

## Concept with Sapphire™ & Novec 1230™



### Description

The Hygood **SAPPHIRE** Engineered System is an automatic, fixed nozzle, fire suppression system using 3M **Novec 1230** Fire Protection Fluid for Class A, B, and C fires. The system is designed and installed in accordance with the ISO 14520 or National Fire Protection Association (NFPA) Standard 2001, "Clean Agent Fire Extinguishing Systems." It is listed by LPCB and Underwriters Laboratories, Inc. (UL), Underwriters of Canada (ULC), and approved by Factory Mutual (FM). The system is capable of automatic detection and actuation and/or remote manual actuation. The detection portion of the fire suppression system allows for automatic detection by means of the **Concept** Control System and/or VESDA Detection System. Several different detection options are available. Exposure to **Novec 1230** fluid at design concentrations up to 10% (NOAEL) is not hazardous to health. Refer to NFPA 2001, Section 1-6 "Safety," for exposure requirements. As with Halons, the EPA, LPCB and the National Fire Protection Association recommend that unnecessary exposure to any agent be avoided and that personnel evacuate protected areas as quickly as possible to avoid the decomposition products of the fire. A system installation and maintenance manual is available containing information on system components and procedures concerning design, operation, inspection, maintenance, and recharge. The system is installed and serviced by authorised distributors that are trained by the manufacturer.

Basic Use – The **SAPPHIRE** Engineered Clean Agent Fire Suppression System is

particularly useful for suppressing fires in hazards where an electrically non-conductive medium is essential or desirable; where clean up of other agents present a problem; or where the hazard is normally occupied and requires a non-toxic agent.

**Composition and Material** – The basic system consists of extinguishing agent stored in steel containers. Various types of actuators, pneumatic and electric, are available for release of agent into the hazard area. The agent is distributed and discharged into the hazard area through a network of pipe and a nozzle. The nozzle is drilled with a fixed number of orifices designed to deliver a uniform discharge to the protected area. On large hazards, where two or more tanks are required, actuation design can be utilised to actuate multiple tanks.

### Application

The **SAPPHIRE**™ Engineered System utilises 3M™ **Novec™ 1230** Fire Protection Fluid as the suppression agent. **Novec 1230** fluid can effectively be applied in total flooding fire suppression applications in the following areas:

- Data Processing Centres
- Tape Storage
- Vaults
- All normally occupied or unoccupied electronic areas where equipment is either very sensitive or irreplaceable
- Telecommunications including Cellular sites and Switching Centres
- Military Systems including Combat Vehicles and Marine Engine Rooms

- Transportation including Merchant Marine Vessels and Mass Transit Vehicles Recreation including Pleasure Craft and Race Cars

### Features

- UL/ULC Listed
- FM Approved
- LPCB Approved
- Effective Total Flooding on Class A, B, and C Fires
- Clean Agent Suitable for Protection of High Value Assets
- Long-Term, Sustainable Alternative To Halon, HFCs and PFCs

### Environmental

The **SAPPHIRE** Clean Agent Fire Suppression System utilises 3M **Novec 1230** Fire Protection Fluid. This fluid has a zero ozone depletion potential, an atmospheric lifetime of just five days, and a global warming potential of 1.0. Novec 1230 fluid is registered with the U.S. EPA under TSCA and European ELINCS. It has met the requirements of registration under SNAP (Significant New Alternatives Policy) and is approved for use as an alternative to Halon 1301 for total flooding applications in occupied spaces.

Make **Concept** Fire Suppression Ltd with **SAPPHIRE**™ **Novec™ 1230** and part of your fire protection plan.

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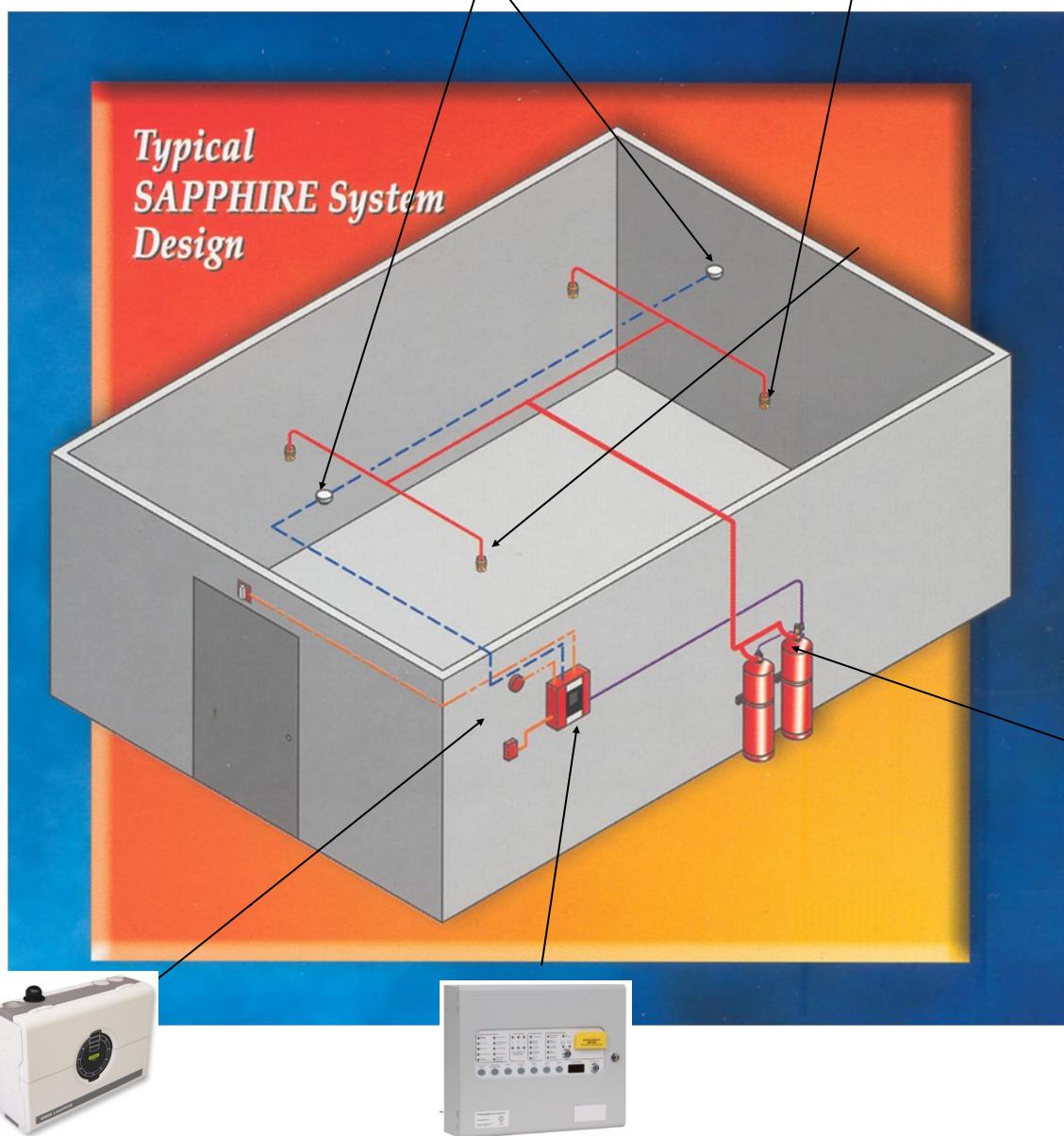
### Smoke Detectors

Smoke detectors arrange so that two detectors from two zones are required before the gas is discharged.



### Discharge Nozzles

From 15mm to 50mm discharge nozzles ensure the gas agent is discharged



**Cylinders**  
8, 16, 32, 52, 106, 147 and 150L agent cylinders 25bar.



### Optional VESDA Detection

For increased levels of detection VESDA is utilised to give early warning of a fire.



### Control Panel

3 to 8 zone control panels controlling 1 to 4 areas.



Sapphire is a registered trademark of Tyco International.  
Novec 1230 is a registered trademark of 3M.

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