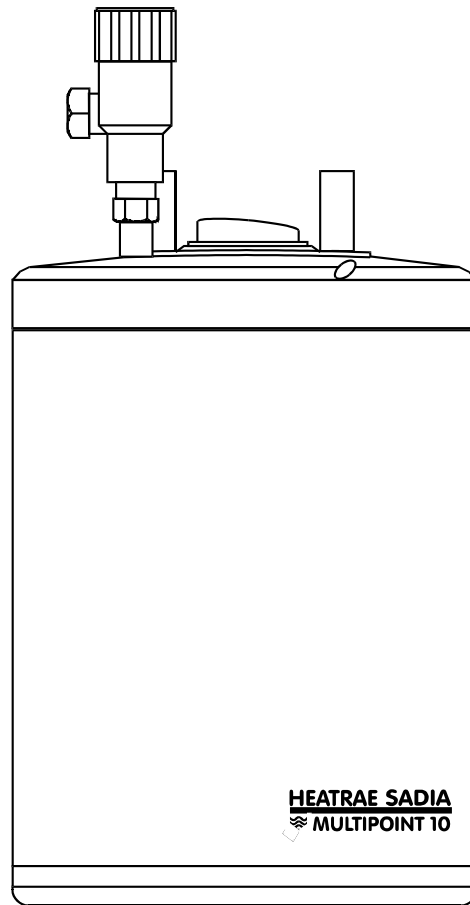


HEATRAE SADIA

The quality name in water heating

Installation and User Instructions for the MULTIPOINT 10 and 15 litre Unvented Water Heaters



Please read and understand these instructions before starting work.

Please leave this leaflet with the user following installation

36 00 5718 Issue 4

MULTIPOINT

Please read and understand these instructions prior to installing your Multipoint 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 customer and these instructions left with them for future reference.

TECHNICAL SPECIFICATIONS

Electrical rating	2.75/3kW 230/240V ~
or	4.1/4.5kW 230/240V ~
Capacities	10 or 15 litres
Weight (full)	10 litre - 16.9kg
.....	15 litre - 23.8kg
Rated pressure	6 bar
Minimum recommended supply pressure	0.8 bar
Temperature/Pressure Relief Valve	90°C/7 bar

1.0 IMPORTANT INSTALLATION POINTS

- 1.1 The Multipoint unvented water heater **MUST** be fitted with a Pressure Relief Valve. The factory fitted Temperature/Pressure Relief Valve can fulfill this function. **FAILURE TO PROVIDE ADEQUATE PRESSURE RELIEF WILL INVALIDATE ANY GUARANTEE AND LEAD TO A DANGEROUS INSTALLATION**
- 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 Diagram 1 for expansion pipe lengths).

N.B. Both the above conditions must be met. Additionally expansion within the cold water supply will not be possible if the static supply pressure exceeds 4.1 bar (60p.s.i.).
- 1.3 If any of the conditions in 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 together with a Pressure (expansion) Relief Valve (see Diagram 2). Use Accessory Pack U2 code no. 95 970 351.
- 1.4 If the static supply pressure exceeds 4.1 bar (60p.s.i.) 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 Diagram 3). Use Accessory Packs U1 and U2 code no.'s 95 970 352 and 95 970 351.

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: 01603 420330) OR AN APPROVED INSTALLER.

Diagram 1 For inlet pressures up to 4.1 bar (60 p.s.i.)

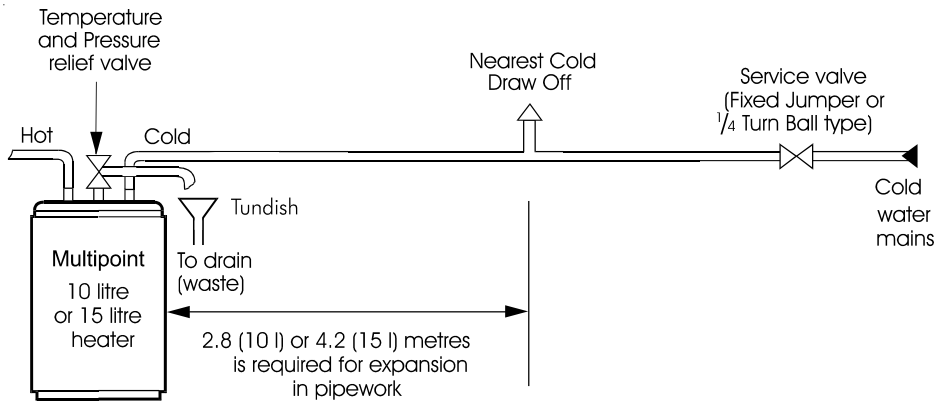


Diagram 2 For inlet pressures up to 4.1 bar (60 p.s.i.) where expansion in main supply is not possible

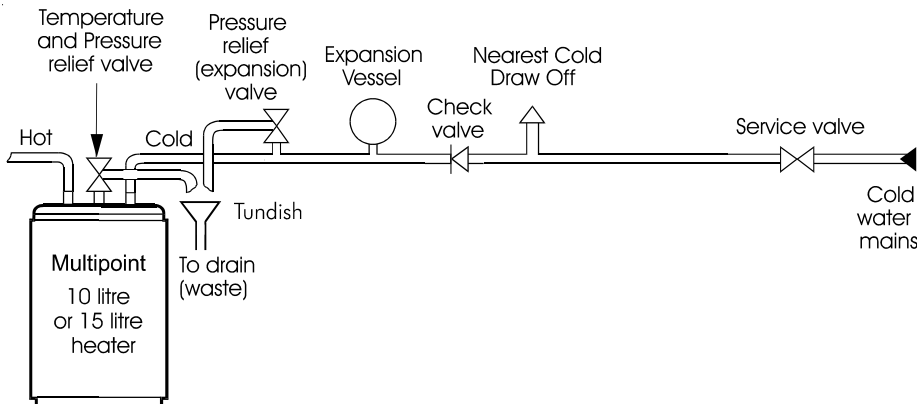
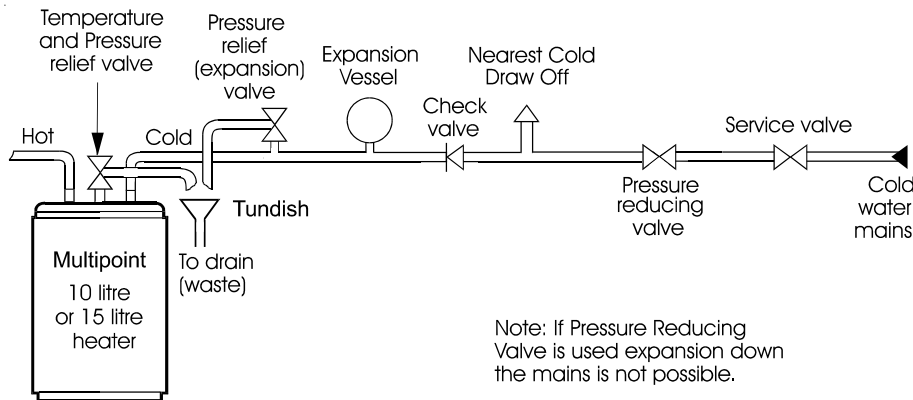


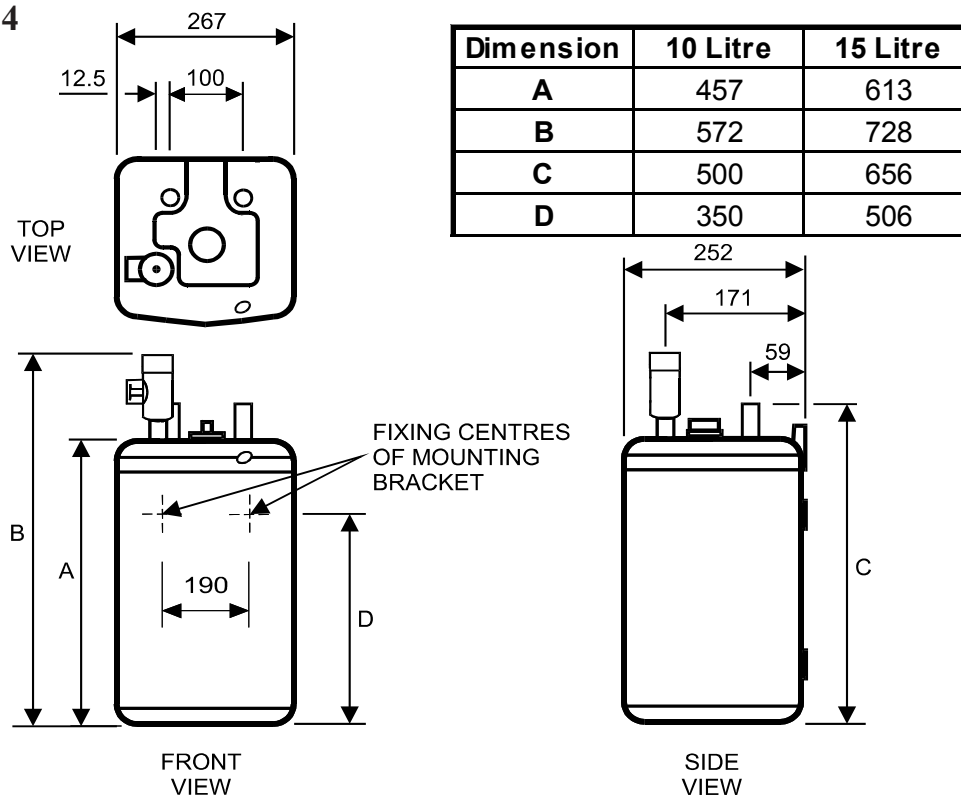
Diagram 3 For inlet water pressures above 4.1 bar (60 p.s.i.)



2.0 INSTALLATION - GENERAL REQUIREMENTS:

- 2.1 National Wiring rules may contain restrictions concerning the installation of these units in bathrooms.
- 2.2 The unit should be vertically wall mounted using the wall bracket supplied. The water connections must always be to the top of the unit.
- 2.3 Enough space should be left at the top above the unit for pipe connections and access to the Temperature/Pressure Relief Valve. Refer to Diagram 4 and the Dimensions Table to determine a suitable position for the heater.
- 2.4 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.
- 2.5 DO NOT install where the unit may freeze.
- 2.6 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 1 to 3.
- 2.7 The water connections are 15mm diameter copper tubes suitable for compression fittings. Do not use solder joints as this will damage the heater and may prevent servicing under warranty.
- 2.8 The INLET is marked BLUE, the OUTLET is marked RED. The WBS Listed isolating valve (supplied) must be fitted on the cold water supply to the heater. Several hot outlets can be served.
- 2.9 Plumbers Paste must not be used as it can impair the operation of the valves.

Diagram 4



3.0 INSTALLATION - ELECTRICAL REQUIREMENTS

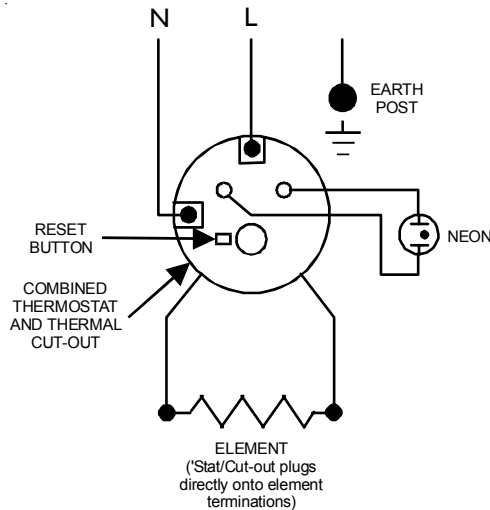
WARNING: This appliance must be earthed. It is suitable for a.c. supply only. Disconnect the electrical supply before removing the terminal cover. Installation must be in accordance with the current I.E.E. Wiring Regulations.

3.1 The unit is supplied fitted with a 0.75m 3 core 1.5mm² flexible cable on the 3kW model or a 0.75m 3 core 2.5mm² cable on the 4.5kW model. The electricity supply should be fused 13 Amp for a 3kW model and 20 Amp for a 4.5kW model and be via a double pole isolating switch with a contact separation of at least 3mm in both poles. Refer to the schematic wiring diagrams below.

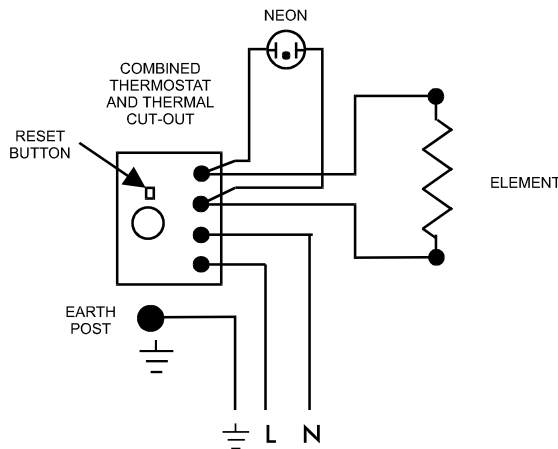
3.2 The wires are colour coded as follows:

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

Wiring Diagram
3kW models



Wiring Diagram
4.5kW models



4.0 INSTALLATION - DISCHARGE PIPE REQUIREMENTS

- 4.1 The discharge outlet from the Pressure (expansion) Relief Valve and the Temperature/Pressure relief Valve must be connected to a discharge pipe. It is recommended that the tundish supplied be installed in the discharge pipe to give a visible indication that the valves are operating.
- 4.2 The discharge pipe must fall continuously from the valve outlets and be unobstructed.
- 4.3 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.
- 4.4 The pipe material should be capable of conveying water/steam at 100°C.
- 4.5 The final discharge point should be in a safe, visible position.

5.0 COMMISSIONING

- 5.1 Do not switch on the electrical supply until the unit has been filled with water and checked for leaks.
- 5.2 Check that all installation, electrical and discharge pipe requirements have been met.
- 5.3 Check that all water and electrical connections are tight.
- 5.4 Open a hot water tap, turn on mains water supply to the heater.
- 5.5 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.
- 5.6 Manually test the operation of the Temperature/Pressure Relief Valve and, if fitted, the Pressure (expansion) Relief Valve. Ensure water flows freely from the valve(s) and through the discharge pipes.
- 5.7 Switch on the electrical supply. The indicator light will illuminate during heating. When the set temperature is reached the indicator light will go out.
- 5.8 The set temperature can be adjusted by rotating the knob located in the terminal cover. It is possible to lock the thermostat knob in either the mid-range or a “hot” position by following the procedures in 5.9 or 5.10 below. Always switch off the electrical supply before removing the terminal cover.
- 5.9 **Setting the “mid-range” position:**

Rotate the thermostat knob to the mid position. Remove the terminal cover by using a large flat bladed screwdriver to depress the three snap lugs located in the three top rectangular depressions. Holding the thermostat knob in position turn the terminal cover over and remove the backing disc from the underside of the

cover. Turn the backing disc over and refit to the knob ensuring the notch locates with the boss on the underside of the cover. Refit the terminal cover, the thermostat will now be locked in the “mid-range” position.

5.10 Setting the “hot” position:

Rotate the thermostat knob to mid way through the hot graduated range (red graphic). Follow the procedure detailed above, however in this case the knob should be held in the “hot” position previously set. When the terminal cover has been refitted the thermostat will be locked in the “hot” position. This position is recommended when using the heater in conjunction with a thermostatic blending valve.

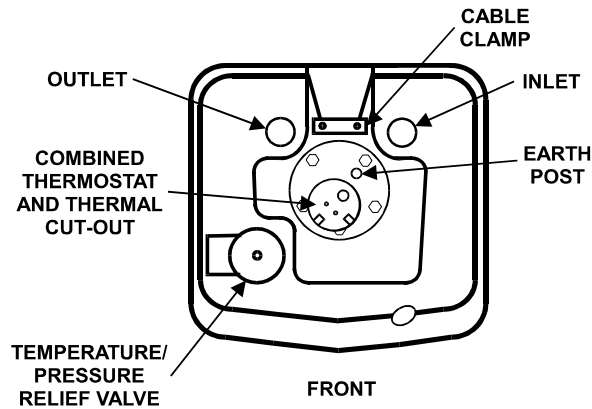
6.0 MAINTENANCE - DESCALING

Little maintenance is required, however in hard water areas the unit will require periodic descaling to ensure efficient operation. To descale the unit:

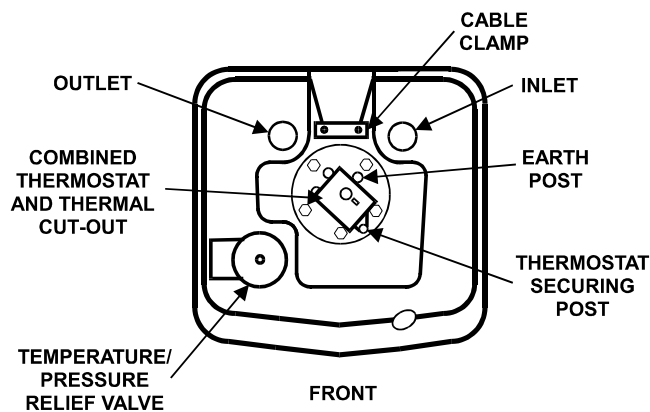
- 6.1** Switch off and disconnect the electrical supply. Turn off the water supply to the unit.
- 6.2** Open a hot tap to relieve any system pressure. Disconnect the plumbing connections to the unit and remove from the wall bracket (note full weights of units). Empty unit through the outlet connection.
- 6.3** Remove the terminal cover by using a large flat bladed screwdriver to depress the 3 snap lugs located in the top 3 rectangular depressions.
- 6.4** Remove the plastic disc from the thermostat spindle. Remove the insulating pad from the terminal housing. Disconnect the electrical terminations to the thermostat. Disconnect earth links to the earthing stud.
- 6.5** Remove the element plate assembly by unscrewing the five securing screws, a tapped jacking point is 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.
- 6.6** Re-assemble the element plate assembly fitting a new sealing gasket. Note the correct orientation of the element plate by reference to Diagram 5 overleaf. Rewire the unit with reference to the Wiring Diagrams. Refit the insulating pad and plastic disc to ensure the correct operation of the thermostat.
- 6.7** Re-commission the unit following the **INSTALLATION** and **COMMISSIONING** instructions.

Diagram 5 Correct orientation of element plate (viewed from top of unit)

3kW models



4.5kW models



7.0 MAINTENANCE - SAFETY VALVES

The Temperature/Pressure Relief Valve and, if fitted, the Pressure (expansion) Relief Valve should be regularly checked. 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.

8.0 MAINTENANCE - EXPANSION VESSEL PRECHARGE PRESSURE

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:

- 8.1 Turn off water supply to the unit; open a hot tap to relieve system pressure.
- 8.2 Remove dust cap from top of Expansion Vessel
- 8.3 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.
- 8.4 Re-check pressure and when correct replace dust cap.
- 8.5 Turn on mains water supply and close hot tap.

9.0 SPARE PARTS

The following comprehensive list of spare parts is available for your Multipoint water heater. Please refer to the Rating Label on the side of your heater before ordering to ensure the correct spare part is obtained.

DO NOT REPLACE WITH PARTS NOT RECOMMENDED BY HEATRAE SADIA - THIS WILL INVALIDATE YOUR GUARANTEE AND MAY RENDER THE INSTALLATION DANGEROUS.

DESCRIPTION	CODE NO.
Element plate assembly - 10 litre 3kW	95 606 921
Element plate assembly - 15 litre 3kW	95 606 922
Element plate assembly - 10 litre 4.5kW	95 606 923
Element plate assembly - 15 litre 4.5kW	95 606 924
Combined thermostat/thermal cut-out 3kW	95 612 633
Combined thermostat/thermal cut-out 4.5kW	95 612 634
Indicator light 3kW	95 607 992
Indicator light 4.5kW	95 607 993
Element plate gasket	95 611 811
Pressure (expansion) Relief Valve	95 607 986
Temperature/Pressure Relief Valve	95 905 045
Check Valve	95 607 987
Expansion Vessel	95 607 988
Pressure Reducing Valve	95 607 989
Top cover moulding	95 614 181
Terminal cover c/w thermostat knob	95 614 182

10.0 FAULT FINDING

Disconnect the electrical supply before removing the terminal cover. It is recommended that any service operations on the Multipoint heater are carried out by a competent person.

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 Wiring Diagram)
	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)
Discharge of water from Pressure Relief Valve (intermittently)	1. Expansion in mains not possible	1. Fit Pack U2 (see IMPORTANT INSTALLATION POINTS)
	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 8.0)
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.

NOTE: Use only Heatrae Sadia approved spare parts. Replacement of any parts with components not recommended by Heatrae Sadia will invalidate the guarantee and may render the installation dangerous.

11.0 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.

12.0 USER INSTRUCTIONS

- 12.1** The Multipoint unvented heater stores water at the temperature set on the adjustable thermostat. This can be set to give temperatures in the range of 10 to 70° C. To avoid any risk of freezing when the heater is not in use for long periods during the winter months, do not switch off the electrical supply and set the thermostat to its minimum position. N.B. This will not protect other system pipework.
- 12.2** The thermostat can also be locked in either the mid range or a “hot” (recommended when using in conjunction with a Thermostatic Blending Valve) position. To lock the thermostat position the instructions given under Sections 5.9 or 5.10 should be followed. We recommend that this procedure is carried out by a qualified electrician.
- 12.3** The indicator light will be illuminated when the unit is heating.
- 12.4** To ensure the heater continues to operate at its optimum performance it should be periodically maintained in accordance with the instructions given under the Sections headed MAINTENANCE.

12.5 IMPORTANT NOTES TO USER

Do not block or restrict the discharge from any safety valve fitted.

Do not tamper with any safety valve fitted.

If water discharges from any safety valve fitted, switch off the electrical supply to the unit immediately. Contact the Heatrae Sadia Service Team (Tel: 08701 600125) or an approved installer.

Do not turn the electrical supply on again until the unit has been checked and approved by a qualified installer.

Guarantee

This water heater is guaranteed for a period of five years from the date of purchase with the exception of the immersion heater and thermal controls which are guaranteed for a period of two years provided:

1. The unit has been installed in accordance with these instructions and all necessary inlet controls and safety valves have been fitted correctly.
2. Any valves or controls are of Heatrae Sadia recommended type.
3. The unit has not been tampered with and has been regularly maintained as detailed in these instructions.
4. The unit has been used only for heating potable water.
5. Within 60 days of installation, the user completes and returns the certificate supplied along with proof of purchase to register the product

The unit is not guaranteed against damage by frost and the immersion heater is not guaranteed against excessive scale build up.

This guarantee does not affect the statutory rights of the consumer.

Environmental Information

This product is manufactured from many recyclable materials. At the end of its useful life it should be disposed of at a Local Authority Recycling Centre to realise the full environmental benefits.

HEATRAE SADIA

The quality name in water heating

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