



# CEASEFIRE

The Fire and Safety Experts



**Over 500**  
Quality Products



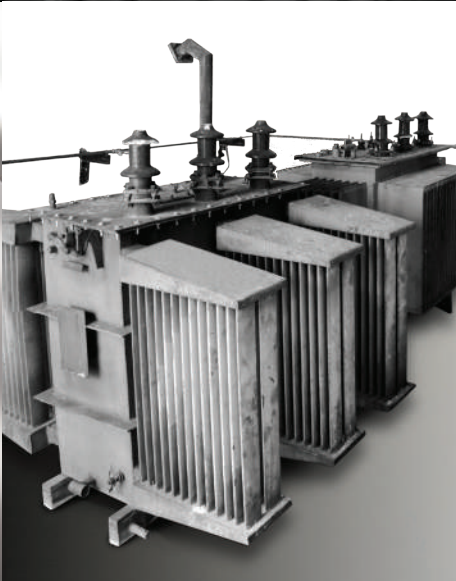
**State-of-the-Art**  
Technology



**International**  
Certifications

**Watermist  
Suppression  
Systems**





# Ceasefire is ranked amongst the top fire safety brands in the Indian subcontinent.



Airports, aircraft, the Indian Railways, ISRO, ships, factories, warehouses, malls, stadiums, offices, cars, hospitals, schools, houses and Indian Army Ammunition Depots across the country are protected by Ceasefire.

And of course, millions of Indians who use these facilities.



In a market where many manufacturing units are little more than assembly operations, Ceasefire's products are deeply researched, quality-tested and engineered to perform to the highest standards. Manned by over 200 skilled and semi-skilled employees, our manufacturing unit is equipped for backward integration on virtually every component of an extinguisher, from its outer body to the tiniest valve. This means a greater cost to us, but the resulting quality is faultless.



Ceasefire designs products at the in-house Design Centre; and produces critical components at the hi-tech Ceasefire manufacturing unit in Dehradun, India.



An advanced MIG CO<sub>2</sub> welding station. A state-of-the-art paint shop for weather protection and seamless finish.



An in-house valve manufacturing unit. A world class deep draw machine equipped with advance hydraulics system.



And a testing lab where a battery of the most stringent in-ward and out-ward tests determine whether or not a product is fit to be sold.

**Today, a Ceasefire product is sold every 60 seconds, and used in a real life fire emergency every 5 minutes.**

**We've never let anyone down.**







Today, the fire safety industry across the world is witnessing revolutionary advancements in technology. However, an enormous number of buildings still deploy old-fashioned water-based suppression systems. Even though water, as we know, is the oldest and most natural of all extinguishing agents with a massive cooling power, it still has its own set of limitations.

## ARE YOU HARNESSING THE ENORMOUS POTENTIAL OF WATER?

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Despite its firefighting prowess, water has its limitations when used in its natural form.

The first and foremost limitation of a water-based suppression system is that it is not designed to protect the property. It's built to kill the fire with total flooding and stop it from spreading to the neighbouring building. Total flooding in turn causes huge collateral damages and total loss of assets. To recover from this loss and to get the business functional again takes a much longer time and affects the business in a harsh way.

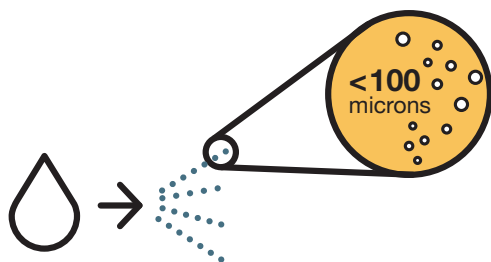
The flooding in process also leads to a large amount of wastage as only a small percentage of the water discharged actually comes in contact with the fire. In addition to this, to have such

quantity of water available at the time of fire accident requires large water resources or storage tanks. To make matters worse, water in its natural form is not compatible with all types of fire. Like using water on oil fire or an electrically started blaze can be catastrophic.

The need of the hour today is cutting-edge technology that causes the least collateral damage whilst maintaining the green benefits of water as an extinguishing agent.

**Ceasefire brings to you its pioneer Watermist-based Suppression System that is fully equipped to detect and suppress fires automatically, without any collateral damage.**

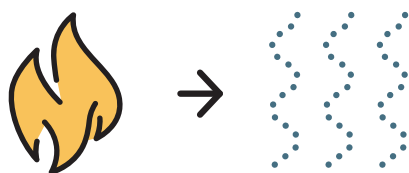
## WATERMIST – THE PARADIGM TECHNOLOGY



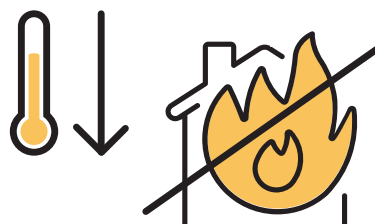
This pioneering technology breaks water down into a fine mist of less than 100 microns.



This mist is then thrown at the fire with an optimal kinetic force, covering a large surface area.



As soon as the mist comes in contact with the fire, it instantly turns into steam, increasing its volume 1600 times over.



The steam envelops the flames, cutting off the oxygen supply and reducing the temperature to below combustion level. This ensures that even the largest fire succumbs to Watermist technology in seconds.

### EVAPORATION SURFACE AREA & SHIELDING SURFACE AREA

Various parameters like the force with which water is discharged, the droplet size of water and the nozzle coverage area make the Watermist system ultra effective on fires. Conventional water-based suppression systems work on the principle of cooling the combustible surface with large droplets of water and hence totally drenching assets.

However, research has shown that the droplet size plays a vital role in killing the fire while protecting assets from collateral damage. When these fine droplets of water enter a fire zone, there is a rapid exchange of heat which cools the fire and converts the droplets into steam. The smaller the size of the droplet, the

larger is the surface area that it can cover for heat absorption and evaporation, thus resulting in lesser consumption of water to suppress the fire.



# CEASEFIRE WATERMIST SUPPRESSION SYSTEM

Ceasefire's revolutionary Watermist-based Suppression System is fully equipped to detect and suppress fires automatically without leaving any collateral damage.

A network of detection devices, special Watermist nozzles, pumps, filters and water tank connectors are installed indoors. In the event of a fire, the system kicks into action in seconds. The specially designed nozzles dispense Watermist, made up of microscopic droplets of water (below 100 microns), onto the fire affected area, quickly putting out the flames as well as bringing the temperature down to non-combustion levels. Entirely self-activated and requiring no human intervention, this integrated system provides a complete detection and suppression solution, working quickly to save property and lives.

What's more, since it is Watermist-based, it has no long-term effect on the work environment and operations can resume with no time lost.



## CUSTOMISATION FOR COMPLETE PROTECTION

We believe that no two premises are alike and there is a need for custom-made configuration for each requirement. Ceasefire's Watermist-based Suppression System comes to rescue with an array of key component variants that can be assembled in various configurations

based on the customised requirement of the premises. This unique suppression system will comprise the detection sensors, mist generation technology and Watermist nozzles best suited for that premise.





# WATERMIST GENERATION TECHNOLOGY

Watermist can only be generated when water is passed through the nozzles at a very high pressure. Ceasefire uses three technologies by which water can be converted to be a more potent fire extinguishing agent:

## PUMP-BASED SYSTEM



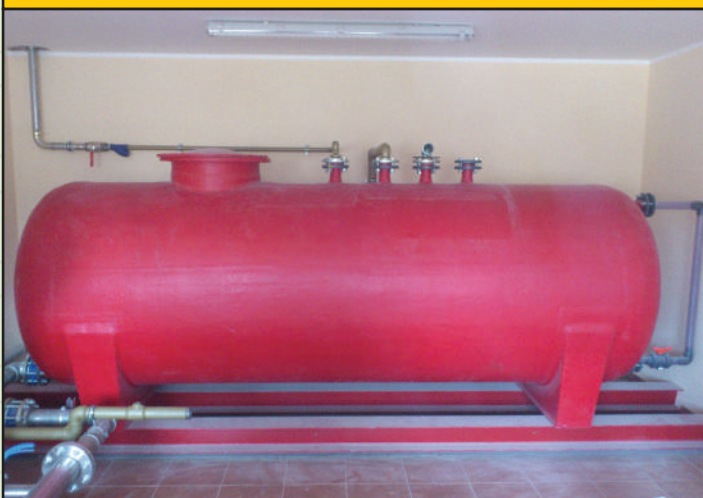
A large area where higher quantities of Watermist may be required to curb a fire needs a bigger source of water. In such cases, the water is stored in a local tank/reservoir which is connected to a pump and in the event of a fire, the high-powered pump propels water from the reservoir/tank efficiently to the pipes and specially designed nozzles.

## ROTOR-BASED SYSTEM



In cases where suppression systems protect smaller areas, a self-contained pulse mist-based system is used. Water is stored in nitrogen pressurised cylinders connected with detectors, pipes and nozzles. In an event of fire, the pressurised water is pushed through the specialised rotor and a little propellant (nitrogen) is also released into the water pipe via an air tube to create a bubbled mixture of water and nitrogen which arrives at the nozzle.

## LARGE QUANTITY OF STORED COMPRESSED AIR



In this system, compressed air is stored separately to be mixed with water only at the time of activation. When the system gets activated, water and compressed air mix together from two different sources to spray Watermist through the specialized nozzle.



# DETECTION SENSORS

The detectors guarantee a first line of safety. Ceasefire's detection range is the result of extensive hardware and software product design and development. Our stringent standards extend to all our products, including detectors. These detection devices communicate with the control panel, sending a signal that activates the system the very second a fire is detected.



**The extensive range of detectors provides flexibility of solutions and application-specific support :**



## **Conventional Heat Detector:**

There are two variants in heat detectors -

**Fixed Temperature Detector:** Heat detection is achieved by the sensor continually measuring the ambient temperature of an area using Thermistor and acknowledging when the temperature exceeds the fixed point.

**Rate of Rise Detector:** Here heat detection is achieved by the sensor measuring not only the temperature rise but also the speed at which it's rising.



## **Conventional Smoke Detector:**

This detection technology works either by the photoelectric method or the ionization method. In both, the sensor continuously analyses the air for the presence of smoke particles.



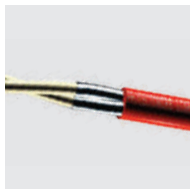
## **Aspiration Detection System:**

It consists of a central detection unit which draws air through a network of pipes to detect smoke. It may also require a fan unit to draw in a sample of air from the protected area through its network of pipes.



## **Flame Detector:**

This is an optical equipment for the detection of flames.



## **Linear Heat Sensing Cable:**

A line-type form of fixed temperature heat detection cable that detects fire right where it occurs.



## **Heat Sensing Tube:**

The heat sensing tube is a pneumatic polymer tube that is designed to burst at a specific temperature point and actuate the system.

# NOZZLES

The minimal water usage, combined with the fact that Ceasefire nozzles generate super fine Watermist droplets, means the mist quickly vapourises in the fire zone and surrounding atmosphere and causes no harm to delicate equipment. By adjusting the nozzle variant, water volume and air pressure parameters, we can control the qualities of the mists it generates. Droplets can range in size from 10 microns to 150 microns while mist streams may be limited to several centimetres or extended up to 12 metres. This unique flexibility allows Ceasefire to create optimal mist solutions for a broad range of applications.

All the products at Ceasefire are extensively tested in the world's largest, purpose-built, state-of-art fire test laboratories to guarantee that even the largest scale designs are fully proven in real fire conditions.



**Our all-new range of Watermist Nozzles is broadly classified into:**

## SINGLE FLUID-BASED SYSTEM

Here water and air have a single inlet and outlet. Under this application we have two types of nozzles -

**Open Nozzles** are those that are pressurised with water till the deluge or solenoid valve, and

**Closed Nozzles** are those that are pressurised with the water up till the nozzle.



## TWIN FLUID TECHNOLOGY

Here there are two separate inlets and outlets for water and air to form Watermist. Only open nozzles can be utilised in this application.



Please find the detailed list of Ceasefire Nozzles variants and their functionality mentioned in the technical specifications section.

# APPLICATIONS

## GENERATOR AUTO-QUELL SYSTEM



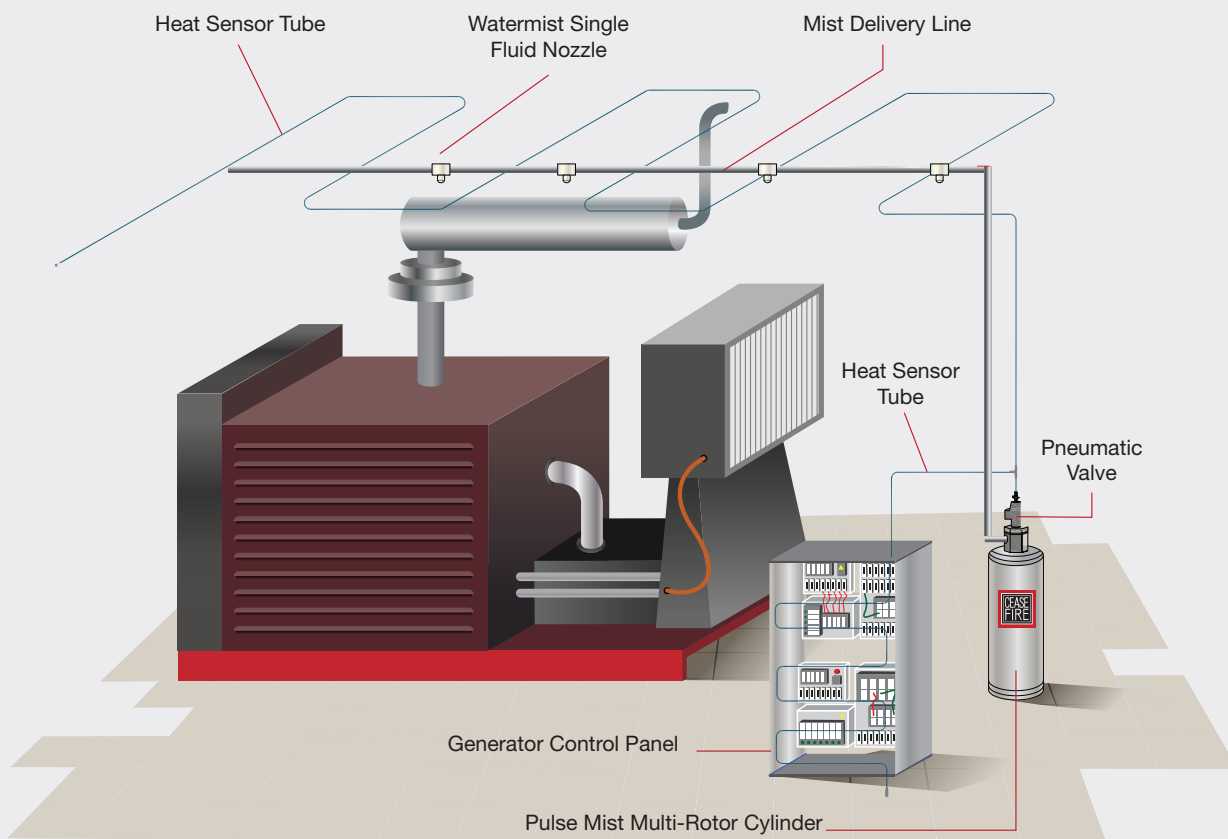
Generators produce a lot of heat. They're also powered by fuel, and placed in areas that are difficult to access quickly. By the time a fire is detected and put out, it could be too late.

The Ceasefire Watermist Suppression System is fully equipped to detect and suppress such fires automatically, without any collateral damage. Being Watermist-based, it tackles fires efficiently, and helps reduce the time and money taken to clean up and re-establish damaged property. With non-damaging, non-corrosive technology, it also ensures zero downtime.

### Features:

- Works on A, B, C and electrical fires
- Does not require any power supply
- Inbuilt detection mechanism eliminates the need for human intervention
- Offers 24x7 protection
- Flexible tubing accesses difficult areas easily
- Environment-friendly
- No collateral damage
- Economical replacement for traditional sprinkler systems

### The Complete System:





TRANSFORMER AUTO-QUELL SYSTEM



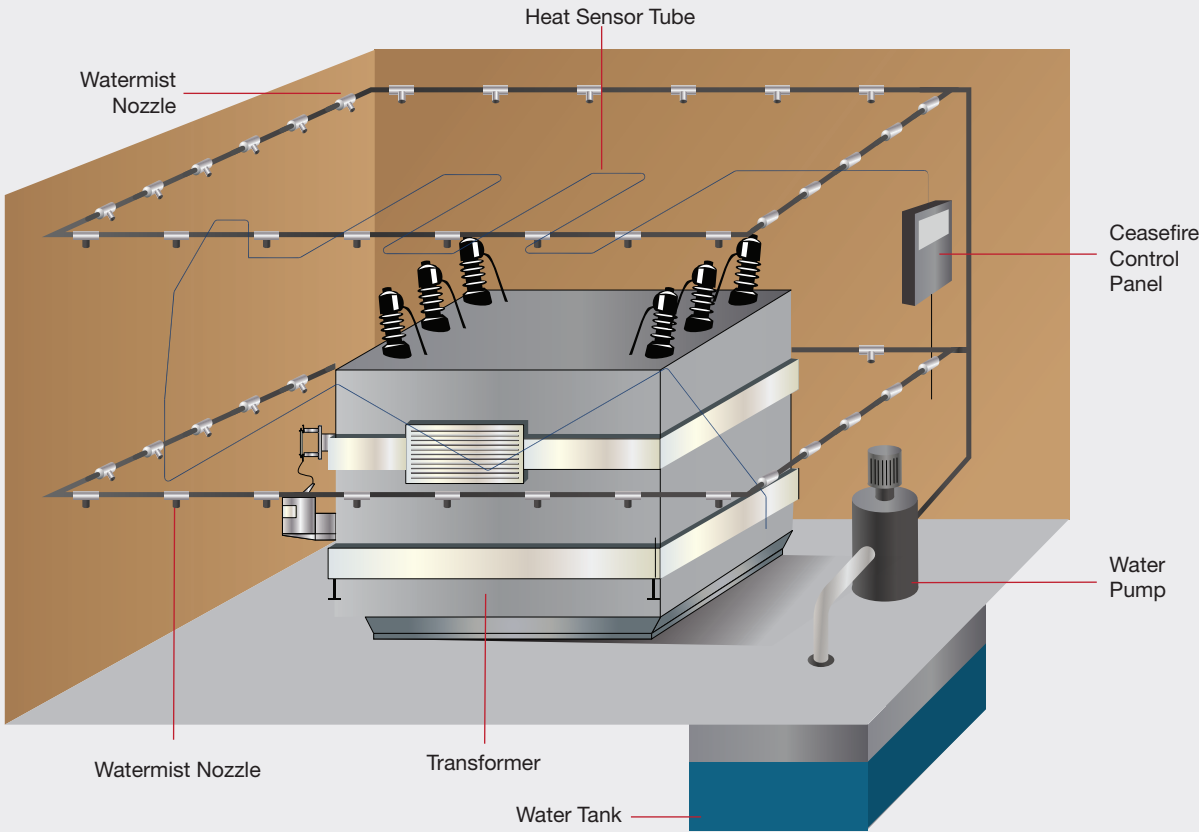
Transformers are vital for any operation to run smoothly. But the oil that fuels them, coupled with high temperatures generated and the presence of electricity, makes the area vulnerable to fires. With transformers often being placed in remote areas or areas that aren't easily accessible, there's always the chance that a fire will not be extinguished in time.

The Ceasefire Watermist-based Suppression System is perfect for such environments as it self-activates, detects and suppresses the fire right when it ignites. Watermist confines the fire in or around the transformer area and extinguishes it before it spreads, thus ensuring zero collateral damage.

Features:

- Works on A, B, C and electrical fires
- Does not require any power supply
- Inbuilt detection mechanism eliminates the need for human intervention
- Offers 24x7 protection
- Flexible tubing accesses difficult areas easily
- Environment-friendly
- No collateral damage
- Economical replacement for traditional sprinkler systems

The Complete System:



SWIFT



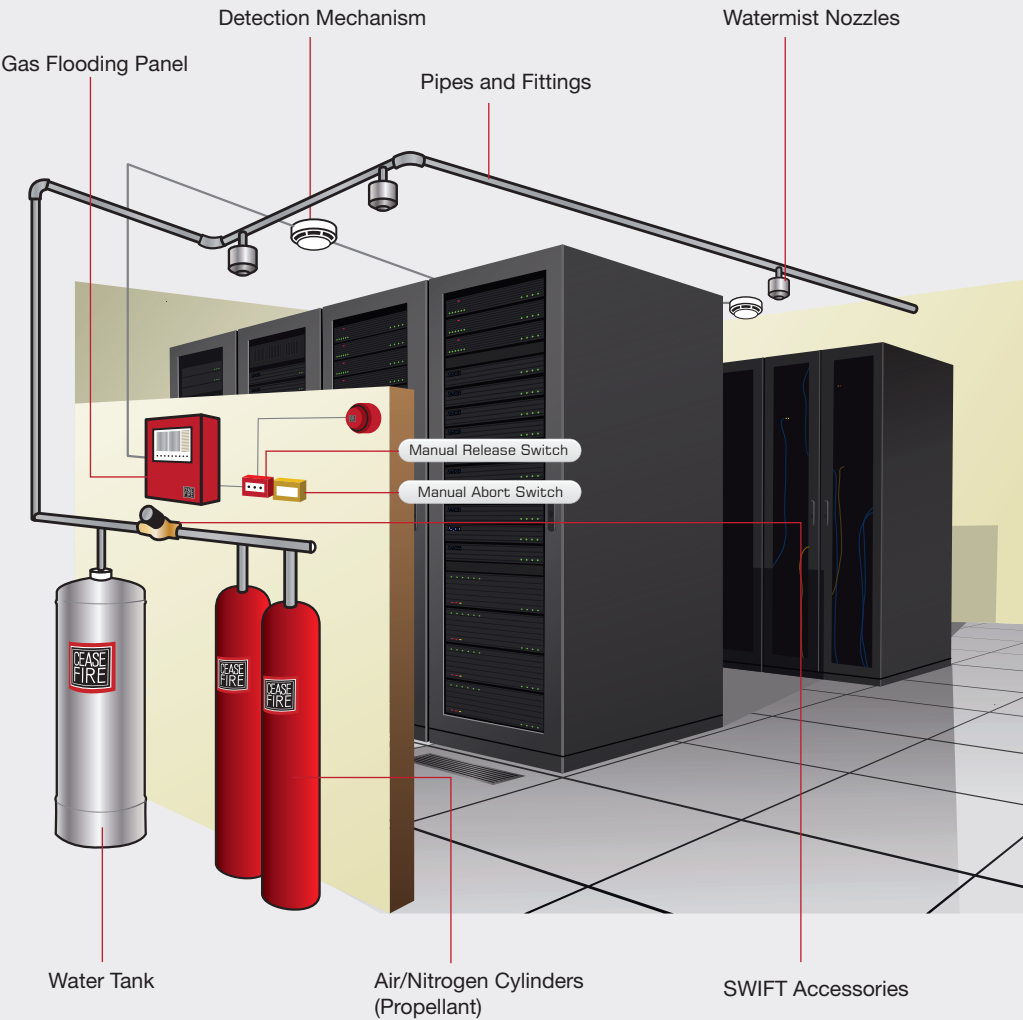
A fire in a business hub leads to huge financial losses and also cripples operations. The sheer size of these spaces makes fire safety on the premises a challenge. The need of the hour is a suppression system that provides coverage and automatically kicks into action immediately, with the least possible collateral damage.

Ceasefire's revolutionary SWIFT (Self Activated Watermist Instant Flooding Technology) does just that. Specially designed to cover the entire commercial enterprises, SWIFT detects, activates and runs automatically. Powered by Watermist technology, it causes no collateral damage to the premises or expensive equipment.

Features:

- Works on Class A, B, C, and fires involving electrically charged devices
- No damage to human life or property
- Covers a larger surface
- Cost effective, eco-friendly alternative to chemical systems

The Complete System:



### INDOOR AUTOQUELL SYSTEM



The Ceasefire Watermist Auto-Quell System is a revolutionary, all-purpose detection and fire suppressant system solution.

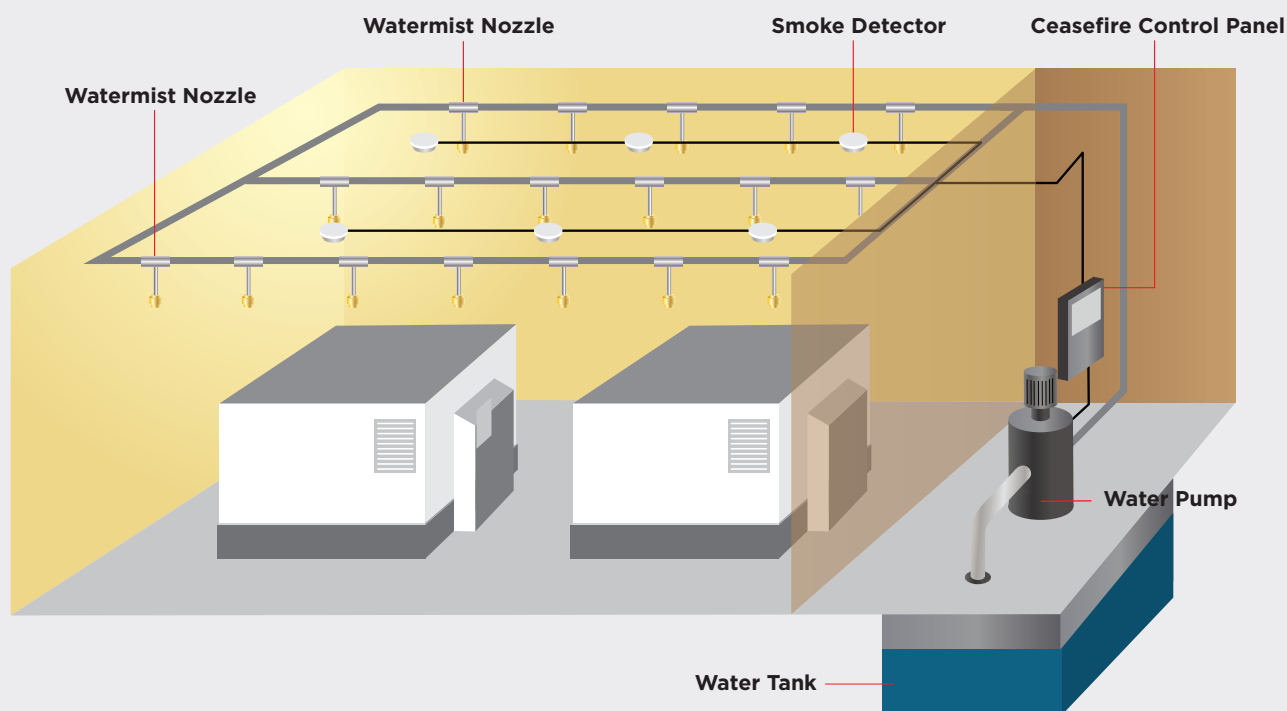
A network of detection devices, special watermist nozzles and a connection to a water tank is installed indoors. In the event of a fire, the system kicks into action in seconds.

The specially designed nozzles dispense watermist, onto the fire affected area, quickly putting out the flames as well as bringing the temperature down to non-combustion levels.

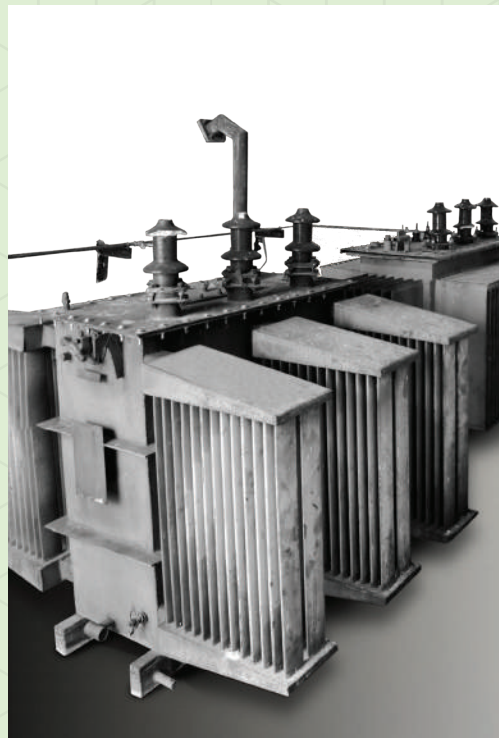
**Features:**

- Works on A, B, C and Electrical Fires, and is suitable for a variety of applications
- Does not require any power supply
- Inbuilt detection mechanism eliminates the need for human intervention
- Offers 24x7 protection
- Flexible tubing accesses difficult areas easily
- Environment-friendly
- No collateral damage
- Economical replacement for traditional sprinkler systems

#### The Complete System:







Download the Ceasefire app.



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