

WATER MIST PUMP SET

GRIFEN sprinkler solutions

This innovative product brings our industrial and residential fire sprinkler product expertise to the low pressure water mist industry.

A family of products to cover all risks from domestic systems up to commercial OH3 risks

MIST8N combines a pump and controls with a residential riser including alarm signals all together in one turnkey solution.

Automatic weekly testing for functionality of the pump, pressure switches and solenoid

An LCD screen shows activations of switches in real time and retains some system information

The pump acts as a jockey pump making up for small leaks, and as a fire pump when required.

EN12845 features such as back up pressure switches.

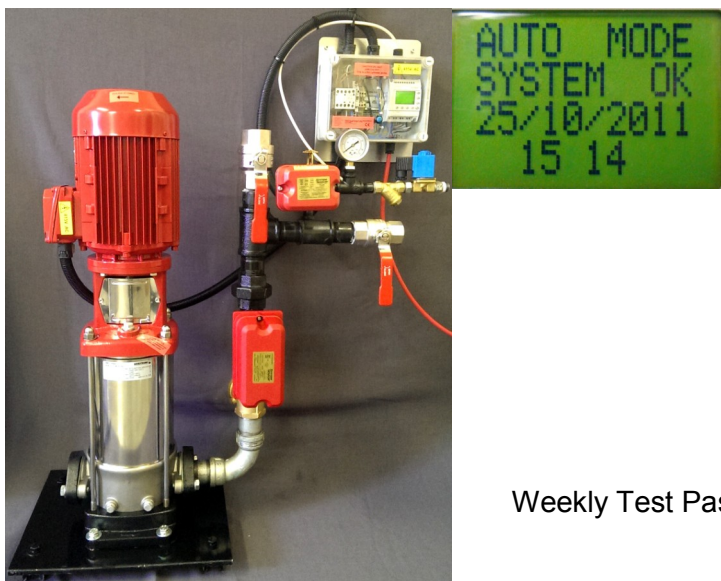
An optional integrated pressure relief valve can be incorporated to create our innovative “flat pump curves”, enabling low pressure pipe systems to be used for higher pump duties.

Options for even greater levels of protection with 2 fully integrated pumps in either 2 x full duty or 2 x 1/2 duty systems

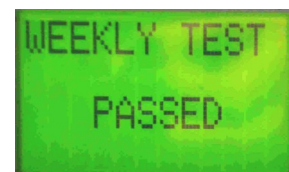
Technical support available for product selection through to technical advise on DD8489 and DD8458

LCD screens shows some of the conditions that are reported on the product, simple buttons allow tests to be started/ results checked

System at pressure and healthy



Weekly Test Passed - System healthy.



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PRODUCT FEATURES

- **Prewired and fully tested**
- Power and alarm cables fire rated **LPCB approved**
- **Pressure switch (FM, VdS, LPCB approved, UL listed) Circuit No 1** acts as a jockey pump first then a fire pump.
- **Pressure switch Circuit No 2**, same as circuit one offering back-up
- **Failsafe wiring** the pressure switch circuits will operate the pump if they go open circuit
- **Jockey pump** the jockey pump will operate for 8 seconds to remake pressure loss
- **Fire pump** the pump will operate if pressure is unhealthy, LCD screen and alarm indication
- **Pressure gauge** glycerine filled to dampen pressure pulses
- **Auto Cooling**, if the fire pump operates, the solenoid valve opens every 30 seconds for 2 seconds to cool the impeller ensuring functionality even when a property is unoccupied.
- **Automotive technology**, a black electrophoretic bonded paint finish is applied to the pipe work, giving better protection and an attractive finish. Alternatively a stainless steel manifold option is available
- **Control box** mountable at a convenient location.
- **Integrated alarm system** Optional 2 tone sounder system prewired for fire and fault. Fire signal from the controls. Fault signal includes weekly test failed, jockey pump fault, fire pump in operation and annual test due
- **Alternatively a flow switch FM approved & UL listed** with retard mechanism, 2 circuits available for evacuation alarm

LCD Screens



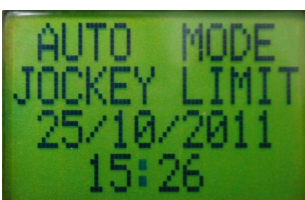
This screen shows;
The fire pump has latched
The remote alarm is open
Pressure switch No 2 caused the pump to latch (unhealthy)
Pressure switches No 1 & No 2 are currently unhealthy
LCD display to view results, and real time information.



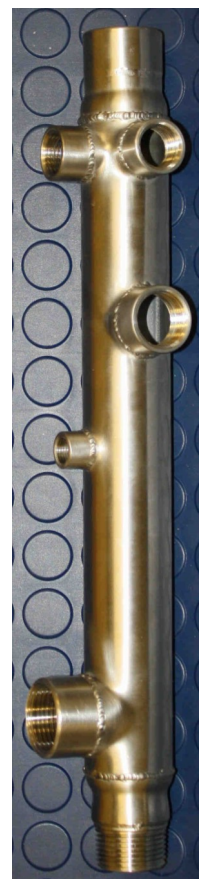
A weekly test passed or failed is shown on the screen and will show a failure to a remote station. If the test fails the switch in fault is highlighted.



The product keeps a watch on the number of times it starts as a jockey pump. This aims to give pre failure warnings due to system leaks



The annual flow test must check the correct function of the pump and pressure switches. If it passes the unit will warn again in 12 months, if failed it will warn at the remote station and must be repeated until passed.



Stainless steel manifold, available as an option for any mist pump set

TESTING & OPERATION

- **Power on** when the system is switched on an opening sequence of screens enables system checks before the pump fills the system. The pump will then run until the water mist system is full.
- **Weekly self test** The product will self test every week by opening a solenoid valve and sending some water back to the tank. The solenoid opens to make the pressure switches unhealthy, the pump will then run to remake pressure, the LCD and alarm will warn if the test fails. Drain time and pump run time is up to 20 seconds or until a pass occurs, enabling both small and large systems to adapt their testing regime to suit the system size.
- The system can remain pressurised at all building levels when maintenance is being carried out.
- The jockey pump is continually monitored, if more than 8 starts occur in any hour the LCD will display jockey limit and the alarm operates. This helps to prevent motor damage and warns of water mist system leaks which could cause property damage.
- **Annual tests** are only carried out on the pump ensuring it is capable of the duty at the correct pressure.

PROTECTING THE ENVIRONMENT

During an annual flow test no water is drained from the water mist system, this also ensures the flow test is testing the pump only. This saves vast quantities of water, reduces time taken to carry out the test and reduces the energy used to operate the pump when refilling the system.

PRODUCT OPTIONS

- A range of pumps to suit your applications, please call with your required duty point
- Additional alarm fault outputs as Normally closed and/ or normally open or SPDT
- Separation of different alarm signals and additional alarms eg. pump running, pump failed to start
- Duty / backup pump systems or 2 x 1/2 duty
- Prewired isolators
- Emergency start/stop button
- Soft starters
- Integrated UPS battery backup systems

In the absence of a British Standard for water mist systems our MIST8n pump sets comply with BS 9251.

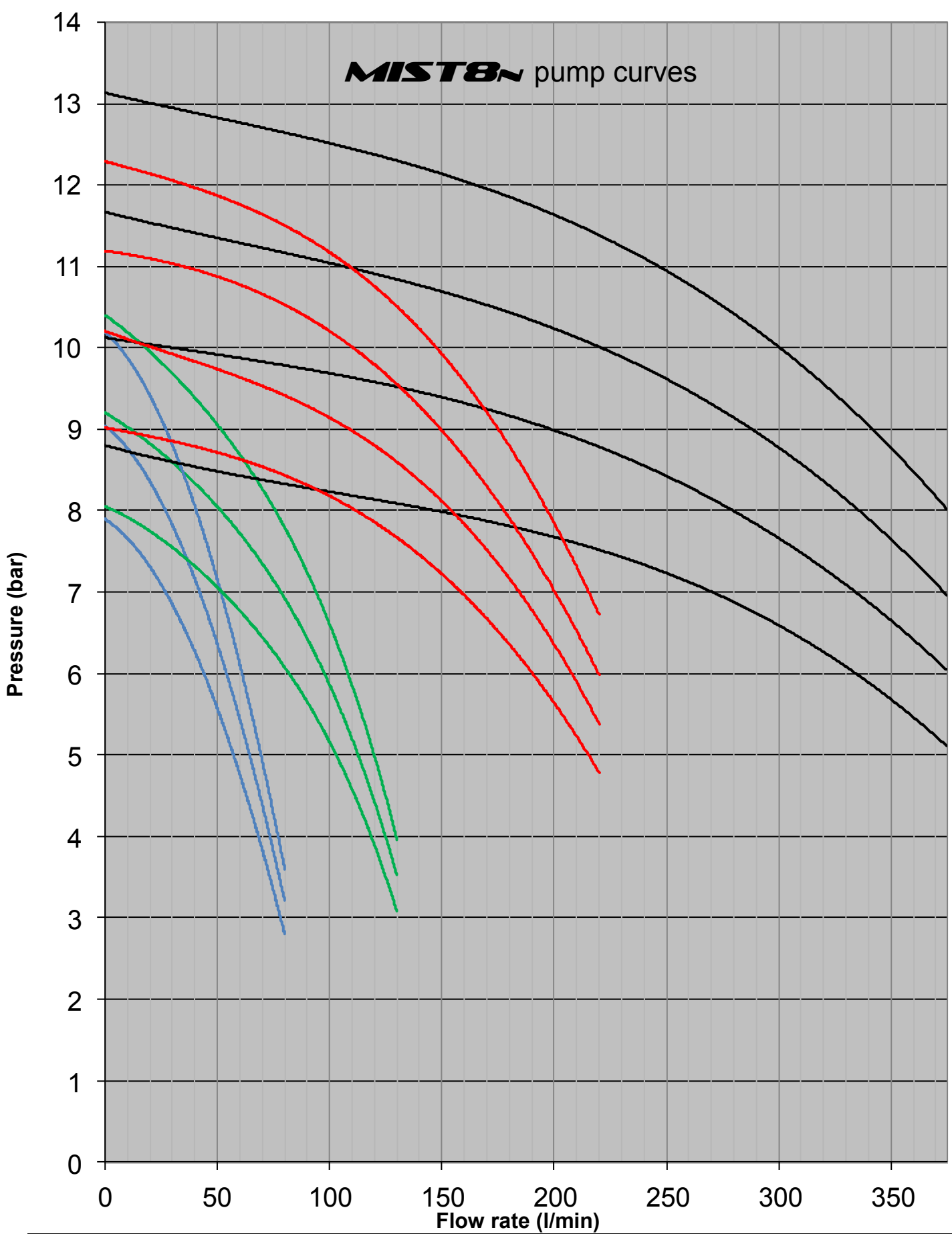
If required it is possible to provide a pump set in compliance of DD8458, DD8489 or as a fire engineered solution. For advice regarding compliance with water mist standards and guidelines please call the number below.

We are happy to consider other ideas which you may have to improve our system as a standard or for site specific situations.

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MIST8_N pump curves



One head mist		Domestic mist		Residential mist		Mist	
ONM230-65	35 l/min @ 6.5 bar	DM230-65	70 l/min @ 6.5 bar	RM400-73	140 l/min @ 7.3 bar	M400-76	210 l/min @ 7.6 bar
ONM230-75	35 l/min @ 7.5 bar	DM230-74	70 l/main @ 7.4 bar	RM400-84	140 l/min @ 8.4 bar	M400-89	210 l/min @ 8.9 bar
ONM230-84	35 l/min @ 8.4 bar	DM230-83	70 l/min @ 8.3 bar	RM400-92	140 l/min @ 9.2 bar	M400-101	210 l/min @ 10.1 bar
				RM400-102	140 l/min @ 10.2 bar	M400-115	210 l/min @ 11.5 bar

Technical Specifications

Model	Pump flow	H max	VAC	kW	inlet	outlet	test"
ONM230-65	35 l/min @ 6.5 bar	7.9 bar	230	1.3	1"	1"	3/4"
ONM230-75	35 l/min @ 7.5 bar	9.05 bar	230	1.3	1"	1"	3/4"
ONM230-84	35 l/min @ 8.4 bar	10.2 bar	230	1.5	1"	1"	3/4"
DM230-65	70 l/min @ 6.5 bar	8.05 bar	230	1.5	1 1/4"	1"	3/4"
DM230-74	70 l/min @ 7.4 bar	9.2 bar	230	2.2	1 1/4"	1"	3/4"
DM230-83	70 l/min @ 8.3 bar	10.4 bar	230	2.2	1 1/4"	1"	3/4"
RM400-73	140 l/min @ 7.3 bar	9 bar	400*	3	1 1/2"	1 1/2"	1 1/4"
RM400-84	140 l/min @ 8.4 bar	10.2 bar	400*	4	1 1/2"	1 1/2"	1 1/4"
RM400-92	140 l/min @ 9.2 bar	11.2 bar	400*	4	1 1/2"	1 1/2"	1 1/4"
RM400-102	140 l/min @ 10.2 bar	12.3 bar	400*	4	1 1/2"	1 1/2"	1 1/4"
M400-76	210 l/min @ 7.6 bar	8.8 bar	400	5.5	2"	2"	1 1/4"
M400-89	210 l/min @ 8.9 bar	10.1 bar	400	7.5	2"	2"	1 1/4"
M400-101	210 l/min @ 10.1 bar	11.7 bar	400	7.5	2"	2"	1 1/4"
M400-115	210 l/min @ 11.5 bar	13.1 bar	400	11	2"	2"	1 1/4"

* Also available in 230VAC

MISTB pump curves above are a replication of the manufacturer pump curves, it is essential good design practice is applied to the suction side and delivery side to avoid losses. It is recommended that products are selected with a margin for error/safety.

N.B suction pipes, bends, valves, the flow switch, water height in the tank all affect pump duty, they must be considered and calculated.

Other pump duties are available. If at quotation stage we can assist you in the product selection and estimated calculations before you have finalised calculations.

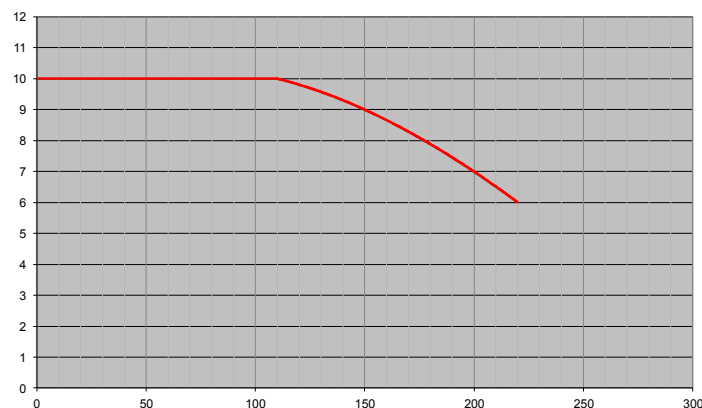
Pressure relief valves

The graph below shows our **MISTB** model RM400-92, including a 10 bar pressure relief valve.

Our set pressure relief valves create 'flat' pump curves preventing over pressurisation of pipe work, ensuring low pressure pipe work can be used for a greater range.

The pressure relief valve also adds to the pump cooling line, helping to prevent the pump overheating whilst removing no water required for fire fighting. Different set pressures are available depending on your system requirements.

RM400-92 with 10 bar pressure relief valve



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