

Trouble Shooting

All Models excluding 1.5 ltr unit

Birko

TempoTronic

On Wall Boiling Water Heater

Models:

1070074	2.5 ltr
1070076	5 ltr
1070078	7.5 ltr
1070080	10 ltr
1070082	15 ltr
1070084	20 ltr
1070086	25 ltr

Note:

This manual excludes the 1.5 ltr model as it has a different internal design.



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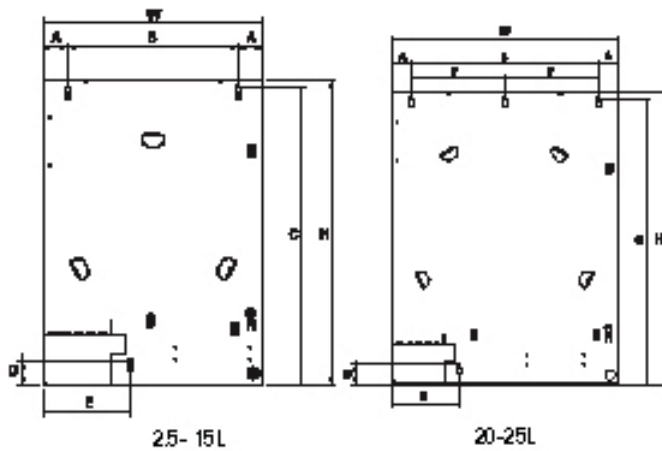
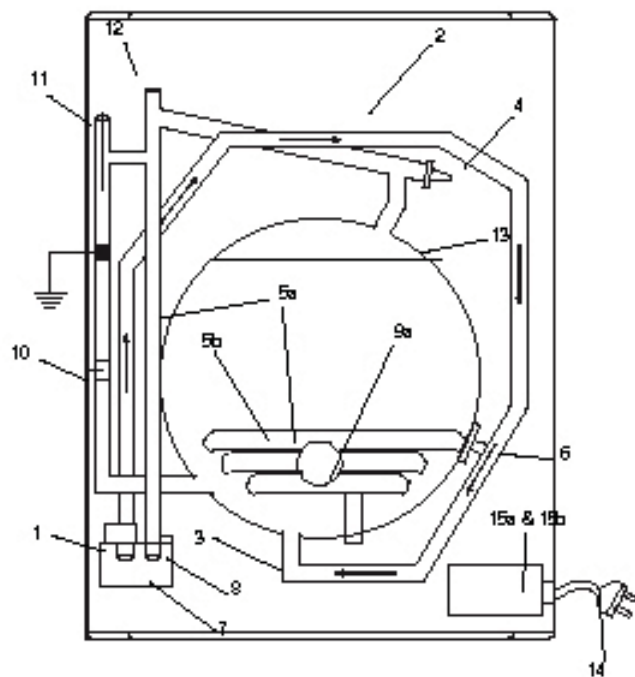
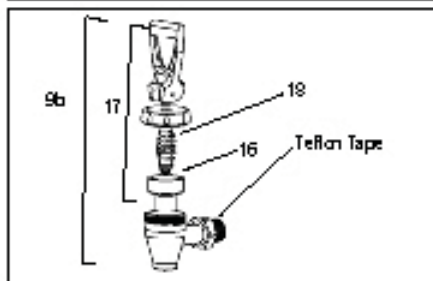
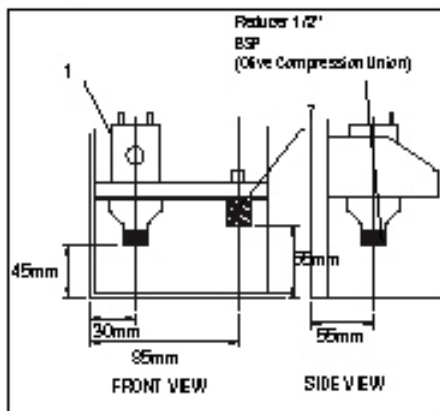
The General Operational Process

1. After fixing to wall and checking all connections, turn on power and water together.
2. The solenoid valve will now open and fill the tank until it reaches the low water level sensor.
3. When the low water level sensor is contacted, the filling process stops and the heating cycle starts, the heating will continue until the water reaches approximately 98-99°C.
4. Once this temperature is reached the heating stops and filling restarts, this process of heat/fill/heat/fill continues until the top water level sensor is reached. When water makes contact with the high water level sensor, the PCB isolates the filling cycle from this function, and the element controlled by the PCB remains in circuit to monitor for any heat top up's that may be required.
5. If any subsequent water is used and the unit drops away from the high level water sensor, the heat/fill/heat /fill process restarts until water is back at the high level water sensor and at maximum temperature.

Spare parts and diagrams for location and installation dimensions.

Ref	Part No.	Description
1	13110100	Water Solenoid Valve
2	1311044	Condensor Assembly
3		Cold Water Inlet To Tank
4	1311043	Thermistor Steam Sensor
5a		Element and Tank Assembly
5b	1311032	Element and Tank Assembly 5 - 25 ltr
6	1311006	Manual Reset Thermostat (boil dry protection)
7		Steam Vent Outlet (half inch BSP)
8	1311022	Auto Reset Thermostat (steam vent overflow)
9a		Water Outlet Fitting (half inch BSP)
9b	1311056	Tap Assembly
10	1311082	Sensor (minimum water level)

Ref	Part No.	Description
11	1311048	Probe (maximum water level)
12		Steam Vent Outlet
13		Maximum Water Level
14	1310842	Power Cord and Plug Assembly
15a	1311093	Control Board Assembly (2.5ltr) pre 2005
15b	1311093	Control Board Assembly (5 - 25ltr) pre 2005
15c	1311093	Control Board Assembly all model (2005 onwards)
16	1311058	Tap Cup Seal
17	1311060	Tap Insert
18	1310732	Tap Spring
4a	1311085	Thermistor Steam Sensor (2005 onwards)



Wall Mounting Dimensions (mm)

	2.5L	5-7.5L	10-15L	20-25L
A	56.4	41.4	41.4	41.4
B	198.0	278.0	335.0	399.0
C	418.45	488.45	545.45	602.45
D	42.45	42.45	42.45	42.45
E	143.4	143.4	143.4	143.4
F				200
H	490.8	500.8	557.8	621.8
W	310.8	360.8	417.8	481.8

Problem Solving

Symptom	Solution
Unit filling to low level but not heating	<ol style="list-style-type: none"> 1. Possible replacement PCB 2. Check Element
Unit not filling	<ol style="list-style-type: none"> 1. Check top probe (No.11 page 3) and ensure that the probe is not in contact with tubing. Also check for scale build up. 2. Check solenoid valve (No.1 page 3) with multimeter set to Ohms scale, it should read between 3.9 - 4.2. 3. Check water supply. 4. Turn power supply on then off to see if you can hear the "squirt" of water from the solenoid valve.
Unit continually boiling	<ol style="list-style-type: none"> 1. Replace thermistor steam sensor (No.4 page 3) 2. If above does not solve problem, replace PCB (No.15a or 15b page 3).
Manual reset thermostat (Unscrew) (Element boil dry protection)	<ol style="list-style-type: none"> 1. Check water supply to tank. 2. Check element. 3. Replace manual reset.
Tap leaking	<ol style="list-style-type: none"> 1. Replace tap cup seal (No.15 page 3) 2. Replace tap assy (No.9 page 3). Re-tape with teflon.

Tank access and replacing parts

Task	Operation
Front cover removal	<ol style="list-style-type: none"> 1. Turn power and water off 2. Drain unit via tap, be carefull of boiling water. 3. Remove the tap assy by unscrewing counter-clockwise 4. Undo self-tapping screws, 2 at top and 2 at bottom of case. Remove the cover by drawing towards you.
Replace Solenoid	<ol style="list-style-type: none"> 1. Directions as above in Cover Removal. 2. Disconnect wires to valve. 3. Disconnect the water fitting attached to valve. 4. Unscrew securing screws fixing valve. Remove old valve and replace with new valve. 5. Re-connect fitting, turn on water and check for leaks.
Replace Element	<ol style="list-style-type: none"> 6. Refit case and return to operation. 1. Directions as above in Cover Removal. 2. Disconnect element wiring. 3. Disconnect wiring from the manual re-set thermostat and remove by unscrewing. 4. Remove the panel at the top of the tank, then the 3 nuts securing the element, 2 at the bottom and 1 on the side of tank. 5. Remove the element through the top opening. 6. Replacement is the reverse procedure. 7. Refit case and return to operation. <p>NOTE: After replacing the element the top panel must be re- sealed to ensure water tight operation.</p>
Replace Tap assembly	<ol style="list-style-type: none"> 1. Directions as above in Cover Removal. Steps 1-3. 2. Re-fit the new tap assembly. 3. Ensure new thread seal tape is applied.
Replace Manual Re-Set Thermostat	<ol style="list-style-type: none"> 1. Directions as above in Cover Removal. 2. Remove the connecting wires, unscrew the cutout. 3. Replacement is the reverse procedure.
Replace PCB.	<ol style="list-style-type: none"> 1. Directions as above in Cover Removal. 2. Disconnect connecting wires and unscrew PCB. 3. Replacement is the reverse procedure. 4. Refit case and return to operation. <p>NOTE: PCB wiring is colour coded please ensure that the wires go back onto the same connection terminals. All connections are 240 volt, take great care. The temperature is non-adjustable. PCB No.181801 is for 2.5 ltr. PCB No.181815 is for 5ltr and larger.</p>

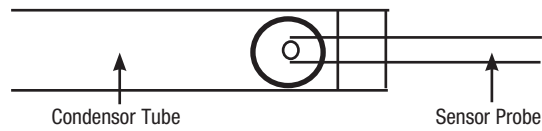
Tank access and replacing parts con't.

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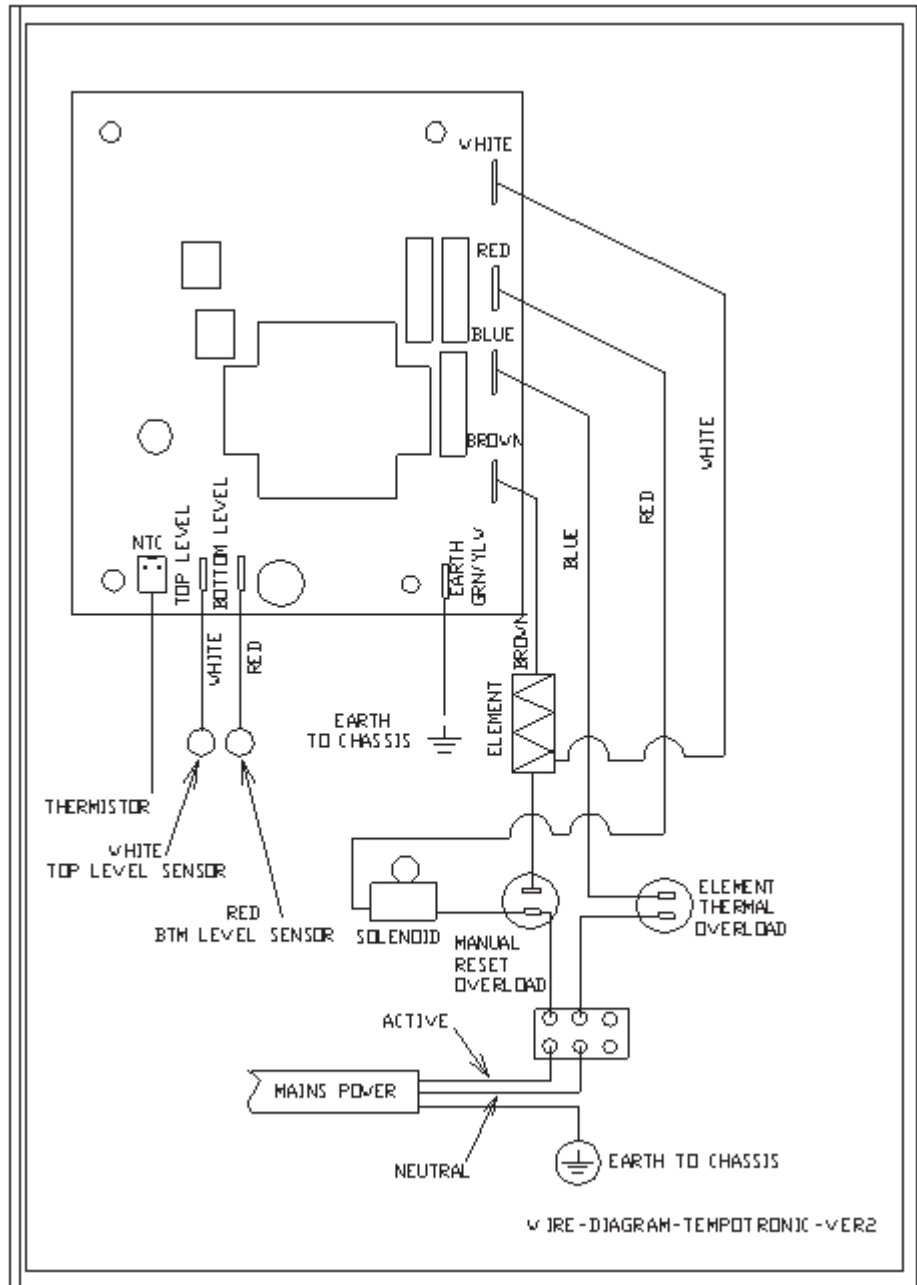
Replace Thermistor Steam Sensor

Operation

1. Directions as above in Cover Removal.
2. Remove PCB cover plate.
3. Remove the thermistor.
4. The probe end of the thermistor pushes into the condensor tube so that the tip just covers the hole drilled in the condensor tube.
5. Re-connect the sensor to the PCB at either NTC 1 or NTC 2, in any order.



Wiring diagram and PCB layout. (2005-onwards)



Item	Value
Solenoid Coil	3.9 - 4.2 K ohms
Element	2.4kw / 10 amp

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