Description

The CP 91200-E 1200 lb. cylinder is filled with one pound increments from a minimum of 519 lb. to a maximum of 1211 lb., to meet the exact amount of agent required. The quantity of agent required for each enclosure can be calculated through Context Plus's software, version CP 3.10, which contains a sophisticated calculation routine for predicting the two-phase as well as two-component flow of agent and nitrogen through the distribution piping network in quasi-steady state from the initiation of the discharge to final gas blow down. The cylinder is then super-pressurtzed with dry nitrogen to 360 psi at 70°F to provide extinguishment in 10 seconds less. The 4°Statiless steller valve offers excellent flow characteristics for the liquefled gas, allows for long pipe runs and has a greater coverage area. This is the largest Clean Agent cylinder currently manufactured and designed for very large applications. The 1200 lb. cylinder is manufactured, tested and stamped in accordance with DOT 48W500.

1200 lb Clean Agent Cylinder

Temperature Range: 32°F (0°C) to 130°F (54.4°C) System Operating Pressure: 360 psi at 70°F (25.3 kg/cm³ at 21.1°C)

The cylinder is equipped with a 4* stainless steel back pressure type valve and a 4* Victaulic n outlet. A piston in the valve bore is equipped with a rubber seal that keeps the Clean Agent un pressure within the cylinder. A small hole in the piston allows cylinder pressure to be qualized both sides of the piston. Since the area at the top of the piston is greater than the area at bottom of the piston, the net force seals the piston against the valve discharge outlet. When cylinder pressure on the top of the piston is relieved by means of automatic or manual activat there is only cylinder pressure acting against the valve this on seal, and the piston sildes to it's full oposition, allowing cylinder discharge through the distribution piping network.

There is a 1/8" NPT outlet stamped 'P' on the cylinder valve. This outlet transmits cylin pressure to an optional low pressure supervisory switch, which when used, monitors the interpressure of the cylinder. Another 1/8" NPT outlet stamped 'M' on the cylinder avoise is available use as a pressure of the cylinder. Another 1/8" NPT outlet stamped 'M' on the cylinder system or to actual or a pressure operated switch in the event of the cylinder discharge. In multiple cylinders installat when manifolded together, a maximum of its (9 1200 lb. cylinders discharge) and as slave cylinder can be operated of discharge using this "M' port through the piston actuator."

The cylinder is equipped with a 360 psi pressure gauge for quick visual INSPECTION optimals internal pressure.

.iquid level indicator is available as an option for measurement of w cylinder and is highly recommended for ease of maintenance.

 Part Number
 Diameter
 A
 B
 C
 D
 E
 F

 CP 60790
 30.00°
 29.125°
 33.250°
 31.750°
 1.5°
 14.00°
 2°

 CP 60772
 30.00°
 4.500°
 11.500°
 10.000°
 1.5°
 N/A
 2°

 CP 60772
 30.00°
 4.500°
 11.500°
 10.000°
 1.5°
 N/A
 2°

HFC-227ea Clean Agent Fire Suppression System

Clean Agent Cylinders

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The Clean Agent cylinders are manufactured, tested and stamped in accordance with DO 48W500 or DOT 48500. All cylinders are equipped with back pressure type valve. A piston in that valve bore is equipped with a rubber seal that keeps the HFC-227ac Clean Agent under pressure within the cylinder. A small hole in the piston allows cylinder pressure to be equalized on bot sides of the piston. Since the area at the bottom of the piston, the net force seals the piston sqainst the valve discharge outlet. When the cylinder pressure on the top of the piston is relieved by means of automatic or manual activation, there if only cylinder pressure acting against the piston seal, and the piston sides to it full open position allowing cylinder discharge through the distribution piping network. Attached to the bottom of the cylinder valve is a siphon tube, which is straight and runs from the top of the cylinder to the bottom of the cylinder. The cylinder must be installed in an upright position (valve on top). There is a 1/8" NPT outlet stamped "P" on the cylinder valve. This outlet transmits cylind pressure to an optional low pressure such cylinder Another 1/8" NPT outlet stamped "M" on the cylinder Another 1/8" NPT outlet stamped "M" on the cylinder valve is availab for use as a pressure source to drive the piston actuators on a multiple cylinder system or actuate pressure operators with in the event of the cylinder discharge operators with the cylinder discharge.

Description

Cylinder Model HFC-227ea Clean Agent cylinde

Cylinder Bracket
The cylinder bracket is manufactured from stainless steel band formed to the radius of the cylinwith flanges for botting to the continuous slot metal framing channel of 12-gauge steel corrosion resistant paint or galvanized. The channel must be supplied by the installer cylinder bracket must be secured to a surface that the bracket will withstand a load up to 5 if of the cylinder bracket weight. This precaution is to have the bracket safely supports the weight of cylinder and the reaction force of the HFO-227ee Clean Agent when discharge.

 Each of the basic sizes can be filled with one pound increment of HFC-227ea Clean Agent required, within their fill ranges. nperature Range: 32°F (0°C) to 130°F (54.4°C) stem Operating Pressure: 360 psi at 70°F (25.3 kg/cm³ at 21.1°C)

For the 35 lb. to 250 lb. cylinders - One cylinder bracket must be used For the 375 lb. to 560 lb. cylinders - Two cylinder brackets must be used

Control Heads

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HFC-227ea Clean Agent Fire Suppression System

· Used for manual actuation of cylinder

ring the piston to slide upward and commence cylinder discharge. The Local Manual Control Head mounts directly to a top plug adapter, which is located

· Equipped with safety pull-pin to prevent accidental manual discharge of



LISTED

CP 60705-3 CP 60706-3 CP 60707-2 CP 60707-3 CP 60708 -2 CP 60708 -3

CP 60709 -2

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pneumatic pressure required to operate the Piston Actuator is obtained from the "M" port of a cylinder that is designated as "Master" cylinder and is either mechanically

HFC-227ea Clean Agent Fire Suppression System

The Piston Actuator features a pneumatically driven piston that depresses a Schrader

and/or electrically actuated. Multiple cylinders equipped with Piston Actuators can be activated from one master cylinder using 1/4" copper tubing or 1/4" metal flex hose. The Piston Actuator mounts directly to a top plug adapter, which is located on top of the

Discharge Nozzle

- Discharge Nozzles are made of aluminum with female pipe threads. The orifice size of the discharge nozzle is determined by the hydraulic flow calculations. All nozzles are rated for a maximum hazard height of 16 ft. If hazards exceed 16 ft in height, a second tier of nozzles must be used.
- Discharge Nozzles are available in sizes of 1/2*, 3/4*, 1*, 1-1/4*, 1-1/2* and 2*. Each discharge nozzle comes in two configurations: 180 and 360 degree distribution patterns. Deflector plates are available as an option where sensitive ceiling tiles must be protected. Description
 %" (180") Sidewall
 %" (360") Central
 %" (180") Sidewall
 %" (360") Central
 1" (180") Sidewall
 1" (360") Central
 1" (180") Sidewall
 1" (360") Central
 1" (180") Sidewall
 1" (360") Central
 1" (360") Central
 2" (180") Sidewall

2" (180°) Sidewall 2" (360°) Central

The electric solenoid valve is a normally closed valve that requires electrical energy to open. It is used to vent the pressure from the top of the piston in the cylinder valve, allowing the piston to slide upward and commence cylinder discharge. The electric solenoid valves are available in 6 VDC, 12 VDC, 24 VDC and 120 VAC. The source of

NOTE: Two 12 VDC solenoids can be wired in series in a 24 VDC actuating circuit. Connect solenoid pigtalis to actuation circuit wires with wire nuts within a junction box or by means designated by the authority having jurisdiction. Whenever an electric solenoid is used as the sole means of actuation, a top plug must be used to seal the top of the cylinder valve.

Description

the electrical energy will determine the number and rating of the electric solenoid used. The solenoid circuit must be supervised for a break in the wiring, a ground or a short circuit.

HFC-227ea Clean Agent Fire Suppression System

Clean Agent

 Solid brass construction Stainless steel operation lock-pin

on top of the cylinder valve.

PISTON ACTUATOR High quality brass construction

check valve, thereby venting the pressure from the top of the piston in the cylinder valve, allowing the piston to slide upward and commence cylinder discharge. The

- rge Nozzle, in a fire extinguishing system, is Clean Agent in a uniform, pre-determined pattern and concentration. The nozzles are designed to complete the discharge of Clean Agent in 10 seconds or less when installed within the design limitations stated in the Installation Instruction Manual.
- Discharge Nozzle Selection Sidewall 180°
 Typically to be installed adjacent to the center of the one wall of one enclosure. It's discharge path will be across the enclosure. At no time shall the area coverage be

Installation
Please refer to Context Plus Installation, Maintenance & Service Technical Manual for Discharge Nozzles Area Coverage and Application Selections. HFC-227ea Clean Agent Fire Suppression System

Electric Solenoid

1,200 LB. 24 VDC

∩∩ _ CP 50025-2

e. It's discharge path will be acro

to a control panel that is UL listed for releasing devices and compatible with Context Plus Fire Suppression equipment.

> Connect the terminals of to the releasing module if shows in series. A third to (ground) is for grounding Most Releasing circuits are supervis by an EOL (End of line) Resistor

Flexible Hoses

x hoses are used to connect the agent storage containers to the manifold in multiple cylinders arrangement. Flex hoses are structed of high pressure hydraulic rubber in the 1" and 1-1/2" sizes and stainless steel corrugated inner core with stainless of braid in the 2-1/2" size. All sizes are fitted with male NPT thread on both ends.

There are two options available for the 1200 LB cylinder. They are a flex hose alone and flex hose & check valve assembly. The flex hose alone is 4" in diameter (Part # CP 91230) and 30-1/2" in length. The combination of flex hose and check valve, which has a diameter of 4" (Part No. CP 91231) and a length of 26-1/2", is used when using a manifold in a piping network. All are manufactured from a stainless steel corrugated inner core with stainless steel braided. The flex hose has 4" Victaulic fittings on

1 1/2"

HFC-227ea Clean Agent Fire Suppression System

HFC-227ea Clean Agent

nd therefore is safe for use in occupied spaces without fear of oxygen deprivation. 170.03 16.4°C/2.48° 131°C/-203.8 422.3 psia

Critical Pro Vapor Density (AIF tile (by vo

Normally Open (N.O.) Normally Close (N.C.)

260

Pressure Switches

PRESSURE OPERATED SWITCH (N.C./N.O.) SP Indicates that the Fire Suppression Agent is being discharged

Engineering and Architect Specificatio The switch is used to monitor the press occurs, and it's pressure drops to belor providing a signal to the Release Control pressure supervisory switch is wired in lectrical Rating 20 VAC - 5.8FLA, 4.8LRA 40 VAC - 2.9FLA, 15LRA 4 VDC - 125VA Pilot Duty 8 VDC - 2 Amps

-20°F to +150°F -65°F to +275°F

ring and Architect Specifications
h is provided to indicate a system discharge and provides electrical contacts for alarm
ary functions. The switch will have form C contacts rated at 15 Amps -125/250 VAC. An
annual reset button shall be provided on the pressure switch. After system actuation, the
non MUST be depressed in order to reset the device. The switch may also be connected
into of the discharge piping between the cylinder and nozzle.

Discharge Nozzle Selection – Central Type 360° Typically to be installed at the center of the enclosure. It's disch the enclosure. At no time shall the area coverage be exceeded. The function of the Deflector Plate, in a fire extinguishing system, is to aid in the quick and effective distribution of Clean Agent, into any hazardous areas, without damage to ceiling tiles. The Deflector Plate directs the flow of the Clean Agent downward without severely limiting area coverage. When used properly, the deflector plates will effectively protect the ceiling tiles and help to prevent a loss of Clean Agent supply due to the displacement or destruction of ceiling tiles. Deflector Plates are available in sizes to fit and the processing the ceiling tiles. all nozzle

e cylinder discharge valve that is equipped with a solenoid valve is to be connected CP 91225-2

Viscosity @ 20°C/68°F)
Usus (V/V @ 20°C/68°F)
Ozone Depletion Pot-

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Context Plus

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ss liquefied compressed gas. It is stored as a liquid and dispensed into the hazard as a colorless, electrically non-conductive va is clear and does not obscure physical vision. It leaves no residue and has acceptable toxicity for use in occupied spaces at design centration. Chemori 227™ extinguishes a fire by a combination of chemical and physical mechanisms. Chemori 227™ does not displace

Context Plus

P/N: CP 50138 - 1 (N.C.) CP 50138 - 2 (N.O.)

than 10 ppm of moisture. It has less than 1 ppm acidity as HF. The non-volatile residue is less than 0.05g/100ml. HFC-227ea Clean Agent Fire Suppression System

Context Plus

lectrical Connection ressure Connection ielectric Strength

HFC-227ea Clean Agent Fire Suppression System