

FOGMAKER



**Fire suppression with water mist
for all engine compartments**



FOGMAKER

Cools, Chokes, and Suppresses fires effectively and is environmentally friendly.

INCREASED DEMANDS on reduced noise and emission of exhaust gases have lead to enclosed and more insulated engine compartments, higher fuel pressure a which increases engine compartment temperatures.

Most fires start in the engine compartment. A well-developed fire in an engine compartment often has a very intensive course of event and is impossible to fight with a hand extinguisher.

The solution is a installed and fully automatic suppression system – FOGMAKER.

FOGMAKER has developed a method that suppresses with the help of three basic mechanisms

Water mist under high pressure is a much superior extinguishing technique in engine compartments. The high pressure in combination with special nozzles creates microdrops with an average size of 50 µm. As a comparison, 8 000 of these drops are equal to a drop with a diameter of 1 mm!



All components in the chain reaction are combated with **FOGMAKER's** extinguisher system.

1 HEAT

In the evaporation process the watermist cools the burnt gases and hot parts in the engine compartment.

One calorie is needed to warm one gram of water + 1 °C but 540 times more to evaporate the same quantity from + 0 °C to vapour. The effective cooling contributes to a rapid extinguishing and reduces the risk for reignition.

2 OXYGEN

The small water drops evaporate immediately upon contact with heat.

In the evaporation, 1 litre of water forms 1700 litres of water vapour. The vapour increases the water content of the air and prevents a new supply of oxygen to the fire.

3 FUEL

The Fogmaker system includes a low concentration, environmentally friendly AFFF, (Aqueous Film Forming Foam) coating the fuel, preventing its contact with oxygen, resulting in suppression of the combustion.

Tough environments demands pure performance

Underground machines

A machine fire below ground can be devastating since there are often large quantities of diesel and hydraulic oil in the direct vicinity. The fire will have a very violent development. A fire below ground will also mean a direct danger for the life of the personnel.

The machines operate often in shifts and are also difficult to replace in a possible stoppage. The water mist protects engine and hydraulic compartments as well as built-in brakes. FOGMAKER can be activated mechanically, manually or fully-automatically.

Our customers include Caterpillar, Atlas Copco, GIA, SCHÖMA, TEREX, Liebherr, Paus HFH, Normet etc. Our users include Eurotunnel, LKAB, Boliden.

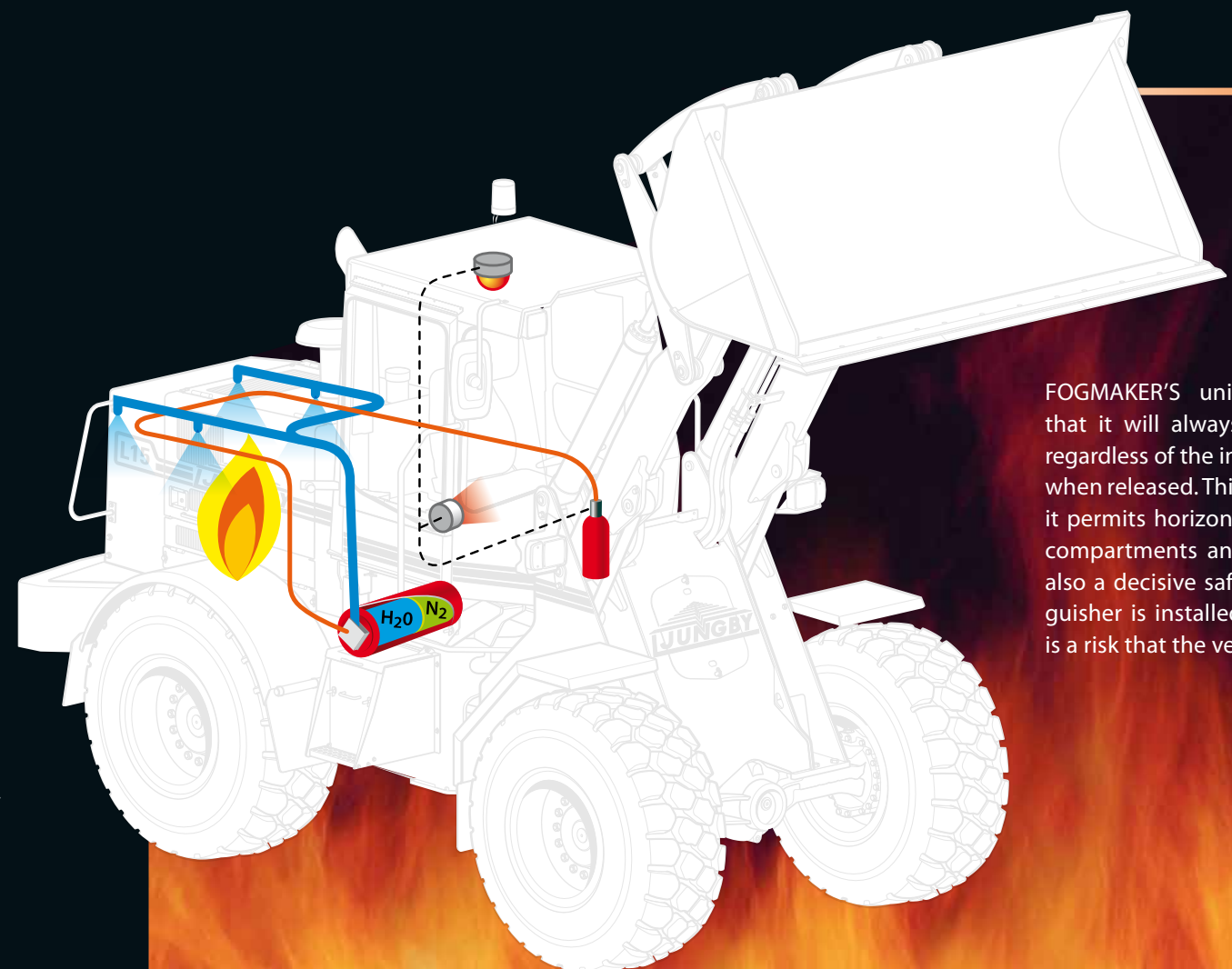
Contractor and forest machinery

Large quantities of fuel and hydraulic oil constitute great risks for machines. If they also operate in flammable environments such as the forest industry, recycling or the petrochemical industry inflammable material is often collected on the engines and can easily ignite. The fires often have a very rapid development.

In Sweden the insurance companies' requirements are stated in SBF127.

FOGMAKER fulfils these requirements. The water mist protects against fires in engine compartments, hydraulics and built-in brakes. The systems are fully or semi-automatic with hydropneumatic detection.

The advantage with this is that it manages heavy voltage variations that can occur during welding work and start assistance and that it operates independent of power supply.



FOGMAKER'S unique construction means that it will always be completely emptied, regardless of the installation angle or position when released. This is a great advantage since it permits horizontal installation in cramped compartments and this saves space. This is also a decisive safety factor when the extinguisher is installed in a vehicle where there is a risk that the vehicle can land on its side.

FOGMAKER

Unique cooling effect, temperature reduction of 734 °C in 10 seconds!



+870 °C
0 sec

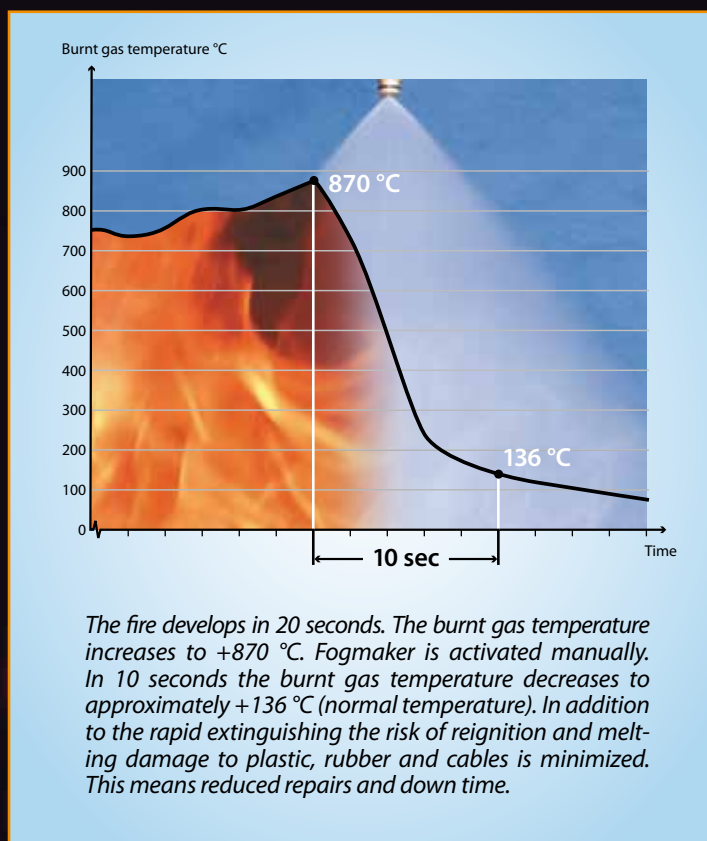
5 sec

+136 °C
10 sec

"From 870 °C to 136 °C in 10 seconds!"

Extinguisher test in a simulated engine compartment with a volume of 2,5 m³. The fire source consists of four 20 x 40 cm cylinders filled with diesel. Diesel spray is also applied at 2 litre per minute at a pressure of 5 bar, which showers the engine. The heat effect reaches approximately 1,3 MW. The pictures are taken with 2 sec intervals. During the whole interval, 10 seconds, approximately 7 dl extinguishant is used.

- Cooling and choking water mist, 100 bar
- Minimal cleaning after a fire
- Environment friendly
- Service friendly, low service costs
- No power requirements
- Patented high pressure technique
- Harmless for people, machines and the environment
- Anodized cylinder, corrosion protected for rugged environments
- CE-marked and DOT compliant
- Approved by Bureau Veritas, The Swedish Fire Protection Association (SBF 127) FIA, The International Motor Sport Association, DEKRA, UL-listed (Underwriters Laboratories) and many more
- More than 90 000 extinguisher systems installed since 1995



FOGMAKER INTERNATIONAL AB

Sandvägen 4, Box 8005 • SE-350 08 Växjö
Tel +46 470-77 22 00 • Fax +46 470-77 22 10
info@fogmaker.com • www.fogmaker.com