USER GUIDE

RU Series Automatic Coffee Urn

Style Varies, RU-300 Shown

READ AND SAVE THESE INSTRUCTIONS

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

Contact Information

Wilbur Curtis Co., Inc.
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Phone: 323-837-2300 | Toll Free: 800-421-6150
Email: csrassistance@wilburcurtis.com | Web: www.wilburcurtis.com

For the latest specifications and information go to www.wilburcurtis.com
Toll Free: 800-995-0417 | Monday - Friday 5:30 A.M. - 4:00 P.M. PT
Email: techsupport@wilburcurtis.com

Key Features

- Automatic refill during brew cycle.
- Thermostatically controlled for near-instant recovery.
- Closed-lid brewing creates superior flavor and full coffee aroma.
- Swing-spray head evenly saturates coffee grounds for complete extraction.

Specifications (Selected Models)

Electrical Supply Requirements

MODEL #	DESCRIPTION	PHASE	VOLTS	AMPS	HEATING CONFIG	WIRE	WATTS	HERTZ	GAL/HR	CAPACITY
RU-150-12	Single 3 Gallon	1 PH	220 V	21.1 A	2 X 2500 W	3W + G	5000	50/60 Hz	13.0	1 X 3 Gal.
RU-150-20	Single 3 Gallon, 3 Phase	3 PH	220 V	13.8 A	3 X 1750 W	3W + G	5200	50/60 Hz	13.0	1 X 3 Gal.
RU-225-12	Single 6 Gallon	1 PH	220 V	31.0 A	2 X 3500 W	3W + G	7000	50/60 Hz	15.0	1 X 6 Gal.
RU-225-20	Single 6 Gallon, 3 Phase	3 PH	220 V	20.0 A	3 X 2500 W	3W + G	7500	50/60 Hz	15.0	1 X 6 Gal.
RU-300-12	Twin 3 Gallon	1 PH	220 V	27.3 A	2 X 3000 W	3W + G	6000	50/60 Hz	13.0	2 X 3 Gal.
RU-300-20	Twin 3 Gallon, 3 Phase	3 PH	220 V	20.0 A	3 X 2500 W	3W + G	7500	50/60 Hz	13.0	2 X 3 Gal.
RU-600-12	Twin 6 Gallon	1 PH	220 V	45.5 A	2 X 5000 W	3W + G	10,000	50/60 Hz	30.0	2 X 6 Gal.
RU-600-20	Twin 6 Gallon, 3 Phase	3 PH	220 V	27.6 A	3 X 3500 W	3W + G	10,500	50/60 Hz	30.0	2 X 6 Gal.
RU-1000-12	Twin 10 Gallon	1 PH	220 V	45.5 A	2 X 5000 W	3W + G	10,000	50/60 Hz	30.0	2 X 10 Gal.
RU-1000-20	Twin 10 Gallon, 3 Phase	3 PH	220 V	27.5 A	3 X 3500 W	3W + G	10,500	50/60 Hz	30.0	2 X 10 Gal.
EXPORT										
RU-150-62	Single 3 Gallon	1 PH	220 V	23.0 A	2 X 2500 W	2W + G	5000	50/60 Hz	13.0	1 X 3 Gal.
RU-150-91	Single 3 Gallon, 3 Phase	3 PH	380 V	10.0 A	3 X 3000 W	4W + G	6600	50/60 Hz	13.0	1 X 3 Gal.
RU-300-63	Twin 3 Gallon	1 PH	220 V	36.0 A	2 X 4000 W	2W + G	8000	50/60 Hz	15.0	2 X 3 Gal.
RU-300-91	Twin 3 Gallon, 3 Phase	3 PH	380 V	18.5 A	3 X 4000 W	4W + G	12,000	50/60 Hz	15.0	2 X 3 Gal.
RU-600-63	Twin 6 Gallon	1 PH	220 V	45.5 A	2 X 5000 W	2W + G	10,000	50/60 Hz	30.0	2 X 6 Gal.
RU-600-91	Twin 6 Gallon, 3 Phase	3 PH	380 V	18.5 A	3 X 4000 W	4W + G	12,000	50/60 Hz	30.0	2 X 6 Gal.
RU-1000-91	Twin 10 Gallon, 3 Phase	3 PH	380 V	18.5 A	3 X4000 W	4W + G	12,000	50/60 Hz	30.0	2 X 10 Gal.

Dimensions / Water Supply Requirements

MODEL #	HEIGHT	WIDTH	DEPTH	SHIP WEIGHT	SHIP CUBE	WATER CONNECTOR	WATER PRESSURE	MIN. FLOW RATE
RU-150-12	29.25”	23.75”	16.50”	78.0 lbs	11.62 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-150-20	29.25”	23.75”	16.50”	78.0 lbs	11.62 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-225-12	32.50”	23.50”	16.50”	85.0 lbs	13.33 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-225-20	32.50”	23.50”	16.50”	85.0 lbs	13.33 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-300-12	28.40”	32.60”	18.50”	95.0 lbs	13.85 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-300-20	28.40”	32.60”	18.50”	95.0 lbs	13.85 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-600-12	32.50”	38.00”	17.00”	120.0 lbs	19.37 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-600-20	32.50”	38.00”	17.00”	120.0 lbs	19.37 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-1000-12	29.50”	38.00”	17.00”	146.0 lbs	23.74 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-1000-20	29.50”	38.00”	17.00”	146.0 lbs	23.74 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
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RU-300-91	28.40”	32.60”	18.50”	95.0 lbs	13.85 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-600-63	32.50”	38.00”	17.00”	120.0 lbs	19.37 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-600-91	32.50”	38.00”	17.00”	120.0 lbs	19.37 cu ft	1/4” flare	20 - 90 psi	1.0 gpm
RU-1000-91	29.50”	38.00”	17.00”	146.0 lbs	23.74 cu ft	1/4” flare	20 - 90 psi	1.0 gpm

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, will result in death or serious injury.

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

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

NOTICE - Indicates a situation which, if not avoided, could 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 completely 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.
- 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. This brewer must be properly grounded.

NOTICE: DO NOT connect this brewer 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.
- For units without an attached cord set: 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.

NSF International 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

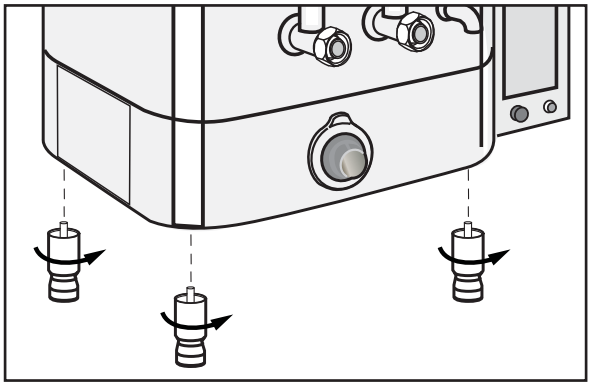
Prepare the Location

WARNING: DO NOT place the urn closer than 6 inches from the wall. The urn must have adequate cross-ventilation.

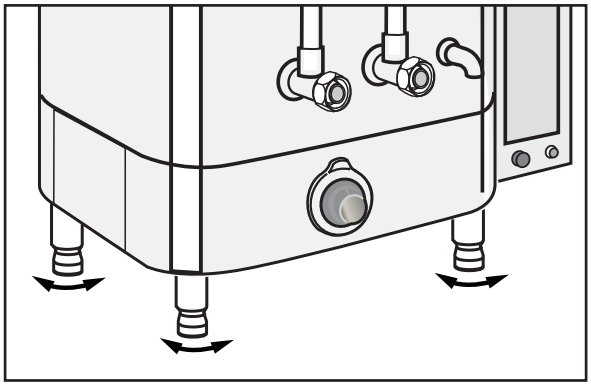
1 Determine the location. Make sure that the counter is capable of supporting at least 600 lbs. to allow for the urn weight at full capacity.

Level the Unit

2 Remove the urn from the shipping carton and install the legs on the 4 corners. Screw them firmly into place on the bottom of the unit.



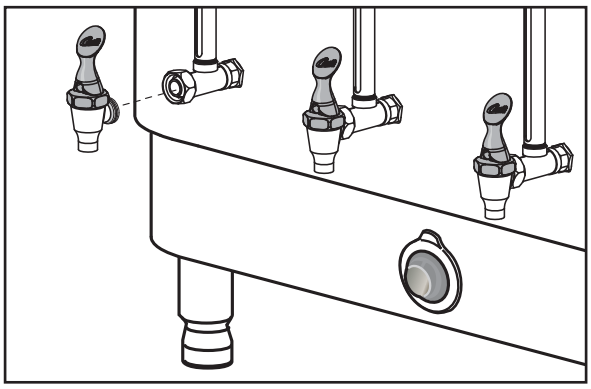
3 Position the urn on the countertop. Level it left to right and front to back by turning the feet at the bottom of the legs.



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

Install the Faucets

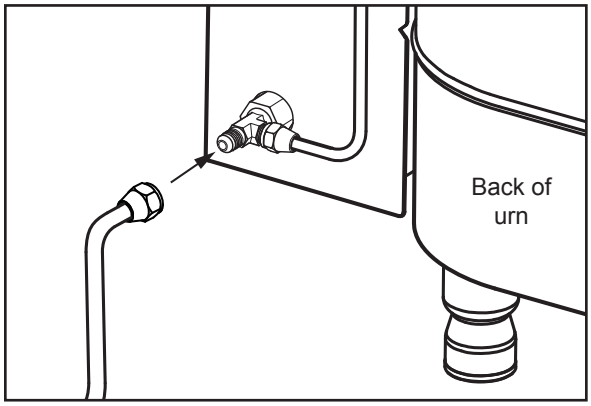
4 Install the faucets on the front of the unit. Be careful not to over tighten the faucet mounting nuts.



Connect the Water Supply

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

6 Connect the water supply line to the flare fitting on the back of the urn control panel. Leave the water supply valve closed until power is connected.



Connect the Wiring

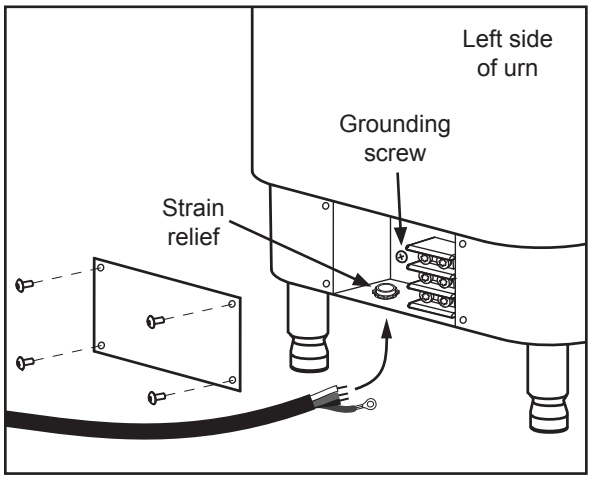
WARNING: Turn off power to the junction box at the circuit breaker panel before connecting the power cable to the urn.

7 Remove the electrical access cover on the left side of the urn.

8 Loosen the strain relief under the electrical access hole and feed the power cable into the chassis.

9 Connect the wires on the power cable to the terminal block inside the unit. Use the proper wire gauge, plus 25%. Refer to the *SPECIFICATIONS* for the required urn wire gauge.

10 Connect the ground wire to the chassis grounding screw inside the unit.



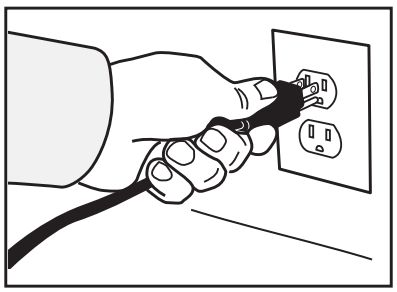
WARNING: The body of the urn must be securely grounded with a separate grounding conductor and never with the neutral conductor of a single phase, 3 wire system.

11 Tighten the strain relief.

12 Replace the access cover.

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

14 Some models are equipped with a second 120 Volt power cord. Connect it to a dedicated electrical outlet protected by a 15-20 Amp. circuit breaker.



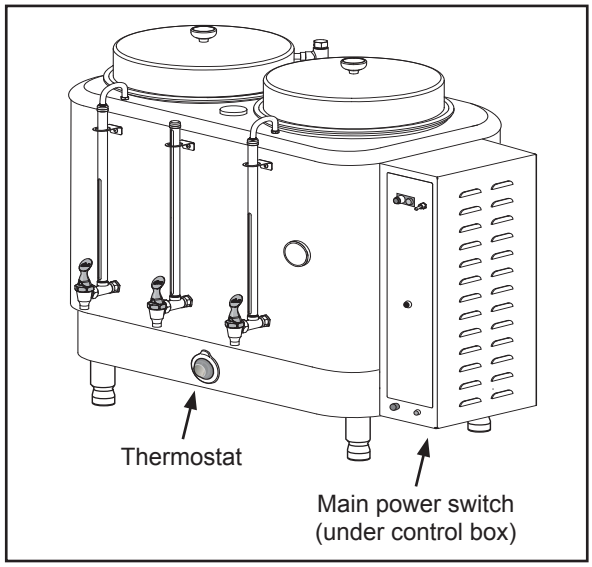
continued...

Power Up the Brewer

15 Turn on the water supply valve.

16 Make sure that the circuit breaker(s) supplying power to the unit is on.

17 Turn the main power toggle switch on the bottom of the urn control box to the ON position. When you turn the toggle switch ON, the water jacket will start to fill. To expedite filling, you may open the emergency refill valve located on the back of the control panel. While the tank is filling, inspect the water supply lines for leaks. During the initial water tank fill, the initial brew and whenever the filter is replaced, you may hear the sounds of air being purged from the filter and water supply tubing.



NOTICE: Do not forget to close the emergency refill valve once the water jacket has filled.

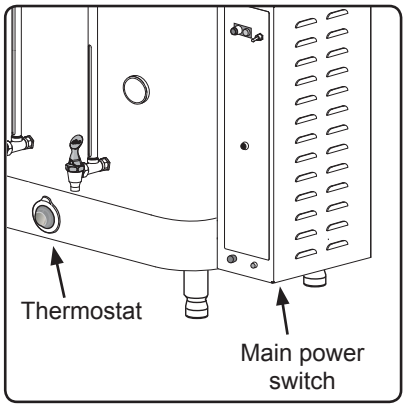
18 When the water jacket has filled, turn on the thermostat by turning the dial clockwise to the desired setting. Depending on the water temperature and the electrical specifications, the water typically requires 50 to 60 minutes to reach operating temperature. The thermostat indicator will light as the unit heats and turns off when the unit is at brew temperature.

IMPORTANT: When operating the unit at higher elevations, reduce the operating temperature by 2°F for each 1000 feet of elevation above 4000 feet. See ***Thermostat Adjustment*** in the *TROUBLESHOOTING GUIDE*.

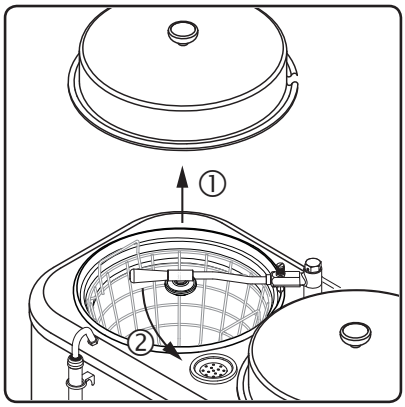
Brewing Instructions

WARNING - TO AVOID SCALDING, AVOID SPLASHING. Do not open the lid(s) while the brew light is on. Keep body parts clear of hot surfaces on the outside of the urn.

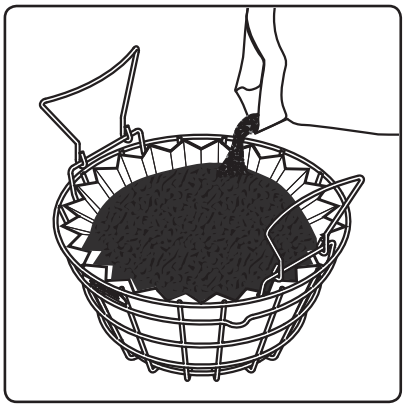
The urn is factory preset for optimal performance.



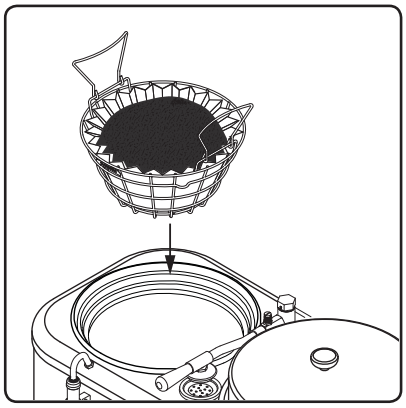
1 The brewer should be ON. Confirm this at the main power toggle switch, located on the bottom of the control box. The thermostat should be set to ON and the thermostat light should be OFF (indicating that the water is hot).



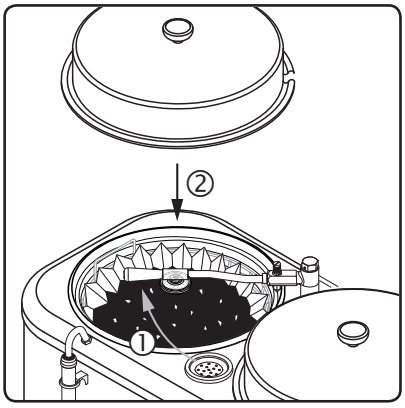
2 Remove the urn lid and rotate the spray arm to the side.



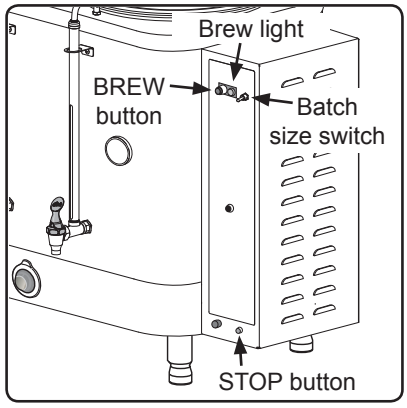
3 Remove the brew basket and insert a clean paper filter. Fill the basket with the proper amount of ground coffee. Make sure that the coffee is level in the filter.



4 Make sure that the liner is empty before brewing. Insert the filled brew basket into the top of the urn.



5 Rotate the spray head over the bed of coffee inside the filter and center it. Put the lid on top of the urn.



6 Make sure the batch size selector switch is in the desired position, then press the BREW button. Brewing will begin immediately. To stop brewing before the cycle is complete, press the STOP button.

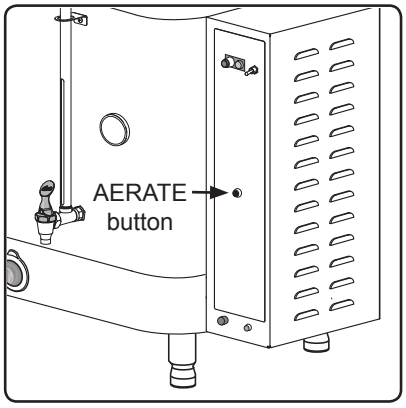
Aeration

During brewing, the richer, thicker coffee tends to settle toward the bottom of the liner, while the weaker part of the mixture tends to move to the top. The aeration feature assures uniform mixing of the brewed coffee by pumping air into the liner(s) and mixing the coffee. The aeration pump comes on for 30 seconds automatically at the end of the brew cycle.

For best coffee taste, aerate the coffee manually once an hour.

To manually aerate the coffee:

Push and hold the **AERATE** button on the control panel for 30 seconds. The air pump will aerate the coffee. On twin urn models, both sides aerate at the same time. Release the button to stop aeration.



NOTICE - Do not use cleaning liquids, compounds or powders containing acids or corrosives. These products promote corrosion and will pit the stainless steel. Never use abrasives to clean the unit(s). **USE OF THESE PRODUCTS WILL VOID THE WARRANTY.**

Daily Cleaning - Urns and Banquet Brewer without Banquet Holder*

WARNING: Avoid injury. The cleaning instructions below involve cleaning hot surfaces with very hot water.

1 Clean the brewer liner(s). Drain any remaining coffee out of the liner(s). Run a brew cycle of fresh water. Spray the hot water into the liner(s), then thoroughly brush out with a long handled brush. Drain the water out of the liner(s), then repeat the proceeding cleaning procedure. After draining the second time, wipe down the liners with a clean towel. If the urn/brewer is not going to be used immediately, pour a gallon or two of fresh water inside each liner. Remember to drain off this water before making another brew.

2 Remove the wire baskets from the unit and wash with urn cleaner. Rinse thoroughly.

3 Clean the exterior. Turn off the main power toggle switch and allow the unit to cool. Wipe the exterior surfaces with a damp cloth to remove spills and debris. Turn power back on when done.

Bi-Weekly Cleaning - Urns and Banquet Brewer without Banquet Holder

WARNING: Avoid injury. The cleaning instructions below involve cleaning hot surfaces with very hot water. After scouring, flush the entire system as instructed before running another brew cycle.

1 Be sure the water jacket is full of water at brewing temperature. Run a full brew cycle with water only, in each liner, and stir in coffee urn cleaning compound. Dilute it according to the manufacturer's recommendations. Allow the liners to soak at brewing temperature for the amount of time recommended in the cleaning compound manufacturer's instructions.

2 Scrub the inside of the liner cover(s) and the inside of the liner(s) with a long handled brush.

3 Allow to soak for the specified amount of time in the cleaning compound manufacturer's instructions. After soaking is complete, open all faucets on the unit to drain the cleaning solution.

4 After the cleaning solution is drained, fill both liners with hot rinse water.

5 Drain the liner(s), then repeat step 4.

6 Switch off power to the unit at the circuit breaker panel. Turn off the water supply. Drain the liner(s).

7 If the urn/brewer is not going to be used immediately, pour a gallon or two of fresh water into each liner. Remember to drain off this water before making another brew.

Spray Head Cleaning - Weekly

Remove the spray head from the spray arm and clean it once a week, more often in heavy lime areas.

* For Banquet Brewers used with a Banquet Holder, see the following page.

Cleaning the Faucet and Sight Gauge - As Needed

1 Unscrew the handle/bonnet assembly and remove. Inspect the seat cup for wear. Replace the seat cup if it is damaged. Clean the parts with a mild detergent solution. Rinse, dry and reassemble the handle/bonnet by hand.

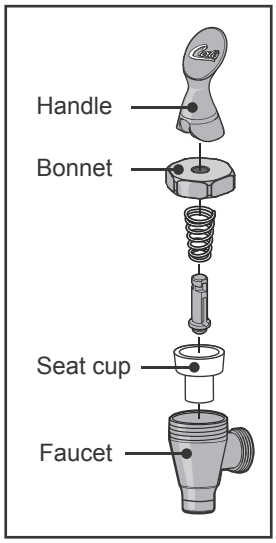
2 Remove the hose on top of the gauge (if applicable) by pulling it up and off of the cap. Remove the gauge cap and the glass tube. Inspect the glass tube for cracks or chips.

WARNING - If the gauge glass is broken, carefully inspect and remove all traces of glass and insert a new glass tube, then thoroughly rinse out the faucet shank.

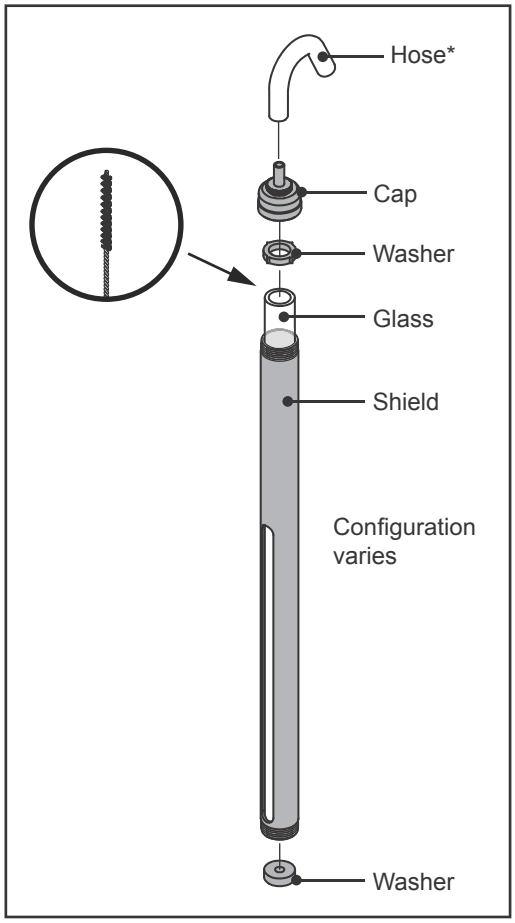
3 Clean the glass tube with a gauge brush soaked with a mild detergent solution. Rinse and dry.

4 Clean the washers, rinse and dry.

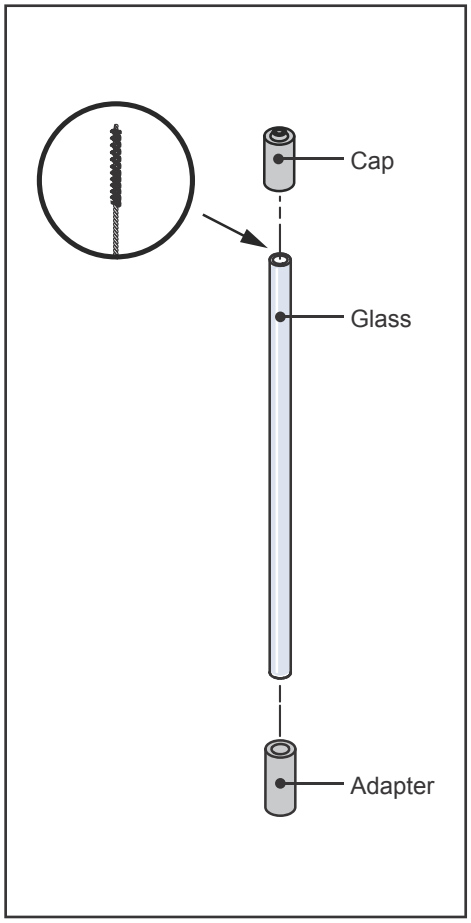
5 Reassemble and hand tighten the cap.



Faucet Disassembly



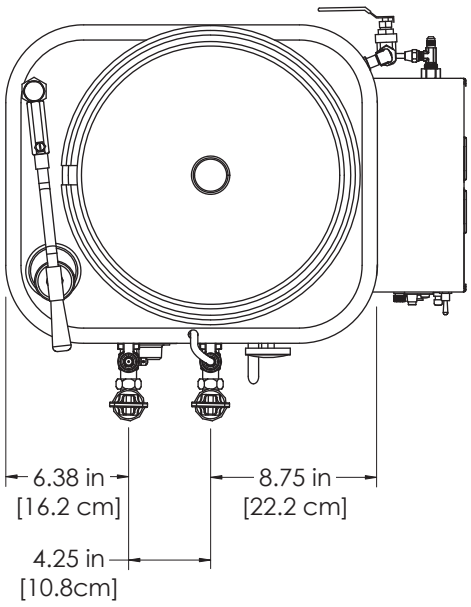
Sight Glass Disassembly - Standard Type

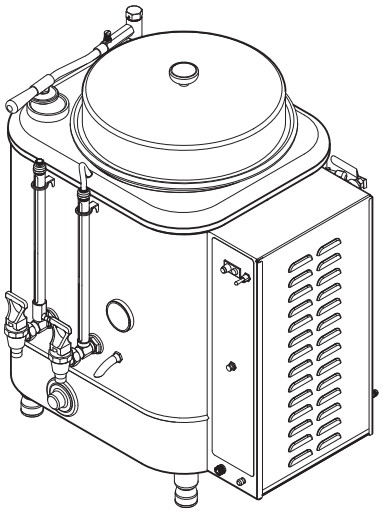


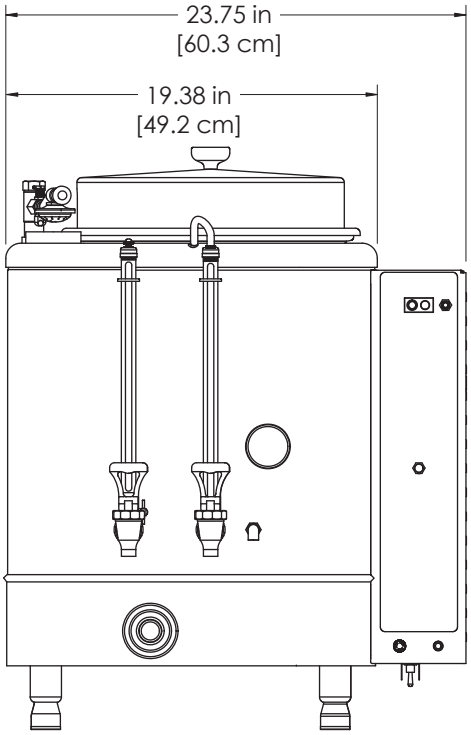
Sight Glass Disassembly - Milano Type

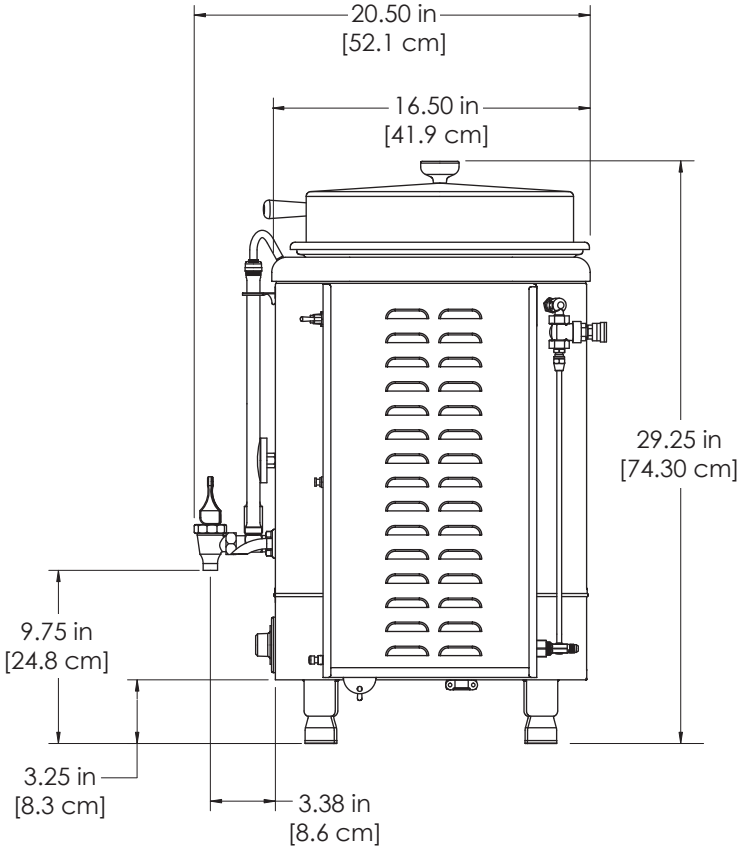
* Hose used only on models with aeration feature

RU-150 Series

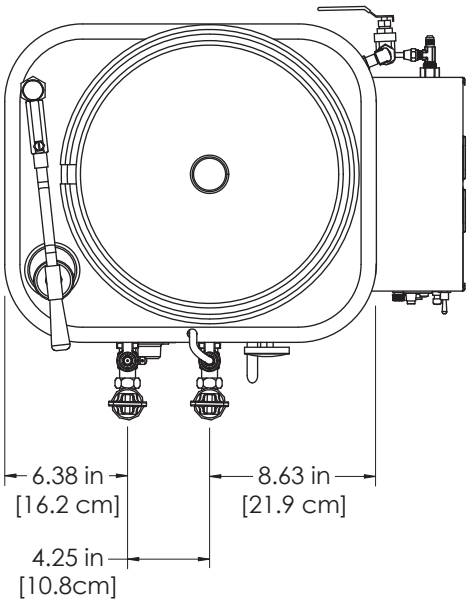


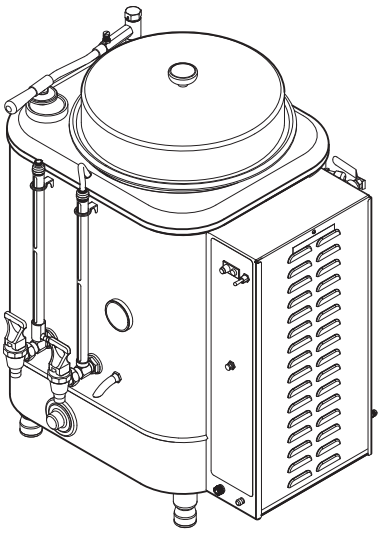


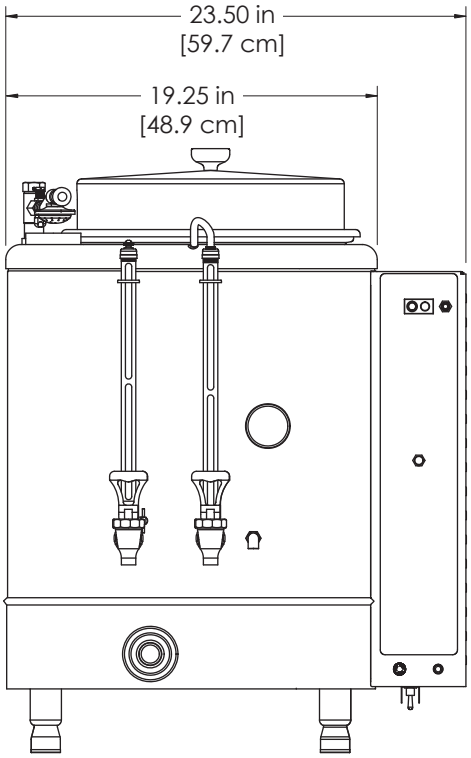


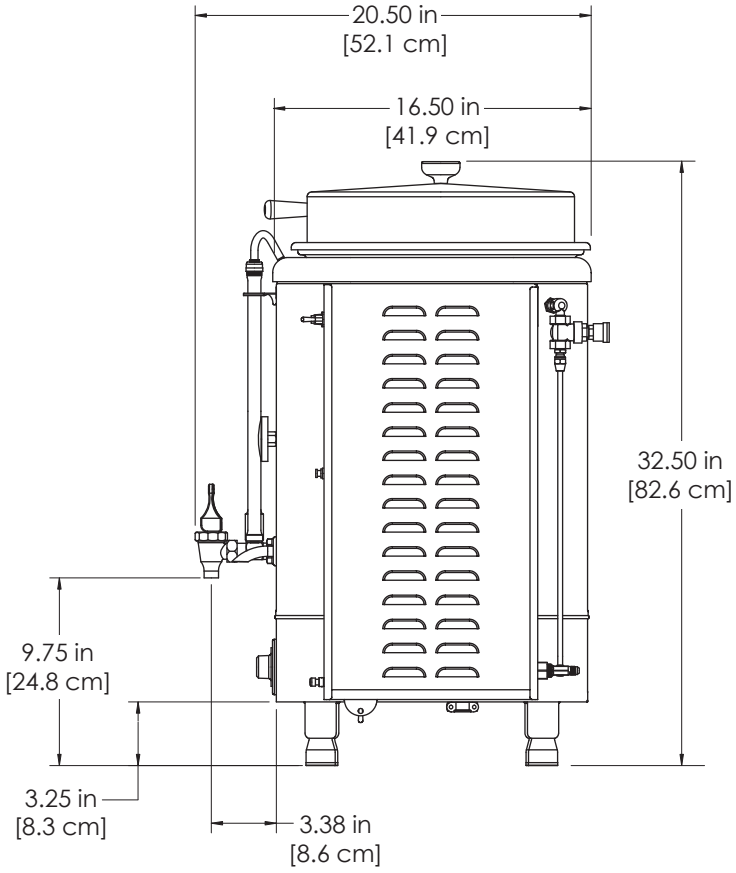


RU-225 Series

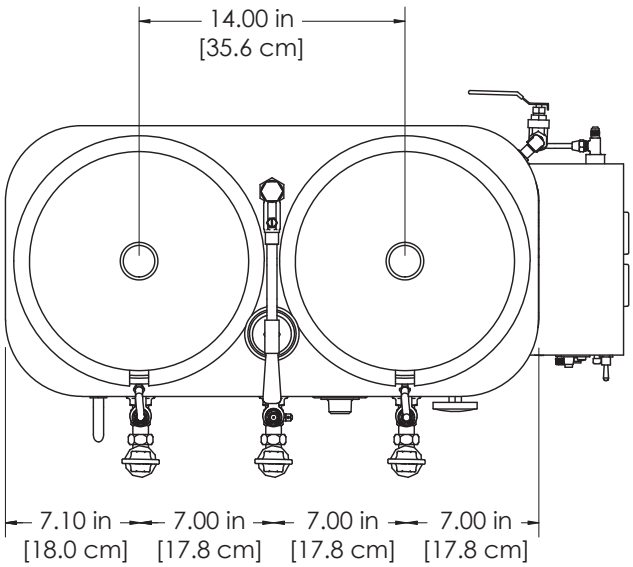


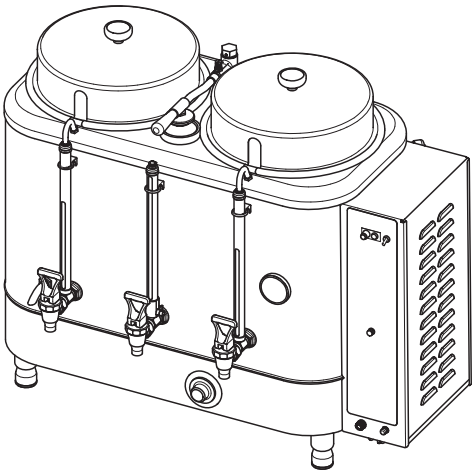


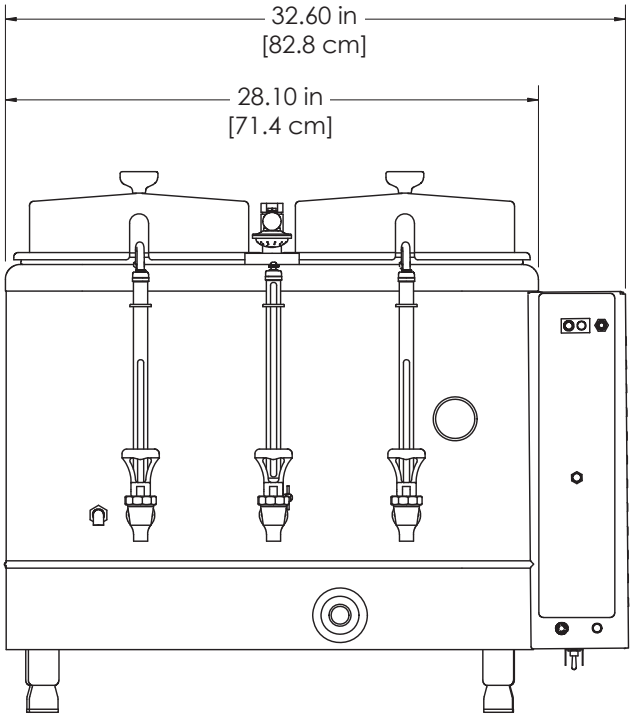


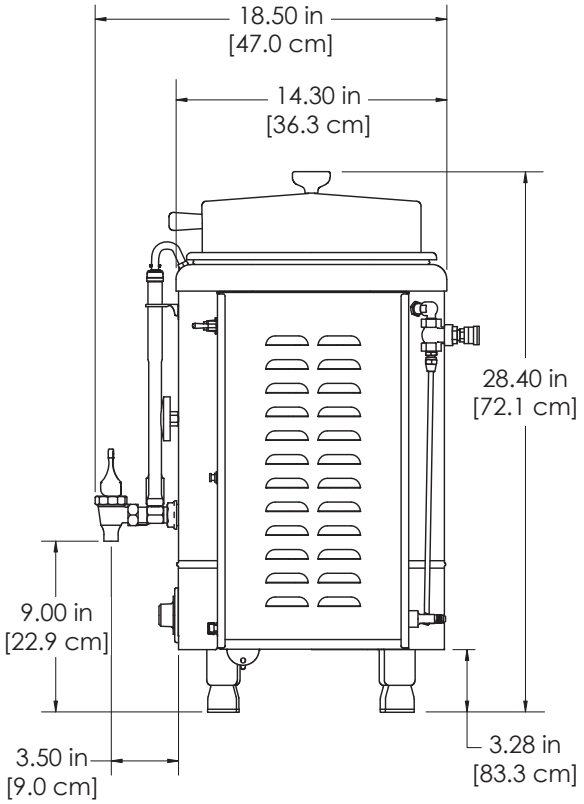


RU-300 Series

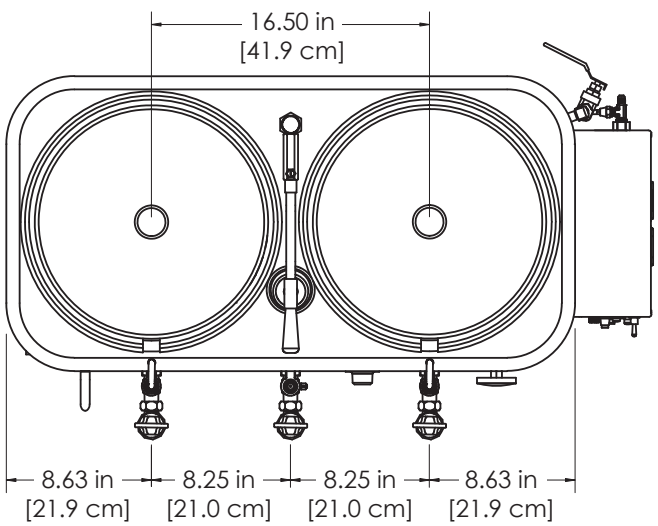


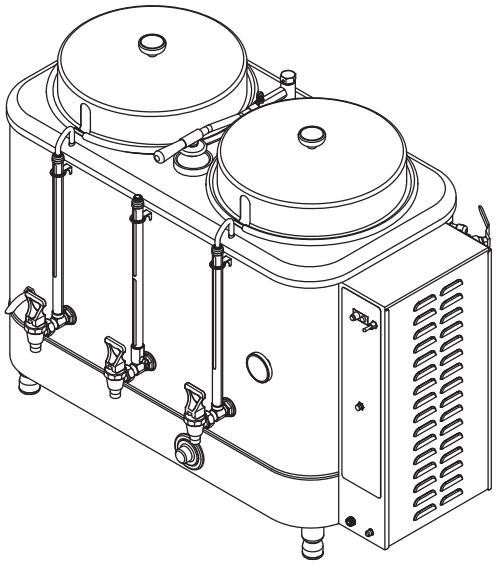


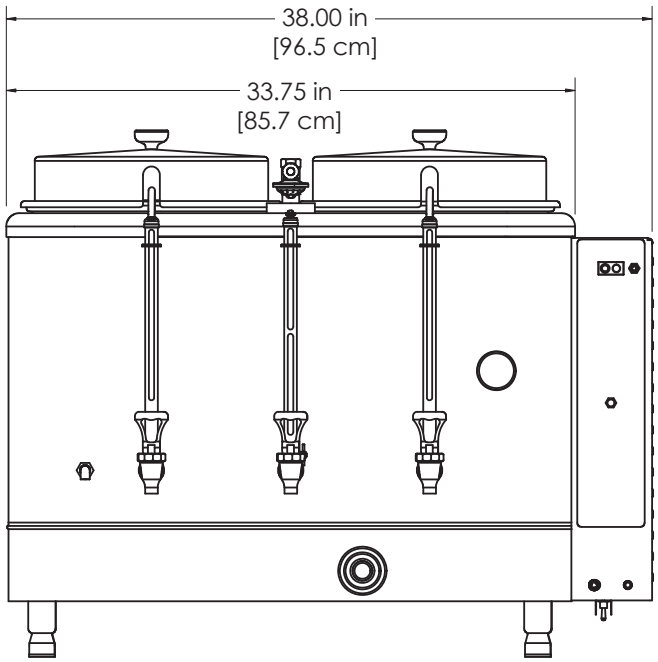


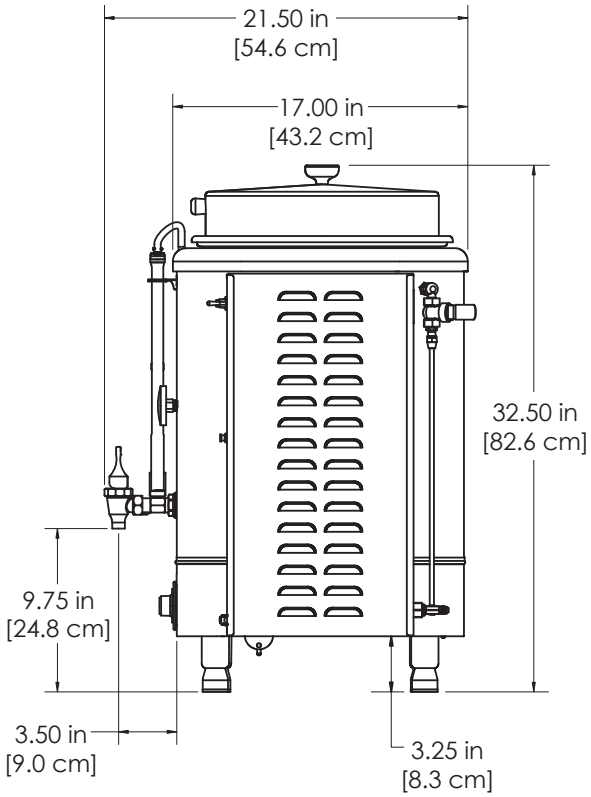


RU-600 Series

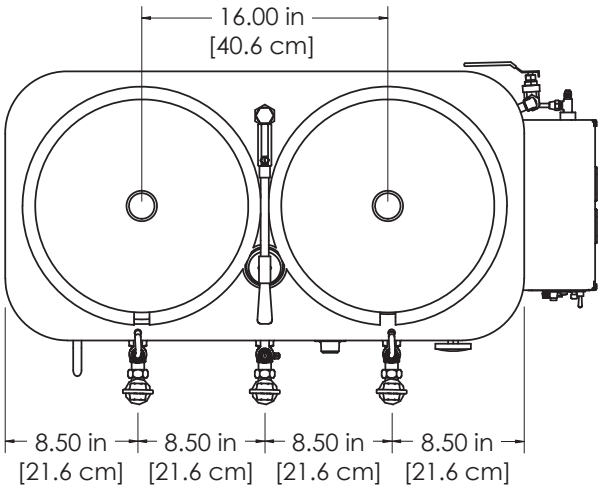


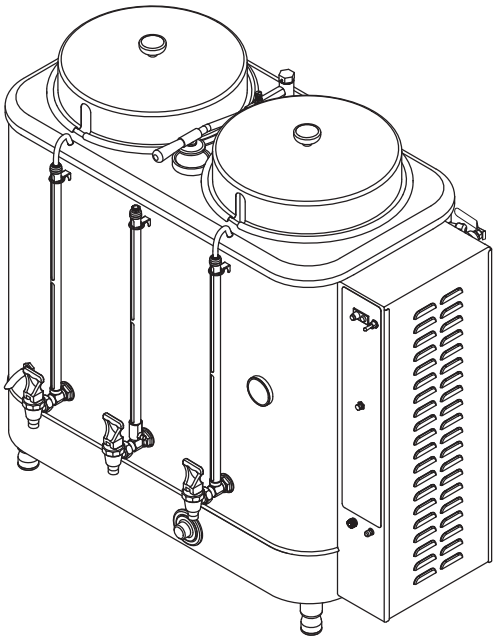


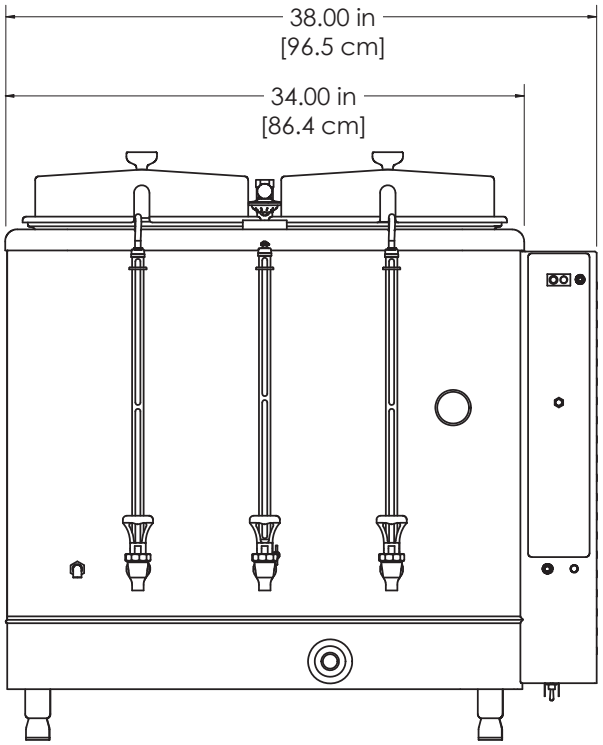


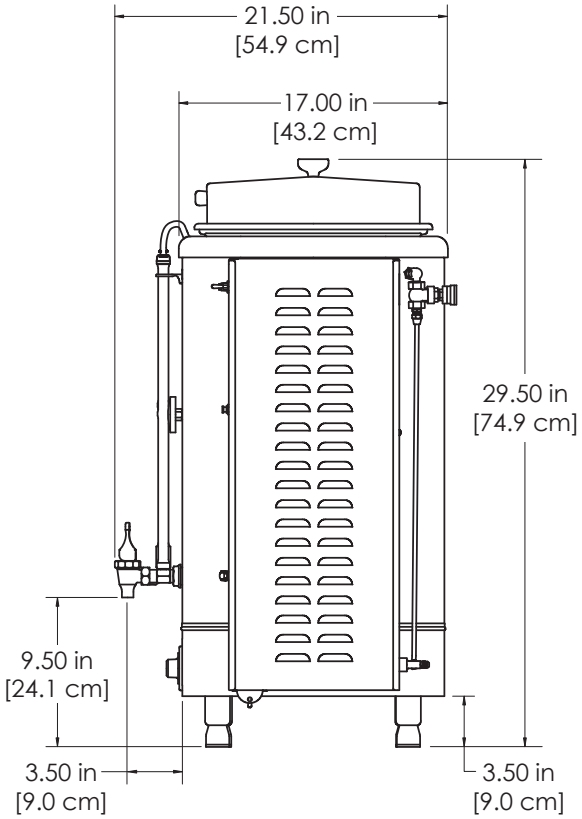


RU-1000 Series



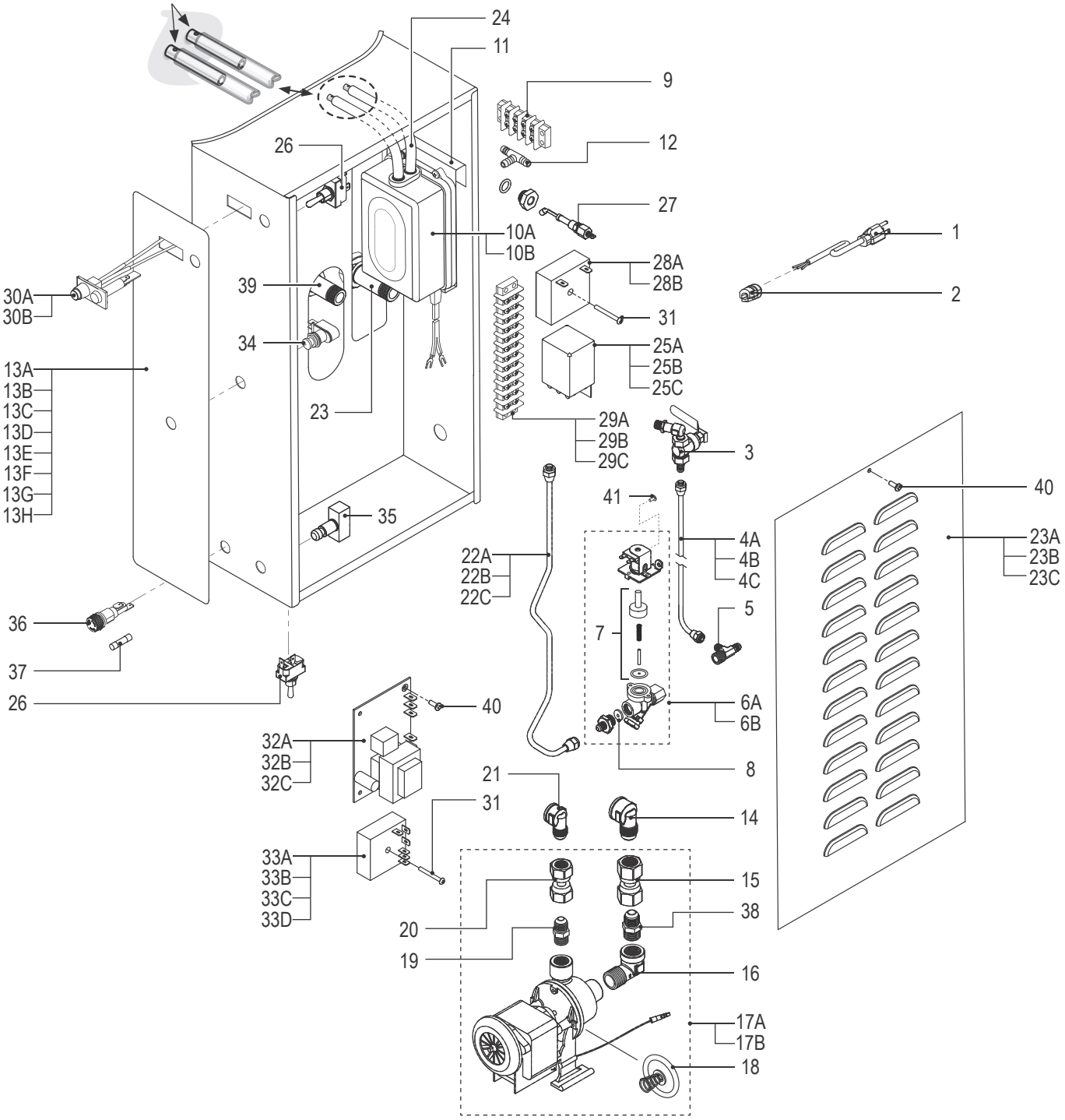






RU Series Urn - Control Box - Exploded View

Older models: when reconnecting the silicone tubing to the copper tubes, make sure you do not cover the small holes on the copper tubes.



RU Series Urn - Control Box - Parts List

ITEM #	PART #	DESCRIPTION	USED ON
1	WC-1200	CORD, 14/3 SJTO 6' BLK W/PLUG	DOMESTIC 3 PHASE UNITS
2	WC-1408	GRIP, CORD 7/8" OD	DOMESTIC 3 PHASE UNITS
3	WC-806	VALVE, 1/4" BRASS BALL ASSY EMERGENCY REFILL RU'S	ALL RU UNITS
4A	WC-53104	TUBE ASSY, 1/4x14.50 ER W/NUTS RU-150/300	RU-150, RU-300
4B	WC-53105	TUBE ASSY, 1/4x17.00 ER W/NUTS RU-225/600	RU-225, RU-600
4C	WC-53109	TUBE ASSY, 1/4" ER W/NUTS RU-1000	RU-1000
5	WC-2705	TEE, 1/4 X 1/4 FLARE X 3/8 NPT PLATED	ALL RU UNITS
6A	WC-801	VALVE, INLET BRASS .50 GPM 120V 10W RU/WB	DOMESTIC RU UNITS
6B	WC-858	VALVE, INLET BRASS .50 GPM 220V 10W	EXPORT RU UNITS
7	WC-3700	KIT, INLET VALV REPAIR USE ON WC-801/801R/885/890/858	ALL RU UNITS
8	WC-813	FLOW WASHER, .5GPM .5" S45	ALL RU UNITS
9	WC-301	TERMINAL STRIP, 4-S	OLDER RU UNITS [1]
10A	WC-37166	KIT, AIR PUMP RU'S	DOMESTIC RU UNITS
10B	WC-1009	PUMP, AGITATION 220V	EXPORT RU UNITS
11	WC-5843	BRACKET, AERATOR PUMP RU	ALL RU UNITS
12	WC-3600	TEE, CONNECTOR 3/16 POLYPROPYLENE	RU-150, RU-225
13A	WC-3900	LABEL, INSTRUCTION PANEL RU-150	RU-150 [1]
13B	WC-3901	LABEL, INSTRUCTION PANEL RU225	RU-225 [1]
13C	WC-3902	LABEL, INSTRUCT'S PANEL CURTIS RU-300	RU-300 [1]
13D	WC-3903	LABEL, INSTRUCT'S PANEL CURTIS RU-600	RU-600 [1]
13E	WC-3904	LABEL, INSTRUCT'S PANEL CURTIS RU1000	RU-1000 [1]
13F	WC-38570	LABEL, INSTRUCTION PANEL RU-150/RU-300	RU-150 [2], RU-300 [2]
13G	WC-38571	LABEL, INSTRUCTION PANEL RU225/RU-600	RU-225 [2], RU-600 [2]
13H	WC-38574	LABEL, INSTRUCTN PANEL RU1000	RU-1000 [2]
14	WC-2405	ELBOW, 1/2 FLARE x 1/2 NPT	ALL RU UNITS
15	WC-2609	SWIVEL, 1/2" TUBE X 1/2 NPT	ALL RU UNITS
16	WC-2504	ELBOW, 1/2 NPT X 1/2 NPT	ALL RU UNITS
17A	WC-1037	PUMP, WATER W/FITTINGS 120VAC	DOMESTIC RU UNITS
17B	WC-1039	PUMP, WATER W/FITTING 220/240 VAC	EXPORT RU UNITS
18	WC-3702	KIT, WATER PUMP SEAL RU'S USE ON WC-1000	ALL RU UNITS
19	WC-2605	CONNECTOR, 3/8 FLARE X 3/8 NPT	ALL RU UNITS
20	WC-2608	SWIVEL, 3/8 TUBE x 3/8 NPT	ALL RU UNITS
21	WC-2403	ELBOW, 3/8 FLARE x 3/8 NPT PLATED GEN USE	ALL RU UNITS
23A	WC-5808	DOOR, CONTROL BOX LOUVER, RU-225/600	RU-225, RU-600
23B	WC-5807	DOOR, LOUVER ACB RU150/300	RU-150, RU-300
23C	WC-5809	DOOR, CONTROL BOX LOUVER RU-1000	RU-1000
22A	WC-5322	TUBE ASSY, 1/4x20.00 WI W/NUTS	RU-225, RU-600
22B	WC-5321	TUBE ASSY, 1/4x17.00 WI W/NUTS	RU-150, RU-300
22C	WC-5323	TUBE ASSY, 1/4x26.00 WI W/NUTS	RU-1000
23	WC-2929P	FITTING, 1/2 NIPPLE/NUT PLATED	ALL RU UNITS
24	WC-5307	TUBE, 3/16 ID x 3/32W SILICONE GEN USE	ALL RU UNITS
25A	WC-402	RELAY, HOLDING 120V COIL 10A RU'S	OLDER RU UNITS EXCEPT RU-1000 [1]
25B	WC-403	RELAY HOLDING 120V 3 POLE 6.6A RES.@240V	OLDER RU-1000 UNITS [1]
25C	WC-417	RELAY, HOLDING 220V 2P 10A RU	OLDER RU UNITS
26	WC-102	SWITCH, TOGGLE NON-LIT SPST 15A 125/6A 250VAC RESISTIVE	ALL RU UNITS [3]

CONTINUED ON FOLLOWING PAGE

[1] UNITS BUILT BEFORE 1/29/13
[2] UNITS BUILT 1/29/13 AND LATER
[3] USE FOR POWER SWITCH, UNITS BUILT AFTER 1/29/13 ARE EQUIPPED WITH A SECOND TOGGLE SWITCH USED FOR BATCH SELECTION

RU Series Urn - Control Box - Parts List (continued)

ITEM #	PART #	DESCRIPTION	USED ON
27	WC-5502-01	KIT, PROBE, ASSY WATER LEVEL W/HEX FITTING, O-RING & NUT	ALL RU UNITS
28A	WC-405R-101K-120	KIT, AGITATION TIMER 120V RU-150,225,300,600,1000	DOMESTIC RU UNITS
28B	WC-405R-101K-220	KIT, AGITATION TIMER 220V RU-150,225,300,600,1000	EXPORT RU UNITS
29A	WC-303	TERMINAL STRIP 12-S	OLDER RU-150, RU-3000 UNITS
29B	WC-304	TERMINAL STRIP, 14-S(RU1,6)	OLDER RU-225, RU-600 UNITS
29C	WC-302	TERMINAL STRIP, 6-S(GM,CRA)	OLDER RU-1000 UNITS
30A	WC-3737	KIT, BREW SWITCH 120V RU'S	DOMESTIC RU UNITS
30B	WC-3738	KIT, BREW SWITCH 220V RU RPL	EXPORT RU UNITS
31	WC-4608	SCREW, 8-32x1¼ PHIL RD HD 18-8	ALL RU UNITS
32A	WC-10030	CONTROL MODULE,120/220V LIQUID LEVEL/BREW TIMER	NEWER RU UNITS[5]
32B	WC-10030K-RU	KIT, CONTROL BOARD LIQUID LEVEL/BREW TIMER 120/240V RU	NEWER RU UNITS[4]
32C	WC-608-101K	KIT, LIQUID LEVEL CONTROL BOARD RETROFIT	OLDER RU UNITS[1]
33A	WC-10030	CONTROL MODULE,120/220V LIQUID LEVEL/BREW TIMER	NEWER RU UNITS[5]
33B	WC-10030K-RU	KIT, CONTROL BOARD LIQUID LEVEL/BREW TIMER 120/240V RU	NEWER RU UNITS[4]
33C	WC-603-101K-RU	KIT, RETROFIT TIMER, BREW SELECTOR 120V RU-300 W/ 1/2BB	OLDER DOMESTIC RU UNITS[1]
33D	WC-622-101K-RU	KIT, RETROFIT BREW TIMER FULL & 1/3 BATCH 220V RU	OLDER EXPORT UNITS AND DOMESTIC RU-300 WITH NO HALF BATCH[1]
34	WC-101	SWITCH, ON/OFF NON-LIT SPST MOMENTARY 3/6A 250/120V	ALL RU UNITS
35	WC-100	SWITCH, RESET-STOP N.C.NON-LIT SP MOMENTARY 10/15A 250/120V	ALL RU UNITS
36	WC-1501	FUSE, HOLDER ASSY W/5A FUSE	ALL RU UNITS
37	WC-1500	FUSE, 5 AMP	ALL RU UNITS
38	WC-2606	CONNECTOR, 1/2 FLARE X 1/2 NPT	ALL RU UNITS
39	WC-2928P	FITTING, 3/8 NIPPLE/NUT PLATED	ALL RU UNITS
40	WC-4403	SCREW, 6-32x3/8 PHIL ROUND HD	ALL RU UNITS
41	WC-4616	SCREW, 1/4-20 x 1/2 PHILLIPS PAN HEAD STAINLESS STEEL	ALL RU UNITS

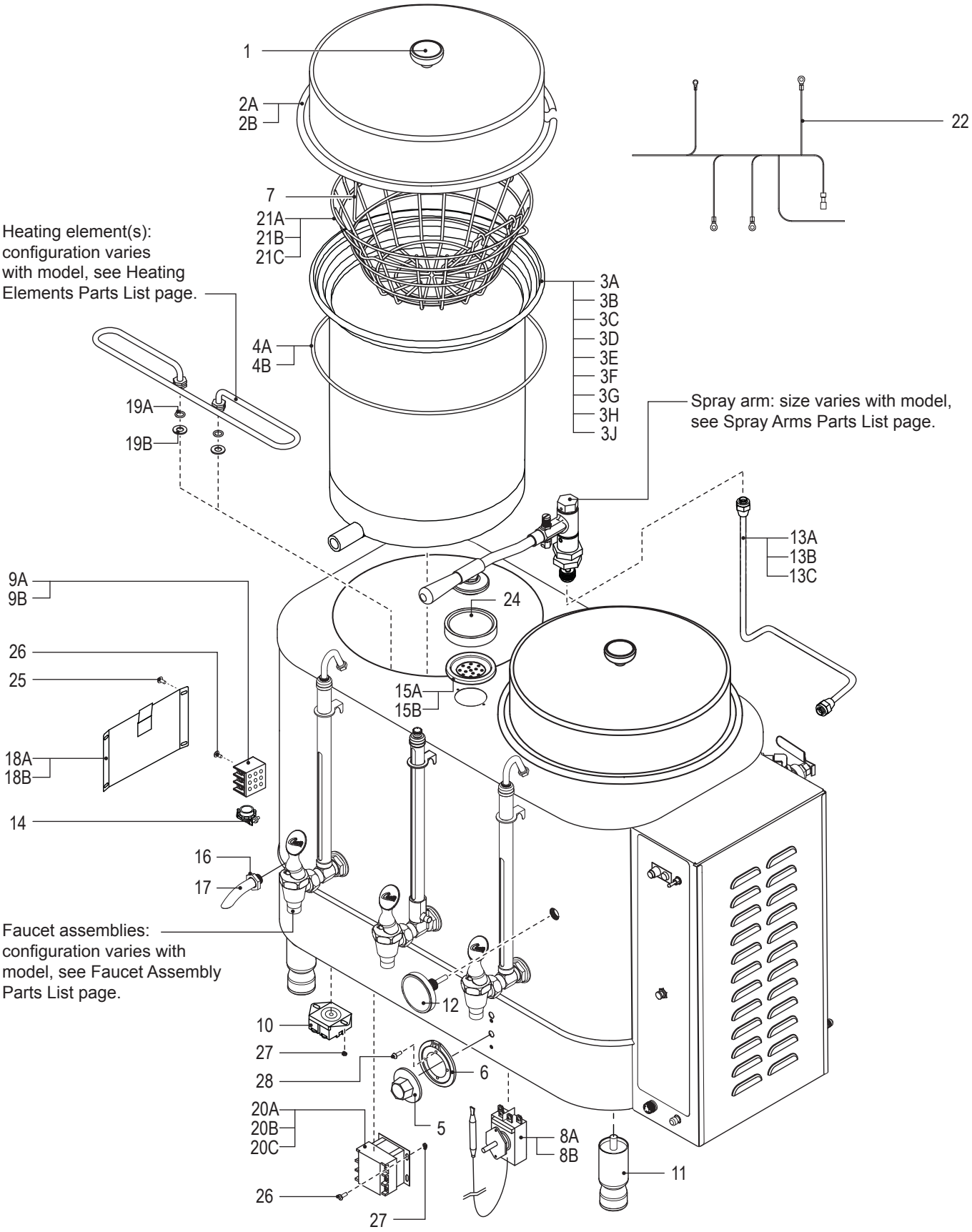
[1] UNITS BUILT BEFORE 1/29/13
[2] UNITS BUILT 1/29/13 AND LATER
[3] USE FOR POWER SWITCH, UNITS BUILT AFTER 1/29/13 ARE EQUIPPED WITH A SECOND TOGGLE SWITCH USED FOR BATCH SELECTION
[4] UNITS BUILT BETWEEN 1/29/13 AND 5/04/18
[5] UNITS BUILT 5/04/18 AND LATER

RU Series Urn - Control Box - Recommended Parts to Stock

ITEM #	PART #	DESCRIPTION
6A	WC-801	VALVE, INLET BRASS .50 GPM 120V 10W RU/WB
7	WC-3700	KIT, INLET VALV REPAIR USE ON WC-801/801R/885/890/858
17A	WC-1037	PUMP, WATER W/FITTINGS 120VAC
18	WC-3702	KIT, WATER PUMP SEAL RU'S USE ON WC-1000
26	WC-102	SWITCH, TOGGLE NON-LIT SPST 15A 125/6A 250VAC RESISTIVE
27	WC-5502-01	KIT, PROBE, ASSY WATER LEVEL W/HEX FITTING, O-RING & NUT

ITEM #	PART #	DESCRIPTION
30A	WC-3737	KIT, BREW SWITCH 120V RU'S
32B	WC-10030K-RU	KIT, CONTROL BOARD LIQUID LEVEL/BREW TIMER 120/240V RU
33B	WC-10030K-RU	KIT, CONTROL BOARD LIQUID LEVEL/BREW TIMER 120/240V RU
37	WC-1500	FUSE, 5 AMP

RU Series Urn - Main Chassis - Exploded View



RU Series Urn - Main Chassis - Parts List

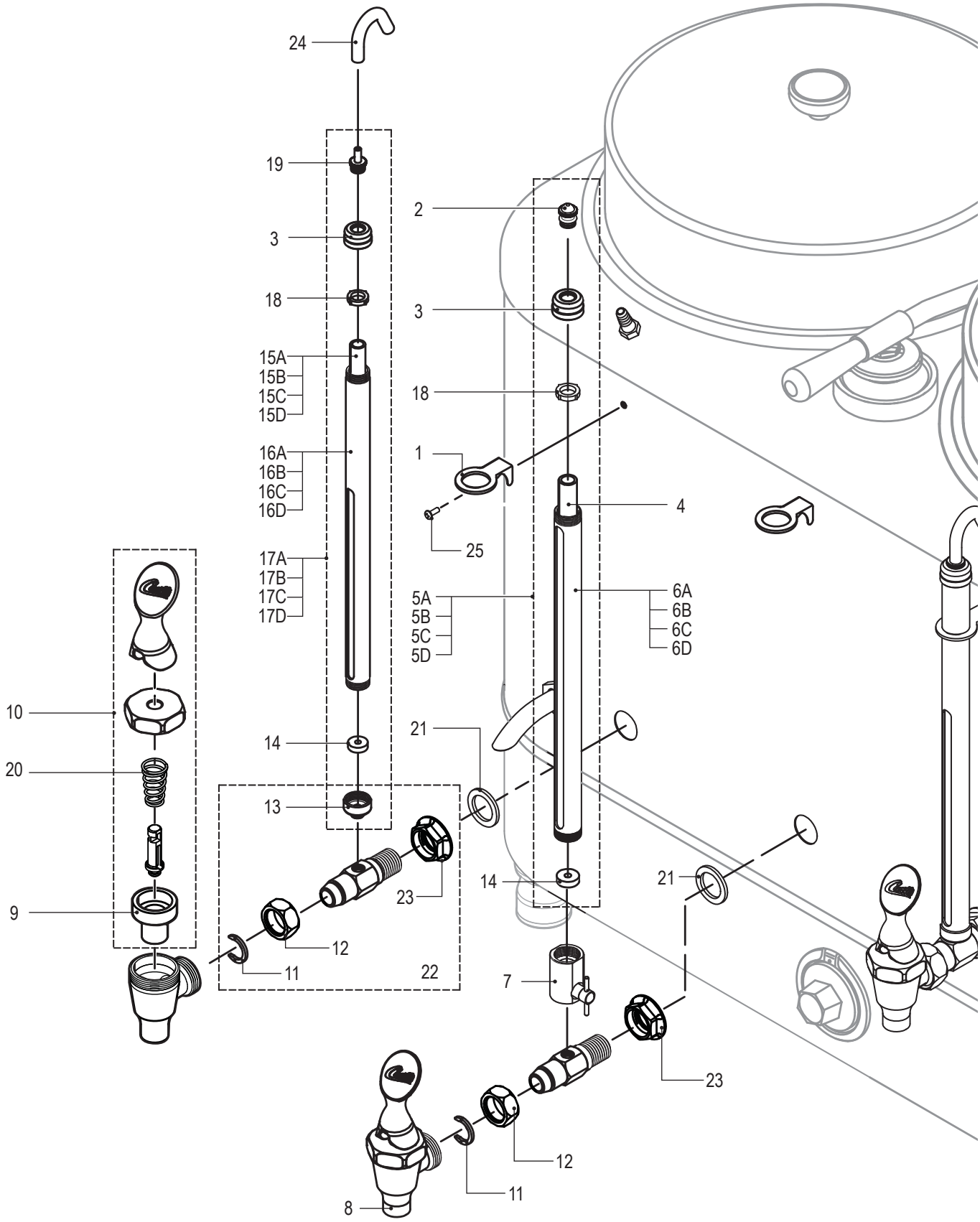
ITEM #	PART #	DESCRIPTION	USED ON
1	WC-3205	KNOB, LID 1/4-20 FEMALE THRD USE ON WC-5601/5602/5603	ALL RU UNITS
2A	WC-5601	LID, LINER ASSY (SC)RU-150/300 (INCLUDES KNOB)	RU-150, RU-300
2B	WC-5603	LID, LINER ASSY RU225/600/1000 (INCLUDES KNOB)	RU-225, RU-600, RU-1000
3A	WC-5700	LINER, 3 GAL RU-150	RU-150
3B	WC-5701	LINER, 3 GAL D/S RU-150	RU-150DS
3C	WC-5706	LINER, 6 GAL RU-600	RU-225, RU-600
3D	WC-5703	LINER, 6 GAL D/S RU-225	RU-225DS
3E	WC-5707	LINER, 6 GAL D/S RU-600	RU-600DS
3F	WC-5704	LINER, 3 GAL RU-300	RU-300
3G	WC-5705	LINER, 3 GAL D/S RU-300	RU-300DS
3H	WC-5708	LINER, 10 GAL RU-1000	RU-1000
3J	WC-5709	LINER, 10 GAL D/S RU-1000	RU-1000DS
4A	WC-4303	O-RING, LINER RU-150/300	RU-150, RU-300
4B	WC-43076	O-RING, LINER, RU'S, 6, 10 GA	RU-225, RU-600, RU-1000
5	WC-3217	KNOB, ELECTRIC THERMOSTAT RU	ALL RU UNITS
6	WC-3220	BEZEL, THERMOSTAT ELECTRIC URN'S	ALL RU UNITS
7	WC-3305	FLAP, WIRE BASKET RU150/300 (2 REQUIRED)	RU-150, RU-300
8A	WC-37165	KIT, THERMOSTAT WC-500A/501A	ALL RU UNITS
8B	WC-502	THERMOSTAT, CAPILLARY LWC OFF DPST	OLDER 3 PHASE UNITS
9A	WC-300	POWER BLOCK 3-STA 175A 600V RU'S	ALL DOMESTIC AND EXPORT SINGLE PHASE UNITS
9B	WC-313	POWER BLOCK, 4 STA 85A 600V	EXPORT THREE PHASE UNITS
10	WC-522	THERMOSTAT, HI LIMIT HEATER CONTROL DPST 277V 40A	ALL RU UNITS
11	WC-3528	LEG, 4" ADJUSTABLE 3/8-16 THRD ITALIAN STYLE	ALL RU UNITS
12	WC-511	THERMOMETER, DIAL RU'S	ALL RU UNITS
13A	WC-5313	TUBE, SPRAYARM ASSY W/NUTS RU-300	RU-150, RU-300
13B	WC-5314	TUBE, SPRAYARM ASSY W/NUTS RU-600	RU-225, RU-600
13C	WC-5315	TUBE, SPRAYARM ASSY W/NUTS RU-1000	RU-1000
14	WC-1412	CORD GRIP, 3/4" FOR METAL CORD TO .81"OD	ALL RU UNITS
15A	WC-5800	RING, STEAM	ALL SINGLE SERVICE RU UNITS
15B	WC-5458	PLATE, RING STEAM D/SERVICE SHEAR SIZE 4.00	ALL DUAL SERVICE RU UNITS
16	WC-4205	NUT, 1/4 LOCK NPS BRASS	ALL RU UNITS
17	WC-2913	SPOUT OVERFLOW	ALL RU UNITS
18A	WC-5810	COVER, W/A ELECTRIC BOX RU'S RU-600,1000	RU-150, RU-600, RU-225, RU-1000
18B	WC-58067	COVER, W/A ELECTRIC BOX RU-300	RU-300
19A	WC-43123	O'RING, .549 ID X .103CS SILICONE FOR HEATING ELEMENT	ALL RU UNITS
19B	WC-4305	WASHER 5/8" TEFLON	OLDER UNITS
20A	WC-431	CONTACTOR, 120V 60A 3P DP	ALL DOMESTIC RU UNITS
20B	WC-439	CONTACTOR, 220V 3POLE 63A RES	EXPORT SINGLE PHASE UNITS
20C	WC-443	CONTACTOR, 3POLE 50A 208-240VAC COIL	EXPORT THREE PHASE UNITS
21A	WC-3302	BREW BASKET WIRE W/FLAPS RU-300	RU-150, RU-300
21B	WC-3303	BREW BASKET, WIRE W/ FLAPS RU-600	RU-225, RU-600
21C	WC-3304	BREW BASKET, WIRE W/ FLAPS RU-1000	RU-1000
22	WC-13501	HARNESS ASSY, RU-600/1000	ALL RU UNITS

CONTINUED ON FOLLOWING PAGE

RU Series Urn - Main Chassis - Parts List (continued)

ITEM #	PART #	DESCRIPTION	USED ON
23A	WC-13361	HARNESS ASSY RU-150-12 FOR THERMOSTAT (NOT SHOWN)	RU-150-12, RU-150-62
23B	WC-13362	HARNESS ASSY RU-225-12 FOR THERMOSTAT (NOT SHOWN)	RU-225-12
23C	WC-13363	HARNESS ASSY RU-300-12 FOR THERMOSTAT (NOT SHOWN)	RU-300-12, RU-300-63
23D	WC-13364	HARNESS ASSY RU-600-12/RU1000-12 FOR THERMOSTAT (NOT SHOWN)	RU-600-12, RU-600-63, RU-1000-12
23E	WC-13365	HARNESS ASSY RU-600-20/RU1000-20 FOR THERMOSTAT (NOT SHOWN)	RU-600-20, RU-1000-20
23F	WC-13366	HARNESS ASSY RU-150-20/225-20 FOR THERMOSTAT (NOT SHOWN)	RU-150-20, RU-150-91, RU-225-20
23G	WC-13368	HARNESS ASSY RU-300-20 FOR THERMOSTAT (NOT SHOWN)	RU-300-20, RU-300-91, RU-600-91, RU-1000-91
24	WC-5634	CAP, URN STEAM RING	ALL RU UNITS
25	WC-4403	SCREW, 6-32x3/8 PHIL ROUND HD	ALL RU UNITS
26	WC-4503	SCREW, 8-32x1/2 PHILLIPS HEAD	ALL RU UNITS
27	WC-4201	NUT, 8-32 HEX KEP ZINC	ALL RU UNITS
28	WC-4439	SCREW, 6-32x¼ PHIL PAN HD SS	ALL RU UNITS

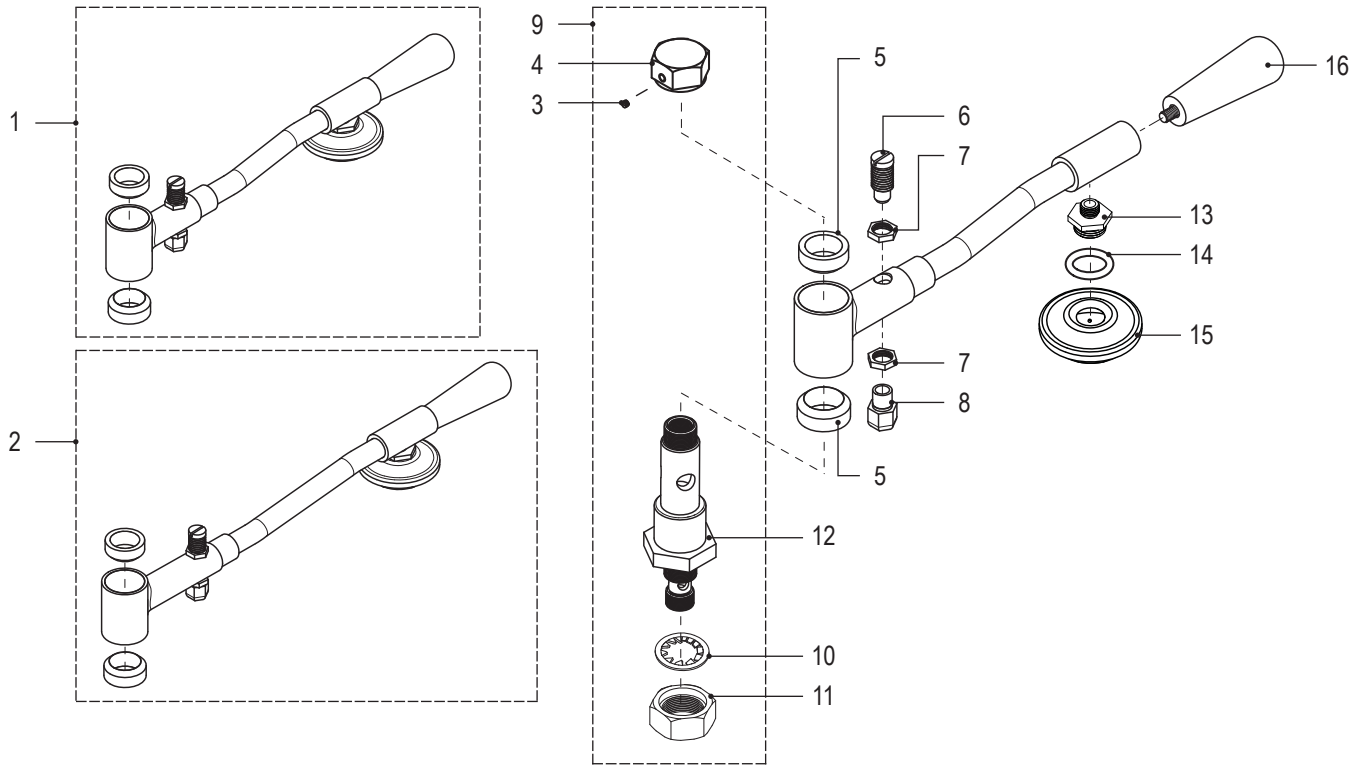
RU Series Urn - Faucet Assemblies - Exploded View



RU Series Urn - Faucet Assemblies - Parts List

ITEM #	PART #	DESCRIPTION	USED ON
1	WC-2007	BRACKET, GAUGE GLASS GEM-3	ALL RU UNITS
2	WC-2003	CAP, PLUG VENTED 44	ALL RU UNITS
3	WC-2002K	KIT, SHIELD CAP W/CLEAN OUT	ALL RU UNITS
4	WC-2030	GLASS, GAUGE 13”	RU-225, RU-600
5A	WC-2108	GAUGE GLASS ASSEMBLY 13” USE ON RU-225	RU-225, RU-600
5B	WC-2104	GAUGE GLASS ASSEMBLY 10”	RU-150
5C	WC-2105	GAUGE GLASS, ASSY 11” USE ON RU-150/300	RU-150, RU-300
5D	WC-2113	GAUGE GLASS, ASSY 19”	RU-1000
6A	WC-2017	SHIELD, GAUGE GLASS 13”	RU-225, RU-600
6B	WC-2104	SHIELD, GAUGE GLASS 10”	RU-150
6C	WC-2014	SHIELD, 11” GAUGE GLASS	RU-300
6D	WC-2022	SHIELD, 19” GAUGE GLASS 1/8 NPT	RU-1000
7	WC-1900	VALVE, GAUGE SHIELD SHUT-OFF 1/8 NPT	ALL RU UNITS
8	WC-1800	FAUCET,”S” SERIES BLK LOCKING 1-1/32-14 UNS CURTIS	ALL RU UNITS
9	WC-1805	SEAT CUP, “S” FAUCET USE ON WC-1800/B/LB/D/DL/L/WC-1803	ALL RU UNITS
10	WC-3705	KIT, FAUCET HANDLE S SERIES NONLOCK	ALL RU URNS
11	WC-1906	C’ RING .917 X .760 X .090 TT-3 TC’S	ALL RU UNITS
12	WC-1903	NUT, UNION SHANK WB-10/WB-10-60/WB-30-12	ALL RU UNITS
13	WC-2004K	KIT, BASE GAUGE GLASS SHIELD	ALL RU UNITS
14	WC-2006	WASHER, .188 ID X .188 THK BOTTOM GAUGE GLASS GEN USE	ALL RU UNITS
15A	WC-2028	GLASS, GAUGE 5/8” X 11”	RU-150, RU-300
15B	WC-2031	GLASS, GAUGE 14”	RU-225, RU-600
15C	WC-2029	GLASS, GAUGE 5/8” X 12”	RU-300
15D	WC-2037	GLASS, GAUGE 5/8” X 20”	RU-1000
16A	WC-2014	SHIELD, 11” GAUGE GLASS	RU-150, RU-300
16B	WC-2016	SHIELD, GAUGE GLASS 3/4D.X 12”	RU-300
16C	WC-2019	SHIELD, 14c” GAUGE GLASS	RU-600
16D	WC-2023	SHIELD, 20” GAUGE GLASS	RU-1000
17A	WC-2105	GAUGE GLASS, ASSY 11” USE ON RU-150	RU-150
17B	WC-2109	GAUGE GLASS, ASSY 14”	RU-225, RU-600
17C	WC-2107	GAUGE GLASS, ASSY 12” SHORT WIN	RU-300
17D	WC-2114	GAUGE GLASS, ASSY 20”	RU-1000
18	WC-2005	WASHER, SHIELD CAP 1/8” GEM-3/TC’S W/SG	ALL RU UNITS
19	WC-2000	FITTING, AGITATION PLATED RU’S	ALL RU UNITS
20	WC-3402	SPRING, RETURN “S”SERIES FAUCT	ALL RU UNITS
21	WC-1813	WASHER, 1-1/8” OD ETHYLENE PROPYLENE RUBBER	ALL RU UNITS
22	WC-1901AK	KIT,FAUCET SHANK W/SHIELD BASE	ALL RU UNITS
23	WC-1939	NUT, FLANGED TLS-2, GEM3, RU’S	ALL RU UNITS
24	WC-5307	TUBE, 3/16 ID x 3/32W SILICONE GEN USE	ALL RU UNITS
25	WC-4439	SCREW, 6-32x¼ PHIL PAN HD SS	ALL RU UNITS

RU Series Urns - Spray Arms - Exploded View



RU Series Urns - Spray Arms - Parts List

ITEM #	PART #	DESCRIPTION
1	WC-2908K	KIT, SPRAY ARM ASSY RU-150/300
2	WC-2909	SPRAY ARM ASSEMBLY, RU-225/600/1000
3	WC-4800	SCREW, 8-32 x 1/8" SET S.S.
4	WC-3103K	KIT, CAP CLEAN OUT, VALVE CORE RU'S
5	WC-4307	RING, PACKING TEFLON 2-REQ
6	WC-2916	NEEDLE, BY PASS PLTD (SPRAY ARM)
7	WC-4202	NUT, 3/8" - 24 JAM, PLATED
8	WC-2914	SPOUT, BY PASS PLTD (SPRAY ARM)
9	WC-3753	KIT, VALVE CORE REPLACEMENT O-RING STYLE RU'S

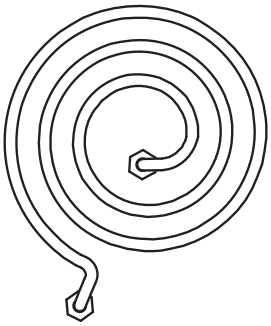
ITEM #	PART #	DESCRIPTION
10	WC-4310	WASHER, 7/8" INTERNAL TOOTH LOCK 410 STAINLESS STEEL
11	WC-4215P	NUT, 7/8" JAM PLATED
12	WC-3109K	KIT, CORE VALVE RU'S
13	WC-2904	SPRAY HEAD HOLDER PLATED
14	WC-4320	O'RING, 0.487I.D.x 0.693OD x0.103CS BUNA-N #112
15	WC-2907K	KIT, SPRAYHEAD ASSY RU'S
16	WC-3200*	HANDLE, SPRAY ARM BLACK PLASTIC RU/MWM

* Use only with valve cores that do not have Teflon retractors.

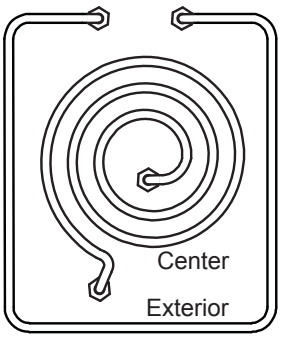
RU Series Urns - Spray Arms - Recommended Parts to Stock

ITEM #	PART #	DESCRIPTION
14	WC-4320	O'RING, 0.487I.D.x 0.693OD x0.103CS BUNA-N #112
15	WC-2907	SPRAY HEAD, ASSY (SC)RU-150/225/300/600/1000

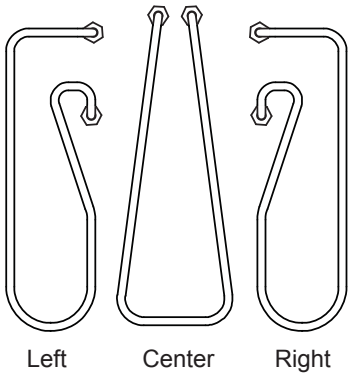
RU Series Urns - Heating Elements



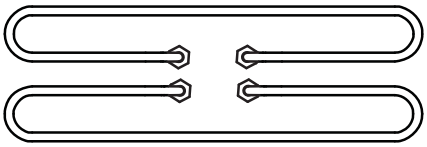
Element Configuration “A”



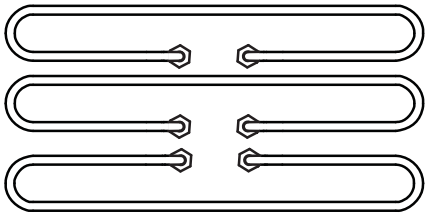
Element Configuration “B”



Element Configuration “C”



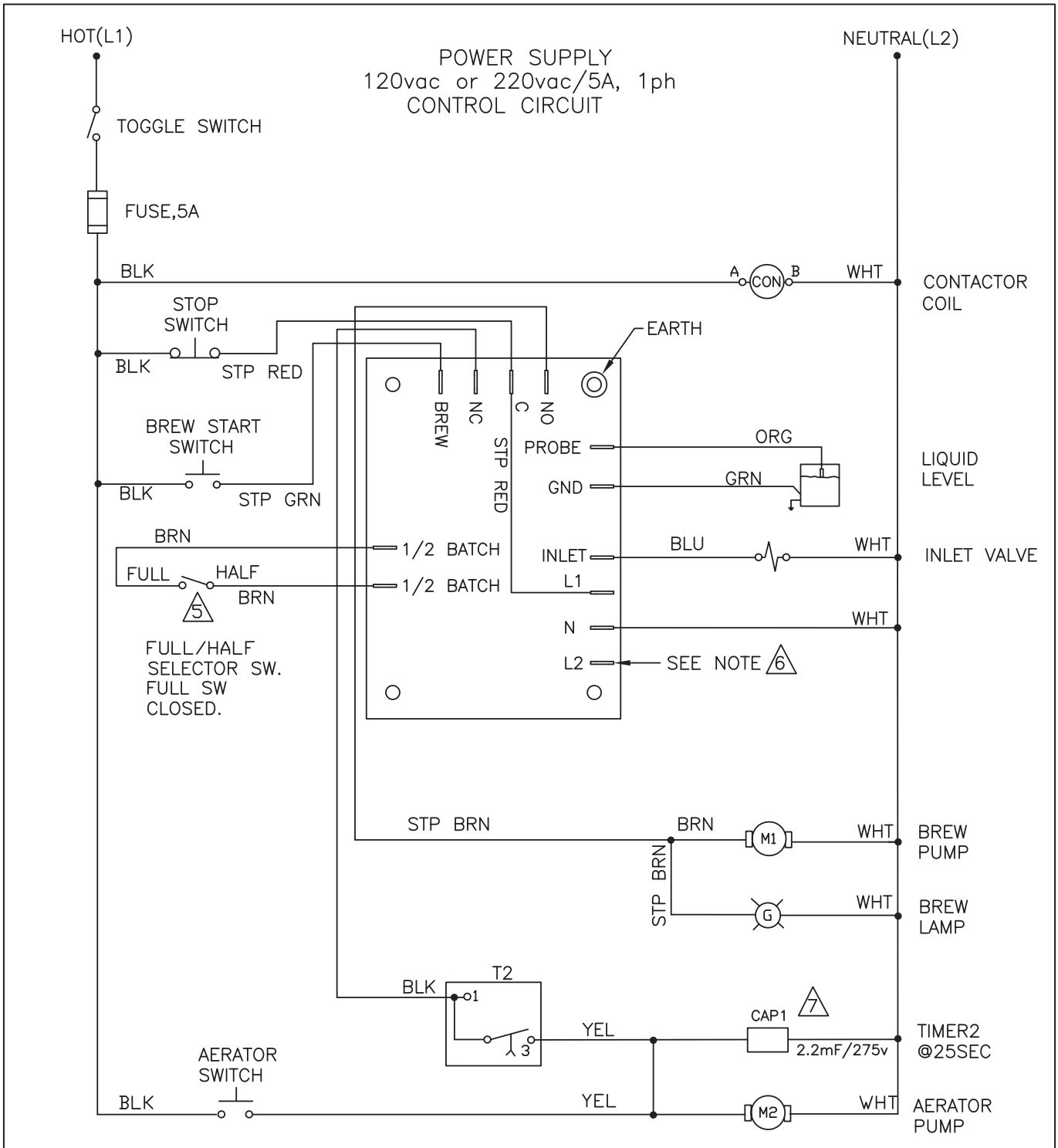
Element Configuration “D”



Element Configuration “E”

URN MODEL	ELECTRICAL SUPPLY	ELEMENT CONFIGURATION	ELEMENT LOCATION	ELEMENT PART #	ELEMENT DESCRIPTION
RU-150-12	208/220V-1 PHASE	A	-	WC-913-01	ELEMENT, HEATING 5KW 220V FOR MED SPIRAL
RU-150-20	208/220V-3 PHASE	C	LEFT	WC-907-01	ELEMENT, HEATING 1.75KW 220V FORMED LEFT
			CENTER	WC-907-02	ELEMENT, HEATING 1.75KW 220V FORMED CENTER
			RIGHT	WC-907-03	ELEMENT, HEATING 1.75KW 220V FORMED RIGHT
RU-150-62	208/220V-1 PHASE	A	-	WC-913-01	ELEMENT, HEATING 5KW 220V FOR MED SPIRAL
RU-150-91	380V-3 PHASE	C	LEFT	WC-915-01	ELEMENT, HEATING 3KW 440 FORMED LEFT
			CENTER	WC-915-02	ELEMENT, HEATING 3KW 440 FORMED CENTER
			RIGHT	WC-915-03	ELEMENT, HEATING 3KW 440 FORMED RIGHT
RU-225-12	208/220V-1 PHASE	B	CENTER	WC-911-02	ELEMENT, HEATING 3.5KW FORMED CENTER
			EXTERIOR	WC-911-01	ELEMENT, HEATING 3.5KW 208/ 220V W/JAM NUT FORMED EXTERIOR
RU-225-20	208/220V-3 PHASE	C	LEFT	WC-908-01	ELEMENT, HEATING 2.5KW 220V FORMED LEFT
			CENTER	WC-908-02	ELEMENT, HEATING 2.5KW 220V FORMED CENTER
			RIGHT	WC-908-03	ELEMENT, HEATING 2.5KW 220V FORMED RIGHT
RU-300-12	208/220V-1 PHASE	D	ALL	WC-910	ELEMENT, HEATING 3KW 220V RU’s
RU-300-20	208/220V-3 PHASE	E	ALL	WC-908	ELEMENT, HEATING 2.5KW 220V
RU-300-63	208/220V-1 PHASE	D	ALL	WC-912	ELEMENT, HEATING 4KW 220V
RU-300-91	380V-3 PHASE	E	ALL	WC-924	ELEMENT, HEATING 4KW 380V
RU-600-12	208/220V-1 PHASE	D	ALL	WC-913	ELEMENT, HEATING 5KW 220V
RU-600-20	208/220V-3 PHASE	E	ALL	WC-911	ELEMENT, HEATING 3.5KW 220V
RU-600-63	208/220V-1 PHASE	D	ALL	WC-913	ELEMENT, HEATING 5KW 220V
RU-600-91	380V-3 PHASE	E	ALL	WC-924	ELEMENT, HEATING 4KW 380V
RU-1000-12	208/220V-1 PHASE	D	ALL	WC-913	ELEMENT, HEATING 5KW 220V
RU-1000-20	208/220V-3 PHASE	E	ALL	WC-911	ELEMENT, HEATING 3.5KW 220V
RU-1000-91	380V-3 PHASE	E	ALL	WC-924	ELEMENT, HEATING 4KW 380V

RU Series Control Circuit

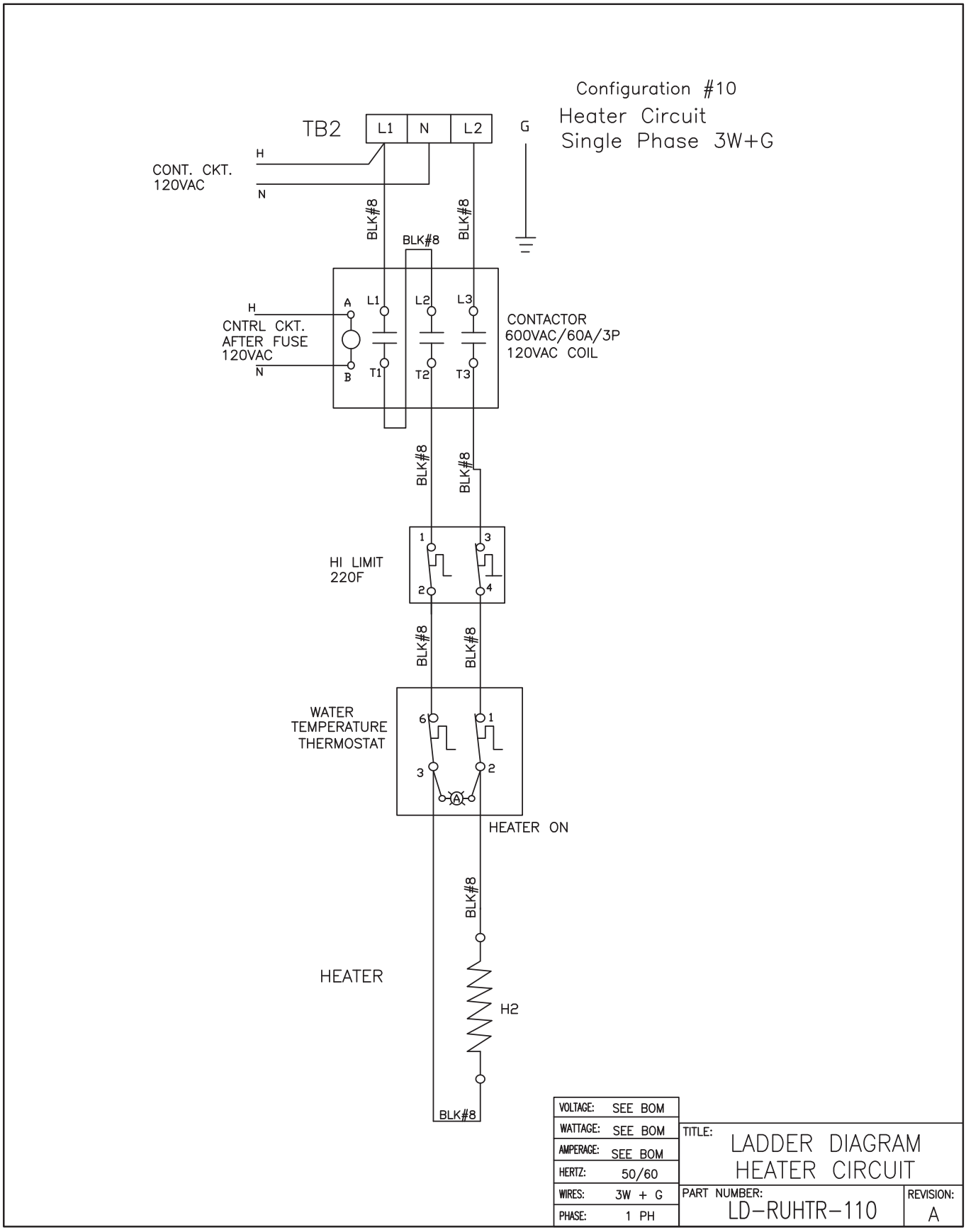


7 CAPICITOR ONLY USED ON 208/220V OR EXPORT UNITS.
6 WHEN USING 220VAC CONFIGURATION CONNECT WHITE WIRE FROM NEUTRAL TO L2.
5 FULL & 1/3 BATCH FOR RU1000. FULL AND HALF BATCH FOR RU150/225/300/600.
4 ALL COMPONENTS IN CONTROL CIRCUIT WILL BE 120VAC OR 220VAC DEPEND ON POWER SUPPLY AND CIRCUIT CONFIGURATION.
3 USE THIS DIAGRAM FOR OTHER MODELS WITH ADDED PREFIX AND/OR WITH SECOND DASH NUMBER ON THEIR PART NUMBERS PROVIDED THEY HAVE THE SAME ELECTRICAL SPECS AND/OR RATINGS.
2 DO NOT CHANGE NOR SUBSTITUTE WIRE COLORS. ALL WIRES SHALL BE 18AWG.
1 ALL WIRES SHALL BE UL APPROVED APPLIANCE
NOTES: UNLESS OTHERWISE SPECIFIED

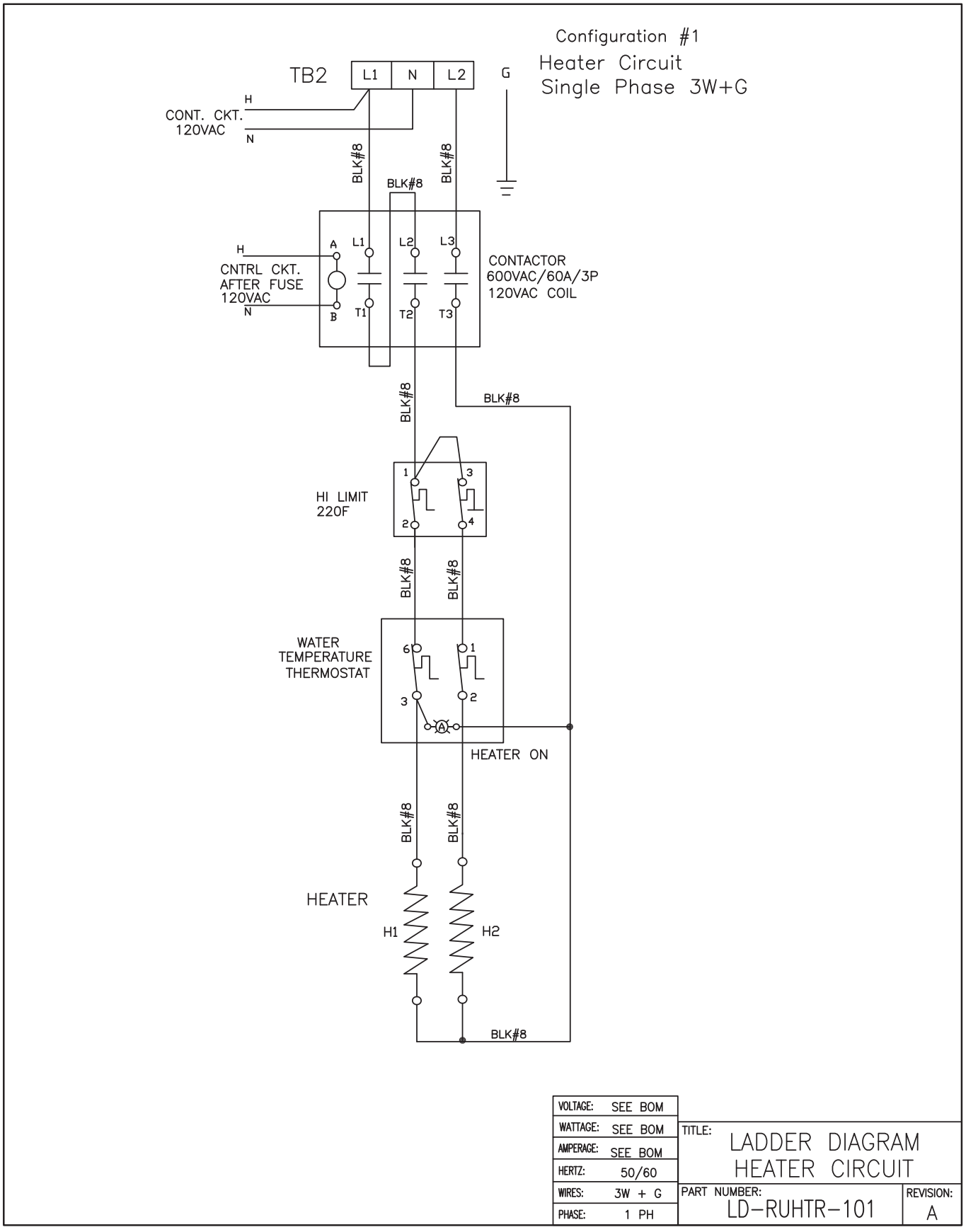
VOLTAGE:	120/240
WATTAGE:	600
AMPERAGE:	5A
HERTZ:	50/60
WIRES:	2W + G
PHASE:	1 PH

TITLE: LADDER DIAGRAM CONTROL CIRCUIT, STD.
PART NUMBER: LD-RUCNTRL-100
REVISION: D

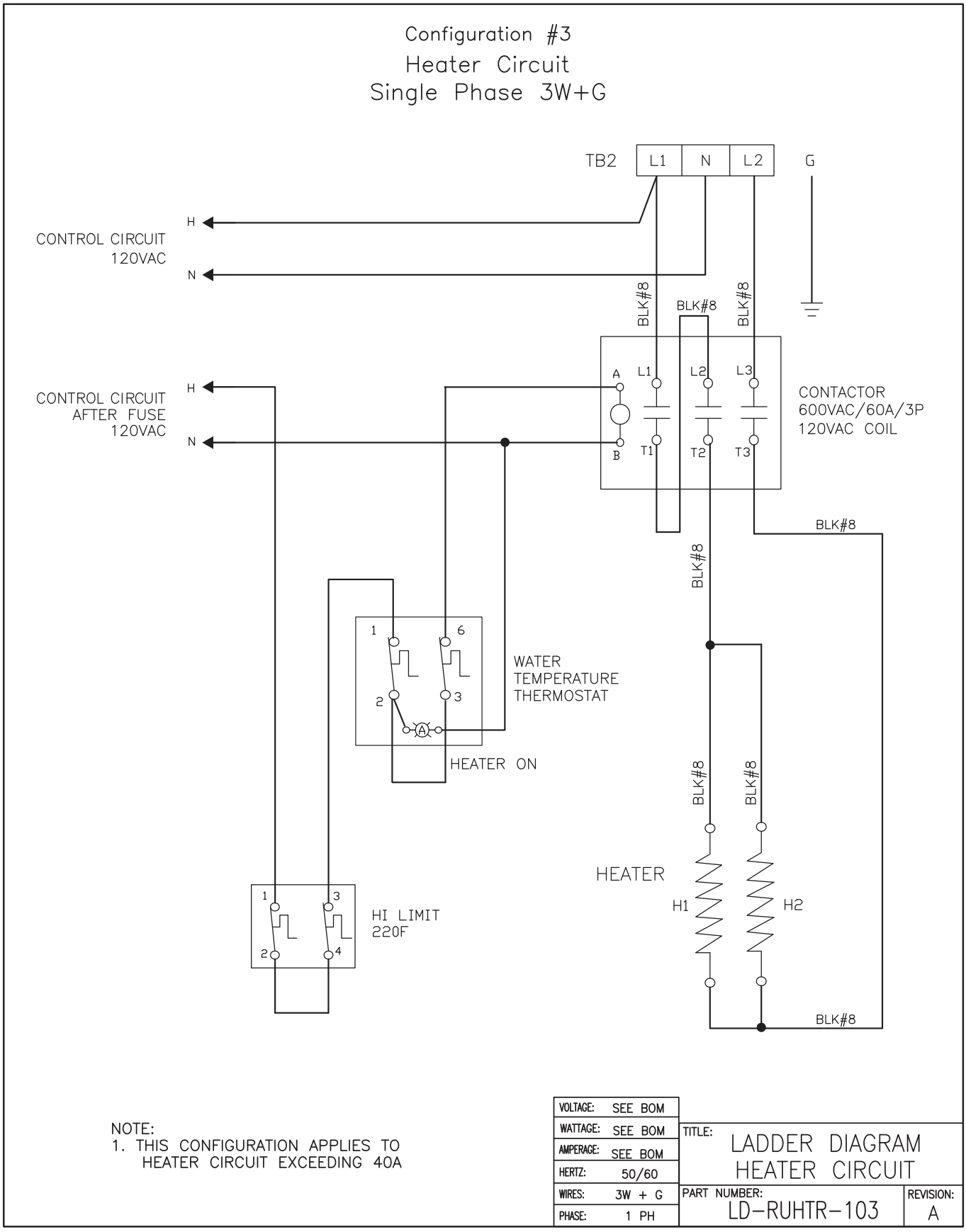
RU Series Heater Circuit, RU-150-12



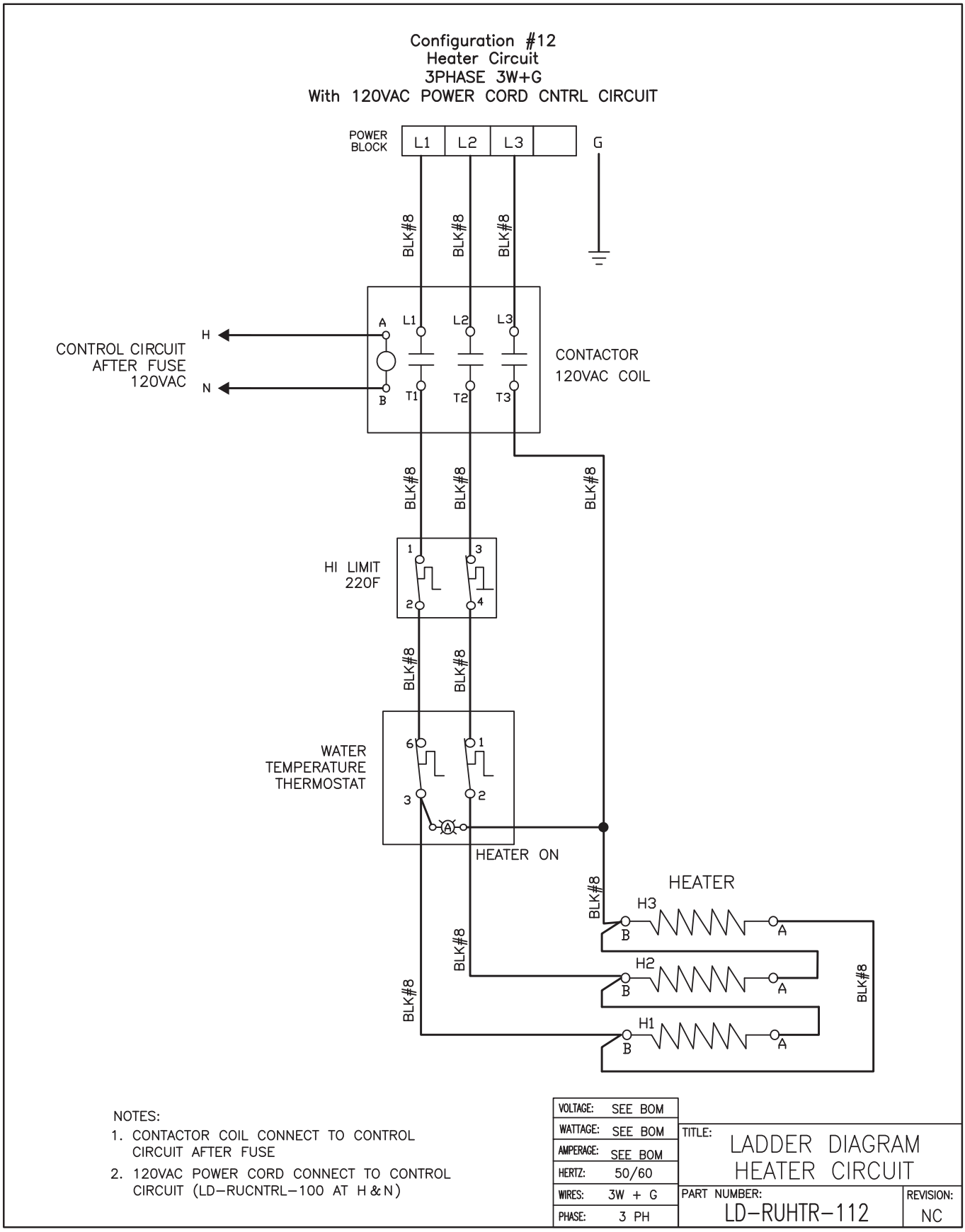
RU Series Heater Circuit, RU-225-12, RU-300-12, RU-600-12



RU Series Heater Circuit, RU-1000-12



RU Series Heater Circuit, RU-150-20, RU-225-20, RU-300-20, RU-600-20, RU-1000-20



NOTES:

1. CONTACTOR COIL CONNECT TO CONTROL CIRCUIT AFTER FUSE
2. 120VAC POWER CORD CONNECT TO CONTROL CIRCUIT (LD-RUCNTRL-100 AT H & N)

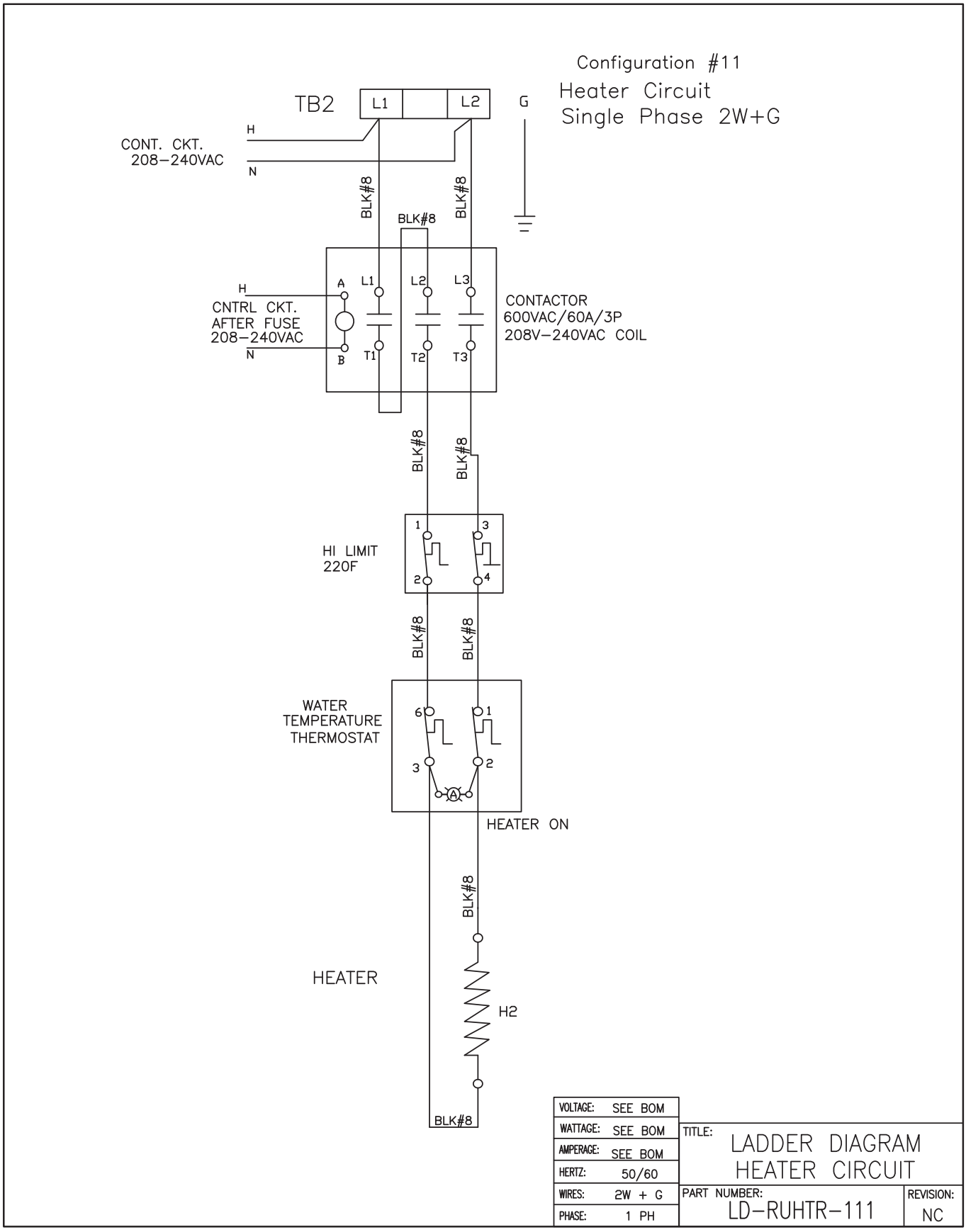
VOLTAGE:	SEE BOM
WATTAGE:	SEE BOM
AMPERAGE:	SEE BOM
HERTZ:	50/60
WIRES:	3W + G
PHASE:	3 PH

TITLE: LADDER DIAGRAM HEATER CIRCUIT

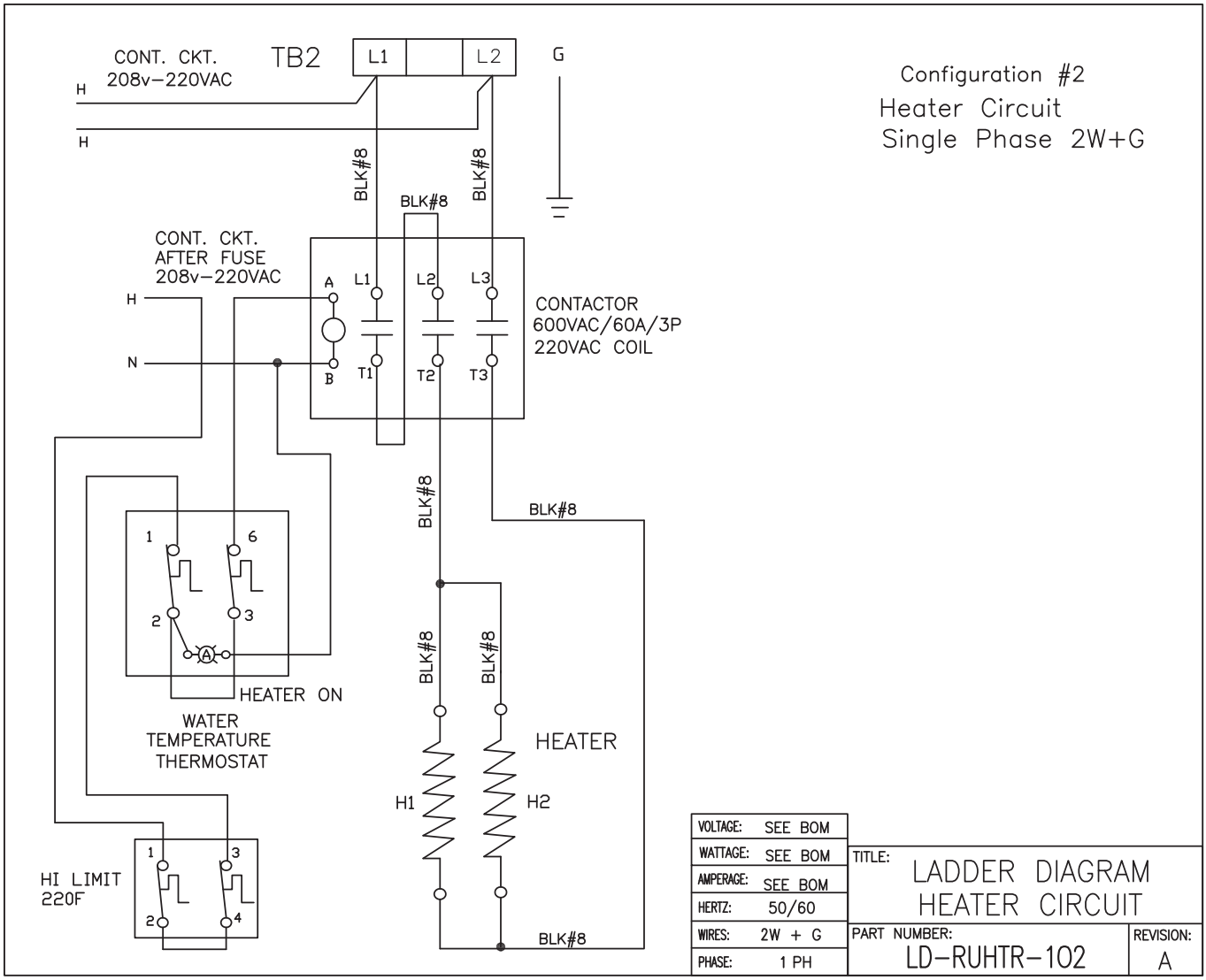
PART NUMBER: LD-RUHTR-112

REVISION: NC

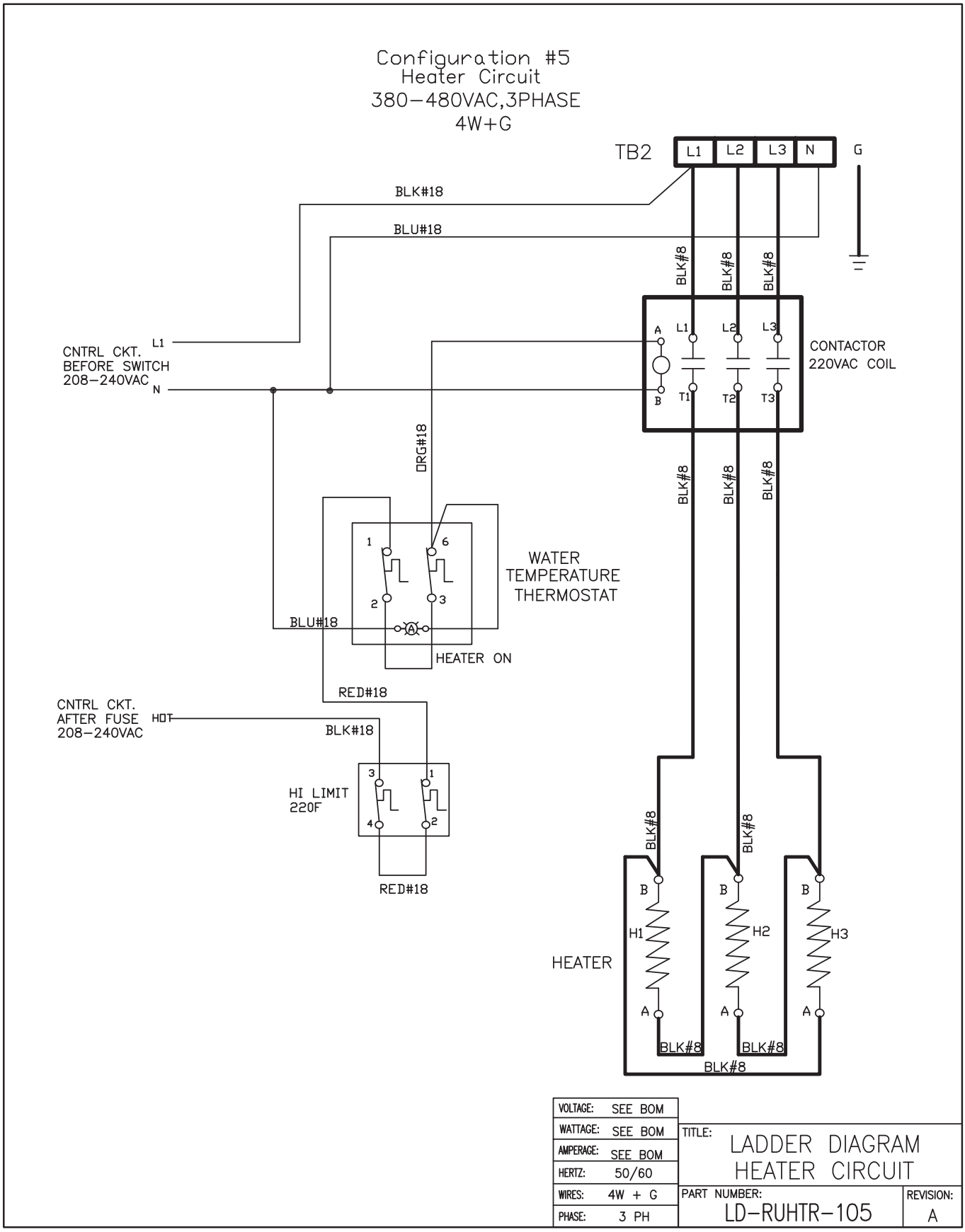
RU Series Heater Circuit, RU-150-62



RU Series Heater Circuit, RU-300-63, RU-600-63



RU Series Heater Circuit, RU-150-91, RU-300-91, RU-600-91, RU-1000-91



WARNING:

Electric Shock Hazard - the following procedures are to be performed only by a qualified service technician. Turn off power when replacing components. 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.

Troubleshooting Guidelines

- An urn that is not level may not function properly. Make sure the urn 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.*

No Power - Nothing Works

1 Make sure the circuit breaker for the circuit supplying power to the urn is not tripped and is turned on. On units with both a 120 Volt and 220 Volt power supply, make sure both circuits are turned on.

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

3 Make sure that the main power toggle switch on the bottom of the control box is turned ON.

4 Remove the fuse on the front of the control box and make sure it is not blown.

5 Remove the electrical box cover and verify that all wires from the power cord are properly connected inside the unit. Check to make sure the wires are not burned/overheated. Check chassis ground.

Urn Does Not Start to Brew When BREW BUTTON is Pressed

If the urn starts to brew when the BREW BUTTON is press, but stops brewing when it is released, see ***Brewing Stops When BREW BUTTON is released***.

1 First check the water level in the water jacket. If the water level is low, see ***Water Jacket Does Not Fill***.

2 Press the BREW BUTTON and check for power across the terminals of the brew pump. If there is power to the pump, but water does not flow, replace the pump.

3 If the brew pump is not getting power, first check for faulty wiring and connections between the timer and the pump.

4 If the wiring is OK, check for power across terminals 2 and 3 and across terminals 3 and 9 on the timer.

5 If power is being supplied to the timer, check to make sure power is supplied to pin 5 of the timer when the BREW BUTTON is pressed. If power is being supplied to all the terminals checked in steps 4 and 5, but there is no power supplied to the pump when the BREW BUTTON is pressed, replace the timer. After replacing the timer, set the timer as instructed in the ***Setting the Timer*** section on the following page.

Brewing Stops When BREW BUTTON is Released

The brew light stays on only while the switch is pressed, but turns off when released and water comes out of the spray head only while the switch is kept pressed. Normally, the timer should reset itself to the N. O. position after every brewing cycle but if it fails to reset, brewing will stop when the button is released.

1 Turn off power to the urn.

2 Disconnect the wires to terminals 8 and 9 on the timer.

3 Using a multi-meter, check for continuity between terminals 8 and 9 on the timer. If there is continuity, the timer is faulty and must be replaced. After replacing the timer, set the timer as instructed in the ***Setting the Brew Timer*** section on the following page.

Liner Not Filled To Normal Level During Brewing

1 Before brewing, make sure that the water jacket is full. If water flow into the jacket is slow, see ***Water Jacket Does Not Fill***.

2 Check the position of the batch switch.

3 Check for obstructions in the spray head and spray head water supply tubing that slow down the delivery rate of the water during brewing. Also check to make sure that the pump is working properly.

4 Run a brew cycle with the batch switch in one position, then a second time with the switch in the opposite position. If the brew time/volume does not change based on the position of the switch, check the batch selector switch and wiring harness. If both are OK, replace the timer.

5 If the batch switch is working, try changing the timer setting. See ***Setting the Brew Timer***. If changing the timer setting does not lengthen the brew cycle sufficiently, replace the timer.

Brew Light Does Not Come on During Brewing

Press the brew button and check for power to the light. If power is being supplied, but the light does not come on, replace the BREW BUTTON assembly.

Liner Overflows During Brewing

1 Check to make sure the liner is empty before starting a brew cycle.

2 Try changing the timer setting. See ***Setting the Brew Timer***. If changing the timer setting does not shorten the brew cycle sufficiently, replace the timer.

Water Jacket Does Not Fill

IMPORTANT: No water or low water in the water jacket can cause the water to overheat, resulting in the thermostat reset switch opening. If after correcting a jacket fill problem there is no power to the heating elements, push the reset switch button to reset.

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

3 If power is not being supplied to the inlet valve, check the wires between the liquid level control board and the inlet valve. Check for corroded connections.

4 If the wiring between the water level control board, and the inlet valve is OK, disconnect the orange wire from the control board. If the water tank starts to fill, either the wire or the probe is shorted to ground. If the water tank does not start to fill, replace the control board.

Water Jacket Overfills

1 Turn the toggle switch on the bottom of the control box 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 jacket when the toggle switch is turned OFF and resumes when the switch is turned back ON, remove the orange wire from the water probe inside the control box. While power is ON, short the end of the orange wire to ground. If the water jacket stops filling, check for a corroded connections at both ends of the orange wire.

3 If water does not stop flowing when the orange wire is shorted to ground, check the ground wire to the water level control board and the continuity of the orange wire. If all connections are OK, replace the control board.

Air Does Not Flow Through One (or Both) Tubes When AERATE Button is Pressed

IMPORTANT: On older units, when reconnecting the silicone tubing to the copper tubes inside the control box, make sure that you do not cover the small holes on the copper tubes. See the diagram on the following page.

1 Remove the aeration tubing from the copper tubes (or tee) inside the control box. Press the AERATE button. Air should blow through both tubes. If air blows through only one tube or the pump makes noise but air does not come out of either tube, replace the pump. If air comes out of both tubes, skip to step 3.

2 If the pump does not make noise when the AERATE button is pressed, check to make sure the pump is getting power. If the pump is getting power when the button is pressed, but does not operate, replace the pump.

3 If the pump is working normally, reconnect the tubing inside the control box. Press the AERATE button and check for leaks in the aeration system. See the diagram on the following page.

Automatic Aeration Does Not Work, Manual (AERATE) Button Works OK

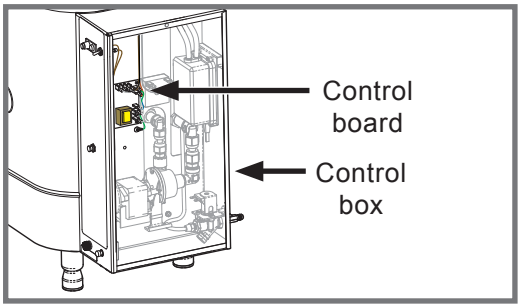
Remove the black wire from terminal 1 on the aeration timer. Disconnect the black wire from the aerator switch. Plug the wire from the switch into terminal 1 of the timer. The air pump should immediately start pumping air into the liner. If the pump works, replace the agitation timer. If the pump does not work, check the wiring between the aeration timer and the pump.

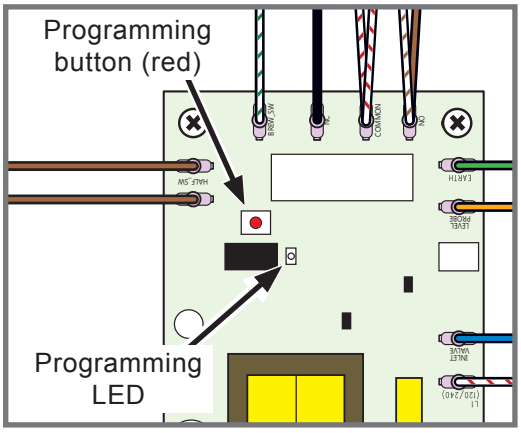
Coffee Does Not Flow Back Into Gauge After Aeration

Older model urns are equipped with holes in the top of the copper tubes that feed air to the gauge assemblies. See the diagram on the following page for location. Make sure that the holes are not covered by the silicone tubing from the pump. If the holes are not exposed, coffee will not flow back into the gauge after aeration.

Setting the Brew Timer (Brew Volume)

WARNING: During programming, keep hands clear of all bare wires/terminals. Touch only the control board. Keep all body parts clear of the liner/spray arm to avoid scalding.





1 Remove the side cover from the control box. Power must be connected and the water supply on. Turn the toggle switch on the bottom of the control box ON.

2 Wait for the water jacket to fill and heat (wait for the light next to the BREW button to come on).

3 Turn the batch selector switch to HALF BREW/ONE POUND.

4 Remove the lid and brew basket from the urn liner and swing the spray arm into place.

5 Make sure the liner is empty.

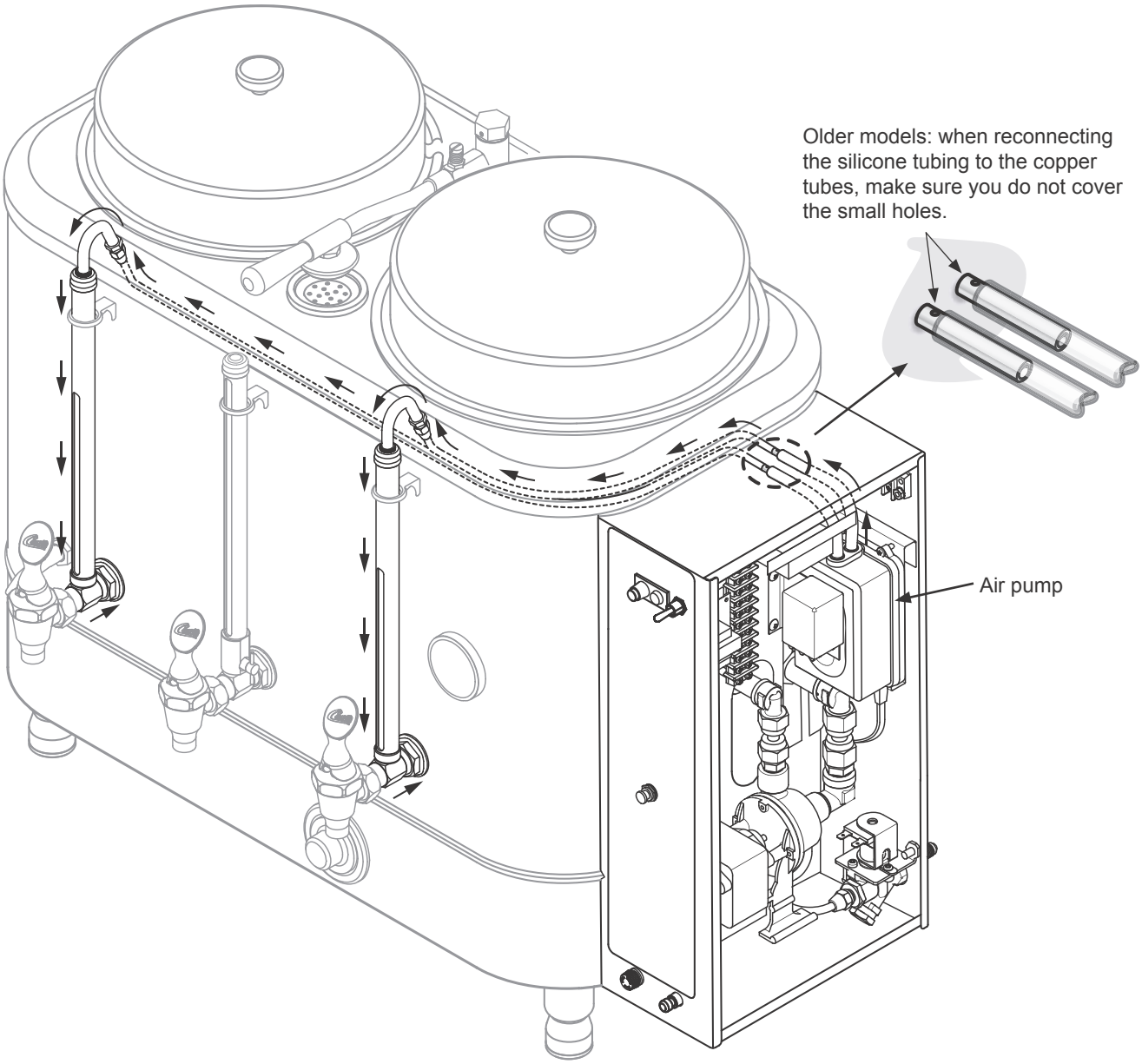
6 Push and hold the programming button until the programming LED flashes.

7 Press the BREW button on the front panel.

8 When the liner is half full, press the BREW button again. Half batch is now programmed.

9 Empty the liner.

10 Turn the batch selector switch to the FULL BREW or TWO POUNDS position and repeat steps 4 through 9 when the brew light comes back on, this time waiting for the liner to fill all the way during programming.



Aeration System Airflow Diagram - RU-300 Shown

Water Does Not Heat At All

- If the water heats, but is not hot enough, see ***Water Not Hot Enough***.

The following steps are performed with the control box 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 (nominal resistance is 13 Ohms).

2 If there is no power to the element, trace the circuit back (using the ***ELECTRICAL SCHEMATIC***) to the power source(s) to find out where power is lost.

Water Heats More Slowly Than Usual

1 Check for the proper voltage across the terminals of the heating element.

2 If the proper voltage is being supplied, disconnect the heating element and check for high resistance (nominal resistance should be 13 Ohms). Replace a heating element if the resistance is too high.

Water Not Hot Enough

1 Check for the correct temperature setting on the thermostat knob.

2 Make sure that the water has had sufficient time to heat. Heating time for cold water can be up to 60 minutes.

3 If the temperature setting is OK, check the heating elements for high resistance (nominal resistance should be 13 Ohms). Also make sure all elements are getting power.

4 If the elements are OK, try adjusting the thermostat (see ***Thermostat Adjustment***). Replace a thermostat that is stuck closed.

Water Too Hot (Boiling or Excessive Steaming)

IMPORTANT: When operating the unit at higher elevations, reduce the default operating temperature (200°F) by 2°F for each 1000 feet of elevation above 4000 feet. See ***Thermostat Adjustment*** on the following pages.

1 If operating the urn at higher elevations, check to make sure that the thermostat is not set too high. Re-adjust as instructed on the following page.

2 Check for a thermostat that is stuck closed. Replace as necessary.

Thermostat Adjustment

The thermostat is factory set to cut off at 200ºF. If necessary, adjust it as follows:

1 Turn the main power switch OFF.

2 Rotate the thermostat knob to the right, to the BOIL position.

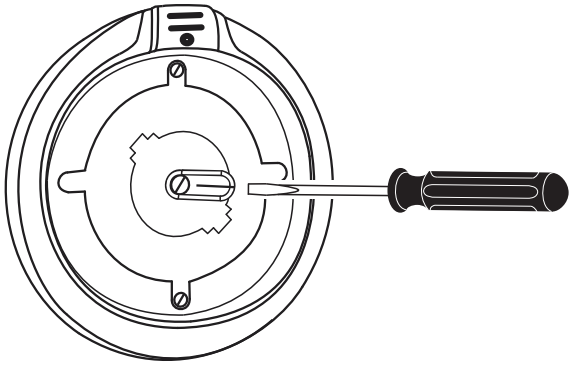
3 Pull off the knob.

4 In the thermostat stem, locate the tiny adjustment screw.

5 Using a small screwdriver, adjust the temperature up or down. Turning the screw ¼ turn to the left will increase the temperature about 20°F. Turning the screw ¼ turn to the right will decrease the temperature by 20°F.

6 Replace the knob.

7 To determine the temperature setting, turn the urn power switch ON, insert a thermometer probe into the water after about 60 minutes and re-adjust as necessary according to the steps above.



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 forty (40) months from the date of purchase or 40,000 pounds of coffee, whichever comes first. Stainless steel components are warranted for two (2) years from the date of purchase against leaking or pitting. 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.*

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.