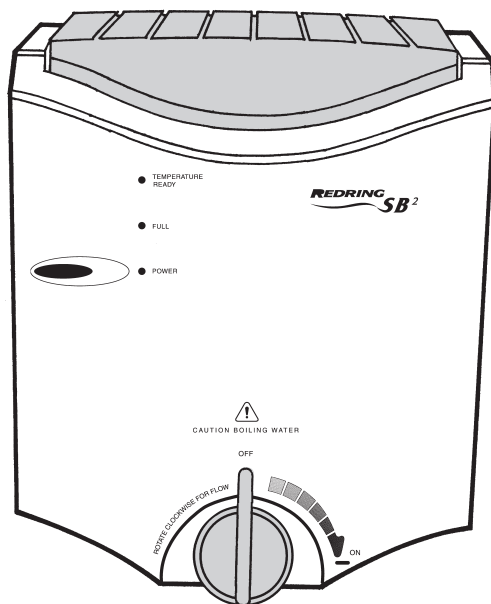


THE

REDRING

SB²



BOILING WATER DISPENSER

INSTALLATION & OPERATING INSTRUCTIONS

IMPORTANT: READ AND SAVE THESE INSTRUCTIONS FOR THE BENEFIT OF THE USER

Thank you for choosing a quality Redring product manufactured by Applied Energy Products Limited, Peterborough, U.K.

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Installation Instructions

Important Notes

- **All installation must be supervised by a qualified electrician and plumbing engineer.**
- **Installation and wiring must conform to current IEE Regulations (U.K.) and the Water Regulations Act 1999. Local regulations may apply in other countries.**
- **The steam vent connection MUST BE MADE, as required in these instructions.**
- **The product must be supplied by a 13 Amp fused double pole isolating switch with a minimum contact gap of 3mm in each pole.**
- **Check that the mains supply matches the electrical rating on the product. The rating plate is located on the bottom edge of the unit.**
- **THIS APPLIANCE, AND ALL METAL PIPE WORK CONNECTED TO IT, MUST BE EARTHED.**
- **If you have any queries about installing this product or after it has been installed, please contact Applied Energy Products Customer Services (Ring 08709 000430). Customers outside the U.K. should contact their local Redring distributor.**
- **This product will need to be descaled regularly. The frequency of descaling will depend on the hardness of the water supply.**

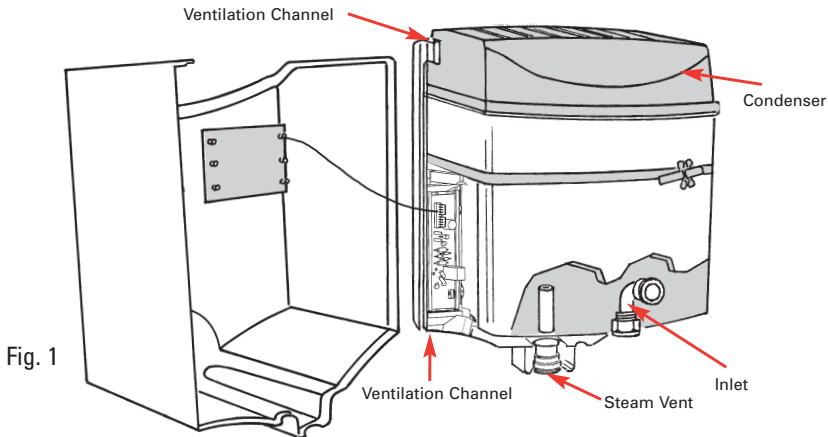
What the installer will need

- A 13 Amp fused double pole isolating switch with a minimum contact gap of 3mm in each pole.
- Suitable length of 1.0mm² three core multi strand PVC insulated mains cable that complies with BS6500.
- Suitable lengths of 15mm copper pipe.

Where to locate the SB²

- We recommend that the unit is installed on a suitable wall, at shoulder height and over a sink.
- Adjacent to the 13 Amp (240 V) double pole fused isolating switch.
- Available mains cold water supply and drainage facility.
- Do not install the SB² within reach of a person using a bath or shower.
- Do not obstruct the ventilation channel in the backplate.

Installing the water supply and steam vent pipes



The unit must be connected to cold, mains fed, drinking water only. Pressure range between 0.7 Bar/69kPa (10psi) and 10.0 Bar/940kPa (140psi).

Do not connect to a storage tank

- Isolate the water supply.
- Lay in 15mm water supply pipe to the location of the inlet connection (Fig. 1). (Check that the water supply position gives enough space under the unit for it to be used properly). Flush through the water supply before making the final connection, so that any debris is removed.
Note: The inlet elbow contains a flow regulator. THIS MUST BE USED IN THE INSTALLATION.
- Lay in 15mm drainage pipe to the location of the steam vent connection (Fig. 1). (Connection is made using the push fit adaptor provided).
- The steam vent connection must be taken directly to the sink below, if there is one, or via a tundish to a suitable drain. **Note: The steam vent outlet also acts as an overflow. (If a sink is used it must be able to withstand boiling water and have an overflow outlet).**

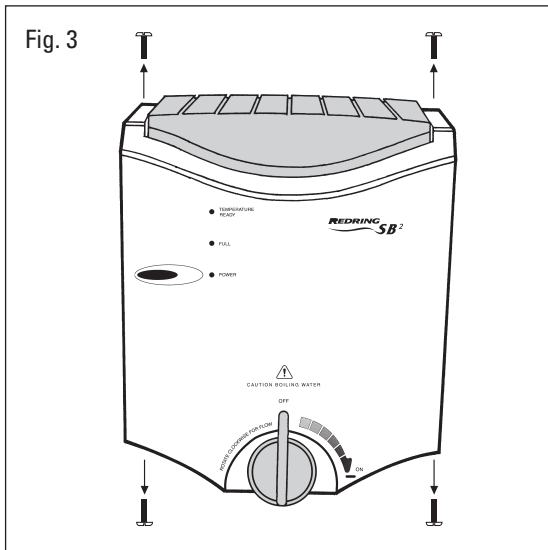
Installing the mains supply

If a mains supply is not already available.

- Install a 13 Amp fused double pole isolating switch with a minimum contact gap of 3mm in each pole adjacent to where the unit will be fixed.

Removing the front cover

- Remove the screws from the bottom and top edge of the unit (Fig. 3).
- Support the front cover and remove the flow knob (Fig. 4).
- Pull the front cover away from the unit.
- Please note that there is a flying lead and plug freely attached to the front cover.



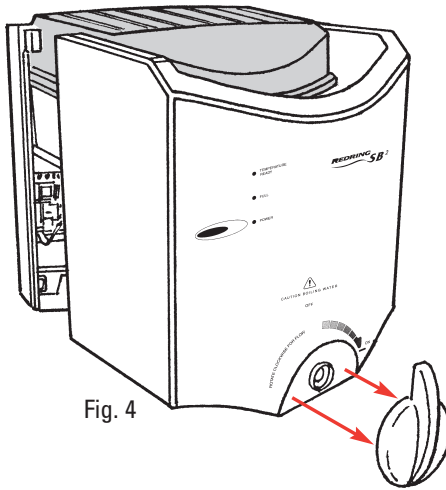


Fig. 4

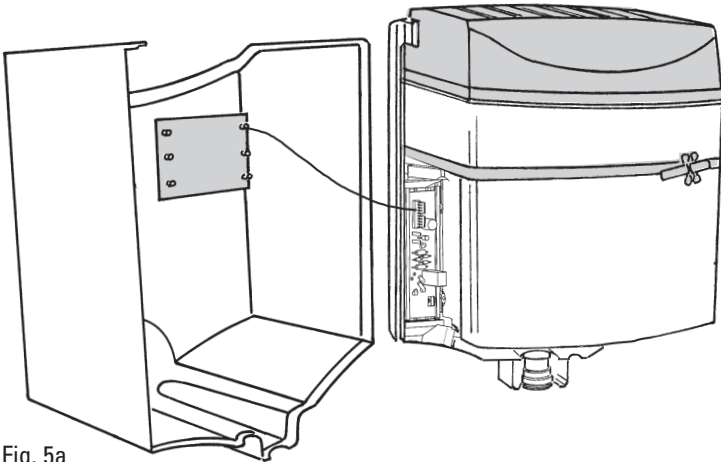


Fig. 5a

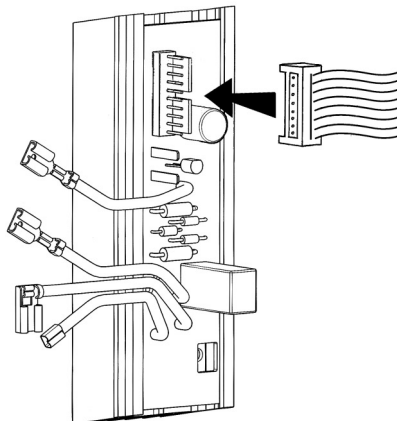


Fig. 5b

Fixing the unit on the wall

- Use the wall mounting bracket supplied and the two lower fixing holes.
- An extra top fixing point is available by temporarily removing the condenser assembly.

Connecting the water supply and vent pipes

- When the unit is fixed to the wall, make the final water supply and steam vent connections and secure the pipe work.
- Switch the water supply back on.

Connecting the mains cable

- Ensure the mains supply is isolated.
- Connect the mains cable from the SB² to the 13 Amp fused isolating switch. Ensure the cable clamps are firmly secured and the cable ends are tightened into the terminal block.

Note: The supply cable must be a minimum of 1.0mm² three core multi strand PVC insulated mains cable. The terminal block will not accept cable diameters above 1.5mm². Check that the mains supply matches the electrical rating on the product. The rating plate is located on the bottom edge of the unit.

IMPORTANT: Connect the supply cable, complying with BS6500, to this appliance in accordance with the following code:

GREEN AND YELLOW (EARTH) connect to terminal marked "⊕".

BLUE (NEUTRAL) connect to terminal marked "N"

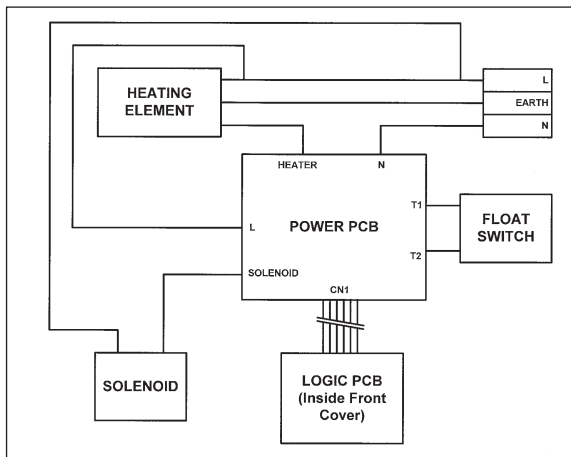
BROWN (LIVE) connect to terminal marked "L"

WARNING: THIS APPLIANCE, AND ALL METAL PIPE WORK CONNECTED TO IT, MUST BE EARTHED.

Replacing the front cover

- Support the cover and re-attach the flying lead to the unit (See Fig. 5a and Fig. 5b).
- Replace the front cover and secure using the top and bottom fixing screws.
- Carefully replace the knob, ensuring correct alignment of the D shaft.
- Reconnect the mains supply.

Schematic Wiring Diagram



Operating Instructions

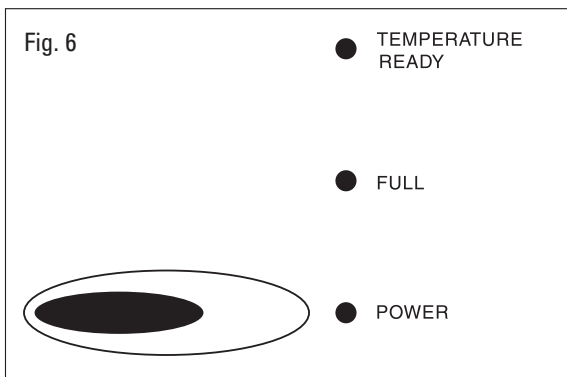
General Product Description

The SB² is a wall mounted, self calibrating and self filling boiling water heater. It can be used for making cups of tea or coffee and even soups and hot snacks. A special condenser traps steam and returns droplets to the tank, minimising waste and saving energy.

The water temperature is set and automatically maintained by the SB² and the unit is powered down with the Power button. Water is dispensed by rotating the front cover knob clockwise.

How to operate the SB²

- Make sure the electricity and water is turned on.



Refer to Fig. 6

- Use the POWER button to switch the SB² on and to power down. (The SB² should be switched off at the mains if the water is not required e.g. at weekends, holidays, etc).

POWER light

When the SB² is on the POWER light will come on.

FULL light

The FULL light comes on when the tank is full of water. (The SB² fills up automatically and this can take up to 10 minutes if the tank is completely empty).

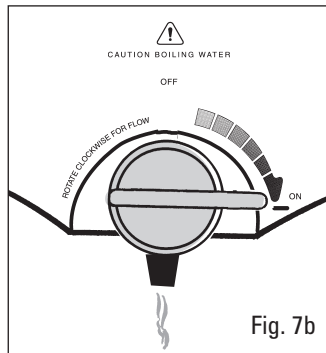
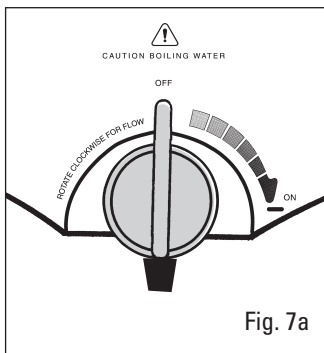
TEMPERATURE READY light

The TEMPERATURE READY light comes on when the water is hot enough to use. (This can happen even when the tank is not completely full of water).

Please Note:

- The SB² can take several minutes to reach the required SB temperature, depending on usage and tank capacity.
- To avoid energy wastage, the SB² will automatically reduce the temperature by 10°C if the unit is not used for more than 60 minutes. (The SB² will automatically go back to boiling when the water is used).
- When the SB² is switched on at the local isolator and the POWER button is pressed, it will start by self calibrating. This can take up to 20 minutes to complete and includes automatically **boiling the water for 30 seconds**.
- **When first installed, it is recommended that the initial tank of boiling water is fully drawn off and discarded. Allow the tank to re-fill and the TEMPERATURE READY light to come on, before using the SB².**

Dispensing water from the SB²



- Place your cup under the red spout at the bottom of the unit.
- Turn the knob clockwise to fill your cup (Fig. 7b).
- Turn the knob anti-clockwise to OFF (Fig. 7a).

WARNING

- **SCALDING HOT WATER can be dispensed from the SB².**
- **Never wash your hands directly from the unit.**
- **Some plastic cups can distort if they are filled with boiling water, so causing a danger of scalding.**

How to clean and descale your SB²

- Before cleaning or descaling, switch off the electricity at the isolating switch.
- It is recommended that the SB² surfaces are cleaned with a soft cloth.
- **Do not use abrasive or solvent cleaning fluids.**

DESCALING

- **A qualified electrician should carry out the descaling.**
- **ENSURE THE MAINS ELECTRICITY SUPPLY IS ISOLATED.**

If scale comes out with the hot water then the SB² may need to be descaled. This is done by removing the front cover and top condenser assembly and using a suitable kettle descaler. Ensure unit is thoroughly flushed through after descaling.

Trouble shooting

SELF HELP (See Table 1) – If the SB² is unsatisfactory, then make the following checks before calling out the contractor. Any one of these adjustments could restore the performance.

Table 1

a) TEMPERATURE READY light is not on	This is normal: The water has not reached the set temperature. (See Table 3 on page 10 for approximate heat up times).
b) TEMPERATURE READY light is on but the FULL light is off	This is normal: Some water has been taken out of the tank so it is no longer full, but the water temperature is still hot enough to use. (The tank will automatically fill up).
c) The FULL light is on but the TEMPERATURE READY light is off	This is normal: The tank has automatically filled itself and the heater is still getting the water up to the boil. (See Table 3 on page 10 for approximate heat up times).
d) The POWER light is on but the TEMPERATURE READY and FULL lights are both off	This is normal: The tank is still filling itself with water and the heater is still getting up to the boil. (See table 3 on page 10 for approximate heat up times).
e) TEMPERATURE READY light is on but the water is not boiling	To avoid energy wastage, the SB ² is designed to automatically reduce the temperature by 10°C if the unit is not used for more than 60 minutes. (The SB ² will automatically go back to boiling when the water is used).
f) All the lights are out and the POWER button does not work	Ensure that the electricity supply is switched on at the isolator, then press the POWER button.
g) The water flowing from the outlet is sometimes only a trickle	The water in the tank has been drained out due to a high demand. Wait for the FULL & TEMPERATURE READY lights to come on again.
h) The SB² takes a long time to reach the selected temperature	When the SB ² is first switched on it can take up to 18 minutes to reach the Boil setting. (See Table 3 on page 10 for approximate heat up times).
i) Steam and very hot water sometimes dribbles out of the vent hole at the back of the SB²	Check that a pipe has been fitted to the steam vent. Contact your installer if this is missing. Use the POWER button to power down the unit and not the main electrical isolator. (This will reduce the amount of steam produced).
j) The water tastes different	A new SB ² needs to be flushed out before being first used. We recommend that the initial tank of boiling water is fully drawn off and discarded. Wait for the FULL & TEMPERATURE READY lights to come on, before using the unit.
k) Solid particles are visible in the water	Scale has built up inside the tank. As with all water heaters scale will build up inside the water tank. How quickly this build up occurs will depend on the hardness of the water and the usage of the SB ² . Descale the SB ² heater tank. (This should be carried out by a qualified electrician). We recommend the use of in line resin filters to protect the heater.

Professional Service (see table 2)

If the **SELF HELP** checks do not cover the symptom, you should seek professional help.

The following additional checklist is provided for the benefit of the qualified engineer.

WARNING: SWITCH OFF THE ELECTRICITY AT THE ISOLATING SWITCH BEFORE REMOVING THE COVER TO MAKE CHECKS.

Table 2

a) Unit fails to heat the water	Check that the water supply is on and that its pressure is between 0.7 Bar 69kPa (10 psi) and 10.0 Bar 940 kPa (140 psi). Check circuit through solenoid coil. Check circuit through the heating element. Check circuit through float switch. If defective then replace.
b) All the lights are out and the POWER button does not work	Ensure that the electricity supply is switched on at the isolator. Ensure that the flying lead to the front cover is connected properly (see Fig. 5a and Fig. 5b). Check the supply to the PCB. If supply OK then change PCB.
c) Water flows continuously from the steam vent pipe	Check that the float switch operates correctly and switches the water solenoid on and off.
d) The water tank takes more than 20 minutes to fill with water	Check that the water supply is on and that its pressure is between 0.7 Bar 69kPa (10 psi) and 10.0 Bar 940kPa (140 psi). Check operation of the water solenoid and that water flows into the tank at a rate between 0.3 Litres/min and 1 Litre/min. Check circuit through the solenoid coil.

SB² heat up times

Table 3

CONDITION	APPROXIMATE HEAT UP TIME		WHAT ELSE HAPPENS
	2.5 Litre SB ²	4 Litre SB ²	
SB ² is switched on at the local isolator and the unit is empty of water. POWER button is pressed.	12 minutes (4 mins filling 8 mins heating)	18 minutes (5 mins filling 13 mins heating)	- POWER light comes on - then FULL light comes on - then TEMPERATURE READY light comes on - then steam comes out of the vent for 30 seconds.
SB ² is switched on at the local isolator and the unit is already full of cold water. POWER button is pressed.	8 minutes	13 minutes	- POWER and FULL lights both come on. - then TEMPERATURE READY light comes on. - then Steam comes out of the vent for 30 seconds

APPLIED ENERGY PRODUCTS AFTER SALES SERVICE

We offer a technical service on the telephone to contractors and other customers seeking advice.

RING 08709 000430

Some parts can be supplied using a credit card.

RING 08709 000420

Remember to quote the model of SB² and have a note of the Catalogue number as stated on the rating plate along the bottom edge of the unit.

SPARE PARTS

Part No.	Part Description
95719601	Element assembly
95719613	Terminal block
95719614	Logic board assembly
95719615	Power PCB assembly
95719616	Solenoid valve
95719617	Float switch
95719618	Cable pack
95719608	Control knob
95719609	Outlet Spout
95719619	Scale Trap
95719611	Outlet valve
95719620	Inlet elbow assembly (includes flow regulator)

Guarantee

We, Applied Energy Products Ltd., guarantee that should this SB² unit prove to be defective by reason of faulty workmanship or material within 24 months (outside of U.K. please contact your local distributor) of the date of purchase or commencement of hire we will replace or repair the defective parts FREE OF CHARGE on the condition that:

- a) The appliance has been correctly installed and used only on the supply circuit or voltage stamped on the rating plate.
- b) The appliance has been used in accordance with these instructions and has not been tampered with or otherwise subject to misuse, neglect or accident.
- c) The appliance has not been taken apart, modified or repaired except by a person authorised by us.
- d) EVIDENCE of the date of purchase in the form of an invoice, receipt (or hire purchase document) is included with the appliance if returned under guarantee.

SCALE PREVENTION

Formation of scale occurs with hot water heaters operating at high temperatures in hard water areas. We strongly recommend the use of in line resin filters to protect the heater. The manufacturers guarantee does not extend to cover this natural phenomenon.

“This Guarantee does not affect your statutory rights”

Full details of terms and conditions of guarantee are available on request from:–

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