



Service Manual – WB5GT Water Boiler

Important Safeguards/Symbols

This equipment is designed for commercial use. Any servicing other than cleaning and routine maintenance should be performed by an authorized Wilbur Curtis Company service technician.

- DO NOT immerse the unit in water or any other liquid
- To reduce the risk of fire or electric shock, DO NOT opens service panels. There are no user service-able parts inside.
- Keep hands and other items away from hot areas of the unit during operation.
- Never clean with scouring powders or harsh chemicals.

Symbols:



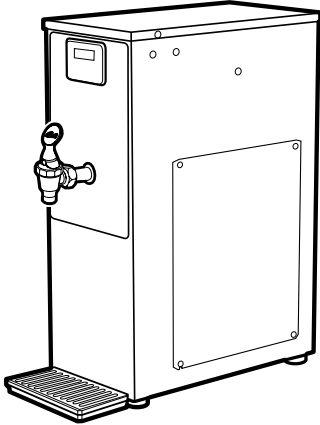
**WARNING/CAUTION** – To advise about conditions that may result in property damage, personal injury or death



**IMPORTANT** – Notes about proper operation



Sanitation requirements



Models Included:

- WB5GT63000
- WB5GT30000
- WB5GT19000

INSTALLATION

This Curtis unit is pre-set and ready to go from the factory.

System Requirements:

- Water Supply: 20 – 90 psi (minimum flow rate of 2.0 gpm)
- Electrical: See electrical schematic.

SETUP STEPS

1. The unit should be level (left to right - front to back), on a secure surface.
2. Connect the water line to the water inlet fitting on the rear of the unit. Water volume going to the machine should be consistent. Use tubing sized sufficiently to provide a minimum flow rate of two gallons per minute.



**WARNING:** Use the leveling legs to level the brewer only. Do not use them to adjust brewer height. Do not extend them higher than necessary.



**CAUTION:**

Equipment must be installed to comply with applicable federal, state, and local plumbing/electrical codes.



**CAUTION:**

Follow this setup procedure before attempting to use this unit. Failure to follow these instructions can result in injury and/or void of warranty.



**CAUTION:**

DO NOT connect the unit to hot water supply. The inlet valve is not rated for hot water.

**NOTE:** A water filtration system must be used to help maintain trouble-free operation. **Air must be purged from the cartridge prior to connection to equipment.** In areas with extremely hard water, we highly recommend the use of a Curtis approved water filter. For our full line of filters, please log on to [www.wilburcurtis.com](http://www.wilburcurtis.com).



NSF requires the following water connection:

1. A quick disconnect or additional coiled tubing (at least 2x the depth of the unit) is required so that the unit can be moved for cleaning.
2. This unit must be installed with adequate backflow protection to comply with applicable federal, state and local codes.
3. Water pipe connections and fixtures directly connected to a portable water supply shall be sized, installed and maintained in accordance with federal, state, and local codes.

3. Connect the unit to electrical outlet with appropriate amperage rating (See serial tag on machine).
4. Once power has been supplied to the unit, flip the toggle switch to the 'ON' position (located on the rear of the unit), the water tank will begin to fill. When the water level in the tank reaches the probe, the heating element will turn on.
5. Water in the heating tank will require 60 to 70 minutes before reaching operating temperature (factory setting of 204°F).

ISO 9001:2008 REGISTERED

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Technical support: 1-800-995-0417 M-F 5:30 A.M. - 4:00 P.M. PST  
Email: [techsupport@wilburcurtis.com](mailto:techsupport@wilburcurtis.com)

# PROGRAMMING

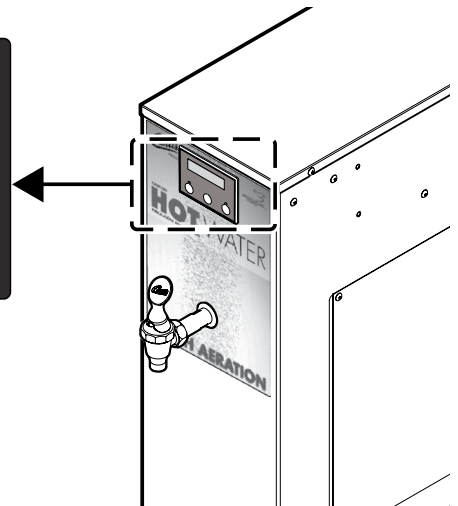
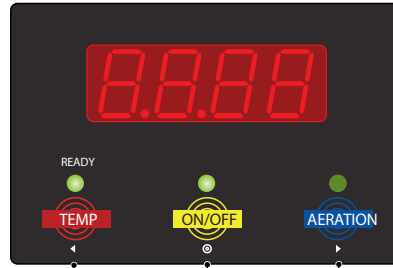
## UNIVERSAL CONTROL MODULE (UCM)

### A FUNCTION

1. Press TEMP button for 1 second to check the set point temperature.
2. Press TEMP button for 3 seconds to enter heating tank temperature programming mode. The temperature in the heating tank is adjustable from 140° to 210°F.

To change temperature setting:

- a. Press ◀ to decrease temperature.
- b. Press ⊙ to set and exit programming.
- c. Press ▶ to increase at 2° increments.



### B FUNCTION

1. Press the AERATION button to pump air through the water in the heating tank.
2. Aerator pump will run as long as you hold down the button. Release button to stop.

### I/O FUNCTION

1. ON/OFF button. Press once to activate control panel.
2. ON/OFF button used to set and exit programming.

## OTHER FEATURES

### LED SCREEN DISPLAY

When the unit is on and not in programming mode, the UCM will stay on and the LED screen will display the current tank temperature. The factory setting is 204°F. In the UCM programming, there is an option to change the screen display to read HOT instead of the set point temperature. You may also change the temperature units from Fahrenheit to Celsius.

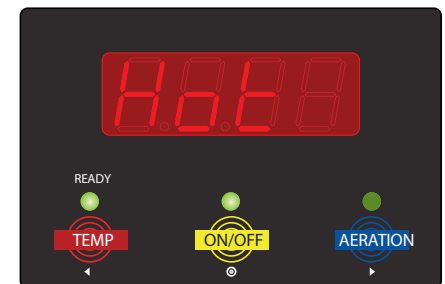
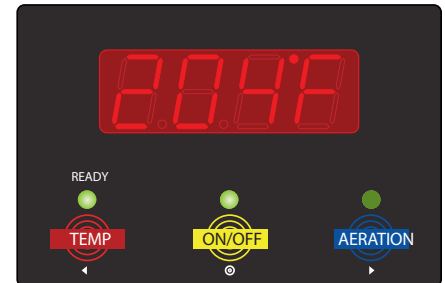
To Change the LED To Read HOT:

1. Press the left TEMP button and hold down for 5 seconds. The F will start flashing.
2. Continue holding the TEMP button, at the same time, press and hold the ON/OFF button for 5 seconds.
3. Release both buttons. The program is now changed and the LED screen will display HOT.
4. While in the HOT display, pressing the TEMP button for 1 second will display the tank temperature.

To Change the LED To Read In Celsius:

NOTE: When the LED screen is in the HOT display mode, you cannot switch between Fahrenheit and Celsius. The LED screen must be in the Temperature display mode.

1. Press and hold down the TEMP button for 10 seconds. The temperature reading will change to Celsius.
2. Release the TEMP button. The LED screen will display the temperature in degrees Celsius (default is 96°C).



### AERATOR

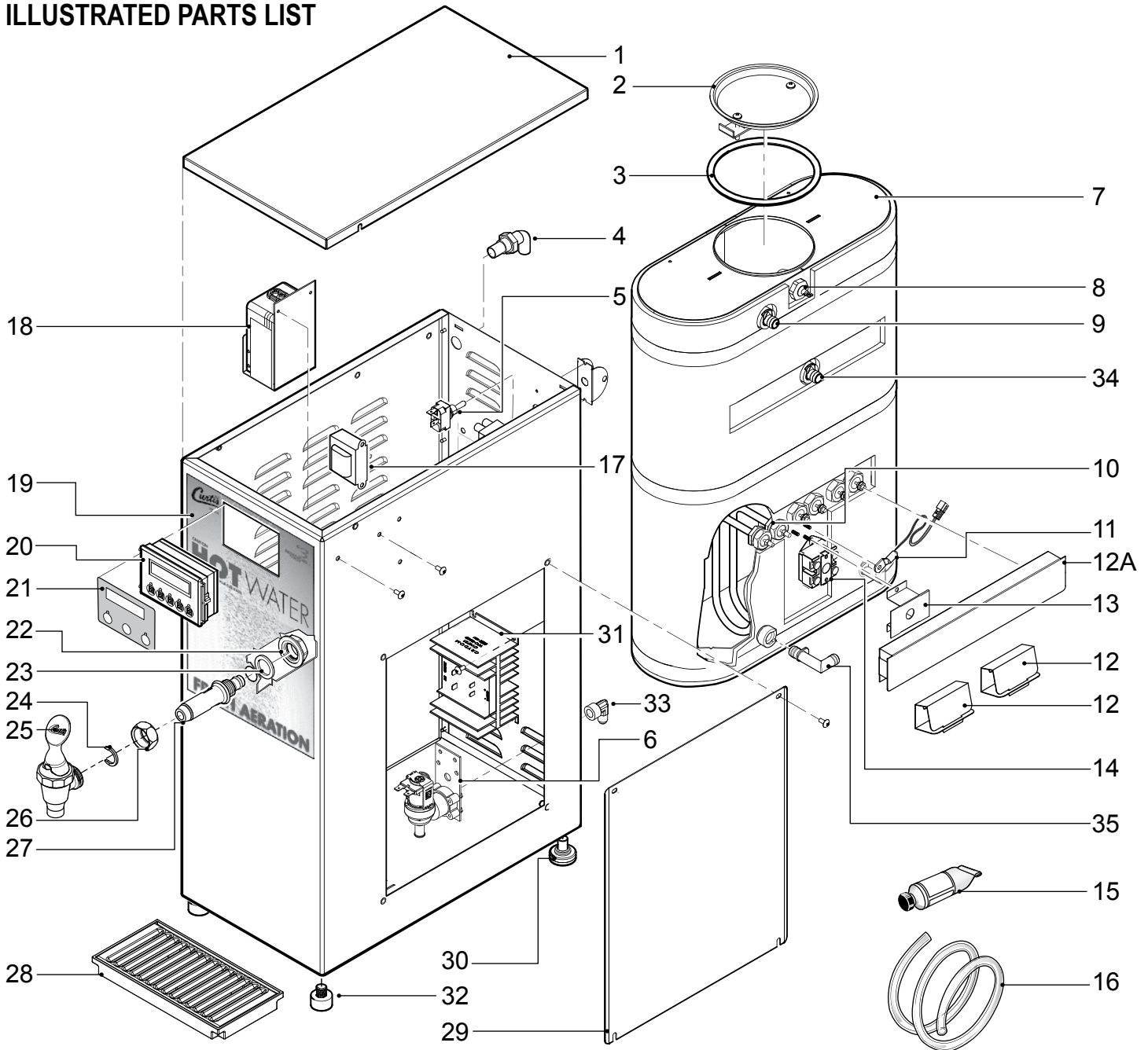
The aerator pump will automatically come on every 30 minutes. Aeration is factory set to run for 5 seconds. When the aeration is running, the display shows the LED bars chasing from left to right.

### ERROR CODES

ERR1 = Overflow. Water level error.

ERR2 = Open sensor. Break in temperature thermistor circuit.

# ILLUSTRATED PARTS LIST



## PARTS LIST

ITEM N <sup>o</sup>	PART N <sup>o</sup>	DESCRIPTION
1	WC-58117	COVER, TOP ALPGT/D500GT/D60GT TLP/TCTS/CBS/GEMSS
2	WC-5661	LID ASSY, TANK
3	WC-43067 <sup>a</sup>	O-RING, 4-1/2" I.D. X Ø.285 SILICONE TANK LID
4	WC-2948	FITTING, TANK OVERFLOW 304SST
5	WC-102 <sup>a, b, d</sup>	SWITCH, TOGGLE NON-LIT SPST 15A 125/6A 250VAC RESISTIVE
5A	WC-103 <sup>c</sup>	SWITCH, TOGGLE NON-LIT DPST 25A 125/250VAC RESISTIVE
6	WC-847 <sup>a, b, d</sup>	VALVE, INLET 2 GPM 120V 10W GEN USE BROWN BODY
6A	WC-883 <sup>c</sup>	VALVE, INLET 2 GPM 240V 10W

<sup>a</sup>Suggested parts to stock

<sup>b</sup>Used on model WB5GT63000

<sup>c</sup>Used on model WB5GT30000

<sup>d</sup>Used on model WB5GT19000

Continued on following page

## PARTS LIST (CONT)

ITEM N <sup>o</sup>	PART N <sup>o</sup>	DESCRIPTION
7	WC-62045 <sup>b, c</sup>	TANK, COMPLETE WB5GT63
7A	WC-62044 <sup>d</sup>	TANK, COMPLETE WB5GT19
8	WC-5527K <sup>a</sup>	KIT, PROBE WATER LEVEL O-RING
9	WC-37266	KIT, FITTING TANK OVERFLOW
10	WC-934-04 <sup>a</sup>	KIT, ELEMENT HEATING 2.5KW 220V W/JAM NUT & SILICONE WASHERS
11	WC-1438-101 <sup>a</sup>	SENSOR, TEMPERATURE TANK
12	WC-4394 <sup>a, b, c</sup>	GUARD, SHOCK/HEATING ELEMENT FOR SINGLE HEATING ELEMENT
12A	WC-4382 <sup>a, d</sup>	GUARD, SHOCK HTNG ELMNT DOUBLE
13	WC-43055	GUARD, SHOCK RESET THERMOSTAT (WC-522)
14	WC-522 <sup>a</sup>	THERMOSTAT, HI LIMIT HEATER CONTROL DPST 277V 40A
15	WC-5231 <sup>a</sup>	COMPOUND, SILICONE 5 OZ
16	WC-5310 <sup>a</sup>	TUBE, 5/16 ID x 1/8W SILICONE GEN USE
17	WC-718 <sup>a, b, d</sup>	TRANSFORMER, 120VAC-12VAC
17A	WC-719 <sup>a, c</sup>	TRANSFORMER, 240/120VAC-12VAC
18	WC-1048-101 <sup>a, b, d</sup>	PUMP, ASSY AGITATION WB5GT
18A	WC-1009-101 <sup>c</sup>	PUMP, AGITATION 220V W/CAPACITOR & TERMINALS
19	WC-39610	LABEL, FRONT WB5GT
20	WC-794 <sup>a</sup>	CONTROL MODULE, MINI UNIVERSAL 120-220VAC
21	WC-39602	LABEL, UCM OVERLAY CONTROL PANEL WB5GT
22	WC-1939	NUT, FLANGED TLS-2, GEM3, RU'S
23	WC-1813 <sup>a</sup>	WASHER, 1-1/8" OD ETHYLENE PROPYLENE RUBBER
24	WC-1906 <sup>a</sup>	"C" RING .917 X .760 X .090 TT-3 TC'S
25	WC-1800HW <sup>a</sup>	FAUCET, "S" SERIES HOT WATER 1-1/32-14 UNS
26	WC-1903	NUT, UNION SHANK WB-10/WB-10-60/WB-30-12
27	WC-1955	SHANK, FAUCET PLAIN WB5
28	DTP-08	DRIP TRAY, ASSY PLASTIC 8"
29	WC-61549	COVER, SIDE ACCESS WB5GT
30	WC-3518 <sup>a</sup>	LEG, GLIDE 3/8"-16 STUD SCREW
31	WC-8559 <sup>a</sup>	RELAY, SOLID STATE, 280Vac MAX W/INTEGRATED HEAT SINK
32	WC-3503 <sup>a</sup>	LEG, 3/8"-16 STUD SCREW BUMPER
33	WC-2401	ELBOW, 3/8 NPT X 1/4 FLRE PLATED
34	WC-37357	KIT, STRAIGHT PLASTIC FITTING AND BUSHING 12MM
35	WC-37365	KIT, FITTING TANK INLET

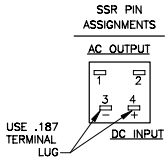
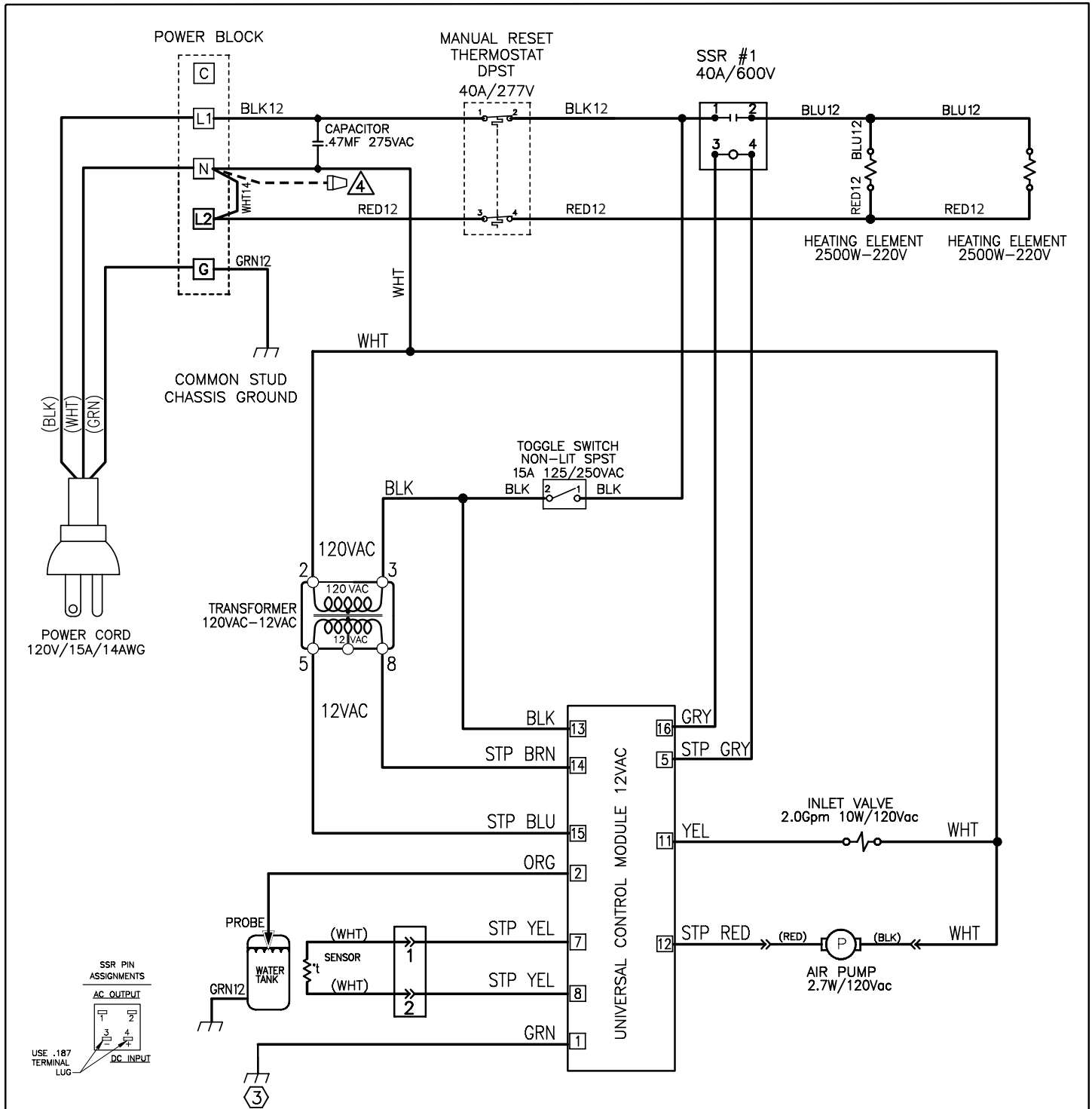
<sup>a</sup>Suggested parts to stock

<sup>b</sup>Used on model WB5GT63000

<sup>c</sup>Used on model WB5GT30000

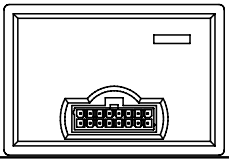
<sup>d</sup>Used on model WB5GT19000

# ELECTRICAL SCHEMATIC 120/220V SINGLE PHASE (MODEL WB5GT63000)



## MUCM PIN ASSIGNMENTS

PIN ASSIGNMENTS
PIN 01: GROUND
PIN 02: LEVEL PROBE
PIN 03: NOT USED
PIN 04: NOT USED
PIN 05: SSR (+5Vdc)
PIN 06: NOT USED
PIN 07: TEMP SENSOR
PIN 08: TEMP SENSOR
PIN 09: TRIAC GATE
PIN 10: TRIAC RETURN A2
PIN 11: INLET VALVE
PIN 12: AIR PUMP
PIN 13: 120Vac HOT (BLK)
PIN 14: 12V TRANSFORMER
PIN 15: 12V TRANSFORMER
PIN 16: SSR (0V)



- ⚠ FOR USE WITH 120V (FACTORY DEFAULT): REMOVE CAP FROM JUMPER & CONNECT TO POINT L2 ON TERMINAL BLOCK. FOR USE WITH 220V: JUMPER TO BE DISCONNECTED AND CAPPED.
  - Ⓜ INSTALL A GROUND WIRE ASSEMBLY FROM THE HARNESS TO THE SEPARATE GROUND STUD ON TANK.
2. DO NOT CHANGE NOR SUBSTITUTE WIRE COLORS.
1. ALL WIRES SHALL BE 18 AWG MINIMUM.

NOTES: UNLESS OTHERWISE SPECIFIED

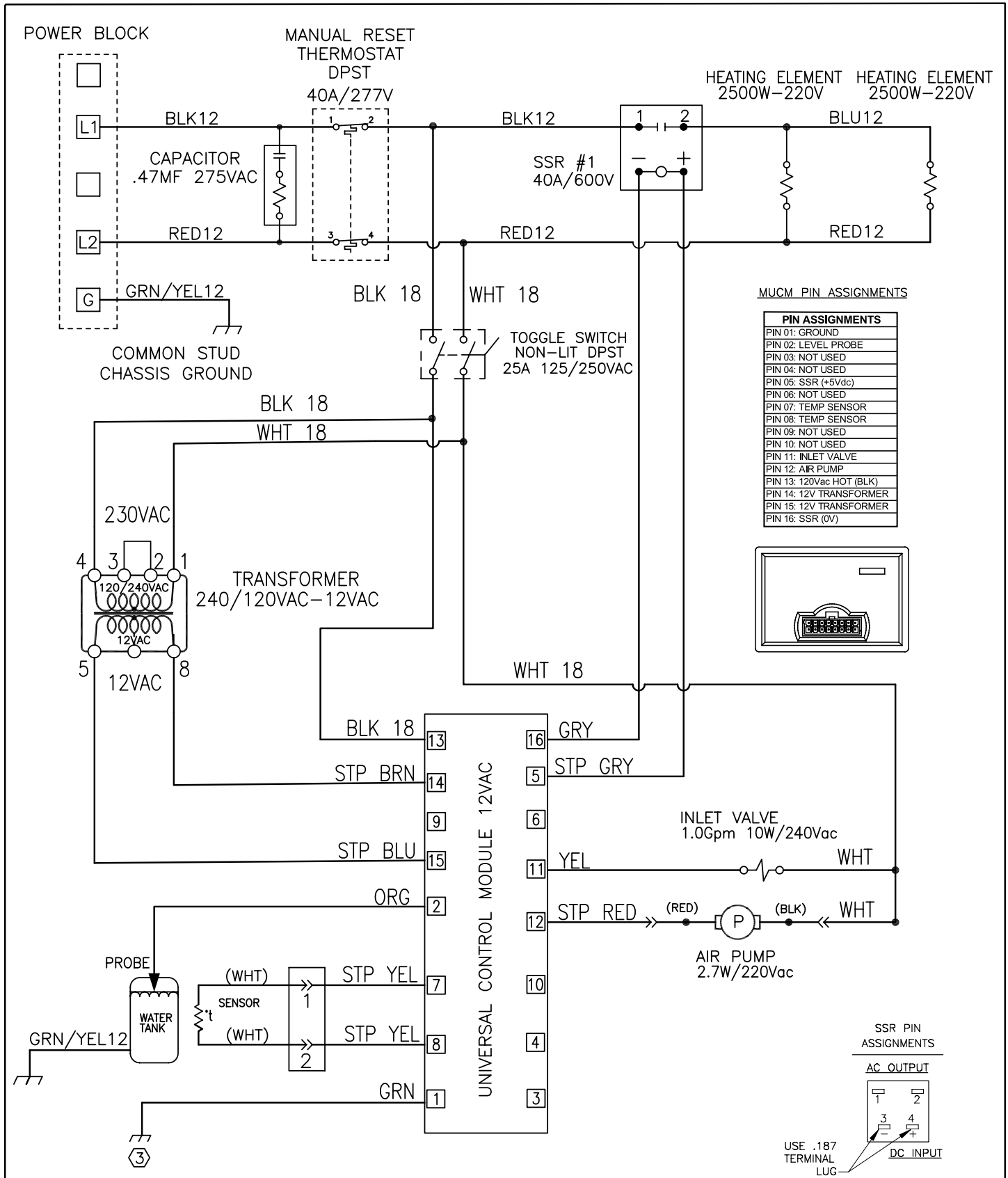
	Wattage	Amp
120Vac	1500W	12.5A
220Vac	5000W	22.7A

TITLE: LADDER DIAGRAM  
WB5GT 120/220V

PART NUMBER: LD-WB5GT-63

REVISION: C

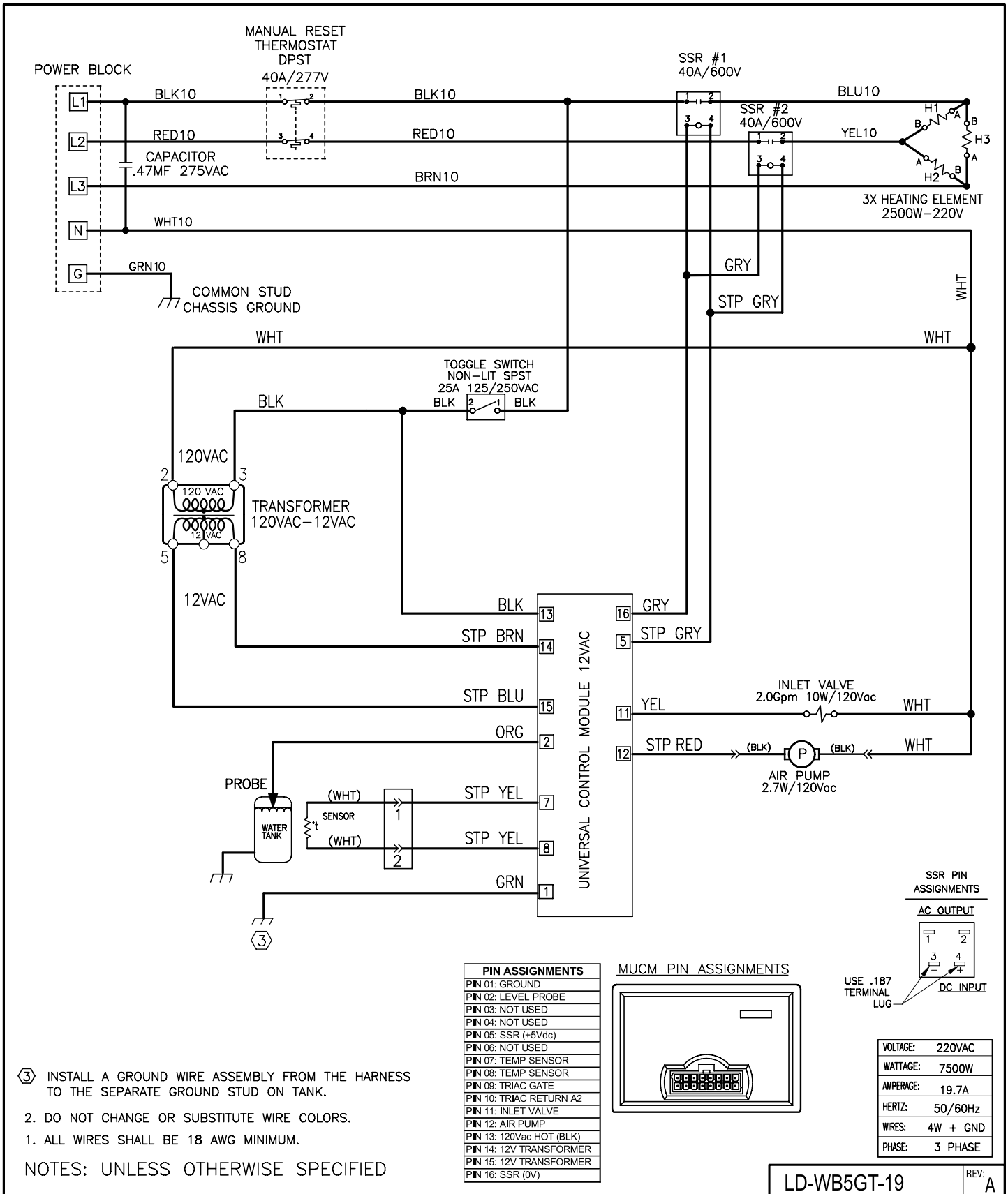
# ELECTRICAL SCHEMATIC 220V SINGLE PHASE (MODEL WB5GT30000)



- ③ INSTALL A GROUND WIRE ASSEMBLY FROM THE HARNESS TO THE SEPARATE GROUND STUD ON TANK.
2. DO NOT CHANGE NOR SUBSTITUTE WIRE COLORS.
1. ALL WIRES SHALL BE 18 AWG MINIMUM.
- NOTES: UNLESS OTHERWISE SPECIFIED

TITLE: LADDER DIAGRAM WB5GT 230V	
PART NUMBER: LD-WB5GT-30	REVISION: D

# ELECTRICAL SCHEMATIC 220V THREE PHASE (MODEL WB5GT19000)



③ INSTALL A GROUND WIRE ASSEMBLY FROM THE HARNESS TO THE SEPARATE GROUND STUD ON TANK.

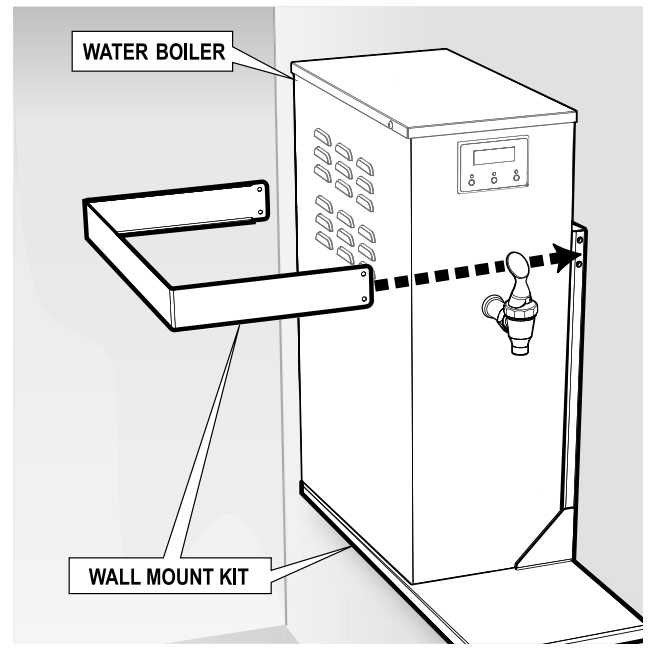
- DO NOT CHANGE OR SUBSTITUTE WIRE COLORS.
- ALL WIRES SHALL BE 18 AWG MINIMUM.

NOTES: UNLESS OTHERWISE SPECIFIED

## WALL MOUNT OPTION

Curtis can provide an optional wall mount assembly that allows you to place your Curtis water boiler against a wall surface. The water boiler may be mounted with the faucet facing in either direction. The kit requires some assembly.

To order the wall mount kit, request Curtis part number WC-37347; to be used on water boiler units WB5GT.



## CLEANING

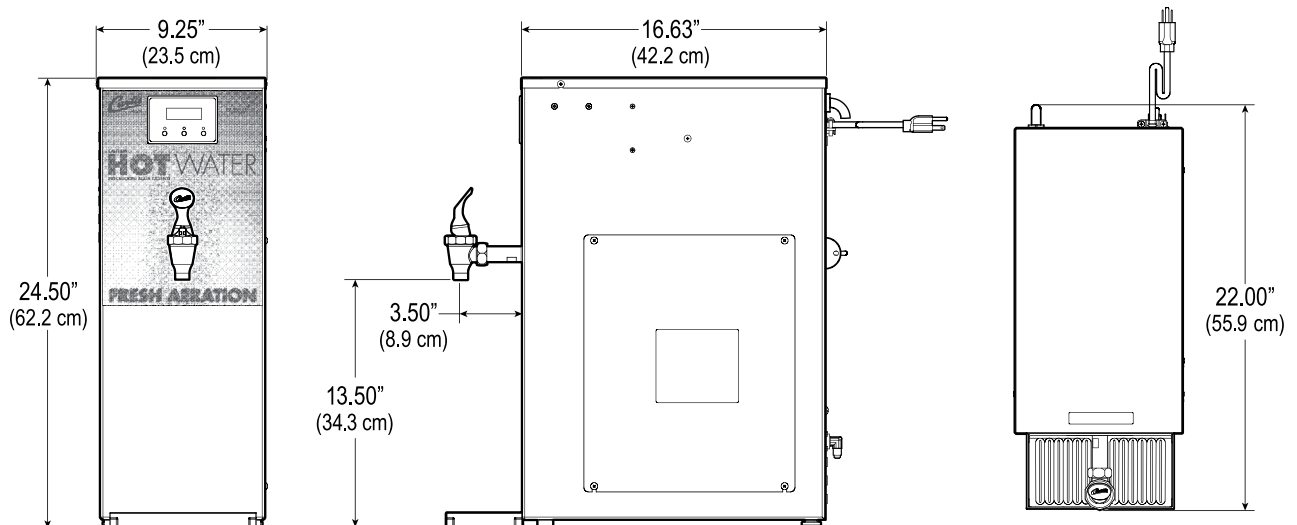
Regular cleaning and preventive maintenance is essential in keeping your water heater looking and working like new. To clean the water heater unit and components, prepare a mild solution of detergent and warm water.

**CAUTION** – Do not use cleansers, bleach liquids, powders or any other substance containing chlorine. These products promote corrosion and will pit the stainless steel. USE OF THESE PRODUCTS WILL VOID THE WARRANTY.

### DAILY CLEANING

1. Wipe exterior surfaces with a cloth soaked with a mild detergent solution. Wipe off any spots, dust, spills, or debris.
2. Rinse the area with a cloth soaked with clean water, removing any residual detergent.
3. Dry the area.
4. If a drip tray is used, dump out the water and clean inside the tray. Remove the screen and wash.
5. Dry the tray.
6. Rub a stainless steel polish on the outside surfaces to protect the cabinet.

## WB5GT ROUGH-IN DRAWING





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## Product Warranty Information

Wilbur Curtis Co., Inc. certifies that its products are free from defects in material and workmanship under normal use. The following limited warranties and conditions apply:

3 years, parts and labor, from original date of purchase on digital control boards.

2 years, parts, from original date of purchase on all other electrical components, fittings and tubing.

1 year, labor, from original date of purchase on all electrical components, fittings and tubing.

Additionally, Wilbur Curtis Co., Inc. warrants its grinding burrs for forty (40) months from date of purchase or 40,000 pounds of coffee, whichever comes first. Stainless steel components are warranted for two (2) years from date of purchase against leaking or pitting and replacement parts are warranted for ninety (90) days from date of purchase or for the remainder of the limited warranty period of the equipment in which the component is installed.

All in-warranty service calls must have prior authorization. For authorization, call the Technical Support Department at 1-800-995-0417. Effective date of this policy is April 1, 2003.

Additional conditions may apply. Go to [www.wilburcurtis.com](http://www.wilburcurtis.com) to view the full product warranty information.

### CONDITIONS & EXCEPTIONS

The warranty covers original equipment at time of purchase only. Wilbur Curtis Co., Inc., assumes no responsibility for substitute replacement parts installed on Curtis equipment that have not been purchased from Wilbur Curtis Co., Inc. Wilbur Curtis Co., Inc. will not accept any responsibility if the following conditions are not met. The warranty does not cover and is void under the following circumstances:

- 1) Improper operation of equipment: The equipment must be used for its designed and intended purpose and function.
- 2) Improper installation of equipment: This equipment must be installed by a professional technician and must comply with all local electrical, mechanical and plumbing codes.
- 3) Improper voltage: Equipment must be installed at the voltage stated on the serial plate supplied with this equipment.
- 4) Improper water supply: This includes, but is not limited to, excessive or low water pressure, and inadequate or fluctuating water flow rate.
- 5) Adjustments and cleaning: The resetting of safety thermostats and circuit breakers, programming and temperature adjustments are the responsibility of the equipment owner. The owner is responsible for proper cleaning and regular maintenance of this equipment.
- 6) Damaged in transit: Equipment damaged in transit is the responsibility of the freight company and a claim should be made with the carrier.
- 7) Abuse or neglect (including failure to periodically clean or remove lime accumulations): Manufacturer is not responsible for variation in equipment operation due to excessive lime or local water conditions. The equipment must be maintained according to the manufacturer's recommendations.
- 8) Replacement of items subject to normal use and wear: This shall include, but is not limited to, light bulbs, shear disks, "O" rings, gaskets, silicone tube, canister assemblies, whipper chambers and plates, mixing bowls, agitation assemblies and whipper propellers.
- 9) Repairs and/or replacements are subject to our decision that the workmanship or parts were faulty and the defects showed up under normal use. All labor shall be performed during regular working hours. Overtime charges are the responsibility of the owner. Charges incurred by delays, waiting time, or operating restrictions that hinder the service technician's ability to perform service is the responsibility of the owner of the equipment. This includes institutional and correctional facilities. Wilbur Curtis Co., Inc. will allow up to 100 miles, round trip, per in-warranty service call.

**RETURN MERCHANDISE AUTHORIZATION:** All claims under this warranty must be submitted to the Wilbur Curtis Technical Support Department prior to performing any repair work or return of this equipment to the factory. All returned equipment must be repackaged properly in the original carton. No units will be accepted if they are damaged in transit due to improper packaging. **NO UNITS OR PARTS WILL BE ACCEPTED WITHOUT A RETURN MERCHANDISE AUTHORIZATION (RMA). RMA NUMBER MUST BE MARKED ON THE CARTON OR SHIPPING LABEL.** All in-warranty service calls must be performed by an authorized service agent. Call the Wilbur Curtis Technical Support Department to find an agent near you.

ECN 16664 9/01/15@14.0 . rev M



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