

Model FS9600 Preassembled Fire Suppression & Extinguishing Skid



- *Designed and engineered per NFPA requirements for each application*
- *Wide variety of suppression agents: CO₂, FE-13™, FM-200™ and others*
- *Systems can be fully integrated into the NOVA-5000 Detection and Control System or designed to work with existing equipment*
- *Safety Systems Technology Clean Agent Systems are effective where other types of suppression are not suitable... high inerting concentrations, low agent storage temperatures and high ceiling heights*
- *Safety Systems Technology designs will meet all requirements of NFPA 12 or NFPA 2001 with no usage restrictions.*
- *Equipment certified or listed by one or more testing agencies:*



THE SKID ASSEMBLY

Safety Systems FS9600 skids are used to store suitable fire suppression agents in pressurized cylinders. The skid base and frame are 100% seal welded steel, designed to firmly and safely hold the cylinders in place during a discharge of the agent stored inside. The framing is also designed to withstand stresses caused by earthquakes or other seismic activity. Each cylinder is connected to a manifold with high pressure flexible hoses. The stored agent may be released by applying a 24 volt dc signal to solenoid release valves on the cylinders, by manual operation of a release lever on one of the cylinders, by pneumatic pressure, or by mechanical remote control. It is common to design the skid so that two of the listed releasing means are possible. At installation, the manifold will be connected using suitable piping to discharge nozzles in the protected area. The nozzles are arranged so as to distribute the agent uniformly throughout the hazard.

The agent is usually stored in the cylinders as a liquid. Once the liquid reaches the nozzles and pressure is released, it will disperse as a gas.

The two cylinder retaining bars on the front of the skid are bolted in place. After the agent has been released, the bars will be removed, the hoses disconnected and the cylinders removed for refilling with new agent.

Note that the skid is shipped and installed as one complete item. This replaces a kit of approximately 100 individual items that would require on-site assembly if the skid is not used.

THE AGENTS

In general, any one of the various agents available can be used in any hazard. The following guidelines are not all inclusive, but can be used to make a preliminary choice.

FM-200™ (registered trademark of Great Lakes Chemical) is usable in spaces where personnel are present. It can be released without evacuation of the personnel. Does not damage electrical or electronic equipment.

FE-13™ (registered trademark of Dupont Fluoroproducts) is effective at low temperatures where other agents are not, as low as -40 degrees. It can be used in high ceiling enclosures up to a height of 25 feet.

Carbon Dioxide (CO₂) A traditional agent that has been in use for 70 years for extinguishing in areas where personnel are not present. If used in occupied areas, the personnel must evacuate before the CO₂ is released, as it displaces oxygen and will not support life. In addition to total flooding of an enclosure, it may be applied directly on burning material with fixed nozzles or hand hose lines.

Other agents can be supplied for special applications, including **Argonite®** (registered trademark of Gingham Kerr) and **Novec™** (trademark of 3M Company).

DISTRIBUTION NOZZLES

Along with the skid, Safety Systems can supply the required distribution nozzles to protect the hazard. Hydraulic calculations will insure that the agent will be uniformly applied throughout the protected area. The pipe and fittings necessary to connect the nozzles to the skid is not supplied, and should be obtained locally.

TOTAL FLOODING APPLICATION

This is the most common method for applying the extinguishing agent. This method requires an enclosed volume, such as an equipment room, a machine enclosure, or even an entire building. The system is designed to flood the entire volume of space with sufficient agent to prevent or extinguish a fire in the protected volume.

LOCAL APPLICATION

A CO₂ system can be designed to protect specific pieces of machinery or the surface of a flammable liquid pool. In local application nozzles are aimed to spray carbon dioxide directly into burning class B materials.

HAND HOSE APPLICATION

The third application method for CO₂ protection employs stationary cylinders connected to hose reels or racks. Trained responders direct the spray of carbon dioxide from hose lines and nozzles directly onto the fire. Hand hose line systems offer more fire-killing power than the largest portable or wheeled extinguishers.

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

Fire suppression and extinguishing agent shall be stored in approved cylinders assembled onto a self-contained welded skid assembly. The skid shall be shipped complete, with capability for positioning using a fork lift or crane. Bolted together rack type kits for field assembly shall not be supplied. All components shall be listed for their intended use in fire protection service. The equipment shall conform to the requirements of NFPA 2001 Clean Agent or NFPA 12 Carbon Dioxide Fire Extinguishing Systems.

TECHNICAL SPECIFICATIONS

Extinguishing Agents:	Specify any of the listed agents on this sheet, or allow SST to pick the recommended agent for your application.
Skid Material:	Carbon Steel, 100% seal welded, except front retaining bars which are bolted in place to permit removal of cylinders for maintenance
Skid Finish:	Fire Engine Red paint, or other color to customer's specification
Number of Cylinders:	2 to 7 in a single row, 6 to 10 in double rows estimated. Actual maximums vary depending on agent and cylinder capacity.
Gross Weight:	Approximately 475 pounds per cylinder. Varies depending on agent and cylinder sizes
Design Acceleration:	0.65g lateral, 0.33g vertical applied simultaneously (transportation or seismic)
Power Required:	24 volts DC @ 3.9 amps
Ambient Temperature:	0°F to 130°F (-17°C to 54°C). External heating or cooling may be used to keep temperature within this range.

ORDERING INFORMATION

PART NO.	DESCRIPTION
	All systems are custom designed to your specific application. Please contact your authorized sales representative, distributor, or our home office for design assistance or a price quotation.



SAFETY SYSTEMS TECHNOLOGY (NV), INC.

23282 Mill Creek Drive, Suite 215, Laguna Hills California 92653

Tel. 1-949-583-1857 Fax 1-949-340-6643 <http://www.safetysys.com>

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