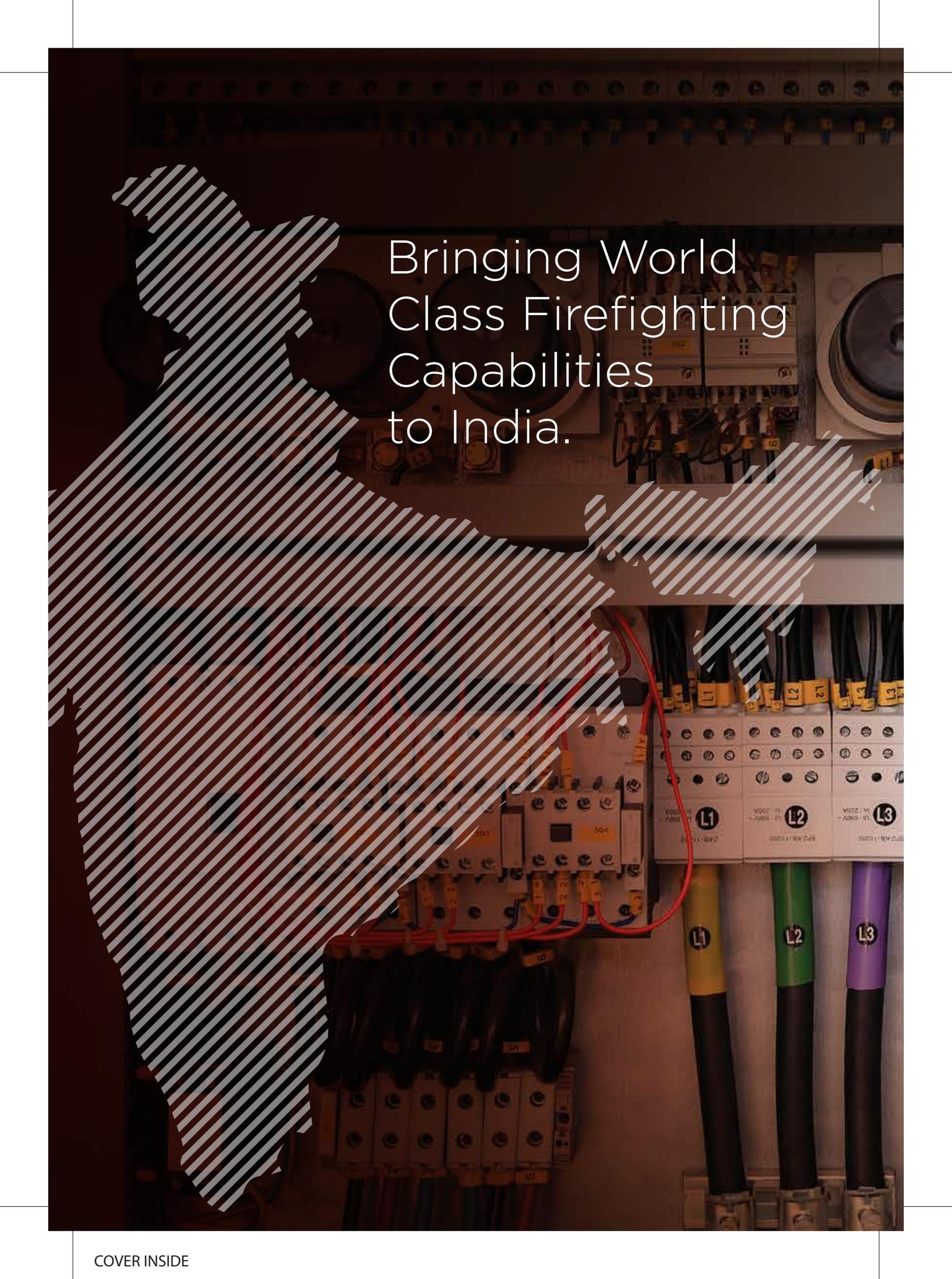




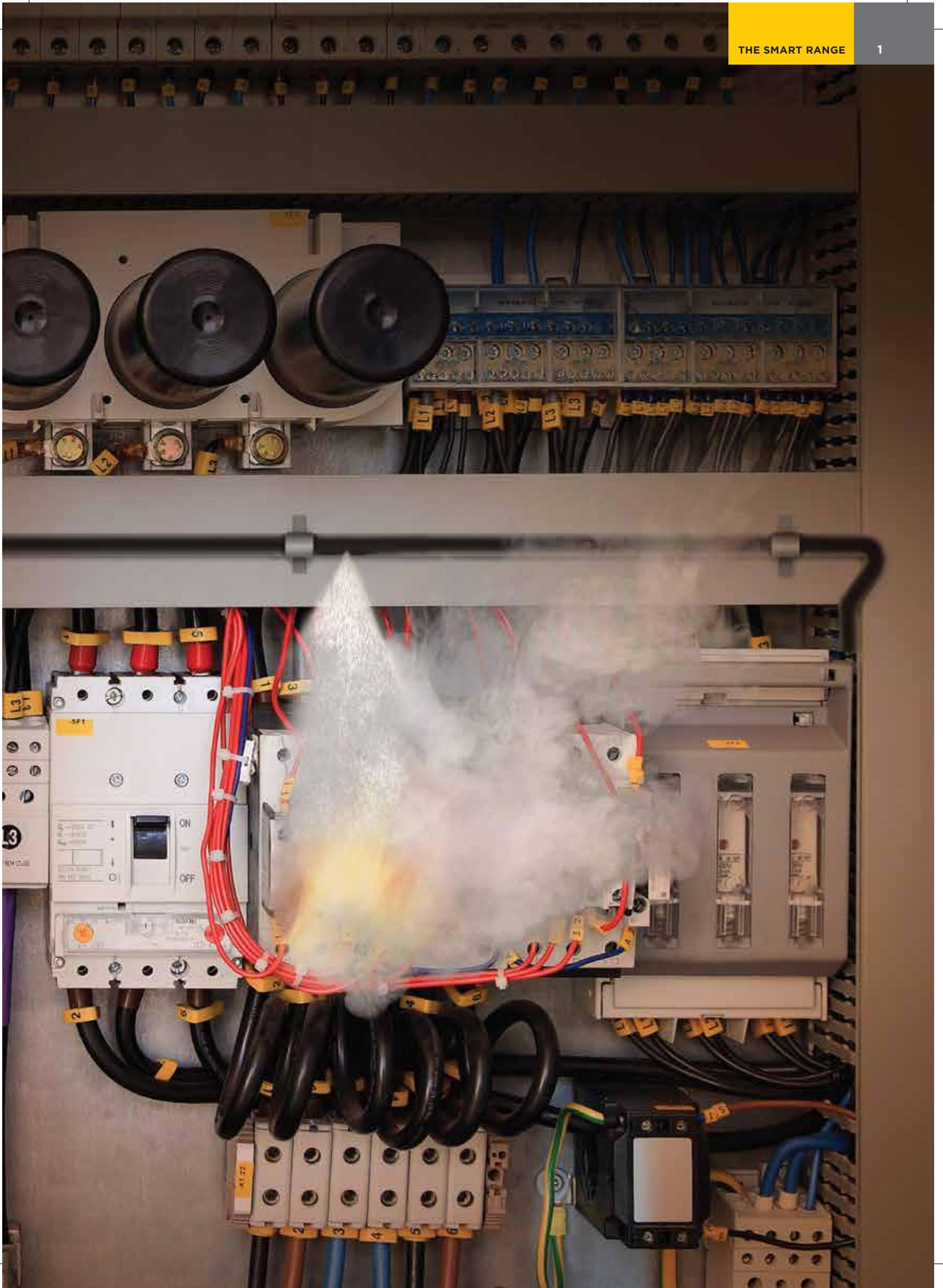
CEASEFIRE
THE SMART RANGE

Fire Suppression Systems

www.ceasefire.in



Bringing World
Class Firefighting
Capabilities
to India.



CEASEFIRE INDUSTRIES PVT. LTD.

Ceasefire Industries Pvt Ltd is the most trusted fire safety brand in India and a fast emerging global conglomerate. With its globally certified, holistically-integrated range of fire fighting solutions, the company is amongst the rarest in the world to have such a diverse product portfolio as part of one eco-system.

The company is a leading manufacturer of a 360 degree-unified product range that includes - A Complete line of Fire Extinguishers with the widest variety of extinguishing agents, Special Application Extinguishers, Highly-advanced In-Panel Suppression Systems, Total Flooding Systems, Greenest technologies including Inert Gas Based Suppression, Revolutionary Watermist Based Suppression Systems, Extensive range of Watermist and Wet chemical Based Kitchen Fire Suppression Systems, Hydrant Systems, Fire Alarm Systems and other highly-specialised fire fighting technologies.

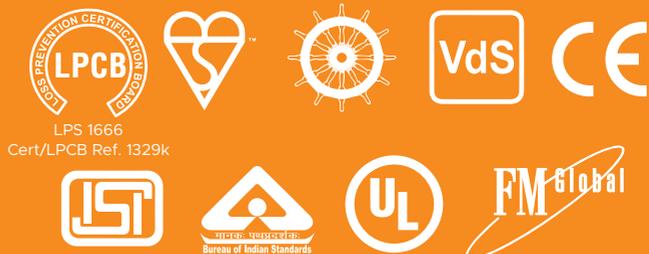
This extensive product portfolio is built at the very forefront of technology and conforms to the highest global standards and carry a host of international certifications by world's top-notch quality agencies including - ISI, EN3, EN1866, BIS, LPCB, BSI, MED, PED, VDS, ISO9001. Manufactured at the company's state-of-the-art production facility in India, Ceasefire's fire fighting solutions are setting global benchmarks in quality..

Best names across industry segments in India and other parts of the world have counted on us for their safety, including global giants, MNCs, Government Agencies, Railways, Airports and Military & Strategic Establishments.

Totalling 500,000 customers. We've never let anyone down, ever.



A range certified for quality by the top-notch agencies in the world.



A FULL-SPECTRUM SUPPRESSION SYSTEMS RANGE



Ceasefire today offers a range of fire suppression systems to suit the needs of every kind of premises. The range comprises of solutions ranging from room suppression systems like HFC 227ea based Total Flooding System, Inert Gas and CO₂ based Suppression System and Retrofittable Ceiling Mounted Suppression System to micro environment suppression systems like In-panel Tube based Fire Suppression System, Specialized System for Server Racks that can fire proof small spaces that vulnerable to fire at large.

One Stop Solution

Being a holistically integrated company, Ceasefire designs, manufactures, commissions, installs and provides maintenance and service to its systems, making it an end to end solution provider.

CERTIFICATIONS

CEASEFIRE SUPPRESSION SYSTEMS RANGE



LPS 1230
Cert/LPCB Ref. 1329e

**CEASEFIRE'S
HFC227EA FLOODING
SYSTEM**

bsi.

**CEASEFIRE MINI-
MICRO ENVIRONMENT
SUPPRESSION SYSTEM**

Tested by
BSI



LPS 1666
Cert/LPCB Ref. 1329k

**CEASEFIRE'S IN-PANEL
TUBE-BASED FIRE
SUPPRESSION SYSTEM**

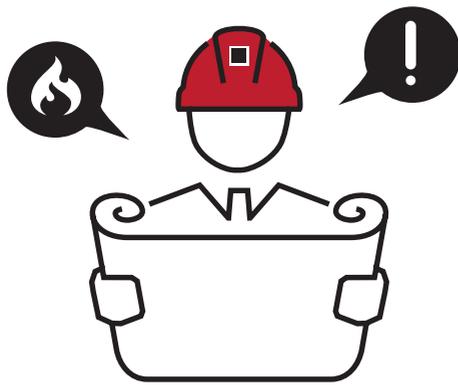


**CEASEFIRE'S INERT
GAS & CO₂ BASED FIRE
SUPPRESSION SYSTEM**

VDS Approved

CEASEFIRE DESIGN CELL - THE REAL CEASEFIRE ADVANTAGE

The real advantage of Ceasefire's Fire Suppression Systems comes in form of company's In-house Design Capability. The Design cell comprises of a team of qualified Engineers, CAD Designers and Fire Experts who have extensive experience of customizing fire suppression systems for a wide variety of spaces including Offices, Factories, Data Centers, Schools, Hospitals, Warehouses, Residential Towers, Airports, Malls and more. Each system is customized as per the requirements of the premises.

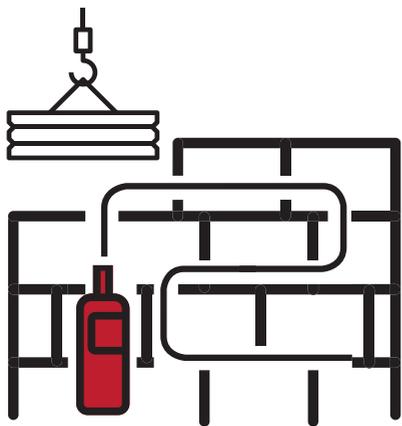


A THROUGH SURVEY OF THE PREMISES

The Ceasefire Design Cell Experts, carefully study the premises where the suppression system is to be installed, keeping in mind the premises at large, the fire hazards associated with the premises, challenges around collateral damage and the assets that need to be protected at large.

ADHERENCE TO PROTOCOLS

The design of every system follows predefined guidelines and principles laid out by the quality certification agencies and nothing is ever done outside of the prescribed standards.



CUSTOMIZED SOLUTIONS

The outcome is a system that adheres to all the guidelines in the most precise manner and safeguards the area in the best possible way.

OUR TRUE DIFFERENTIATOR: OUR SERVICE STRENGTH

Installation & Service Strength:

The advantages with Ceasefire Systems don't just end with the Design capability of the company and its extensive range of fire suppression solutions.

A key strength of Ceasefire is to be able to install the system at a premises right with its team of trained technicians who follow the guidelines stated in the approving standard to the last letter.



A DEDICATED TEAM

At Ceasefire we have a team dedicated for installations & service of the systems that follows a documented procedure to do so and undergoes regular audits from the certification agencies. In order to keep this team updated on the design, installation & service norms, regular training programs & workshops are carried out. Being a customer facing interface this team is given great strategic importance in the Ceasefire ecosystem.

THE MOST HOLISTICALLY INTEGRATED FIRE FIGHTING RANGE.

The Ceasefire ecosystem has evolved to encompass a very dynamic and diverse range of fire safety products that truly complement each other. The result is a 360 degree,

holistically-integrated range that can address any kind of fire safety requirement for any kind of premises with utmost perfection.



Wide range of Portable & Trolley Mounted Fire Extinguishers

ABC Powder, Water & CO₂-based extinguishers. Certified to ISI and EN3 / EN1866 standards.



Portable & Trolley Mounted Watermist-based Extinguishers

Exclusive range of Watermist-based portable and trolley mounted fire extinguishers, ready to fight large fires without any collateral damage.



Special Application Fire Extinguishers

Feature-full Clean Agent, Wet Chemical and Special Agent for Class B and Metal Fire-based fire extinguishers.



Designer Series Home & Car Fire Extinguishers

ABC Powder & Clean Agent-based fire extinguishers that come in aesthetically pleasing designs and colours.



In-Panel Tube-based Fire Suppression System

Certified by LPCB for LPS1666 Standard Certification for 2 and 4 kg HFC227ea and HFC236Fa gas variants.



Kitchen Hood Fire Suppression Systems

Watermist and Wet Chemical-based Systems. Certified by LPCB for LPS1223 Standard Certification. The range also includes BSI tested systems for domestic kitchen application.



Watermist-based Suppression Systems

Watermist-based Systems with LPCB certified nozzles for exclusive application in Offices, Warehouses, Factories, Generator and Transformer areas.



Specialised Gas-based Suppression Systems

HFC227ea-based System, available in both Engineered and Pre-engineered variants. Certified by LPCB for LPS1230 Standard Certification.



Inert Gas & CO₂ Based Suppression Systems

Ceasefire's VDS approved Inert Gas and CO₂ based systems are the greenest and most powerful extinguishing systems available today in the world.



Retrofittable Suppression Systems

Ceasefire Atom X, retrofittable suppression system that requires minimal pipes and fittings and consumes least amount of your productive work space.



Hydrant Systems

Completely Independent Watermist-based Hydrant Systems.



Fire Alarm Systems

Ceasefire's CF XPlus range of Fire Alarm systems come in a complete spectrum of Conventional, Addressable, Wireless and Standalone systems.



Special Firefighting Systems

Advanced firefighting systems that are the first of their kind in the world.

Technological leader. Demand generator.



Through our extensive fire safety product portfolio, unmatched quality and knowhow, and by bringing high end products to

existing, new and lower market denominators, we've been known to open market opportunities exponentially for Ceasefire's Business Associates.

EXPORTS TO MARKETS AROUND THE GLOBE

Ceasefire products are tested and certified to the most stringent, globally accepted safety standards by world's most reputed certification agencies. These include EN3, EN1866, PED, LPCB, BSI, ISO and OHSAS.

With these certifications in place, the company's cutting edge fire safety products are exported around the world

and are being very well received in the markets of countries including UK, UAE, Sri Lanka, Nepal, Bangladesh and more.

In some of these markets Ceasefire products sell in their maiden brand name, whereas for some markets the company contract-manufactures for leading brands in these countries under OEM agreements.





CONTENTS

FIRE SUPPRESSION SYSTEMS

HFC227ea Flooding System	12	Server Quick Response System	50
Ceasefire Inert Gas & CO ₂ Based Suppression System	17	CF3000 - Self Contained Watermist-Based Hydrant System	56
Ceasefire Atom X - Pre-Engineered Retrofittable Fire Suppression System	20	LancePro - Hammer Drill Equipped Watermist-Based Firefighting System	60
In-Panel Tube-Based Micro Environment Suppression System (CQRS)	25	Morph - Watermist Guns	66
Ceasefire Mini - Micro Environment Suppression System	32	Why Ceasefire - In-Panel Tube-Based Micro Environment Suppression System	70

CERTIFICATIONS

CEASEFIRE SUPPRESSION SYSTEMS RANGE



LPS 1230
Cert/LPCB Ref. 1329e

**CEASEFIRE'S
HFC227EA FLOODING
SYSTEM**



**CEASEFIRE MINI-
MICRO ENVIRONMENT
SUPPRESSION SYSTEM**

Tested by
BSI



LPS 1666
Cert/LPCB Ref. 1329k

**CEASEFIRE'S IN-PANEL
TUBE-BASED FIRE
SUPPRESSION SYSTEM**



**CEASEFIRE'S INERT
GAS & CO₂ BASED FIRE
SUPPRESSION SYSTEM**

VDS Approved



HFC 227ea FLOODING SYSTEM



Offices, server rooms, data centres... any area where heavy-duty electronics, computers, etc, are stored tend to be prone to fire. Not only does the presence of electricity, equipment, wiring and complicated circuitry leave the area vulnerable to fire, an overload or system shutdown could cause an energy imbalance that results in a sudden blaze.

And putting out the fire doesn't necessarily mean the end of your troubles either. The reality is, in a fire situation many fire suppression systems cause major damage, and even destroy the very things they are supposed to protect.



Introducing Ceasefire HFC 227ea - the most revolutionary firefighting system like no other. Brought to you by the only Indian company manufacturing these systems with world leader DuPont™ - Ceasefire.



HFC 227ea has been specially created to suppress fire by reaching extinguishing levels in seconds, reducing the oxygen supply to below combustion levels and stopping ordinary, electrical, and flammable liquid fires before they cause significant damage. That's the fastest fire protection available, period!

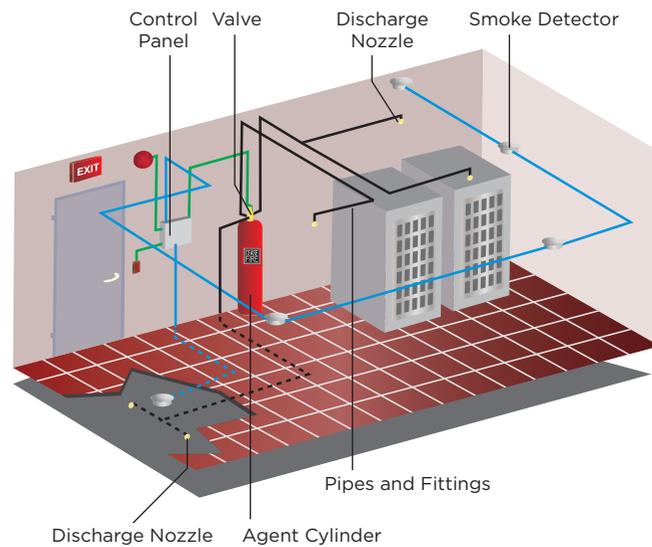
How the system works

The detectors sense a rise in temperature above normal, particles of smoke, or a change in air quality, and alert the Control Panel. Which, in turn, activates the system and triggers a high-pressure solenoid valve that releases the HFC 227ea gas from seamless cylinders to the nozzle via a flexible piping network. A hooter goes off simultaneously, warning personnel to clear the area while the extinguishing agent is dispersed.

80% of HFC 227ea's firefighting effectiveness is achieved through heat absorption, and 20% through direct chemical means (action of the fluorine radical on the chain reaction of a flame). The system harnesses cutting-edge technology and has been designed for commercial enterprises and industries. Activating instantly in case of fire, it requires no monitoring.

The HFC 227ea Flooding System can also be manually activated. When a fire is detected, the system is actuated. Large quantities of extinguishing agent are released through wide-range nozzles that give the agent more

reach. This effectively 'floods' the area, reduces the concentration of oxygen in the air and efficiently puts out the fire. Being self-activated, the system offers protection from fire 24 x7, whether anyone's around or not.



THE COMPLETE SYSTEM

The HFC 227ea Flooding System is designed to conform to IES 15519, the National Fire Protection Association (NFPA) 2001 and ISO/PF 20885 standards.

The system comprises various components that come together to create an unbeatable suppression system.



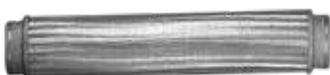
Agent Tank



Valves and Actuation Line



Nozzles



Pipes and Fittings



Detection Devices



The HFC 227ea Control Panel

The system variants

The HFC 227ea Flooding System is available in two variants.

I Pre-engineered System

Backed by in-depth studies of common applications of the HFC227ea flooding system in the Indian market, the Ceasefire Design Cell has created 8 pre-fabricated variants of the system, which can be installed in rooms of different sizes.

System Name	Enclosure Volume (Minimum)	Enclosure Volume (Maximum)
CF - HFC 227ea Flooding System - M - V1	20 m3	28 m3
CF - HFC 227ea Flooding System - M - V2	28.1 m3	40 m3
CF - HFC 227ea Flooding System - M - V3	40.1 m3	47 m3
CF - HFC 227ea Flooding System - M - V4	47.1 m3	60 m3
CF - HFC 227ea Flooding System - M - V5	60.1 m3	80 m3
CF - HFC 227ea Flooding System - M - V6	80.1 m3	90 m3
CF - HFC 227ea Flooding System - M - V7	90.1 m3	105 m3
CF - HFC 227ea Flooding System - M - V8	105.1 m3	120 m3

I Engineered System

Each premises is unique. It has unique set of hazards that require unique fire safety solutions. The engineered version of the system is a customised fire safety solution, keeping in mind the risk factors and the premises in mind.



LPS 1230
Cert/LPCB Ref. 1329e

**CEASEFIRE'S
HFC227EA FLOODING
SYSTEM**

The system conforms to one of the most stringent quality standard LPCB.

Benefits of the Ceasefire HFC 227ea Flooding System

 A, B, C, F	Classification Works on class A, B fires and fires involving electrically-charged devices. Effective on a wide range of flammable and combustible materials.		Highly Effective Not only does HFC 227ea work in 10 seconds, it prevents re-ignition by rapidly cooling down temperatures in the surrounding area.
	Electronics-Friendly Shown to be electrically non-conductive and is safe for electrically charged equipment, it is kinder on electronics than the majority of extinguishing agents available in the market.		Highly Reliable A fully assembled and 100% tested mechanical control head ensures reliable operation. A pressure gauge on the valve marks the gas levels so maintenance staff can replenish it whenever required. Protective nozzle covers keep nozzles free from contamination and blockages by grease or other by-products that could inhibit the proper discharge of the extinguishing agent.
	Ozone, Environment-Friendly Being a clean agent, this is an eco-friendly alternative to chemical and water-based extinguishing systems. As HFC 227ea already exists as a gas in the Earth's atmosphere and is one of the by-products of combustion, it does not harm the Earth's stratospheric ozone layer. Its atmospheric lifetime is minimal.		Globally Utilised HFC 227ea is the only globally accepted flooding system gas and is in use in over one hundred thousand applications, in more than 70 countries.
	Superior To Other Gas Agents HFC 227ea is superior to other gas-based extinguishing agents that have lower boiling points and tend to be corrosive.		Residue-Free Being a clean agent, it won't leave behind oily residue, particulate or corrosive material.
	High-value Risk Protection Suitable for protection on a range of high-value risks as it virtually eliminates damage to high-tech equipment, artwork and other delicate and sensitive objects.		Superior Quality HFC 227ea is UL listed gas.
	No Clean-up Required After Discharge After a discharge, the extinguishing agent can be removed by simple ventilation.		Highly Adaptable Existing Halon/CO ₂ control systems can easily be adapted for use with HFC 227ea.
	24-hour Protection Automatic detection and actuation controls ensure fire protection is always 'on'.		Unobtrusive Design Flexible piping configurations allow for a streamlined design and convenient installation that will not interfere with office workflow.
	Multiple Triggers The system can be triggered either by the manual actuation system or through the automatic detection system.		Highly Flexible Available in a variety of sizes that can be customised as per the application. Its flexible configuration and design can easily accommodate changes to the layout or expansion of the area.
	Speedy Deployment, Minimal Downtime Deploys quickly, reaching extinguishing levels in 10 seconds or less, stopping ordinary combustible, electrical, and flammable liquid fires before they cause significant damage. When a fire is extinguished this quickly, it means less damage, lower repair costs, and an extra margin of safety for people. It also means less downtime and disruption of business.		
	Lower Storage Requirements In applications where space is at a premium, HFC 227ea fire suppression systems are the superior choice. Stored in cylinders as a liquid and pressurised with nitrogen, HFC 227ea systems take up to seven times less storage space than any system based on CO ₂ and inert gases.		

APPLICATION AREAS:



Offices



Theatres



Petroleum Storage



Parking Lots



Medical Equipment



Storage Areas



Factories



Battery Rooms



Server Rooms

CEASEFIRE INERT GAS & CO₂ BASED SUPPRESSION SYSTEM

APPROVED BY



Ceasefire inert gas suppression system is among the most environment friendly fire suppression system.

It uses inert or natural gases to extinguish fire. Often used as a blend of gases, these gaseous mixtures leave no residue behind and are designed to protect enclosures where there is a need for quick reaction to extinguishing a fire.

The system reduces dumps inert gases in the fire zone, bringing down the oxygen concentration in the fire zone below the fire threshold point.

While the oxygen level is lowered, the system does not eliminate oxygen from the space altogether, leaving enough oxygen to support life but not fire!



ENVIRONMENT FRIENDLY SUPPRESSION SYSTEM



The air we breathe has approximately 21% of Oxygen. Oxygen is the key factor in sustaining a fire and the key factor in keep us alive too!

By removing the oxygen, we will certainly extinguish a fire, but that comes with obvious problems. How do we sustain life at the same time?

Fires need more than 16% Oxygen to combust. Anything below this level of oxygen will not be enough for a fire to sustain combustion.

To extinguish a fire and sustain life, we need to reduce oxygen from 21% (assuming were at sea level) to below 16%, but not less than 12%. This extinguishes fire and sustains life at the same time.



FEATURES:

	Fights Class A, B, C and Electric fires
	Electronics Friendly
	Environmentally Friendly
	Inert gas is among the most environment friendly gases
	High-value Risk Protection
	No Clean-up Required After Discharge
	24-hour Protection

	Multiple Triggers
	Speedy Deployment, Minimal Downtime
	Highly Effective
	Residue-free
	Superior Quality
	Unobtrusive Design
	Highly Flexible

APPLICATION AREAS:

- | Bank Vaults
- | Libraries
- | Rare book stores
- | Archive Storage Rooms
- | Electronic Data Processing
- | Telephone Exchanges
- | Studios
- | Communication Centres
- | Transformer and Switch rooms
- | Control Rooms
- | Test Laboratories
- | Computer and Control Rooms
- | Tape Stores
- | Electrical Cabinets
- | Electrical Switchgear
- | Telecommunication Equipment



CEASEFIRE ATOM X - PRE-ENGINEERED RETROFITTABLE FIRE SUPPRESSION SYSTEM



Development in the economy has resulted in the mushrooming of the modern structures.

Each of these premises could be unique in their fire risks in terms of occupancy, kind of activities being carried, flammable materials stored or purely due to the high value of the assets present at these places.

Many turn to specialized suppression systems for ideal fire safety of their premises, often overlooking the system requirements like structural changes needed to accommodate the system, dedicated space to store the massive agent containers and the downtime associated with the installation.



INTRODUCING ATOM X!
PRE-ENGINEERED RETROFITTABLE FIRE SUPPRESSION SYSTEM

Understanding the evolving demands of unique infrastructures and businesses, Ceasefire presents the next generation specialized fire suppression technology. Ceasefire Atom X doesn't demand any structural change neither consumes the floor space nor leads to downtime, as this innovative system is mounted on the ceiling of the space.

Designed with smart and sensitive features, it minimizes the possibility of false activation and safeguards the premises.

The system is an automated smart network of ceiling mounted agent containers, an array of detection devices and a control panel.

CUSTOM-MADE SOLUTIONS

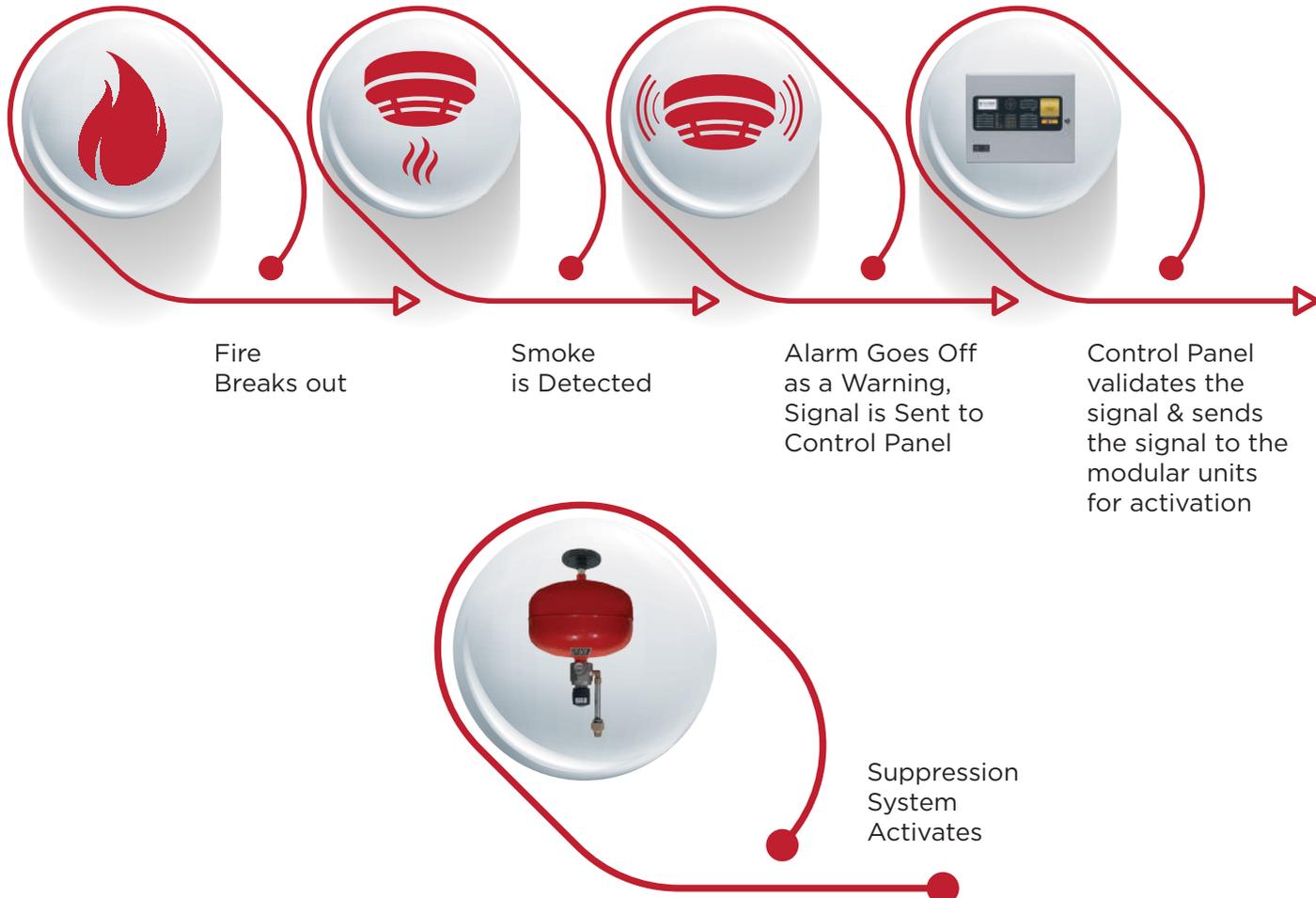
ATOM X is a highly customised fire safety solution. From the detectors that sense fire and raise an alarm to the extinguishing agent that quells fire to the control panel that integrates the system, everything can be customised on basis on the the fire risks and the assets to be protected.

The system is available in two agent variants viz: ABC Dry Powder MAP 90 and HFC 227ea.

This makes the system one of the most effective firefighting mechanism and can be used across a wide range of premises.



HERE'S HOW ATOM X WORKS



KEY FEATURES:

	<p>Classification: Works on class A, B, C fires and fires involving electrically-charged devices. Effective on a wide range of flammable and combustible materials.</p>
	<p>Self-actuated: Does not require any power supply and will function normally in the event of a power outage.</p>
	<p>Electronics-Friendly: HFC 227 ea variants is suitable for securing high-value sensitive equipment.</p>
	<p>Value For Money: Cost effective solution to Conventional Suppression Systems</p>

	<p>24-hour Protection: Automatic detection and actuation controls ensure fire protection is always 'on'.</p>
	<p>Flexible Design: Flexible tubing allows protection in areas that are difficult to access and may not be able to accommodate any other means of detection.</p>
	<p>Customized Firefighting Protection: The system can be customised to suit the requirement of any kind of premises</p>
	<p>Rugged System: Can withstand even harsh conditions where other types of detection systems might be rendered inadequate.</p>

APPLICATION AREAS:

Gas Based Suppression System



Electrical Control Room



BMS Control Room



Site Control Room



Server Room For Small Offices



Server Racks



Battery Room



Mobile Room

Powder Based Suppression System



Warehouse



Chemical Storage Area

TECHNICAL SPECIFICATIONS OF MAP90 CONTAINER:

Parameters	MAP90			
	2kg	5kg	10kg	15kg
Size	2kg	5kg	10kg	15kg
Pressure Type	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure
Agent	MAP90	MAP90	MAP90	MAP90
Applicable on fires	A, B, C & Electrical Started Fire			
EN 3 Ratings	N/A	N/A	N/A	N/A
Certification Standard	N/A	PED	PED	N/A
Certification Body	N/A	EUROCERT	EUROCERT	N/A
Gross Weight	4.80 to 5.0kg	7.70 to 7.90kg	14.70 to 15.10kg	22.1 to 22.5kg
Net Content	1.80 to 2.10kg	4.90 to 5.10kg	9.80 to 10.20kg	14.80 to 15.2kg
Approx. Height of Fire Ext. Upto Nozzle (Without Base)	330 mm	390 mm	450 mm	535 mm
Discharge Mechanism	Automatic with solenoid	Automatic with solenoid	Automatic with solenoid	Automatic with solenoid
Can Construction	Deep Drawn and MIG Welded			
Valve / Cap Construction	Forging & Machining	Forging & Machining	Forging & Machining	Forging & Machining
Internal Coating	No	No	No	No
External Coating	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder
Warranty In Years	1	1	1	1
Helium Leak Detection Testing	Yes	Yes	Yes	Yes
Working Pressure	15Bar	15Bar	15Bar	15Bar
Dia. Of Shell (OD)	175 mm	240 mm	300 mm	300 mm
Operating Temperature	-30° C to +60° C			
Hydrostatic Test Pressure	35Bar	35Bar	35Bar	35Bar
Cylinder Material Spec.	Steel CR2(DC01)	Steel CR2(DC01)	Steel CR2(DC01)	Steel CR2(DC01)
Body Thickness	1.6 mm	1.6 mm	2.0 mm	2.0 mm

* Please check the product specifications at the time of placing your order from our website (address of which is given at the end of this catalogue). Specifications can change without notice due to our continuous R&D and product improvisation initiatives.

TECHNICAL SPECIFICATIONS OF GAS CONTAINER:

Parameters	HFC227ea			
	2kg	5kg	10kg	15kg
Size	2kg	5kg	10kg	15kg
Pressure Type	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure
Agent	HFC227ea	HFC227ea	HFC227ea	HFC227ea
Applicable on fires	A, B, C & Electrical Started Fire			
EN 3 Ratings	N/A	N/A	N/A	N/A
Certification Standard	N/A	PED	PED	N/A
Certification Body	N/A	EUROCERT	EUROCERT	N/A
Gross Weight	4.80 to 5.0kg	7.70 to 7.90kg	14.70 to 15.10kg	22.1 to 22.5kg
Net Content	1.90 to 2.10kg	4.90 to 5.10kg	9.80 to 10.20kg	14.80 to 15.2kg
Approx. Height of Fire Ext. Upto Nozzle (Without Base)	330 mm	390 mm	450 mm	535 mm
Discharge Mechanism	Automatic with solenoid	Automatic with solenoid	Automatic with solenoid	Automatic with solenoid
Can Construction	Deep Drawn and MIG Welded			
Valve / Cap Construction	Forging & Machining	Forging & Machining	Forging & Machining	Forging & Machining
Internal Coating	No	No	No	No
External Coating	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder
Warranty In Years	1	1	1	1
Helium Leak Detection Testing	Yes	Yes	Yes	Yes
Working Pressure	10Bar	10Bar	10Bar	10Bar
Dia. Of Shell (OD)	175 mm	240 mm	300 mm	300 mm
Operating Temperature	-30° C to +60° C			
Hydrostatic Test Pressure	35Bar	35Bar	35Bar	35Bar
Cylinder Material Spec.	Steel CR2(DC01)	Steel CR2(DC01)	Steel CR2(DC01)	Steel CR2(DC01)
Body Thickness	1.6 mm	1.6 mm	2.0 mm	2.0 mm

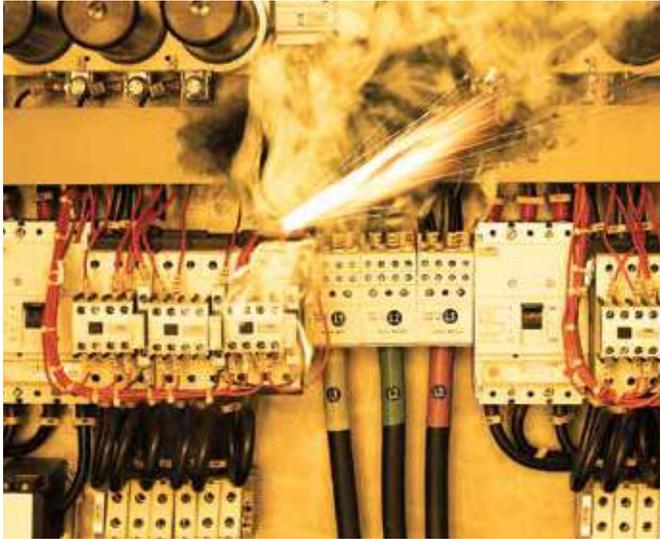
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IN-PANEL TUBE-BASED MICRO ENVIRONMENT SUPPRESSION SYSTEM (CQRS)

CERTIFIED BY LPCB TO
LPS 1666 STANDARD



LPS 1666
Cert/LPCB Ref. 1329k



Research shows that most fires start with a spark in electrical mains, in the wiring in the server, in a genset or deep in an automobile engine or industrial machinery. And by the time you actually spot the fire and can take action, it's already too late because everything inside has already been destroyed by the fire.

These are perhaps most dangerous of all fires. And there's just one way to deal with them: instant detection and swift firefighting. But how do you detect a fire you cannot even see? And even if detected, how do you effectively fight it in an area that is difficult to access?



Ceasefire's In-Panel Tube-Based System (CQRS) is a revolutionary firefighting solution which combines ground-breaking technology with functional simplicity to keep what's precious safe.

The most prominent feature of CQRS is the specially designed heat-sensitive pneumatic polymer tubing. It's connected at one end to a Ceasefire extinguishing agent container, while the rest of it runs unobtrusively throughout the area at risk. When the flame comes in contact with the heat-sensitive tubing and reaches a temperature of 80° - 90°C, the tubing bursts open at that exact spot and forms a miniature nozzle. The pneumatic mechanism triggers the valve of the extinguisher and sprays the extinguishing agent out of the tube directly onto the flame,

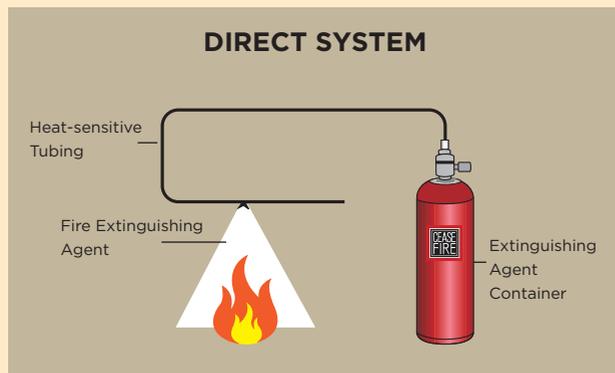
dousing the fire instantaneously. Because the system is based on a host of extinguishing agents, the system can be customised to combat any kind of fire. This revolutionary technology makes this system entirely self-activated, and requires no human intervention once it has been installed. This makes it especially beneficial for "microenvironments", or areas where the fire hazard is likely to be in an enclosed space (such as a server or a genset).

*HFC236fa and HFC227ea are UL Certified gases

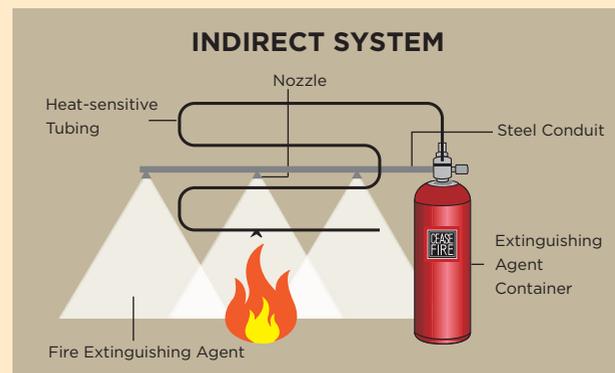
CUSTOM-MADE SOLUTIONS

CQRS operates on two different technologies - Direct and Indirect.

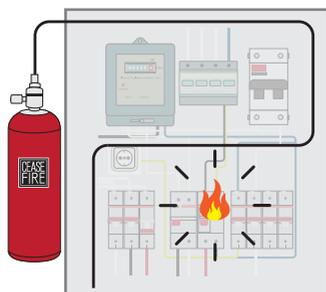
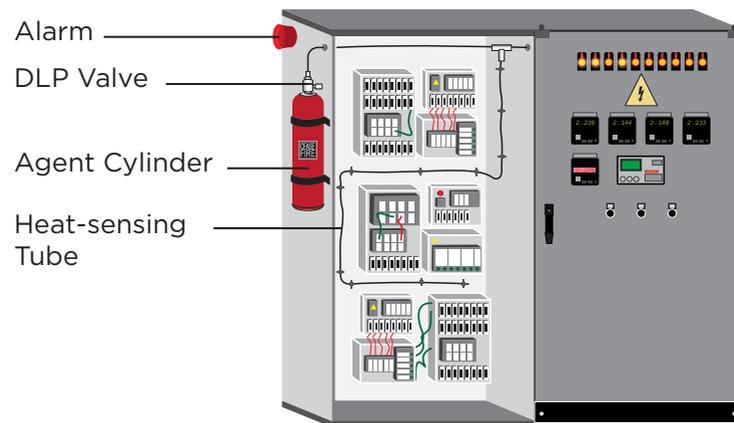
In the **Direct system**, the heat-sensitive tubing also acts as an extinguishing agent delivery system. When a fire is detected, the tube bursts at that point, forms a miniature nozzle and sprays the extinguishing agent. Ideal for places where fires can break out in localised areas.



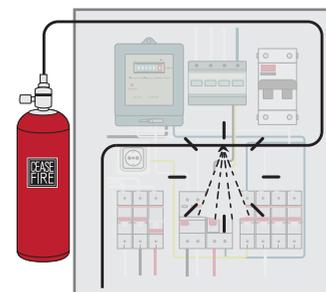
In the **Indirect system**, the heat-sensitive tubing only acts as a detection device. In the event of a fire, the extinguishing agent is delivered through a steel pipe and sprayed across the entire area through strategically placed nozzles. Ideal for areas where there is a chance of ignition of fires at multiple points. Both are available in low and high pressure variants.



HERE'S HOW CQRS WORKS



The single heat-sensitive polymer tube is connected to an extinguishing agent container via a pressure release valve. When a fire breaks out, it results in a drastic increase in temperature.

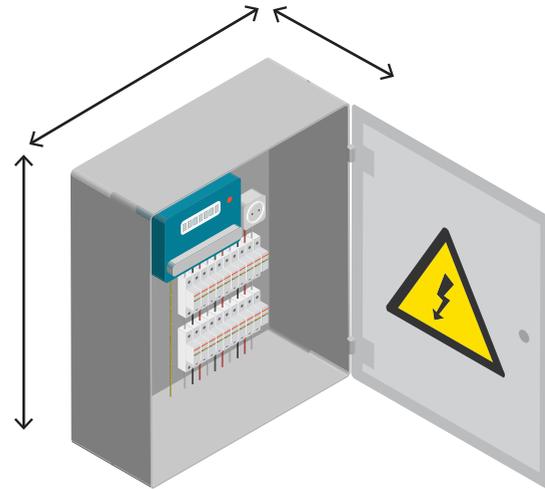


When it reaches 150° - 180°C, the heat-sensitive tubing bursts and releases the extinguishing agent through the direct or indirect line. The extinguishing agent is sprayed out of the container, flooding the microenvironment and instantly extinguishing the flame.

VARIANTS OF IN-PANEL TUBE-BASED MICRO ENVIRONMENT SUPPRESSION SYSTEM (CQRS)

I Pre-engineered system:

Backed by in-depth studies of common applications of the micro environment suppression system in the Indian market, the Ceasefire Design Cell has created 3 pre-fabricated variants of the system, which can be easily installed in microenvironments of different sizes. They are designed with utmost precision to international quality standards, and come with complete sets of accessories to fulfil all the requirements of a fire-prone micro environment.



SYSTEM NAME	ENCLOSURE VOLUME	
	Minimum	Maximum
Ceasefire Quick Response System – M – V1	0.036 m3	0.06 m3
Ceasefire Quick Response System – M – V2	0.072 m3	1.134 m3
Ceasefire Quick Response System – M – V3	1.68 m3	2.02 m3



I Engineered system:

Ceasefire's In-Panel Tube-Based Systems can also be designed to suit the individual needs of the premises, after careful inspection and assessment by the Ceasefire Design Cell.

CEASEFIRE'S LOW PRESSURE IN-PANEL TUBE-BASED SYSTEM (DIRECT)



Ceasefire's Low Pressure In-Panel Tube-Based System (Direct) is an ideal solution in case of fire in a single location, whether small or large. The system uses Ceasefire's UL listed gas HFC227ea & HFC236fa; FM200, HCFC123, Fluoroketone & B Plus Powder as an extinguishing agents.



Ceasefire's Low Pressure In-Panel Tube-Based System (Direct) is available in:
 HFC 236fa : 500 gram, 1 kg, 2 kg, 4 kg, 6 kg & 9 kg
 HFC 227ea : 2 kg, 4 kg, and 6 kg
 Fluoroketone : 2 kg, 3 kg & 4 kg
 FM200 : 2 kg, 4 kg, 6 kg & 9 kg
 HCFC123 : 2 kg, 4 kg, 6 kg & 9 kg

CEASEFIRE'S HIGH PRESSURE IN-PANEL TUBE-BASED SYSTEM (DIRECT)



Ceasefire's High Pressure In-Panel Tube-Based System (Direct) is a perfect solution in case of fire in a single location, best suited for areas ranging from large to very large in size. This system uses highly pressurised CO₂ as the extinguishing agent.



System is designed to suit the individual needs of the premises, after careful inspection and assessment by the Ceasefire Design Cell, but is also available in 2 variants - 2 kg, 4.5 Kg, 6.5 Kg & 22.5 Kg

CEASEFIRE'S LOW PRESSURE IN-PANEL TUBE-BASED SYSTEM (INDIRECT)



Ceasefire's Low Pressure In-Panel Tube-Based System (Indirect) varies structurally from the Low Pressure In-Panel Tube-Based System (Direct), and is ideal for situations where fire could break out in multiple locations at the same time. The system can be designed with a host of agents like HFC227ea, HFC236fa, Fluoroketone, FM200, HCFC123, B Plus Powder.



While Ceasefire's Low Pressure In-Panel Tube-Based System (Indirect) can be designed to suit the individual needs of a property, it is available in:

- HFC 236fa : 2 kg, 4 kg, 6 kg & 9 kg
- HFC 227ea : 4 kg & 6 kg
- HCFC123 : 2 kg, 4 kg, 6 kg & 9 kg
- FM200 : 6 kg & 9 kg
- B Plus Powder : 4 kg & 6 kg

CEASEFIRE'S HIGH PRESSURE IN-PANEL TUBE-BASED SYSTEM (INDIRECT)



The Ceasefire High Pressure In-Panel Tube-Based System (Indirect) varies structurally from the High Pressure In-Panel Tube-Based System (Direct), and is ideal for situations where fire could break out in multiple locations at the same time, spread out over a vast area.



The Ceasefire Indirect High Pressure Quick Response System is designed to suit the individual needs of the premises, after careful inspection and assessment by the Ceasefire Design Cell. The system is available in 2 kg, 4.5 Kg, 6.5 Kg & 22.5 Kg variants.

KEY FEATURES:

	Classification: Works on class A, B, C fires and fires involving electrically-charged devices. Effective on a wide range of flammable and combustible materials.
	Self-actuated: Does not require any power supply and will function normally in the event of a power outage.
	Electronics-Friendly: Shown to be electrically non-conductive and is safe for electrically charged equipment, HFC 236 is kinder on electronics than the majority of extinguishing agents available in the market.
	High-value Risk Protection: The gas based systems are suitable for protecting a range of high-value risks as it virtually eliminates damage to high-tech equipment, artwork and other delicate and sensitive objects.
	No Clean-up Required After Discharge: After discharge, the gaseous extinguishing agents can be removed by simple ventilation.
	Wide Applications: CQRS is based on a vast array of extinguishing agents making it one of the most versatile micro-environment fire suppression system.

	24-hour Protection: Automatic detection and actuation controls ensure fire protection is always 'on'.
	Flexible Design: Flexible tubing allows protection in areas that are difficult to access and may not be able to accommodate any other means of detection.
	International Quality Standards: The Ceasefire Quick Response System - M is manufactured to the highest global and national standards like LPCB, ISI and CE.
	Rugged System: Can withstand even harsh conditions where other types of detection systems might be rendered inadequate.
	DLP Tube Based Suppression System: 2 kg and 4 kg come with LPS1666 approval and use HFC227ea/HFC236fa UL Listed gas.

APPLICATION AREAS:



Electrical Panels



Server Racks



Electrical Cabinets

Mobile Tower
Switching Areas

Diagnostic Machines



Gensets



Printing Press



UPS Rooms



Certified by LPCB for LPS1666 Standard Certification for 2 and 4 kg Direct HFC-227ea and HFC-236fa gas variants.

CEASEFIRE MINI - MICRO ENVIRONMENT SUPPRESSION SYSTEM

TESTED BY **bsi.**

Anyone who's ever been in a fire situation agrees: fire is the biggest foe. Mercilessly ruining everything in its path; be it expensive electronics, mementos or human life. But even the biggest of fires start small, and in an overwhelming majority of cases, experts can trace their origins to tiny enclosed areas, like an electrical cabinet with old wiring or a fuse box.

The only solution is to catch the fire in its nascent stage by guarding these enclosed areas, so that it

doesn't stand a chance of becoming big. Although advanced suppression systems that can detect and kill the fire exist in the market, they are not designed to protect microenvironments like electrical appliances, MCB (Miniature Circuit Breaker) panels or enclosed machinery.

What you need is an ultra-small suppression system that's unobtrusive and can take on a fire the moment it starts.



Hello, Mini!

Introducing the Ceasefire Mini, the biggest, smallest suppression system in town; and proof that some of the best things do come in small packages.

The Mini is a state-of-the-art microenvironment suppression system designed by Ceasefire. The size of your palm, it sits snugly inside small enclosed spaces that are vulnerable to fire. When the temperature of the microenvironment exceeds a preset limit, the Mini swings into action and automatically extinguishes the fire. Place it inside your server. Pop it in the fuse box. The Mini fits anywhere, and protects everywhere!



The green Ceasefire Mini is available in clean agent HFC 227ea. This causes no collateral damage to your electronics or the Earth, making the Mini absolutely safe.



Types of Ceasefire Mini

Ceasefire has designed a Mini to protect practically every kind of microenvironment, including those that cannot be reached by humans.



Mini - Intuitive System

The Mini - Intuitive System is a direct suppression system which protects the microenvironment from inside. Place it inside or attach it to the inner wall of the microenvironment, and the Mini is ready to protect.



Mini - Adaptive System

The Mini - Adaptive System is an indirect suppression system designed for those microenvironments which are too small to even accommodate a Mini, let alone other firefighting systems. In this case, the Mini container is installed outside, with its heat-sensitive glass bulb inside the microenvironment.

Components of the Mini

HEAT-SENSITIVE GLASS BULB

The Mini's heat-sensitive glass bulb acts as the heat detector. In case the temperature inside the microenvironment rises beyond a preset level, the glass bulb breaks to activate the system. In the Intuitive System, the glass bulb is attached to the main container while in the Adaptive System, it is attached to a stainless steel barrel which extends from the container.

Ceasefire has designed 3 types of glass bulbs depending on the temperature conditions of the microenvironment to be protected:

- 57°C - Ideal for electrical cabinets in areas where the temperatures are low, like air-conditioned workplaces, hospitals, server rooms, etc.
- 68°C - Ideal for electrical cabinets where the temperature is moderate, like non-AC offices, factories, garages, etc.
- 93°C - Ideal for electrical cabinets where temperatures are high, like welding units, manufacturing setups.



STAINLESS STEEL CONTAINER

The Mini's container is a seamless piece of stainless steel that is corrosion resistant. Depending on the amount of extinguishing agent, there are five variants of the Mini container: 100g, 200g, 300g, 400g and 500g. A ball valve sits on top of the container. This ball valve is available in Intuitive and Adaptive variants.



STAINLESS STEEL BARREL

The Adaptive System has an option of attaching a stainless steel barrel between the glass bulb and the container to extend the Mini deep into unreachable spots. When the glass bulb breaks, the extinguishing agent passes through the barrel and out of the exit port of the nozzle.

The barrel is available in three sizes: 100mm, 150mm and 200mm.



PRESSURE GAUGE

The Mini's state-of-the-art pressure gauge tells you that the extinguishing agent is under optimum pressure and the Mini is in top working condition.



INSTALLATION MOUNTS

The Ceasefire Mini is attached to the wall of the microenvironment by means of mounts. There are two types of Mini mounts: Standard Installation Mount and Busbar Installation Mount.



Features and benefits

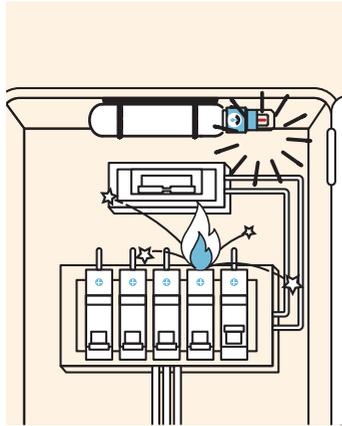
	Ease of Use: Being automatic, the Mini requires no prompt to start firefighting.
	Fits Anywhere: The Mini can easily fit into the spots that are most prone to fire.
	Electronics-friendly: The Mini is filled with clean agent HFC 227ea that causes no damage to your electronics.
	Maintenance-free: The Mini comes with a 1 year warranty and the assurance of no leakage.
	Easy to Install with 2 Mounts: The Standard and Busbar mounts make installation a breeze.
	Self-actuation: Since the Mini is self-actuated, it spots the fire and protects even when no one is around.
	No Power Supply Required: The Mini uses a mechanical release mechanism to start firefighting.
	Works on All Classes of Fire: The Mini can be used on any kind of fire, making it a truly versatile firefighter.
	Different temperature settings: Mini variants are available for 3 heat thresholds - 57°C, 68°C and 93°C.
	Protects all Microenvironments: Available as an Intuitive or Adaptive System, the Mini protects everywhere.
	Heat-sensitive Glass Bulb: The Mini's glass bulb acts as a heat sensor that detects a rise in surrounding temperature.



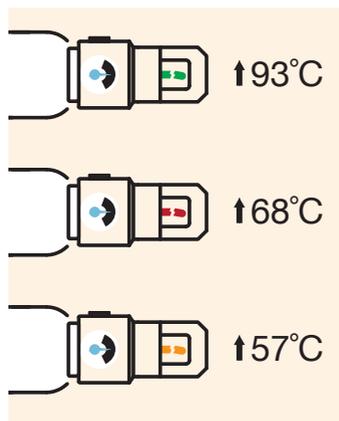
Technology meets design In the handy Ceasefire Mini.

Built to protect microenvironments, the Ceasefire Mini automatically kicks into action in a fire situation.

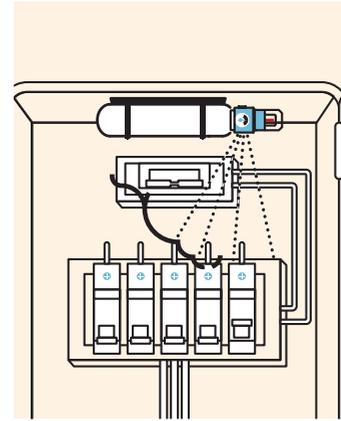
INTUITIVE SYSTEM



Stage 1:
A fire sparked by a short circuit causes the pressure inside the Mini's glass bulb to increase.

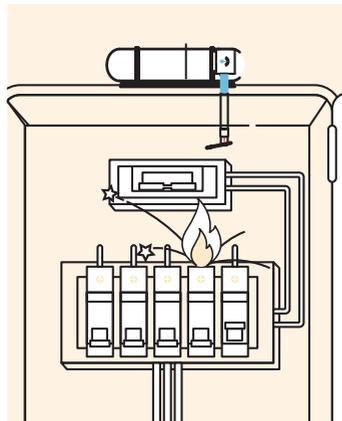


Stage 2:
The very second the temperature rises beyond a point, the bulb breaks and activates the system.

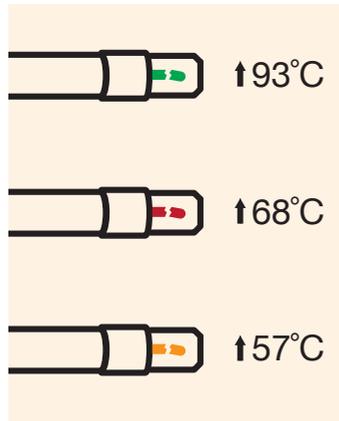


Stage 3:
Instantly, the extinguishing agent is dispersed, killing the fire in its early stages.

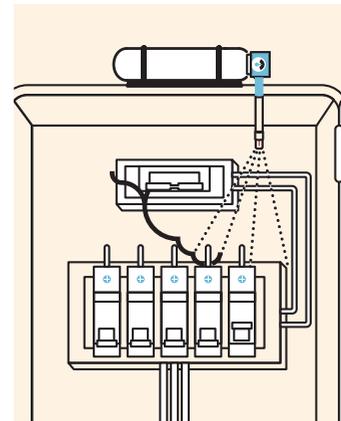
ADAPTIVE SYSTEM



Stage 1:
A fire sparked by a short circuit causes the pressure inside the Mini's glass bulb to increase.



Stage 2:
The very second the temperature rises beyond a point, the bulb breaks and activates the system.

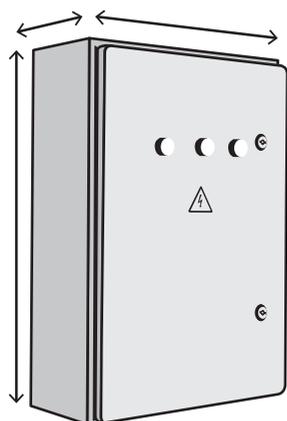


Stage 3:
Instantly, the extinguishing agent is dispersed, killing the fire in its early stages.

Zero Hassles

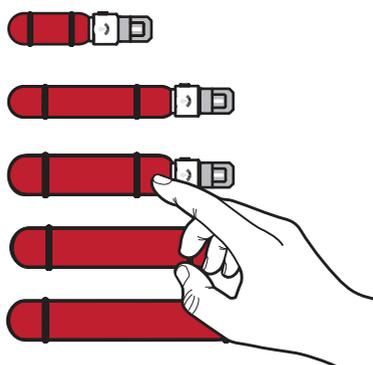
Fitting the Mini is as easy as 1-2-3. It's the only suppression system in the market which you can install without any help or technical support.

INSTALLING THE MINI - INTUITIVE SYSTEM



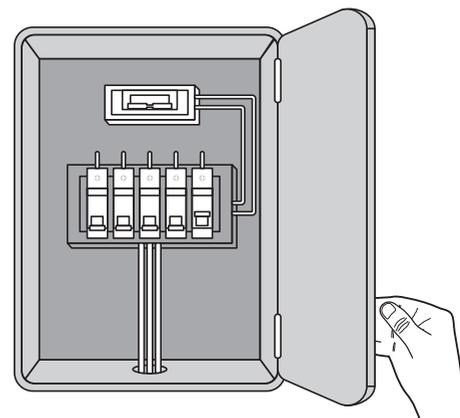
Step 1:

Measure the approximate volume of the enclosure you want to protect.



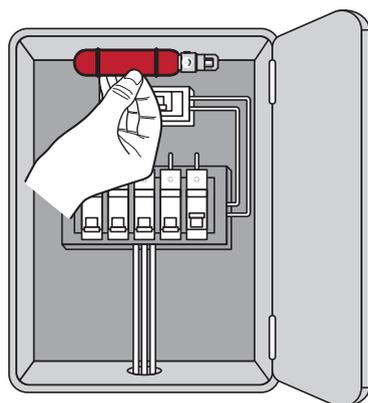
Step 2:

Choose the right variant of the Mini - Intuitive System.



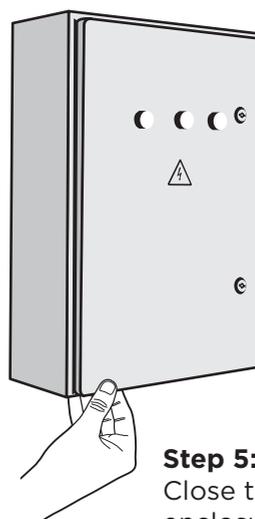
Step 3:

Open your electrical cabinet, AHU or machinery.



Step 4:

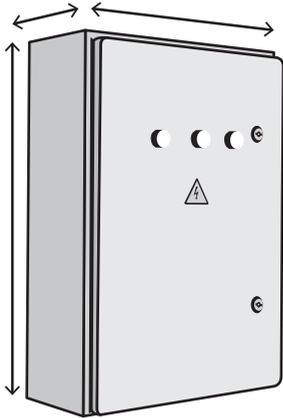
Place the Mini inside, vertically or horizontally. In case of large enclosures, you could screw its bracket to the wall inside and place the Mini on it.



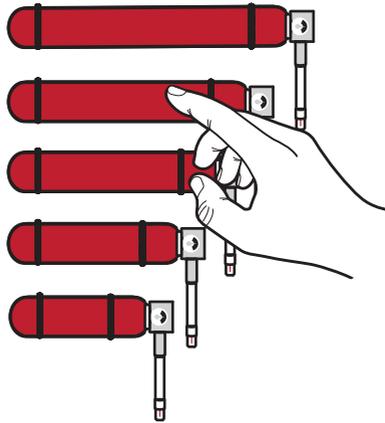
Step 5:

Close the enclosure.

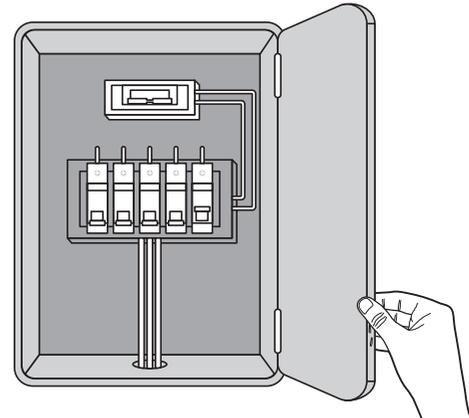
INSTALLING THE MINI - ADAPTIVE SYSTEM



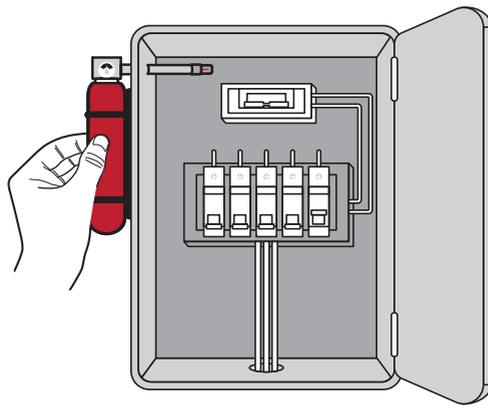
Step 1:
Measure the approximate volume of the enclosure you want to protect.



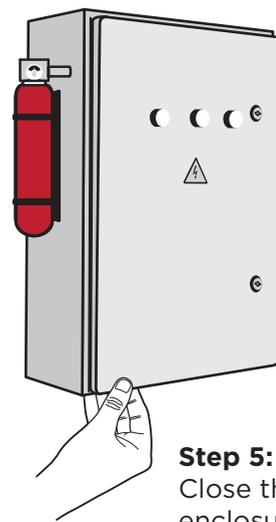
Step 2:
Choose the right variant of the Mini - Adaptive System.



Step 3:
Drill a hole in the wall of your electrical cabinet.



Step 4:
Place the Mini on the outside such that the barrel passes through the hole and the heat-sensing bulb is inside the cabinet.



Step 5:
Close the enclosure.

Application areas

The Mini is built to protect electrical cabinets of all kinds in homes, offices, factories, schools and hospitals.



Offices and Data Centres:

With several workstations and computers, some running round-the-clock, offices and data centres are at a high risk of fire. A Mini sitting unobtrusively inside the office's busy electrical cabinet can detect a fire and extinguish it before it destroys your workplace and data. Besides, being powered by clean agent gas, it doesn't cause any discomfort and lets your staff continue working.



Homes:

Electrical cabinets and MCBs (Miniature Circuit Breakers) are blind spots in most houses, as the only time you look at them is when there is no power or when a switch trips. The Mini is built precisely for such an environment. Place it inside the cabinet and forget about it. Whether it's a short circuit or overheating, the Mini will take care of it.



Factories:

Old wiring. Irregular maintenance. A huge consumption of electricity. Electrical cabinets in factories are hotspots of fire, literally. Our tech team will help you determine how many Minis are required to protect the electrical cabinet in your factory so you can stop a fire before it ruins your business.

**Schools:**

Schools also consume a humungous amount of power, making their electrical cabinets high risk areas. Add to that the responsibility of managing thousands of students and suddenly, it has all the makings of a major mishap. This is why auto detection of fires is important. And nothing does it better than Minis placed in the electrical cabinets.

**Hospitals:**

At any point of time, hundreds of patients undergo treatment in a hospital. There are complex scanning machines and labs to test these patients. Put together, all this leads to large power consumption. Minis cut the panic involved in a fire situation by automatically killing fires in the hospital's electrical cabinets.

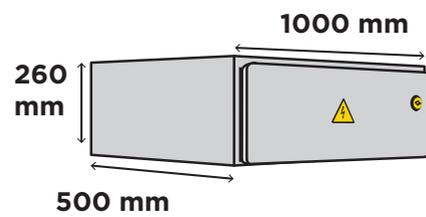
Which mini variant should you choose?

If there is a microenvironment in need of protection, you can be sure there is a Mini for it. Depending on the volume of the space you're protecting, Ceasefire has designed 5 variants of the Mini. Here's how you can find the one most suited to your requirements.

MINI 100 GMS



Weight: **100 Gms**
Concentration: **9.5**
Volume in M³: **0.130**



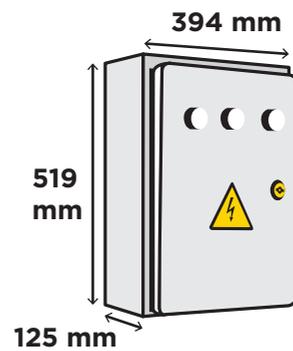
Suitable for sizes with volume ≤ 0.130 M³

Sample Size	Height in mm	Width in mm	Depth in mm
Type 1	260	1000	500
Type 2	380	420	75
Type 3	380	450	75
Type 4	380	495	75
Type 5	380	740	75

MINI 200 GMS



Weight: **200 Gms**
Concentration: **9.5**
Volume in M³: **0.261**



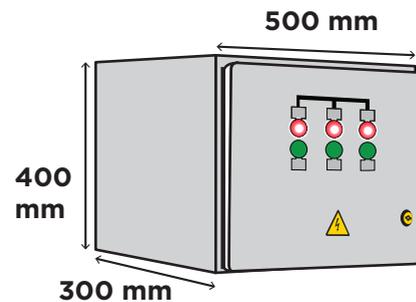
Suitable for sizes with volume ≤ 0.260 M³

Sample Size	Height in mm	Width in mm	Depth in mm
Type 1	520	1000	500
Type 2	519	394	125
Type 3	519	430	125
Type 4	519	466	125
Type 5	519	538	125

MINI 300 GMS



Weight: **300 Gms**
Concentration: **9.5**
Volume in M³: **0.392**



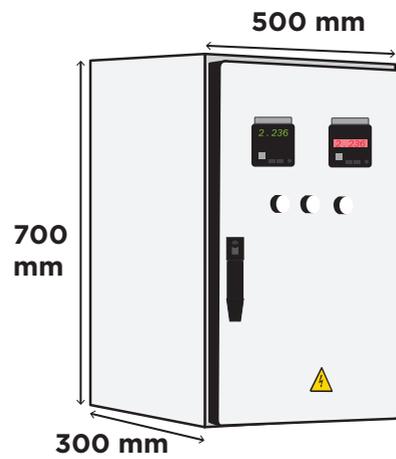
Suitable for sizes with volume ≤ 0.390 M³

Sample Size	Height in mm	Width in mm	Depth in mm
Type 1	780	1000	500
Type 2	400	500	300
Type 3	450	500	300
Type 4	500	500	300
Type 5	550	500	300

MINI 400 GMS



Weight: **400 Gms**
 Concentration: **9.5**
 Volume in M³: **0.520**



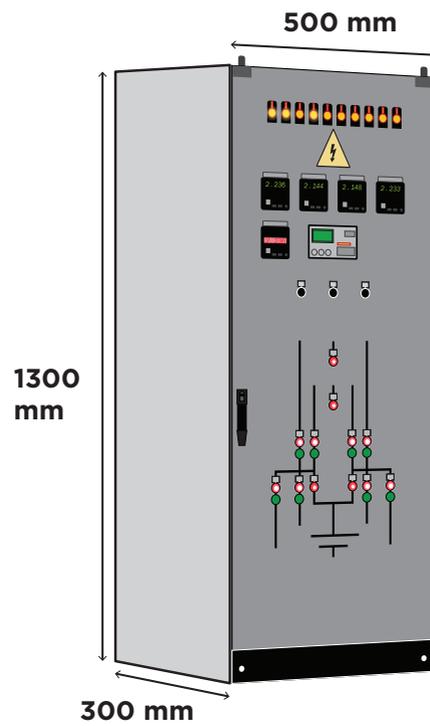
Suitable for sizes with volume ≤ 0.520 M³

Sample Size	Height in mm	Width in mm	Depth in mm
Type 1	380	495	75
Type 2	519	466	125
Type 3	500	500	300
Type 4	700	500	300
Type 5	1250	500	300

MINI 500 GMS



Weight: **500 Gms**
 Concentration: **9.5**
 Volume in M³: **0.780**



Suitable for sizes with volume ≤ 0.780 M³

Sample Size	Height in mm	Width in mm	Depth in mm
Type 1	1560	1000	500
Type 2	1000	500	300
Type 3	1200	500	300
Type 4	1250	500	300
Type 5	1300	500	300

TECHNICAL SPECIFICATIONS:

Nomenclature For Mini	Mini Intuitive 57°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red	Mini Intuitive 57°C Automatic Fire Ext HFC-227ea -200 Gm SS SP Red	Mini Intuitive 57°C Automatic Fire Ext HFC-227ea -300 Gm SS SP Red	Mini Intuitive 57°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red	Mini Intuitive 57°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red	Mini Intuitive 68°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red	Mini Intuitive 68°C Automatic Fire Ext HFC-227ea -200 Gm SS SP Red	Mini Intuitive 68°C Automatic Fire Ext HFC-227ea -300 Gm SS SP Red
Stored Pressure / Cartridge	Stored Pressure							
Agent	HFC-227ea							
Agent Category	Clean Agent							
Product Code	CF-000833A	CF-000834A	CF-000835A	CF-000836A	CF-000837A	CF-000833B	CF-000834B	CF-000835B
Certification Type	PED							
PED	YES							
Gross Weight	APPROX. 0.665 Kg	APPROX. 0.90 kg	APPROX.1.10 kg	APPROX. 1.25 Kg	APPROX.1.45 kg	APPROX. 0.665 Kg	APPROX.0.90 kg	APPROX.1.10 kg
Net Mass	APPROX. 100 Gm	APPROX 200 Gm	APPROX 300 Gm	APPROX 400 Gm	APPROX 500 Gm	APPROX. 100 Gm	APPROX 200 Gm	APPROX 300 Gm
Approx. Height Of Fire Ext.	184 mm	284 mm	276 mm	331 mm	386 mm	184 mm	284 mm	276 mm
Discharge Mechanism	Automatic							
Applicable On Fires	A, B, C & Electrical Started Fire							
Can Construction	Deep Drawn And MIG Welded							
Valve / Cap Construction	Machining							
Internal Coating	No							
External Coating	Epoxy Polyester Powder							
Warranty In Years	6	6	6	6	6	6	6	6
G.A. Drawing Number	CF/SP-CA100-VR/GA/01	CF/SP-CA200-VR/GA/01	CF/SP-CA300-VR/GA/01	CF/SP-CA400-VR/GA/01	CF/SP-CA500/GA/01	-	-	-
Working Pressure	10Bar/ 12Bar	-	-	-				
Dia. Of Shell (OD)	40.0 mm	40.0 mm	50.0 mm	50.0 mm	50.0 mm	40.0 mm	-	-
Operating Temperature	50°C & Above	68	68	68				
Hydrostatic Test Pressure	35Bar	35Bar	35Bar	35Bar	35Bar	-	-	-
Cylinder Material Spec.	SS 316L (1.4435)	-	-	-				
Body Thickness	1.2 mm	-	-	-				

* Please check the product specifications at the time of placing your order from our website (address of which is given at the end of this catalogue). Specifications can change without notice due to our continuous R&D and product improvisation initiatives.

Nomenclature For Mini	Mini Intuitive 68°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red	Mini Intuitive 68°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red	Mini Intuitive 93°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red	Mini Intuitive 93°C Automatic Fire Ext HFC-227ea -200 Gm SS SP Red	Mini Intuitive 93°C Automatic Fire Ext HFC-227ea -300 Gm SS SP Red	Mini Intuitive 93°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red	Mini Intuitive 93°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red
Stored Pressure / Cartridge	Stored Pressure						
Agent	HFC-227ea						
Agent Category	Clean Agent						
Product Code	CF-000836B	CF-000837B	CF-000833C	CF-000834C	CF-000835C	CF-000836C	CF-000837C
Certification Type	PED						
PED	YES						
Gross Weight	APPROX. 1.25 Kg	APPROX. 1.45 kg	APPROX. 0.665 Kg	APPROX. 0.90 kg	APPROX. 1.10 kg	APPROX. 1.25 Kg	APPROX. 1.45 kg
Net Mass	APPROX 400 Gm	APPROX 500 Gm	APPROX. 100 Gm	APPROX 200 Gm	APPROX 300 Gm	APPROX 400 Gm	APPROX 500 Gm
Approx. Height Of Fire Ext.	331 mm	386 mm	184 mm	284 mm	276 mm	331 mm	386 mm
Discharge Mechanism	Automatic						
Applicable On Fires	A, B, C & Electrical Started Fire						
Can Construction	Deep Drawn And MIG Welded						
Valve / Cap Construction	Machining						
Internal Coating	No						
External Coating	Epoxy Polyester Powder						
Warranty In Years	6	6	6	6	6	6	6
G.A. Drawing Number	-	-	-	-	-	-	-
Working Pressure	-	-	-	-	-	-	-
Dia. Of Shell (OD)	-	-	40.0 mm	-	-	-	-
Operating Temperature	68	68	93	93	93	93	93
Hydrostatic Test Pressure	-	-	-	-	-	-	-
Cylinder Material Spec.	-	-	-	-	-	-	-
Body Thickness	-	-	-	-	-	-	-

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Nomenclature For Mini	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 50mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 100mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 200mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 50mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 100mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 200mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 50mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 100mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -100 Gm SS SP Red with 200mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 50mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 100mm barrel.
Stored Pressure / Cartridge	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure
Agent	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea
Agent Category	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent
Product Code	CF-000843AA	CF-000843AB	CF-000843AC	CF-000843BA	CF-000843BB	CF-000843BC	CF-000843CA	CF-000843CB	CF-000843CC	CF-000844AA	CF-000844AB
Certification Type	PED	PED	PED	PED	PED	PED	PED	PED	PED	PED	PED
PED	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gross Weight	APPROX. 0.695 Kg	APPROX. 0.738 Kg	APPROX. 0.822 Kg	APPROX. 0.695 Kg	APPROX. 0.738 Kg	APPROX. 0.822 Kg	APPROX. 0.695 Kg	APPROX. 0.738 Kg	APPROX. 0.822 Kg	APPROX. 0.935 Kg	APPROX. 0.970 Kg
Net Mass	APPROX. 100 Gm	APPROX. 100 Gm	APPROX. 100 Gm	APPROX. 100 Gm	APPROX. 100 Gm	APPROX. 100 Gm	APPROX. 100 Gm	APPROX. 100 Gm	APPROX. 100 Gm	APPROX. 200 Gm	APPROX. 200 Gm
Approx. Height Of Fire Ext.	148 mm	148 mm	148 mm	148 mm	148 mm	148 mm	148 mm	148 mm	148 mm	248 mm	248 mm
Discharge Mechanism	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Applicable On Fires	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire
Can Construction	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded
Valve / Cap Construction	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining
Internal Coating	No	No	No	No	No	No	No	No	No	No	No
External Coating	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder
Warranty In Years	6	6	6	6	6	6	6	6	6	6	6
G.A. Drawing Number	-	-	CF/SP-CA100-HR/GA/01	-	-	-	-	-	CF/SP-CA100-HR/GA/01	-	-
Working Pressure	-	-	10Bar/ 12Bar	-	-	-	-	-	10Bar/ 12Bar	-	-
Working Pressure	-	-	40.0 mm	-	-	-	-	-	40.0 mm	-	-
Operating Temperature	-	-	-	-	-	-	-	-	-	-	-
Hydrostatic Test Pressure	-	-	35Bar	-	-	-	-	-	35Bar	-	-
Cylinder Material Spec.	-	-	SS 316L (1.4435)	-	-	-	-	-	SS 316L (1.4435)	-	-
Body Thickness	-	-	1.2 mm	-	-	-	-	-	1.2 mm	-	-

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Nomenclature For Mini	Mini Adaptive 57°C	Mini Adaptive 68°C	Mini Adaptive 68°C	Mini Adaptive 68°C	Mini Adaptive 93°C	Mini Adaptive 93°C	Mini Adaptive 93°C	Mini Adaptive 57°C	Mini Adaptive 57°C	Mini Adaptive 57°C	Mini Adaptive 68°C
	Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 200mm barrel.	Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 50mm barrel.	Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 100mm barrel.	Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 200mm barrel.	Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 50mm barrel.	Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 100mm barrel.	Automatic Fire Ext HFC-227ea -200 Gm SS SP Red with 200mm barrel.	Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 50mm barrel.	Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 100mm barrel.	Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 200mm barrel.	Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 50mm barrel.
Stored Pressure / Cartridge	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure
Agent	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea
Agent Category	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent
Product Code	CF-000844AC	CF-000844BA	CF-000844BB	CF-000844BC	CF-000844CA	CF-000844CB	CF-000844CC	CF-001178AA	CF-001178AB	CF-001178AC	CF-001178BA
Certification Type	PED	PED	PED	PED	PED	PED	PED	PED	PED	PED	PED
PED	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gross Weight	APPROX. 1.05 Kg	APPROX. 0.935 Kg	APPROX. 0.970 Kg	APPROX. 1.05 Kg	APPROX. 0.935 Kg	APPROX. 0.970 Kg	APPROX. 1.05 Kg	APPROX. 1.07 Kg	APPROX. 1.12 Kg	APPROX. 1.20 Kg	APPROX. 1.07 Kg
Net Mass	APPROX. 200 Gm	APPROX. 200 Gm	APPROX. 200 Gm	APPROX. 200 Gm	APPROX. 200 Gm	APPROX. 200 Gm	APPROX. 200 Gm	APPROX. 300 Gm	APPROX. 300 Gm	APPROX. 300 Gm	APPROX. 300 Gm
Approx. Height Of Fire Ext.	248 mm	248 mm	248 mm	248 mm	248 mm	248 mm	248 mm	240 mm	240 mm	240 mm	240 mm
Discharge Mechanism	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Applicable On Fires	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire
Can Construction	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded
Valve / Cap Construction	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining
Internal Coating	No	No	No	No	No	No	No	No	No	No	No
External Coating	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder
Warranty In Years	6	6	6	6	6	6	6	6	6	6	6
G.A. Drawing Number	-	-	-	-	-	-	-	-	-	-	-
Working Pressure	-	-	-	-	-	-	-	-	-	-	-
Working Pressure	-	-	-	-	-	-	-	-	-	-	-
Operating Temperature	-	-	-	-	-	-	-	-	-	-	-
Hydrostatic Test Pressure	-	-	-	-	-	-	-	-	-	-	-
Cylinder Material Spec.	-	-	-	-	-	-	-	-	-	-	-
Body Thickness	-	-	-	-	-	-	-	-	-	-	-

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Nomenclature For Mini	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 100mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 200mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 50mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 100mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -300 Gm SS SP Red with 200mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 50mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 100mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 200mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 50mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 100mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 200mm barrel.
Stored Pressure / Cartridge	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure
Agent	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea	HFC-227ea
Agent Category	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent
Product Code	CF-001178BB	CF-001178BC	CF-001178CA	CF-001178CB	CF-001178CC	CF-001179AA	CF-001179AB	CF-001179AC	CF-001179BA	CF-001179BB	CF-001179BC
Certification Type	PED	PED	PED	PED	PED	PED	PED	PED	PED	PED	PED
PED	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gross Weight	APPROX. 1.12 Kg	APPROX. 1.20 Kg	APPROX. 1.07 Kg	APPROX. 1.12 Kg	APPROX. 1.20 Kg	APPROX. 1.27 Kg	APPROX. 1.30 Kg	APPROX. 1.39 Kg	APPROX. 1.27 Kg	APPROX. 1.30 Kg	APPROX. 1.39 Kg
Net Mass	APPROX. 300 Gm	APPROX. 300 Gm	APPROX. 300 Gm	APPROX. 300 Gm	APPROX. 300 Gm	APPROX. 400 Gm	APPROX. 400 Gm	APPROX. 400 Gm	APPROX. 400 Gm	APPROX. 400 Gm	APPROX. 400 Gm
Approx. Height Of Fire Ext.	240 mm	240 mm	240 mm	240 mm	240 mm	295 mm	295 mm	295 mm	295 mm	295 mm	295 mm
Discharge Mechanism	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Applicable On Fires	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire
Can Construction	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded
Valve / Cap Construction	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining	Machining
Internal Coating	No	No	No	No	No	No	No	No	No	No	No
External Coating	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder
Warranty In Years	6	6	6	6	6	6	6	6	6	6	6
G.A. Drawing Number	-	-	-	-	-	-	-	-	-	-	-
Working Pressure	-	-	-	-	-	-	-	-	-	-	-
Working Pressure	-	-	-	-	-	-	-	-	-	-	-
Operating Temperature	-	-	-	-	-	-	-	-	-	-	-
Hydrostatic Test Pressure	-	-	-	-	-	-	-	-	-	-	-
Cylinder Material Spec.	-	-	-	-	-	-	-	-	-	-	-
Body Thickness	-	-	-	-	-	-	-	-	-	-	-

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Nomenclature For Mini	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 50mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 100mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -400 Gm SS SP Red with 200mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 50mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 100mm barrel.	Mini Adaptive 57°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 200mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 50mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 100mm barrel.	Mini Adaptive 68°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 200mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 50mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 100mm barrel.	Mini Adaptive 93°C Automatic Fire Ext HFC-227ea -500 Gm SS SP Red with 200mm barrel.
Stored Pressure / Cartridge	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure	Stored Pressure
Agent	HFC-227ea	HFC-227ea	HFC-227ea									
Agent Category	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent	Clean Agent
Product Code	CF-001179CA	CF-001179CB	CF-001179CC	CF-000822AA	CF-000822AB	CF-000822AC	CF-000822BA	CF-000822BB	CF-000822BC	CF-000822CA	CF-000822CB	CF-000822CC
Certification Type	PED	PED	PED									
PED	YES	YES	YES									
Gross Weight	APPROX. 1.27 Kg	APPROX. 1.30 Kg	APPROX. 1.39 Kg	APPROX. 1.46 Kg	APPROX. 1.50 Kg	APPROX. 1.58 Kg	APPROX. 1.46 Kg	APPROX. 1.50 Kg	APPROX. 1.58 Kg	APPROX. 1.46 Kg	APPROX. 1.50 Kg	APPROX. 1.58 Kg
Net Mass	APPROX. 400 Gm	APPROX. 400 Gm	APPROX. 400 Gm	APPROX. 500 Gm	APPROX. 500 Gm	APPROX. 500 Gm	APPROX. 500 Gm	APPROX. 500 Gm	APPROX. 500 Gm	APPROX. 500 Gm	APPROX. 500 Gm	APPROX. 500 Gm
Approx. Height Of Fire Ext.	295 mm	295 mm	295 mm	350 mm	350 mm	350 mm	350 mm	350 mm	350 mm	350 mm	350 mm	350 mm
Discharge Mechanism	Automatic	Automatic	Automatic									
Applicable On Fires	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire	A, B, C & Electrical Started Fire
Can Construction	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded	Deep Drawn And MIG Welded
Valve / Cap Construction	Machining	Machining	Machining									
Internal Coating	No	No	No									
External Coating	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder	Epoxy Polyester Powder
Warranty In Years	6	6	6	6	6	6	6	6	6	6	6	6
G.A. Drawing Number	-	-	-	-	-	-	-	-	-	-	-	-
Working Pressure	-	-	-	-	-	-	-	-	-	-	-	-
Working Pressure	-	-	-	-	-	-	-	-	-	-	-	-
Operating Temperature	-	-	-	-	-	-	-	-	-	-	-	-
Hydrostatic Test Pressure	-	-	-	-	-	-	-	-	-	-	-	-
Cylinder Material Spec.	-	-	-	-	-	-	-	-	-	-	-	-
Body Thickness	-	-	-	-	-	-	-	-	-	-	-	-

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SERVER QUICK RESPONSE SYSTEM

High-end servers, wiring and complicated circuitry make server rooms and data centres vulnerable to fire. An overload or system shutdown could easily cause an energy imbalance that results in a sudden blaze. While existing firefighting systems secure the whole room, they are not designed to protect your equipment.

A fire incident can cause loss of vital information & reputation. It may also lead to monetary losses on account of replacing the damaged servers and the loss of opportunity due to downtime or complete shutdown.

SQRS is powered by HFC 227ea - the cleanest extinguishing agent known to man. This fully automated, independent suppression system is perfect for an individual server. It is designed to slot into your existing server racks and quell a fire within seconds of detection.

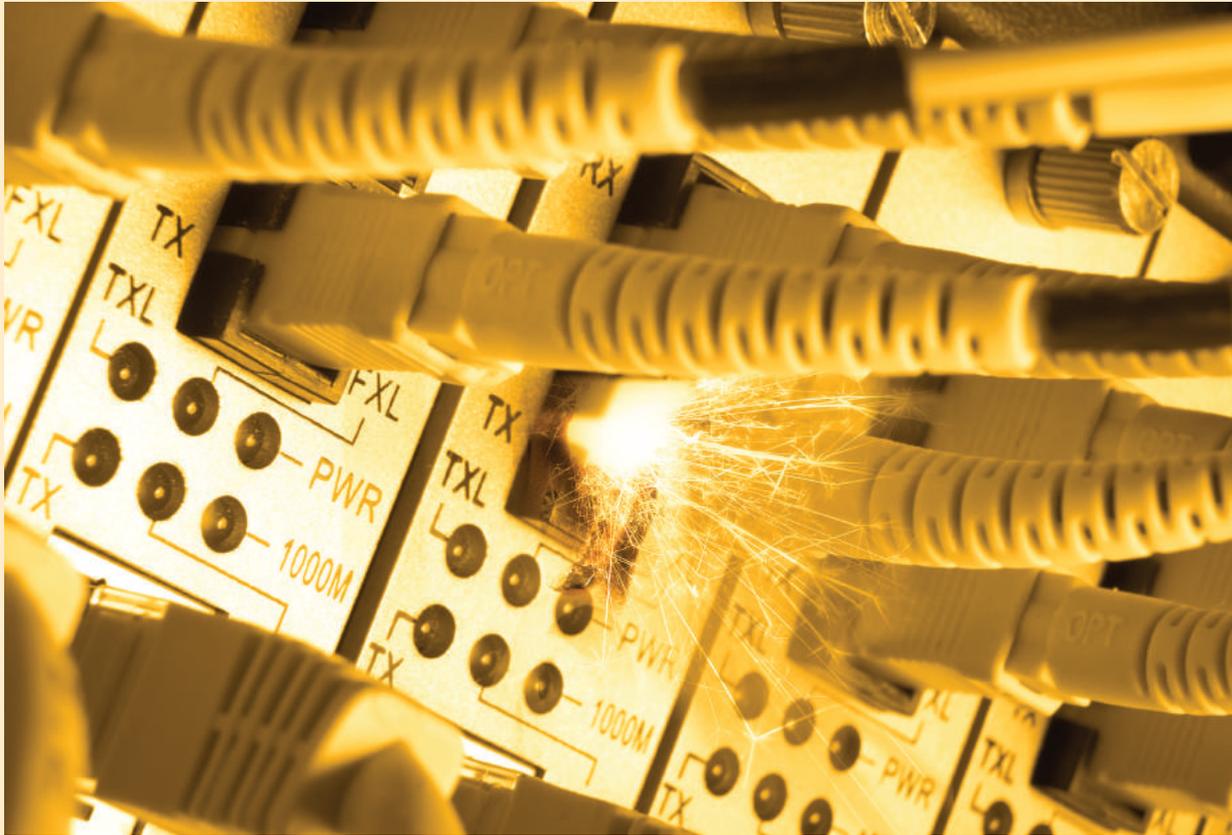
What's more, since HFC 227ea is a completely clean, gas-based extinguishing agent, it puts out a fire without causing any collateral damage to the server. With zero ODP, HFC 227ea is absolutely safe for the environment too.



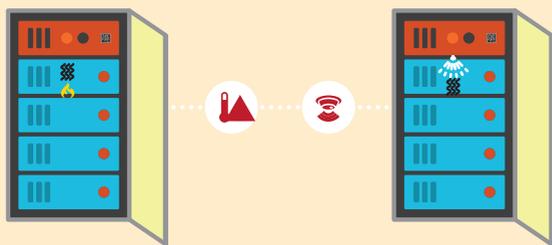
FIGHTS CLASS

A B C F ⚡

THE SERVER-READY CEASEFIRE SQRS



The Ceasefire SQRS is installed within the micro environment of a server rack. When the detectors sense a rise in temperature above normal, particles of smoke or a change in the air quality of the contained server space, they activate the system and discharge the extinguishing agent (HFC 227ea) and a hooter goes off, warning personnel about the fire.



80% of HFC 227ea's firefighting effectiveness is achieved through heat absorption and 20% through direct chemical means (action of the fluorine radical on the chain reaction of a flame).

The Ceasefire SQRS houses detectors, controls, extinguishing agent cylinders and alarm devices in one compact unit. The modular nature of the system brings scalability together with the effectiveness of micro environment protection.

For high air flow server racks, the system comes with a Highly Sensitive Smoke Detection option. The optional IP Module allows the user to monitor the system's health online using a computer or a smart phone, and receive email alerts and alarms in case of emergencies.

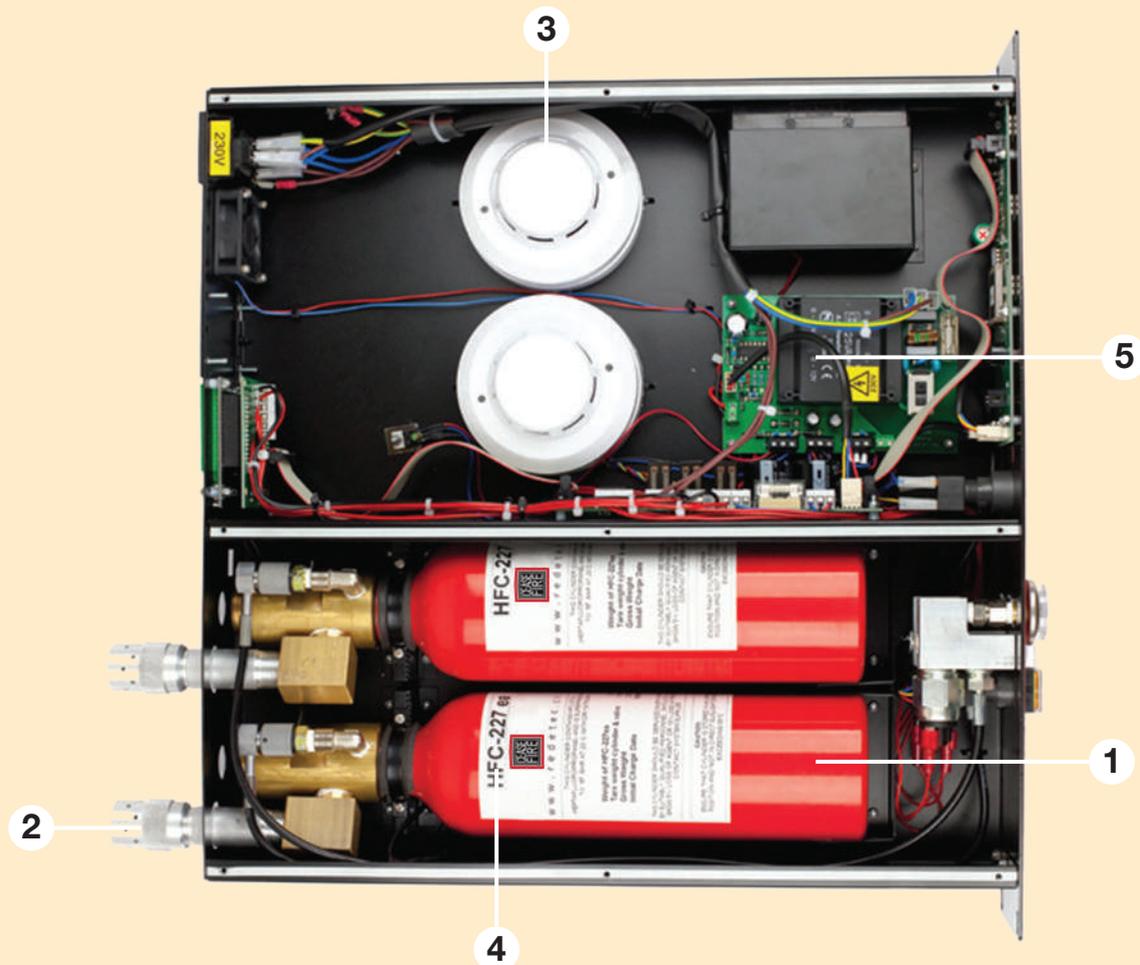
Since each rack can hold an independent Ceasefire SQRS, it can be easily converted into a large system when more than one server rack needs to be protected.

Harnessing the latest in cutting-edge firefighting technology, this system has been specially designed for server racks in data centres and server rooms. It requires no monitoring and offers 24x7 protection by self-activating instantly in the event of a fire.

THE COMPLETE CEASEFIRE SQRS SYSTEM

The system comprises of various components coming together to create an unbeatable system for server racks.

- 1 **Agent Tank:** An essential component of the system, these high pressure tanks are placed in the server rack. Depending upon the requirement, one or two containers are installed.
- 2 **Nozzles:** The extinguishing agent is dispersed through the brass discharge nozzle. These nozzles are designed specially for the server rack.
- 3 **Detection Devices:** Ceasefire uses accurate and reliable Point Type Detectors, built-in with the option of remote detection for further coverage. Highly Sensitive Smoke Detection (HSSD) is also available for mission critical applications.
- 4 **Extinguishing Agent:** The SQRS is powered by HFC 227ea, a gas that has zero Ozone Depletion Potential and is environmentally friendly. The containers are each capable of protecting a volume of 1.5 m³.
- 5 **Control:** The SQRS is designed to suit a range of applications, whether 19" rack mounted or otherwise. Each system is a complete fire detection and suppression solution, managed by an internal controller.



FEATURES

	Fights Class A, B, C, E and Class F Fires
	Electronics Friendly
	Environmentally Friendly
	HFC 227ea Superior to Other Gas Agents
	High-value Risk Protection
	No Clean-up Required After Discharge
	24-hour Protection

	Multiple Triggers
	Speedy Deployment, Minimal Downtime
	Highly Effective
	Residue-free
	Superior Quality
	Unobtrusive Design
	Highly Flexible

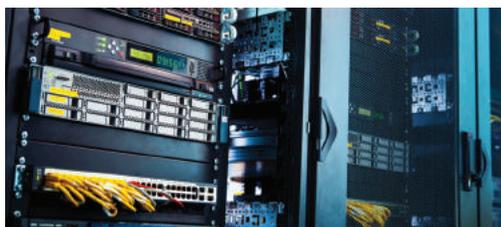
APPLICATION AREAS



Offices



Data Centre



Servers





TECHNICAL SPECIFICATIONS

Specification	SQRS 1.5 Zp	SQRS 1.5 Za	SQRS 3.0 Zp	SQRS 3.0 Za
1.5 m ³ flooding capacity	✓	✓	✗	✗
3 m ³ flooding capacity	✗	✗	✓	✓
Fit server racks with a depth of 600 mm	✓	✓	✓	✓
Includes point type optical smoke detection	✓	✓	✓	✓
Includes a pressure gauge, allowing you to check the cylinder pressure	✓	✓	✓	✓
Has a low gas pressure output warning	✓	✓	✓	✓
Comes with external connection for fire control coverage of additional areas	✓	✓	✓	✓
Volt-free contact outputs for 1st and 2nd stage alarms and system fault conditions	✓	✓	✓	✓
Two pressure gauges to indicate pressure in each cylinder	✗	✗	✓	✓
Selectable single activation mode	✓	✓	✓	✓
Highly Sensitive Smoke Detection for high airflow applications	✗	✓	✗	✓
Also available with optional IP Module	✗	✓	✗	✓



CF3000 - SELF CONTAINED WATERMIST-BASED HYDRANT SYSTEM

Never underestimate a fire. With enough oxygen and fuels, even the smallest flame can turn into a full-scale blaze, destroying everything in its path in just six minutes. The problem is, even if firefighters are rushing to your aid, external factors such as traffic and construction could prevent them from reaching you in time.

Which means that to beat a fire, you need two important things on your side: quick response time and powerful firefighting equipment that's easily accessible and on the premises.

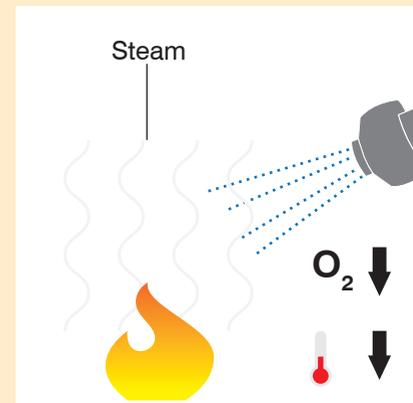
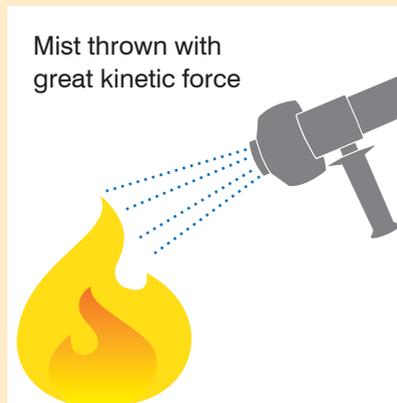
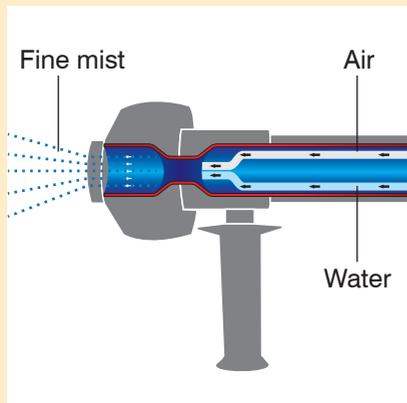
Powered by revolutionary Watermist technology, CF 3000 maximises the firefighting and cooling properties of water, and then increases it manifold.



HOW WATERMIST WORKS.

Revolutionary technology breaks water down into a fine mist. This mist is then thrown at the fire with a great kinetic force, covering a large surface area. As soon as the mist comes into contact with the fire, it instantly turns into steam. Enveloping the

flames, cutting down the oxygen supply and reducing the temperature to below combustion levels. Ensuring that even the largest fire succumbs to Watermist technology in minutes.

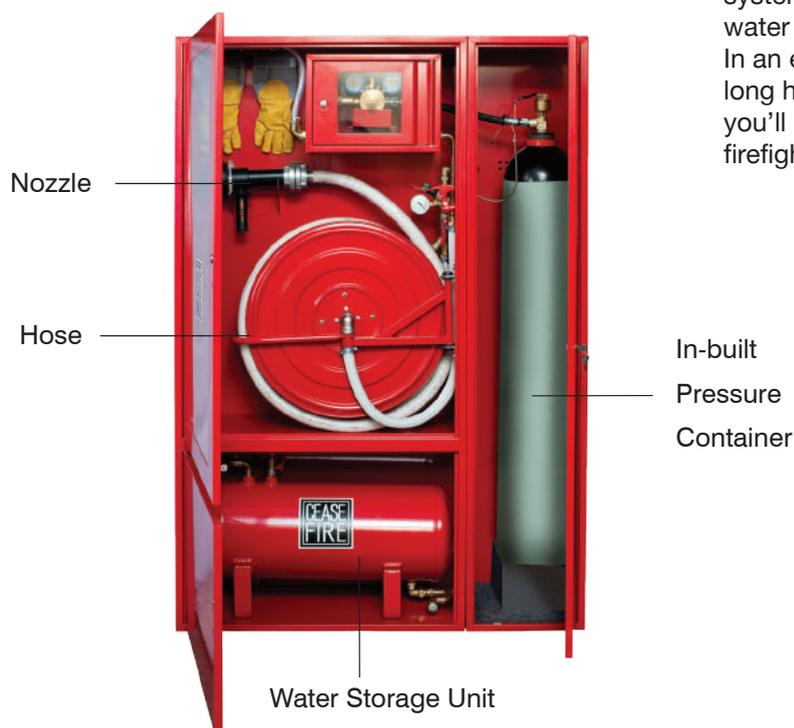


About CF 3000

These advanced standalone Watermist hydrant systems are highly dependable. Being standalone firefighters, you don't need to worry about issues like malfunctioning pipelines and wear and tear on parts that affect commercially available hydrants. What's more, while other hydrants run dry and other fire extinguishers are exhausted before putting out all the flames, CF 3000 continues the fight against fire.

Featuring the same potent firefighting power as conventional hydrants with much more efficient usage of water, CF 3000 use just 60 litres of water where a normal hydrant would need thousands of gallons to achieve the same results.

CF 3000 is a self-contained, standalone firefighting device, suitable for locations with no ready supply of compressed air and water. This easy-to-use system features an in-built pressure container, water storage unit and an optional foam supply unit. In an emergency, all you need to do is pull out the long hose, activate the device and instantly, you'll be armed with CF 3000's immense firefighting power.





TECHNICAL SPECIFICATIONS:

Specification	CF3000
Overall Dimensions	1200 x 370 x 1800 mm
Total Weight of Cabinet and Device	300 kg
Length of Fire Hose	30 m
Nitrogen Gas Cylinder Capacity	68 l
Nitrogen Gas Pressure	300 bar
Water Tank Capacity	60 l
Continuous Operating Time	4 min

FEATURES:

	Effective use of water		Can be used on all classes of fires
	Smaller droplets to fight larger fires		Compatible with electronic equipment
	Thermal barrier		Independent of power supply

APPLICATION AREAS:



Garments
Manufacturers



Malls



Furniture Industry



Theatres



Restaurants and
Food Supply Chain



Factories



Power Plants and
Thermal Power Stations



Assembly Lines

LANCEPRO

The biggest challenge while fighting fires is common - to safeguard the lives of the people battling the flames. Often, when a fire breaks out in any large premises, the first line of responders to fight fire are at maximum risk. Even the best fire suits can only decrease the intensity of the fire, and not fully protect the firefighter.

The other big problem firefighters face in factories, hotels, hospitals and other large complexes, is the large number of enclosed rooms. This not only hides the flames from outside, but can also make the area inaccessible. The minute a firefighter opens a door or window in these spaces, there is a huge risk of a backdraft - which could result in a massive explosion!

The only way out is to have a revolutionary firefighting system on your side. One that fights its way into sealed off spaces, battles the flames, and controls collateral damage at the same time.

Considering some of these key challenges faced by firefighters, Ceasefire brings you the Ceasefire Lancepro. A revolutionary firefighting system that addresses some of the biggest challenges faced by anyone fighting a blaze.



REVOLUTIONARY TECHNOLOGY: WATERMIST

It's common knowledge that there is no extinguishing agent more potent than water.

With its massive cooling power of 2.6 MW per litre per second, water kills even the largest of fires in minutes. But even fire's worst adversary has its shortcomings. Using water on an electrically started blaze can be fatal mistake. What you need is cutting-edge technology that changes water's natural form, so that it can fight fires without causing any collateral damage.

The innovative Ceasefire Lancepro uses Watermist technology enabling it to be used safely on all types of fires including electrical fires. Watermist also increases the coverage area of water many times over, taking the firefighting power manifold by rapidly bringing down the temperature to below combustible levels and cutting off the oxygen supply.



ALL YOU NEED TO KNOW ABOUT LANCEPRO

The Lancepro allows the firefighter to fight the fire in an enclosed area without physically coming into contact with it.

A cordless rotary hammer drill, with a speed of 5000 blows per minute, in the system's kit allows the firefighter to drill a hole in the wall or ceiling of the enclosed area. Next, a nozzle attached to a long hose is pushed through. Allowing Watermist (droplets of 55-120 microns in size) to be launched at the flames from up to 9 metres away.

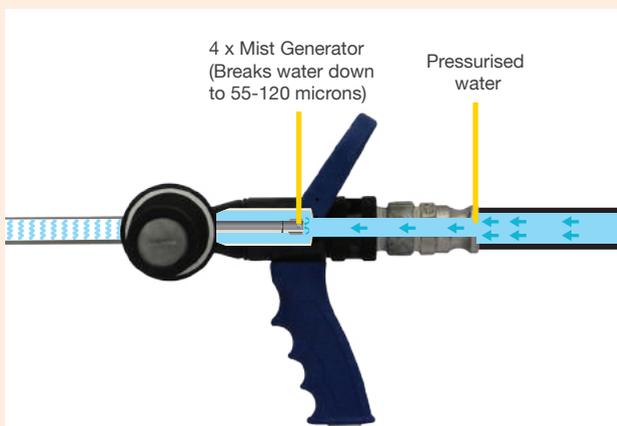
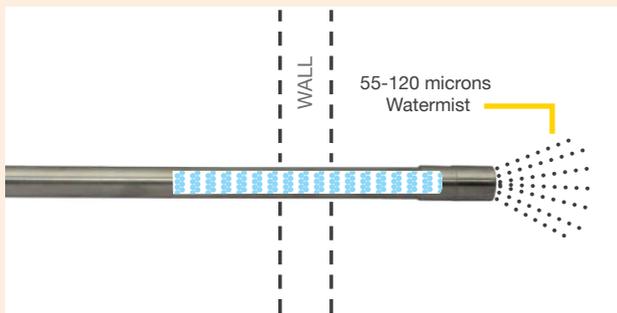
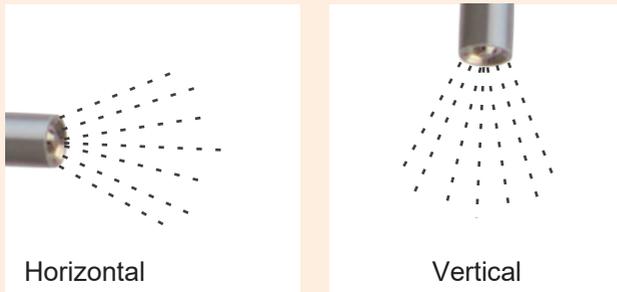
The Lancepro gun is available in two variants. Lancepro1 is used to horizontally penetrate through the enclosed area. Lancepro2 is used for vertical access.

Both drills come with two bits – one for drilling through a concrete surface, and another for metal surfaces.

The Ceasefire Lancepro ensures zero risk of thermal shock or recoil while using, and is safe on any kind of fire. It can also be used fires in open spaces, allowing the firefighter to battle the flames from a distance.

Powered by Watermist; the Lancepro offers four benefits. First, it secures the firefighter from the heat of the fire, and danger of entering the enclosed room.

Second, it cools the fire as a result of water evaporation. Third, forms a blanket over the flames, stopping the oxygen from reaching the flames. The fourth and biggest benefit is that it fights fires without any collateral damage to electronic equipment.



FEATURES

	Easy to use with Quick Activation
	Ensures Safety of the firefighter with remote access
	Two different variants to use as per requirement
	Fights Class A, B, C and Electrically started Fires

	Absolutely harmless on People
	Watermist ensures No Collateral damage
	Environment Friendly
	Ideal for Rapid Reaction

LANCEPRO SYSTEM:



Lancepro Gun

Hammer Drill Machine

Lancepro Kit

APPLICATION AREAS:



Garment stores and Warehouses



Hospitals



Hotels



Wooden godown, sheds and furniture



Ammunition depots



Paint factories



Factories



Large office, factories and commercial buildings



Airports



Oil and fuel storage areas

TECHNICAL SPECIFICATIONS:

Technical Specifications	Watermist Lancepro 1	Watermist Lancepro 1
Type	Watermist Lancepro with nozzle, extension pipe, on/off lever and handle.	Watermist Lancepro with nozzle, extension pipe, on/off lever and handle.
Model number	Lancepro 1	Lancepro 2
Weight	1.7 kg	1.7 kg
Fluid handling	Clean water (water purity - Less than 400 microns)	Clean water (water purity - Less than 400 microns)
Total Length	67 cm (with an extension of 30 cm)	70 cm (with an extension of 30 cm)
Type of end connection	STORZ 25/instantaneous couplings to suit the system requirement.	STORZ 25/instantaneous couplings
Working Pressure	5 bar to 25 bar	5 bar to 25 bar
Mist droplet size Dv (microns)	55 – 120 microns	55 – 120 microns
Watermist discharge rate	40 LPM @ 5 bar	71 LPM @ 5 bar
Watermist stream range	82 LPM @ 25 bar	150 LPM @ 25 bar
Coverage diameter	4.5 m to 9.0 m	4.0 m to 7.5 m

TECHNICAL SPECIFICATIONS:

Technical Specifications	Drilling Kit (Drilling in metal, wood, gypsum board and plastic)
Type	TE 6-A cordless rotary hammer with Li-ion battery
Make	Hilti
Rated battery voltage / capacity	36V / 93.6 Wh
Speed under no load / underload (r.p.m.)	1050
Hammering speed, maximum (blows/min.)	5000
Weight with Hilti B36 2.6 Li battery	1.17 kg
Total tool weight (including battery weight)	3.8 kg

MORPH

Water storage tanks filled to the brim to combat fires. Fire hydrants on standby to take care of flames. Fire trucks ready to come to the rescue. While firefighting systems that use pressurised water to extinguish large fires are already in place, these systems use large amounts to try and douse the flames. Not only using water inefficiently, but also proving ineffective when it comes to fighting specific fires situations like oil and electrical fires.

Take a fire truck, for instance. The truck's small reservoir of water gets quickly depleted while firefighting. In a country like India where there's precious little water to begin with, the need of the hour is a system that minimises the use of water yet maximises firefighting potential. Especially in the case of large fires.

Presenting Ceasefire Morph. A range of advanced nozzle guns that, upon being attached to an existing hydrant system or fire truck, converts water into the revolutionary extinguishing agent, Watermist. Multiplying the power a fire truck or water hydrant has and allowing it to take on large fires with ease.



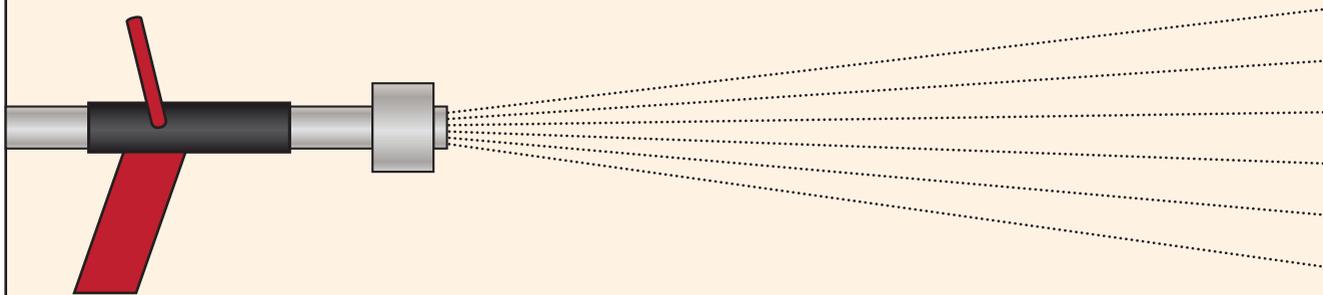
REVOLUTIONARY TECHNOLOGY: WATERMIST

It's common knowledge that there is no extinguishing agent more potent than water. With its massive cooling power of 2.6 MW per litre per second, water kills even the largest of fires in minutes. But even fire's worst adversary has its shortcomings. Using water on an electrically started blaze can be a fatal mistake. What you need is cutting-edge technology that changes water's natural form, so that it can fight fires without causing any collateral damage.

The revolutionary Ceasefire Morph converts water into Watermist, enabling it to be used safely on

electrical fires. Watermist also increases the coverage area of water to fight fires many times over, taking the firefighting power of the fire engine or hydrant system many notches higher. Rapidly bringing down the temperature to below combustible levels, and cutting off the oxygen supply.

100% green, Watermist causes no damage to equipment or the earth. Making it absolutely safe to use on electronics, sensitive equipment and above all else, human lives.



HOW IT WORKS

Ceasefire has designed three revolutionary Morph nozzle guns, each addressing different requirements and fire situations.

The Converter:

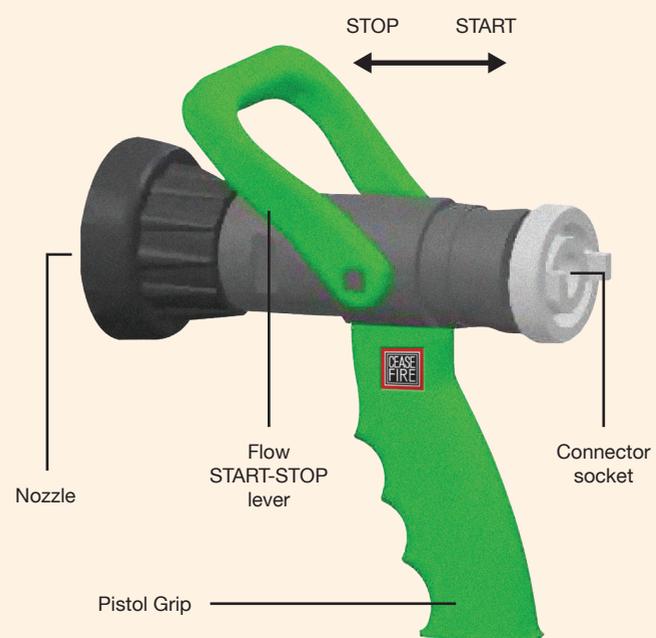
Designed to take on grass and bushfires, this nozzle dispenses Watermist with a wide throw.

The Transformer:

Lightning fast when it comes to fighting fires, this nozzle is ideal for use by firefighters on light, fast response fire trucks to extinguish class A, B, C and F fires, as well as electrical fires. This nozzle can also be used on storage tanks, converting them into Watermist hydrant systems.

The Morpheus:

Designed to extinguish class A, B, C and F fires, as well as electrical fires, this nozzle is the real deal, offering Watermist at the most pressure, with the most throw and the most reach. It's a firefighter's best weapon.





FEATURES:

	<p>Class A, B, C, F and Electrical Fires</p>	 
	<p>Range</p>	
	<p>Customised Design</p>	
		

APPLICATION AREAS:

Designed to help firefighters take on the largest fires, the Morph upgrades an ordinary fire truck into a Watermist fire truck, increasing its firefighting power manifold. The Morph can

also be attached to an existing water hydrant system in commercial and residential complexes to transform it into a Watermist system.

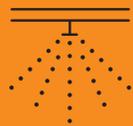




THE SMART RANGE

WHY CEASEFIRE:

What gives Ceasefire's In-panel
Tube-based Fire Suppression System
an edge over other players in the industry?



DESIGN SUPPORT

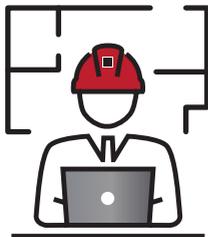


Unlike extinguishers, Micro Environment Suppression Systems need to be specially designed and configured for the space they are installed in.

A wrongly designed system is practically guaranteed to be a faulty one.

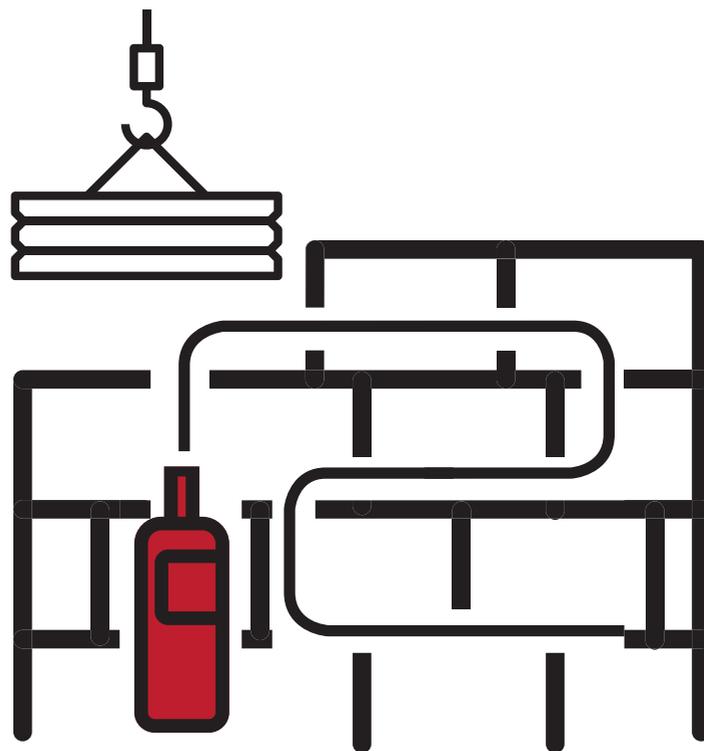


At Ceasefire, we have a team of specialist engineers and draftsmen with expertise in designing In-panel Suppression Systems.



The design of the Micro Environment Suppression System is extremely comprehensive. CAD drawings are used to lay the sensor tube, and deploy pre-determined scientific methods to calculate the amount of extinguishing agent required.

The design not only configures the system specifically, but also lays down the details to be followed at the time of installation, in compliance with LPS 1666 standards.



THE SYSTEM'S CRITICAL COMPONENTS



There are six most critical components in an In-panel Tube Based Fire Suppression System for enclosed spaces that determine how it performs. These are:

- The Extinguishing Agent Container
- The Valve
- Response Panel
- Extinguishing Agent Connector
- Connectors
- Detection Tube

In addition to the above components, other important aspects need to be considered before you make a purchase decision.



Service Support Network



Design Support



Certifications

THE CONTAINER BODY



The steel container has to be of a particular quality and thickness. Why? Because it holds the extinguishing agent at high pressure.

The industry's practice of making containers is a highly compromised one. Many procure recycled containers from the local market, refurbish, and sell them. How can they guarantee the quality of the containers they haven't even manufactured themselves?

It's a question you need to ask yourself before making a purchase decision.



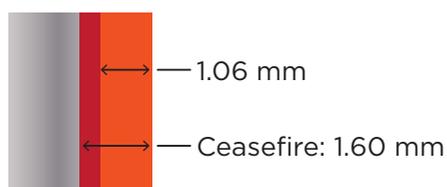
Ceasefire purchases steel directly from original and reputed producers - Tata Steel, Essar Steel or SAIL.



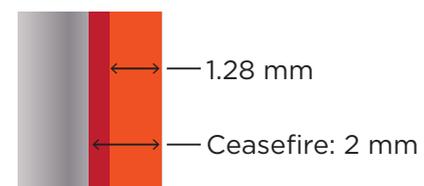
Our CRCA steel sheets are IS513 compliant, 34% thicker than the Indian industry average and 12.5% thicker than the European industry average.

Thickness required as per IS 15683:

2 kg extinguisher



9 kg extinguisher





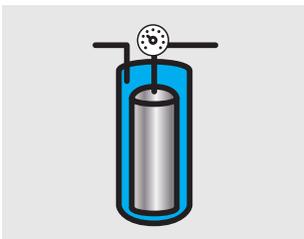
A specialised Deep Draw process is carried out to give the CRCA steel sheets the shape of a container. This process involves moulding through hydraulic presses.



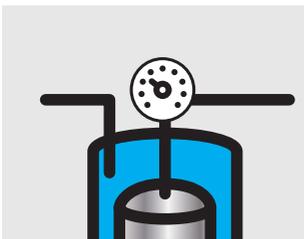
After mechanically rolling the sheet to form a cylinder shape, the two ends are seamed together by advanced welding technology - Motorised Metal Inert Gas (MIG) CO₂ welding.



Creates the strongest and smoothest welded seam.



Ceasefire's production guidelines make it mandatory to conduct specialised Hydrostatic Pressure Testing on every single container.



A minimum of 30 kgf/cm² pressure is exerted on the container for 2 mins. That's 3 times more pressure than a fire extinguisher, ensuring a perfect container.



Ceasefire containers undergo an Eight Tank Process for additional strength and durability.

THE VALVE



The valve is the most technical component of an extinguisher. In such systems, it works on the principle of pressure differential, and directly corresponds with the detection tube and the discharge line. It's vital that the many micro components that go making the valve are manufactured and assembled with absolute precision. Production of valves require a highly specialised manufacturing set up. Many manufacturers, without this specialised production capability or know-how go ahead and manufacture this vital component. This often results in an output of substandard quality.



Our heavy duty valves are made of high-grade brass/ stainless steel, which have an integrated Ball Valve feature.

This ensures no leakages whatsoever!

The Open/ Close knob is designed in such a way that it cannot be accidentally closed.

A singular switch regulates the system's ports, which can only be accessed with an allen key can. Thus making it 100% safe against being turned off.

The status of the Open/Close knob can be electronically monitored by the Control Panel.



There are no intermediate moving mechanical parts for actuation other than pneumatic pressure itself.



Anyone who attempts to compare Ceasefire valves with those in the industry would instantly know that ours are almost 50% heavier and cohesively integrated.



Ceasefire's valves are TPED certified and confirm to Pressurised Equipment Directorate (PED) Standards.

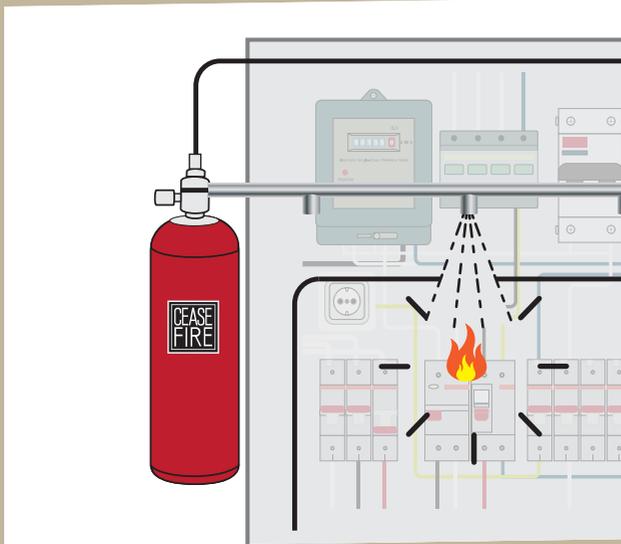


Hundreds of Ceasefire In-panel Tube-based Fire Suppression Systems are installed all over the country - in telecom towers, hospitals, schools, malls, airports and factories.

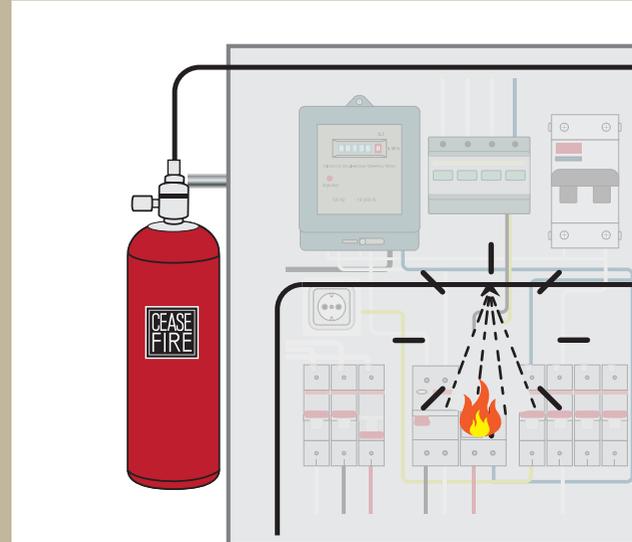
Not even a single valve malfunction incidence has been reported.

THE DETECTION TUBE

In an In-panel Tube-based Suppression System, fires are detected through the heat sensing tube.



In an Indirect version of the system, this tube detects the fire and bursts, allowing the pressure inside to drop, signalling the valve to release the extinguishing agent through a separate discharge line.



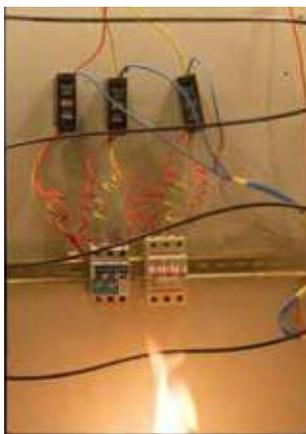
In a Direct version of the system, this tube both detects and activates the system by first allowing the pressure to drop, and creating a miniature nozzle for the extinguishing agent.

The tube needs to burst at the right temperature, or the system is rendered useless.



Our In-panel Tube Based Fire Suppression System, namely the CQRS, comes equipped with a Certified, High Grade Polyamide Multilayered Heat Sensing Tube with improved burst characteristics.

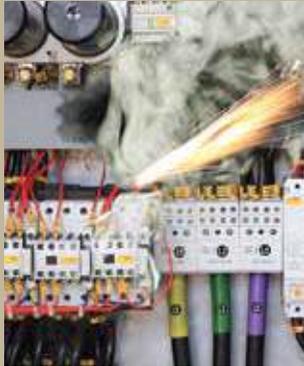
This ensures maximum safety and reliability.



Ceasefire's tubes offer robust detection and have distinct puncture characteristics, forming perfect discharge ports for firefighting.

- ✓UV protected for longer life
- ✓Fit for even the harshest of conditions
- ✓Multilayered hence far more durable and functional.

THE EXTINGUISHING AGENT GAS



A suppression system is designed for one singular purpose - to ensure that the extinguishing agent is discharged onto the fire at the right time, in the right manner.

The extinguishing agent is finally responsible for putting out the fire. In-panel Tube-based Suppression Systems use a clean agent gas that fights the fire by totally flooding the enclosed space where the system is installed.

The clean agent gas must have near zero boiling point properties, to ensure complete vaporisation when discharged.



The Ceasefire In-panel Fire Suppression Systems use internationally certified HFC 236fa and HFC 227ea as the extinguishing agent.

HFC 236fa and HFC 227ea do not leave any kind of residue. UL/FM approved, they're non-corrosive in nature.

HFC 236fa and HFC 227ea are available through many reputed companies, and do not have any sourcing limitations.

CONNECTORS



A Micro Environment Fire Suppression System is only capable of fighting a fire if it's pressurised. The pressure holding ability of the system is determined by the container, heat sensing tube, valve, and the connectors that join the tubes to the valve and container.



The connectors used in Ceasefire's In-panel Fire Suppression System (CQRS) meet the standards of the Superior Heat Sensing Tube installed in the system - ISO16750-3:2007.



The connectors installed in Ceasefire's systems meet the highest tightness and pressure holding capacity. The Heat Sensing Tube and connectors are designed to complete the detection and activation line seamlessly, and hold and maintain the pressure over a long period of time.

CONTROL PANEL



An In-panel Fire Suppression System is a mechanical, pressurised system that is activated on the principle of pressure differential.

Such systems need to be electronically monitored to ensure they're ready to come to the rescue.

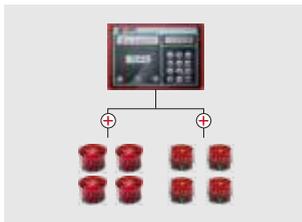
In larger premises with scaled up systems, it's even more essential to have the system in working order.



Can monitor up to four cylinder systems.

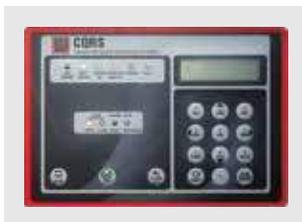
Ceasefire's In-panel Fire Suppression System comes equipped with a state-of-the-art Control Panel with the ability to monitor up to four cylinder systems.

Plus the provision to monitor the status of each of these four systems' Valve and Pressure Switches.



Ceasefire's Control Panels come equipped with a special relay output that enables the user to install additional Hooters (sound alarms) and Lamp Flashers (visual indicators) on the Detection Line.

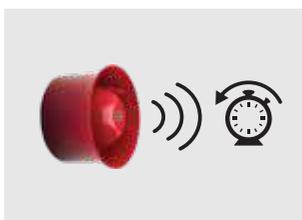
They can be installed near the system anywhere depending on the requirements of the premise or the user.



Ceasefire's Control Panels have an in built 24-hour battery back up and a user-friendly LCD display.



The LCD display spells out the problem in case of activation, in addition to the sounder and flasher raising the alarm.



The Panel can be programmed to delay the relay activation by up to 5 seconds - allowing for minor incidents to be controlled manually before the system kicks into action.

INSTALLATION SUPPORT



One of the most important steps towards ensuring that your system is functioning perfectly, is to make sure that it is installed properly. Even the best designed system with the best quality components can fail if the system is not installed correctly. In short, your system is only as good as the installation.



At Ceasefire, we have a team of trained technical support professionals to install the In-Panel Fire Suppression System. The installation, overlooked by our engineers, meets every standard and guideline set.

SERVICE NETWORK AND SUPPORT



A high-end specialised system requires specialised service support.

These systems are complicated, and if the manufacturer of the system cannot provide service support at that location, it can lead to much confusion.



Spread across more than 300 Indian towns and cities.

At Ceasefire, we have a direct, nationwide delivery and service network spread across more than 300 Indian towns and cities.



Ceasefire has a dedicated team of specially trained engineers and technicians, with experience in installing and servicing these systems.

CERTIFICATIONS & APPROVALS



In addition to the above components, these important aspects need to be considered too.

An In-panel Fire Suppression System is a highly specialised system, often installed in high-risk areas or where the potential of collateral damage is extremely high.

It's therefore essential for such systems to be manufactured to benchmark quality standards, and installed to pre-defined norms set by specialised, reputed agencies.



These systems have successfully passed the most stringent test criteria laid out by the British certification agency under the category of micro environment suppression.

Which means not one or two components, but the system as a whole is fully certified.



The Ceasefire In-panel Systems have the British LPCB certification - for standard No. LPS 1666 for 2 kg and 4 kg HFC 227ea and HFC 236fa gas size variants.

Download the Ceasefire app.



Ceasefire Industries Private Limited,
B1/ H1, 2nd Floor, Mohan Cooperative
Industrial Estate, Mathura Rd, New
Delhi, 110044.
t **+91-114 184 6800**

Call our Free Hotline :
1800 120 3473 / +91 9540 666 666

www.ceasefire.in

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