



Fire Suppression Systems for construction vehicles

Statistics show that heavy equipment catches fire at an alarming rate. These fires occur for various reasons. The vehicles operate long hours, almost round the clock, under extreme conditions. They carry large quantities of flammable substances such as diesel fuel, hydraulic fluid, gasoline, lubricants and grease. They also get contaminated with other flammable materials. Surfaces like the engine block exhaust manifold, turbo and brakes can easily reach temperatures sufficient to ignite the various flammable materials present in and around these high hazard areas. A fire can often lead to major repairs and/or replacement of expensive hard to come by components resulting in long down times and loss of Business. Worst of all, a fire could result in bodily injury and in the most severe cases even fatalities.

Insurance companies are well aware of the risks involved and therefore demand reliable fire suppression systems on construction vehicles.

As the owner of a vehicle with a Dafo Forrex Fire Suppression System, you have taken a major step in protecting your employees, your equipment and your business against damages caused by Fire.



A Fire Suppression System specially designed for Installed as a fully automatic system

Audible and optical alarm

- Alarm lamp and alarm horn actuate on system discharge.
- Manual mode: Fire alarm is given whereupon the driver can actuate the system electrically from the control panel or mechanically from the nitrogen cartridge.
- Automatic mode: Fire alarm is given and the system releases immediately

Linear detection wire

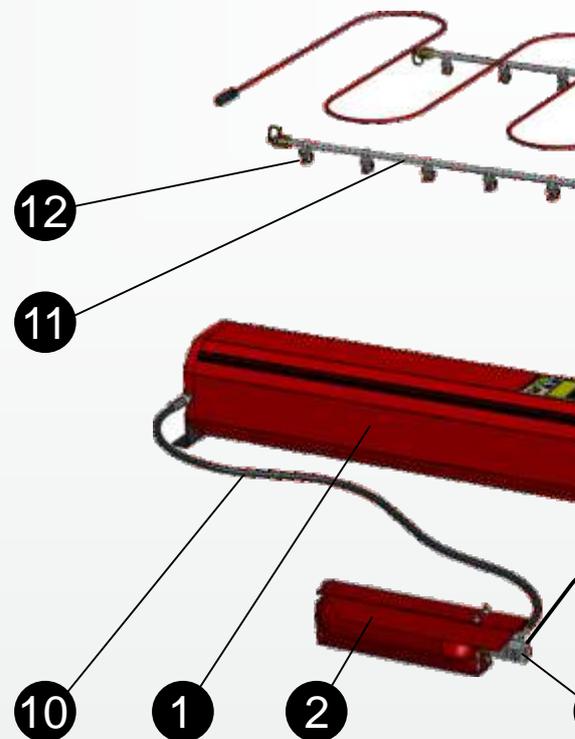
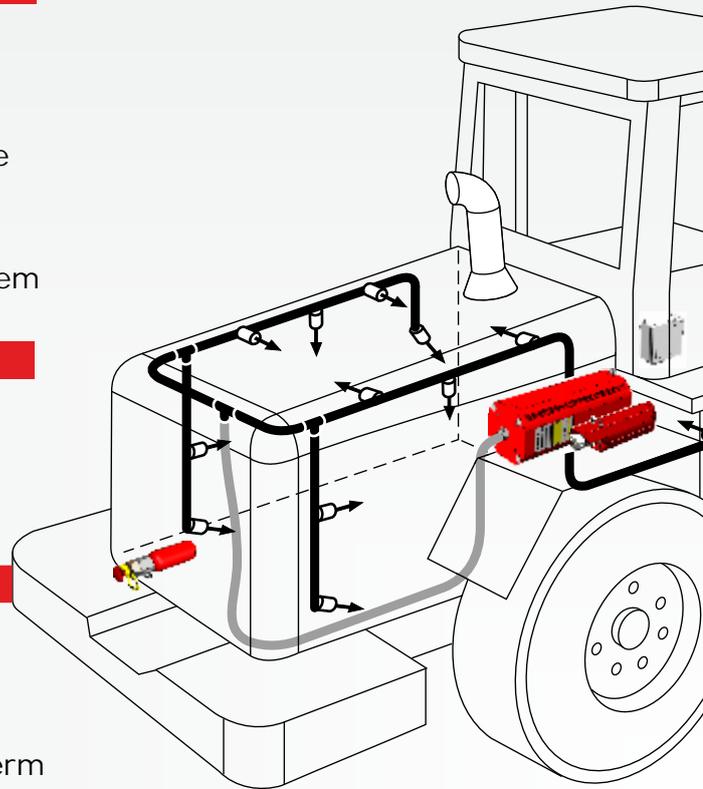
- Better coverage in more of the hazard area.
- Rugged construction, suitable for harsh environments.
- Rapid response to fire situations.

Forrex Nozzle

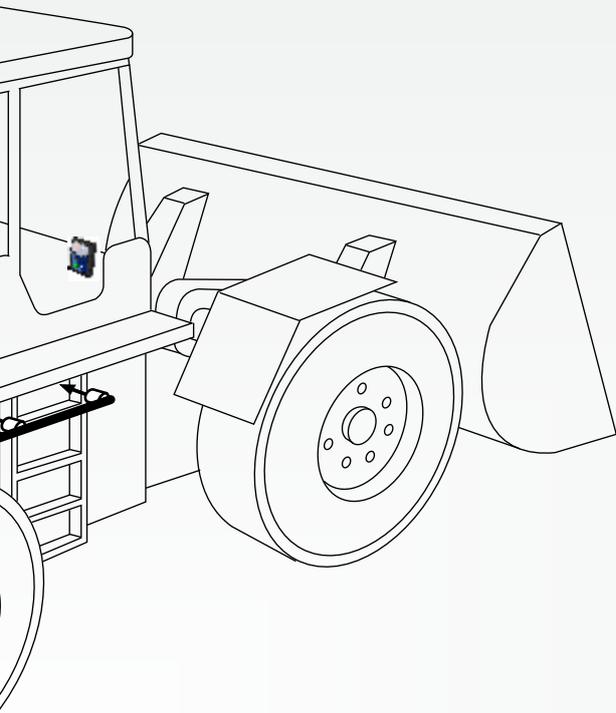
- 100° spray pattern.
- Flow rate of 3 liters ($\frac{3}{4}$ gallon) per minute.
- Approximately 1.5 meters (5 feet) spray range.
- Installation directly on the pipe system for long term stability.
- Protective cap of sturdy silicon rubber to prevent nozzle blockage.

Agent tank Forrex type SV-K

- Operates regardless of orientation.
- High flow rate and even pressure during discharge.
- Normally unpressurized piston operated container, returns to its unpressurised state after release.
- Utilizes the entire content of the agent and leaves no residues.
- Patented construction.
- Corrosion resistant, rugged construction
- Available in sizes from 5 liter (1.25 gallon) to 25 liters (6.5 gallons).



for vehicles working in forestry and construction.
em with manual release capability.



The Forrex agent

- Highly effective, non-corrosive agent.
- Cleaner than Dry Chemical, more effective than traditional foams.
- Comparable with Water Mist. In addition to this the Forrex agent is a more effective protection against re-ignition and has better cooling properties.
- Impregnating effect (penetrates the burning material to prevent flare ups).
- Film forming effect to prevent re-ignition.
- Freeze protection down to -30°C (-22°F)
- Not hazardous to humans.
- Environmentally friendly.
- Resistant to ageing.
- Easy clean-up after discharge, just rinse with water.
- Tested, certified and approved.

Control unit and alarm panel

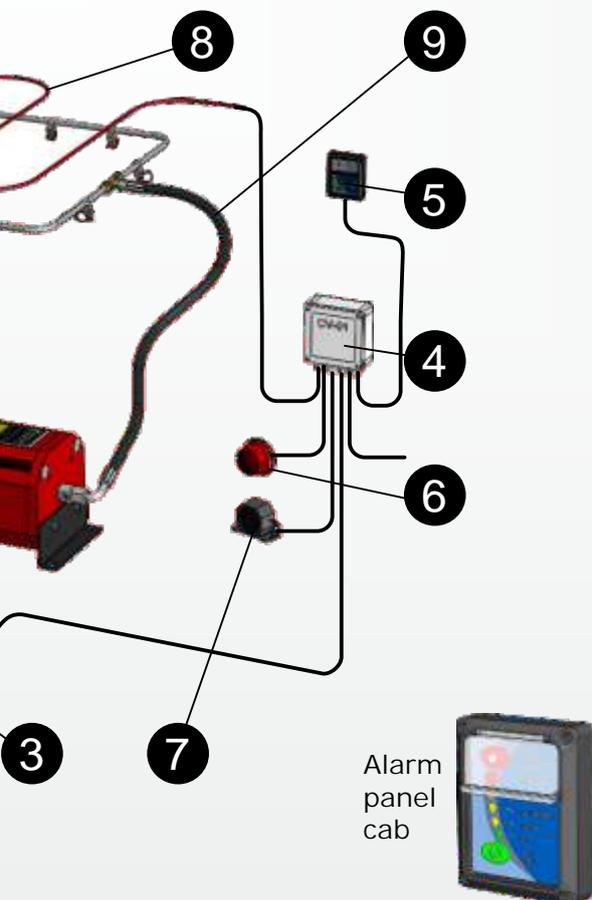
- Microprocessor controlled utilizing the latest technology.
- Built-in activity log.
- Internal battery for stand alone use or as backup. Lasts up to two years.
- Immune to electrical interferences like jump starting.
- Control panel available in several languages.
- Electrical release, system supervision and testing done from the control panel.
- Operating voltage 9 – 28 VDC.
- EMC tested and approved.

Actuation

- Manual release from the pneumatic actuator (3).
- Automatic release from the linear detection wire (8).
- Manual release from the alarm panel (5).

Operation

Fire is detected by the linear detection wire (8), which sends a signal through the control unit (4) to the actuator (3) which releases the nitrogen cartridge (2). The nitrogen cartridge pressurizes the agent tank (1) which releases the agent at a pressure of 20 bars (290 psi) through the distribution system (9 & 11) and the nozzles (12). When the system releases, the visual alarm lights (6) and the alarm horn (7) is activated. The alarm is indicated on the alarm panel (5) in the cab.





Benefits

- Allows both manual and automatic actuation of the system.
- The system is unpressurized which makes it easier to maintain, service and recharge the system.
- All systems are installed with the amount of extinguishing agent mandated in SBF 127 (regulations from the Swedish Insurance Companies Association), i.e. 3 liters of agent per every m³ of engine volume.
- Effective extinguishing agent with unique properties of cooling down the material and excellent protection against re-ignition.
- Robust system design that is highly resistant to vibration, cold, heat, chemical substances and mechanical abuse.
- The agent attacks the fire both at the source and in the hazard area as a whole.
- The nozzles produce ideally sized droplets. They are large enough to prevent them from being blown away by the exhaust fan, yet small enough so there is no reduction in cooling and inerting effect.
- Proven design – Dafo has 30 years of experience in the design, development and installation of fire suppression system for vehicles.
- Tested, approved and certified by SBF.
- Every system design and installation is done strictly according to the SBF 127.
- The system and its components are approved by SBF, numerous insurance companies and TÜV. Tested for vibrations, temperature and EMC disturbances.

