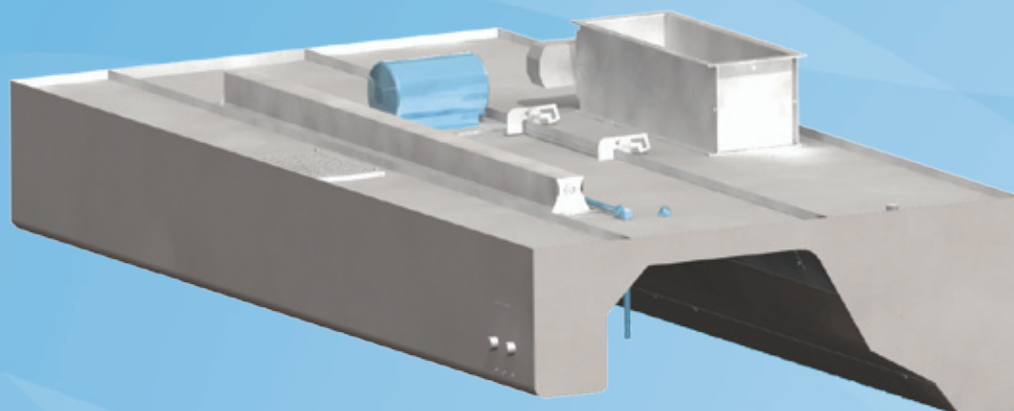


## K-5 Galley

Wet Chemical Fire Suppression System  
for Halton Marine Galley Hoods



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According to the SOLAS regulations, ships must install a marine fire extinguisher system to protect the galley, in particular the fryer employed in the cookline. The K-5 galley fire suppression system has been designed to meet the requirements of ISO 15371.

The K-5 system is a fully independent system that is electrically actuated and uses spot heat detectors to detect fire conditions. The detectors are placed directly over the appliance being protected or in the extract air flow above the appliance. The cooking appliances can be individually protected or multiple systems can be configured to suit the demands of galley. The K-5 system can be operated manually using a push button switch located at strategic positions around the galley. On receiving the appropriate FIRE signal the system control panel sounds audible and visual alarms and immediately initiates shut down of the power supply to the appliance/s being protected. Simultaneously the control system deploys the suppressant liquid onto the fire.

The gas required to pressurise the storage cylinder is produced in a controlled manner from a solid propellant gas generator. The cylinder and gas generator remain at zero pressure until an electrical signal is received from the system control panel. On actuation the cylinder is pressurised to 10-12 bar.

The Wet Chemical Suppressant Liquid has been specially formulated to suppress fires in cooking oils and grease and prevent re-ignition.

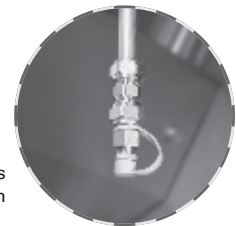
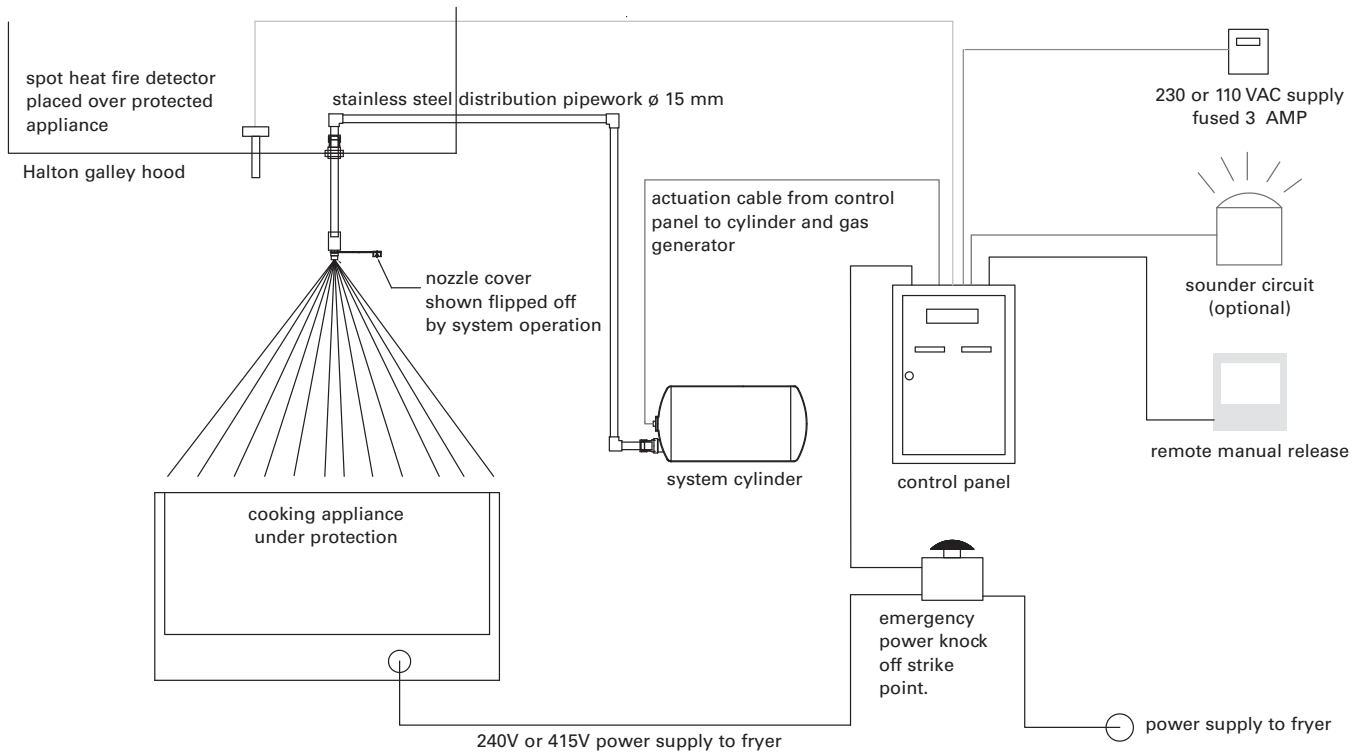
### Benefits

- K-5 Fire Suppression system together with Halton hoods form a superb combination that increase safety in galleys
- Installation of K-5 Fire Suppression system into galley hood is done already at the factory. This means direct savings on board.
- Simple and compact design
- No high pressure gas cartridges
- No mechanical pulleys, tensioners, levels or spring loaded plungers
- Real time system monitoring for fire and fault conditions
- Stainless steel construction

## TYPICAL SYSTEM LAYOUT

The stainless steel cylinder containing the wet chemical suppressant, gas generator and burst disc / filter assembly can be located horizontally or vertically by means of a mounting bracket. The system pipe work is 15mm stainless steel utilising compression fittings. The nozzle is fitted with a cover to prevent ingress of grease. Where the pipe length is equal to or less than

5.0 metres the restrictor must be inserted into the pipe work to reduce the pressure of the spray from the nozzle. Between 5.0 and 10.0 metres the restrictor is not required. The gas generator is connected to the control panel via a heat resistant cable terminating with an IP67 rated DIN connector.



Nozzle cover. Clover flips off by system operation

## Operation principle

The system is electrically controlled and actuated in automatic mode via a specified detector or in manually by using a push button switch. The actuation current is provided by the systems dedicated control panel which provides the interface between detection and actuation. The control panel is capable of isolating the power supply to the fryer and initiates a local audible and visual alarms for both fault and fire conditions. The gas used to expel the suppressant from the cylinder and through

the pipework is produced from a solid based propellant, gas generator. When the system receives an actuation signal an electrical impulse is supplied to the gas generator initiating the pressurisation of the system cylinder. Therefore the whole system remains unpressurised until a fire condition is detected.

## Main components

The components of K-5 fire protection system are electronically controlled, there are no mechanical moving parts. Each installation will consist of one or a number of stainless steel cylinders containing a highly effective F class wet chemical liquid designed specifically

## Control panel

An electrical control panel integrates the fire detection, system actuation and shut down of power and gas, ensuring all circuits are fully monitored for fire and fault conditions continuously. There are two control panels available: the more sophisticated NSF III S and the more basic NSF SOLO. The NSF III S can be configured to protect two areas and up to four suppression systems, each of these areas having a remote manual release. The SOLO control panel is designed for simplicity operating a single detection zone and having a single actuation output. The panel incorporates a manual release facility. Both control panels offer:

- Constant monitoring of detection and actuation circuits for faults
- 24hr battery backup in case of main power failure
- Signals to the main ships alarm if required
- Ability to interface to automatically shut down to the affected cooking appliance via inbuilt volt free contacts

## Cylinder

The basic stainless steel cylinder sizes consist of 5 ltr. capacity.

The central boss is used to locate the gas generator that is MOD approved and as such is manufactured to exacting military specifications, testing and inspections regimes.

## Certified quality

The K-5 Galley Fire Suppression system was designed to meet ISO 15371:2000, therefore confirming to the latest SOLAS regulations. The system is also approved by the MCA and as such has a wheel mark, as well as by DNV, Lloyds and the ABS.

For more information, contact Halton Marine.

All components are manufactured from stainless steel including the cylinder, gas generator, pipework, nozzles and protective blow off caps.

for fast flame knock down and fire suppression. The liquids low pH value ensures no damage to galley appliances and as a direct result of its efficiency limiting the volume of liquid required, there is minimal clean up requirements after discharge.



## Approvals

- MED, MCA, ABS, DNV, Lloyd's Register
- Detection - UL/FM approved
- Gas generator - CE marked, HSE & MOD approved
- Control panel - CE marked, BS7273-1, BS EN54, BS 5839
- Manufactured to ISO 9001 /2, LCPCB Cert. No.624

## Credentials

- Australian Navy
- Royal Navy War Ships
- Offshore platforms and Supply ships

