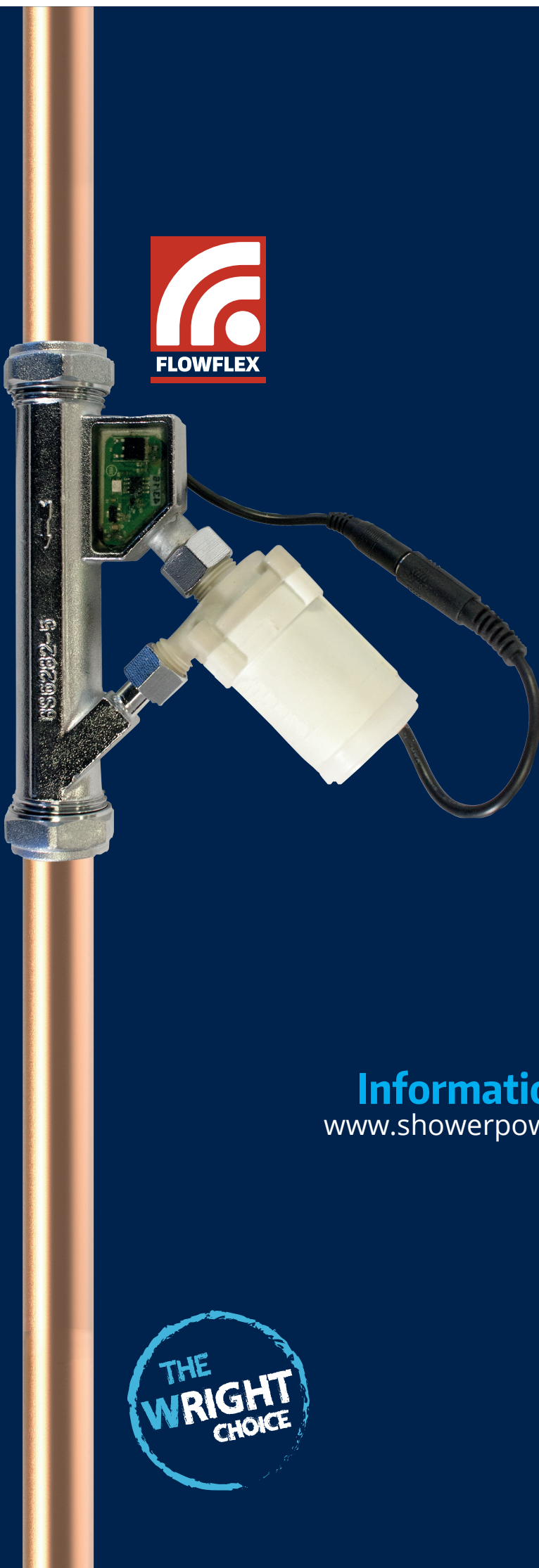




SHOWER  
POWER  
BOOSTER  
INLINE MICRO PUMP



**Information Manual**  
[www.showerpowerbooster.co.uk](http://www.showerpowerbooster.co.uk)



The Shower Power Booster was invented by Chartered Civil Engineer and hydraulics expert Alan Wright, who has worked in municipal water for 30 years, 25 of which were at Anglian Water. Over the years Alan has designed and worked on many water projects and his expertise was often sought to provide solutions to complex problems.

In his early years, as a reservoir inspector, Alan was impressed by the superb work of Victorian Engineers who understood the physics of water and made things happen without complex electronics. He discovered that the Victorians simply allowed the water to do what it wanted to do and not force it to do something it does not want to do! It is the mix of physics and simplicity which Alan has applied to his invention - the Shower Power Booster.

A result of careful and correct application of science, the Shower Power Booster is an innovative and unique technology which can transform your showering experience or enhance a dribbly tap, giving the same effect felt from a pump 20 times bigger, using 20 times the electricity to run.

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The Shower Power Booster (SP2B) is an award winning, innovative product, celebrated for its power versus size properties, winning Best Water Innovation by Imperial College London 2012.

WRAS approved and fully factory tested, the pump comes with a 2 or 3 year warranty.

Designed as a retro-fit booster, it uses a safe 12-volt brushless motor, which is highly efficient, fully waterproof, with low friction long-life bearings.

It is highly efficient when delivering volumes of water of up to 6.5 litres per minute to a traditional shower head or tap and it can deliver up to 9 litres of blended water for rain showers and bath taps.

The SP2B does not restrict flow so it automatically deactivates itself in the event of high flow rates or in a power cut, meaning your original flow is restored.

The Shower Power Booster has been installed in thousands of homes across the UK and beyond since 2012 with excellent customer satisfaction.

It comes with a 30 day money back return period so we encourage customers to trial the product and guarantee a refund if you are not fully satisfied.



## 2 OR 3 YEAR WARRANTY (SPB Ultimate Care Pack)

### 30 DAY RETURN POLICY

### WRAS APPROVED

### PUMP SPECIFICATION:

Pump Weight: 180g (625g including brass fitting)  
 Centrifugal Pump with Brushless Motor: 75mm x 35mm  
 Brass Fitting Length: 150mm  
 Fully Waterproof

### OUTPUT:

Maximum Head: 5.2m to 6m  
 Typical Output at 5 litres per minute: 3.2m  
 Head Power Consumption at 5 litres per minute: 12.6 Watts  
 Maximum Sustained Pressure: 4 Bars  
 Maximum Sustained Temperature: 85°C  
 Flow Switch - Magnetic Rotor Sensed by hall detector  
 Minimum Flow for detection: 1.5 litres per minute

### TRANSFORMER:

Input: 100-240 Volts 50/60Hz  
 Output: 12 Volts DC

### IMPORTANT:

#### Do not adjust the motor nuts. These are factory set tensions.

All pumps are tested before shipping but we welcome you to carry out pre-fitting checks:

Plug in the transformer and you will get a constant blue light, when installed a flashing blue light will indicate a detected flow and the pump is running.

You can check the flow switch yourself by visiting YouTube and search: 'Shower Power Booster - Flow Switch Check'

If you do not have 1.5 litres per minute of flow then the pump will not automatically kick in. You can bypass the flow switch by plugging the transformer directly into the white motor. You can then operate the pump by turning the power on and off. You can use the plug, a radio remote, or wire into the lighting circuit to activate the pump.

## SINGLE PUMPS

### SP2B

## AUTOMATIC SHOWER POWER BOOSTER      MANUAL SHOWER POWER BOOSTER



Both Automatic & Manual Shower Power Boosters are supplied with a transformer and 22mm to 15mm reducing sets.

## DOUBLE PUMP PACKS

### SP22S

## TWO AUTOMATIC PUMPS

### SP21S

## AUTO & MANUAL PUMPS



Double Pump Packs are supplied with a transformer, 22mm to 15mm reducing sets and cables to link the two pumps together.

## UPGRADE PUMPS

### SP2U

## AUTOMATIC PUMP UPGRADE

### SP1U

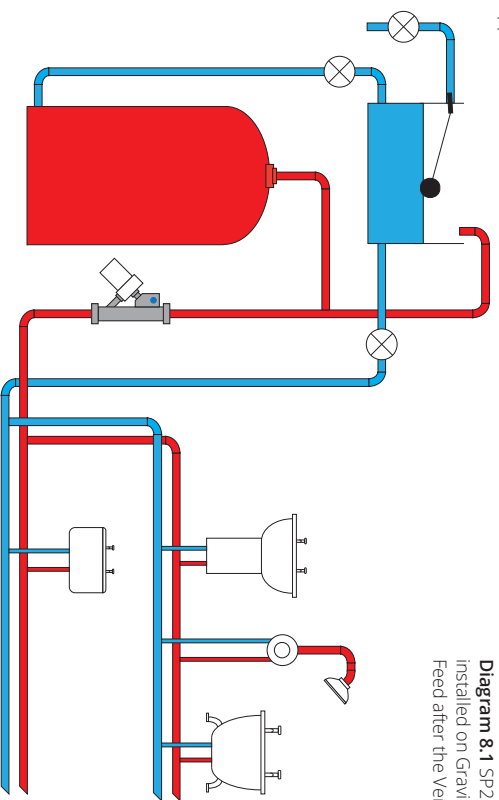
## MANUAL PUMP UPGRADE



Upgrade Pumps add a second pump to your existing setup. Upgrade pumps are not supplied with a transformer as they run from your existing transformer. They come with 22mm to 15mm reducing sets and cables to link two pumps together.

**WHOLE HOUSE SOLUTION**

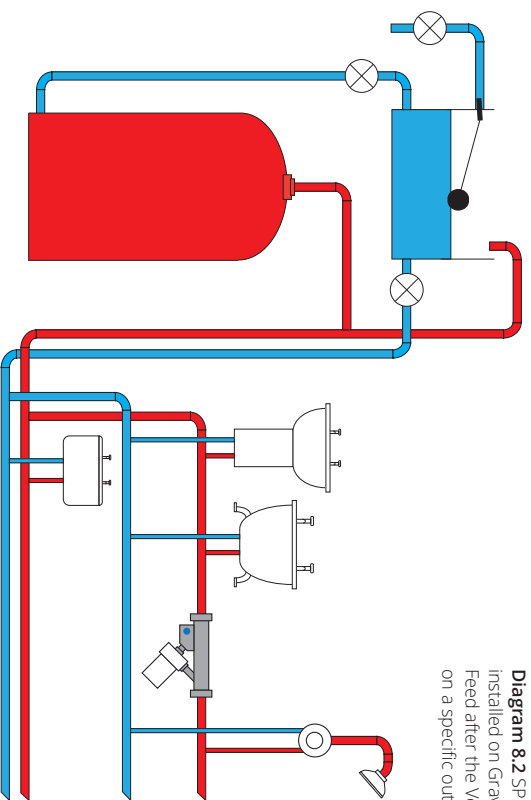
For gravity systems, our whole house solution is the most popular choice. Installing a pump next to the hot water cylinder, but after the vent pipe, will boost the flow rate for every tap, shower & application in the house.



**Diagram 8.1** SP2B installed on Gravity Hot Feed after the Vent Pipe.

**PROTECTED FLOW SOLUTION**

Sometimes there is just one tap, shower or application which is letting you down with poor flow rates & low pressure. The Shower Power Booster does not cavitate so you are able to install it on the feed which only supplies a specific tap or shower. This will not only improve the flow for the specific outlet, it will also maintain the flow even if other taps are being used in the home.



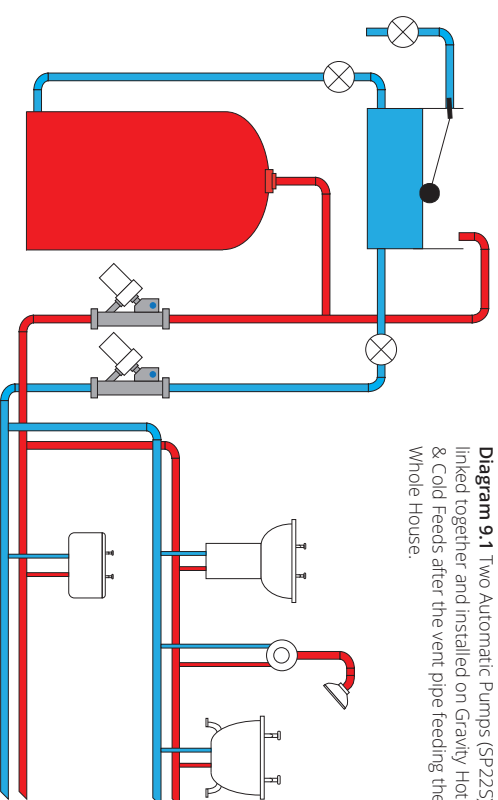
**Diagram 8.2** SP2B installed on Gravity Hot Feed after the Vent Pipe on a specific outlet.

**BALANCED FLOW SOLUTIONS**

A single Shower Power Booster is sufficient for most installations. A good shower or tap mixer should be able to cope with pressure differentials of up to 4 to 1.

If your hot and cold supplies are both very low pressure, or your mixer struggles to balance pressures, then you may need to install a pump on both the gravity hot and cold feeds. This will not only improve all water outlets, but will also keep the system balanced.

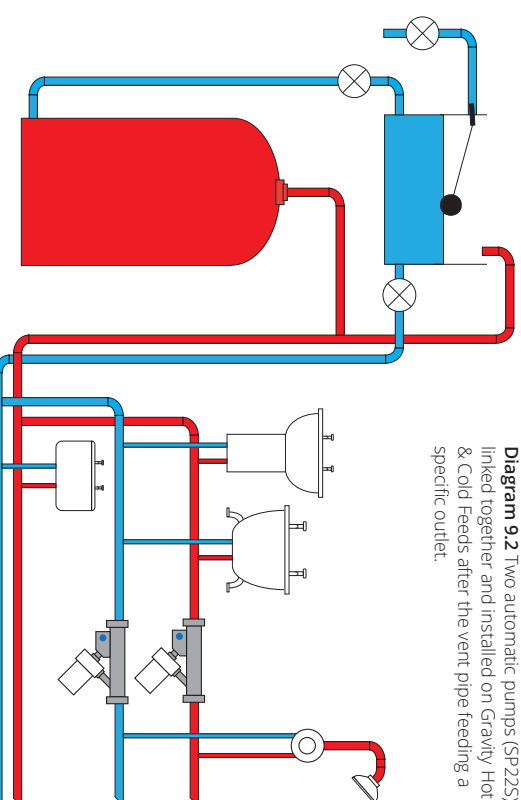
**WHOLE HOUSE BALANCED SOLUTION**



**Diagram 9.1** Two Automatic Pumps (SP225) linked together and installed on Gravity Hot & Cold Feeds after the vent pipe feeding the Whole House.

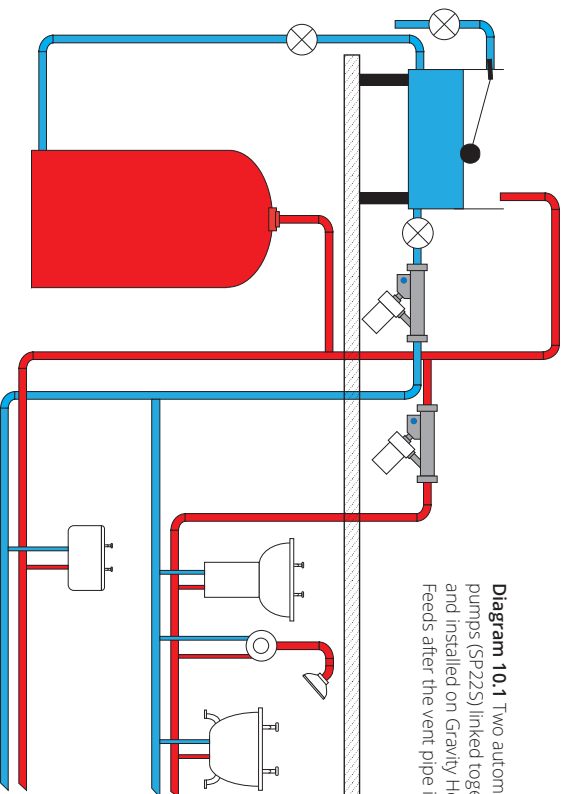
**PROTECTED FLOW BALANCED SOLUTION**

**Diagram 9.2** Two automatic pumps (SP225) linked together and installed on Gravity Hot & Cold Feeds after the vent pipe feeding a specific outlet.



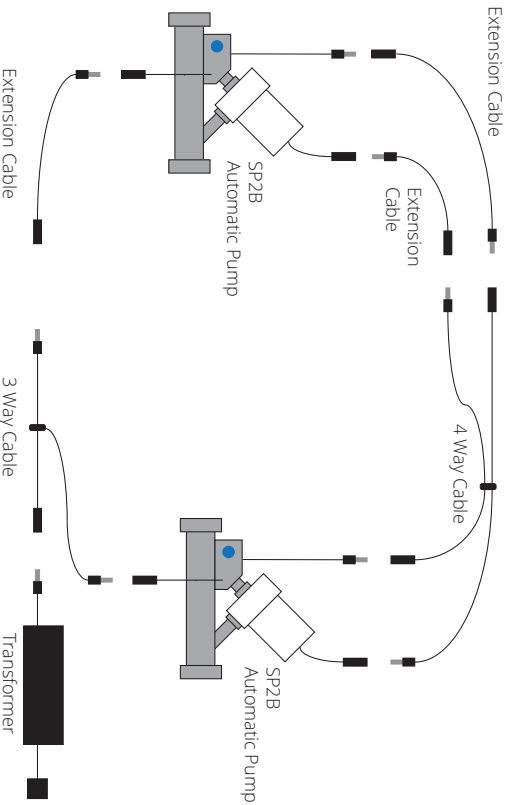
## FLEXIBLE INSTALLATION

The Shower Power Booster can be installed anywhere within the house, including in a shower room and in the loft. Pumps do not cavitate or pull air in the vent pipe so you can install wherever is easiest to fit. If you are struggling to get two pumps close together or installing in different rooms you can still link them together using low voltage DC extension cables.



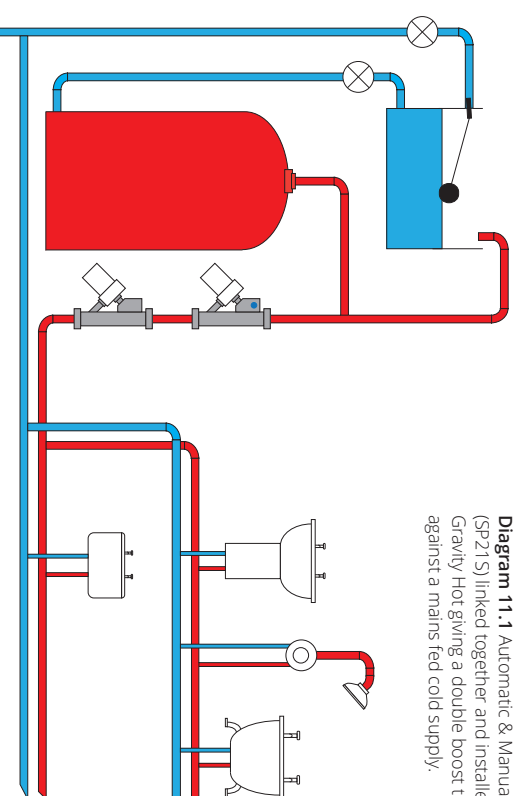
**Diagram 10.1** Two automatic pumps (SP22S) linked together and installed on Gravity Hot & Cold Feeds after the vent pipe in the loft.

## WIRE DIAGRAM WITH EXTENSION CABLES



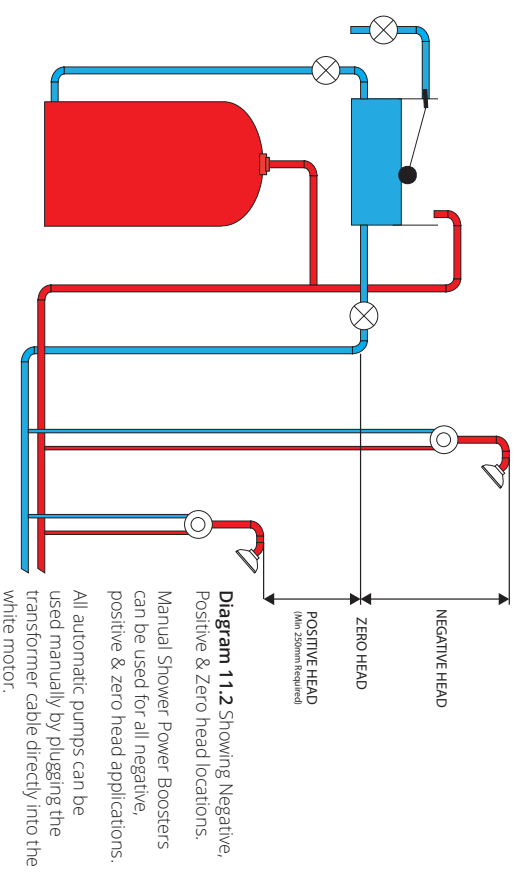
## MIXED FLOW SOLUTION

If you have a Gravity Hot Feed and a Mains Fed Cold Feed then you have a Mixed system. If your mains fed cold is higher than the gravity hot side and you are having issues due to this imbalance you will need a Shower Power Booster to give the gravity hot side a boost. If the mains fed is significantly higher you can add a pressure reducing valve, or a better solution would be to add a second pump to the gravity hot side, giving it a double boost.



**Diagram 11.1** Automatic & Manual pumps (SP21S) linked together and installed on Gravity Hot giving a double boost to balance against a mains fed cold supply.

## NEGATIVE HEAD & MANUAL SWITCHING



**Diagram 11.2** Showing Negative, Positive & Zero head locations. Manual Shower Power Boosters can be used for all negative, positive & zero head applications. All automatic pumps can be used manually by plugging the transformer cable directly into the white motor.

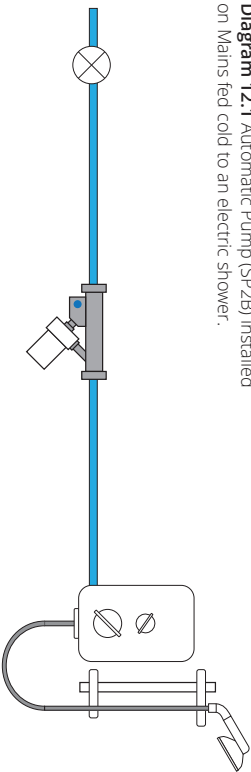
## ELECTRIC SHOWER SOLUTION

All Electric Showers are fitted with a pressure sensor and if the pressure of the incoming mains cold water supply falls below 0.8 Bar, the electric shower will switch off heating elements and you will be left with a cold shower or boiling hot water. Adding a Shower Power Booster will increase the pressure and flow rates to stop this from happening. If your incoming cold water supply is exceptionally low then you may need to add a second pump to double boost.

Although a Shower Power Booster will keep your electric shower active, it is important to note that all electric showers are limited by the KW rate to the amount of water it can heat, we would therefore advise that you measure the flow rate from your electric shower as you may already be getting the maximum flow rate from your electric shower:

- 7.5 KW Electric Shower 3.5 litres a minute
- 9.8 KW Electric Shower 4.7 litres a minute
- 12.5 KW Electric Shower 6.0 litres a minute

**Diagram 12.1** Automatic Pump (SP2B) installed on Mains fed cold to an electric shower.

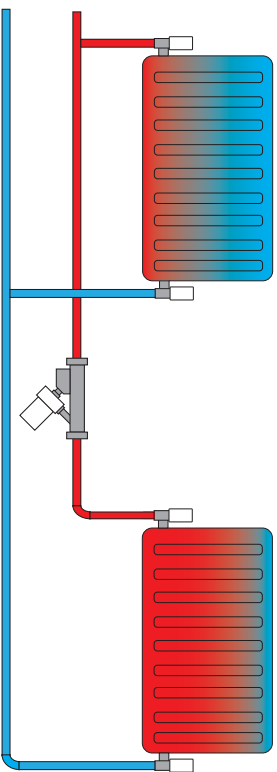


## RADIATOR SOLUTION

A Shower Power Booster can be used to drive water towards or from a radiator or group of radiators which are not getting hot. In many homes radiators do not get hot due to air locks, poor pipework or due to being located some distance from the boiler.

You can install the pump on either the flow or return to the radiator(s). You need to operate the pump manually and it can be activated by simply switching it on and off at the socket, using a radio remote, using a timer or by being linked to the central heating system.

**Diagram 12.2** A Manual Pump (SP1) improving the flow to a radiator



## COMBINATION BOILER SOLUTION

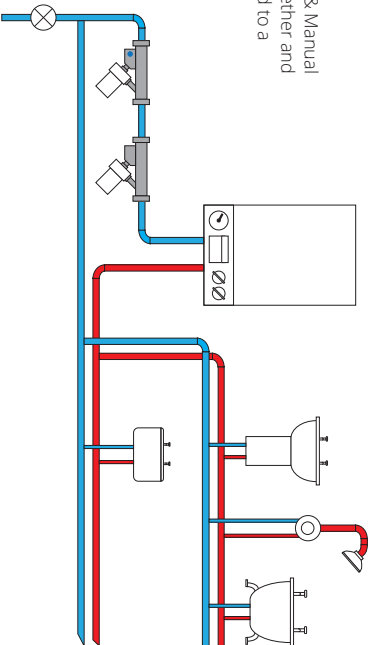
Combination boilers are fitted with a pressure sensor and if the pressure of the incoming mains cold water supply drops below 1.0 bar the gas is turned off. The Shower Power Booster can be legally fitted to the incoming mains cold supply to increase the pressure and flow rate to stop this from happening.

In most cases a single pump is enough to keep the boiler active adding between 0.2 and 0.4 Bar of pressure. However, you can add a second pump to give a double boost adding around 0.4 to 0.6 Bar to the pressure preventing the combination boiler from falling below 1 bar.

Although the output of a combination boiler greatly exceeds the output of a Shower Power Booster you can still expect to protect flow rates of 6 litres a minute to showers and around 8.5 litres a minute to taps.

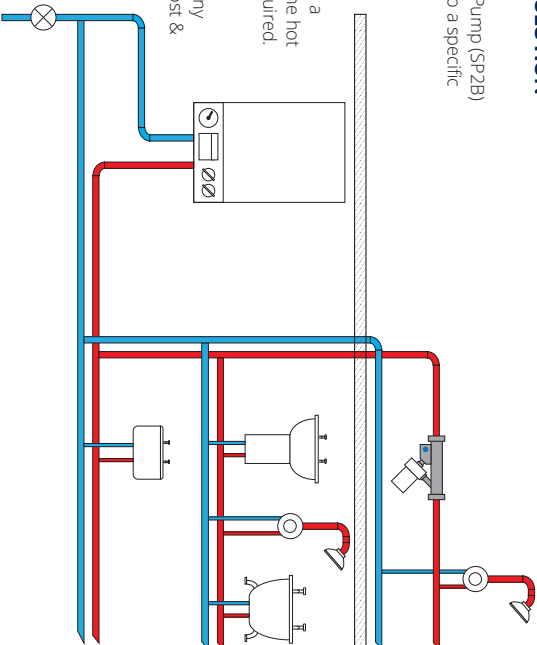
## WHOLE HOUSE SOLUTION

**Diagram 13.1** Automatic & Manual Pumps (SP21S) linked together and installed on Mains fed cold to a combination boiler.



## PROTECTED FLOW SOLUTION

**Diagram 13.2** Automatic Pump (SP2B) installed on the hot feed to a specific outlet.



For demanding situations a second pump either on the hot or on the cold may be required.

A Shower Power Booster works on the hot side of any Combination Boiler to boost & protect a shower or tap.

## 3 STEP INSTALLATION

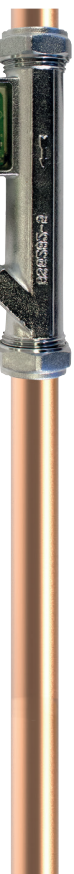
A Shower Power Booster can be fitted in most places enabling you to install wherever is most convenient. Pumps are supplied with everything you need to install on 22mm or 15mm pipe and it takes just 3 steps to install.

### STEP 1 - Select location for pump & isolate the pipe

The diagrams on the previous pages suggest where is best to install for specific applications. Please ensure that the pipework is isolated and free from water before cutting the pipe.

The Shower Power Booster limits the amount of water taken from the Hot Water Cylinder and can only pump up to 9 litres a minute. Shower Power Boosters do not pull in air and there is no need for a Surrey or Essex Flange and no need to drain the cylinder.

### STEP 2 - Remove 115mm of pipe, insert the pump & tighten the compression joints.



Once you have identified the pipe size use reducing sets accordingly. You can use 3/4" imperial olives to install on 3/4" imperial pipe. Inserts must be used when installing on plastic PEX pipe. If there is little play in the pipes compression slip couplings can be used to enable easy fitting.

Due to the lightweight and compact nature of the pumps they can be fitted unsupported on existing pipework at any angle or orientation.

Do not hold the barrel (white motor) of the pump when installing and (if at all), use any jointing compound very sparingly. This can easily get into the pump and block the filter.

### STEP 3 - Connect transformer cable to the pump and to a power supply.

Once connected and turned on the LED light on an SP2B will indicate the status of the pump:

**Constant LED light** = Pump has power

**Fast flashing light** = Pump has detected water flow and is running

**Slow flashing light** = Transformer Fault



**Please note:** If you have two pumps connected the LED on one pump will shine solid blue while the LED on the other pump may flash - both pumps will be running. This is because the flow rate in one pump is less than 1.5 litres a minute.

Shower Power Booster pumps run off a 12-volt power supply, which allows you to install in bathrooms, where traditional 240 volt pumps would not be allowed.

The transformer can be plugged into the nearest convenient 3-pin socket and without the need for an electrician. You can get to sockets up to 1.5m away from the pump by using our extension cables. Pumps, which only need 15 watts of power, can also run off an electric light circuit.



## INSTALLATION TIPS - INSTALL AFTER THE VENT PIPE

The only place you cannot install a Shower Power Booster is before the vent pipe. Installing a pump before the vent pipe will result in you pumping hot water into your cold water tank and not to a tap or shower. Diagrams on the previous pages show where to install to boost either the whole house or a specific feed.

Before installing the pump you need to determine which pipe is heading to the cold water tank and which is heading for the outlet you want to boost. You can establish this by turning on the tap or shower you want to boost and feel which pipe gets hot. The vent pipe is the pipe going to the cold water tank and the hot water supply will be the hottest pipe.

You may find that the hottest pipe is the vent pipe heading up towards the cold water tank. If this is the case it means there is a gravity hot supply feeding of the vent pipe in another location, usually the loft. There is no problem installing in the loft, but make sure you fit the pump to the hottest pipe and the pipe which is only feeding the outlet you want to boost.

### USING A SWIVEL CONNECTOR

A swivel connector allows you to connect the Shower Power Booster directly to 3/4" Male BSP Thread.



1. Take the bush from the reducing set supplied and insert into the body of the pump.

2. Place a washer on the bush and connect the round end of the swivel connector, creating a seal.

3. Place second washer inside the 3/4" swivel nut. The Shower Power Booster is ready to connect to a 3/4" Male BSP Thread.

### USING A SLIP COUPLING

A 22mm or 15mm slip coupling can be used if you need some play on the pipes to fit the Shower Power Booster.



1. Cut the pipe either side of where you want to fit the pump

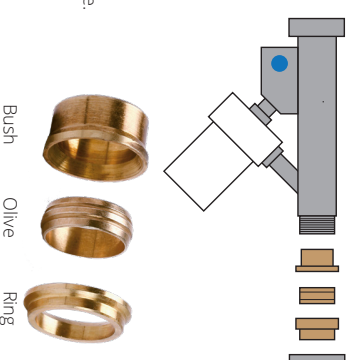
2. Install the pump on the length of pipe you have removed.

3. Reinstall the length of pipe you have removed. The coupling simply slips over the pipe so you can easily reconnect when the pump is installed.

### USING 3 PIECE REDUCING SETS

3 Piece Reducing sets are supplied with all Shower Power Booster meaning you can easily install the pump on either 22mm or 15mm pipe. When installing on 15mm pipe you need to use the 3 piece reducing set:

1. Remove 22mm Nut & Olive.
2. Insert the Bush, thin end first.
3. Insert the 15mm olive.
4. Place Ring on Olive, with the lip resting on the 15mm Olive.
5. Put the 22mm Nut back on and tighten.

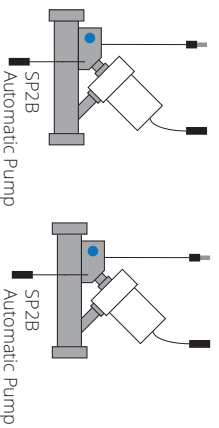


## PUMP NOT KICKING IN?



You can reconfigure the wiring on Automatic pumps so that instead of relying on the flow switch, pumps are activated by the power supply.

You can activate a power supply by turning on a three pin plug socket, using a radio remote or by wiring in to a lighting circuit.



## PROBLEMS WITH AIR

Air trapped in the pipework between the hot water cylinder and the shower or tap can reduce the flow significantly. If the hot pipe near the cylinder rises into the loft, across and down to the outlet, then an 'inverted U' is created and a column of air will be trapped in the loft with no means of venting it. The solution is to tee the pipe into the vent pipe in the loft and fit the Shower Power Booster there. See Diagram 10.1 on page 10.

There are other pipe configurations that can trap air. Plug the transformer directly into the white motor and remove the shower head to maximise the flow. The increased flow may allow the water to push the air all the way to a shower hose or fully opened tap.

If the pump runs and you have a continuous flashing light, pauses with a constant blue light, then runs and the blue light starts flashing again - you have got trapped air.

## INSUFFICIENT WATER REACHING THE PUMP

If there is insufficient water reaching the tap, then it will drain the water from the vent pipe until it runs out of water. When it has run out of water, the pump will spin quickly and the pumping efficiency will drop. This can allow the incoming water to 'catch up' and re-prime the pump - the pump commences to pump in water again, this can be identified by a lower tone from the pump. As soon as it exhausts the water supply the process repeats.

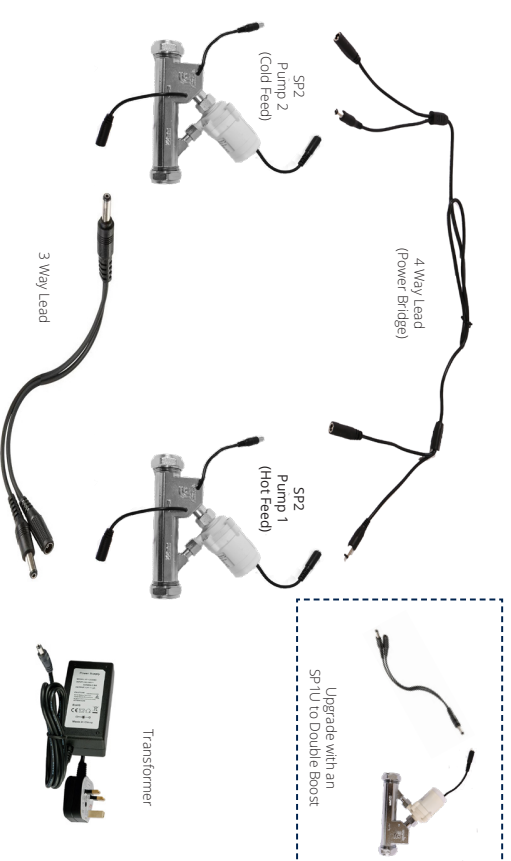
The fault can lie in not turning on the shut-off valve after the pump is fitted, a faulty shut-off valve, or sediment in the hot water cylinder which is blocking flow, or air in the pipe work between the cold tank and the hot water cylinder. To confirm this fault, allow a pipe to discharge water freely and note the maximum flow.

## CAN'T FIND AN ANSWER TO YOUR PROBLEM?

Simply google: 'Showerpowerbooster fault finding'

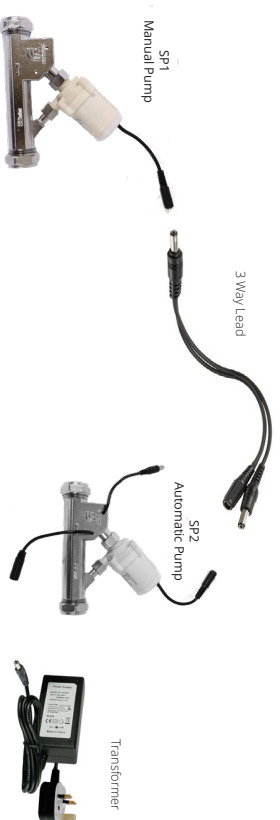
## SP225 - TWO AUTOMATIC PUMPS (or SP2B and SP2U Upgrade Pump)

Balanced Flow: Boost both Hot & Cold Gravity Feeds



## SP215 - ONE AUTOMATIC & ONE MANUAL PUMP (or SP2B & SP1U Upgrade Pump)

Double Boost: Two pumps on Hot or Cold Feed provides a double boost





For more than 60 years Flowflex has been at the forefront of designing and engineering solutions for the heating and plumbing sector, delivering innovation and technical know-how to support contractors, consultants, installers and our distribution partners.

As a family business we pride ourselves in the integrity, quality and reliability we deliver through our products and people. With a strong heritage in British engineering and manufacturing we champion innovation and help to bring new and exciting solutions to the market.

Our vision is to be a world leader in engineering and manufacturing solutions for the heating and plumbing sector and beyond, including working in partnership with manufacturers across a variety of industries through our OEM solutions.



**British Manufacturing and Engineering**

Maintaining the highest quality in design, engineering and manufacture is a vital factor in the delivery of our fittings, valves and components. Operating on a six-acre site in the North of England, we ensure that we manufacture to the highest standards to produce outstanding products that are fit for purpose.

Over sixty years we have built the knowledge and expertise to develop superior engineering solutions for our customers and manufacture some of the most highly regarded non-ferrous plumbing fittings available on the market.

Our dedication and commitment to excellence in everything we do is evident in the loyalty of our customers and the reputation of our products.

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Trustpilot

For assistance please contact product experts at Flowflex who will be able to offer advice and help you with any issues you may have.

**PHONE:** +44 (0) 1298 77211

**EMAIL:** [SPB@flowflex.com](mailto:SPB@flowflex.com)

### **FLOWFLEX OFFICE HOURS:**

Monday to Thursday 08:30 to 17:00

Friday 08:30 to 16:00

Alternative & Out Of Hours contact details are displayed on our website:

[www.showerpowerbooster.co.uk](http://www.showerpowerbooster.co.uk)

### **SHOWER POWER BOOSTER**

Invented by: Alan Wright BSc (Hons) CEng M.I.C.E



**FLOWFLEX**

MANUFACTURED UNDER LICENCE IN THE UK  
UK Patent Granted