

## GX-20/FM-200<sup>®</sup> Fire Extinguishing System



GX20/FM-200 is a clean agent fire suppression system that protects high-value assets from fire and the effects of fire-fighting, allowing normal operations to be resumed quickly with no collateral damage and clean-up costs. Kidde Fire Protection is at the forefront of new technologies in fire safety, offering a range of state-of-the-art fire extinguishing systems.

GX-20 systems utilise FM-200, a gaseous extinguishing agent manufactured by Great Lakes Chemical Corporation, which has emerged as the most viable alternative to Halon 1301 on the basis of extensive trials. FM-200 is fast and effective with a low space/weight characteristic which is also environmentally-acceptable and safe for human exposure.

Halon fire extinguishants were regarded for many years as the most effective fire suppressants for a wide range of applications. Amendments to the Montreal Protocol of 1987 focused on the manufacture of Halons, however, and their production has now ceased in recognition of their virulent destruction of the ozone layer. In addition, European legislation requires that Halon systems within the EU must have been decommissioned by the end of 2003.

FM-200 has been adopted by the majority of the world's fire protection companies and is the most widely used clean agent fire suppressant, with tens of thousands of systems installed across the globe.

### Benefits

- Fast and effective against a wide range of Class A, B and electrical fires
- Safe for occupied areas
- Non-corrosive and electrically non-conductive
- No post-discharge residue, no clean-up required
- Environmentally acceptable
- 25 bar system
- Engineered and pre-engineered systems available
- Range of system release options
- Low installation and maintenance costs
- Computer design maximises effectiveness of system
- FM Global and LPCB approved components with ULI listed systems available on request
- Marine systems available





#### What is FM-200?

FM-200 is a colourless, odourless gas containing only carbon, hydrogen and fluorine, thereby lacking the ozone-depleting presence of bromine atoms. Highly penetrative and achieving an homogeneous dispersion in the hazard zone, it acts on fires largely by physical means, lowering the temperature of the flame and fuel to a point at which combustion reactions cannot be sustained. There is no significant obscuration on discharge and this non-corrosive and electrically non-conductive agent causes no damage to sensitive equipment with no post-discharge clean-up required.

#### The environment

FM-200 has a zero ozone-depletion potential and a short atmospheric lifetime. When used in a fire event, FM-200 mitigates the effects of an uncontrolled fire and at the end of the lifetime of the system, the gas can be readily recovered and recycled.

#### System design

The GX-20 system comprises a versatile range of cylinders, valves and related components which have been selected for use with FM-200 and have been subject to stringent testing procedures. Flexibility, quality and reliability make the Kidde Fire Protection GX-20 range the world's finest in fire safety and the equipment carries third party listing through FM Global and the Loss Prevention Certification Board, plus Lloyds Register of Shipping and DNV for marine applications. Systems are UL2166 compliant.



Pressure Operated Control Head



Electric Control Head



Electric & Cable Operated Control Head



Lever Operated Control Head



Lever & Pressure Operated Control Head

#### Safety to personnel

A significant body of toxicity data has been obtained for FM-200 from over 70 studies. The US Environmental Protection Agency and the UK Halon Alternatives Group accepts the use of FM-200 in occupied spaces up to 9% concentration without mandated egress times and at up to 10.5% with mandated evacuation times. Since the agent does not act by oxygen-depletion in the hazard zone, it poses no human asphyxiation threat.

Both engineered and pre-engineered systems are available. The pre-engineered systems offer a low engineering/design cost option with defined maximum design parameters. Engineered systems offer optimum designs for the defined risks with reduced pipe sizes, unbalanced flows and common room and void protection possible.



Electric Control Head (Stackable)

### GX-20 cylinders

A wide range of sizes 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. The larger cylinders have an optional liquid level device for ease of contents monitoring and improved system maintenance.

### GX-20 valves

GX-20 valves are designed for optimum system performance, allowing the most economical pipe sizes to be selected, thus lowering installation costs. The fast-opening valves are available in a range of sizes and are manufactured from tough, corrosion-resistant brass under stringent quality control standards. The valve design enables the Kidde worldwide network of factory-trained distributors to recharge the cylinders without the need for replacement parts. An easy-to-read gauge on the valve permits the convenient visual inspection of the cylinder pressure. GX-20 valves are actuated by one of the following means:

- Electric solenoid
- Pneumatic diaphragm
- Local manual release at the control head
- Manual release at a remote pull station

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 LPCB approved Kidde Fire Protection equipment.

### Nozzles

A range of custom-designed nozzles is available, including 180° wall-mounted and 360° ceiling-mounted types.

### System space requirements

System space and weight are usually at a premium in industrial and commercial premises. FM-200 is stored as a liquid in nitrogen-pressurised containers at 25 bar, leading to minimal storage requirements comparing favourably with all other viable gaseous agents.

### Approvals

Kidde FM-200 systems are FM Global listed, meet the criteria of UL2166 and carry LPCB design manual and component approval.

### Applications

GX-20 systems are ideally suited to the protection of high value assets from both loss by fire damage and the accompanying catastrophic plant down-time. Applications include:

- Computer suites
- Telecommunications facilities
- Internet Service Providers
- Control rooms
- Railway signalling centres
- Air traffic control centres
- Stores & Archives
- Heritage sites - art galleries and museums
- Medical and laboratory equipment
- Petrochemical plant
- Offshore oil and gas installations
- Pipeline pumping stations
- Ship's engine rooms

### Assured reliability

Kidde Fire Protection systems are designed to conform to NFPA 2001 and ISO 14520 requirements. An empirically-verified Windows™ based computer program is used to model two-phase agent flow and ensure that the correct concentration of agent is achieved within 10 seconds throughout the protected zones as required by the NFPA and ISO Standards.





BS EN ISO9001  
FM00215



INVESTOR IN PEOPLE

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