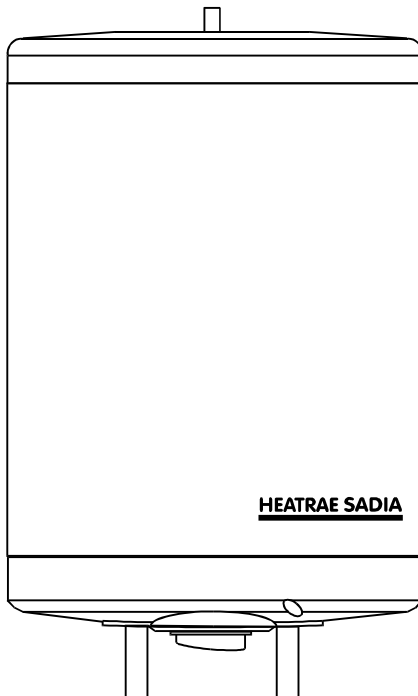


HEATRAE SADIA

The quality name in water heating

Installation and User Instructions for the B3/C3 M Range Wall Mounted Vented Water Heaters



Please read and understand these instructions before starting work.

Please leave this leaflet with the user following installation

Please read and understand these instructions prior to installing your B3M or C3M vented 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	2.75/3.0kW 230/240V~
Capacities	B3M - 30 litres
.....	C3M - 50 litres
Weight (full)	B3M - 42.5kg
.....	C3M - 69.3kg
Rated pressure (Open Outlet).....	0 bar
Rated pressure (Max. head pressure Cistern Fed)	
.....	2 bar (20 metres)
Minimum recommended supply pressure	0.4 bar (4 metres)

COMPONENT CHECK LIST

Before commencing installation check that all the following components have been supplied in the Installation Kit.

- Open Outlet Spout
- Inlet Valve
- White 1/2" x 15mm Push Fit Spout Adaptor
- White 15mm Push Fit Cap
- White 15mm x 22mm Push Fit Straight Connector
- Wall mounting bracket set
- Self adhesive Levelling Feet (2 off)
- Moulded plastic Spacer

1.0 IMPORTANT INSTALLATION POINTS

- 1.1 The B3M and C3M vented water heaters are designed to be wall mounted. Ideally they should be mounted close to where hot water is required most frequently. Pipe runs should be kept to a minimum.
- 1.2 The B3M or C3M can be installed either as an Open Outlet or Cistern Fed type unit when used with the appropriate fittings.
- 1.3 **Install only as an OPEN OUTLET or CISTERN FED unit, failure to do so will invalidate any guarantee and may lead to a dangerous installation.**

1.4 OPEN OUTLET INSTALLATION

When installed as an Open Outlet water heater the outlet acts as a vent and must not be connected to any form of tap or fitting not recommended by Heatrae Sadia.

Only one outlet can be served via an Open Outlet type tapset.

1.5 CISTERN FED INSTALLATION

When installed as a Cistern Fed water heater the cold water supply must be from a feed cistern complying with Water Byelaw 30.

A vent pipe must be connected to the outlet of the heater. The vent pipe must rise continuously and be arranged to discharge into the cold water feed cistern.

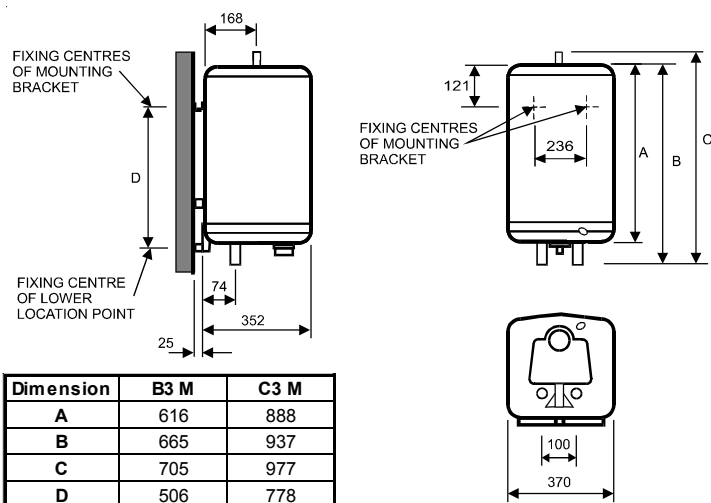
The vent pipe must have a minimum bore of 19mm.

More than one conventional tap can be supplied.

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 and levelling feet provided (see Section 3.0 INSTALLATION - WALL MOUNTING). The inlet and outlet water connections must always be to the bottom of the unit.

Diagram 1 Dimensions

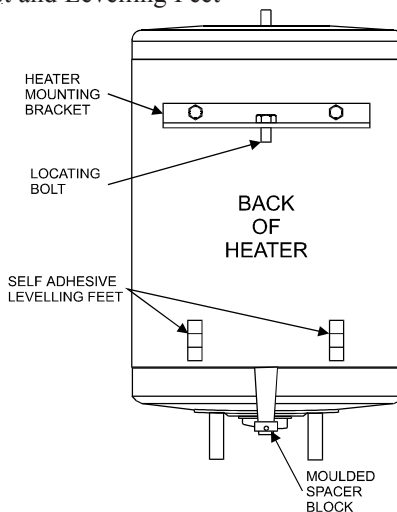


- 2.3 Enough space should be left below and at the top above the unit for pipe connections. Refer to Diagram 1 and the Dimensions Table to determine a suitable position for the heater.
- 2.4 NOTE: Ensure that the wall can support the full weight of the unit (see TECHNICAL SPECIFICATIONS) and that there 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.
- 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.
- 2.8 The INLET is marked BLUE, the OUTLET is marked RED. It is recommended that a WBS Listed isolating valve be fitted on the cold water supply to the heater.
- 2.9 Plumbers Paste must not be used as it can impair the operation of components.

3.0 INSTALLATION - WALL MOUNTING

- 3.1 Using Diagram 1 and the Dimensions Table as a guide mark the position of the wall mounting bracket and lower location point. Drill and plug the wall with suitable fixings, fix the wall bracket to the wall.
- 3.2 Fit the heater wall bracket to the rear of the unit using the screws provided ensuring the central location bolt is pointing towards the bottom of the unit.
- 3.3 Remove the backing paper from the self adhesive pads of the Levelling Feet and affix them to the lower back of the unit in the approximate positions shown on Diagram 2.

Diagram 2 Bracket and Levelling Feet Positions

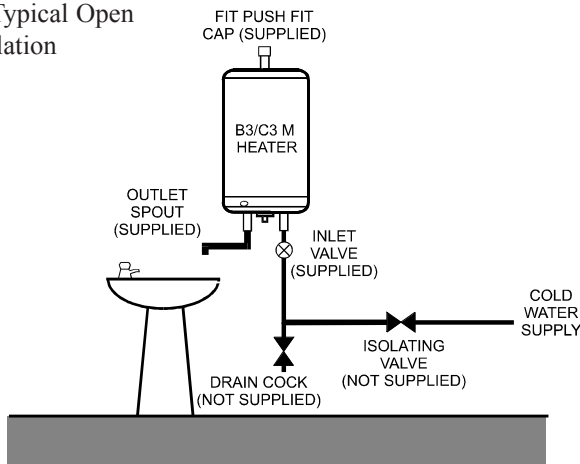


- 3.4 Hang the unit on the wall mounting bracket ensuring the location bolt locates in the hole in the wall bracket. Position the moulded spacer block between the tab on the bottom cover moulding and the wall. Insert a No. 10 x 2 1/2" long screw through the tab and spacer block and tighten into wall plug.

4.0 INSTALLATION - OPEN OUTLET

- 4.1 When installed as an Open Outlet water heater the outlet acts as a vent and must not be connected to any form of tap or fitting not recommended by Heatrae Sadia.
- 4.2 Only one outlet can be served. The fittings supplied include an Inlet Tap, 300mm Open Outlet Spout, a 15mm x 1/2" straight Push Fit connector and a 15mm Push Fit cap. The heater should be sited so that the spout can discharge into a suitable sink or basin.
- 4.3 Streamline option packs J, K, M, P, Q, R or S can be used in place of the spout to provide a single tap outlet. Flow rates will be at a reduced rate. Note: item 4.7
- 4.4 The cold water supply may be taken from the cold water mains or from a cold water feed cistern complying with Water Byelaw 30 with a minimum recommended pressure of 0.4 bar (4 metres head). A drain cock should be incorporated in the supply to facilitate draining the heater for maintenance.
- 4.5 The inlet tap should be fitted to the INLET pipe of the heater. **The inlet must not be connected directly to the cold water mains supply.** The Outlet Spout should be fitted to the OUTLET pipe of the heater using the 15mm x 1/2" straight push fit connector supplied in the fittings kit.

Diagram 3 Typical Open Outlet installation



- 4.6 The 15mm Push Fit Cap, with tamperproof collet, must be fitted to the Vent Pipe on the top of the heater.
- 4.7 In an Open Outlet installation it is normal for the spout to drip during heating. This is due to expansion of water as it is heated within the unit, it does not indicate a fault. DO NOT attempt to stop this dripping by over-tightening the inlet tap as damage to the sealing washers or internal operating mechanism will occur.

5.0 INSTALLATION - CISTERN FED (LOW PRESSURE)

5.1 This method of installation must be used if the outlet is to be connected to one or more conventional taps. It is not recommended for supplying a shower. Individual site demands should be considered when choosing the number of outlets to be served.

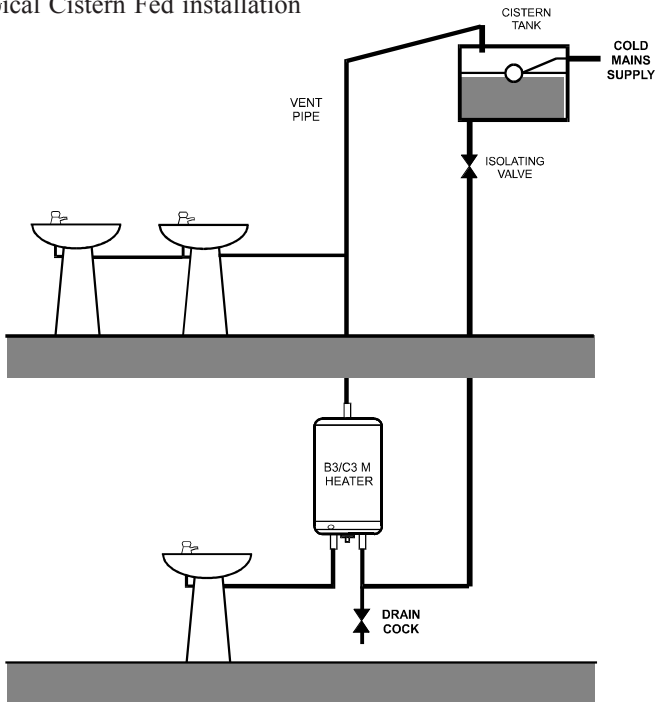
5.2 A vent pipe must be connected to the outlet connection of the heater.

The vent pipe must have a minimum internal diameter of 19mm.

The vent pipe must be unobstructed, rise continuously and be arranged to discharge over the cold water feed cistern.

DO NOT connect any pressure relief device to the vent pipe of this water heater.

Diagram 4 Typical Cistern Fed installation



- 5.3 The cold water supply must be from a cold water feed cistern complying with Water Byelaw 30. The maximum head pressure must not exceed 20 metres.
- 5.4 It is recommended that a WBS Listed isolating valve is fitted on the cold water supply to the heater. A drain cock should be fitted on the inlet pipe to the heater at a level lower than the unit to allow draining for maintenance.
- 5.5 **The inlet must not be connected directly to the cold water mains supply.**
- 5.6 The Vent Pipe should be connected to the top of the heater using the 15 x 22mm Push Fit Straight Connector supplied.

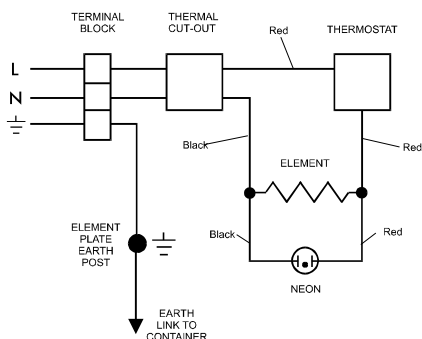
6.0 INSTALLATION - ELECTRICAL REQUIREMENTS

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.

- 6.1 The unit is supplied fitted with a 1.0m 3 core 1.5mm² flexible cable. The electricity supply should be fused 13 Amp for a 3kW 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 diagram below.
- 6.2 The wires are colour coded as follows:

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

Wiring Diagram



7.0 COMMISSIONING

- 7.1 Do not switch on the electrical supply until the unit has been filled with water and checked for leaks.
- 7.2 Check that all installation and electrical requirements have been met.
- 7.3 Check that all water and electrical connections are tight.
- 7.4 Open a hot water tap, if fitted, and turn on cold water supply to the heater.
- 7.5 Allow unit to fill and leave hot outlet to run for a short while to purge any air and flush out the pipework. Close the hot tap and check the system for leaks.
- 7.6 Switch on the electrical supply. The indicator light will illuminate during heating. When the set temperature is reached the indicator light will go out.
- 7.7 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 7.9 or 7.10 below. Always switch off the electrical supply before removing the terminal cover.

7.8 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 four snap lugs located in the four rectangular depressions around the cover. 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.

7.9 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.

8.0 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:

- 8.1 Switch off and disconnect the electrical supply. Turn off the water supply to the unit.
- 8.2 Open a hot tap, if fitted, to relieve any system pressure. Empty unit by opening the drain cock in the inlet pipework.
- 8.3 Remove the terminal cover by using a large flat bladed screwdriver to depress the 4 snap lugs located in the 4 rectangular depressions on the bottom cover.

- 8.4 Disconnect the electrical terminations to the element. Disconnect earth links to the earthing stud. Withdraw the thermostat and thermal cut-out capillary tubes from the pocket on the element plate.
- 8.5 Remove the element plate assembly by unscrewing the five securing screws, a tapped jacking hole is provided (NOTE: a quantity of water may still be present in the container, it is recommended that a container be placed under the unit to collect any spillage). 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.
- 8.6 Re-assemble the element plate assembly fitting a new sealing gasket. Rewire the unit with reference to the Wiring Diagram.
- 8.7 Re-commission the unit following the INSTALLATION and COMMISSIONING instructions.

9.0 SPARE PARTS

The following comprehensive list of spare parts is available for your B3M or C3M 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 - 30/50 litre 3kW	95 606 926
Thermostat	95 612 667
Thermal cut-out	95 612 666
Indicator light	95 607 995
Element plate gasket	95 611 811
Terminal cover c/w thermostat knob	95 614 184
15mm Push Fit Cap Nut	95 607 996
Spout and adaptor	95 604 212

10.0 FAULT FINDING

Disconnect the electrical supply before removing the terminal cover. It is recommended that any service operations on the B3M or C3M heaters 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
	3. Thermostat fault	3. Check thermostat operation, replace if necessary
	4. Element fault	4. Check element for circuit continuity and insulation resistance. If faulty replace.
No water flow - General	1. Cold water supply not turned on	1. Check mains water supply is on.
	2. Blockage in cold water supply	2. Check for obstructions.
No water flow - Open Outlet installations	1. Open Outlet tapset not correctly installed	1. Check water connections to tapset
	2. Blockage in tapset	2. Check for obstructions.
No water flow - Cistern Fed installations	1. Blockage in tapset	1. Check for obstructions.
	2. Cistern tank empty	2. Check water supply to cistern tank is turned on. Check operation of cistern float valve.
Water flow gradually reduces - Cistern Fed installations	1. Cistern not filling as fast as outlet flow rate	1. Check water supply to cistern tank is turned on and that inlet flow rate is equal to outlet flow rate. Check operation of cistern float valve.
	2. Vent pipe blockage	2. Check vent pipe for obstructions, clear as necessary.

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 USER INSTRUCTIONS

- 11.1** The B3M and C3M vented water heaters store water at the temperature set on the adjustable thermostat. This can be set to give temperatures in the range of 10 to 75° 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.
- 11.2** The thermostat can also be locked in either the mid range or a “hot” position. To lock the thermostat position the instructions given under Sections 7.8 and 7.9 should be followed. We recommend that this procedure is carried out by a qualified electrician.
- 11.3** The indicator light will be illuminated when the unit is heating.
- 11.4** To ensure the heater continues to operate at its optimum performance it should be periodically maintained in accordance with the instructions given under the Section headed MAINTENANCE.

11.5 IMPORTANT NOTES TO USER

OPEN OUTLET INSTALLATIONS

When installed as an Open Outlet water heater the outlet acts as a vent and must not be connected to any form of tap or fitting not recommended by Heatrae Sadia. The outlet of the tap must not be restricted or blocked in any way.

In an Open Outlet installation it is normal for the hot outlet to drip during heating. This is due to the expansion of water as it is heated within the unit, it does not indicate a fault with the unit. DO NOT attempt to stop this dripping by over-tightening the inlet tap as damage to the sealing washers or the operating mechanism will occur.

GUARANTEE

This water heater is guaranteed for a period of two years from the date of purchase provided:

1. The unit has been installed in accordance with these instructions and all necessary controls and 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.

The unit is not guaranteed against damage by frost or due to the build up of scale.

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.

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