

FIKE AGENT STORAGE CONTAINERS FOR FM-200® CLEAN AGENT SYSTEM

FM-200 is also known by its ASHRAE designation HFC-227ea

DESCRIPTION

Fike Series 70 Clean Agent Containers are used in fire extinguishing systems to store the Clean Agent until a fire develops and the agent must be released. The Clean Agent is retained in the container by a valve assembly which contains a fast-acting rupture disc. The disc will be ruptured, and the Clean Agent released, through the operation of an actuator by an electric signal that is automatically or manually controlled. The valve is available in three sizes: 1" (25mm), 2 1/2" (65mm) and 3" (80mm). The 1" (25mm) valve is used on the 20 (8.5 L), 35 (15 L), 60 (27 L), and 100 pound (44 L) containers; the 2 1/2" (65mm) valve is used on the 125i (51 L) and 215i pound (90 L) containers; the 3" (80mm) valve is used on the 215 (87 L), 375 (153 L), 650 (267 L) and 1000 pound (423 L) containers. After a discharge, the valve is field reconditioned by simply replacing three components.

Fike Series 70 Clean Agent Containers have passed extensive testing by Underwriters Laboratories and Factory Mutual and are used in installations where 12 to 1045 pounds (5.5 to 474 kg) of FM-200 is required. To eliminate the need for multiple containers, or using more Clean Agent than necessary, these containers can be filled in 1 pound (0.5 kg) increments to their maximum capacity.

Each container for FM-200 Clean Agent is super pressurized with dry nitrogen to 360 psig (25 bar), at 70° F (21° C), to provide a quick and effective discharge in 10 seconds or less.

Fike Series 70 Clean Agent Containers are supplied with a pressure gauge that permits a quick, visual, inspection of container pressure. Optional items include a Liquid Level Indicator, and a Low Pressure Supervisory Switch. The Liquid Level indicator provides the convenience of determining the container's agent weight without removing it from its installed location. The Low Pressure Supervisory Switch provides constant monitoring of the container's internal pressure and can be wired either normally opened or normally closed. In the event of a decrease in container internal pressure from 360 psig to 288 psig (24.8 bar to 18.8 bar), the Supervisory Switch normally opened/closed contacts will close/open. This will cause a supervisory trouble alarm at the system control panel.

Fike Series 70 Clean Agent Containers are available for installation in the upright, inverted or horizontal positions, depending upon the user's particular needs and the type and size container specified. The mounting location of the container is quite flexible. It can be mounted at the exact point of discharge or at a remote location by adding distribution piping from the container to the nozzle system. (Refer to the Fike Design, Installation and Maintenance Manual - P/N 06-215).

The operating temperature range is +32 to +130°F (0 to 54.4°C) in any installation. If the Clean Agent reaches an internal temperature range of 160° to 187° F (71.1° to 86.1°C), it will create a sufficient internal pressure to burst the rupture disc and release the Clean Agent through the piping network.



APPROVALS

- UL Listed - Ex 4623
- FM Approved - 3014476

Form No. C.1.01.01-4

RELIABILITY

Fike Series 70 Clean Agent Containers are manufactured in strict accordance with Department of Transportation (DOT) regulations. The Fike Series 70 Clean Agent Containers have successfully passed testing by Factory Mutual and Underwriters Laboratories, Inc. Before leaving the factory, each container must pass extensive leakage testing, and pressure testing to 1000 psig (69 bar). The containers are constructed from carbon steel alloys and painted with a durable, baked enamel finish.

INSTALLATION

Fike Series 70 Clean Agent Containers are supplied with a mounting bracket that is designed to provide the most effective and versatile installation for that particular container. The 20, 35 and 60 pound (8, 15 and 27 L) container brackets employ two U-bolts for securing the container to the bracket. The 125i and 215i pound (51 and 90 L) containers utilize an “L” shaped bracket for direct wall mounting or, with an optional floor mounting kit, can be mounted on a floor in the “valve down” position. The 100 pound (44 L) and 215 pound (87 L) through 1000 pound (423 L) containers are supplied with one “U-shaped” mounting bracket for mounting to a wall or other secure surface.

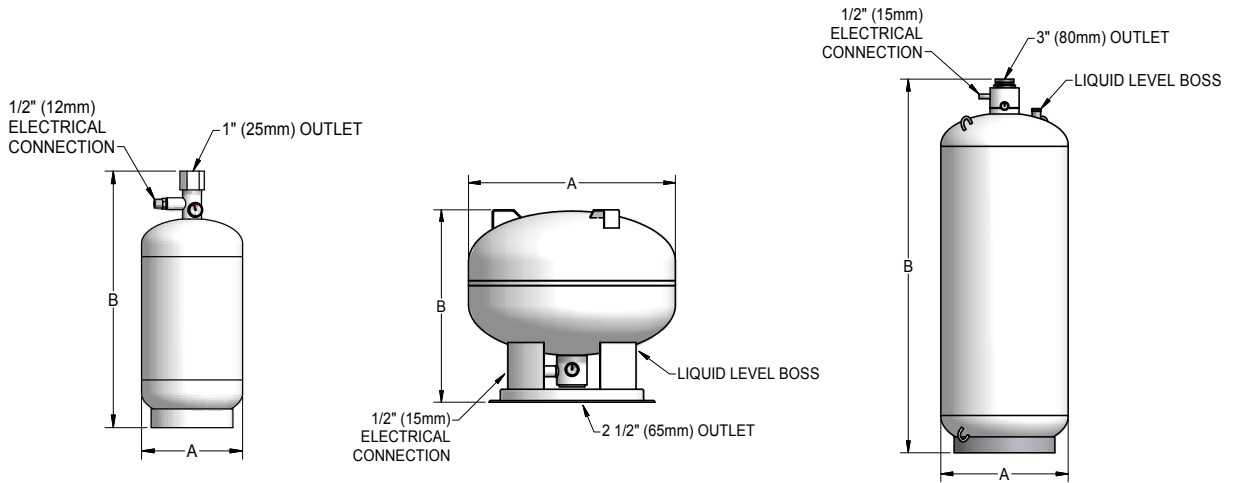
CLEAN AGENT STORAGE CONTAINER DATA - U.S. STANDARD

| Fike P/N | Size (lbs) | Valve (in) | Empty Wt (lbs) | FM-200 Agent Fill Range (lbs) | Valve Position | D.O.T. Regulation |
|----------|------------|------------|----------------|-------------------------------|-----------------------|-------------------|
| 70-098 | 20 | 1 | 21 | 12-21 | Horizontal or Upright | 4BW500 |
| 70-089 | 35 | 1 | 32 | 22-38 | Horizontal or Upright | 4BW500 |
| 70-152 | 60 | 1 | 44 | 39-68 | Horizontal or Upright | 4BW500 |
| 70-153 | 100 | 1 | 61 | 63-108 | Upright | 4BW500 |
| 70-041 | 125i | 2 1/2 | 180 | 73-126 | Inverted | 4BA500 |
| 70-077 | 215i | 2 1/2 | 225 | 128-223 | Inverted | 4BA500 |
| 70-154 | 215 | 3 | 150 | 124-216 | Upright | 4BW500 |
| 70-155 | 375 | 3 | 218 | 217-378 | Upright | 4BW500 |
| 70-156 | 650 | 3 | 350 | 378-660 | Upright | 4BW500 |
| 70-157 | 1000 | 3 | 515 | 598-1045 | Upright | 4BW500 |

CLEAN AGENT STORAGE CONTAINER DATA - METRIC

| | Size (L) | Valve (MM) | Empty Wt (KG) | FM-200 Agent Fill Range (KG) | Valve Position | D.O.T. Regulation |
|--------|----------|------------|---------------|------------------------------|-----------------------|-------------------|
| 70-098 | 8.5 | 25 | 10 | 5.5-9.5 | Horizontal or Upright | 4BW500 |
| 70-089 | 15 | 25 | 15 | 10.0-17.0 | Horizontal or Upright | 4BW500 |
| 70-152 | 27 | 25 | 20 | 18.0-30.5 | Horizontal or Upright | 4BW500 |
| 70-153 | 44 | 25 | 28 | 28.5-49.0 | Upright | 4BW500 |
| 70-041 | 51 | 65 | 82 | 33-57.0 | Inverted | 4BA500 |
| 70-077 | 90 | 65 | 102 | 58-101.0 | Inverted | 4BA500 |
| 70-154 | 87 | 80 | 68 | 56.5-98.0 | Upright | 4BW500 |
| 70-155 | 153 | 80 | 99 | 98.5-171.5 | Upright | 4BW500 |
| 70-156 | 267 | 80 | 159 | 171.5-299.5 | Upright | 4BW500 |
| 70-157 | 423 | 80 | 234 | 271.5-474.0 | Upright | 4BW500 |

CLEAN AGENT STORAGE CONTAINER DIMENSIONS



20 - 100LB (4 to 44L) Container
LLi on 100LB (44L) only

125i and 215i LB (51 to 91L) Container

215 - 1000LB (87-423L) Container

| U.S. Sizes and Dimensions | | | | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Size-LB | 20 | 35 | 60 | 100 | 125i | 215i | 215 | 375 | 650 | 1000 |
| A (in) | 7.25 | 7.25 | 10.75 | 10.75 | 20.00 | 24.00 | 20.00 | 20.00 | 24.00 | 24.00 |
| B (in) | 21.50 | 32.50 | 28.00 | 38.75 | 20.25 | 23.75 | 28.87 | 42.50 | 48.75 | 70.00 |
| Metric Sizes and Dimensions | | | | | | | | | | |
| Size-L | 8 | 15 | 27 | 44 | 51 | 90 | 87 | 153 | 267 | 423 |
| A (mm) | 184 | 184 | 273 | 273 | 508 | 610 | 508 | 508 | 610 | 610 |
| B (mm) | 546 | 826 | 711 | 984 | 515 | 605 | 733 | 1080 | 1237 | 1778 |

ARCHITECT AND ENGINEERING SPECIFICATIONS

The Clean Agent shall be stored in Fike Series 70 Clean Agent Storage Containers. The containers shall be capable of being filled, in one-pound (0.5kg) increments, to their listed maximum capacity. The Clean Agent container shall be activated by a signal from the control panel which is processed by the Agent Release Module. This module shall store the power required to operate the actuator. The valve shall contain a scored, non-fragmenting, rupture disc to provide an immediate, total discharge of all the agent. FM-200 Clean Agent is stored in the container as a liquid, having a natural vapor pressure of 200 psig at 77°F (13 barg at 25°C). To aid in discharge, the container shall be super-pressurized to 360 psig at 70°F (25 bar at 21°C) with dry nitrogen. Agent discharge shall be completed in 10 seconds or less.

Clean Agent Storage Containers shall be actuated by an electrical signal that is automatically or manually controlled. Normal operating temperature shall be +32° to +130°F (0° to 54.4°C) in any installation.

Clean Agent Storage Containers shall be equipped with a pressure gauge to display internal pressure. This gauge shall be an integral part of the container and color coded for fast referencing of pressure readings. A Low Pressure Supervisory Switch shall be made available, as an option. A decrease in internal container pressure from 360 to 288 psig (24.8 to 18.8 bar) shall cause the normally opened/closed Supervisory Switch contacts to close/open, indicating a trouble or supervisory condition, at the control panel.

Clean Agent Storage Containers shall be fastened to a wall, or other secure surface, using an optional mounting bracket that is designed for the most effective and versatile installation of each container.



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