

---

# Recirculating Pump



## Installation Guide.

---

## ***SolaStat SP Pump Installation Guide Index.***

### Description, Ordering and Specifications.

Index	page 2
Features	page 3
Introduction	page 3
Ordering Information.	page 3
Specifications	page 4
Dimensions	page 4

### SolaStat SP Pump Mounting.

Mounting the SolaStat SP Pump.	page 5
--------------------------------	--------

### SolaStat SP Pump Specifications and Limit of Liability.

### SolaStat SP Pump Power Up.

Connect the Pump.	page 7
Before you connect the power.	page 7
System Venting.	page 7
Basic SolaStat-Plus-1 Installation.	page 7

### SolaStat SP Pump Trouble-shooting Guide.

page 8

# SolaStat 3 Speed Recirculating Pump.



## Features.

- Low Noise, Convenient Installation.
- Three User Selectable Speeds; Up to 6m Heads.
- Low Power Usage.
- Direct Replacement for Many Other Brands.
- Corrosion Resistant Bronze or Cast Iron Pump Body.
- Available Pre-wired & with Rubber Insulated Mounting Brackets for Easy Installation.
- 1½inch (38mm) Screw Connectors, Allowing for the Use of Large Diameter Water Pipes.



## Introduction.

**SolaStat** has experience in designing and manufacturing Solar Hot Water Controllers to Industrial Electronic Standards for over 15 years. This has earned SolaStat a reputation for Quality, Accuracy, Efficiency and Reliability. To complement their range of Solar Hot Water Controllers, SolaStat supply a series of recirculating pumps specifically designed to cycle water for solar energy, cooling, air-conditioning, and boiler applications.

The pumps are all 3 speed, allowing variable flow rates up to 5m³/h, and draw not more than 90W of power. These pumps have been tested to meet the highest standards of functionality, long term reliability, and aesthetic appeal.

The pumps have standard 1½" male plumbing threads allowing for connection of a variety of pipe sizes. The pump bodies are cast bronze for potable water or cast iron for other non-corrosive fluids. The stator and rotor of the motor have a stainless steel cover, sealed with a heat resistant facing ring. The motor uses the water being pumped both as a coolant and lubricant.

## Ordering Information.

- SP-25-6Bz** 6m Head Recirculated Pump; Bronze Pump Body. 3 Speed; 1½" (38mm) Male Brass Couplings.
- SP-25-6Bz-F** 6m Head Recirculated Pump; Bronze Pump Body; Rubber Insulated Mounting Brackets; 3 Speed; 1½" (38mm) Male Brass Couplings; 2m Power Lead.
- SP-25-6S** 6m Head Recirculated Pump; Cast Iron Pump Body; 3 Speed; 1½" (38mm) Male Brass Couplings.
- SP-25-6S-F** 6m Head Recirculated Pump; Cast Iron Pump Body; Rubber Insulated Mounting Brackets; 3 Speed; 1½" (38mm) Male Brass Couplings; 2m Power Lead.

## Recirculating Pump Cross-Reference.

SP Cross-reference Guide			
SolaStat SP Pump Model	Grundfos	Wilo	Davey
SP-25-6B	UPS-25-60	RS25/6	SB 25-20

Note: This cross-reference is only a guide, showing approximate equivalent models. No guarantee can be given that the SP will be a direct replacement. Every situation must be evaluated.

## Quality Assurance Programme.

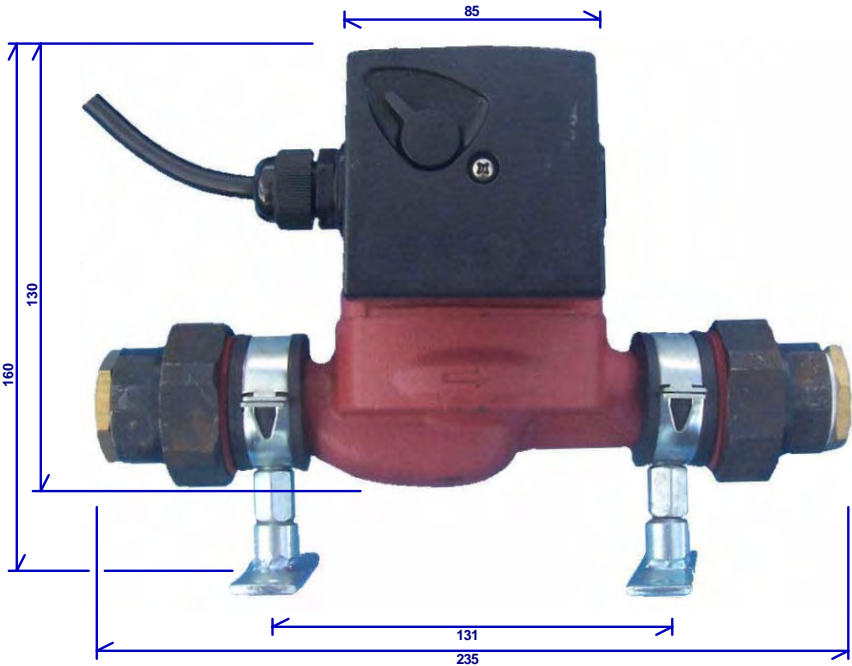
The modern technology and strict procedures of the ISO9001 Quality Assurance Programme applied during design, development, production and final inspection grant the long term reliability of the instrument.

**SolaStat SP Pump Specifications.**

Rotational Speed 1	Maximum Head. (0 Flow Rate)	3.4m.
	Maximum Flow Rate (0m Head)	2.5m³/h
	Power Usage.	50W
	Current Usage.	0.25A
Rotational Speed 2	Maximum Head. (0 Flow Rate)	5m.
	Maximum Flow Rate (0m Head)	3.6m³/h
	Power Usage.	70W
	Current Usage.	0.35A
Rotational Speed 3	Maximum Head. (0 Flow Rate)	6m.
	Maximum Flow Rate (0m Head)	4.7m³/h
	Power Usage.	90W
	Current Usage.	0.45A
Rated Supply Voltage		230Vac / 50Hz.
Fluid Temperature	Minimum	2C
	Maximum	110C
Ambient Temperature Range		2~40C
Maximum Pressure of System		< 1.0MPa.
Minimum Pressure of Water Inlet		> 0.1MPa.
Inlet Diameter		3/4"
Inlet/Outlet Fittings	Pump Fitting	1½" Male Threaded.
	Adapters Supplied with Pump	1" Female Threaded
Ingress Protection Rating		IP44
Gross Weight		2.9kg

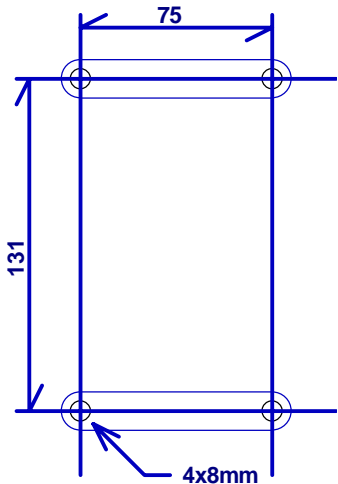
Notes:  
Transmitted liquid should not include solid impurities exceeding 0.1% of the volume or 0.2mm in size.

**SolaStat SP Pump Dimensions.**



Note. All dimensions are +/- 1mm.

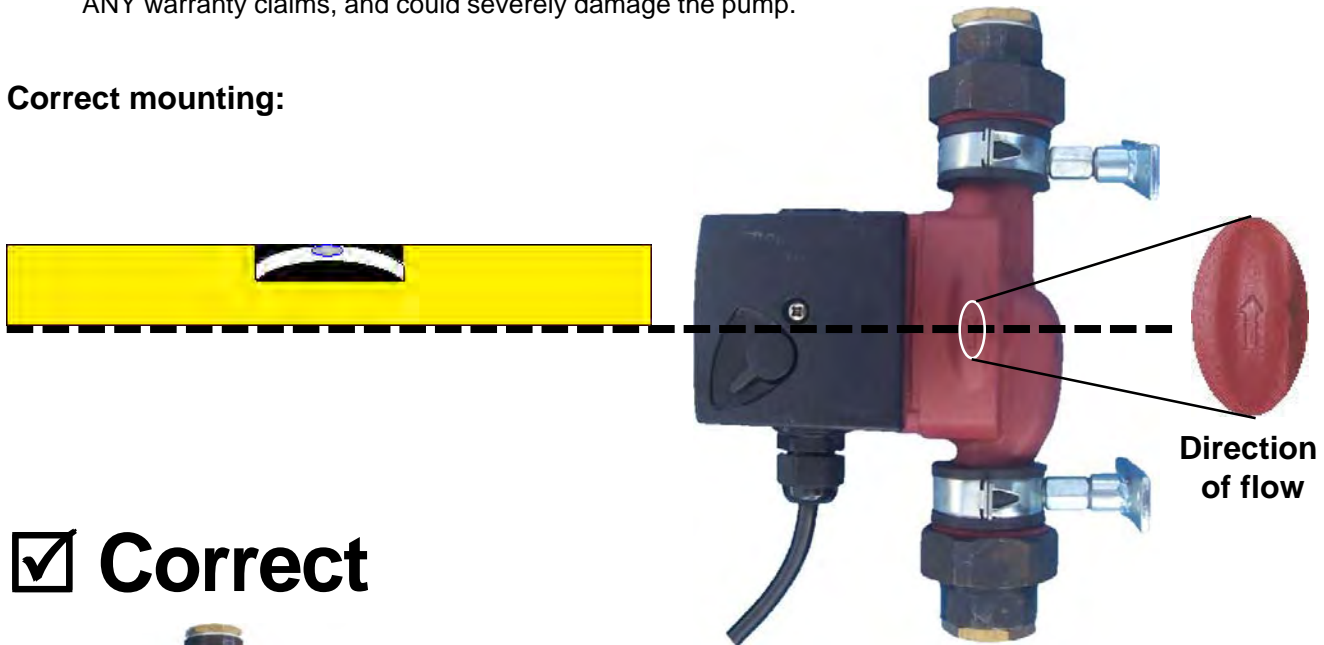
**Mounting Bracket Dimensions.**



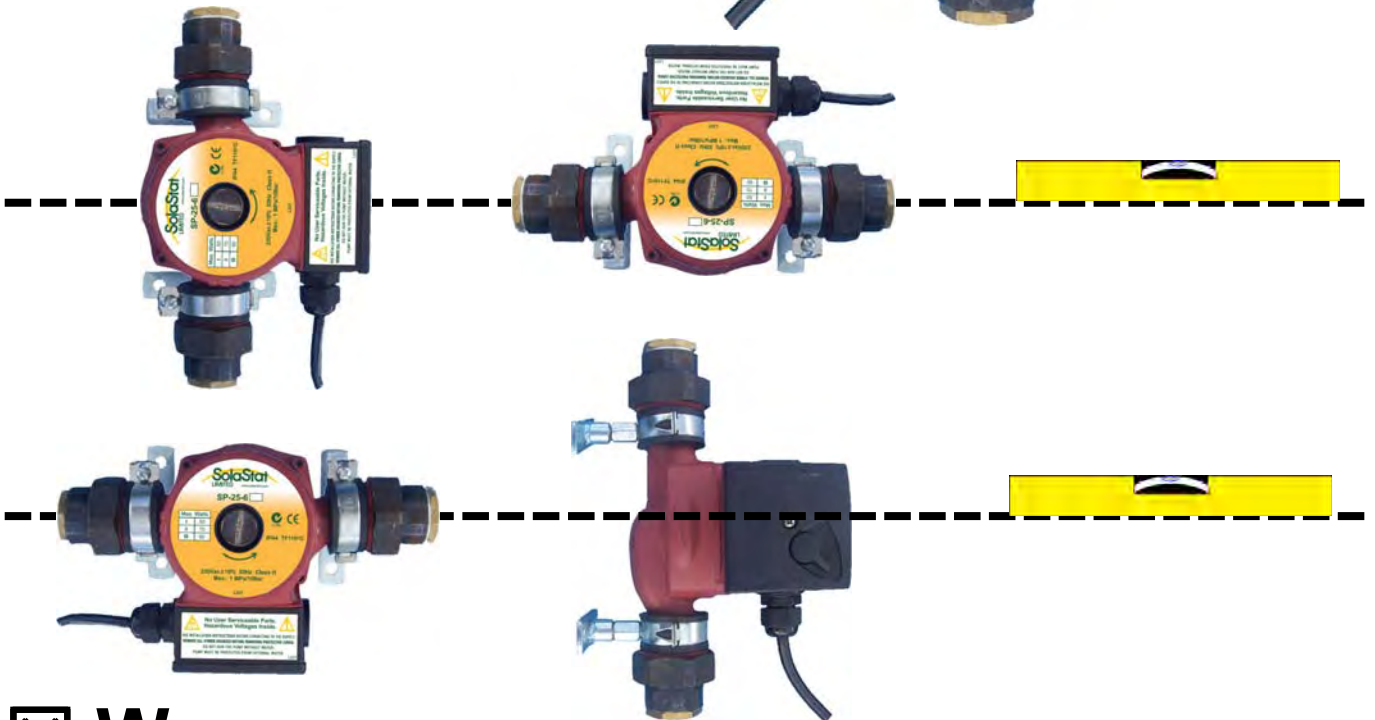
## SolaStat SP Pump Installation.

1. Mount the SolaStat Pump as low as possible with relationship to the Hot Water Tank. DO NOT mount the Pump above the tank.
2. Ensure all welding / soldering is completed and the pipe flush out before installing the pump.
3. The pump must be installed in an easily accessible location.
4. The ambient temperature MUST be lower than that of the pumped fluid.
5. The arrow on the pump body indicates direction of flow.
6. Shut-off valves should be fitted on both the inlet and outlet of the pump.
7. DO NOT wrap the pump in thermal insulation. This will cause the pump to overheat, and void any warranty.
8. The SolaStat SP Pumps MUST be mounted with the pump body mounted on the horizontal plane, as described below. The pump uses the pumped fluid for both cooling and lubrication, and failure to mount correctly will void ANY warranty claims, and could severely damage the pump.

### Correct mounting:



☑ Correct



☒ Wrong



## ***SolaStat SP Pump Safety Instructions and Limit of Liability.***

**Read safety instructions and limit of liability before proceeding with the installation.**

### **General Safety Instructions.**

1. This installation guide is for the installation of SolaStat SP Recirculating Pump only and is not an installation guide for any other part.
2. The complete installation should be checked at least annually for damage or malfunction.
3. All servicing to be carried out by an authorised service agent only.
4. All aspects of the installation must comply with local electrical and plumbing regulations (and any special solar hot water regulations).

### **Installation Precautions.**

1. Must be installed away from water sources such as rain, leaking pipes, or wet floors and must not be installed in damp areas like bathrooms.
2. Must be installed away from direct sunlight, flammable liquids or radiant heat sources.

### **Electrical Precautions.**



**CAUTION: Dangerous Voltages may be present. The SolaStat has no user serviceable parts.  
Protective enclosure only to be opened by qualified personnel.  
Remove ALL power sources before removing protective cover.**



1. All mains voltage electrical work to be carried out by a qualified electrician.
2. A readily accessible disconnect device, overcurrent device and RCD Protection rated to suit the size of the pump must be incorporated in the power supply wiring.
3. Do not use mains power extension cords unless approved by the manufacturer. Water resistant plugs and sockets should be used.

## SolaStat SP Power Up.

### Connect the Pump:

- **SP-25-6Bz-F SP-25-6S-F Models.**  
Plug in the pump to the 'PUMP' socket on the SolaStat-Plus.
- **SP-25-6Bz SP-25-6S Models.**  
These models need a power plug and lead fitted, and are only to be fitted by a qualified electrician.

### Before you connect the power;

1. Read safety instructions, warnings and limit of liability before proceeding.
2. Complete all the installation and securely mount the SolaStat SP Pump.
3. Ensure suitable over-current protection and RCD Protection for the SolaStat SP Pump is in place.
4. Ensure there is no water, metal shavings or other electrical hazards to contaminate the plug, socket and surrounding environment.
5. The pump supply lead must be laid clear of any obstacles, pipe or the pump body.

### System Venting.

The pump must be vented for it to work properly.

1. Fill the recirculation system with fluid.
2. Remove the vent screw from the top of the pump body.
3. Wait until water appears at the screw hole.  
- Protect all electric parts from any water.
4. Replace screw immediately.
5. Turn power to pump on.
6. Ensure the fluid is circulating.

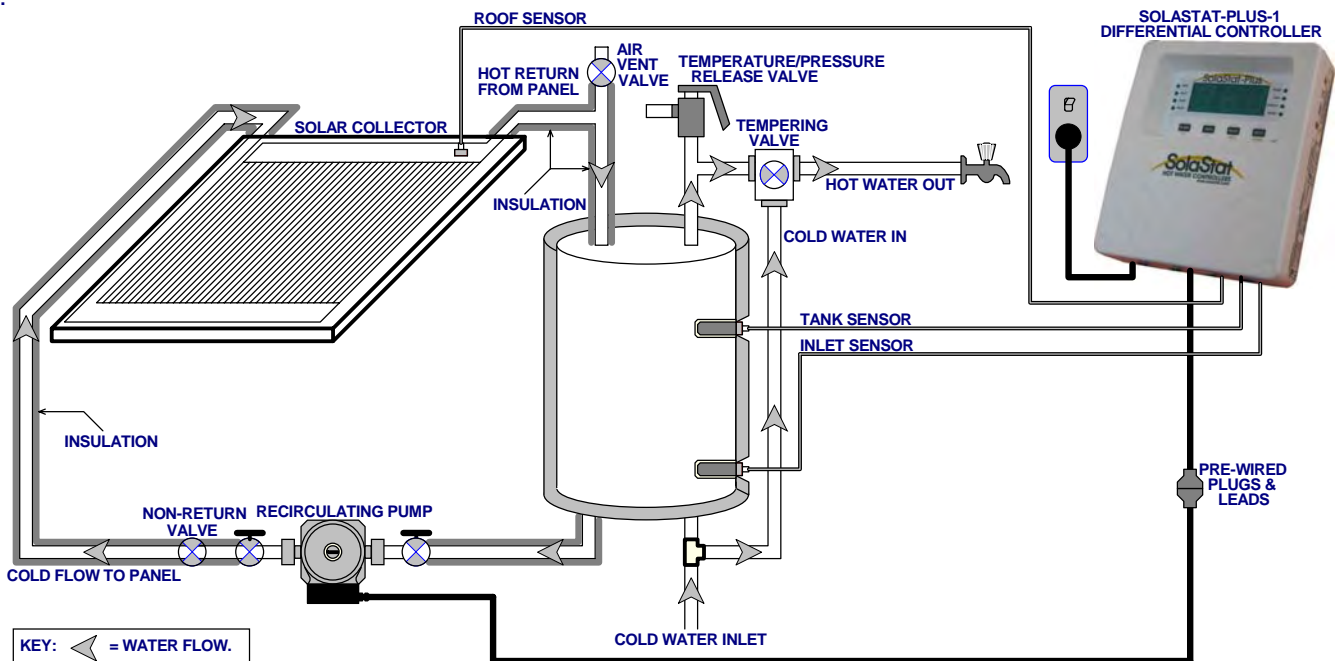
Note In some situations it may be necessary to repeat the venting procedure, with the pump running.

DO NOT run the pump for more than 10sec without fluid circulating.  
This may damage the pump, and void any warrant claim.



### Basic SolaStat-Plus-1 Installation.

The SolaStat-1 controlling the Solar Collector circulating pump.





## **SolaStat SP Pump Trouble-shooting Guide.**

This is intended as an initial guide to minimise service calls.

Trouble Shooting		
Symptom	Cause	Solution
Motor not running when it should be.	a. SolaStat not turning pump on. b. No power. c. Motor is blocked.	a. Check SolaStat controller and Adjustable Values. b. Check connections and fuses. c. Unblock. Remove Vent Screw as described in 'System Venting' and ensure pump rotor can rotate freely.
Motor is running but not pumping.	a. Air in pump.	a. Vent pump as described in 'System Venting'
Motor operating noisy.	a. Cavitation in pump or inlet system.	a. Increase inlet pressure or reduce pump speed.

## **SolaStat Distributor.**

--



Email: [sales@solastat.com](mailto:sales@solastat.com)