

SYMPTOM	POSSIBLE CAUSE	REMEDY
4 Water runs from around sprayplate; pressure relief pins have broken due to excess pressure build-up.	A. Blocked sprayplate and/or water control knob turned too far anti-clockwise.	A. Turn off isolating switch and servicing valve. Clean sprayplate. Contact our Service Department. The pins cannot be replaced by the User.
5 Neon light does not go on, even though flow is adequate. Isolating switch is on. Usually immediately on starting to use handwash, initial flow is with very hot water, then cold.	A. Thermal cut-out has operated. Handwash has been used a few minutes before, and residual heat of elements has been transferred to water in the heat exchanger.	A. This is normal, and will not harm the handwash. To reduce likelihood of its occurring, run the handwash for a while at a flow so low that the neon goes out. This will flush cold water over the hot elements.

HEATRAE SADIA

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INSTALLATION AND USER INSTRUCTIONS

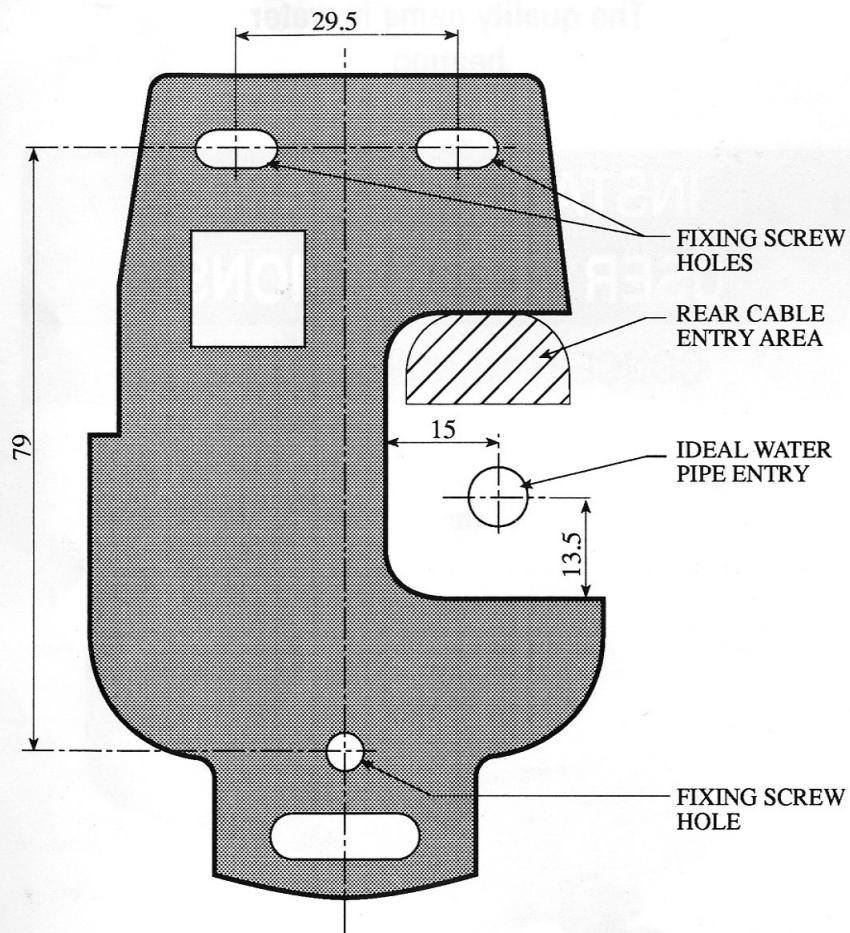
CONCEPT HANDWASH UNIT



Please read and understand these instructions before starting work

If you have any problems in installation or usage please contact our Service Department.
 Heatrae Sadia Heating Ltd, Hurricane Way, Norwich, Norfolk NR6 6EA
 For help with fitting and using the Concept call: 01603 420330 (Fax 01603 420349)
 For information on other Heatrae Sadia products call: 01603 420110 (Fax 01603 420149)
 Please leave with the user

Booklet No. 3600 5584 Issue 2



This diagram is actual size and can be used as a template.

Figure 4.5 Wall Bracket fixing and rear entry of services

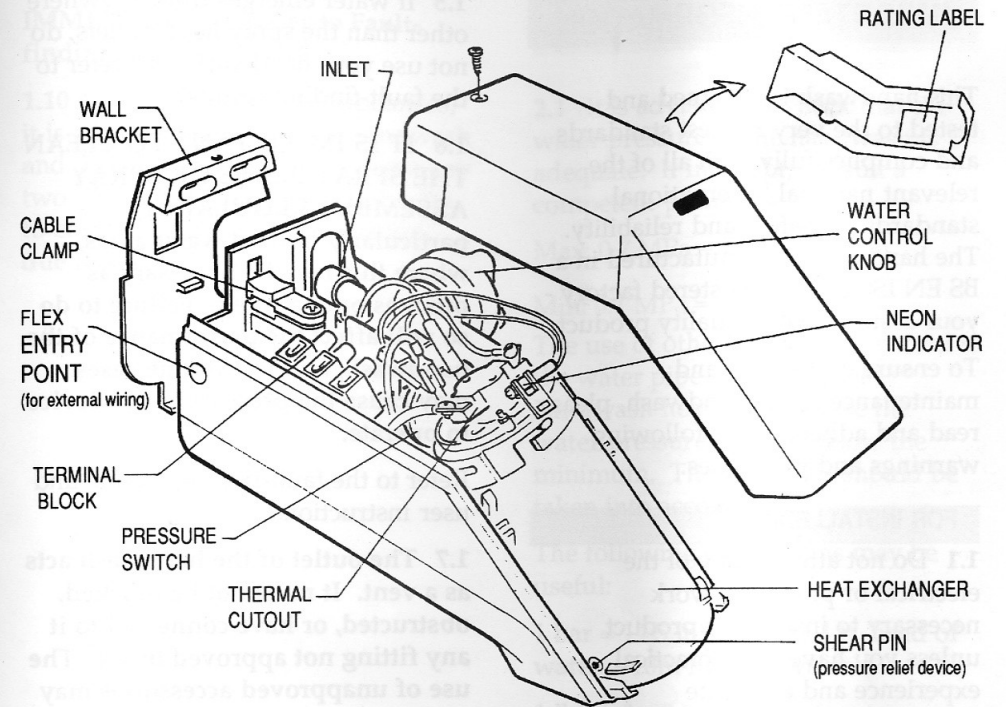


Figure 1.0 Major Internal Components

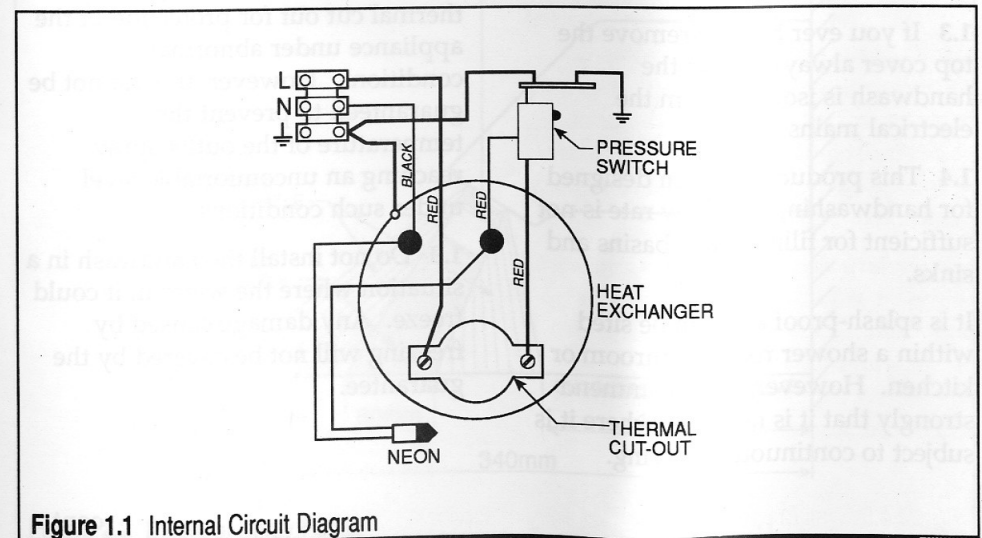


Figure 1.1 Internal Circuit Diagram

SECTION ONE

IMPORTANT INFORMATION

This handwash is designed and tested to the very highest standards and complies fully with all of the relevant national/international standards for safety and reliability. The handwash is manufactured in a BS EN ISO 9002 - registered factory - your assurance of a quality product.

To ensure correct use and maintenance of the handwash, please read and adhere to the following warnings and guidelines.

FOR INSTALLERS:

1.1 Do not attempt any of the electrical or plumbing work necessary to install this product unless you have good practical experience and adequate understanding of the IEE Wiring Regulations and Water Bye-Laws.

1.2 WARNING: THIS APPLIANCE MUST BE EARTHED.

1.3 If you ever have to remove the top cover always ensure the handwash is isolated from the electrical mains.

1.4 This product has been designed for handwashing. Its flow rate is not sufficient for filling wash basins and sinks.

It is splash-proof and can be sited within a shower room, bathroom or kitchen. However, we recommend strongly that it is not sited where it is subject to continuous spraying.

FOR USERS:

1.5 If water emerges from anywhere other than the spray head outlets, do not use your handwash, and refer to the fault-finding section.

1.6 IT IS IMPORTANT TO CLEAN THE SPRAY PLATE OR SPRAY ASSEMBLY REGULARLY, particularly in hard water areas, where this may be necessary as often as once a week. Failure to do so will affect the performance of the handwash, and in extreme cases may cause the pressure relief device to operate.

Refer to the fault-finding section and user instructions.

1.7 The outlet of the handwash acts as a vent. It must not be blocked, obstructed, or have connected to it any fitting not approved by us. The use of unapproved accessories may invalidate the guarantee and may affect the performance and safety of the unit.

1.8 The handwash incorporates a thermal cut out for protection of the appliance under abnormal conditions. However, this cannot be guaranteed to prevent the temperature of the outlet spray reaching an uncomfortable level under such conditions.

1.9 Do not install the handwash in a situation where the water in it could freeze. Any damage caused by freezing will not be covered by the guarantee.

If the handwash could possibly be frozen, **SWITCH OFF IMMEDIATELY.** Refer to Fault-finding, Section Five.

1.10 As with all electrical appliances, it is advisable to have your handwash and installation checked at least every two years by a competent electrician, to ensure there is no deterioration due to age and usage.

SECTION TWO

SITING AND PLUMBING

2.1 It is advisable to check that the water pressure to the handwash is adequate. If in doubt, consult a competent plumber.

Max: 0.7 MPa = 7 bar = 100 psi.

Min: 0.1 MPa = 1 bar = 14.5 psi.

The use of other services connected to the water pipe supplying the handwash heater may cause the water pressure to drop below the minimum. Therefore this should be taken into account.

The following conversions may be useful:

1 bar = 14.5 lbf/in² = 33.3 ft. head of water = 10m head of water.

1 lbf/in² = 2.3 ft. head of water.

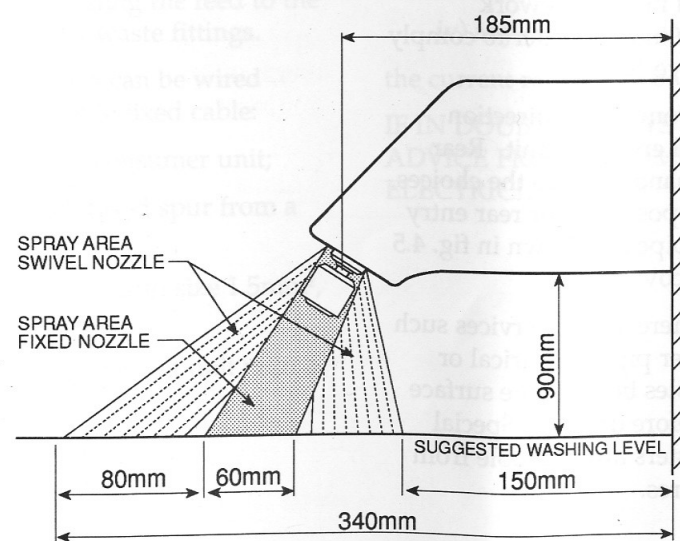


Figure 2.2 Extent of Spray Forms

cont...

The handwash can be fed from a storage tank where there is sufficient head of water, i.e. over 7m.

2.2 Position the unit so that the spray will be wholly contained within the sink or basin to be served. The unit is supplied with a fixed-position spray plate; if required, the swivel nozzle may be fitted as follows:

- i) Unscrew the fitted white plastic spray ring using a coin (2p or 10p is ideal).
- ii) Fit the black rubber washer and screw in the chrome swivel spout. The extent of the spray forms with nozzle and ring are shown in fig. 2.2. There is no facility to lock the adjustable nozzle at a fixed angle.

2.3 Ideally the unit should be positioned so that the lowest point of the nozzle or plate is at least 25mm (1") above the spill-over level of the sink. Otherwise a double-check valve must be fitted in the pipework supplying the unit, in order to comply with Water By-law 17.

2.4 Decide from which direction your pipe will enter the unit. Rear entry or left hand side are the choices. The required positions for rear entry of cable and pipe are shown in fig. 4.5 (inside front cover).

2.5 Ensure there are no services such as gas or water pipes, electrical or telephone cables beneath the surface of the wall before drilling. Special hand-held testers are available from hardware stores.

2.6 The water connection to the handwash heater should be made using standard 8mm outside diameter copper, or stainless steel, pipe. A length of 8mm copper pipe specially-bent for side entry, is supplied. A 15mm/8mm reducing coupler is also supplied, to enable connection to the more common 15mm pipe. The ends should be cut square and be free from internal and external burrs and deep scratches. Where possible, use a pipe-cutter and not a saw, to prevent saw chippings entering the pipe.

2.7 Before making the final water connections to the handwash, the pipework **MUST BE FLUSHED THOROUGHLY** to remove brick dust, swarf, etc. which could severely damage the handwash itself.

SECTION THREE

ELECTRICAL INSTALLATION

WARNING: THIS APPLIANCE MUST BE EARTHED.

The electrical installation should be carried out in accordance with the IEE Wiring Regulations.

The following notes are for guidance only:

3.1 The handwash must only be connected to a 230/240V ac supply.

3.2 Before making any electrical connections within the installation, make sure that no terminal is live. If in doubt, switch off the whole installation at the consumer unit or switch fuse (where fitted).

3.3 Note that all exposed metallic parts in a bathroom must be bonded together using cable of at least 4mm² CSA (cross sectional area). These parts include metal baths, radiators, water pipes (including the feed to the shower), taps and waste fittings.

3.4 The handwash can be wired direct using suitable fixed cable:

- i) direct to a consumer unit;
- ii) via a 13A fused spur from a ring main

or 3-core flex (minimum size 1.5mm², surface mounted);

- iii) from a connection unit with a special flex outlet;

The flex or fixed cable supplying the Concept must be capable of carrying the rated current under the installation conditions. See the tables on page 8.

A means of disconnecting both poles of the supply, with a contact separation of at least 3mm in each pole, must be fitted in the circuit to the Concept.

3.5 Choosing cable and fuse sizes. By reference to fig. 3.5a determine the nominal current of your handwash. The current rating of your cable must be at least that of the handwash itself. Then use fig. 3.5b to choose a fuse or mcb with a rating less than that of your chosen cable. We advise against using rewirable fuses.

If the cable is to be:

- i) bunched with others;
- ii) in an ambient of above 40°C;
- iii) in an insulating wall or within thermal insulation e.g. loft insulation;
- iv) any other unusual situation;

the current rating will be reduced.

IF IN DOUBT ALWAYS SEEK ADVICE FROM A COMPETENT ELECTRICIAN.

Supply Voltage	Product Rating	Nominal Current	Max Length of Fixed Cable for 6V drop		
			1.0mm ²	1.5mm ²	2.5mm ²
240V	3kW	12.5A	10m	16m	26m
230V	2.8kW	12.0A	11m	17m	27m

Figure 3.5a Rating of handwash and maximum cable run.

PVC twin and earth cable	1.0mm ²			1.5mm ²			2.5mm ²			
	Cable Installation Method	Current Rating	Suitable		Current Rating	Suitable		Current Rating	Suitable	
			Fuse	mcb		Fuse	mcb		Fuse	mcb
Direct on plaster or clipped to vertical wall	15	15	10, 15	19.5	15, 20	16, 20	27	20	20, 25	
In conduit or trunking on surface or within brick wall	13	n/s	10	16.5	15	16	23	15, 20	16, 20	

Figure 3.5b Cable rating, and suitable cartridge fuses/mcbs (rewirable fuses are not recommended) and are not covered by this table. Values are in amps.

SECTION FOUR CONNECTING TO SERVICES

4.1 N.B. Before making the final water connections to the handwash, the pipework **MUST BE FLUSHED THOROUGHLY** to remove brick dust, swarf etc. which could severely damage the handwash itself.

4.2 Remove the cover from the unit by loosening the countersunk Pozidriv screw and lifting the top section away.

Rear Entry

4.3 Remove the grey backplate from the handwash unit and fix this to the wall. Secure the backplate by the bottom screw first and check that it sits straight before drilling the wall and securing the two top screws.

4.4 If pipework and/or cable is to enter from the rear, it may be easier to arrange this as described below before drilling the wall for securing the backplate. Positioning of the pipe is critical and once it is fixed to the unit, it can be difficult to remove.

4.5 Temporarily fit the (8mm diameter) pipe in place in the wall,

and ensure that 16/21mm protrudes. It is essential that there are no external burrs on this pipe and it is worthwhile applying a smear of silicone grease. Cut a hole in the template fig. 4.5 (inside front cover) at the water pipe entry, feed over the pipe and mark where to drill for the backplate fixing holes and cable entry. Fix the backplate to the wall. If cable is to enter from the rear, feed it through the backplate at this stage.

4.6 Turn the inlet elbow towards the back of the unit. Place the bottom of the unit into the lip on the backplate, and hinge the unit to the wall, ensuring that the copper pipe enters the push-fit elbow.

4.7 Push the unit home onto the backplate. It may need to be tapped home.

4.8 If you need to withdraw the unit, push the collar on the inlet elbow back towards the front of the unit and hold it while you pull the whole unit away from the pipe.

Side Entry

4.9 Remove the grey backplate from the handwash unit and fix it to the

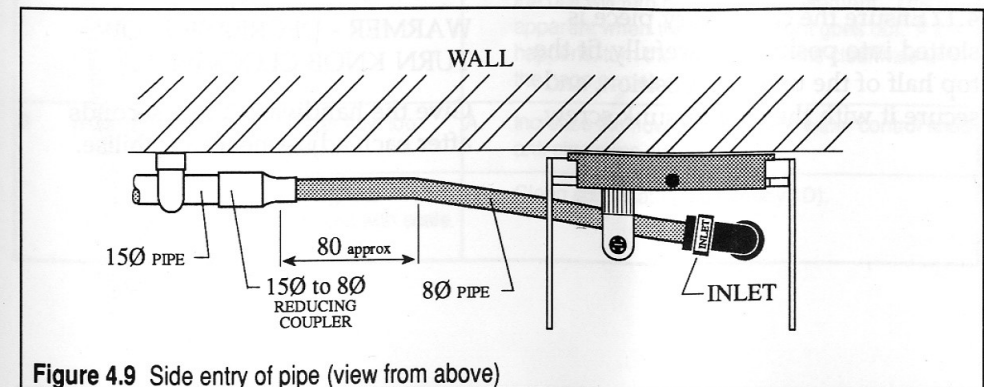


Figure 4.9 Side entry of pipe (view from above)

wall. For side entry of plumbing, remove the small plastic plug from the left-hand bottom half of the unit, turn the inlet elbow towards the side and make connection using the piece of pre-formed 8mm copper tube supplied as shown in fig. 4.9. Make sure that the tube has burr-free ends. Ensure the tube is pushed fully home into the elbow. If you need to remove the tube, push and hold back the collar on the push-fit elbow whilst easing the tube from the elbow.

4.10 For side entry of cable, the square-shaped blank cable-entry piece should be replaced with whichever of the two cable-entry pieces supplied is more appropriate.

Connecting the Cable

4.11 Thread the cable or flex through and connect it to the terminal block. The outer sheath should only be removed for a length of 25mm (1") and the inner sheath for a maximum of 8mm. Fix the cable into the cable clamp. The top section of the clamp can be rotated to suit the type of cable selected. The clamp is not needed for rear entry of cable, but do not remove it. Cover the bare earth wire of cable with green/yellow sleeving.

4.12 Ensure the cable-entry piece is slotted into position. Carefully fit the top half of the unit into position, and secure it with the countersunk screw.

SECTION FIVE TESTING & USING THE HANDWASH

5.1 Ensure that the electricity supply to the unit is turned off.

5.2 Turn the water control knob fully clockwise.

5.3 Turn on the water supply.

5.4 Slowly turn the water control knob anti-clockwise.

5.5 Let water flow. There may be gurgling and spluttering until any air has been purged.

5.6 When the flow is steady, turn the knob fully clockwise and ensure that the flow stops. Look for leaks and correct them. Then turn on the electricity.

5.7 Turn the water control knob slowly anti-clockwise until the neon light comes on. This indicates that the element is heating.

5.8 Adjust the control knob to alter the spray temperature:-

**COOLER - INCREASE FLOW -
TURN KNOB ANTI-CLOCKWISE;**

**WARMER - DECREASE FLOW -
TURN KNOB CLOCKWISE.**

Give the handwash a few seconds after each adjustment to stabilise.

SECTION SIX FAULT-FINDING

In the unlikely event of a problem, consult the trouble shooting chart below.

For your particular symptom follow the suggested remedies in the order given. If you are unable to remedy the problem, **CONTACT YOUR INSTALLER IN THE FIRST INSTANCE.** Do not attempt any electrical or plumbing work unless you are competent to do so.

SYMPTOM	POSSIBLE CAUSE	REMEDY
1 No flow or not enough flow.	A. Water control knob is turned fully clockwise.	A. Turn water control knob anti-clockwise.
	B. Water turned off at mains or servicing valve.	B. Ensure water is fully turned on at the mains and at servicing valve in pipework to the unit.
	C. Handwash suspected of being frozen.	C. If so, DO NOT USE. (i) Switch off immediately at isolating switch. (ii) Turn water off at servicing valve (if fitted) or at stop cock. (iii) Contact our Service Department.
	D. There may be an outlet blockage.	D. Unscrew sprayplate or nozzle, clean thoroughly in proprietary descaler or neat vinegar and replace.
2 Flow adequate but water too cold.	A. Electrical power to the handwash heater is off.	A. Ensure that the electrics to the handwash are switched on, and the "neon indicator" light is lit.
	B. Water flow too high.	B. Reduce the flow by turning the water control knob clockwise slowly. NOTE: If the knob is turned too far clockwise, the safety pressure switch inside the unit will turn off the heating element. This is apparent when the indicator light goes out. If this happens, turn the knob slowly anti-clockwise until the neon comes on.
3 Water too hot.	A. Water flow too low.	A. Increase the flow by turning the water control knob anti-clockwise slowly.
	B. Sprayplate blocked with scale or debris.	B. Clean sprayplate (see remedy 1D).