

# Kidde Engineered Fire Suppression System

Engineered for use with 3M™ Novec™ 1230 Fire Protection Fluid



The Kidde Engineered Fire Suppression System is the new generation in gaseous fire suppressant technology. Designed to protect human life and high value assets from fire, it meets industry concerns for safety, performance and the environment.



Novec 1230 fluid is a fluorinated ketone that is stored as a liquid and discharged as a gas. It distributes uniformly throughout the hazard zone, and suppresses fire by a combination of heat absorption and chemical interference with the flame.

## ENVIRONMENT

With a zero ozone depletion potential (ODP), a global warming potential (GWP) of just one, and an atmospheric lifetime (ALT) of only 5 days, Novec 1230 fluid has virtually no measurable impact on climate change. When used in a fire event, the fluid mitigates the effect of an uncontrolled fire. At the end of the lifetime of the system, the fluid can be readily recovered and recycled.

## CLEAN

Novec 1230 fluid discharges as a colourless, electrically non-conductive and non-corrosive gas that does not damage sensitive equipment. There is no post-discharge residue, no costly clean-up operations are required, and down-time is kept to a minimum.

## COST-EFFECTIVE

By using its tried and trusted range of 25 bar equipment, Kidde can offer a cost-effective Novec 1230 fire suppression system.

## EFFICIENT

Small and large-scale tests have proven that Novec 1230 fluid puts fires out quickly, before they can do any serious damage. It does this by reaching extinguishing concentrations in ten seconds or less. It is effective on a wide range of Class A, B and electrical fires.

## SAFETY

The US EPA Significant New Alternatives Program (SNAP) classifies Novec 1230 fluid as acceptable for use as a total flooding agent in occupied spaces. A low design concentration of 4 to 6% in combination with a high No Observable Adverse Effect Level (NOAEL) of 10% means it provides a safety margin of up to 100%. This is by far the largest safety margin of any clean agent currently available. In addition, there is no risk of human asphyxiation with Novec 1230 fluid since it does not act by oxygen depletion in the hazard zone.

## SYSTEM DESIGN

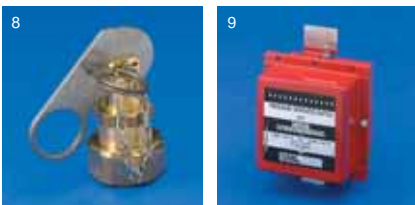
The Kidde Engineered Fire Suppression System comprises Novec 1230 fluid stored in cylinders connected to distribution pipework and specially designed discharge nozzles.

Novec 1230 fluid is stored as a liquid in nitrogen-pressurised steel cylinders. This ensures minimal storage space and weight requirements compared to all other viable gaseous agents. It also enables refills to be transported in unpressurised cylinders without the restrictions on gaseous alternatives.

The range of cylinders, valves and related components has been specially selected for use with Novec 1230 fluid and has been subjected to stringent testing procedures. Flexibility, quality and reliability make the Kidde Fire Protection range the world's finest in fire safety.

Engineered systems are designed using FM Global and UL verified software and guidelines, and offer optimum designs for the defined risks with reduced pipe sizes, unbalanced flows and common room and void protection possible.

## Kidde Engineered Fire Suppression System



1. Discharge nozzles
2. Electric actuator
3. Pneumatic actuator
4. Manual pull box
5. Manifold
6. Cylinder valve
7. Electrical/manual actuator
8. Manual actuator
9. Pressure switch

### Cylinders

A wide range of sizes from 5 to 368 litre is available, offering a choice of fill capacities to meet specific requirements and ensure maximum economy in installation. Each cylinder is manufactured from high strength alloy steel.

### Valves

Valves are designed for optimum system performance, allowing pipe sizes to be reduced and installation costs to be lowered. They are manufactured from tough, corrosion-resistant brass under stringent quality control standards. A pressure monitoring gauge and/or pressure switches are provided for easy servicing. Valves are actuated by electric solenoid, pneumatic, or local manual release at the control head.

All related components from discharge nozzles to control heads are designed to be compatible, allowing a complete system to be configured using FM Global and UL approved Kidde Fire Protection equipment.

### Nozzles

Custom-designed nozzles are available with nominal pipe sizes from 1/4 to 2 inch, including 180° and 360° configurations.

### Directional Valves

Available for multi-hazard installations.

### APPROVALS

Novac 1230 Fluid:

- USA - TSCA, EPA SNAP Listed
- Europe - ELINECS
- Canada - CDSL
- Korea - KECI
- Australia - AICS
- China - CICS
- BS EN ISO 14520
- NFPA 2001
- HAG Listed

Kidde Engineered Fire Suppression System:

- FM Global
- UL
- TPED compliant
- PED compliant

### APPLICATIONS

- Computer suites, EDP facilities and telecommunications hardware
- Internet Service Providers
- Server Rooms
- Control rooms such as railway signalling centres and air traffic management centres
- Stores and archives
- Heritage sites such as art galleries and museums
- Medical and laboratory equipment
- Petrochemical plant, offshore oil and gas installations, pipeline pumping stations

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Kidde Fire Protection operates a continuous programme of product development. The right is therefore reserved to modify any specifications without prior notice and Kidde Fire Protection should be contacted to ensure that the current issues of all technical data sheets are used.

### Kidde Fire Protection

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