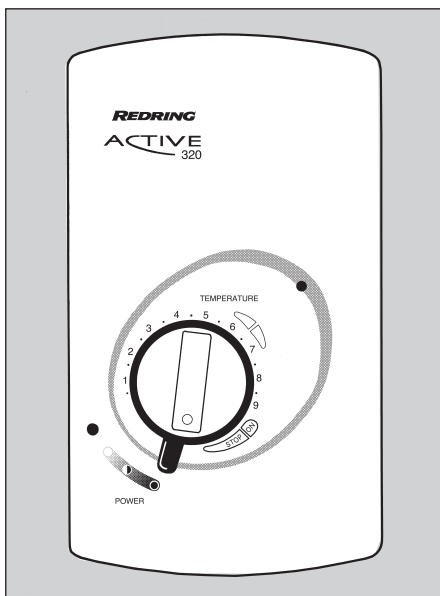


THE  
**REDRING**  
SHOWER  
HANDBOOK

ACTIVE  
320



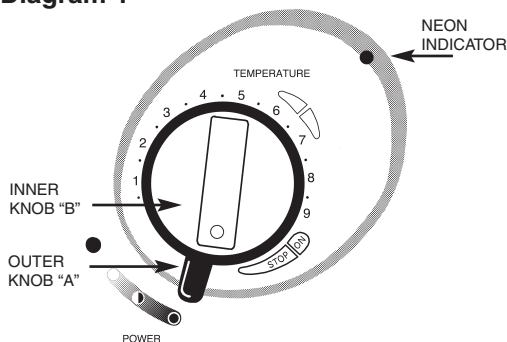
INCLUDING OTHER EXPORT VARIANTS

**IMPORTANT:**  
THIS BOOKLET SHOULD BE GIVEN TO THE CUSTOMER  
AFTER INSTALLATION AND DEMONSTRATION

Thankyou for choosing a quality **REDRING** product manufactured in Peterborough, England.

## How to use your Redring Shower

Diagram 1



- 1 Ensure the electricity and water is turned on to the unit.
- 2 Your shower has 4 power settings selected by turning the outer knob "A". The most popular is "HIGH" indicated by a red ●. There are also options for a "MEDIUM", "LOW" or "COLD" shower (see notes 8 and 9).  
**For this example turn inner knob "B" anti-clockwise to number 6 on the scale this will let water flow through the unit. Turn outer knob "A" fully anti-clockwise to "HIGH".**
- 3 The neon indicator will glow brightly indicating that the selected power setting is "HIGH".
- 4 **Allow about 20 seconds** for the temperature of the water to stabilise.
- 5a If the water is **too hot, turn knob "B" anti-clockwise** to number 5 on the scale. **Wait 20 seconds** for the temperature of the water to stabilise. Repeat turning anti-clockwise if necessary until you get the water temperature of your liking.

- 5b If the water is **too cold, turn knob "B" clockwise** to number 7 on the scale and continue as necessary until you get the temperature of your liking. The final adjustment may be anywhere on the scale.
- 5c Basically turning knob "B" **clockwise increases** the water temperature, whilst turning **anti-clockwise decreases** the water temperature.
- 6 Once a temperature setting of your liking has been achieved, you should remember the number or position of knob "B". This position will rarely change. Adjustment will only be required to take account of seasonal water temperatures.
- 7 When you have finished showering turn knob "B" clockwise to the "STOP" position. You have no need to adjust knob "A". Switch off electricity at the ceiling switch or local isolator, where fitted.
- 8 The "MEDIUM ●" and "LOW ○" setting of outer knob "A" reduces the power used by the shower giving a cooler shower or the option of reduced water flow. These options are mainly for summer usage and if this is used then knob "B" must be re-adjusted. On these settings the neon indicator will glow half as bright.
- 9 The COLD setting indicator by "grey ●" will supply water without any heating, and the neon indicator will go out.
- 10 Your shower is **designed to stabilise temperature** changes, caused by pressure fluctuations. These can result from toilets being flushed or taps being turned on and 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 0.7 bar (10 p.s.i.) at pressures above 0.7 bar (10p.s.i.) it will minimise temperature fluctuations as

detailed in note 10. If the water pressure falls below 0.7 bar (10 p.s.i.) it is likely that the pressure switch will turn off the power to the heating elements, resulting in a cold shower. This will be indicated by the neon light going out.

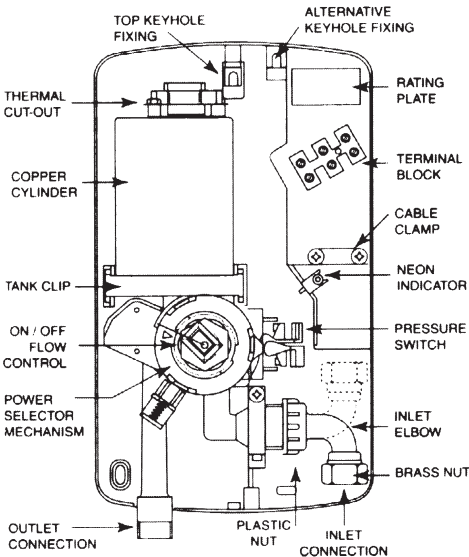
**WARNING! DO NOT SWITCH THE SHOWER ON IF YOU SUSPECT IT OF BEING FROZEN. WAIT UNTIL YOU ARE SURE IT HAS THAWED OUT.**

## How your Redring 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 cylinder (diagram 2).

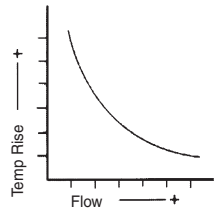
**Diagram 2**



- 2 The required temperature is achieved by adjusting the rate of water flow. Diagram 3 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 "MEDIUM ●" or "LOW ○" power settings may give adequate hot water.

**Diagram 3**



- 3 The heaters are only switched on when sufficient water is flowing. This is done automatically with a switch which works on water pressure and is indicated by the neon indicator illuminating brightly or dimly depending on the power selected by knob "A".

- 4 The water is turned on and off by a tap that is built into the shower.
- 5 The flow of water is automatically held at the level set by the user though the supply pressure may vary (see "How to use your shower" note 10).
- 6 If the water supply falls below a set limit, the pressure switch will operate and switch off the power to the elements. This is indicated by the neon indicator going out (See "How to use your shower" note 11).
- 7 As a further safeguard, a thermal cut-out switches the power off if the water temperature climbs above a set limit. This cut-out which gives an audible click, may also operate due to residual heat when the shower is switched off. It will reset itself if cold water is run through the shower for 10 to 20 seconds.
- 8 The pressure relief device is to safeguard against extreme abuse conditions.

# What to do if things go wrong

## SELF HELP

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

<b>a) Water too HOT</b>	Increase water flow by adjusting the temperature control anti-clockwise. Clean spray plate. Switch power to "Medium ◐" or "Low ◑". 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>	Check power is on by neon.  Decrease water flow by adjusting temperature control clockwise.  Switch power to "High ●" setting.
<b>c) Spray pattern poor</b>	Clean the showerhead.
<b>d) Water takes longer to heat up</b>	Thermal cut-out has operated after previous use. Switch power to "High ●" setting.
<b>e) Water goes cold</b>	Check neon light is on. Check water pressure has not fallen so far as to let the pressure switch cut out. e.g. Another tap drawing water off. Raise position of showerhead.
<b>f) Broken parts</b>	Please contact our spares dept, on: 08709 000420. (UK only). Your local Dealer (Export Variants). Fitting instructions are provided with spares.

## PROFESSIONAL HELP

If all the above checks 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.

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

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

<b>a) Water too HOT</b>	Insufficient water supply. Check the water pressure meets the unit requirements (see note 11 in how to use your Redring Shower).
<b>b) Water too COLD</b>	Check circuit through thermal cut out. Check circuit through microswitches on the pressure switch. Check each element circuit. Check tightness of electrical connections.
<b>c) Water leaks from burst pressure relief valve</b>	Check for cause of high pressure and remove it. Blockage on outlet i.e. Blocked spray plate/kinked hose. Replace the pressure relief disc.

## *Redring after sales service*

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

**RING 08709 000430 (UK ONLY)**

**RING YOUR LOCAL DEALER (Export variants)**

Spare parts/Additional accessories can be supplied.

**RING 08709 000420 (UK ONLY)**  
**Visa/Access cards accepted.**

**RING YOUR LOCAL DEALER (Export Variants)**

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 as stated on the rating plate inside the shower (see diagram 2 for location).

# Installation Instructions

All wiring and installation should be supervised by a qualified electrician.

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

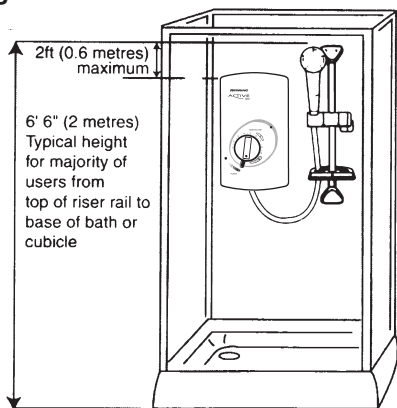
We recommend that the installation is done in the following sequence.

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

## a) Fixing the shower to the wall

- 1 Place the riser rail at the height recommended in diagram 4 and mark its position.
- 2 Position the heater so that the sides of the

**Diagram 4.**



unit are vertical and the top is level with, **or up to 0.6m (2ft) maximum below the top of the riser rail.** Choose a flat piece of wall to avoid possibility of distorting the backplate 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 handset.
  - c) The handset must not be able to come into contact with the used water in the cubicle, bath or basin. If it can, even after the hose has been retained by the soap dish (see diagram 9), 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 9.
  - 5 Decide the position of the electrical cable to the unit. If top or bottom entry is chosen, cut away the relevant walls of the backplate as shown in diagram 5.
  - 6 Decide the position of the cold water pipe into the unit. If top or bottom entry is chosen, cut away the relevant walls of the backplate and front cover as shown in diagram 5. If rear is chosen refer to note 5 in plumbing section.
  - 7 Your Shower is provided with three main fixing positions in the backplate (see diagram 5). The top fixing hole is a key-hole slot and should be marked and drilled first (There is an additional top fixing hole provided for better access). Tighten top screw with head protruding about 10mm from the wall and hook the backplate over the screw head. This allows for correct and accurate alignment of your shower before marking and fixing the bottom positions. You may not wish to tighten up the screws at this stage as the holes are elongated to allow for adjustment after other connections have taken place.

## b) Plumbing

The heater should be connected to the mains cold water supply. This must have a minimum running pressure of 0.7 bar (10 p.s.i.) and a maximum pressure of 7.0 bar (100 p.s.i.).

**Before connecting to the shower ensure that the pipework is flushed out.**

- 1 It is recommended that a water council listed isolating valve is fitted between the rising main and the unit. This will allow the unit to be serviced without turning off the cold water 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 of 7 metres (23ft).
- 3 In extreme cases of difficulty in getting sufficient water pressure, consideration should be given to using a pump.
- 4 15mm Copper or Stainless steel pipe should be used, to avoid cross threading do not remove the brass nut from the elbow when positioning pipe.

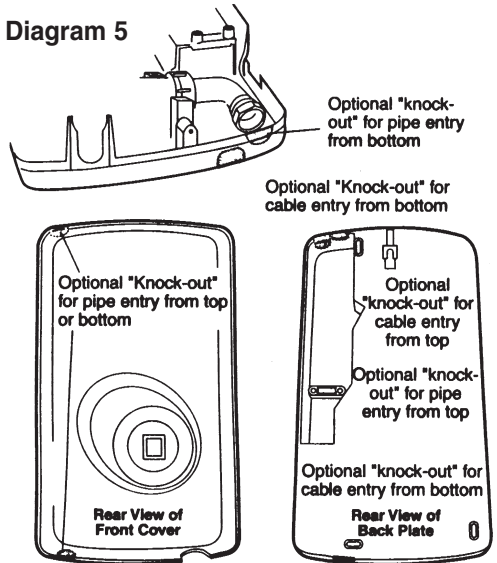
In multiple shower installations, correct pipework sizes should be calculated to maintain adequate flow to each shower.

- 5 If top or rear entry has been chosen, turn the elbow into the required position. If rear entry is used treat as top but use a "Yorkshire" elbow (soldered type) fitting in the rear channel.

**CAUTION! BEWARE OF DAMAGING PRESSURE SWITCH WHEN TIGHTENING BRASS INLET NUT.**

- 6 It is in order to use a W.R.C. (Water Research Council) approved sealant sparingly whilst avoiding excess finding its way into shower operating parts.

Diagram 5



- 7 With an isolating valve connected, flush the pipework through to remove particles etc. before making the final connection to the shower. A blockage in the waterways (particularly the spray rings and flow valve) will prevent the heater working properly.
- 8 The shower is designed to have an open outlet and should only be used with "Redring" recommended fittings.

**WARNING! THE OUTLET ACTS AS A VENT. DO NOT FIT A TAP ON THE SHOWER OUTLET. TAKE CARE TO AVOID RESTRICTING THE OUTLET OF PRESSURE RELIEF DEVICE.**

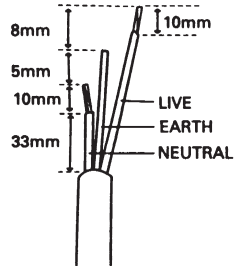
## C) Electrical Connections

The electrical installation must be in accordance with the current BS 7671 (I.E.E. regulations) and/or local regulations. 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 to your unit (see diagram 2 for location).

# 1 Recommended cable sizes (UK & Export)

RATING	CABLE SIZE	FUSE RATING
3.0kW 220/230V	2.5mm <sup>2</sup>	15A Cartridge fuse 17m Max
3.5kW 220V	4.0mm <sup>2</sup>	30A Cartridge fuse 17m Max
4.5kW 220V	4.0mm <sup>2</sup>	30A
5.5kW 220V	4.0mm <sup>2</sup>	30A
6.0kW 220V	4.0mm <sup>2</sup>	30A
7.2kW 220V	4.0mm <sup>2</sup> or 6.0mm <sup>2</sup>	35A
7.2/6.6kW 240/230V	4.0mm <sup>2</sup>	30A Cartridge fuse 17m Max
8.5kW 220/240V	6.0mm <sup>2</sup> or 10.0mm <sup>2</sup>	40A Cartridge fuse 14m Max Type 1 MC 22m MAX 40/45A Cartridge fuse 22m Max

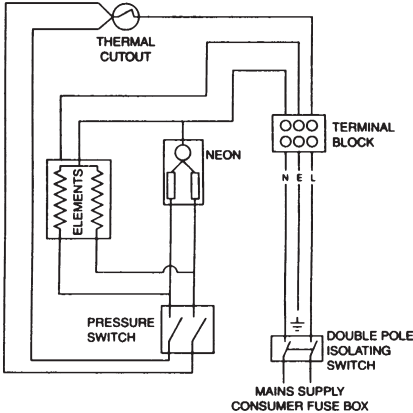
Diagram 7



Remember to uprate the cable if it runs in or against thermal insulation in the walls or loft and if in any doubt contact a qualified electrician for advice.

2 In order to provide means of isolation, the heater **MUST BE** permanently connected to the electricity supply through a double pole linked switch with a contact gap of 3mm mounted in a convenient position. We recommend ceiling switches.

Diagram 6



Schematic Wiring Diagram

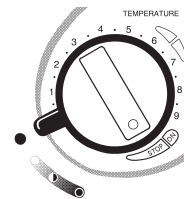
3 Cut back cable as in diagram 7, connect cable to the terminal block making sure that **ALL** the retaining screws are **VERY** tight and that no cable insulation is trapped under the screws.

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

4 **WARNING! THIS APPLIANCE MUST BE EARTHED.**

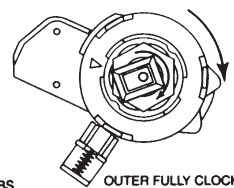
5 The earth continuity conductor of the electrical installation must be effectively connected electrically to all exposed parts of the appliances and services in the room in which the water heater is to be installed in conformity with the current BS 7671 (I.E.E. wiring regulations) and/or local regulations.

6 Rotate outer drive wheel fully clockwise and the inner square drive fully clockwise. On the front cover rotate the inner and outer knob until they are aligned as per diagram 8. Push cover onto backplate, small adjustments in the knob positions may be necessary to achieve final alignment. Check that knobs function correctly before replacing the fastening screws.



ALIGN INNER AND OUTER KNOBS AS ABOVE

Diagram 8



OUTER FULLY CLOCKWISE  
INNER FULLY CLOCKWISE

7 Fit hose and operate the shower first without the handset to flush out particles, attach handset and then operate the shower as on page 2 and check:

- a) That the water gets to a satisfactory temperature.
  - b) The water flow can be adjusted and stopped by the inner knob "B".
  - c) Power selection operates in all 4 positions, giving a change in water temperature and that the "heat" light functions correctly.
  - d) Check again for leaks.
  - e) That the holes in the showerhead are not blocked.
- 8 DEMONSTRATE OPERATION TO THE USER, AND LEAVE THIS BOOKLET WITH THE USER.

## How to maintain your Redring shower

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

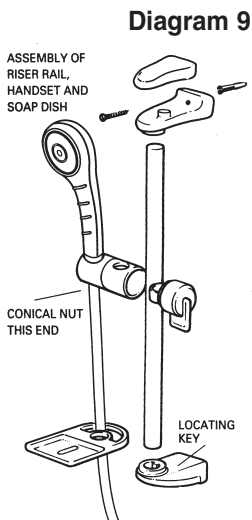
DO NOT use powerful abrasive or solvent cleaning fluids. It is advisable to switch off the shower at the isolating switch to avoid the shower accidentally switching on.

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

All water contains particles of lime which build up in the sprayhead and unit reducing the performance. It is therefore important to clean the sprayhead by regularly dipping it in a suitable descaling solution. The frequency of this will vary from weekly to quarterly depending on water hardness and experience.

Additional Accessories	Cat. No.
1 metre riser rail	83-792521
Gold accessory pack inc. multi-mode handset	83-590750
Chrome accessory pack inc. multi-mode handset	83-590749
Shower control lever (interchangeable with inner control knob)	83-590710
Water control tap	93-792452
Shower de-scaling powder	95-711015
Curtain and rail pack with non slip bath mat	83-792801
Curtain and rail pack	83-792802
Multi-mode handset	83-590751

**Spare parts/accessories can be supplied against any Visa or Access cards from Redring Sales 08709 000420.**



## GUARANTEE

*We, GDA Applied Energy Ltd, guarantee that should this instant water heater prove to be defective by reason of faulty workmanship or material within 36 months (12 months outside the U.K.) of the date of purchase or commencement of hire purchase 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.

*This guarantee does not affect your statutory rights.*

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

# **REDRING**

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