

**REDRING®**

*Selectronic*

**SHOWER HANDBOOK**



**IMPORTANT**

This booklet should be given to the customer after installation and demonstration.

Thank you for choosing a quality “Redring” product manufactured in Peterborough, England.

## Contents

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## Warning

**Do Not Switch The Shower On If You Suspect It Of Being Frozen, Wait Until You Are Sure That It Has Been Completely Thawed Out.**

## How To Use Your Shower

Your shower has two modes of operation, **Normal** and **Temperature Lock**.

The temperature lock feature ensures a factory preset maximum temperature is not exceeded.

This is achieved by disabling the temperature control buttons, so that the less-able, elderly and children can use the shower with confidence.

The mode of operation is set on commissioning / installation (see page 10). The unit leaves the factory in temperature lock mode.

Button Function	Location	Shape / Texture
Start / Stop	At The Bottom Of The Shower	Large, A Raised Pip In The Centre, Made From Soft Rubber.
Flow	Above And To The Right Of The Start / Stop	Same Shape As The Start / Stop But, Smaller Smooth With No Raised Pip Recessed. Made From Soft Rubber.
Warmer	Towards The Top Right Of The Shower	Textured Front And A Central Recess With A Raised Pip In The Centre. Made From Hard Plastic.
Cooler	Underneath The Warmer Button Following Curve	Same Shape As Warmer However Smooth With A Central Recess, No Raised Pip. Made From Hard Plastic.

## Normal Operation

**Switch On Electricity** at ceiling / isolating switch.

**Press Start /Stop Button** in the centre.  
(Confirmed with a **single bleep**)

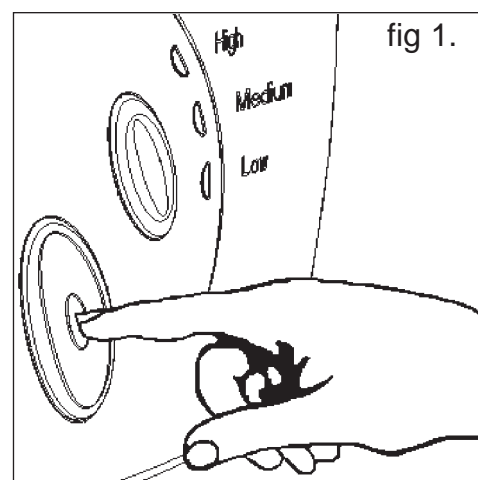
The unit will start and the motorised valve will reset. Display will usually light up number 1.

This will increase until display shows number 6. The average showering temperature.

When the unit has got close to this setting it **sounds a double bleep** and the unit is **ready for use**.

The unit will only count up and double bleep once per shower session.

**Flow light** (green) will be on **high**.



**To Increase Temperature - Press the warmer button** once in the centre (Confirmed with a **single bleep**).

The number will change to the new setting.

i.e. Display will change from digit 6 to digit 7.

**Wait for a few seconds** for the shower to increase the temperature to the new setting.

**Repeat this for your ideal setting** waiting each time for the temperature to be achieved.

**To Decrease Temperature - Press the cooler button** once in the centre (Confirmed with a **single bleep**)

The number will change to the new setting.

i.e. Display will change from digit 6 to digit 5.

**Wait for a few seconds** for the shower to decrease the temperature to the new setting.

**Repeat this for your ideal setting** waiting each time for the temperature to be achieved.

**To Change Flow Rate - Press the flow button** once in the centre (Confirmed with a **single bleep**)

This reduces the flow without changing the temperature setting. (Note: As the flow changes, the water temperature may go up and down slightly).

**Press once** and the flow will reduce to **medium**. **Press it again** and it will reduce to **low**.

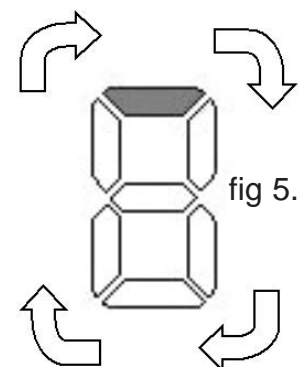
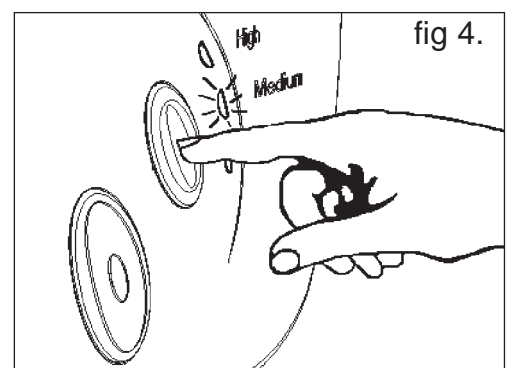
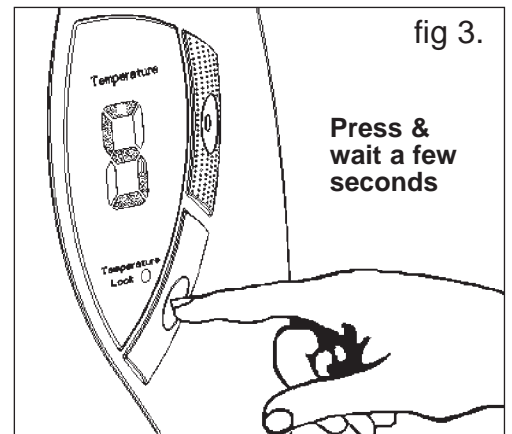
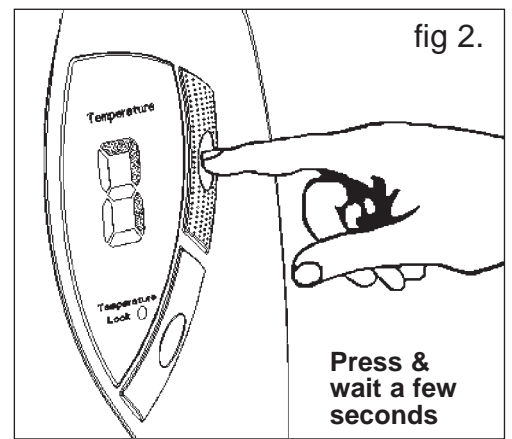
On switching on the shower, the flow always comes on in the **high** flow condition.

### Switching Off

**When you have finished showering press the Start/Stop button** in the centre. See fig. 1 (Confirmed with **3 short bleeps**)

The water will continue to run for a few seconds so that the unit is cooled down ready for the next time the shower is used. While this is happening the display will circle round and round (see fig.5).

The unit will then switch off automatically.  
**Switch Off Electricity** at ceiling / isolating switch.



## Over Temperature Shutdown

If an abnormal condition occurs which causes the water to get too hot.

The **unit will automatically shutdown straight away and the water will stop flowing**, this is to prevent any hot water coming out of the handset.

This is indicated by **8 short beeps** and the display flashing a lowercase “o” and then “t” (see fig.6). This will continue until the water is at a safe temperature. The unit will then switch off automatically and will need to be restarted in the normal way (see “normal operation” section)

It can take a long time for the unit to reach a safe temperature. To speed this temperature reduction up, the hot water **can be purged** from the unit.

### Purging

While the unit is **in Over Temperature shutdown mode press the cooler and flow button together for 20 seconds.** (See fig.7)

This will switch the water on **only** while the buttons are pressed.

### Caution!!

**Water Will Be Hot stand clear** of the spray from the handset.

The unit will then **switch off automatically** with **3 short beeps** when a safe water temperature has been reached.

### Temperature Lock Operation

This mode is **set on installation** to prevent the temperature from being changed. See section in commissioning Page 10.

All the controls are the same as previously described.

However, the **warmer and cooler buttons do not work** and the temperature lock light will come on. The normal setting is now number 5.

### Temperature Lock Override

The temperature lock feature can be over ridden, while the shower is running, by pressing the warmer and cooler buttons together for more than three seconds.

The shower will revert back to normal operation. However, it will return to temperature lock mode the next time it is used.

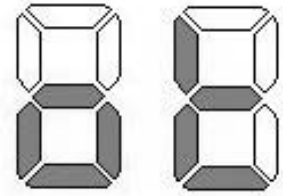


fig 6.

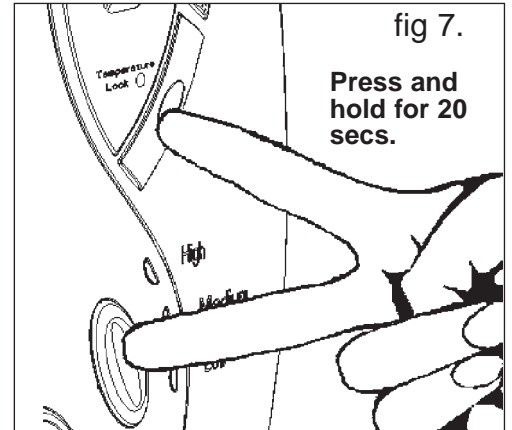


fig 7.

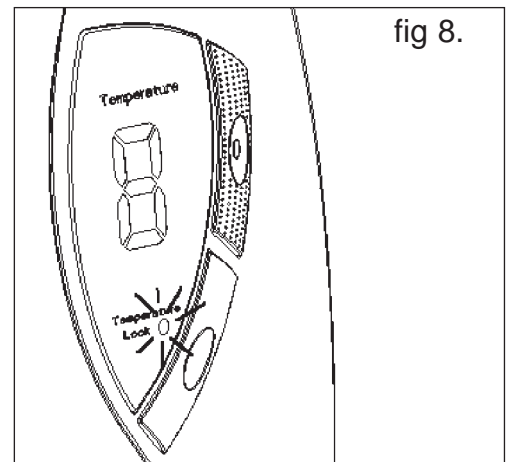


fig 8.

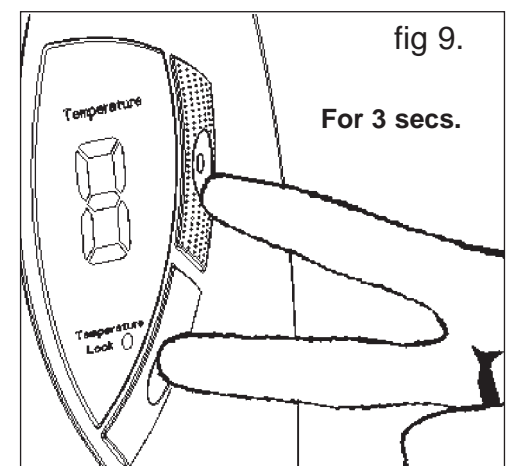
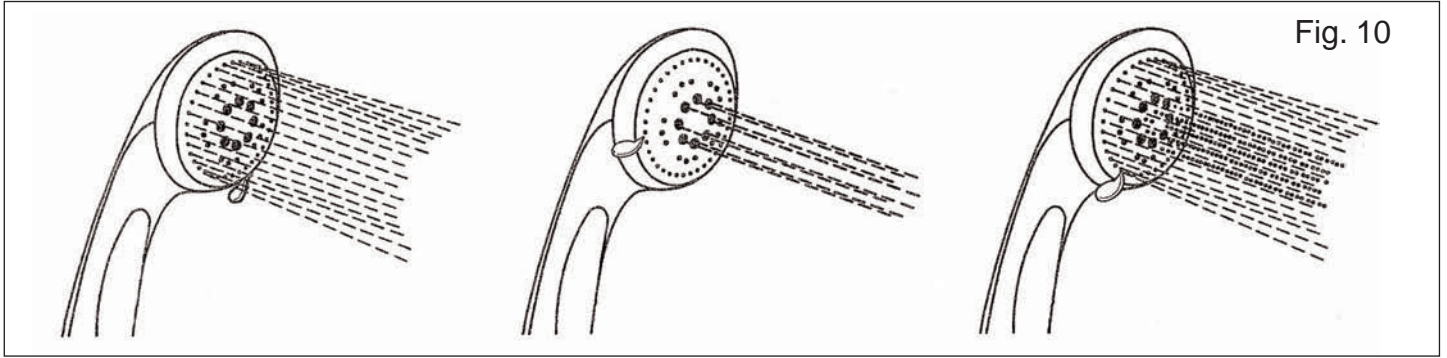


fig 9.

## Handset Operation



Surf  
(Outer spray only)

Sport  
(Inner spray only)

Cascade  
(Combination of inner/outer)

There are three defined spray plate settings adjustable by rotating the spray plate (see fig. 10). The modes have a positive click to identify them.

The spray head rotates through approximately 130°.

**In Order To Maintain The Performance Of Your Shower You Must Clean The Shower Head regularly.**

All water contains particles of lime, which build up in the showerhead and unit reducing the performance. It is therefore important to clean the showerhead by simply rubbing the rubber nozzles. The frequency of this will vary from weekly to quarterly depending on the water hardness and experience.

In some winter conditions, when the incoming mains water is particularly cold it may be necessary to select the inner or outer spray pattern only; this will ensure correct operation of the shower with a slightly lower water flow rate. After use it is normal for some water to drip from the spray head for a few moments. This helps prevent scale build up over prolonged use.

## Routine Maintenance

It is recommended that the unit and accessories be cleaned using a soft cloth.

**DO NOT** use abrasive or solvent cleaning fluids. It is advisable to switch off the shower at the isolating switch to avoid the shower accidentally switching on.

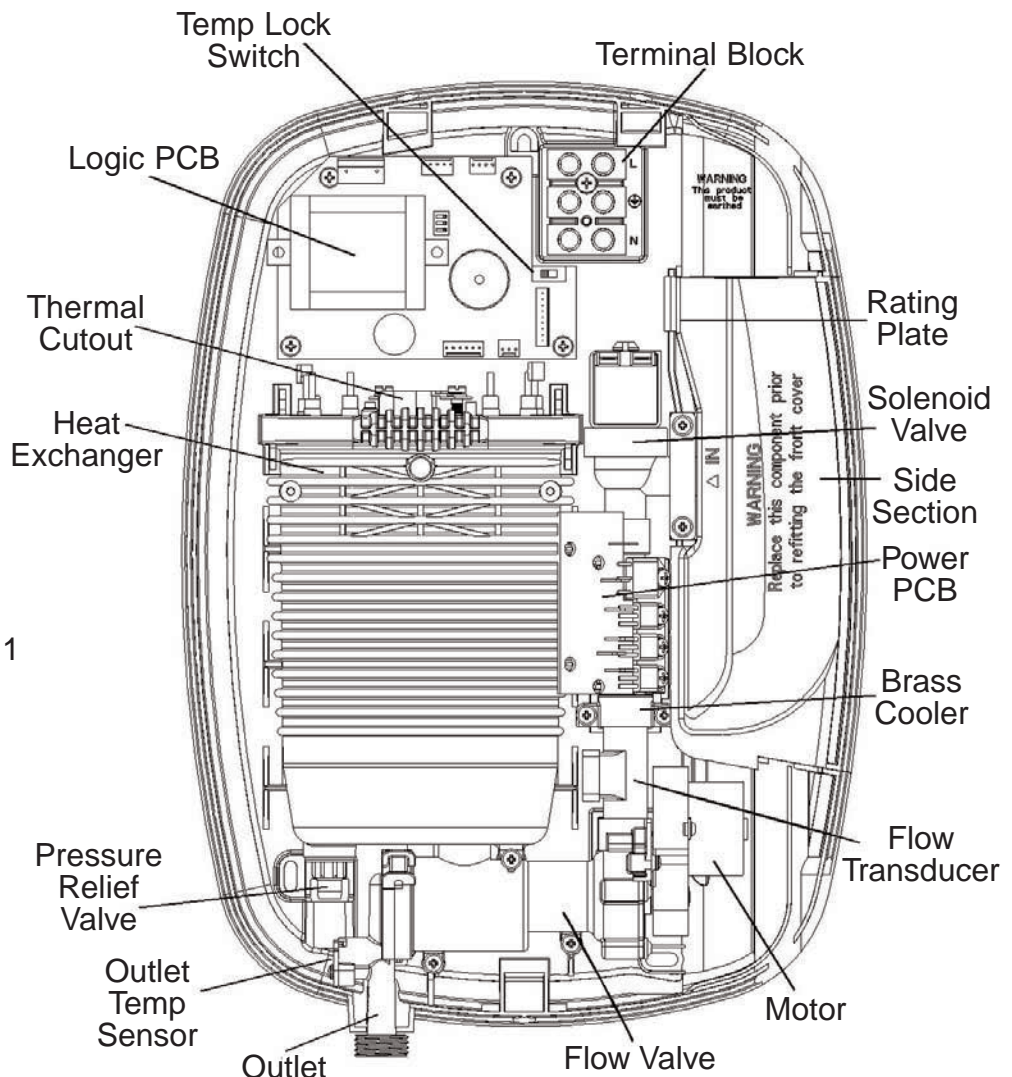


Fig. 11



## How Your Shower Works

1. Water is heated instantaneously as it flows over the heaters in the plastic heat exchanger assembly.
2. The shower automatically adjusts the power to the heating elements and flow of water to achieve the selected water temperature. The electronics senses the incoming water temperature and the flow of water through the heat exchanger. It then works out how many heaters to switch on so that the shower temperature matches the temperature selected by the buttons.
3. The amount of hot water available at the selected temperature is limited by the total power of the heater. The ideal flow rate is calculated and adjusted automatically.
4. The water is turned on and off by the solenoid valve built into the shower.
5. A stabiliser is built into the flow valve to automatically compensate for small fluctuations in water pressure that frequently occur in households. There are three further controls to cater for exceptional reductions in water pressure to prevent the shower from getting too hot.
  - a) If the flow of water is less than 1.0 l/min the power to the elements is switched off, but the solenoid valve remains open allowing water to flow through the shower.
  - b) If the outlet temperature sensor senses an excessive temperature the flow of water and the heating elements will automatically switch off. The electronics will signal over temperature condition (see “over temperature shutdown” section).
  - c) A two stage mechanical thermal cut-out is mounted on the top of the heat exchanger independent of the electronics. Stage one switches the power off to the elements if it senses an excessive temperature. The switch operates with an audible click and will reset if cold water is run through the shower. Stage two only operates if an extreme temperature is sensed. The cut out will permanently switch off and it will then have to be replaced.
6. A pressure relief device is fitted to safeguard against other extreme conditions. If this operates a replacement part will be required.

## Troubleshooting

If the performance of the shower deteriorates in service, follow the checks in the “self help” table opposite before calling out the contractor. Any one of the simple adjustments could restore the performance.

If these fail to restore the performance you should seek professional help.

The person who installed the shower is probably the best one to repair it and is certainly the person to contact if you have a problem in the guarantee period.

## Self Help Check List

a) Water too HOT	Press the cooler button when in NORMAL operation. Clean spray plate holes.
b) Water too COLD	Press the warmer button when in NORMAL operation.
c) Spray pattern poor	Clean spray plate. Select outer / inner only.
d) Display behaves erratically	Switch off electricity at ceiling / isolating switch, wait a few seconds, switch on again. (Note the shower should be switched off each time after use at the ceiling switch).
e) Water does not flow when Start / Stop button is pressed	Note: It there is no water flowing then the shower will automatically switch off after 30 seconds
lights on	Check the water supply is turned on.
“o” and then “t” flashing in display	Unit in over temperature mode see section on “purging”
no lights	Check ceiling switch is on. Check power is on.
f) Warmer / cooler buttons do not function	Unit in “temp lock” mode. See relevant section on how to override.
g) Unit makes a whirring noise, especially at the start of the shower session	This is normal. There is a motor inside the shower used to adjust the flow and this always operates at the start of each shower.

## Professional Service Check List

This additional checklist is provided for the benefit of the qualified service representative.

### Warning. Switch Off The Electricity At The Isolating Switch Before Removing The Front Cover To Make Checks.

a) Poor temperature control	Check inlet / outlet thermistors to see if they are in circuit. Check for blockage in filter of solenoid valve. Check board configuration for correct power rating.
b) Water too COLD	Check circuit through thermal cut-out. Check circuit through all 4 elements. Test should be done using a low voltage resistance meter whilst the power is switched off at the isolating switch. Check circuit through triacs. Check working voltage.
c) Poor or no control over water flow	Replace inlet flow valve assembly.
d) No water when start button is pressed	Check water supply. Check circuit through solenoid coil. If ok replace logic PCB.
e) Unit has been switched off using stop button but can be heard heating the water.	Replace triac PCB.
f) Pressure relief valve blown	Check for cause of high pressure and remove it. Replace pressure relief valve.
g) Temperature buttons do not function	Unit is in templock mode. Remove cover and change position of templock switch to OFF (see Fig. 15 for location) or explain feature to user.
h) Shower runs cold for about 30 seconds and then switches off by itself	Flow transducer fault. Check that internal blade "spins" when the water flows. If not, replace.

## Installation Instructions

The installation should be done by qualified personnel and checked by the electricity supply authority.

We recommend that the installation be done in the following sequence:–

- a) Fix the shower to the wall
- b) Plumbing
- c) Electrical connections
- d) Commissioning

### Warning: Do Not Install The Shower In A Room Where It May Be Subject To Freezing

#### a) Fix The Shower To The Wall

When deciding where to place the unit a few things need to be taken into consideration: -

- 1) The unit **must not** be mounted directly in the path of the spray from the handset.
- 2) The handset could be used over a sink for hair washing.
- 3) The handset does not come into contact with the used water in the cubicle, bath or basin. A hose retainer is supplied with the accessories (see fig 16 & 17).
- 4) The unit can be mounted at a lower level for less able users combined with optional extended hose and riser rail. The installation must comply with BS 8300: 2001. (Design of buildings and their approaches to meet the needs of disabled people. Code of practice). Remembering to adhere to point 1.
- 5) Choose a flat piece of wall to avoid the possibility of distorting the backplate and making the front cover a poor fit.

Remove the three cover screws and lift the shower cover off.

Remove side section complete with seal. Depending on which water entry is being used (top or bottom) break out the relevant rear support rib using a pair of pliers (see fig 12).

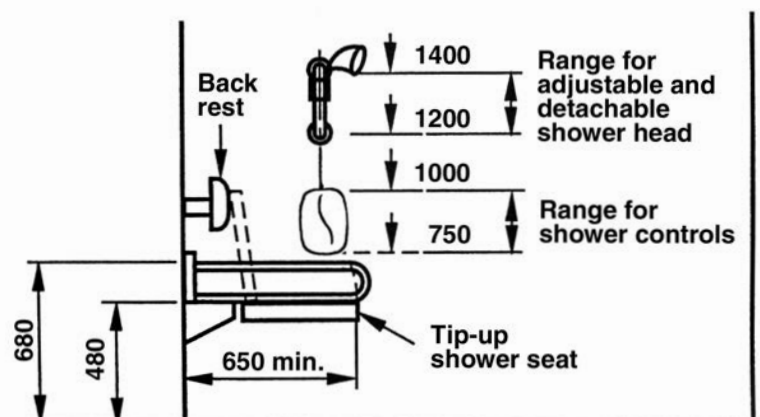
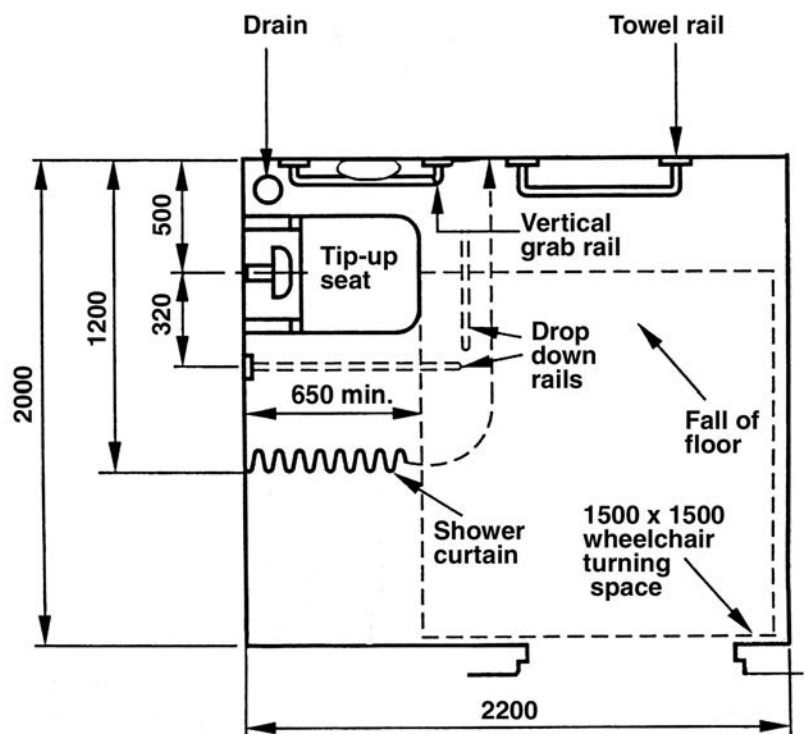
Identify which pipe and cable entry needs to be cut to enable the services to enter the shower (top or bottom, no trimming required for rear entry) then fit them to the backplate (see fig 12).

Hold the shower vertically against the wall and mark the top hole first.

Drill the hole to take the rawl plug provided (taking care to keep dust away from the shower).

Put the top screw in first leaving it proud by 5mm approx. The shower can now be hung on this screw.

Typical guideline dimensions used for less able bathroom installations.





Position the shower so that it is vertical then mark and drill the other two holes. Then fix the shower to the wall.

Assemble the accessories as shown in fig 16 (or 17 for style accessories). Fix the riser rail with screws provided. The fixing holes are revealed by removing the plastic fronts.

A grab rail is provided with the Selectronic "plus" shower. This is to be mounted according to BS8300: 2001. The screw fixings used will vary on wall type and thickness but must be strong enough to carry a persons weight (fixings not supplied).

## b) Plumbing

We recommend that a WRAS (Water Regulations Advisory Scheme) listed isolating valve be fitted between the rising main and the unit. This will allow the unit to be serviced without having to turn off the house water at the stop valve.

The unit should be connected to the mains cold water supply. This must have a minimum running pressure of .07 Mpa (0.7bar / 10 p.s.i.) and a maximum pressure of 1Mpa (10bar/145 p.s.i.).

The unit can be fed from a header tank provided this has a minimum head of 7 metres (23ft).

In extreme cases of low water pressure consideration should be given to a pump from the stored water.

Standard 15mm copper or stainless pipe should be used. Connection to the unit is via a 15mm plain shank on the solenoid valve. A compression elbow or push fit connector can be used. (Stainless pipe is not recommended for push fit).

Using an Isolating valve, **flush the pipe work through to remove particles etc.**, before making the final connection to the shower. A blockage in the waterways (particularly the spray plate and solenoid valve) will prevent the unit from working correctly.

The shower is designed to have an open outlet and should only be used with the fittings recommended by the manufacturer.

**Warning!! Do Not Fit A Tap On The Shower Outlet. Take Care To Avoid Restricting The Outlet Of The Pressure Relief Device. (see fig. 11 for location)**

## c) Electrical Connections

The electrical installation must be in accordance with the current BS7671 (I.E.E. wiring regulations)

If in doubt contact our after sales service department for a data sheet.

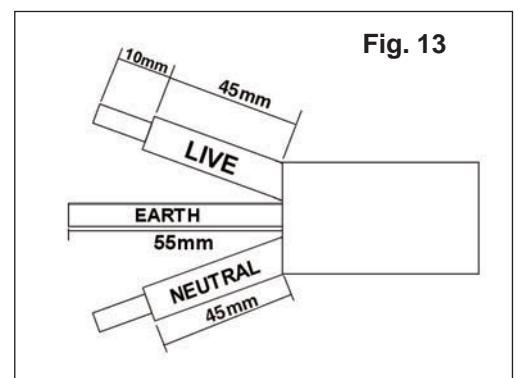
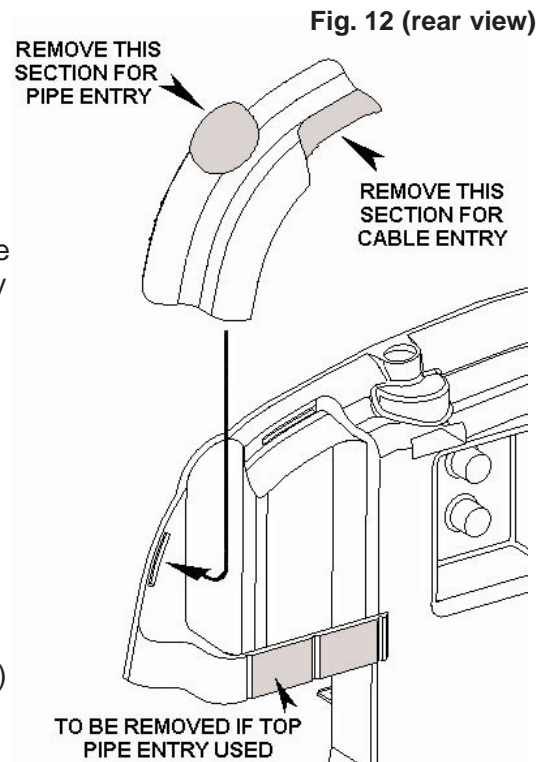
The unit is designed for a single phase 50 Hz a.c. electrical supply. Please check the rating plate on the unit to see what details apply to your unit.

In order to provide a means of isolation, the unit **Must Be** permanently connected to the electrical supply through a double pole switch with a minimum contact gap of 3mm in each pole mounted in a convenient position. We recommend pull cord ceiling switches.

The cable should be stripped back according to fig.13  
Connect the cable to the terminal block. Ensure that all the retaining screws are **VERY** tight and that no cable insulation is trapped under the screws.

**Warning: Failure To Comply With These Instructions Could Result In A Failure Of The Terminal Block.**

**Warning: This Appliance Must Be Earthed**



The earth continuity conductor of the electrical installation **MUST BE** effectively connected electrically to all exposed parts of the appliances and services in the room in which the water heater is to be installed in conformity with the current BS 7671 (I.E.E. wiring regulations)

Replace the side section along with seal.

Connect flying lead from front cover to PCB. Replace the front cover and fasten in position with three screws.

#### d) Commissioning

The unit is supplied in TEMPLOCK mode. It is recommended that the commissioning be carried out in NORMAL mode.

Ensure the water and electricity are switched on to the unit. Press the START/STOP button then change the temperature setting to number 1 by pressing the COOLER button 5 times.

Allow the unit to fill and wait for the water to come out of the handset.

Change setting up to number 6 by pressing the warmer button, check that the outlet temperature increases to comfortable temperature and that, when pressing the flow button the flow does change.

Check for leaks.

Press START/STOP button to switch the unit off.

This completes the commissioning. The unit then can be set back into TEMPLOCK mode if required.

#### Demonstrate Operation To User.

Please leave these instructions with user for future reference.

#### Changing The Operating Mode Templock/Normal

**Warning. Switch Off The Electricity At The Isolating Switch Before Removing The Cover.**

After the unit is commissioned, it can be switched to temperature lock mode or normal mode. Remove the front cover taking care not to strain the flying lead. Change the temp.lock switch from ON to OFF depending on whether it is required or not. (see fig. 15 for location). Replace and refasten the front cover.

Switch on electricity. Check that the unit operates correctly (see temperature lock operation section).

Fig. 14

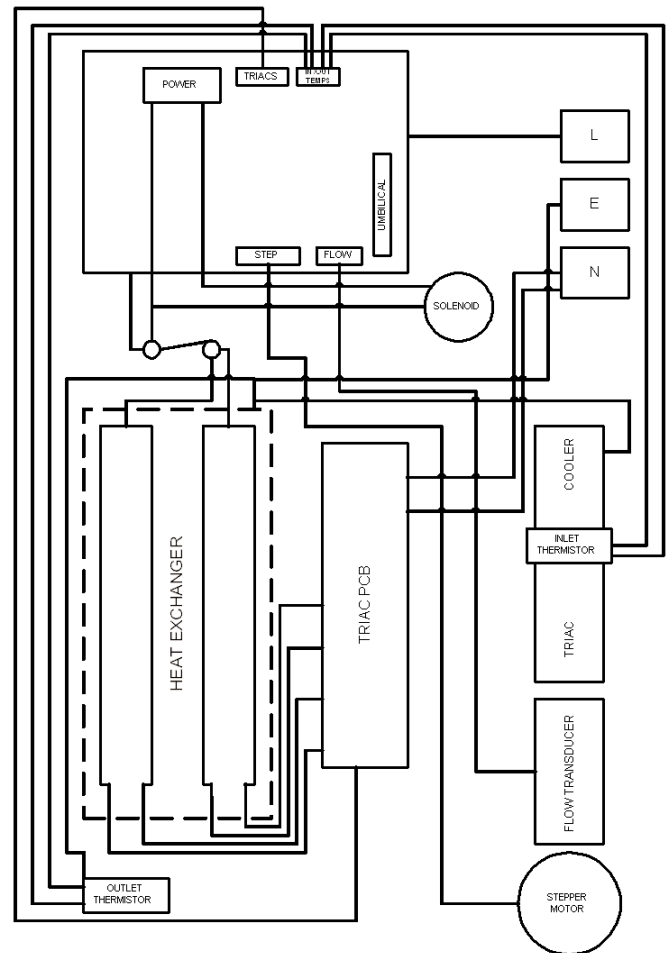
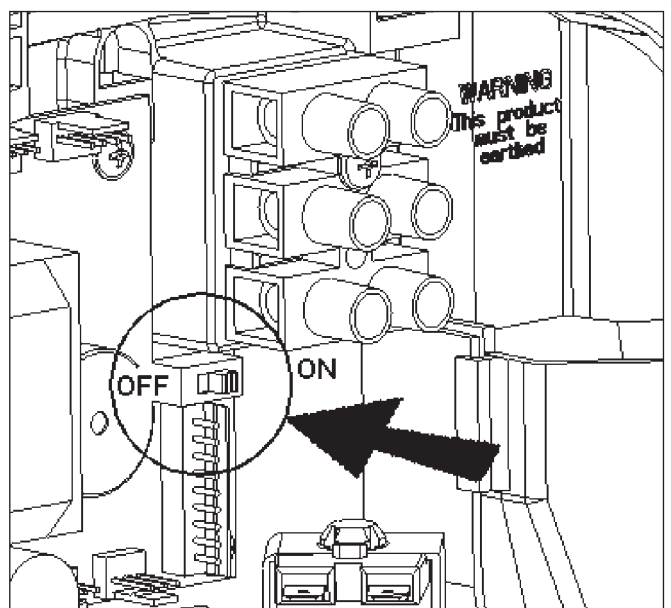


Fig. 15



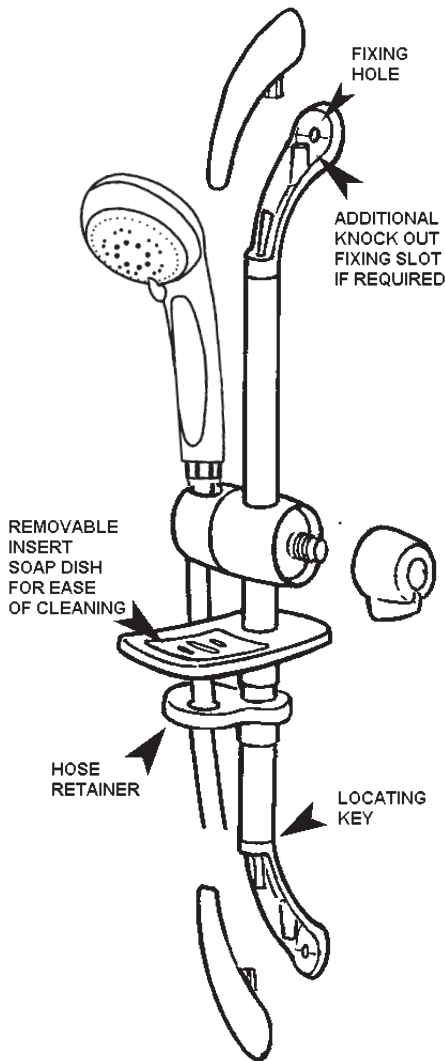
**Optional Accessories** (standard fittings only)

2 Metre smooth shower hose	83-792578	1 Metre riser rail	83-593530
2 Metre convoluted shower hose	83-593529	Care pack (1 Metre rail/2 Metre smooth hose)	83-792354
		Grab rail	83-593568

**Spares**

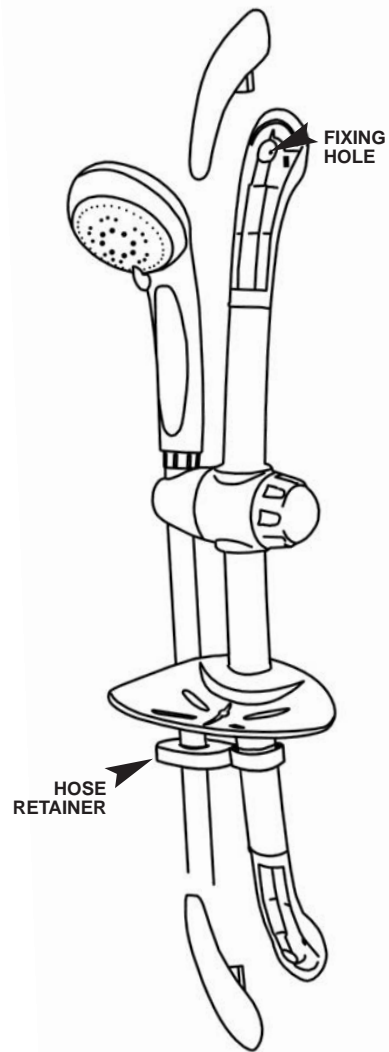
Solenoid valve + seals	93-594101	Cable entries (top / bottom)	93-594111
Triac PCB	93-594102	Side section	93-594112
Flow transducer	93-594103	Logic PCB	93-594113
Flow assy + motor (no outlet)	93-594104	Front cover assy complete	93-594114
Valve motor	93-594105	PRV housing complete	93-594115
Cutout assy + cables	93-594109	Cable pack (all internal cables)	93-594116
Hose outlet assy complete	93-594110	Multi-mode handset	93-593565

**Fig. 16**



**Standard Accessories**

**Fig. 17**



**Style Accessories**

# ***Guarantee***

We, Applied Energy Products Ltd., guarantee that should any part of this instant water heater prove to be defective by reason of faulty workmanship or material within 36 months (for outside U.K. contact your local distributor) of the date of purchase, we will replace the defective parts FREE OF CHARGE on condition that :-

- (a) The appliance has been correctly installed and used on the supply circuit or voltage printed 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 is included with the appliance if returned under guarantee.

'This guarantee does not effect your statutory rights'

## **After Sales Service**

For Technical Queries, UK Sales & Advice.

**RING 0870 9000 430**

For Spare Parts & Accessories.

**RING 0870 0102 829**

Remember to quote the exact type of shower, as written on the front of the shower and on this leaflet.

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

# ***REDRING***

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