



# Foam applications

WB Firepacks is your partner in fire and foam pump sets and proportioner for foam applications!





# The future of foam

**It has been in the air for some time, but the new legislation regarding the use of fluorine-containing (PFAS\*) fire fighting foam concentrates will be tightened up by the European Union. The outcome is a definitive ban on fluorinated (PFAS) fire fighting foam concentrates in the near future. That is why now is the time to look together at the consequences and possible adjustments to your fire extinguishing system.**

*\*PFAS = per- and polyfluoroalkyl substances, this is a group of chemicals used to make fluoropolymer products.*

## **Consequences for your fire extinguishing system**

The use of fluorine-free extinguishing foam concentrates has consequences for the operation of various parts of your fire extinguishing system, including foam pump, mixing system and/or water-driven foam mixer. It is important to investigate whether your fire extinguishing system can handle the fluorine-free foam concentrate. Some fluorine-free foam concentrates are so thick that they do not want to flow out of the packaging container. Or do not mix well without making adjustments to your fire extinguishing systems.

## **Why do we use foam?**

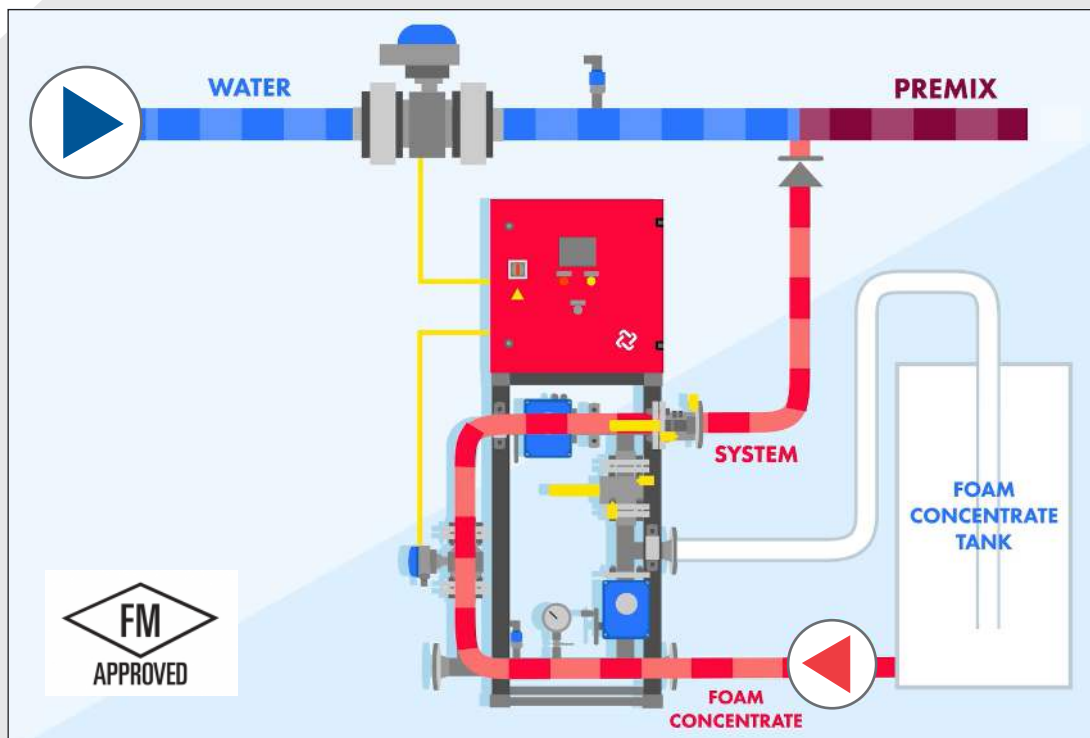
Fire is created by a combination of fuel, oxygen and an heat. To extinguish the fire, it is imperative to remove one of those three pillars. When the fire has started due to chemical substances, foam is often used for extinguishing. The foam functions as a blanket to remove the oxygen and generating a cooling effect, as such, extinguish the fire. Foam sets are often applied at warehouses or business where (large quantities of) hazardous substances are used.

# How does it work?

To create foam, water and foam concentrate must be mixed. For this process we have developed a Foampack, in addition to the Firepack. This Foampack pumps the foam concentrate. In order to make sure that the exact right quantity of foam concentrate is injected, we developed a Electronic Foam Proportioner (EFP®). As soon as the water has been mixed with the foam concentrate, it is pumped to the area. The sprinkler or foam generator, in combination with oxygen, turns the premix into foam.

## See the working visual:

1. You need a pump for water and an pump for foam concentrate;
2. You need an engine to pump water and foam concentrate;
3. You need to mix the right amount of foam concentrate with water.  
You can do this with a proportioner system



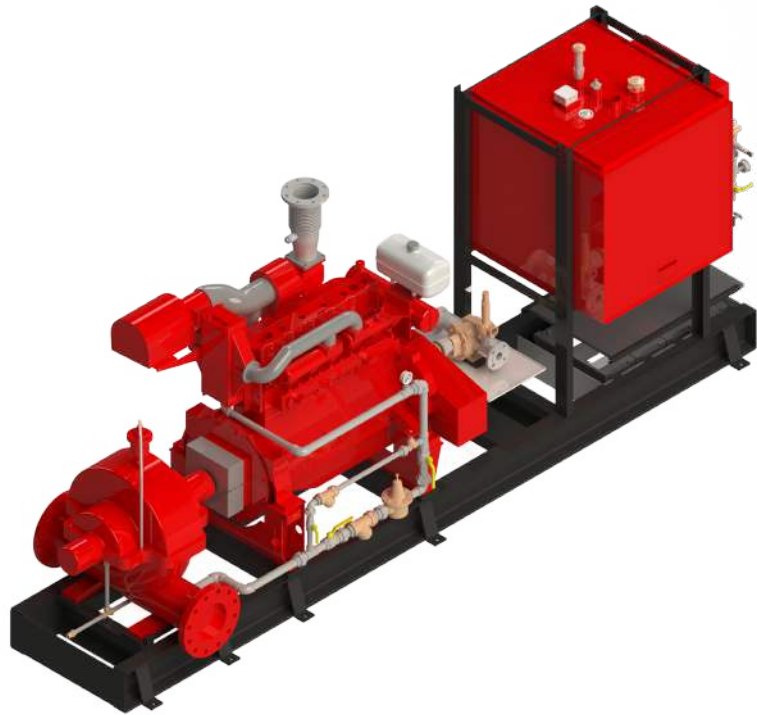


# Foam sets

Every foam application starts with the driver. Independent of your foam application you need water and foam concentrate to create foam. A fire fighting installation is in stand-by mode 24 hours per day, 365 days per year.

The driver for a foam fire suppression systems is activated differently compared to a sprinkler application. An engine for a foam application is activated by an incoming signal, for example provided by a fire alarm panel.

At WB Firepacks we developed two types of pump units for foam fire suppression systems.

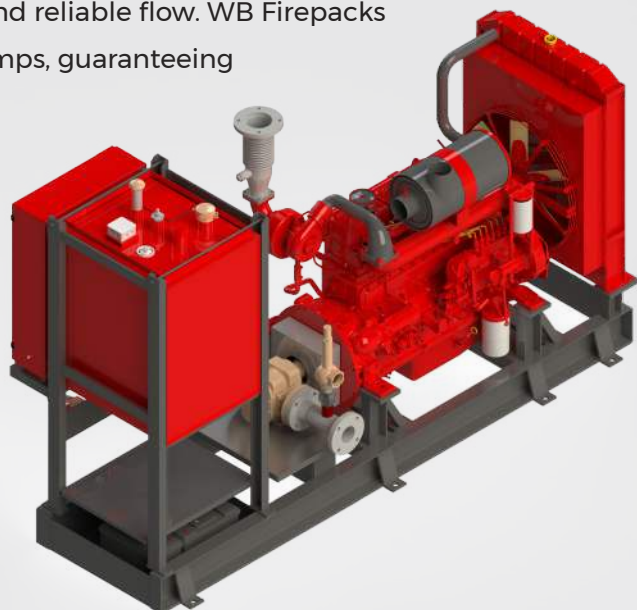


### **Twin Firepack**

The Twin Firepack is a unique application for the use of both water and foam. Two different pumps are powered by a single diesel or electrical motor which, in addition to reducing costs and space requirements, results in greater reliability. This application is often used in the petrochemical industry, in tunnels, in hangars, and on offshore (drilling) platforms.

### **Foampack**

Is your environment characterized by the presence of flammable substances, such as petrol, diesel, or kerosine? Then a foam-based fire extinguishing system is the answer. Foam systems often used in the petrochemical industry, in tunnels, in hangars, and on offshore (drilling) platforms. The Foampack offers a wide range of pump performances and driver options to feed the foam proportioner with constant and reliable flow. WB Firepacks offers FM Approved foam pumps, guaranteeing the highest standards in safety and quality.





# Foam pump

The foam pump pumps the foam concentrate to a proportioner system. It is important that you can rely on your foam pump. As mentioned there are some changes coming. There will be a ban on the use of fire fighting fluorine containing foam. Most likely sooner than later you need to use fluor free foam. The viscosity of fluor free foam concentrate type might be higher than the current foam concentrate types. This has consequences for your current foam application.



## **Fire Lion Global developed the FP-series Foam pumps.**

This pumps were designed to have the lowest cost of ownership by using these exclusive features:

- One lip seal - no timing gears for simplicity of operation
- Herringbone rotors for all viscosities of foam concentrates
- Quiet and smooth operation
- Experience pumping most major brands of fluorine free foam
- Fast and easy pump maintenance if needed in the field
- Made in USA means fastest delivery and best quality on the market
- Certifications available:
  - Non-Listed - General Market
  - <FM> Approved
  - UL Listed
  - CE-Marked





# Proportioning systems

Proportioning systems is the last part of our expertise's. We have the driver and pumps to pump water and foam concentrate. But maybe more important is to mix these two elements. This can be done with a proportioning system. At WB Firepacks we developed three types:

- **Electronic Foam Proportioner (EFP®)**
- **Electronic Flow Controller (EFC)**
- **Electronic Sustaining Valve (ESV)**

## Electronic Foam Proportioner (EFP®)

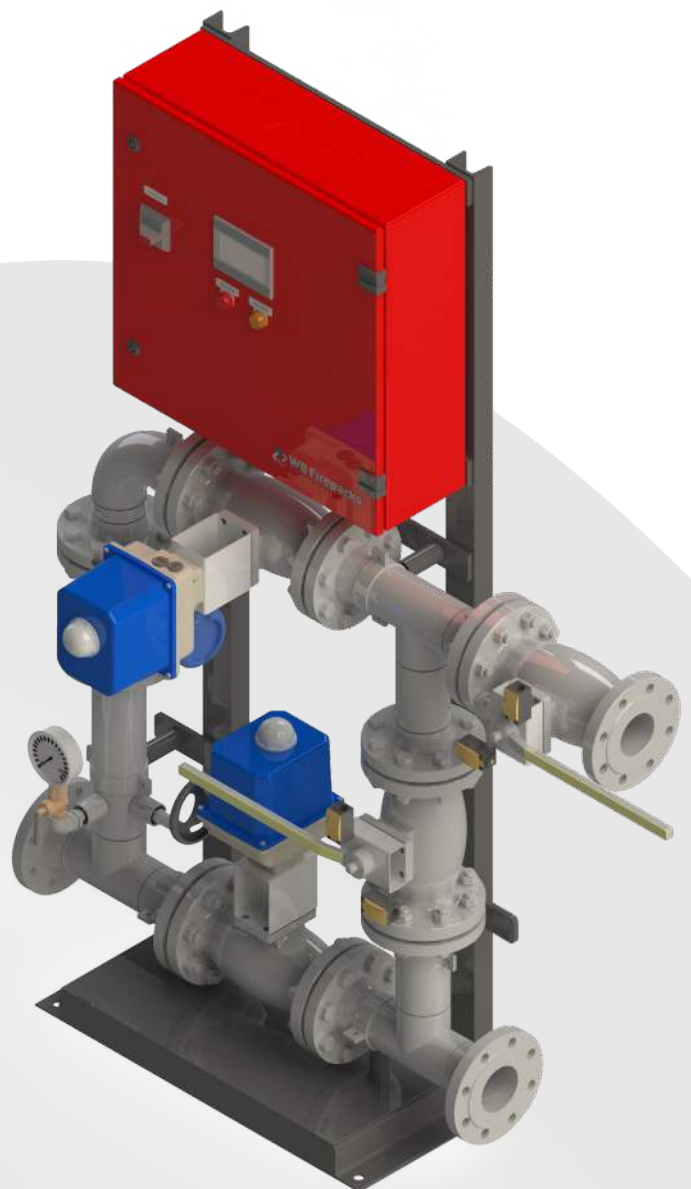
The EFP® is WB Firepacks' patented product innovation. This unique, FM-certified system ensures the right dosage (amount, mixing ratio) of foam concentrate and water when extinguishing a fire.

In addition to the dosage function, the EFP® give you the option to test with no loss of foam concentrate. This means there is no loss of foam concentrate from testing, significantly reduced environmental damage and, as a result, substantially lower disposal costs.



### Unique EFP characteristics:

- No loss of foam from weekly/annual tests;
- Accuracy is within  $\pm 0.1\%$  of requirements;
- Admixture percentage is independent of the type of foam used;
- Zero loss of pressure to the water flow;
- Wide dosage parameters;
- Available with FM-Approval.



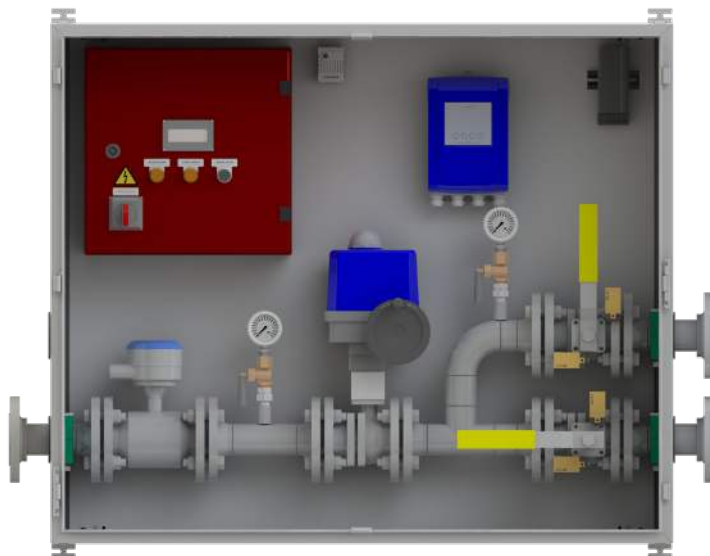
**No loss of foam concentrate**  
**No environmental damage | substantially lower disposal costs**



## Electronic Flow Controller (EFC)

The EFC (Electronic Flow Controller) regulates an optimal dosing of foam concentrate in your foam installation. Within 3 seconds an exact admixture of foamforming agent is created in the water flow. The main advantages are no pressure loss in the water stream and a significant cost saving.

The thoughtful design ensures that there is no loss of foam concentrate. In addition, the EFC is suitable for all types of foaming agent and it is possible to subsequently change fabric shapes, type and/or thickness of foaming agent. That makes the EFC of very added value to your foam installation.

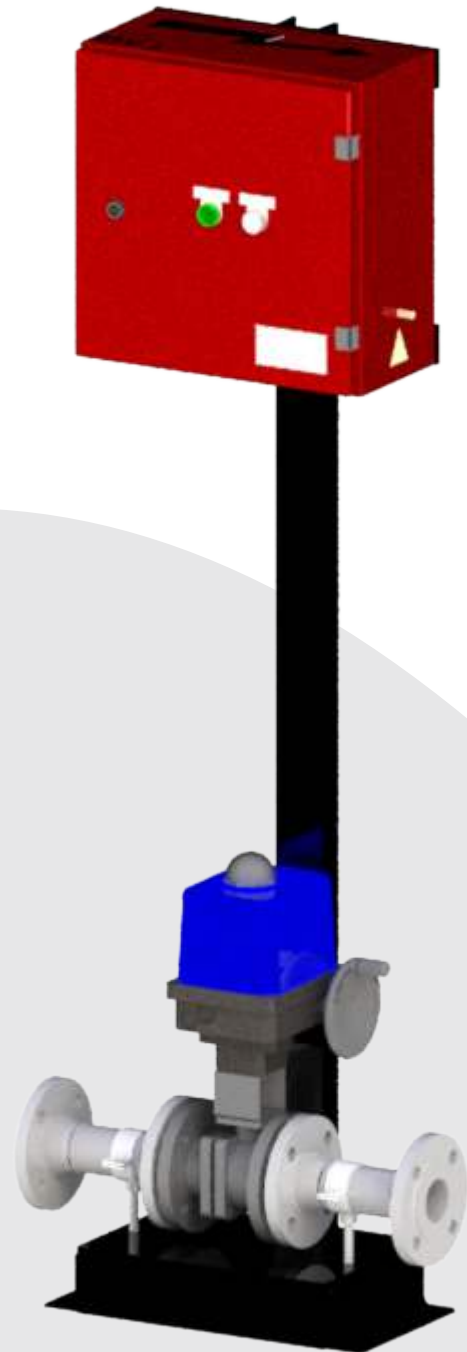


## Electronic Sustaining Valve (ESV)

The ESV regulates the desired foam pressure by regulating the flow of the valve which is placed in the return pipe of the foam.

This valve is opened and closed by an electric motor. The foam pressure is measured by a pressure transducer mounted upstream of the valve unit. If the foam pressure is too high, it will open further, if it is too low, it will close.

When the foam pump is not in operation, the valve is fully opened. This ensures the foam pumps start without load. The electric motor is equipped with limit switches to detect open and close positions. When the foam pump is operating, the ESV is activated and starts regulating the pressure. When the foam pump stops, the run signal for the ESV terminate and the valve of the ESV is fully opened.



**With the EFC and ESV you have control on the optimal dosing of foam concentrate and you can easily regulate the foam pressure.**



# The all-in-one solution

The all-in-one solution is a compact combination of the highest quality products. With the success of the Electronic Foam Proportioner (EFP®), it was time to develop a compact foam system. The result is the new EFP Compact: a complete system mounted on a common base plate with the smallest possible dimensions. The EFP Compact contains our proven EFP® connected to the Fire Lion Global foam pump. The combination of these components prevents problems with the new fluorine-free foam concentrates.



## EFP Compack

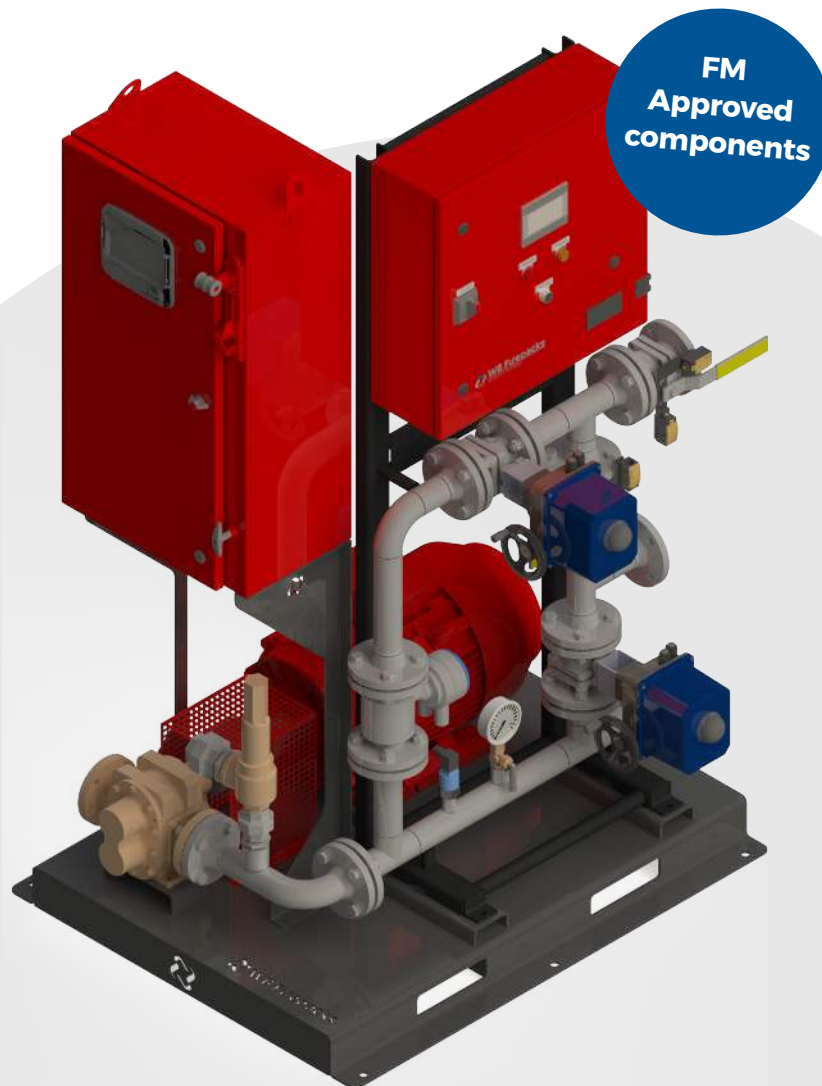
The EFP Compack is the all in one solution for unmatched accuracy.

This system is ready to run. This plug and play system includes:

- Electronic Foam Proportioner (EFP®)
- Fire Lion Foam Pump
- Electric or diesel drive

The EFP Compack is the easiest solution. The following options are included:

- real time waterflow and -pressure display
- real time concentrate flow and -pressure display
- real time display of actual and desired mixing rate



**With this application you have the ideal all-in-one foam solution with which you are prepared for the future.**

# Firepacks Group

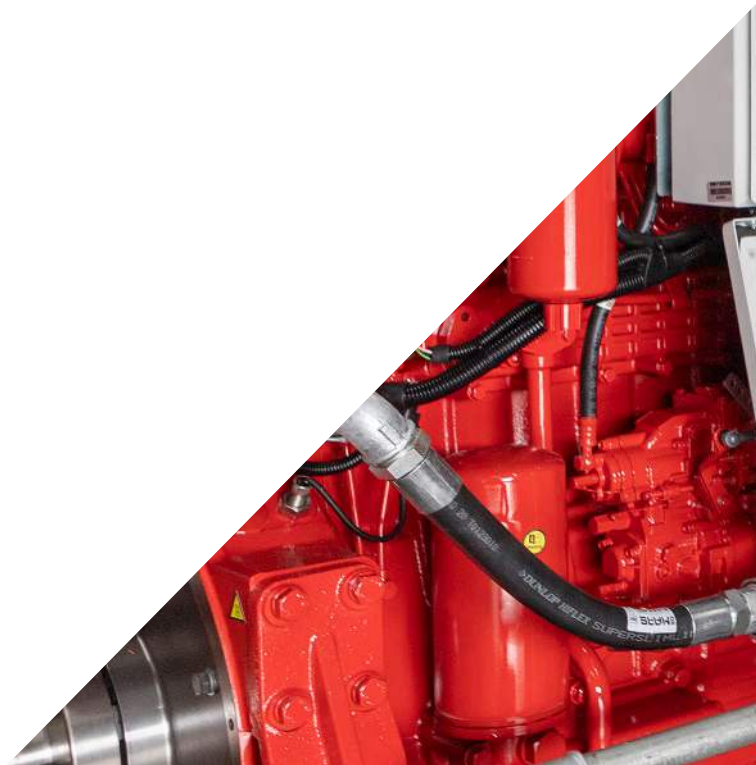
## Get to know us!

Firepacks Group consist of three organisations occupied with fire prevention:



WB Firepacks (Netherlands) and HSA Firepacks (Germany) are total suppliers in the area of fire prevention-solutions. In addition to supplying new solutions, these companies also see to service and renovation activities.

Fire Lion is the expert in the area of the foam modules. They produce and distribute foam pumps from Vancouver (USA).







Hoedemakersstraat 14  
3334 KK Zwijndrecht  
Nederland  
+31 (0)78 623 15 00  
[firepacks@firepacks.com](mailto:firepacks@firepacks.com)  
[firepacks.com](http://firepacks.com)