

GUARANTEE

Terms and Conditions for the UK (outside the UK contact your local distributor or point of purchase)

We, Applied Energy Products Limited, guarantee this product for the period of 36* months from date of purchase.

* The weekly mechanical programmer is guaranteed for the period of 24 months from date of purchase.

(Outside the UK contact your local distributor or point of purchase)

Within the guarantee period we will resolve, **free of charge**, any manufacturing defects in the product resulting from faulty workmanship or material on the condition that:-

- a) The appliance has been correctly installed in accordance with our instructions and is being 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 subjected 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 or receipt will be required in order to qualify for an in-guarantee repair.
- e) For the service work to be undertaken free of charge, the work must only be undertaken by Applied Energy Products Limited, or our approved agents.
- f) Service under guarantee has no effect on the expiry date. The guarantee of any exchanged parts or product ends when the original guarantee period ends.

EXCLUSIONS

This guarantee **DOES NOT** cover damage or defects arising from poor or incorrect installation, improper use or lack of maintenance, including build-up of limescale. It is the responsibility of the installer to check that the installation parameters meet the requirements of the product, and any relevant regulations.

If we are called out to a fault, which is subsequently identified as being an installation fault, we will make a charge. It is important that the routine checks are completed before calling us out, as many issues can be simply diagnosed and resolved.

We make no guarantees as to response times for repairs. We will endeavour to achieve the most timely response possible but while we indicate an average response time, this should not be taken as a guarantee.

The guarantee applies to a repair or replacement (at our discretion) of the product subject to the conditions above, and **DOES NOT** cover compensation for the loss of the product or consequential loss of any kind.

The guarantee does not apply to the repair or replacement of pressure relief devices, sprayheads, hoses, accessories, isolating switches, electrical cable, fuses and/or circuit breakers.

This guarantee does not affect your statutory rights.

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

REDRING

APPLIED ENERGY PRODUCTS LIMITED,
MORLEY WAY, PETERBOROUGH PE2 9JJ

TEL +44 (0) 844 372 7750 / FAX: +44 (0) 844 372 7760

Website: www.applied-energy.com

(A4 Leaflet No. 578-2018-12a)

REDRING *WS7-EcoT*

Point of Use Water Heater

Installation & Instruction Manual

These instructions should be read in full before commencing the installation. We recommend that the installation should only be carried out by a suitably qualified person.

The *Redring WS7-EcoT* heater is an open outlet, thermal storage water heater for use with Redring recommended fittings for one outlet only. It operates on the displacement principle i.e. when cold water is admitted into the bottom of the tank, hot water flows out through the outlet.

Installation

We recommend that this unit should be installed in the following order:

1. Fit wall bracket.
2. Fit mains electrical cable to the unit.
3. Fit heater to the wall.
4. Connect plumbing to the unit.
5. Replace the front cover.
6. Fill the unit with water and check for leaks.
7. Connect mains electrical cable to the fixed wiring.
8. Set the weekly mechanical timer.
9. Turn unit on and check operation.
10. Demonstrate operation to user.

Please Note: -

When removing the front cover, we recommend that you first remove the two top fixing screws, but only LOOSEN the two bottom screws.

This will aid when replacing the front cover during installation.

THIS APPLIANCE IS NOT INTENDED FOR USE BY PERSONS (INCLUDING CHILDREN) WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES, OR LACK OF EXPERIENCE AND KNOWLEDGE, UNLESS THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING USE OF THE APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY.

CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.



Fixing (see Diagram 1)

The wall bracket should be securely fixed in position. The heater is then hung on the wall bracket. Further security can be obtained by marking the position of the extra fixing holes as shown and applying appropriate wall fixings to these positions.

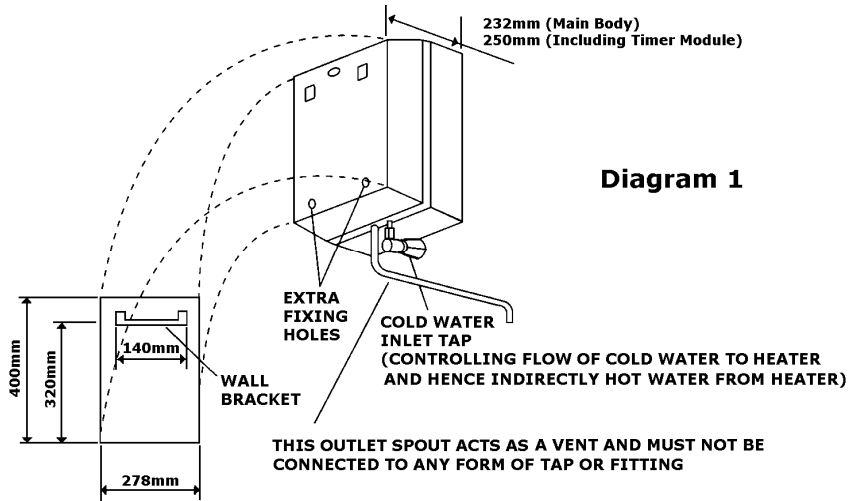


Diagram 1

When the unit is used above the sink with the cold inlet tap and spout supplied, it is recommended that these extra fixing positions be used. The bottom of the heater should be approximately 350mm above the top of the sink.

The outlet should be at least 13mm above the maximum possible water level for any unit that is to be filled from the heater.

Electrical Connection

The installation must be in accordance with the current BS7671 - IEE Wiring Regulations and "Part P" of the Building Regulations.

WARNING: THE UNIT MUST BE FILLED WITH WATER BEFORE POWER IS SWITCHED ON.

1. The heater is suitable for 240/230V single phase A.C supply.
2. The live (brown) and neutral (blue) wires must be connected to the designated positions in the terminal block and the earth (⊕) (green/yellow) to the earth position.
3. **WARNING: THIS UNIT MUST BE EARTHED**
4. The mains cable should be prepared as shown (see Diagram 2)
5. A means for disconnection in all poles must be incorporated in the fixed wiring in accordance with the wiring rules.
6. The cable should be heat resisting 3-core flexible PVC of 1.25mm² minimum.

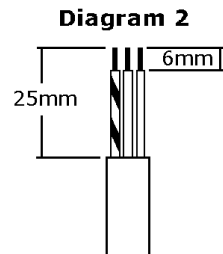


Diagram 2

Installation Engineer Note:

The most likely reason for no heated water is an open circuit thermal fuse. See label on front insulation for details. This can be caused at initial commissioning if the heating element is energized with no water in the tank. Alternatively, it may be due to a back siphonage in the cold water supply caused by a break or disconnection. If you feel that your installation may suffer from a water failure, we recommend the fitting of a non-return water check valve.

After Sales Service

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

**Ring: 0844 372 7766
Fax: 0844 372 7767**

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

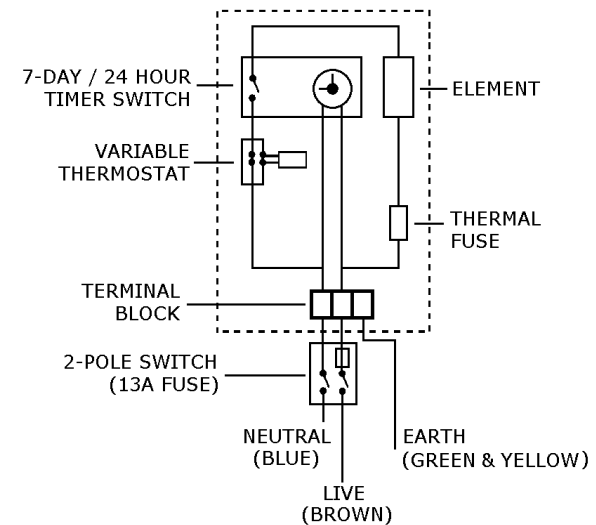
Common Spare Parts and Recommended Accessories

The fitting of Spare Parts must be supervised by a suitably qualified person.

Common Spare Parts		Recommended Accessories	
Thermal Fuse	Cat No. 94-780456	Swivel Arm (450mm)	Cat No. 84-780404
7-Day Timer	Cat No. 94-780457	Swivel Arm (600mm)	Cat No. 84-780405
Front Cover Assy	Cat No. 94-780458	Monoblock Mixer Tap	Cat No. 84-780408

Common Spare Parts and Recommended Accessories can be supplied from Redring Sales Hotline (RING) 0844 372 7766 or (FAX) 0844 372 7767

Circuit Diagram



WARNING: THE UNIT MUST BE FILLED WITH WATER BEFORE POWER IS SWITCHED ON. FAILURE TO DO THIS MAY RESULT IN THE HEATING ELEMENT BECOMING TOO HOT, CAUSING THE ONE-SHOT SAFETY THERMAL FUSE TO OPERATE AND MAY INVALIDATE YOUR GUARANTEE.

Setting up the temperature thermostat

The four settings indicated by the temperature thermostat are: -

- III This gives very hot water, which can be mixed with cold water to produce quantities of usable water greater than the actual capacity of the heater.
- II This setting will deliver, direct water suitable for washing up.
- I This setting will deliver, direct, water suitable for hand washing.
- This setting will maintain the water in the heater just above freezing point if the heater is to be left unattended whilst subject to freezing conditions. The electricity must be left on for this facility, and the mechanical programmer must be in the "I" setting.

Water expands when heated, thus during the initial heating of cold water admitted to the heater, drips from the outlet spout may occur.

If it is required that the adjustments of the thermostat is not available to the users of the heater, then after first establishing that the temperature is as required, the knob may be removed and the blanking grommet (supplied free with heater) inserted in the hole.

This grommet is a relatively loose fit, and can be made more secure by the use of suitable silicone sealant or PTFE tape etc. (not supplied).

Draining the Tank

If it is required to drain the tank, this can be effected by undoing the screw in the base plate of the heater (see "Tank Drain" Diagram 3), and catching the water in an appropriate vessel.

We recommend that the water in the heater is left to cool, or that any hot water is run through the heater before commencing this operation.

The heater must be disconnected from the electrical supply before commencing this operation.

Take care to protect the mechanical programmer from any water.

If the unit fails to heat water

1. Check that the switching time on the mechanical programmer is set to be "ON".
2. Check that the mechanical programmer is not in the "O" position.
3. Check that the mains fuses are not blown and that the mains supply is switched on.
4. Check that the cold water supply is on.
5. Check that the outlet has not been blocked in any way.

If the fault persists: -

Contact the dealer from whom you purchased the unit or the installation engineer. You can also call the "Technical Advisory Helpline" (see "After Sales Service")

Water Connection (see Diagram 4 for suggested installation plan)

Oversink (see Diagram 3a)

When using the tap and spout as supplied, the cold water connection is made directly to the Ø15mm compression fitting at the rear of the cold inlet tap.

Ensure that the water flow is in line with the flow direction arrow moulded on the cold inlet tap.

Undersink (see Diagram 3b)

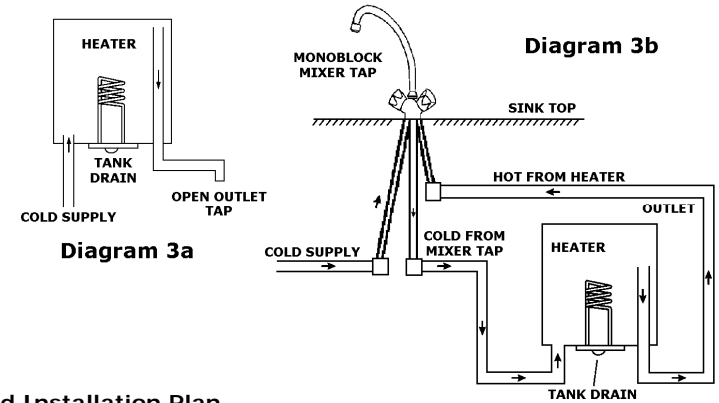
If the unit is to be mounted below sink level, it MUST be connected to the special open outlet Monoblock Mixer Tap as recommended by Redring (see page 7).

The economic performance of the heater will be enhanced by lagging the hot water pipe from the heater to the outlet.

Oversink and Undersink Installation

Before final assembly of the tap the appropriate restrictor insert must be selected and fitted into the end of the cold inlet pipe on the heater (see Table A).

The correct insert will ensure that the flow rate of water through the heater is at an optimum to prevent undue mixing of the incoming cold water with the stored hot water, as well as avoiding any unnecessary pressure within the tank.



Suggested Installation Plan

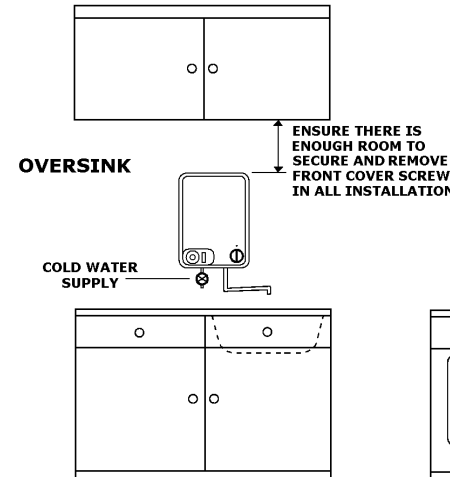


TABLE A		
SUPPLY PRESSURE		
MAXIMUM 690 kPa (100 psi / 6.9 bar)		
MINIMUM 34 kPa (5 psi / 0.3 bar)		
SUPPLY PRESSURE kPa	SUPPLY PRESSURE (psi / bar)	RESTRICTOR
690 - 345	(100 - 50 / 6.9 - 3.5)	1
345 - 207	(50 - 30 / 3.5 - 2.1)	2
207 - 117	(30 - 17 / 2.1 - 1.2)	3
117 - 69	(17 - 10 / 1.2 - 0.69)	4
69 - 34	(10 - 5 / 0.69 - 0.34)	NONE

UNDERSINK
USING SPECIAL OPEN OUTLET MONOBLOCK MIXER TAP
(See Diagram 3b for layout using recommended "Monoblock Mixer Tap")

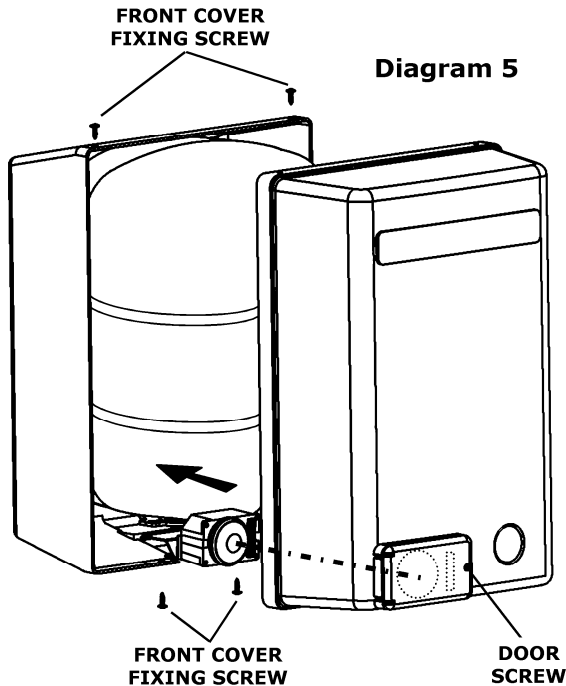
Diagram 4

Replacing the Front Cover (see Diagram 5)

Please Note: -

We recommend that the front cover is replaced before the unit is filled with water.

1. To aid assembly, ALL the weekly mechanical programmer tappets should be pushed to the inner edge of the dial to the "OFF" period (see Diagram 6).
2. Offer up the front cover to the main body, aim to fit the mechanical programmer through the bezel keeping the front cover square to the wall.
3. Once the mechanical programmer is engaged into the bezel, adjust the position so that it is a snug fit over the appliance Backplate.
4. Replace the top fixing screws (x2), then press the cover at the base while tightening the bottom fixing screws (x2).
5. Check that the mechanical programmer is free to spin, and the switch is in its aperture.
6. The appliance can be programmed as described in the "Setting up the weekly mechanical programmer" section and shown in Diagrams 6 and 7
7. Fasten the door with the screw provided.



Usage

The Redring WS7-EcoT contains an integrated weekly mechanical programmer. This facility allows the user to set the heater "ON" and "OFF" periods for each separate day of the week.

"ON" periods are settable by sliding the timer segments to the outer position. The minimum selectable "ON" period is 2 hours and 20 minutes.

A major benefit of the Redring WS7-EcoT heater is the energy saving possibilities of controllability and the facility in a commercial installation to set a programme to cover a weekly usage pattern including weekends.

However, the thick insulation contained in the Redring WS7-EcoT heater also ensures economic running costs if the heater is left on at all times.

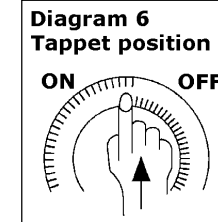
Setting up the weekly mechanical programmer

The dial should be set to the current time and day.

Rotate the dial slowly in the clockwise direction, until the correct time and day segment on the dial is approaching the arrowhead shown at the top of the dial.

Note the dial is printed with the 24 hour clock.

6.00 am = 6 on the dial and 6.00 pm = 18 on the dial.

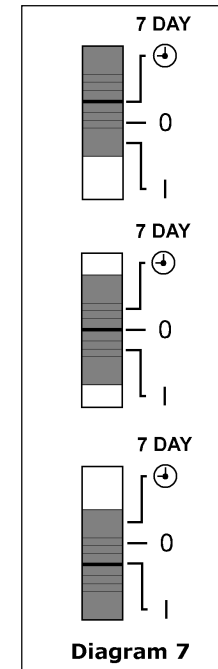


Programming switching times (see Diagram 6)

Set the tappets between the desired "ON" and "OFF" period required.

ALL the tappets must be pushed to the outer edge of the dial for an extended "ON" period.

Each tappet switches the output for a 2 hour and 20 minute period.



Setting the selector switch (see Diagram 7)

"1" setting.

The heater will operate and heat water as programmed. The separate water temperature thermostat will control the water temperature.

"0" setting.

The weekly programmer is over-riden. The water heater is "OFF" and the water will not be heated.

"1" setting.

The weekly programmer is over-riden. The water heater is "ON" and the separate water temperature thermostat will control the water storage temperature.