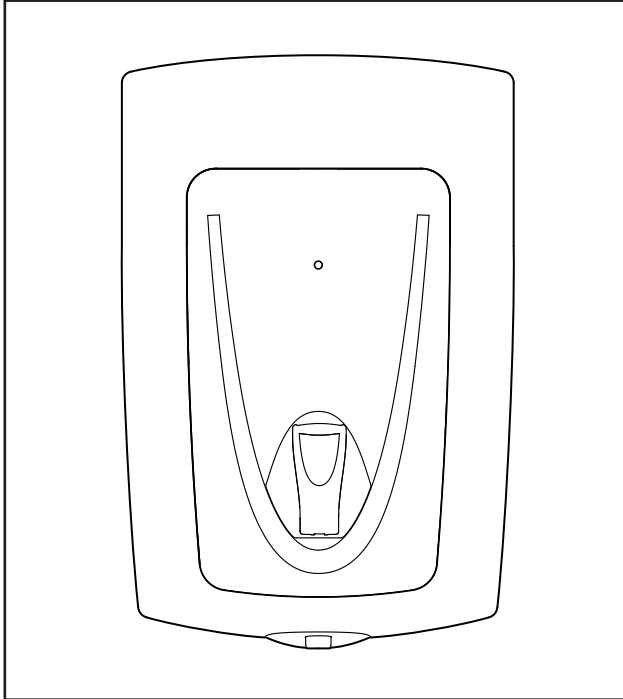




SPEEDIBOIL

Installation and User Instructions

Models: SP2.5, SP5.0, SP7.5



Please read and understand these instructions before starting work.
Please leave this leaflet with the user following installation.

WARNING

This Boiling Water Heater must only be installed by
qualified persons.

INTRODUCTION

Thank you for purchasing a Santon Speediboil . The Boiling water heater is manufactured to the highest standards and has been designed to meet all the latest relevant safety specifications.

This Santon water heater must be installed (Sections 1-5), commissioned (Section 6) and maintained (Sections 7-8) by a competent person. Please read and understand these instructions prior to installing your Santon water heater. Following installation and commissioning the operation of the heater should be explained to the user (Section 10) 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.

COMPONENT CHECKLIST

Before commencing installation check that all the following components have been supplied with your Speediboil heater.

- Wall mounting bracket
- No.12 x 2" screws (2 off)
- No.8 x 1" screw (1 off)
- No.12 x 2" wall plug (2 off)
- No.8 x 1" wall plug (1 off)
- 15mm x 15mm straight push-fit connector (fitted)
- 15mm x 15mm 90 ° elbow push fit connector (fitted)

TECHNICAL SPECIFICATION

CONNECTIONS

Inlet connection -15mm ext. diameter

Water entry point - bottom and rear

Cable entry point - bottom and rear

ELECTRICAL

Model numbers

2.5kW - Speediboil 2.5ltr - 94 200 001

2.5kW - Speediboil 5.0ltr - 94 200 002

2.5kW - Speediboil 7.5ltr - 94 200 003

Electrical rating 2.3/2.5kW@230/240V

Nominal capacities Model SP2.5 2.5 litres

Model SP5.0 5.0 litres

Model SP7.5 7.5 litres

Weight (full) Model SP2.5 8.4kg

Model SP5.0 11.8kg

Model SP7.5 15.4kg

Rated pressure

Minimum supply pressure 0.05MPa (0.5 bar)

Maximum supply pressure 1.0MPa (10 bar)

Enclosure rated IP X2

Nominal commissioning times (minutes) to temperature ready

Model SP2.5 16

Model SP5.0 24

Model SP7.5 32

STANDARDS AND APPROVALS

Complies with the requirement of EN 60335-2-35.

British Electromechanical Approvals Board (BEAB) approved.

Complies with European Community Directives (CE).

Complies with UK water regulations, kiwa approved.

1.0 IMPORTANT INSTALLATION POINTS

- 1.1 The Speediboil stores and dispenses water at or close to boiling point at all times it is switched on. Due caution must be taken when choosing a location for the product to minimise misuse. Locate the unit over a draining board NOT over the sink or basin.
- 1.2 Push fit connectors DO NOT grip chromed or stainless pipe.
- 1.3 The Speediboil is a vented water heater. The vent pipe must never be blocked or obstructed, it must be a minimum of 15mm outside diameter pipe. Where the vent pipe length exceeds 3m the pipe diameter should be increased. The vent pipe must be laid to a continuous fall and discharge in a safe and visible position; it must discharge via a tundish or finish a minimum of 20mm above a draining board. The vent pipe material must be capable of conveying boiling water. The vent pipe must never be connected directly to a soil pipe.
- 1.4 Wherever possible the Speediboil should be supplied directly from a rising main. If fed from a cold water feed cistern, the cistern must comply with the Water Regulations Guide (clause R27.2). It should be noted that water quality may be reduced when supplied from a cistern and additional forms of water pretreatment may be necessary.
- 1.5 In hard water areas, heated water will produce lime scale which will be deposited within the heater. If this is not regularly removed it will impair the operation of the heater. Where rapid and excessive scale build up is likely to occur the use of a proprietary scale reducing device may be beneficial.
- 1.6 **The installation must be carried out in accordance with the relevant requirements of:**
 - The appropriate Building Regulations either The Building Regulations (England & Wales), The Building Regulations (Scotland) or Building Regulations (Northern Ireland).
 - The Water Fittings Regulations or Water Byelaws in Scotland.
- 1.7 The Speediboil will adjust for ambient (room) temperatures of between 1°C and 40°C.
- 1.8 When not in use care must be taken to prevent it freezing; if thought to be frozen it must not be switched on. It must be left to thaw and must then be thoroughly inspected to ensure it is totally thawed and undamaged.
- 1.9 The unit is not suitable for installation in an area where a water jet could be used.

2.0 INSTALLATION - MOUNTING

- 2.1 The Speediboil must be vertically wall mounted using the bracket supplied.
- 2.2 Fig.1 details the outside dimensions of the Speediboil unit. It is recommended that the unit is positioned above the draining board. If this is not possible consideration should be given to any spillages that may occur under the appliance. The heater should be positioned at a height to suit the items being filled (flasks, pans, cups etc.). This is likely to position the base of the unit 250mm above the work surface.
- 2.3 Sufficient room should be left around the heater for access for maintenance and servicing. The top should not be covered as this will reduce the efficiency of the Speediboil.
- 2.4 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 Using the backplate mark the fixing positions and water and vent entry points. Drill and plug the fixing positions. Fix the mounting bracket to the wall using the two No. 12x2” screws provided (confirm suitability of all screws and plugs for use with the wall, if unsuitable due to wall type provide alternative fixings)
- 2.6 If rear entry services are to be used the necessary holes for these should be prepared prior to hanging the unit onto its bracket.
- 2.7 Remove the front cover by: unscrewing the top and bottom cover fixing screws bottom and top. Hang the Speediboil onto the wall mounting bracket. Secure anchor point to the wall with the No.8 x 1” screw (provided).

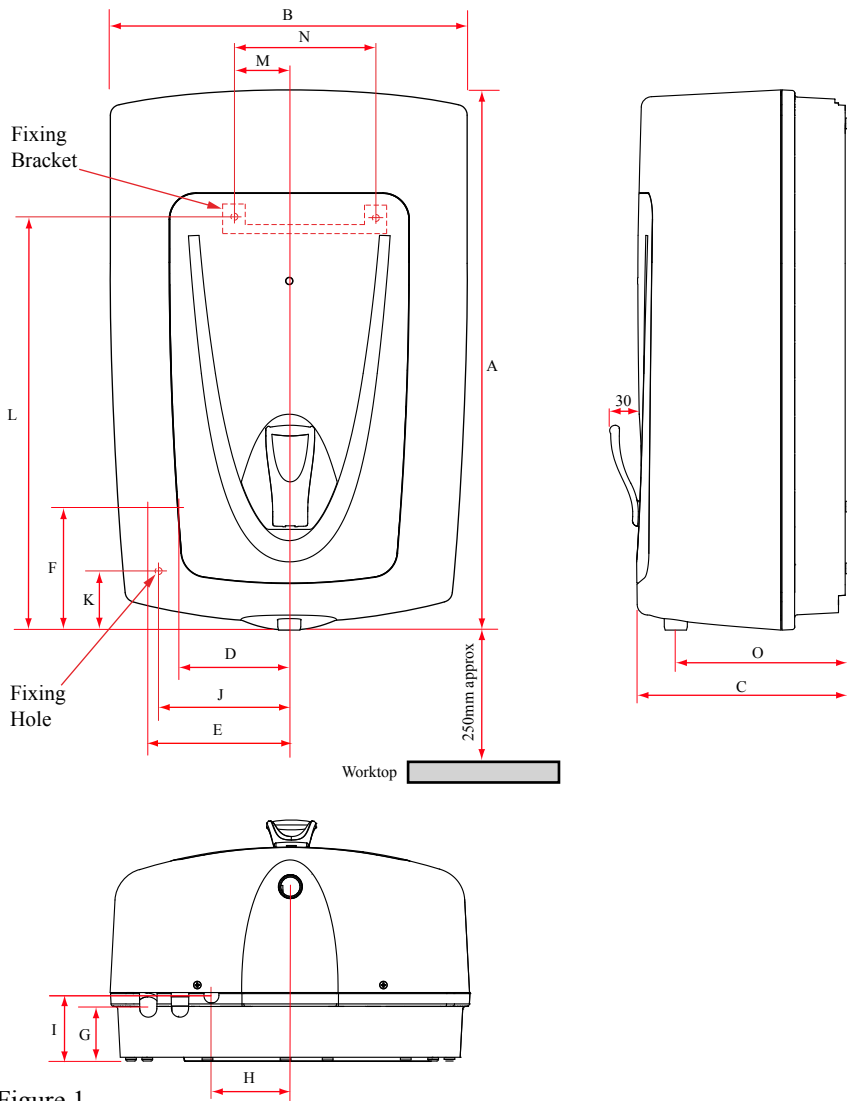


Figure 1

| MODEL | DIMENSIONS (mm) | | | | | | | |
|-------|-----------------|-----|-----|-------|------|----------------|----------------|----------------|
| | A | B | C | D | E | F | G | H |
| | | | | INLET | VENT | INLET/ VENT | INLET/ VENT | CABLE ENTRY |
| SP2.5 | 445 | 290 | 190 | 85 | 115 | 101 | 49 | 46 |
| SP5.0 | 510 | 335 | 200 | 103 | 133 | 101 | 49 | 69 |
| SP7.5 | 510 | 335 | 262 | 103 | 133 | 101 | 49 | 69 |

| | I | J | K | L | M | N | O |
|-------|-------------|--------------|--------------|---------|---------|---------|--------|
| | CABLE ENTRY | FIXING POINT | FIXING POINT | BRACKET | BRACKET | BRACKET | OUTLET |
| SP2.5 | 59 | 96 | 50 | 342 | 52.5 | 169 | 152 |
| SP5.0 | 61 | 117 | 67 | 401 | 84 | 217 | 163 |
| SP7.5 | 61 | 117 | 67 | 401 | 84 | 217 | 225 |

3.0 INSTALLATION - WATER SUPPLY

- 3.1 Select appropriate push fit connector for chosen entry position:
Bottom entry water - 15mm x 15mm 90° elbow.
Rear entry water - 15mm x 15mm straight.
Note: stainless or chromed pipes DO NOT provide secure connections with push fit fittings (use copper pipe at joints).
- 3.2 Push the connector fully home (28mm engagement) onto the solenoid valve inlet spigot. To remove a push fit connector the collar (collet) should be pushed towards the body of the fitting whilst pulling the connector off the pipe.
- 3.3 If the inlet pipe run is horizontal and beneath the unit ensure it does not prevent access to the case screws.
- 3.4 Connect the inlet pipe to the push fit connector ensuring it is fully pushed home (28mm engagement). After connection DO NOT make soldered joints in the pipe work close to the heater, as the heat may damage the connector or the water heater itself.
- 3.5 A WRAS listed isolating valve should be fitted to the cold supply to facilitate servicing the heater.
- 3.6 Push fit connectors are supplied to allow either bottom or rear entry of services.

4.0 INSTALLATION - VENT PIPE

- 4.1 Select appropriate push fit connector for chosen entry position:
Bottom entry vent - 15mm x 15mm straight
Rear entry vent - 15mm x 15mm 90° elbow
- 4.2 Push the connector fully home (28mm engagement) onto the vent pipe connection.
- 4.3 Connect the vent pipe to the push fit connector ensuring it is pushed fully home (28mm engagement). Refer to the vent pipe requirement detailed in IMPORTANT INSTALLATION POINTS. If a bottom entry vent pipe is used the pipe must terminate below the unit, in a safe visible position. After connection DO NOT make soldered joints in the pipe work close to the heater, as the heat may damage the connector or the water heater itself.

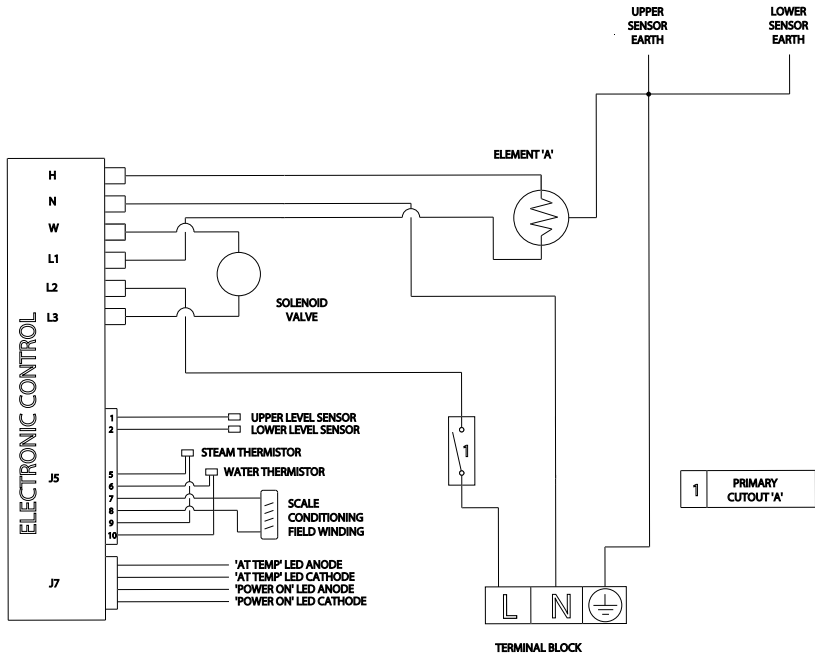
5.0 INSTALLATION - ELECTRICAL REQUIREMENTS

WARNING:

- 5.1 This appliance must be earthed.
- 5.2 The installation, supply cable and circuit protection must conform to the latest BS7671 'Requirements for electrical installations' (IEE Wiring Regulations).
- 5.3 The appliance must only be connected to a 230/240 V ac supply. A double pole isolating switch, with a contact separation of at least 3mm in both poles, must be incorporated in the electrical supply. The supply should be fused 13Amp.
- 5.4 If the Speediboil is to be unused for significant periods of time running costs can be reduced by switching the unit off. It is recommended that this is done automatically by incorporating a suitable timeswitch in the supply to the unit. The use of an accessory No. 95 970 124 is recommended. The timeswitch can then be set to switch the unit on for a suitable period to allow it to heat up before it is next to be used. NOTE: A timeswitch must be capable of switching 13 Amps resistive load.

Figure 2: Wiring Diagram

[— 2.5 kW]



6.0 COMMISSIONING

- 6.1 The electronic control system of the Speediboil has a self commissioning and calibration function. Once the heater is installed and all services have been connected the appliance should require no further adjustment before use.
- 6.2 Check that all electrical, water and vent pipe connections have been made and are secure.
- 6.3 Replace the cover and secure with the fixing screws. Ensure the tank discharge tube is centrally located in the outlet spout. Turn on water then electrical supply.
- 6.4 The READY indicator will flash to indicate the unit is in its “self commissioning” mode. The water in the unit will not be hot enough to use at this stage (do not draw water off).
- 6.5 The READY indicator will continue to flash until the unit has reached boiling and has “self-calibrated”. At this point the READY indicator will remain illuminated. If for any reason the calibration procedure is interrupted it will restart after a short delay but may result in the calibrated temperature being too low. If this occurs switch the electrical supply OFF for several seconds and then switch ON. The calibration sequence will reset. Wait for the READY indicator to remain illuminated.
- 6.6 The unit is now ready to use, however, it is recommended that the first few fills be drawn off and discarded to ensure the freshness of the water.
- 6.7 The tap sealing washer pressure has been already set. If the tap drips after commissioning adjust the spring tension so that the handle is just loose.
 - a) Remove the tap bezel after removing the two screws securing it. Note: to remove the bezel the handle will have to be operated. This will cause water to discharge from the outlet (see Page 13 item 10).
 - b) Tighten the tap headwork nut (turn clockwise) until the handle is just loose. Replace bezel and securing screws. Note: excessive adjustment will dismantle the tap, if heated this would result in the uncontrollable release of boiling water (see Page 13 item 7).
- 6.8 Check for leaks.
- 6.9 **IMPORTANT NOTE:** each time the unit is switched off then switched on it will always go through the same cycle 6.4-6.5. Water should never be drawn off the

7.0 MAINTENANCE

NOTE: Maintenance must be carried out by competent persons.

Competent - i.e. Trained, experienced, qualified.

Disconnect the electrical supply before removing the cover.

WARNING: Electronics control by switching 'n' (neutral), in some instances neutral terminations will be at 230 volts with respect to earth.

- 7.1 The Speediboil incorporates an electronic scale conditioning function which will reduce the rate of scale deposition in hard water areas. However, some deposits may still occur in the storage tank; these should be periodically removed.
- 7.2 The amount of usage of the unit will also determine the quantity of scale build up. A regular inspection of the tank every 6 to 12 months will provide longer life of the product and optimum performance (removal of the steam plate assembly will give access to the storage tank) .
- 7.3 The front cover and spout will require a periodic wipe to clean any marks/splashes from use.

8.0 FAULT FINDING

YOUR SANTON SPEEDIBOIL SHOULD GIVE TROUBLE FREE OPERATION, HOWEVER SHOULD A FAULT OCCUR THE TABLE BELOW SHOULD ALLOW MOST FAULTS TO BE IDENTIFIED. FAULT FINDING SHOULD ONLY BE CARRIED OUT BY A COMPETENT PERSON.

| SYMPTOM | POSSIBLE CAUSE | ACTION |
|-------------------------------------|--|---|
| No indicator light | <ol style="list-style-type: none">1. If no water or heat - no power to unit2. If no water available - no power to indicator diodes | <ol style="list-style-type: none">1. Check power supply is correctly connected and switched on and that primary cutout has not operated2. Check connections to indicators at 4 way plug |
| Unit does not fill on commissioning | <ol style="list-style-type: none">1. If "ON" indicator not illuminated no power to unit2. Solenoid valve fault3. Low water pressure | <ol style="list-style-type: none">1. Check power supply is correctly connected and switched on and that primary cutout has not operated2. Check operation of solenoid valve, replace if necessary3. Check supply is turned on |
| Unit does not heat on commissioning | <ol style="list-style-type: none">1. If "ON" indicator not illuminated no power to unit2. Solenoid valve fault3. Low water pressure4. Element fault | <ol style="list-style-type: none">1. Check power supply is correctly connected and switched on and that primary cutout has not operated2. Check operation of solenoid valve, replace if necessary3. Check supply4. Check element continuity. If faulty replace |

| SYMPTOM | POSSIBLE CAUSE | ACTION |
|---|--|---|
| Unit does not fill after commissioning | <ol style="list-style-type: none"> 1. Level sensor fault 2. Solenoid valve fault 3. Electronic control fault 4. Low water pressure | <ol style="list-style-type: none"> 1. Check level system earth connections 2. Check operation of solenoid valve, replace if necessary 3. Check connections to electronic control. Replace if necessary 4. Check supply |
| Unit does not heat after commissioning | <ol style="list-style-type: none"> 1. Element fault 2. Electronic control fault 3. Control thermistor fault - short circuit | <ol style="list-style-type: none"> 1. Check element continuity. If faulty replace 2. Check connections to electronic control, Replace if necessary 3. Check continuity (5Kohms at 100°C, 100Kohms at 25°C) |
| Water flows from vent and primary cutout activate | <ol style="list-style-type: none"> 1. Solenoid valve fault 2. Level sensor fault 3. Electronic control fault 4. Low water pressure | <ol style="list-style-type: none"> 1. Check operation of solenoid valve. Replace if necessary 2. Check level system earth connections 3. Check connections to electronic control. Replace if necessary 4. Increase inlet pressure |
| Steam from vent pipe and primary cutout operates | <ol style="list-style-type: none"> 1. Control thermistor fault - open circuit 2. Electronic control fault 3. Scale build up | <ol style="list-style-type: none"> 1. Check continuity (5Kohms at 100°C, 100Kohms at 25°C) 2. Check connections to electronic control. Replace if necessary 3. Descale unit |
| Drip from outlet | <ol style="list-style-type: none"> 1. Incorrect spring tension 2. Scale : debris under tap seal 3. Damaged tap seal 4. Scale on tap outlet spout | <ol style="list-style-type: none"> 1. Ensure tap headwork nut correctly adjusted 2. Remove and clean as necessary 3. Replace tap seal 4. Clean tap outlet |
| Water "runs on" when tap released | <ol style="list-style-type: none"> 1. Scale on tap outlet spout 2. Scale : debris under tap seal 3. Damaged tap seal | <ol style="list-style-type: none"> 1. Clean tap outlet 2. Remove and clean as necessary 3. Replace tap seal |
| Stale taste to water | Unit left unused for several days | Empty and allow to refill before use |
| Tap sticks open | Dirt around handle pivot | Clean with a stiff paint brush |
| Water consistently cooler than when new | <ol style="list-style-type: none"> 1. Control thermistor pocket has a covering of scale 2. Control Thermistor out of calibration 3. Steam thermistor out of calibration | <ol style="list-style-type: none"> 1. Descale the pocket surface & unit 2. Check values (5Kohms at 100°C, 100Kohms at 25°C) 3. Check values (5Kohms at 100°C, 100Kohms at 25°C) |

For any faults that cannot be identified using the Fault Finding chart please contact the Santon After Sales Service, telephone (08448) 711530, fax (08448) 711528.

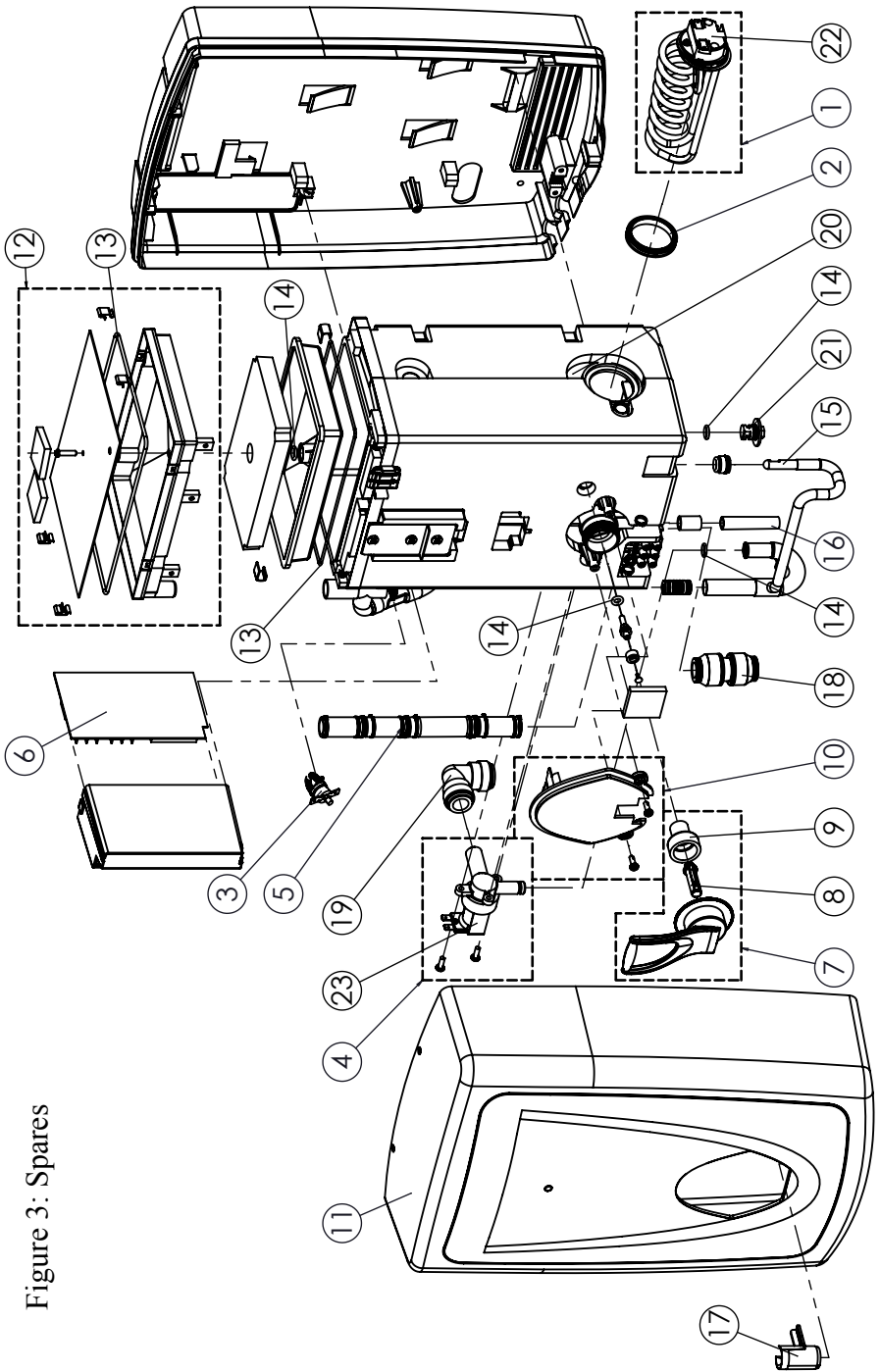
9.0 SPARE PARTS

The following comprehensive list of spare parts is available for your Santon Speediboil water heater. Please refer to the rating label on the right hand side of your heater before ordering to ensure the correct spare parts are obtained.

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

| | |
|---|------------|
| 1. Element assembly (incorporating start dry cutout)..... | 95 607 952 |
| 2. Element assembly sealing gasket..... | 95 611 816 |
| 3. Primary cutout (vent pipe)..... | 95 612 001 |
| 4. Solenoid valve assembly..... | 95 605 877 |
| 5. Level sensor assembly (2.5ltr Model)..... | 95 606 971 |
| Level sensor assembly (5.0/7.5ltr Model)..... | 95 606 972 |
| 6. Circuit board (All Models)..... | 95 615 007 |
| 7. Outlet tap headwork (inc. handle)..... | 95 605 071 |
| 8. Outlet tap stem..... | 95 605 832 |
| 9. Outlet tap cup seal..... | 95 611 731 |
| 10. Bezel for tap & cover..... | 95 605 072 |
| 11. Cover assy & screws (2.5ltr Model)..... | 95 607 212 |
| Cover assy & screws (5.0ltr Model)..... | 95 607 213 |
| Cover assy & screws (7.5ltr Model)..... | 95 607 214 |
| 12. Steam condenser assy (2.5ltr Model)..... | 95 607 015 |
| Steam condenser assy (5.0ltr Model)..... | 95 607 016 |
| Steam condenser assy (7.5ltr Model)..... | 95 607 018 |
| 13. Condenser sealing gasket (2.5ltr Model)..... | 95 611 817 |
| Condenser sealing gasket (5.0ltr Model)..... | 95 611 819 |
| Condenser sealing gasket (7.5ltr Model)..... | 95 611 820 |
| 14. 'O' ring kit..... | 95 611 002 |
| 15. Manifold assy 2.5ltr..... | 95 607 206 |
| Manifold assy 5.0ltr..... | 95 607 207 |
| Manifold assy 7.5ltr..... | 95 607 208 |
| 16. Outlet spout plastic - tank..... | 95 604 668 |
| 17. Outlet spout - cover..... | 95 604 001 |
| 18. Push fit connector 15x15 straight..... | 95 607 509 |
| 19. Push fit connector 15x15 elbow..... | 95 607 510 |
| 20. Tank (2.5ltr Model)..... | 95 608 926 |
| Tank (5.0ltr Model)..... | 95 608 927 |
| Tank (7.5ltr Model)..... | 95 608 928 |
| 21. Tank drain & seal..... | 95 608 929 |
| 22. Start dry cutout (element)..... | 95 612 691 |
| 23. Solenoid valve coil..... | 95 605 839 |
| 24. Fitting kit (2.5ltr Model)..... | 95 607 024 |
| 25. Fitting kit (5.0/7.5ltr Model)..... | 95 607 025 |
| 26. Wiring harness 4-way..... | 95 612 006 |
| 27. Wiring harness complete..... | 95 607 209 |

Figure 3: Spares



10.0 USER INSTRUCTIONS

- 10.1 Once installed the filling and the heating cycles of the Speediboil are completely automatic.
- 10.2 To dispense water, place a suitable container under the outlet spout and pull the tap handle down and towards (or pushed away) the user. The water dispensed will at all times be boiling or close to boiling point so due caution must be taken when using the product.
- 10.3 The tap handle is spring loaded so that when released it will spring back to the “off” position (no flow).
- 10.4 The Speediboil is fitted with one neon indicator
When the neon is flashing the unit is commissioning (DO NOT draw water off).
When the neon is on and stays as a solid light the unit is ready to be used.
- 10.5 If the store of hot water is completely withdrawn, the flow rate from the outlet tap will reduce to the filling rate of the heater (leave for 2 minutes before drawing any more water off). This slow flow rate allows the incoming water to be instantly reheated, it does not indicate a fault with the water heater.
- 10.6 If the Speediboil is not used for a few days the water may become “stale”. In these instances it is advisable to draw off the contents and discard the water at least twice to remove the “stale” water. This will ensure that “freshly” boiled water is used to make your drinks etc.
- 10.7 Similarly, if left unused it is possible that some scale residue will collect in the outlet tap. This will cause the outlet water to appear “milky” for a short while. If this condition occurs it is recommended that the first few cups are drawn off and discarded.

Guarantee

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

- 1 The unit has been installed by a competent person in accordance with the Installation, User Instructions, all relevant Codes of Practice, 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 Santon recommended type and specification.
- 3 The appliance 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 appliance has been used only for heating potable water.

The appliance is not guaranteed against damage by frost, and the inner container with integral heating element is not guaranteed against excessive scale build-up.

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

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

Environmental Information

Santon 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.

Spares Stockists

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 Center
Tel: 0845 270 9801
www.partscenter.co.uk

Newey & Eyre
Specialist Products Division
Please contact your local branch

UK Spares Ltd.
Tower Lane, Warmley
Bristol, BS30 8XT
Tel: 0117 961 6670

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

SANTON

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