

**FM-200 (HFC-227EA) EFS
EASY FLOW SYSTEM CLEAN AGENT
FIRE EXTINGUISHING SYSTEM**





EASY FLOW FM-200 (HFC-227EA) EFS

**What is PISTON FLOW SYSTEM engineering?
The most innovative technology, first in the world.**

The standard HFC-227ea (FM-200) fire extinguishing system is known to have major limitation in terms of discharging the extinguishant (agent) through relatively long pipe runs. This is due to the lack of pressure that drives the agent because the agent and nitrogen driver are stored in the same cylinder. Thus, this type of system is suitable only for installations where agent storage cylinders are placed in spaces inside or near the protected enclosure.

PISTON FLOW SYSTEM (PFS) is the first-of-its-kind technology that was developed primarily for the purpose of extending the length of piping of the clean agent fire extinguishing system.

PFS consists of storage cylinder containing the fire extinguishing agent super-pressurized with nitrogen to about 25 bar (360 psi) at 21 °C (70 °F) and a driver cylinder containing nitrogen gas compressed up to 80 bar (1,160 psi) at 21 °C (70 °F).

When the agent cylinder valve is actuated, the agent is pushed up through the internal siphon tube, out of the valve discharge outlet and subsequently into the piping. Some portion of the flowing agent actuates the nitrogen valve and instantly releases the pressurized nitrogen into the vapor space of agent

Cylinder

PFS technology enables the discharge of the agent through long-distance piping due to the addition of pressurized nitrogen before the pressure in agent cylinder drops significantly. This technique of releasing the nitrogen driver prevents rapid decline of discharge pressure. Hence, by adopting this technology increased level of freedom for pipeline routing, location and layout of agent cylinder storage room and protected areas is gained - giving the designer more flexibility in designing the clean agent fire extinguishing system.

System basic operation

- In case of fire in a protected space, smoke and heat DETECTORS are activated.
- The CONTROL PANEL sends electronic signal to the corresponding ACTUATION BOX.
- The ACTUATION BOX activates and enables the release of pressurized actuation gas.
- The actuation gas flows through and opens the corresponding SELECTOR VALVE.
- As the actuation gas reaches the AGENT CYLINDER, it the agent discharge valve assembly enabling the or discharge of FM-200® (HFC-227ea) agent.
- The discharged FM-200® (HFC-227ea) agent flows through the discharge line from the MANIFOLD, SELECTOR VALVE, PIPING and to the NOZZLES in the affected space
- Using an appropriate connection in the discharge line, the pressure from the discharged agent actuates a pressure switch activating the CONTROL PANEL.
- The CONTROL PANEL activates the audible and visual SYSTEM DISCHARGE ALARMS to give positive warning of system discharge shortly before the discharged agent reaches the NOZZLES

KEY FEATURES

APPLICATIONS

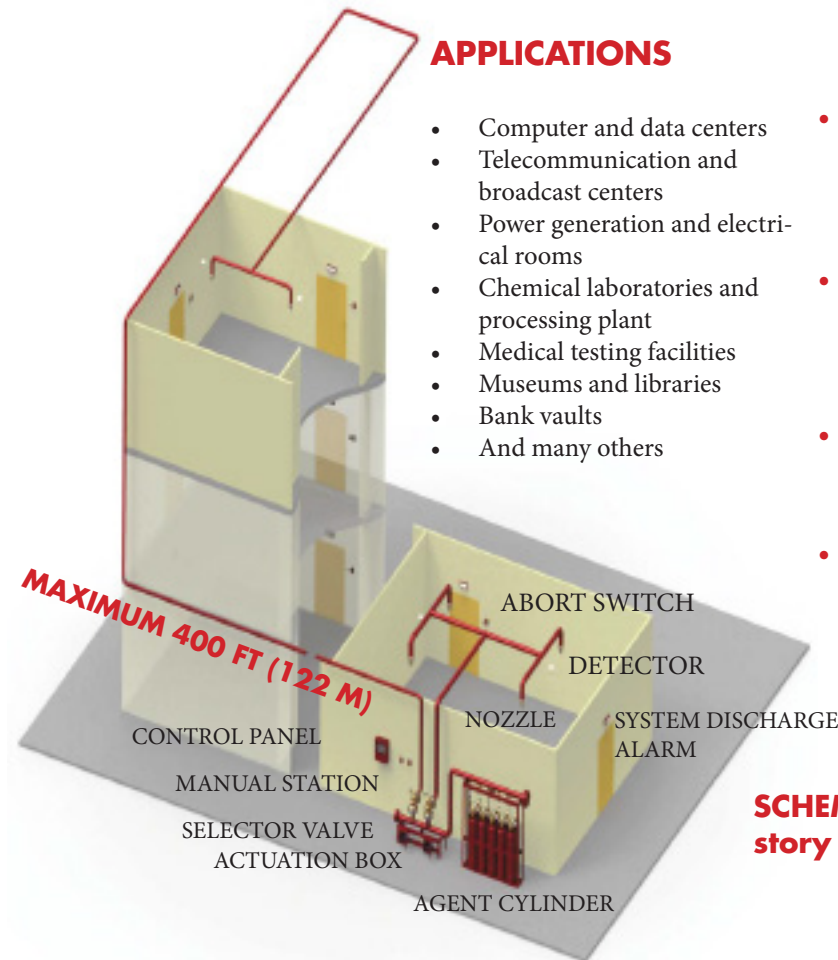
- Computer and data centers
- Telecommunication and broadcast centers
- Power generation and electrical rooms
- Chemical laboratories and processing plant
- Medical testing facilities
- Museums and libraries
- Bank vaults
- And many others

- LOCATE CYLINDERS FAR AWAY FROM PROTECTED HAZARD LONG PIPE RUNS
- GROUP CYLINDERS IN ONE PLACE QUICK INSPECTION & MAINTENANCE
- BEST FOR MULTI- ZONE FIRE PROTECTION
- FLOW CALCULATION TOOL -QUICK & RELIABLE SYSTEM DESIGN

Developed exclusively for MASTECO by Hughes Associates, Inc., USA

SCHEMATIC OF A 2-ZONE PFS Multi story building

Approved DOT 3AA specification cylinders



FM-200® (HFC-227ea) PISTON FLOW SYSTEM PFS)

- Engineered automatic clean agent fire extinguishing system intended for total flooding of enclosed spaces
- Uses FM-200® (HFC-227ea) - world's most widely selected clean agent for Halon replacement application
- FM-200® (HFC-227ea) agent is stored in US DOT approved cylinder superpressurized with Nitrogen to about 25 bar (360 psi) at 21 °C (70 °F)
- Additional compressed Nitrogen in a separate US DOT cylinder drives the agent through longer piping network within 10 seconds
- Operating temperature from 0 °C to 55 °C (32 °F to 130 °F)



AGENT CYLINDER			
Part No.	Nom. Capacity (L)	Valve Size (mm)	Weight of Agent (KG)
MFC-50	63.0	40	31.2 - 60.6
MFC-75	89.0	40	44.1 - 85.6
MFC-100	115.4	50	57.2 - 111.0
MFC-150	175.0	50	86.7 - 168.3

NITROGEN DRIVER CYLINDER			
Part No.	Nom. Capacity (L)	Charging Pressure (bar)	Partner Agent Cylinder
N68-60	68.0	60	63.0 L
N68-70	68.0	60	89.0 L
N68-80	68.0	80	115.4 L
N68-80	68.0	80	175.0 L

SALES

Email: sales@crminingsolutions.co.za

Website: www.crminingsolutions.co.za

Tel: +27 12 881 0040

Cell: +27 68 047 8219

