FM-200 Fire Suppression System

DESCRIPTION

The FM-200 Fire Suppression System is an engineered system utilizing a fixed nozzle agent distribution network. The system is designed and installed in accordance with the National Fire Protection Association (NFPA) Standard 2001, "Clean Agent Fire Extinguishing Systems." When properly designed, the FM-200 system will suppress surface burning fire in Class A, B, and C hazards.

Complete suppression using FM-200 has the following advantages:

- FM200 gas is clean agent, the system is environmental fire suppression system
- The small quantity of agent cover maximum protected area.
- Maximum safety for personnel due to low toxicity.
- Most effective when used with automatic detection to introduce FM-200 rapidly.
- The ability to prevent re-ignition as long as concentration levels are maintained.

Typical areas that can be protected by a FM-200 system are:

Bank Vaults	Libraries
Rare Book Stores	Electronic Data Processing
Telephone Exchanges	Studios
Communication Centers	Transformer and Switchrooms
Control Rooms	Test Laboratories
Armarium Rooms	Flammable Liquid Storage

CATEGORY

WINAN FIRE has three types of FM200 suppression system available, they are pipe network type, cabinet type and hanging type.

1. Pipe network type

This type consists of extinguishing agent stored in high strength steel cylinders. Manual or automatic actuators are available to open the valve(s) for release of the agent into the hazard area. The agent is distributed and discharged into the hazard area through fixed piping and nozzles. Each nozzle is designed to deliver a uniform discharge of agent into the protected area. On large hazards, cylinders can be manifolded together. The cylinders are connected to the manifold by means of a flexible discharge bend and check valve. Automatic actuation is accomplished through the detection system. When a fire condition cause the detector(s) located in the hazard area to go into alarm, a signal is sent to the detection control panel. This causes actuation of the release circuit which electrically operates the actuator located on the cylinder valve. The actuator opens the valve and allows the agent to enter the pipe network and discharge out the nozzles.

This type of system can protect as many as 8 hazard areas at once. The system will be located in a separate room partitioned from protected areas.

PARAMETER

Model	QMQ4.2/70N-GA, QMQ4.2/90N-GA, QMQ4.2/100N-GA, QMQ4.2/120N-GA, QMQ4.2/150N-GA,
Cylinder Capacity	70L, 90L, 100L, 120L, 150L
Agent Type	HFC-227ea (FM200)
Agent Filling Density	≤950KG/m³
Storage Pressure	4.2MPa
Maximum Working Pressure	5.3MPa
Starting Voltage/Current	DC24V/1.6A
Operation Temperature	0-50°C
Starting Mode	Auto/Manual

Cabinet Type

Compared with pipe network type, construction of cabinet type is more simple. Only consists of cabinet, cylinder (with solenoid valve) and discharge nozzle. Gas cylinder was installed inside the cabinet. Discharge nozzle installed on cabinet. This type with good aesthetics and convenient transportation. The starting mode is same as pipe networking type. The system receive the signal from fire detector(s) to stimulate solenoid valve open and agent discharge out from nozzle into hazard area.

This type of system will be located in the same room of hazard area. Every set of cabinet is a complete and independent system covers one protected area only.

Single Cylinder Cabinet FM200 System

Double Cylinder Cabinet FM200 System

PARAMETER FOR SINGLE CYLINDER

Model	Cylinder Capacity (L)	Dimensions (mm)
		H×L×B
GQQ40/2.5GA	40	1300×450×450
GQQ70/2.5GA	70	1600×500×450
GQQ90/2.5GA	90	1800×500×450
GQQ100/2.5GA	100	1800×550×450
GQQ120/2.5GA	120	1900×580×520
GQQ150/2.5GA	150	1900×580×520
GQQ180/2.5GA	180	2100×650×600

PARAMETER FOR DOUBLE CYLINDER

Model	Cylinder Capacity (L)	Dimensions (mm)
		H×L×B
GQQ40/2.5GA	40	1300×840×450
GQQ70/2.5GA	70	1600×930×450
GQQ90/2.5GA	90	1800×930×450
GQQ100/2.5GA	100	1800×930×450
GQQ120/2.5GA	120	1900×1100×520
GQQ150/2.5GA	150	1900×110×520

Hanging Type

Hanging type FM200 system is capable for computer room, switch board room, small oil depot or such small protected areas. Hanging type FM200 system has two starting modes. One is same as cabinet type by solenoid valve. Another mode activated through a bulb sprinkler head. The cylinder is sealed by a glass bulb sprinkler. Same mechanism as fire sprinkler, a fire condition cause environment temperature increase. When temperature gets bulb rated temperature, glass bulb burst and seal falls. Agent discharge to hazard area from sprinkler head.

Hanging FM200 system can be either hung on the ceiling or mounted on the wall, which depends on spatial position of the protected room.

PARAMETER

Model	Cylinder Capacity (L)	Dimensions (mm) H×L×B	Storage Pressure (20°C) (MPa)	Starting Mode
QQC8/1.6	8	Φ260×300	1.6	solenoid valve/glass bulb
QQC10/1.6	10	Φ300×356	1.6	solenoid valve/glass bulb
QQC15/1.6	15	Φ330×427	1.6	solenoid valve/glass bulb
QQC20/1.6	20	Φ330×427	1.6	solenoid valve/glass bulb
QQC30/1.6	30	Φ400×437	1.6	solenoid valve/glass bulb