

FIREMIKS

An Example of the New Coming Industry Standard

A water motor-driven pump system is a mechanical way of dosing firefighting additives into the water, without the need of external power or pressure balance. The water motor-driven pump system is by many considered to be the new coming industry standard in fire-fighting installations.

Our FIREMIKS is such a system and it consists of two volumetric parts, one water motor and one concentrate pump, connected to each other through a direct drive coupling. With this solution the water motor acts like a combined flow meter/ drive for the foam pump, so automatically achieving the correct ratio between water motor and foam pump, without any external flow meters, foam pumps or orifices.

The water motor may either a positive displacement type motor or a turbine. The difference between these two options is that, with a turbine as drive, the flow and pressure range will be limited as a turbine is only partly volumetric, (with a Pelton wheel drive a part of the water flow is wasted.)

FIREMIKS is a fully volumetric system with a positive displacement water motor

instead of a turbine. This makes it possible to maintain the mathematical ratio between water motor and concentrate pump in a wider pressure and flow range, furthermore there is no waste of water.

FIREMIKS can be used anywhere between a water source (hydrant or main water pump) and a nozzle (monitor, spray pipe, foam chamber, sprinkler head, low-ex, medium-ex or high- ex.) It does not need a pressure tank; only connect it to an atmospheric foam tank.

Operating Principle

FIREMIKS does not need any external energy. It is driven by the water flow which goes through the water motor. This generates a circular rotor motion, transferred to the concentrate pump over the direct-drive coupling. The concentrate is pumped into the water motor outlet, where dosing occurs.

Since the water motor and the pump are directly connected, the system is flow-proportional. The water motor rotor has 8 to 10 working wings, which gives an early and stable volumetric function of the water motor. The narrow interior design, along with low friction vanes, reduces noise level and creates long lasting durability.

With FIREMIKS a fire brigade can lay out a system consisting of one FIREMIKS

and for ex. three, four or five nozzles working independently of each other, at different heights and lengths from main water pump.

FIREMIKS is offered in mainly two types; – GP is provided with a gear pump and is particularly suited for use in systems with higher flow rates, such as deluge systems, fire monitors and fire trucks. This type is also very suited for high viscosity extinguishing media concentrates.

– PP is provided with a piston pump and is particularly suited for use in systems with low start flows, for example, sprinkler systems, as well as for concentrates with low viscosity such as wetting agents. Both types can be supplied in Mobile versions.

FIREMIKS is available in different flow sizes, from max capacity 400 lpm to 12,000 lpm, and with dosing alternatives 1%, 2%, 3% as standard. Other options are available on request, including units with selectable dosing rates.

Due to its comparable low weight, compact design and no need of external energy, installation of a FIREMIKS is relatively easy. It can, if requested, be supplied with a dosing return valve enabling regular tests without consuming any concentrate, an economical and environmental-friendly option. FIREMIKS meets applicable parts of NFPA 11 and NFPA 1901 and production is made according to European directive 2006/42/EC. Third-party inspection reports from DNV-GL, Bureau Veritas are available.

Some reference examples are Pertamina – Indonesia, Oliver Tham Airport – South Africa, Jotun A/S – Norway, British Petroleum – Mozambique, Wärtsilä/Singapore Marin – Singapore, Rolls Royce Nuclear – UK, Thyssen-Krupp – Malaysia.

▼ Two FIREMIKS FM 8000-3-GP-F installed at two Pertamina Oil Fire trucks in Indonesia.



For more information, go to www.firemiks.com