

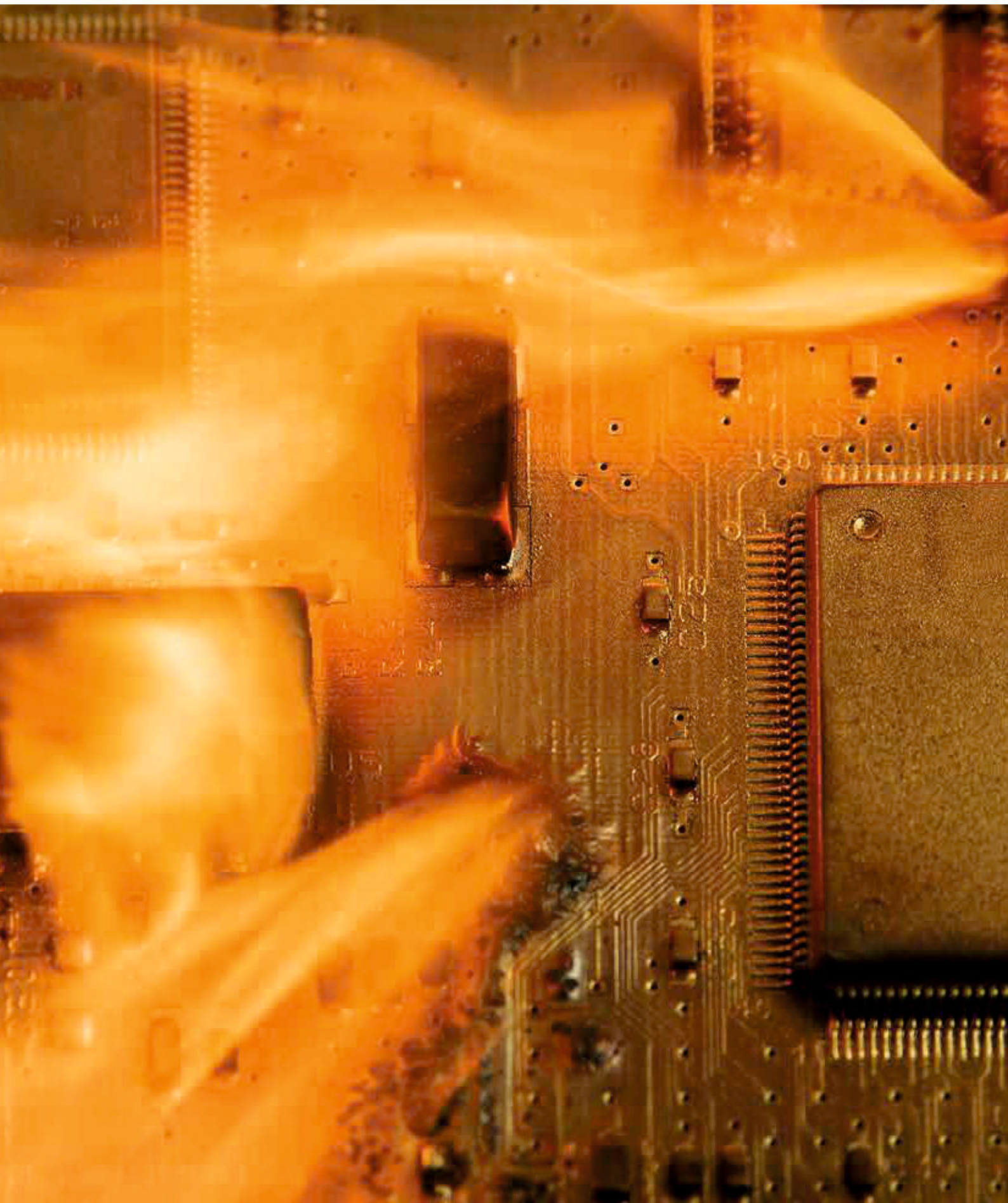


# BRUTAL ON FIRES,

# SAFE FOR THE ENVIRONMENT



## CEASEFIRE'S RANGE OF FLUOROKETONE (FK) FIREFIGHTING SOLUTIONS





# FIGHTS FIRE, WHILE KEEPING THE PLANET SAFE

While fire extinguishants are imperative for controlling fire episodes and saving lives & properties, their detrimental impact on environment has consistently raised concerns among environmentalist, sustainability advocates and conscious users alike.

Pioneering next generation firefighting technologies and furthering the cause of bringing green firefighting solutions to the world, Ceasefire has always invested in technologies that are not just potent on fires but also gentle on the environment.

Ceasefire's range of fire fighting solutions based on Fluoroketone (FK) gas is among the most potent yet environment friendly solutions with a Global Warming Potential (GWP) of less than 1 and a Ozone Depletion Potential (ODP) of 0.

Ceasefire's range of FK based extinguishers and systems are non-flammable, non-corrosive, residue-free and come with a high dielectric strength making them safe to be administered on high-value and sensitive electronic equipment.

Since FK causes no collateral damage and is extremely potent on fire, it is ideal to be used in premises like data centres, banks, hospitals, museums etc.

In purview of the recent F-gas regulations, which aims at a gradual reduction and eventual phasing out of HFCs, our FK based range, which does not fall under the purview of this regulation, offers an ideal long-term solution.

# CEASEFIRE'S FLUOROKETONE (FK) FIREFIGHTING RANGE

Clean Agent FK Portable Extinguishers

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Automatic M-Series Extinguishers

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# FIRE EXTINGUISHERS

## PORTABLE RANGE

Research shows that short circuits in the electrical mains or in sensitive electronic equipment such as computers, server racks, CNC machines, etc. are the most common cause of fire in work spaces. While powder-based extinguishers can certainly defeat these fires, they cause serious collateral damage.

built to not only put out fires, but save sensitive electronic equipment too. Powered by one of the cleanest, most powerful extinguishing agents on the planet, these extinguishers are extremely lightweight, yet are power-packed with an immense throw that penetrates even the finest mesh and spaces.

That's where Ceasefire's Fluoroketone (FK) based Extinguishers come in. These extinguishers are



FIGHTS CLASS

A B C ⚡

CERTIFICATIONS

  
CM/L-8886112

| SIZES AVAILABLE:   |      |      |      |      |
|--------------------|------|------|------|------|
| Fire Extinguishers | 1 KG | 2 KG | 4 KG | 6 KG |

# FEATURES AND BENEFITS



## Safe on Electronic equipment:

Clean gas FK based extinguishers leave no residue and can be used on electronic equipment.



## Lightweight:

Extremely lightweight, yet packed with tremendous power and throw, to penetrate past even the finest grills and meshes.



## Simplicity in Handling:

The easy grip plastic handle aids simplicity in handling.



## Pressure Gauge:

The state-of-the-art pressure gauge can be tested onsite, using a special magnet to ensure that it is working perfectly and is 100% accurate.



## World Class Quality:

Comes with ISO 9001 and CE certification, and conforms to ISI standards. Comprehensive Helium Tests and Leak Tests also guarantee that the products you buy are manufactured according to the world's most stringent quality standards.



## 10 year Warranty:

The Ceasefire Automatic Extinguishers come with 10 year warranty ensuring complete peace of mind.



## Types of Fire:

Fights Class A, B, C & Electrically Started Fire.



## Safe on Environment:

Fluoroketone (FK) gas is among the most potent yet environment friendly solutions with a Global Warming Potential (GWP) of less than 1 and a Ozone Depletion Potential (ODP) of 0.



## Free from F-gas Regulations:

FK being outside the purview of F-gas regulation gives freedom of operation to businesses and offers a long term trade solution.



# WHAT'S NEW

## LATEST UPGRADES THAT MAKE CEASEFIRE EXTINGUISHERS UNMATCHED IN THE INDUSTRY.

**1**

### ENHANCED VALVE SYSTEM

#### Pressure Relief Valve (PRV)

Releases excess internal pressure before it reaches a dangerous level, providing an additional layer of safety for the user. This helps minimise the risks associated with excessive pressure build-up and enhances overall user safety during operation and handling.



#### Non-Return Valve (NRV)

Enables pressure gauge removal for checking or replacement while maintaining internal pressure. This simplifies servicing and maintenance, allowing essential service operations to be carried out more efficiently without the need to fully depressurise the extinguisher.



This enhanced valve mechanism delivers greater pressure safety and more efficient servicing, reducing the need to fully depressurise the extinguisher.

**2**

### SCREEN-PRINTED CYLINDER LABEL

Moving beyond conventional applied labels, our extinguishers now feature screen-printed product information directly on the cylinder. The print offers excellent resistance to peeling, tampering, rubbing, scratching and common chemicals, along with high resistance to fading.

This ensures critical information remains clear, long-lasting and legible despite regular wear and tear, keeping essential safety and usage information readily accessible during emergency.



### 3 GLOW-IN-THE-DARK LOCATOR

Where conventional identification is depended on available ambient light, our extinguishers now feature a phosphorescent glow-in-the-dark cylinder locator to make the extinguisher easier to identify in dark and low-visibility conditions.

Manufactured without phosphor, lead-containing compounds or radioactive materials, the signage conforms to the DIN standard and exceeds the requirements of DIN 67510 Part 4. Under suitable light-charging conditions, it can continue to glow for several hours after lights-out.



This helps users locate the extinguisher faster in darkness, low visibility, and smoke, enabling quicker access and a more immediate response during emergencies.

### 4 ECO-FRIENDLY PACKAGING

Moving away from conventional packaging materials, our extinguishers are now packed using recyclable paper, corrugated board and natural rubber.

This helps users locate the extinguisher faster in darkness, low visibility, and smoke, enabling quicker access and a more immediate response during emergencies.



### 5 EASY-LUG MOUNT BRACKET

Replacing the earlier mounting arrangement, our extinguishers now feature an easy-lug mounting system with a secure “J” hanger.

The design makes mounting and removal quick, simple and convenient, while keeping the extinguisher securely positioned and readily accessible during an emergency.



TECHNICAL SPECIFICATIONS:

| Nomenclature                               | Fire Ext. 1 Kg MS SP Red       | Fire Ext. 2 Kg MS SP Red       | Fire Ext. 4 Kg MS SP Red       | Fire Ext. 6 Kg MS SP Red       |
|--------------------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Stored Pressure/Cartridge                  | Stored Pressure                | Stored Pressure                | Stored Pressure                | Stored Pressure                |
| Product Code                               | CF-001332                      | CF-001462                      | CF-001469                      | CF-001470                      |
| Agent                                      | Fluoroketone (FK-5-1-12)       | Fluoroketone (FK-5-1-12)       | Fluoroketone (FK-5-1-12)       | Fluoroketone (FK-5-1-12)       |
| Bulk Range Discharge (BRD as per IS 15683) | > 1 meters                     | > 2 meters                     | > 2 meters                     | > 2 meters                     |
| Certification Standards                    | PED                            | PED, IS15683                   | PED, IS15683                   | PED, IS15683                   |
| BIS                                        | No                             | Yes                            | Yes                            | Yes                            |
| CE                                         | Yes                            | Yes                            | Yes                            | Yes                            |
| Gross Weight (approx.)                     | 2.3 kg                         | 3.50 kg                        | 6.35 kg                        | 9.00 kg                        |
| Net Mass (approx.)                         | 1 kg                           | 2 kg                           | 4 kg                           | 6 kg                           |
| Discharge Mechanism                        | Thumb Triggered                | Thumb Triggered                | Squeeze Grip                   | Squeeze Grip                   |
| Fire Ratings                               | —                              | 1A, 21B                        | 1A, 34B                        | 2A, 55B                        |
| Can Construction                           | Deep Drawn & MIG Welded        | Deep Drawn & MIG Welded        | Deep Drawn & MIG Welded        | Deep Drawn & MIG Welded        |
| Valve/Cap Construction                     | Forging & Machining            | Forging & Machining            | Forging & Machining            | Forging & Machining            |
| External Coating                           | Epoxy Polyester Powder Coating | Epoxy Polyester Powder Coating | Epoxy Polyester Powder Coating | Epoxy Polyester Powder Coating |
| Operating Temp.                            | -30°C to +60°C                 | -30°C to +60°C                 | -30°C to +60°C                 | -30°C to +60°C                 |
| Warranty in Years                          | 10                             | 10                             | 10                             | 10                             |
| Working Pressure                           | 10 Bar                         | 10 Bar                         | 10 Bar                         | 10 Bar                         |
| Height of Fire Ext. (approx)               | 327 mm                         | 370 mm                         | 440 mm                         | 485 mm                         |
| Dia. of Shell (OD)                         | 86.5 mm                        | 108 mm                         | 140 mm                         | 160 mm                         |
| Hydrostatic Test Pressure                  | 30 Bar                         | 35 Bar                         | 35 Bar                         | 35 Bar                         |
| Body Thickness                             | 1.0 mm                         | 1.4 mm                         | 1.2 mm                         | 1.4 mm                         |
| Min. Discharge Time (as per IS 15683)      | 4 sec                          | 8 sec                          | 8 sec                          | 13 sec                         |
| PRV and NRV                                | No                             | No                             | Yes                            | Yes                            |
| Extinguisher Label                         | Screen printed                 | Screen printed                 | Screen printed                 | Screen printed                 |
| Glow in the Dark Fire Extinguisher Locator | No                             | No                             | Yes                            | Yes                            |
| Green Packaging (Environment Friendly)     | Yes                            | Yes                            | Yes                            | Yes                            |
| Mounting Bracket                           | Wire Bracket                   | Wire Bracket                   | L Bracket with J hanger        | L Bracket with J hanger        |

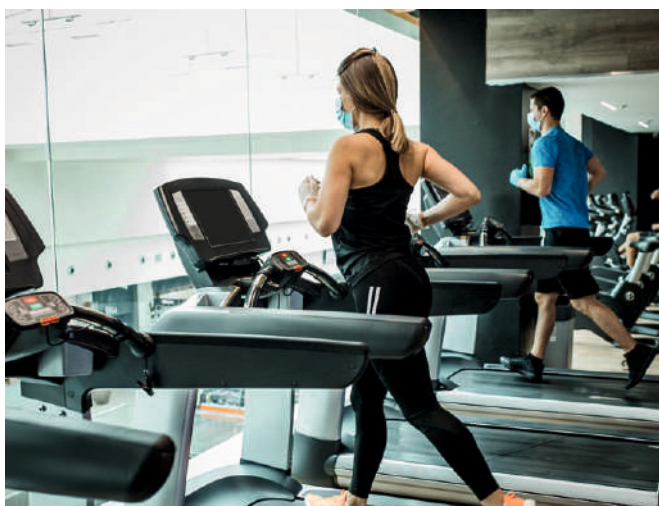
# APPLICATION AREAS



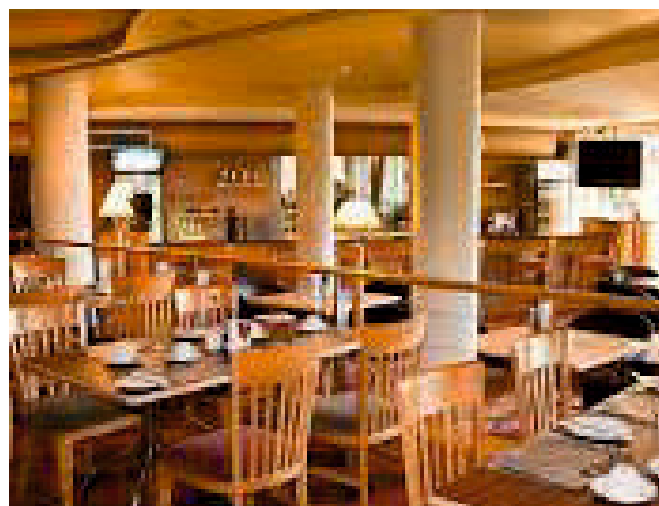
Hospitals



Offices



Spas and Gyms



Hotels and Restaurants



Banks and Financial Institutions



Apartments and Villas

CEASEFIRE FK RANGE



# AUTOMATIC M-SERIES EXTINGUISHERS (INTRODUCTION)

The Ceasefire M Series Automatic extinguishers is a breakthrough range of Wall Mounted and Ceiling Mounted units that are designed for three-fold fire

protection of a premises that is Intuitive (Self Activated), Responsive (Monitorable) and Scalable (Expandable).

Mounted and Ceiling Mounted variants and are designed to give 24x7 automatic fire protection to any space where human presence is low or

absent and manual fire detection and fire fighting is a challenge.

The modular nature of these extinguishers make them retrofittable and can instantly be mounted in a variety of spaces, making the premises self-reliant on fire safety, without having to undertake any structural changes in the space.

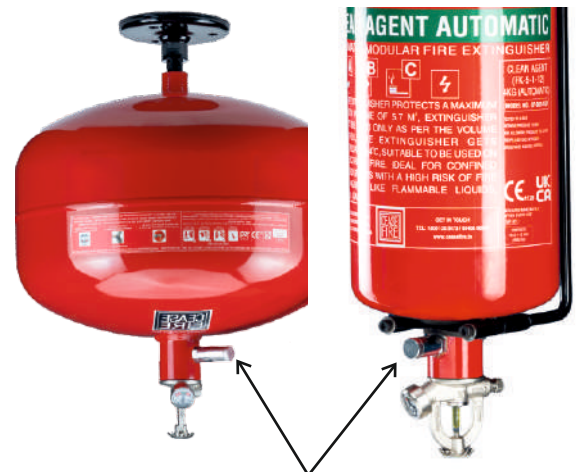
The biggest strength of the Ceasefire M Series Extinguishers however is their ability to become monitorable and scalable. By opting for a

Pressure Switch these extinguishers can be integrated to third-party devices to become monitorable. On the other hand these extinguishers can also be used as building blocks to form a scalable and integrated total flooding system by opting for Metron Actuators and connecting the units with fire detection devices and a control panel.



## Making the M Series Automatic Extinguishers Monitorable

With the presence of a pressure port in these extinguisher units, these can be made monitorable by opting for a Pressure Switch and can be integrated to any third-party device such as a Fire Alarm Panel, a stand-alone Siren Strobe or a Building Management System for monitoring purpose. This enables users to not only get an alert on activation of these units in case of fire but also do preventive-maintenance monitoring of the units.



In-built Pressure Port



Optional Pressure Switch



## Scaling up to a Total Flooding System

The Ceasefire M Series extinguishers can be used as building blocks to form an integrated total flooding system by opting for Metron Actuators which can be further connected with a network of detectors via a control panel to form a formidable fire suppression system.

# WALL MOUNTED AUTOMATIC M-SERIES EXTINGUISHERS

This innovative extinguisher functions as a standalone system. With simple wall-mount brackets, installation is quick and seamless. The telescopic arm (optional) further ensures precise

coverage of hard-to-reach fire risk zones, offering an ideal solution for challenging installations while saving valuable floor space.



These wall-mounted automatic M Series extinguishers come equipped with a pressure monitoring port and by opting for a Pressure Switch these can be made monitorable by integrating it with third party devices such as BMS, Fire alarm systems, or Stand alone Sirens with/without beacon.



## SIZES AVAILABLE:

|              |      |      |      |      |      |
|--------------|------|------|------|------|------|
| Wall Mounted | 1 KG | 2 KG | 4 KG | 6 KG | 9 KG |
|--------------|------|------|------|------|------|

## FEATURES AND BENEFITS



### Easy To Install

Retrofittable system and can be installed with least amount of structural changes in a premises.



### Automatic Actuation

Detects fire through thermal sensor and activates automatically.



### Targeted Protection

Option flexible mounting bracket that enables optimal positioning of the extinguisher in the risk zone proving targeted protection.



### Electrical Actuation Option

The units can be activated electrically by opting for metron actuators and connecting them to a network of detectors via a control panel to be configured as a Total Flooding System.



### Certification

CE marked.



### Saves Space

Agent cylinders are wall mounted units that do not require any floor space.



### Extinguishing Agents

Available in Clean extinguishing agent Fluoroketone (FK-5-1-12).



### Container Sizes

These wall mounted units are available in 1kg, 2kg, 4kg, 6kg and 9kg variants to suit diverse kinds of premises and applications.



### Monitorable Option

These automatic extinguishers can be upgraded to become monitorable by opting for a pressure switch and integrating it with third-party devices.



### Secure Mounting Bracket

Comes with a secure mounting bracket for direct installation on the wall.



# TECHNICAL SPECIFICATIONS:

| Nomenclature                 | Fire Ext. Automatic M Wall Mounted 1Kg MS SP Red    | Fire Ext. Automatic M Wall Mounted 2Kg MS SP Red | Fire Ext. Automatic M Wall Mounted 4Kg MS SP Red    | Fire Ext. Automatic M Wall Mounted 6Kg MS SP Red | Fire Ext. Automatic M Wall Mounted 9Kg MS SP Red |
|------------------------------|-----------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| Stored Pressure / Cartridge  | Stored Pressure                                     | Stored Pressure                                  | Stored Pressure                                     | Stored Pressure                                  | Stored Pressure                                  |
| Agent                        | FK-5-1-12                                           | FK-5-1-12                                        | FK-5-1-12                                           | FK-5-1-12                                        | FK-5-1-12                                        |
| Product Code                 | CF-001411C                                          | CF-001413C                                       | CF-001415C                                          | CF-001416C                                       | CF-001417C                                       |
| Certification Standards      | PED                                                 | PED                                              | PED                                                 | PED                                              | PED                                              |
| CE                           | Yes                                                 | Yes                                              | Yes                                                 | Yes                                              | Yes                                              |
| Gross Weight (approx.)       | 1.85 Kg                                             | 3.35 Kg                                          | 6.05 Kg                                             | 8.75 Kg                                          | 12.95 Kg                                         |
| Net Contents (approx.)       | 1 Kg                                                | 2 Kg                                             | 4 Kg                                                | 6 Kg                                             | 9 Kg                                             |
| Approx. Height Of Fire Ext.  | 370 mm                                              | 442 mm                                           | 493 mm                                              | 538 mm                                           | 668 mm                                           |
| Type of Operating Mechanism  | Automatic Thermal Quartzoid Bulb and Elect (metron) |                                                  | Automatic Thermal Quartzoid Bulb and Elect (metron) |                                                  |                                                  |
| Min. Discharge Time          | 0.5 sec                                             | 1 sec                                            | 2 sec                                               | 3 sec                                            | 4 sec                                            |
| Min. Single Volume Coverage  | 0.79 m <sup>3</sup>                                 | 1.58 m <sup>3</sup>                              | 3.16 m <sup>3</sup>                                 | 4.74 m <sup>3</sup>                              | 7.11 m <sup>3</sup>                              |
| Max. Single Volume Coverage  | 1.4 m <sup>3</sup>                                  | 2.8 m <sup>3</sup>                               | 5.7 m <sup>3</sup>                                  | 8.5 m <sup>3</sup>                               | 12.8 m <sup>3</sup>                              |
| Concentration At Max. Volume | 4.5 v/kg %                                          | 4.5 v/kg %                                       | 4.5 v/kg %                                          | 4.5 v/kg %                                       | 4.5 v/kg %                                       |
| Actuation Temperature*       | 79°C ± 4°C                                          | 79°C ± 4°C                                       | 79°C ± 4°C                                          | 79°C ± 4°C                                       | 79°C ± 4°C                                       |
| Type of Discharge Fitting    | Sprinkler With Quartzoid Bulbhead                   | Sprinkler With Quartzoid Bulbhead                | Sprinkler With Quartzoid Bulbhead                   | Sprinkler With Quartzoid Bulbhead                | Sprinkler With Quartzoid Bulbhead                |
| Warranty In Years            | 10                                                  | 10                                               | 10                                                  | 10                                               | 10                                               |
| Working Pressure             | 10 Bar                                              | 10 Bar                                           | 10 Bar                                              | 10 Bar                                           | 10 Bar                                           |
| Dia. Of Shell (OD)           | 86 mm                                               | 108 mm                                           | 140 mm                                              | 160 mm                                           | 175 mm                                           |
| Operating Temperature        | -30°C to 60°C                                       | -30°C to 60°C                                    | -30°C to 60°C                                       | -30°C to 60°C                                    | -30°C to 60°C                                    |
| Hydrostatic Test Pressure    | 30 Bar                                              | 30 Bar                                           | 30 Bar                                              | 30 Bar                                           | 30 Bar                                           |
| Body Thickness               | 1.4 mm                                              | 1.4 mm                                           | 1.2 mm                                              | 1.4 mm                                           | 1.4 mm                                           |

\*Quartzoid bulb in alternate temperature settings as mentioned above are available on request and would be dependent on MOQ for your region. Please check the availability and delivery time before ordering.

## QUARTZOID BULB KEY

|                 |                 |                |                |                 |
|-----------------|-----------------|----------------|----------------|-----------------|
| ● 57°C / 135°F  | ● 68°C / 155°F  | ● 79°C / 174°F | ● 93°C / 200°F | ● 141°C / 286°F |
| ● 182°C / 360°F | ● 227°C / 440°F |                |                |                 |

# CEILING MOUNTED AUTOMATIC M-SERIES EXTINGUISHERS

Ceasefire Ceiling Mounted Automatic M Series Extinguishers are self-contained units with thermal sensors that detect the rise in the temperature of the area and activate automatically, even when there is no one present, ensuring that the fire is brought under control early and efficiently.

A key benefit of these units is that they not only bring automated protection for places with low human traffic, but being ceiling mounted they also save productive floor space of any premises in a big way.



The Ceiling Mounted Automatic M Series extinguishers come equipped with a pressure monitoring port and by opting for a Pressure Switch these can be made monitorable by integrating it with third party devices such as BMS, Fire alarm systems, or Stand alone Sirens with/without beacon.



SIZES AVAILABLE:

|              |      |      |       |       |
|--------------|------|------|-------|-------|
| Wall Mounted | 2 KG | 5 KG | 10 KG | 15 KG |
|--------------|------|------|-------|-------|

# FEATURES AND BENEFITS



## Automatic actuation

Detects fire through thermal sensor and activates automatically.



## Easy To Install

Retrofittable and can be installed with least amount of structural changes in a premises.



## Highly Cost Effective

Does not require extensive fitments it works out to be price competitive.



## Monitorable Option

These automatic extinguishers can be upgraded to become monitorable by opting for a pressure switch and integrating it with third-party devices.



## Extinguishing Agents

Available in Clean extinguishing agent Fluoroketone (FK-5-1-12).



## Certification

BSI tested and CE marked.



## Tamper Proof Design

Being ceiling mounted the extinguisher is tamper proof.



## Requires Minimal Fittings

Does not require an extensive network of pipes, fittings and ducts for installation.



## Saves Space

Agent cylinders are ceiling mounted units that do not require any floor space.



## Electrical Actuation Option

The units can be activated electrically by opting for metron actuators and connecting them to a network of detectors via a control panel to be configured as a Total Flooding System.



## Container Sizes

These ceiling mounted units are available in 2kg, 5kg, 10kg and 15kg variants to suit diverse kinds of premises.



TECHNICAL SPECIFICATIONS:

| Nomenclature                | Fire Ext. Automatic M<br>Ceiling Mounted 2Kg<br>MS SP Red | Fire Ext. Automatic M<br>Ceiling Mounted 5Kg<br>MS SP Red | Fire Ext. Automatic M<br>Ceiling Mounted 10Kg<br>MS SP Red | Fire Ext. Automatic M<br>Ceiling Mounted 15Kg<br>MS SP Red |
|-----------------------------|-----------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| Stored Pressure / Cartridge | Stored Pressure                                           | Stored Pressure                                           | Stored Pressure                                            | Stored Pressure                                            |
| Agent                       | FK-5-1-12                                                 | FK-5-1-12                                                 | FK-5-1-12                                                  | FK-5-1-12                                                  |
| Product Code                | CF-001393B                                                | CF-001337B                                                | CF-001338B                                                 | CF-001493B                                                 |
| Certification Standards     | PED                                                       | PED                                                       | PED                                                        | PED                                                        |
| CE                          | Yes                                                       | Yes                                                       | Yes                                                        | Yes                                                        |
| BSI Yested                  | Yes                                                       | Yes                                                       | Yes                                                        | Yes                                                        |
| Gross Weight (approx.)      | 4.00 Kg                                                   | 7.50 Kg                                                   | 14.35 Kg                                                   | 18.60 Kg                                                   |
| Net Contents (approx.)      | 2 Kg                                                      | 5 Kg                                                      | 10 Kg                                                      | 15 Kg                                                      |
| Approx. Height Of Fire Ext. | 287 mm                                                    | 367 mm                                                    | 389 mm                                                     | 469 mm                                                     |
| Type of Operating Mechanism | Automatic Thermal Elect (metron)                          | Quarzoid Bulb and Elect (metron)                          | Automatic Thermal Elect (metron)                           | Quarzoid Bulb and Elect (metron)                           |
| Min. Discharge Time         | 2 to 5 sec                                                | 4 to 8 sec                                                | 6 to 10 sec                                                | 6 to 15 sec                                                |
| Min Single Volume Coverage  | 1.58 m³                                                   | 3.95 m³                                                   | 7.9 m³                                                     | 11.85 m³                                                   |
| Max Single Volume Coverage  | 2.8 m³                                                    | 7.2 m³                                                    | 14.4 m³                                                    | 21.5 m³                                                    |
| Concentration At Max Volume | 4.5 v/kg %                                                | 4.5 v/kg %                                                | 4.5 v/kg %                                                 | 4.5 v/kg %                                                 |
| Actuation Temperature*      | 68°C ± 4°C                                                | 68°C ± 4°C                                                | 68°C ± 4°C                                                 | 68°C ± 4°C                                                 |
| Type of Discharge Fitting   | Sprinkler With Quartzoid Bulbhead                         | Sprinkler With Quartzoid Bulbhead                         | Sprinkler With Quartzoid Bulbhead                          | Sprinkler With Quartzoid Bulbhead                          |
| Warranty In Years           | 10                                                        | 10                                                        | 10                                                         | 10                                                         |
| Working Pressure            | 10 Bar                                                    | 10 Bar                                                    | 10 Bar                                                     | 10 Bar                                                     |
| Dia. Of Shell (OD)          | 86 mm                                                     | 108 mm                                                    | 160 mm                                                     | 160 mm                                                     |
| Operating Temperature       | -30°C to 60°C                                             | -30°C to 60°C                                             | -30°C to 60°C                                              | -30°C to 60°C                                              |
| Hydrostatic Test Pressure   | 35 Bar                                                    | 35 Bar                                                    | 35 Bar                                                     | 35 Bar                                                     |
| Body Thickness              | 2 mm                                                      | 1.6 mm                                                    | 2 mm                                                       | 2 mm                                                       |

\*Quartzoid bulb in alternate temperature settings as mentioned above are available on request and would be dependent on MOQ for your region. Please check the availability and delivery time before ordering.

QUARTZOID BULB KEY

● 57°C / 135°F

● 68°C / 155°F

● 79°C / 174°F

● 93°C / 200°F

● 141°C / 286°F

● 182°C / 360°F   ● 227°C / 440°F

# CREATING AN INTEGRATED TOTAL FLOODING SYSTEM

The Ceasefire M Series extinguishers can be used as building blocks to form an integrated total flooding system by opting for Metron Actuators.

The user needs to opt for Metron Actuators to be

The detection module of the system can be configured using a wide variety of detectors such as smoke detectors, beam detectors, heat

installed at the Nozzle heads of the M Series extinguishers which can be further connected with a network of detectors via a control panel to form a formidable fire suppression system.

detectors, or others depending upon the need of the premises and all interact with a central control panel.

The system acts on the principle of cross-zoning. Only when two or more detectors from two separate zones confirm the fire episode to the control panel, the panel sends an activation signal to the system. The activation signal is sent to the Metron Actuator in the form of an electrical impulse. On receiving this electrical impulse a metal pin is fired inside the actuator that breaks the glass vial placed at the discharge point of

extinguishing units, triggering the discharge of the agent. What makes such a system configuration truly versatile is that all fire suppression system units are triggered simultaneously to achieve total flooding results. Configuring a total flooding system using Ceasefire M Series Extinguishers for any premises requires a design process to be followed as defined in the system's manual.



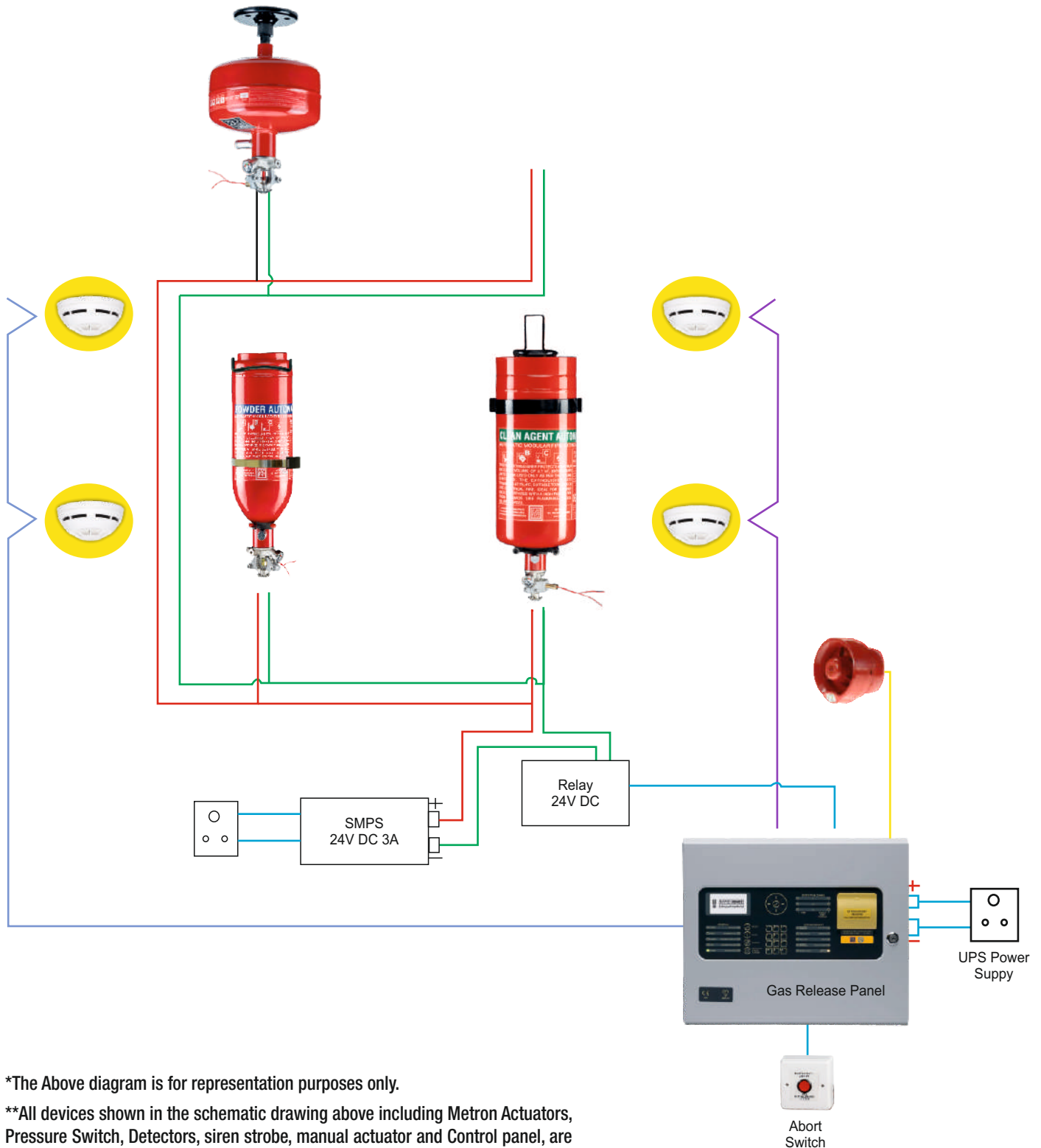
## SIZES AVAILABLE:

|              |      |      |      |      |      |
|--------------|------|------|------|------|------|
| Wall Mounted | 1 KG | 2 KG | 4 KG | 6 KG | 9 KG |
|--------------|------|------|------|------|------|

|                 |      |      |       |       |
|-----------------|------|------|-------|-------|
| Ceiling Mounted | 2 KG | 5 KG | 10 KG | 15 KG |
|-----------------|------|------|-------|-------|

# TYPICAL SCHEMATIC DRAWING

## OF AN INTEGRATED TOTAL FLOODING SYSTEM CONFIGURED USING M-SERIES AUTOMATIC EXTINGUISHERS



\*The Above diagram is for representation purposes only.

\*\*All devices shown in the schematic drawing above including Metron Actuators, Pressure Switch, Detectors, siren strobe, manual actuator and Control panel, are add-on optional devices and not a part of the standard product. These devices need to be ordered separately to configure a flooding system. Designing a total flooding system using M series extinguishers require system manual guidelines to be followed.

# FEATURES AND BENEFITS



## Classification

Effective against all classes of fire.



## Agent Options

Available in Clean agent (Fluoroketone (FK-5-1-12)).



## Scalable Protection

The system is designed to be scalable in nature, where you can add wall mounted or ceiling mounted units to the existing network of extinguishing units to expand the protection area in order to meet your growing needs.



## Cost Effective Solution

Since the system does not require so many fittings, fixtures and plumbing, it works out to be highly cost effective.



## Easy To Install

The system is a retrofittable one and hence can be installed in a running and functional premises without hindering the daily business operations of the place. This is because minimal structural changes are required to be done in the premises to install the system.



## Certification

BSI tested, CE marked and UKCA approved.



## Monitorable System

Each of the extinguishing units (wall mounted or ceiling mounted) are monitorable in nature via the Control Panel with the presence of a pressure switch.



## Intelligent Detection

The detection module of the system can include devices that are most suitable to address the risks present at the premises.



## Container Sizes

The system includes ceiling mounted extinguishing units in 2kg, 5kg, 10 kg and 15 kg and wall mounted extinguishing units in 1kg, 2kg, 4kg, 6kg and 9kg variants to suit diverse kinds of premises and applications.



## Consumes Minimal Productive Space

The system being ceiling / wall mounted consumes no floor space. Big boon for business premises where productive floor space is not consumed by the system's agent containers.



\*The pressure switch shown in the picture of Ceiling Mounted M-Series Extinguishers above is for representation purposes only. It is an optional device and is not a part of the standard products.

## SYSTEM COMPONENTS

### Ceiling Mounted Units

Ceiling mounted agent container units that saves productive floor space and activate together to create total flooding results.



### Wall Mounted Units

Wall mounted agent container units are included in the system where ceiling space is not available or accessible and targeted protection is required.

### Detection Sensors

The system has a wide-ranging line-up of detection devices such as smoke detectors, heat detectors, flame detectors, and beam detectors. A mix of these devices may be used in the system based on the fire hazard of the premises.



### Control Panel

The control panel receives signal from the detectors and actuates the system while also monitoring the system readiness via pressure switch. A control panel can actuate upto six automatic units simultaneously. This capacity can be increased further by adding additional relay.

## Metron Actuator (UL & CE Certified)

This is an essential device required to configure a total flooding system using M-Series Extinguishers. The metron actuator receives an electrical impulse from the panel and fires a metal pin inside the actuator that breaks the glass vial placed at the discharge point of M-Series extinguishers.



## Pressure Switch (UL & CE Certified)

The presence of pressure switch marks the extinguishing units monitorable in nature so the user can always check the system's readiness. This optional device's role is to convert a mechanical action into a switching effect that completes the circuit to send a signal to activate the third party devices such as fire alarm systems, sounder beacons or building management systems.

## Conventional Wall Sounder with Beacon

Ceasefire's Sounder with Beacon (optional) is a vital addition to our suite of fire safety solutions, engineered for effortless integration with all pressure switch compatible solutions such as wall mounted and ceiling-mounted fire extinguishers. Built to respond instantly in emergencies, this high-performance device combines a brilliant strobe light with a powerful audible alarm to deliver clear, unmistakable alerts in the event of a fire, ensuring your premises stay protected at all times.



## Telescopic Arm

The optional telescopic arm ensures precise coverage of hard-to-reach fire risk zones, where protecting specific assets is the priority.

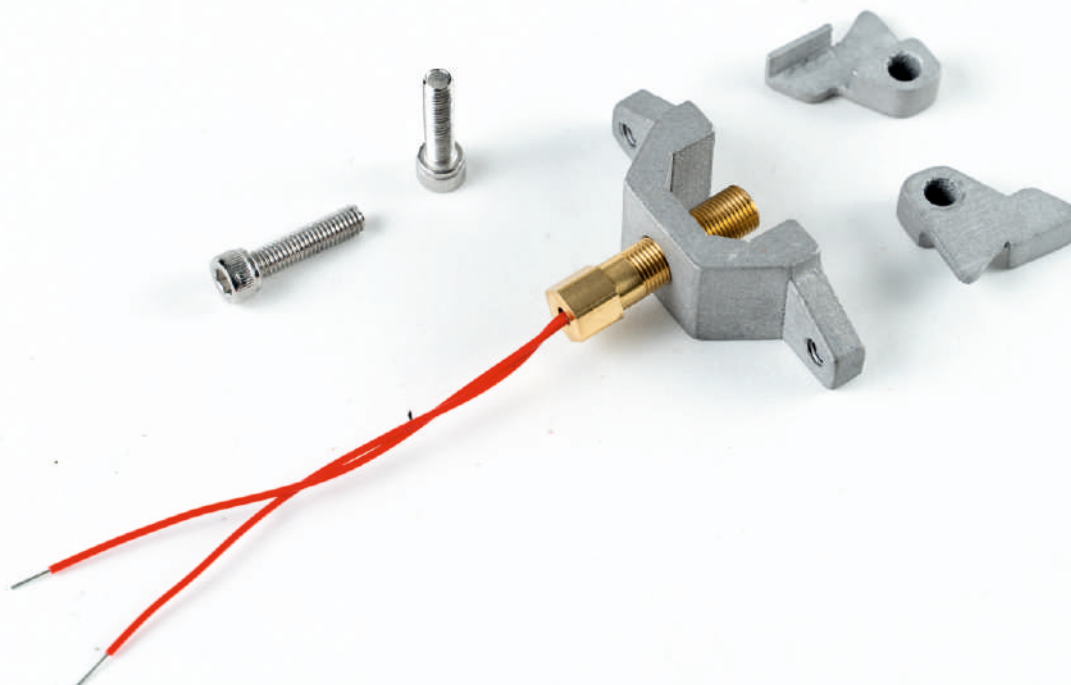
UL & CE Certified  
PRESSURE SWITCH



| TECHNICAL SPECIFICATIONS       |                                                                              |
|--------------------------------|------------------------------------------------------------------------------|
| Product Code                   | SM-RM4307                                                                    |
| Description                    | Pressure Switch SPDT (Switch Point 5Bar / 72.5 PSIG decreasing) NC & NO -Imp |
| Increasing Activation          | 130 PSIG ± 9 PSIG [9 BAR]                                                    |
| Decreasing Activation          | 72.5 PSIG ± 7 PSIG [5 BAR]                                                   |
| Max Pressure                   | 290 PSIG                                                                     |
| Connector                      | NONE.                                                                        |
| Fitting                        | M10 WITH DEFLATOR.                                                           |
| Fitting Material               | BRASS.                                                                       |
| Body Material                  | PLASTIC                                                                      |
| Electrical Rating              | 3A 240 VAC/28 VDC.                                                           |
| Wire Jacket/insulator Material | PVC                                                                          |
| O-ring Provided With Switch    | NBR-70 SHORE (7.8X1.9 mm)                                                    |
| Certification                  | UL, RoHS, CE                                                                 |

UL & CE Certified

## METRON ACTUATOR WITH MOUNTING BRACKET



### TECHNICAL SPECIFICATIONS

| TECHNICAL SPECIFICATIONS                     |                |          |                                                        |
|----------------------------------------------|----------------|----------|--------------------------------------------------------|
| Nomenclature                                 |                | UOM      | Technical Detail                                       |
| Description                                  |                | -        | Metron Actuator For Ceiling or Wall Mounted Atom X Pro |
| Product Code                                 |                | -        | SM-RM2431                                              |
| Minimum Piston Stroke Length (mm)            |                | (mm)     | 9.5                                                    |
| Body/Piston Material                         |                | -        | Brass/Stainless Steel                                  |
| Minimum Work Output (Joules)                 |                | Joules   | 4.9                                                    |
| Typical Peak Thrust (Newton's)               |                | Newton's | 1800                                                   |
| Service Life (Ambient) (Years)               |                | -Years   | 10                                                     |
| Operating Temperature (OC)                   |                | OC)      | -40 to +70                                             |
| Electrical Resistance Range (Ohms)           |                | Ohms     | 0.9 - 1.6                                              |
| Maximum No Fire Current (Amps)               | 30 sec pulse   | Amps     | 0.15                                                   |
|                                              | 0.05 sec pulse |          | 0.3                                                    |
| Minimum Single Fire Current (Amps)           | DC             | Amps     | 0.6                                                    |
|                                              | 0.01 sec pulse |          | 0.9                                                    |
| Recommended Series Firing Current (Amps)     |                | Amps     | 3                                                      |
| Maximum distance of Metron head from the QBD |                | mm       | 7                                                      |
| Merton Threads on body                       |                | -        | M 8 X 0.75                                             |

CONTROL PANEL



| TECHNICAL SPECIFICATIONS |                                                                                                                             |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Spare Part Code          | TI-002341                                                                                                                   |
| Base technology          | Flash-based processor                                                                                                       |
| Display                  | Backlit 128 x 64 LCD                                                                                                        |
| Remote status indicators | Supported via RS485 (maximum of 7)                                                                                          |
| Controls                 | Alphanumeric keypad, navigation keys and system keys for Reset, Mute, Silence/Resound and Sound alarms                      |
| Detection zones          | 3 x conventional detection zones (inc. support for I.S. barrier)                                                            |
| Extinguishing Zones      | 1 x flooding/extinguishing zones. Support for solenoid and metron type actuators                                            |
| Onboard sounder circuits | 3 x 700mA, 21-28VDC                                                                                                         |
| Onboard relays           | 4 x 1A, 30VDC relay outputs (Fire, Fault & 2 x programmable)                                                                |
| Auxilliary supply        | 2 x 400mA aux supply outputs 21-28VDC (1 switched)                                                                          |
| Programmable outputs     | Support for 8 additional programmable outputs via Exp-008                                                                   |
| Switch inputs            | 4 x programmable, 1 x manual trigger, 6 x release related (Mode Select, Valve Monitor, Pressure Monitor, Hold, Abort, Flow) |
| Countdown timer          | On board, large digit                                                                                                       |
| Mains supply             | 3A universal switch mode PSU                                                                                                |
| Battery capacity         | 24V 7Ah                                                                                                                     |
| Charger current          | 1A                                                                                                                          |
| USB ports                | 1 x USB port for PC connection                                                                                              |
| Event log                | 1000 event time-stamped                                                                                                     |
| Enclosure, colour        | Steel IP30, grey RAL7035                                                                                                    |
| Gable entry              | 17 knockouts in enclosure top, 13 in enclosure back                                                                         |
| Size (H x W x D)         | 330mm x 400mm x 95mm                                                                                                        |
| Weight                   | 6Kg                                                                                                                         |

## CONVENTIONAL WALL SOUNDER BEACON



### TECHNICAL SPECIFICATIONS

|                                           |                    |
|-------------------------------------------|--------------------|
| <b>Spare Part Code</b>                    | TI-002273          |
| <b>Power supply voltage range</b>         | 15Vdc – 40Vdc      |
| <b>Activated current load (High Vol.)</b> | 11-25 mA at 24 Vdc |
| <b>Acoustic Frequency range</b>           | 400-2900 Hz        |
| <b>Maximum acoustic Output</b>            | 100 dB(A) @ 1m     |
| <b>Visual Alarm Device Frequency</b>      | 0.5 Hz or 1 Hz     |
| <b>EN54-23 Classification</b>             | W-2.5-7            |
| <b>Temperature range (no icing)</b>       | -25°C to +70°C     |
| <b>Unit weight (inc Back box)</b>         | 290g               |
| <b>Max humidity (non condensing)</b>      | 95% RH             |
| <b>Ingress Protection</b>                 | IP 65              |

CONVENTIONAL OPTICAL SMOKE & THERMAL DETECTOR



| TECHNICAL SPECIFICATIONS         |                                                 |                          |
|----------------------------------|-------------------------------------------------|--------------------------|
| Spare Product Code               | TI-002265                                       | TI-002267 / TI-002268    |
| Alarm Temperature                | —                                               | 78oC (Class BS)          |
| Operating Voltage                | 10-30V DC                                       | 10-30V DC                |
| Standby Current Consumption      | 90µA @ 24V DC                                   | 90µA @ 24V DC            |
| Max. Alarm Current Consumption   | 40mA                                            | 40mA                     |
| Max. Remote Output Current       | 18mA                                            | 18mA                     |
| Ambient Temperature              | -10°C to +55°C                                  | -10°C to +55°C           |
| Relative Humidity                | 95% (non condensing)                            | 95% (non condensing)     |
| Dimensions (Diameter x Height)   | 110mm (Ø) x 54mm (depth)                        | 110mm (Ø) x 54mm (depth) |
| Standard                         | EN 54-7                                         | EN 54-7                  |
| LED Indicator                    | Bi-coloured LED indicator with 3600 visibility. | —                        |
| Certification/Approval Authority | LPCB                                            | LPCB                     |
| Protection Class                 | Ip40                                            | Ip40                     |

## DETECTOR BASE



| TECHNICAL SPECIFICATIONS      |                |
|-------------------------------|----------------|
| Spare Part Code               | TI-002270      |
| Dimensions                    | 110mm x 16mm   |
| Weight                        | 50g            |
| Temperature Range (no icing)  | -10°C to +55°C |
| Max humidity (non condensing) | 95% RH         |
| Cable size                    | 6mA @ 24Vdc    |

# APPLICATION AREAS

Ceasefire Modular Suppression System addresses the fire safety requirements of a diverse kind of premises. Its easy to install modular units can easily be fitted into any kind of area and its effective detection and extinguishing action can challenge any kind of fire without the need of human intervention.



## **Factories and Manufacturing Set-ups:**

A large number of production lines require the presence of fire for manufacturing. These factories face a higher fire risk than others. The Modular Suppression System can quickly launched at these fires to battle the flames while people vacate the premises.



## **Garment Stores and Godowns:**

Fires in deserted areas such as warehouses, storage areas, or in garment stores where there is a lot of material to fuel the fire can be left undetected till all the goods stored inside are completely destroyed. These fires can easily spread to adjacent storage areas. The Modular Suppression System is ideal to combat these blazes, taking on the fire on its own.

## **Schools and Hospitals:**

Schools are filled with little children, unable to fight fires and prone to panic. While in the case of hospitals, the patients are too frail to engage in firefighting. Placed at strategic places on the premises, the Modular Suppression System forms a first layer of protection and fights fires on its own. Allowing the staff in both institutions to focus their attention on the people and not the flames.





Adaptive Design



Intuitive Design

# CEASEFIRE MINI<sup>PRO</sup>

## MICRO-ENVIROMENT FIRE SUPPRESSION

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

The Mini Pro is a state-of-the-art micro-environment suppression system that comes equipped with a provision to be made monitorable by pressure switch. The size of your palm, it sits snugly inside small enclosed spaces that are vulnerable to fire. When the temperature of the micro-environment exceeds a preset limit, the Mini Pro 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!

### Evolved To Protect

At Ceasefire, our products have evolved to take the fight to the fire. First, came simple home extinguishers. Then, complete flooding systems followed by advanced suppression systems. And now, the Mini, the smallest firefighter that takes on a fire the moments it starts.



Tested by  
**bsi.**

### Monitoring Capability

Presence of a pressure port in Mini allows it to be connected to a pressure switch. This makes Mini monitorable in nature, so the user can always check the unit's readiness and can be alerted on its activation by integrating Mini with any third-party device such as a Fire Alarm System, a Standalone Sounder Beacon or a Building Management System.



### SIZES AVAILABLE:

|      |        |        |        |        |        |
|------|--------|--------|--------|--------|--------|
| Mini | 100 GM | 200 GM | 300 GM | 400 GM | 500 GM |
|------|--------|--------|--------|--------|--------|

## TYPES OF CEASEFIRE MINI PRO

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



### Mini Pro – Intuitive System

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



### Mini – Adaptive System

The Mini – Adaptive System is a direct suppression system designed for those micro-environments 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 micro-environment.

## COMPONENTS OF THE MINI PRO



### Heat-sensitive Glass Bulb:

The Mini's heat-sensitive glass bulb acts as the heat detector. In case the temperature inside the micro-environment 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 specifically designed glass bulbs depending on the temperature conditions of the micro-environment to be protected.

■ In low-temperature settings, like air-conditioned offices, hospitals, server rooms, etc., 57°C is the ideal temperature for electrical cabinets.

### QUARTZOID BULB KEY\*

|                 |                 |                |                |                 |
|-----------------|-----------------|----------------|----------------|-----------------|
| ● 57°C / 135°F  | ● 68°C / 155°F  | ● 79°C / 174°F | ● 93°C / 200°F | ● 141°C / 286°F |
| ● 182°C / 360°F | ● 227°C / 440°F |                |                |                 |

\*Quartzoid bulb in alternate temperature settings as mentioned above are available on request and would be dependent on MOQ for your region. Please check the availability and delivery time before ordering.

\*\*The pressure switch shown in the picture of Mini above is for representation purposes only. It is an optional device and is not a part of the standard products.

## FEATURES AND BENEFITS



### Ease Of Use

Being automatic, the Mini requires no prompt to start firefighting.



### Electronics-friendly

The Mini is filled with clean agent Fluoroketone (FK) that causes no damage to your electronics.



### Heat-sensitive Glass Bulb

The Mini's glass bulb acts as a heat sensor that detects a rise in surrounding temperature.



### Easy To Install With 2 Mounts

The Standard and Busbar mounts make installation a breeze.



### No Power Supply Required

The Mini uses a mechanical release mechanism to start firefighting.



### Maintenance-free

The Mini comes with a 5-year warranty and the assurance of no leakage.



### Fits Anywhere

The Mini can easily fit into the spots that are most prone to fire.



### Works On All Classes Of Fire

The Mini can be used on any kind of fire, making it a truly versatile firefighter.



### Monitorable Option

These automatic extinguishers can be upgraded to become monitorable by opting for a pressure switch and integrating it with third-party devices.



### Protects All Micro-Environments

Available as an Intuitive or Adaptive System, the Mini protects everywhere.



### Self-actuation

Since the Mini is self-actuated, it spots the fire and protects even when no one is around.



# TECHNICAL SPECIFICATIONS:

## INTUITIVE

| Nomenclature                 | Mini Intuitive<br>Automatic Fire Ext.<br>100gm SS SP Red | Mini Intuitive<br>Automatic Fire Ext.<br>200gm SS SP Red | Mini Intuitive<br>Automatic Fire Ext.<br>300gm SS SP Red | Mini Intuitive<br>Automatic Fire Ext.<br>400gm SS SP Red | Mini Intuitive<br>Automatic Fire Ext.<br>500gm SS SP Red |
|------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| Product Code                 | CF-001339AP                                              | CF-001341AP                                              | CF-001343AP                                              | CF-001345AP                                              | CF-001347AP                                              |
| Agent                        | Fluoroketone<br>(FK-5-1-12)                              | Fluoroketone<br>(FK-5-1-12)                              | Fluoroketone<br>(FK-5-1-12)                              | Fluoroketone<br>(FK-5-1-12)                              | Fluoroketone<br>(FK-5-1-12)                              |
| Certification Standards      | PED                                                      | PED                                                      | PED                                                      | PED                                                      | PED                                                      |
| CE                           | Yes                                                      | Yes                                                      | Yes                                                      | Yes                                                      | Yes                                                      |
| BSI Tested                   | Yes                                                      | Yes                                                      | Yes                                                      | Yes                                                      | Yes                                                      |
| Gross Weight (approx.)       | 0.665 kg                                                 | 0.90 kg                                                  | 1.10 kg                                                  | 1.25 kg                                                  | 1.45 kg                                                  |
| Net Mass (approx.)           | 100 gm                                                   | 200 gm                                                   | 300 gm                                                   | 400 gm                                                   | 500 gm                                                   |
| Maximum Volume Covered       | 0.130 m <sup>3</sup>                                     | 0.260 m <sup>3</sup>                                     | 0.390 m <sup>3</sup>                                     | 0.520 m <sup>3</sup>                                     | 0.650 m <sup>3</sup>                                     |
| Discharge Mechanism          | Automatic QBD*                                           | Automatic QBD*                                           | Automatic QBD*                                           | Automatic QBD*                                           | Automatic QBD*                                           |
| Can Construction             | Deep Drawn & MIG Welded                                  |                                                          | Deep Drawn & MIG Welded                                  |                                                          |                                                          |
| Valve/Cap Construction       | Machining                                                | Machining                                                | Machining                                                | Machining                                                | Machining                                                |
| External Coating             | Epoxy Polyester Powder                                   |                                                          | Epoxy Polyester Powder                                   |                                                          |                                                          |
| Operating Temp.              | -30°C to +60°C                                           | -30°C to +60°C                                           | -30°C to +60°C                                           | -30°C to +60°C                                           | -30°C to +60°C                                           |
| Min. Discharge Time          | 1 to 3 sec                                               | 1 to 3 sec                                               | 1 to 3 sec                                               | 1 to 3 sec                                               | 1 to 3 sec                                               |
| Warranty in Years            | 10                                                       | 10                                                       | 10                                                       | 10                                                       | 10                                                       |
| Working Pressure             | 10 Bar / 12 Bar                                          | 10 Bar / 12 Bar                                          | 10 Bar / 12 Bar                                          | 10 Bar / 12 Bar                                          | 10 Bar / 12 Bar                                          |
| Height of Fire Ext. (approx) | 184 mm                                                   | 284 mm                                                   | 276 mm                                                   | 331 mm                                                   | 386 mm                                                   |
| Dia. of Shell (OD)           | 40 mm                                                    | 40 mm                                                    | 50 mm                                                    | 50 mm                                                    | 50 mm                                                    |
| Hydrostatic Test Pressure    | 35 Bar                                                   | 35 Bar                                                   | 35 Bar                                                   | 35 Bar                                                   | 35 Bar                                                   |
| Body Thickness               | 1.2 mm                                                   | 1.2 mm                                                   | 1.2 mm                                                   | 1.2 mm                                                   | 1.2 mm                                                   |

\*Quartzoid bulb in alternate temperature settings as mentioned above are available on request and would be dependent on MOQ for your region. Please check the availability and delivery time before ordering.

### QUARTZOID BULB KEY

● 57°C / 135°F

● 68°C / 155°F

● 79°C / 174°F

● 93°C / 200°F

● 141°C / 286°F

● 182°C / 360°F   ● 227°C / 440°F

ADAPTIVE

| Nomenclature                   | Mini Intuitive Automatic Fire Ext. 100 gm SS SP Red | Mini Intuitive Automatic Fire Ext. 200 gm SS SP Red | Mini Intuitive Automatic Fire Ext. 300 gm SS SP Red | Mini Intuitive Automatic Fire Ext. 400 gm SS SP Red | Mini Intuitive Automatic Fire Ext. 500 gm SS SP Red |
|--------------------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| Product Code (w/50 mm Barrel)  | CF-001340AAP                                        | CF-001342AAP                                        | CF-001344AAP                                        | CF-001346AAP                                        | CF-001348AAP                                        |
| Product Code (w/100 mm Barrel) | CF-001340ABP                                        | CF-001342ABP                                        | CF-001344ABP                                        | CF-001346ABP                                        | CF-001348ABP                                        |
| Product Code (w/200 mm Barrel) | CF-001340ACP                                        | CF-001342ACP                                        | CF-001344ACP                                        | CF-001346ACP                                        | CF-001348ACP                                        |
| Agent                          | Fluoroketone (FK-5-1-12)                            | Fluoroketone (FK-5-1-12)                            | Fluoroketone (FK-5-1-12)                            | Fluoroketone (FK-5-1-12)                            | Fluoroketone (FK-5-1-12)                            |
| Certification Standards        | PED                                                 | PED                                                 | PED                                                 | PED                                                 | PED                                                 |
| CE                             | Yes                                                 | Yes                                                 | Yes                                                 | Yes                                                 | Yes                                                 |
| BSI Tested                     | Yes                                                 | Yes                                                 | Yes                                                 | Yes                                                 | Yes                                                 |
| Gross Weight (approx.)         | 0.665 kg                                            | 0.90 kg                                             | 1.10 kg                                             | 1.25 kg                                             | 1.45 kg                                             |
| Net Mass (approx.)             | 100 gm                                              | 200 gm                                              | 300 gm                                              | 400 gm                                              | 500 gm                                              |
| Maximum Volume Covered         | 0.130 m³                                            | 0.260 m³                                            | 0390 m³                                             | 0.520 m³                                            | 0.650 m³                                            |
| Discharge Mechanism            | Automatic QBD*                                      | Automatic QBD*                                      | Automatic QBD*                                      | Automatic QBD*                                      | Automatic QBD*                                      |
| Can Construction               | Deep Drawn & MIG Welded                             |                                                     | Deep Drawn & MIG Welded                             |                                                     |                                                     |
| Valve/Cap Construction         | Machining                                           | Machining                                           | Machining                                           | Machining                                           | Machining                                           |
| External Coating               | Epoxy Polyester Powder                              |                                                     | Epoxy Polyester Powder                              |                                                     |                                                     |
| Operating Temp.                | -30°C to +60°C                                      | -30°C to +60°C                                      | -30°C to +60°C                                      | -30°C to +60°C                                      | -30°C to +60°C                                      |
| Min. Discharge Time            | 1 to 3 sec                                          | 1 to 3 sec                                          | 1 to 3 sec                                          | 1 to 3 sec                                          | 1 to 3 sec                                          |
| Warranty in Years              | 10                                                  | 10                                                  | 10                                                  | 10                                                  | 10                                                  |
| Working Pressure               | 10 Bar / 12 Bar                                     | 10 Bar / 12 Bar                                     | 10 Bar / 12 Bar                                     | 10 Bar / 12 Bar                                     | 10 Bar / 12 Bar                                     |
| Height of Fire Ext. (approx)   | 184 mm                                              | 284 mm                                              | 276 mm                                              | 331 mm                                              | 386 mm                                              |
| Dia. of Shell (OD)             | 40 mm                                               | 40 mm                                               | 50 mm                                               | 50 mm                                               | 50 mm                                               |
| Hydrostatic Test Pressure      | 35 Bar                                              | 35 Bar                                              | 35 Bar                                              | 35 Bar                                              | 35 Bar                                              |
| Body Thickness                 | 1.2 mm                                              | 1.2 mm                                              | 1.2 mm                                              | 1.2 mm                                              | 1.2 mm                                              |

\*Quartzoid bulb in alternate temperature settings as mentioned above are available on request and would be dependent on MOQ for your region. Please check the availability and delivery time before ordering.

QUARTZOID BULB KEY

● 57°C / 135°F

● 68°C / 155°F

● 79°C / 174°F

● 93°C / 200°F

● 141°C / 286°F

● 182°C / 360°F

● 227°C / 440°F

# 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:

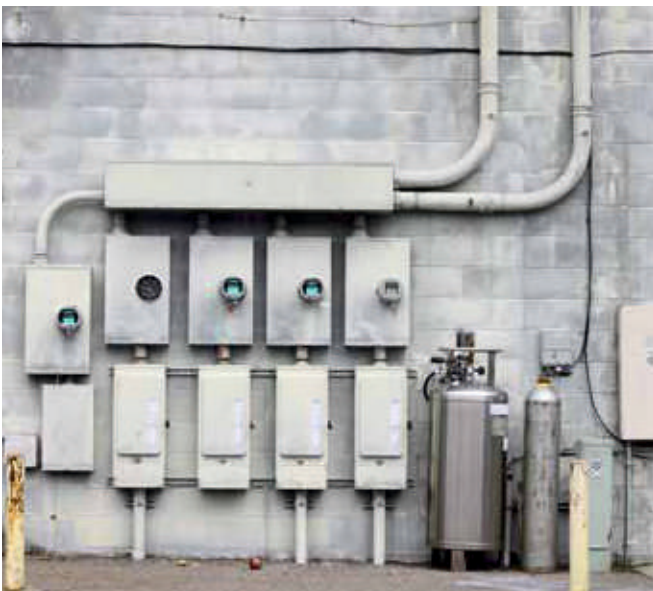
Old wiring. Irregular maintenance. A huge consumption of electricity. Electrical cabinets in factories are hotspots of fire, literally. Our tech team will help you determine how many Minis are required to protect the electrical cabinet in your factory so you can stop a fire before it ruins your business.



### **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.



# CEASEFIRE QUICK RESPONSE SYSTEM

## IN-PANEL TUBE BASED SUPPRESSION SYSTEM

Ceasefire's In-Panel Tube-Based System (CQRS) is an advanced 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 tube bursts open at that exact spot and forms a miniature nozzle. The pneumatic mechanism triggers the valve of the extinguisher and the extinguishing agent is released and sprayed onto the flame, dousing the fire instantaneously.

Because the extinguishing agent used is a clean gas, this system is effective to combat any kind of fire. This advanced technology makes this system entirely self-activated, and requires no human intervention once it has been installed.

**CERTIFIED BY LPCB TO  
LPS 1666 STANDARD**



**CERTIFICATIONS:**



**SIZES AVAILABLE: DIRECT**

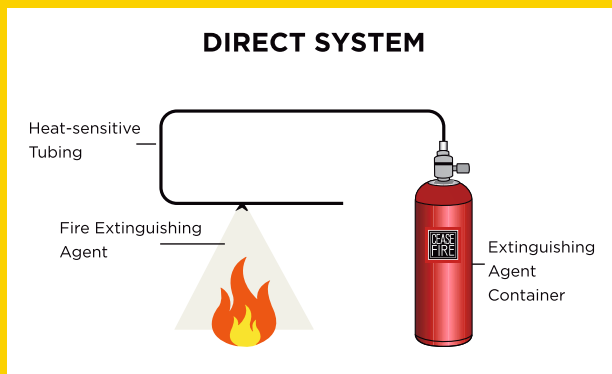
|                             |      |      |      |      |      |
|-----------------------------|------|------|------|------|------|
| Fluoroketone (Low Pressure) | 2 KG | 3 KG | 4 KG | 6 KG | 9 KG |
|-----------------------------|------|------|------|------|------|

**SIZES AVAILABLE: INDIRECT**

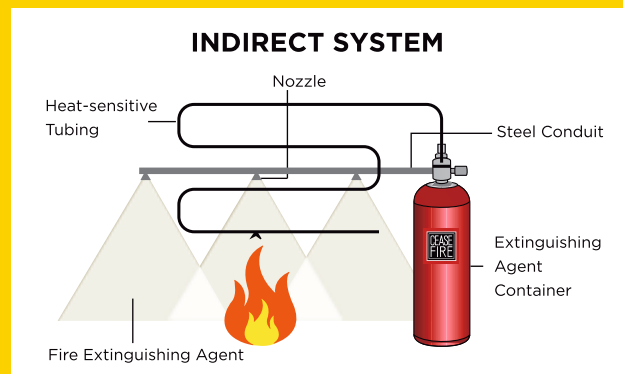
|                             |      |      |      |      |
|-----------------------------|------|------|------|------|
| Fluoroketone (Low Pressure) | 2 KG | 4 KG | 6 KG | 9 KG |
|-----------------------------|------|------|------|------|

## Types of Systems:

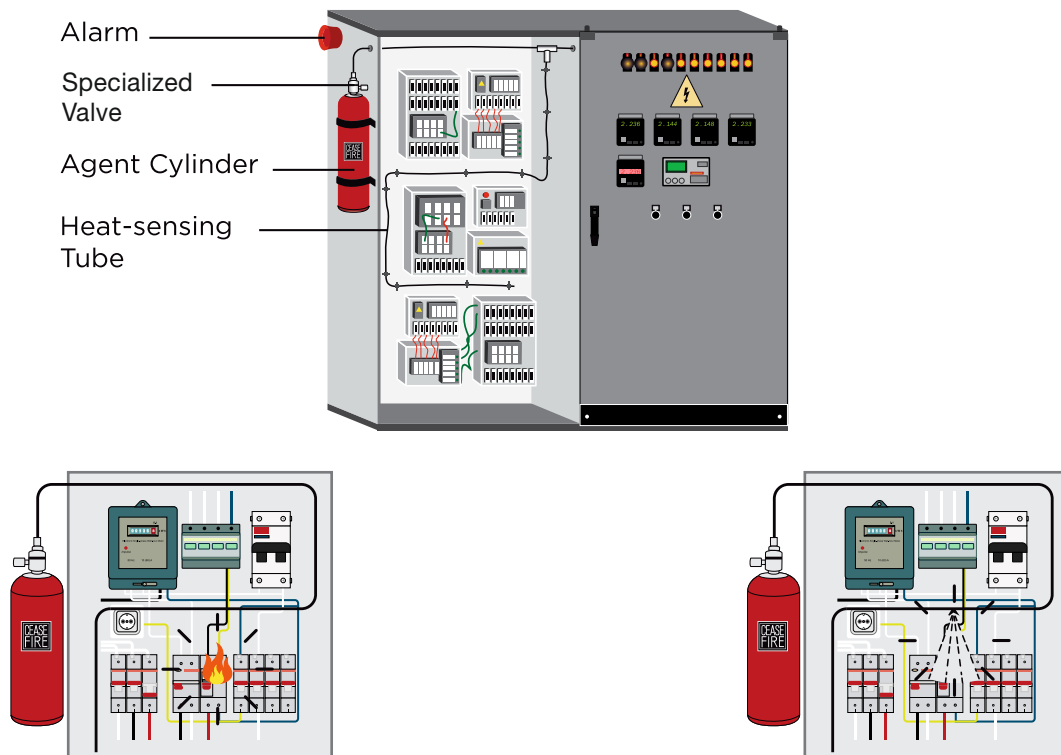
The heat-sensitive tubing acts as an extinguishing agent delivery system. The tube bursts at the point where the fire is detected, forms a miniature nozzle and sprays the extinguishing agent. Ideal for places where fires can break out in localised areas. This is available in low-pressure and high-pressure systems.



In the Indirect system, the heat-sensitive tubing only acts as a detection device. The extinguishing agent is delivered through a steel conduit and sprayed across the entire area through strategically placed nozzles. Ideal for areas where there is a chance of fires igniting at multiple points. This is available in low-pressure and high-pressure systems.



## The Complete System:



The 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  $180^{\circ}$  -  $200^{\circ}\text{C}$ , the heat-sensitive

tube bursts and activates the valve which in turn releases the extinguishing agent through the direct or indirect line. The extinguishing agent is sprayed out of the container, flooding the micro-environment and instantly extinguishing the flame.

# FEATURES AND BENEFITS



## 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. Fluoroketone is kinder on electronics than the majority of extinguishing agents available in the market.



## No Clean-up Required After Discharge:

After a discharge, the extinguishing agent can be removed by simple ventilation.



## Residue-free:

Based on clean gases the system won't leave behind oily residue, particulates or corrosive material.



## 24-hour Protection:

Automatic detection and actuation ensures that 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:

Fluoroketone based CQRS is LPCB approved to LPS 1666 standard.



## Rugged System:

Can withstand even harsh conditions where other types of detection systems might be rendered inadequate.



## Safe on Environment:

Fluoroketone (FK) gas is among the most potent yet environment friendly solutions with a Global Warming Potential (GWP) of less than 1 and a Ozone Depletion Potential (ODP) of 0.



## Free from F-gas Regulations:

FK being outside the purview of F-gas regulation gives freedom of operation to businesses and offers a long term trade solution.



## TECHNICAL SPECIFICATIONS:

| Nomenclature                | UOM | 2Kg FK-5-1-12 DLP system                                                           | 3Kg FK-5-1-12 DLP system                                                           | 4Kg FK-5-1-12 DLP system                                                           | 6Kg FK-5-1-12 DLP system                                                           | 9Kg FK-5-1-12 DLP system                                                           |
|-----------------------------|-----|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Product Code                | —   | CF-00792A                                                                          | CF-00792B                                                                          | CF-00792C                                                                          | CF-001358                                                                          | CF-001360                                                                          |
| Capacity of Agent           | KG  | 2                                                                                  | 3                                                                                  | 4                                                                                  | 6                                                                                  | 9                                                                                  |
| Agent                       | —   | Fluoroketone (FK-5-1-12)                                                           | Fluoroketone (FK-5-1-12)                                                           | Fluoroketone (FK-5-1-12)                                                           | Fluoroketone (FK-5-1-12)                                                           | Fluoroketone (FK-5-1-12)                                                           |
| Certification               | —   | PED<br>UKCA<br>LPS 1666-LPCB                                                       | PED<br>UKCA<br>LPS 1666-LPCB                                                       | PED<br>UKCA<br>LPS 1666-LPCB                                                       | PED<br>UKCA                                                                        | PED<br>UKCA-PED                                                                    |
| Diameter of Shell           | MM  | 108                                                                                | 140                                                                                | 140                                                                                | 160                                                                                | 175                                                                                |
| Total Height (approx.)      | MM  | 360                                                                                | 417                                                                                | 417                                                                                | 462                                                                                | 592                                                                                |
| MOC of Shell                | —   | M.S. Sheet (CRCA grade 2)                                                          | M.S. Sheet (CRCA grade 2)                                                          | M.S. Sheet (CRCA grade 2)                                                          | M.S. Sheet (CRCA grade 2)                                                          | M.S. Sheet (CRCA grade 2)                                                          |
| Mini. Wall Thickness        | MM  | 1.6                                                                                | 1.6                                                                                | 1.6                                                                                | 1.6                                                                                | 1.6                                                                                |
| Test Pressure               | BAR | 35                                                                                 | 35                                                                                 | 35                                                                                 | 35                                                                                 | 35                                                                                 |
| Anti-Corrosive Treatment    | —   | Outer surfaces are EP Powder coated having Thickness 50 Micron Min. RAL Shade 3000 | Outer surfaces are EP Powder coated having Thickness 50 Micron Min. RAL Shade 3000 | Outer surfaces are EP Powder coated having Thickness 50 Micron Min. RAL Shade 3000 | Outer surfaces are EP Powder coated having Thickness 50 Micron Min. RAL Shade 3000 | Outer surfaces are EP Powder coated having Thickness 50 Micron Min. RAL Shade 3000 |
| Service Pressure            | BAR | 15                                                                                 | 15                                                                                 | 15                                                                                 | 15                                                                                 | 15                                                                                 |
| Type of Operating Mechanism | —   | Automatic                                                                          | Automatic                                                                          | Automatic                                                                          | Automatic                                                                          | Automatic                                                                          |

# CEASEFIRE FK RANGE

| Nomenclature                                                                | UOM    | 2Kg FK-5-1-12 DLP system                                                                                                                                                                                                                                                              | 3Kg FK-5-1-12 DLP system                        | 4Kg FK-5-1-12 DLP system                        | 6Kg FK-5-1-12 DLP system                                                                                                                                                                                                                                                              | 9Kg FK-5-1-12 DLP system                        |
|-----------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Type of Pressure Gauge                                                      | —      | Magnetic Bourdon Tube Type                                                                                                                                                                                                                                                            | Magnetic Bourdon Tube Type                      | Magnetic Bourdon Tube Type                      | Magnetic Bourdon Tube Type                                                                                                                                                                                                                                                            | Magnetic Bourdon Tube Type                      |
| Type of Dis. Fitting & Length                                               | MM     | NA                                                                                                                                                                                                                                                                                    | NA                                              | NA                                              | NA                                                                                                                                                                                                                                                                                    | NA                                              |
| Type of valve                                                               | —      | Direct Low Pressure Valve (DLP) with two outlet                                                                                                                                                                                                                                       | Direct Low Pressure Valve (DLP) with two outlet | Direct Low Pressure Valve (DLP) with two outlet | Direct Low Pressure Valve (DLP) with two outlet                                                                                                                                                                                                                                       | Direct Low Pressure Valve (DLP) with two outlet |
| Length of Heat Sensing tube                                                 | METER  | 10m long tube from each valve outlet to the end of single detection tube run at each outlet of DLP valve. Up to 4 branches of heat detection tube can be connected to a single container using tee connectors subject to each branch length do not exceed 10m from each valve outlet. |                                                 |                                                 | 10m long tube from each valve outlet to the end of single detection tube run at each outlet of DLP valve. Up to 4 branches of heat detection tube can be connected to a single container using tee connectors subject to each branch length do not exceed 12m from each valve outlet. |                                                 |
| Size of equipment /enclosure can be protected by one system                 | —      | The volume of largest enclosure within the panel to be protected shall not exceed 2 cubic meters.                                                                                                                                                                                     |                                                 |                                                 | The volume of largest enclosure within the panel to be protected shall not exceed 3 cubic meters.                                                                                                                                                                                     |                                                 |
| Maximum number of compartments to be protected by one end of DLP valve.     | —      | There is no limitation on number of compartments to be protected however, the designer should follow the maximum tube length and volume limits as specified in points no. 5 & 6 above.                                                                                                |                                                 |                                                 |                                                                                                                                                                                                                                                                                       |                                                 |
| Maximum distance of the detector tube from potential secondary fire sources | MM     | 200mm (for cabinets with ventilations), 600mm (for cabinets without ventilation)                                                                                                                                                                                                      |                                                 |                                                 |                                                                                                                                                                                                                                                                                       |                                                 |
| Maximum free vent area of enclosure. (natural air flow)                     | Cm2    | At High level - 500<br>At low level – 157                                                                                                                                                                                                                                             | At High level - 500<br>At low level – 250       | At High level - 500<br>At low level – 500       | At High level - 500<br>At low level – 500                                                                                                                                                                                                                                             | At High level - 500<br>At low level – 500       |
| Maximum free vent area of enclosure. (forced air flow, high, outward)       | Cm2    | At High level - 500<br>At low level – 250                                                                                                                                                                                                                                             | At High level - 500<br>At low level – 500       | At High level - 500<br>At low level – 500       | At High level - 600<br>At low level – 600                                                                                                                                                                                                                                             | At High level - 600<br>At low level – 600       |
| Maximum Air ventilation rate (forced air flow, high level, outward)         | m³/sec | 0.025 to 0.035                                                                                                                                                                                                                                                                        | 0.05 to 0.07                                    | 0.05 to 0.07                                    | 0.05 to 0.07                                                                                                                                                                                                                                                                          | 0.05 to 0.07                                    |
| Maximum free vent area of enclosure. (forced air flow, Low level, inward)   | Cm2    | At High level - 250<br>At low level – 250                                                                                                                                                                                                                                             | At top - 500<br>At Bottom – 250                 | At top - 500<br>At Bottom – 250                 | At top - 600<br>At Bottom – 300                                                                                                                                                                                                                                                       | At top - 600<br>At Bottom – 300                 |
| Maximum Air ventilation rate (forced air flow, low level, inward)           | m³/sec | 0.02 to 0.25                                                                                                                                                                                                                                                                          | 0.025 to 0.035                                  | 0.025 to 0.035                                  | 0.025 to 0.035                                                                                                                                                                                                                                                                        | 0.025 to 0.035                                  |
| Heat sensing tube pressure operation range.                                 | °C     | 9-23 Bar @ 20°C                                                                                                                                                                                                                                                                       | 9-23 Bar @ 20°C                                 | 9-23 Bar @ 20°C                                 | 9-23 Bar @ 20°C                                                                                                                                                                                                                                                                       | 9-23 Bar @ 20°C                                 |

| Nomenclature                | UOM   | 2Kg FK-5-1-12 DLP system        | 3Kg FK-5-1-12 DLP system        | 4Kg FK-5-1-12 DLP system        | 6Kg FK-5-1-12 DLP system        | 9Kg FK-5-1-12 DLP system        |
|-----------------------------|-------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Operating Temperature Range | °C    | -20°C to 60°C                   | -20°C to 60°C                   | -20°C to 60°C                   | -20°C to 60°C                   | -20°C to 60°C                   |
| Applicable to Type of Fire  | —     | A, B, & Electrical Started Fire | A, B, & Electrical Started Fire | A, B, & Electrical Started Fire | A, B, & Electrical Started Fire | A, B, & Electrical Started Fire |
| Product Warranty            | YEARS | 1                               | 1                               | 1                               | 1                               | 1                               |



# TECHNICAL SPECIFICATIONS:

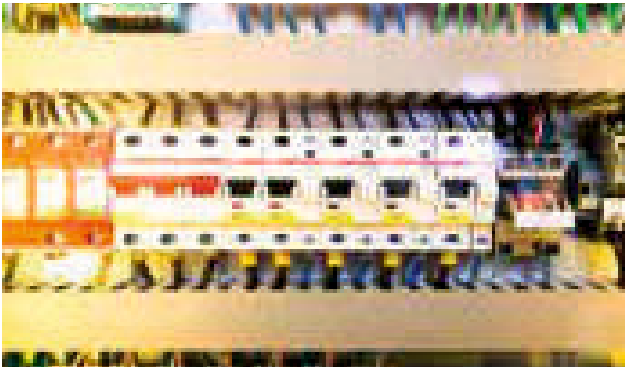
| Nomenclature                | UOM | 2kg- FK 5-1-12 clean agent with (ILP) with integrated ball valve.                             | 4kg- FK 5-1-12 clean agent with (ILP) with integrated ball valve .                            | 6kg- FK 5-1-12 clean agent with (ILP) with integrated ball valve.                             | 9kg- FK 5-1-12 clean agent with (ILP) with integrated ball valve.                             |
|-----------------------------|-----|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Product Code                | —   | CF-001355                                                                                     | CF-001357                                                                                     | CF-001359                                                                                     | CF-0013561                                                                                    |
| Capacity of Agent           | KG  | 2 (-5%)                                                                                       | 4 (-5%)                                                                                       | 6 (-5%)                                                                                       | 9 (-5%)                                                                                       |
| Agent                       | —   | Fluoroketone (FK 5-1-12)                                                                      | Fluoroketone (FK 5-1-12)                                                                      | Fluoroketone (FK 5-1-12)                                                                      | Fluoroketone (FK 5-1-12)                                                                      |
| Certification               | —   | PED<br>UKCA<br>BSI TESTED                                                                     | PED<br>UKCA<br>BSI TESTED                                                                     | PED<br>UKCA<br>BSI TESTED                                                                     | PED<br>UKCA<br>BSI TESTED                                                                     |
| Diameter of Shell           | MM  | 108                                                                                           | 140                                                                                           | 160                                                                                           | 175                                                                                           |
| Total Height (approx.)      | MM  | 403                                                                                           | 465                                                                                           | 510                                                                                           | 635                                                                                           |
| MOC of Shell                | —   | M.S. Sheet (CRCA )                                                                            | M.S. Sheet (CRCA )                                                                            | M.S. Sheet (CRCA )                                                                            | M.S. Sheet (CRCA )                                                                            |
| Mini. Wall Thickness        | MM  | 1.6                                                                                           | 1.6                                                                                           | 1.6                                                                                           | 1.6                                                                                           |
| Test Pressure               | BAR | 35                                                                                            | 35                                                                                            | 35                                                                                            | 35                                                                                            |
| Anti-Corrosive Treatment    | —   | Outer surfaces are EP Powder coated having Dry Film Thickness 50 Micron (Min.) RAL Shade 3000 | Outer surfaces are EP Powder coated having Dry Film Thickness 50 Micron (Min.) RAL Shade 3000 | Outer surfaces are EP Powder coated having Dry Film Thickness 50 Micron (Min.) RAL Shade 3000 | Outer surfaces are EP Powder coated having Dry Film Thickness 50 Micron (Min.) RAL Shade 3000 |
| Service Pressure            | BAR | 15                                                                                            | 15                                                                                            | 15                                                                                            | 15                                                                                            |
| Type of Operating Mechanism | —   | Automatic / Manual                                                                            | Automatic / Manual                                                                            | Automatic / Manual                                                                            | Automatic / Manual                                                                            |
| Type of Pressure Gauge      | —   | Magnetic Bourdon Tube Type                                                                    | Magnetic Bourdon Tube Type                                                                    | Magnetic Bourdon Tube Type                                                                    | Magnetic Bourdon Tube Type                                                                    |
| Type of Dis. pipe & Length  | MM  | Delivery pipe OD 10MM x 1MM Wall Thk. 5M                                                      | Delivery pipe OD 10MM x 1MM Wall Thk. 8 M                                                     | Delivery pipe OD 10MM x 1MM Wall Thk. 10M (Stright Line) 15 M (Ring Form)                     | Delivery pipe OD 10MM x 1MM Wall Thk. 12 M (Stright Line) 20 M (Ring Form)                    |
| No of Max. nozzles          | —   | 2                                                                                             | 4                                                                                             | 6                                                                                             | 8                                                                                             |

| Nomenclature                | UOM  | 2kg- FK 5-1-12 clean agent with (ILP) with integrated ball valve. | 4kg- FK 5-1-12 clean agent with (ILP) with integrated ball valve . | 6kg- FK 5-1-12 clean agent with (ILP) with integrated ball valve. | 9kg- FK 5-1-12 clean agent with (ILP) with integrated ball valve. |
|-----------------------------|------|-------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|
| Type of valve               | —    | Indirect Low Pressure Valve (ILP) with Single outlet              | Indirect Low Pressure Valve (ILP) with Single outlet               | Indirect Low Pressure Valve (ILP) with Single outlet              | Indirect Low Pressure Valve (ILP) with Single outlet              |
| Operating Temperature Range | °C   | -20 to 60                                                         | -20 to 60                                                          | -20 to 60                                                         | -20 to 60                                                         |
| Applicable to Type of Fire  | —    | A, B, & Electrical Started Fire                                   | A, B, & Electrical Started Fire                                    | A, B, & Electrical Started Fire                                   | A, B, & Electrical Started Fire                                   |
| Product Warranty            | YEAR | 1                                                                 | 1                                                                  | 1                                                                 | 1                                                                 |

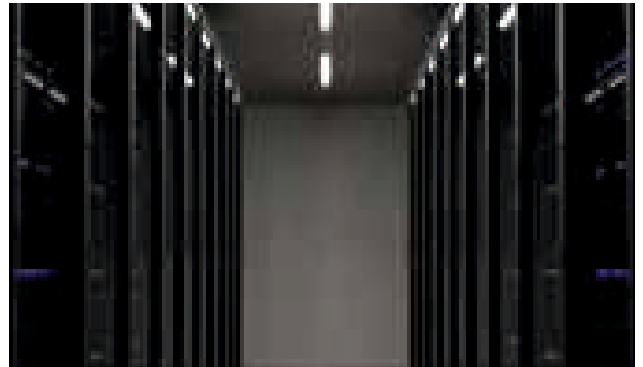


# APPLICATION AREAS

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Electrical Panels



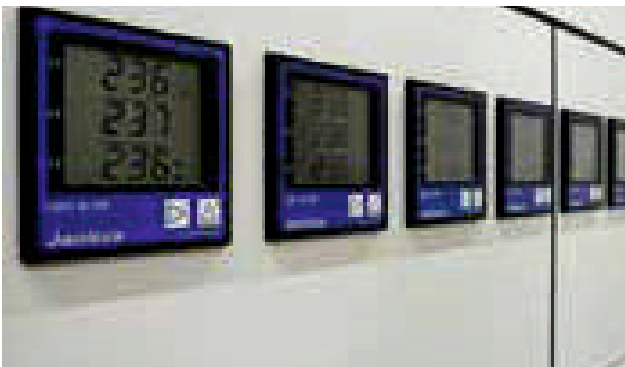
Server Racks



Diagnostic Machines



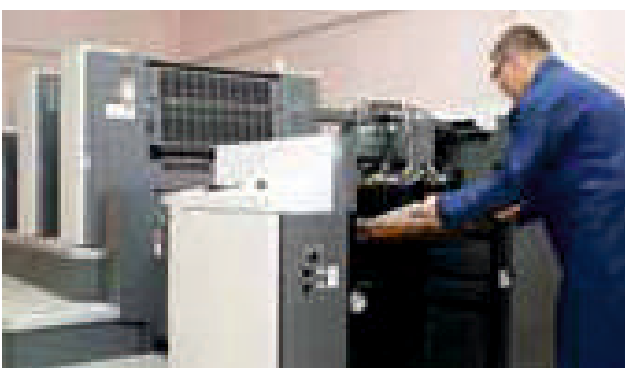
Gensets



Electrical Cabinets



Mobile Tower Switching Areas



Printing Press



UPS Rooms

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Please check the product specifications at the time of placing your order. Specifications can change without notice due to our continuous R&D and product improvisation initiatives.

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