

SALES & SERVICE  
KWIKOT(PTY)LTD.

# **Installation Guide & Owner's Manual**

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Please read this booklet as it contains important information about the correct installation and operation of the Kwikboil unit. Failure to install the Kwikboil incorrectly will deem the

### 1. IMPORTANT NOTES

- 1.1 The kwikboil is designed and manufactured to operate at a maximum incoming mains cold water pressure of 1000kPa. Should the water pressure exceed 1000 kPa, an inline pressure reducing valve must be fitted.
- 1.2 Please ensure that the mains cold water supply is connected to the indicated water inlet connection of the Kwikboil(at the base of the solenoid valve ) and that the unit vent connection always has a free flow of air into and out of the boiling water chamber.
- 1.3 The Kwikboil is a simple technologically advanced electronic automatic boiling water system and operates differently and more efficiently to other mechanical systems. Please familiarise yourself with the filling and operating modes of this electronic system as explained on Page 4 and 5 of the Manual.
- 1.4 The Kwikboil system facilitates a boiling water temperature adjustment for different altitude installations. A temperature trim pot is located in the electronic controller (PCB) Should a temperature adjustment be

necessary ,the procedure is detailed on Page 10 of the Manual.

- 1.5 The Kwikboil unit produces boiling water and care should be taken at all times when using it.

- 1.6 The machine is suit to the environmental temperature:5-40°C.

### 2. WATER QUALITY

Caution is suggested if the Boiling Water Unit is to be connected to a water supply with a high content of silica or calcium. Water supplies of this nature may be detrimental to the unit's operation and may cause the warranty to become void. For further information relating to the guidelines of water quality, contact your local service agent for advice.

### 3. INSTALLATION

This Boiling Water Unit shall be installed by a qualified service person . The installation must comply with the local building regulations and the relevant wiring and plumbing regulations.

#### 3.1 LOCATION

This unit is designed for interior installation only and is NOT WEATHERPROOF. If the unit is to be installed outside , it must be protected from the weather and from freezing.

### 3.2 OPENING THE UNIT

To remove the jacket from all models, remove the retaining screws on the sides and pull the jacket forward.

### 3.3 MINIMUM CLEARANCES

All units require a minimum clearance of 50 mm on all sides, however, we recommend you leave sufficient clearance for servicing.

### 3.4 MOUNTING

When installation, make the expansion screws (please refer to 6 and 7 pages corresponding size) fix on the wall or other safe place, make sure fixation of the expansion screws, and the expansion screws must be anchored on the subjects which can be beared the machine when filled with water (Reference page 8). And then hang the machine on the expansion screws.

### 3.5 WATER SUPPLY CONNECTION

Mains cold water supply (refer to pressure table on Page 9 for operating water pressures) must be piped and connected to the  $\frac{1}{2}$ " BSP inlet fitting located on the left hand side underneath the unit. An accessible isolating valve must be installed near the unit.

This unit contains a strainer on the water inlet connection. To ensure continuing satisfactory operation, it is suggested that the inlet strainer be serviced every six months. Where poor water quality is present it is recommended to install an

additional auxiliary filter.

For rear entry connection, we recommend that you use a braided flexible hose with a 90° new elbow for ease of connection.

### 3.6 VENT/OVERFLOW CONNECTION

Connect a 15 mm ( $\frac{1}{2}$ " ) pipe to the vent/overflow connection ( $\frac{1}{2}$ " BSP). This pipe must have a continuous fall, not exceeding 3 metres in length, or contain no more than 4 bends.

During the normal operation of the Kwikboil the vent/overflow connection may discharge small quantities of steam and condensate, so it is ESSENTIAL that the drain pipe is attached to the vent/overflow connection. This drain pipe must discharge to waste at a point where no scald injury or inconvenience is caused.

Ensure that the vent/overflow line remains open because the Kwikboil tank is not designed to be pressurised. It is recommended to install an air break in the vent/overflow drain line, no more than 300 mm from the Kwikboil unit.

### 3.7 DRAIN CONNECTION

There is a drain screw located on the underside of the unit to completely drain the tank for servicing.

Before removing the drain screw, ensure the appliance has been switched off and the water is not hot enough to scald.

#### **CAUTION:**

This unit is not suitable for installation in an area where a water jet could be used. This unit must not be cleaned using a water jet.

### 3.8 TAP OUTLET

To prevent damage during transportation, the tap is bubble wrapped and placed inside the carton.

The tap is fitted to the threaded tap outlet extension with an "O" ring seal fitted and fixing screw to secure in the vertical position.

#### **PLEASE NOTE**

Installation and maintenance of the Kwikboil Boiling Water Unit shall be carried out by a suitably qualified service person.

### 3.9 ELECTRICAL REQUIREMENTS

All models  
• 230 Volts AC, 50HZ,  
Single Phase

#### ELEMENT RATING

- 1800 Watts – 2.5 Litre
- 2000 Watts – 5 to 10 Litre
- 2400 Watts – 15 Litre
- 3000 Watts – 25 Litre

A flexible cord complete with a plug is supplied on all models. Do not loosen the cord grip or pull excess cord into the Kwikboil. If the supply cord of this unit is damaged, it must be replaced by a qualified service person.

#### **CAUTION:**

THIS APPLIANCE MUST BE  
EARTHED

## 4. OPERATION

When the installation is complete, first turn on the water supply and then switch on the power, which will engage the solenoid valve and the unit will automatically begin to fill and the heating sequence will commence.

The water is heated in small quantities, so boiling water is available at all times.

The electronic control unit constantly controls the water level and the water temperature.

### 4.1 MODE 1 OPERATION:

To follow through the sequence of events in order, it is necessary that we consider the unit is switched on for the first time.

When the unit is switched on, the controller scans the Level Probe condition, and having established that, then executes a sequence of events particular to that mode.

1. The Controller scans the Level Probe to establish the Level Probe condition. Both Probes (low and high) will be found to be in an OPEN condition, i.e. no water present. This then places the unit in MODE 1 condition.
2. The Solenoid valve is then energised, allowing water to enter the tank.

3. Water continues to enter the tank until such time as the Low Level Probe Becomes "CLOSED", i.e. Water present, up to the end of the Low Level Probe.
4. The Solenoid Valve is then de-energised, stopping the flow of water into the tank.
5. The Controller then steps into MODE 2 new line condition.

#### 4.2 MODE 2 OPERATION:

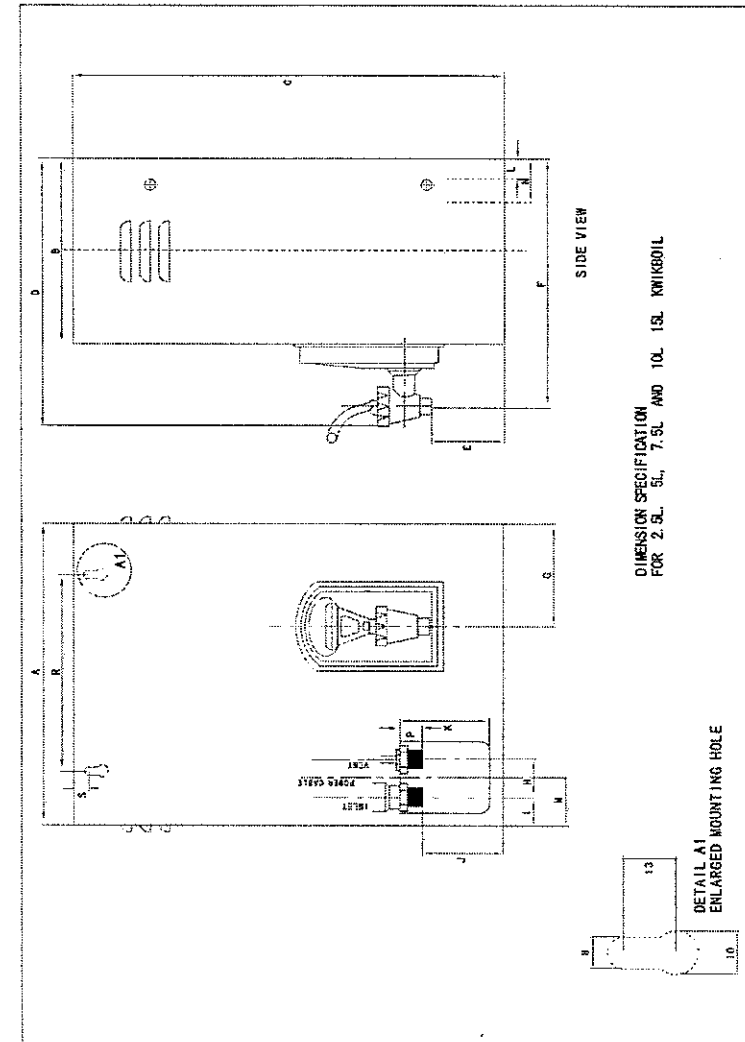
1. The element is energised, allowing heating of the water to take place.
2. The continued heating results in the water reaching the set point, detected by the Thermistor.
3. The Solenoid Valve is then energised, allowing ambient water to enter the tank thus reducing the water temperature by a maximum of 2°C and results in a shift away from the set point, again detected by the Thermistor.
4. When this occurs, the Solenoid valve is then de-energised, stopping the flow of water into the tank.
5. Steps 2 to 4 are repeated until such time as the High Level Probe becomes "CLOSED", i.e. water is present.

#### 4.3 MODE 3 OPERATION:

1. The Element remains energised, allowing heating of water to take place, resulting in the water attaining set point, detected by the Thermistor.
2. The Element is then de-energised allowing cooling of water to take place.
3. Cooling continues to take place through heat loss via the tank insulation until set point minus 2°C is reached, detected by the Thermistor.
4. The Element is then energised, allowing heating of water to take place.
5. Steps 1 to 4 are repeated until such time as the water is drawn from the unit, at which time the controller then steps back into MODE 2

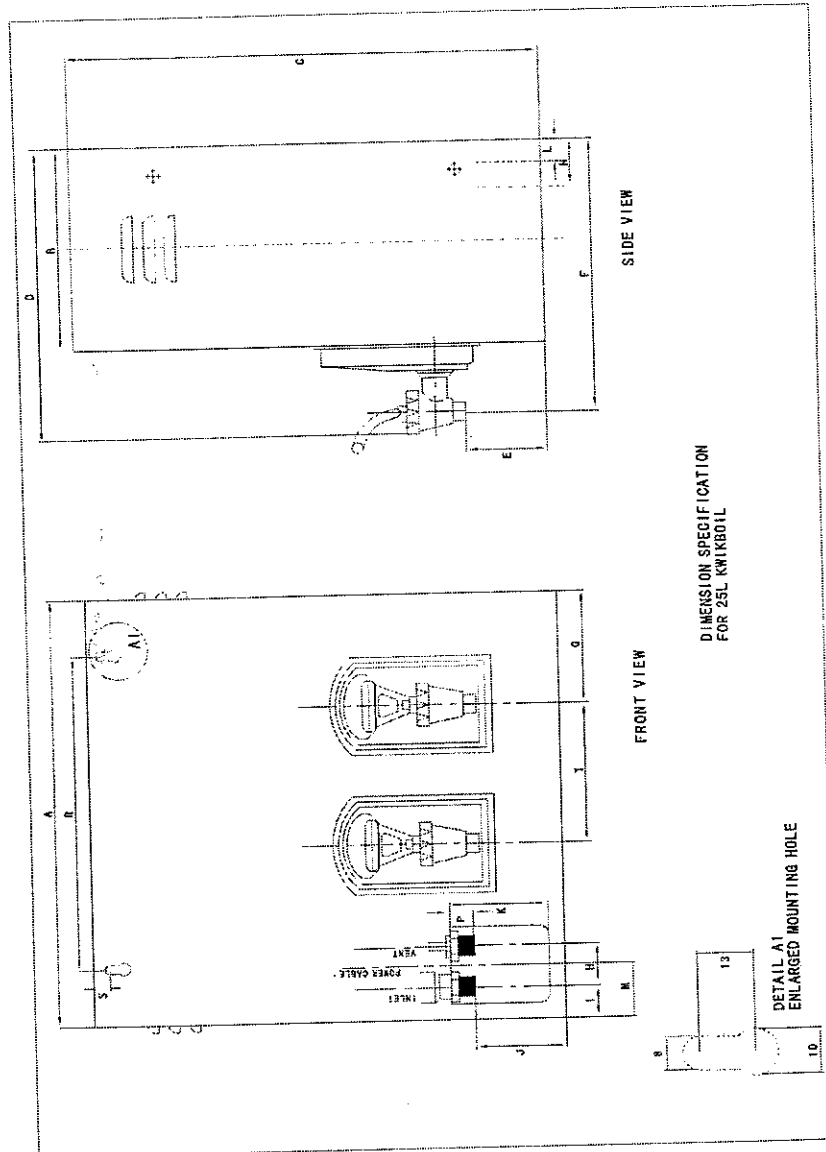
4.4

#### DIAGRAM-DIMENSION SPECIFICATION 2.5, 5, 7.5, 10, 15L MODELS



4.5

# DIAGRAM: DIMENSION SPECIFICATION 25 L MODEL



4.6

# DIMENSION SPECIFICATION TABLE

DIMENSION (mm)	KWIKBOIL SIZE					
	2.5 Litres	5 Litres	7.5 Litres	10 Litres	15 Litres	25 Litres
A	257	320	320	348	370	400
B	165	195	195	225	230	255
C	365	448	448	460	513	613
D	263	293	293	323	328	353
E	82	82	82	82	82	82
F	243	273	273	303	308	333
G	110	110	110	137	140	115
H	44	44	44	44	44	44
I	28	28	28	28	28	28
J	90	90	90	90	90	90
K	93	93	93	93	93	93
L	18	18	18	18	18	18
M	49	49	49	49	49	49
N	45	45	45	45	45	45
P	20	20	20	20	20	20
R	220	220	220	220	220	220
S	16	16	16	16	16	16
T	N/A	N/A	N/A	N/A	N/A	135

## SPECIFICATIONS

Nominal Storage Capacity	2.5 Litres	5 Litres	7.5 Litres	10 Litres	15 Litres	25 Litres
Approx. Weight(Kg.) Empty	6.6	8.5	8.7	10	11.2	14.2
Approx. Weight(Kg.) Full	10.7	16.3	18.3	25.5	30.4	47.2
Minimum Water Pressure kPa	20	20	20	20	20	20
Maximum Water Pressure kPa	1000	1000	1000	1000	1000	1000
Element Size Kw	1.8	2.0	2.0	2.0	2.4	3.0
Initial Draw-off (180ml cups)	15	30	45	60	100	150
Approx. Time for 1 Cup (in minutes)	6	7	7	10	11	11
Approx. Time to heat full capacity (in minutes)	14	22	29	37	47	60
Recovery(180ml cups per minute)	2	2	2	2	2.5	3

## 5. TEMPERATURE ADJUSTMENT

A trim pot is located at the right rear of the control box .Access is provided by means of a 10 mm diameter hole.

All Electronic controllers are factory set to deliver water at a temperature of approximately 97°C.

When is temperature adjustment necessary?

1. When you replace the Electronic Controller.
2. When you change the Thermistor or an Element and Thermistor.
3. For different altitudes.

How do you adjust the temperature setting of the Electronic Controller?

1. Drain water to the LOW LEVEL (discharge from the tap).
2. Rotate the Trim Pot ANTI clockwise to it's MINIMUM SETTING.
3. Switch the unit ON and allow it to operate automatically for five minutes.
4. Using a 3 mm wide screwdriver,rotate the Trim Pot CLOCKWISE to its MAXIMUM SETTING.The unit will now boil continuously.
5. Rotate the Trim Pot ANTI CLOCKWISE,SLOWLY.until such time that the SOLENOID VALVE opens,allowing the water to flow into the tank.

## 6. ROTATE THE TRIM POT ANTI

CLOCKWISE approximately 1/8 turn.

**IMPORTANT**

Temperature adjustment shall be carried out by a qualified service person.

## 7.MACHINE ANTIFREEZE

If the local used environmental temperature is lower,should deal with the feed pipe with heat insulating material (insulation sponge),preventing the pipe freeze,that cause the machine can not be used normally.

## 8.MACHINE NORMAL MAINTENANCE

1. Cut off the power supply and water supply before maintance and clean the machine.
2. When clean machine shell,only use a clean cloth to wipe it(not use other detergent)
3. Suggestions for disinfecting once per 3 month,emptying the water in the machine,put 03 into the faucet for three minutes.

9.

### KWIKBOIL BOILING WATER UNIT: FAULT FINDING GUIDE

SYMPTOM	POSSIBLE CAUSE	SOLUTION
1.The unit does not fill with water	There is no power supply There is no water supply The filter is blocked Electronic Controller failure Solenoid Valve failure	Check the electrical supply. Check the water supply. Check the filter, clean or replace. Test the Electronic Controller. Check resistance of the solenoid, Replace if broken
2.The unit fills water to low level and does not heat	Thermal cut-out tripped. Heating Element failure. Electronic Controller failure. Thermistor failure	Reset the Thermal cut-out. If the Heating Element is properly wired, then check its resistance. Test the Electronic Controller. Replace Thermistor
3.the unit boils continuously.	Temperature is not correctly set. Electronic Controller failure. Thermistor failure.	Set the Temperature Adjustment Trim Pot. Test the Electronic Controller. Replace Thermistor.
4.The unit overflows	Incoming water pressure is too high Solenoid valve failure. Level probe failure.	Reduce incoming water pressure. Disassemble the solenoid valve and blow air through it. If air flows through, replace the solenoid valve. Clean the level probe. Replace the level probe.
5.There is no water from the tap.	The unit did not fill with enough water. The tap diaphragm is disconnected from its spindle.	See 1. & 2. Above. Drain water out of the unit. When the unit is empty, disassemble and repair of the top
6.No electrical power to unit.	Power Supply failure.	Will restart automatically when electrical power is restored.
7.No water to unit	Mains water supply failure.	When water supply restored: 1.Continue to use as normal and the refilling process will automatically restart 2. Switch off electrical supply for 30 seconds & switch on again.

## 10. SPARE PARTS LIST:

KB-ELE-1,8	1.8kw element (2,5 lt.)
KB-ELE-2,0	2.0kw element (5;7,5 & 10 lt)
KB-ELE-2,4	2.4kw element (15 lt.)
KB-ELE-3,0	3.0kw element (25 lt.)
KB-PCB	PC BOARD
KB-VALVKIT	SOLENOID VALVE KIT
KT-TAP-O/ASS	OUTLET TAP ASSEMBLY
KB-WAT-PROBE	WATER LEVEL PROBE
KB-THERMIS	THERMISTORS
KB-SEALS	TANK / ELEMENT SEAL
KB-TAP-SPAC	TAP OUTLET SPACER
KB-TAP-H	TAP HANDLE
KB-TAP-CAP	TAP CAP
KB-TAP-SHAF	TAP SHAFT
KB-TAP-SEAL	TAP SEAL
KB-TAP-SPRING	TAP SPRING
KB-DR-SCR	DRAIN SCREW
KB-DR-SEAL	DRAIN SEAL
KB-NUT-I/O	INLET / VENT NUT
KB-VENT-ISH	INLET / VENT SILICONE HOSE
KB-IN-STRAIN	INLET STRAINER
KB-IN-NRVALV	INLET NON-RETURN VALVE
KB-PRV15	ITAP 361 PRV 15mm
KB-SSTRAY	STAINLESS STEEL DRIP TRAY

8. NOTES:

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8. NOTES:

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