

HIGH PRESSURE Backpack Twin lance PIERCING NOZZLE
ing FOAM INDUCTION Droplet FIRE ATTACK SYSTEM
FAST intervention HAUTE PRESSION Lance Perforation
attaque contre le Feu ECONOMIE D'EAU Doseur de
RVENTION RAPIDE Sistema de Ataque contra Incendios
ALTA PRESIÓN Inyector de espuma Lanza Doble

FAS

F.A.S. means Fire Attack Systems. Our systems are designed to offer an immediate and rapid response to attack a fire. To achieve this, our engineers have relied on High Pressure technology to make the best use of water for fire fighting.

F.A.S. will answer many important issues:

Efficiency • Autonomy • Environment • Ease-of-use • Compact • Light weight

F.A.S. is an equipment range designed to fight fire and reduce environmental impact. Water has always been considered as an inexpensive and unlimited resource to be wasted, and in particular when fighting fire. However, today this is no longer true for numerous commercial, environmental and ethical reasons.

F.A.S. can extinguish a fire with less than a tenth of the usual water consumption by a standard fire vehicle, the use of this equipment dramatically reduces water consumption, and subsequently the discharge of polluted water and run-off.

F.A.S. has a much lower carbon foot print than conventional fire fighting equipment by providing a much reduced hydrocarbon fuel usage to attack and extinguish fires and thereby reducing CO2 emissions. You can already appreciate the difference in fuel consumption between a 4x4 pick up carrying less than 25% of the water, compared to a standard fire vehicle carrying 2 tonne of water and a large water pump. Less water, lighter vehicles, less fuel consumption, vastly reduced environmental impact and ultimately a significantly lower cost to attack and extinguish fire.

High Pressure

3F

The FAS logo is a red oval with the letters 'FAS' in yellow, bold, sans-serif font.

The Technology

F.A.S. Fire Attack Systems are high-pressure water / foam systems delivering a fine water spray. The systems are manufactured by ABC MacIntosh in the UK and distributed through the 3FFF network of agents and distributors. **F.A.S.** are available with various delivery pressures from 120 Bars to 200 Bars depending on the model selected. These unique and simply designed portable fire-fighting units are a quality-engineered product, with reliability being the first key feature of their simplicity. **F.A.S.** are built on a box section frame, constructed in stainless steel and finished in a highly resilient red powder coating. This distinct advantage makes it a must-have where the **F.A.S.** may have frequent contact with seawater during marine fire fighting operations or hot and humid conditions.

F.A.S. rely on the high pressure to reduce the water droplet diameter from a standard spray nozzle at 5 mm to an ideal droplet size of 20µm. This increase of water surface, multiplies the cooling power of the water by about 40 times. The increased cooling efficiency explains why we can reduce the water flow from 120 to 400 l/mn (35 to 100 US Gallon/mn) to between 15 to 50 l/mn (4 to 13 US Gallon/mn) in our equipment. There is an important balance to be maintained with water droplet size. If the droplet is too small, they cannot reach onto the fire. If they are too big, their effectiveness is limited. This is why we calibrate our systems to a pressure range from 120 to 200 Bars -1800 psi to 3000 psi- which gives the right size of droplets through our nozzle.

F.A.S. are designed to fit in a 4x4 vehicle, pick-up, or small fire truck. These vehicles are far smaller than standard fire trucks and can easily manoeuvre in dense traffic in urban areas or narrow roads in rural areas. The smaller 4x4 vehicle is also suitable for flooded roads or areas of restricted access. The importance of fighting fire is quick response and **F.A.S.** promotes this rapid intervention.

F.A.S. are equipped with one or two hose reels, which can range from 30 metres up to a maximum of 90 metres, with possibilities of extending the length either with additional portable hose reel – fixed on ground with securing pegs - or with an extra length on a wider reel.

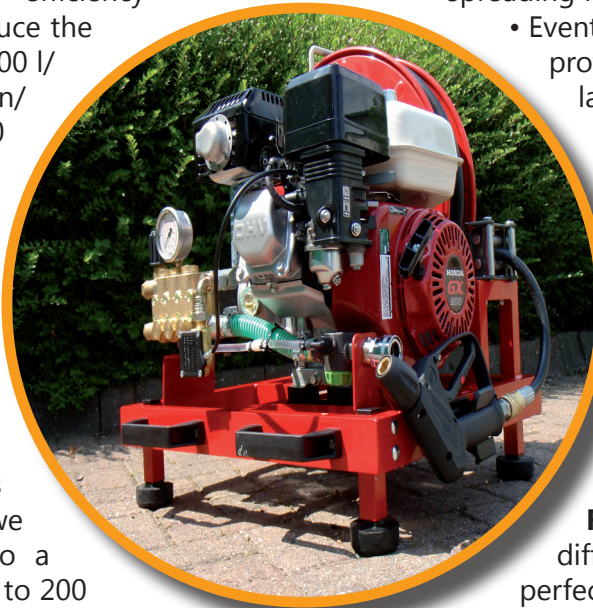
The units do not lose pressure on length up to 120 metres. Again, the **F.A.S.** pumps will not lose pressure at up to 16 metres of head on a 30 metres hose reel.

F.A.S. offer a broad range of applications, which respond to the customers demand such as:

- Fire Brigade immediate attack on fast spreading fires.
- Event organizing companies to provide fire protection during large public events
- Mining industry to get local fire response in remote areas
- Isolated communities where fire fighting support is too far away, **F.A.S.** provides excellent fire cover for all such events with a minimal water requirement.

F.A.S. can be fitted with different nozzles to adjust the perfect combination depending on the fire scenario: water jet / spray nozzle, Low/high pressure lance, foam lance, piercing lance, peat lance.

3F only recommend 'Fluoro Free' wetting agents and foams, which have no medium or long term detrimental impact on the environment and are proven to be totally bio-degradable and approved in **F.A.S.** equipment. Our only recommendation is 'FREEFOR' for Class A and small Class B fires and 'FREEDOL' Alcohol Resistant Class B foam.



Advantages

A portable high pressure fire suppression system such as our Fire Attack Systems must provide particular attributes to make such a system appropriate for its designed application. The end user should consider the key areas of design.

Pressure

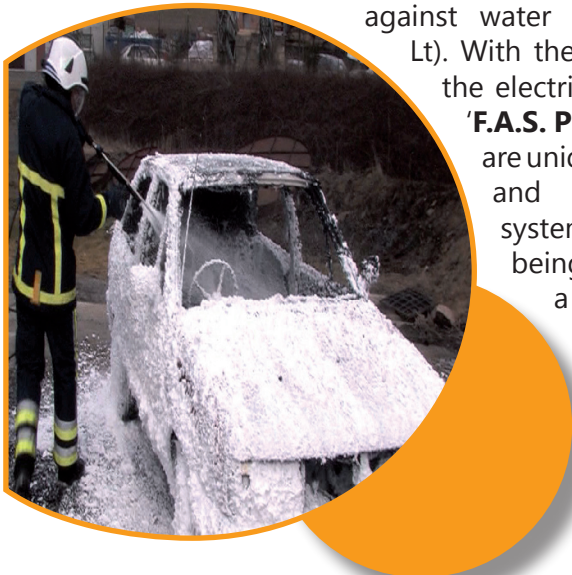
High pressure delivery reduces the water droplet size and increases the surface area of the media which in turn promotes increased cooling. The optimum pressures fall within a range of 120 bar (1800 psi) to 200 bar (3000 psi).

Water

Water usage is a key area to be considered when choosing a high pressure system. **F.A.S.** is specifically designed as a portable system and making best use of the available water stored in a tank is crucial to maintain the longest possible delivery time of high pressure water to the fire. **F.A.S.** use the least amount of water per minute than any of its rival pressure systems. They are delivered with standard length of hose but can be extended up to 120 metres without losing pressure.

Weight

F.A.S. are all designed around a light weight but very strong stainless steel frame, making the units the lightest amongst its rivals on the most important basis of unit weight against water delivery (Kg/Lt). With the exception of the electrical version of '**F.A.S. POWER**', **F.A.S.** are uniquely portable and independent systems capable of being moved by a two or four person lift easily and safely.



Nozzle

The **F.A.S.** nozzle is designed to provide the most versatile application of water in all applications. With high pressure the nozzle will produce a jet or fan spray. A simple pull on the nozzle produces low pressure jet or fan spray delivery or simply change to foam delivery by switching to the aspirated foam nozzle.

The piercing nozzle can be used for penetrating thin steel such as car bodies. This will allow the operator to extinguish a car fire for example without the need to open compartment areas such as an engine space or the rear confined storage space of a vehicle.

The peat nozzle is an extendable harden tip nozzle up to 6 metres in length to penetrate into deep seated fires.

Water tanks and skid

Skid and tanks are supplied with all required filters and pipe work and fittings required to operate in conjunction with **F.A.S.**

Feeding pump

A natural source such as a river, stream or brook can be transferred via our small 4 stroke petrol pump 130 l/mn with a 25mm wire reinforced hose line and water filter to the tank. We deliver it with a 15 metres lay flat hose which can also be fitted with a spray nozzle with a Stortz coupling.

Foam induction systems

We offer various options:

- Additional wetting agent / foam concentrate backpack to be connected to the nozzle.
- Complete foam induction system, with its foam tank, all the required hoses and connections, and an adjustable dial to select the foam concentration from 0.3% to 3%.

F.A.S. Phoenix uses the automatic dosing system '**TRITON**' for accurate foam delivery from 0.1% to 1.0%



The Equipment

MODEL	ULTRA	ULTRA DIESEL	MINI	PHOENIX	POWER
Fuel type	Petrol	Diesel	Petrol	Petrol	Electricity
Pressure Bars	200	200	140	120	180
Pressure psi	3000	3000	2100	1800	3000
Flow rate l/mn	19	19	14	50	19
Flow rate US Gal/mn	5	5	4	13	5
Weight kilo	105	108	45	220	124
Starter	Key	Key	Manual	Key	Auto•Manual
Hose	2x30m	2x30m	1x30m	1x60m	1x60m
Reel	2	2	1	1	1

