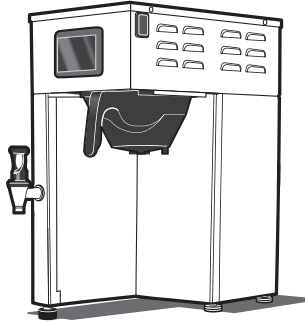




## WILBUR CURTIS COMPANY, INC.

### Service Manual – G4 Single Head 1 Gallon Brewer



Model  
• G4TP1S



**CAUTION:** Please use this setup procedure before attempting to use this brewer. Failure to follow the instructions can result in injury or the voiding of the warranty.



**IMPORTANT:** Equipment to be installed to comply with applicable governmental plumbing/electrical codes having jurisdiction.



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

#### 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 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



**Sanitation Requirements**

This Curtis Generation 4 Unit is Factory Pre-Set and Ready to Go Right from the Box.

Following are the Factory Settings for your G4 Coffee Brewing System:

- Brew Temperature = 200°F
- Water Bypass = Turned 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](http://www.wilburcurtis.com) for your model.

#### 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 flow to the machine should be consistent. Use tubing sized sufficiently to provide a minimum flow rate of one gallon per minute.



**NOTE:** A water filtration system must be used to help maintain trouble-free operation. 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). A water filtration system will greatly prolong the life of the unit and enhance the quality and taste of the product.



*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 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(s) will turn on.
5. Water in the heating tank will require approximately a half hour before reaching operating temperature (factory setting of 200°F). Where applicable, turn on the Universal Control Module (UCM). When the unit reaches operating temperature, it will display "READY TO BREW".

ISO 9001:2008 REGISTERED

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For the latest information go to  
[www.wilburcurtis.com](http://www.wilburcurtis.com)  
Tel: 800-421-6150  
Fax: 323-837-2410

Technical Support: 1-800-995-0417 M-F 5:30am-4:00pm PT

Email: [techsupport@wilburcurtis.com](mailto:techsupport@wilburcurtis.com)

# QUICK START

Your Curtis G4/Gold Cup Series is Factory Pre-Set for Optimum Performance.

After connection to water and power; turn on the brewer at the rear toggle switch. You will hear a beep and the status lights will come on for a moment.

The screen will display MODEL NUMBER CONTROL BD NUMBER . Next FILLING is displayed. Water will fill the tank (2-3 minutes depending on water flow rate).

When the proper level is reached HEATING will appear on the screen. It takes approximately 30 minutes to reach the set point temperature.

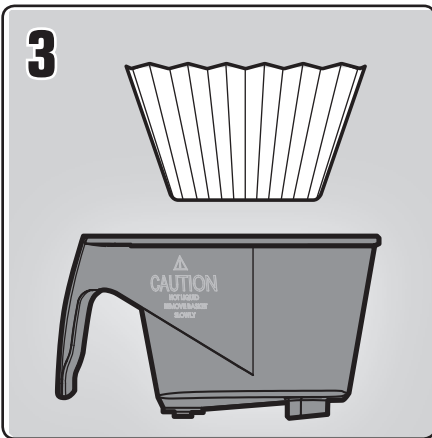
Control will display READY TO BREW when temperature reaches the set point. The unit is now ready to brew.

## COFFEE BREWING INSTRUCTIONS

1. Brewer should be ON. Confirm this at the toggle switch on the back of the brewer. The touch screen should read Ready to Brew.
2. Place an empty coffee container centered beneath the brew cone.



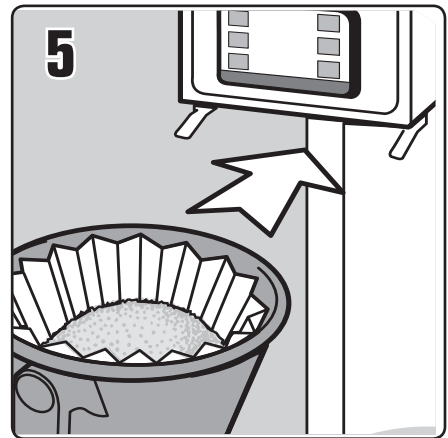
**WARNING – AVOID SCALDING: REMOVE THE BREW CONE CAREFULLY.** The brew cone contains hot coffee grounds. The coffee vessel is heavy when full. Take precautions to avoid dropping while moving.



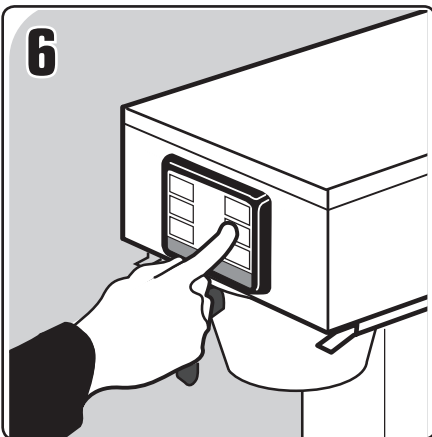
3. Place a new paper filter into the brew cone.



4. Fill the brew cone with the proper amount of ground coffee.

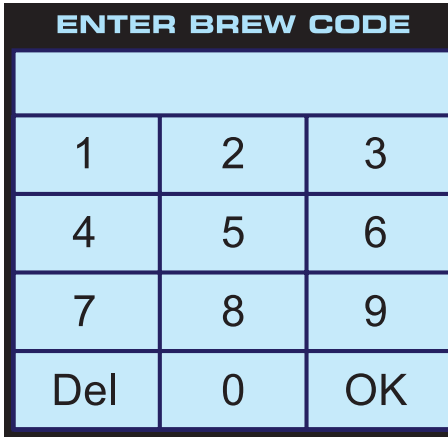


5. Transfer the filled brew cone to the brewer.



6. Start the brew cycle by hold your finger on the desired brew icon. As soon as you hear the click of the brew valve, the brew cycle has started and you can lift your finger.

**Brew Code:** You may find that when a brew button is pressed, a key pad appears on the screen. This is a brew lock-out feature that



requires a code to be entered before a brew will start. The default is OFF.

**CAUTION:** When enabled, as soon as you enter the brew code a brew cycle starts.

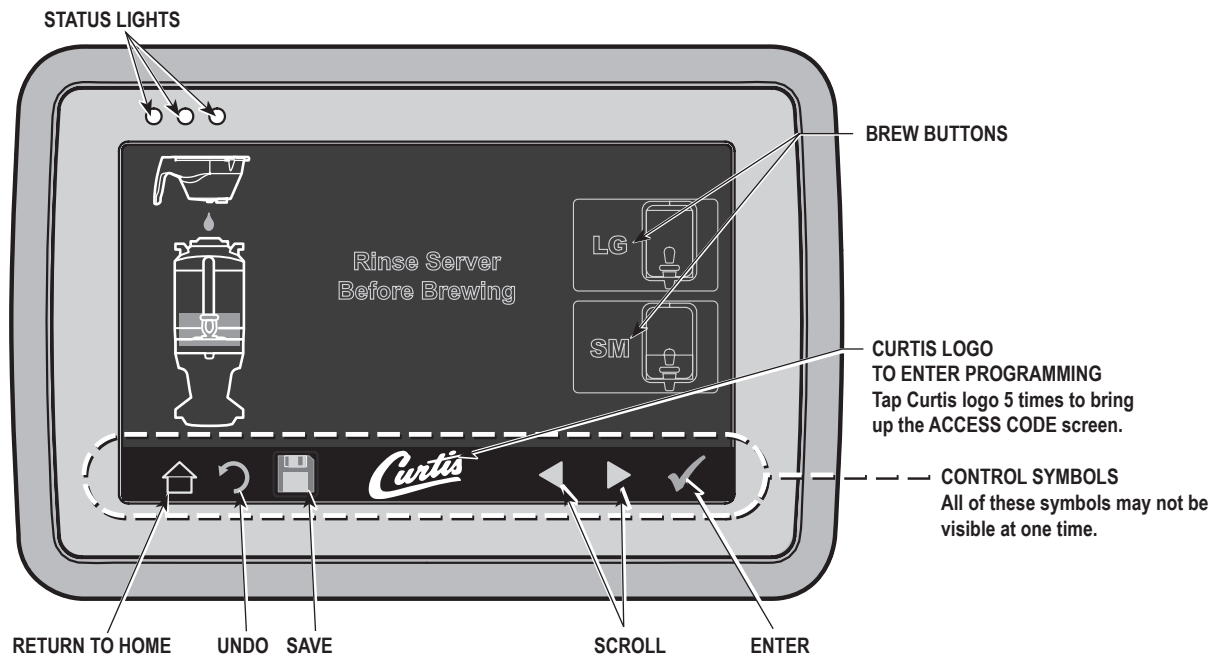
Refer to page 8 for more information about the Brew Code.



While brewing, a 1 gallon coffee server icon is displayed on the screen with coffee flowing from the brew cone to the server. Also showing is the brew timer, counting down the time remaining on the brew cycle.

## Touch Screen Control Module

The touch screen turns on when power is available to the controller. The screen will contain standard control feature such as symbols and buttons. Pressing these elements with your finger tip will activate the programming functions. The default screen, as well as some added control buttons are shown in the illustration below.



## PROGRAMMING

ENTER ACCESS CODE		
1234		
1	2	3
4	5	6
7	8	9
Del	0	OK

**ACCESS CODE** screen. Default is 1 2 3 4. Once the code is entered, press OK. The Main Menu screen will appear.

The access code can be reset in Control Settings, PASSWORDS.



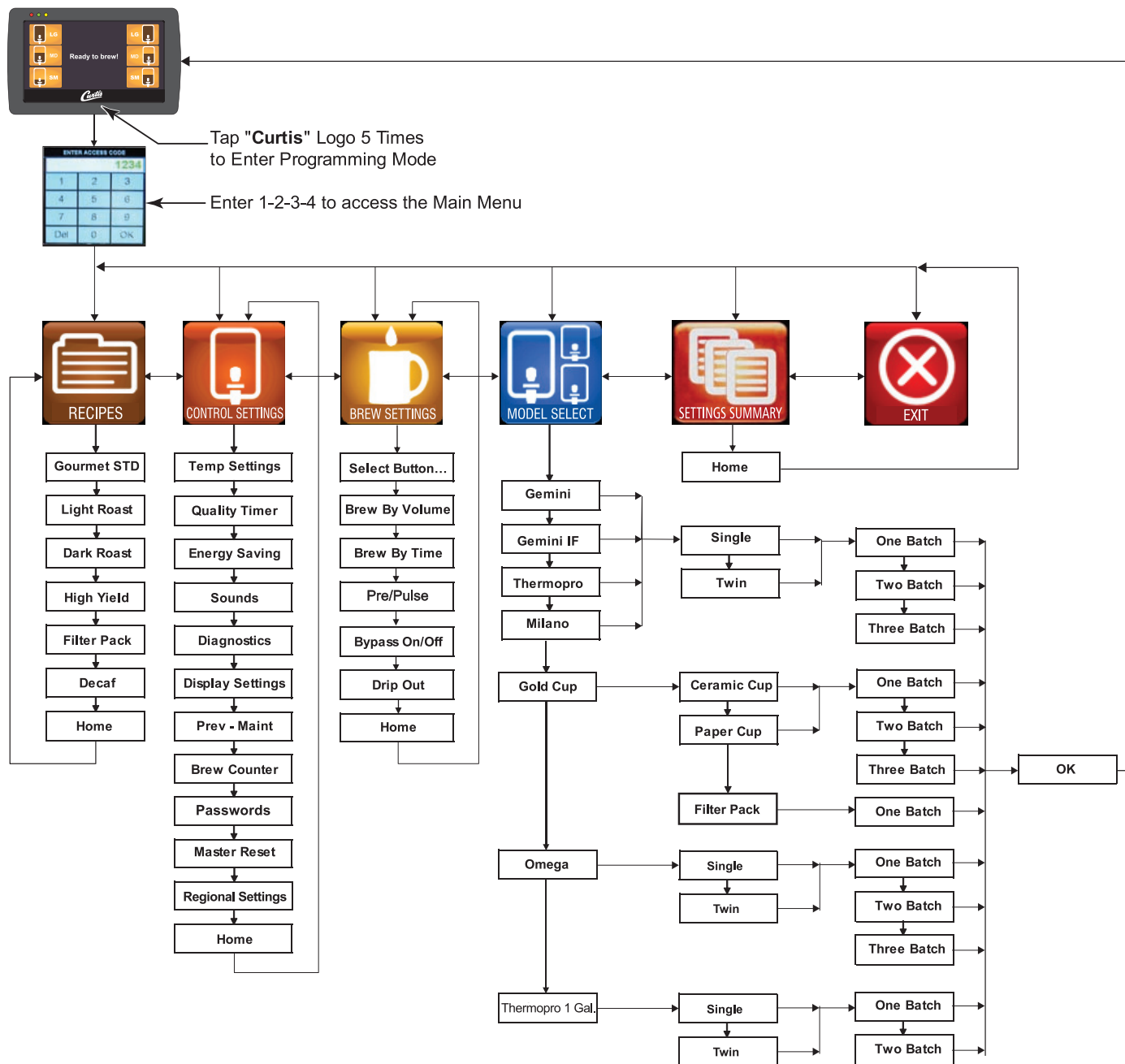
**MAIN MENU** screen contains six control icons:

RECIPES, CONTROL SETTINGS, BREW SETTINGS, MODEL SELECT, SETTINGS SUMMARY and EXIT.

PROGRAMMING Continued . . .

# Menu Tree

This chart explains how to enter the program mode and menu selections available from the MAIN MENU.



## Menu Features

### RECIPES

FUNCTION TO SET	SETTING RANGE	FACTORY SET DEFAULT	NOTES / COMMENTS
Global Recipes	Gourmet STD, Light Roast, Dark Roast, High Yield, Filter Pack, Decaf, Home	Gourmet STD	

### CONTROL SETTINGS

FUNCTION TO SET	SETTING RANGE	FACTORY SET DEFAULT	NOTES / COMMENTS
Temperature Settings	175°F - 206°F , 1°F Increments	Tank Temp = 200°F Minimum Brew Temp = 195°F	
Warmer Settings	Disabled, 1 Hr - 12 Hr, 1 Hr Increments.	<Disabled on GEMT/GEMS>	Note: This function is only visible on Gemini Units.
	1 Hr - 12 Hr, 1 Hr Increments.	<10 Hr. on GEMTIF/GEMSIF>	
	<OFF>, <HIGH>, <MED.>, <LOW>	<MED.> During Brewing	
Quality Timer	Disabled, 20min - 240min, 10 Minute Increments.	<Disabled on GEMT/GEMS/TP2T/TP2S/OMG/TPC2T/TPC2S> <120min on GEMTIF/GEMSIF>	Audible alarm when time is expired. (Only shows available when a machine has Warmer Elements). (Also this function is visible when Gemini models are selected).
Energy Save Mode (Activates after 4 Hours of Inactivity)	No Change	No Change	Tank temperature is maintained at the temp setpoint default
	Turn Tank Heater Off		Tank is turned off.
	Reduce tank temp to: 140°F		Tank temperature maintained at 140°F.
Sounds	Beeper On/Off	On	Turns Board sounds Off or On
Diagnostics	-	Auto Test	Runs Diagnostic Tests
Display Settings	Brew Timer-Hide/Show	Show	Displays Brew Time
	Quality Timer Hide/Show	Hide (Models: GEMT/GEMS/TP2T/TP2S/OMGT/OMGS)	Displays Quality Timer
		Show (Models: GEMTIF/GEMSIF)	
	"Rinse Server"-Hide/Show	Show	Displays "Rinse Server" Message
	Screen Saver	Off	Displays Screen Saver
	Display Name	Blank	Displays Banner Name
Prev. Maintenance	Maintenance Interval	Off	Off, 1000 to 20000 Gallons, 1000 Increments
	Service Telephone Number	1-800-000-0000 x0000	
Brew Counter	Resettable	Resettable	For maintenance purpose (Resettable)
Passwords	Programming	1234	Reprogrammable; allows access to programming screens
	Brew (Enabled/Disabled)	Disabled	Reprogrammable; allows access to brewing screens
Master Reset	Reset	Are you sure? (Yes / No)	Select to Reset to Restore Factory Defaults
Regional Settings	SI/US	US	US Units or Metric Units
Home	-	-	Select to go to Home Page

## Menu Features

### BREW SETTINGS

FUNCTION TO SET	SETTING RANGE	FACTORY SET DEFAULT	NOTES / COMMENTS
Brew by Volume	OFF, 30sec to 19Min.59sec.	LARGE BREW: 132oz $\pm$ 4oz using a Amber AFS Sprayhead	To Set: Press Brew to start / Press Brew to stop.
		SMALL BREW: 64oz $\pm$ 4oz using a Amber AFS Sprayhead	
Brew by Time	0 to 19Min - 59sec, 1min-01secs increments	LARGE BREW: 3min 32sec using a Amber AFS Sprayhead	Note: These are the default times for a Amber AFS Sprayhead,
		SMALL BREW: 1min 52secs using a Amber AFS Sprayhead	
Pre-Infusion	Disabled	Disabled	OFF
	10 secs On/10 secs Off		When this is Chosen"COLD BREW LOCK set to 5°F, Pulse Brew On/Off" Function <Disabled>
	20 secs On/20 secs Off		When this is Chosen"COLD BREW LOCK set to 5°F, Pulse Brew On/Off" Function <Disabled>
	30 secs On/30 secs Off		When this is Chosen"COLD BREW LOCK set to 5°F, Pulse Brew On/Off" Function <Disabled>
	40 secs On/40 secs Off		When this is Chosen"COLD BREW LOCK set to 5°F, Pulse Brew On/Off" Function <Disabled>
	50 secs On/50 secs Off		When this is Chosen"COLD BREW LOCK set to 5°F, Pulse Brew On/Off" Function <Disabled>
	60 secs On/60 secs Off		When this is Chosen"COLD BREW LOCK set to 5°F, Pulse Brew On/Off" Function <Disabled>
Pulse Brew On/Off	OFF	C	OFF
	A		A = "10 seconds ON 4 Times"/"10 seconds OFF 4 Times", then "ON" Till End of Brew Cycle.
	B		B = "1 Minute ON", "10 seconds OFF 4 Times"/10 seconds ON 4 Times", Till end of Brew Cycle.
	C		C = "25 seconds ON 5 Times"/"20 seconds OFF 5 Times", then "ON" Till End of Brew Cycle.
	D		D = Manual Program: "PULSE COUNT = 1 to 20 pulses", "ON TIME = 5 - 150 seconds", "OFF TIME = 5 - 150 seconds", 5 second increments.
	E		E = Manual Program: "PULSE COUNT = 1 to 12 pulses", "ON TIME = 0 - 150 seconds", "OFF TIME = 1 - 150 seconds", 1 second increments.
By-Pass On/Off	Off, 5%-50%, in 1% increments	LARGE BREW: 10% using a Amber AFS Sprayhead	Note: These are the default times for a Amber AFS Sprayhead
		SMALL BREW: Off using a Amber AFS Sprayhead	
Drip-Out Mode	Off, 10 Seconds - 15min, 10 Second Increments	2 min	Reprogrammable
Home	-	-	Select to go to Home Page

## System Fault Messages

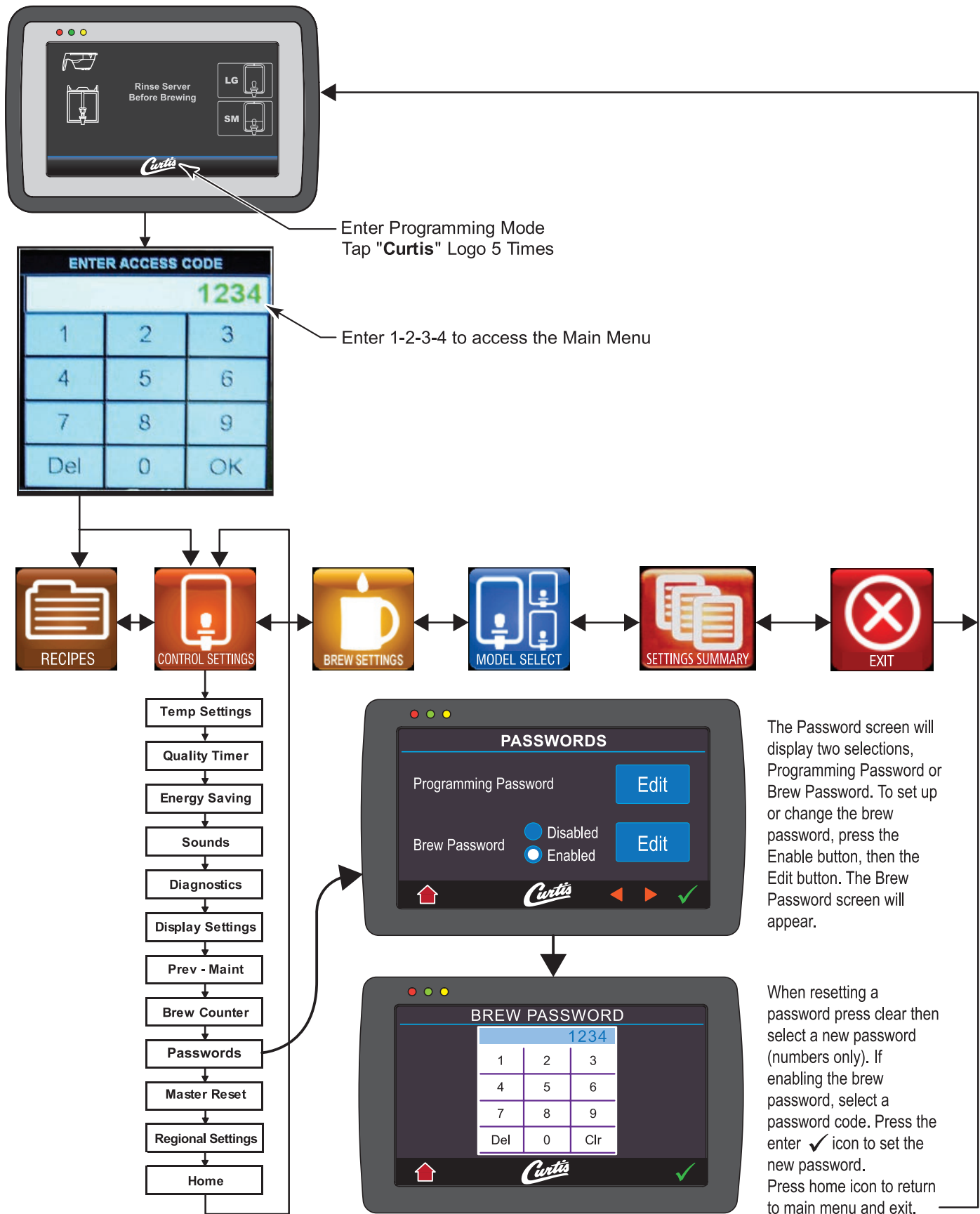
### WARNING MESSAGES - ALLOWS BREWING

MESSAGE DISPLAY	WARNING DESCRIPTION	CAUSE
Maintenance Required	Maintenance Required	Brew count "Gallons Since Reset" exceeds programmed Preventative Maintenance period
Low Water Flow Warning	Low Water Flow	If the Inlet valve remains on longer than XX Seconds (during the brew cycle only) and repeats TWICE during that brew cycle. It shall clear upon the next brew and if the same low flow exists again, it will re-appear. XX = Alpha 20 secs; Gem/TP Twin 40 secs; Gem/TP Single 30 secs

### ERROR MESSAGES - STOPS BREWING

MESSAGE DISPLAY	ERROR DESCRIPTION	CAUSE
Water Level Error	Fill run error / Overflow	The fill solenoid has either run for more than 10 minutes on the initial tank fill or 120 Seconds on Large Brewers and 30 Seconds on CGC Brewer in normal operation
Sensor Error	Open Sensor	Break in the temperature thermistor circuit or short circuit.
Over Temp. Error	Excess Temperature	The sensor is reading that temperature in the heating tank has risen above 210°F, or sensor has shorted to ground.
Internal Error 1	UPM-UCM Communication	Break in the UPM-UCM Communication circuit.

## Brew Access Code





## USB – Easy Programming

There are two methods that can be used to change the default settings on G4 brewers. They can be programmed at the brewer by the touch screen universal control module (UCM) or the settings can be changed using the USB (Universal Serial Bus) data port on the side of the brewer. Using the USB connection and a flash memory data storage device will easily reprogram the settings simply by copying data.

The flash drive can upload or download the entire setting from one G4 brewer, into another G4 brewer. This eliminates the need to walk through the usual steps in reprogramming that would be required when you use the touch screen to make a change. This is an advantage for a service technician when standardizing the program settings on multiple G4 brewers.

Use a USB drive with USB 2.0 support and a type-A USB connection. Storage capacity should be 2 GB minimum.

**IMPORTANT:** The flash drive must be completely blank. Before starting, please erase any files that may be in the USB drive.



## SOFTWARE INFORMATION TRANSFER

### UPLOAD TO USB

1. Make sure the brewer is on. Determine that the G4 brewer you wish to copy is properly programmed for your desired settings.
2. Connect an empty flash drive into the USB port on the brewer. The UCM on the brewer will upload all of the particular setup data onto the flash drive. The yellow LED on top of the touch screen will light indicating that data is transferring. This will only take a second to complete.

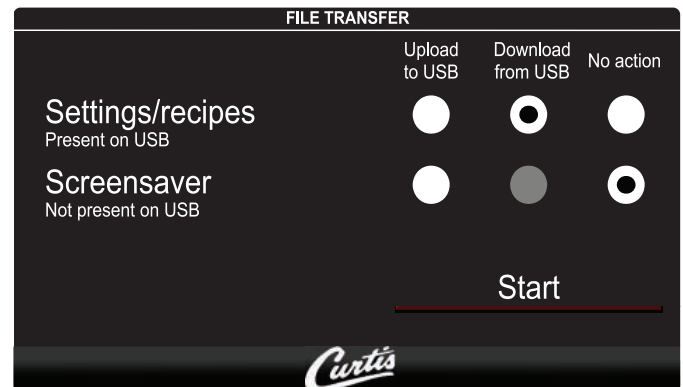
### DOWNLOAD TO BREWER

1. Select the brewer you wish to make the program changes on. The brewer should be on.
2. Plug the loaded flash drive into the USB port on the brewer. The data copied from the first G4 brewer will automatically download, overwriting all the settings that were on the second brewer.
3. The red LED on the UCM will indicate that the download is in process. This will only take a second.
4. Once the download is complete, the UCM will reboot in order for the changes to take effect.
5. Remove the flash drive. The download is complete. The data on the flash drive can be downloaded into as many G4 brewers as needed.

This screen will be presented whenever the USB flash is inserted. The UCM will always create a backup on the USB flash drive before downloading settings/recipes or screensaver.

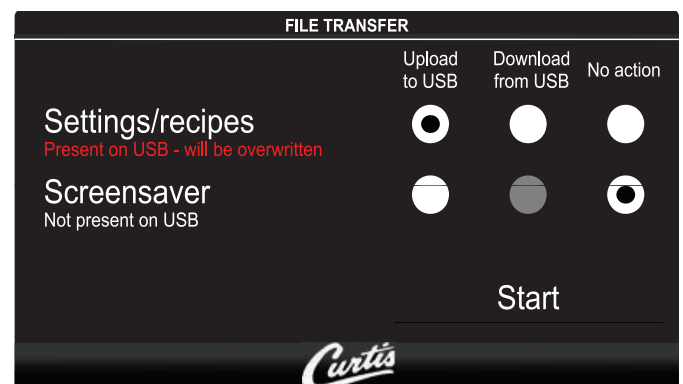
#### Case 1

Settings/recipes file present, screensaver not present. User has selected 'Download from USB' for settings/recipes file.



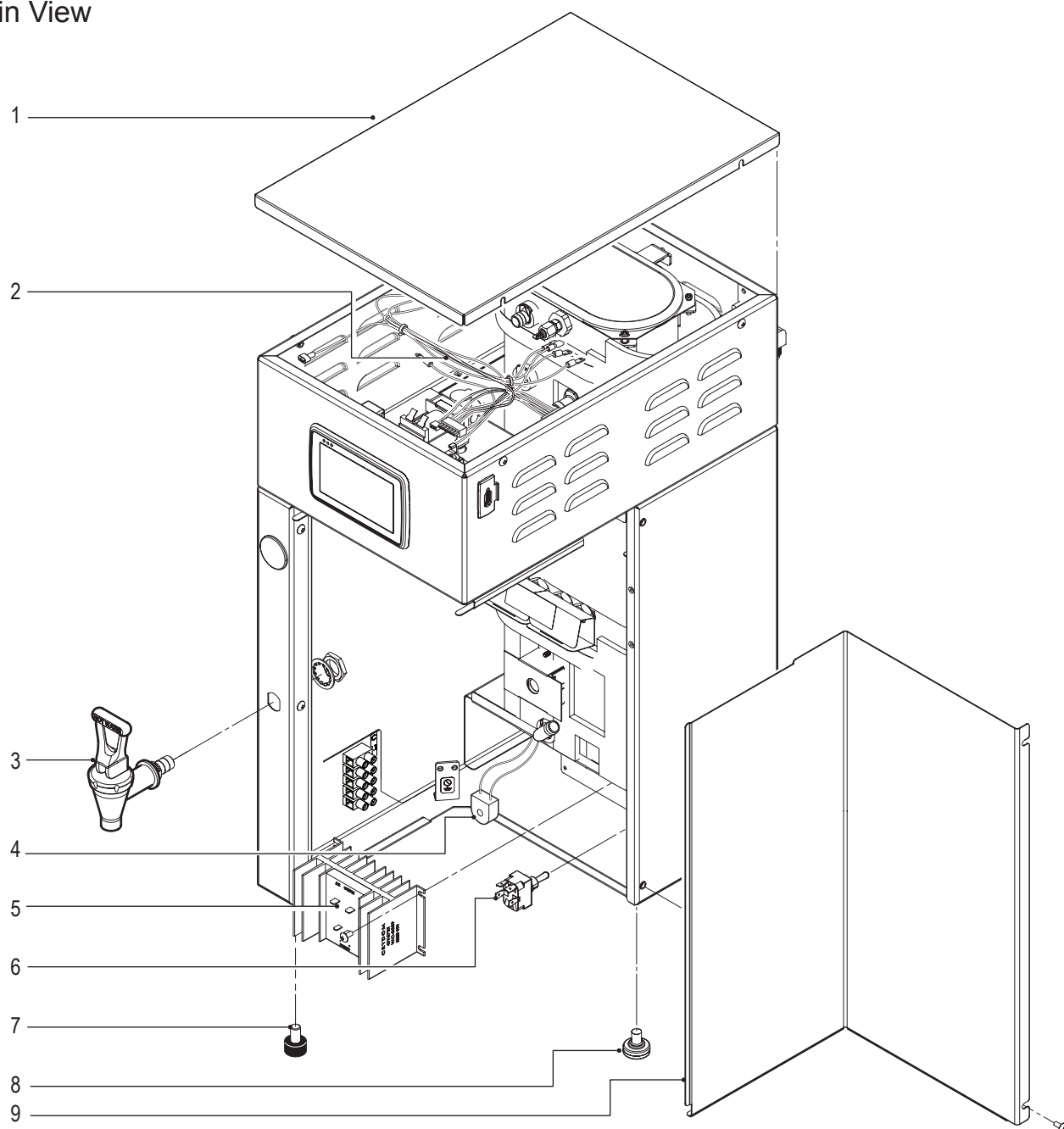
#### Case 2

As above, but user has selected 'Upload to USB' for settings/recipes file. With this action, the overwrite warning appears.



## Illustrated Parts

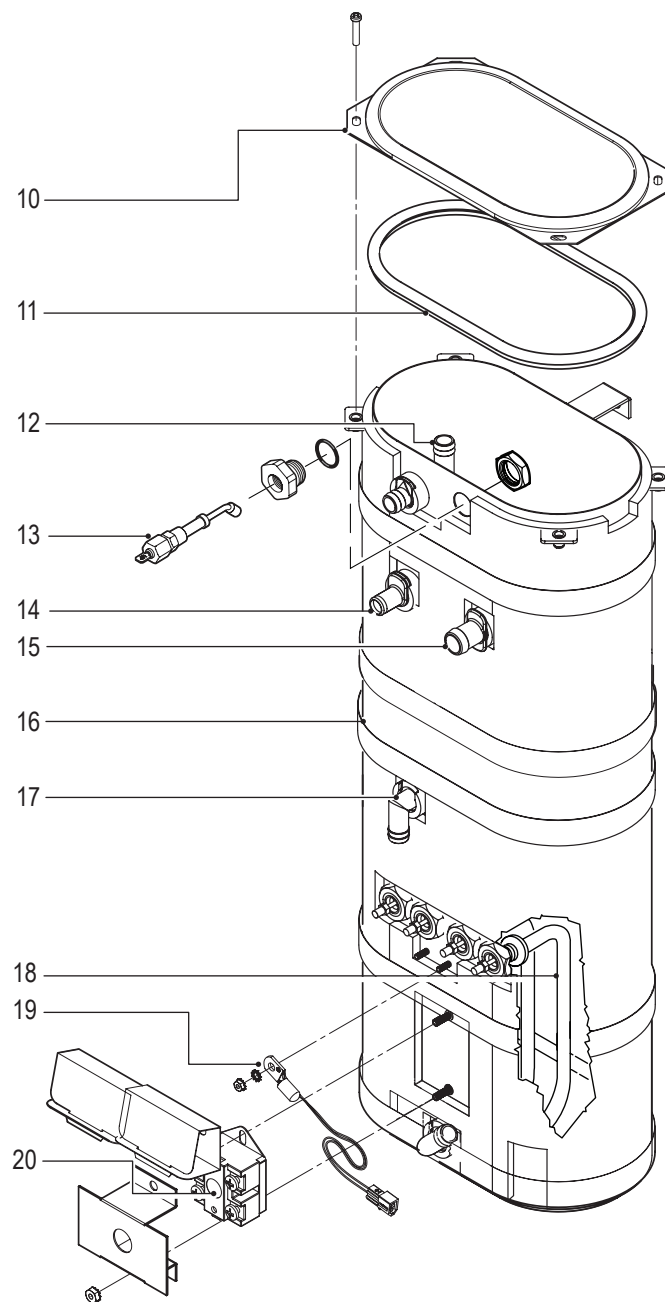
### Main View



ITEM №	PART №	DESCRIPTION
1	WC-61509	COVER, TOP WRAP
2	WC-13462	HARNESS ASSY, COMPLETE G4TP2S10/G4TPC25S10
3	WC-1825	FAUCET, ASSY HOT WATER TP2S, TP2T
4	WC-14045-101	CURRENT SENSOR ASSY G4
5	WC-8559*	RELAY, SOLID STATE 40A W/INTEGRATED HEAT SINK
6	WC- 103 *	SWITCH, TOGGLE NON-LIT DPST 25A 125/250VAC RESISTIVE
7	WC-3503*	LEG, 3/8"-16 STUD SCREW BUMPER
8	WC-3518*	LEG, GLIDE 3/8"-16 STUD SCREW
9	WC-58037-102	COVER, CENTER WRAP G4TP1S

\* RECOMMENDED PARTS TO STOCK

## Illustrated Parts Heating Tank

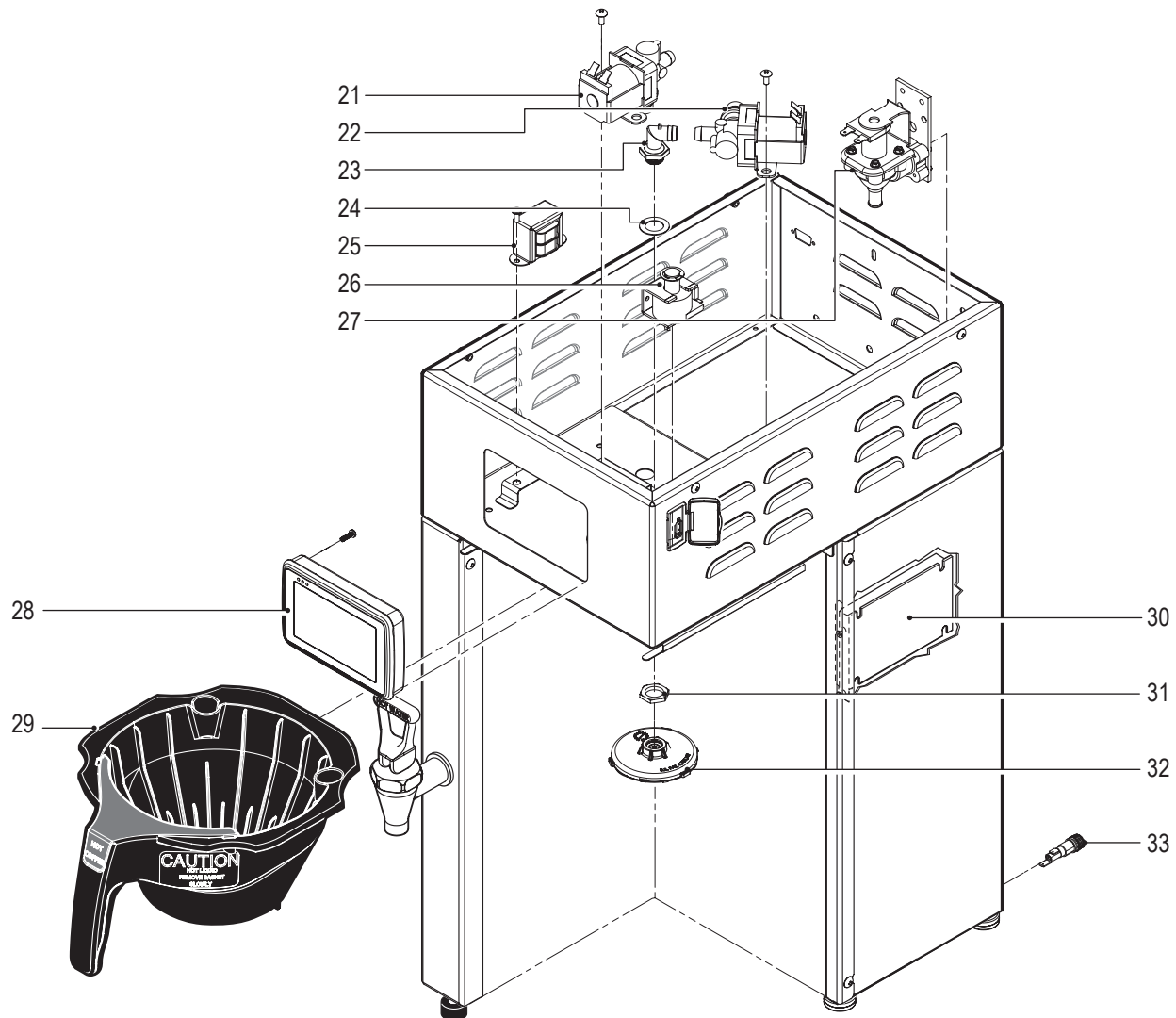


ITEM №	PART №	DESCRIPTION
10	WC-5853-102	COVER, TOP HEATING TANK
11	WC-43062*	GASKET, TANK LID
12	WC-37266*	KIT, TANK OVERFLOW ELBOW FITTING
13	WC-5502-01*	KIT, LIQUID LEVEL PROBE W/HEX FITTING, O-RING & NUT
14	WC-37317	KIT, STRAIGHT FITTING & BUSHING 8MM
15	WC-37357*	KIT, STRAIGHT PLASTIC FITTING & BUSHING 12MM
16	WC-62088DV	TANK COMPLETE, 1600W-120/220V
17	WC-37365*	KIT, TANK INLET FITTING
18	WC- 904-04*	KIT,ELEMENT, HEATING 1.6KW120V W/ JAM NUT & SILICONE WASHERS
19	WC-1438-101*	SENSOR, TEMPERATURE TANK
20	WC- 522*	THERMOSTAT, HI LIMIT HEATER DPST 277V-40A

\* RECOMMENDED PARTS TO STOCK

## Illustrated Parts

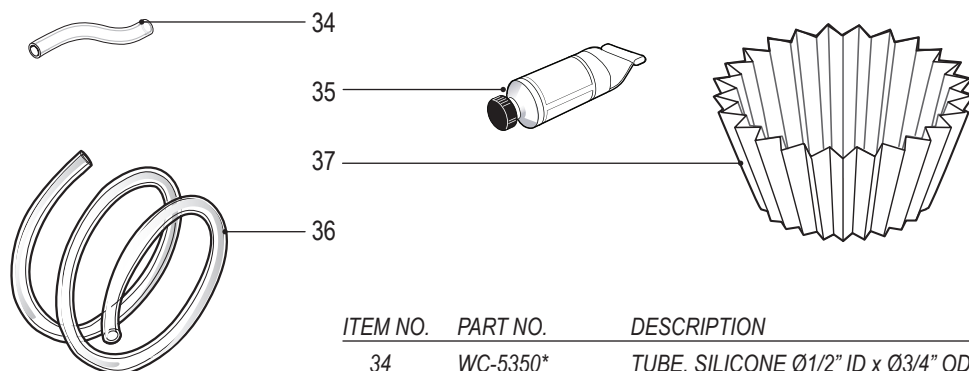
### Top Wrap



ITEM №	PART №	DESCRIPTION
21	WC- 844-101*	VALVE, BYPASS 120V-14W NON ADJUSTABLE W/RESTRICTOR (WC-2945)
22	WC-37122*	KIT, DUMP VALVE RIGHT
23	WC-2977-101K*	KIT, SPRAYHEAD FITTING PLASTIC
24	WC-43089*	GASKET, 1.00" OD x .625" ID x .030" THK RED SILICONE 40 SHORE
25	WC- 589-101	TRANSFORMER, 120/230V-24V 4.8A W/LEADS & MOLEX CONNECTOR
26	WC- 442*	SOLENOID, LOCK BREWCONE RIGHT 120VAC
27	WC- 847*	VALVE, INLET 2 GPM 120V-10W
28	WC-10000*	CONTROL MODULE (UCM), TOUCH SCREEN G4
29	WC-3417	BREW CONE, ASSY W/SPLASH POCKET BROWN STYLIZED GEM HOT COFFEE
30	WC-10001*	UNIVERSAL POWER MODULE - G4
31	WC-4212-02*	NUT, 5/8-18 JAM PLASTIC ULTEM
32	WC-29050*	SPRAYHEAD ASSY, AFS-AMBER
33	WC-1501	FUSE, HOLDER ASSY w/5A FUSE

\* RECOMMENDED PARTS TO STOCK

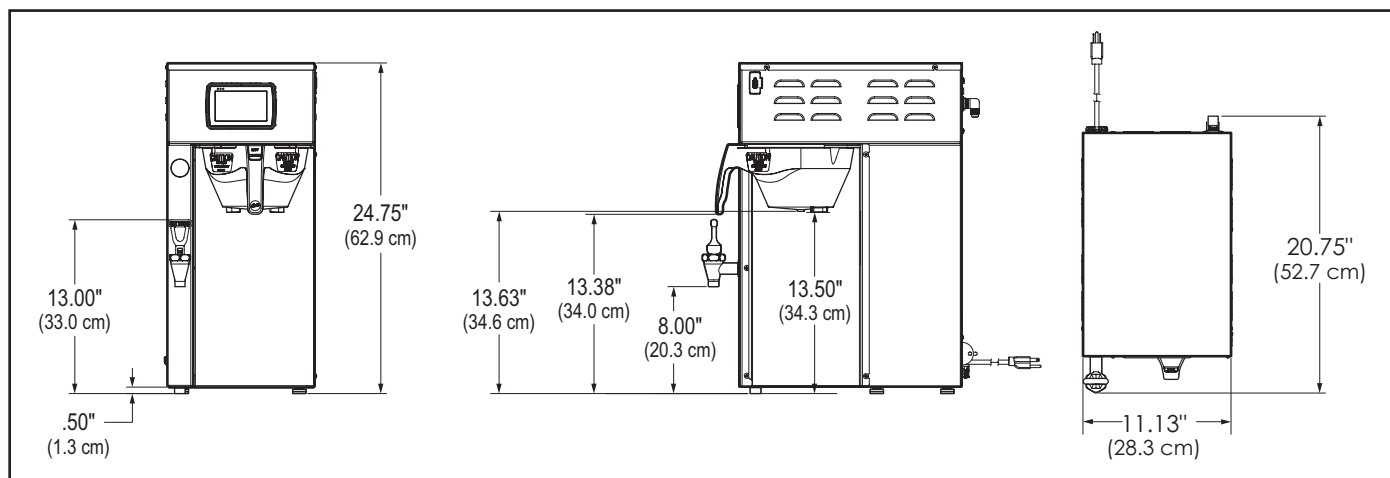
## Illustrated Parts List



ITEM NO.	PART NO.	DESCRIPTION
34	WC-5350*	TUBE, SILICONE Ø1/2" ID x Ø3/4" OD x 1/8" WALL
35	WC-5231*	COMPOUND, SILICONE 5 OZ TUBE
36	WC-5310*	TUBE, 5/16 ID x 1/8W SILICONE
37	GEM-6 *	FILTER, 500PK GEM-12/230A/WC-37308

\* RECOMMENDED PARTS TO STOCK

## Rough-In Drawing



## Cleaning the Coffee Brewer

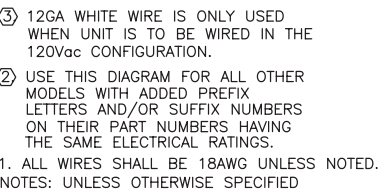
Regular cleaning and preventive maintenance is essential in keeping your coffee brewer looking and working like new.



**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.

1. Wipe exterior surfaces with a moist cloth, removing spills and debris.
2. Slide the brewcone out and clean it. Clean the sprayhead area with a moist clean cloth.
3. Rinse and dry the brewcone.
4. Drain drip tray of coffee. Wash out the drip tray. Dry the tray.
5. Rub a stainless steel polish on the outside surfaces to protect the brewer.

G4TP2S-63



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## Product Warranty Information

The Wilbur Curtis Company 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, the Wilbur Curtis Company 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. The Wilbur Curtis Company, Inc., assumes no responsibility for substitute replacement parts installed on Curtis equipment that have not been purchased from the Wilbur Curtis Company, Inc. The Wilbur Curtis Company 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. The Wilbur Curtis Company 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 Company 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.*

