

Fenwal Engineered Fire Suppression System

Designed for use with 3M™ Novec™ 1230 Fire Protection Fluid

Spherical Agent Storage Container Data Sheet

F-44-1120-1



A UTC Fire & Security Company

P/N: 44-11020X-001

FEATURES

- 4 Convenient Sizes
- 20 to 196 Pound Capacities
- UL Listed, FMRC Approved
- Requires No Floor Space
- Electric Initiator Actuation

DESCRIPTION

Fenwal Modular Spherical Agent Storage Containers store 3M™ Novec™ 1230 Fire Protection FLuid superpressurized with dry nitrogen to 360 psig at 70°F. These containers hold from 20 to 196 pounds of Novec™ 1230 fluid and are equipped with a burst disc type discharge valve, a replaceable initiator well, a screen assembly, safety plug and cable assembly. Each container has two identical boss-mounted check valves which will accept a pressure gauge (standard), and an optional pressure switch (see Data Sheet F-44-3119-0). Either of these check valves may be used for recharging the container. Initiator assemblies must be ordered for each container. See Data Sheet F-44-1932-0

OPERATION

The container is discharged when the initiator is actuated to rupture the burst disc valve.

INSTALLATION

The container must be rigidly mounted in position with the valve facing down. Fenwal mounting brackets provide a secure means for wall mounting containers. A lifting ring on the container provides a means for raising the container to its mounting location.

After the container is secured in place, remove the safety plug and connect the rest of the piping and nozzles(s) specified in the system drawing. Retain the safety plug for use when reconditioning the container and whenever a filled container is moved.

MAINTENANCE

Inspection and/or maintenance procedures should be scheduled as listed below, or performed when an event occurs which might affect the reliability of the system.



QUARTERLY INSPECTION

1. Check the pressure gauges of each agent storage container. If the pressure is less than 325 psig at 70°F (22.9 Kg/cm² at 21°C), the container should be removed and carefully inspected by qualified personnel. It should then be reconditioned, recharged or replaced depending upon its condition. Pressure varies with temperature, and in the range of 55°F to 85°F (12.7°C-29.4°C) this change is approximately 3psig/°F (.38 Kg/cm²/°C)
2. Check all component supporting hardware and tighten or repair as required.
3. Visually check all components for physical abuse and take whatever action is necessary. Replace the component if at all in doubt as to its ability to perform properly.

B. SEMI-ANNUAL INSPECTION

Qualified personnel are to remove and weigh all agent storage containers. Losses of agent must not exceed 5% in net weight, or 10% reduction of pressure (adjusted for temperature). Container and agent weight are marked on the container's nameplate.

All outlet piping must be clean and free of dirt, chips, fillings and other foreign material that may become hazardous projectiles or cause the system to become inoperative or ineffective at the time of the discharge.

Note: The safety lug shipped with this container should be retained and secured to the container whenever the piping is removed from a charge container. **Charged containers must have the safety plug installed when removed from the system for shipment. Observe proper handling procedures when installing or removing the initiator.**

RECONDITIONING

After a system has been actuated, it is recommended that the local authorized Fenwal Distributor be contacted for reconditioning the system.

The Reconditioning Kit for this unit is P/N 31-193005-001. This kit does not contain the initiator, which must be ordered separately.

ARCHITECT/ENGINEER SPECIFICATIONS

The agent storage container shall be a Fenwal modular spherical (refillable) container constructed of high strength, low HSLA alloy steel. It shall consist of: fill check valve, burst disc valve assembly, integral supporting flanges, 0-700 psig pressure gauge and pressure switch assembly (optional). The containers shall hold from 20 to 196 lbs. of Novec 1230 agent.

Containers shall conform to applicable specifications of Dept. of Transportation, Underwriters Laboratories, and Factory Mutual Research Corp.

The burst disc valve assembly shall be an integral part of the agent storage container and shall be operated by applying electrical current to an initiator assembly, which has a electro-explosive device that provides an instantaneous full bore release and discharge of the agent on demand. The releasing mechanism shall contain no moving parts.

Filled containers shall be super-pressurized with dry nitrogen to 360 psig at 70°F to aid in rapid agent distribution, particularly at lower temperatures. It shall automatically relieve between 850 to 1000 psig in the event of excessive pressure build-up.

The mounting bracket shall be designed for installation on a wall, floor or other rigid surface and shall serve as support for the agent storage container, and shall be capable of withstanding a thrust of 1000 lbs. For 5 seconds in any direction.

Sphere			
Part Number	Diameter	Height*	Empty Weight**
44-110201-001	13-13/64 in. (334 mm)	20-21/32 in. (525 mm)	28-1/2 lb. (12.9 kg)
44-110202-001	14-13/16 in. (377 mm)	22-13/32 in. (569 mm)	36.7 lb. (16.6 kg)
44-110203-001	17-5/16 in. (439 mm)	24-29/32 in. (634 mm)	52 lb. (23.6 kg)
44-110204-001	21-1/2 in. (547 mm)	29-19/64 in. (745 mm)	99.1 lb. (45 kg)

*Height is from top of lifting ring to bottom surface of flange. Flange mounting holes 5/8 in. (15.9 mm) diameter located on bolt circle 6-5/8 in. (162.3 mm) diameter. Flange is 1-13/32 in (6.4 mm) thick for all models except for 90-110204-001, which is 3-13/16 in. (9.5 mm).

**Average weight for shipping and mounting planning. Actual weight stamped on each unit.

Part Number	Fill Range	Capacity
44-110201-001	20 - 44 lb. (9.1 - 20 kg)	.656 ft. ³ (.019 m ³)
44-110202-001	28 - 63 lb. (12.7 - 29 kg)	.932 ft. ³ (.026 m ³)
44-110203-001	45 - 101 lb. (20.3 - 46 kg)	1.488 ft. ³ (.042 m ³)
44-110204-001	85-196 lb. (38.6 - 89 kg)	2.833 ft. ³ (.080 m ³)

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A UTC Fire & Security Company

400 Main Street
Ashland, MA 01721
Ph: 508.881.2000
Fax: 508.881.8920
www.fenwalfire.com