

AUTOMATIC CLEAN AGENT

# FIRE *SUPPRESSION* SYSTEM

ELECTRICAL PANEL PROTECTION



# AUTOMATIC FIRE SUPPRESSION FOR ELECTRICAL CONTROL PANELS

**MARSHAL** Pre-Engineered Systems perform fire detection and suppression operations in the hazardous area and extinguishes the fire before it enlarges without a need for any other extinguishers. In recent years, the size and financial value of industrial tools have started to increase rapidly. The fire protection of those tools at the most cost effective way gained importance due to the increase of the cost of the tools. Electrical enclosures can be found in almost any industrial and commercial areas. In some cases, the cabin can be a single, small panel, and sometimes a large room covered with electrical panels. In case of fire in one of these enclosures, the equipment inside the panel may be destroyed. If the fire did not bring under control, it may spread to the room and the building.

HFC-227ea and FK-5-1-12 clean agents are used in the systems as the extinguishant which is harmless to electronic devices compared to water-based extinguishants, leaves no residue regardless to dry powder and its derivatives.

**Marshal**  
FIRE SUPPRESSION  
TRULY PROTECTING



## MOST COMMON SOURCES OF FIRE IN ELECTRICAL ENCLOSURES.

- Wire fatigue
- Equipment failures
- Improper installation
- Other environment causes.
- Overloaded circuits



## HOW OUR AUTOMATIC FIRE SUPPRESSION SYSTEM WORKS

### DIRECT SYSTEM

Based on a thorough risk assessment, our detection tube is installed near to identified hazards within the enclosed panel. When fire is detected the system activates and the fire suppression agent inside the cylinder(s) discharges rapidly to the seat of the fire. This rapid deployment significantly improves the probability of returning the asset to full working order with minimal downtime.

The direct system utilizes Heat Sensing Tube as both fire sensing & suppression of fire by delivering the agent. Due to which pressure drops in Heat Sensing Tube & entire content of cylinder discharges. The nearest surface of Heat Sensing Tube bursts due to heating & it forms effective discharge nozzle

- Compact and light weight.
- 24/7 protection with zero false alarms.
- Provides rapid suppression leaving no residue.
- Agent is non-corrosive and completely non-conductive.



# INDIRECT SYSTEM

Utilising the same detection method as our direct system, our indirect system has a fire suppressant discharge network using nozzles to rapidly protect larger cabinets. Our nozzles have been developed to provide a discharge pattern that delivers the agent across a wide area in a matter of seconds.

The Indirect system utilizes Heat Sensing Tube as fire sensing ONLY. Suppression of fire is delivered via copper, SS or Braided pipe. The nearest surface of Heat Sensing Tube bursts due to heating it actuates the valve & agent discharges through strategically placed

- Compact and light weight.
- 24/7 protection with zero false alarms.
- Provides rapid fire suppression leaving no residue.
- Agent is non-corrosive and completely non-conductive.



# SYSTEM ACCESSORIES



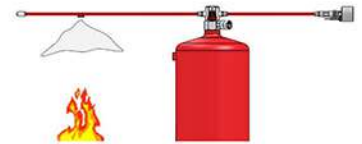
Cylinder filled with Clean Agent



Master Control Unit



End of Line Adapter with Pressure Gauge



Dual Outlet Value

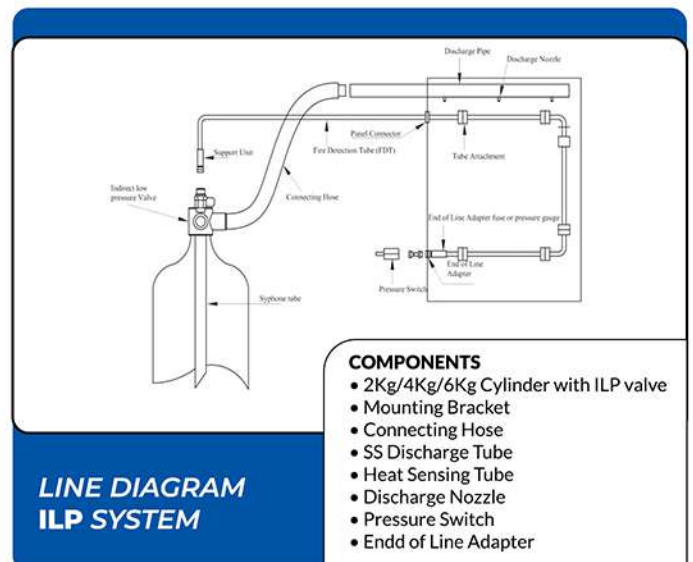
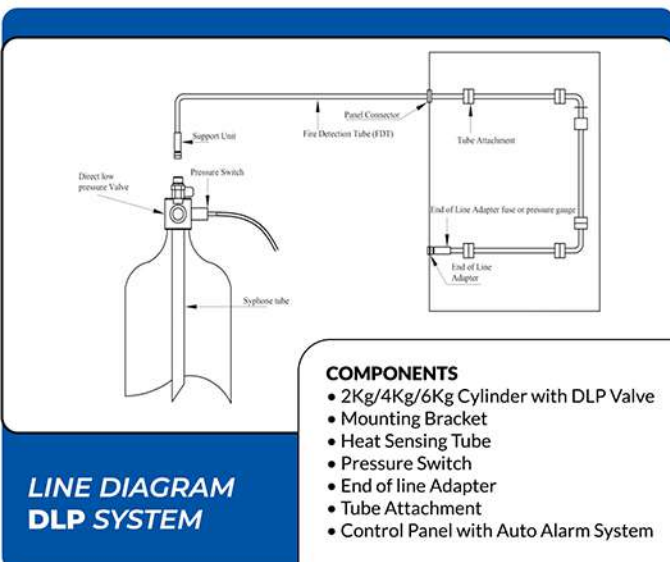


Heat Detection Tube UL/CE



Pressure Switch

# LOW PRESSURE FIRE SUPPRESSION SYSTEM





**WE ALSO  
PROVIDE**



## TOTAL FIRE SUPPRESSION SYSTEM

### Head Office

301, Aggarwal Tower, L.S.C-II, Mandawali,  
Patparganj, Delhi- 110092

### Off. & Works - Unit 1

ASES HOUSE, A-2 / 69 Site-IV, Sahibabad Indl. Area,  
Ghaziabad, U.P.-201010

### Off. & Works - Unit 2

Plot No. 52, Toy City, Ecotech III, Greater Noida, Uttar  
Pradesh 201306

### Kolkata Office

Mira Bhawan, 250, Block-B, Laketown, Ground Floor,  
Kolkata-700089

### Bangalore Office

No -18, 2nd Floor, Matadahalli, Further Extensions, R. T.  
Nagar, Next Building to Himalaya, Bangalore- 560032

### Mumbai Office

17/A-4, Shiv Shakti Industrial Estate, Opp. Damodar  
Park, LBS Marg, Ghatkopar (W), Mumbai - 400086