



Safety for your life





Kidde 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 ozonelayer. 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.

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.



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

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.

Benefits

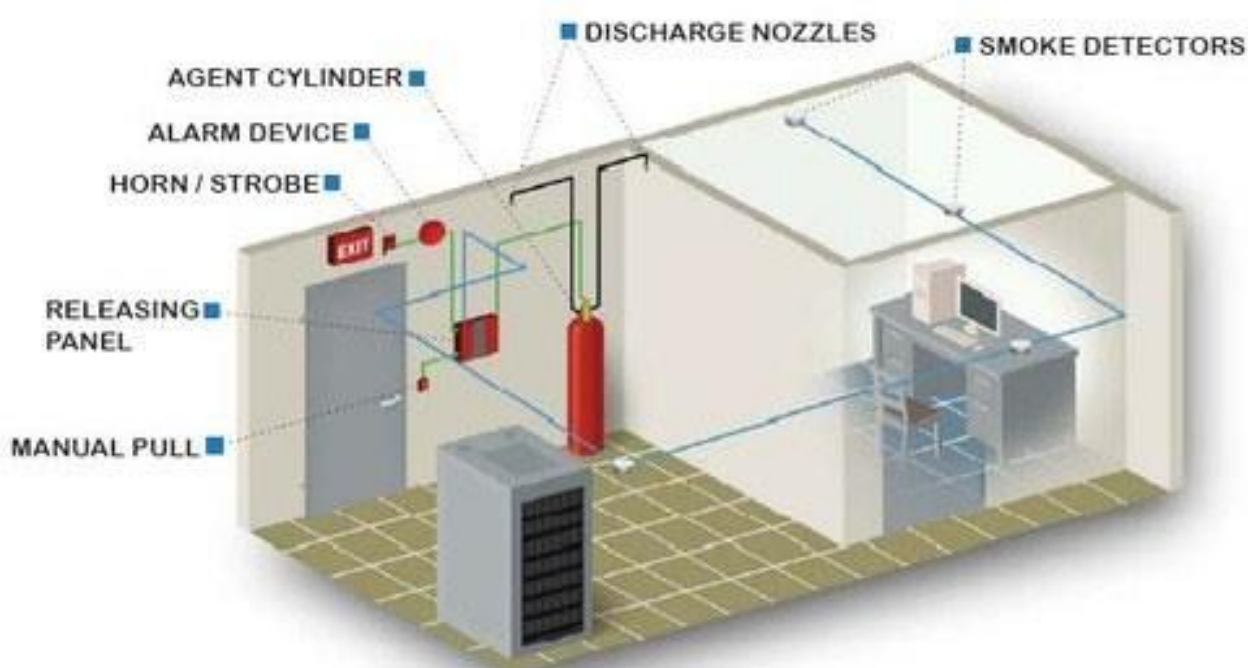
- Fast and effective against a wide range of Class A, B and electrical fires
- Safe for occupied areas
- Non-corrosive and electrically non-conductive
- No post-discharge residue, no clean-up required
- Environmentally acceptable
- 25 bar system
- Engineered and pre-engineered systems available
- Range 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

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.



Kidde GX20 systems are designed to conform to NFPA 2001 and ISO 14520 requirements. An empirically-verified 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.



Design Calculations

The required agent quantity is based on the volume of protected area at the lowest expected ambient temperature and concentration required. To obtain the minimum agent quantity required, use the following equation:

$$W = (V/S) \times (C/100 -$$

W = weight of Agent required

V = volume of protected area

S = specific vapour volume

$S = 0.1269 + 0.000513 T$

C = Required HFC-227ea Design Concentration (% by volume) at Design Temperature (t).

T = Design temperature in protected area (°C)

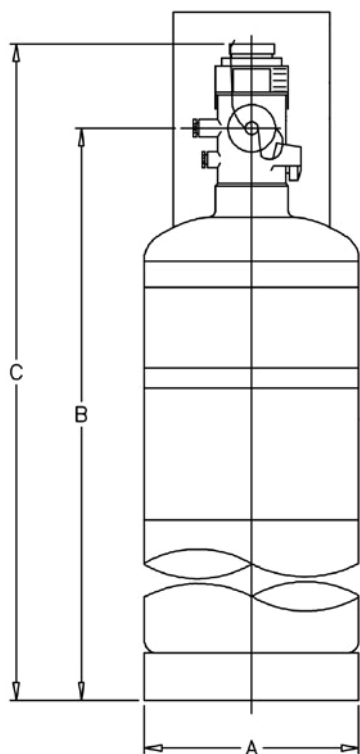
Product Specification

FM200 System Application



- 1 Container Valve
- 2 Electric Solenoid Control Head
- 3 Lever Operation Control Head
- 4 Pressure Gauge
- 5 Discharge Hose
- 6 Pilot Hose
- 7 Pressure Operated Control Head
- 8 Pressure Operated Switch
- 9 Supervisory Pressure Switch
- 10 FM200 Cylinder

A wide range of cylinder sizes from 16 to 368 litres 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 and both TPED and DOT approved cylinders are available.



No	Part number	Cylinder size (ltr)	Approximate weight (kg)	Dimensions (cm)		
				A	B	C
1	E7763-103-04-EU	16	19	230	580	680
2	E7763-104-04-EU	28	27	230	885	985
3	E7763-105-04-EU	51	42	324	816	919
4	E7763-106-06-EU	81	62	324	1206	1337
5	E7763-109-04-EU	142	97	406	1351	1482
6	E7763-111-06	243	126	558.8	1285	1445
7	E7763-112-02	368	235	610	1567	1772

Product Specification



Explosion Proof Electric Control Head, Stackable

Part no: B6793-709
 Material: Brass
 Finish: Natural
 Current Draw: 0.2 amps
 Weight: 1.8kg



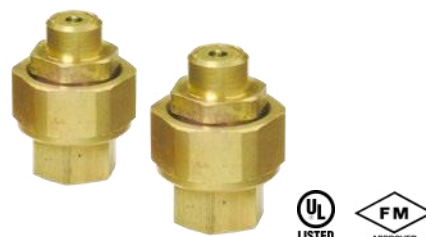
Lever Operation Control Head

Part no: B6793-705
 Lever: Stainless steel
 Body: Brass
 Finish: Natural
 Weight: 0.36kg



Electric Control Head

Part no: 890181
 Voltage: 24 VDC
 Current: 2.0A



Pressure Operated Control Head

Part no: 878737
 Material: Brass



FM200® Pendent Nozzle (180°, 360°)

Part no: 93-1940.1
 Material: Brass
 Size: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"



Pressure Operated Switch

Part no: 486536
 Contact Ratings (3 PDT):
 - 15 Amp @ 125 Vac
 - 10 Amp @ 250 Vac
 - 3/4 HP @ 250 Vac
 - 1, 2 or 3 Phase

Product Specification



Kentec Multi-Area Extinguishant Control Panels

Product Overview

Sigma XT+ control panels are multi-area extinguishant control panels complying with EN12094-1, EN54-2 and EN54-4. Up to 8 zones of conventional detection with up to 4 extinguishant areas are available. Stand alone extinguishant control units are also available with 2 monitored inputs to receive initiating signals from remote fire detection control panels or addressable modules.

Each extinguishant area has a comprehensive set of inputs and outputs and is configurable via a simple programming interface. All extinguishant areas may have up to 7, serially connected Sigma Si status indication and control units or ancillary relay boards connected via a simple 4 core cable.

The versatility of the control panel can be enhanced further by the fitting of up to 7 Sigma CP Ancillary boards (K580) or Sigma CP Sounder boards (K461) to the RS485 serial bus. See data sheet DS39 and DS48.

For compatible status units see Sigma Si data sheet DS41.

Product Code	Zones	Areas	Size (mm)
K21021M3	2	1	385 x 520 x 110
K21042M3	4	2	385 x 520 x 110
K21083M4	8	3	385 x 700 x 145
K21084M4	8	4	385 x 700 x 145

Features

- Approved to EN12094-1, EN54-2 and EN54-4
- 2, 4 or 8 detection zones
- 1 to 4 extinguishant areas
- Dual extinguishant outputs for each area (configurable as Main/Reserve)
- First and second stage sounder outputs for each area
- First and second stage volt free changeover contacts for each area
- Released volt free contact per area
- Fault volt free contact per area
- Programmable extinguishant delays
- Programmable output duration
- Extract fan control
- Countdown indicator shows time until release in seconds
- Mode select and manual release controls per area
- Monitored remote manual release input
- Monitored remote Hold input
- Monitored remote Mode select (door interlock) input
- Monitored remote Released pressure switch input
- Monitored remote Low Pressure switch input
- Monitored Abort input
- Serial connection for Sigma Si status units and ancillary boards. (K588)

Product Specification



Photoelectric Smoke Detector

Model	2400E
Operating Voltage	8.5 - 35V
Standby current	50 μ A
Alarm Current	130 mA
Dimensions	5.3" x 2.0"
Weight	6.3 oz (178 g)
Operating Temperature	32°F to 120°F (0°C to 49°C)
Operating Humidity	0 to 95% RH Non-Condensing
Approval	UL, FM



Mechanical Heat Detector

Model	5601P
Operating Voltage	6-28VDC
Dimensions	4.57" x 1.69"
Weight	6 oz (170 g)
Alarm Temperature	135°F (57°C)
Operating Humidity	5 to 95% RH Non-Condensing
Approval	UL



Fire Alarm Bell

Model	SSM24-6
Operating Temperature	-31°F to 140°F
Operating Voltage	16 to 33 VDC
Maximum Current	DC-31.1mA/ FWR-53.5mA
Gong Diameter	6"
Approval	UL, FM

Product Specification



**Manual Pull
Stations Series
3300**

Part no	30-330001-001
Switch rating	2 Amp @ 240 Vac or 125 Vdc
Operating Humidity	0-95% RH
Operating Temperature	-40°F to 150°F (-40°C to 66°C)
Shipping Weight	1.12 lbs. (510 g)



**Series 1930 Suppression
System Abort Station**

Part no	30-193000-001
Electrical Ratings	2.5 Amps @ 120 Vdc
Ambient Temperature	-13°F to 158°F (-25°C to 70°C)
Shipping Weight	2 lb. (.9 kg)



Discharge Warning Box

Part no	SFM-DISW
Voltage	24 VDC
Ambient Temperature	- 25° - +70°
Dimensions (mm)	H150 x W400 x D85
Material	Black Steel
Finish Colour	Red



Electronic Sounder and Beacon

Model	KS-17
Voltage	24 VDC
Current Consumption 24V DC (tone 3)	14.5mA
Volume Control	0 to - 20dB adjustment
Ambient Temperature	-25°C ~ +80°C
Material	ABS plastic
Dimensions	92.5mm(Dia.)x110mm(H)
Weight	278g

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