

Kidde Fire System

ECS™ Fire Suppression System with HFC-227ea Agent Component Description 450 lb. Cylinder and Valve Assembly



Effective: December 2020
K-90-9450 Rev AA

FEATURES

- Well Suited for Complicated Pipe Networks and Large Area Coverage with Minimal Room for Cylinder Storage
- 260 lb. to 450 lb. Fill Capacity
- Agent Cylinder Liquid Level Indicator
- UL Listed, File Number 4674
- FM Approved
- For RoHS Compliance, See the Individual Component Datasheets

DESCRIPTION

Kidde Fire Systems ECS™ 360 psi Fire Suppression System with HFC-227ea Agent (herein referred to as “Agent”) 450 lb. cylinders store the suppression agent super-pressurized with dry nitrogen to 360 psig at 70°F (2.48 MPa at 21°C). The cylinders are painted red and are equipped with a 2-inch pressure differential valve, pressure gauge, liquid level indicator and Schrader connection for a pressure supervisory switch. The safety burst disc is located on the cylinder head.

OPERATION

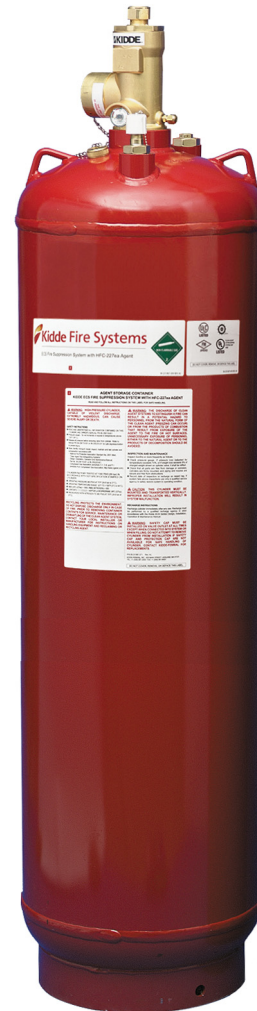
The agent storage container discharges when the actuation assembly operates, causing the pressure differential valve to open.

INSTALLATION

The container is installed in a vertical position with the valve assembly pointing up. Interconnection to discharge piping is 2-inch NPT. Interconnection can be via a 2-inch flex hose (P/N WK-283899-000) or via a valve outlet adapter (P/N WK-283905-000).

The container is secured in place by two mounting straps (P/N WK-281866-000), which must be fixed to a solid wall or strut assembly. After the container is securely mounted, it is connected to discharge piping per the directions in the Design, Installation, Operation and Maintenance Manual (P/N 06-236115-001).

An optional cylinder supervisory pressure switch P/N 06-118262-001 or 06-118537-001 (ATEX Approved) can be installed on the cylinder valve in the field if required. This cylinder supervisory pressure switch has a 1/4 inch SAE flared connection.



MAINTENANCE

According to NFPA standards the following inspection and/or maintenance procedure must be scheduled as listed below and performed upon the occurrence of any event which might affect the reliability of the system.

QUARTERLY INSPECTION

1. Check the pressure gauges of each agent storage container. If the pressure gauge indicates a loss in pressure of 10% or more, then it shall be recharged or replaced. Pressure varies with temperature, and this must be taken into account when checking the pressure gauge.
2. Check all components, including supporting hardware, and tighten, repair or replace as required.
3. Replace any component if at all in doubt of its ability to perform properly.

SEMI-ANNUAL INSPECTION

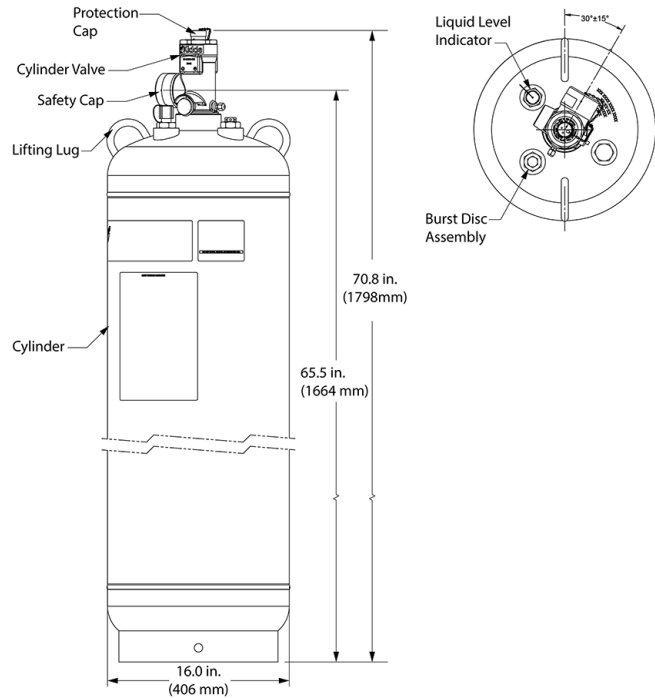
Qualified personnel are to determine the amount of agent in all containers. The liquid level indicator may be used to measure agent supply and compare it to the original net weight which is marked on the container label. If the measured net weight is less than 95% of the original charged weight the container should be recharged or replaced.

Inspect all piping, fittings and nozzles for looseness, dirt or other damage. All outlet piping must be clean and free of dirt, chips, fillings and other foreign material that may cause the system to become inoperative or ineffective at the time of discharge.

SPECIFICATIONS

Fill Range	260-450 lb. (117.9-204.1 kg)
Height	70.8 in (1798 mm)
Diameter	16 in (406 mm)
Internal Volume	6.43 ft ³ (.182 m ³)
Empty Weight	269 lb (122 kg)
Temperature Range	32 to 130°F (0 to 54°C)
Construction Specification	DOT 4BW-500

DIMENSIONS



ORDER INFORMATION

The part number for ordering the ECS™ System 450 lb. cylinder with liquid level indicator is 90-100451-001.

ACCESSORIES

Description	Part Number
2-inch stainless steel flexible hose	WK-283899-000
2-inch EI-check valve	WK-877690-000
Cylinder mounting strap*	WK-281866-000
Cylinder supervisory pressure switch	45-118500-001
Cylinder supervisory pressure switch (ATEX)	45-500537-001
* Two straps are required for each 450 lb. agent cylinder.	

EXPORT INFORMATION (USA)

Jurisdiction: EAR
Classification: EAR99

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