

Modular Cylindrical

Effective: August 1999

FM-200™ Agent Storage Container

P/N 93-120XXX-001

FENWAL®

93.120X-1

DESCRIPTION

These cylindrical agent storage containers, which are less than ten inches high and contain from 20 to 30 pounds of FM-200, are ideal for height-limited locations such as under-floor applications. They are equipped with a pressure gauge, a burst disc type discharge valve, a replaceable initiator will assembly a screen assembly, cable assembly, mounting brackets and safety plug. Each ASC has a boss-mounted check valve which accepts and optional Pressure switch (see Fenwal Data Sheet 93.3119.0) and is used for recharging the container

Initiator assemblies must be ordered for each container. See Fenwal data Sheet 93.1932.0 for information.

Total pressure in a filled container is adjusted to 360 psi at 70°F by superpressurizing with dry nitrogen.

Nozzles and piping selected shall ensure a minimum discharge rate of 84 lbs. FM-200 agent per second at the minimum operating temperature. Operating temperature shall be limited to 32° to 130°F. Nozzles and piping must be in accordance with Fenwal FM-200 Design Manual.

OPERATION

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

INSTALLATION

The container must be securely mounted in position with the valve down using the integral mounting brackets. The center of four slots are located at the corners of a rectangle 8-1/2 in. wide by 11-11/16 in. long. Use four 5/16 in. bolts or studs to secure the container to a solid surface.

The 93-120251-001 unit has mounting brackets on the bottom as shown at right and the 93-120253-001 unit has the mounting brackets on top. The 93-120351-001 and 93-120353-001 units have mounting brackets on the dies. All units must be mounted with the valve at the bottom: either parallel to the floor or facing down. If not mounted in this manner, proper discharge will not be possible.

After the container is secured in place, remove the safety plug and screw the screen assembly into the valve body. Then connect the rest of the piping and nozzle specified in the system drawing. Retain the safety plug for use when reconditioning the container or whenever a filled container is moved.

MAINTENANCE

The following inspection and/or maintenance procedures should be scheduled or performed upon the occurrence of any even which might bias the reliability of the system.



A. QUARTERLY INSPECTION

1. Check the pressure gauge. If the pressure is less than 325 psig at 70°F (22.9 Kg/cm² at 21°C) the container must be removed by qualified personnel, inspected carefully then recharge or replaced as required. Pressure will vary with temperature. In the range of 55 to 85°F (12.8 to 29.4°C), this change is approximately 3 psi per degree F (0.397 Kg/cm² per degree C).
2. Check all components supporting hardware and tighten, repair or replace as required.
3. Visually check all components for evidence of physical abuse and take whatever action is indicated. Replace any component if at all in doubt of its ability to perform properly.

B. SEMI-ANNUAL INSPECTION

Qualified personnel are to remove and weight all agent storage containers. Losses in net weight of agent must not exceed 5% or 10% under pressure loss adjusted for temperature. Container, and agent weight are marked on the mounting bracket.

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

NOTE: The safety plug shipped with the container must be retained and secured to the container whenever the piping is removed from a charged container. **Charged containers must have safety plug installed when removed from system for shipment.**

RECONDITIONING

After a system has been actuated, it is recommended that the local authorized Fenwal distributor be contacted to recondition 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.

SPECIFICATIONS

Cylinder Diameter:	9-3/8" (239mm)
Overall Height:	9-7/8" (251mm)
Overall Length:	19-1/2" (495mm)
Empty Weight:	24 lbs. (10.8 Kg) approx.
Volume:	.442 cu. ft. (12.52 L)
Minimum Fill:	20 lbs. (9.07 Kg)
Maximum Fill:	30 lbs. (13.61 Kg)

ARCHITECT/ENGINEER SPECIFICATIONS

The agent storage container shall be a Fenwal cylindrical (refillable) FM-200 container constructed of high strength low HSLA alloy steel. It shall consist of: fill valve, burst disc valve assembly, initiator, safety plug, screen assembly, cable assembly, integral supporting flanges, 0-100 psig pressure

gauge and pressure switch assembly (optional). The containers shall hold from 20 to 30 lbs. of FM-200 agent.

Container shall conform to all applicable specifications of Department of Transportation.

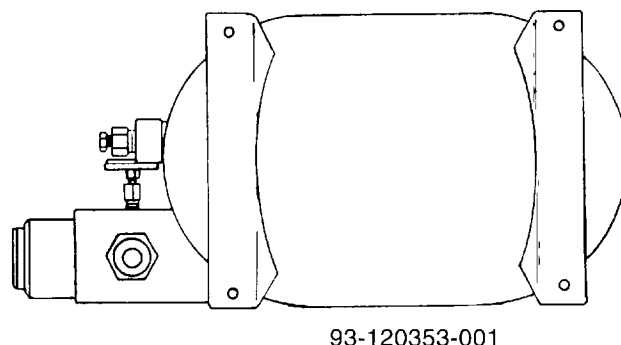
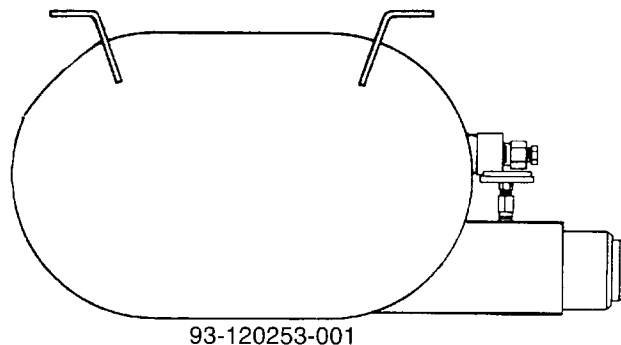
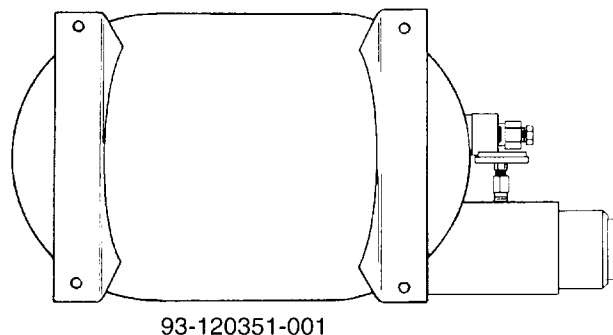
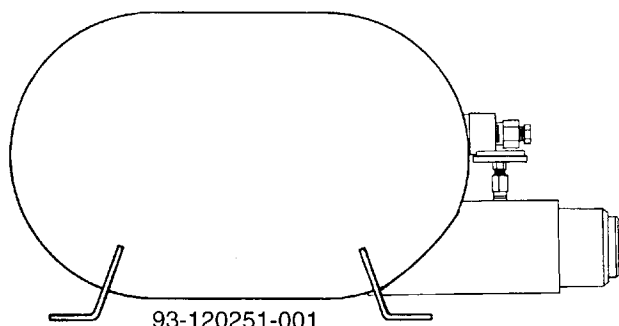
The burst disc valve assembly shall be an integral part of the agent storage container and shall be operated by applying electrical current to an initiator assembly which has an electro-explosive device that provides on demand, and instantaneous full bore release and discharge of the agent. Valves with moving parts and seals are not acceptable.

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 psi in even of excessive pressure build up.

Devices and connecting leads shall be completely supervised.

The container design shall permit on-site reconditions and refilling.

The integral mounting assembly shall provide a means for mounting to a solid vertical or horizontal surface and shall withstand a thrust of 1000 lbs. for 5 seconds in any direction.



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