PUMPWORLD

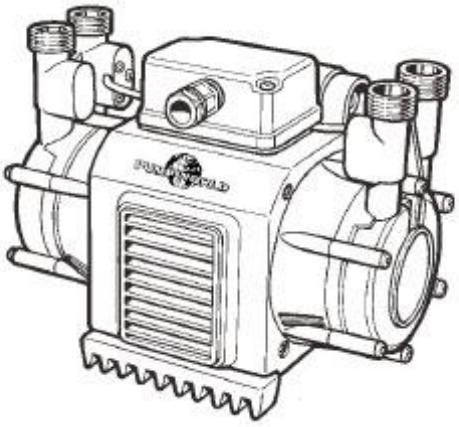
supergen

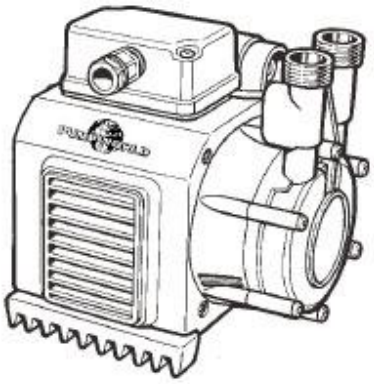
performance shower pumps

INSTALLATION GUIDE

58TX TWIN
15SX SINGLE

AUTOMATIC REGENERATIVE





This is a high performance, high specification pump range with precise installation requirements.

Please pass all manuals on to the householder after installation.
It is necessary to retain proof of purchase in order to facilitate any warranty claim.

technical helpline : 01793 820142

QUALIFIED INSTALLER TO CARRY OUT INSTALLATION

1. GENERAL

Your Supergen Shower Pump has been designed and manufactured in England.
If correctly installed and not misused, it will give many years of reliable service.

Installation and operation must comply with local regulations and accepted codes of good practice. The use of this product requires experience and knowledge of the product. To ensure satisfactory operation, we ask that you read the instructions before commencing installation. Then carry out, in sequence, each step as described. The instructions MUST be followed, otherwise the pump may be damaged and your warranty invalidated.

Note: Please dispose of any packaging supplied in an environmentally friendly and legal manner.

2. PREPARING THE PUMP

When unpacking and installing pump, ensure that no foreign particles (such as solder or dust, etc) are allowed to enter the outlets; these will cause the flow switch to malfunction and damage the pump impeller.

The pump is made of acetal copolymer plastic, which is destroyed by solder flux. Do not allow any solder flux to come into contact with any part of these pumps.

3. POSITIONING THE PUMP

Do not connect the pump directly to the water mains supply.
The pump cannot be used with combination boilers, unvented cylinders, thermal store etc.

There should be a minimum of 227 litres (50 gallons) of stored cold water.
The pump cannot operate if the level of the water in the cold water tank is below the level of the pump.

The pump must have an inlet head of at least 1.0 m.
There must be a minimum height between the bottom of the cold water tank and the highest point of the outlet pipe or the shower outlet of at least 250 mm for positive head pumps.

Supergen 58TX / 15SX	
Inlet Head	**1 - 10 m**

It is important to select a position for installing the pump which affords easy access for subsequent servicing and maintenance. Ensure a good flow of water, sufficient inlet head, unrestrictive pipework and provision to prevent air locks.

The pump must be uncovered in a well-ventilated, frost-free location.

Position the pump horizontally with the outlet ports vertically upwards to ensure correct operation. Install on a vibration-free foundation. In case of wooden floors, use a small concrete foundation of approximately 225 x 225 mm and 40 - 50 mm thick.

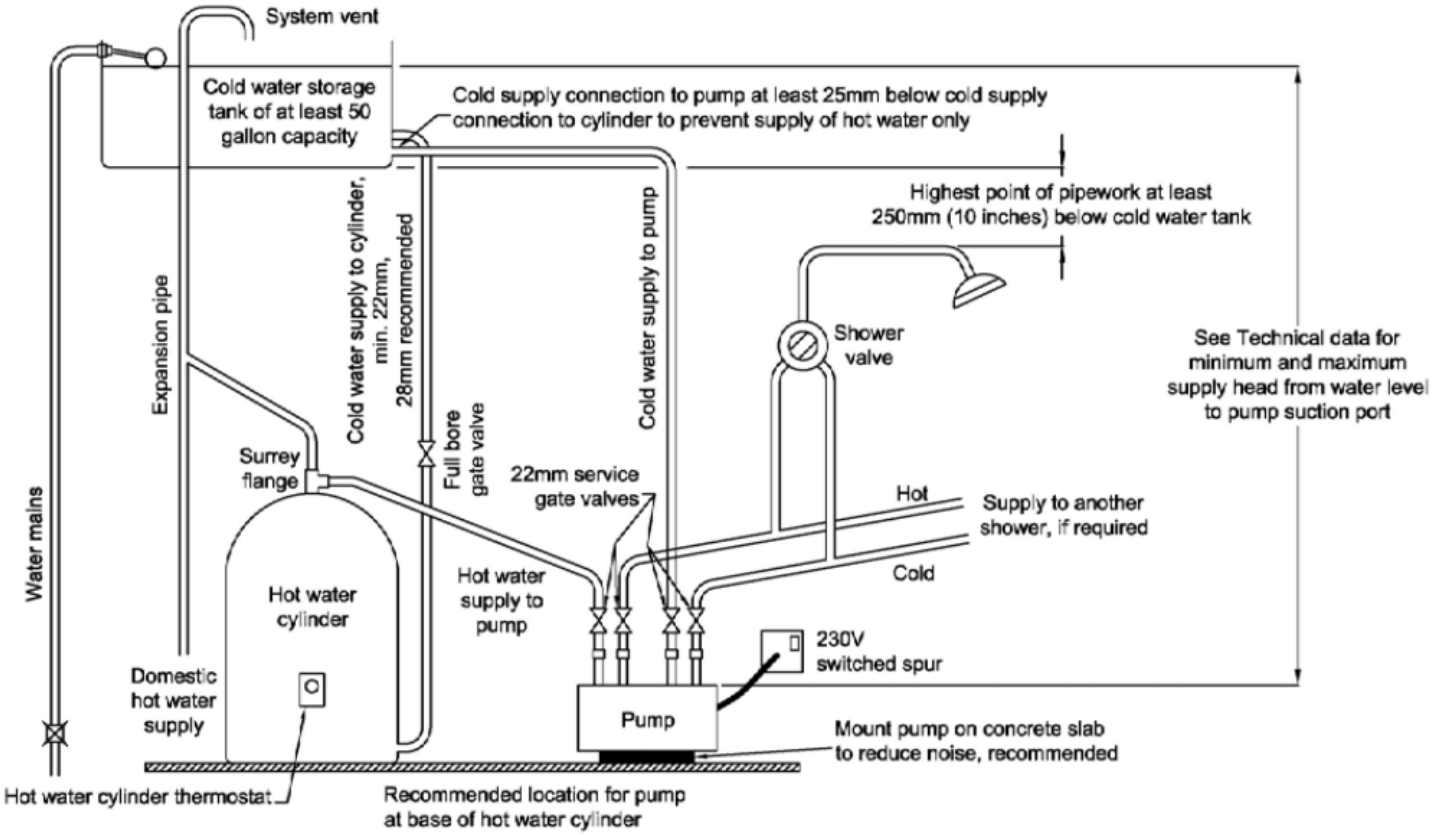
Keep the pump as close as possible to the source of hot and cold water.
Install the pump in accordance with the Water Supply (Water Fittings) Regulations 1999.

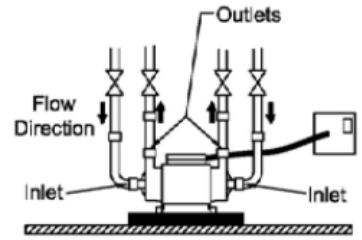
Ideally position the pump at the base of the hot water cylinder.

Fit a downward loop of at least 450 mm if the pump is positioned above the hot water cylinder. This will help prevent air locks.

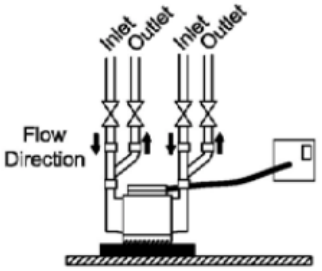
For installation within a bathroom, locate the pump in accordance with local regulations. Position the pump at least 0.6 metres horizontally away from or 3.0 metres vertically above floor from any bath, shower tray or basin. The pump may be fitted under a bath, providing this space is only accessible through the use of a tool. **For installation in the loft,** ensure there is sufficient head to feed the pump. For assistance, call 01793 820142.

4. TYPICAL LAYOUT (FIG. 1)





Pipework connections Centrifugal pumps



Pipework connections Regenerative and Brass pumps

5. PIPE CONNECTIONS

Use 15 mm or 22 mm pipes to and from the pump.

- The expansion pipe from the hot water cylinder should always rise in order to prevent trapped air.
- The outlet pipe from pump to shower valve should rise, where possible, to prevent trapped air.
- Pipes from the pump to the shower valve should go up and over, rather than under floor.
- Do not fit any other outlets in the inlet pipes to the pump.
- Use dedicated supplies to hot and cold water.
- Avoid blanked off pipes.
- Avoid restrictions in the flexible hoses.
- Secure down all pipes to minimise noise and vibration.

6. HOT WATER CYLINDER CONNECTIONS

DO NOT USE ANY JOINTING COMPOUNDS

- Connect the supply from the hot water cylinder to the pump with a dedicated supply.
- Fit a surrey flange to minimise air in the hot water supply to the pump.
- Use 15 mm or 22 mm pipe to ensure an adequate flow to the pump. Use of a smaller diameter may cause cavitation and/or reduce showering performance.

7. COLD WATER SUPPLY

DO NOT CONNECT DIRECTLY TO THE WATER MAINS SUPPLY
DO NOT USE ANY JOINTING COMPOUNDS OR TAPE

- The cold water supply to the pump must be connected directly from the cold water storage tank (do not connect to the central heating header tank), see **Fig 1**.
- The cold water storage tank must be equal to or larger than 227 litres (50 gallons).
- Position the cold water outlet at least 25 mm lower than the supply to the hot water cylinder to prevent the supply of hot water only.

Do not position outlets in the cold water storage tank directly below the inlet from the water mains supply in order to prevent air from being drawn into the pump or hot water cylinder.

8. CONNECTING THE PUMP

DO NOT USE ANY JOINTING COMPOUNDS OR TAPE.
DO NOT ALLOW SOLDER FLUX TO COME INTO CONTACT WITH THE PUMP.
ENSURE UNRESTRICTED FLOW IN THE FLEXIBLE HOSES.

- **Do not fit non-return valves in the inlet pipework to the pump.**
- Fit full-bore isolating valves in the pump inlet and outlet ports for easy installation, servicing and cleaning of strainers. Isolating valves assist draining down, strainer cleaning and refilling.
- Position the pump on a flat, level surface, ensuring that the outlets are vertical for correct operation of the flow switches. Position supply pipes and shower pipes accurately so that the pump is not under any mechanical strain, such as supporting weight of pipes.
- The filters supplied with the pump must be fitted to the pump inlet connections only (See Fig. 2) with the wire dome towards the pump. Fit the plain hose washer in the outlet connection.
- **The flexible hoses supplied must be used for connecting this pump to the pipe work.**
  Do not connect metal (brass / iron) fittings directly onto pump inlets / outlets.
  The threads are ¾" BSP parallel and are designed only for mating with the flexible hose connectors. Use of these hoses will ensure strain and vibration-free watertight connections.
  Care should be taken with pump positioning so that the flexible hoses are not kinked.
  Max bend allowance of 45 degrees.
- The flexible hose connection nuts should be "finger tight" plus ¼ turn. The nuts should be re-tightened after hot water has been pumped for the first time.
- Ensure correct alignment to avoid cross threading.
- Line up pipework accurately and fit hoses to pump before connecting to pipes.
- **To disconnect the push fit hose,** firmly push down the retaining ring whilst pulling out the hose.

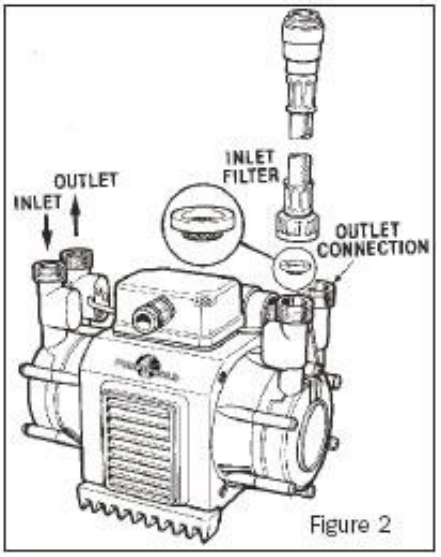


Figure 2

9. TEMPERATURE SETTING

Maximum hot water temperature at the pump must not exceed 60°C (140°F) in accordance with BS6700:2006, to eliminate the risk of limescale and cavitation.

10. FLANGES

Either Surrey, York, Warix or Essex flanges can be used for the hot water cylinder, depending on the cylinder type and installation. We do not recommend that you take the hot-water supply directly from the top of the hot water cylinder, as entrapped air may cause problems such as airlocks in the supply pipe.

11. ELECTRICAL INSTALLATION

The low voltage pump installation kits are supplied with 3 metres of connecting lead. The connecting leads between the pump and the isolating transformer can be extended up to about 15 metres.
Use min. 1.0 mm^2 cable.

DANGER - ELECTRIC SHOCK - DEATH OR SERIOUS PERSONAL INJURY
ENSURE COMPLIANCE WITH IEE REGULATIONS

Before starting any work on the product, make sure that the power supply has been switched off and that it cannot be accidentally switched on.

- Complete all pipe installation before making any electrical connections.
- Do not allow any water to enter into the electrical terminal box.
- Electrical hazard will result if the pump is not correctly earthed. Installation must be carried out by a competent, authorised person in accordance with local regulations. If in doubt, consult a qualified electrician or call your local electrical supplier.
- Check that the supply voltage and frequency correspond to the values stated on the nameplate.
- **The pump must be connected to a 230 volt 50 Hz supply. The unit must be connected to a switched spur fused at 5 Amps with a minimum contact gap of 3 mm in all poles.**
- Metal pipes must be earthed by the use of earthing clamps and 4 mm^2 earthing wire (BS 951).
- Connect the pump to a socket with earth connection.
- We recommend that you fit the permanent installation with an earth leakage circuit breaker (ELCB) with a tripping current ≤ 30 mA.

1. **1x 230V, 50 Hz. Strip off the insulation cap and the leads as specified for the switched spur.**

Observe colour coding as follows:
- Brown to terminal L.
- Yellow and green to terminal E (PE).
  Ensure the earth lead is at least as long as the other two leads.
- Blue to terminal N (neutral).

2. Insert the lead fully into the terminal connector and tighten the screw firmly.
3. Ensure that the connection is secure.
4. Tighten the cable restraint.

Follow procedure for startup before switching on the power supply. Comply with IEE regulations. Fit the terminal box cover before you switch on the power supply.
The pump switch should be left in ‘on’ position at all times for normal operation of the system.

12. PUMP START UP

DO NOT START THE PUMP UNTIL IT HAS BEEN FILLED WITH LIQUID.
BEFORE STARTUP, FLUSH THE SYSTEM WITH CLEAN WATER AND DRAIN TO REMOVE POSSIBLE IMPURITIES.

1. Turn on the water supply. Allow the system to fill.
2. Immediately inspect for any leaks.
3. With the pump not running, allow maximum water flow, for example remove the handset from the shower hose.
4. Operate maximum hot and cold flows for at least two minutes to flush out all debris.
5. Switch on the power supply, run the pump for a few minutes, switch off, drain down and clean the inlet strainers.
6. Replace the inlet strainers and reconnect the hoses.
7. Turn on the water supply. With the power supply off, allow maximum water flow, for example remove handset from the hose.
8. Operate maximum hot and cold flows for at least 5 minutes each to ensure air is thoroughly purged from the system.
9. Replace handset on the shower hose.
10. Switch on the power supply.
11. Operate the pump in both full hot and cold modes for two minutes each while inspecting for leaks.
12. Check that all hot water connections are tight and not leaking when the hot water has been run for several minutes.

The first few times the pump is used, the insulating varnish used on the pump motor may give off an odour. This is perfectly normal and will diminish with use.

Shaft seal run in - The seal faces are lubricated by the pumped liquid, meaning that there may be a certain amount of leakage from the shaft seal. When the pump is started for the first time, or when a new shaft seal is installed, a certain run-in period is required before the leakage is reduced to an acceptable level. The time required for this depends on the operating conditions. Under normal conditions the leaking liquid will evaporate. As a result, no leakage will be detected.

Run the pump for five minutes or more at least once every 4 weeks in order to prevent the pump from seizing up. Scale buildup can cause the pump parts to stick.

13. MAINTENANCE & SERVICING

- Inspect all flexible hoses and connections at least every six months, as water temperature and mechanical stress, can cause the hoses to deteriorate with age. Replace as necessary to prevent leaks. Only hoses designed for the pump can be used.
- Clean strainers every 6 months, or when needed. If the flow from the shower drops below its normal performance, it may be necessary to clean the pump strainers. Blocked strainers are common on initial installation of pumps, or in new buildings where the use of jointing compounds, tapes, flux and other debris can be flushed through the system. In this event, close the isolating valves, remove and clean the strainers. See section 12 Pump Start Up.

- Washers and seals must be replaced when necessary to prevent leaks or drips.
- If the supply cord is damaged, contact Pump World for assistance.
- A common cause of poor shower performance is a clogged shower head / handset, so regular cleaning and descaling is important. This applies particularly to hard water areas.

14. FAULT FINDING

Before starting any work on the product, make sure that the power supply has been switched off and that it cannot be accidentally switched on.

One of the most common causes of pump problems is air in the system.

Fault	Possible Cause	Remedy
1. The pump fails to start.	a. The power supply is switched off.	Switch on the power supply.
	b. The fuses are blown.	Replace the blown fuses. If the new ones blow too, check the electrical installation.
	c. The built-in thermal protection has switched off the motor.	The thermal protection resets automatically within one to two hours.
	d. Pump installed with non-vertical outlet ports (flow switches)	The pump must be installed with vertical outlet ports (flow switches).
	e. Insufficient water flow, below 0.5 lpm	Increase the water flow to at least 0.5 lpm.
2. The pump runs but delivers no water.	a. Isolating valves are closed.	Open the isolating valves.
	b. Strainers are blocked.	Close the isolating valves, clean the strainers and re-open the valves.
3. The flow from the shower drops.	a. Strainers are blocked.	Close the isolating valves, clean the strainers and re-open the valves.
4. The pump runs continuously.	a. A tap or outlet is open.	Ensure that there are no leaks and that all taps and appliances are closed.
	b. Air in the system.	Purge any air in the system. With the pump not running, allow maximum flow by removing the shower handset and allowing the hose to hang into the shower tray or bath. Operate maximum hot and cold flow for at least five minutes each. For fixed head showers remove the shower rose and connect a length of hose, hanging into the shower tray or bath.
	c. The float in the flow switch is stuck in the up (on) position.	Make sure that the flow switch can operate correctly and there is no debris in the flow switch.

	d. Flow switch or reed switch faulty or incorrectly set.	Adjust or replace as appropriate.
5. The pump pulses.	a. The use of other taps in the house may cause the pumps to start momentarily.	Ensure that taps or other outlets are not causing water hammer. A low pressure non-return valve can be fitted on the outlet pipe of the pump. Contact your installer.
6. Unstable water temperature or noisy pump.	a. Air entering the pump, most commonly from the hot water cylinder.	Fit a Surrey flange and study the pipe layout. There should be no high points where air can collect.
	b. Too high water temperature.	Reduce hot water temperature. The maximum hot water temperature at the pump is 60’C.
	c. Debris caught in the impeller casing.	Remove debris.
7. Noisy pump.	a. Vibration through pump mounting surface.	Place the pump on a concrete slab to reduce noise.
8. Hose connection leaking.	a. Hose connection loose.	Make sure that the hose washers and strainer washers are fitted. Check that the plastic nuts on the hoses are tight.

15. TECHNICAL DATA

Supergen 58TX (Supergen 15SX)

Electrical		**Mechanical**		**Dimensions**	
Volt / Phase / Frequency	230/1/50	Inlet Head (min - max)	1 - 10 m	Length	250 mm (230 mm)
Power Consumption	See nameplate	Max Developed Pump Head	15.0 m	Width	140 mm
Rated Current	See nameplate	Max Working Pressure	3.0 Bar	Height	190 mm
Rating *	20 min on / 40 mins off	Min Starting Flow Rate	0.5 lpm	Weight	5.8 kg (4.98 kg)
Enclosure +	IPX2	*** Recommended minimum flow rate 5 lpm**			
Motor	4 Pole Induction	**+ When mounted on a flat, horizontal surface.**			
Temperature		**The specifications in brackets ( ) refer to the Supergen 15SX**			
Ambient Temperature	Max 40°C				

16. DISPOSAL

This product or parts of it must be disposed of in an environmentally sound way:

1. Use the public or private waste collection service.
2. If this is not possible, contact Pump World.

The crossed-out wheelie bin symbol on a product means that it must be disposed of separately from household waste. When a product marked with this symbol reaches its end of life, take it to a collection point designated by the local waste disposal authorities. The separate collection and recycling of such products will help protect the environment and human health.

17. INSTALLER CHECKLIST

Your Supergen shower pump will only work properly if it has been installed correctly. The installer should complete the following checklist ensuring it is signed and dated. While you are installing this shower pump, tick the following important instructions to confirm installation guide has been followed. If you need assistance, please contact the Supergen Service helpline on 01793 820142.

When the installation is completed please sign and date and pass on to the customer.

- **The pump must not be connected to mains pressure water (combi, unvented, thermal store etc). There should be a minimum of 227 litres (50 gallons) of stored cold water.** ☐
- **Dedicated independent supply from hot water cylinder and cold feed from tank. At least 1 metre head from water level in cold water storage tank to top of pump** ☐
- **Pipework should be the same size as the flexibles. The flexible hoses supplied must be used to connect the pump. Do not connect any pipework directly to the pump.** ☐
- **Highest point of pipes must be at least 250 mm below the base of the cold water storage tank (not applicable for universal head pumps).** ☐
- **An air free supply of hot water is required. Do not connect directly to expansion pipe. The use of a Surrey or Essex flange is recommended.** ☐
- **Anti gravity loop if the pump is sited above the hot water cylinder.** ☐
- **Hot water temperature at the pump must not exceed 60°C (cylinder must have thermostat).** ☐
- **Do not use any jointing compounds on threads or retaining nuts.** ☐
- **When making pipe joints, do not allow any solder flux to come into contact with the pump.** ☐
- **Complete all pipework before making electrical connection - do not let any water into the terminal box.** ☐
- **Do not run the pump dry - purge with water thoroughly for 5 minutes before running pump.** ☐
- **After completing installation, the whole system must be thoroughly tested, operating both hot and cold at full flow. Check water temperature stability and that each connection is tight and not leaking.** ☐

Print Name		Signature	
Company Name		Date	

To register your Supergen shower pump, please complete and return this form via post, email or online.
Pump World, Unit 11 Woodside Road, Swindon, SN3 4WA. enquiries@pumpworld.co.uk, www.pumpworld.co.uk

CONTACT DETAILS

Your Full Name

Address & Post Code

Telephone Number

Email Address

PUMP DETAILS

Supergen Model Name
Located on the pump nameplate.

Pump Serial Number
Must be included. Located on the pump nameplate, typical format: W00000 - 000 - 0000

Supplied By
Please include contact, company name and branch location (if applicable).

Installed By
Please include installer name, company name and contact phone number.

Date of Purchase

Date of Installation

INSTALLATION DETAILS

This part should be completed with the help of your installer. All questions must be completed.

Type of Cylinder Fitting
(Essex Flange / Warix Flange / Surrey Flange / York Flange / 1st Vent Take Off) If other, please specify.

Pipe Sizes
Suction / Discharge

Do you have a Cylinder Thermostat?

Is Suction Dedicated?
ie. no draw offs prior to the pump.

If yes, confirm Thermostat Setting
The hot water temperature at the pump must not exceed 60'C.

°C

Are Flexible Hoses straight?
Flexibles must be kept straight.

If no, do you have a Temperature Regulator? If not, your warranty is invalid.

Is the pump located on the floor, by the cylinder?

If applicable, confirm Temperature Regulator Setting

°C

If no, please advise pump location