

SECUREZONE



SECUREZONE
WET CHEMICAL BASED

Commercial Kitchen Suppression System



ABOUT US

Securezone is a manufacturer of a world-class range of Fire Extinguishers with options of various types of extinguishing agents including ABC Dry Powder, Water, Foam, CO2, Clean Agent Based & Watermist Based extinguishers available in small to large sizes.

Securezone products conform to - EN3, EN1866, UKCA and PED standards and are manufactured at the company's state-of-the-art production facility in India.



SECUREZONE

WET CHEMICAL BASED KITCHEN SUPPRESSION SYSTEM





ULTRA PLUS SERIES / ENGINEERED

WET CHEMICAL BASED KITCHEN SUPPRESSION SYSTEM

**CERTIFIED BY LPCB TO
LPS 1223 STANDARD**



Hazardous oil and grease fires in kitchens take place due to overheating of oil in the temperature range of 350°C - 380°C. Fires are further enhanced by the accumulation of oil deposits in the enclosure behind the filter and the exhaust ducts of the kitchen hood over time due to cooking activities.

Several reasons can be attributed to kitchen fires, from temporary distraction by the user to

complete absence of attention to cooking appliances and vessels during cooking to malfunctioning of automated temperature control equipment in electrical deep fat fryers.

This is where the Wet Chemical Kitchen Suppression System comes in. This automated kitchen fire suppression system detects and kills a fire, even when no one is around.



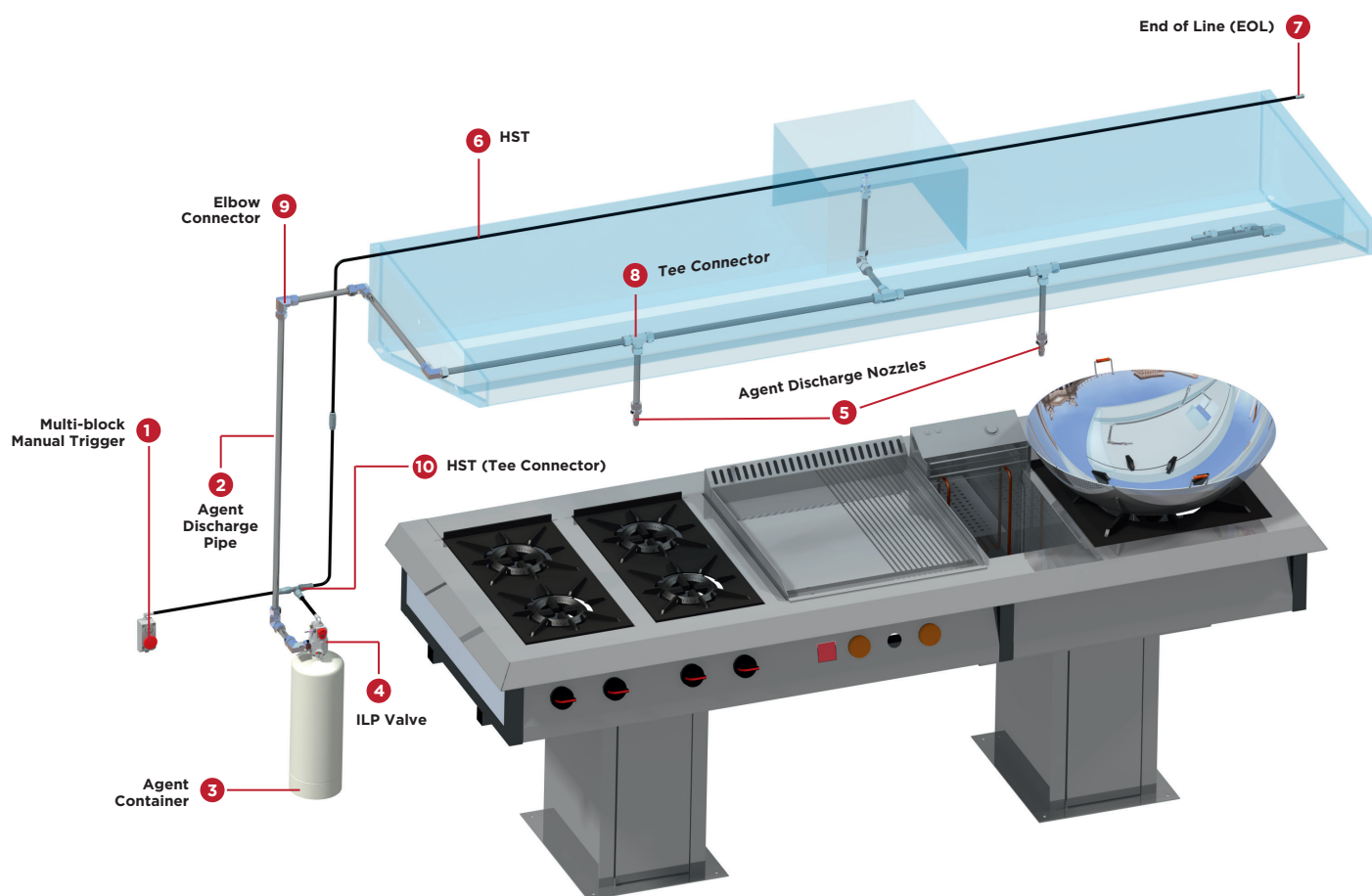
How The System Protects

The Wet Chemical based Kitchen Suppression System incorporates both manual and automatic protection by a pneumatic detection and actuation technique.

All sensitive areas susceptible to fire such as fire due to overheated cooking oil in vessels/deep fat fryer and oil residual deposits in the extraction system of kitchen hoods are covered by a pressurised heat sensing tube. The heat sensing tube is connected to the head of the indirect low

pressure valve mounted on the top of pressurised agent container.

In case of fire, the heat sensing tube punctures at a pre-determined temperature, releasing the pressure of the tube and activating the indirect valve. The extinguishing agent thus released is spread through distribution piping from the nozzle provided to cover the kitchen hood, vessels, plenum and duct.

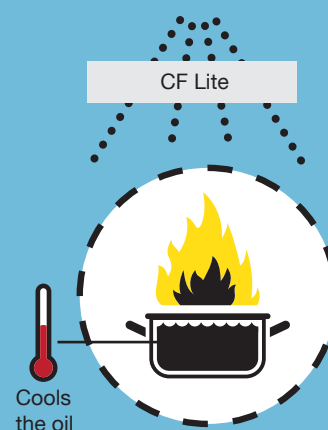


How The Agent Works

The extinguishing chemical is a wet chemical based foaming agent. It is a highly concentrated formulation of the extinguishing agent that makes it effective against Class A, B and kitchen fires.

In contrast to normal Class B fires where temperatures in the range of 350°C-380°C are observed only in the burned fuel or their vapour, the oil used in cooking is itself at this high temperature.

The extinguishing agent has a blanketing effect on the flames, which cools the oil to below its self-ignition point, thereby killing fire..









WET CHEMICAL BASED KITCHEN SUPPRESSION SYSTEM GIVES YOU MORE:

- LPCB Certified System
- No flooding-related collateral damage
- Fights Class A, B and F (cooking oil) fires
- Its heat-sensitive tube offers superior uniform protection as compared to conventional Point Detector-based Systems
- Available in 9 liters, 15 liters, 22.5 liters and 30 liters.



Features of the Wet Chemical Based Kitchen Suppression System

	24-hour Protection - Automatic detection and actuation controls ensure fire protection is always 'up'.
	Stored Pressure Technology - Stainless steel containers hold the wet chemical under stored pressure. This not only ensures instant activation, but also provides the convenience of checking the readiness of the system by the mere observation of the pressure gauge. If the needle is in the green zone, the system is ready for action
	Multiple Triggers - The system can be triggered either by the manual actuation system or the automatic detection system.
	Highly Effective - Wet Chemical prevents re-ignition by cooling down the temperature of the heated oil.
	Unobtrusive Design - Flexible piping configurations allow for a streamlined design and convenient installation that won't interfere with kitchen workflow.

	Highly Flexible - Kitchen Suppression System's flexible configuration and design can easily accommodate changes to the layout of appliances or the expansion of the cooking area.
	Highly Reliable - A fully assembled and 100% tested Mechanical Control Head ensures reliable operation. Pressure gauges on the steel cylinders mark the gas levels, allowing maintenance staff to replenish it whenever required. Protective chrome nozzle covers keep the nozzles free of contamination and blockages caused by grease or other cooking by-products.
	LPCB Certified System
	4 Variants - Available in four variants - 9 liters, 15 liters, 22.5 liters and 30 liters.

Wet Chemical Based Kitchen Suppression System Components

1. AGENT CONTAINER

The size and content of the stainless steel cylindrical agent containers depend upon the number of nozzles selected. Agent containers are available in four sizes:

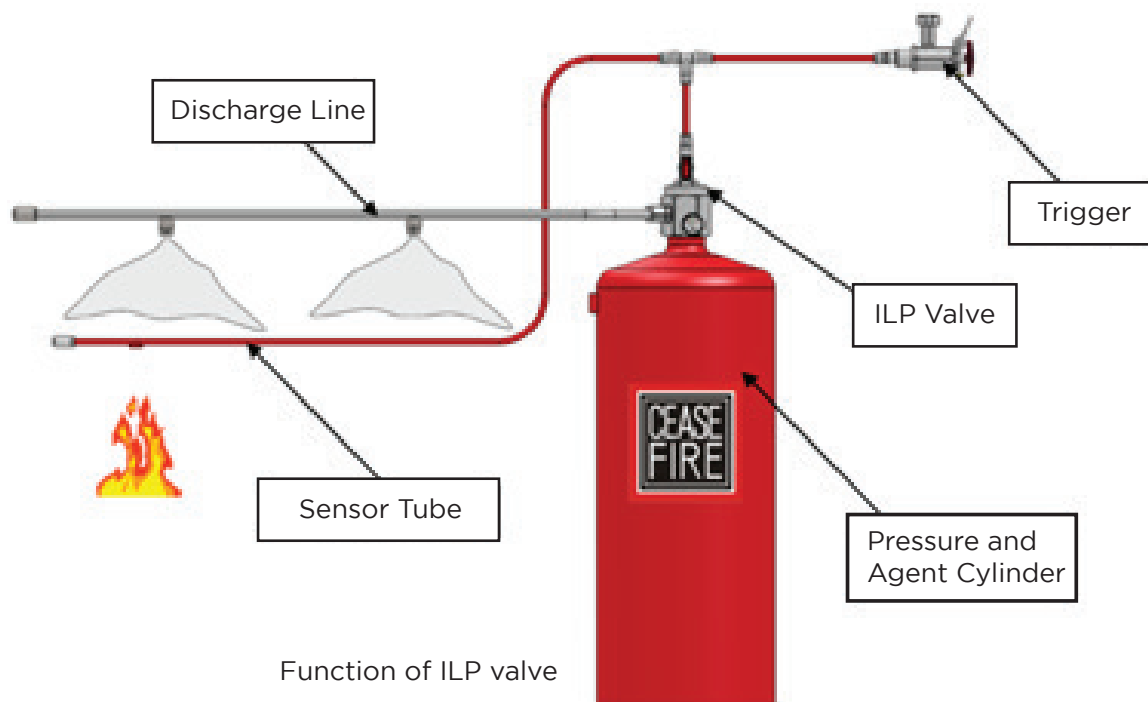
9 liters capacity | **15 liters capacity** | **22.5 liters capacity** | **30 liters capacity**

The agent volume has been selected by the number of nozzles estimated to 1.5 liters per nozzle discharge.

2. CYLINDER VALVE

This ILP valve is the main component of an indirectly working extinguishing system in connection to the heat sensing tube. If the sensor detects a fire, the valve is triggered and expels the extinguishing agent from the pressure vessel through a separate

discharge line. The valve reacts to a drop in pressure inside the heat sensing tube and opens the valve outlet. Because of the indirect function principle, the system may also be triggered and activated manually or electromagnetically.



3. EXTINGUISHING AGENT



Developed after extensive research, the extinguishing agent has a significant influence not only on the extinguishing result (especially in the case of grease fires) but also on factors such as corrosive behavior and performance.

It is a concentrated class F or Class K fire fighting wet chemical based extinguishing agent. This powerful agent fights all types of kitchen hood fire effectively.

The powerful agent brings down the agent quantity requirement to 1.5 ltr per nozzle making the system more efficient.

Using it, a larger hood area can be protected using the same agent cylinder size because it supports more number of nozzles with the same quantity of agent.

4. HEAT SENSING TUBE

In the Wet Chemical Kitchen Suppression System, the standard fire detection device is the heat sensing tube. Heat sensing tubes are made of high-tech plastic and were developed especially for the installation and application in automatic fire extinguishing systems. The prescribed operating pressure is applied

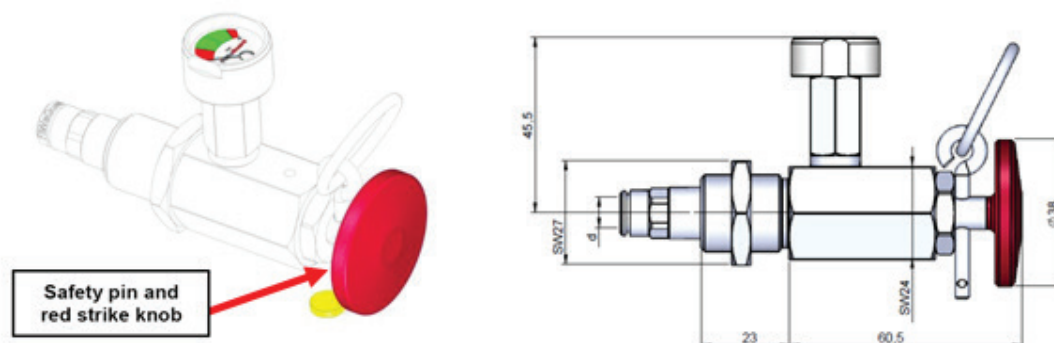
to the heat sensing tube after the proper installation. Due to the thermal material properties and the inner over-pressure, the heat sensing tube will burst when touched by a flame or subjected to an excessive heat increase, and therefore functions as a reliable detector in the case of a fire.



5. MANUAL ACTUATOR

Manual triggers are installed in or at the end of the detection line and simulate a burst of the heat sensing tube when actuated. The drop of pressure thus generated will trigger the valve.

To actuate the manual trigger, pull the safety pin and press the red strike knob.

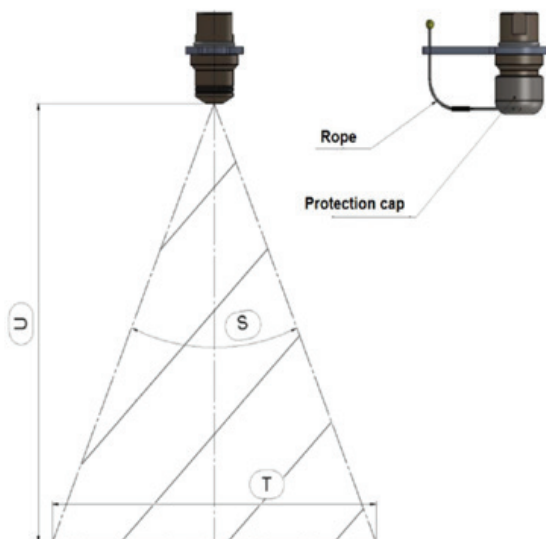


The installation of a manual trigger is mandatory.

6. EXTINGUISHING NOZZLES

The number of nozzles needed for a system depends on the circumstances and the type of equipment in the kitchen.

Full cone nozzle 40° | **Full cone nozzle 15°**



The nozzles are protected against the intrusion of dirt and grease by protection caps. However, the nozzles must be kept absolutely clear of dirt and obstructions during installation. When the system is activated, the protection caps are blown off and do not impede the disbursement of the extinguishing agent.

The nozzles must be selected according to the local circumstances (hood length) and aligned accordingly.

7. PIPES, FITTINGS

Stainless steel pipe of **10 mm diameter** (inner diameter of 8 mm) with compression fittings are used.

8. AUTOMATIC FIRE DETECTION

Each kitchen fire extinguishing system is fitted with a pneumatic heat sensing tube as a fire detector. In the event of a fire, the tube will react to the increasing heat and burst. The resulting pressure drop activates the cylinder valve **(ILP)** and the extinguishing agent is expelled through the extinguishing line.



9. MANUAL SYSTEM ACTUATION



In case the kitchen personnel or someone else detects a fire before the sensor hose has reacted, he or she can trigger the activation manually. There are two manual actuation options available. The silver safety pin must be pulled, and the red strike knob must be pushed deeply and firmly. These triggers are mounted at the end or in line with the sensor hose.

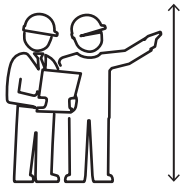
10. OPTIONAL RESPONSE PANEL

The Response Panel not only helps monitor the readiness of your kitchen suppression system, which ensures that you're not left high and dry in an emergency situation, but also raises the alarm.

- **Activates alarm**
- **Compatible with third party systems**
- **Helps check the readiness of your kitchen suppression system**



CUSTOMIZED SOLUTIONS



First, our Safety Consultants will visit your premises and help you calculate the length of the kitchen hood you wish to protect.



Depending on the dimensions, a customized design is made.



Finally, the Installation Team oversees installation and testing.

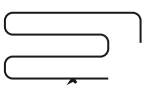








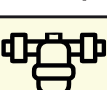






Post installation, Specialised Services Division maintains and services the system.



The big advantage here is that the variant you choose will have a fixed price. Any further costs involved in customising the system or adding components will be taken care of by us, giving you complete peace of mind.

WHY CHOOSE SECUREZONE LPCB CERTIFIED WET CHEMICAL BASED COMMERCIAL KITCHEN SUPPRESSION SYSTEM ?

	Advanced detection based UL Listed, UV protected Heat Sensing Tube for superior fire detection and longevity.
	Uniform protection under the kitchen hood, plenum and duct area.
	Maximum hood length protection of 10 metres with up to 20 nozzles in a single container system.
	Easy to maintain with low maintenance cost.
	100% biodegradable agent.
	Stored pressure technology; ease of monitoring system's readiness via pressure gauge.
	Rust-proof stainless steel agent containers.
	One nozzle type for protection of all types of cooking equipment.
	System compatible for integration with third party devices (e.g - BMS).
	Integrated Ball Valve designed to minimise leakages.
	Reed switch to monitor the readiness status of the system.
	Close and safe proximity of nozzles, of a minimum 350mm, from the cooking equipment possible.
	Unobtrusive nozzle placement that does not hamper user movement under the hood.
	LPCB certified system under LPS1223 standard.

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