AFE
ANGUS FIRE ENGINEERING

KIDDE 200

Clean agent systems

Angus Fire Engineering specialises in the design, manufacture, installation and service of fixed fire fighting systems. Established internationally and with a pioneering record in fire engineering, Kidde has conducted an extensive programme of product development and research to produce a superior gaseous system.

The main criteria in this programme were:

- Extinguishing performance
- Safety to personnel
- Environmental acceptability
- Practicality

Introducing the Kidde200 system

The agent chosen for the Kidde200 system is FM200™, a clean gaseous agent which has been universally accepted as the most suitable extinguishant to supersede Halon 1301.

This combination of extinguishant and advanced system components in the LPCB approved Kidde200 system is considered to be the ultimate gaseous system for a multitude of applications.

The new Kidde200 system is available in two engineering formats:

Pre-engineered systems

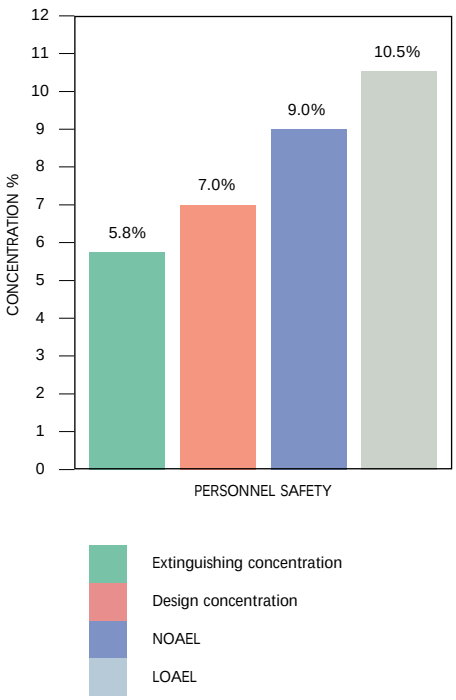
These units are pre-engineered with one or more extinguishing nozzles. A series of these units can be arranged in combination strategically located and operating simultaneously.

- Easily installed and relocated
- Reduced pipework runs
- Minimum cost
- Effective protection
- Vertically or horizontally mounted cylinders

Engineered systems

These systems are individually designed for each customer's requirement utilising an Approved Design Manual and Hydraulic Calculations Package.

- Individually tailored to meet exact requirements
- Efficient use of extinguishant
- Cost-effective use of pipework, layout and materials
- Effective protection



Extinguishing power

Rapid fire knockdown within ten seconds

The Kidde200 will protect at low concentrations of extinguishant, between 7 and 9%, a design which ensures a rapid fire knockdown essential for personnel and property protection. This low concentration also means that over pressurisation of rooms and enclosures is restricted, an important feature sometimes overlooked.

These systems are equally suitable for flammable mixtures of fuel found in, for example, marine engine compartments or for electrically sensitive equipment in communication technology.

Personnel safety

Safe in manned areas

Personnel safety in the event of discharging the Kidde200 system in an emergency is safeguarded as the extinguishant has a low toxicity rating, a fact supported by the government report. It is classified as:

Safe for automatic operation in areas where staff are at work

and that it has

No observed adverse effect on humans at concentration of 9%
(Systems are designed for lower concentrations than 9%)

Additionally, because the Kidde200 system assures rapid knockdown, inhalation of fumes from the burning materials causing the fire are minimised and smoke build up restricted.

Environmentally safe

Zero ozone depletion

In the past, certain gases such as Halon 1301 were utilised in systems until it was realised that they could deplete the ozone layer. Kidde was the first company to withdraw from the use of these gases in its products even before ratification of the Montreal Protocol banning Halon production. The new Kidde200 system encompasses all the parameters of the Montreal Protocol.

The FM200 extinguishant used in the Kidde200 system has;

Zero ozone depletion rating and a very short atmospheric life span

as listed in the United Nations Environmental Protection Report in December 1994.

Practical solution

Compact cylinder requirement

- As the FM200 is a liquefiable gas, a wide range of fill ratios are available which ensures a cost-effective application of container and contents through accurate systems calculations
- Kidde200 systems incorporate advanced design criteria to increase flow and installation efficiency by 100%, giving maximum flexibility to new and retrofit installations
- Kidde200 system cylinders are only pressurised at 25 bar and can be located within the risk area without a separate cylinder room enclosure

Technically advanced features

Numerous safety and unique system extinguishing features, particularly:

- A range of high flow. low-loss valves for maximum system pipe runs
- Nine sizes of containers allowing the quantity of gas to be precisely matched to the volume of risk
- Container valve critical flow paths optimised by computer modelling techniques
- Plug-in flexible hose connectors to simplify installation
- Vertical and horizontal mounting of containers
- Manifolds with built-in check valves permitting low mounting heights
- Provision for contents pressure monitoring
- Integral discharge nozzles on smaller containers
- Safe transportation and installation
- Can be repeatedly tested following installation
- Container valves are latch closed for transportation
- Vibration proof solenoid activator

Detection

Activation of the Kidde200 fire system can be carried out electrically, pneumatically, or manually with either local or remote control. The system can be connected to existing detection control stations situated on site or be provided with Kidde's own detection package.

Other related services

Halon recovery – the multiple choice solution

To assist companies that have existing Halon gaseous systems, Angus Fire Engineering has drawn up a Flexible Option Plan, specially devised to take account of differing requirements and varying budgets.

- Installation of a technically advanced, highly effective Kidde200 system
- Conversion of existing Halon systems to Kidde200 systems
- Decommissioning of Halon 1301 systems, using Kidde's registered recycling plant
- CO_2 installation for unmanned sites

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