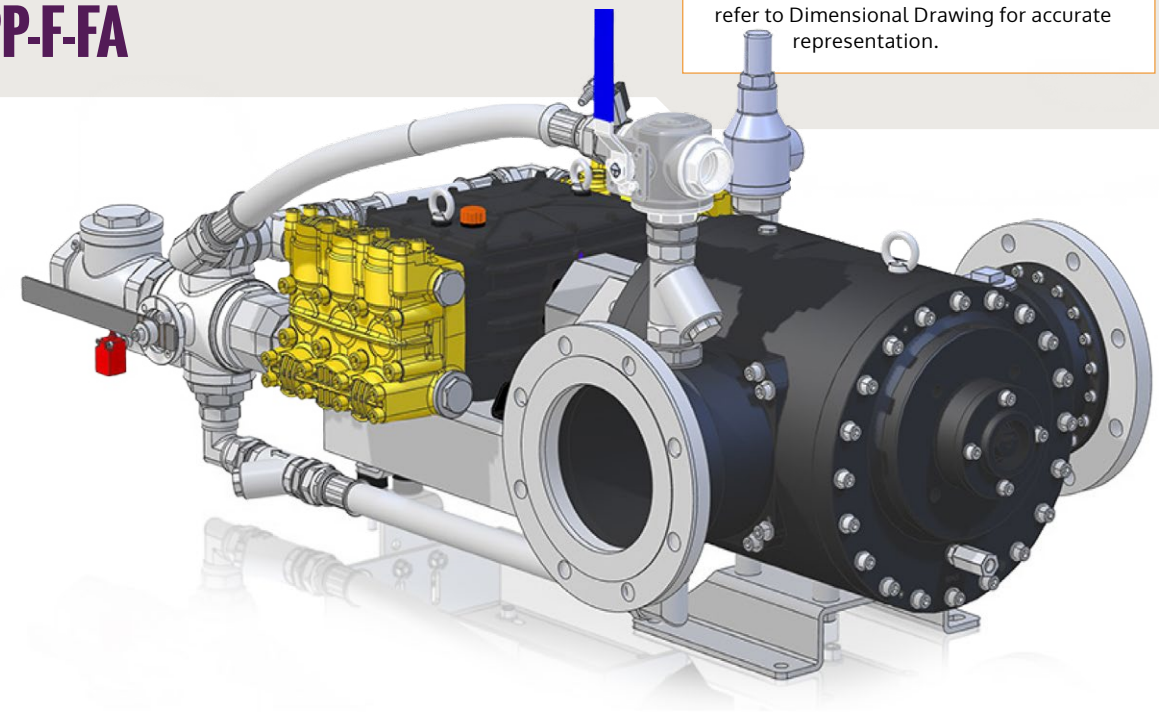
DELTAFIRE
AUSTRALASIA PTY LTD

FACTSHEET:

FIREMIKS 8000-3-PP-F-FA

Note: Showing optional DRV valve with PRV and aluminium water motor, incl. integrated flanges. For illustration only, refer to Dimensional Drawing for accurate representation.



WHAT IS IT?

The Firemiks 8000-3-PP-F-FA piston pump type for fixed installations is a water motor driven variable viscosity proportioner for firefighting. Dosing rate 3%. Used primarily in fixed installations connected to an atmospheric concentrate tank with gravity feed to Dosing pump (concentrate pump). Consists mainly of two volumetric parts: a Water motor and a Dosing pump.

Extinguishing water drives the multi-vane volumetric water motor, which in its turn drives the positive displacement concentrate piston/ plunger pump (PP) that doses the correct amount of foam concentrate in the extinguishing water.

Correct dosing at system pressures from 4 to 16 bar and from min flow (see Min flow table on the following page) up to 8000 lpm.

Equipped with a Manual air relief valve (No.5 on Flow chart on page 4 of this fact sheet). Flushing of Dosing pump is done automatically, while water is flowing, when the concentrate inlet is closed with Dosing/Flushing valve, (No.4 on Flow chart). Water motor available in two different materials, Hard-anodized Aluminium or bare Nickel-aluminium Bronze. Equipped with Flap check valve on Dosing pump inlet (No.10 on Flow chart).

Water motor material	Product No
Aluminium, Hard-anodized	8000-3-PP-F-FA-ALU
Ni-Al Bronze	8000-3-PP-F-FA-BRZ

This document must be followed in its entirety if this fact sheet is to be valid:
Instruction and Operating Manual FIREMIKS FM Approved - SPFA-FM2, Rev: 2541

FIREMIKS THE SWEDISH ORIGINAL

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TECHNICAL DATA

Nominal dosing rate:	3% (approved range 3,0 - 3,9%)	
Min and max water inlet operating pressure:	4 bar (58 psi) - 16 bar (232 psi)	
Approved viscosity range of concentrate:	From 1 cP to max viscosity as defined in Max viscosity table below	
Factory tested pressure:	24 bar (348 psi)	
Burst pressure type tested:	64 bar (928 psi)	
Max inlet water flow rate: *Water flow is governed by the hydraulic calculation of the complete system and the available pressure loss over the FIREMIKS, see Pressure loss below.*	8000 lpm (2114 us gpm) @ 587 rpm (+/- 5 rpm) *(Note: Systems with dry piping at start-up are at risk of exceeding the maximum flow if no additional measures are taken. See IOM).*	
Min water flow rate with different concentrate viscosity and water inlet pressure: *Minimum water flow rate is the lowest water flow rate at which the dosing reaches the required 3% dosing. The minimum flow rate varies depending on water inlet pressure and viscosity properties of the concentrate. Once min flow is reached, correct dosing at higher flows is typically no longer sensitive to fluctuations in pressure. Below minimum flow, there is still dosing as long as the unit is rotating, just not the required 3%.*	Viscosity/water inlet pressure: 1-20 cP at 4 bar 1-20 cP at 8 bar 1-20 cP at 16 bar Max viscosity (see table below) at 16 bar.	Min water flow: 1050 lpm (277 us gpm) 1350 lpm (357us gpm) 1850 lpm (489 us gpm) 2450 lpm (647 us gpm)
Suction height: *The pump has suction capability, but it is not recommended for safe operation. Suction requires priming of the pump and might lower dosing performance.*	0 meters (0 ft). Gravity feed and positive inlet pressure to the Dosing pump inlet required	
Operating temperature window:	Non-freezing (no solidification of fluids) temperature to +55 °C (131°F), not exceeding storage temperature limits	
Storage temperature window, dry conditions:	-30°C to 55°C (-22° to 131°F)	
Connection dosing pump inlet with Flap check valve	Iso 228-1 G 3" female - DN 80	
Connections water motor: *Other connections available by using adaptors.*	Standard: ANSI/AWWA C 606-15 Cut groove 8" - DN 200 (219,1 mm).	Optional: - Integrated flanges 8" - DN 200 ANSI # 150 RF/FF or PN 16 (SS 316L or Ni-Alu bronze) - Cut groove 10" - DN 250
Required* concentrate delivery hose/pipe dimensions and height: *To fulfil dosing performance at maximum viscosity. Recommended for all installations and viscosities.* **Unless the installation designer guarantees that there is positive pump inlet pressure under all operating conditions, (considering that non-Newtonian concentrates are very difficult to calculate).*	Diameter size: 4" - DN 100 or larger Total pipe/hose length without sharp bends: 4 meters or shorter Gravity feed height (= lowest tank level height minus pump inlet height): 0.5 meter or higher	

Maximum viscosity on concentrate allowed: *Important! These viscosity values shall not be exceeded in the whole temperature range where the proportioner will be used. Consult with provider of concentrate.* *See also connection requirements for dosing pump above.*	Shear rate 1/s:	Viscosity (cP):
	5	7288
	10	3942
	20	2110
	50	959
	100	533
	600	132

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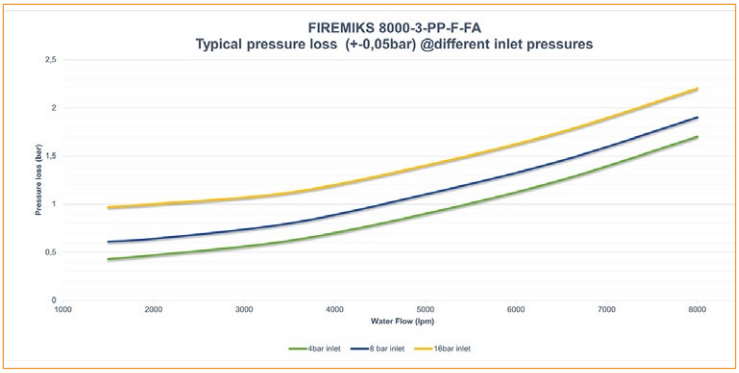
PRESSURE LOSS

Water flow rate:	Pressure loss @ 8 bar inlet pressure:
1500 lpm	0.6 bar
2000 lpm	0.65 bar
3500 lpm	0.8 bar
5000 lpm	1.1 bar
6500 lpm	1.45 bar
8000 lpm	1.9 bar



MATERIALS

Water motor housing and rotor material	Specification
- Aluminium:	Aluminium EN AW 6082-T6 (housing) / 7075-T6 (Rotor), Hard-anodized Tufram
- Bronze:	Nickel-Aluminium Bronze JM 7 (C95500)
Water motor components:	AISI 316 (fasteners), PET (vanes), NBR (O-rings), POM (inserts), ceramic (mech seals), AISI 420 (ball bearings)
Dosing pump head:	Standard head: Ni-plated Brass
Dosing pump components:	Aluminium, ceramics, NBR, AISI 316 (fasteners)
Fittings:	High grade Stainless steel
Valves and flexible hoses:	High grade Stainless steel + PTFE

APPROXIMATE DIMENSIONS AND WEIGHT

Overall dimensions (mm):	1575 L x 760 W x 860 H
FIREMIKS 8000-3-PP-F-FA-ALU	310 kg
FIREMIKS 8000-3-PP-F-FA-BRZ	575 kg

Actual dimensions and weight will depend on optional equipment.

RECOMMENDED SPARE PARTS FOR 2 - 5 YEARS

Water motor parts:	Dosing pump parts:	Complete unit parts:
1.10 Set of vane plates (4 pcs)	2.10 Water seals and plunger kit	3.11 Manual Air relief valve
1.20 Set of Mechanical Seals (2 pcs)	2.20 In/Out valve kit	3.20 Check valve
1.30 Set of Ball Bearings (2 pcs)		3.30 Complete Drive gear + Wedges
1.40 Set of O-rings (8 pcs)		3.40 Filter flushing line
1.45 Set of Gable inserts (2 pcs)		

Always mention the serial number of the units concerned when ordering spare parts.

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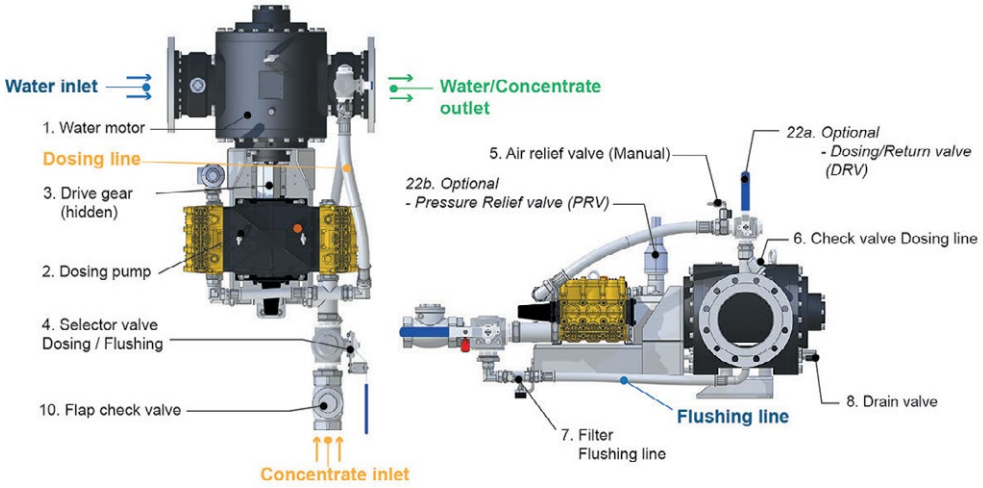
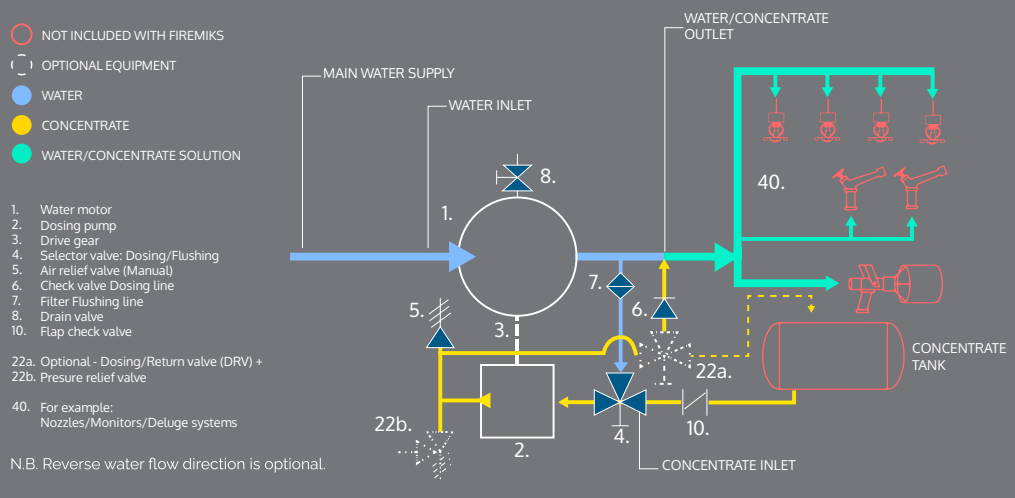
MAIN PARTS OVERVIEW



OPTIONAL FEATURES / ITEMS

Features / Items:	Description:
Reversed water flow direction (right to left) or Vertical flow direction (upwards or downwards)	Standard flow direction is from left to right seen from pump side.
Dosing/Return valve (DRV), iso 228-1 G 1 1/2" (1,5") female - DN 40	Valve for returning the concentrate to the tank, for easy and quick checking of dosing rate, without consuming concentrate and without and generating water/foam solution. Including Pressure relief valve (PRV) set at 20 bar to avoid over-pressure, in case the return line is blocked for discharge for any reason.
Adaptors for Water motor connections	Flanges (ANSI, DIN), Storz couplings, etc.
Y-strainer	If the firefighting water contains foreign/solid particles a strainer in the main water line before the FIREMIKS is a necessity.

PRINCIPLE FLOW CHART



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