

DUPONT™ FM-200® AGENT STORAGE CONTAINERS

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

DESCRIPTION

Fike 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 impulse 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.

Fike Clean Agent Containers have passed extensive testing by Factory Mutual and Underwriters Laboratory and are used in installations where 12 to 1045 pounds (5.5 to 474 kg) of FM-200 agent is required. Clean Agent containers can be filled in 1 pound (0.5 kg) increments to their maximum capacity.

Each container for FM-200 Clean Agent Systems 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 Clean Agent Containers are supplied with a mounting bracket and pressure gauge that permits a quick visual inspection of container pressure. Containers with a 3" (80mm) discharge valve, 150-lb (61 L) and up, are equipped with a Liquid Level Indicator that allows a convenient method for determining the container agent weight without removing it from the installed location. An optional Low Pressure Supervisory Switch is available to provide constant monitoring of the internal pressure of the container. In the event of a decrease in container pressure below 288 psi (18.8 bar), the Supervisory Switch will change states, causing a supervisory trouble at the control panel.

Fike 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 flexible. It can be mounted at the point of discharge or at a remote location by adding distribution piping.

RELIABILITY

Fike Clean Agent Containers are manufactured in strict accordance with Department of Transportation (D.O.T.) regulations. The Fike 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.

APPROVALS

- UL Listed - Ex 4623
- FM Approved - 3014476



1" Impulse Container



3" Impulse Container



Inverted 150 lb. Impulse Container

Form No. IV.1.01.01

CONTAINER DATA/SPECIFICATIONS

Container		Fill range		Valve Size	Tare Weight	Dimensions (approximate)		Mounting Position
Size	P/N	Minimum	Maximum			Diameter	Height	
Lb. (L)		lbs. (kg)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
20* (8)	70.263	12 (5.5)	21 (9.5)	1 (25)	21 (9.5)	7.0 (178)	22.375 (568.3)	Upright - Horizontal
35* (15)	70-264	22 (10.0)	38 (17.0)	1 (25)	31 (14.5)	7.0 (178)	32.5 (825.5)	Upright - Horizontal
60 (27)	70-265	39 (18.0)	68 (30.5)	1 (25)	52 (23.6)	10.75 (273)	28 (711.2)	Upright - Horizontal
100 (44)	70-266	63 (28.5)	108 (49.0)	1 (25)	77 (34.9)	10.75 (273)	38.75 (984.3)	Upright (Valve Up)
150/150i (61)	70-267	87 (39.5)	150 (68.0)	3 (80)	150 (68.0)	20.0 (508)	23.63 (600.1)	Upright/Inverted
215 (88)	70-268	124 (56.5)	216 (98.0)	3 (80)	155 (70.3)	20.0 (508)	28.87 (733.3)	Upright (Valve Up)
375 (153)	70-269	217 (98.5)	378 (171.5)	3 (80)	225 (102.1)	20.0 (508)	42.5 (1079.5)	Upright (Valve Up)
650 (267)	70-270	378 (171.5)	660 (299.0)	3 (80)	385 (174.6)	24.0 (610)	50.625 (1286)	Upright (Valve Up)
1000 (423)	70-271	598 (271.5)	1045 (474.0)	3 (80)	550 (249.5)	24.0 (610)	70 (1778)	Upright (Valve Up)
Fill Range		40 to 70 lbs/ft ³			630 to 1121 kg/m ³			
Fill Increments		1.0 lbs			0.5 kg			
Container Super - Pressurization Level				360 psig at 70°F (24.8 bar at 21°C) after filling with dry nitrogen				
Container Storage Temperature Limitation				32°F (0°C) - minimum			130°F (54.4°C) - maximum	
Container Rating				DOT 4BW500			TC 4BWM534	

Note:

* The 20 lb. (8 L) containers and 35 lb. (15 L) containers filled to less than 25 lb. (11.5 kg) are **only** approved by FM Approvals.

ITEMS SUPPLIED WITH CONTAINER

Along with a name plate and siphon tube, all Fike clean agent containers are supplied with the following:

Impulse Valve

This valve is a rupture disc (metal diaphragm), pressure operated device that allows the agent to be released from the container and into the protected via the associated piping network and discharge nozzle(s).

The discharge valve also fulfills the pressure relief valve requirements in accordance with DOT regulations.



Impulse Valve

Victaulic Nipple and Coupling

Used to connect container to the discharge piping network.

For shipping purposes, a baffle plate is inserted into the Grooved Coupling as a safety device.



Victaulic Nipple and Coupling

Discharge Valve Size	Replacement P/N	Description
1" Discharge Valve	02-9964	1" diameter (25 mm) Victaulic Coupling
	02-10042	1" diameter (25 mm) x 3" (76 mm) long Nipple
3" Discharge Valve	02-1987	3" diameter (80 mm) Victaulic Coupling
	02-2106	3" diameter (80 mm) x 4.5" (114 mm) long Nipple

ARCHITECT AND ENGINEERING SPECIFICATIONS

The Clean Agent shall be stored in Fike 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°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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 Form No. IV.1.01.01 April, 2010 Specifications are subject to change without notice.