Technical data sheet

FLOWST8N™

BS9251: 2021 COMPLIANT CAT 2 & 3

We believe the standard requires buildings to be safe at all times so we improved on BS9251: 2021.

BS EN12845 is the gold standard and we think we have improved on it.

Our pumps reduce the risks that the standard actually creates, with our forensic examination of the risks **DUPLIC8™** is our duty standby system.

Our automatic test is carried out daily offering greater confidence when protecting people and the building itself. Results are kept on the LCD screen.

ASSET PROTECT™

The software can put the system into a protected self resetting or continual run to protect the motor and prevent damage to UPS power backup systems.

ALARM MANAGEMENT™

Mitigating the risks associated with the complex alarms from the pumps/ pump room.

We hope that you would want to have our logic fully explained, so that's what we've done, so you can make an informed choice.

No tricks, no marketing nonsense, just the facts that help you save lives.

Our forensic examination of the rules and meticulous testing gives us the confidence to say our product is truly unique, totally complaint and exceeds the 2021 rules delivering unmatched protection.

Checks are displayed on an LCD screen, which shows the product and device status at all times. Each pump is autonomous and reports separately.

ACTIV8™

Provides local mist fire protection for the pump delivering unrivalled protection.

DAILY TEST

P1 P2 P1 H P2 H

PASSED

KEY SPECIFIABLE FEATURES

ACTIV8™ – The fast response mist system

ALARM MANAGEMENT™ – Twice a day protection from alarm silencing

ASSET PROTECT™ Protecting the assets from multiple starts

EASY START™ Soft start and reduced pressure at start-up

FAILSAFE COMMUNICATION Priority is given to a pump in jockey run and daily test for autonomy. An override exists to prevent a pump being inhibited in a fault

FLOW CONTROLLED™ The tank size reducing revolution

INTERACTIVE COOLING™ Ensures cooling is optimised for the conditions

PREDECITIVE FAILAURE ANALYSIS™
Providing checks that would otherwise be impossible

Tested every weekday – 5x more likely to find a problem

Total rules compliance - two devices – Both checked high and low every weekday

Interactive drain sequence – Only drops pressure until a pass occurs

Information on screen if a failure occurs

Clear instructions for life printed on the box

Keep the system pressurised and safe if a phase has failed

NEVER EQUALLED

FLOW CONTROLLED
THE FIRE SPRINKLER REVOLUTION

FLOW CONTROLLED™

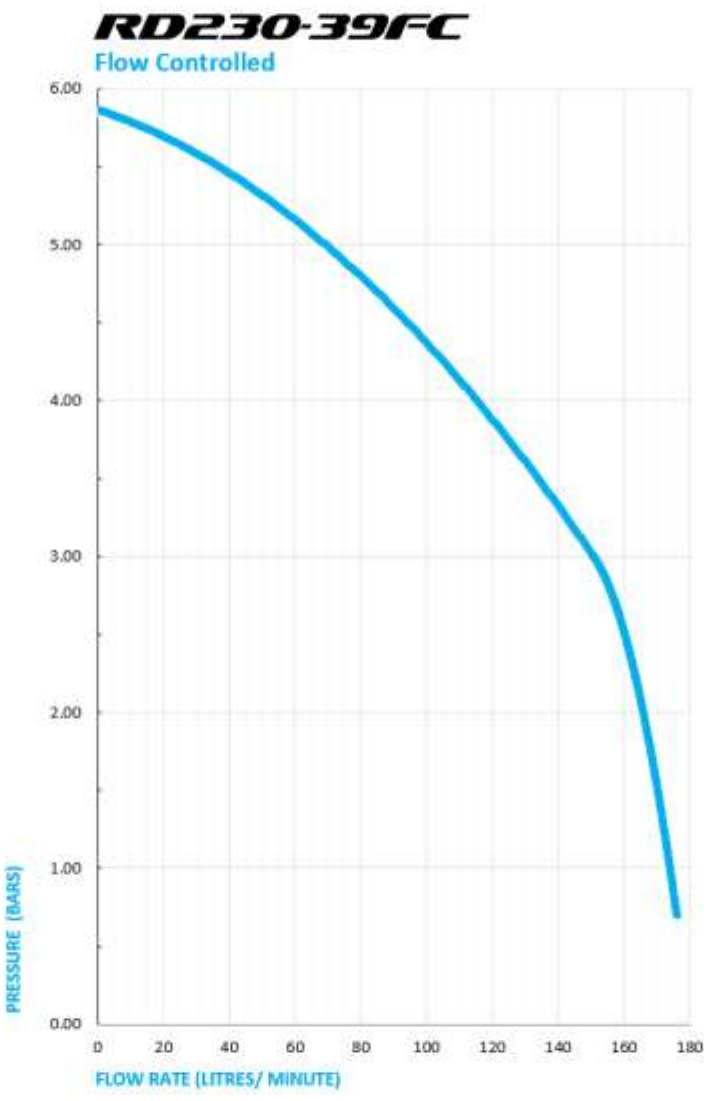
The system is able to mechanically and then electronically assign priority via communication.
Once one pump enters Max Alert, the second can operate if needed within 3 seconds.
This prevents in tandem starting and more importantly running – maximizing tank run time.

VAST REDUCTION OF TANK SIZE

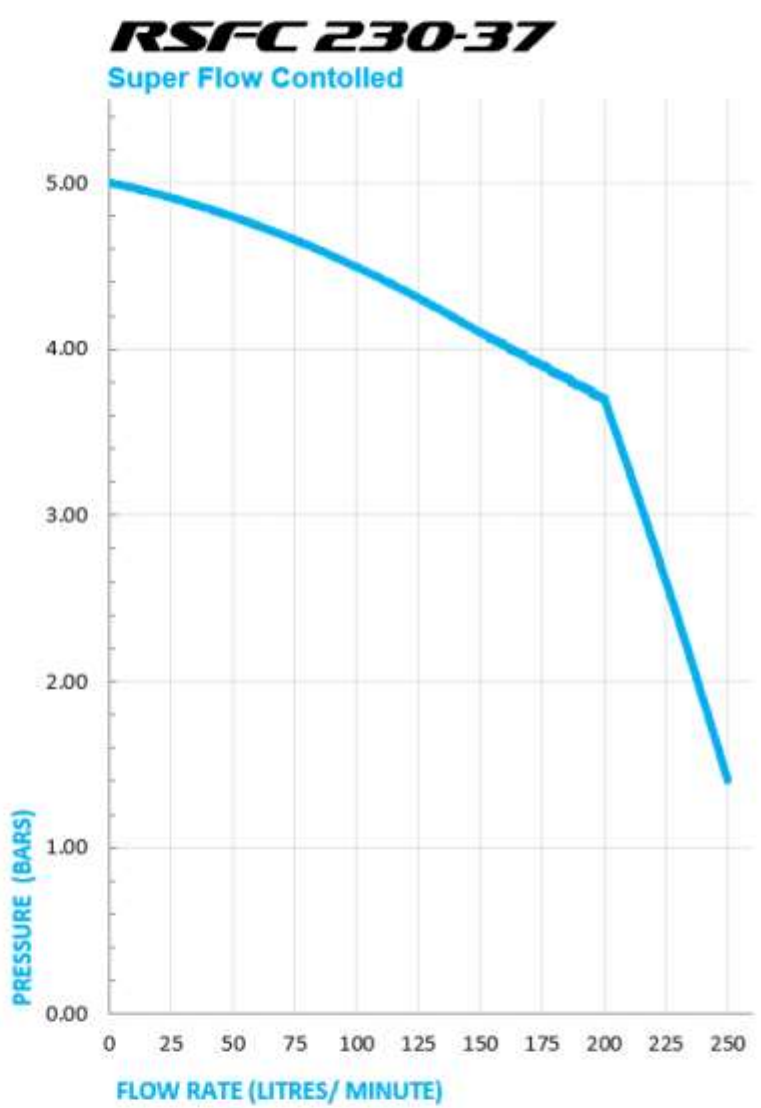
This innovation changes the pump curve to be shorter and steeper, reducing the volume of stored water.

HUGE COST SAVINGS

Improves the effectiveness of your infill.
Valuable building space back.
Use spare pump pressure to overcome losses and reduce system pipe sizes.
Reduce pipe inventory.
Impossible to cavitate pumps.



Category 2 pump



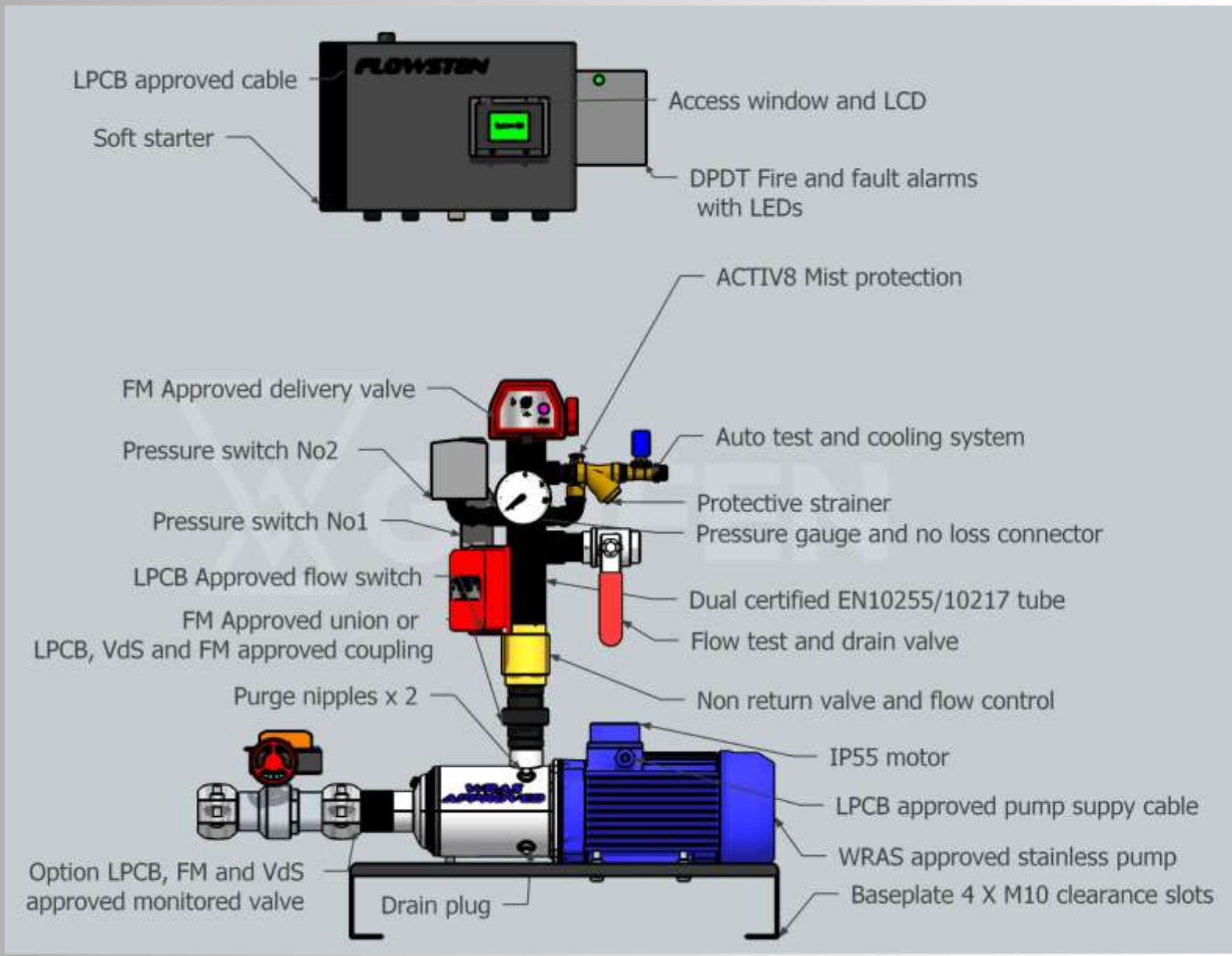
Category 3 pump

FLOWST8N™ SCHEMATIC

THE CLASS LEADING BS 9251 2021 FIRE SPRINKLER PUMP SYSTEM

The controllers differ between single phase DOL and the Three phase units / Single phase with a soft start when supplied with a UPS.

Both the controllers have 4 mounting wings, the three phase units having the soft start have more substantial and larger metal mounting wings.



ACTIV8™
LOCAL MIST PROTECTION

Ceiling mounted heads are key in protecting an area of operation, but they may not always react quickly enough to protect against local fire damage to the pump in complex plant rooms.

ACTIV8™ gives total peace of mind, discharging a mist, controlling risk to the pump.



ASSET PROTECT™

We know alarms can be ignored, so we have provided an extra level of protection for critical assets including, the pumps and power backup systems.

Although our system prevents rapid cycling, damage to motors and UPS could occur if unchecked.
Soft seat components such as NRVs and solenoids can weep causing repeated starting.

We take preventative action rather than just alarming.

We have created a two-layer system of reaction, protecting the whole system;

High Alert puts the pump into a 1 hour protected run if 5 starts occur in 30 minutes.
The system can self reset, protecting all the critical electrical systems, including motors and UPS.

Max Alert occurs if the pump starts 3 times in 10 minutes. The pump will then run continually and alarm.

CONTINUOUSLY RATED

BS9251: 2021 pumps must be continually rated. There are two critical things that are required;

- Protect the controller, pump, switches and alarm relays from local fire risks.
- Cool the pump, making sure it is optimised for all conditions.

We pride ourselves in being the only company to do this.

It may not be possible to access a pump/ plant room immediately.
If a pressure switch develops a fault, the pump must run – it is in the rules.
GRIFEN ensure pump and system safety.

STANDARD COOLING

We cool the pump every 10 seconds for 0.5 seconds to comply with the Machinery Directive, it is the law after all.
The WRAS approved solenoid valve is slow opening/ closing reducing pipe shock.

INTERACTIVE COOLING

6 second on delay, with a 8 second cool and 6 seconds off, which repeats and immediately resets if a pressure switch goes unhealthy, ensuring all the required flow is available for the fire sprinkler system.

This gives maximum cooling (1 or no heads activated) and maximum sprinkler flow when needed.
Every pump requires significant cooling, we design ours to give the best of both worlds, the best cooling and the maximum delivered flow when required.

Not only is the pump cooled by water flow, the motor itself is cooled dramatically by the cool pump end, preventing thermal runaway and mechanical seal damage.
Plastic pipe systems have thermal expansion limitations, we ensure you have total system efficacy.

The pump is protected should an uncommanded start occur. This feature has saved countless systems, leaving the pump available for the fire sprinkler system if required.

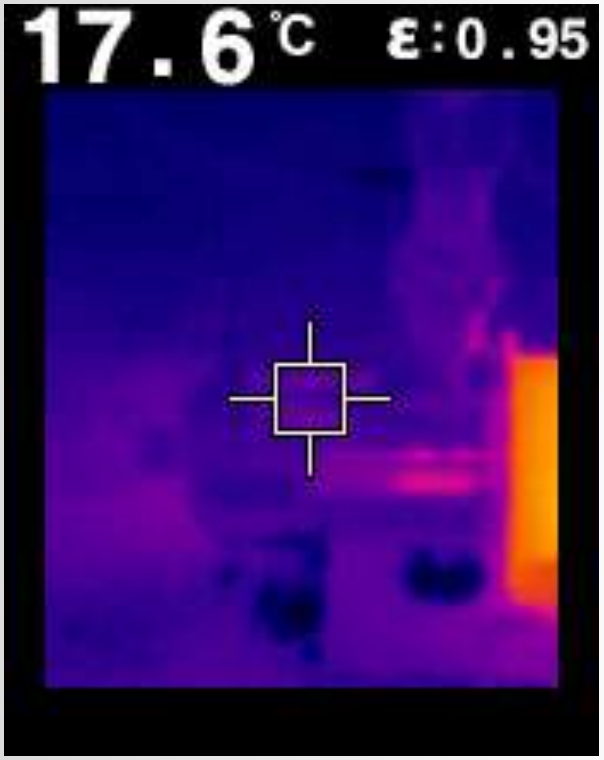
We are constantly replacing pumps of competitors who do not cool their pumps.

Other Manufacturers - Limited/ No Cooling

A pump with no cooling, reaching dangerous temperatures quickly.

Pipe efficacy is exceeded with a delta temperature outside plastic pipe system limits.

Doomed to failure or worse.



GRIFEN Pump Cooling

The same test running with cooling.
GRIFEN cooling with normal temperatures.

Product and costs protected and operating safely as required by law

Efficacy is guaranteed.

CLOSED VALVE PREVENTION

Our higher pressure pumps have a pressure relief valve to further protect plastic pipe systems.

JUST AMAZING STUFF

ALARM TEST WITH NO TOOLS

BS9251: 2021 allows the alarm test to be carried out at the pump.

The solenoid can be used to drop the pressure with the press of a button.

The pump will react and enable the alarm test to be carried out through a 10mm orifice, mimicking a sprinkler head, while viewing the events on the LCD screen.

SILENCEABLE FIRE ALARM

A simple press of a button enables engineers to be off watch for 8 minutes and avoid building evacuation. The fire alarm relay will not trigger, allowing the riser or a zone to be filled.

EFFECTIVE FILTERING

As the company pioneering these automatic tests from the first pump we shipped, experience has led to strainer size being upgraded to 3/4". This gives the filter more capacity to catch tank detritus, ensuring effective cooling at all times.

While some of our features may be copied by competitors our efficacy will never be matched.

These features take our products to a whole new level, achieving almost unimaginable levels of confidence and protection.

FLOW SWITCH WRONG POSITION

The LCD screen will show flow switch wrong position if Mechanically or electrically incorrect, which takes away guesswork.

Not only do we monitor circuits, we also monitor the expected and unexpected mechanical condition.

We use flow switches with the highest specification and then take that to a much higher level than its LPCB approval and UL listing, with a PLC timed delay and on screen count.

MONITORING FS WRONG POSITION FS20

The alarm boxes are clear, you can see the status LEDs and the relay contacts change state

LPCB approved flow switch and LPCB, VdS and FM approved Victaulic 1 bolt coupling

Everything is healthy

JUST AMAZING STUFF

EASY START™

To assist the soft start we open the WRAS approved solenoid for 4 seconds to reduce the pressure every time a pump starts. The empirical fail to start signal is checked during this phase.

SOFT STARTED AND STOPPED (3 phase + single phase with UPS)

A vast improvement over traditional starting, offering a seamless delivery of flow and pressure.
All three phase pumps and single phase pumps with a UPS are soft started.
Three phase are additionally soft stopped.
A button is available to stop the pump for 20 seconds before full shut down.

IRON COUPLINGS

GRIFEN use Victaulic LPCB/ VdS / FM approved iron couplings which naturally absorb noise.

The innovative couplings have rubber pipe end separation, or liners which has an amazing effect, ensuring quieter operation.

We use of the most innovative components reducing joints and risk.

THE HIGHEST SPECIFICATION

All our components are the best to match our unapparelled attention to detail with system efficacy.
There simply isn't a competitor that comes close to our dedication to approvals.

We use FM approved valves, way beyond the standard required, LPCB/ VdS options

We use 1% accuracy gauges, beyond the standard required

We use LPCB/ VdS / FM approved couplings, way beyond the standard required

Inside our manifold

Dual certified EN10255/10217 self colour tube.

Laser cut.

Electro coated post welding and production for incredible longevity and no galvanic problems when compared with stainless steel.

Incredibly low frictional resistance, maximizing performance.

FLOWST8N™ APPROVALS

	RD	RD FC	R	RFC	RSFC
WRAS / KIWA stainless pump (IE2 230V, IE3 400V)	Yes	Yes	Yes	Yes	Yes
Pump IP55 & ISO 9005	Yes	Yes	Yes	Yes	Yes
LPCB approved FP200 mains cable	Yes	Yes	Yes	Yes	Yes
LPCB approved FP200 pump cable	Yes	Yes	Yes	Yes	Yes
FM approved small bore fittings	Yes	Yes	Yes	Yes	Yes
EN10255/10217 welded manifold	Yes	Yes	Yes	Yes	Yes
90 degrees c rated conduit, UL listed	Yes	Yes	Yes	Yes	Yes
UL listed PLC	Yes	Yes	Yes	Yes	Yes
UL listed contactor or soft starter	Yes	Yes	Yes	Yes	Yes
Flow switch LPCB approved EN 12259-5 (double knock PLC control)	Yes	Yes	Yes	Yes	Yes
2 x fully independent Failsafe pressure switches/ LPCB approved optional	Yes/ Opt	Yes/ Opt	Yes/ Opt	Yes/ Opt	Yes/ Opt
Tri rated/ UL listed hook-up wire	Yes	Yes	Yes	Yes	Yes
Mist system protection	Yes	Yes	Yes	Yes	Yes
WRAS approved solenoid	Yes	Yes	Yes	Yes	Yes
IP54 minimum	Yes	Yes	Yes	Yes	Yes
LPCB/ VdS & FM couplings	Yes	Yes	Yes	Yes	Yes
EN837-1 80mm gauge + No loss connector	Yes	Yes	Yes	Yes	Yes
FM approved monitored delivery valve (Option for LPCB, FM VdS approved)	Yes/ Opt	Yes/ Opt	Yes/ Opt	Yes/ Opt	Yes/ Opt
LPCB, VdS & FM approved monitored suction valve (monitored with the common alarm)	Opt	Opt	Opt	Opt	Opt
UL listed alarm relays	Yes	Yes	Yes	Yes	Yes
UL listed control box	Yes	Yes	Yes	Yes	Yes
UL listed alarm box	Yes	Yes	Yes	Yes	Yes

Opt = Optional

RDFC, RFC & RSFC pumps are FLOW CONTROLLED™ and will vastly reduce tank size.

CE Marked for low voltage directive and machinery equipment directive.
The product complies with the pressure equipment directive, yet falls under the standard engineering practice due to the low temperature and pressure, is therefore not CE marked for the pressure directive.

INCREDIBLE FEATURES

PREDICTIVE FAILURE ANALYSIS™

What is it?

A daily test that uses an intelligent soft start to detect phase failures and/or the beginnings of motor damage, predicting more significant motor trouble. Pumps are tested every weekday, ensuring rapid intervention, giving unrivalled protection. *(Standard on 3 phase pumps and single phase with a UPS)*

Why is it needed?

The weekly test requires the pressure switches to go unhealthy and then be made healthy again.
Owing to this pressure drop, a run condition could occur (required by rules), guaranteeing further motor damage.

The rules now require a period of protection of up to 1 hour.

A damaged motor may not be able to run for an hour in a fire event.
It is beneficial to detect issues before they escalate.

EN12845 requires a more thorough run time test .
We are achieving the same effect through this innovative technology.

How it works - A two pronged approach

1. **Firstly, our automatic daily test will detect a failed phase, report on it and crucially stop the drain, preventing damage. As our test is daily, it is 5 times more likely to find any issue than the rules require.**
2. **Secondly, the auto test includes a thermal trip and alarm. If motor damage is developing , the pump will trip to prevent further deterioration and alarm.**

The system will never prevent a jockey or fire pump run, they will always run without thermal protection and run to destruction if needed.

GRIFEN

RELIABILITY GUARANTEED

Fire sprinkler regulations the world over have the principal of run to destruction.
FLOWST8N™ is no different.

Interaction with the pumps is inevitable. We want the fire sprinkler system and pumps to be in the best possible condition, whilst also maintaining safety.

Our innovative soft starters have thermal protection in our daily test. During a test the soft start cannot only prevent motor damage, it can recognise early signs of it and warn you, giving **PREDICTIVE FAILURE ANALYSIS**. If triggered, a fault will occur.

During a jockey run or Max alert, a run to destruction philosophy applies with no thermal trip.

Soft start - Prolongs motor life, reduces noise and pipe shock whilst reducing electrical load.
Soft stop - A short soft stop reduces pipe shocks and noise.

INTEGRATED PHASE FAIL DETECTION

Our soft starters have integrated phase failure detection, reducing cable terminations.
Our common fault signal also detects 24VDC and PLC failure.

Each soft starter is programmed for the specific motor current, ensuring optimal protection at all times.

Our soft starters have a status checker and a digital ammeter, displaying values in amps.
This enables motor health checks to be carried out, without electrical test equipment.

Starting
The soft start is active in a daily test with thermal trip available if required

Running
The soft start at full ramp during a daily test with thermal protection if required

Stopping
The soft stop is active

Fire Mode
A jockey or fire pump run current with no thermal protections

Phase loss
This indicates a trip in the auto checks or a daily test

Overload
This indicates a trip in a daily test to protect it and warn of a future problem

ALARM MANAGEMENT™

Twice daily resetting of the common fault signal, this ensures silencing at FAP cannot mask subsequent tampering/ faults, which could be more serious.

All the fault signals are transmitted to the common fault. It is failsafe

The system is EN16925 ready (with the optional alarm relays). The common fault signal will mimic any dedicated fault alarm. This ensures even if a relay should not trigger, a backup is available.

INCREDIBLY SIMPLE INSTALLATION

The pumps can be rotated on the union/ LPCB, VdS, FM approved coupling to simplify the tank connection.

Rotation from 45 degrees to a full 180 is possible.

The pumps can be staggered on site to aid access to the standby pump.

The manifolds can also be rotated to further aid connections and operation.

The controllers can be installed to suit the best viewing angle and ease of installation.

4 slotted wings give flexibility to mount.

Single phase pump DOL start controller

Standard alarms all labelled with visible LEDs and relay contacts

DAILY TEST
P1 P2 P1H P2H
PASSED

INTERACTIVE AUTO TESTING

Our daily test adapts to the system size. Once the pressure switches are both unhealthy the pump will start to remake pressure.

Two failed retuning healthy pressure switches will cause the pump to run on.

A single switch failing to return healthy will report and be dealt with in monitoring mode.

OPERATIONAL FEATURES

JOCKEY FUNCTION

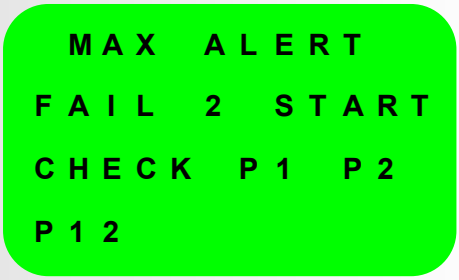
The pump runs for 16 seconds to top up system pressure loss. A pre start check time of 4 seconds occurs and a post run check of 6 seconds. This prevents pump hunting and confirms the signal.
If a pressure switch remains unhealthy after the 6 second monitoring time MAX ALERT will occur.
We only rely on pressure switches, there are no overrides, exactly as the standard requires.
.

ON DEMAND

An empirical test, vastly improving on blind set switches common on EN12845 systems.
15 seconds of flow (≈ 38 litres/min or more) in MAX or HIGH ALERT detected by the LPCB approved flow switch. Visual indication of the flow and cumulative count occurs on screen.

FAILED TO START

An empirical test, the solenoid opens and if flow (less than ≈ 38 litres/min) doesn't occur, the failed to start signal will trigger. Our 3/4" strainer will collect debris and filter it, keeping your system free of detritus. This can be easily cleaned at service intervals, keeping the fire sprinkler system in the best condition.



LOST CLOCK

Our daily test requires a time stamp. If the clock is lost after delivery, the system warns and alarms.

COMMERCIAL LEVEL ALARMS

We aim to not only meet BS9251 2021 but exceed EN12845, giving the best efficacy possible.
All our fault signals are covered in one relay with **ALARM MANAGEMENT**™

BS9251 ALARMS (required)

Weekly test tail (**DUPLIC8** is weekday, daily)
Pump on demand *
Power fail (including Phase Failure)
Valve/s wrong position
Low Level detection (monitored 24VDC failsafe)

ADDITIONAL ALARMS (not required by BS9251 2021)

Pump failed to start * (empirical)
Annual service due
Flow switch wrong position
Predictive failure analysis
Clock not present
24Vdc failure, controller failure, controller off
Max alert

FLOWST8N has a common fault alarm (the above dedicated alarms can also be specified as an option for EN16925 systems). See separate data sheet for DUPLIC8 duty and standby system or AMAO DUPLIC8 CAT 4 resi 75m and100m area pumps.

We understand that the worlds of the fire sprinkler engineer and Fire alarm engineer are very different. Our DPDT alarms are separate from the pump controller in their own IP66 box with transparent lid.

Each relay has its own LED and you can see the contacts switch. Wires are colour coded and labelled, it couldn't be any better. Resistors are easily fitted into the relays for full supervision.

LISTENING, LEARNING AND DEVELOPING.
THEN SMASHING IT OUT THE PARK

We design our products with an emphasis on further improving residential fire sprinkler systems. Our new software brings amazing benefits, improving our class leading product.

Over 15 years of manufacturing FLOWST8N™ and offering technical support, it is evident most failings occur in simple site based housekeeping problems. We find them and fix them, keeping your system in the best possible condition.

STATUS INDICATION

Our system is designed to monitor devices at all times, indicating their status on the LCD screen. The bottom row indicates real time status, with any device that is active currently unhealthy/operating.

FLOWST8N™ monitored devices are:

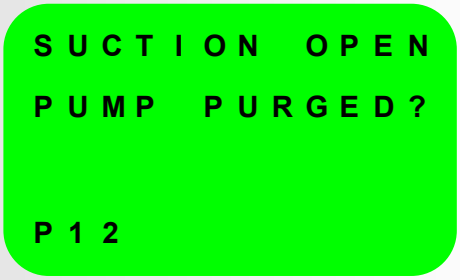
Pressure Switch No1 **(P1)**
Pressure Switch No2 **(P2)**
Solenoid **(SOL)**
Flow Switch **(FS + activation time in seconds)**
Delivery Valve **(DV)**
Suction Valve **(SV)** (if fitted as an option)
Phase Failure **(PH)** (if 3 phase)
Low level **(LL)**
If multiple devices are at fault they will flash intermittently

A phase fail/ soft start warning

A screen warning is given when the pump is switched on.

P1 Indicates pressure switch No 1 is unhealthy.
P2 indicates pressure switch No 2 is unhealthy

P12 indicates both switches are unhealthy



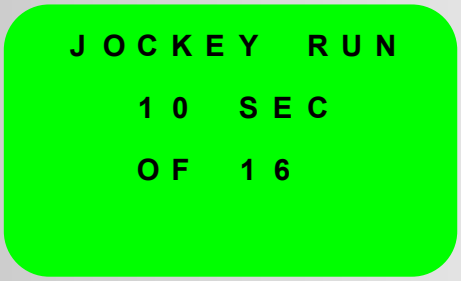
Switch on message

THE JOCKEY PUMP

The pump is also the fire pump, if needed a 16 second run will occur to top up system pressure.
A prestart check on the switches of 4 seconds confirms the signal. .
A 6 second post run check decides if the pressure remains maintained or has dropped and needs to trigger a higher alert status.

It is all about the independent failsafe pressure switches, there are no flow switch overrides, the devices with the highest status in BS9251: 2021 decide jockey success or a higher alert.

4 second prestart check.
A confirmed signal



The jockey pump is running for 10 of the 16 second run

When the jockey pump run ends, it indicates it is checking pressure.

MONITORING

This is the default mode, awaiting auto tests or to react to pressure switches/ user inputs.

MONITORING NO CLOCK	MONITORING SYSTEM OK 10:22	MONITORING DEVICE CHECK DV
During commissioning if the clock has been lost (6 weeks after production powered down) the system will warn you to re-enter it.	The system will tell you if it is OK. The backlight will illuminate if any devices become unhealthy.	A monitored valve is in the wrong position. Device Check flashes to gain attention.

Our new boxes are printed for life with all the key instructions.

Simplified for 2021 with single button commands

A 24DVC power good LED is visible and illuminates our new logo.

HIGH ALERT

The jockey pump is also the fire pump
The software prevents any rapid start-stops.

HIGH ALERT puts the pump into a 1 hour protected run if 5 starts per half hour occur.
Historically we have considered this to be an alarm, we are now proactive, we know alarms can be ignored, and consequences for damage severe.
Interactive auto cooling will potentially clear the detritus from the tank that may be causing a solenoid or NRV to pass.
If 20 seconds of flow into the sprinkler system occurs, the system will alarm and enter ON DEMAND, requiring a manual reset.

HIGH ALERT VENT AIR FRO CHECK P1	AUTO RESET M SYSTEM PUR CHECK P1 P2 SOL	HIGH ALERT GE PUMP CHEC CHECK P1
Simple scrolling instructions guide engineers to the best course of action	AUTO RESET if a fire has not been confirmed after 1 hour	The message alternates between High Alert and Auto Reset

MAX ALERT

There are two ways into MAX ALERT

A rapid drop in pressure after a jockey run (fire pump required).

Or
The Jockey operates 3 times within 10 minutes.

The pump will now run continually, in either event.

The system will tell you which pressure switch/es caused the pump to enter MAX ALERT

This system protects against unvented areas of pipe/pressure switch fiddling.

```
MAX ALERT

CHECK P1
```

ON DEMAND

After a jockey run the switches are checked for 6 seconds, On demand can occur in High or Max Alert.

ON DEMAND is HIGH or MAX ALERT +15 seconds of continuous flow, the fault alarm will change state, the pump will not switch off.

```
ON DEMAND

CHECK P1
   FS15
```

The Flow switch confirms the pressure switches and pump on demand

```
ON DEMAND
+FIRE ALARM
CHECK P1
P1 FS20
```

The second stage being an evacuation

```
ON DEMAND
+FIRE ALARM
CHECK P1
   FS20 SOL
```

The solenoid will interactively further cool the pump if needed

ON DEMAND + FIRE ALARM

20 seconds of continuous flow (≈ 38 litres/min or more) in MAX or HIGH ALERT).
The fire alarm will now change state.

INFORMATIVE & INSTRUCTIONAL

Our new boxes are screen printed with instructions for life.

Should a daily test not pass, the screen will display the most common remedial action for your system.

The screen remembers all successful parameters prompting you to check the devices that did not trigger.

If a service is due the screen will display the action you need to take.

(Three phase controller/ single phase with soft start for UPS)

THE INCREDIBLE AUTOMATIC DAILY TEST

SIMPLY ASTOUNDING PROTECTION, SURPASSING BS9251: 2021

Having been the only manufacturer that has performed these drop tests for over 15 years, we have perfected it. The test has been improved for BS9251: 2021 to give even more features.

Our objective was to make our product superior to EN12845 and we have achieved it.

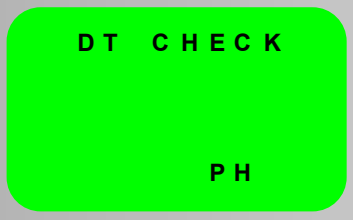
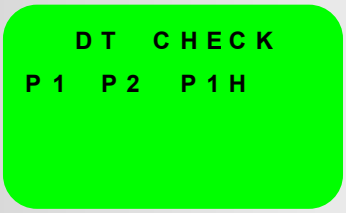
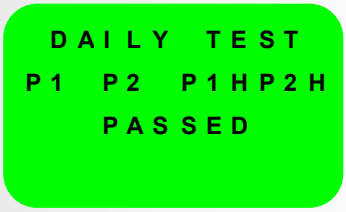
Our drain sequence is interactive upto 35 seconds, adapting to the size of the fire sprinkler system.

The pump will then start for 15 seconds and attempt to make both pressure switches healthy again.

SOLVING REGULATORY PROBLEMS

In the event a phase failure is detected, the Daily Test reports as failed, allowing the system to remain safe and fully pressurised. In a week, 5 tests will be performed.
Pump damage would definitely occur if running on a failed phase.
GRIFEN understand this risk and mitigate it, unless a jockey run is needed or a fire is detected.

- Tested automatically on every weekday at 10am, it can also be manually forced at any time.
- Record kept of all pass conditions if a test fails, until a test passes.
- **Two fully independent** failsafe pressure switches (defined as devices in BS9251: 2021, ie totally separate devices) are tested to achieve low pressure and return to high pressure again.
- Alarm in failure (a failure and the cause will be remembered until a successful test occurs, even after a power failure).

Phase fail	Test taking place	Items passed/to check	Confirmed pass
			
Phase fail has occurred and motor protection is on, preventing damage in a daily test.	For the test to pass Both P1 & P2 must go below the set pressure and then return healthy again.	The Daily Test didn't pass. The screen records the events that occurred. P2 hasn't returned healthy.	All checks passed and the system is healthy.

It will only be displayed if there are no other priorities occurring, e.g. jockey run / high alert.
As soon as they are cleared the DT CHECK will display.

If P1H and P2H are displayed at the end of the test, the pump must be functional and it's the drain sequence that has failed.

If either P1 or P2 are not healthy at the end of the test, there is a likely pressure switch issue. Monitoring will start and a jockey run will try and boost the pressure.

If both P1 and P2 have failed to return healthy then it could be a more serious issue. The pump will run in HIGH ALERT, giving someone the opportunity to investigate while the pump is running.

INTERACTIVE COOLING is activated in HIGH ALERT, protecting your pump from overheating.

CONTINUING COMPLIANCE

BS9251: 2021 requires annual services to be performed.

DUPLIC8™ reminds end users with an alarm and on screen message displaying your name and company number.

The service clock will remind every year.

The service can be forced at any time.

The product now gives on screen instructions to the engineer informing them of actions that need to be taken.

TEL 0161 874
SERVICE DUE
CLEAN STRAIN

The message below scrolls when a service is due, displaying your company name and phone number, essentially turning the product into a simple instruction manual.

CLEAN STRAINER, FLOW PUMP, SOUND FIRE ALARM, CHECK FAULT ALARM

WE GO THE EXTRA MILE

Labels spell out critical tasks, leaving nothing to chance.

We know instructions get lost, instructions not only appear on screen but also all over the product to ensure the best possible outcome throughout the products life.

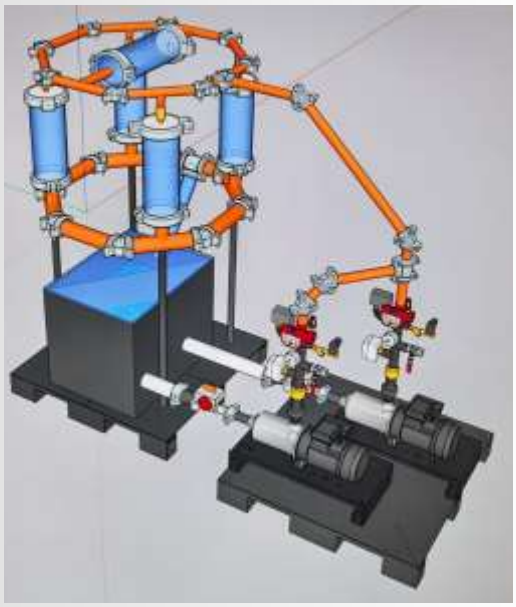
Instructions to carry out the daily test, force a service, silence the fire alarm are all permanently attached to the product.

TRAINING / DEMO ROOM

Our interactive training room has the following products:

BOOST8N™
FLOWST8N™
DUPLIC8™
FLOW CONTROLLED™
UPS POWER BACKUP 230Vac single phase.
UPS POWER BACKUP 400Vac three phase.
PDVS

You can electrically trigger sprinkler heads, including a sidewall in 6” polycarbonate tubes, view the discharge and operate and pass/ fail the pump for yourself. A huge monitor makes viewing in a group easy.



FAMILIAL OPERATION

Our residential pumps **BOOST8N™**, **FLOWST8N™** and **DUPLIC8™** now have familial operation. This enables engineers to operate Cat 1, 2, 3 and 4 pump systems with ease.

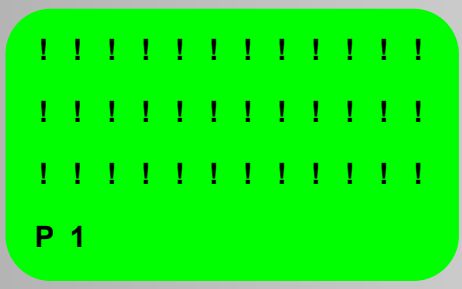
Key instructions and functions can be easily identified on the product, staying with it for life.

FEATURE	BUTTON	TIME	FAULT STATUS
SOLENOID DRAIN	LEFT ◄	Hold for 8 SECONDS to open, Immediate close on release	NONE (IN FAULT IN MAX ALERT)
FORCE A DAILY TEST	UP △	8 SECONDS	NONE
FORCE A SERVICE	PLUS +	8 SECONDS	IN FAULT
CLEAR A SERVICE	**See O&M**		CLEARS FAULT
STOP PUMP (for 20 seconds)	ESC	2 SECONDS	IN FAULT
SILENCE FIRE ALARM FOR 8 MINUTES	RIGHT ►	8 SECONDS	CLEARS

The solenoid can be triggered by the press of a button.

This can be used to check pressure switch cut in.

It can also be used to put the pump into on demand and check the alarm valve operation.



The pump can be stopped at any time

(and will soft stop if three phase)

The pump will stop for 20 seconds giving you time to switch off at the isolator.

Live device status can still be seen on the bottom row.

THE HEART OF THE MATTER

2 fully independent pressure switches wired in IP65 flexible 90 °C protective conduit.

ACTIV8™ - the mist protection system for the pump and controller.

1% accuracy glycerine filled 80mm gauge on a no loss connector.

LPCB 12259-5 flow switch with double knock alarm.

FM approved monitored delivery valve.

3/4” Y-strainer & WRAS approved solenoid.

INTEGRATING UPS POWER BACKUP

We understand that a UPS power back-up could be a daunting prospect, but we can simplify the process.

Our system has been designed to integrate seamlessly with our fire sprinkler pumps.

A standard UPS poses significant risks in a fire sprinkler application, owing to its inadequate IP rating.

GRIFEN have mitigated those risks, from fusing, alarms and crucially, a fire sprinkler resistant extra cabinet with water deflecting louvres both front and rear.

The external cabinet has cooling space with louvres front and rear to ensure cool operation and a long life.

Optimised operation reduces heat, enabling prolonged component and battery life.

Maximised autonomy time with tailored software designed with our OEM.

All faults alarm, provided as volt free contacts.

A palletised baseplate, slim enough to pass through a standard pedestrian doorway, making installation incredibly simple. Simply move with a pump truck on all 4 sides for ultimate flexibility.

A touch screen enables diagnosis, but locked out from potential tampering, ensuring lifetime efficacy.

Simply chose your fire sprinkler pumps and we will match your UPS power backup, for your one hour plus run time.

Our cabinet under assault from a live sprinkler head, this is the only way to total efficacy.

THE OPERATING TIMELINE

We are immensely proud of our research and development. We believe you simply will not find another product that is even remotely comparable.

We are happy and proud to explain in minute by minute detail how our product works.
We don't go in for marketing claptrap, this is a safety device and you need to know how it functions.
We have your back and you can sleep well knowing you have efficacy and knowing you did it right.

These time lines allow you to understand how events occur. The numbers represent seconds (not to scale).

Monitoring healthy, until the next event (UNV)

Pressure switch unhealthy

Pressure switch unhealthy, switch pre start checking time (4 seconds)

Pressure switch healthy (at pressure)

Jockey pump run

Flow switch flowing

HIGH ALERT (long jockey run, always 1 hour)

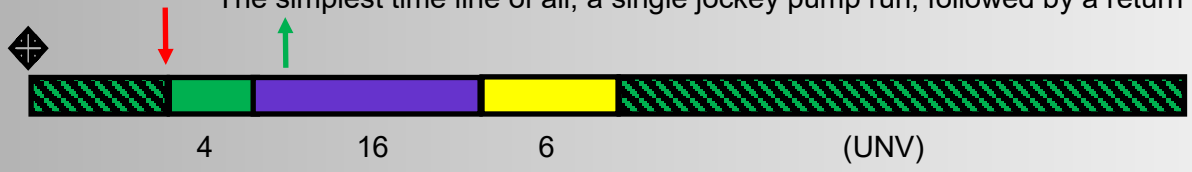
Flow switch not flowing

Pressure switch checking time, post jockey run (6 seconds)

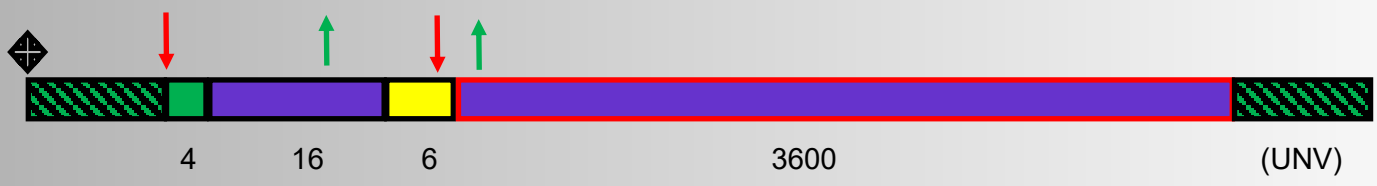
ON DEMAND (15 seconds of flow during HIGH or MAX ALERT), alarm condition, manual shut down required.

ON DEMAND + FIRE ALARM (20 seconds of flow during HIGH ALERT)

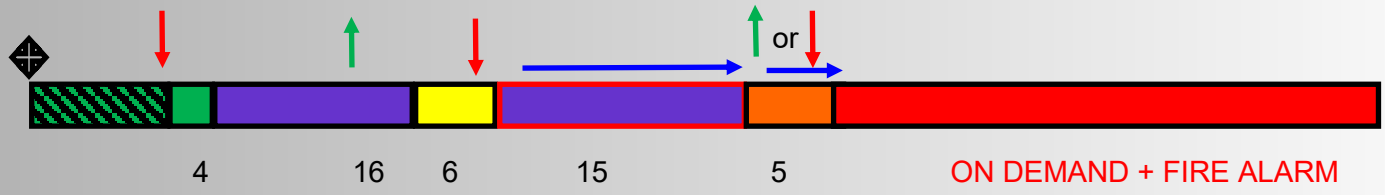
The simplest time line of all, a single jockey pump run, followed by a return to monitoring



HIGH ALERT followed by a return to monitoring, no flow, no fire, no alarm, no problem



HIGH ALERT, followed by ON DEMAND & ON DEMAND + FIRE ALARM. The key event being the flow switch triggering in high alert and stayed flowing, the pump will now not switch off and enters ON DEMAND + FIRE ALARM



HIGH ALERT & MAX ALERT, due to 3 rapid succession starts. The pump makes itself safe and can fix and reset itself. The PLC differentiates between slow & fast system leaks, activating MAX ALERT (+Common Fault Alarm & Screen message) where the frequency of JOCKEY RUNS indicate significant leakage & high frequency Pump Runs.