Service Manual – Combo Brewer Single

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 Co. Inc., service technician.

- DO NOT immerse the unit in water or any other liquid.
- To reduce the risk of fire or electric shock, DO NOT open service panels. There are no user serviceable 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:

⚠ **WARNINGS – To help avoid personal injury**

Important Notes/Cautions – from the factory

NSF **Sanitation Requirements**

This Curtis Generation 3 unit is factory preset and ready to go right from the box.
Following are the factory settings for your G3 Coffee Brewing System:
- Brew Temperature = 204°F   • Water Bypass = On for LARGE brew only
- Brew Volume = Set to vessel requirement.
System Requirements:
- Water Source   20 – 90 psi (minimum flow rate of 1 gpm)
- Electrical: See attached schematic for standard model or visit www.wilburcurtis.com for your model.

SETUP INSTRUCTIONS

1. The unit should be level (left to right - front to back), on a secure surface.

2. Install the hot water faucet as instructed on page 2.

3. Connect the water line to the water inlet fitting on the rear of the unit. Water volume flow to the machine should be consistent. Use tubing sized sufficient to provide a minimum flow rate of one gallon 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.

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 recommend the use of a Curtis approved water filter. For our full line of filters, please log on to www.wilburcurtis.com.

NSF NSF International 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 back-flow protection to comply with applicable federal, state and local codes.
3. Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed and maintained in accordance with federal, state, and local codes.

4. Connect the unit to an electrical outlet with appropriate amperage rating (see serial tag on machine).

5. 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(s) will turn on.

6. Water in the heating tank will require approximately a half hour before reaching operating temperature (factory setting of 204°F). Where applicable, turn on the universal control module (UCM). When the unit reaches operating temperature, it will display Ready to Brew.


Curtis®

Model:
- CBHS

CAUTION: Use this setup procedure before attempting to use this brewer. Failure to follow the instructions can result in injury or void the warranty.

IMPORTANT: Equipment to be installed to comply with applicable federal, state or local plumbing/electrical codes having jurisdiction.

CAUTION: DO NOT connect this brewer to hot water. The inlet valve is not rated for hot water.

ISO 9001:2008 REGISTERED

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HOT WATER FAUCET INSTALLATION

The hot water faucet is shipped loose and must be attached during the initial set-up of the brewer. To attach the hot water faucet, you will need a ratchet type socket wrench with a 3/4" (approximately 2" deep) socket for nut removal and tightening.

Faucet Installation Instructions:

1. Disconnect power to the brewer.

2. Carefully remove the round plug from the faucet hole on the left or right side panel. See diagram below.

3. Remove the screws that hold the front cover in place and remove the cover.

4. Take the faucet and insert the shaft into the faucet hole.

5. From inside the brewer, slide the lock washer over the faucet shank. Then, thread the nut onto the faucet shank.

6. Hold the body of the faucet while tightening it with the 3/4" socket.

7. Locate the hot water tube that runs from the hot water tank inside the brewer. It has a plug on the end of it.

8. Remove the plug from the hot water tube.

9. Slide the end of the hot water tube over the smooth section of the faucet shank, inside the brewer.

10. Replace the front cover.

Side panel

2
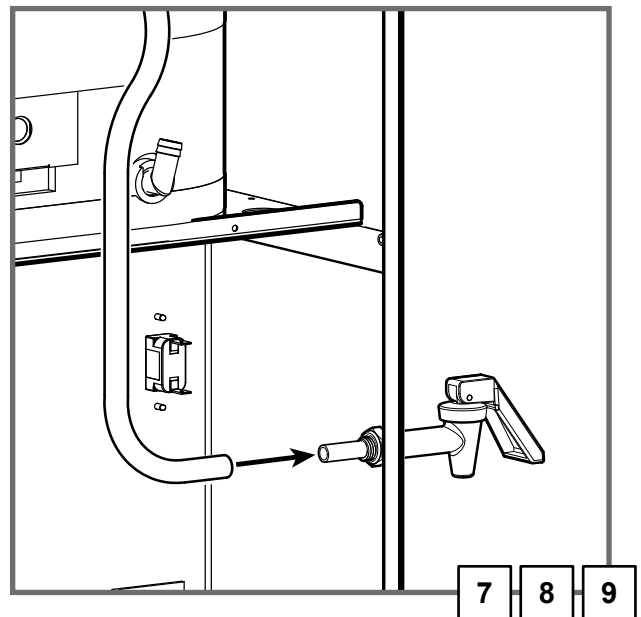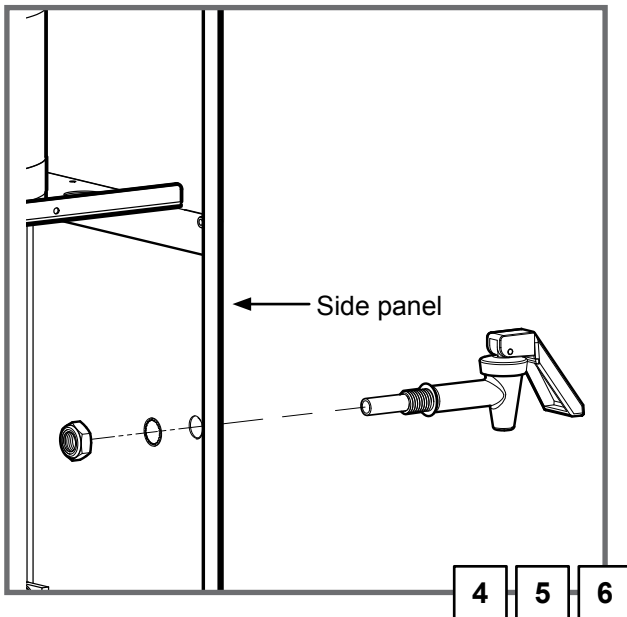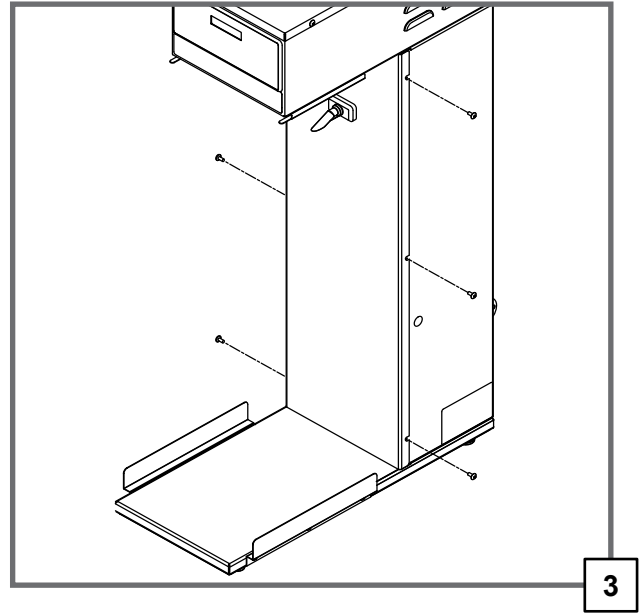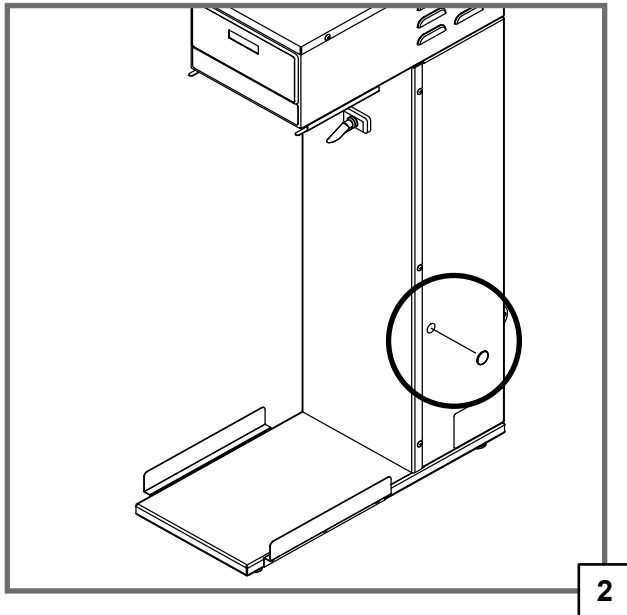
Coffee Brewing Instructions

1. Brewer should be ON (confirm at rear toggle switch, then press the ON/OFF button). Ready to Brew should be on the display.

2. Place an empty coffee dispenser under the brew basket. Make sure the dispenser is open at the top and it is centered under the brew basket.
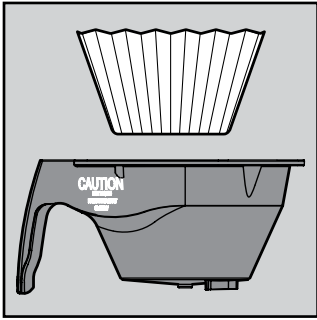
3. Place a paper filter into the brew basket labeled HOT COFFEE.
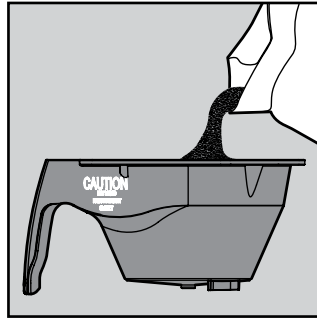
4. Fill the brew basket with the proper amount of ground coffee.
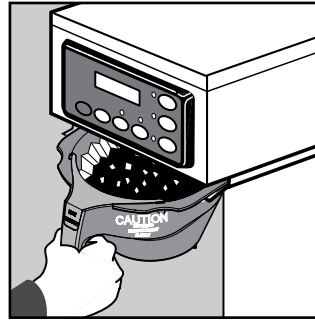
5. Slide the filled brew basket into the rails on the brewer.
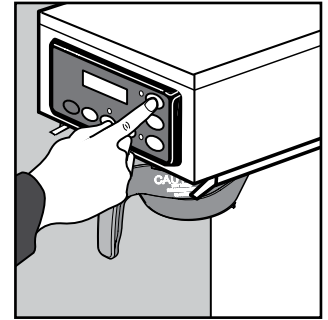
6. Select the appropriate COFFEE brew button and press to start the brew cycle.

> ⚠ WARNING TO AVOID SCALDING, Do not remove the brew basket or coffee dispenser until the UCM screen indicates that the brew cycle has finished.

Tea Brewing Instructions

1. Brewer should be ON (Confirm at rear toggle switch, then press ON/OFF button). Ready to Brew should be displayed.
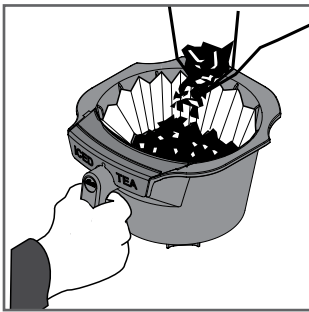
2. Place a paper filter into the brew basket labeled ICED TEA. Pour leaf tea into the brew basket.
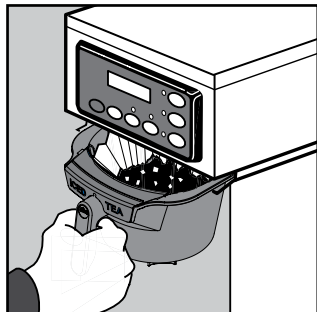
3. Slide the filled brew basket into the brew rails.
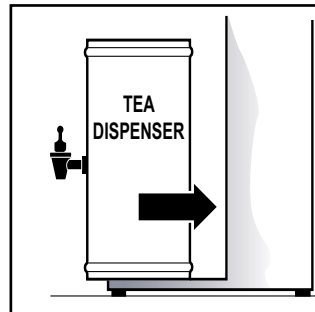
4. Slide a tea dispenser all the way in against the center wrap.
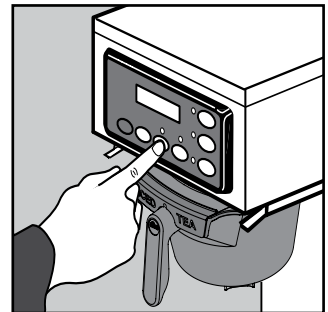
5. Press the TEA BREW button to start brewing tea.

> ⚠ **WARNING** - TO AVOID SCALDING, do not remove the brew basket or iced tea dispenser until the UCM screen indicates that the brew cycle has finished.

Quick Start

CBHS

Your Curtis G3/Gold Cup Series Brewer is factory preset for optimum performance.
After connection to water and power; the rear toggle switch must be on. You will hear a beep sound, indicating power is available to the controller.

The control displays `CURTIS`. Press ON/OFF button and the screen will display `<CBHVS> CURTIS`. After three seconds, `CURTIS Filling` is displayed.

Water will fill the tank (approximately 2-3 minutes depending on water flow rate). When the proper level is reached `CURTIS Heating` will appear on the screen. It takes approximately 20 minutes to reach set point temperature.

Control will display `CURTIS Ready to Brew` when temperature reaches the set point. Unit is now ready to brew.

Programming the Universal Control Module (UCM)

Turn off the control panel by pressing the ON/OFF button. Press and <u>hold</u> the bottom/right coffee brew button (#4 in illustration) and then press and release the ON/OFF button.

Continue holding the bottom-right brew button. The screen will display `Entering Programming Mode`, wait until `Enter Code — — — —` is displayed. Enter the four digit access code, the code corresponds to the buttons illustrated below. The default code set at the factory is 1-2-3-4.

After the four digit code is entered, `Program Menus < Select >` will be displayed. You can now enter the program menu features.
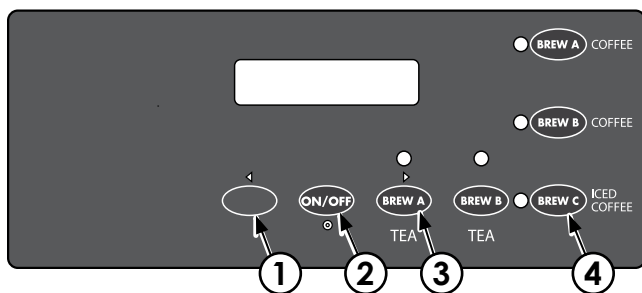
All programming selections are performed with the three center buttons. The symbols above and below the buttons are:

◄   *Scroll left (button 1)*

⊙   Select *or* Enter *to save new parameter (button 2)*

►   *Scroll right (button 3)*

PROGRAM MENUS COMBO BREWER

Program Menus	From **Program Menus** press ►. Display will show the next feature Coffee Recipes.

Coffee Recipes	**Coffee Recipes (factory set to Gourmet STD)** Press ⊙ to select. If selected, press ◄ or ► to choose a coffee recipe: Gourmet STD, Light Roast, Dark Roast, High Yield, Filter Pack or Decaf. Press ⊙ to select the desired recipe.

Non-Brew Program	**Non-Brew Program** Press ⊙ to select ◄ or ► to bypass by these options and continue to the next group. The selections for Non-Brew Program are listed below.
Temperature	**Temperature (factory set to 204ºF)** Press ⊙ to select. Press ◄ or ► to move to the desired temperature and then ⊙ to set. The temperature is programmable from 170ºF to 208ºF in 2-degree increments.
Energy Save Mode	**Energy Save Mode (factory set to OFF)** Press ⊙ to select. Then press ◄ or ► to choose ON, OFF or ON 140ºF, then press ⊙ to set. When ON, the unit will automatically shut off 4 hours after the last brew. When the feature is OFF, the unit does not utilize the energy saving mode. In the ON 140ºF position, the temperature lowers to 140ºF, if the unit has not brewed in 4 hours. This feature will save energy by maintaining a lower temperature in the tank in periods of non-operation.
Brew Count Odom.	**Brew Count Odom** Press ⊙ to display the total brew cycles. Press EX or Reset.
Brew Count Total	**Brew Count Total** Press ⊙ to select. This feature shows the total gallons and total brew cycles on the unit. It cannot be reset.

Cold Brew Lock . . . (factory set to 5ºF)

Cold Brew Lock	Press ⊙ to select. Press ◄ or ► to choose the desired setting (5°F, 15°F or Off), then press ⊙ to set. The Cold Brew Lock feature allows the brewer to brew at three different temperature levels from the actual set point. The first setting is within 5 degrees of the set point, next is within 15 degrees of the set point, OFF is within 30 degrees of the set point for the Ready to Brew message, however, it will brew at any temperature.

Master Reset

Master Reset	Press ⊙ to display Are You Sure? Then ◄ for Yes, ► for No. The brewer factory defaults are then reset.

Service Call (phone number factory set to 1-800-000-0000 x0000)

Service Call	Press ⊙ to display the number and change a number. Press ◄ to move the number place and EX to exit when complete. This number will be displayed during a heating system SENSOR ERROR or during a WATER ERROR.

Access Code (factory set to 1-2-3-4)

Access Code	Press ⊙ to display the number and to change a number, (the number can be changed 1 to 4) or ◄ to move the number place and EX to exit when complete.

Banner Name (factory set to Curtis)

Banner Name	Press ⊙ to display the letters and change the letters or ◄ to move place and EX to exit when complete. This feature allows up to 14 letters to be programmed for a company name or a regional name. Programming all blanks disables the Banner Name. If programmed, the Banner Name is displayed every 5 seconds on and off.

P-Maintenance (factory set to OFF)

P-Maintenance	Press ⊙ to select. Set the number of gallons brewed to indicate P-Maintenance. Press ◄ or ► to adjust from Off to 9500 gallons. This feature advances in 500 gallon increments. Press ⊙ to exit.

Beeper On/Off (factory set to ON)

Beeper On/Off	Press ⊙ to display ON or OFF. Pressing either ◄ or ► toggles between ON and OFF. Press ⊙ to set and exit. When ON, you will hear a short beep each time a button is pressed.

Coffee Drip-out Mode (factory set to 2 minutes)

Coffee Drip-Out	Press ⊙ to select. Press ◄ or ► to move to the desired time (OFF, 1, 2, 3, 4, 5 minutes). Press ⊙ to set and exit.

Tea Drip-out Mode (factory set to OFF)

Tea Drip-Out	Press ⊙ to select. Press ◄ or ► to move to the desired time (OFF, 1, 2, 3, 4, 5, 6, 7, 8, 9 minutes). Press ⊙ to set and exit.

Displ. Brew Time (factory set to ON)

Displ. Brew Time	Press ⊙ to display ON or OFF. Pressing either ◄ or ► toggles between ON and OFF. After Display Brew Time an EXIT screen will return you to Brew Button Prog.

Display Messages (factory set to ON)

Display Messages	Press ⊙ to display ON or OFF. Pressing either ◄ or ► toggles between ON and OFF. This feature allows the operator to select the message "Rinse Server Before Brewing". This message will be displayed any time the unit is not brewing.

Brew Button Program

Brew Button Prog	This is the next group of options in the sequence. The screen will prompt you to choose tea or coffee. Coffee options are shown below. Tea options are shown on page 6.

Select Button

Select Button	This is a temporary screen message indicating you are in the coffee brew button programming mode. Select a **coffee** brew button on the UCM.

Brew by Volume (Factory settings: LARGE 200oz ±8oz. SMALL 64oz±4oz.)

Brew By Volume	Press ⊙ to select. The display will ask you to select a brew button, Large, Medium or Small. Press the desired brew button to begin... when the desired volume is reached, press the same brew button to stop the flow. Now the volume has been set.

Brew By Time	**Brew by Time (factory settings: LARGE 5min-25sec. SMALL 1min-52sec.)** Next item in the sequence is Brew by Time. Press ⊙ to select and to change the brew time. The display will now show the current time. By pressing ◄ or ► you can toggle back and forth from minutes to seconds and to exit (ex). Change the time or set and exit by pressing the ⊙ button.
Pre-infusion	**Pre-Infusion (factory disabled)** Press ⊙ to select. The current setting is displayed in seconds. Press ◄ to decrease or ► to increase (range from OFF to 10 through 60 seconds). Press ⊙ to set and exit. If Pre-infusion is selected (ON), Cold Brew Lock is set to Delta 1 within 5ºF of the set point and Cold Brew Lock disappears from the list of program selections. When Pre-infusion is ON, Pulse Brew disappears from the list of program selections.
Pulse Brew On/Off	**Pulse Brew (factory setting C)** Press ⊙ to select. Press ◄ or ► to select OFF or one of the five pulse patterns (A to E). The five Pulse Brew options help "tune" or change the coffee flavor. Guidelines for Pulse Brew: Filter Pack type coffees typically extract better with the *A* and *B* pulse setting. Decaf coffees typically extract better with the *B* pulse setting. High-Yield coffees typically extract better with the *C* pulse setting. Of course, any of the *A, B* or *C* settings may be used to suit your taste profile. Settings *D* and *E* are manual pulse counts. To exit from the Pulse Brew mode, select 0 for the time. If Pulse Brew is turned on, Cold Brew Lock is set to Delta 1 within 5ºF of set point and Cold Brew Lock disappears from the list of program selections. When Pulse Brew is on, Pre-infusion disappears from the list of program selections.
By-Pass On/Off	**By-Pass (factory settings: LARGE 35%, SMALL Off.)** The By-Pass option helps with controlling extraction with larger brews. Contact time that is too long will extract undesirable bitter, harsh flavor compounds. By-passing some of the brew water around the coffee bed will balance the extraction. Press ⊙ to display the current setting. Press ◄ or ► to choose the setting (OFF, 1% to 50%). Press ⊙ to set and exit.
Select Button	**Select Button** – You may select a **tea** brew button to program from the buttons on the control module.
Brew By Volume	**Brew by Volume** Press ⊙ to select. The display will read Select Brew Button. Once the desired brew button is selected, the display will read "Press BREW to Start" and hot water starts dispensing. When the desired volume is reached, press the brew button again to stop the flow. The brew volume has now been set. When EXIT is displayed, press ⊙ to select and exit.
Brew By Time	**Brew by Time (factory set to Full Brew 3 min 32 sec, Iced Coffee Full Brew 3 min 23 sec)** Press ⊙ to select. Press ◄ or ► to increase or decrease time. Tea by Time has a range of 0:00 to 9:59 (Increments are minutes and seconds). The HALF BREW button will be set at half the brew time.
Dilut. Delay	**Dilution Delay (factory set to Full Brew 30 sec, Iced Coffee Full Brew 30 sec)** Press ⊙ to select. Press ◄ or ► to toggle between Standard-Gray (30 sec), Standard-Purple (30 sec), Tropical-Gray (9 min), Tropical-Purple (9 min), 76/308-Gray (4 min) and 76/308-Purple (4 min). The range is from 0 seconds to 10 minutes; in 30 second increments.
Dilut. Volume	**Dilution Volume** Press ⊙ to select. The display will now show "Push START To Begin...". Press the BREW button, then water starts running. When the desired volume is reached, press the BREW button again to stop the flow. Now the volume has been set. Pressing the ► button will display the subsequent menu features.
Dilut. Time	**Dilution Time (factory set to Full Brew 4 min 5 sec, Iced Coffee Full Brew 2 min 26 sec)** Press ⊙ to select. Press ◄ or ► to toggle between Standard-Gray (4min-5sec), Standard-Purple (4min-5sec), Tropical-Gray (4min-26sec), Tropical-Purple (4min-26sec), 76/308-Gray (4min-55sec) and 76/308-Purple (4min-55sec). The setting range is from 0 sec to 9 min, 59 sec, in 1 second increments.
Pulse Brew On/Off	**Pulse Brew (factory set to Full Brew OFF, Iced Coffee Full Brew 30 sec on, 40 sec off).** Press ⊙ to select. Press ◄ or ►to choose ON, OFF, or D. Selecting ON will give a pulsing pattern of 1 to 20 pulses. In D, the pulse time can be set for ON, from 5 to 150 seconds (adjustable in 5 sec increments). Off time is from 5 to 150 seconds, adjustable in 5 second increments.

Sweetener Time	**Sweetener Time** Not applicable for this model.
Model Select	**Model Select (factory set to CBHV-Single)** Press ⊙ to select. Press ◄ or ► to select the model. The available selections are: CBHV-Twin, CBHV-Single, CBHV-Twin SW, and CBHV-Single SW. Press ⊙ to set and exit. When the Model Select feature is changed, all settings are reset to the factory defaults of the newly selected model.
Batch Select Coffee	**Batch Select (factory set to Two Batch)** This feature will give you a choice of selections: one brew button or two brew buttons. Select Two Batch.
Tea Recipes	**Tea Recipes (Factory set to Standard - Amber)** This is a tea feature. Press ⊙ to select. If selected, press < or > to chose a tea recipe: Standard - Amber, Tropical - Amber, or 76/308 - Amber. Press ⊙ to select the desired recipe.

Control Module Menu Tree

The flow chart displays the sequence of menu item that can be accessed through the UCM. Various menu items will immediately exit the programming mode when selected. Other menu items, when selected, will continue to the next item in the menu list.

7
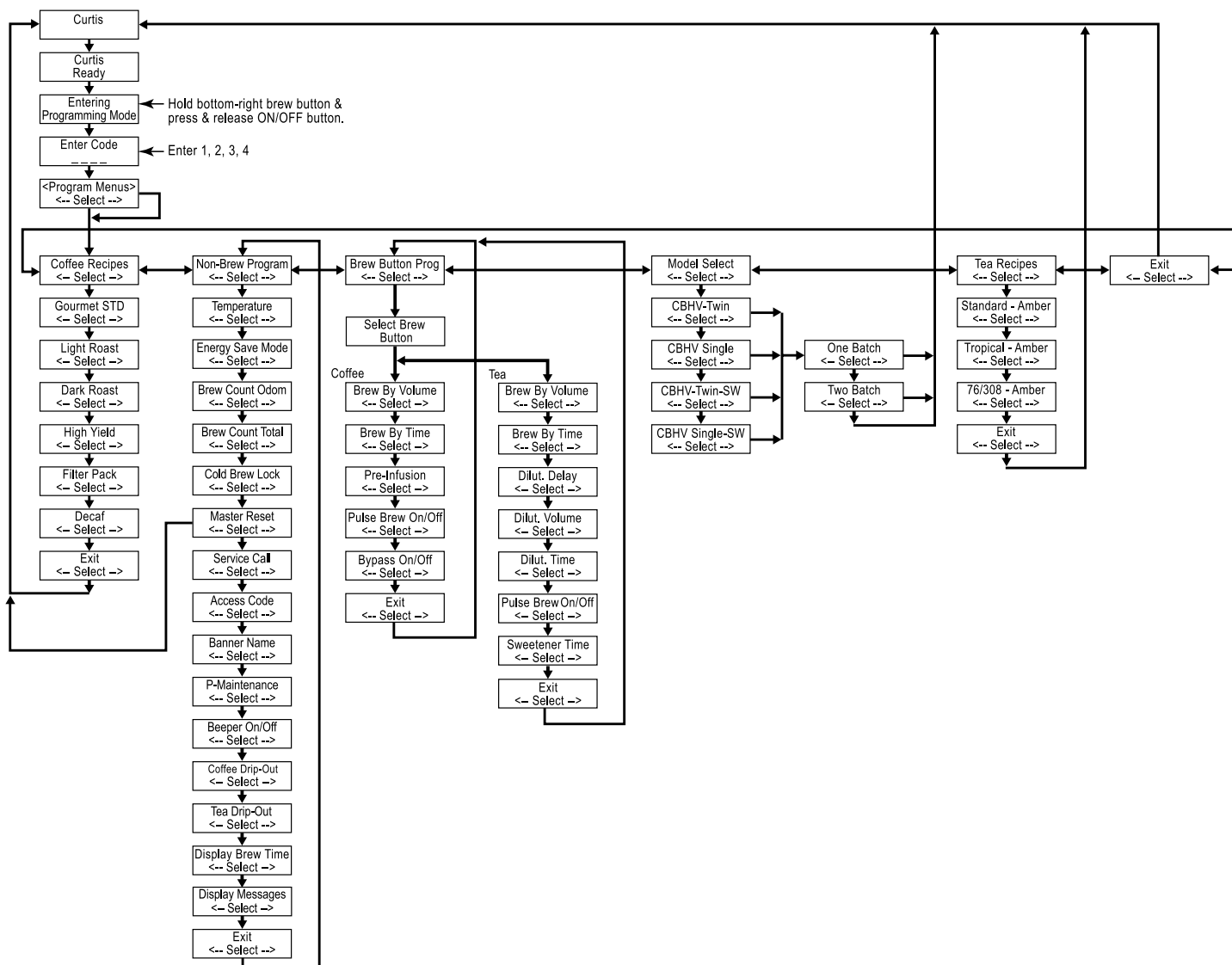
Illustrated Parts - Chassis
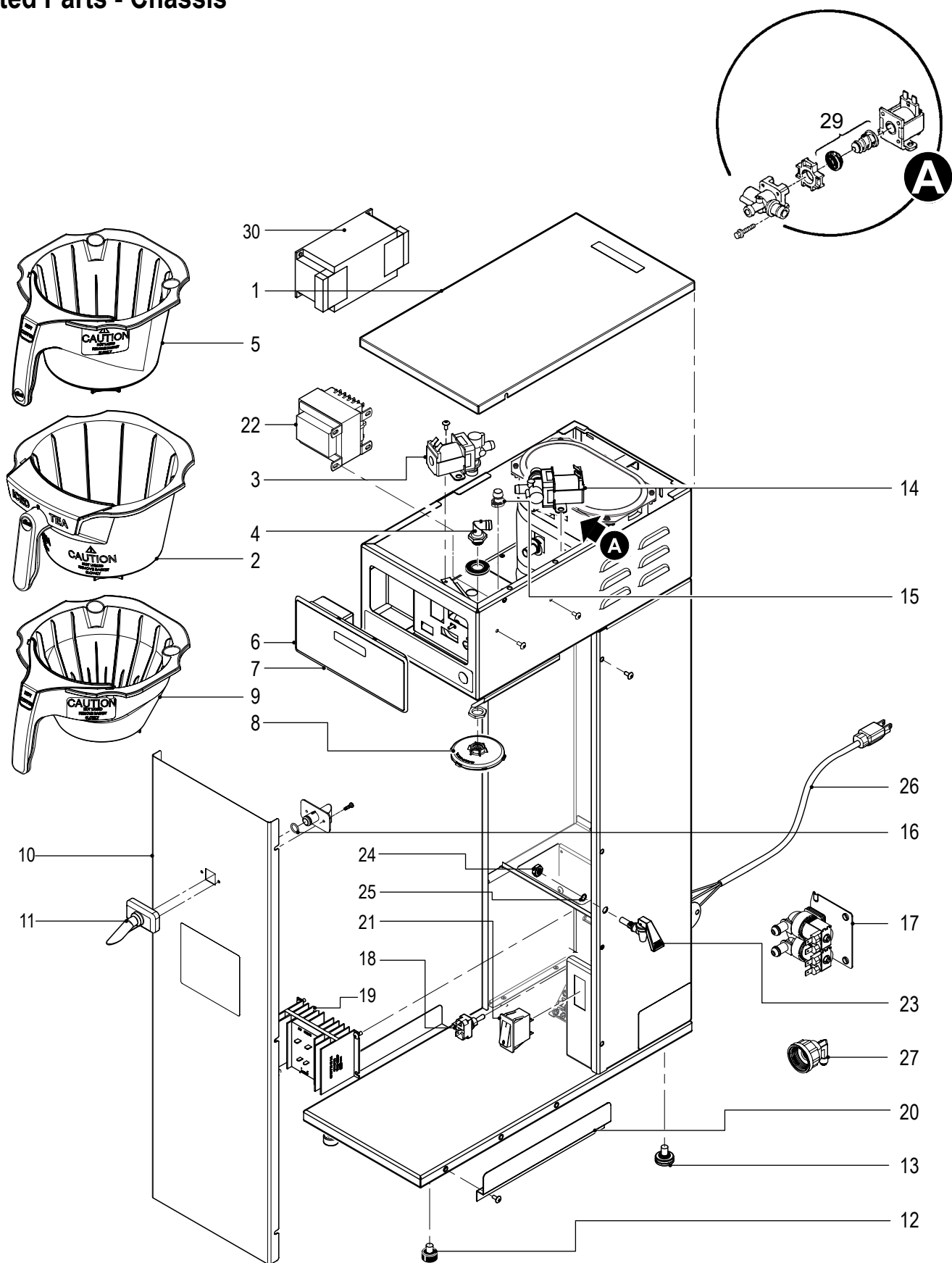
Parts List - Chassis

ITEM №	PART №	DESCRIPTION
1	WC-58117	CVR, TOP ALPGT/D500GT/D60GT TLP/TCTS/CBS/GEMSS
2	WC-3398	BRW CNE, ASSY STD TEA NON MTL W/BLU SPLASH PCKT
3	WC-844-101*	VALVE, BY-PASS, NON-ADJUST. W/RESTRCTR (WC-2945)
4	WC-2977-101K*	KIT, SPRAYHEAD FITTING PLASTIC
5	WC-3422IC	BRW CNE,ASSY W/SPLASH PCKT TAN STYL HV ICED COFF
6	WC-390061	LABEL, UCM OVERLAY CBHS CURTIS ICED COFFEE
7	WC-37556*	KIT, UCM & LABEL CBHVS & CBHS
8	WC-29050*	SPRAYHEAD, AMBER ADVANCED FLOW
9	WC-3417*	BRW CNE, ASSY W/SPLSH PCKT BRN STYL GEM HOT COF
10	WC-61607	COVER, FRONT CBHVS
11	WC-66079	SPOUT ASSY, DILUTION PLASTIC
12	WC-3503	LEG, 3/8"-16 STUD SCREW BUMPER
13	WC-3518	LEG, GLIDE 3/8"-16 STUD SCREW
14	WC-37122*	KIT, DUMP VALVE RIGHT
15	WC-29044	SLEEVE, OVERFLOW ASSY GEN USE
16	WC-43134	O'RING, .426 X 9/16 O.D X .070 WALL EDPM TCTS
17	WC-895-105*	VALVE, INLET DUAL 120V 10W 2 GPM X .5 GPM
18	WC-103*	SWITCH, TOGGLE NON-LIT DPST 25A 125/250VAC RESIST
19	WC-8559*	RELAY, SOLID STATE, 280Vac MAX W/INT HEATSINK
20	WC-8531	RAIL, BASE TCTD
21	WC-1512	BREAKER, CIRCUIT 2-POLE 5A/250VAC (CBHS3 ONLY)
22	WC-592	TRANSFORMER, 230-115V 130VA GEN USE (CBHS3 ONLY)
23	WC-1809-104	FAUCET, HOT WATER LONG SHANK
24	WC-4271	NUT, LOCK 1/2"-20 W/ NYLON INSERT PLATED
25	WC-4308	WASHER, 1/2 ID INTRNL LCK, STL
26	WC-1200	CORD, 14/3 SJTO 6' BLK W/PLUG
27	WC-37255	KIT, DUAL VALVE WATER INLET
28	WC-13444	HARNESS, ADAPTER ASSY CBHVS (NOT SHOWN)
28A	WC-13286-102	HARNESS ASSY, W/TRANS (CBHS3 ONLY - NOT SHOWN)
29	WC-37132*	KIT, VALVE REPAIR FOR INVENSYS WC-820WDR, WC-821WDR, WC-844WDR (OLDER UNITS)
30	WC-596K	KIT, NOISE FILTER EMI 250V/30A 1PH (CBHS3 ONLY)

* RECOMMENDED PARTS TO STOCK

Illustrated Parts – Heating Tank
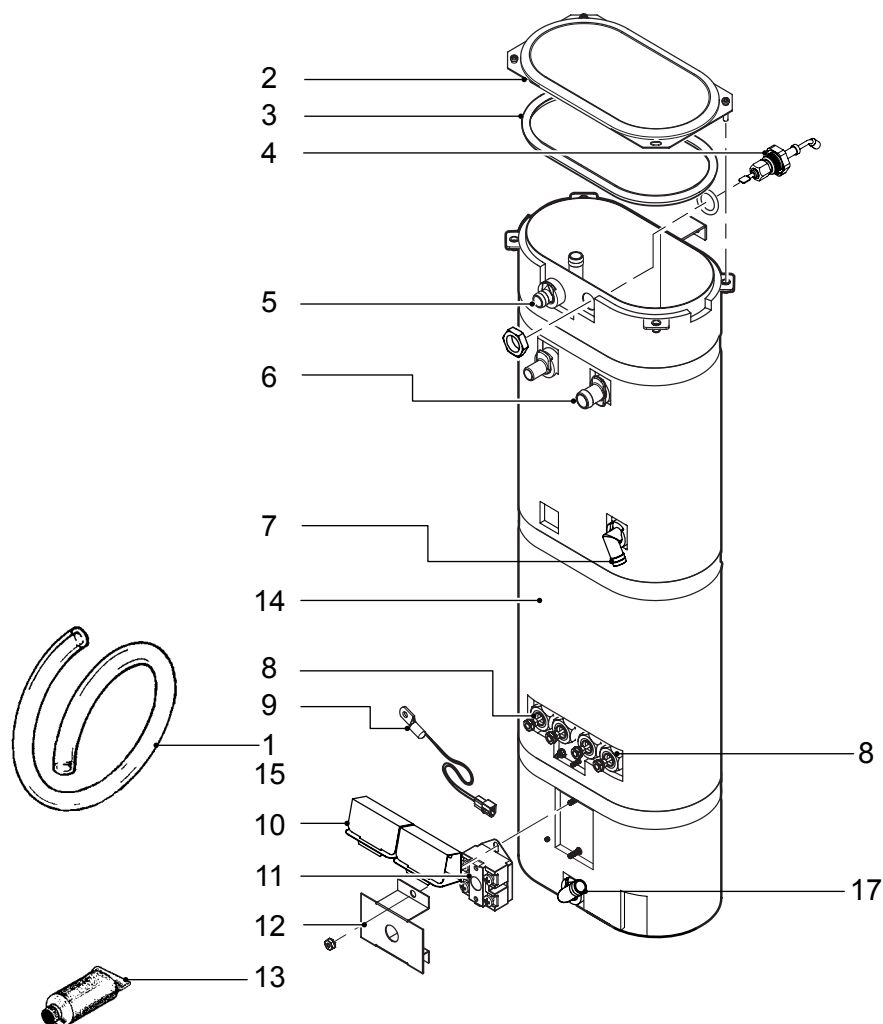
ITEM №	PART №	DESCRIPTION
1	WC-5310*	TUBE, 5/16 ID x 1/8W SILICONE GEN USE
2	WC-5853-102	COVER, TOP HEATING TANK GEN USE
3	WC-43062*	GASKET, TANK LID
4	WC-5527K*	KIT, WATER LEVEL PROBE, O-RING & NUT
5	WC-37266*	KIT, FITTING TANK OVERFLOW
6	WC-37317*	KIT, STRAIGHT FITTING & BUSHNG 8mm GEN USE
7	WC-37365*	KIT, FITTING TANK INLET
8	WC-904-04*	KIT,ELE, HEAT 1.6KW120V W/ JAM NUT & SIL O-RING
8A	WC-906-04**	KIT, ELE, HEATING 2KW 220V W/ JAM NUT & SIL O-RING
9	WC-1438-101*	SENSOR, TEMPERATURE TANK

ITEM №	PART №	DESCRIPTION
10	WC-4394*	GUARD, SHOCK/HEAT ELE, FOR SINGLE HEATING ELE
11	WC-522*	THERMOSTAT, HI LIMIT HEATER CONTROL DPST 277V 40A
12	WC-43055*	GUARD, SHOCK RESET THERMOSTAT (WC-522)
13	WC-5231*	COMPOUND SILICONE 5 OZ
14	WC-62080	TANK COMPLETE, CBHS/CBHS67144
14A	WC-62032**	TANK, COMPLETE TP2S ULTEM FITTINGS
15	WC-5350*	TUBE, 1/2 ID x 1/8W SILICONE GEN USE

* RECOMMENDED PARTS TO STOCK

** USED ON CBHS3

Electrical Schematic

POWER BLOCK
57–65A/300–450V

WHT/12GA

WHT/12GA

BLK/12GA

WHT/12GA

RED/12GA

GRN/12GA

COMMON STUD
CHASSIS GROUND

C1 .47MF 275VAC

220°F
THERMOSTAT
MAN. RESET
DPST
40A/277V

BLU/12GA

RED/12GA

DPST TOGGLE SWITCH
125/250VAC–25A

WHT/12GA

SOLID STATE RELAY
40A/600V

GRY   STP GRY

BLK/12GA

HEATING ELEMENTS

H1

H2

RED/12GA

SSR PIN ASSIGNMENTS

AC OUTPUT
1   2

3   4
–   +
DC INPUT

USE .187
TERMINAL LUG

BLK   FUSE   BLK
5A/250V

BLK

ORG

PROBE

HEATING TANK

SENSOR TANK

TANK GROUND

(WHT) 2   STP YEL

(WHT) 1   STP YEL

GRN
UCM GROUND

UNIVERSAL CONTROL MODULE
5W/120V

GRY

STP GRY

WHT

DUAL VALVE
10W/120VAC

YEL   2.0 GPM   WHT
INLET VALVE

RED   .5 GPM   WHT
DILUTION VALVE

VIO   .5 GPM 12W/120V   WHT
DUMP VALVE

STP VIO   .5 GPM 12W/120V   WHT
BYPASS VALVE

UCM Pin Assignments	
20 Pin Connector	
1	NOT USED
2	SOLID STATE RELAY - COMMON
3	SOLID STATE RELAY - +5 VDC
4	NOT USED
5	NOT USED
6	INLET VALVE
7	BYPASS VALVE
8	NOT USED
9	DILUTION VALVE
10	NOT USED
11	NOT USED
12	NOT USED
13	TANK TEMPERATURE SENSOR
14	TANK TEMPERATURE SENSOR
15	UCM GROUND
16	WATER LEVEL PROBE
17	120V NEUTRAL
18	120V HOT
19	DUMP VALVE
20	NOT USED

ELECTRICAL RATING TABLE

Model	Voltage V	Amps A	Watts W	Hertz Hz	# of Conductor Wires	Phase	# of Tank Elements	Tank Element Rating W/V
CBHS5x	120	10.0	1200	50/60	(2)	1	2	1150W/120V
	110/220	10.7	2350		3			
	120	10.0	1200		(2)	1		
	120/240	10.2	2450		3			
CBHSx/ CBHS6x	120	15.0	1800	50/60	(2)	1	2	1600W/120V
	110/220	12.7	2800		3			
	120	15.0	1800		(2)	1		
	120/240	13.8	3300		3			

3️⃣ 12GA WHT WIRE IS ONLY USED WHEN UNIT IS TO BE USED IN THE 120VAC CONFIGURATION.

2. USE THIS DIAGRAM FOR ALL OTHER MODELS WITH ADDED PREFIX LETTERS AND/OR SUFFIX NUMBERS ON THEIR PART NUMBERS HAVING THE SAME ELECTRICAL RATINGS.

1. ALL WIRES SHALL BE MIN 18AWG PVC/UL1015 UNLESS NOTED.

NOTES: UNLESS OTHERWISE SPECIFIED.

VOLTAGE:	SEE TABLE	TITLE:
WATTAGE:	SEE TABLE	
AMPERAGE:	SEE TABLE	LADDER DIAGRAM
HERTZ:	SEE TABLE	
WIRES:	3W + G	PART NUMBER:
PHASE:	1 PHASE	LD–CBHS

REVISION: D

Electrical Schematic

POWER BLOCK 57−65A/300−450V
BLU/10GA
CAPACITOR 2.2uF 250/275 VAC
BRN/10GA
G/Y−10GA
COMMON STUD CHASSIS GROUND

INCOMING POWER 230Vac 1PH 2W+G 50/60 Hz

FILTER NOISE EMI 30A/250V
LINE LOAD
GRN/YEL−10GA

THERMOSTAT MAN. RESET DPST 40A/277V
220°F
BLK/10GA
RED/10GA

SOLID STATE RELAY 40A/240−280V
BLK/10GA

HEATING ELEMENTS 2X 2.0KW 220VAC
BLK/10GA
A A
H1 H2
B B
RED/10GA RED/10GA

DPST TOGGLE SW. 25A/125−250V
RED/10GA
GRY STP GRY

CIRCUIT BREAKER 5A/250V
12(k) LINE(11) RED
22(k) LINE(21) STP/RED

BRN 6   12 BLK
VIO 5   11 BLK
2   8 WHT
1   7
TRANSFORMER 230V−115V, 130VA
BLU
BLK

SSR PIN ASSIGNMENTS
AC OUTPUT 1 2
DC INPUT − +
USE .187 TERMINAL LUG

UCM Pin Assignments	
20 Pin Connector	
1	NOT USED
2	SOLID STATE RELAY - COMMON
3	SOLID STATE RELAY - +5 VDC
4	NOT USED
5	NOT USED
6	INLET VALVE
7	BYPASS VALVE
8	NOT USED
9	DILUTION VALVE
10	NOT USED
11	NOT USED
12	NOT USED
13	TANK TEMPERATURE SENSOR
14	TANK TEMPERATURE SENSOR
15	UCM GROUND
16	WATER LEVEL PROBE
17	120V NEUTRAL
18	120V HOT
19	DUMP VALVE
20	NOT USED

UNIVERSAL CONTROL MODULE 5W/120V
WHT
BLK 18
ORG 16
PROBE
HEATING TANK
TEMP SENSOR
(WHT) 2 STP YEL 14
(WHT) 1 STP YEL 13
GRN/YEL −10GA
UCM GROUND GRN 15
COMMON STUD CHASSIS GROUND

2 GRY
3 STP GRY
17 WHT
DUAL VALVE 10W/120VAC
6 YEL WHT INLET VALVE 2.0 GPM
9 RED WHT DILUTION VALVE .5 GPM
19 VIO 14W/120V WHT DUMP VALVE
7 STP VIO 12W/120V WHT BYPASS VALVE

ELECTRICAL RATING TABLE								
Model	Voltage V	Amps A	Watts W	Hertz Hz	# of Conductor Wires	Phase	# of Tank Elements	Tank Element Rating W/V
CBHS3	230	20.0	4600	50/60	2	1	2	2000W/220V

VOLTAGE:	SEE TABLE
WATTAGE:	SEE TABLE
AMPERAGE:	SEE TABLE
HERTZ:	SEE TABLE
WIRES:	2W + G
PHASE:	1 PHASE

TITLE: LADDER DIAGRAM
PART NUMBER: LD−CBHS−30   REVISION: A

2. USE THIS DIAGRAM FOR ALL OTHER MODELS WITH ADDED PREFIX LETTERS AND/OR SUFFIX NUMBERS ON THEIR PART NUMBERS HAVING THE SAME ELECTRICAL RATINGS.
1. ALL WIRES SHALL BE MIN 18AWG PVC PER UL1015.
NOTES: UNLESS OTHERWISE SPECIFIED.

TEA TIPS

• Store tea bags in a dark, cool and dry place away from strong odors and moisture. Do not refrigerate.

• Do not hold brewed tea overnight.

• Make sure your equipment is clean at all times. Clean tea-brewing equipment at least once a day.

• Sanitize equipment at least once per week.

• Do not let fresh-brewed iced tea sit at room temperature for more than 8 hours.

As with other food products, if you adhere to proper preparation, holding and sanitation procedures, fresh-brewed iced tea is a safe beverage.
The primary cause for high bacteria counts found in tea from food service businesses is related to excessive holding times and/or poor cleaning and sanitizing procedures.

Cleaning The Brewer

IMPORTANT: Clean out the screen, within the brew basket, to maintain the flow of brewed tea. Neglecting this screen will eventually cause the brew basket to overflow, spilling hot liquid over the unit.
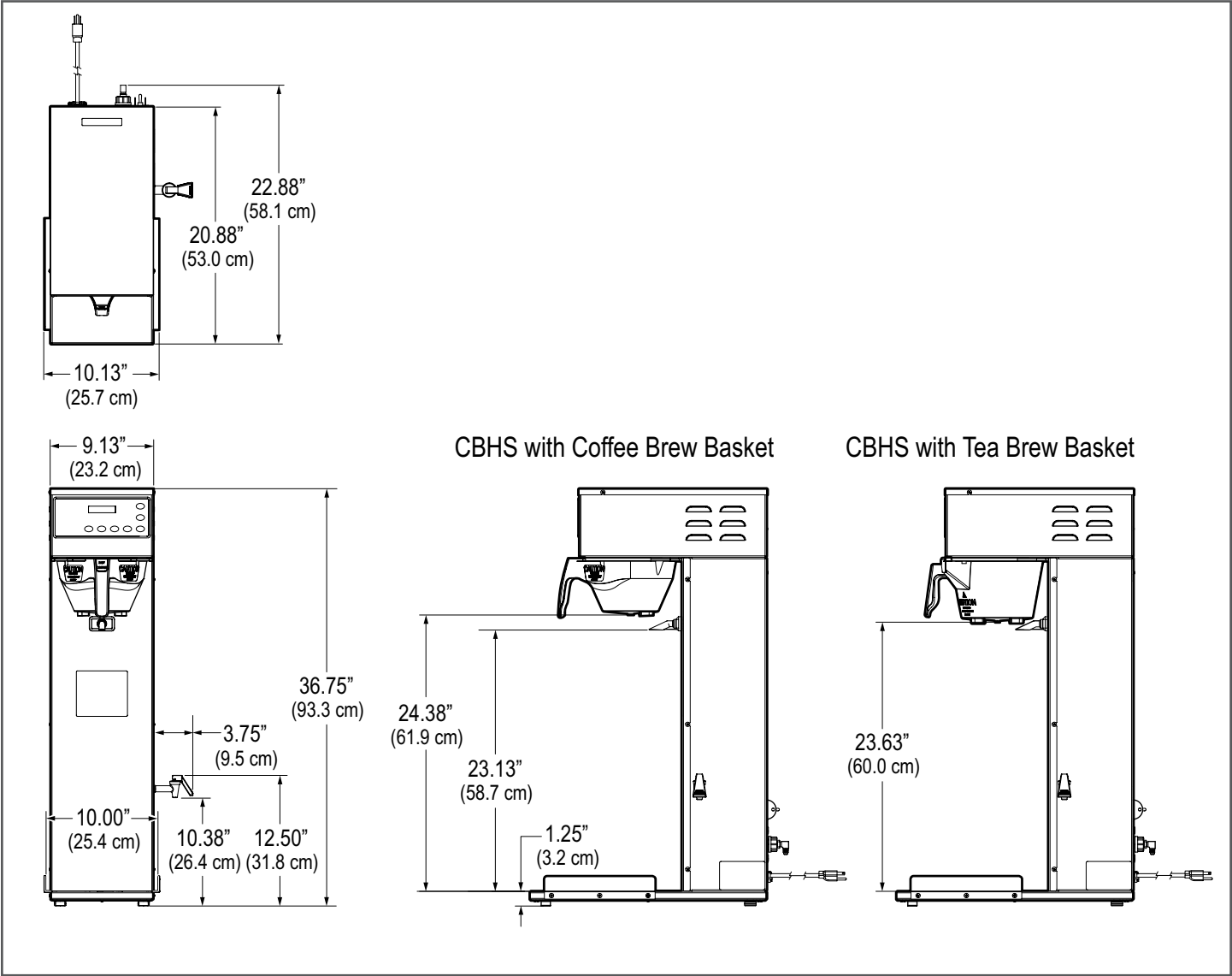
CAUTION: DO NOT use undiluted bleach or chlorine.

CAUTION: Never remove the faucet from the tea dispenser when the dispenser is full. Drain dispenser first.

DAILY

1. Wipe any spills, dust or debris from the exterior surfaces with a damp cloth. The outside surfaces of the brewer should be cleaned with stainless steel polish only, to prevent scratches.

2. Clean the spray head and domed area around the spray head with a mild detergent and warm water solution. Scrub well to remove residue. Rinse with and clear water. Dry with clean cloth.

3. Remove the plastic brew basket and wash with a detergent solution or put through a dishwasher.

4. Wash the beverage dispenser.

    a. Clean the dispenser and top cover with a detergent solution.

    b. Remove the faucet assembly. Unscrew the handle assembly from the faucet. Clean the faucet shank with a gauge glass brush (circular bristle) by pushing the brush through the shank.

    c. Dry and assemble parts.

Rough-In Drawing

22.88"
(58.1 cm)

20.88"
(53.0 cm)

10.13"
(25.7 cm)

9.13"
(23.2 cm)

36.75"
(93.3 cm)

3.75"
(9.5 cm)

10.00"
(25.4 cm)

10.38"   12.50"
(26.4 cm)   (31.8 cm)

CBHS with Coffee Brew Basket

24.38"
(61.9 cm)

23.13"
(58.7 cm)

1.25"
(3.2 cm)

CBHS with Tea Brew Basket

23.63"
(60.0 cm)

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 the date of purchase or 40,000 pounds of coffee, whichever comes first. Stainless steel components are warranted for two (2) years from the date of purchase against leaking or pitting and replacement parts are warranted for ninety (90) days from the 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 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, "0" 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 Co., Inc. 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.

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