



## WILBUR CURTIS COMPANY, INC.

### Service Manual – Gemini IntelliFresh Brewer

#### Models

- GEMTIF
- GEMSIF
- GEM3IF

#### Important Safeguards/Conventions

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

- Do NOT immerse the unit in water or any other liquid
- To reduce the risk of fire or electric shock, do NOT open service panels. No user serviceable parts inside.
- Keep hands and other items away from hot parts of unit during operation.
- Never clean with scouring powders, bleach or harsh chemicals.

#### Symbols



WARNINGS – To help avoid personal injury



Important Notes/Cautions – from the factory



Sanitation Requirements

Your IntelliFresh brewer is Factory Pre-Set and Ready to Go... Right from the Carton.

Following are the Factory Settings for IntelliFresh brewer:

- Brew Temperature = 200°F
- Water Bypass = On LARGE & MEDIUM brew only
- Brew Volume = Large set to vessel requirements.
- Energy Save Mode = Off
- Quality Timer = 120 Minutes

#### System Requirements:

- Water Source 20 – 90 PSI (Minimum Flow Rate of 1 GPM)
- Electrical: See attached schematic for standard model or visit [www.wilburcurtis.com](http://www.wilburcurtis.com) for your model.


#### SETUP STEPS

The unit should be level (left to right and front to back), located on a solid counter top. Connect a water line from the water filter to the brewer. NOTE: A water filtration system must be used to maintain a trouble-free operation. (In areas with extremely hard water, we suggest that a sedimentary and taste & odor filter be installed.) This will prolong the life of your brewing system and enhance coffee quality.




NSF International requires the following water connection:

1. A quick disconnect or additional coiled tubing (at least 2x the depth of the unit) so that the machine can be moved for cleaning underneath.
2. In some areas an approved backflow prevention device may be required between the brewer and the water supply.

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

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

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

1. A 3/8" Flare x 3/8" Male pipe elbow is supplied with the brewer for water line connection. Use tubing sized sufficiently to provide a minimum of 1.0 GPM.
2. Connect the unit to an appropriate electrical power circuit.
3. Turn on the toggle (STANDBY/ON) switch behind the unit. The heating tank will start to fill. When the water level in the tank rises to the correct volume, the heating elements will energize automatically. With the IntelliFresh brewer, there is no danger of element burnout caused by overheating an empty tank.
4. The heating tank will require 20 to 30 minutes to reach operating temperature (200°F), indicated when READY TO BREW is displayed on the LCD screen.
5. Prior to brewing, dispense 12 ounces of hot water through the hot water faucet.
6. Brew a cycle of at least 12 ounces, to purge the water lines of any air that may be trapped after filling.

ISO 9000:2008 REGISTERED

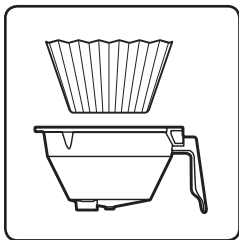
WILBUR CURTIS CO. INC.  
Montebello, CA 90640  
[www.wilburcurtis.com](http://www.wilburcurtis.com)

# INTELLIFRESH BREWING INSTRUCTIONS

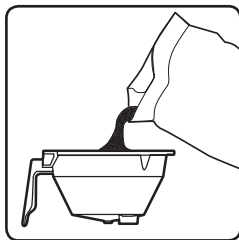
1. Brewer should be ON (Confirm at rear toggle switch, then press the ON/OFF button). Ready-to-Brew should be on the display. If the brewer is connected to an InterLock grinder, the grinder should be on. When Interlock connection is made, grind coffee at this time.
2. Place an empty Satellite under the brewcone and press the warmer switch to pre-heat the Satellite.



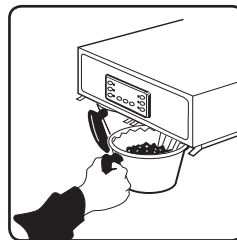
NOTE: Only utilize Intellifresh Satellites on Intellifresh brewers.



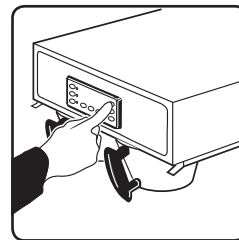
3. Place a clean filter into the brewcone.



4. Fill brewcone with ground coffee.



5. Transfer filled brewcone to brewer.



6. Press Brew button. Brewing will begin immediately.



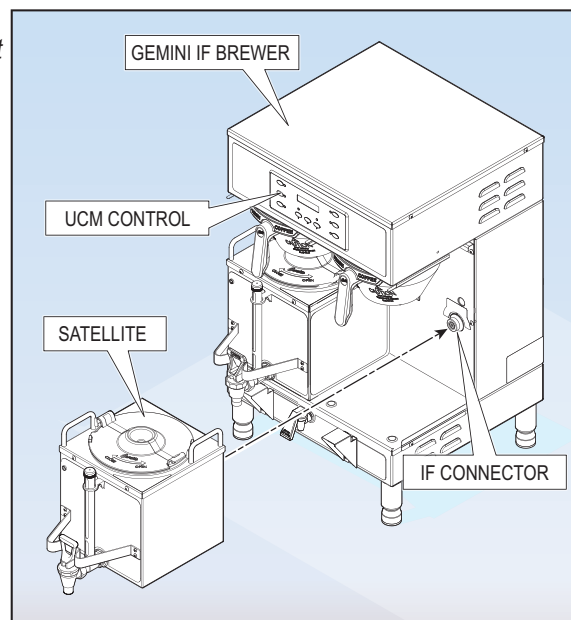
WARNING TO AVOID SCALDING, Do not remove brewcone while brew light is flashing.

## INTELLIFRESH FUNCTION & FEATURES

The IntelliFresh system is a method of storing coffee to maintain freshness and alert you when the coffee has exceeded the desired holding time. Being a GEMINI system, coffee is brewed directly into an Intellifresh Satellite container. The Satellites are linked to the brewer by a connector. The Intellifresh system is activated when the connector on the Satellite comes into contact with a corresponding connector on the center panel. The Satellite contains two main control functions built into the server.

**TEMPERATURE:** This system allows you to select the holding temperature within the Satellite. You have a choice of three temperature settings, HIGH, MEDIUM and LOW. The factory default is MEDIUM. The temperature is adjustable through the UCM control panel on the brewer.

**TIMER:** The timer does two things. It turns on and off a red indicator light and turns off the warmer element. The timer is also programmable through the UCM. The indicator light signals when a predetermined time has expired. The warmer shuts off 12 hours after the indicator light comes on.



At the beginning of the brew-cycle, the LED on the Satellite comes on and stays lit during the quality time setting. Range 20 min – 240 min, in 10 minute increments.

When quality time expires, LED will flash for 12 hours.

After 12 hours of flashing, the LED and warmer will turn off.

The LED above the warmer button on the UCM will simultaneously duplicate the light pattern on the Satellite. If a new brewcycle is started before the quality timer has expired, the timer will reset and begin counting down again.

# Quick Start

# GEM INTELLIFRESH

The G3/Gold Cup Series Brewing System is Factory Pre-Set for Optimum Performance.

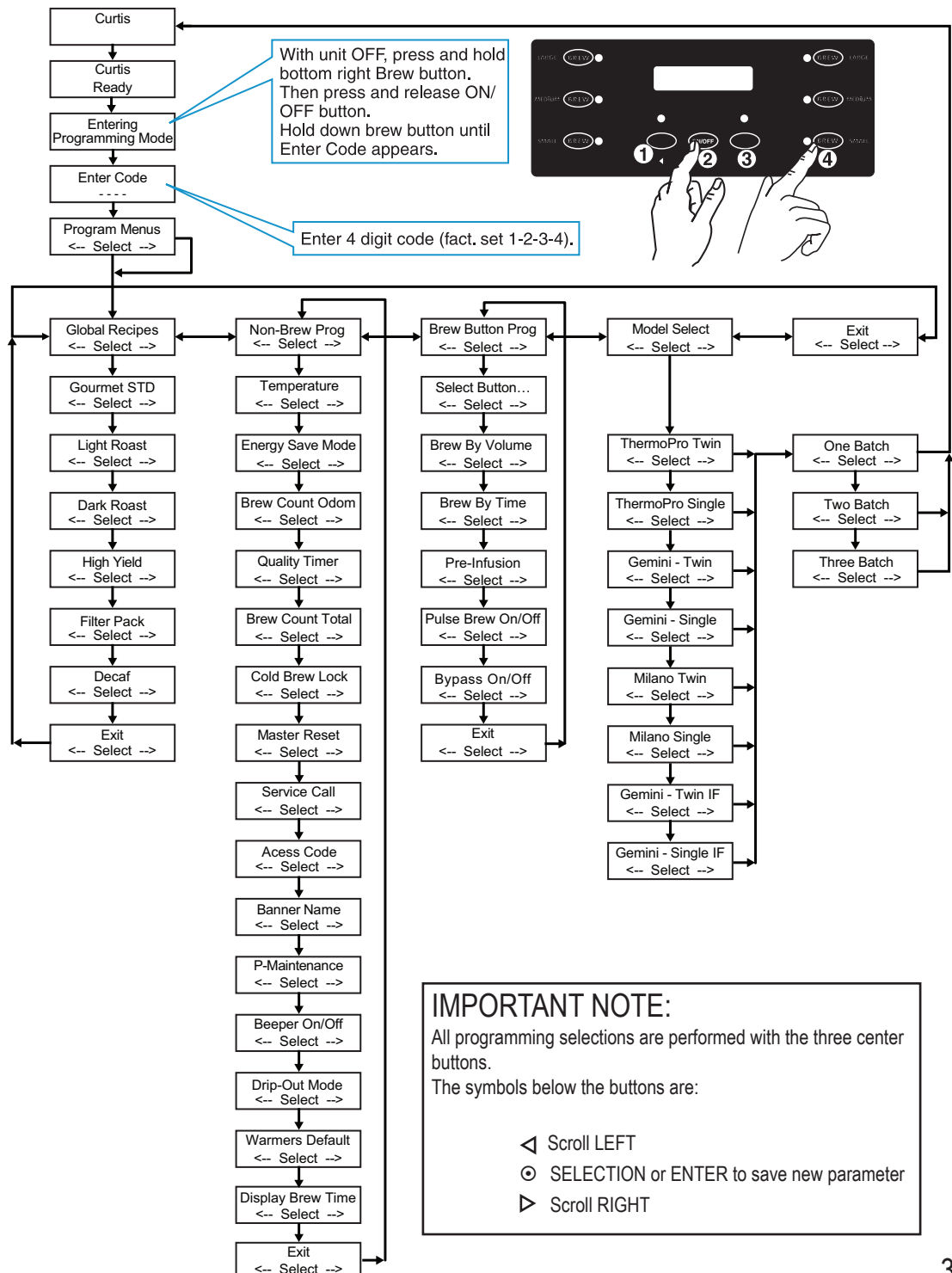
After connection to water and power; the rear toggle switch must be on. You will hear a beep sound, indicating power is available to the controller.

The control displays **CURTIS**. Press ON/OFF button and the screen will display **<GEMINI TWIN> WILBUR CURTIS**. After three seconds, **CURTIS FILLING** is displayed.

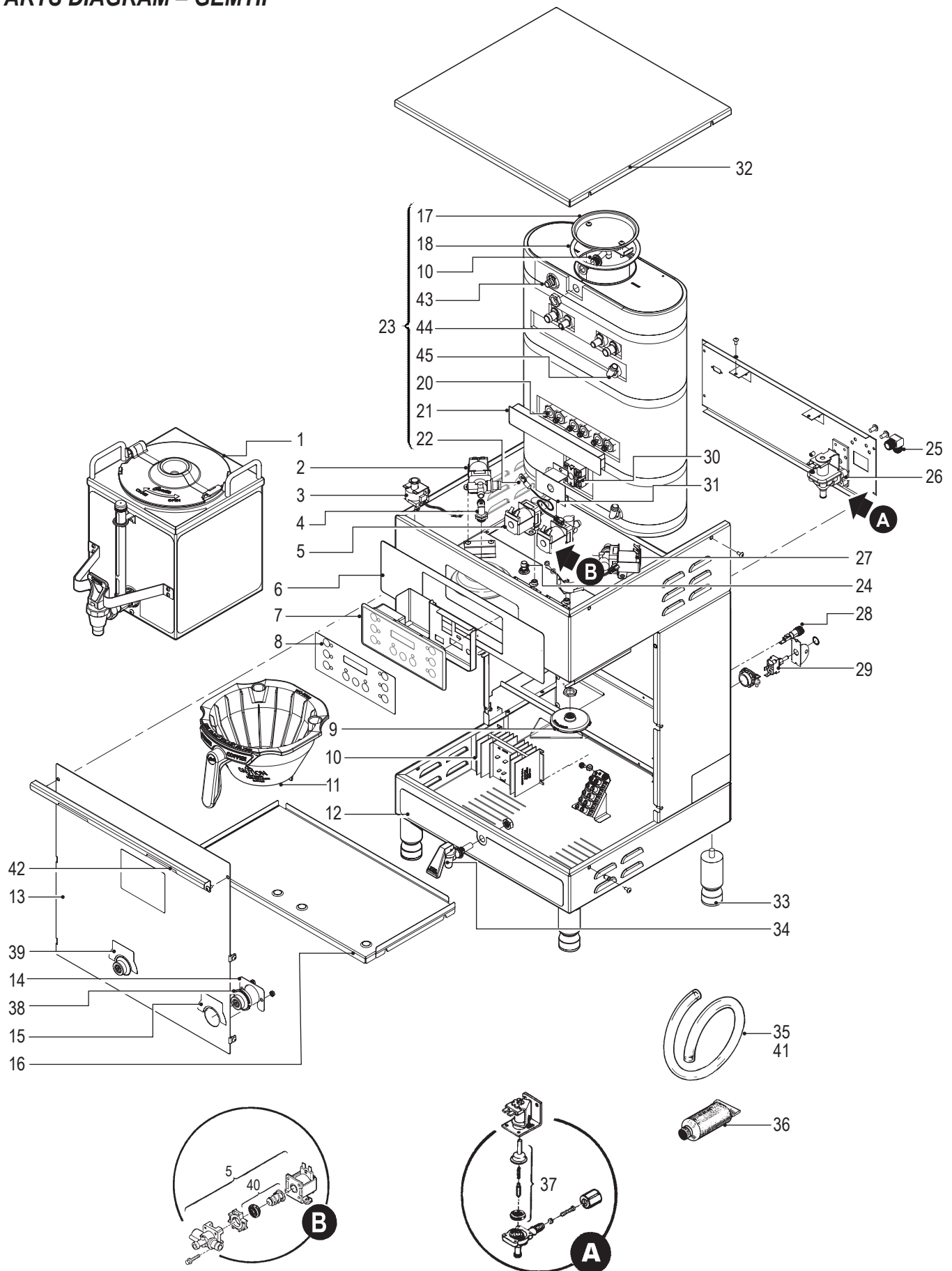
Water will fill the tank (approximately 2-3 minutes depending on water flow rate). When the proper level is reached **CURTIS HEATING** will appear on the screen. It takes approximately 20 minutes to reach setpoint temperature of 200°F.

Control will display **CURTIS READY TO BREW** when temperature reaches the setpoint (200°F). Unit is now ready to brew.

## PROGRAM MENUS



# PARTS DIAGRAM – GEMTIF



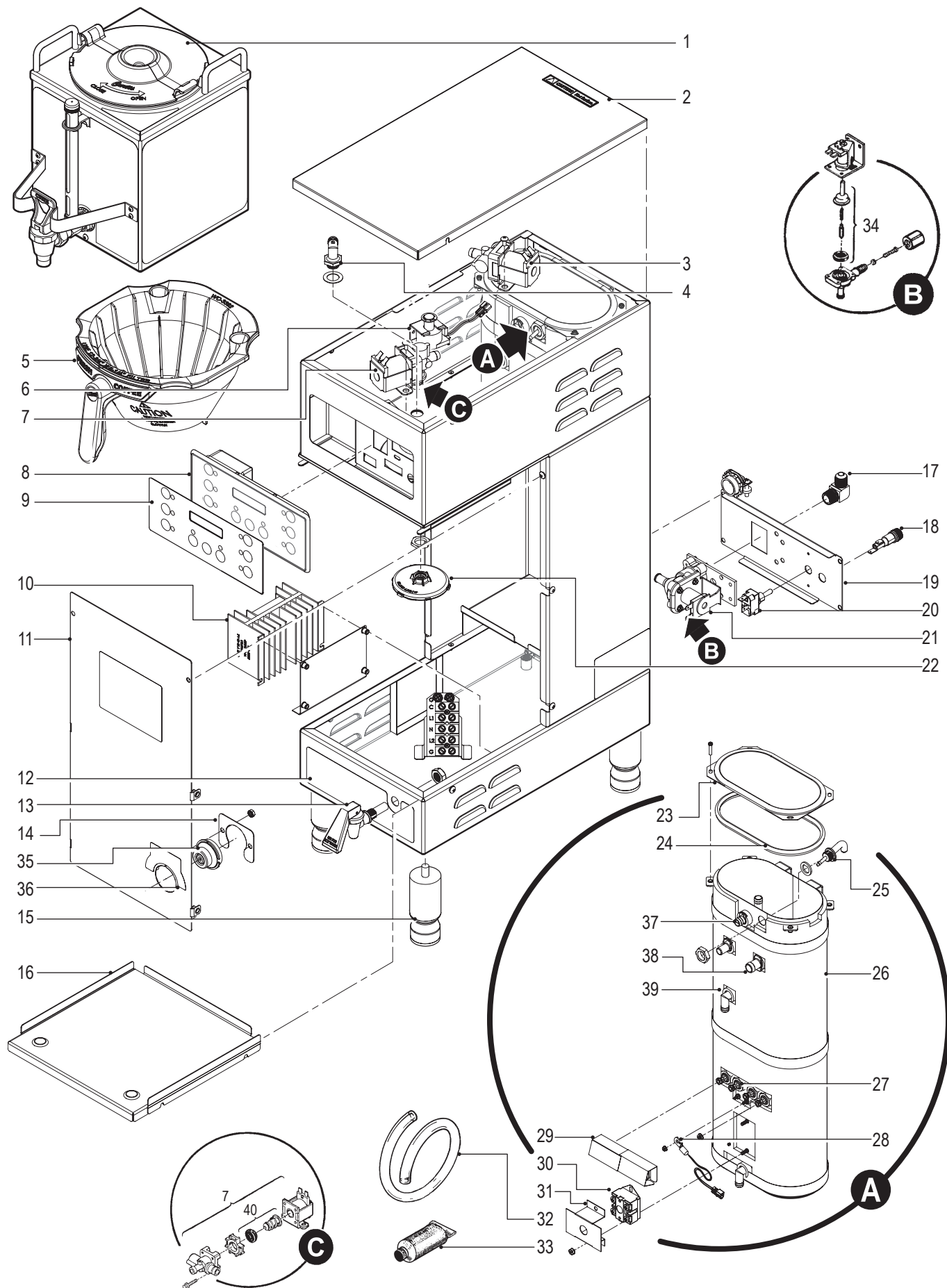
## PARTS LIST – GEMTIF

<i>Index N°</i>	<i>Part N°</i>	<i>Description</i>
1	GEM3IF	SATELLITE, INTELLIFRESH
2	WC-37121*	KIT, DUMP VALVE LEFT
3	WC- 442	SOLENOID, LOCK BREW CONE RIGHT 120V
4	WC-2977-101	FITTING, SPRAYHEAD ULTEM
5	WC- 844-101*	VALVE, BY-PASS, NON-ADJUSTABLE W/RSTRCTR
6	WC-39744	LABEL, UCM & OUTER 3-BATCH GEM-IF
7	WC-37388*	KIT, LABEL & UCM GEMTIF 3-BATCH CURTIS
8	WC-39755*	LABEL, UCM OVERLAY 1-BATCH
8A	WC-39756*	LABEL, UCM OVERLAY 2-BATCH
9	WC-29050*	SPRAYHEAD, AFS-AMBER
10	WC-8559*	RELAY, SOLIDSTATE 40A W/HEAT SINK
11	WC-37308*	KIT, BREWCONE BLACK NON-METAL GEM
12	WC-39745	LABEL, BOTTOM PANEL
13	WC-61309	COVER, FRONT CENTER WRAP WELD ASSY GEMTIF
14	WC-61307	HOLDER, WC-571 FEMALE IF CONNECTOR
15	WC-38504	LABEL, WARNING SHOCK HAZARD
16	WC-61301	DECK, WARMER WELD ASSY GEMTIF
17	WC-37008*	KIT, TANK LID ROUND
18	WC-43067*	O'RING, 4.5" ID SILICONE
19	WC-37406*	KIT, LIQUID LEVEL PROBE FAIL-SAFE, NON-METAL
20	WC- 934-04*	ELEMENT HEATING 2.5KW 220V
21	WC-4382*	GUARD, SHOCK HEATING ELEMENT
22	WC-1438-101*	SENSOR, HEATING TANK
23	WC-62033	TANK, COMPLETE GEMTS NON-METAL FITTINGS
24	WC-29044	SLEEVE, OVERFLOW ASSY GEN USE
25	WC-2402P*	ELBOW, 3/8"FL x 3/8" NPT PLATED
26	WC- 847 *	VALVE, INLET 2 GPM 120V 10W GEN USE YEL BODY
27	WC-37122 *	KIT, DUMP VALVE RIGHT
28	WC-1501*	FUSE HOLDER ASSY W/5A FUSE
29	WC- 102*	SWITCH, TOGGLE NON-LIT SPST 15A 125/250VAC
30	WC- 522 *	THERMOSTAT, RESET
31	WC-43055*	GUARD, SHOCK RESET T-STAT
32	WC-5421	COVER, TOP SS GEM
33	WC-3528 *	LEG, 4" ADJUST 3/8-16 THREAD STYLIZED
34	WC-1809*	FAUCET, PS/HPS SERIES HOT WTR
35	WC-5310*	TUBE, 5/16 ID x 1/8W SILICONE
36	WC-5231*	COMPOUND, SILICONE
37	WC-3765L *	KIT, VALVE REPAIR USE ON WC-847
38	WC-13429	HARNESS ASSY IF CONNECTOR RT
39	WC-13428	HARNESS ASSY IF CONNECTOR LT
40	WC-37132*	KIT, VALVE REPAIR USE ON WC-844-101
41	WC-5350*	TUBE, SILICONE Ø1/2" ID x Ø3/4" OD x 1/8" WALL
42	WC-61674	BRACKET, BREWCONE ALIGNMENT
43	WC-37266*	KIT, TANK OVERFLOW FITTING
44	WC-37317*	KIT, STRAIGHT FITTING
45	WC-37365*	KIT, TANK INLET FITTING

\* SUGGESTED PARTS TO STOCK



# PARTS DIAGRAM – GEMSIF

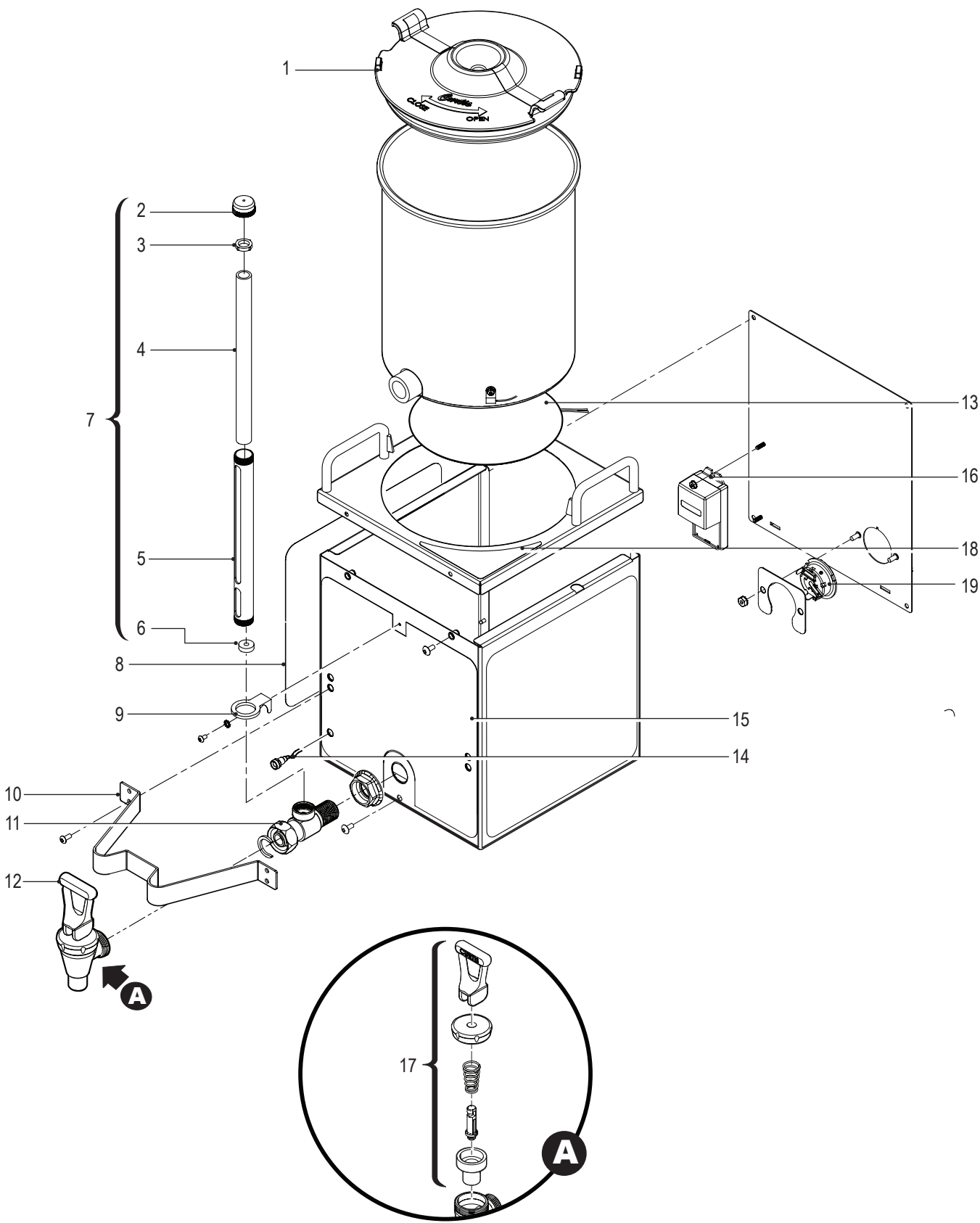


## PARTS LIST – GEMSIF

Index Nº	Part Nº	Description
1	GEM3IF	SATELLITE, INTELLIFRESH
2	WC-58117	COVER TOP
3	WC-37122*	KIT, DUMP VALVE RIGHT
4	WC-2977-101	FITTING, SPRAYHEAD ULTEM
5	WC-37308*	KIT, BREWCONE BLACK PLASTIC GEM
6	WC- 442	SOLENOID, LOCK BREWCONE L/R LABEL
7	WC- 844-101*	KIT, VALVE BY-PASS NON-ADJUSTABLE
8	WC-37389	KIT, LABEL & UCM GEMSIF 3-BATCH CURTIS
9	WC-39801*	LABEL, UCM PANEL 3-BATCH GEMSIF
9A	WC-39802*	LABEL, UCM PANEL 2-BATCH GEMSIF
9B	WC-39803*	LABEL, UCM PANEL 1-BATCH GEMSIF
10	WC-8559*	RELAY, SOLIDSTATE 40A W/HT SINK
11	WC-61384	COVER, FRONT CENTER WRAP GEMSIF
12	WC-39800	LABEL, BOTTOM WRAP GEMSIF
13	WC-1809*	FAUCET, PS/HPS SERIES HOT WTR
14	WC-61307	HOLDER, WC-571 FEMALE IF CONNECTOR
15	WC-3528 *	LEG, 4" ADJUST 3/8-16 THRD ITALIAN
16	WC-61379	DECK, WARMER W/A
17	WC-2402P*	ELBOW, 3/8"FL x 3/8" NPT PLATED
18	WC-1501	FUSE HOLDER ASSY W5A FUSE
19	WC-59020	PANEL, BACK GEMSS
20	WC- 102*	SWITCH, TOGGLE NON-LIT SPST 15A 125/250VAC
21	WC- 847 *	VALVE, INLET 2 GPM 120V 10W GEN USE YEL BODY
22	WC-29050*	SPRAYHEAD, AFS-AMBER
23	WC-5853-102	COVER, TOP HEATING TANK
24	WC-43062*	GASKET, TANK LID
25	WC-37406*	KIT, PROBE LIQUID LEVEL NON-METAL
26	WC-62035	TANK, COMPLETE GEMSS W/ULTEM FITTINGS
27	WC- 906-04*	KIT, ELEMENT, HEATING 2KW 220V
28	WC-1438-101*	SENSOR, HEATING TANK
29	WC-4394*	GUARD, SHOCK HEATING ELEMENT
30	WC- 522 *	THERMOSTAT, RESET
31	WC-43055*	GUARD, SHOCK RESET THERMOSTAT
32	WC-5310*	TUBE, 5/16 ID x 1/8W SILICONE
33	WC-5231*	COMPOUND, SILICONE
34	WC-3765L *	KIT, VALVE REPAIR
35	WC-13429	HARNESS ASSY IF CONNECTOR RT
36	WC-38504	LABEL, WARNING SHOCK HAZARD
37	WC-37266*	KIT, TANK OVERFLOW FITTING
38	WC-37317*	KIT, STRAIGHT FITTING
39	WC-37365*	KIT, TANK INLET FITTING
40	WC-37132*	KIT, BY-PASS VALVE USE ON WC-844-101
41	WC-29044	SLEEVE, OVERFLOW ASSY GEN USE (NOT SHOWN)

\* SUGGESTED PARTS TO STOCK

**PARTS DIAGRAM – GEM3IF**





## PARTS LIST – GEM3IF

Index N°	Part N°	Description
1	WC-5622*	LID, BLACK PLASTIC GEM-3
2	WC-2001	CAP, SHIELD W/VENT
3	WC-2005*	WASHER, SHIELD CAP 1/8"
4	WC-2025*	GLASS, GAUGE 8"
5	WC-2010C	SHIELD, GAUGE GLASS ¾" D. x 8"
6	WC-2006*	WASHER, .188ID x .188 THK BOTTOM
7	WC-2102	GAUGE GLASS ASSEMBLY 8"
8	WC-39747	LABEL, SIDE GEM3IF CURTIS LOGO
9	WC-2007	BRACKET, GAUGE GLASS GEM-3
10	WC-6417	GUARD, FAUCET GEM-3
11	WC-1901A	SHANK, FAUCET W/SHIELD BASE
12	WC-1800*	FAUCET, S' SERIES NON-LOCKING
13	WC- 976-101*	HEATER, SILICONE 120V 71W W/TERMINALS
14	WC- 586*	LED, 5MM W/HOLDER & WIRES
15	WC-39746	LABEL, FRONT GEM3IF CURTIS LOGO
16	WC- 736-101*	BOARD, HYBRID T-STAT CNTRL W/TRMNLS
17	WC-3705*	KIT, FAUCET S' SERIES
18	WC-38151	LABEL, LOCK/UNLOCK GEM3
19	WC-13426	IF CONNECTOR, FEMALE W/WIRES

\* SUGGESTED PARTS TO STOCK

## CLEANING THE GEM3IF SATELLITE

A daily routine of cleaning the GEM3IF Satellite will maintain the appearance of the unit and ensure great tasting coffee.

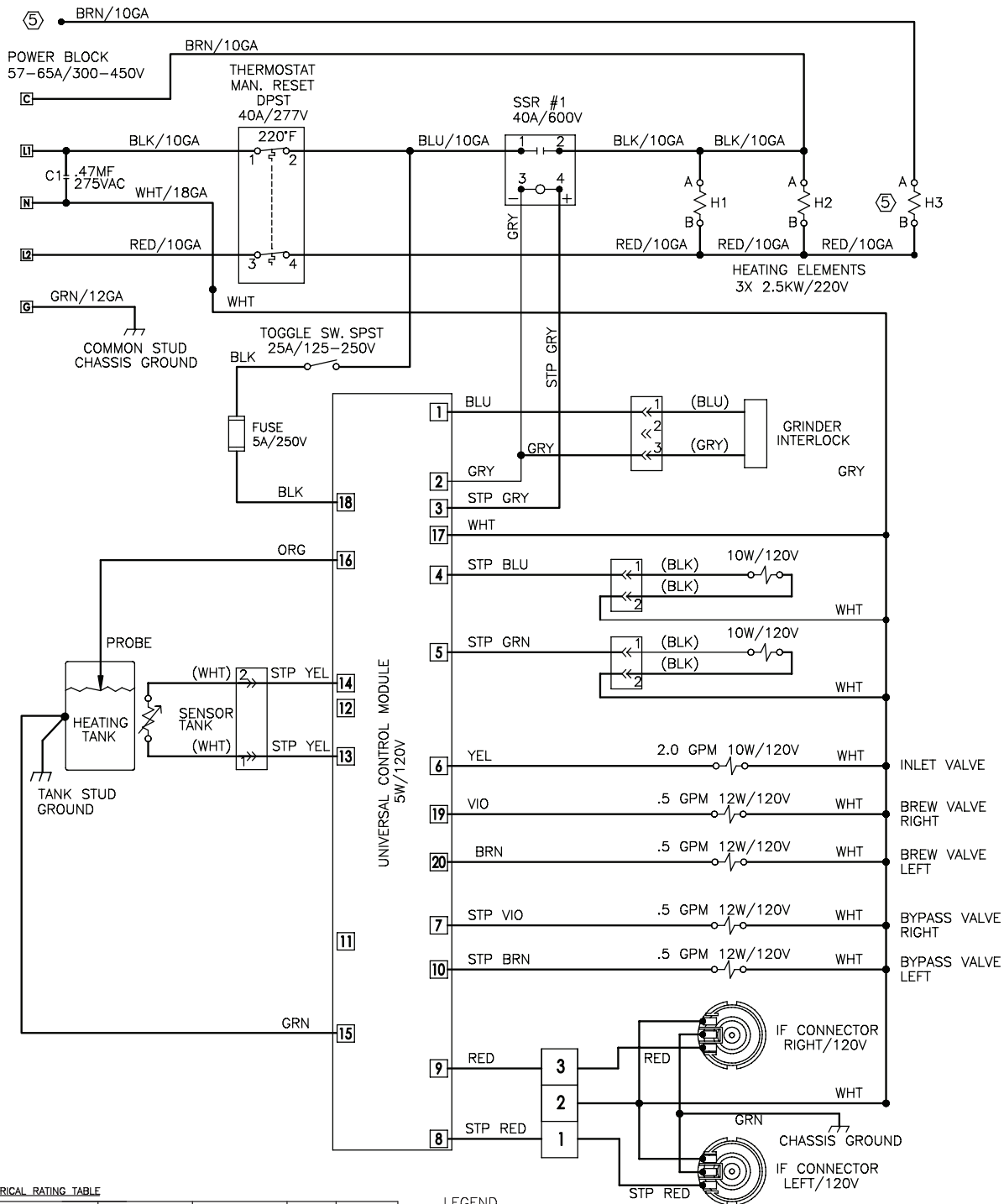


CAUTION – Do not use cleansers, liquids containing bleach, powders or any other substance containing chlorine. These products promote corrosion and will pit the stainless steel. USE OF THESE PRODUCTS WILL VOID THE WARRANTY.

To clean the Satellite components, prepare a mild detergent solution.

1. Remove lid from satellite.
2. Turn the lid over and clean the funnel area, preferably with a gauge glass brush.
3. Rinse the lid, removing all traces of cleaning solution.
4. Unscrew the handle/bonnet assembly and remove from faucet.
5. Remove seat cup from stem and inspect for wear or hardening. Replace if necessary.
6. Clean all parts, including faucet body, with mild detergent and warm water. Thoroughly rinse with clear warm water.
7. Dry and assemble. Hand-tighten the handle assembly.
8. Remove the gauge glass tube by unscrewing the gauge glass cap.
9. Flush the tube and washers with a gauge brush and washing solution. Rinse with clear water. Dry and assemble.
10. Clean inside Satellite with a cloth or ScotchBrite™ pad.
11. Remove coffee residue using a mild detergent solution with water.
12. Thoroughly rinse with clear warm water.

# ELECTRICAL SCHEMATIC GEMTIF



ELECTRICAL RATING TABLE

MACHINE	HEATING ELEMENTS			GEM-3IF		TOTAL POWER (WATTS)	TOTAL CURRENT (AMPERES)
	H1	H2	H3	LEFT	RIGHT		
GEMTIF	•	•	•	•	•	5200	23.6
GEMTIF W/ H3	•	•	•	•	•	7600	34.5

⑤ 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.

④ USE THIS DIAGRAM FOR ALL OTHER MODELS WITH ADDED PREFIX LETTERS AND/OR SUFFIX NUMBERS ON THEIR PART NUMBERS HAVING THE SAME ELECTRICAL RATINGS.  
Ex.: SCGEMTIF10

3. LOCATE MATED CONNECTORS AWAY FROM HEAT.

2. INSTALL GROUND LUG OVER THE SENSOR ON TANK SENSOR STUD.

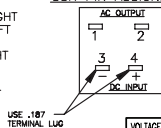
1. ALL WIRES SHALL BE 18AWG UNLESS NOTED.

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

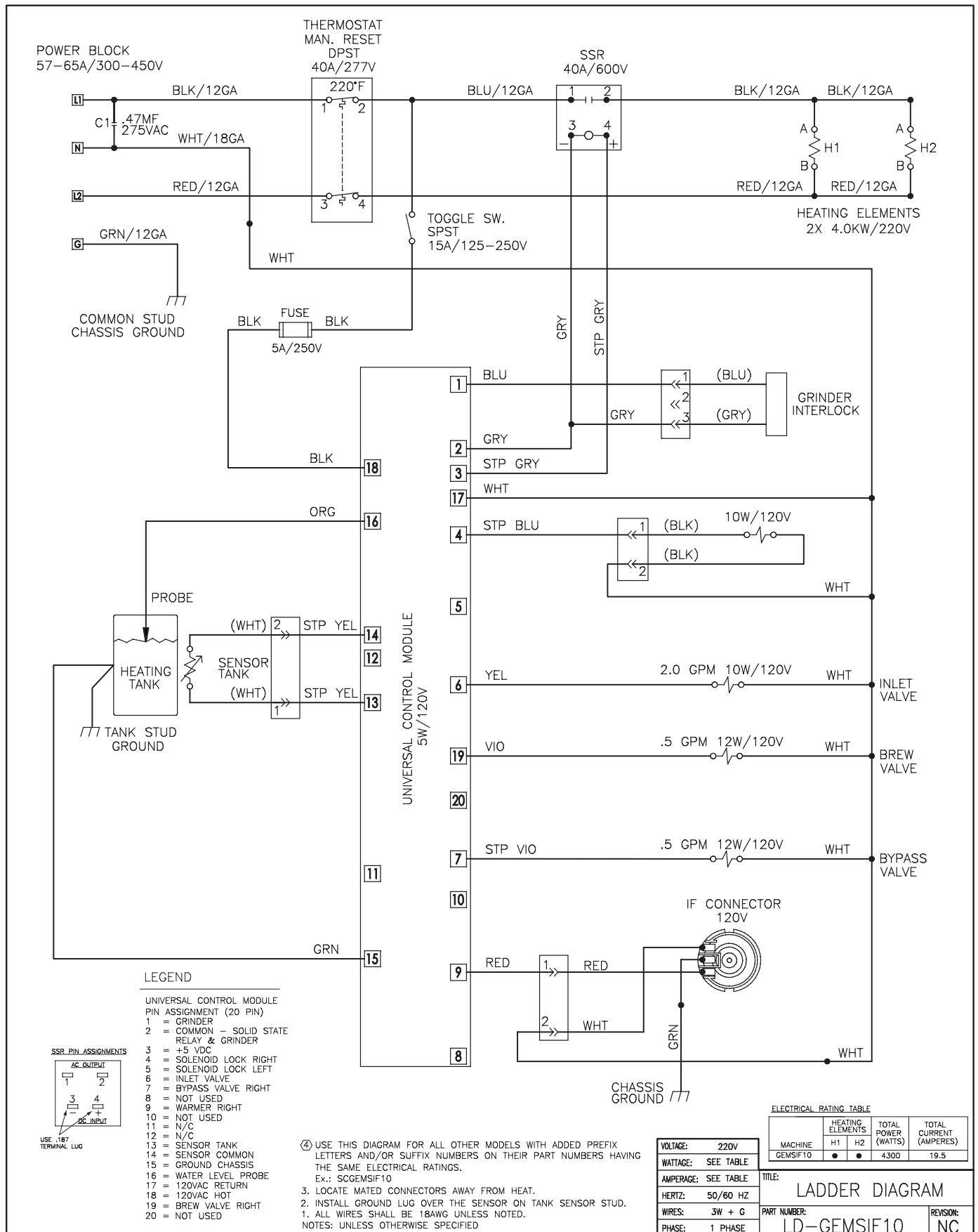


VOLTAGE:	220V
WATTAGE:	SEE TABLE
AMPERAGE:	SEE TABLE
HERTZ:	50/60 HZ
WIRES:	3W + G
PHASE:	1 PHASE

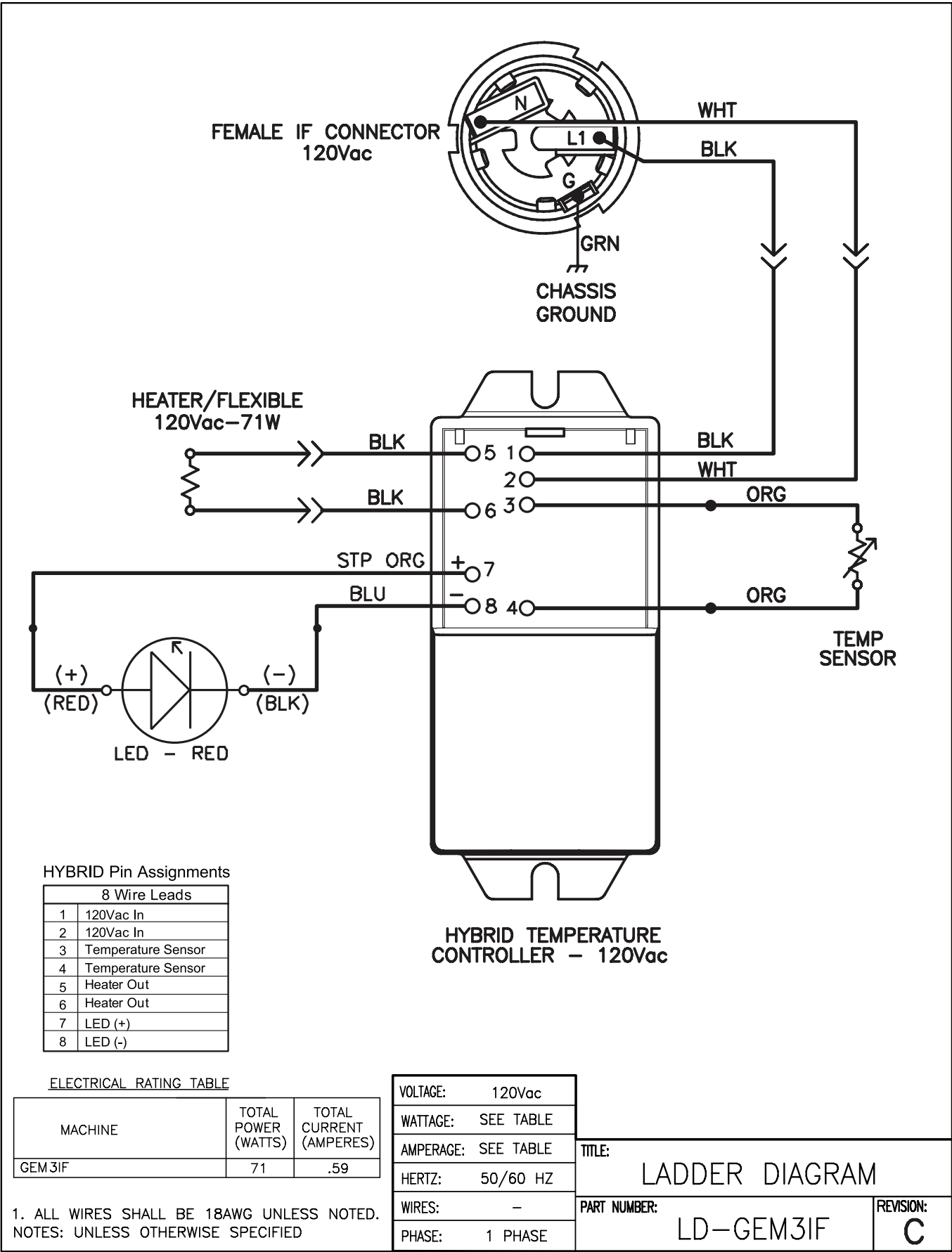
TITLE: LADDER DIAGRAM  
GEMTIF10

REVISION: A

# ELECTRICAL SCHEMATIC GEMSIF

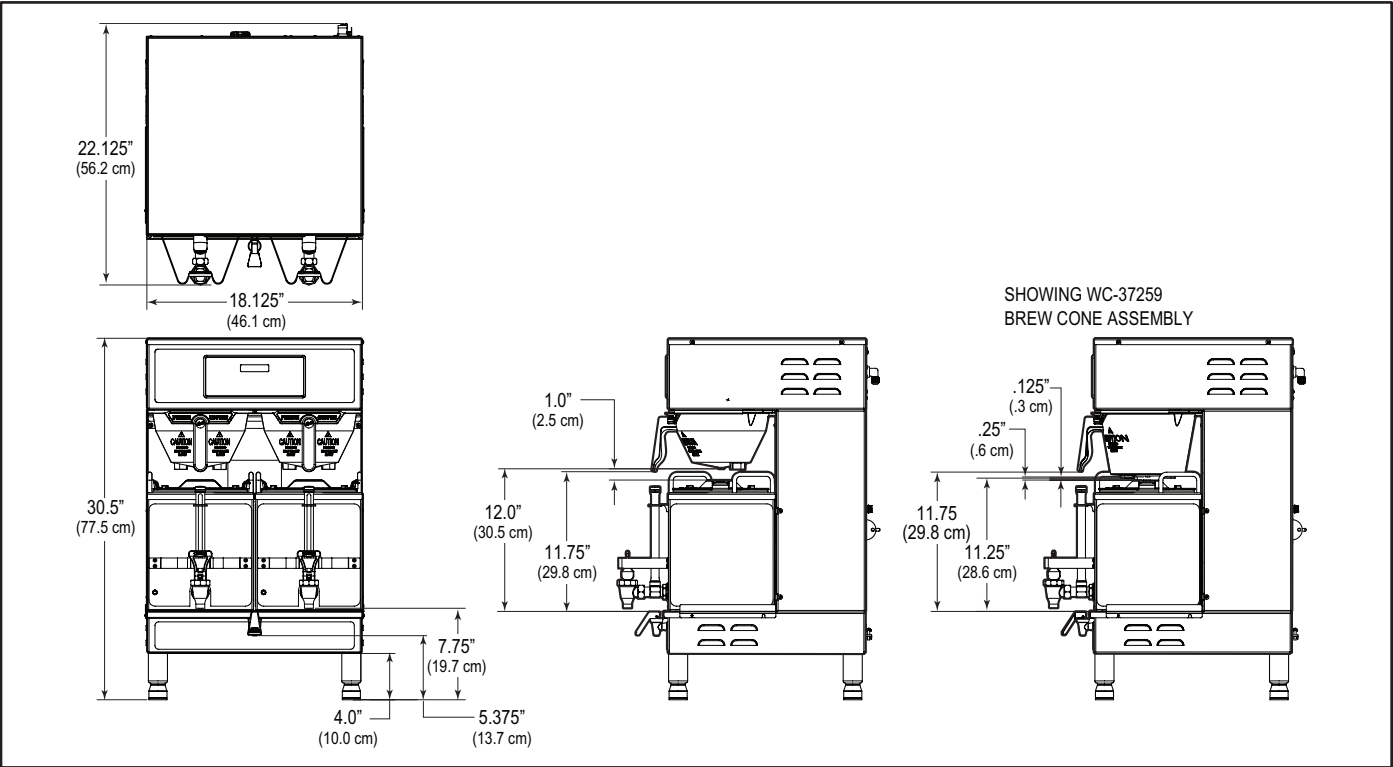


ELECTRICAL SCHEMATIC GEM3IF

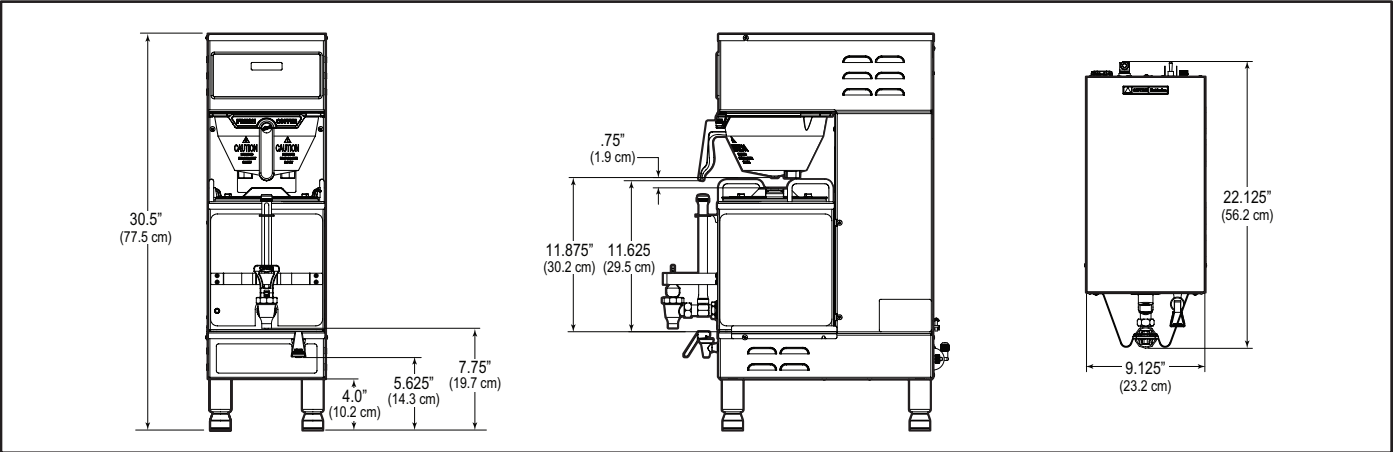


ROUGH-IN DRAWINGS

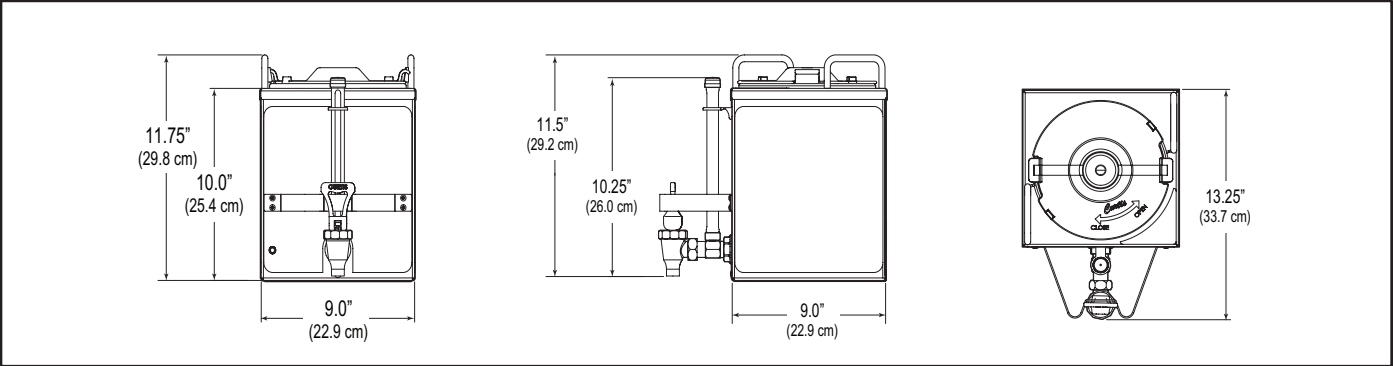
GEMTIF



GEMSIF



GEM3IF



## Product Warranty Information

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

- 3 Years, Parts and Labor, from Original Date of Purchase on digital control boards.
- 2 Years, Parts, from Original Date of Purchase on all other electrical components, fittings and tubing.
- 1 Year, Labor, from Original Date of Purchase on all electrical components, fittings and tubing.

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

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

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

### CONDITIONS & EXCEPTIONS

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

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

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



**WILBUR CURTIS CO., INC.**

6913 Acco St., Montebello, CA 90640-5403 USA

Phone: 800/421-6150 ♦ Fax: 323-837-2410

♦ Technical Support Phone: 800/995-0417 (M-F 5:30A - 4:00P PST) ♦ E-Mail: [techsupport@wilburcurtis.com](mailto:techsupport@wilburcurtis.com)

♦ Web Site: [www.wilburcurtis.com](http://www.wilburcurtis.com)