G3 GEMX™ IntelliFresh® Coffee Brewing System with FreshTrac® Satellite

Style varies. Model GEMXSIFT shown.

READ AND SAVE THESE INSTRUCTIONS

NOTICE TO INSTALLER: Please leave this booklet with the machine.

Contact Information

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Due to continued product improvement, the products illustrated/photographed in this guide may vary slightly from the actual product.

Key Features

- LED notification of freshness timing.
- Digital control module - Provides precise control over all aspects of brewing: time, temperature, volume plus specialty coffee needs from pre-infusion to pulse-brewing to water bypass.
- Preset, one-touch Global Recipes – Based on coffee type, grind and weight. Simplifies profile setting for gourmet results every time.
- Industry's most effective mineral tolerant design.
- Patented fast-wetting AFS spray head and non-immersed water temperature sensor.
- Encapsulated control board – Protects against steam, water and impact.
- Field selectable for 0.5, 1.0 or 1.5 gal. (1.9, 3.8 or 5.7 L) batch brewing.

Specifications (Selected Models)

Electrical Supply Requirements

MODEL #	DESCRIPTION	PHASE	VOLTS	AMPS	HEATING CONFIG	WIRE	WATTS	HERTZ	CAPACITY
GEMXSIFT30A1000	Single, 1.5 Gallon with IntelliFresh®	1 PH	230 V	18.5 A	2 X 2000 W	2W + G	4050 W	50/60 Hz	12.0 gal./hr. [45.4 L/hr.]
GEMXSIFT63A1000	Single, 1.5 Gallon w/IntelliFresh, Dual Voltage	1 PH	120/220 V	13.5/13.5 A	2 X 1600 W	2W/3W + G	1650/2800 W	50/60 Hz	4.5/10.0 gal./hr. [17.0/37.9 L/hr.]
GEMXTIFT10A1000	Twin, 1.5 Gallon with IntelliFresh	1 PH	220 V	23.0/34.0 A	3 X 2500 W	3W + G	5100/7500 W	50/60 Hz	15.0/21.0 gal./hr. [56.8/79.5 L/hr.]
GEMXTIFT30A1000	Twin, 1.5 Gallon with IntelliFresh	1 PH	230 V	24.2 A	2 X 2500 W	2W + G	5574 W	50/60 Hz	15.0/21.0 gal./hr. [56.8/79.5 L/hr.]

Dimensions   Water Supply Requirements

MODEL #	HEIGHT	WIDTH	DEPTH	SHIP WEIGHT	SHIP CUBE	WATER CONNECTOR	WATER PRESSURE	MIN. FLOW RATE
GEMXSIFT30A1000 GEMXSIFT63A1000	31.87" [81.0 cm]	10.50" [26.7 cm]	22.68" [57.6 cm]	51.0 lb. [23.1 kg]	7.00 cu. ft. [0.20 m³]	3/8" flare	20 - 90 psi [138 - 620 kPa]	1.0 gpm [3.8 Lpm]
GEMXTIFT10A1000 GEMXTIFT30A1000	31.87" [81.0 cm]	18.17" [46.1 cm]	22.68" [57.6 cm]	85.0 lb. [38.6 kg]	10.90 cu. ft. [0.31 m³]	3/8" flare	20 - 90 psi [138 - 620 kPa]	2.0 gpm [7.6 Lpm]

Following are the factory default settings for the IntelliFresh brewer:

- Brew Temperature = 200°F (92°C)
- Water Bypass = On LARGE and MEDIUM brew only
- Brew Volume = Large-Medium-Small

- Energy Save Mode = Off
- Quality Timer = 120 Minutes
- Warmer Auto-Off = 18 Hours

Symbols

This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER - Indicates a hazardous situation which, if not avoided, <u>will</u> result in death or serious injury.

WARNING - Indicates a hazardous situation which, if not avoided, <u>could</u> result in death or serious injury.

CAUTION - Indicates a hazardous situation which, if not avoided, <u>could</u> result in minor or moderate injury.

NOTICE - Indicates a situation which, if not avoided, <u>could</u> result in property damage.

IMPORTANT - Provides information and tips for proper operation.

SANITATION REQUIREMENTS

WARNING - This product can expose you to chemicals including Acrylamide and Bisphenol A (BPA), which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information visit www.P65Warnings.ca.gov.

Important Safeguards/Conventions

WARNING:

- Make sure that this appliance is installed and grounded according to the INSTALLATION INSTRUCTIONS by qualified personnel before attempting to use it. Failure to follow the INSTALLATION INSTRUCTIONS could result in personal injury or void the warranty.

- This appliance is designed for commercial use. Any service other than cleaning and preventive maintenance should be performed by an authorized Wilbur Curtis service technician.

- To reduce the risk of fire or electric shock, DO NOT open the service panels. There are no user serviceable parts inside.

- Keep hands, arms and other items away from hot surfaces of the unit during operation.

- Clean the appliance and any dispensers <u>completely</u> before using them for the first time according to the CLEANING INSTRUCTIONS. Clean them regularly as instructed in the CLEANING INSTRUCTIONS.

- Use this appliance only for its intended use, brewing/dispensing hot and/or cold beverages/water.

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

- Avoid spillage onto the power (mains) connector.

CE Requirements

- This appliance must be installed in locations where it can be overseen by trained personnel.

- For proper operation, this appliance must be installed where the temperature is between 5°C to 35°C.

- This appliance is not suitable for outdoor use.

- This appliance shall not be tilted more than 10° for safe operation.

- An electrician must provide electrical service as specified in conformance with all local and national codes. For safe use, an all-pole disconnection must be incorporated into the fixed wiring in accordance with the wiring rules outlined in clause 7.12.2 of IEC 60335 for meeting the minimum electrical safety of this standard.

- This appliance must not be cleaned by water jet.

- This appliance can be used by persons aged from 18 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved.

- Keep the appliance and its cord out of reach of children aged less than 18 years.

- Appliances can be used by persons 18 years and above with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

- Children under the age of 18 years should be supervised to ensure they do not play with the appliance.

- If the power cord is ever damaged, it must be replaced by the manufacturer or authorized service personnel with a special cord available from the manufacturer or its authorized service personnel in order to avoid a hazard.

- Machine must not be immersed for cleaning.

- Cleaning and user maintenance shall not be made by children unless they are older than 18 years and supervised.

- This appliance is intended to be used in household and similar applications such as:

    – staff kitchen areas in shops, offices and other working environments;

    – by clients in hotels, motels and other residential type environments;

    – bed and breakfast type environments.

- This appliance not intended to be used in applications such as:

    – farm houses

- Access to the service areas permitted by Authorized Service personnel only.

- The A-Weighted sound pressure level is below 70 dBA.

⚠️ **WARNING:** Installation is to be performed only by a qualified installer.

⚠️ **WARNING:** Improper electrical connection may result in an electric shock hazard or damage the unit. This appliance must be properly grounded.

① **NOTICE:** DO NOT connect this appliance to a hot water supply. The water inlet valve is not rated for hot water. Do not exceed the maximum water pressure stated in the *SPECIFICATIONS* section.

ⓘ **IMPORTANT:** Observe all governing codes and ordinances.

Installation Instructions

Installation Requirements

- A secure surface capable of supporting the weight of the appliance.

- <u>For units without an attached cord set attached or dual voltage units set up for use with 220 - 240 Volts</u>: Appropriately sized, UL listed, grounding type power cable to meet the electrical specifications for the appliance. If you have questions about the correct cable size and length, consult a qualified installer. If the appliance will be hard wired to a junction box, the power cable must be long enough so that the unit can be moved for cleaning underneath.

- A grounded electrical connection to an electrical circuit that meets the electrical specifications of the appliance (see *SPECIFICATIONS*). The circuit must be protected by the appropriate sized circuit breaker. If you are not certain that the existing circuit meets the requirements for your unit, consult a licensed electrician.

- A water filtration system is required to maintain trouble-free operation. Wilbur Curtis Co., Inc. recommends a Wilbur Curtis approved water filter. See the Curtis Equipment Catalog for a full line of Wilbur Curtis approved water filters.

- Potable water supply line connection from the water filter capable of supplying the minimum flow rate required by the specifications. The water supply line must be able to connect to the flare fitting on the back of the unit. See the *SPECIFICATIONS* section for the correct size. The water line should also be capable of being controlled by a shut off valve. Do not connect the water line to a saddle valve or needle valve.

IEC requires the following water connection:

1 A quick disconnect or additional coiled tubing (at least two times the depth of the appliance) is required so that it can be moved for cleaning underneath.

2 This equipment is to 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.

The International Plumbing Code of the International Code Council and the Food and Drug Administration (FDA) Food Code manual, direct that this equipment must be installed with adequate back-flow prevention in compliance with federal, state and local codes. For units installed outside of the U.S.A., make sure that the installation is in compliance with the applicable plumbing/sanitation code for your area.

Installation

Leveling

⚠️ **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.

1   Position the brewer on the counter top. Level it left to right and front to back by turning the bottom of the legs.
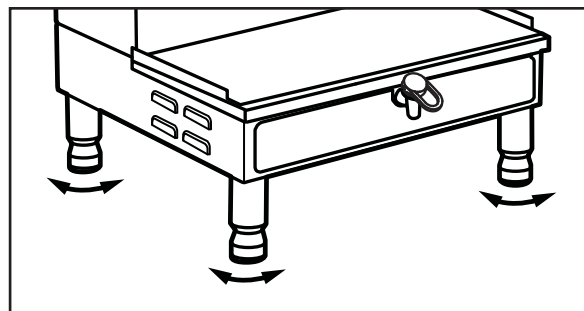
Connect the Water Supply

2   Flush the water supply line prior to installation to purge air and debris from the water filter and tubing.

3   Connect the water supply line to the flare fitting on the back of the brewer. Leave the water supply valve closed until the power is connected.
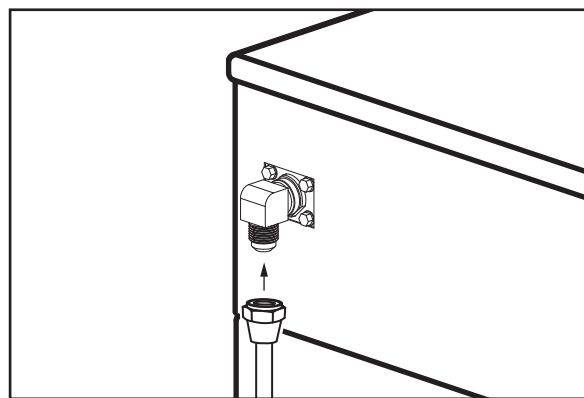
Connect the Brewer Wiring

Brewers Without A Cord Set Attached and Dual Voltage Brewers to be Operated 220 Volts

⚠️ **WARNING:** Turn off power to the junction box at the circuit breaker panel before connecting the power cable to the brewer. Lock out and tag the circuit breaker.

4   Remove the screws that hold the front panel in place and remove it.

5   Loosen the strain relief on the back of the brewer.

6   On dual voltage units being operated at 220 Volts (nominal) disconnect the existing power cable from the terminal block and remove.

7   Feed the 220 Volt power cable into the brewer.

8   On dual voltage units being operated at 220 Volts, disconnect and cap the jumper wire between the "C" and "N" terminals on the terminal block.

9   Connect the wires on the power cable to the terminal block inside the brewer.

10 Tighten the strain relief and replace the front panel.

11 Connect the power cable wires to the terminals in the junction box. See the ELECTRICAL SCHEMATIC for the power supply requirements.

Configuration varies with model

Front panel · Brew deck · Wiring label · Terminal block
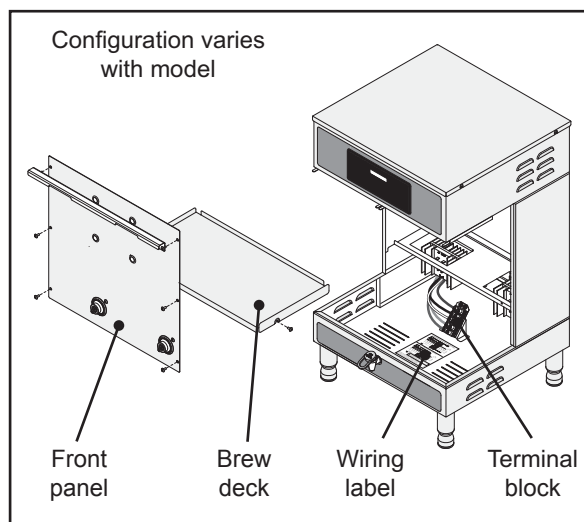
Connect the Brewer Wiring (cont.)

Brewers With A Cord Set Attached **-**

12 Connect the power cord to the appropriate type of electrical outlet.

⚠ **WARNING:** Connect the power cord to the appropriate type and size electrical outlet. If the electrical outlet is not compatible with the power cord, have it upgraded by a licensed electrician. Do not modify the power plug. Do not use an extension cord. Do not use a power cord/plug that is damaged.
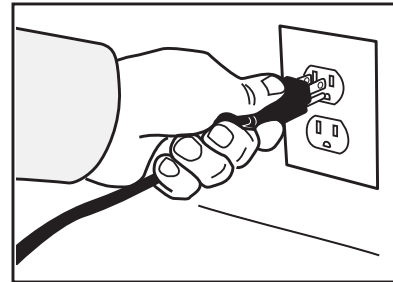
Power Up the Brewer

13 Turn on the water supply valve.

14 Make sure that the circuit breaker supplying power to the unit is on.

15 Turn the toggle switch on the back of the brewer to the ON position. The water tank will start to fill. While the tank is filling, inspect the water supply line for leaks.

16 Determine if the brewer will be setup for one, two or three batch mode. Find the appropriate label, included with the brewer. The three batch label has LARGE, MED and SMALL BREW on it, the two batch label has LARGE and SMALL BREW on it, and the one batch has only BREW on it.

17 Peel the protective backing off of the desired label and affix it to the front of the universal control module (UCM).

18 Go to the *PROGRAMMING GUIDE* section and program the brewer for the correct model and batch number.
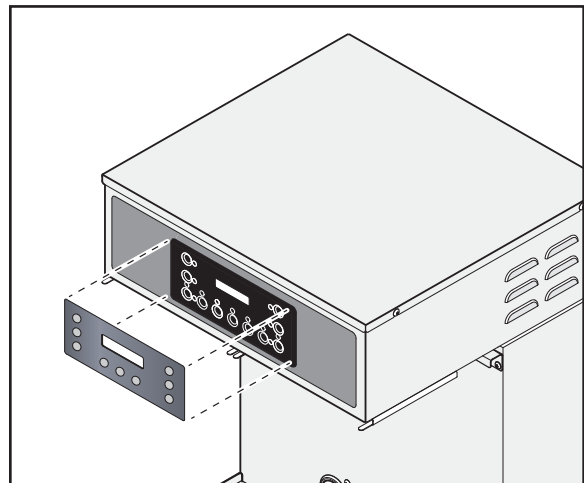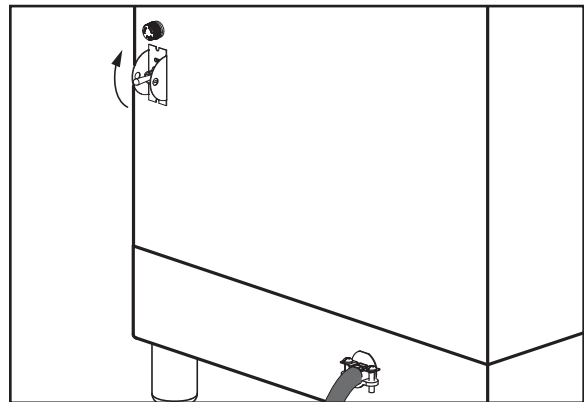
ⓘ **IMPORTANT:** When operating the brewer at higher elevations, reduce the factory set operating temperature (200°F/92°C) by 2°F/1°C for each 1000 ft./300 m of elevation above 4000 ft./120 m. See *PROGRAMMING GUIDE*.

19 If the UCM is not already lit, push the ON/OFF button on the UCM. When the water level in the tank rises to the correct volume, the heating elements will turn on automatically. Depending on the incoming water temperature and the electrical specifications, the water tank typically requires 20 to 30 minutes to reach the factory set operating temperature. When the water has heated, "Ready to Brew" should be on the display.

20 Before brewing for the first time, dispense 12 oz./350 ml of hot water through the hot water faucet to help purge air from the tubing inside the brewer.

21 Brew a cycle of at least 12 oz./350 ml, to purge any remaining air from the tubing. See *OPERATING INSTRUCTIONS*. During the initial brew cycle and whenever the filter is replaced, you may hear the sounds of air being purged from the filter, tubing and water tank.

Brewing Instructions

⚠️ **WARNING** - TO AVOID SCALDING, AVOID SPLASHING. Keep body parts clear of the brewer during brewing. Do not remove the brew basket while "Brewing" appears on the display.

❗ **NOTICE** - Only use GEM3XIFT IntelliFresh® satellites on GEMX™ series IntelliFresh brewers.

The G3 GEMX Intellifresh brewer is factory preset for optimal performance.
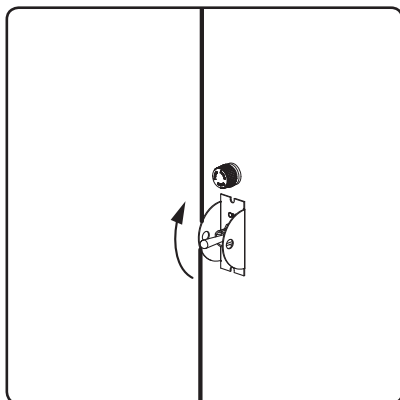
1 The brewer should be ON. Confirm this at the rear toggle switch. "Ready to brew" should be on the display.
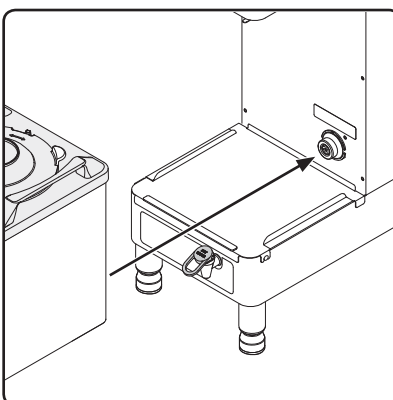
2 Place an empty GEMX IntelliFresh satellite under the brew basket. Make sure the satellite is pushed all the way back against the front cover and is making contact with the electrical socket.
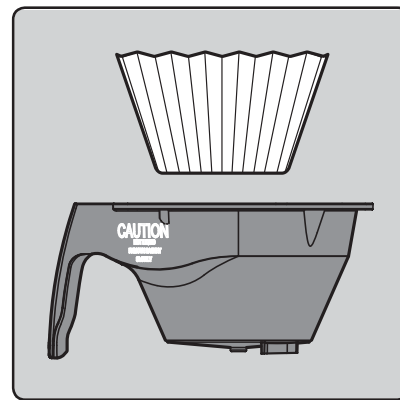
3 Insert a clean paper filter into the brew basket.
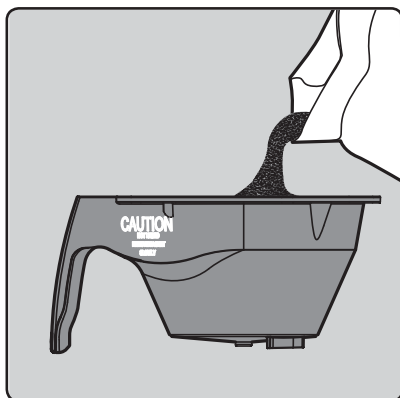
4 Fill with the proper amount of ground coffee. Level the coffee in the filter.
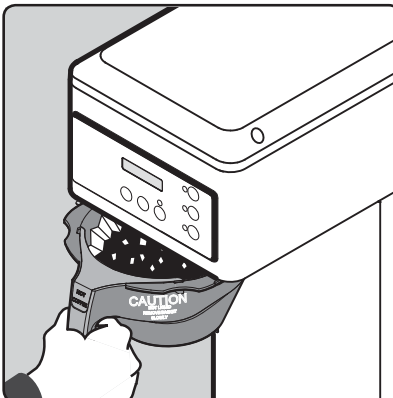
5 Slide the filled brew basket into the brew rails under the control panel. Slide it all the way back until it stops.
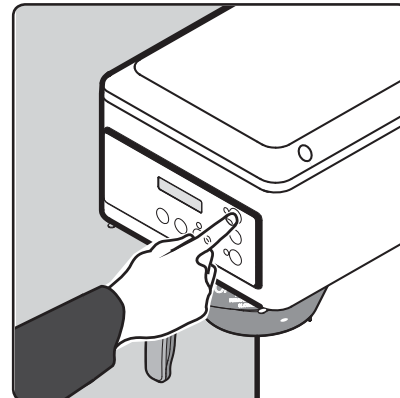
6 Press the brew button. Brewing will begin immediately.

The brewer will brew coffee based on the settings programmed into the universal control module (UCM). To change the settings, see the *PROGRAMMING GUIDE* section. When brewing starts, the warmer will come on inside the satellite. Press the warmer button to change the heat setting (low, medium, high).

Warmer Button

IntelliFresh Function and Features

The LED coffee level gauge on the front of the dispenser is also the indicator for the IntelliFresh Quality Timer system. When the quality timer is set to on (default), it alerts you to when the coffee has exceeded the programmed freshness time. The Quality Timer is activated via a signal sent through corresponding connectors from the brewer to the dispenser. When the warmer (automatically) shuts off, the coffee level gauge turns blue, provided there is still coffee in the dispenser. Otherwise the LEDs turn off completely.

See the *PROGRAMMING GUIDE* to change the Quality Timer settings, including freshness (quality) time and LED color.

ⓘ **NOTE:** After the brew cycle is complete, if the GEMX dispenser is transferred from the brewer to a Curtis IntelliFresh warmer stand, the following dispenser settings will remain the same: Quality Timer, Warmer Default (heat setting) and dispenser (Intellifresh) Color Scheme.

Brewer style varies with model number

LED Coffee level gauge/ Quality Timer

1½ Gallons

1 Gallon

½ Gallon
¼ Gallon

Volumes are approximate

Brew cycle

Warmer Auto-Off
18 Hrs after quality timer has expired

Quality timer - LEDs on constant
Setting range: 20 Min. to 230 Min.

LEDs flash after quality timer has expired, and continue until warmer shuts off.

LEDs flashing[1]

LEDs on constant[1]

LEDs flashing[2]

LEDs blue

Coffee Level Gauge LED Status

[1]Color 1 (coffee is fresh)
[2]Color 2 (coffee is no longer fresh)

Colors are user selectable, see *PROGRAMMING GUIDE*

LED Coffee Level Gauge - Intellifresh Quality Timer ON

Brew cycle

Warmer Auto-Off
18 Hrs after brew cycle completes

LEDs on constant[1]

LEDs on constant[1]

LEDs blue

Coffee Level Gauge LED Status

[1]Color 1: User selectable, see *PROGRAMMING GUIDE*
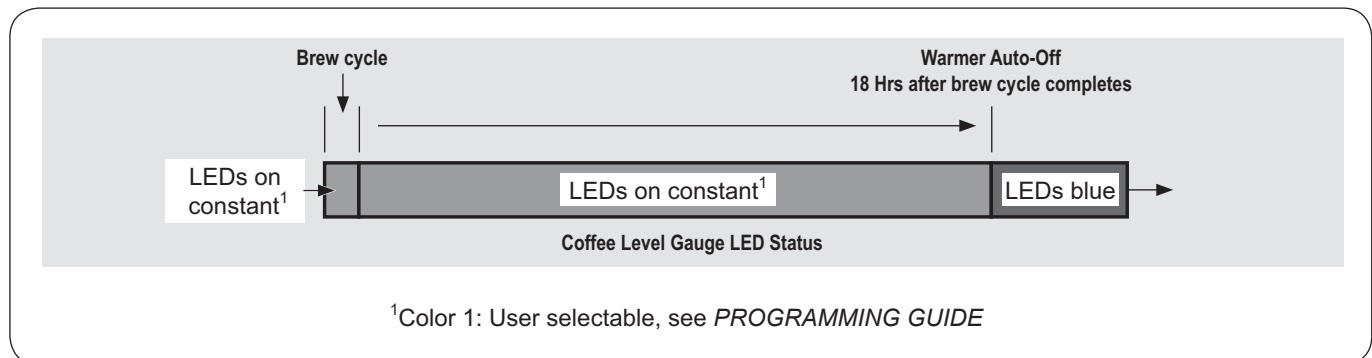
LED Coffee Level Gauge - Quality Timer OFF

⚠ **WARNING: HOT SURFACES** - To avoid injury, allow the brewer and dispenser(s) to cool before cleaning.

ⓘ **NOTICE** - Do not use cleaning liquids, compounds or powders containing chlorine (bleach) or corrosives. These products promote corrosion and will damage the finishes. **USE OF THESE PRODUCTS WILL VOID THE WARRANTY.**

Cleaning The Brewer - Daily

⚠ **WARNING:** DO NOT immerse the brewer in water or any other liquid.

The brewer should be OFF. Turn the brewer off by flipping the rear toggle switch to the OFF position.

1   Remove the dispenser(s). Wipe exterior brewer surfaces with a damp cloth to remove spills and debris.

2   Remove the brew basket(s) and clean them in a mild detergent solution. Use a soft bristled brush for hard to clean areas. Rinse with clean water, then dry.

3   Wipe the spray head area with a cloth soaked in a mild detergent solution. Rinse with a cloth soaked with clean water removing any residual detergent. Use a clean, soft cloth to dry.

4   Dump out the drip tray(s) (if applicable). Rinse with clean water, then dry with a soft, clean cloth.

Cleaning The Brewer - Weekly

The brewer should be OFF. Turn the brewer off by flipping the rear toggle switch to the OFF position.

1   Remove the spray head(s), unscrewing counterclockwise from the dome plate.

2   Thoroughly clean and rinse the dome plate area.

3   Clean the brew basket rails with a brush soaked with a mild detergent solution. Rinse the area with a cloth soaked with clean water, removing any residual detergent.

4   Dry the area with a soft, clean cloth.

5   Reattach the spray head(s).

Cleaning the Dispenser (Daily)

The following cleaners are required to properly maintain the dispenser:

- Mild solution of dish-washing detergent and warm water
- TABZ™ Z95 Coffee Equipment Cleaner Tablets (Curtis PN WC-79000)
- One-Pro Beverage Equipment Cleaner (Curtis PN WC-79001)

⚠️ **WARNING:** DO NOT immerse the dispenser in water or any other liquid. Do not place the dispenser in a dishwasher. Doing so will void the warranty. Do not use harsh powders or cleansers containing chlorine. Do not use a wire brush or scouring pad to clean inside the liner. **To avoid damage, DO NOT use a brush to clean the faucet or the inside of the faucet shank (outlet)**.

ⓘ **IMPORTANT:** Clean the dispenser daily to avoid the build up of coffee oil residue on the Intellifresh® sensors inside the liner. Residue build up may cause the Intellifresh indicator to malfunction.

Cleaning the Liner

1   Remove the dispenser from the brewer and remove the lid. Set the lid aside. Rinse out the liner.

2   **Wash** - Prepare a mild solution of detergent and warm water. Wipe the exterior surfaces of the dispenser with a sponge moistened with the detergent solution to remove spills and debris. Fill the liner with the detergent solution. Take a soft nylon brush and scrub out the stainless steel liner.

3   **Rinse** - Rinse out the liner with clean, warm water.

4   **Sanitize** - Drop one TABZ Z95 tablet into the liner. Fill to the top with hot water (122°F/50°C min.). Stir the contents. Allow the liner to soak for 5 to 10 minutes.

5   Open the faucet and drain out the dispenser (to clean the faucet shank).

6   Fill the liner to the top with clean, warm water and drain through the faucet (to rinse the faucet shank).

7   Fill the liner to the top with water a second time and drain through the faucet.

8   Disassemble the faucet - Unscrew the handle/bonnet assembly from the top of the faucet and remove it. Inspect the seat cup for wear. Replace the seat cup if it is damaged.

9   **Air Dry** - Turn the dispenser upside down and allow to air dry.

continued...

Style may vary

Handle

Bonnet

Seat cup

Wilbur Curtis

Wilbur Curtis
Ready to Brew*

To enter programming mode:

With unit OFF, press and hold bottom right BREW button (4). Then press and release ON/OFF button (2). Continue to hold down BREW button until Enter Code appears.

* "Ready" on some models

Entering
Programming Mode

Enter Code
- - - -

Enter 4 digit code.
(factory default = 1-2-3-4)

LARGE BREW   BREW LARGE
MEDIUM BREW   BREW MEDIUM
SMALL BREW   BREW SMALL
① ② ③ ④

Program menus
<-- Select -->

Label style may vary

Global Recipes <-- Select -->	Non-Brew Prog <-- Select -->	Brew Button Prog <-- Select -->	Language <-- Select -->	Model Select <-- Select -->	Exit <-- Select -->
Press ⊙	Press ⊙	Press ⊙	Press ⊙	Press ⊙	Press ⊙
See Global Recipes Menu section	See Non-Brew Programming Menu section	See Brew Button Programming Menu section	See Language Menu section	See Model Select Menu section	

LARGE BREW   BREW LARGE
MEDIUM BREW   BREW MEDIUM
SMALL BREW   BREW SMALL
Program Menus
<-- Select -->
◄ ⊙ ►
ON/OFF

Label style may vary

i **IMPORTANT:** All programming functions are performed with the three center buttons.

The symbols below the buttons are:

◄   Scroll LEFT/UP (1)
⊙   SELECT or ENTER to save new parameter (2)
►   Scroll RIGHT/DOWN (3)

Once you enter programming mode, press ◄ or ► to scroll LEFT or RIGHT to the various menus (Global Recipes, Non-Brew Prog, Brew Button Prog, etc.). Press ⊙ (SELECT) to enter a menu. Then press ◄ or ► to scroll UP or DOWN through a menu. When the desired menu item appears on the screen, press ⊙ (SELECT) to access. See *Programming Options* for detailed descriptions.

Programming Options

See the previous page for instructions on accessing each individual menu.

Some menus save and exit automatically when a parameter is updated. Other menus exit to the previous menu when a parameter is saved. To exit, press ► until EXIT appears on the display, then press ⊙.

Global Recipes Menu

Select from the following coffee recipes: Gourmet STD (standard), Light Roast, Dark Roast, High Yield, Filter Pack, or Decaf. The factory default setting is Gourmet STD. Selecting the recipe sets the temperature and brew settings to the factory recommended settings for the recipe selected. If desired, the individual brew settings may be changed once the recipe has been selected to meet your brewing needs as shown in the *Brew Settings* section.

ⓘ IMPORTANT: If you change any of the brewer settings on the following pages, some or all of them may be modified if you change the coffee recipe afterward using the *Global Recipes Menu*.
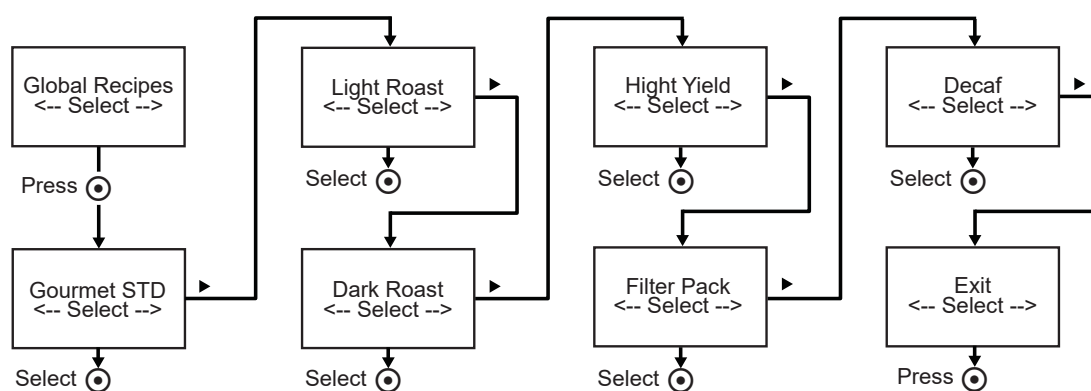
Recipe Default Brew Settings (all models except TP1 series)						
	Temperature	Pulse Brew	Bypass Large	Bypass Medium	Bypass Small	Pre-Infusion
Gourmet STD	200°F/92°C	C	35%	10%	0%	OFF
Light Roast	200°F/92°C	C	45%	15%	0%	OFF
Dark Roast	196°F/91°C	OFF	25%	5%	0%	60/60
High Yield	192°F/89°C	OFF	35%	10%	0%	60/60
Filter Pack	200°F/92°C	C	0%	0%	0%	OFF
Decaf	200°F/92°C	C	0%	0%	0%	OFF

Recipe Default Brew Settings (TP1 series)						
	Temperature	Pulse Brew	Bypass Large	Bypass Small	Pre-Infusion
Gourmet STD	200°F/92°C	C	10%	0%	OFF
Light Roast	200°F/92°C	C	15%	0%	OFF
Dark Roast	196°F/91°C	OFF	5%	0%	60/60
High Yield	192°F/89°C	OFF	10%	0%	60/60
Filter Pack	200°F/92°C	C	0%	0%	OFF
Decaf	200°F/92°C	C	0%	0%	OFF

Non-Brew Programming Menu

Non-Brew Prog
<-- Select -->

Press ⊙

Temperature
<-- Select -->

Select ⊙

Energy Save Mode
<-- Select -->

Select ⊙

Brew Count Odom
<-- Select -->

Select ⊙

Quality Timer [1,2]
<-- Select -->

Select ⊙

Brew Count Total
<-- Select -->

Select ⊙

Cold Brew Lock
<-- Select -->

Select ⊙

Master Reset
<-- Select -->

Select ⊙

Service Call
<-- Select -->

Select ⊙

Access Code
<-- Select -->

Select ⊙

Banner Name
<-- Select -->

Select ⊙

Warmers Auto-Off [1]
<-- Select -->

Select ⊙

P-Maintenance
<-- Select -->

Select ⊙

Beeper On/Off
<-- Select -->

Select ⊙

Drip-Out Mode
<-- Select -->

Select ⊙

Warmers Default [1,2]
<-- Select -->

Select ⊙

Display Brew Time
<-- Select -->

Select ⊙

Display Messages
<-- Select -->

Select ⊙

Display Timers
<-- Select -->

Select ⊙

QT Alarm On/Off
<-- Select -->

Select ⊙

Satellite Color
<-- Select -->

Select ⊙

Server Lockout
<-- Select -->

Select ⊙

Exit
<-- Select -->

Press ⊙

[1] Visible only when model selected =
Gemini or Gemini-IF (Twin or Single)

[2] Visible only when model selected =
GEMX (Twin or Single)

Temperature - sets the brewing temperature of the water held in the water tank. The factory default setting is 200°F/92°C (Gourmet STD). The setting range is 170°F to 206°F (77°C to 97°C). Once accessed, press ◄ or ► to choose the desired temperature. Then press ⊙ to set and exit.

Energy Save Mode - saves energy during periods when the brewer is not in use. The factory default setting is Off. When set to On or On-140°F, the brewer automatically shuts off four hours (two hours on older units) after the last brew cycle. Press the ON/OFF button to return to normal operation. Use the On-140°F setting to reach brewing temperature faster. On-140°F keeps the water temperature at 140°F (60°C) during periods of non-use. Once accessed, press ◄ or ► to choose the desired setting. Then press ⊙ to set and exit.

Brew Count Odom - When accessed, this feature displays the total brew cycles since the odometer was last reset. Press ◄ to exit or ⊙ reset and exit.

Quality Timer - (Gemini models) notifies the user that the coffee is no longer fresh. See the *INTELLIFRESH®* *FEATURES* section for a complete description of how the timer operates. The factory default setting is 2 hours (Off for GEMS and GEMT models). The setting range is 20 minutes to 4 hours for GEMSIF/GEMTIF series and 20 minutes to 3 hours, 50 minutes for GEMX series. Once accessed, press ◄ or ► to choose the desired setting. Then press ⊙ to set and exit.

Non-Brew Programming Menu (cont.)

Brew Count Total - when accessed, displays the total brew cycles on the brewer. It cannot be reset. The display returns to the previous screen automatically after a few seconds.

Cold Brew Lock - adjusts the temperature at which the brewer will brew coffee when the BREW button is pressed (**Ready to Brew** appears on the display). The factory default setting is 5°F (3°C) below the water tank temperature setting. This feature also adjusts the temperature at which the heating element turns on to reheat the water in the tank. The available settings are 5°F, 15°F (8°C) and Off. Once accessed, press ◄ or ► to choose the desired setting. Then press ⊙ to set and exit.

Master Reset - resets the brewer universal control module (UCM) to the factory default settings. Once accessed, "Are You Sure?" will appear on the display. Press ◄ for Yes or ► for No.

Service Call - sets the service phone number that appears on the display when the UCM detects a SENSOR ERROR or WATER ERROR . Once accessed, press ◄ or ► to choose the number to be changed. Then press ⊙ repeatedly to change the number value. Press ◄ or ► to choose the next number to change or choose exit and press ⊙.

Access Code - sets the access code entered to access programming mode. The factory default is 1-2-3-4. Once accessed, press ◄ or ► to choose the number to change. Then press ⊙ repeatedly to change the number value (the range is 1 to 4). Press ◄ or ► to choose the next number to change or choose exit and press ⊙.

Banner Name - changes the company name that appears on the display. The factory default is **Curtis**. No name appears when all blanks are entered. Once accessed, press ◄ or ► to choose the letter to change. Then press ⊙ repeatedly to change the number value. Press ◄ or ► to choose the next number to change or choose ex and press ⊙ to exit.

Warmer Auto-Off - (GEMS, GEMT, GEMSIF, GEMTIF models) adjusts the length of time that elapses before the dispenser warmer shuts off automatically. This function takes priority over the quality timer. The factory default setting for GEMSIF/GEMTIF is 10 hours. For GEMS/GEMT the default is "disabled". The setting range is 1 to 12 hours. Once accessed, press ◄ or ► to adjust the number of hours. Then press ⊙ to set and exit.

P-Maintenance - turns on/off and adjusts the P-Maintenance (preventive maintenance) brew monitor. The factory default setting is Off. When On, the UCM measures the number of gallons brewed before the P-Maintenance reminder appears on the display. The setting range is 0 to 9500 gallons (36,000 liters). Once accessed, press ◄ or ► to choose the desired setting, then, press ⊙ to exit.

Beeper On/Off - turns the beeper that is heard each time a button is pressed on or off. The factory default setting is On. Once accessed, press ◄ or ► to choose the desired setting. Then, press ⊙ to exit.

Drip-out Mode - sets the drip-out mode timer. After water stops flowing, it allows additional time for the coffee to drain from the brew basket before the brew basket lock releases. The factory default is 2 min. This feature reduces the chance that the brew basket will be removed too early. The setting range is 0 to 5 minutes. Once accessed, press ◄ or ► to choose the desired setting, then, press ⊙ to exit.

Warmers Default - (Gemini models) sets the warmer temperature. The factory default setting is MED. The available settings are Off*, HIGH (188°F/87°C), MED (185°F/85°C) or LOW (182°F/83°C)**. Once accessed, press ◄ or ► to choose the desired setting, then press ⊙. On twin brewers press ◄ or ► to choose the desired setting for the second warmer, then press ⊙. Press ⊙ to exit.

*Off option not available on GEMX series models.
**GEMIF and GEMX only - based on a brew temperature of 200°F(92°C).

Non-Brew Programming Menu (cont.)

Display Brew Time - turns the display of the brew time during brewing On or Off. The factory default setting is On. Once accessed, press ◄ or ► to choose the desired setting, then press ⊙ to exit.

Display Messages - turns display of the message "Rinse Server Before Brewing" On or Off The factory default setting is On. Once accessed, press ◄ or ► to choose the desired setting, then press ⊙ to exit.

[QT] Display Timers [On/Off] - (some models, QT Alarm must be on) turns the quality timer countdown display On or Off. The factory default setting is Off. Once accessed, press ◄ or ► to choose the desired setting. Then, press ⊙ to exit.

QT Alarm On/Off - (Gemini models) turns the quality timer audio alarm On or Off. The factory default setting is On for GEMS/GEMT models, Off for GEMIF and GEMX models. An audible alarm goes off when the quality timer has expired. Once accessed, press ◄ or ► to choose the desired setting. Then, press ⊙ to exit.

Satellite Color - (GEMX series models only) changes the color scheme of the quality timer LEDs on the dispenser (satellite). Once accessed, press ◄ or ► to choose the desired color to indicate "fresh" (On). Press ⊙ to save, then press ◄ or ► to choose the desired color to indicate "expired". Press ⊙ to save and exit.

Server Lockout - (GEMX series models only) turns the lockout feature On or Off. The factory default setting is Off. When set to On, the BREW button is disabled when there is fluid in the dispenser, provided that an IR equipped dispenser is in use (LOCKED appears on the display). Once accessed, press ◄ or ► to choose the desired setting. Press ⊙ to save and exit.

Brew Button Programming Menu

When you first enter the Brew Button Programming menu, you will be asked to select (press) a BREW button to change the settings for. To program more than one BREW button, finish programming the first, then press ► until Exit appears on the display. Press ⊙ to exit, then re-enter the Brew Button Program to program the next one. The default brew settings assume that the amber AFS spray head is installed.
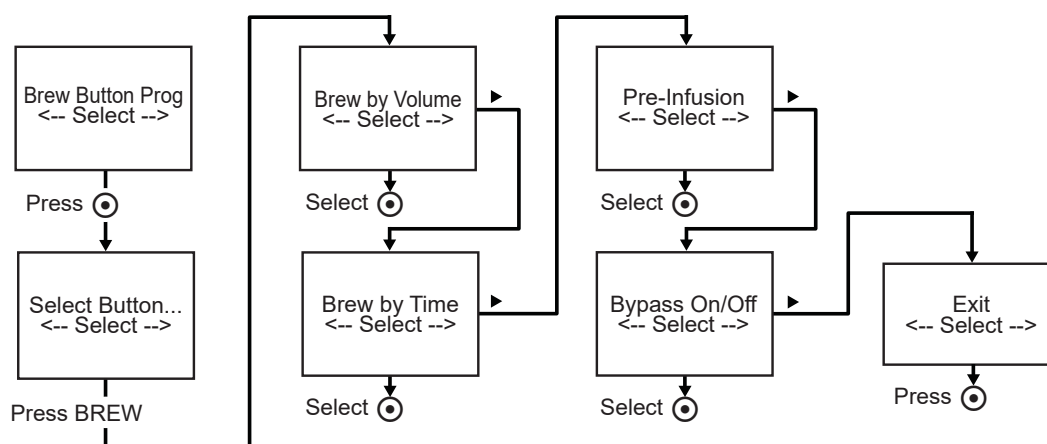
Brew by Volume - adjusts the volume brewed. The factory default settings are LARGE* 200 oz. ±8oz./5.9 L ±236 ml, MEDIUM** 132 oz. ±6oz./3.9 L ±177 ml, SMALL 64 oz. ±4oz/1.9 L ±118 ml. With a dispenser in place, press the BREW button that is illuminated. When the desired volume is reached, press the same BREW button again to stop the brew cycle and set the volume.

* Not applicable to TP1 series.
** This is the LARGE setting for TP1 series brewers.

Brew Button Programming Menu (cont.)

Brew by Time - adjusts the amount of coffee brewed by time rather than by volume. The factory default settings are LARGE* 5 min.-25 sec., MEDIUM** 3 min.-32 sec., SMALL 1 min.-52 sec. Once accessed, press ◄ or ► until the number of minutes is flashing. Then press ⊙ repeatedly to change the number value. Press ◄ or ► until the number of seconds is flashing. Then press ⊙ repeatedly to change the number value. Press ◄ or ► until "ex" is flashing, then, press ⊙ to exit.

* Not applicable to TP1 series.
** This is the LARGE setting for TP1 series brewers.

Pre-Infusion - sets the brewer Pre-Infusion time (Pulse Brew must be off to access, the factory default setting is Disabled). Pre-Infusion increases control of coffee clarity and extraction. When turned on, the setting range is 0 to 60 seconds. Once accessed, press ◄ or ► to choose the desired setting, then, press ⊙ to exit. To turn off pulse brew mode, choose 0 for the time.

ⓘ   When Pre-infusion is On, Pulse Brew disappears from the list of menu items.

Pulse Brew - selects the pulse brew pattern (Pre-Infusion must be off to access, the factory default setting is C). The pulse brew pattern selected "tunes" or changes the flavor of the coffee. Once accessed, press ◄ or ► to choose the desired setting. Then, press ⊙ to exit.

ⓘ   When Pulse Brew is On, Cold Brew Lock is set to within 5°F (3°C) of the water temperature level and, Cold Brew Lock and Pre-Infuson disappear from the list of program selections.

Setting	Description
A	Toward the beginning of brew cycle: 4 cycles of 10 seconds on and 10 seconds off, then on until end of brew cycle.
B	Starts towards ends of brew cycle. 4 cycles of 10 seconds off and 4 cycles of 10 seconds on. Ends when brew cycle ends.
C	Starts at beginning of brew cycle. 5 cycles of 25 seconds on and 20 seconds off, then on until end of brew cycle.
D	Manually set. Starts at beginning of brew cycle. Number of pulses is adjustable from 1 to 20. Pulse on time and off time are both adjustable from 5 to 150 seconds.
E	Manually set. Starts at beginning of brew cycle. Number of pulses is adjustable from 1 to 8. Pulse on time and off time are both adjustable from 1 to 150 seconds.

Pulse Brew Guidelines

- Filter pack type coffees typically extract better with the A and B pulse setting.
- Decaffeinated 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.

By-Pass - helps control extraction with larger brews. The factory default settings are LARGE 35% (10% for TP1 series), MEDIUM 10%, SMALL Off. It reduces contact time to avoid extraction of undesirable bitter and harsh flavor compounds. The setting range is 0% to 50%. Once accessed, press ◄ or ► to choose the desired setting, then, press ⊙ to exit.

Language Menu - changes the language that appears on the display. The factory default setting is English. This feature is programmable for changing and adding languages. Once accessed, press ◄ or ► to choose the desired setting, then press ⊙ to exit.

Model Select Menu - changes the model number and number of batches (to match the label on the universal control module, the factory default is Gemini-Twin, One batch). Once accessed, press ◄ or ► until the model number matching the model number label on the brewer appears, then press ⊙. Press ◄ or ► until the number of batches matches the number of batch sizes on the UCM label, then press ⊙ to exit.

```
Model Select
<-- Select -->

Press ⊙

TP/TPX Twin          ►
<-- Select -->

Select ⊙
        Go to (A)

TP/TPX - Single     ►
<-- Select -->

Select ⊙
        Go to (A)

Gemini - Twin        ►
<-- Select -->

Select ⊙
        Go to (A)

Gemini - Single      ►
<-- Select -->

Select ⊙
        Go to (A)
```

```
Milano Twin          ►
<-- Select -->

Select ⊙
        Go to (A)

Milano Single        ►
<-- Select -->

Select ⊙
        Go to (A)

Gemini - Twin IF     ►
<-- Select -->

Select ⊙
        Go to (A)

Gemini - Single IF   ►
<-- Select -->

Select ⊙
        Go to (A)
```

```
GEMX - Twin          ►
<-- Select -->

Select ⊙
        Go to (A)

GEMX - Single        ►
<-- Select -->

Select ⊙
        Go to (A)

TPIG/TPXIG Twin      ►
<-- Select -->

Select ⊙
        Go to (B)

TPIG/TPXIG-Singl     ►
<-- Select -->

Select ⊙
        Go to (B)
```

(A)

```
One Batch            ►
<-- Select -->

Press ⊙

Two Batch            ►
<-- Select -->

Press ⊙

Three Batch          ►
<-- Select -->

Press ⊙
```

(B)

```
One Batch            ►
<-- Select -->

Press ⊙

Two Batch            ►
<-- Select -->

Press ⊙
```

* Factory default: Gemini ® double - one batch

GEMXSIFT - Single Coffee Brewer

With high volume
brew basket

0.23 in
[0.58 cm]

11.31 in
[28.7 cm]

10.50 in
[26.7 cm]

31.87 in
[81.0 cm]

7.92 in
[20.1 cm]
CUP
CLEARANCE

4.00 in
[10.2 cm]

With standard
brew basket

0.92 in
[2.3 cm]

12.01 in
[30.5 cm]

5.48 in
[13.9 cm]

6.79 in
[17.2 cm]

18.31 in
[46.5 cm]

22.68 in
[67.6 cm]
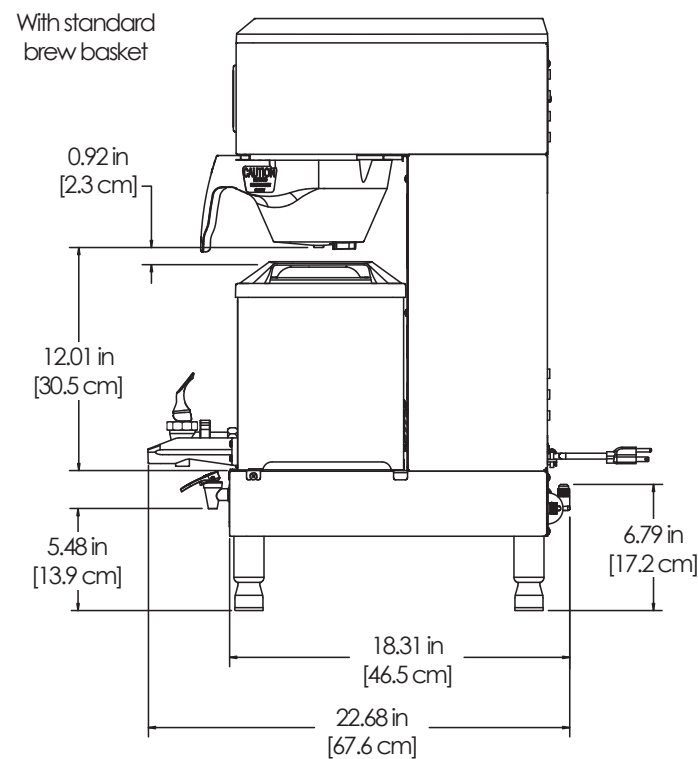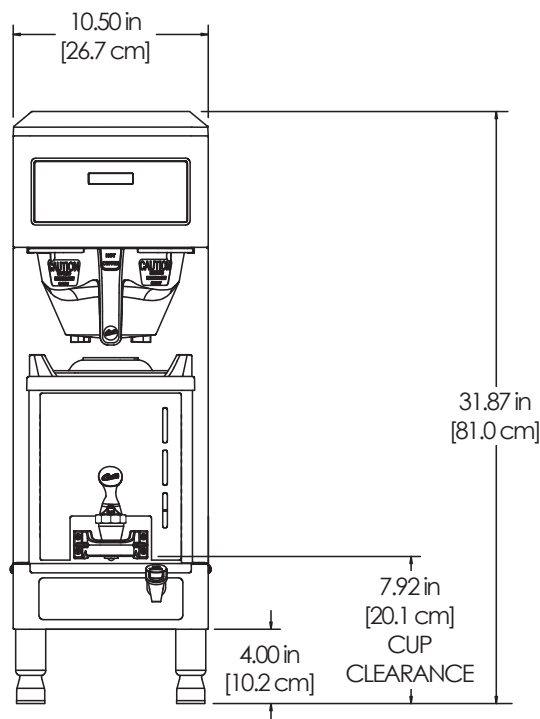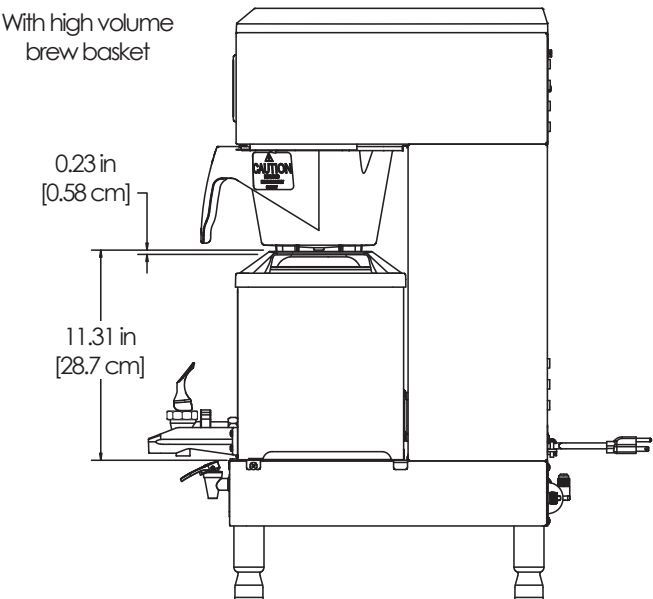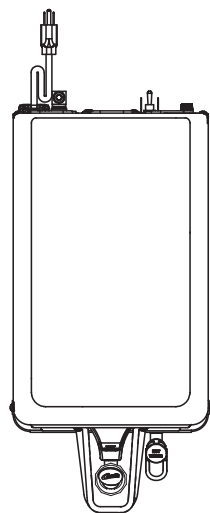
GEMXTIFT - Twin Coffee Brewer

With high volume
brew basket

0.26 in
[0.66 cm]

11.35 in
[28.8 cm]

18.17 in
[46.1 cm]

With standard
brew basket

0.91 in
[2.3 cm]

31.87 in
[81.0 cm]

12.01 in
[30.5 cm]

26.43 in
[67.1 cm]

7.92 in
[20.1 cm]
CUP
CLEARANCE

4.00 in
[10.2 cm]

5.52 in
[14.0 cm]

18.31 in
[46.5 cm]

22.68 in
[67.6 cm]

GEM3XIFT - Dispenser

9.04 in
[23.0 cm]

9.17 in
[23.3 cm]

4.68 in
[11.9 cm]

11.09 in
[28.2 cm]

11.42 in
[29.0 cm]
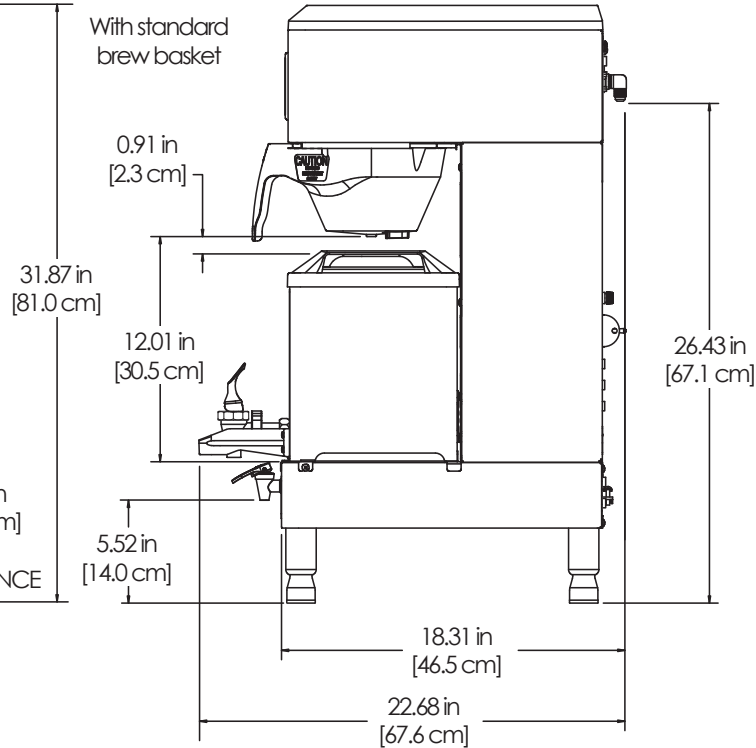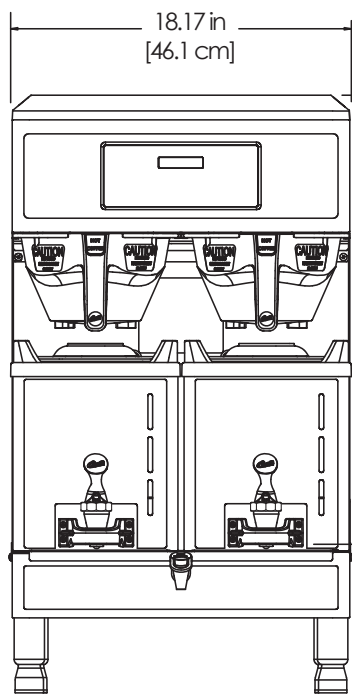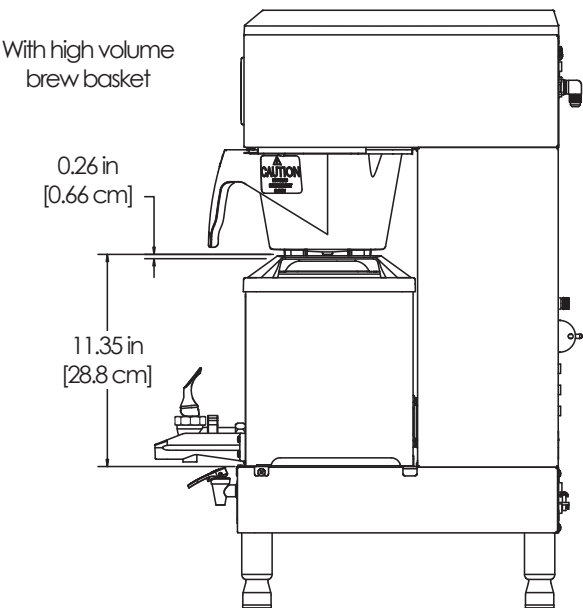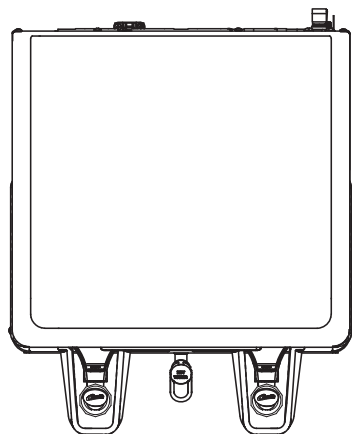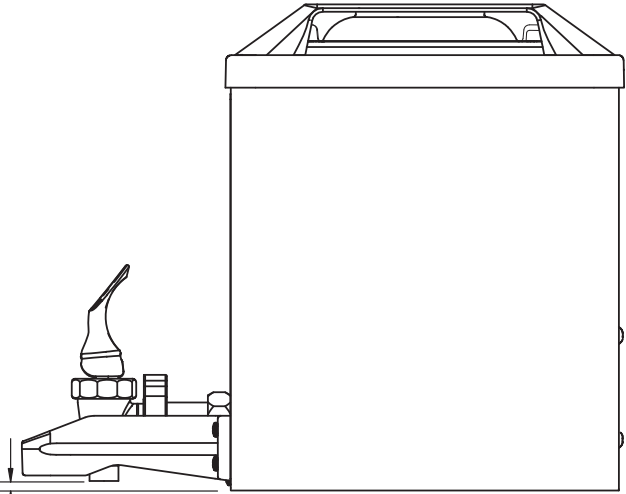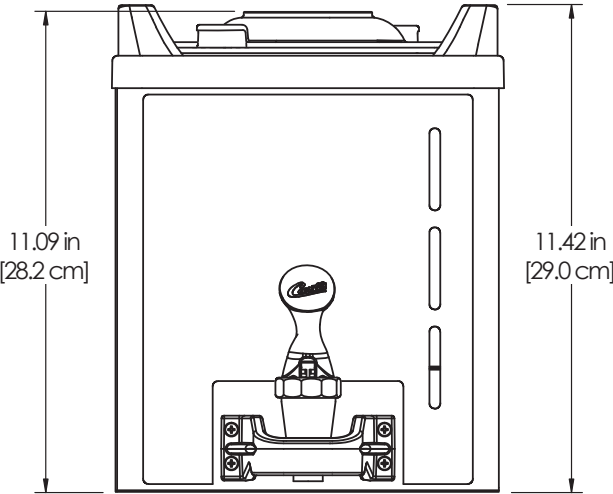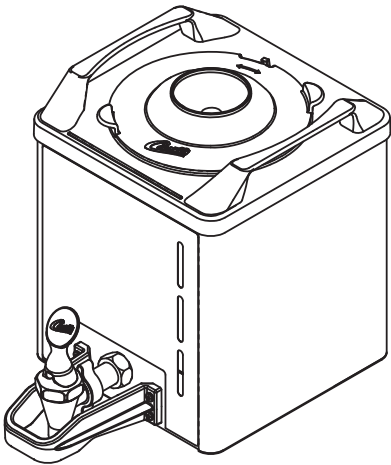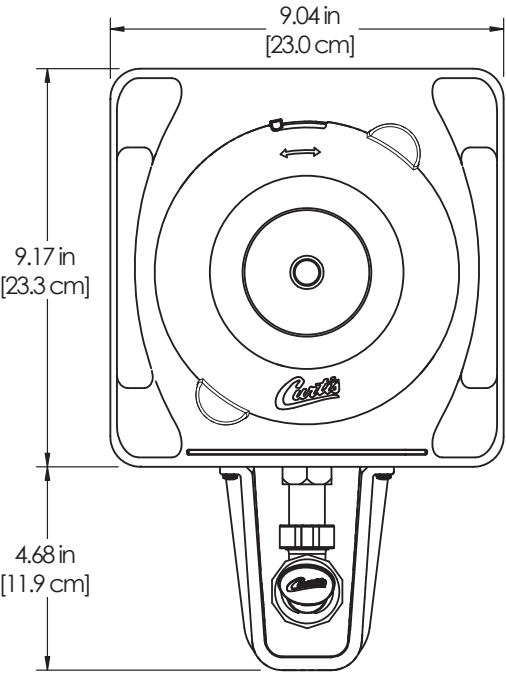
0.24 in
[0.6 cm]

GEMXSIFT - Main Chassis - Exploded View

See satellite user guide for satellite replacement parts.

*Water tanks assemblies:
   Single voltage units, see section IP31
   Dual voltage units, see section IP32
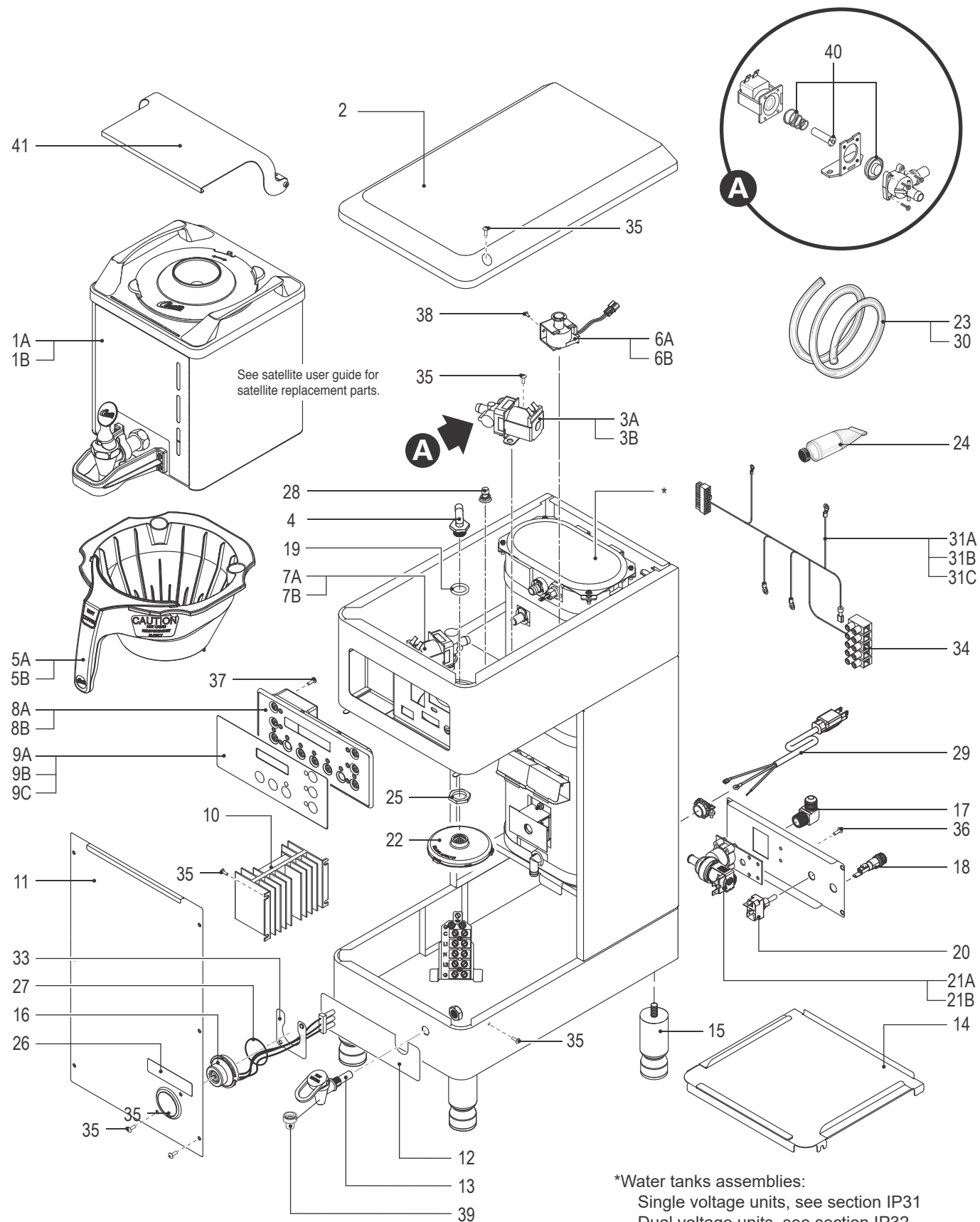
GEMXSIFT - Main Chassis - Parts List

ITEM #	PART #	DESCRIPTION
1A	GEM3XIFT[a]	SATELLITE, GEMX
1B	GEM3XIFT30[b]	SATELLITE SERVER, 1-1/2 GAL. 82W 230V .36 2W+G 1PH 50/60HZ
2	WC-66115	COVER, TOP GEMXSIFT
3A*	WC-820WDR[a]	VALVE, DUMP RIGHT 120V 12W W/INTERNAL RESISTOR & DIODE
3B	WB-854[b]	VALVE, BREW DUMP RIGHT 240V 12W GEM12D/ TP/TPC
4*	WC-2977K	KIT, SPRAYHEAD FITTING METAL
5A	WC-3417-P	BREW CONE, ASSY W/SPLASH POCKET BRWN STYLIZED GEMIN HOT COFFEE
5B	WC-3422-P	BREW CONE, ASSY W/SPLASH POCKET BRWN STYLIZED HIGH VOLUME (OPTIONAL)
6A	WC-442[a]	SOLENOID, LOCK BREW CONE RIGHT/LEFT 120V TP2T/TP2S/GEMSS/GEM
6B	WC-446[b]	SOLENOID, LOCK BREW CONE RIGHT 220V THERMOPRO/GEMTS
7A*	WC-844-101[a]	VALVE, BY-PASS, NON-ADJUSTABLE WITH RESTRICTOR (WC-2945)
7B*	WC-844-102[b]	VALVE, BY-PASS, 220V NON-ADJUSTABLE WITH RESTRICTOR (WC-2945)
8A	WC-723[a]	CONTROL MODULE, UCM 120V TP2S/TP2T GEMSS/GEMTS
8B	WC-728[b]	CONTROL MODULE, UCM 220V TPS2/TP2T/ GEMSS/GEMTS
9A*	WC-390350	LABEL, UCM OVERLAY 3-BATCH GEMXSIFT CURTIS
9B*	WC-390352	LABEL, UCM OVERLAY 2-BATCH GEMXSIFT CURTIS
9C*	WC-390351	LABEL, UCM OVERLAY 1-BATCH GEMXSIFT CURTIS
10*	WC-8559	RELAY, SOLID STATE 280V/40A W/ HEATSINK AND QUICK DISCONNECTS
11	WC-58395	COVER, FRONT
12	WC-390353	LABEL, BOTTOM DECK GEMXSIFT/ G4GEMXISFT CURTIS
13*	WC-1809-P	FAUCET, PS/HPS SERIES HOT WTR 1/2-20 UNF AP/ALP
14	WC-65042-101	DECK, SATELLITE W/A
15*	WC-3528	LEG, 4" ADJSUTABLE 3/8-16 THRD ITALIAN STYLE
16	WC-571K-R	KIT, IF CONNECTOR- RIGHT

ITEM #	PART #	DESCRIPTION
17*	WC-2402P-P	ELBOW, 3/8"FL x 3/8" NPT PLATED
18	WC-1501	FUSE, HOLDER ASSY W/5A FUSE
19	WC-4320	O'RING, 0.487I.D.x 0.693OD x0.103CS BUNA-N #112
20*	WC-103	SWITCH, TOGGLE NON-LIT DPST 25A 125/250VAC RESISTIVE
21A*	WC-847[a]	VALVE, INLET 2 GPM 120V 10W GEN USE BROWN BODY
21B	WC-883[b]	VALVE, INLET 2 GPM 240V 6W
22*	WC-29050	SPRAYHEAD, AMBER ADVANCED FLOW
23*	WC-5310	TUBE, 5/16 ID x 1/8W SILICONE
24*	WC-5231	COMPOUND, HEAT SINK 5OZ
25*	WC-4213-P	NUT, 5/8 LOCK PLATED
26	WC-38504	LABEL, WARNING SHOCK HAZARD INTELLIFRESH
27	WC-43133	O-RING, 1.424ID X 1.630 OD X .103 WALL GEMIF's
28	WC-29044-101	SLEEVE, OVERFLOW
29*	WC-1200[a]	CORD, 14/3 SJTO 6' BLK W/PLUG
30	WC-5350	TUBE, 1/2 ID x 1/8W SILICONE GEN USE
31A	WC-13287[a]	HARNESS, ASSY COMPLETE GEMSS (INCLUDES TERMINAL BLOCK)
31B	WC-13298[a]	HARNESS ASSY, DV CONVERSION GEMSS/ TP2S
31C	WC-13379[b]	HARNESS, ASSY COMPLETE GEMSS EXPORT GEMSS30
32	WC-1412	CORD GRIP, 3/4" FOR METAL CORD TO .81"OD
33	WC-61963	PLATE, HOLDER IF CONNECTORS GEMTIF
34	WC-314	POWER BLOCK, 5 STATION
35	WC-4426	SCREW, 8-32x3/8 PH HEAD TRUSS
36	WC-4616	SCREW, 1/4-20 x 1/2 PHILLIPS PAN HEAD STAINLESS STEEL
37	WC-4439	SCREW, 6-32x¼ PHIL PAN HD SS
38	WC-4412	SCREW, 10-32x3/16" PH PN HD MS SS
39	WC-1806	SEAT CUP, SILICONE USE ON WC-1809 FAUCET
40	WC-37132-101	1 KIT, VALVE REPAIR FOR DELTROL WC 820WDR, WC-821WDR, WC-844WDR (NEWER UNITS)
41	WC-62098-102K	KIT COVER PIVOTING FRONT DISPLAY (G4)GEMXSIFT (OPTIONAL ACCESSORY, INCLUDES MOUNTING HARDWARE)

* Recommended parts to stock

[a] Domestic units

b Export units

GEMXTIFT - Main Chassis - Exploded View

41

A

43

27

23

39

1A
1B

See satellite user guide for
satellite replacement parts.

39

5A
5B

4

6

26
31

20A
20B

Water tank assembly,
see section IP26

17

33A
33B

2A
2B

38

3A
3B

36

19A
19B

18

40

8A

11A
11B

37

8A
8B
8C

7A
7B

21

22

35

32

34

13

9

15

29

39
39

25

42

14

30

28

12

10

24

39
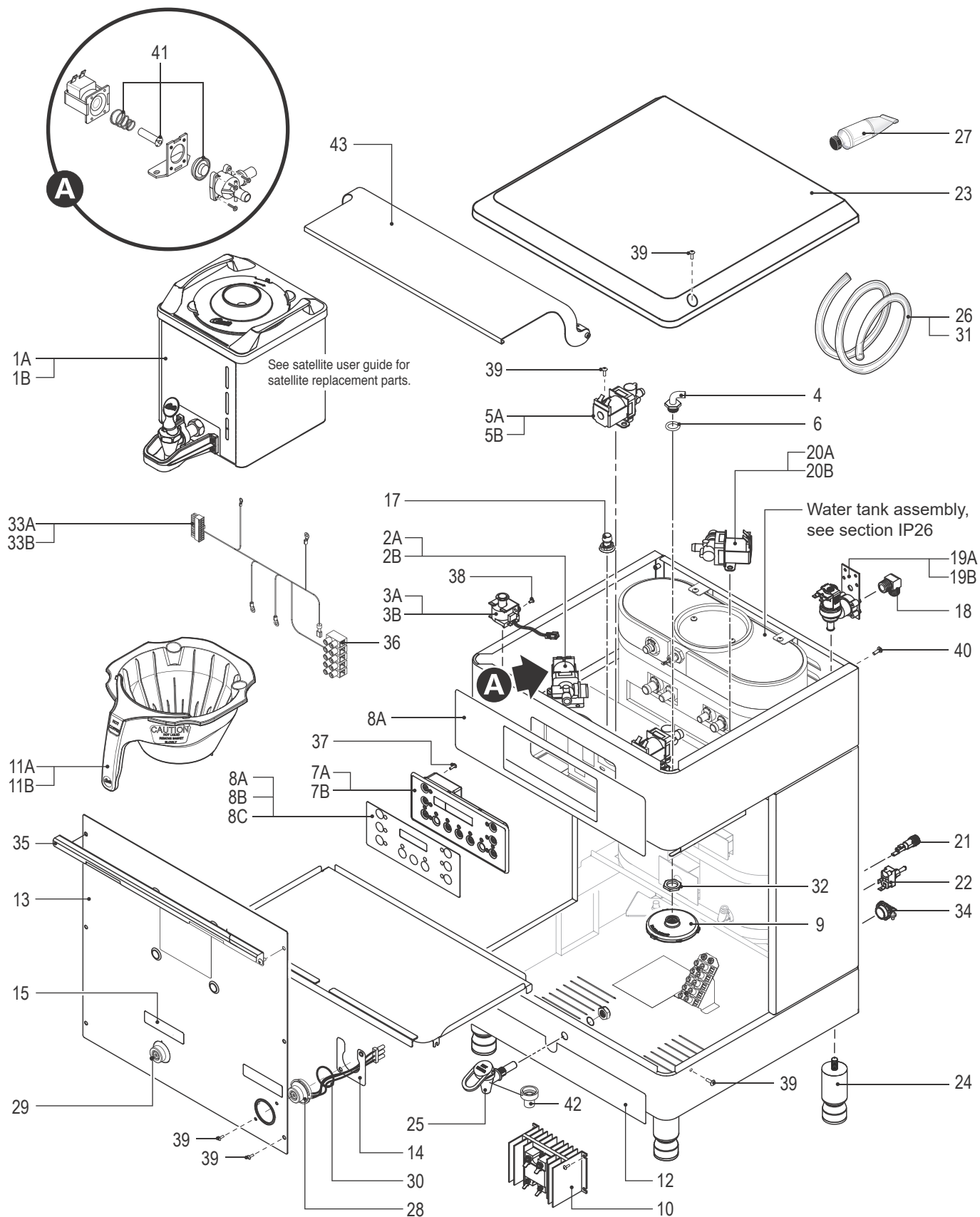
GEMXTIFT - Main Chassis - Parts List

ITEM #	PART #	DESCRIPTION
1A	GEM3XIFT[a]	SATELLITE, GEMX
1B	GEM3XIFT30[b]	SATELLITE SERVER, 1-1/2 GAL. 82W 230V .36 2W+G 1PH 50/60HZ
2A*	WC-821WDR[a]	VALVE, DUMP LEFT 120V 12W W/INTERNAL RESISTOR & DIODE
2B	WC-853[b]	VALVE, BREW DUMP LEFT 240V 12W GEM12D/TP/TPC
3A	WC-442[a]	SOLENOID, LOCK BREW CONE RIGHT/LEFT 120V TP2T/TP2S/GEMSS/GEM
3B	WC-446[b]	SOLENOID, LOCK BREW CONE RIGHT 220V THERMOPRO/GEMTS
4*	WC-2977K	KIT, SPRAYHEAD FITTING METAL
5A*	WC-844-101[a]	VALVE, BY-PASS, NON-ADJUSTABLE WITH RESTRICTOR (WC-2945)
5B	WC-844-102[b]	VALVE, BY-PASS, 220V NON-ADJUSTABLE W/RESTRICTOR (WC-2945)
6	WC-4320	O'RING, 0.487I.D.x 0.693OD x0.103CS BUNA-N #112
7A	WC-723[a]	CONTROL MODULE, UCM 120V TP2S /TP2T GEMSS/GEMTS
7B	WC-728[b]	CONTROL MODULE, UCM 220V TP2S/ TP2T/ GEMSS/GEMTS
8A*	WC-390346	LABEL, UCM & OUTER OVERLAY 3-BATCH GEMXTIFT CURTIS
8B*	WC-390347	LABEL, UCM OVERLAY 2-BATCH GEMXTIFT CURTIS
8C*	WC-390348	LABEL, UCM OVERLAY 1-BATCH GEMXTIFT CURTIS
9*	WC-29050	SPRAYHEAD, AMBER ADVANCED FLOW
10*	WC-8559	RELAY, SOLID STATE 280V/40A W/ HEATSINK AND QUICK DISCONNECTS
11A*	WC-3417-P	BREW CONE,ASSY W/SPLASH POCKET BRWN STYLIZED GEMIN HOT COFFEE
11B	WC-3422-P	BREW CONE,ASSY W/SPLASH POCKET BRWN STYLIZED HIGH VOLUME (OPTIONAL)
12	WC-390349	LABEL, BOTTOM DECK GEMXTIFT/G4GEMXTIFT CURTIS
13	WC-61960	COVER, FRONT W/A
14	WC-61963	PLATE, HOLDER IF CONNECTORS GEMTIF
15	WC-38504	LABEL, WARNING SHOCK HAZARD INTELLI-FRESH
16	WC-65042	DECK, SATELLITE WA
17	WC-29044-101	SLEEVE, OVERFLOW
18*	WC-2402P-P	ELBOW, 3/8"FL x 3/8" NPT PLATED

ITEM #	PART #	DESCRIPTION
19A*	WC-847[a]	VALVE, INLET 2 GPM 120V 10W GEN USE BROWN BODY
19B	WC-883[b]	VALVE, INLET 2 GPM 240V 6W
20A*	WC-820WDR[a]	VALVE, DUMP RIGHT 120V 12W W/INTERNAL RESISTOR & DIODE
20B	WC-854[b]	VALVE, BREW DUMP RIGHT 240V 12W GEM12D/TP/TPC
21*	WC-1501	FUSE, HOLDER ASSY W/5A FUSE
22*	WC-102	SWITCH, TOGGLE NON-LIT SPST 15A 125/6A 250VAC RESISTIVE
23	WC-66112	COVER, TOP GEMXTIFT
24*	WC-3528	LEG, 4" ADJUSTABLE 3/8-16 THRD ITALIAN STYLE
25*	WC-1809-P	FAUCET, PS/HPS SERIES HOT WTR 1/2-20 UNF AP/ALP
26*	WC-5310	TUBE, 5/16 ID x 1/8W SILICONE GEN USE
27*	WC-5231	COMPOUND, HEAT SINK 5OZ
28	WC-571K-R	KIT, IF CONNECTOR- RIGHT
29	WC-571K-L	KIT, IF CONNECTOR- LEFT
30	WC-43133	O-RING, 1.424ID X 1.630 OD X .103 WALL GEMIF's
31*	WC-5350	TUBE, 1/2 ID x 1/8W SILICONE GEN USE
32	WC-4213-P	NUT, 5/8 LOCK PLATED
33A	WC-13335[a]	HARNESS ASSY, COMPLETE TP2T10/ GEMTS FOR SOLID STATE RELAY (INCLUDES TERMINAL BLOCK)
33B	WC-13338[b]	HARNESS ASSY, COMPLETE TP2T30 GEMTS FOR SOLID STATE RELAY
34	WC-1412	CORD GRIP, 3/4" FOR METAL CORD TO .81"OD
35	WC-61954	PLATE, BREW CONE STOP SSTL GEMTIF
36	WC-314	POWER BLOCK, 5 STATION
37	WC-4439	SCREW, 6-32x¼ PHIL PAN HD SS
38	WC-4412	SCREW, 10-32x3/16" PH PN HD MS SS
39	WC-4426	SCREW, 8-32x3/8 PH HEAD TRUSS
40	WC-4616	SCREW, 1/4-20 x 1/2 PHILLIPS PAN HEAD STAINLESS STEEL
41	WC-37132-101	KIT, VALVE REPAIR FOR DELTROL WC-820WDR, WC-821WDR, WC-844WDR (NEWER UNITS)
42	WC-1806	SEAT CUP, SILICONE USE ON WC-1809 FAUCET
43	WC-62098K	KIT COVER PIVOTING FRONT DISPLAY (G4)GEMXTIFT (OPTIONAL ACCESSORY, INCLUDES MOUNTING HARDWARE)

* Recommended parts to stock

[a] Domestic units

[b] Export units

WC-62033 - Tank Assembly
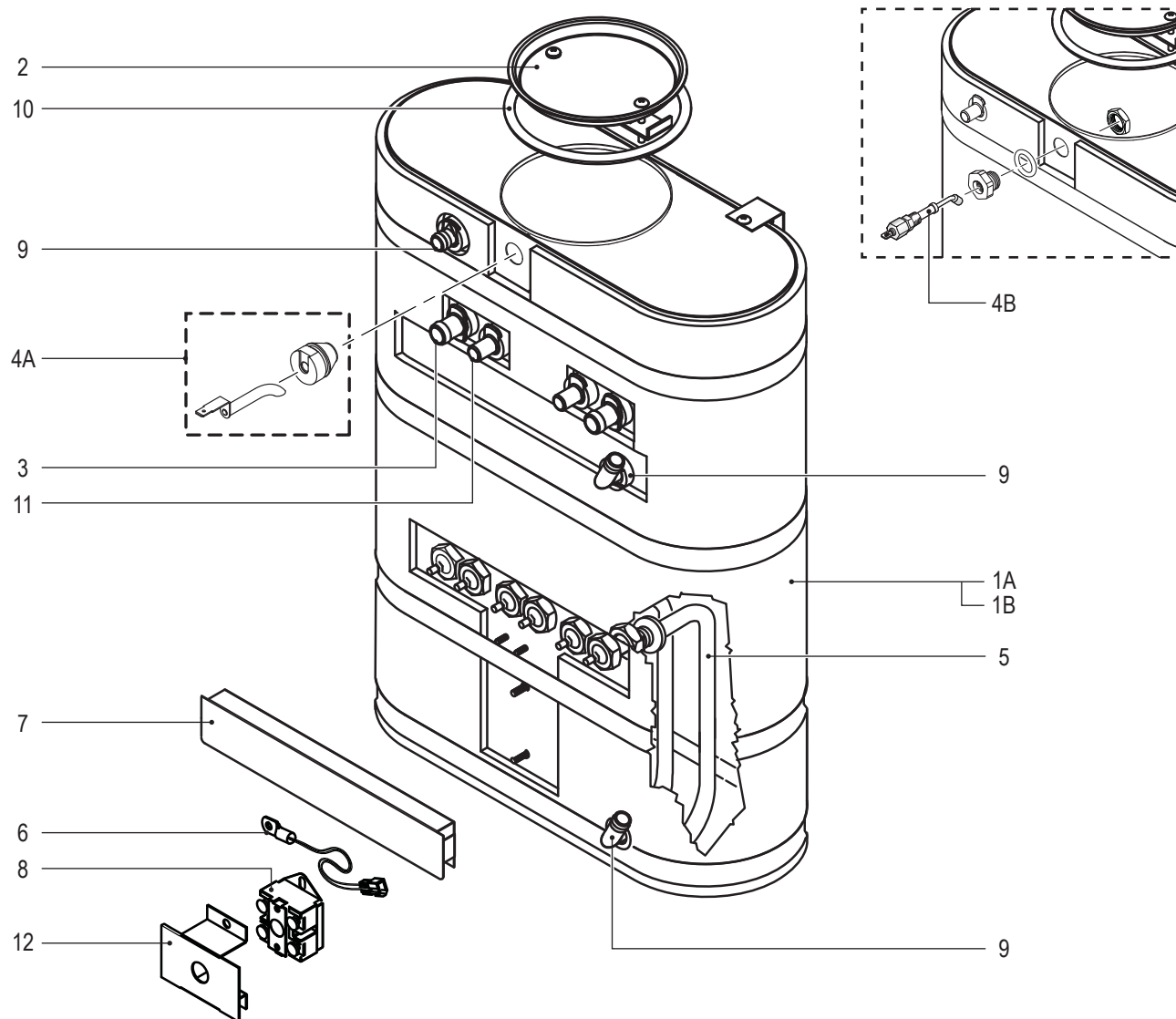
WC-62033 - Tank Assembly - Parts List

ITEM #	PART #	DESCRIPTION
1A	WC-54287	TANK, ASSY TPS1T/GEMTS
1B	WC-62033	TANK, COMPLETE GEMTS W/ULTEM FITTINGS
2	WC-37008	KIT, TANK LID ROUND (INCLUDES GASKET)
3*	WC-37357	KIT, STRAIGHT PLASTIC FITTING AND BUSHING 12MM
4A[1]	WC-5528K	KIT, WATER LEVEL PROBE, SILICONE
4B[2]	WC-5502-01	KIT, PROBE, ASSY WATER LEVEL W/HEX FITTING, O-RING & NUT
5*	WC-934-04	KIT,ELEMENT HEATING 2.5KW 220V W/ JAM NUT & SILICONE WASHERS

ITEM #	PART #	DESCRIPTION
6*	WC-1438-101	SENSOR, TEMPERATURE TANK
7*	WC-4382	GUARD, SHOCK HTNG ELMNT DOUBLE
8*	WC-522	THERMOSTAT, HI LIMIT HEATER CONTROL DPST 277V 40A
9*	WC-37365	KIT, FITTING TANK INLET
10*	WC-43067	SILICONE TANK LID O-RING, 4-1/2" I.D. X Ø.285
11*	WC-37317	KIT, STRAIGHT FITTING & BUSHNG 8MM GEN USE
12*	WC-43055	GUARD, SHOCK RESET THERMOSTAT (WC-522)

[1] Units built 01/04/2019 and later.

[2] Units built before 01/04/2019. Replaces WC-5527.

* Recommended parts to stock.

WC-62035 - Tank Assembly
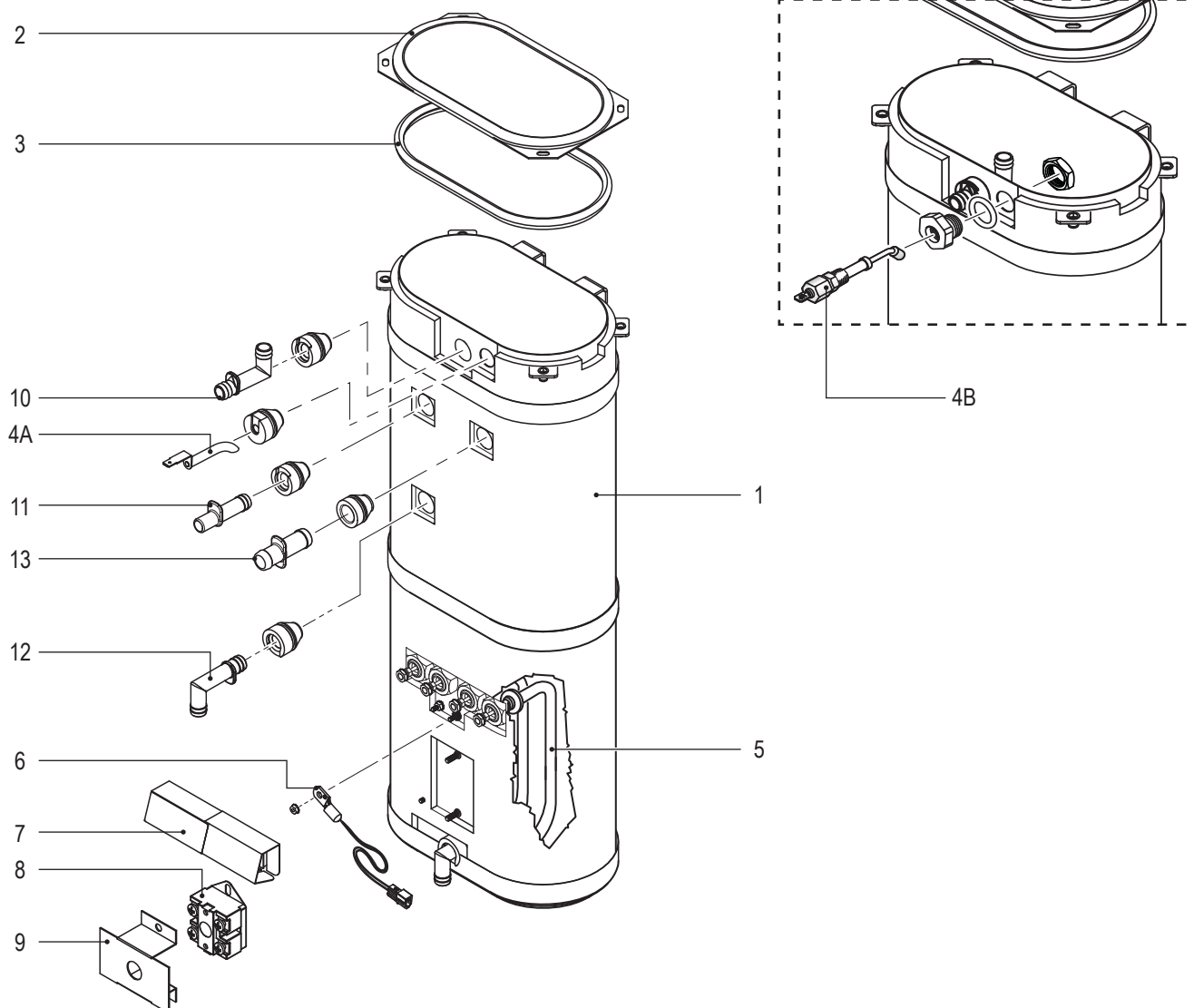
WC-62035 - Tank Assembly - Parts List

ITEM #	PART #	DESCRIPTION
1	WC-62035	TANK, COMPLETE GEMSS W/ULTEM FITTINGS
2	WC-5853-102	COVER, TOP HEATING TANK GEN USE
3*	WC-43062	GASKET, TANK LID
4A[1]	WC-5528K	KIT, WATER LEVEL PROBE, SILICONE
4B[2]	WC-5502-01	KIT, PROBE, ASSY WATER LEVEL W/HEX FITTING, O-RING & NUT
5*	WC-906-04	KIT, ELEMENT, HEATING 2KW 220V W/ JAM NUT & SILICONE O-RING
6*	WC-1438-101	SENSOR, TEMPERATURE TANK
7*	WC-4394	GUARD, SHOCK/HEATING ELEMENT FOR SINGLE HEATING ELEMENT

ITEM #	PART #	DESCRIPTION
8*	WC-522	THERMOSTAT, HI LIMIT HEATER CONTROL DPST 277V 40A
9*	WC-43055	GUARD, SHOCK RESET THERMOSTAT (WC-522)
10*	WC-37266	KIT, FITTING TANK OVERFLOW
11*	WC-37317	KIT, STRAIGHT FITTING & BUSHING 8mm GEN USE
12*	WC-37365	KIT, FITTING TANK INLET
13*	WC-37357	KIT, STRAIGHT PLASTIC FITTING AND BUSHING 12MM

[1] Units built 01/04/2019 and later.

[2] Units built before 01/04/2019.Replaces WC-5527.

* Recommended parts to stock.

WC-62034 - Tank Assembly
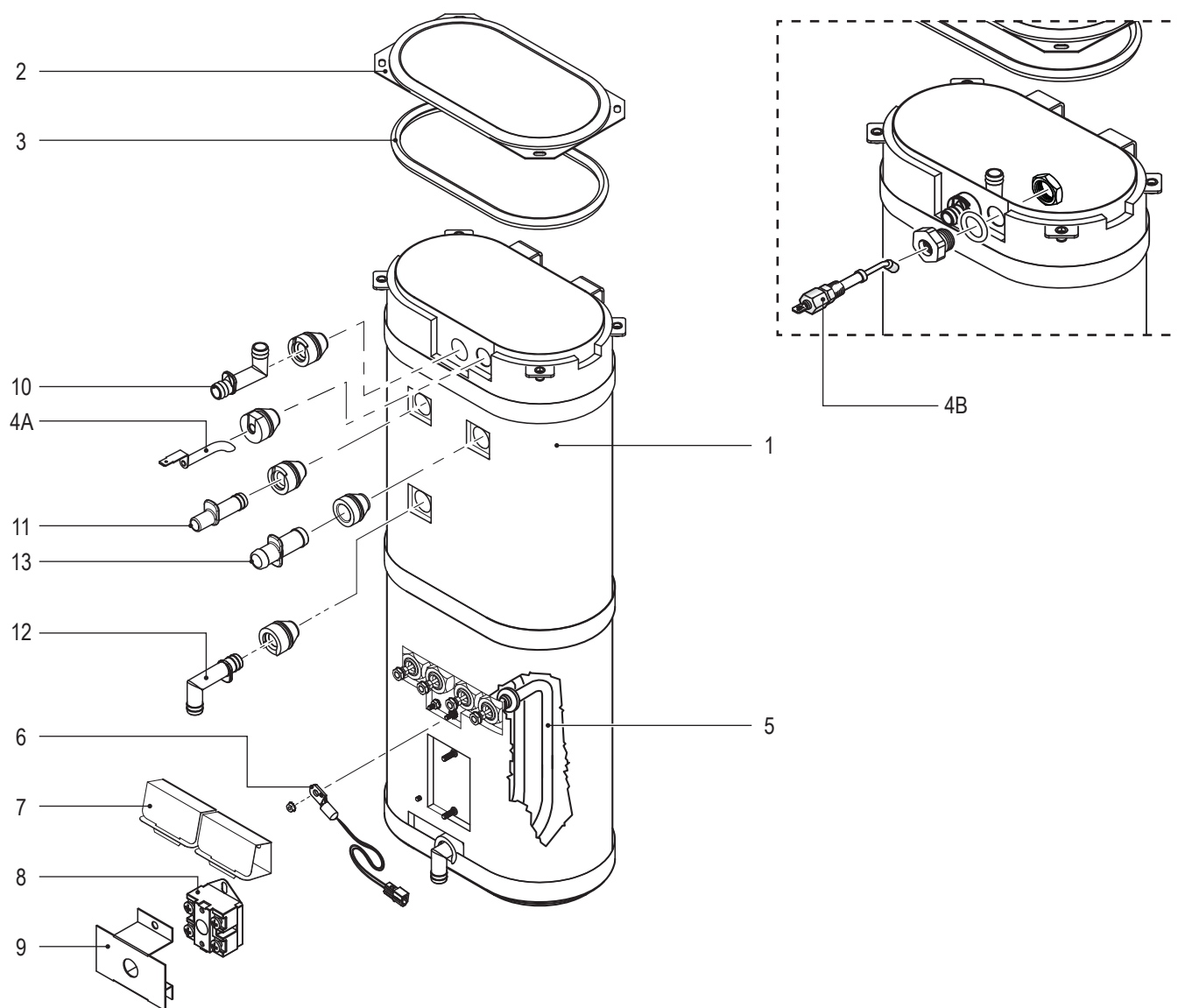
WC-62034 - Tank Assembly - Parts List

ITEM #	PART #	DESCRIPTION
1	WC-62034	TANK, COMPLETE GEMSS DV W/ ULTEM FITINGS
2	WC-5853-102	COVER, TOP HEATING TANK GEN USE
3*	WC-43062	GASKET, TANK LID
4A[1]	WC-5528K	KIT, WATER LEVEL PROBE, SILICONE
4B[2]	WC-5502-01	KIT, PROBE, ASSY WATER LEVEL W/HEX FITTING, O-RING & NUT
5*	WC-904-04	KIT,ELEMENT, HEATING 1.6KW120V W/ JAM NUT & SILICONE O-RING
6*	WC-1438-101	SENSOR, TEMPERATURE TANK
7*	WC-4394	GUARD, SHOCK/HEATING ELEMENT FOR SINGLE HEATING ELEMENT

ITEM #	PART #	DESCRIPTION
8*	WC-522	THERMOSTAT, HI LIMIT HEATER CONTROL DPST 277V 40A
9*	WC-43055	GUARD, SHOCK RESET THERMOSTAT (WC-522)
10*	WC-37266	KIT, FITTING TANK OVERFLOW
11*	WC-37317	KIT, STRAIGHT FITTING & BUSHNG 8mm GEN USE
12*	WC-37365	KIT, FITTING TANK INLET
13*	WC-37357	KIT, STRAIGHT PLASTIC FITTING AND BUSHING 12MM

[1] Units built 01/04/2019 and later.

[2] Units built before 01/04/2019.Replaces WC-5527.

* Recommended parts to stock.

GEMSIF63 Series

UCM Pin Assignments

20-Pin Connector

Pin	Function
1	GRINDER INTERLOCK
2	COMMON-SOLID STATE RELAY & GRINDER
3	SOLID STATE RELAY +5 Vdc
4	BREW CONE LOCK
5	NOT USED
6	INLET VALVE
7	BYPASS VALVE
8	NOT USED
9	IF WARMER
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	110-120V NEUTRAL
18	110-120V L1
19	BREW VALVE
20	NOT USED

5-Pin Connector

Pin	Function
1	Data_Comunication First
2	Not Used
3	Not Used
4	Vdd +5Vdc
5	Vss - (Logic_Common)

IR Receiver 4-Pin

Pin	Function
1	Vss - (Logic_Common)
2	Vdd +5Vdc
3	Data_Comunication First
4	Data_Comunication Next

SSR PIN ASSIGNMENTS

AC OUTPUT — 1, 2
DC INPUT — 3 (−), 4 (+)

USE .187 TERMINAL LUG

ELECTRICAL RATING TABLE

Model	Voltage V	Amps A	Watts W	Hertz Hz	# of Conductor Wires	Phase	# of Tank Elements	Tank Element Rating W/V	Warmer Element Rating W/V
GEMSIF52/	120	10.0	1200		(2)	1			
GEMXSIFT52/	120/220		2050	50/60	3		2	1150W/ 120V	(1X) 75W/120V
GEMXSIFTRS2	120/240	10.0	1200 / 2400		(2) / 3	1			
GEMSIF63/	120	13.5	1650		(2)	1			
GEMXSIFT63/	120/220		2800	50/60	3		2	1600W/ 120V	(1X) 75W/120V
GEMXSIFTR63	120/240	13.5	1650 / 3300		(2) / 3	1			

LADDER DIAGRAM

TITLE: LD-GEMSIF63   REVISION: F

PART NUMBER:

VOLTAGE: SEE TABLE
WATTAGE: SEE TABLE
AMPERAGE: SEE TABLE
HERTZ: SEE TABLE
WIRES: SEE TABLE
PHASE: SEE TABLE

INCOMING POWER
120/208 - 240 VAC 1PH
2W/3W+G 50/60 Hz

POWER BLOCK 65A/300V

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

SSR 40A/240-280V

HEATING ELEMENTS (SEE TABLE)

DPST TOGGLE SWITCH 125/250VAC-25A

GRINDER INTERLOCK

BREW CONE LOCK 10W/120V

INLET VALVE 2.0 GPM 10W/120V

BREW VALVE 12W/120V

BYPASS VALVE 12W/120V

FOR GEM3IF CONNECTOR-75W/120V

UNIVERSAL CONTROL MODULE 5W/120V

SENSOR TANK

HEATING TANK

PROBE

COMMON STUD CHASSIS GROUND

CHASSIS GROUND

IR RECEIVER +5Vdc (for GEMXSIFTRx)

CHASSIS GROUND

C1 .47MF 275VAC

FUSE 5A/250V

Notes:
④ 12GA WHT WIRE IS ONLY USED WHEN UNIT IS TO BE USED IN THE 120VAC CONFIGURATION.
③ SEE LD-GEM3IF FOR WIRING SPECIFICATIONS.
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 18AWG PER UL1015.
NOTES: UNLESS OTHERWISE SPECIFIED

GEMSIF30A1000, GEMXSIFT30A1000

UCM Pin Assignments
20 Pin Connector

1	GRINDER INTERLOCK
2	COMMON-SOLID STATE RELAY & GRINDER
3	SOLID STATE RELAY +5 Vdc
4	BREW CONE LOCK
5	NOT USED
6	INLET VALVE
7	BYPASS VALVE
8	NOT USED
9	IF WARMER
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	220-240V L2
18	220-240V L1
19	BREW 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	Warmer Element Rating W/V
GEMSIF30x	220	18.5	4050	50/60	2	1	2	2000W/220V	(1X) 75W/220V
	230	19.2	4426						
	240	20.0	4800						

⟨3⟩ SEE LD—GEM3IF—30 FOR WIRING SPECIFICATIONS.
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

SSR PIN ASSIGNMENTS

USE .187 TERMINAL LUG

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

TITLE: LADDER DIAGRAM
PART NUMBER: LD—GEMSIF—30
REVISION: B

GEMTIF10A1000, GEMTIF10B1000

④ BRN/10GA

BRN/10GA C

BLK/10GA L1

WHT/18GA N

RED/10GA L2

GRN/12GA G

POWER BLOCK
57-65A/300-450V

COMMON STUD CHASSIS GROUND

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

.47MF 275VAC C1

INCOMING POWER
208 - 240Vac 1PH
3W+G 50/60 Hz

TOGGLE SW. SPST 25A/125-250V

BLU/10GA

SSR #1 40A/600V
1 2
3 4
− +
GRY STP GRY

RED/10GA

SSR #2 40A/600V
1 2
3 4
− +
GRY

BLK/10GA BLK/10GA
A H1 B
A H2 B
④ A H3 B

HEATING ELEMENTS 3X 2.5KW/220V

RED/10GA RED/10GA RED/10GA

FUSE 5A/250V

BLK 18

ORG 16

PROBE

HEATING TANK

TANK STUD GROUND

SENSOR TANK

(WHT) 2 STP YEL 14
12
(WHT) STP YEL 13

UNIVERSAL CONTROL MODULE 5W/120V

BLU 1
GRY 2
STP GRY 3
WHT 17
STP BLU 4
STP GRN 5
YEL 6
VIO 19
BRN 20
STP VIO 7
STP BRN 10
11
GRN 15
RED 9
STP RED 8

GRY
STP GRY

1 (BLU)
2
3 (GRY)

GRINDER INTERLOCK

STP BLU (BLK) (BLK) 10W/120V WHT

STP GRN (BLK) (BLK) 10W/120V WHT

2.0 GPM 10W/120V WHT INLET VALVE

.5 GPM 12W/120V WHT BREW VALVE RIGHT

.5 GPM 12W/120V WHT BREW VALVE LEFT

.5 GPM 12W/120V WHT BYPASS VALVE RIGHT

.5 GPM 12W/120V WHT BYPASS VALVE LEFT

RED RED WHT
3
2 WHT
1
STP RED

WHT

IF CONNECTOR RIGHT/120V

GRN

IF CONNECTOR LEFT/120V

CHASSIS GROUND

ELECTRICAL RATING TABLE

MACHINE	HEATING ELEMENTS			GEM3IF		TOTAL POWER (WATTS)	TOTAL CURRENT (AMPERES)
	H1	H2	H3	LEFT	RIGHT		
GEMTIF10 @208Vac	●	●		●	●	4550	21.5
GEMTIF10 @220Vac	●	●		●	●	5100	23.0
GEMTIF10 @240Vac	●	●		●	●	6050	25.0
④ GEMTIF10 w/H3 @208Vac	●	●	●	●	●	6700	32.0
④ GEMTIF10 w/H3 @220Vac	●	●	●	●	●	7500	34.0
④ GEMTIF10 w/H3 @240Vac	●	●	●	●	●	8900	37.0

④ H1 AND H2 CONNECTION ONLY: REMOVE & CAP BRN WIRE END FROM H3
H1, H2 AND H3 CONNECTION: REMOVE CAP & CONNECT BRN WIRE
FROM H3 TO C (COMMON) ON POWER BLOCK.

③ SEE LD-GEM3IF FOR WIRING SPECIFICATIONS.

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 18AWG UNLESS NOTED.
NOTES: UNLESS OTHERWISE SPECIFIED

LEGEND

UNIVERSAL CONTROL MODULE
PIN ASSIGNMENT (20 PIN)
1 = GRINDER
2 = COMMON − SOLID STATE RELAY & GRINDER
3 = +5 VDC
4 = SOLENOID LOCK RIGHT
5 = SOLENOID LOCK LEFT
6 = INLET VALVE
7 = BYPASS VALVE RIGHT
8 = WARMER LEFT
9 = WARMER RIGHT
10 = BYPASS VALVE LEFT
11 = N/C
12 = N/C
13 = SENSOR TANK
14 = SENSOR COMMON
15 = GROUND CHASSIS
16 = WATER LEVEL PROBE
17 = 120VAC RETURN
18 = 120VAC HOT
19 = DUMP VALVE RIGHT
20 = DUMP VALVE LEFT

SSR PIN ASSIGNMENTS
AC OUTPUT
1 2
3 4
DC INPUT
USE .187 TERMINAL LUG

VOLTAGE:	220V
WATTAGE:	SEE TABLE
AMPERAGE:	SEE TABLE
HERTZ:	50/60 HZ
WIRES:	3W + G
PHASE:	1 PHASE

TITLE: LADDER DIAGRAM GEMTIF10

PART N°: LD-GEMTIF10

REVISION: C

GEMTIF30A1000, GEMXTIFT30A1000

UCM Pin Assignments

20 Pin Connector	
1	GRINDER INTERLOCK
2	COMMON-SOLID STATE RELAY & GRINDER
3	SOLID STATE RELAY +5 Vdc
4	BREW CONE LOCK RIGHT
5	BREW CONE LOCK LEFT
6	INLET VALVE
7	BYPASS VALVE RIGHT
8	IF WARMER LEFT
9	IF WARMER RIGHT
10	BYPASS VALVE LEFT
11	NOT USED
12	NOT USED
13	TANK TEMPERATURE SENSOR
14	TANK TEMPERATURE SENSOR
15	UCM GROUND
16	WATER LEVEL PROBE
17	220-240V L2
18	220-240V L1
19	BREW VALVE RIGHT
20	BREW VALVE LEFT

④ HEATING ELEMENT H3 ONLY USED AS SPARE. NO WIRE CONNECTIONS.
③ SEE LD-GEM3IF-30 FOR WIRING SPECIFICATIONS.
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

ELECTRICAL RATING TABLE

Model	Voltage V	Amps A	Watts W	Hertz Hz	# of Conductor Wires	Phase	# of Tank Elements	Tank Element Rating W/V	Warmer Element Rating W/V
GEMTIF30x	220	23.0	5100	50/60	2	1	2	2500W/220V	(2X) 75W/220V
	230	24.2	5574						
	240	25.0	6050						

VOLTAGE:	SEE TABLE	TITLE:	REVISION:
WATTAGE:	SEE TABLE	LADDER DIAGRAM	B
AMPERAGE:	SEE TABLE		
HERTZ:	SEE TABLE		
WIRES:	2W + G	PART N°:	
PHASE:	1 PHASE	LD-GEMTIF-30	

GEM3XIFT

Pin Assignments

UPM

1	120V HOT
2	120V NEUTRAL
3	TANK TEMPERATURE SENSOR
4	TANK TEMPERATURE SENSOR
5	HEATER/WARMER OUT
6	HEATER/WARMER OUT
7	LED 5V
8	LED GROUND
9	LED COMMUNICATION

Pin Assignments

LED

1	UPM GROUND
2	UPM 5V
3	UPM COMMUNICATION
4	LED #4
5	LED #3
6	LED #2
7	LED #1
8	CHASSIS GROUND

ELECTRICAL RATING TABLE

Model	Voltage V	Amps A	Watts W	Hertz Hz	# of Conductor Wires	Phase
GEM3XIFTx/ GEMX3Nx	100	0.49	49	50/60	2	1
	110	0.55	60			
	115	0.58	67			
	120	0.60	71			

LED MODULE

LED 4   LED 3   LED 2   LED 1

CHASSIS GROUND

GRN-22GA

TEMP SENSOR

BLK-22GA

GRN-22GA

WHT-22GA

VIO-22GA

YEL-22GA

BRN-22GA

BLU-22GA

SATELLITE LINER

PROBE 4   PROBE 3   PROBE 2   PROBE 1

FEMALE IF CONNECTOR 120Vac

WHT-18GA

BLK-18GA

GRN-18GA

CHASSIS GROUND

L1   N   G

BLK-18GA

WHT-18GA

WHT-22GA

WHT-22GA

CONTROL MODULE
UPM -120Vac

5 1
2
6 3
4
7
8
9

INCOMING POWER
100-120Vac 1PH
2W+G 50/60 Hz

WARMER ELEMENT
120Vac-75W

(BLK-18GA) RED-18GA

(BLK-18GA) RED-18GA

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 200°C UNLESS NOTED. GAGE AS NOTED.
NOTES: UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES, DO NOT SCALE DRAWING
TOLERANCES: .XX ±.03 .XXX ±.010 ANGLES ±1°

REVIEWED
APPROVED

NEXT ASSEMBLY:
FINAL
MODEL NUMBER: SEE ELECTRICAL RATING TABLE
VOLTAGE: SEE TABLE
WATTAGE: SEE TABLE
AMPERAGE: SEE TABLE
HERTZ: SEE TABLE
WIRES: SEE TABLE
PHASE: SEE TABLE

DRAWN BY: JA DATE: 3/2017
CHK. BY: DATE:
APPR.BY: DATE:

Curtis
Wilbur Curtis Co., Inc
6913 Acco St.
Montebello, CA 90640
Phone-323-837-2300
Fax-323-837-2402
WWW.WILBURCURTIS.COM

TITLE: LADDER DIAGRAM
PART NUMBER: LD-GEM3XIFT
DRAWING SIZE: C
REVISION: A
SCALE: NTS SHEET 1 OF 1

GEM3XIFT30

Pin Assignments

UPM

1	220V L1
2	220V L2
3	TANK TEMPERATURE SENSOR
4	TANK TEMPERATURE SENSOR
5	HEATER/WARMER OUT
6	HEATER/WARMER OUT
7	LED 5V
8	LED GROUND
9	LED COMMUNICATION

Pin Assignments

LED

1	UPM GROUND
2	UPM 5V
3	UPM COMMUNICATION
4	LED #4
5	LED #3
6	LED #2
7	LED #1
8	CHASSIS GROUND

ELECTRICAL RATING TABLE

Model	Voltage V	Amps A	Watts W	Hertz Hz	# of Conductor Wires	Phase
GEM3XIFT30x/ GEM3XN30x	200	0.31	62	50/60	2	1
	220	0.34	75			
	230	0.36	82			
	240	0.37	89			

LED MODULE

LED 4   LED 3   LED 2   LED 1

CHASSIS GROUND

GRN—22GA

TEMP SENSOR

VIO—22GA
YEL—22GA
BRN—22GA
BLU—22GA

BLK—22GA
GRN—22GA
WHT—22GA

SATELLITE LINER

PROBE 4   PROBE 3   PROBE 2   PROBE 1

FEMALE IF CONNECTOR
220Vac

WHT—18GA
BLK—18GA
GRN/YEL—18GA

CHASSIS GROUND

L1   G   N

BLK—18GA
WHT—18GA
WHT—22GA
WHT—22GA

CONTROL MODULE
UPM —220Vac

5   1
2
6   3
4
7
8
9

WARMER ELEMENT
220Vac—75W

(BLK—18GA) RED—18GA
(BLK—18GA) RED—18GA

INCOMING POWER
200-240Vac 1PH
2W+G 50/60 Hz

NEXT ASSEMBLY:
FINAL
MODEL NUMBER:
SEE ELECTRICAL
RATING TABLE

VOLTAGE: SEE TABLE
WATTAGE: SEE TABLE
AMPERAGE: SEE TABLE
HERTZ: SEE TABLE
WIRES: SEE TABLE
PHASE: SEE TABLE

DRAWN BY: JA   DATE: 1/2018
CHK. BY: DATE:
APPR.BY: DATE:

PART NUMBER:
LD—GEM3XIFT—30

TITLE: LADDER DIAGRAM

Curtis
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6913 Acco St.
Montebello, CA 90640
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DRAWING SIZE: C
REVISION: B

SCALE: NTS   SHEET 1 OF 1

REVIEWED
APPROVED

UNLESS OTHERWISE
SPECIFIED DIMENSIONS
ARE IN INCHES. DO NOT
SCALE DRAWING

TOLERANCES: .XX ±.03
.XXX ±.010
ANGLES ±1°

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written permission of
Wilbur Curtis Co., Inc.

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 200°C UNLESS NOTED. GAGE AS NOTED.
NOTES: UNLESS OTHERWISE SPECIFIED

⚠️ **WARNING:**

Electric Shock Hazard - the following procedures are to be performed only by a qualified service technician. Disconnect power when replacing components. Lock out and tag the circuit breaker on units without a power plug. Neither Wilbur Curtis Co., Inc. nor the seller can be held responsible for the interpretation of this information, or any liability in connection with its use.

Scald and Burn Hazard - keep body parts clear of hot surfaces during troubleshooting.

ⓘ **IMPORTANT:** If it is necessary to replace the G3 universal control module (UCM), always check all inlet, dump (brew), bypass* and dilution* valve coils for a short and replace the valve as necessary, before replacing the module. See the *Valve Test Procedure*, below to test for defective valves. *Some units do not have this function, see the *ELECTRICAL SCHEMATIC*.

Troubleshooting Guidelines

- If an error message appears on the display, consult the *ERROR CODES* section before troubleshooting.
- A brewer that is not level may not function properly. Make sure the brewer is properly leveled before proceeding.
- This troubleshooting guide identifies some, but not all, of the possible causes for common problems that can occur.
- Use this troubleshooting guide along with the appropriate *ELECTRICAL SCHEMATIC.*

Valve Test Procedure

Use a digital multi-meter to measure the resistance of valve coils.

Measure the resistance across the valve coil terminals with the wiring harness disconnected. Reverse the meter leads on the terminals and measure the resistance in the opposite direction. A resistance of less than 100 ohms, in either direction, indicates a shorted coil. The valve must be replaced.

If a shorted coil is not detected, test for an open coil:

1   Reconnect the valve terminals to the wiring harness.

2   Power up the brewer with the appropriate cover removed to allow access to the valve.

3   Run a brew cycle while monitoring the voltage at the valve coil terminals. If voltage is present on the terminals, you should hear the valve click open/closed at the moment power is applied or removed from the terminals. The inlet valve should open any time the water tank is not full. If the valve does not open, replace the valve. If voltage is not detected, first check the wiring. If the wiring is OK, replace the UCM.

Water Not Hot Enough

1   If the water heats, but is not hot enough, first check for the correct temperature setting on the control panel. Reprogram as necessary.

2   If the temperature setting is OK, and the actual water temperature does not match setting on the control panel, replace the temperature sensor.

Water Heats More Slowly Than Usual

1   Check for power across the terminals of the heating element(s). If power is being supplied, disconnect the heating element(s) and check for continuity. Replace a heating element if the resistance is too high (nominal resistance is 13 Ohms).

2   If there is no power to the heating element(s), check the wiring to any element that does not have the proper voltage across it. Also check for corroded connections anywhere between the power cord and the heating element(s).

Dispenser Overflows <u>During Brewing</u>

1   Check to make sure the control module (UCM) brew, bypass* and dilution* levels are set properly.

2   Check for a missing spray head. Replace as needed.

3   Make sure the dispenser is empty before starting the brew cycle. If not, empty it before brewing.

*Some units do not have this function, see the *ELECTRICAL SCHEMATIC*.

No Power - Display Not Lit

1   Make sure the circuit breaker to the circuit supplying power to the brewer is not tripped and is turned on.

2   On brewers with a power plug, make sure it is connected to the power receptacle.

3   Make sure that the main power toggle switch on the back panel is turned ON.

4   Verify that all wires from the power cord are properly connected inside the unit. Check to make sure the wires are not burned/overheated. Loose connections can create heat. Check chassis ground.

5   Check to make sure power and ground are being supplied to the control module (UCM). If there is power into UCM, but display is blank, UCM is probably bad.

6   If there is no power into the UCM, trace the circuit back (using the wiring diagram) to the power cord to find out where power is lost. If there is power into the thermostat reset switch, but not out, see step 7.

7   If there is power into the thermostat reset switch, but not out, check to make sure that the water tank is not empty. If the tank is empty, the reset switch has probably opened up due to a low water level, go to *Water Tank Does Not Fill*. If there is water in the tank, but no power out, push in on the reset switch button to see if it restores power. If power is restored, check to make sure that the switch is not opening up at the wrong temperature (the switch should not open up at normal water temperatures). If there is still no power through the switch after pushing the button, replace the thermostat reset switch.

Brewer Does Not Start When Brew Button is Pressed

1   If **Brewing** appears on the display, check for faulty wiring and connections between the universal control module (UCM) and the valves.

2   If **Brewing** does not appear on the display, check for a faulty universal control module (UCM).

Sensor Error Message

This error indicates a malfunction (open circuit) in the temperature sensor system. Once the malfunction is corrected, the error message must be cleared. To reset the brewer and return to normal operation, turn the toggle switch on the back of the brewer to the OFF position for 5 seconds, then back ON.

1   Check the resistance across the leads of the temperature sensor while it is disconnected from the universal control module (UCM). If an open circuit is measured (resistance above 200 k), replace the sensor.

2   If the sensor resistance is less than 200 k check the sensor wires for corrosion and reconnect them to the UCM. Afterward, if the error message comes back after resetting the control and power modules, replace the UCM.

Water Tank Overfills

1   Turn the toggle switch on the back of the brewer ON and OFF. If water continues to flow when the switch is in both positions, replace the inlet valve.

2   If water stops flowing to the water tank when the toggle switch is turned OFF and continues when the switch is turned back ON, remove the orange wire from the water probe on the tank. While power is ON, short the end of the orange wire to the metal surface on the outside of the tank. If the water tank stops filling when the orange wire is shorted to the tank, check for a corroded connection at the water probe.

3   If water does not stop flowing when the orange wire is shorted to the tank, check the tank ground connection and the continuity of the orange wire connecting to the universal control module (UCM). If both are OK, replace the UCM.

Water Tank Does Not Fill

ⓘ   **IMPORTANT:** No water or low water in the tank can cause the tank to overheat, resulting in the thermostat reset switch opening. If after correcting a tank fill problem there is no power to the control panel, push the reset switch button to reset.

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1   Check to make sure the water supply is turned on. Check for a clogged water supply line, water filter or plugged inlet valve.

2   If there are no plugs in the water supply line, check for power across the inlet valve terminals. If power is being supplied, but there is no water flow, replace the inlet valve.

3   If power is not being supplied to the inlet valve, check the wires between the universal control module (UCM) and the inlet valve. Check for corroded connections.

4   If the wiring between the UCM and the inlet valve is OK, but there is no power to the inlet valve, remove the orange wire from the water tank probe. If the water tank starts to fill, replace the water probe. If the water tank does not start to fill, replace the UCM.

Coffee/Tea Too Strong

See *Dispenser Not Filled To Normal Level During Brewing*.

Dispenser Not Filled To Normal Level During Brewing

1   Check to make sure that the universal control module (UCM) brew, bypass* and dilution* levels are set properly.

2   Check to make sure that the flow rate and water pressure from the water supply line meet the minimum specifications for the brewer. See the *SPECIFICATIONS* section.

3   Check to make sure that the spray head is clean and free of debris. Clean or replace as needed. Also make sure that the spray head is correctly aligned and that the tubing is routed properly to allow for maximum water flow (no kinks).

4   Remove the brew basket and place a large container under the dump (brew) and dilution outlet points. Run a brew cycle and confirm that the dump (brew) valve, bypass* valve and dilution* valve open during the brew cycle. Check for flow through any exit point that is slow or non-existent. Not all valves open at the same time. If flow is restricted, check for obstructions in the related tubing or valve. If there are no obstructions, but flow through one particular valve is slow, it can be assumed that the particular valve is not opening all the way and should be replaced. If water does not flow at all through a particular valve during the brew cycle, check to make sure that power is being supplied to the valve in question. Replace any valve that is not opening when power is applied to the terminals. If power is not being supplied to the valve, check the wiring between the valve and the UCM. If the wiring is OK, replace the UCM.

*Some units do not have this function, see the *ELECTRICAL SCHEMATIC*.

Dispenser Overflows <u>All Of The Time</u>

1   Check to see if water continues to flow from the spray head, the bypass* outlet or the dilution* spout when the toggle switch is turned OFF. Replace any valve that is stuck open.
    *Some units do not have this function, see the *ELECTRICAL SCHEMATIC*.

2   If one or more of the valves mentioned in step 1 turns on when the toggle switch on the back is ON and turns off when the switch is OFF, replace the universal control module (UCM).

No Water/Tea Flows From Brewer During Brewing

1   Make sure that the water supply is turned on.

2   Check to see if the water in the tank is level with the water tank probe? If not, see *Water Tank Does Not Fill*.

3   If the water tank is full, the water is hot and power is on, but NO water flows during a brew cycle, the problem is usually a bad universal control module (UCM). Run a brew cycle and check for power from the UCM to the dump (brew), bypass* and dilution* valves. If there is no power output, replace the UCM.
    *Some units do not have this function, see the *ELECTRICAL SCHEMATIC*.

Low Water Flow Warning

See *Water Level Error Message*.

Water Level Error Message

Water level fill error or overflow. This error message occurs when the inlet valve solenoid has been on too long during initial fill or tank refill, See the *ERROR CODES* section for the maximum times allowed. Once the malfunction is corrected, the error message must be cleared. To reset the unit and return to normal operation, turn the toggle switch on the back of the brewer to the OFF position for 5 seconds, then back ON.

1   Check to make sure that the water filter is not clogged.

2   Check to make sure that the flow rate from the water supply line meets the minimum flow rate specifications for the brewer. Also check the water pressure. See the *SPECIFICATIONS* section.

3   Check for blockage at the inlet valve inlet and outlet and that it opens completely. Check for blockage in the tubing between the inlet valve and the water tank.

4   Check the water probe wire for an open condition or corroded connections.

5   If the probe connections are OK, cycle power to the unit by turning the rear toggle switch OFF, then ON. Check to see if power is applied to the inlet valve terminals. If power is applied to the terminals, but there is not water flow, replace the inlet valve.

6   Check for power from the universal control module (UCM) to the inlet valve. If the wiring is OK, replace the UCM.

Water Does Not Heat At All

- Check to see if the water level in the tank is in contact with the water level probe. If not, see *Tank Does Not Fill*. The water will not heat unless it is in contact with the probe.
- If the water heats, but is not hot enough, see *Water Not Hot Enough*.
- If **Ready to brew** appears on the display, but the water is not hot, check the resistance across the leads of the temperature sensor. If the resistance is less than 10 k and the water is not hot, replace the temperature sensor. If the sensor resistance is above 10 k when the water is cool, replace the universal control module (UCM).

If **Heating...** appears on the display, but the water is not hot, follow the steps below. The following steps are performed with the rear toggle switch in the ON position.

1   Check for power across the terminals of the heating element(s). If power is being supplied, remove the wires and check for an open heating element.

2   If there is no power to the element(s), trace the circuit back (using the ELECTRICAL SCHEMATIC) to the power cord to find out where power is lost. If there is power into the solid state relay(s) (SSRs) but not out, see the following step. On units having two SSRs, be sure to check both.

3   If there is power into a SSR, but not out, check for 5 Vdc (nominal*) across the + and - pins of the SSR(s). If there is 5 Vdc across the + and - pins of the SSR(s), but no (or low) output voltage at a SSR output terminal, replace the SSR. If 5 Vdc is not being supplied from the UCM, but **Heating...** appears on the display, check the wiring from the UCM to the SSR(s). If the wiring is OK, replace the UCM.

Water Too Hot (Boiling or Excessive Steaming)

ⓘ   **IMPORTANT:** Before proceeding, make sure that the control panel temperature is adjusted to compensate for higher elevations. The factory setting is 200°F. Reduce the temperature setting two degrees for every 1000 feet of elevation above 4000 feet.

1   If **Over Temp Sensor** or **Ready to Brew** appears on the display and the water is too hot, go to *Over Temp Sensor Error Message*.

2   If the display reads **Heating** constantly, first check to make sure that the temperature sensor is attached tightly to the tank and that heat sink compound was used. A properly mounted sensor should have a resistance of around 7 k when the water is hot. If not, replace the sensor.

3   Check to see if the universal control module (UCM) constantly has +5 Vdc output (nominal) to the solid state relay (SSR), regardless of the resistance of the temperature sensor. If so, the UCM is probably bad.

4   If the UCM is working properly, check for a shorted SSR.

Over Temp Sensor Error Message

This error message indicates that the universal control module (UCM) has detected a water overheating problem. The UCM is reading a water temperature in the tank above 210°F. If the water temperature is too hot, but **Heating...** appears on the display, see *Water Too Hot*. Once the malfunction causing the error is corrected, the error message must be cleared. To reset the brewer and return to normal operation, turn the toggle switch on the back of the brewer to the OFF position for 5 seconds, then back on.

1   Check for 5 Vdc (nominal) across the + and - pins of the solid state relay (SSRs). If no power is applied to the SSR and the heating elements are always on, replace the SSR. On units having two SSRs, check both.

2   Turn off power to the brewer and allow the water tank to cool. Once cool, turn power back on while monitoring the voltage across the + and - pins of the SSR(s). During normal operation, the voltage should be 5 Vdc, until the water is hot, then drop to below 1 Vdc. The UCM should be replaced if the voltage reads 5 Vdc constantly even though **Ready to brew** or **Over Temp Sensor** appears on the display.

3   If the UCM is operating normally, check for a false over-temp error caused by the temperature sensor. Check the resistance across the leads of the temperature sensor. If the resistance is less than 10 k when the water is cool, replace the temperature sensor.

Dispenser Does Not Heat

NOTE: The dispenser heating element is designed to keep brewed coffee hot, but is not of sufficient wattage to reheat cold coffee.

1. First check to see if one of the LED bars on the dispenser is flashing an error code. The top LED bar flashing red indicates a bad heating element. The middle LED bar flashing red indicates a defective sensor circuit on the controller (replace the controller).

2. Check to see if the Intellifresh® LED on the front of the dispenser comes on at the beginning of the brew cycle. If neither the LED nor the warmer come on, then it can be assumed that there is no power to the dispenser. Make sure that power is being supplied to the Intellifresh (IF) connector on the brewer when the BREW button is pressed. The voltage varies based on the model, see the *ELECTRICAL SCHEMATIC*. If power is present at the connector, check the connector contacts. If power is not present at the IF connector, trace the circuit back to the control module to see if it is supplying power to the IF connector.

Top segment flashing: bad heating element

Middle segment flashing: defective controller

3. Check the contacts on the dispenser IF connector to make sure that they are making good contact with the connector on the brewer.

4. If the dispenser is receiving power from the IF connector and there are no error codes, suspect the controller.
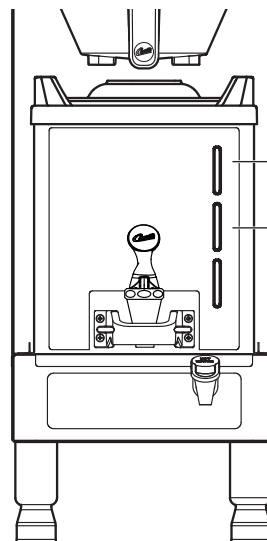
None of the LED Bars Light, Regardless of Coffee Level (Warmer is Working OK)

NOTE: If the dispenser is empty, the LED bars will not light.

1. Check for chassis ground, UPM ground and UPM 5 Volts into the LED array (see LED pin assignment on dispenser schematic).

2. If power and ground are being supplied to the LED array and none of the LED sections come on when the dispenser is full, the LED array is probably bad.

Some LED Bars Do Not Light

Short the probe wire for the LED section that is not working to ground. If the section lights, check the probe connection. If the section does not light, the LED array is bad.

One or More LED Bars are Constantly On Regardless of Coffee Level

1. Clean the inside of the dispenser according to the *CLEANING INSTRUCTIONS* section to remove any residue build-up that may be causing a malfunction.

2. Check for a probe wire that is shorted to ground.

3. If the probe wires are OK, suspect the LED array.

IntelliFresh Feature Does Not Work (Warmer OK)

1. Check to make sure that the UCM IntelliFresh settings on the brewer are correct.

2. Check the continuity of the UPM/LED communication wire.

3. Replace the LED module. If the IntelliFresh feature does not work properly after replacing the LED module, the dispenser UPM module is probably bad.

System Fault Messages

An error message will appear on the screen in the event of a malfunction under the following conditions:

1   Water level overflow. This error indicates that either there is not enough incoming water flow/pressure or a water overflow condition (unit will stop functioning).

2   Break in temperature control circuit.

3   Excess temperature in heating tank.

If any of the errors below appear on the screen, turn off the main power toggle switch and call for service.

ERROR MESSAGE	WARNING DESCRIPTION	CAUSE
Water Level Error	Fill run error/Overflow	The water inlet valve has either been open for more than 10 minutes on the initial tank fill or has been open for more than 30 seconds* in normal operation.
Sensor Error	Open Probe	Break in the temperature thermistor circuit.
Over Temp. Error	Excess Temperature	The sensor is reading that temperature in the heating tank has risen above 210ºF (99°C).

* 120 seconds for models with water tanks larger than 2 gallons.

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 other electrical components, fittings and tubing

Additionally, Wilbur Curtis Co., Inc. warrants its grinding burrs for four (4) years from the date of purchase. Stainless steel components are warranted for two (2) years from the date of purchase against leaking or pitting. 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 800-995-0417. 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:

- **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.*
- **Replacement of items subject to normal use and wear:** *This shall include, but is not limited to, spray heads, faucets, light bulbs, shear disks, "O" rings, gaskets, silicone tubing, silicone elbows, canister assemblies, whipper chambers and plates, mixing bowls, agitation assemblies and whipper propellers.*

The warranty is void under the following circumstances:

- **Improper operation of equipment:** *The equipment must be used for its designed and intended purpose and function.*
- **Improper installation of equipment:** *This equipment must be installed by a professional technician and must comply with all local electrical, mechanical and plumbing codes.*
- **Improper voltage:** *Equipment must be installed at the voltage stated on the serial plate supplied with this equipment.*
- **Improper water supply:** *This includes, but is not limited to, excessive or low water pressure and inadequate or fluctuating water flow rate.*
- **Damaged in transit:** *Equipment damaged in transit is the responsibility of the freight company and a claim should be made with the carrier.*
- **Abuse or neglect (including failure to periodically clean or remove lime accumulations):** *The 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.*
- **Unauthorized repair or modification:** *This equipment must be serviced only by qualified service technicians, using factory specified parts to factory specifications.*
- **Modified/Missing Serial Tag:** *The serial number label (tag) must not be defaced or removed.*

Repairs and/or Replacements are subject to Curtis' 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 (RMA): 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 properly re-packaged in the original carton and received by Curtis within 45 days following the issuance of a RMA.** 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). THE RMA NUMBER MUST BE MARKED ON THE CARTON OR SHIPPING LABEL. All warranty claims must be submitted within 60 days of service. Invoices will not be processed or accepted without a RMA number. Any defective parts must be returned in order for warranty invoices to be processed and approved.** 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.