

## DATA SHEET | FIREMIKS<sup>®</sup> 450-3-PP-F

### PISTON PUMP TYPE FOR FIXED INSTALLATIONS

Approval: FM Class 5130, no 3060416



3% dosing system for firefighting - for fixed installations connected to a concentrate tank with gravity feed to dosing pump. Consists mainly of two volumetric parts; a Water motor and a Piston pump. Equipped with a Manual air relief valve. Flushing of dosing pump is done automatically when the concentrate inlet is closed with 3-way ball valve, (no 4 on Flow chart). Water motor available in three different materials, aluminium, nickel-aluminium bronze and stainless steel 316L.



Note: For illustration only. Refer to Dimensional Drawing for accurate representation of each model.

### TECHNICAL DATA

<b>PRODUCT NO with water motor material:</b>		
- Aluminium 6082/7075:	FIREMIKS 450-3-PP-F-ALU-FM	
- Nickel-aluminium bronze JM7:	FIREMIKS 450-3-PP-F-BRZ-FM	
- Stainless steel 316L:	FIREMIKS 450-3-PP-F-SS-FM	
<b>Nominal dosing rate:</b>	3 % (approved range 3,0-3,9 %)	
<b>Max water flow rate:</b>	450 lpm (105 US gpm)	
<i>Note! Maximum water flow rate is the approved maximum continuous flow rate entering the FIREMIKS. The unit has been tested for 40% overflow (=630 lpm) for 3 minutes at start-up without any damage. During overflow/overspeed, the correct dosing might not be achieved.</i>		
<b>Min water flow rate:</b>	112 lpm (30 US gpm), 155 lpm (41 US gpm)	
<i>Minimum water flow rate varies depending on system pressure and viscosity properties of the concentrate. Minimum flow rate is here defined as the lowest flow rate where the dosing is correct, above 3,0%, at 4 bar inlet pressure. The first number is valid for the lowest approved viscosity, the second for the highest, see below. At flows below minimum flow, some dosing will still happen as long as the unit turns. Once min flow is reached, correct dosing at higher flows is no longer sensitive to fluctuations in pressure or viscosity for a given system.</i>		
<b>Approved viscosity range:</b>	1 centipoise – 1800 centipoise at 60 rpm or 3600 centipoise at 30 rpm, with Brookfield viscometer spindle #4	
<b>Max inlet operating pressure:</b>	16 bar (232 psi)	
<b>Factory tested pressure:</b>	24 bar (348 psi)	
<b>Suction height:</b>	0 meters (0 ft) Gravity feed	
<i>The pump has suction capability, but it is not recommended to be relied upon for safe operation. Suction requires priming of the pump and will lower dosing performance.</i>		
<b>Operation temperature:</b>	1°C to 55 °C (34°F to 131°F)	
<b>Storage temperature, dry condition:</b>	-30°C to 55°C (-22° to 131°F)	
<b>Connections water motor:</b>	<u>Standard:</u> G 2" male iso 228-1	<u>Optional:</u> ANSI/AWWA C 606-04 Cut groove DN 50 (60,3)
<i>Other connections available by using adaptors.</i>		

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Approved by: Walle

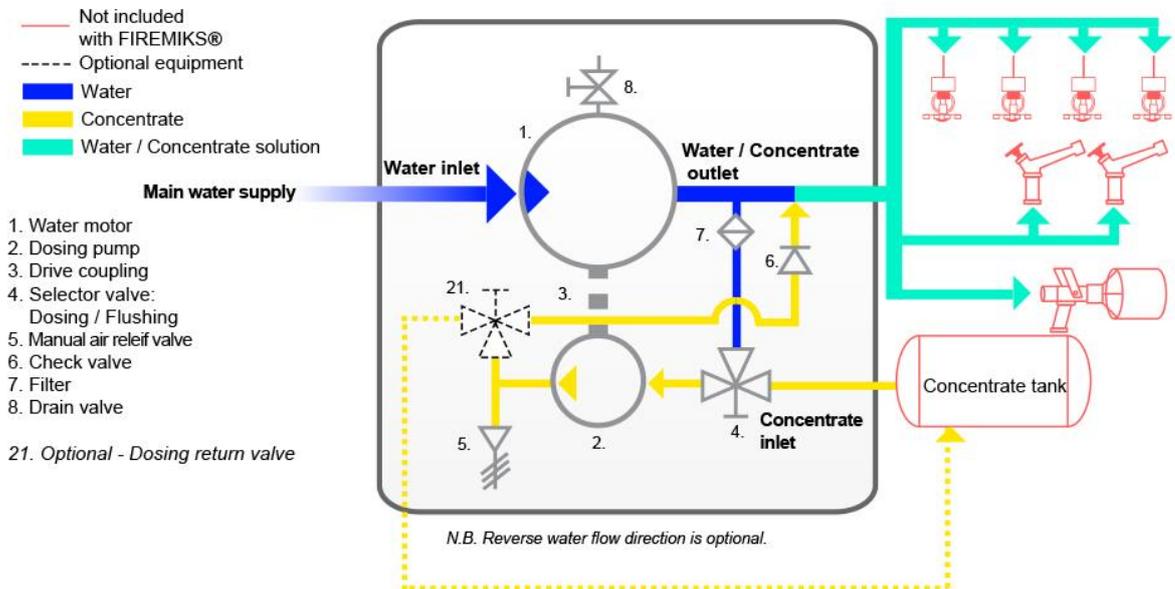
Version: 04

Date: 2019-11-20

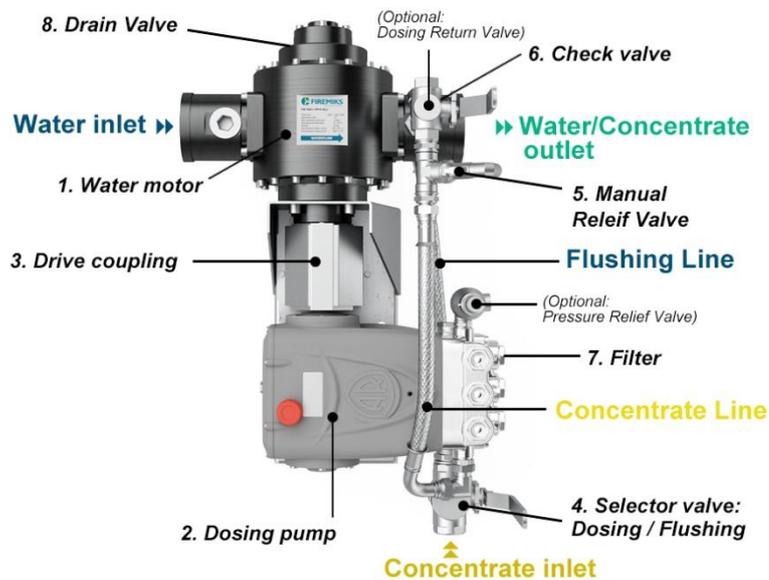
<b>MATERIALS</b>	
<b>Water motor housing and rotor:</b>	
FIREMIKS 450-3-PP-F-ALU-FM:	Aluminium EN AW 6082/7075, hard-anodized and PTFE-coated
FIREMIKS 450-3-PP-F-BRZ-FM:	Nickel-Aluminium Bronze JM7 (C95500)
FIREMIKS 450-3-PP-F-SS-FM:	Stainless Steel AISI 316L
<b>Water motor components</b>	AISI 316 (fasteners), PET (vanes), NBR (O-rings).
<b>Dosing pump:</b>	Aluminium, brass, ceramics, NBR, AISI 316 (fasteners)
<b>Fittings:</b>	High grade stainless steel
<b>Valves and hoses:</b>	High grade stainless steel + PTFE
<b>DIMENSIONS AND DOSING PUMP CONNECTION</b>	
<b>Connection pump:</b>	G 3/4" female iso 228-1
<b>Overall dim. L x W x H mm:</b>	511 x 306 x 412
<b>WEIGHT</b>	
<b>Weight *:</b>	
FIREMIKS 450-3-PP-F-ALU-FM:	23 kg
FIREMIKS 450-3-PP-F-BRZ-FM:	34 kg
FIREMIKS 450-3-PP-F-SS-FM:	33 kg
<i>*Average value, depending on optional equipment</i>	
<b>PRESSURE LOSS TABLE (@8bar system pressure)</b>	
<b>112 lpm</b>	0,8 bar
<b>260 lpm</b>	1,2 bar
<b>450 lpm</b>	2,0 bar
<b>OPTIONAL</b>	
<b>Dosing return valve with pressure relief valve</b>	Valve for returning the concentrate to the tank for easy and quick checking of admixture rate, without consuming concentrate and generating water/foam solution. Pressure relief valve included and set to open at 20 bar
<b>Reversed Flow direction (right to left)</b>	Standard flow direction is from left to right seen from pump side
<b>Adapters for water motor connections</b>	Flanges of different kinds (ANSI, DIN), Storz couplings, etc
<b>Y-strainer main water flow</b>	If the firefighting water contains foreign particles a strainer in the main water line before the FIREMIKS is a necessity

While the above numbers are correct to our best knowledge, for best practice we strongly recommend contacting us with your dosing case, stating the required flows and pressures, the data sheet of the concentrates to be used and any other useful information, so we can provide you with our most suitable dosing solution.

## FLOW CHART



## OVERVIEW



*Note: For illustration only. Refer to Dimensional Drawing for accurate representation of each model.*

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For information on our FM-approval, go to [www.approvalguide.com](http://www.approvalguide.com)

We reserve the right to make changes in the specifications without prior notice. Production is made according to European Directive 2006/42/EC  and conforms to applicable parts of NFPA 11 and NFPA 1901. 

