



ARES

FUME HOOD FIRE EXTINGUISHING SYSTEM





NDS-1 INDUSTRIAL FIRE EXTINGUISHING SYSTEM

Each year small scaled kitchen fires breaking out at different places of the world, result in high level of financial, business and service loss at buildings such as mall, hotel, hospital, etc. as necessary precautions are not taken.

Fume hoods for cooking furnaces are areas with the highest fire risk. The grease stacking up at kitchen hood surface, filter unit and chimneys starts to burn when they reach a specific temperature and spread to restaurant section within seconds.

Fume Hood Fire Extinguishing System developed by **Nero Industry** provides a significant success in avoiding these losses and damages.

RISK AREAS:

FURNACES

- They flame up themselves and quickly burst into flames.
- The heat quickly increases with the flaming.
- The flammable gases coming out during the fire results in expansion of the fire.

FUME HOOD CHIMNEYS

- Fume hood chimneys are the areas where grease accumulation is highest.
- Detection of a possible fire bursting out within the chimney is not easy.
- As the chimneys are connected to each other at the industrial kitchens, fire easily spreads to other kitchens and the building.

System Approval and Standards



Potential Threats

One of the most important factors to be taken into consideration at the kitchen is the threat of grease-bearing steam.

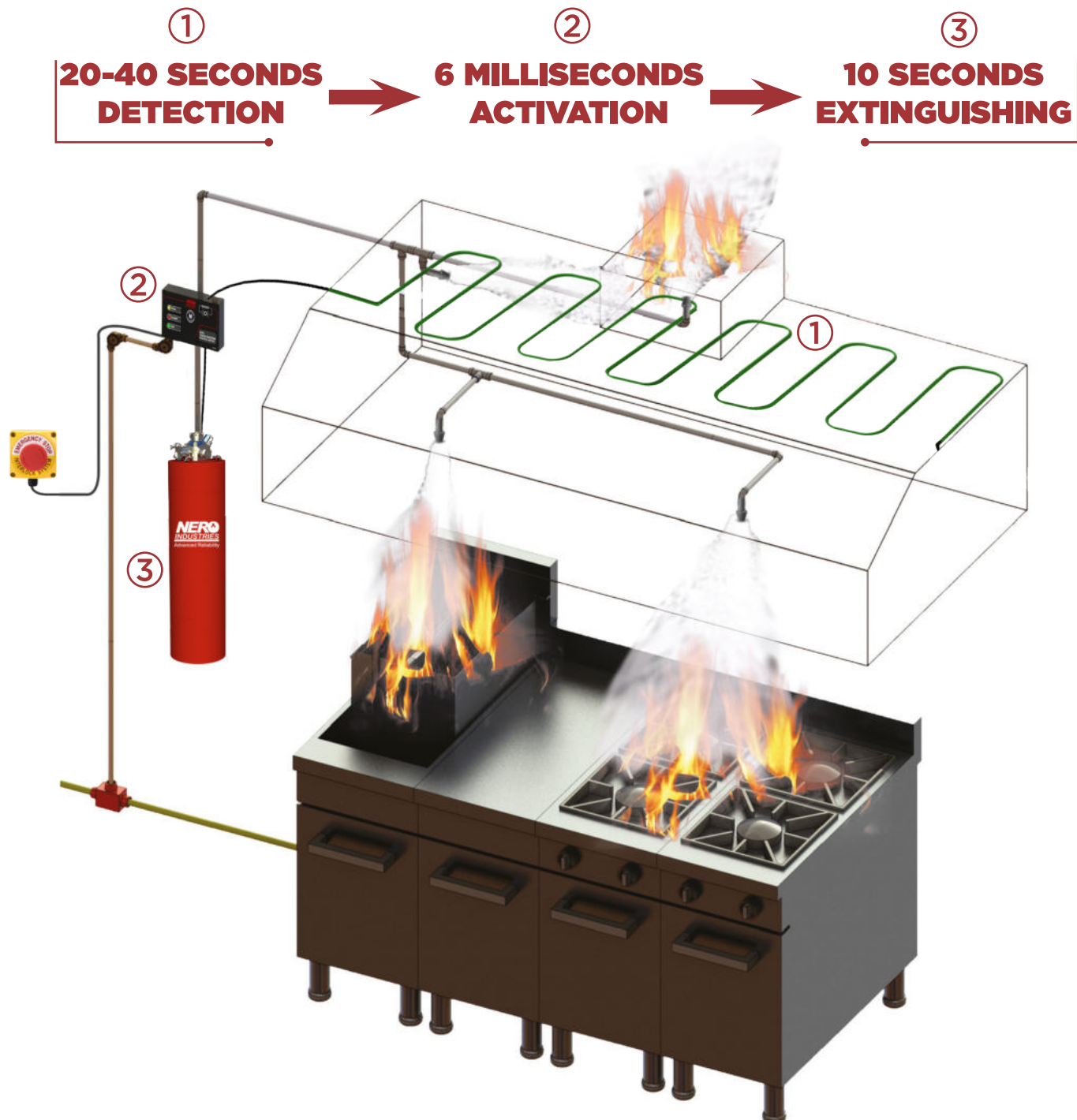
Modern day kitchen systems, bears consistent fire risk due to substantial flammable greases and high level of temperature.

- Deposit of grease on the grills
- Greases within the open furnaces and frying pans
- Overheated deep fryer and wok pans
- Gyros grill machines, salamander and open grills
- Plenum and interior of chimneys
- Bad maintenance
- Worn-out electric cables or defective hardware

are main reasons resulting in fires.



System Schematic and Operation Principle



1 The fire is detected within 20-40 seconds by Linear sensor wire and the signal is sent to control unit.

2 Control unit analyses the incoming signal and activates the extinguisher tube. Simultaneously, it warns the user by activating alarm horn and light-voice warning system.

3 This extinguisher liquid is a special liquid developed by Nero Industry. The liquid extinguisher agent within LIFEK is carried to the required area with the help of hose and nozzles. When the system is activated, it extinguishes the fire within 10 seconds.

System Specifications

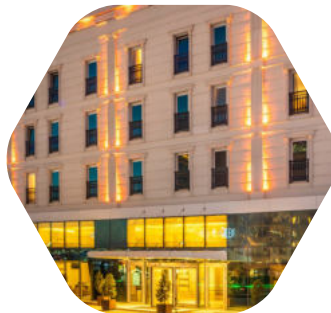
- It is capable of extinguishing grease fire.
- It automatically detects and extinguishes the fire within 1 minute.
- It provides 24 hours protection. It provides interior chimney protection.
- Extinguisher and propellant gases are in the same tube, an extra tube is not needed.
- It includes system control unit, errors and alarms are shown on the unit.
- It can automatically power down the energy of cooking equipment.
- It provides protection at the hardest points.
- It prevents fire spreading to other kitchens and the building.
- It is environmentally-conscious.
- It is easy to clean from the surface after a possible fire.
- It does not create corrosion on the surface. It provides steam safety.
- It is UL300 certified.
- It is conformant to EN 16282-7 standard.
- System installation is performed by the technicians trained by NERO.



MAIN AREAS OF USAGE:



- RESTAURANTS
- DINING HALLS
- INDUSTRIAL PLANTS



- HOTELS
- HOLIDAY VILLAGES
- MALLS



- HOSPITALS
- SCHOOLS
- FACTORIES

LIFEC Extinguisher Tube



SPECIFICATIONS	EXPLANATION
Response Period	< 6 milliseconds
Indicators	Monometer
Triggering	Pyrotechnic mechanism
MTBF	250.000 hours
Extinguishing Agent	2X FFS
Capacity	10 lt
Triggering Voltage	24 Vdc (10-32 Vdc). It is also triggered at lower voltage, but performance would decrease.
Propellant Gas	Nitrogen
Operating temperature	-32°C +71°C
Storage temperature	-32°C +71°C
Weight	30 kg
Test Standards It Conforms	MIL-STD-461, MIL-STD-810,



CONTROL UNIT

High speed reaction	Operating temperature: -32 °C / +71 °C
Reading input signals received from detector	Storage temperature: -50 °C / +71 °C
Automatic / Manual activation	Fault indication for each detector and tube
Weight: 480g +50 g	Dimensions: 85x49x100 mm (5 mm)

System Components



LINEAR SENSOR WIRE	
 It has wide detection area	 Operating Temperature: -32°C / +121°C
 High reliability	 Storage Temperature: -55°C / +71°C
 Operating Temperature: -55°C / +150°C	 MTBF Period: 200.000 hours
 Wire Gauge: 6 mm	 Maximum Length: 15m



EMERGENCY SWITCH	
 It gives warning signal	 Dimensions WXDxL: 77,8 x 77,8 x 75mm
 (+5 mm)	 IP67 su ve toz giriş koruması
 Activation up to three tubes	 IP67 water and dust input protection
 MTBF period 150.000 hours	 Salt fog resistance 800 hours
 Operating voltage: 16-32 VDC	 It has MIL-STD-810G, MIL-STD-461G, MILSTD-



NOZZLE	
 Visual angle is between 90 – 180 degrees.	
 It is sealed against dust, rain, mud and oil.	
 Dispersion speed is 50 or 60 litres / minute.	
 Material type is 304 stainless or brass.	
 Weight: 20 gr + 5	

Maintenance and Service

- Extinguishing System should get periodic maintenance once every 6 months according to international standards. All active and passive components in the system should be checked and maintained by authorised service personnel.
- Fire extinguishing system, is uniquely installed to each kitchen fume hood specially with pre-engineering study. After extinguishing system is installed, definitely do not change locations of cooking devices.
- If the locations or types of cooking devices will be changed, these changes should definitely be made under control of authorised service. Otherwise, extinguishing system may not function in case of fire.
- Maintenance, revision and installation should only be made by authorised service.
- Fume hood and chimneys should be cleaned periodically against fire risk.

TECHNICAL MAINTENANCE AND CONTROLS

Heat Detectors and Detection Line Periodical Maintenance

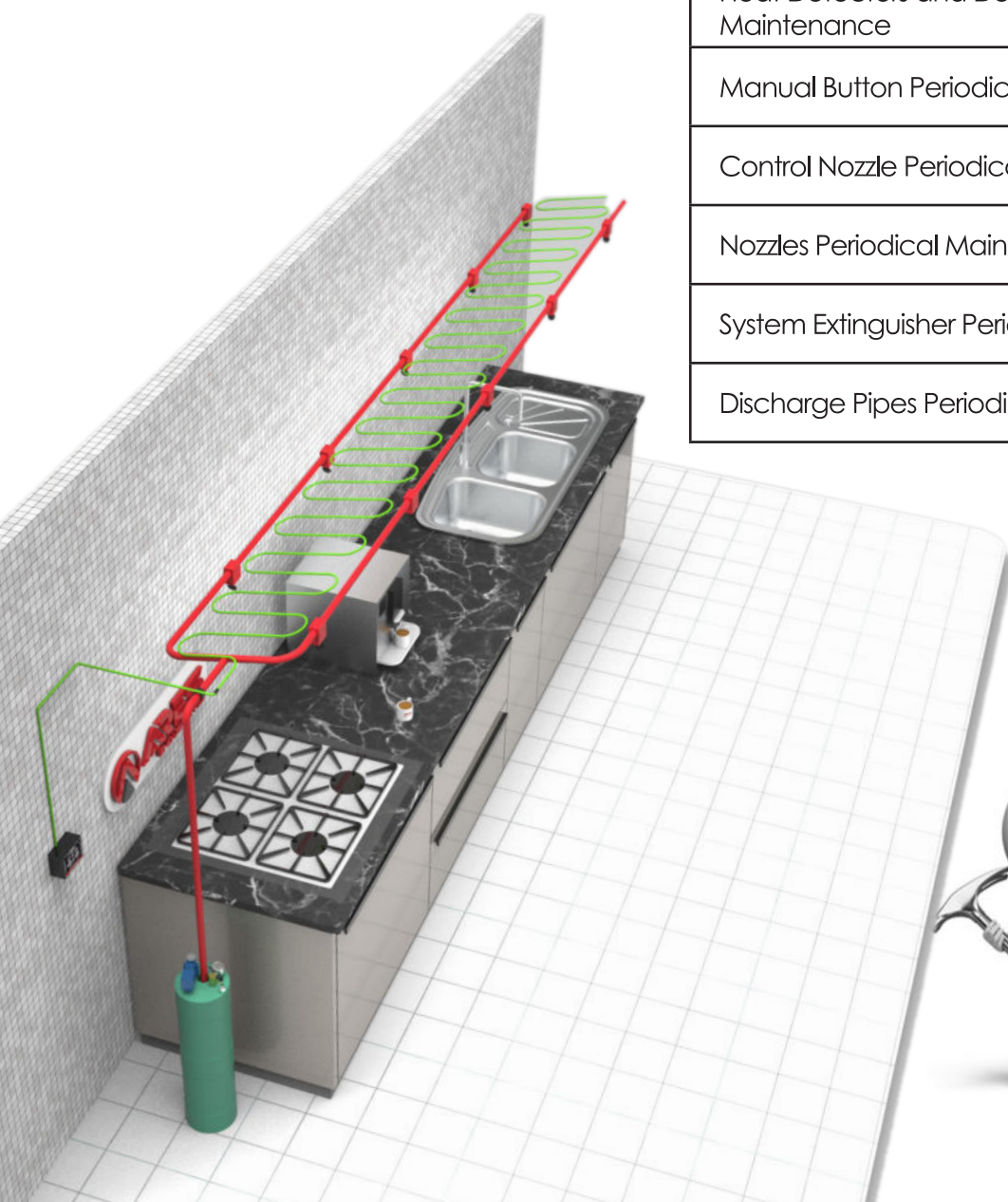
Manual Button Periodical Control

Control Nozzle Periodical Control

Nozzles Periodical Maintenance

System Extinguisher Periodical Maintenance

Discharge Pipes Periodical Maintenance





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