FIREMIKS

ADVANTAGES FOR FIXED INSTALLATIONS

GENERAL ADVANTAGES WITH WATER DRIVEN VOLUMETRIC PUMP PROPORTIONERS

Technical Feature	Functional advantages	User benefits
Water Motor Drive coupled with Concentrate Pump	Self-contained proportioner requiring no external energy source like electricity, engines or PTOs (power take-off)	• Simple start-up and commissioning. Always ready and less reliant on external factors for reliable operation. • Flexible placement without dependence on electrical infrastructure or storage requirements for flammables. • Easy to retrofit. • Reduced extinguishing response time with decentralized installation near the hazard.
	No need for external control systems to regulate proportioning	• Simple installation, operation, and testing. • Instant proportioning activation when water flow begins, with no latency.
The volumetric design of both the Water Motor and Concentrate Pump ensures a predictable water volume per revolution.	Wide operating range for flow and pressure. The self-regulating volumetric FIREMIKS system ensures accurate proportioning, automatically adjusting to flow changes and remaining largely unaffected by pressure variations.	• One FIREMIKS can cover various fire area sizes or multiple simultaneous fires. • Consistent and accurate proportioning within approved tolerances, with no need for calibration. • Flexibility to adjust upstream or downstream systems (piping, monitors, etc.) within the specified minimum and maximum flow limits.
	The concentrate pumps can handle variable viscosity of the concentrate.	• No need to exchange or recalibrate the proportioning system when changing concentrate, as long as it's within the approved viscosity range in the data sheet. • Minimal downtime when changing concentrate viscosity. • Reliable proportioning even if concentrate viscosity changes due to aging, temperature fluctuations, etc. • All of the above applies within the approved viscosity range in the data sheet.
The concentrate is stored in an atmospheric tank.	Flexible concentrate supply options.	• Easy to inspect, check levels, and take samples of concentrate. • Option to refill or change tanks during operation, or install tanks in series. Combine fixed and mobile tanks (e.g., tank trailer, IBC tanks) for uninterrupted firefighting as long as concentrate is available. • Ability to connect different types of concentrate to one FIREMIKS, used one at a time, for various fire hazards.
Dosing/Return Valve (DRV)	System testing can be conducted without injecting concentrate into the water stream, by circulating it back to the tank during regular on-site testing, as required by international standards.	• Economical: Cost savings on testing lead to a lower TCO. For example, with a 4000 lpm FIREMIKS model at a 3% dosing rate, testing with concentrate once a year for 5 minutes saves 3500 USD per test (40000.0355*5 = 3500 USD). No additional costs for destroying foam or cleaning the site. • Regulatory: Complies with the latest environmental regulations. • Practical: No cleanup or destruction of finished foam required.

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SPECIFIC ADVANTAGES WITH FIREMIKS

Technical Feature	Functional advantage	User benefit
Water motor design: Unique in-house designed volumetric motor with 8-10 overlapping vanes driving the dosing pump, featuring no moving rubber-like elastomer seals at the vane ends or rotor, ensuring a more durable and reliable operation.	• Load distribution reduces the risk of vane breakage in overflow situations. • Provides stable, wide volumetric function and dosing rate within approved tolerances. • Results in lower noise and less vibration, ensuring smooth rotation. • Absence of elastomer seals offers more predictable friction and reduces reliance on seals that may wear over time.	Increased mechanical reliability of system, contributing to confidence of accurate function.
Production method: The water motor is designed as a modular system with fully machined components made from bars, rather than castings.	• Allows for tailor-made solutions based on material requirements, flow sizes, special dosing rates, and installation space limitations. • Easy to switch between different water motor connections, such as flanges, BSP threads, cut grooves, etc., even after the unit is supplied. • Material is less prone to porosity and related corrosion issues. • Very robust body, with zero reported cases of body leakage or failure in the field.	These functional advantages ensure long-term customer satisfaction by effectively meeting specific dosing needs.
Pump supply selection: FIREMIKS offers two dosing pump types—Piston pump and Gear pump—sourced from internationally renowned producers specializing in state-of-the-art, high-quality pumps..	• A wide range of quality pumps is available to ensure optimal performance in combination with our in-house designed and produced water motor, based on installation type, flow range, dosing rate, working pressure, and varying viscosities. • Piston/Plunger Pumps (-PP): Reciprocating pumps that perform best with low to high viscosities. • Gear Pump: A robust pump with minimal maintenance, ideal for high-end system flow rates and particularly suited for high and very high viscosities.	The client will receive the most suitable concentrate pump type and specification tailored to their specific dosing requirements.
Hydraulic fittings: Stainless steel fittings and piping, complemented by hydraulic-grade hoses	• The use of hydraulic-grade stainless-steel hoses instead of conventional fixed piping eliminates the need for tedious positioning, sealants, and replacement parts for every opening.	Easy maintenance with a low risk of leakage.

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