

Foam System & Accessories



We Offer
Creative
Design

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Welcome to Arka Sanat Pishroo

Our dreams is build a new generation of high quality design and development with professional skills and efficiency technology in firefighting and fire alarm systems.

Arka Sanat is specialized in designing, manufacturing and installation Firefighting and Fire Alarm systems. When it comes to fire safety and extinguishing solutions, reliability is essential. Therefore, Arka Sanat exclusively cooperates with internationally acknowledged partners.

Arka Sanat with his brand that name is "Trust" has multiple experiences of consulting and performing in national industries of Oil and Gas, Petrochemical, Refinery, Mining, Municipality, Airport, Fire department, Administrative and Commercial centers.

However Arka Sanat offers a lot more than products and services. By all means, we are involved during the complete project and the final commissioning to finish every project successfully.





Why Choose Us?

Our strong sense of identification with client projects means that we are constantly striving to provide solutions, even for issues they aren't yet aware of. To this end, we adopt a progressive approach to technology and marketing techniques.

This sense of identification also means we value and promote seamless interaction with clients' own teams, and ensure the best value is obtained from their event budget.

We love what we do, some might say a bit too much & we bring enthusiasm and commitment to every project we work on.



Focus on quality



Professional



Great company value



Quick response



20 years of experiences



Passionate team

Our Best Services

Today, The Arka Sanat provides Fire Safety Systems with integrated solutions for any fire protection challenge.

The Arka Sanat profession focuses on Designing and Construction a wide variety of safety equipment to human health and safety in the workplace.

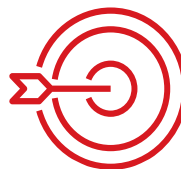
Rely on Arka Sanat to deliver:

Design & Engineering:



Arka Sanat engineering services leverage the cross-functional group of experts at RK to deliver creative, accurate solutions to complicated challenges in a shorter period of time.

Procurement:



Making the details come together is critical to a projects success. Our team works with suppliers to negotiate competitive pricing, delivery expectations, logistics, and administrative details. They also work closely with project management to assure all items are at the site when needed in good condition.

Construction:



Arka Sanat provides predictable and reliable service for firefighting and Fire Alarm Systems. we offer accountability for results. Safety was the driving force behind the decision to start our company, and it remains a crucial factor on every construction project.



It is better to fail in originality than to succeed in imitation

About Our Product

We are a professional & solid company team who works with passion & skills to provide the best design for business needed.

Arka Sanat Company will provide all parts of Foam System Package with the highest quality, as follows:

- Foam Concentrate
- Bladder Tank
- Foam Dosing pump
- Foam Chamber
- Foam pourer
- Foam Maker
- In Line Inductor
- Foam Generator
- Foam Monitor
- Foam Nozzle
- Foam Trolley
- Foam Trailler
- Rimseal System

These are manufactured in corrosion resistant material, bronze and brass and are suitable for both onshore and offshore applications



We can imagine that you still have some question about you own specific situation after reading this leaflet. Our colleagues will be pleased to help you by making a good chance for your kind of risk.

Please contact us:

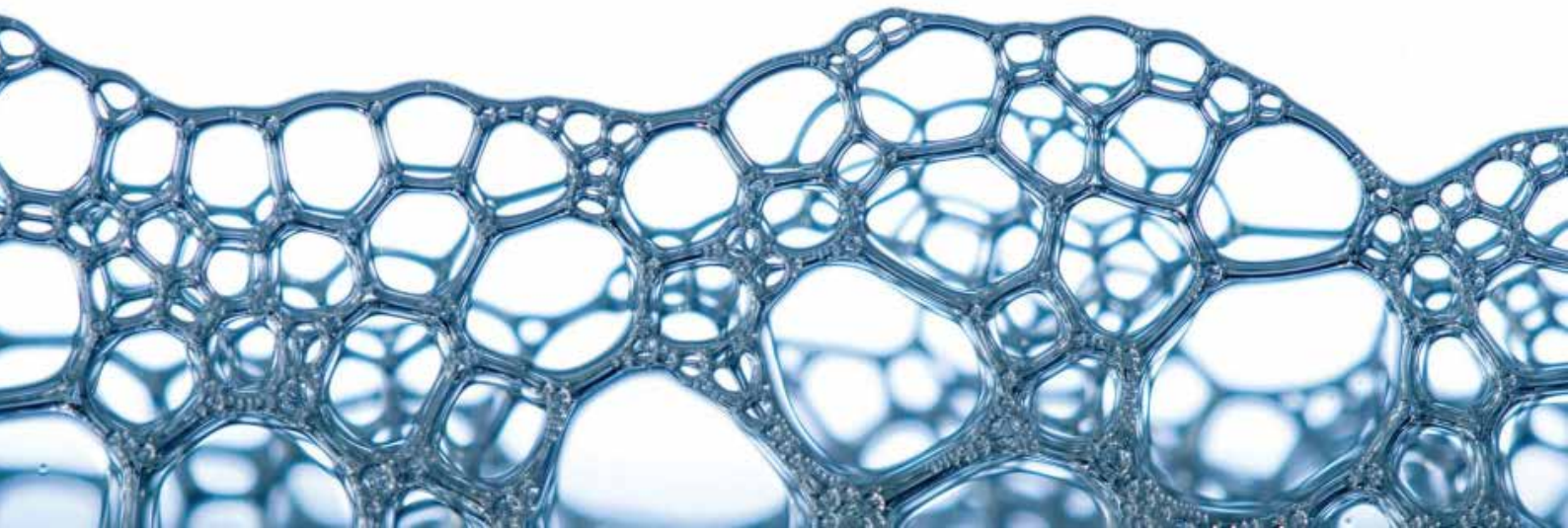
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An Overview for Foam Fire Protection

There are many ways to put out a fire. Depending on the situation, a fire protection system can be designed to work with various fire suppression agents. Plain water is commonly used because it is easily available and effective in many cases. However, water is not always the best choice. Other options include inert gases, dry or wet chemical agents, and different types of fire suppressing foam. In this catalogue, we will discuss foam applications.

Appropriate design and maintenance of a foam-based fire protection system requires an understanding of how and why foam is used. Therefore let's first take a look at foam applications in fire protection.

When to use a foam-based fire protection system foam:

Foam is typically the fire suppression agent of choice in situations where combustible or flammable liquid is stored in tanks or bulk storage facilities. It is especially effective when the flammable liquid has a surface where the foam can be applied. Unlike water, which is heavier than most flammable liquids and will sink ineffectively to the bottom, fire suppressing foam is lighter and will rise to the top. There, it creates a blanket on the surface, reducing vapor formation, preventing oxygen from reaching the combustible liquid and effectively smothering the potential fire.

High expansion foam can also be used to extinguish a fire in a contained space. When used in a railway tunnel, aircraft hangar or other defined space, foam is effective at quickly filling an area and smothering the flames.

Finally, foam also has a cooling effect like water as the foam solution consists mostly of water (~ 97%).

When NOT to use foam for fire protection!

Foam is not recommended in the following scenarios:

- Electrical fire: Where high voltage electricity is involved, the use of foam is highly dangerous. Foam contains water, which is an electrical conductor. Therefore, the risk of electrocution is high. However, it is possible to use foam on an electrical fire if the electricity is first disconnected.
- 3-Dimensional fires: Foam works best when it can form a blanket or barrier between flammable liquid and air. If a fire is spread out in three dimensional space the foam can't smother it effectively.
- Pressurized gases: NPG, LPG, and other fuels which are gaseous at atmospheric temperature and must be pressurized and liquefied to store are typically not appropriate candidates for foam-based fire protection. These substances are very volatile and can release a large volume of vapors.
- Burning metals: When water or water-based substances are applied to some burning metals, it can form a chemical reaction that releases a lot of heat. It can actually explode like fireworks and create a very dangerous situation.

Types of Fire Protection Based on Foam

Chemically, there are two main types of fire protection foam: polar and non-polar. These correspond to two major types of combustible liquid. It is important to use the correct type of foam for the type of liquid present.

- Polar foam is used for polar flammable liquids, meaning liquids whose molecules have a positive charge on one end and a negative charge on the other. These are typically solvents, such as alcohol, used in the chemical and petrochemical industries.
- Non-polar foam is designed for use with non-polar liquids, whose molecules do not carry a polarized electrical charge. These are typically hydrocarbons such as crude oil and gasoline.

Most fire protection equipment designed for use with water can be used for either type of foam. However, the designer and maintenance personnel should be aware of the properties of each specific foam concentrate/solution and select the appropriate equipment settings for each.



Another way to categorize fire protection foam is by rate of expansion. Foam is produced by mixing foam concentrate with water to create a foam solution. This solution then passes through a discharge device (such as a nozzle) which introduces air into the mixture and greatly increases the volume of the finished foam.

- Low-expansion foam describes foam that expands in volume 2 to 20 times from water density to finished foam. This is typically used where the object is to create a fire-suppressing film on the surface of a flammable liquid. It is used for fires of liquids or solids belonging to the fire classes A and B.
- Medium (20 to 200 expansion) and high expansion foams (200 to 1000 expansion) are typically used to quickly fill a large volume of confined space, such as a basement, mine tunnel, or aircraft hangar.

Each type of foam and expansion rate calls for different equipment and/or different settings on the equipment. Designers and maintenance personnel should check with foam and equipment manufacturers to ensure proper use and compatibility.



Arka's fire protection division is fully committed to excellence in design and customer service. For assistance with your foam-based fire protection system design and application needs, contact a Arka Sanat representative in your region.

Advantages

of Firefighting Based on Foam:

- Versatile and effective for the proper extinguishing of hazardous fires.
- Can be proportionated to extinguish many types of fires.
- Very fluid, easily flows over liquid surfaces.

Disadvantages

of Firefighting Based on Foam

- Versatile and effective for the proper extinguishing of hazardous fires.
- Can be proportionated to extinguish many types of fires
- Very fluid, easily flows over liquid surfaces.
- Can be up to four times more costly than water systems.
- Clean-up requires much more time than other extinguishing systems.

Where is the foam fire extinguisher used?

Sparkling fire extinguishing; hydrocarbon fires and the above fire types called Polar Solvents. Foam extinguishing systems, which are widely used in aircraft and helicopter hangars, in warehouses, in stations where fuel is loaded or unloaded, in paint making facilities, in chemical producing or storing facilities, in storage areas of flammable and combustible fluids, in filling areas in flammable and combustible liquids, in shipyards, in oil refineries, it is preferred in similar areas. Due to its ability to handle immediate intervention and control quickly, it acts in a short time on the flammable surface and avoids possible major fires.

Foam has a lower density and can be adhered to both the horizontal and vertical surfaces by the combination of the foam with the pressurized water. Foam extinguishing systems also prevent explosive gases from escaping at the same time.

Areas of use for foam extinguishing systems include for example:

- | | |
|--|--|
| <ul style="list-style-type: none"> ➤ Aircraft maintenance halls ➤ Helicopter landing pads ➤ Offshore platforms and ships ➤ Pipeline pumping stations ➤ Logistics halls with a high percentage of plastic ➤ Mineral oil tanks including the collection containers ➤ Transporting stations for mineral oils and much more | <ul style="list-style-type: none"> ➤ Chemical industry ➤ Refineries ➤ Petrochemical Plant ➤ Power plants ➤ Waste incineration plants ➤ Tyre warehouses ➤ Coal silos |
|--|--|

Foam-Based Fire Protection Equipment

Proportioners:

Foam solutions consist of 1-6% foam concentrate, and the rest water. In a typical foam-based fire protection system, the foam concentrate is stored in a storage tank. The exact proportion of foam to water depends on the type of foam used. Achieving the correct proportion requires a special piece of equipment called a proportioner, which feeds the correct amount of concentrate into the water line. There are two main types of proportioners: pressurized and atmospheric. Each proportioner type is designed to be effective at a particular percentage of concentrate.

- **Pressurized proportioner:** In this system, the foam concentrate is pushed through the system by means of pressure. This can be accomplished with a pump or with a pressurized bladder tank. The latter is a water tank that contains a bladder within which the foam concentrate is stored. The concentrate bladder is pressurized from the outside by the water pressure surrounding it. The pump or pressurized bladder forces the concentrate into the proportioner.
- **Atmospheric proportioner:** This type of proportioner uses atmospheric pressure to suck the foam concentrate through the system like a straw in a glass of water. The water moves through a small orifice, creating a Venturi effect which, creates sufficient suction to pull the concentrate from a small atmospheric storage container into the solution. This type of proportioner is designed to proportion 3-6% of foam concentrate to water.

Deluge valves:

Deluge Valves are a critical component of any foam-based fire protection system. Typically, there will be a Deluge valve on the water piping. In addition to the main deluge valve there is also a foam valve that provides the foam concentrate to the proportioner. Most fire protection deluge valves may be used with either water, foam solution or foam concentrate.

Pressure control valves are also a critical component to consider. Controlled pressure enables more accurate proportioning and application rates. In a foam system, it's best to have pressure control on both the water and the foam sides of the system.

Discharge devices:

Once the foam concentrate has been proportioned into the water it's necessary to use a discharge device to whip it up into foam. Different types of discharge devices are available for different types of foam. Low expansion foam can be used with standard nozzles. Medium and high expansion foams require special equipment such as a foam generator capable of mixing a great volume of air into the solution. An aspirating system for this type of foam can increase the volume of solution by 200-1000 percent.



Type of Foam Concentrate

Fire suppression foam is comprised of three parts: foam concentrate, water, and air. When mixed correctly, these parts form a homogeneous foam blanket that extinguishes flames by the combined mechanisms of cooling, separating the flame source from the product surface, suppressing vapors, and smothering. This makes foam suppression systems an effective option for protecting flammable and combustible liquids.

- P foam is a protein foam: Produced from a carefully controlled blend of hydrolysed protein, foam boosters, stabilizers & preservatives. This ensures the production of stabilized fluid foam. This type of foam should be used as proportioned solution in fresh or sea water.
- FP is a fluoroprotein foam concentrate containing fluorinated surfactant in a carefully formulate protein foam liquid.
- AFFF is an aqueous film forming concentrate consisting of fluorocarbon & hydrocarbon surfactants with various solvent, preservatives & stabilizers. The foam forms an aqueous film that rapidly cuts of the oxygen supply & thus knocks down the fire.
- FFFP is a film forming fluoroprotein foam concentrate containing hydrolyzed protein & preservatives, together with a blend of fluorinated surfactants to achieve the maximum synergistic effect.
- Alcohol Resistance (ARC) is a high efficiency multi purpose film forming foam. The main advantage of ARC is the better induction ratio on all class B fires, also polar solvent.



Proportioning Equipment

Foam proportioning equipment is a crucial element of foam firefighting system as it ensures the correct mixing ratio of foam concentrate to water. Arka foam proportioning systems consist of various products including foam bladder tank proportioners, foam inline inductors, foam ratio controllers and inline balance pressure proportioners.



Common to all fixed foam fire fighting systems is the need for a suitable induction/proportioning system to mix a pre-determined amount of foam concentrate with the fire mains water to produce a foam solution. The foam solution is then supplied through the fire system pipework to a finished foam generator or other delivery device.

The selection of the correct proportioning system is of paramount importance to ensure foam is delivered at the required application rate to extinguish the fire.

In most cases a foam induction/proportioning system will consist of one of the following types:

- Inline inductors
- Bladder tank Proportioner
- Foam Dosing Pump

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Bladder Tank

Bladder Tanks are a component of a balanced pressure proportioning system that includes a pressure-rated tank with an internal elastomeric bladder for foam concentrate storage. Upon system actuation, incoming water applies pressure to the concentrate in the bladder, which supplies pressurized concentrate to the proportioning device. The device meters the foam concentrate into the fire water line, creating foam solution. The solution is then piped to the discharge devices protecting the hazard area.

The bladder tank together with ratio controllers, form a balanced pressure proportioning system used to mix water and firefighting foam concentrate together to produce an effective extinguishing medium. The bladder tank technology is a dependable and precise mixing method that is widespread in the fixed fire protection market.

This method gives a stable water/foam ratio by adjusting automatically to the variable flow rate and pressure conditions that occur during system operation. This feature makes bladder tanks particularly suitable to fit multiple hazard systems, sprinkler systems and any other systems operating under variable, non-predictable flow and pressure conditions.

The bladder tank is a carbon steel pressure vessel containing an elastomeric bladder between the water and foam concentrate.

The bladder permits water pressure to be transferred to the foam concentrate without the two fluids mixing together.



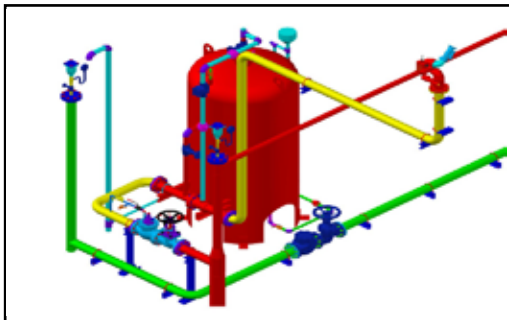
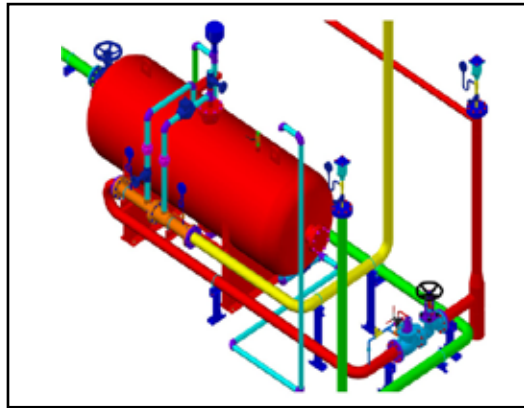
Construction Features:

- Vertical tanks on legs or horizontal tanks on saddles are provided with ground fixing holes
- Design pressure: 12 bar or 18 bar and tested according to the applied design code
- Shell and heads in ASME SA-516 Gr.70
- Lockable corrosion resistant brass tank trim/service ball valves
- Inspection flange available on left or right side of horizontal tanks (left as standard)
- Machine welded circumferential and longitudinal seams for maximum quality and durability
- Welded lifting lugs to facilitate safe handling operations
- Earth lug for electrical safety
- Safety thermal valve for water side of bladder to prevent slow overpressure and relieve thermal fluctuations
- Bladder equipped with cast rubber caps to ensure water & foam integrity under constant pressure
- Sight Tube level indicator
- External epoxy zinc rich primer with aliphatic polyurethane finish

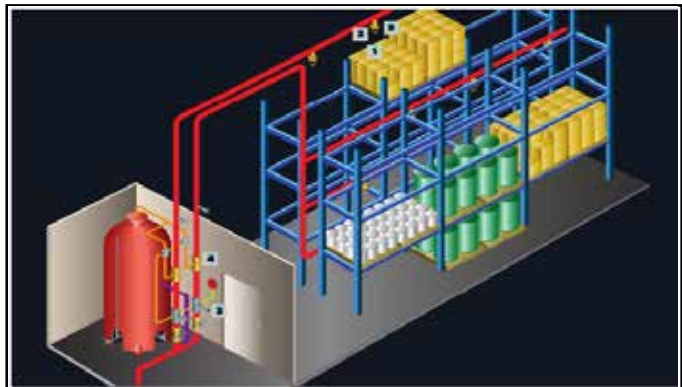
Specification:

- Configuration: Vertical, Horizontal
- Capacity: 25 to 4000 US Gallons Vertical, 50 to 5250 US Gallons Horizontal
- Design Code: ASME Bolier and Pressure Vessel (BPVC) Code
- Standby Pressure Rating: 12.1bar to 18 bar
- Inspection Flange: Left (Standard), Right (required for Horizontal Tanks only)
- Level Indicator: Sight Tube
- Ratio Controller Size(s): 2", 2.5", 3", 4", 6", 8"
- Direction of flow: both of Left to right and Right to left
- Water Line Piping: Carbon Steel
- Foam Line Piping: Carbon Steel, Stainless Steel
- Foam Concentrate Type: AFFF 3%S C6, ARC 3X3S C6, FP 3% C6, AFFF 3%M C6
- Concentrate Control Valve: Hydraulic Ball Valve

Model No.: RK - BLD - 101



Model No.: RK - BLD - 201



Foam Dosing Pump

The Arka Sanat skid mounted Foam Dosing Pump Proportioner systems are designed according to the NFPA guidelines and based on our own high quality proportioners type GB and WRP.

These foam proportioning foam pump packages are designed to accurately proportion foam concentrate into the water stream over a wide range of flows and pressures. Manual adjustments are not required.

Atmospheric foam concentrate tanks made of Carbon steel, 304SS, 316SS, GRP or PE, are also available on request. These can be integrated in the skid or supplied separate.

Arka Sanat Balanced Pressure Proportioning Pump Skids are designed according to the NFPA 11 & 16 guidelines to accurately proportion the foam concentrate into the water stream, this systems operate over a wide range of flows and pressures and do not require any manual adjustment.

Frequently used for fire protection in large aircraft maintenance facilities and large flammable liquid storage facilities, these completely self-contained foam systems are installed attached to atmospheric foam concentrate storage tanks.

A complete balanced pressure proportioning system, control valves, proportioning controllers, duplex gage, positive displacement foam pumps, and all interconnecting piping is mounted on a pump skid for stability.

Multiple proportioning units can be assembled in a single system, and flow ranges can vary according to job requirements.

Arka balanced pressure proportioning pump skids are compatible with all foam concentrates.

In operation, the foam supply pump skid delivers foam concentrate under pressure to mounted ratio flow controller(s).

A skid mounted Pressure Control Valve installed within the skid foam concentrate supply piping balances foam concentrate supply pressure to firewater pressure by returning unused concentrate to the storage tank which is then discharged "sub-surface" to minimize foam aeration.

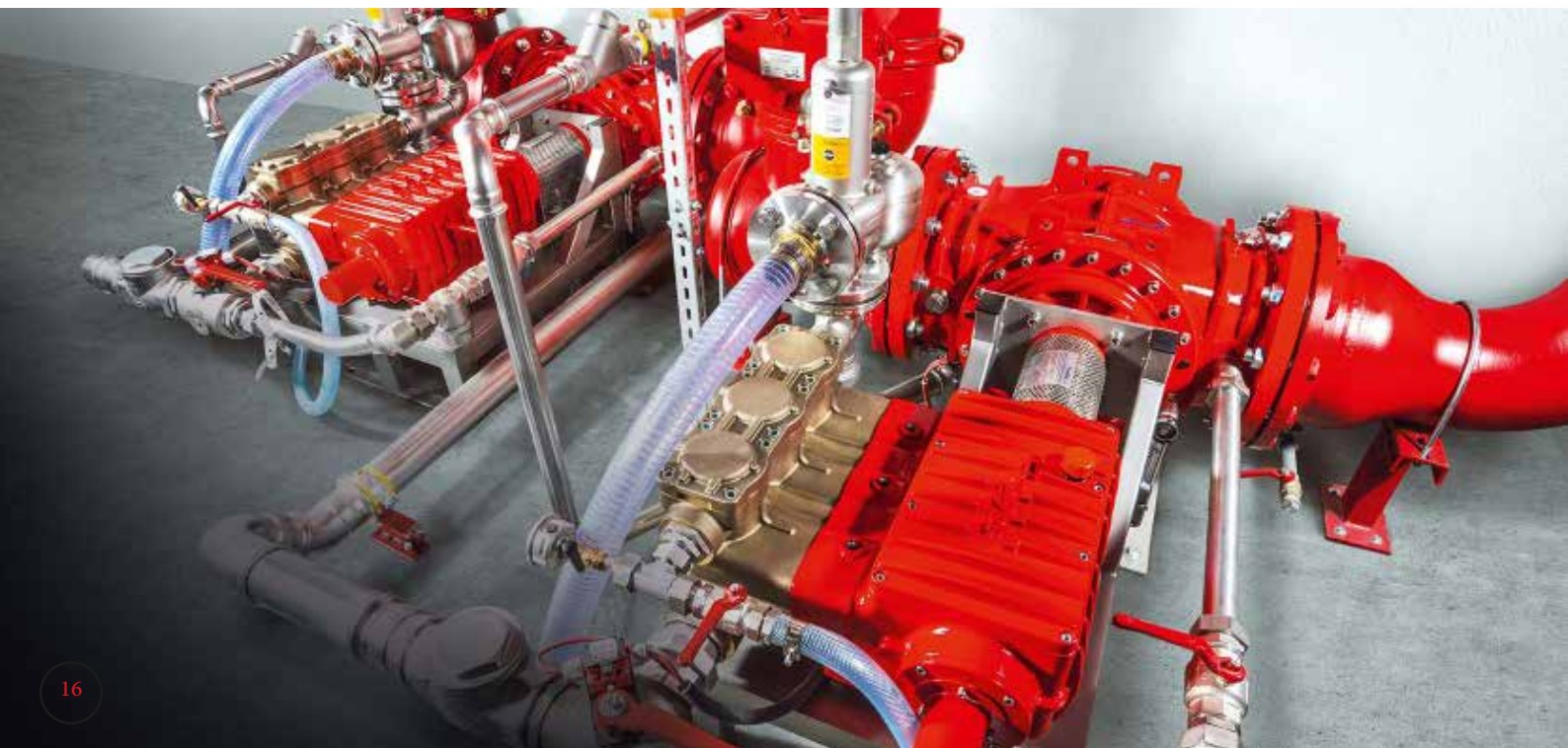
A metering orifice within the Ratio Flow Controller foam inlet port allows concentrate to enter the solution line proportional to the firewater flow and will accurately support the required solution discharge rates.

Water and foam pressures are monitored by pressure gauges.

Manual override of the system is accomplished through the use of a manual valve, installed in piping which bypasses the control valve.

Field connections on the skid are limited to: water inlet to ratio controller; foam solution discharge from ratio controller; foam concentrate suction and return connections to the foam storage tank.

All inlet and outlet piping connections on the skid are 150# flanges.



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Foam/Water Deluge Valve Skid

Deluge skids are packages used to control the flow of water or water/foam solution in fixed fire suppression, cooling or gas containment systems. Depending on the project requirements, there are several possible flow control activation solutions including electric, electro-pneumatic and hydraulic on which additional features such as automatic pressure reducing and remote ON-OFF trims can be added.

Arka Sanat is a well-known manufacturer of deluge valves and skids with a strong expertise in solutions tailored for the oil & gas industry. The Deluge Skids supplied can be manufactured in a variety of different materials such as Carbon Steel, Stainless Steel or Cu-Ni, Cast Steel or Titanium. Deluge valves and trims validated as SIL 2 and SIL 3 are also available for integration in fire systems.

The purpose of a deluge system is to quickly control the expansion / spreading of fire to adjoining areas and ensures cooling of the affected area. It includes both Medium and High Velocity Water Spray and foam water deluge sprinkler system. In these systems, sprinklers are of open type. They are connected to a dry pipe downstream of deluge valve. The deluge valve is connected to a main water supply pipe line through an isolation valve and is kept separated by closing the waterway through pressurization of the diaphragm chamber of the deluge valve, by hydraulic pressure connected to a pressurized water supply pipe line. Release or activation of deluge valve can be achieved thru manual release of pressure in the diaphragm chamber or thru electrical actuation of a solenoid valve connected to the diaphragm chamber pressure release line. Upon release of pressure inside diaphragm chamber upstream pressure overrides the downstream pressure and releases the water from an array of open nozzles connected to the deluge valve through a range of pipes. Deluge valve works on the differential pressure principle. Actuation of the deluge valve can be achieved by activation of Fire detection devices and can be supervised for release thru a pressure switch connected to the fire alarm panel.

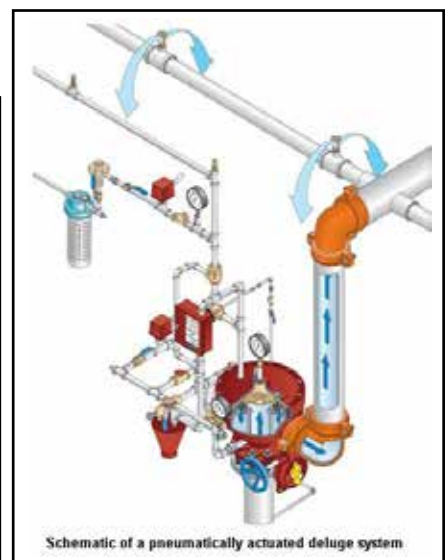
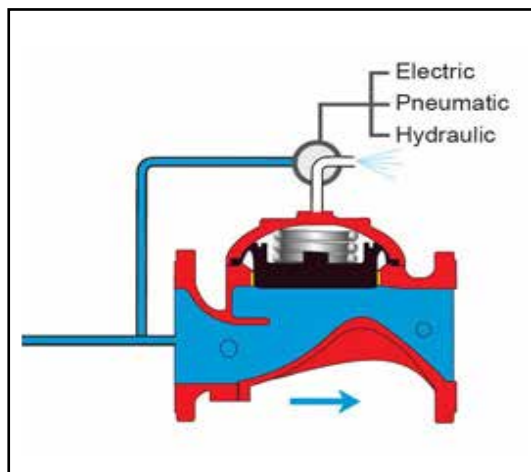


Simple design is
always the best



Specification:

- Type: Regulating, Globe
- Actuating Type: Electrical, Pneumatic, Electro-Pneumatic
- Pressure control in downstream of deluge valve
- Service: Fresh water, Seawater, Foam Solution, Foam Concentrate Fluids
- Installation: Vertical and Horizontal
- Size: 2" (DN50) to 12" (DN300)
- Body material: Ductile Iron, Cast Steel, Ni. Al. Bronze, S.S316
- Preassembled deluge valve on Skid with isolating valves & bypass line (Deluge Skid)
- Flow Rate: 1000 lpm to 15000 lpm
- Normal Inlet Pressure: 1.4 to 17.5 barg.
- Pressure Control Pilot Material: SS316
- End Connection: Flanged End to ANSI B16.42 150# R.F. Dry Pilot, Quick release, Pneumatic operated, Electric Release trim
- Tubing/Fitting Material: S.S.316,
- Manual Emergency Release Valve : S.S.316
- Pressure gauge with isolating valve Dial:4"-0-16 bar, Casing martial SS316
- Drain Valve - Gate Type
- Solenoid Valve, Explosion Proof, 3/2 Way- SS316, 24 V DC, Normally Closed Type,1/4", EX-Proof, Class I,Zone-2 , Group IIA,IIB,T3, Enclosure ,IP65(Normally energized to open)
- Pressure Switch, Explosion Proof, SS316, Snap acting, Zone 2,Gr.IIC,T2
- Water Motor Alarm Gong
- According to: NFPA, BS



Foam Discharge Equipment

Foam is a great tool for improving our firefighting capabilities: It's extremely effective in extinguishing multiple types of fires and does so in a shorter timeframe; it makes water more efficient, providing more firefighting capability from the same volume of water; it's a cost-effective investment; and it's simple to operate.

Nozzles have several key qualities that make them an optimal choice when using foam:

- They are a low-energy system, meaning that the only energy available to produce bubbles in the nozzle comes from the water pump.
- They're easy to make, but there's also a wide variety of aspirating nozzles on the market. Some are fixed tubes with no adjustment. Others are adjustable usually by changing the stream pattern. Our nozzle also makes clip-on aspirating nozzles, which attach to the bumper of a fog nozzle when needed.
- They produce a wide variety of foam types and volumes, and can be used with both Class A and B concentrates.
- They can be designed to bring the air into either the front or the back of the nozzle. Air is drawn into the nozzle through the Venturi effect. As the foam solution passes through the center of the nozzle, a low level of pressure is created, which allows the air to enter the nozzle. This process consumes energy. The more air that's drawn in, the more energy is consumed. This causes a reduction in stream reach.



Foam/Water Nozzle

Arka Foam/Water nozzles are open, air aspirating discharge heads manufactured in stainless steel and designed for installation as part of an engineered fire protection system. They are designed to be used in conjunction with any of the Arka Fire Integrity range of foam concentrates.

The Angus RK-NZ-602 and RK-NZ-603 foam water nozzles are designed for applications where a low expansion foam application is needed followed by a period of water cooling. The nozzles are designed in such a manner as to produce a very similar spray pattern with foam and water. The RK-NZ-602 is designed to meet the 6.5 litres/m²/min application rates of NFPA spacing requirements and the RK-NZ-603 is designed to give an application rate of 4.1 litres/m²/min.

The RK-NZ-601 is a nozzle especially designed to provide foam/water protection for spray rings on bulk storage tanks. The RK-NZ-601 is mounted in a horizontal position, typically 250mm away from the tank wall and 700-900mm below the top of the tank shell.

The RK-NZ-604 nozzle comes in two designs. The RK-NZ-604 nozzle is designed for mounting above the tanker loading bay, to protect the top and sides of road or rail tankers and other one is designed to complement the RK-NZ-604, by throwing foam underneath the tanker to protect the tyres and underside of the transport.



RK - NZ - 601



RK - NZ - 602



RK - NZ - 603



RK - NZ - 604

Foam Monitor Nozzle:



Foam Monitor

Arka Sanat is a specialist in designing, manufacturing and servicing Fire Fighting Monitors both for land and marine applications. We are specialized in heavy duty, special designed and machined monitors in full stainless steel with a state-of-the-art control system and features that add value to the owners, operators and fire-fighters, Our monitors are fully adjustable and provide flow rates of 1000 to 8,000 lpm as follows:

- Manually Controlled Foam/Water Monitor
- Gear Type Monitor
- Station Monitor
- Double Gun Monitor
- Self-Oscillating Monitor
- Remote Control Monitor
- Mobile and Trailer-Mounted Monitors
- Tower Monitor

Standard Reference: NFPA 16, NFPA 24, BS 336
 Body Material: Ductile Iron, Cast Iron, Gunmetal, Stainless Steel
 Operation System: Hand Lever, Gear Type, Self-Oscillating,
 Remote Control Electrical or Hydraulically Type

Specification:

- Control Type: lever (Manual)
- Size: 2 1/2" to 8"
- Inlet connection Size: 4" 150# FF Flanged, ANSI B16.24
- Flow Rate: 2000 LPM @ 7 bar 45 m (water/foam) horizontal throw
- Horizontal Rotation: 0 to 360°
- Vertical Rotation: -40 to +80°
- Material: Carbon Steel, Brass, Gunmetal, Stainless Steel
- Design Pressure: 16 barg.
- Test Pressure: 22.5 barg.

Including:

- Foam/Water Nozzle, manual adjustable pattern (Fog/Jet/shut off)
- Isolating Valve: Butterfly valve
- Pick up tube, ball valve in pick up tube



Model No.: RK - MO - 101



Model No.: RK - MO - 201



Model No.: RK - MO - 301

Arka Sanat
 Firefighting & Fire Alarm Systems



Model No.: RK - MO - 402



Model No.: RK - MO - 501



Foam Equipment

The fire fighting foam equipment includes bladder tanks, branchpipes, foam pourers, foam chambers, foam concentrate pump skids, portable foam trailers and foam concentrates as well as all the complimentary accessories. The fire suppression equipment we offer delivers effective fire protection through a series of low/ medium/ high expansion foam systems which are in accordance with NFPA guidelines. These solutions are suitable for harsh environments and therefore are widely used in chemical and petrochemical industries.

RK-FOC-200 Series Foam inductors are inline foam inductors with 1% or 3% foam mixing ratio. Standard inductors are manufactured using aluminum alloy, copper alloy and stainless steel material are available on request. Inductors are with ANSI #150 or PN-16 flanges, 1.5" inductor is available in threaded or flanged connections.

Specifications:

- Body Material: Aluminum Alloy And Brass And Gun Metal
- Filter: Stainless Steel And Brass.
- Flow Rate: 101psi (7kg. Bar)
- Lpm: 225 Lpm, 450 Lpm, 500 Lpm,
- Usage: Industrial



In Line Inductor
Model No.: RK - FOC - 201



Foam Maker
Model No.: RK - FOC - 201

Foam Hose Reel

Arka Sanat offers fire hose reel cabinets in different styles to meet varying installation requirements. All styles of cabinets are equipped with a hose, valve, reel, key, hing and other accessories.

Fire hose reel cabinet manufactured based on the latest modern technical processes and complies with the best international standards. It has different styles of doors and different types of cabinet.

in genral Arka Sanat offers three types of fire hose reel cabinet as follow:

- Wall Mounted
- Self Standing
- Spicial Fire Hose Cabinet

Wall mounted fire hose cabinet according to UNE/EN 671-1 and 20 m fire hose made according UNE 694.

It is composed by:

- Made of 1.5 mm thickness
- Material: Carbon Steel, Stainless steel
- Easy-open lock
- Support arm fixing
- Pre-holes for water supply
- Reel, hose, swing arm, and supply hose
- Nozzle

Painted in red color RAL3000, It can be made in another color, with the RAL provided by the costumer, or in stainless steel and Gold.

The door design has some options: standard, red blind, white blind, white semi-blind, totally stainless and etc.

We can imagine that you still have some question about you own specific sicuation after reading this leaflet. Our callegues will be pleased to help you by making a good chance for your kind of risk.

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Model No.: RK - HRC - 102



Model No.: RK - HRC - 104



Model No.: RK - HRC - 107



Model No.: RK - HRC - 106



Foam Hose Reel Station:

The Arka Sanat Foam Fire Fighting Station is a self contained unit that relies only on water flow and pressure to lace the system into operation. It is designed to be installed in a fixed location such as Helidecks, offshore processing, storage or handling areas where it is used to control fires or spills of flammable or combustible liquids.

The unit is constructed in such a manner that one person may operate it to its full potential with the speed and effectiveness necessary in an emergency situation when foam is necessary. The units are capable of holding 120 to 200 Liters of foam concentrate, has a 350 lpm in-line inductor pre-piped to a fixed mounted continuous flow hose reel containing 1" to 1-½" hard rubber hose, hand line nozzle with standard or pistol grip and ball shut off.



Model No.: RK - HRC - 402

Features:

- Nozzle is a non air-aspirating type, which has a better stream and gives a constant flow whether on straight stream or fog patterns.
- Painted Steel hose reel is mounted on top of tank. Galvanized steel available.
- Tank is supplied with ½" drain plug and 2" fill opening on top of tank.
- Tank can be refilled during operation of the unit.
- In-line inductor pickup tube has manual ball valve that can be closed so that unit can be used with water only.
- In-line inductor has variable metering valve 1% - 3% - 6%.
- Brass manifold with full-port ball valves.
- Suitable for use with any type foam concentrate.

Foam Trolley

Arka mobile trolley with a capacity of 120 to 350 litre is a unique fire extinguishing system for fighting starting industrial fires. this foam trolley is equipped with:

Features:

- Tank Material: Fiber glass or Stainless Steel
- Light Weight and Durable for use in rugged conditions.
- First aid and rapid deployment high risk areas.
- Easy access in narrow passages where fixed piping and fire vehicles are inaccessible.
- Tank mounted on steel structure with wheels for easy mobility.
- Aluminum alloy low expansion foam branch 225 Lpm or 450 Lpm along with 3% or 6% fixed inline foam inductor made of aluminum alloy is supplied along with it as standard equipments.
- Provision of Storage of 2nos of 15 mtrs hose along with couplings.
- Variable inline inductor, Medium expansion foam generator and fire hoses are optionally supplied.
- Branch Pipe: 250 to 450 lpm Low Expansion branch pipe
- Valve: Control valve (2" ball valve)
- Capacity: 120 to 350 liters foam concentrate





Foam Trailer

The Arka Sanat Monitor Trailer is designed to meet modern industrial firefighting and protection needs, especially for mitigating hazards involving flammable liquids in storage and gases under pressure. It is a mobile large-volume discharging platform capable of delivering up to 22,700 lpm water or foam solution for fire suppression, cooling, personnel protection, toxic gas dispersion and more. Its optional Hydro-Chem capability delivers dry chemicals to extinguish 3-dimensional fires or gas pressure fires. If more flow is needed, maximum flow rate of 30,000 lpm is available on selected models.

The Arka trailer features an A-frame tow bar construction with integral waterway, an internal ballast and an external toolbox. The trailer has been purposely designed to reduce weight and maximize manoeuvrability with stability safety factor achieved by the water ballast tank to increase weight once staged for deployment.

Arka Fire Monitor Trailer is a foam/water delivery device equipped with a self-educating gladiator nozzle. It features straight stream to fog pattern adjustability, turn and click flow adjustment and a self leveling stability system. It delivers outstanding foam range and foam quality. Flow ranges available from 1,500 to 3,000 gpm. This unit's compact and lightweight design offers the capability of manual deployment.



Model No.: RK - MOT - 101



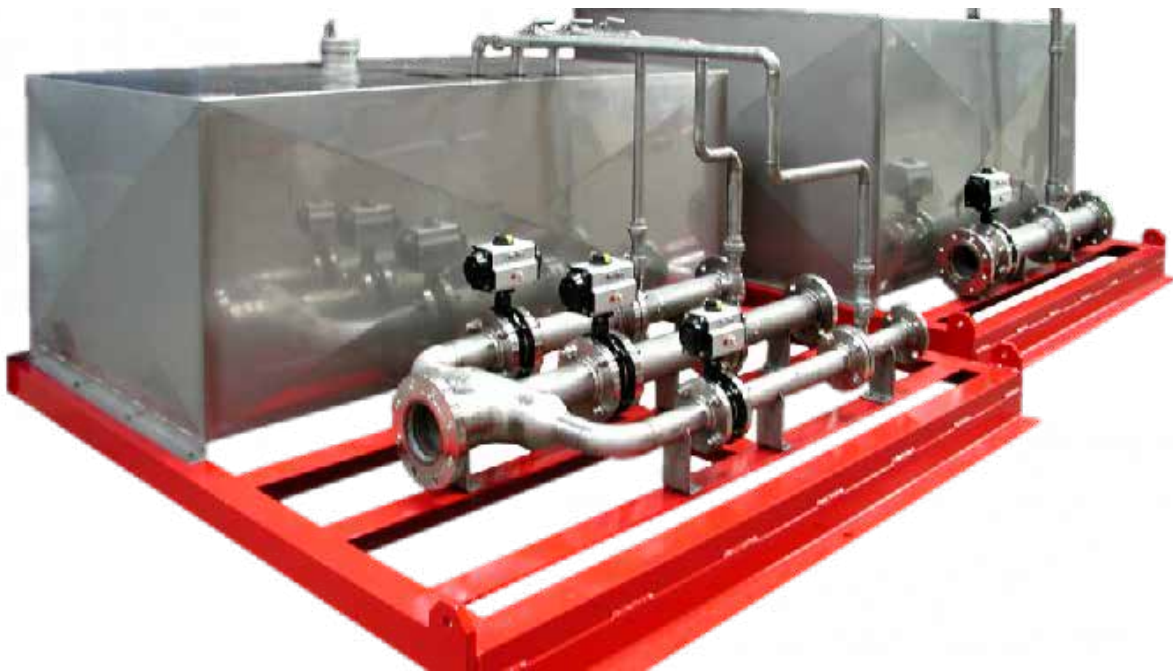
Model No.: RK - MOT - 102



Model No.: RK - MOT - 103



Model No.: RK - MOT - 104



Foam System

Arka Sanat are client orientated experts in the design and manufacture of a wide range of fixed foam firefighting systems providing high quality, cost effective solutions to a broad scope of industry sectors. Working closely with our clients, we strive to attain the highest possible level of service ensuring compliance to the brief at all times.

Utilising hi-tech computer-aided design and state-of-the-art CNC machining, Arka Sanat are a highly experienced manufacturer dedicated to the provision of fire protection and suppression solutions. Arka Sanat are specialists in the design and supply of Helideck Foam Systems.

FIXED FOAM SYSTEMS:

Arka's aim is to work closely with their clients to fully understand their requirements and progress each individual project through staged schematic design and consultation phases ensuring the brief is met in full.

With a team of highly qualified technicians with many years' accumulated experience our service is second to none. Working closely with major offshore operators and multiple sectors for more than 20 years we have developed well proven strategies for achieving cost effective solutions in the provision of fire suppression systems.

FIXED SYSTEM HARDWARE

Arka Fire manufacture a wide range of foam fire fighting equipment for use in fixed foam systems. Included in the range are the Rimseal Pourers, Fixed In-Line Inductors, Foam Proportioners, High Back Pressure Generators, Bladder Tank, Foam Pump, Foam Generator, Foam Trailer and a selection of Station Monitors, Electric Monitors and Oscillating Monitors.



A Foam System is used in firefighting to deliver fire retardant foam for the purpose of extinguishing a fire or protecting unburned areas. Typical components include a water source, a centrifugal pump, foam concentrate tanks, a direct-injection foam proportioning system on the discharge side of the pump, a mixing chamber or device, a rotary air compressor, and control systems to ensure the correct mixes of concentrate, water, and air.

It takes more than concentrate and water to create the world's most effective fire suppressing foam. It demands world-class engineering coupled with breakthrough technology to get it right.

Foam Fire Extinguishing System is divided broadly into two categories according to the chemical involved, namely Air Foam Fire Extinguishing System and Chemical Foam Fire Extinguishing system.

Chemical Foam Fire Extinguishing System is considered obsolete and has generally been replaced by Air Foam Fire Extinguishing System. Being intended primarily for Flammable Liquids, Air Foam Fire Extinguishing System is installed at agencies, producers and storage site of explosives and combustibles. The system comprises Water Source, Fire Pump, Air Foam Concentrate, Proportioner, Foam Maker, Foam Discharge Outlet Control Panel, Pipe, Electric Wire, etc.

A variety of Foam Discharge Outlet is provided to meet any shape of Hazard, conditions of location, etc. The system is divided into the:

- Air Foam Chamber
- Air Foam Nozzle
- Subsurface Foam Injection
- Air Foam-Water Monitor Nozzle
- High Expansion Foam Generators
- Subsurface Foam Injection
- Air Foam-Water Monitor Nozzle
- High Expansion Foam Generators

Areas of application:

In general, foam can be used anywhere that water alone would not have the desired extinguishing effect or the use of gas extinguishing systems or water mist systems would not be effective. Its largest area of application is therefore for combustible and highly flammable liquids. Foam is a good solution if there is a particularly high risk of a reignition and the burning material must therefore be separated from oxygen for a long period of time. It is also important to note that if one attempts to extinguish burning oil or fat fires with water, this could lead to an explosion.



Fire Suppression Foam System in Hanger

Safeguarding of hangars and maintenance buildings at airports against fire is achieved by foam systems that blanket leaked aviation fuel.

Mostly, conventional foam systems with sprinklers and firemonitors are employed here. However, innovative systems with rotating sprinkler nozzles that come up from the floor and spread a foam layer underneath an airplane, are coming more and more into use. For these systems, Arka Sanat can also supply the foam proportioning systems, remotely controlled firemonitors, and the so called pop-up rotating nozzles. High Expansion foam systems are also available for the above installations.

Arka provided Foam Package of aircraft hangar fire suppression systems. The hangar bays ranged from 20,000 square feet to 60,000 square feet, with ceiling heights varying from 30 feet to 105 feet.

Arka performed all Foam Package services. We also completed minor maintenance and repair work at each facility such as cleaning strainers, replacing detectors and adjusting nozzles.

We can imagine that you still have some question about you own specific sication after reading this leaflet. Our colleagues will be pleased to help you by making a good chance for your kind of risk. Please contact us:

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Our services in aircraft fire suppression systems included:

- Performing a visual assessment of the hangar and its associated fire protection systems.
- Functional performance testing of all fire protection systems.
- Hydraulic analysis of water-based fire suppression systems.
- Developing a comprehensive report in order to provide a base-line as to each hangar's fire suppression capabilities.
- Recommendations for repair, upgrade and replacement.
- Developing associated cost estimates for repair, upgrade and replacement.



The specific systems in aircraft fire suppression included:

- Fire alarm and detection.
- Wet pipe fire sprinkler.
- Dry pipe fire sprinkler.
- Pre-action fire sprinkler.
- Low-level high-expansion foam fire suppression.
- Low-level AFFF fire suppression.
- Fire pump systems.





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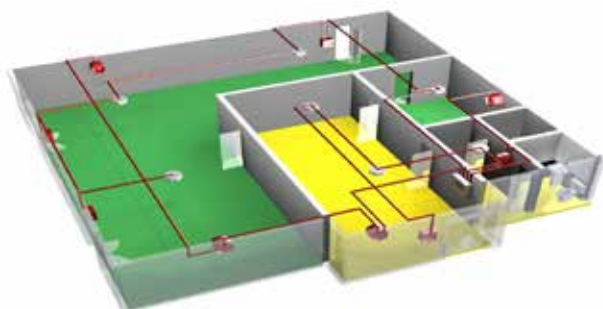
Foam Generator

Arka high-powered, high-expansion foam generators deliver high- or medium-expansion foams. Water, electric, or diesel powered, RK-FG-101 high-expansion foam generators are primarily used for firefighting in aircraft hangars and other structures, in mines, on ships and vehicles, and on military installations. Our foam generators also are effective in controlling fuel spill fires and wildland fire timber breaks.

RK-FG-101 high-expansion foam generators are available in sizes from 1,000 to 26,400 cubic feet per minute. RK-FG-201 models are available for use as portable generators or in fixed installations.

Specification:

- Rate: 216 to 1,189 lpm
- Inlet Pressure: 2.8 to 6.9 barg.
- Expansion Ratio: 330 to 890
- Housing Material: Galvanized Steel
- Foam Screen Material: 304 SS, 316 or 316L SS
- Fan Material: Carbon Steel, 304 SS Blades, 302 SS Rivets, Zinc Plated Carbon Steel or 304 SS Hub
- Water Motor Material: Cast Iron, Bronze, Brass
- Nozzle(s) Material: Brass



High Expansion Foam Generator



Model No.: RK - FG - 101

Medium Expansion Foam Generator



Model No.: RK - FG - 201

Foam/Water Sprinkler System

Where Fixed Foam Suppression Systems are required, the foam generating and distribution systems are normally installed intergrally with the hazard. These fixed devices are then piped to a source of foam solution. Such systems can be designed to operate manually or automatically on the activation of a fire detector.

A foam-water sprinkler system is a system that is pipe-connected to a source of foam concentrate and to a water supply may be any type of sprinkler system Wet, Dry, Preaction, or Deluge . The system is equipped with appropriate discharge devices for extinguishing agent discharge and for distribution over the area to be protected. The piping system is connected to the water supply through a control valve that usually is actuated by operation of automatic detection equipment that is installed in the same areas as the sprinklers. When this valve opens, water flows into the piping system, foam concentrate is injected into the water, and the resulting foam solution discharging through the discharge devices generates and distributes foam.

Arka Sanat is specialized in designing, manufacturing and installation Firefighting and Fire Alarm systems. When it comes to fire safety and extinguishing solutions, reliability is essential. Therefore, Arka Sanat exclusively cooperates with internationally acknowledged partners.



Simple design is
always the best

Foam System for Storage Tank

Liquid fuel storage tanks are a prime candidate for fire protection because the large volumes of flammable liquids involved create high hazard potential. When designing such a system it is important to take the type of storage tank into account. There are two main types of storage tank: those with a fixed roof vs. those with a floating roof. Each calls for a different type of foam-based fire protection system.

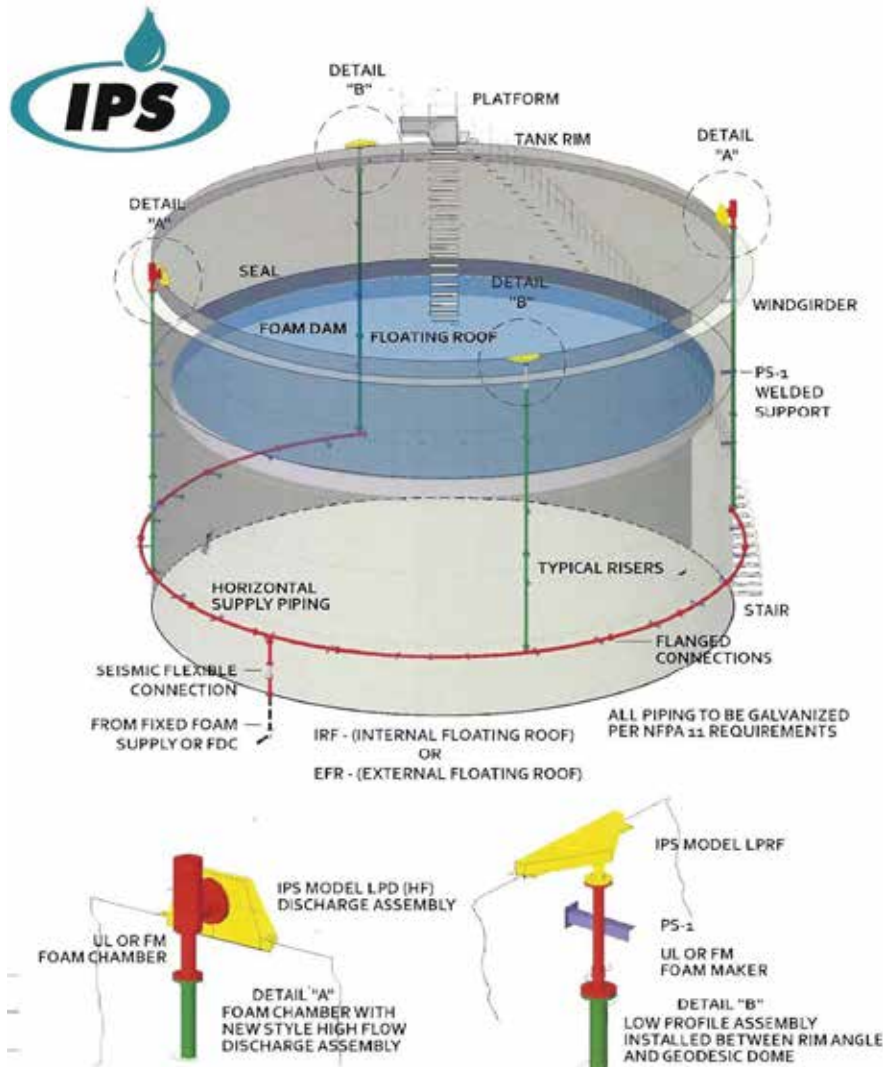
Fire protection for fixed roof storage tanks:

A fixed roof storage tank is a standard tank that contains a volume of liquid. As the liquid exits the tank, a volume of vapor-filled space opens up above it. Protecting the exterior roof of such a tank would be ineffective because of the potential for the vapors inside to ignite and explode, thus damaging or destroying any fire protection equipment present on the roof. Instead, a subsurface fire protection system is typical. In such a system, the foam solution enters the tank at the bottom. After being released through the flammable liquid by means of special nozzles, the foam floats on top of the liquid, forming a protective blanket on the surface.

Fire protection for floating roof storage tanks:

In a floating roof storage tank, the roof of the tank floats freely on the liquid surface. As liquid is drawn out of the tank, the roof descends to eliminate empty space in the tank. This type of storage tank is designed to minimize or eliminate the presence of vapor inside the tank. This helps to reduce the evaporation rate of the liquid. It also reduces the possibility of fire, because it's the vapor that burns, not the liquid itself. However, the perimeter of the roof features a flexible seal that permits the roof to float. Vapor can escape around that seal, creating a potential fire hazard.

In this case a subsurface fire protection system won't help because the low roof prevents any blanket of foam from forming at the liquid's surface. Instead, the top of the roof is protected with special equipment called a foam pool.



Dike

Foam Fire-Extinguish System

Flammable and combustible liquid storage tanks are found in industrial facilities such as refineries, petrochemical facilities, bulk storage plants, and marine terminals. Power plants, airports, local fuel companies, and large manufacturing facilities such as automotive and steel plants may also have bulk storage of flammable and combustible liquids. Atmospheric storage tanks are used to store or mix flammable and combustible liquids in various ways, depending on the facilities. These tanks can range from 10 feet to more than 350 feet in diameter and have an average height of about 45 feet. Such tanks can hold more than 1.5 million barrels (6 million gallons; for crude oil and other petroleum products, one barrel equals 42 gallons) of flammable or combustible liquids. Larger facilities may have more than 100 tanks of varying sizes and quantities, containing various products, which may be near each other and have several other tanks within a common dike. Dikes are physical barriers used to prevent the spread of tank contents if the tank overflows or the tank fails structurally. Dikes are also used to segregate and group tanks according to their contents classification.

RK Arka Sanat
Firefighting & Fire Alarm Systems



Firefighting strategies and tactics are also important. evaluate the objectives or goals vs. the risk. strategies include the following:

Nonintervention: this is essentially a nonaction mode when the risks associated with intervening are unacceptable. all personnel are withdrawn to a safe area.

Defensive: In this tactic, certain areas may be conceded to the incident, and actions are limited to protecting exposures and limiting the spread of the incident.

Offensive: aggressive and direct tactics used to control an incident. as with most fires, the benefits must outweigh the risk.

If a small-diameter tank is burning with no threat to exposures, should you extinguish the fire? If the tank has already lost

its contents, is exposure protection more appropriate? these considerations are identified and developed as part of the preincident response planning, development of emergency action plans, and the identification of the credible incident scenarios.

environmental conditions such as wind and rain could create problems with distance/range of the water/foam solution

streams. Changes in wind direction might cause corrections to incident action plans with respect to changes in staging

locations. an increase in temperature or humidity could force a quicker rotation of firefighters to prevent heat stresses.

Rimseal System

Arka Sanat has developed a special Rim Seal Fire Protection System with the aim of preventing rim seal fire outbreak from the very early stages of its development. The system known as RK-FOM-RIM Automatic Rim Seal Fire Suppression System is a fire fighting package which integrates a fire detection provision which automatically activates the fire extinguishing agent.

Rim Seal floating roof tank fires represent one of the most dangerous threats for chemical and petrochemical storage farms. During the years the world has experienced several rim seal fires and some of them have developed into large disasters.

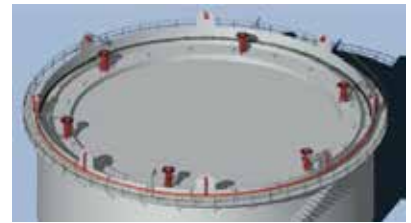
The Arka Automatic Rim Seal Fire Suppression System is available in the following configuration:

- Foam Based unit (FFFP or AFFF)
- Gas Based unit (HFC 227 ea or CF3I)

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Foam Based units can be configured with the following operational methods:

- Deluge using a pneumatic linear heat detection system
- Deluge using an electrical linear heat detection system
- Wet type using closed head nozzles

Activation of the unit is via a propellant gas (nitrogen) which can be:

- Stored in the foam tank (Stored Pressurized Unit)
- Held in an external cylinder (Non Pressurized Unit)

Gas Based units can be configured with the following operational methods:

- Pre-action using a pneumatic linear heat detection system
- Pre-action using an electrical linear heat detection system
- Wet type using closed head nozzles

Activation of the unit is via a propellant gas (nitrogen) which can be:

- Stored in the container (Stored Pressurized Unit)
- Gas extinguishing medium available for the unit are: HFC 227 ea and CF3I

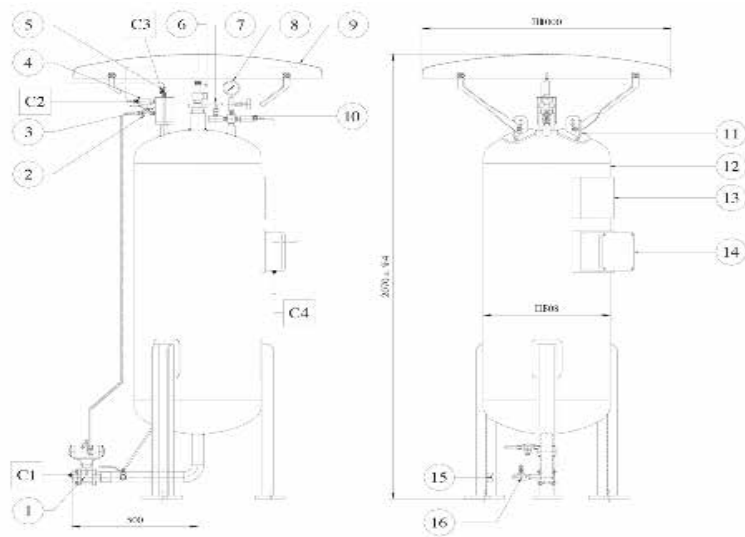
Technical specifications of the system:

- Nominal Vessel Capacity: 250 Liters (depending on request)
- Construction code : ASME VIII Div.1 Category IV - PS.V \geq 5000 bar liters
- Vessel design temperature: $-10 / + 90$ °C
- Design pressure of the Vessel: 28 bar g
- Working pressure limits of the Vessel: 0 – 25 bar g (Vessel to be pressurized at 20°C)
- Protected length along the circumference of the tank: 40 meters
- Maximum distance between & quantity of the nozzles: 2 meters & total 20 nozzles
- Max vertical distance between the nozzles and rim area: 0.4 – 0.6 meters above the seal
- Approximate flow rate of single nozzle: 15 l/min
- Discharge time: 30 / 40 seconds
- Max total weight of the pre-loaded system: 380 kgs.

Construction materials:

- Pressure Vessel: ASTM A 516 Gr B Carbon Steel
- Roof for sun & rain protection: P355NH (EN 10028-3) Steel
- Pneumatic actuated extinguishing agent control valve: Brass with Nickel Plating
- Extinguishing Agent control valve actuation line isolation valve: Stainless Steel body & internals
- Differential pressure multi-valve Valve body & sphere: Stainless Steel
- Actuator: Stainless Steel casing
- Pneumatic detection line low pressure switch: Casing Stainless Steel
- Pneumatic detection tubing: Thermoplastic UV resistant
- Safety Valve: Stainless Steel AISI 304
- System pressure gauge Casing: Stainless Steel
- Vessel low pressure switch: Casing Stainless Steel
- Lifting lugs & Roof supports: Carbon Steel
- Name plate support: Carbon Steel
- Junction Box for signal transmittal: Aluminum Cast
- Earthing Plate: Stainless Steel
- Extinguishing drainage and loading valve: Stainless Steel body & internals

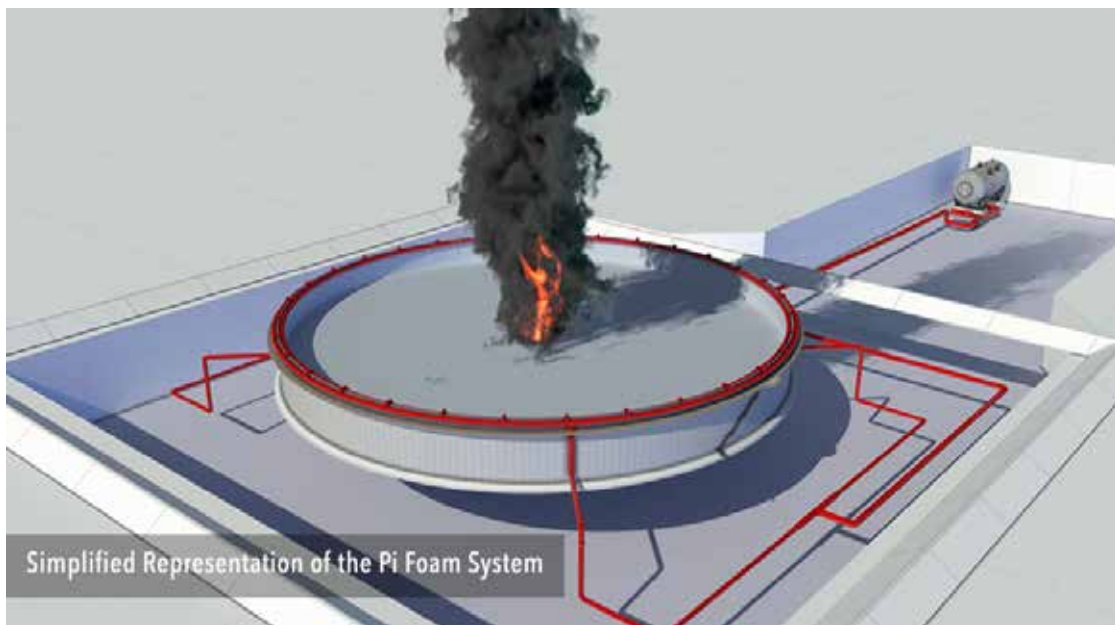




Legend	
1	Pneumatic actuated extinguishing agent control valve
2	Extinguishing Agent control valve actuation line isolation valve
3	Differential pressure multi-valve
4	Pneumatic detection line low pressure switch (ATEX)
5	Pneumatic detection tubing
6	Safety Valve
7	System pressurisation port
8	System pressure gauge
9	Roof for sun & rain protection
10	Vessel low pressure switch (ATEX)
11	Lifting lugs & Roof supports
12	250 l RSFP Pressure tank
13	Name plate support
14	Junction Box for signal transmittal (ATEX)
15	Earthing Plate
16	Extinguishing drainage and loading valve

Advantages CF3I Gas System:

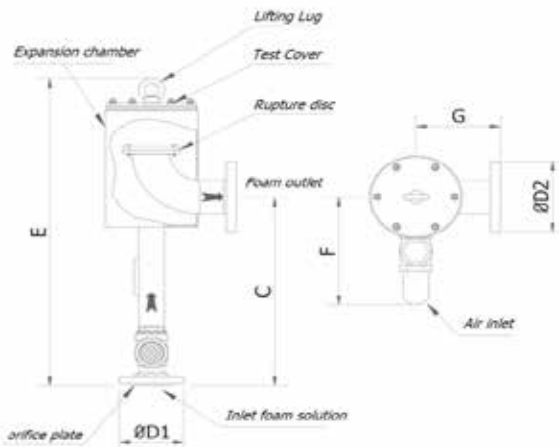
- Class 1 type heat detection with Vds approval.
- Non-pressurized detection element hence the chances of leakages are ruled out.
- Replaces existing Halon Systems.
- Environment friendly.
- Easy to install on existing or new floating roof tanks.
- Low maintenance cost and easy to refill or re-pressurize.
- Continuously monitoring system for leaks detection.
- Suitable for any different seal configuration.
- Reusable detection system over rides installation cost.
- Replenishment cost very economic.
- Alarm threshold can be set as per site requirement.
- Mechanical strength of detection system is very high since metallic tube is used.
- Event logging for specific parameter and events.
- Fast response which minimizes the fire damage.
- Highly versatile – free from false alarm fail-safe.



Foam Chamber

Foam Chamber-pourer sets are an integral part of tank farm fire protection systems.

As an end of line device the foam chamber-pourer must introduce expanded foam on to the surface of flammable liquids with minimal submergence or fuel agitation ensuring the formation of an effective foam blanket with superior extinguishing capabilities. The Knowsley SK Fyextra foam chamber-pourer range is classified as a Type II discharge device as stipulated by NFPA11.



Model No.: RK - FCH - 101



Model No.: RK - FCH - 201

Features:

- Fluid Chamber meets foam System requirement as per NFPA – 11.
- Fluid Chamber Models to cover flow range from 75 LPM to 2700 LPM. Confirms to UL 162.
- Available in two choices of Finish, Enamel and Epoxy.
- Fluid Chambers are compatible for all types of Low Expansion Foam Concentrate i.e. Protein, Fluoroprotein, AFFF & AR-AFFF.
- They are also available in S.S construction for aggressive environments.

Specifications:

- Body: carbon steel
- Vapor seal device: calibrated glass
- Air suction port check valve: brass
- Orifice plate: stainless steel AISI 316
- Expansion rate: 1:5 to 1:8 (depending on foam concentrate type)
- Finish: Red RAL 3000

Model	Flow Rate l/min @5 bar	ØD1 ISO PN16 ANSI # 150	ØD2 ISO PN16 ANSI # 150	C	E	F	G	Weight kg
RK-FCH-101	200	2"	3"	500	816	250	210	30
RK-FCH-102	400	2½"	4"	500	816	265	210	36
RK-FCH-103	800	3"	6"	650	900	350	300	68
RK-FCH-104	1500	4"	8"	650	900	380	300	74
RK-FCH-105	2000	4"	8"	850	1216	370	380	95
RK-FCH-106	2500	4"	10"	850	1216	370	380	116



Foam Pourer

The rim seal foam pourer is designed to discharge fully aspirated foam directly to the annular seal area of the open top floating roof storage tanks for fire or vapor suppression. Fully aspirated foam provides the most effective performance for all types of foam concentrates.

The rim seal foam pourer is designed utilizing the UL Listed CGFLR-30 or CGFLR-90 Foam Makers. The rim pourer design provides protection from the wind, allowing the aspirated foam to gently discharge onto the protected area of the floating roof tank. Gentle application minimizes submergence and agitation, increasing the effectiveness of the foam blanket. This design allows a uniform and cohesive foam flow.

The CGFLR-30-FP and CGFLR-90-FP Rim Seal Foam Pourers are both classified as Type II discharge devices in accordance with NFPA 11, "Standard for Low-, Medium-, and High-Expansion Foam."

The cover of the unit, opposite of the foam solution inlet, is designed for removal to allow for internal inspection. The unit can be mounted on the top flange of the fuel storage tank utilizing the mounting holes located in the base of the rim seal foam pourer or by the use of clamps.

A screened air inlet, conforming to the cylindrical body, allows uniform air distribution into the foam solution stream to generate expanded foam. This design also helps prevent damage and inhibits the entrance of foreign materials.

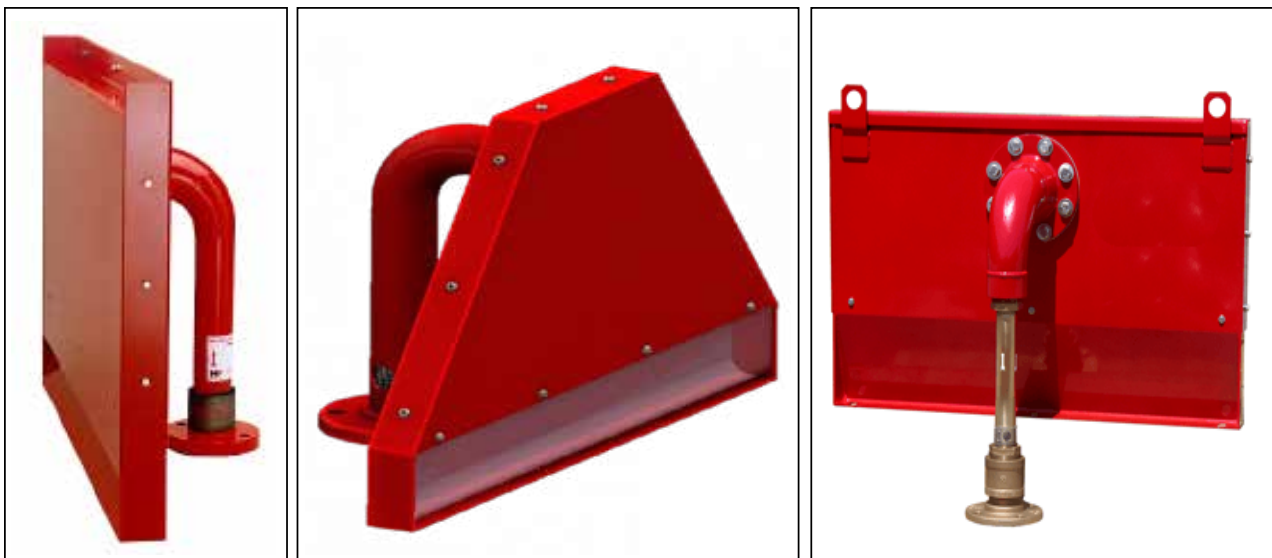
A removable orifice plate at the threaded inlet is sized to deliver foam solution over a range of flow rates depending on the inlet pressure. The acceptable operating pressure range is 30 psi to 150 psi (2.1 bar to 10.3 bar).

A stainless steel foam solution strainer (on CGFLR-30-FP only) is provided at the foam maker inlet. The strainer is secured by a snap retaining ring to allow removal for inspection and cleaning.

Application

CHEMGUARD CGFLR-30-FP and CGFLR-90-FP Rim Seal Foam Pourers are air-aspirating foam discharge devices that are designed to protect floating roof, flammable liquid storage tanks. Specifically, the protected storage tanks must be opentop construction with either double-deck or pontoon-type floating roofs.

Rim seal foam pourers are used with various types of proportioning systems such as bladder tanks, balanced pressure pump proportioning systems, or line proportioners. The foam pourers can be used with appropriate CHEMGUARD low-expansion foam agents.



HeliDek Foam Fire-Extinguish System

At Arka Sanat, we're always providing the latest firefighting systems for helideck and personnel protection. With over 20 years of experience in this field, the primary option for the majority of helidecks was a Fixed Monitor System. But as the Civil Aviation Authority now strongly encourages operators to consider using a DIFFS (Deck Integrated Fire Fighting System).

FULL SYSTEM DESIGN, INSTALLATION AND MAINTENANCE

At Arka, we offer a full design package that includes all of the following:

- Nozzle K Factor Selection
- Nozzle distribution pattern
- Inlet pressure requirements
- Water and Foam concentrate requirements
- Foam mixing design
- Maintenance considerations

If you'd like any further information regarding our DIFFS system, then simply get in touch with us.





**“A satisfied customer
is the best business
strategy of all”**



Every client is unique, every situation is different. Practices turn to Arka Sanat for lots of reasons. But, in most cases, it distills down to a single word: Trust.

- Trust in our experience.
- Trust in our solutions.
- Trust in our results.

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