



Date: November 19, 2025

## Manufacturer's Authorization Letter

WHEREAS we **Ceasefire Industries Pvt Ltd** who are official manufacturers of **Ceasefire Quick Response System (CQRS)** having factories at **E6, UPSIDC Industrial Area, Selaqui, Dehradun - 248011, Uttarakhand, India**, do hereby authorize **Raktos Egypt for Marine & Engineering Services** with office address **Watania Mall, Salah El Din Street, Ataren, Alexandrina, Egypt** hereby grants exclusive distribution rights for the sale and promotion of our products within the Egypt market.

This exclusivity authorizes your organization to represent, market, distribute, and sell our products in the designated territory, subject to the terms and conditions as per the agreement mutually agreed upon. During the period of this agreement, no other distributor or agent will be appointed by us for the Egypt region for the specified product range.

Signed:



Name: **Rohit Harjani**

In the capacity of: **Senior Vice President – International Business**

Duly authorized to sign the Authorization for and on behalf of: **Ceasefire Industries Pvt Ltd**

Date: November 19, 2025

EXTENSIVE RANGE OF FIRE EXTINGUISHERS | SPECIAL APPLICATION FIRE EXTINGUISHERS | MICRO ENVIRONMENT FIRE SUPPRESSION | FIRE SUPPRESSION SYSTEMS  
KITCHEN FIRE SUPPRESSION SYSTEMS | FIRE ALARM SYSTEMS | FIRE PROJECTS | ANNUAL MAINTENANCE CONTRACT | FIRE TRAINING | REFILLING | ACCESSORIES

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## IN-PANEL TUBE BASED SUPPRESSION SYSTEM (CQRS)

### PRODUCT OVERVIEW

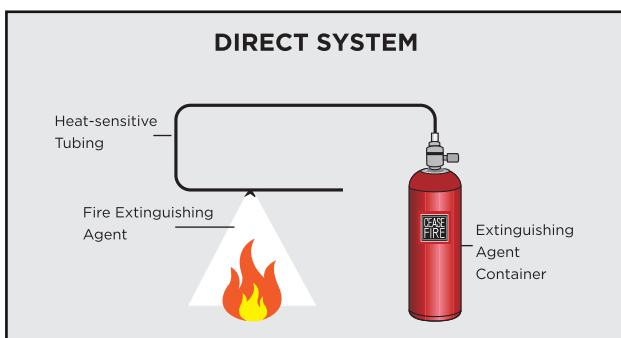
Research shows that most fires start with a spark in electrical mains, in the wiring in the server, in a genset, or deep in an automobile engine or industrial machinery. And by the time you notice the fire and can take action, it's too late because the fire has already destroyed everything inside.

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

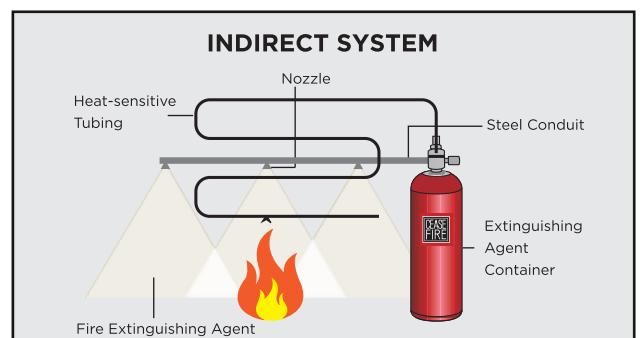


Ceasefire's In-Panel Tube-Based System (CQRS) is a revolutionary firefighting solution that combines ground-breaking technology with functional simplicity to keep what's precious safe.

### Based on two agent explosion technologies, CQRS is available as:

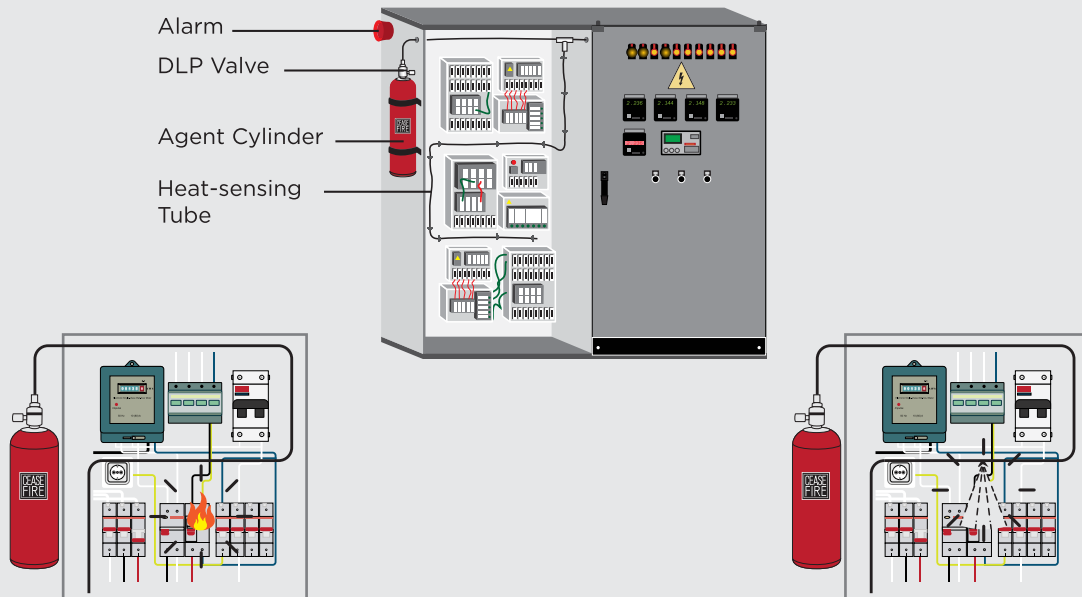


In the Direct system, heat-sensitive tubing also acts as an extinguishing agent delivery system. When a fire is detected, the tube bursts at that point, forming a miniature nozzle that sprays the extinguishing agent. Ideal for places where fires can break out in localized areas.



In the Indirect system, heat-sensitive tubing only acts as a detection device. In the event of a fire, the extinguishing agent is delivered through a steel pipe and sprayed across the entire area through strategically placed nozzles. Ideal for areas where fires can break at multiple points.

**THE COMPLETE SYSTEM:**



The single heat-sensitive polymer tube is connected to an extinguishing agent container via a pressure release valve. When a fire breaks out, it results in a drastic increase in temperature. When the temperature exceeds 150–180°C, the heat-sensitive tubing bursts, releasing the extinguishing agent via the direct or indirect line. The extinguishing agent is sprayed out of the container, flooding the micro-environment and instantly extinguishing the flame. Both are available in low and high-pressure variants.

The system is based on a wide array of extinguishing agents, making it compatible with a large kind of premises and effective against various fire hazards.

**LOW PRESSURE SYSTEMS**

CQRS - ABC POWDER MAP 90
CQRS - FLUORINE FREE FOAM
CQRS - CLEAN AGENT (FK-5-1-12)
<b>CQRS - CLEAN AGENT (HFC-227ea)</b>
CQRS - CLEAN AGENT (HFC-236fa)

**HIGH PRESSURE SYSTEMS**

CQRS - CO <sub>2</sub>
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## CQRS - CLEAN AGENT (HFC-227ea) - DIRECT

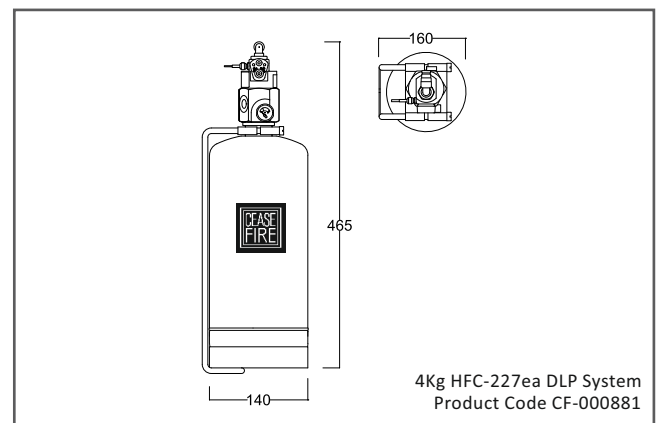
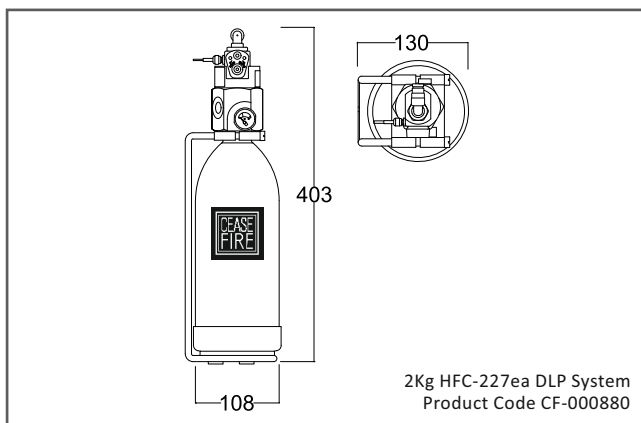
### PRODUCT OVERVIEW

The revolutionary Ceasefire Quick Response System combines ground-breaking technology with functional simplicity. When the flame comes in contact with the heat-sensitive tubing and reaches a temperature of 150 - 180°C, the tubing bursts open at that exact spot and forms a miniature nozzle. The pneumatic mechanism triggers the valve of the extinguisher and sprays the extinguishing agent out of the tube directly onto the flame, dousing the fire instantaneously.

Because the extinguishing agent used is HFC-227ea, this system is effective in combating any type of fire. This is an ideal solution in case of fire in a single location, whether small or large and can be designed to suit the specific needs of the premises.



### ENGINEERING DRAWINGS





TECHNICAL SPECIFICATIONS					
Product Code	UOM	CF-000880	CF-000881	CF-001071	CF-000795A
Description	—	2Kg HFC-227ea DLP system	4Kg HFC-227ea DLP system	6Kg HFC-227ea DLP system	9Kg HFC-227ea DLP system
Capacity of Agent	Kg	2	4	6	9
Certification	—	PED LPS 1666-LPCB	PED LPS 1666-LPCB	PED	PED
Diameter of Shell	mm	108	140	160	175
Total Height (approx.)	mm	360	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)
Mini. Wall Thickness	mm	1.6	1.6	1.6	2.0
Test Pressure	Bar	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
Service Pressure	Bar	15	15	15	15
Type of Operating Mechanism	—	Automatic	Automatic	Automatic	Automatic
Type of Pressure Gauge	—	Magnetic Bourdon Tube Type	Magnetic Bourdon Tube Type	Magnetic Bourdon Tube Type	Magnetic Bourdon Tube Type



Product Code	UOM	CF-000880	CF-000881	CF-000880	CF-000881
Type of Dis. Fitting & Length	mm	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
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.	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.	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 2 cubic meters.	The volume of largest enclosure within the panel to be protected shall not exceed 3 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.	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.	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.	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)	200mm (for cabinets with ventilations), 600mm (for cabinets without ventilation)	200mm (for cabinets with ventilations), 600mm (for cabinets without ventilation)	200mm (for cabinets with ventilations), 600mm (for cabinets without ventilation)
Maximum free vent area of enclosure. (natural air flow)	cm <sup>2</sup>	At High level - 500 At low level - 157	At High level - 500 At low level - 250	At High level - 500 At low level - 500	At High level - 500 At low level - 500
Maximum free vent area of enclosure. (forced air flow, high, outward)	cm <sup>2</sup>	At High level - 500 At low level - 250	At High level - 500 At low level - 500	At High level - 600 At low level - 600	At High level - 600 At low level - 600
Maximum Air ventilation rate (forced air flow, high level, outward)	m /sec	0.025 to 0.035	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)	cm <sup>2</sup>	At High level - 250 At low level - 250	At top - 500 At Bottom - 250	At top - 600 At Bottom - 300	At top - 600 At Bottom - 300
Maximum Air ventilation rate (forced air flow, low level, inward)	m /sec	0.02 to 0.25	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

Product Code	UOM	CF-000880	CF-000881	CF-000880	CF-000881
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	YEARS	1	1	1	1

\* It includes Empty Extinguisher, Contents and Plastic Base only (where applicable) - not including hose, Wall bracket or Packaging.

\*\* Includes all packaging, hose / horn and bracket

## CERTIFICATIONS



## PRODUCT PICTURES



2 kg



4 kg