

# FireSci™



## Pre-Engineered Fire Suppression Systems





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# Pre-Engineered Local Applications

Protecting Your Assets



## Cabinet-Level Fire Protection That Works—Automatically, Always

FIRESCI's pre-engineered systems are designed to detect and suppress fires directly inside critical enclosures—before they escalate. Whether caused by electrical faults, overheating batteries, or flammable vapors, cabinet fires require fast, localized, and independent protection.

FIRESCI offers two core systems:

**DLP (Direct Low Pressure):** The detection tube serves as both sensor and discharge path. When exposed to heat, the tube bursts and the agent is released directly through the rupture point.

**ILP (Indirect Low Pressure):** The detection tube activates a mechanical or electric valve, releasing agent through strategically placed nozzles.

Both systems are engineered to operate without human intervention and can protect energized equipment even in remote, unmonitored, or sealed environments.

## Why Use Micro Suppression?

Traditional extinguishers and full-room systems aren't effective inside sealed cabinets. Fires in enclosures grow rapidly and cause catastrophic failure before building alarms even activate. FIRESCI systems act inside the risk zone, ensuring:

- Immediate response at the source
- No power required (DLP)
- No disruption to adjacent systems
- No damage to electronics (clean agents)

**FIRESCI delivers autonomous suppression where it matters most: inside the enclosure, at the moment of ignition. Trusted globally by installers, integrators, and equipment manufacturers.**

# Pre-Engineered Local Applications

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Tailored Suppression Solutions for Electrical & Mechanical Hazards

FIRESCI offers a modular line of pre-engineered suppression systems for localized protection of enclosures at risk of fire. All systems are engineered for 24/7 readiness, operate without human input, and require no complex installation or commissioning tools.

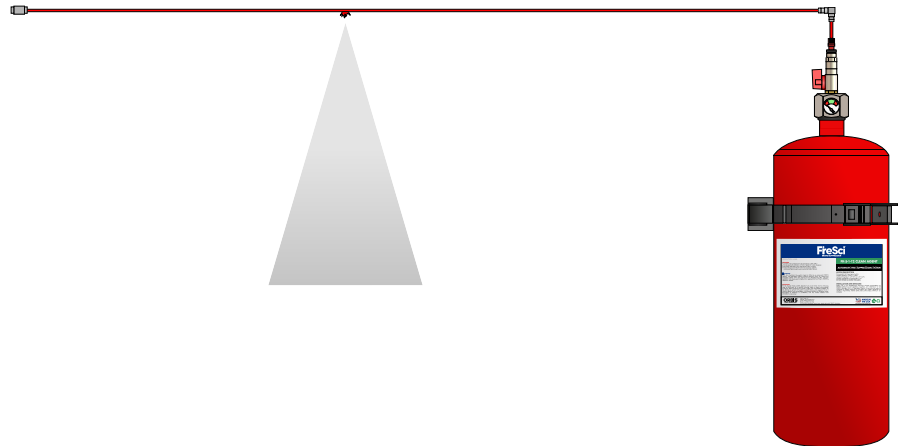
Each system configuration is optimized to balance speed of suppression, installation simplicity, and agent effectiveness—while maintaining full compatibility with demanding industrial environments.

## System Types

### DLP – Direct Low Pressure Release Pre-Engineered System

A self-contained system where a polymer detection tube acts as both sensor and nozzle. When exposed to flame or radiant heat (typically  $-110^{\circ}\text{C} / 230^{\circ}\text{F}$ ), the tube ruptures at the hottest point, instantly releasing agent through the hole and directly onto the source of the fire.

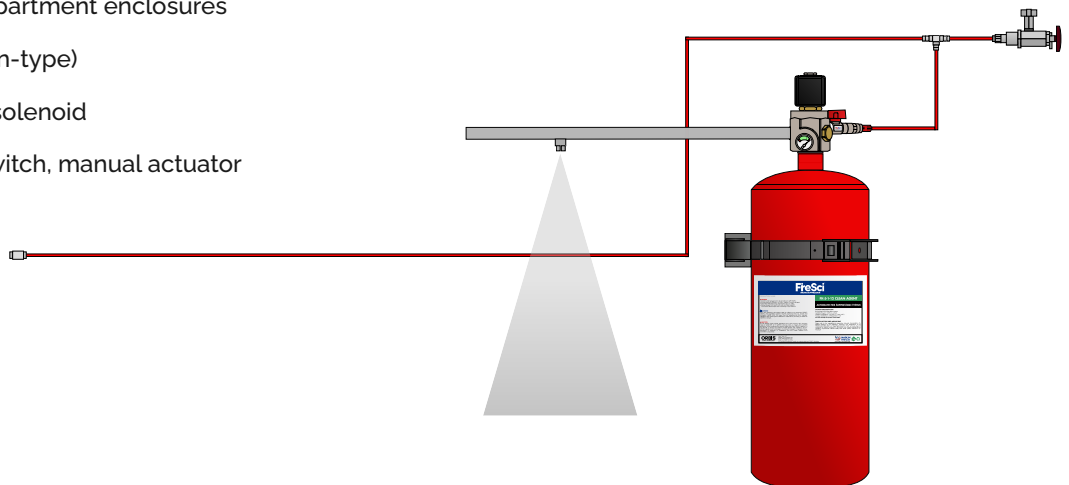
- Best suited for: compact, sealed enclosures
- Nozzles: Not required (tube acts as discharge)
- Installation: Simple, tool-free
- Actuation: Fully pneumatic
- Cylinders: 3 lb to 14 lb



### ILP – Indirect Low Pressure Release Pre-Engineered System

The detection tube senses heat or is linked to an electric/smoke detector. When actuated, the cylinder valve opens, discharging agent through fixed stainless steel or brass nozzles. This allows broader and more uniform coverage.

- Best suited for: larger, multi-compartment enclosures
- Nozzles: Configurable (cone or fan-type)
- Actuation: Pneumatic or electric solenoid
- Optional accessories: pressure switch, manual actuator
- Cylinders: 3 lb to 50 lb



# Pre-Engineered Local Applications

Protecting Your Assets

## Available Extinguishing Agents

Agent	Properties	Ideal Use Cases
<b>FK-5-1-12</b>	Clean, non-conductive, zero-residue. Safe for electronics and personnel.	Server racks, telecom cabinets, UPS bays
<b>HFC-227ea</b>	Halocarbon agent with broad global approvals. Effective Class A/B/C.	Offshore, marine, general industrial
<b>ABC Powder</b>	Dry chemical agent. Rapid knockdown. Budget-friendly and rugged.	Mining, transport, high-dust enclosures

## Targeted Suppression for High-Risk Enclosures and Equipment

Fires that originate within electrical or mechanical enclosures are among the most dangerous—and costly—because they are typically hidden from early detection, ignite in the presence of energized components, and can spread before any building-level suppression system activates.

FIRESCI systems are engineered to intervene at the source, containing fires where they start: inside the cabinet, inside the machine, inside the risk. This approach enables reliable protection without collateral damage or downtime.

## Why Enclosure-Level Suppression Matters

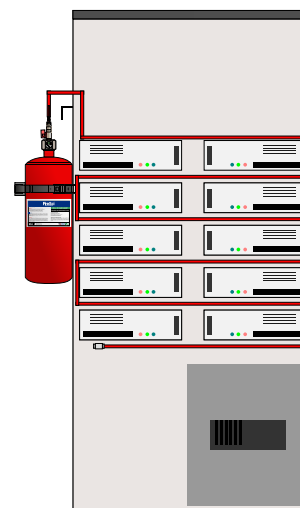
Traditional suppression systems (room flooding or handheld extinguishers) are not designed to protect:

- Enclosed or sealed cabinets
- Remote or unmanned installations
- Equipment in high-dust or outdoor environments
- Systems that remain energized during operation

**FIRESCI's micro suppression systems solve this gap by delivering agent inside the hazard zone, instantly and without human intervention.**

## System Engineering Parameters

- Working Pressure: 195 psi (13.4 bar)
- Discharge Time: <10 seconds
- Detection Tube Rating: 110°C (230°F) or 150°C (302°F) options
- Temperature Range: -30°C to +60°C (-22°F to +140°F)
- Cylinder Material: Stainless steel (standard) or carbon steel
- Mounting: Wall, panel, or chassis-mount brackets available
- Nozzle Configurations (ILP): cone (360°) or fan-type (180°)



# Pre-Engineered Local Applications

Protecting Your Assets

## Ideal Applications

### Electrical Panels & Control Cabinets

- Short circuits, arcing, and overloads are common ignition sources
- Clean agents protect without harming electronics
- DLP systems are ideal for compact sealed enclosures

### Battery Cabinets & UPS Systems

- Thermal runaway risk in lithium-ion packs
- ILP systems offer full-volume coverage with early heat detection
- FK-5-1-12 or FM-200 recommended due to clean discharge

### CNC & Manufacturing Equipment

- Oil mist, flammable dust, and frictional heat
- Integrated protection allows equipment to continue operating post-suppression
- Powder-based systems provide aggressive flame knockdown

### Telecom & Server Racks

- High cable density and continuous load
- Clean agents prevent downtime or data loss
- Multi-nozzle ILP systems ensure even dispersion

### Solar Inverter Boxes & Combiner Panels

- Overheating terminals and arc faults
- DLP systems provide fast protection without relying on external power
- No risk of agent corrosion or residue

### Mining & Off-Highway Vehicles

- Diesel engine bays, hydraulic lines, and battery trays
- Powder or dual-agent ILP configurations available
- Manual actuation and rugged brackets for vibration-heavy conditions

### Marine & Offshore Cabinets

- Navigation, power distribution, and engine control units
- ILP systems with HFC-227ea withstand harsh environments
- Stainless steel components resist corrosion

