUPPRESSION SOLUTIONS

Protecting Life, Assets & Infrastructure

Reliable | Compliant | Technology-Driven

MADE IN INDIA

LPCB

CERTIFIED

FM APPROVED

www.fireengineeringtechnology.com
Info@fireengineeringtechnology.com
+91-9990360705, +91-9971365130

THE PROBLEM

Electrical enclosures are a vital component of almost every industrial and commercial facility, ranging from small control panels to large electrical rooms. These enclosures house high-value, mission-critical equipment essential for daily operations.

In the event of a fire within an electrical panel, damage can occur within seconds. If not detected and controlled promptly, the fire may spread beyond the enclosure, causing equipment failure, operational downtime, and serious safety risks.

Conventional fire protection methods can also lead to secondary damage, making early detection and localised fire suppression essential.

INNOVEX®

FIRE ENGINEERING TECHNOLOGY

NOVEC 1230/ FK- 5112

CHOICE OF AGENT

UL, ULC

CO2, FM200

HFC227

Fire Engineering Technology provides localized fire suppression systems that detect and extinguish fires directly inside the hazard zone. By suppressing a fire in its early stages, the system prevents escalation, limits damage to critical components, and avoids the secondary losses commonly associated with water-based suppression systems. Our solutions are engineered to deliver fast response, precise agent discharge, and high reliability, ensuring business continuity and asset protection.

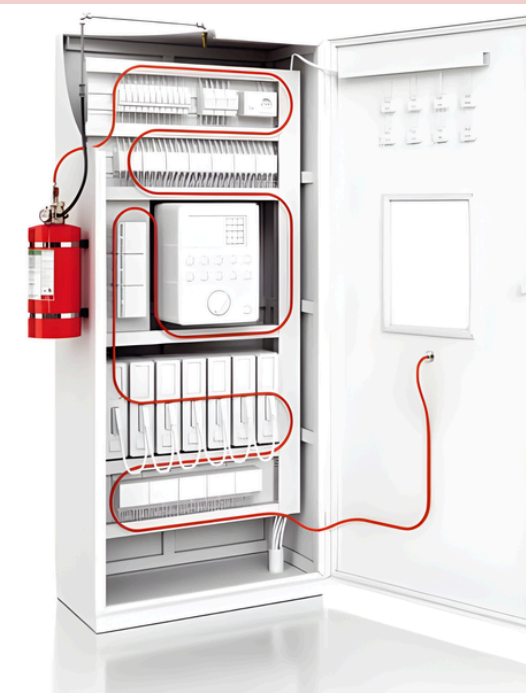
FIRE ENGINEERING TECHNOLOGY – DETECTION TUBING

Fire Engineering Technology's Detection Tubing is an advanced, heat-sensitive polymer tubing designed for early fire detection and rapid system activation within enclosed and high-risk environments. Installed directly inside the protected area, the tubing continuously monitors temperature changes and reacts instantly when exposed to excessive heat or flame.

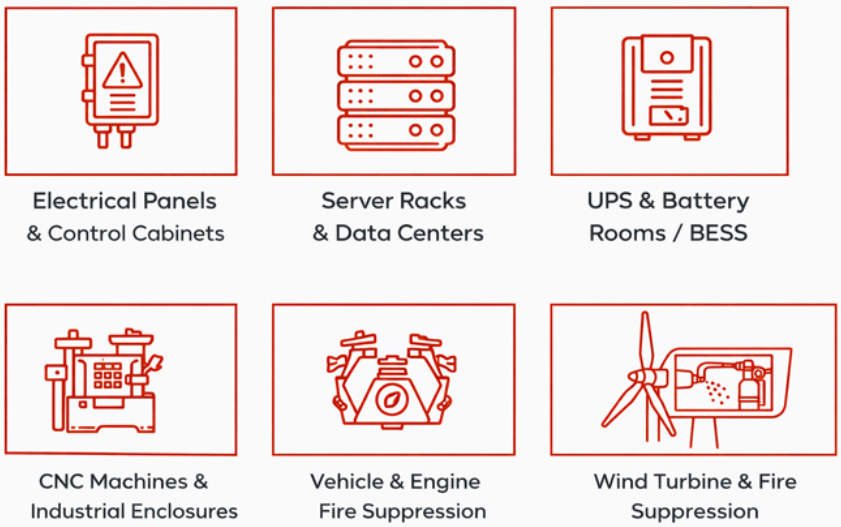
Upon activation, the tubing ruptures at the hottest point, triggering the fire suppression system and releasing the extinguishing agent through connected piping and nozzles. This ensures fast, localized suppression, minimizes damage to critical equipment, and supports reliable, maintenance-friendly fire protection for electrical panels, server racks, machinery, and other mission-critical assets.

ADVANTAGES

- Early and precise fire detection at the point of highest temperature
- Rapid system activation and fire suppression within seconds
- Flexible and easy installation in confined or complex enclosures
- No requirement for electrical power at the detection point
- Pre-engineered solution with minimal system complexity
- Reliable performance in harsh industrial environments
- Seamless integration with fire alarm and monitoring systems
- Minimizes damage to critical equipment and reduces downtime



APPLICAIONS



ABOUT US

Fire Engineering Technology is a professionally managed and technically driven fire safety solutions provider established in 2014. With a strong focus on engineering excellence and quality execution, the company specializes in the design, manufacture, supply, installation and maintenance of advanced fire protection systems for industrial, commercial, and specialized applications across India. Through a combination of innovative products and reliable service delivery, Fire Engineering Technology remains committed to ensuring safety, regulatory compliance, and uninterrupted business continuity for its clients.

MISSION

To deliver dependable, high-performance fire protection and life safety solutions that protect people, critical assets, and infrastructure across industries while upholding the highest standards of quality, integrity, and professional excellence.

VISSION

To be recognized as a trusted leader in fire safety engineering in India, known for innovation, technical expertise, and unmatched commitment to client satisfaction, safety compliance, and long-term reliability.

WHY FIRE ENGINEERING TECHNOLOGY?

QUALITY ASSURANCE

From Last one Decade Fire Engineering Technology is Providing and committed to provide best quality product and services to our clients as per their needs.

TIMELY DELIVERY

As suppression products are mandated by government regulations, Fire Engineering Technology is committed to timely delivery and installation, ensuring customer satisfaction.

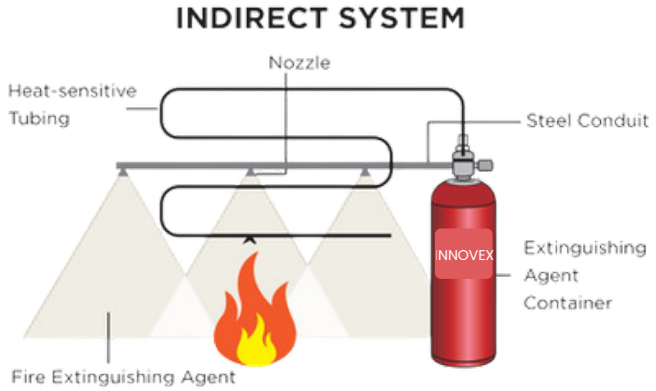
PERSONALIZED APPROACH

Proper attention to each and every client to understand their actual requirement and giving them exact solution as per their requirement by our experts.

FEATURES & BENEFITS

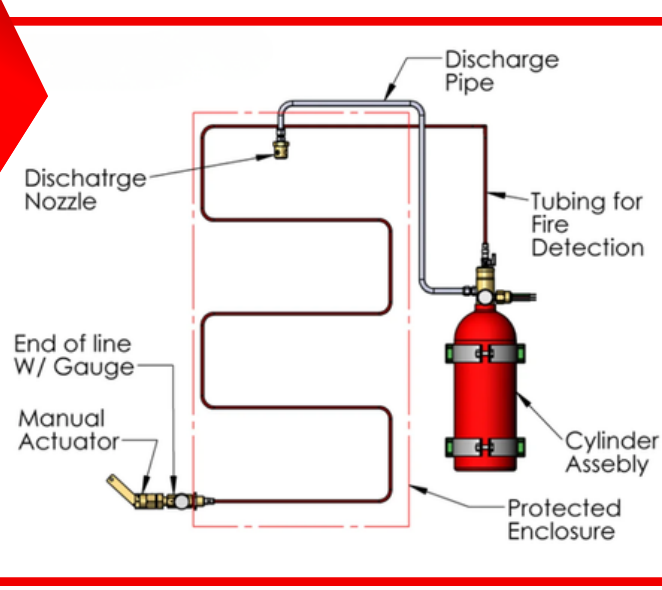
- Heat-Sensitive Detection Tube Technology for early and accurate fire detection at the source
- Automatic Fire Detection & Suppression System requiring no external power at the detection point
- Rapid system activation ensuring immediate release of the suppression agent upon fire detection
- Pressurized clean agent or CO_2 cylinders for fast and effective fire extinguishment
- Tube-based automatic operation enabling localized suppression inside enclosed hazards
- Suitable for new installations and retrofit applications without major system modifications
- Minimal system complexity with pre-engineered design for reliable performance
- Optimised agent discharge for effective coverage with reduced collateral damage
- Supports protection of electrical panels, server racks, machinery, and critical enclosures
- Manual actuation option provided for enhanced operational control
- Compatible with fire alarm panels and monitoring systems for integrated fire safety management

HEAT-SENSITIVE DETECTION TUBE TECHNOLOGY



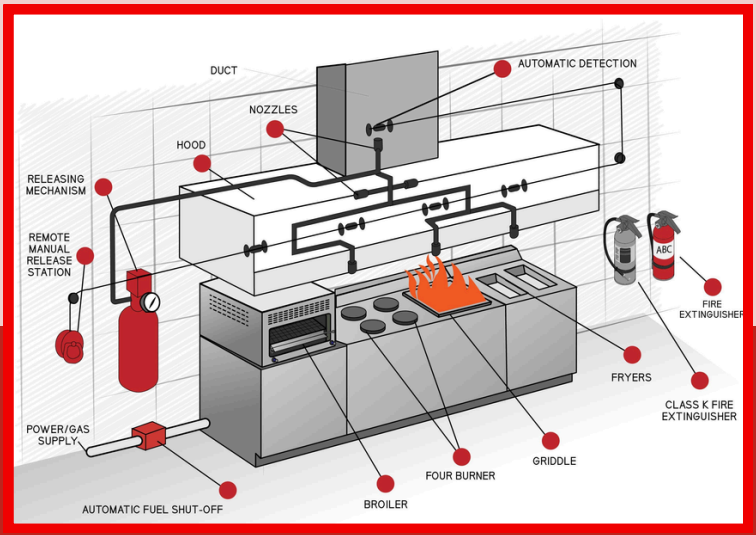
Heat-Sensitive Detection Tube Technology uses a specially engineered polymer tube installed inside the protected enclosure to continuously monitor temperature. When exposed to excessive heat or flame, the tube ruptures at the hottest point, automatically activating the suppression system. Operating without electrical power, it delivers fast, localized fire suppression and reliable protection for critical equipment in harsh environments.

AUTOMATIC FIRE SUPPRESSION ACTIVATION



Automatic Fire Suppression Activation enables immediate fire response without manual intervention. Activation occurs when heat-sensitive detection tubing detects abnormal temperature rise or flame, automatically releasing the suppression agent at the source. This rapid, self-activating process minimizes fire spread, equipment damage, and downtime while operating independently of external power, ensuring reliable protection for critical and high-risk enclosures.

APPLIANCE SPECIFIC COVERAGE



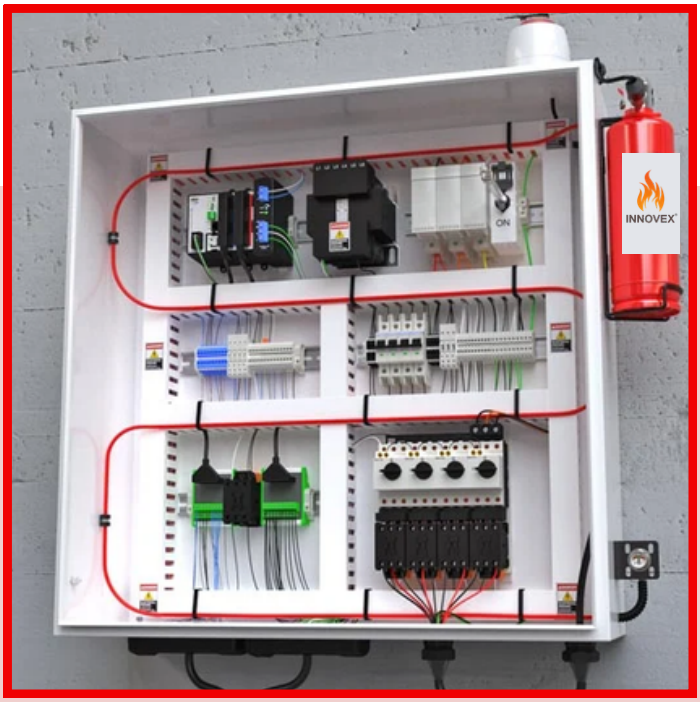
APPLIANCE SPECIFIC COVERAGE

Appliance Specific Coverage is designed to protect individual appliances or equipment using dedicated detection and suppression components. Each unit is monitored and protected independently, ensuring precise fire detection and targeted agent discharge. This approach is ideal for environments with fixed layouts, providing efficient protection while minimizing system complexity and unnecessary agent release.

ZONE DEFENSE

Zone Defense provides fire protection across defined hazard zones rather than individual appliances. Detection and suppression components are configured to protect an entire area, allowing flexibility in equipment placement and layout changes. This solution ensures comprehensive coverage, faster response, and effective fire control for dynamic environments with multiple or frequently changing appliances.

ZONE DEFENSE



CLEAN AGENT (NOVEC 1230 / FM200)

FK1230 (FK-5-1-12) is an advanced clean agent fire suppression solution designed for the protection of mission-critical and high-value assets. It effectively suppresses Class A, B, and C fires by absorbing heat and interrupting the combustion process, without reducing oxygen levels in the protected space.
The agent is non-conductive, residue-free, and safe for occupied areas, making it ideal for environments containing sensitive electronic equipment. FK1230 is environmentally responsible, offering zero ozone depletion and low global warming impact. Its fast discharge and clean suppression ensure minimal downtime and no post-fire cleanup, supporting business continuity and asset protection.

NFPA 2001, Requirements For Minimum Values			
Agent	Class A MEC	Class A Design	Class C Design
FK-5-1-12	3.5	4.5	4.5

PHYSICAL & CHEMICAL PROPERTIES

Chemical Name.....Dodecafluoro-2-methylpentan-3-one
Common Name.....FK-5-1-12
Appearance.....Colorless liquid
Storage State.....Stored as liquid, discharged as gas
Boiling Point.....Approximately 49°C
Freezing Point.....Approximately -108°C
Electrical Conductivity.....Non-conductive
Residue.....None after discharge
Ozone Depletion Potential (ODP)..Zero
Global Warming Potential (GWP)..Very low
Suitability.....Safe for use in occupied spaces

TECHNOLOGY WE HELP

ILP

DLP

HP

DHP

Engineered System

CLEAN AGENT CYLINDER

The FK1230 (FK-5-1-12) cylinder is a critical component of Fire Engineering Technology's clean agent fire suppression systems. It is designed to safely store and rapidly discharge the FK1230 clean agent during system activation. The cylinder is engineered for durability and reliability, ensuring consistent performance under demanding operating conditions.
Pressurized with inert gas, the cylinder enables fast and uniform agent discharge through the distribution piping network, delivering effective fire suppression throughout the protected enclosure.
Available in multiple capacities, the cylinder configuration is selected based on enclosure volume and fire risk assessment, ensuring optimal system performance and compliance with fire safety standards.

SYSTEM COMPONENTS

Flexible Discharge Hose

Fire Engineering Technology supplies agent discharge piping, hoses, and fittings as part of its clean agent and automatic fire suppression systems. Flexible connections between cylinders and manifolds are standard practice and aligned with their system descriptions.

Flexible Actuation Hose

The website confirms automatic activation through detection and control mechanisms. Stainless-steel braided actuation hoses are a standard component in such systems and are consistent with Fire Engineering Technology's clean agent system architecture.

Cylinder Mounting

Cylinder mounting accessories are included as part of system installations. Vertical mounting using brackets or straps is standard and consistent with Fire Engineering Technology's cylinder-based suppression systems.

Electric Cum Manual Actuator

Fire Engineering Technology systems support automatic activation through fire alarm/detection systems and manual actuation. Electric cum manual actuators are functionally aligned with the activation methods described on the website.

1½" Manifold Check Valve

Multi-cylinder clean agent systems offered by Fire Engineering Technology require manifold assemblies and non-return/check valves to ensure correct agent discharge. While exact sizes are not published, the component itself is standard and applicable.

180° & 360° Discharge Nozzles

The website confirms the use of engineered discharge nozzles for clean agent systems. Nozzle spray patterns (directional and full-coverage) are part of system design and are selected based on enclosure layout.

AUTOMATIC FIRE DETECTION & SUPPRESSION SYSTEMS

PROTECT ASSETS AND LIVES

If you only have a total flood suppression system, you need to consider a secondary system that can isolate a fire and possibly save you valuable downtime and repair to your assets. By addressing the danger at a micro level before your larger system kicks in, you are still protecting your assets, personnel, and mechanical, but more efficiently in relation to your total operation. We can provide a self-activating suppression system that reliably suppresses fires in seconds.

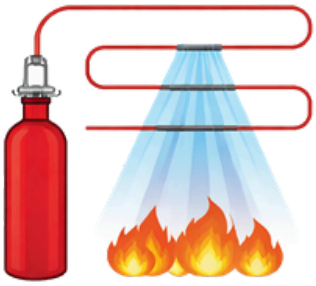
We can design a low maintenance, cost-effective solution to the problem of “micro-environment” fire protection. This system uses a polymer tubing that will rupture when exposed to a flame. This specialized detection tubing combines leak resistance, flexibility, durability and precise temperature sensitivity, allowing it to react quickly when the heat from a fire is present.

DIRECT DELIVERY

DIRECT DELIVERY – Low Pressure Systems

The Direct Low Pressure (DLP) System utilizes the FireFinder Detection Tubing as both the fire detection device and the fire suppressant delivery system. The portion of the tube nearest the hottest point of the fire ruptures forming an effective discharge “nozzle”. The pressure drop in the tube releases the entire contents of the cylinder through this nozzle.

INDIRECT DELIVERY



INDIRECT DELIVERY – Low Pressure Systems

With the Indirect Low Pressure (ILP) system, the FireFinder Detection Tubing is used only as a detection device. The fire suppression agent is delivered via copper tubing, stainless steel tubing or braided hose. Once the tube bursts, the suppressant is discharged through strategically placed nozzles within the protected enclosure.

High Pressure Systems

This line of Fire Finder products, available in both direct and indirect systems, allows for delivery of high pressure suppressants such as carbon dioxide, argon or similar agents.

APPLICATIONS

CNC Machines

Enclosed automated milling machines, robotic welding machines, plastic injection molding machines

Electrical Cabinets and Controls

Computer racks, PLC & process automation control cabinets, critical data processing equipment, UPS cabinets, medical equipment, switchgear

Industrial Equipment

Forklifts, plant machinery equipment protection, paper pulping machines, farming equipment

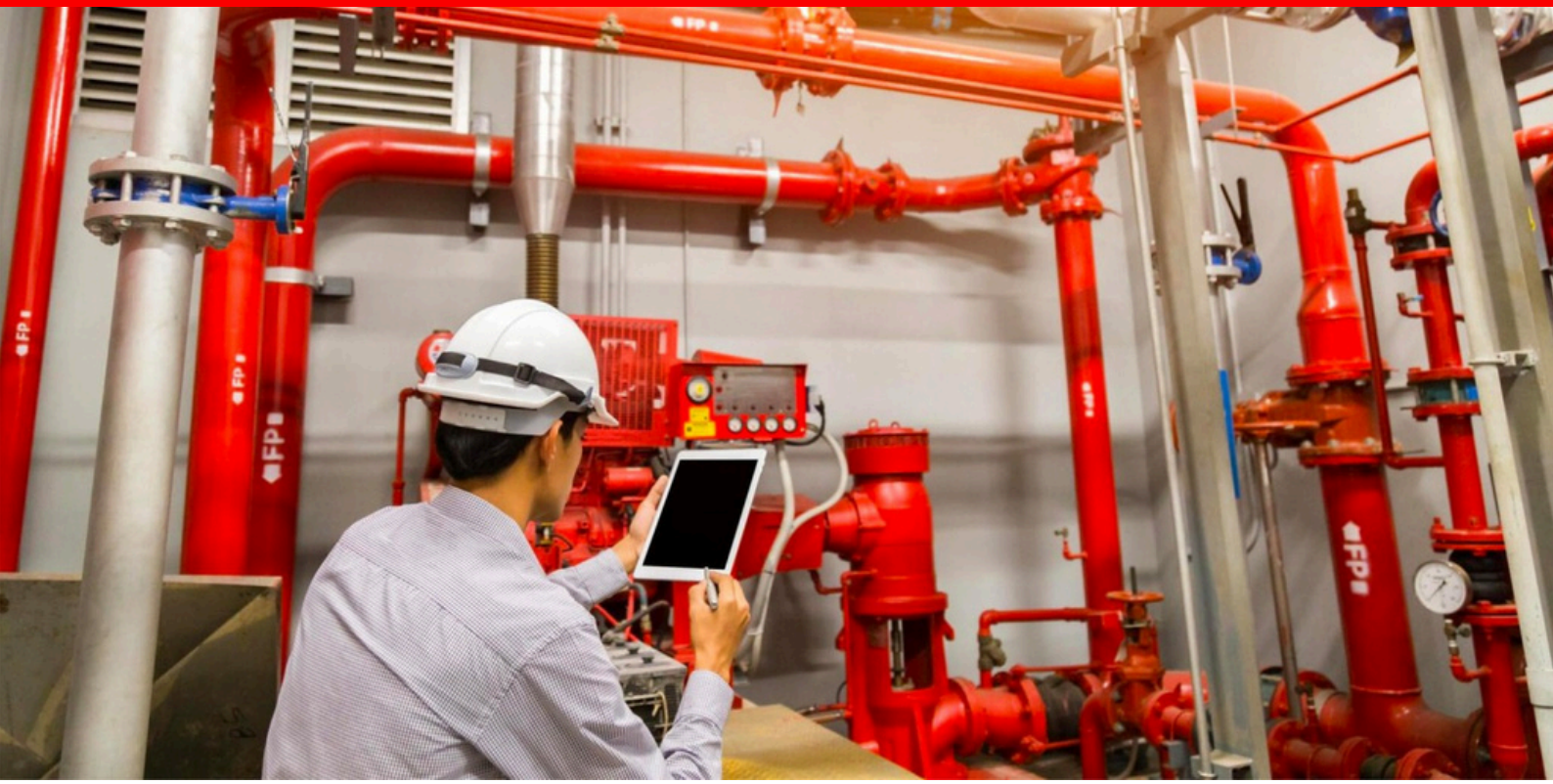
Fume Cabinets

Chemical storage, research and development labs, chemical production, pharmaceutical labs, university and school labs

On-road Vehicles

Mass transit buses, trucks, school buses, paratransit vehicles, armored trucks

FIRE ENGINEERING TECHNOLOGY



COMPANY PROFILE

Fire Engineering Technology is a professionally managed fire safety solutions provider specializing in the design, supply, installation, and maintenance of advanced fire suppression systems. With strong technical expertise and application-focused engineering, we deliver reliable protection solutions for industrial, commercial, and specialized applications across India.
Our systems are developed to meet site-specific risk requirements and are supported by comprehensive engineering design, quality components, and expert technical support. We focus on delivering dependable fire protection solutions that enhance safety, protect assets, and ensure operational continuity.

- Fully engineered fire suppression systems designed to meet specific hazard and equipment requirements
- Automatic detection and suppression for rapid fire control
- Compact and rugged system design suitable for harsh operating conditions
- High-reliability components ensuring consistent system performance

TYPICAL APPLICATIONS

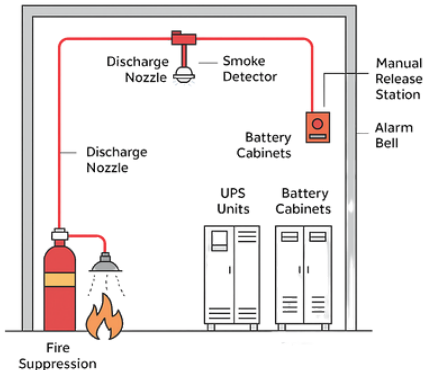
- Surface and underground mining equipment such as dumpers, haul trucks, dozers, loaders, and excavators
- Construction machinery including graders, bulldozers, compressors, and generators
- Industrial and material handling equipment
- Railway equipment and locomotives
- Road transport vehicles including prime movers and heavy-duty trucks
- Marine and port equipment
- Agricultural and forestry machinery
- Medium commercial vehicles and public transport buses

Heavy Equipment

ENGINEERED PRODUCT LINES

THERMAL / FIRE WIRE DETECTION SYSTEM WITH MANUAL ACTUATION

Fire Engineering Technology offers advanced fire wire and thermal detection systems designed for continuous monitoring of high-risk equipment zones. These systems provide early fire detection by sensing abnormal temperature rise along the detection cable or sensor line.
The system supports both automatic detection and manual actuation, ensuring reliable fire suppression even in extreme operating conditions. Designed for durability and precision, the detection system enables fast response while maintaining system supervision for enhanced safety and reliability.



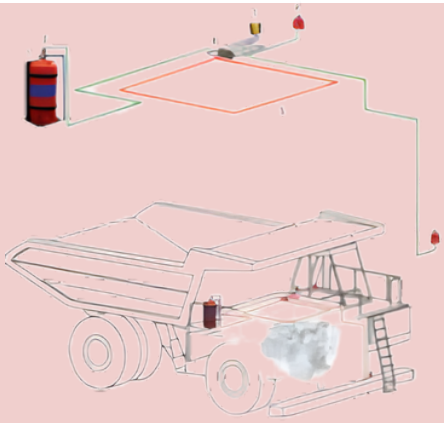
LOSS OF PRESSURE (LOP) ACTIVATION SYSTEM

The Loss of Pressure (LOP) activation system is a fast-acting fire suppression activation method designed for equipment operating in harsh and vibration-intensive environments. The system detects pressure loss caused by heat or fire and automatically triggers the fire suppression system.
LOP systems provide reliable operation with minimal complexity and are well-suited for protecting engine compartments, hydraulic areas, and enclosed equipment zones. Their flexible routing and rugged design make them ideal for mobile and heavy equipment applications where reliability and quick response are essential.

SYSTEM CONFIGURATION

A typical engineered fire suppression system configuration includes:

1. Pressurized suppression cylinder
2. Cylinder discharge valve
3. Control and monitoring interface
4. Discharge piping and nozzles
5. Detection or activation tubing
6. Manual activation devices



INNOVEX®

FIRE ENGINEERING TECHNOLOGY

Corporate Office: Plot No. 1, Nangali Sakarawati, Najafgarh-110043

Manufacturing Unit 1: PLOT NO - 4 LAXMI VIHAR, PART-3 NAJAFGARHNEW DELHI – 110043

+91 9990360705
+91 9971365130

Info@fireengineeringtechnology.com

www.fireengineeringtechnology.com

Ambit

ADVANCE
Goodwill Co-operation Trust

SPC ELECTROTECH PVT. LTD

CONQUERENT
Conquering Current

TM
SAMRUDDHI
Control Equipments

ITC Limited

SUDHIR®
Powering The Future

NEPTUNE®

JAKSON