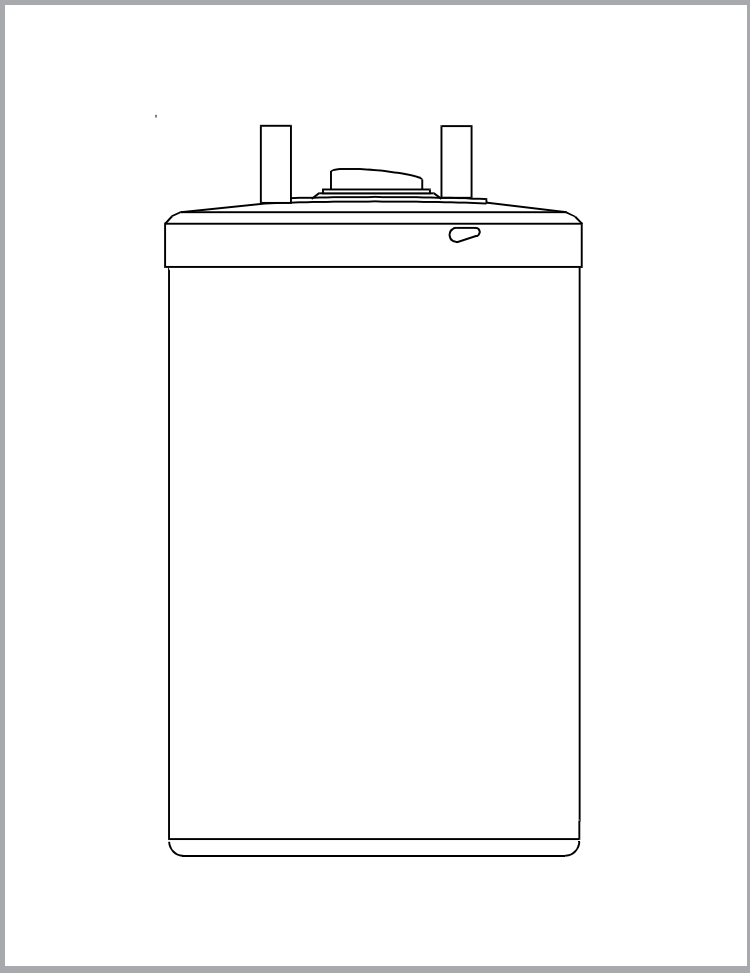
HEATRAE SADIA

The quality name in water heating



HOTFLO 10 / 15

Fitting Instructions and User Guide

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1.0 INTRODUCTION

Thank you for purchasing a Heatrae Sadia Hotflo unvented water heater. The Hotflo water heater is manufactured in the UK to the highest standards and has been designed to meet all the latest relevant safety specifications.

This Hotflo water heater must be installed, commissioned and maintained by a competent person only. Please read and understand these instructions prior to installing your Hotflo unvented water heater. Particular attention should be paid to the section headed IMPORTANT INSTALLATION POINTS.
Following installation and commissioning, the operation of the heater should be explained to the user and these instructions left with them for future reference.

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 the 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.

WARNING: IF WATER FLOWS FROM THE PRESSURE RELIEF VALVE OR TEMPERATURE/PRESSURE RELIEF VALVE THE ELECTRICITY SUPPLY MUST BE SWITCHED OFF IMMEDIATELY. CONTACT THE HEATRAE SADIA SERVICE TEAM (Tel: 0844 8711535) OR AN APPROVED INSTALLER.

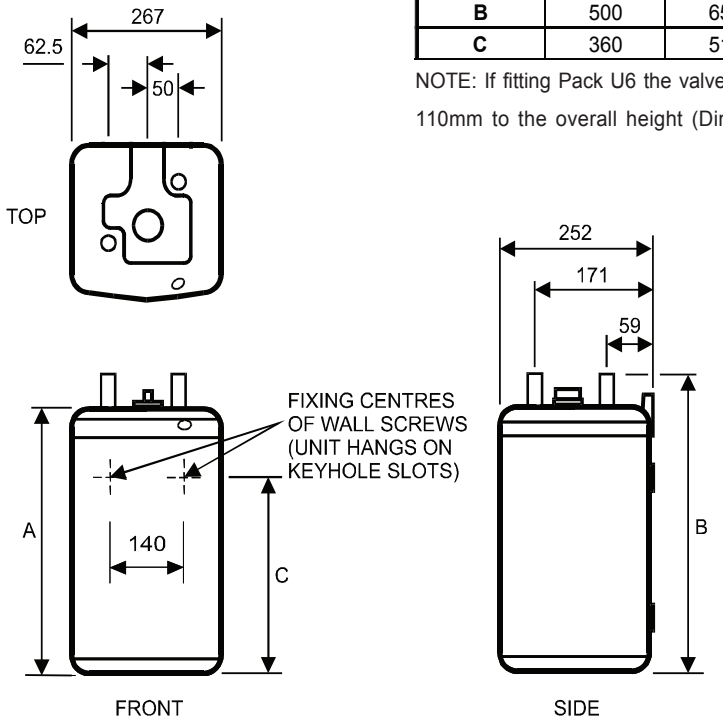
2.0 TECHNICAL SPECIFICATION

Electrical rating	2.2kW@240V~ / 2.0kW@230V~
Capacities	10 or 15 litres
Weight (full)	10 litre - 16.5kg
	15 litre - 23.4kg
Rated pressure	0.6 MPa (6 bar)
Minimum supply pressure	0.08 MPa (0.8 bar)

FIGURE 01: DIMENSIONS

Dimension	10 Litre	15 Litre
A	457	613
B	500	656
C	360	516

NOTE: If fitting Pack U6 the valve will add 110mm to the overall height (Dimension B)



3.0 INSTALLATION

3.1 IMPORTANT INSTALLATION POINTS

3.1.1 The Hotflo unvented water heater MUST be fitted with a Pressure (expansion) Relief Valve. This MUST be fitted to the cold water supply near the heater.

FAILURE TO PROVIDE ADEQUATE PRESSURE RELIEF WILL INVALIDATE ANY GUARANTEE AND LEAD TO A DANGEROUS INSTALLATION.

3.1.2 Expansion can take place within the cold water supply PROVIDED THAT BOTH :

(a) Backflow in the main is not prevented by any stopvalve with loose jumper, check valve, pressure reducing valve or similar

AND

(b) Hot water expansion does not enter a branch to a cold water outlet (see Figure 01, page 3 for expansion pipe lengths).

Note: Both the above conditions must be met. Additionally expansion within the cold water supply will not be possible if the static supply pressure exceeds 0.41 Mpa (4.1 bar).

3.1.3 If any of the conditions in 3.1.2 above cannot be met, expansion must be accommodated using an Expansion Vessel. To ensure all expansion takes place in the vessel, a Check Valve must also be fitted (see Fig. 03, page 5). Use Accessory Pack U5 code no. 95 970 356.

3.1.4 If the static supply pressure exceeds 0.41 MPa (4.1 bar), a Pressure Reducing Valve must be fitted to the cold main supply. If a Pressure Reducing Valve is used, an Expansion Vessel must also be used (see Fig. 04, page 5). Use Accessory Packs U1 and U5 code no.'s 95 970 352 and 95 970 356.

3.1.5 Where specifications demand the fitting of a Temperature/Pressure Relief Valve, one can be fitted on site (see Fig. 04, page 5). Use Accessory Pack U6 code no. 95 970 359. NOTE the fitting of Pack U6 does not alter the requirements detailed in points 3.1.2 to 3.1.4 above.

3.1.6 National Wiring rules may contain restrictions concerning the installation of these units in bathrooms.

3.1.7 The installation must be carried out in accordance with the relevant requirements of:

• The appropriate Building Regulations either The Building Regulations, The Building Regulations (Scotland) or Building Regulations (Northern Ireland).

FIGURE 02: FOR INLET PRESSURES UP TO 0.41 MPa (4.1.BAR)

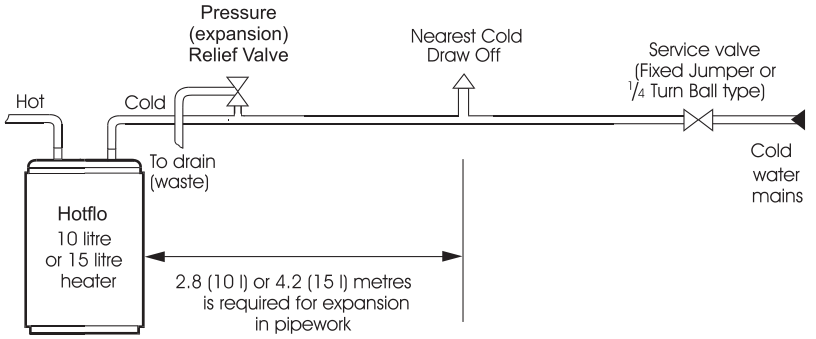


FIGURE 03: FOR INLET PRESSURES UP TO 0.41 MPa (4.1BAR) WHERE EXPANSION IN MAIN SUPPLY IS NOT POSSIBLE

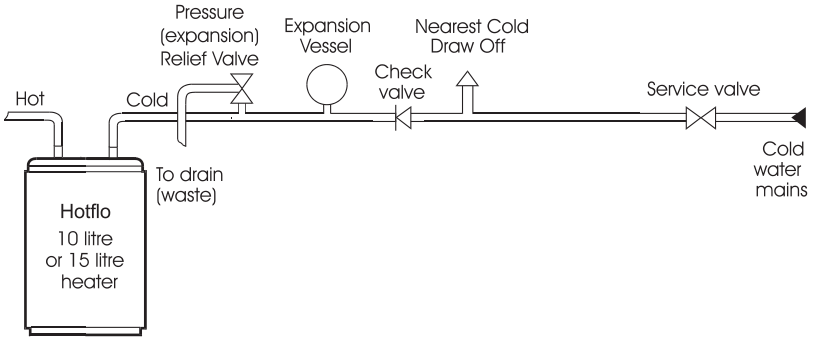


FIGURE 04: FOR INLET PRESSURES ABOVE 0.41 MPa (4.1BAR)

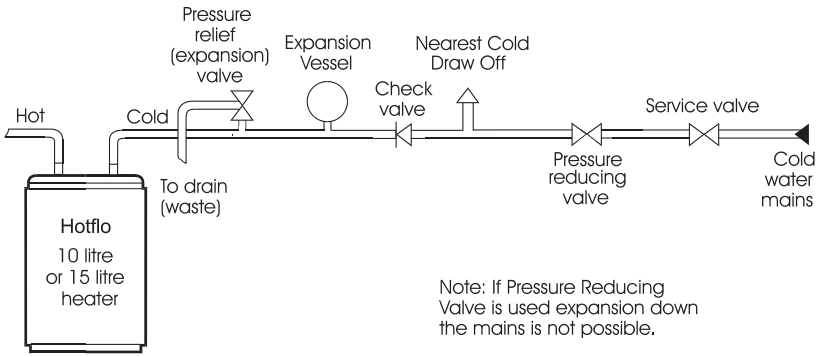
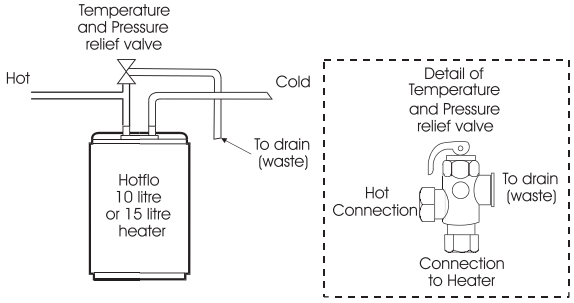


FIGURE 05: TEMPERATURE AND PRESSURE RELIEF VALVE



3.2 LOCATION

3.2.1. The water heater should be vertically wall mounted using the screws and plugs provided. Position the bottom two screws as shown in Figure 01, page 3 with heads 3mm from the wall. Hang the heater and secure with the top screw. Alternatively it can be floor mounted on it's base. The water connections must always be to the top of the unit.

3.2.2 Enough space should be left at the top above the water heater for pipe connections and access to the Temperature/Pressure Relief Valve (if fitted). Refer to Figure 01, page 3 and the Dimensions Table to determine a suitable position for the heater.

3.2.3 NOTE: Ensure that the wall can support the full weight of the unit (see TECHNICAL SPECIFICATIONS) and that there are no hidden services, (electricity, gas, or water) below the surface of the wall.

3.2.4 DO NOT install where the water heater may freeze.

3.3 TERMINAL COVER REMOVAL

3.3.1 To remove the terminal cover, use a large flat bladed screwdriver to relieve the 3 snap lugs located in the top 3 rectangular depressions.

3.3.2 To re fit the cover, locate the hinge at the back of the cover and slide the snaps into place, taking care to ensure the thermostat spindle and thermostat knob align correctly.

3.4 PLUMBING

3.4.1 Refer to the section IMPORTANT INSTALLATION POINTS to determine which valves and accessories are required. Plumb in the valves in the sequence shown in the relevant Diagrams (Figures 02, 03, and 04, page 5).

3.4.2 The INLET is marked BLUE and the OUTLET is marked RED. The pipes are 15mm copper tube and are suitable for compression fittings. It is recommended that a WRAS listed isolating valve (not supplied) is fitted on the cold water supply to the heater. Several hot outlets can be served.

3.4.3 Do not use solder joints as this will damage the heater and may prevent servicing under warranty.

3.4.4 Plumbers Paste must not be used as it can impair the operation of the valves.

3.5 DISCHARGE

3.5.1 The discharge outlet from the Pressure (Expansion) Relief Valve and the Temperature & Pressure Relief Valve (if fitted) must be connected to a discharge pipe. It is recommended that a tundish (not supplied) be installed in the discharge pipe to give a visible indication that the valves are operating.

3.5.2 The discharge pipe must be installed in a continuously downward direction and in a frost free environment.

3.5.3 The pipe from the valves to the tundish should be 15mm o/dia minimum. From the tundish to the point of discharge the pipe should be 22mm o/dia minimum and have a resistance to flow equivalent to 9 metres of straight pipe. Long discharge pipe runs should have an increased internal diameter.

3.5.4 The pipe material should be capable of conveying water/steam at 100°C.

3.5.5 The final discharge point should be in a safe, visible position.

3.6 ELECTRICAL REQUIREMENTS

WARNING: This appliance must be earthed. It is suitable for a.c. supply only. Electrical installation must be carried out by a competent electrician and be in accordance with the latest I.E.E wiring regulations.

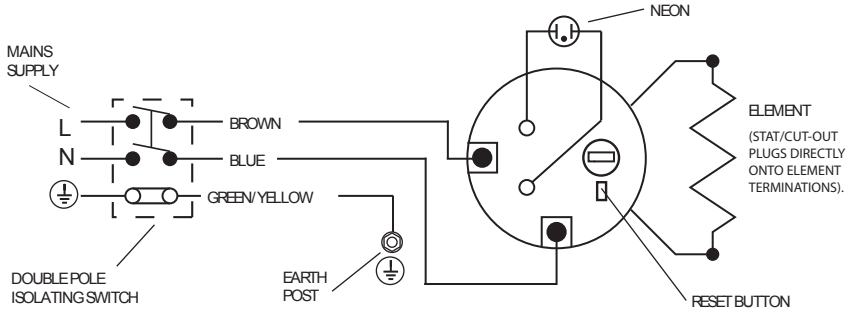
Ensure the electrical supply is switched off before making any connections to the water heater.

3.6.1 The unit is supplied fitted with a 0.75m 3 core 1.5mm^2 flexible cable. The electricity supply should be fused 13 Amp and be via a double pole isolating switch with a contact separation of at least 3mm in both poles. Refer to Fig. 06 below.

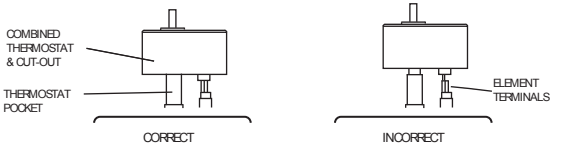
3.6.2 The wires are colour coded as follows:

Green and Yellow	EARTH	⏚
Brown	LIVE	(L)
Blue	NEUTRAL	(N)

FIGURE 06 : WIRING DIAGRAM



IMPORTANT: THE COMBINED THERMOSTAT/CUT-OUT MUST BE PUSHED FULLY HOME TO ENSURE CORRECT OPERATION OF THE CUT-OUT



4.0 COMMISSIONING

4.1 Do not switch on the electrical supply until the unit has been filled with water and checked for leaks.
4.2 Check that all installation, electrical and discharge pipe requirements have been met.
4.3 Check that all water and electrical connections are tight.
4.4 Open a hot water tap, turn on mains water supply to the heater.
4.5 Allow unit to fill and leave hot tap running for a short while to purge any air and flush out the pipework. Close the hot tap and check the system for leaks.
4.6 Manually test the operation of the Pressure (Expansion) Relief Valve and, if fitted, the Temperature/Pressure Relief Valve. Ensure water flows freely from the valve(s) and through the discharge pipes.
4.7 Switch on the electrical supply. The indicator light will illuminate during heating. When the set temperature is reached the indicator light will go out.

5.0 EXPLANATION TO USER

Following Installation and Commissioning of the water heater the operation should be fully explained to the user:

5.1 HOT WATER
5.1.1 Indicate the location of the water heater and identify the outlets to which it is connected.
5.1.2 Explain that the indicator light will be illuminated when the unit is heating.

5.2 SETTING THE TEMPERATURE
5.2.1 The temperature can be set between the minimum setting (10°C) and the maximum setting (70°C) by rotating the dial on the thermostat.
5.2.2 It is recommended that the temperature is set above 60°C.

5.3 DISCHARGE
5.3.1 Explain that water may drip from the discharge pipe of the pressure relief valves/s and that this pipe must be left open to atmosphere.
5.3.2 Explain that if water flows from any safety valve fitted, the electrical supply to the water heater should be switched off immediately. The electrical supply should not be switched on again until the water heater has been checked and approved by a qualified installer.

5.4 SYSTEM MALFUNCTION

5.4.1 Explain how to isolate electrical and water supplies incase of a fault.

5.4.2 Explain that a qualified plumber and / or electrician should be contacted if there is a fault.

5.4.3 Explain how to identify / check basic faults.

5.5 SYSTEM MAINTENANCE

Explain the necessity to carry out regular maintenance of the water heater to ensure it's continued safe and efficient operation.

5.6 LITERATURE

Hand over the installation and user instructions

6.0 MAINTENANCE

WARNING: Disconnect from all electrical supplies before beginning any work on the water heater. Water contained in the water heater may be very hot!

To ensure the continued safe and efficient operation of the water heater, it should be regularly maintained.

In hard water areas the water heater will require periodic descaling.

Maintenance and servicing should be carried out by a competent person and any replacement parts used should be authorised Heatrae Sadia spare parts.

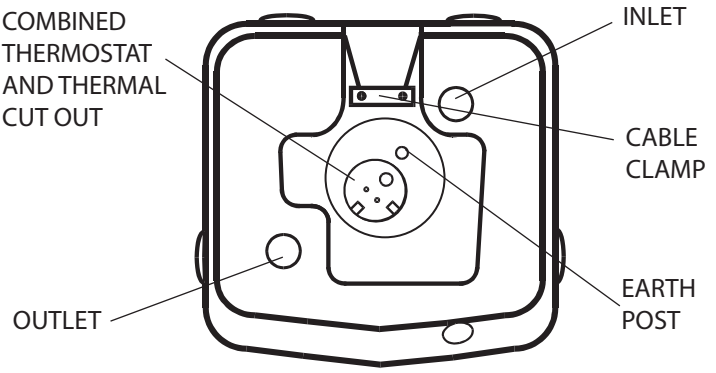
6.1 RE SETTING THE THERMAL CUTOUT

6.1.1 Switch off and disconnect the electrical supply, turn off the water supply to the unit and remove the terminal cover.

6.1.2 Press the thermal cut out button (see Figure 06, page 8).

NOTE: If the thermal cut out continues to operate, check the operation of the thermostat and the element plate assembly.

FIGURE 07: ELEMENT PLATE ORIENTATION



6.2 DRAINING THE WATER HEATER

6.2.1 Switch off and disconnect the electrical supply. Turn off the water supply to the unit.

6.2.2 Open a hot tap to relieve any system pressure. Disconnect the plumbing connections to the unit and remove (note full weights of units, page 3). Empty unit through the outlet connection.

6.3 DESCALING

6.3.1 Switch off and disconnect the electrical supply, turn off the water supply to the unit and remove the terminal cover.

6.3.3 Disconnect the electrical terminations to the thermostat. Disconnect earth links to the earthing stud.

6.3.4 Remove the element plate assembly by unscrewing the five securing screws, tapped jacking points are provided. Remove any loose scale from the container. Carefully clean off any scale from the element and thermostat pocket. DO NOT clean scale from interior container walls.

6.3.5 Re-fit the element plate assembly using a new sealing gasket. Note the correct orientation of the element plate by reference to Figure 07 above. Rewire the unit with reference to Figure 06, page 8 .

6.3.6 Refit the cover.

6.3.7 Re-commission the unit following the INSTALLATION and COMMISSIONING instructions.

6.4 SAFETY VALVES

The Pressure (Expansion) Relief Valve and, if fitted, the Temperature/Pressure Relief Valve should be operated regularly to remove lime deposits and to verify that it is not blocked. Manually operate the valves by either twisting the cap or lifting the lever. Ensure water flows freely from the valve(s) and through the discharge pipes. Ensure the valve(s) reseat correctly when released.

6.5 EXPANSION VESSEL PRESSURE

6.5.1 The Expansion Vessel, if fitted, should have a precharge pressure of 4.1 bar (60 p.s.i.). This can reduce over time and eventually require re-charging. To do this:

6.5.2 Turn off water supply to the unit; open a hot tap to relieve system pressure.

6.5.3 Remove dust cap from top of Expansion Vessel

6.5.4 Check pre-charge pressure using a tyre pressure gauge. If the pressure is lower than 4.1 bar (60 p.s.i.) it should be recharged using a tyre pump (Schraeder Valve type). DO NOT OVER CHARGE.

6.5.5 Re-check pressure and when correct replace dust cap.

6.5.6 Turn on mains water supply and close hot tap.

6.6 SUPPLY CORD

If the supply cord is damaged the water heater should be switched off until the supply cord can be replaced by a competent electrician or a Heateam Engineer in order to avoid a hazard.

7.0 FAULT FINDING

WARNING: Disconnect from all electrical supplies before beginning any work on the water heater. Water contained in the water heater may be very hot!

The water heater should give trouble free operation, however should a problem occur, the tables below should enable most faults to be identified with ease.

Fault Finding should be carried out by a competent person and any replacement parts used should be authorised Heatrae Sadia spare parts.

FAULT	POSSIBLE CAUSES	ACTION
Water not heating	1. Electrical supply fault	1. Check electrical supply
	2. Thermal cut-out tripped	2. Check cut-out, if operated reset and check thermostat operation. If necessary replace thermostat/thermal cut-out (see WiringDiagram, page 8)
	3. Thermostat fault	3. Check thermostat operation, replace if necessary
Discharge of water from Pressure Relief Valve (continuously)	Excessive mains water pressure	Fit Pressure Reducing Valve Pack U1 and U2 (see IMPORTANT INSTALLATION POINTS, page 4)
Discharge of water from Presure Relief Valve (intermittently)	1. Expansion in mains not possible	1. Fit Pack U2 (see IMPORTANT INSTALLATION POINTS, page 4)
	2. Mains pressure exceeds 4.1 bar (60 p.s.i.)	2. Fit Packs U1 and U2
	3. Pack U1 fitted without Pack U2	3. Fit Pack U2 when using Pack U1
	4. Pressure Relief Valve Fault	4. Replace Pressure Relief Valve
	5. Loss of pressure from Expansion Vessel	5. Check and, if necessary, re-charge Expansion Vessel pre-charge pressure (see Section 6.5)
Discharge of water from Temperature/Pressure Relief Valve and or water/steam from Pressure Relief Valve	Thermostat and thermal cut-out fault	Replace thermostat and thermal cut-out
No water flow	1. Inlet valves incorrectly fitted	1. Check all valves are correctly installed in accordance with flow direction arrows
	2. Mains water supply not turned on	2. Check mains water supply is on
	3. Blockage in mains water supply	3. Check for obstructions. If Pack U1 is fitted check the strainer is not blocked
"Milky" water	Oxygenated water	Water from a pressurised system releases oxygen bubbles when flowing. The milkiness will disappear after a short while.

8.0 SPARE PARTS

WARNING: Disconnect from all electrical supplies before beginning any work on the water heater. Water contained in the water heater may be very hot!

To ensure the continued safe and efficient operation of the water heater, it should be regularly maintained.

Maintenance and servicing should be carried out by a competent person and any replacement parts used should be authorised Heatrae Sadia spare parts.

DESCRIPTION	CODE No.
Element plate assembly - 10 litre 2.2kW	95 606 940
Element plate assembly - 15 litre 2.2kW	95 606 941
Combined thermostat/thermal cut-out	95 612 633
Indicator light	95 607 992
Element plate gasket	95 611 708
Pressure (Expansion) Relief Valve	95 607 986
Temperature/Pressure Relief Valve	95 970 359
Check Valve	95 607 987
Expansion Vessel	95 607 988
Pressure Reducing Valve	95 607 989
Top cover moulding	95 614 186
Terminal cover c/w thermostat knob	95 614 182

9.0 ACCESSORIES

The heater can be used to supply several hot water outlets via conventional taps. It is not recommended for supplying a shower. Individual site demands should be considered when choosing capacity and the number of outlets to be served.

A Thermostatic Blending Valve can be used in conjunction with this unit. Accessory Pack U3 (code no. 95 970 354) is recommended. Follow the installation instructions supplied with the valve for connection to the system.

10.0 GUARANTEE

This product is guaranteed against faulty materials and manufacture for a period of 2 years from the date of purchase provided that:

1. The unit has been installed in accordance with the Installation and User Instructions and all relevant Codes of Practice and Regulations in force at the time of installation, and that all necessary controls and safety valves have been fitted correctly.
2. Any valves and controls are of the Heatrae Sadia recommended type and specification.
3. The unit has not been modified or tampered with in any way and has been regularly maintained as detailed in the Installation and User Instructions.
4. The unit has been used only for heating potable water.

The unit is not guaranteed against damage by frost and the inner container with integral immersion heater is not guaranteed against excessive scale build-up.

This Guarantee in no way affects the statutory rights of the consumer.

The policy of Heatrae Sadia is one of continuous product development and, as such, we reserve the right to change specifications without notice.

11.0 ENVIRONMENTAL INFORMATION

Heatrae Sadia products are manufactured from many recyclable materials.

At the end of their useful life they should be disposed of at a Local Authority Recycling Centre in order to realise the full environmental benefits. Insulation is by means of CFC-free polyurethane foam.

This water heater does not contain substances harmful to health; it does not contain any asbestos.

12.0 SPARES STOCKISTS

For the fast and efficient supply of spares, please contact the stockists listed below:

Advanced Water Company Ltd.
Unit D5 Enterprise way, Vale Park,
Evesham, Worcs, WR11 1GS
Tel: 01386 760066
Fax: 01386 760077

Electric Water Heating Co.
2 Horsecroft Place, Pinnacles
Harlow, Essex, CM19 5BT
Tel: 0845 0553811
E-Mail: sales@ewh.co.uk

SPD
Units 9 & 10 Hexagon Business Centre
Springfield Road, Hayes, Middlesex, UB40 0TY
Tel: 020 8606 3567

Parts Centre
Tel: 0845 2709800
www.partscentre.co.uk

Newey & Eyre
Specialist Products Division
Please contact your local branch

UK Spares Ltd.
Unit 1155 Aztec West
Almonsbury, Bristol, BS32 4TF
Tel: 01454 620500

William Wilson Ltd.
Unit 3A, 780 South Street
Whiteinch, Glasgow, G14 OSY
Tel: 0141 434 1530

Service: 0844 8711535
Sevice Fax: 0844 8711528
E-mail: heatraesadiaservice@heateam.co.uk

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