OXYGEN

HEAT

FUEL

FOGMAKER

AUTOMATIC FIRE SUPPRESSION SYSTEM
PROTECTING PORTS AND HARBOURS

TRIPLE ACTION³

**AUTOMATIC FIRE SUPPRESSION SYSTEM
WITH HIGH-PRESSURE WATER MIST**

THE CHALLENGE

A fire in material-handling equipment can be devastating since there are large quantities of diesel and hydraulic oil in the immediate area. Most fires start in the engine compartment. A fire in an engine compartment may occur unseen and often leads to a very rapid and destructive course of events. It is almost impossible to suppress with a portable extinguisher.

Container, harbour and intermodal freight operations are extremely sensitive to unscheduled downtime. Reach stackers, container handlers, forklift trucks, cranes, terminal tractors and loaders often operate in shifts and a whole shift can come to a standstill if one of these vehicles is out of action.

FOGMAKER's water-mist system protects engine and hydraulic compartments. **FOGMAKER** is automatically activated on detection of a fire, but also has a manual option, unlike other fire suppression systems. The control panel makes it possible to shut down the engine, main power switch and fuel solenoid. The versatility of the system is complemented by its high efficiency and reliability.

A PROVEN FIRE SUPPRESSION SOLUTION

FOGMAKER is the holder of several global certificates and approvals.

ISO	**ISO 9001 and 14001**
(UL)	**UL 1384**
Certified Product	**AS-5062 (Australia)**
SP	**SBF-127 / 128 (Scandinavia)**
P	**SPCR 197**
FiA	**FIA**
IATF 16949	**IATF**
FM	**FM 5970 (pending)**

THE FIRE TRIANGLE

FOGMAKER's fire suppression system effectively attacks all three sides of the fire triangle. We call this unique performance **Triple Action^3**.

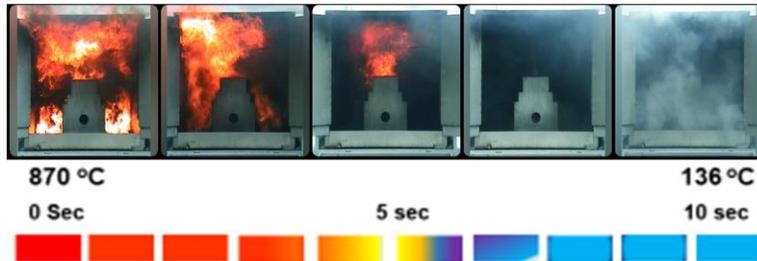|	
1 OXYGEN	Micro droplets of water-based extinguishant are generated by patented nozzles under high pressure. These droplets flood the area being protected and evaporate immediately on contact with heat. During the evaporation process, 1 litre of water will expand into 1700 litres of water vapour, which displaces air and stops the oxygen supply to the fire.
2 HEAT	During the vaporization process the water mist cools the hot gases and hot surfaces in the engine compartment. It takes 1 calorie to heat up 1 gram of water by 1 ^{0}C, but 540 times more energy to evaporate the same amount of water. The cooling achieved by this vaporization reduces the risk of re-ignition.
3 FUEL	FOGMAKER's suppressant also includes, in low concentrations, an Aqueous Film Forming Foam (AFFF), which forms a protective barrier on the surface of any flammable material or fuel, thus preventing the fuel from being available for combustion.

ASSET PROTECTION

Mitigating the risk of an **engine fire** with FOGMAKER's **automatic fire suppression system** is the best way to protect your fleet of valuable assets from the **threat of fire**.
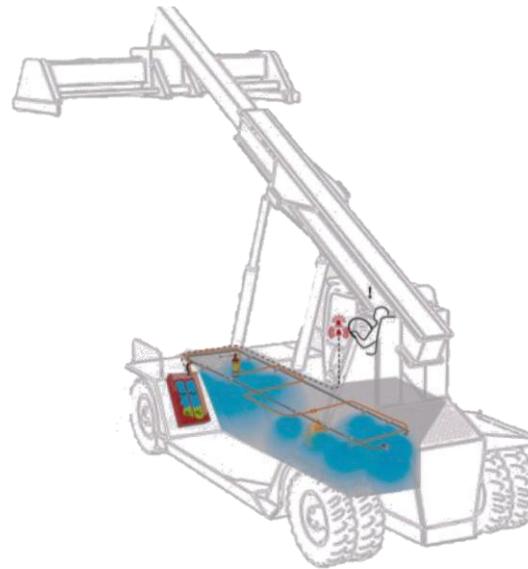
FOGMAKER is fast becoming the **fire protection solution** of choice, and is trusted by many owners of heavy **vehicles** and **mobile industrial machinery** to safeguard their machines, save operator lives and protect the environment in which they are working.

The **FOGMAKER** fire suppression system is developed and manufactured in Sweden. **FOGMAKER** has a successful global track record in Europe, Australia, North and South America, Middle East and Africa – with over **200,000 units installed worldwide** since 1995.
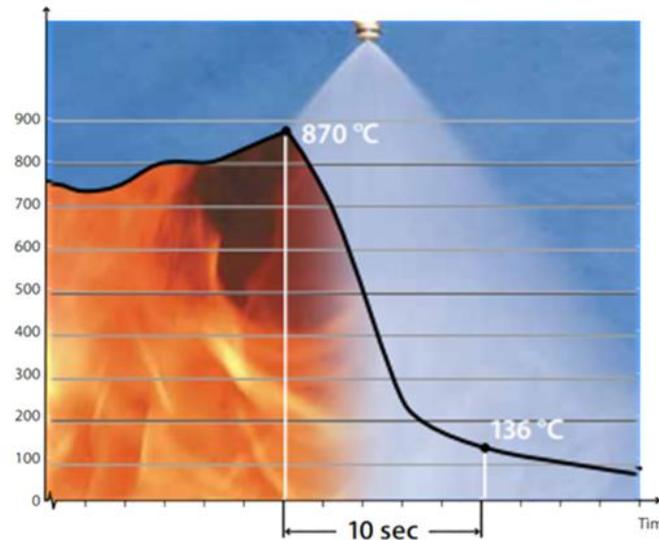

"From 870 °C to 136 °C in 10 seconds!"

870 °C				136 °C
0 Sec		5 sec		10 sec

Fire suppression test in a simulated engine compartment with a volume of 2.5 m³. The fire source consists of 4 20cm x 40cm trays filled with diesel. A spray fire is then simulated by applying diesel at a rate of 2 litres per minute at a pressure of 5 bar, which engulfs the engine. The combined heat output of the fire is approximately 1600 kW.

Temperature of burnt gases

In this simulation the fire is allowed to burn for more than 20 seconds. The burnt gas temperature increases to 870 °C at which point the FOGMAKER system is activated manually. In 10 seconds the temperature of the burnt gases decreases to approximately 136 °C.
In addition to the rapid extinguishing the risk of re-ignition is minimized. This means reduced repairs and downtime.

WHY FOGMAKER ?

- **Extremely effective** - Triple Action³ fire suppression system attacks all 3 sides of a fire triangle.
- **Automatic fire suppression system** - using loss of pressure (LOP) technology. No electric power required.
- **Simplicity** - Minimal obstruction, low weight and orientation independent.
- **Easily installed** - within one working day by our FOGMAKER Field Engineers.
- **Low life-cycle cost** - Periodic inspections and major service every 2 years (MHSA) or 3 years (PER).
- **System monitoring** - including low pressure and fire alarm.
- **Automatic** engine shut down - optional.
- **Easy clean-up and quick recharge** once system has been triggered.

OUR AFRICAN FOOTPRINT

FOGMAKER South Africa is the **sole distributor for Southern Africa**, with its head office in Johannesburg, South Africa. **FOGMAKER** South Africa has representative offices in Durban, Cape Town and Steelpoort, as well as in Zambia and Botswana, and has distributor partners based in Ghana, Nigeria and Togo.

At the heart of **FOGMAKER** South Africa are an amazing team who are **passionate about our product and the customers we service**. What truly differentiates us from our competition is our approach to risk mitigation, our tailored system design, our speedy installation and excellent after-sales service. Our mobile technical consulting team are available to visit you on-site to conduct fire risk assessments, installations and servicing.

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PURE PERFORMACE WITH TRIPLE ACTION³