

WATER MIST PUMP

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.



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

The product is available as a single pump system or in **DUPLIC8** format, this allows even greater protection with 2 fully integrated pumps in either 2 x full duty of 2 x 1/2 duty systems

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

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

Functionality of the pump, flow switch and pressure switches are automatically tested every week.

An LCD screen shows activations of switches in real time and retains activations that cause faults.

An automotive surface treatment is used to coat the pipework inside and out giving a fantastic appearance in jet black and protects the pipe inside and out.

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

A local simple mist system will react to a fire in close proximity to the product giving the best protection for the whole mist system.

Annual testing including a flow test can be conducted on the pump only, whilst the system remains pressurised; saving time, water and energy.

GRIFEN sprinkler solutions

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PRODUCT FEATURES

- Automatic pump cooling cycle, keeping powerful vertical multistage pumps cool in the event of a false start. A cooling cycle will discharge water every 20 seconds for 2 seconds, and enabling sufficient flow if a fire is in progress.
- Pre-wired and fully tested
- Automatic full weekly auto test and fault reporting
- Power cables fire resistant **LPCB approved**
- Gunmetal and MI pipework & valves + electrophoretic jet black pipes protected inside and out
- Unions & Isolation pump can be replaced easily if needed.

PRODUCT FIRE PROTECTION

- **Mist system** - The product is protected by a low-flow simple mist system which offers fire protection for the product, allowing it to be installed in confined spaces. If the head activates the pump will start as the drop in pressure is detected. The system is designed to have a similar water distribution approximately 2-3 litres/min. Once operational the pump will run at a near closed valve condition ensuring maximum pressure and effective protection.

CONTROLS

- **Flow switch (UL listed, MEA approved)** will trigger the pump after a 2 second delay. The pump will then run for 10 seconds, then it stops for 2 seconds. If the flow switch is healthy the pump will turn off, if the flow switch is unhealthy for the last 7 seconds of the jockey pump run, the pump will run permanently (latch) and alarm. The activations are visible on the LCD screen. The flow switch retard mechanism is independent and can be set on site.
- **Pressure switch (LPCB, VdS and FM approved, UL listed) circuit 1** This switch will run the pump until the switch reaches its cut out pressure.
- **Pressure switch (VdS and FM approved, UL listed) circuit 2** This second circuit uses the same logic as circuit 1 and acts as backup to switch 1, offering redundancy in case of failure
- **Pressure gauge** 0-16 bar glycerine filled to dampen any pressure pulses, 1% accuracy
- **Text display** events can be observed and checked.

STATUS INDICATORS AND ALARMS

To keep remote monitoring simple an alarm box is provided with a clear cover, allowing fire alarm engineers to be isolated from 400 and 230VAC circuits.

The controller driven alarms are all available in one box with the connection for a tank low level monitoring circuit.

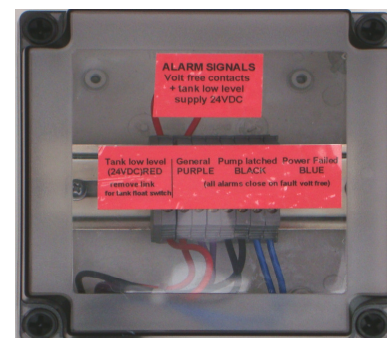
The fault signals that are available are;

- **General alarm**
- **Fire pump latched**
- **Power failed**

These volt free outputs need to be connected to suitable fault indication devices

The alarms all close on fault, open on fault is available as a no cost option, SPDT contacts are also available, please specify when ordering.

- Three volt free contacts are available for fire conditions. Two alarms are driven by the flow switch and retard, the third operates when the fire pump latches.



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STATUS INDICATORS AND ALARMS

2 x Retarded fire alarms are available in the flow switch

Events are displayed on the LCD screen and the alarm signals will close if necessary

The general alarm covers the following conditions to make fault finding simpler;

- **Jockey stop/ start alarm** - Check system for possible leaks, switch faults or a leaking NRV
- **Weekly test failed** pump, contactor, solenoid, pressure switch failure
- **Weekly test passed— LCD only**, visual check for failure at the remote station
- **Flow switch activations**
- **Pressure switch activations**

Non critical alarms can be silenced on the product. The cause of the fault stays on the text display until the fault is cleared or a healthy test is carried out. It is possible to perform weekly tests and annual tests manually upon installation to ensure the product is set up correctly.

ANTI-TAMPER

Power supply power failed alarm volt free contact giving warnings of 400, 230VAC and 24VDC failure.



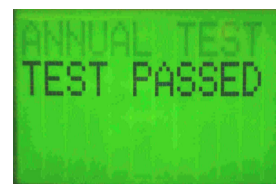
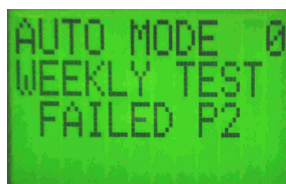
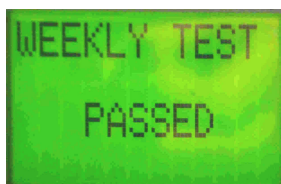
This screen shows;
The fire pump has latched
The remote alarm is closed
Pressure switch No 2 caused the pump to latch (unhealthy)
Pressure switches No 1 & No 2 are currently unhealthy

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 all the 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.



TESTING – COMMISSION, WEEKLY & ANNUAL

- **Power on** when the system is switched on, it will run until the pressure switches and flow switch are healthy. The product will then enter AUTO MODE.
- **Auto Mode** Continually monitors all the switches and acts to correct faults
- **Weekly** The product will self test itself each week by opening a solenoid valve and sending some water to drain / back to the tank. The flow switch must detect flow and the pressure switch(es) must return to a healthy state if they become unhealthy. Industrial sprinkler systems rely on weekly tests by a human operator, this feature allows the same high level of testing with no operator present. End users can perform an on demand test enabling you to “see” the product if a fault develops without an engineer having to travel to site

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PROTECTING THE INSTALLATION INVESTMENT

ANNUAL SERVICES to be carried out by fire sprinkler companies with the correct key code, ensuring ongoing compliance with the standard. If an annual service is not carried out the system will still function and alarm. The service engineer needs to enter the correct key code and perform a full functionality test to silence the alarm.

- SERVICE DUE WARNING Indication is given when an annual service is due, the general alarm operates 2 seconds on, 2 seconds off
- At any time when the annual test is carried out by the code holder to completion the alarm will silence for one year.
- If the device is switched off the power failed alarm will operate.
- When power is restored the device will remember its last annual status and operate the intermittent alarm if a test is due.
- The system remains pressurised at all building levels when maintenance is being carried out.
- The flow tests are only carried out on the pump ensuring the motor and impeller are capable of the duty at the correct pressure.
- The product provides volt free contacts to enable alarms, it does not provide the wiring / alarm units themselves.

BUILDING CONTROL/ INSURERS/ OWNER

- Building control officers and insurers have the peace of mind that the system will be serviced and maintained beyond its warranty.
- Building owners can check their annual service is carried out to the correct standard ensuring ongoing peace of mind.
- The display keeps a count of the number of annual tests completed.

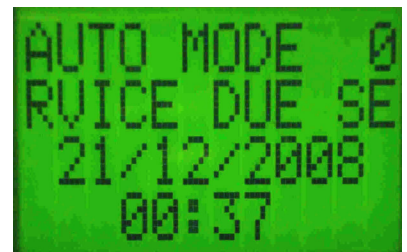
PROTECTING THE ENVIRONMENT

The system isolation valve enables a flow test to be performed on the pump without draining any water from the mist system. This can save vast quantities of water, shortens testing time and reduces amounts of energy used in running the pump when refilling the system.

PRODUCT OPTIONS

- Your own 2 code system and scrolling service message with your telephone number (free of charge)
- * Suction lift, only possible with a foot valve and priming tank Max suction lift 2.5 meters
- Fault outputs as Normally closed and/ or normally open or SPDT
- Duty / backup pump systems or 2 x 1/2 duty
- Prewired isolators
- Additional alarms eg. pump running, pump failed to start
- Emergency stop button

Service due warning (scrolls)



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

FLOW RATES

Any pump configuration is possible using this system. Please call with your required duty point.

Our innovative flat pump curves (if required) will enable you to have misting upto 11 bars and have a pump with an effective closed valve of 11.5 bars– crucially enabling you to use a more cost effective pipe system such as Blazemaster. A suitable pump curve will be provided once we have your most remote area calculations.

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