Compressed Air Foam - CAF

Floating Rooftop Tank Rimseal System

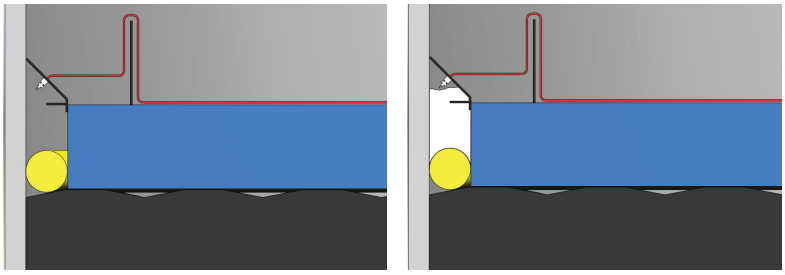
PFS-Fire Suppression Group, LLC
Automatic Compressed Air Foam

The Next Generation of Foam Fire Suppression

ACAF RimSeal™

Fire is known to start in rimseal voids of floating rooftop tanks. Vapors trapped beneath the weather seal and the primary rimseal are subject to ignition from static electric charge and lighting strikes. Rapid detection and suppression of these fires will prevent the fire from spreading into a full tank fire event. The ACAF Self-contained Rimseal System is designed to meet this demand.

Nozzle Under Weather Shield *Total Flooding*

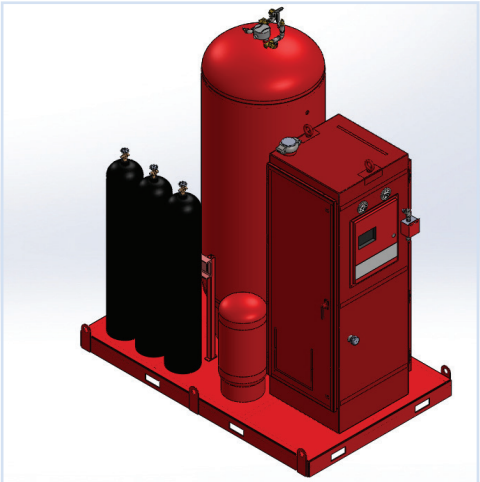


The ACAF Rimseal System, SCRS series is an automatic compressed air foam (CAF) suppression system designed to extinguish fire on floating roof top tanks, rimseal space in their infancy.

Self-contained CAF generator skids with specially designed nozzles and thermal linear heat detection comprise a system that protects the rimseal void.

A single CAF generator skid is positioned on the floating rooftop and is connected to a fixed pipe distribution system of nozzles that are installed beneath the weather shield.

When a fire occurs, linear heat detection fuses to close a signal circuit of a releases panel causing the release of the CAF generator. Instantly foam is created and sent to all rimseal nozzles of the entire tank top so to fill the rimseal void within seconds of activation. To create a high quality finished foam the ACAF System uses only Solberg RF 3 concentrate. This advanced foam concentrate is fluorine free. Produced as CAF this concentrate makes a finished foam that will stand for hours. Unlike traditional foams that breakdown with in minutes. Solberg RF 3 is the most environmentally safe foam concentrate available .



ACAF Systems, Rimseal CAF Generator Skids are self-contained, nitrogen powered CAF generators that are activated by electric release or pneumatic emergency pull stations.

CAF generator skid consist of a steel water pressure tank, stainless steel foam concentrate pressure tank, with or without a proportioner (depending upon system demand), high pressure gas cylinders and a CAF generator control assembly.

In proportioned systems, water and foam concentrate are stored in separate tanks so that the foam concentrate will have long shelf life in high temperature climates.

For fuel tanks with ethanol stored an AR-AFF foam concentrate must be used.

Monitoring of the system's vital condition is made by Class 1 Div.1, explosion proof devices. They include:

- Activation Alarm
- Tank Solution
  (water & foam concentrate)
- Nitrogen Supply

FEATURES & BENEFITS

PFS-Fire Suppression Group, LLC
Automatic Compressed Air Foam

SPECIFICATIONS

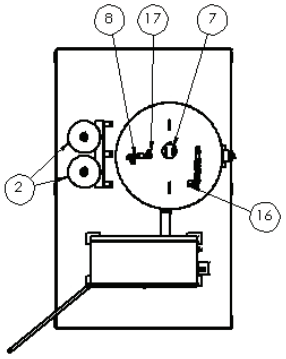
The Next Generation of Foam Fire Suppression

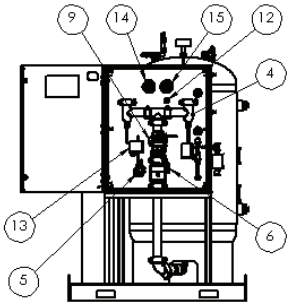
ACAF® Systems
PFS-Fire Suppression Group, LLC
Automatic Compressed Air Foam

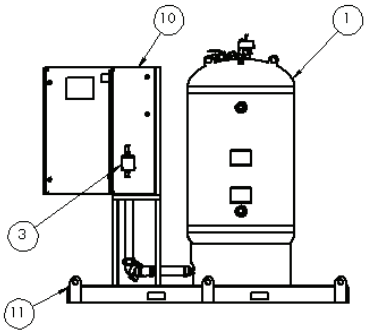
System Components

ACAF RimSeal™

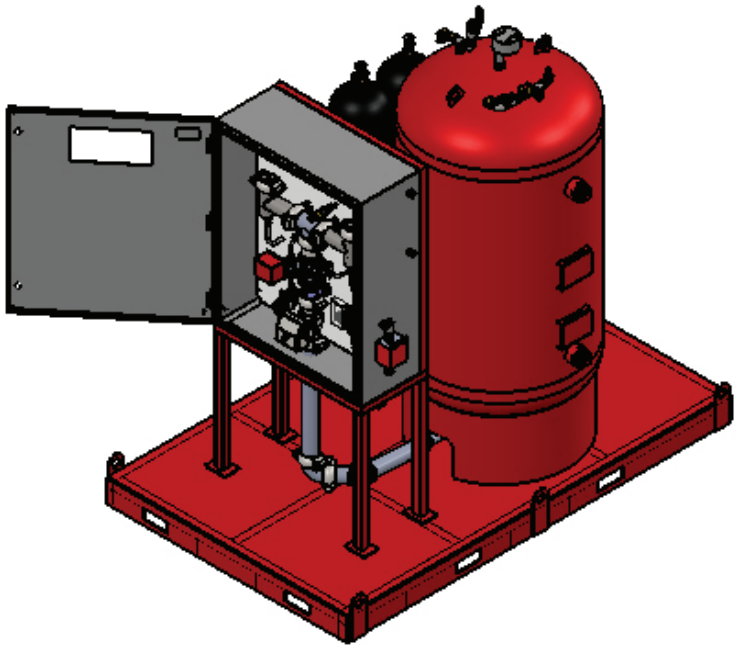
SC- 60 - 175 [60 - 175 Gallon Pre-Mixed Skid







ITEM NO.	COMPONENT REFERENCE
1	PREMIX SOLUTION TANK 60 GAL (227.1 LITERS) THRU 175 GAL (662.5 LITERS)
2	NITROGEN CYLINDERS (SIZED ACCORDINGLY)
3	EMERGENCY PULL STATION
4	MIXING CHAMBER
5	SOLENOID VALVE XP
6	SOLUTION CONTROL VALVE
7	LIQUID LEVEL SUPERVISORY SWITCH XP
8	PRESSURE RELIEF VALVE
9	2" DELUGE VALVE
10	LOCKABLE CABINET
11	SKID BASE
12	NITROGEN SUPPLY SUPERVISORY SWITCH XP
13	ALARM PRESSURE SWITCH XP
14	GAUGE 0-300 PSI
15	GAUGE 0-5000 PSI
16	TANK FILL
17	VENT VALVES



TECHNICAL DATA

SPECIFICATIONS

The Next Generation of Foam Fire Suppression

ACAF® Systems
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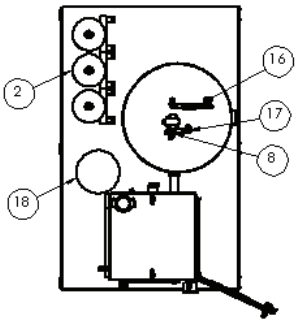
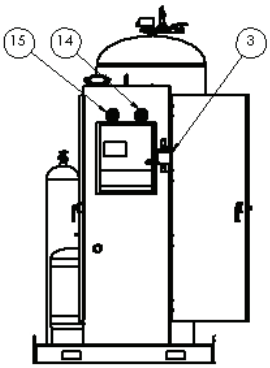
Automatic Compressed Air Foam

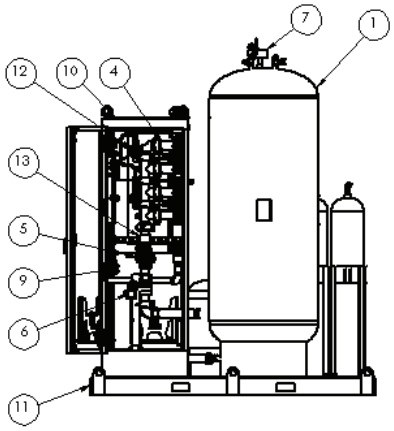
System Components

ACAF RimSeal™

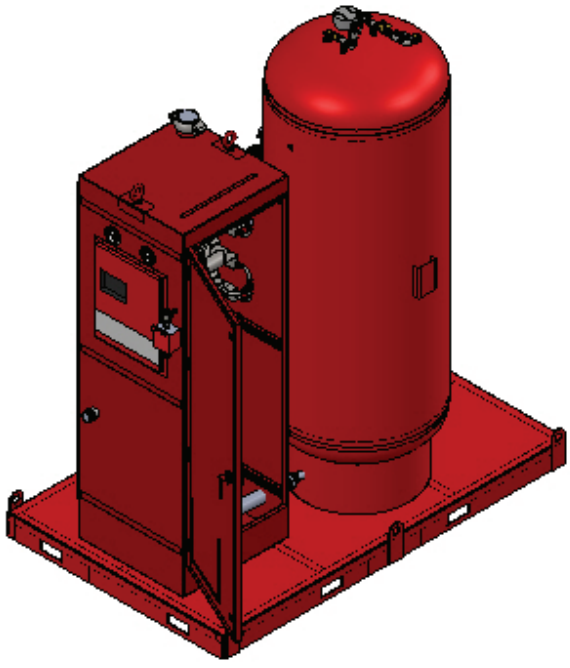
SC- 225 - 575 [225 to 575 Gallon Proportioned Skid







ITEM NO.	COMPONENT REFERENCE
1	SOLUTION TANK 225 GAL (851.7 LITERS) TO 575 GAL (2176.6 LITERS)
2	NITROGEN CYLINDERS (SIZED ACCORDINGLY)
3	EMERGENCY PULL STATION
4	MIXING CHAMBER
5	SOLENOID VALVE XP
6	SOLUTION CONTROL VALVE
7	LIQUID LEVEL SUPERVISORY SWITCH XP
8	PRESSURE RELIEF VALVE
9	2" DELUGE VALVE
10	LOCKABLE CABINET
11	SKID BASE
12	NITROGEN SUPPLY SUPERVISORY SWITCH XP
13	ALARM PRESSURE SWITCH XP
14	GAUGE 0-300 PSI
15	GAUGE 0-5000 PSI
16	TANK FILL
17	VENT VALVES
18	CONCENTRATE TANK 10 GAL (37.9 LITERS) THRU 20 GAL (75.7 LITERS)



TECHNICAL DATA

ACAF RimSeal™

FLOATING ROOF FUEL STORAGE TANKS
Specifically designed to protect against potential fire hazards in the rim seal area.

SPECIFICATIONS

The Next Generation of Foam Fire Suppression

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ACAF RimSeal™

Design

ACAF Systems, Rimseal system is designed and sized based upon the volume of the rimseal area to be protected. As it is a total flooding agent each system needs to be sized to provide the foam water solution necessary to fill the rimseal space. Rimseal spaces are not all built the same size. Because of this fact the volume of each must be calculated based upon size.

Each system consists of a number of CAF nozzles that make up segments of foam distribution units. Each segment is served by a single CAF mixing chamber. A single segment may protect a minimum of 12M (40FT.) of rimseal space . Four nozzles spaced maximum 3M (10FT.) apart. The maximum length for a single mixing chamber is 48 M (160 FT) 16 nozzles.

Systems are designed for solution demands based upon the number of segments served by any one solution tank. ACAF Systems will provide calculations of the demand along with nitrogen supply requirement for each SC CAF generator unit.

CAF generators and solution tanks are built onto skids that may be located on the tank top or placed at ground level with flex hose connection made to the roof top distribution system.

SC CAF Generators are available in size from 227 Liter (60 Gallon) to 2176 Liter (575 Gallon) tanks with CAF generators and system controls pre-assembled.

Detection

Crossed zone linear heat detection makes false trips less of a concern with the ACAF Rimseal system.

Protectowire detection is placed on the weather shield with two wire zones. A signal received by the alarm and release panel from any one zone will initiate an alarm. To activate the system the second zone must also detect the fire.

Supervision and Alarm

Each SC CAF generator is pre-assembled and pre-wired so as to provide supervision, alarm and release.

All vital function of the system are supervised to provide maximum reliability of each generator. Supervision is made for nitrogen supply, solution supply level along with ground fault condition.

One central UL Listed, FM Approved, Alarm / Release Panel per system provides supervision / trouble /alarm and release for all CAF generators that service the tank.

An emergency power supply of battery backup is provided for 48 hours.

Panel power supply required: Universal Input 120VAC, (60Hz, 165 VA), or 220VAC, (50hz, 185VA) 15 Amp Branch Line over current protection required.

TECHNICAL DATA

ACAF® Systems
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Automatic Compressed Air Foam

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