

FM-200®

Fire Extinguishing System



INTRODUCTION

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. As a result, recent years have seen a substantial reappraisal of approaches to fire protection.

Kidde is at the forefront of new technologies in fire safety, offering a range of state-of-the-art fire extinguishing systems. Kidde offers systems containing FM-200®, a gaseous agent manufactured by Great Lakes Chemical Corporation, which has emerged as a viable alternative to the Halons 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.

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

ASSET PROTECTION

It is a chilling statistic that of companies suffering an accidental fire event, 43% never re-open and a further 29% close within three years. Ensure that your business is adequately protected and does not yield to this fate.

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.

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.

BENEFITS

- Fast and effective against a wide range of Class A, B and electrical fires
- Safe for occupied areas
- Non-corrosive and electrically nonconductive
- No post-discharge residue and clean-up
- Environmentally acceptable
- 25 bar system
- Range of system release options
- Low installation and maintenance costs
- Computer design maximizes effectiveness of system

FM - 200[®]

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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 system comprises a versatile line 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's FM 200[®] System the world's finest in fire safety. These engineered systems offer optimum designs for the defined risks with reduced pipe sizes, unbalanced flows and common room and void protection possible.

SYSTEM COMPONENTS

CYLINDERS : A selection of sizes is available, offering a choice of fill capacities to meet specific requirements and ensure maximum economy in installation. All cylinders are CCOE approved and are seamless steel cylinders.

CYLINDER VALVES : Designed for optimum system performance, reducing pipe sizes and lowering installation costs. The fast-opening valves are manufactured from tough, corrosion-resistant brass under stringent quality control standards.

The valve design enables the Kidde worldwide network of 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. Cylinder valves are actuated by one of the following means:

- ◆ Electric solenoid
- ◆ Pneumatic
- ◆ Local manual release at the control head
- ◆ Manual release at a remote pull box

All related components from discharge nozzles to control heads are designed to be compatible, allowing a complete system to be configured using Kidde equipment.

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

APPLICATIONS

FM 200 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, EDP facilities and telecommunications hardware
- ◆ 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
- ◆ Ship machinery spaces, rail locomotives and rolling stock

ASSURED RELIABILITY

Kidde's FM 200 systems are designed to conform to NFPA 2001. 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 Standard.