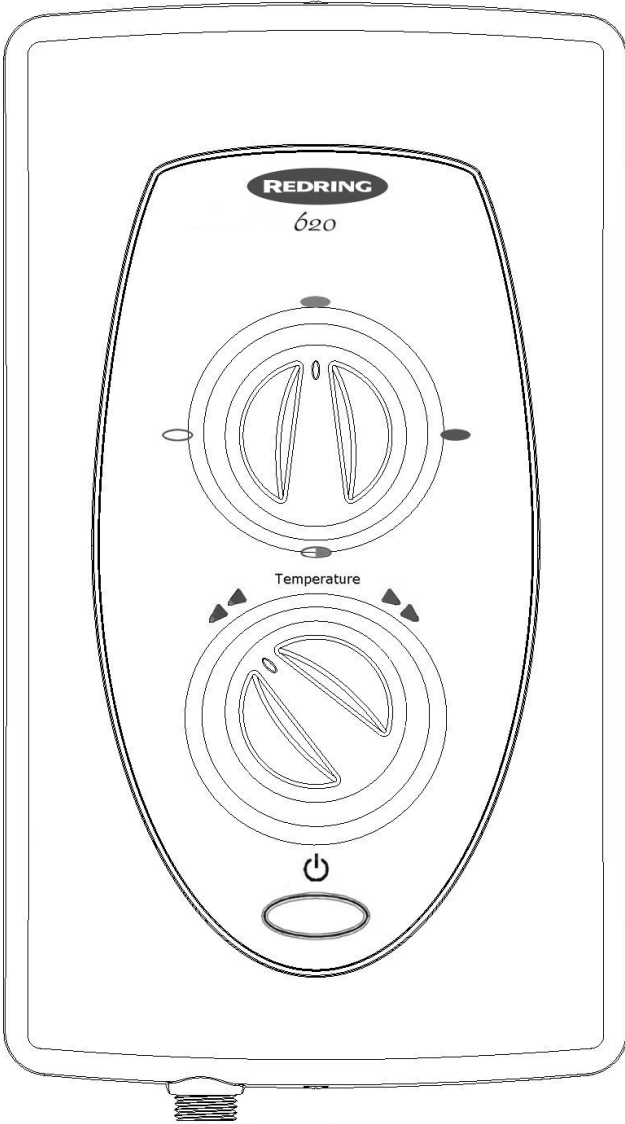
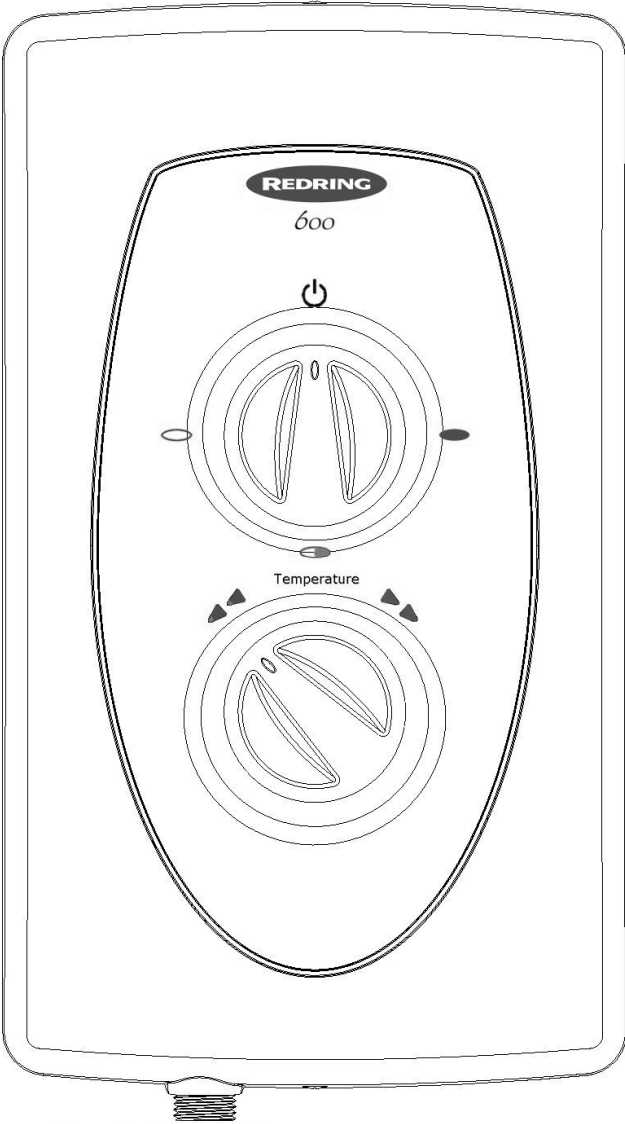




# 600 & 620

## SHOWER HANDBOOK



**IMPORTANT:**  
Please retain this booklet for future reference

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How to use your shower	2
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## How to use your shower

1. Ensure the electricity and water are turned on to the unit

2. Function of controls : -  
**KNOB "A"** – Power selector. (On/off 600 only)

Model 600	Model 620
<b>Standby</b> -	<b>Full power</b> -
<b>Full Power</b> -	<b>Med power</b> -
<b>Med power</b> -	<b>Low power</b> -
<b>Low power</b> -	<b>Cold (grey)</b> -

**KNOB "B"** – Adjusts the flow / temperature of the water

**BUTTON "C"** – Starts and 'Shuts down' the shower and cools the water automatically for (620 only) the next shower.

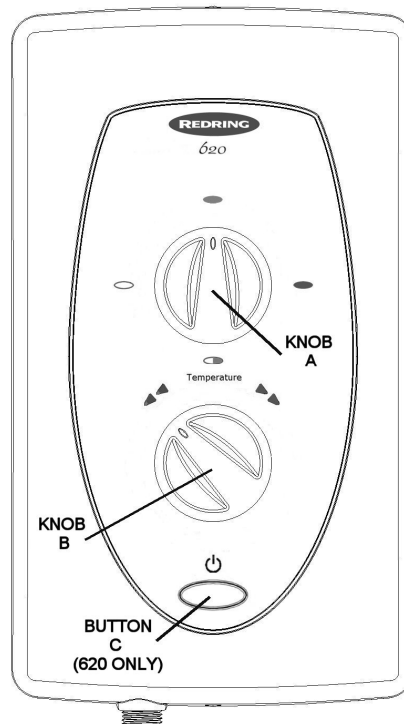
3. **Turning the unit on**

**Model 600** – Rotate knob "A" clockwise a ¼ turn (one click) this will select full power, the normal setting, further turns change the power setting (see above).

**Model 620** – Press button "C". (Rotating knob "A" selects the power level, full power being the normal setting - see above).

4. You will now need to adjust the temperature of the water. Rotate knob "B". If the temperature is too low rotate knob "B" anti clockwise and **allow 20 seconds** for the temperature to settle. Repeat this procedure until the temperature is to your liking.
5. If the temperature is too high then turn knob "B" clockwise **allowing 20 seconds** between adjustments. The final adjustment can be anywhere on the scale. See diagram 2 for relationship of flow to temperature.
6. Clockwise makes the temperature cooler, anti-clockwise makes the temperature warmer.
7. Once a temperature setting to your liking has been achieved knob "B" will rarely need adjusting, e.g. Adjust for variations of incoming mains water temperature between summer and winter.
8. The options of **Medium** or **Low**, reduces the power used giving a cooler shower or the option of reduced flow. These options are mainly for summer usage and knob "B" will have to be re-adjusted. The **cold** option (620 only) supplies water with no heat.
9. When you have **finished** showering.

**Model 600** - Rotate knob "A" to the 12 o'clock position ( ). The electricity is switched off and the water will cease to flow immediately.



**Diagram 1**

**Model 620** - Press button "C". The electricity to the elements is then switched off, water will continue to flow for approximately 5 seconds before switching off. This reduces the temperature of the water in the unit.

Switch the electricity off at the ceiling switch or local isolator.

10. Your shower is designed to stabilise temperature changes caused by water pressure fluctuations. These can result from toilets being flushed or taps being turned on or off. When this happens your showering temperature will be held within a controlled band, provided that the minimum pressure required by the shower is maintained.
11. Your shower requires a minimum operating pressure of 100 kPa (1.0 bar, 14.5 p.s.i.). At pressures above 100 kPa (1.0 bar, 14.5 p.s.i.) it will minimise temperature fluctuations detailed in note 9. If the water pressure falls below 100 kPa (1.0 bar, 14.5 p.s.i.), it is likely that the pressure switch will turn off the power to the heating elements, resulting in a cold shower.
12. During normal operation if the shower senses an overheated water temperature then the thermal cutout will switch off the heating elements. Water will continue to flow and as the water temperature falls the heating elements will be turned back on. If the unit continues to do this then increase the flow rate by turning knob "B" clockwise and check that the handset does not require de-scaling. If it still continues, then rotate knob "A" to the MEDIUM power setting, six o'clock position (Knob B will need adjusting).
13. Note that knob "B" **IS NOT A TAP** and does not turn the water off.

**WARNING! DO NOT SWITCH THE SHOWER ON IF YOU SUSPECT IT OF BEING FROZEN. WAIT UNTIL YOU ARE SURE IT HAS THAWED OUT.**

## Redring After Sales Service

We offer a technical advisory service on the telephone to contractors and other customers with problems in the field.

**RING 0870 9000 430**

Spare parts can be supplied against any debit or credit cards.

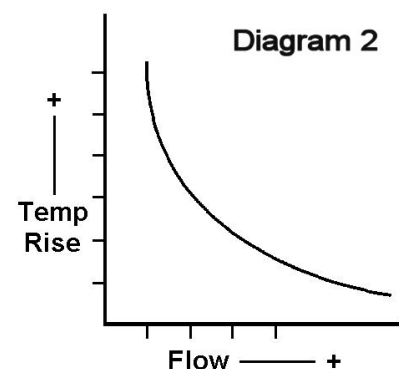
**RING 0870 0102 829**

Remember to quote the exact type of shower, as written on the front of the shower and on this leaflet. It may also be of use to have a note of the catalogue number and serial number as stated on the underside of the shower

## How your shower works

Your shower is designed for convenience, economy and safety of use

1. Water is heated instantaneously as it flows over the heating elements in the copper heating tube.
2. The required water temperature is achieved by adjusting the rate of water flow. Diagram 2 shows the principle involved in relating temperature rise to flow rate. The higher the water flow the lower the temperature rise, and vice versa. The temperature of the water supplied from the mains can vary considerably



throughout the year from 5 to 20°C. This means that in Winter, the flow rate will be less than in the Summer to achieve the same outlet temperature. In summer the 'MED (medium)' or 'LOW' power setting may give adequate hot water.

The heaters are only switched on when sufficient water is flowing. This is done automatically with a switch, which works on water pressure.

3. The water is turned on and off by the solenoid valve built into the shower. This is switched on by rotating Knob "A" (pressing button "C" - model 620 only)
4. The flow of water is automatically held at the level set by the user even though the supply pressure may vary. (See 'How to use your shower' note 9).
5. If the water supply falls below a set limit, the pressure switch will operate and switch off the power to the elements.
6. As a further safeguard, a thermal cutout switches the power off if the water temperature climbs above a set limit. The cutout gives an audible click when it switches off, but will reset itself if water is run through the shower for 10 to 20 seconds.
7. The pressure relief device is to safeguard against extreme abuse conditions.
8. There are 3 defined spray plate settings adjustable by rotating the spray plate, (see diagram 4). If desired many combinations between the 3 can be achieved. (Model 600 has a different shape handset but the modes are the same). The modes have a positive to identify them.

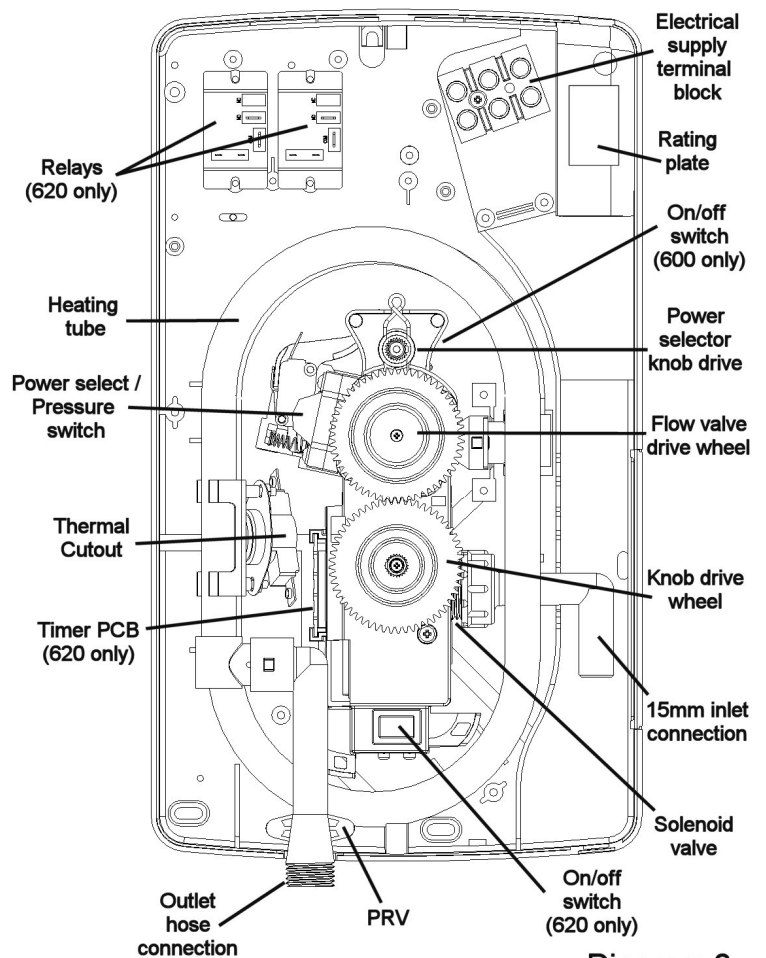


Diagram 3

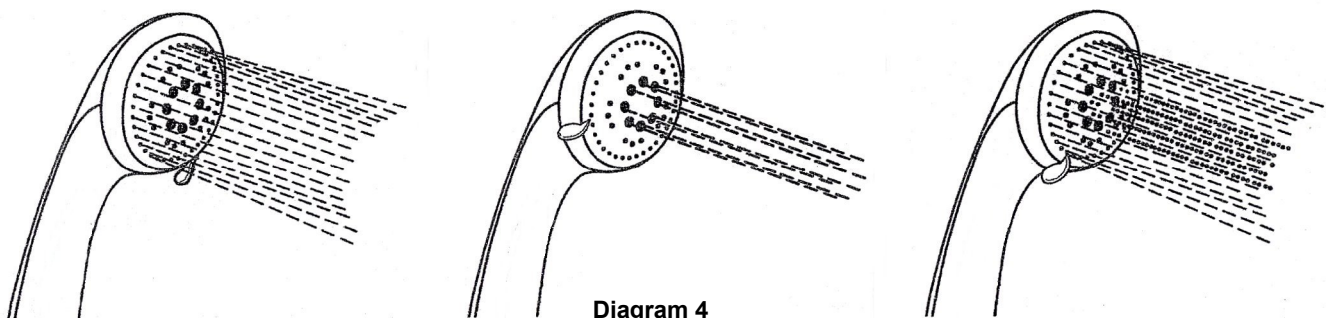


Diagram 4

### IN ORDER TO MAINTAIN THE PERFORMANCE OF YOUR SHOWER YOU MUST CLEAN THE SHOWERHEAD.

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 regularly rubbing the rubber spray nozzles or, in severe cases dipping the spray plate into a suitable de-scaling solution.

The frequency of this will vary from weekly to quarterly depending on the water hardness and experience.

Check the spray plate is then free to rotate to give the three settings.

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

Note: After use it is normal for some water to drip from the showerhead for a few moments, this inhibits scale build up over prolonged use.

## What to do if things go wrong

### SELF HELP

If the shower is unsatisfactory, make the following checks before calling out the contractor. Any of these adjustments could restore the performance

<b>a) Water too HOT</b>	Increase water flow by adjusting the temperature control clockwise.  Clean spray plate holes. (Select outer or combination spray patterns).  Switch power to MEDIUM setting.  Increase pressure of water supply e.g. fully open service valve or stop cock. Check hose is not kinked restricting the water flow.
<b>b) Water too COLD</b>	Decrease water flow by adjusting the temperature control anti-clockwise.  Select inner or outer spray patterns only.  Switch power to HIGH setting.
<b>c) Spray pattern poor</b>	Clean spray plate and flush heater. (Select inner / outer spray pattern).
<b>d) Water goes cold while using shower</b>	Check water pressure has not fallen so far as to let pressure switch cut out, e.g. another tap drawing water off. Raise position of handset.
<b>e) Broken parts</b>	Please contact our spares department on 0870 0102 829. Fitting instructions are provided with spares.

### PROFESSIONAL SERVICE

If the previous checks fail to restore the performance, you should either contact the Redring Technical Advisory Service or seek the assistance of a qualified plumber and / or electrician.

**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.**

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

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

a) <b>Water too HOT</b>	Water flow restricted by blockage in filter of solenoid valve. Switch off water and undo plastic nut on elbow, loosen brass nut to swing elbow away from solenoid. Remove filter in solenoid with long nosed pliers and flush clean.
b) <b>Water too COLD</b>	Check circuit through thermal cut-out Check circuit through microswitch on the pressure switch Check each element circuit. Check tightness of electrical connections.
c) <b>Water leaks from burst pressure relief valve</b>	Check for cause of high pressure and remove it. i.e. Blockage on outlet or blocked spray plate. Replace the pressure relief disc.
d) <b>Water does not flow when Knob "A" is rotated (when button "C" is pressed - 620 only)</b>	Check the circuit through the solenoid coil. Check circuit through mini microswitch (push switch – 620 only) Possible timer PCB fault (620 only). If defective, then replace. Power supply not reaching shower.

## Installation instructions

Check that the electrical rating shown on the shower matches the mains supply.

A competent installer must undertake all installations. If in any doubt, advice and assistance should be sought from a qualified plumber and/or electrician. Installations and wiring must conform to current IEE regulations (UK) BS7671

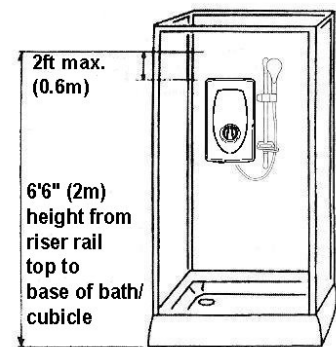
**WARNING! DO NOT INSTALL THIS SHOWER IN A ROOM WHERE IT MAY BE SUBJECT TO FREEZING**

We recommend that the installation be done in the following sequence.

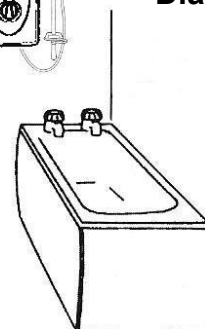
- a) Fixing the shower to the wall
- b) Plumbing
- c) Electrical connections

### a) Fixing the shower to the wall

1. Position the riser rail at the height recommended in diagram 5 and mark its position.
2. Position the heater so the sides of the unit are vertical and the top is level with, **or up to 0.6 metres (2ft) maximum below the top of the riser rail**. Choose a flat piece of wall to avoid the possibility of distorting the back plate thus making the front cover a poor fit
3. Adjust the positions to get the most convenient arrangement taking the following into account.
  - a) The possible need to use the handset over the sink for hair washing etc.
  - b) The heater **must not** be mounted in the direct spray from the showerhead.



**Diagram 5**



c) The handset must not be able to come into contact with any used water in the bath or basin. If it can, even after the hose has been retained by the hose retainer (see diagram 13), then a vacuum breaker must be fitted. It should be noted that these devices are liable to minor leakage so they must be positioned so that any drips are not detrimental.

4. Fix the riser rail with screws provided. The fixing holes at the base of the brackets will be disclosed by removing the plastic fronts. Assemble as shown in diagram 13.

5. Decide the position of the electrical cable inside the unit. If top or bottom entry is chosen (according to diagram 6), cut away the walls of the back-plate as shown in diagram 8. There is also the option to fit the cable from the rear in the channel provided.

6. Decide the cut away position of entry of the cold water pipe into the unit. Cut away the back-plate and front cover as shown in diagram 7 or 8. There is also the option to have rear entry (see later section on plumbing).

7. If you have not yet done so, remove the front cover (complete with control knob) of the unit by undoing the retaining screws at the top and bottom of the unit and lifting the cover off. The top-fixing hole is a keyhole slot, and should be marked and drilled first. Tighten top screw with head protruding about 10mm from wall and hook the back-plate over the screw head. This allows for correct and accurate alignment of your shower before marking and fixing the bottom/side position. You may not wish to tighten up all 3 other screws at this stage as the holes are elongated to allow for adjustment after other connections have taken place.

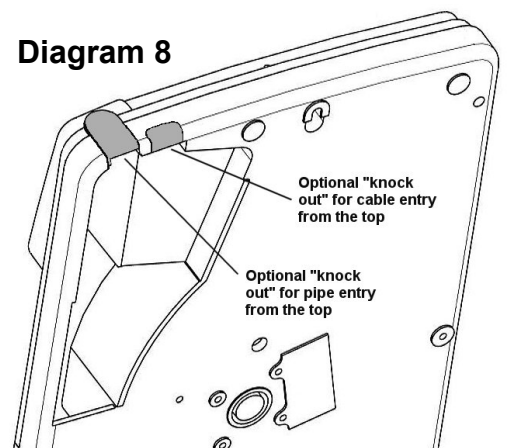
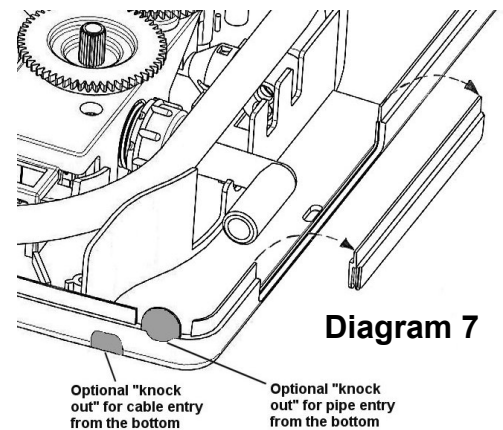
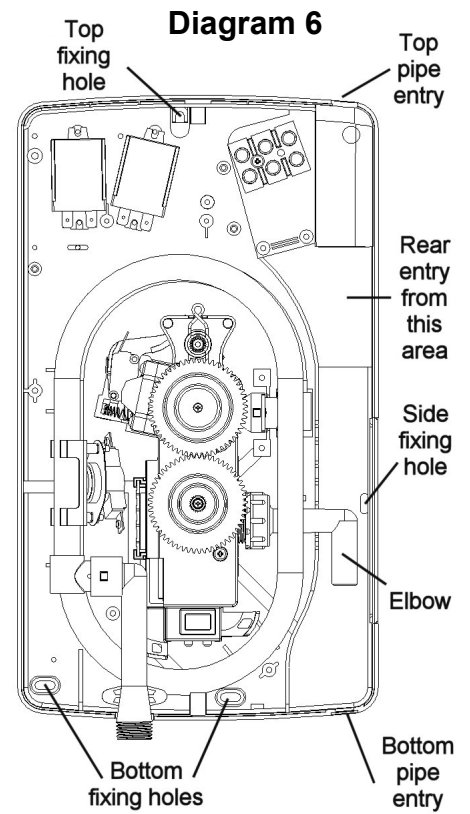
8. Do not obstruct the pressure relief device found in the back-plate slot underneath the outlet connection (see diagram 2). Especially if silicone sealant or similar materials are used around the edges of the back-plate.

9. There are a number of shields in the shower unit. These are important for the correct operation of this shower and MUST NOT be removed under any circumstances.

**b) Plumbing (see diagram 9)**

The heater should be connected to the mains cold water supply. This must have a minimum running pressure of 100kPa, 1.0 bar (14.5 p.s.i) and a maximum pressure of 1000kPa, 10 bar (145 p.s.i).

Before connecting the pipe-work to the shower ensure that pipe-work is flushed out.



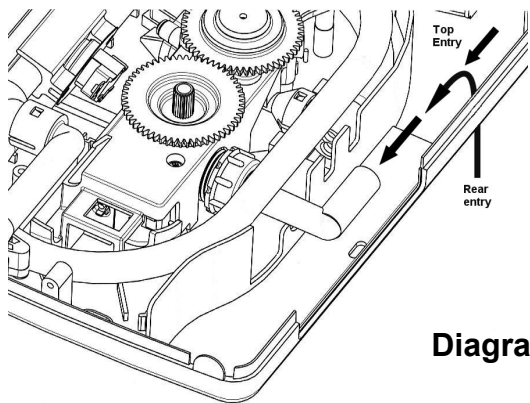
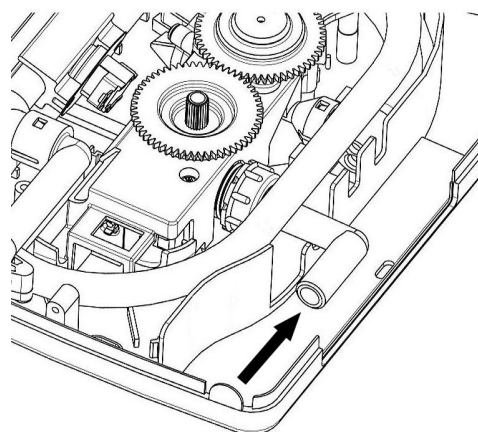


Diagram 9



1. It is recommended that a WRAS (Water Regulations Advisory Scheme) listed isolating valve is fitted between the rising main and the unit. This will allow the unit to be serviced or exchanged without having to turn off the water at the mains stop valve.
2. The heater can be fed from a header tank provided this has a minimum head height of 10.5 metres (35ft).
3. 15mm copper or stainless steel pipe should be used alongside with a standard compression fitting. In multiple shower installations correct pipe-work sizes should be calculated to maintain adequate flow to each shower.
4. a) If top entry is chosen, turn the elbow 180° into the required position and fit a standard 15mm in-line compression fitting. There is a removable side section, which will aid you with this (diag.7).  
 b) If rear entry is chosen, turn the elbow 180° and treat it as top entry except for the fitting of a 'Yorkshire' elbow in the rear channel. The removable side section will again be an aid.
5. It is in order to use a WRAS (Water Regulations Advisory Scheme) approved sealant sparingly whilst avoiding excess finding its way into shower operating parts.
6. With the stop valve connected, **flush the pipe-work through to remove any particles etc.**, before making the final connection to the shower. Blockage in the waterways (particularly the handset and solenoid valve) will prevent the heater working properly.
7. The shower is designed to have an open outlet and should only be used with 'Redring' recommended fittings. Do not connect the handset until after the shower removable side section and front cover are fitted.

**WARNING - DO NOT FIT A TAP ON THE SHOWER OUTLET. TAKE CARE TO AVOID RESTRICTING THE OUTLET AND FLOW FROM THE HANDSET OR THE PRESSURE RELIEF DEVICE.**

#### d) Electrical Connections

The electrical installation must be in accordance with the current BS. 7671 (I.E.E. regulations).

1. The shower is designed for a single-phase A.C. electrical supply. Please check the rating plate on the unit to see what details apply.
2. The table is to be used as a guide only. Please refer to the current wiring regulations.

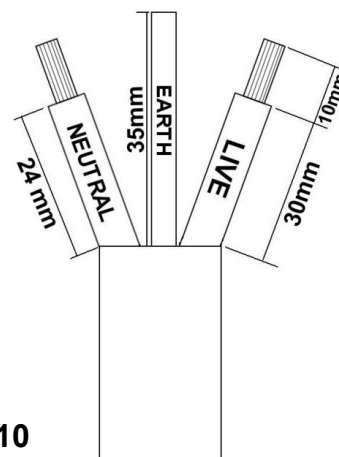


Diagram 10



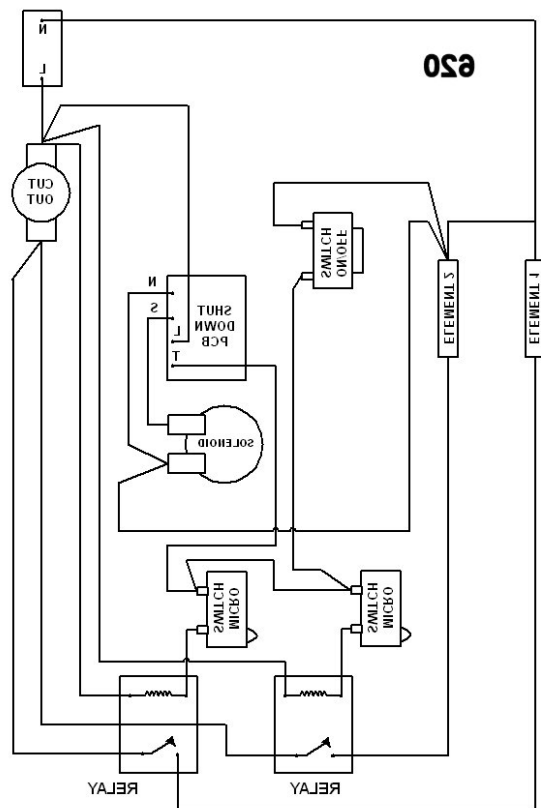
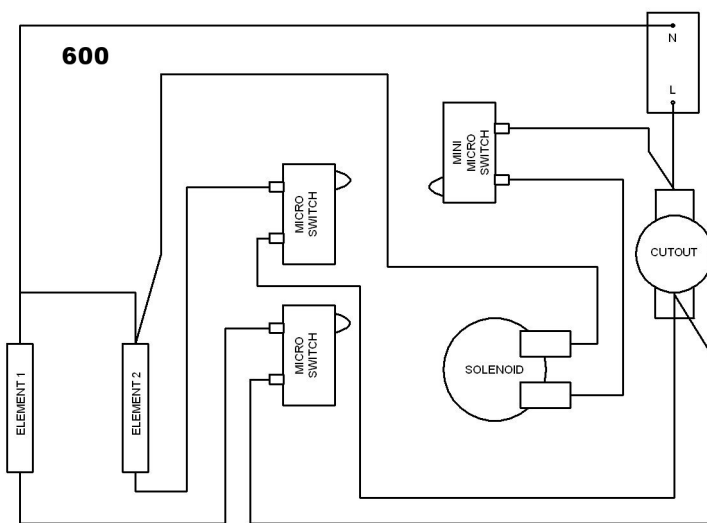
Cable Sizes	Fuse/ MCB
7.5 / 6.9kW 240/230V 6mm <sup>2</sup>	40A Cartridge fuse Type A MCB 14m max
8.5 / 7.8 kW 240/230 V 6mm <sup>2</sup>	40A Cartridge fuse 14m max Type A MCB 22m max
9.5 / 8.7kW 240/230V 10mm <sup>2</sup>	40 or 45A Cartridge fuse 22m max

You may be able to use 6mm<sup>2</sup> cable if Method 1 (clipped direct) is used.

Remember to up-rate the cable if it runs in thermal insulation in a loft, or for a longer distance.

3. A means for disconnection in all poles **must be** incorporated in the fixed wiring in accordance with the wiring rules. We recommend ceiling switches.
4. Cut back cable as in diagram 10. Connect cable to terminal block making sure that ALL the retaining screws are **VERY** tight and that no cable insulation is trapped in the block.

**Diagram 11**



**WARNING - FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN A FAILURE OF THE TERMINAL BLOCK AND CABLING.**

5. **WARNING - THIS APPLIANCE MUST BE EARTHED.**

6. Ensure that the removable side section is fitted securely back into the back-plate.
7. Fit the front cover into position making sure the knob is aligned correctly with the flow valve (see diagram 12).

**WARNING - TAKE CARE WHEN REPLACING THE FRONT COVER TO AVOID DAMAGING ANY COMPONENTS.**

8. Operate the shower first without the handset to flush out any particles, fit handset and then operate the shower as explained previously and check:
  - a) That the water gets to a satisfactory temperature.
  - b) Power selection does give a change in water temperature.
  - c) Check again for leaks.

- d) That the holes in the spray plate are not blocked.
- e) Water flow can be adjusted by knob B.

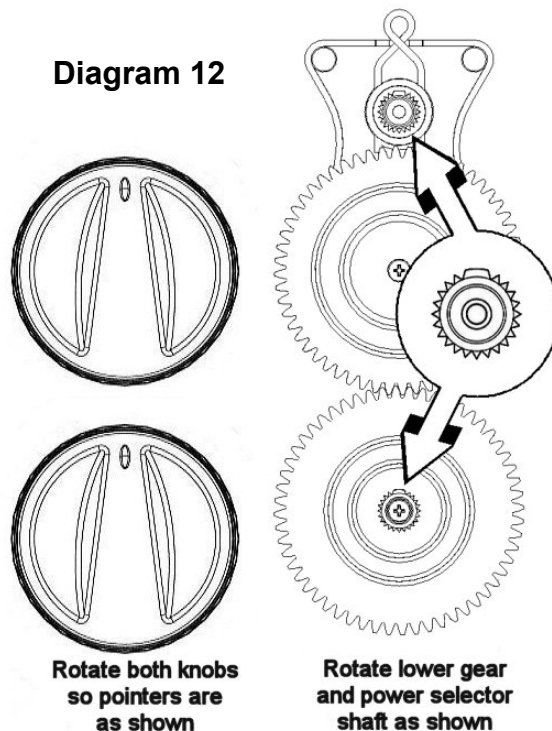
- 9. DEMONSTRATE OPERATION TO USER
- 10. LEAVE THESE INSTRUCTIONS WITH THE USER FOR FUTURE REFERENCE.

### How to maintain your shower

It is recommended that the shower unit, riser rail, hose etc. can be cleaned using a soft cloth and that the use of an abrasive or solvent cleaning fluid be avoided.

We recommend that, before cleaning, the isolating switch be turned off, thus avoiding accidentally switching on the shower.

The showerhead should be periodically cleaned as previously detailed on page 4.



### Additional Accessories

### Catalogue Number

White 2 metre Shower hose	83-593529
Water control tap	93-792452
Shower de-scaling powder	95-711015
Curtain and rail pack	83-792802
Curtain and rail pack with Bath mat	83-792801

### Spares

Front cover complete (600)	93-597808
Front cover complete (620)	93-597809
Side section	93-591819
Thermal cutout	93-590306
Outlet elbow & PRV	93-593592
Solenoid	93-591805
Inlet elbow	93-591804
Gear wheel drive	93-593591
Miniature microswitch (600 only)	93-597811
Relay (620 only)	93-597812
Timer pcb (620 only)	93-597813
On/off switch (620 only)	93-590713.

**Spares / accessories can be supplied against any Visa or Access cards from Redring Sales Hotline 0870 0102 829**

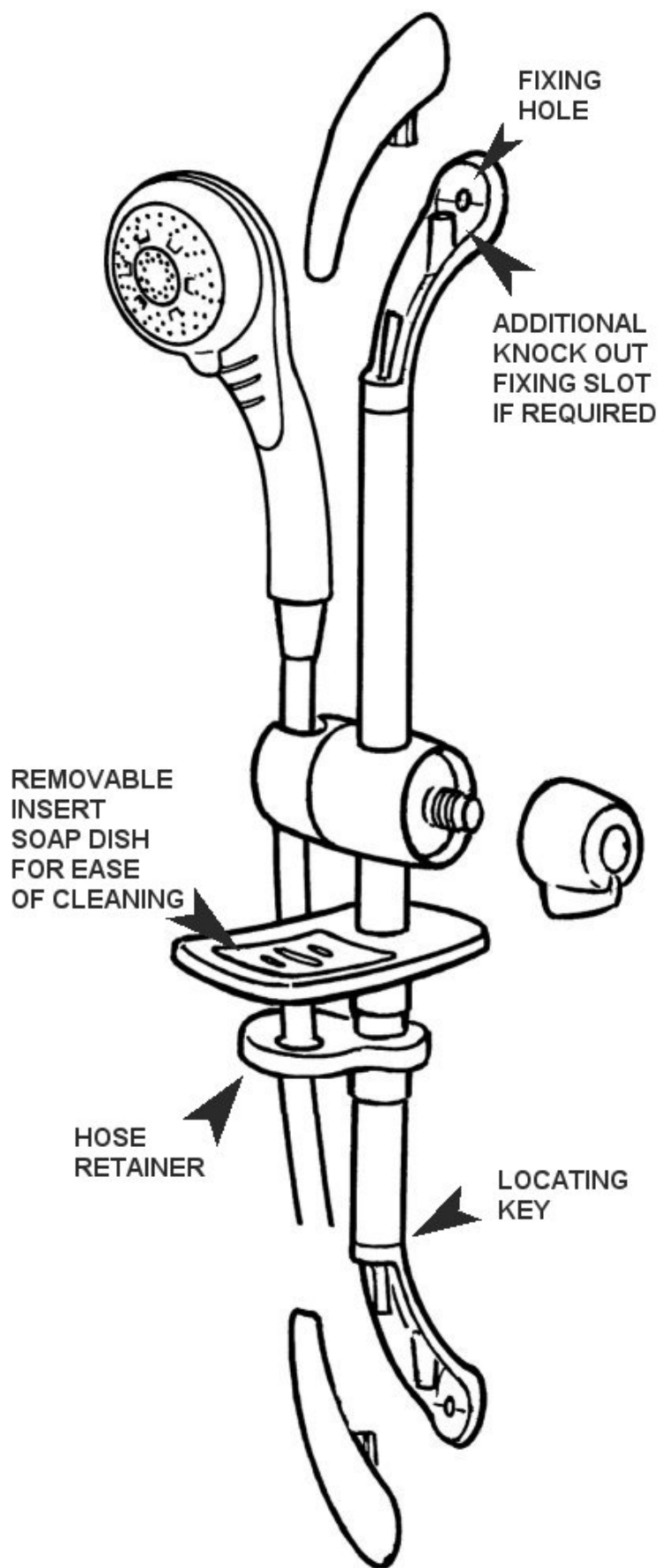


Diagram 13

# *Guarantee*

We, Applied Energy Products Limited, guarantee that should this instant water heater prove to be defective by reason of faulty workmanship or material within 36 months\* of the date of purchase or commencement of hire we will replace 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 (hire purchase documents) is included with the appliance if returned under guarantee.
- e) The appliance has been used for domestic purposes only.

'This Guarantee does not affect your statutory rights'

\*Accessories covered for 12 months.

**REDRING**

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

**APPLIED ENERGY PRODUCTS LTD.**

**MORLEY WAY, PETERBOROUGH. PE2 9JJ.**

Tel +44 (0)1733 456789 Fax: +44 (0)1733 310606 Website: [www.redring.co.uk](http://www.redring.co.uk)

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