



INSTALLATION

WATER INLET CONNECTION

The following is required for water hook-up:

- A quick disconnect water connection or enough coiled tubing so the machine can be moved for cleaning underneath. (*required for NSF approved water hook-up*)
- A 1/4" male flare adapter is provided (packed inside the drain tray) to be attached by the installer to the back of the machine for hook-up to water supply.
- Installation to a water filter system is required to prevent lime and scale build up in the machine.
- Water pipe connections and fixtures directly connected to potable water supply shall be sized, installed, and maintained in accordance with Federal, State, and Local codes. (*required for NSF approved water hook-up*)
- Equipment is to be installed with adequate backflow protection to comply with applicable Federal, State, and local codes. (*required for NSF approved water hook-up*)

WATER HOOK-UP

1. Install the (2) front 4" legs to provide approximately 1/2" clearance with the bottom of the machine.
2. Install drain tray bracket to the front of the machine by sliding the bracket between the front 4" legs and the bottom of the machine. The bracket should self locate with screw heads on the bottom of the machine. Tighten the front 4" legs to secure the drain tray bracket.
3. Install the (2) back 4" legs and tighten.
4. Install the plastic drain tray onto the drain tray bracket. (Note: The drain tray is provided with a removable plug to allow for plumbing the drain tray to a drain.)
5. Connect a flexible water supply hose to 3/8-18 NPT connector in rear. Ensure the water supply hose has sufficient length to allow the machine to be moved for cleaning or service. Supplying hot water to the machine will greatly increase the capacity of the machine. The use of copper tubing is required to prevent rupture when using a hot water supply. A maximum inlet water temperature of 120° F is recommended.
6. Ensure that the water supply to the machine is with 20 to 100psi. Install a pressure regulator if pressure is too high.

ELECTRICAL HOOK-UP

Ensure water connection is made to machine before proceeding

The electrical ratings for your dispenser are located on the serial plate on the outside cabinet. For configuration of three heater models to optional wattages, refer to configuration manual 62210 supplied with the machine.

1. For cord connected models, plug the power cord into an appropriate grounded and dedicated electrical outlet. Go to step 8.
2. For hard-wired models not supplied with a can electrical cord, the dispenser should be connected to a dedicated circuit with a fused disconnect switch or a circuit breaker near the dispenser.
3. Strain relief knockouts are supplied on the back of the machine chassis for power entry.
 - **Electrical connections and wiring materials must conform to local codes and/or be in compliance with the National Electric Code**
 - **Use only copper conductors**
4. Remove the access panel located on the upper left side of the dispenser. Note: wiring diagram is on backside of access panel.
5. Connect the power supply conductors, neutral and ground wire to the appropriate positions on the terminal block located on the upper left side of the dispenser. The ground lug is separate from the terminal block. Note: if power supply available does not provide for a neutral conductor, a stepdown transformer must be installed to provide the necessary 120 volt power supply for the control circuits. Consult factory for assistance.
6. Install the side access panel.
7. Flip power supply to machine "ON" at the branch supply disconnect.
8. Flip power switch to the "ON" position and allow the water tank to fill. The machine will make a subtle hissing sound while filling. Allow 3-4 minutes for fill time depending on water pressure.
9. After the water tank has completed the fill cycle, the green Ready light located on the front of the dispenser should extinguish signifying that the heating element has been activated. Allow 10-60 minutes for the Ready light to illuminate signifying the water tank has reached operating temperature. (Note: Heatup time is dependent on water inlet temperature and input wattage to the machine.)

Attention: This machine employs an interlock switch to disable the dispense and fill circuits when the front door is open. Ensure the front door is closed while installing or operating the machine. A watchdog circuit also monitors the water level in the tank and will disable the machine if the water level in the tank is not normal within (5) minutes of fill time. The machine will require power to be reset to clear the watchdog timeout.

BAG-IN-BOX HOOK-UP

- Place bag-in-box containers inside the cabinet behind the front door. Connect the quick connect fitting to each bag-in-box.
- After connecting the bag-in-box, flip the water switch located behind the front door to the "OFF" position and flip the concentrate switch to the "ON" position.
- Activate the appropriate dispense switch on the front of the door in order to prime the concentrate lines with product. Continue to activate the dispense switch until concentrate is dispensed from the appropriate dispense spout.
- Repeat steps for other dispense spout.

BAG-IN-BOX HOOK-UP (cont.)

- Flip water switch back to "ON" position.
- Close front door and ensure that both water and product are dispensed simultaneously

HOW TO DISPENSE A CUP OF COFFEE

Warning: Do not use cups over 6 3/4" (15.2 cm) tall with this machine. Use of cups over this height could result in severe burns and injury.

On models with manual dispense switches:

- Place a cup under the selected drink dispense nozzle.
- Push and hold dispense switch until cup is full and then release switch.

On models with portion control dispense switches:

- Place a cup under the selected drink dispense nozzle.
- Push button for one second, then release to dispense one serving.

Note: Portion may be cancelled by push and release of the switch.

ADJUSTMENTS**PORTION ADJUSTMENT (Portion control units only)**

- Place a cup under the selected drink dispense nozzle.
- Press and hold the desired dispense switch and press and release the manual top-off button to activate the programming sequence.
- After a 10 second time delay, the machine is triggered into program mode and will begin dispensing.
- Continue pressing the button until cup is full, then release the switch to prevent overflow. The elapsed portion dispense time is saved to memory and will remain until the dispense switch is reprogrammed.
- Check the portion size by placing an empty cup under the desired dispense nozzle, then press and release the dispense switch. The machine will dispense the preprogrammed portion size.
- If the portion size is incorrect, repeat steps 1, 2, 3, 4 & 5 until the desired portion size is achieved.

THERMOSTAT ADJUSTMENT

Note: The thermostat range is approximately 160° to 200°F (71.11°C to 93.33°C). The tank temperature is factory set at 190°F (87.78°C), making beverage temperature slightly lower than 190°F (87.78°C). The factory setting is recommended for liquid coffee based concentrates. Other products may require different mixing temperatures. Follow product manufacturer's recommended mixing water temperature for non-coffee products.

Temperature can be adjusted as follows:**Tool required: #2 Phillips screwdriver.**

- Unplug machine.
- Remove the drip pan.
- Remove the upper splash panel on the front of the machine by removing the (4) Phillips head screws.
- Remove control panel cover by loosening (2) screws enough to allow keyholes in panel to clear the screw heads.
- Locate the thermostat adjustment dial on the left side of the control board.
- To adjust the temperature of the water being dispensed, turn the adjustment dial on the control board. (Turn clockwise to increase the water temperature or counter clockwise to decrease the water temperature.)

Caution: Do not force the adjustment dial beyond its 270 degrees of rotation or damage to the control board may occur.

DRINK STRENGTH ADJUSTMENT (Refer to Figure A)**TOOLS REQUIRED: #2 PHILLIPS SCREWDRIVER**

Warning: Always disconnect power to the machine before servicing or cleaning.

Risk of electric shock is present which can cause serious injury or death.

- Dispense a drink to determine if drink is too strong or weak.
- Turn off power to machine at power switch.
- Remove front splash panel below dispense heads in front of machine.
- Locate the mix ratio setting panel directly behind the front splash panel (see Figure A)
- Adjust drink strength by determining the digital setting for the desired mix ratio.

(Note: Clockwise will strengthen product, counterclockwise will weaken the product.)

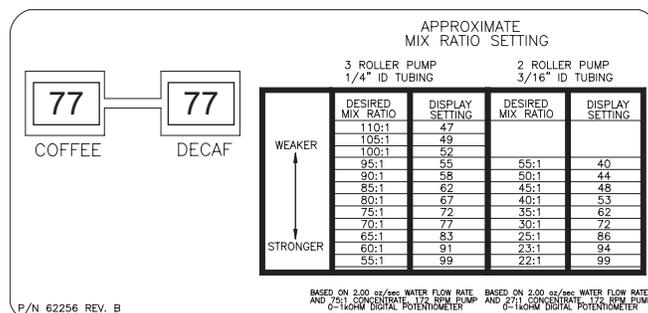


Figure A

Service and Cleaning**Daily Cleaning Instructions for the LCD Coffee Dispensers**

- Wipe down all stainless steel surfaces of the dispense spout, bag-in-box cabinetry and drip tray areas with a clean soft cloth using a mixture of one oz. (28 g) Ivory liquid detergent or equivalent to one gallon (3.8 litre) of fresh water.
- Follow by wiping down all stainless steel surfaces of the dispense spout and cabinetry with a clean soft cloth moistened with fresh water and allow to air dry.
- Remove drain tray and wash in a three compartment sink with warm soapy water per above concentration until all signs of product residue are removed, rinse thoroughly with fresh water and air dry.

WEEKLY CLEANING INSTRUCTIONS FOR THE LCD COFFEE DISPENSERS

- Flip water switch (a) to "OFF" position.
- Remove fitting cap (a) from bag-in-box quick disconnect fitting then remove internal check valve parts by rotating the retaining cap at the opposite end of the o-ring end. This will allow free flow of sanitizing solution through the connector and faster cleaning.
- For Hot Chocolate disconnect BIB fitting and insert Scholle probe sanitizing attachment (not provided).
- Insert the bag-in-box quick disconnect fitting into a one gallon (3.8 litre) basin of very warm (150°F/65.56°C) soapy water. Use 1/2 oz. (14 g) Ivory liquid detergent or equivalent to one gallon (3.8 litre) of water.
- Push and hold the corresponding dispense switch until clear soapy water is dispensed from the spout.
- Flush soapy water by repeating steps 3 and 4 using one gallon (3.8 litre) of very warm (150°F/65.56°C) water without soap.
- Prepare one gallon (3.8 liter) of food grade sanitizing solution in a container per manufacturer's recommendations and repeat step (4) until sanitizing solution is dispensed from the spout. Let sanitizing solution work for 5 minutes, then flush the concentrate line by pushing and holding the dispense switch until the sanitizing solution dispenses clear.
(Note: recommended sanitizing solution is KAY-5 Sanitizer/Cleaner; mix (1) one oz. (28 g) packet of sanitizer powder + 2-1/2 gallons (9.5 litre) of warm (approximately 120°F/48.89°C) water to achieve a solution of 100ppm of available chlorine.
- Remove the bag-in-box connector from the sanitizing solution basin and purge the concentrate line by pushing and holding the dispense switch until the concentrate tube runs dry.
- Flush the concentrate line with fresh water by submerging the bag-in-box connector in a one gallon (3.8 litre) container of fresh tap water and activating the corresponding dispense switch for one minute.
- Re-assemble the bag-in-box connector, then reconnect the bag-in-box connector to a bag-in-box of concentrate.
- Prime the concentrate line by pushing and holding the dispense switch until concentrate drips from the spout.
- Flip the water switch to the "ON" position and dispense and discard (2) 6 oz. (168 g) drinks.
- Repeat all steps for other dispense heads.

To prepare for shipment: Important - Always completely empty water tank, remove bag in box containers, and purge concentrate lines prior to shipping unit.

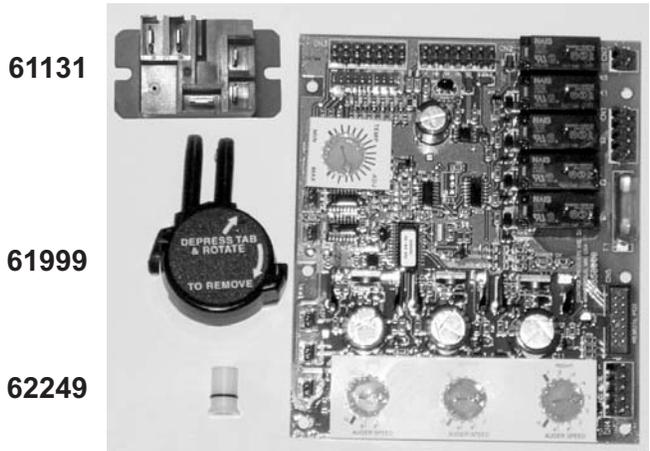
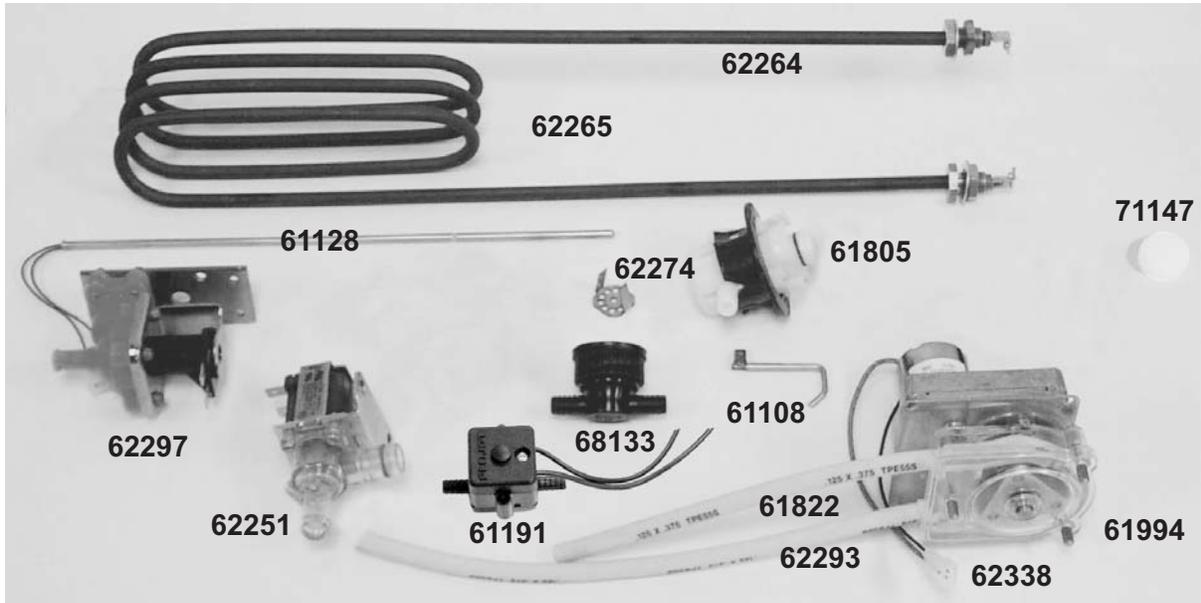
The following procedures must be performed by a qualified service technician.

TROUBLESHOOTING GUIDE		
Problem	Possible Cause	Solution
No hot water from dispense head	<ul style="list-style-type: none"> • Door is open (An interlock switch disables the dispense and fill circuits when the door is open) • Faulty thermistor • Faulty water tank heater • Fill circuit watchdog timer has tripped • Water switch is in "OFF" position • Water supply to machine is turned off • Check for flashing diagnostic lights on control board 	<ul style="list-style-type: none"> • Ensure door is latched closed. Reset power to machine to ensure fill circuit watchdog timer is reset • Consult factory for assistance • Check for open heater and replace if necessary • Ensure water supply to machine is on and reset power to machine. Green Ready light off indicates heater is activated and tank is heating • Ensure switch is in "ON" position • Ensure water supply is on then reset power to the machine to reset the fill circuit watchdog timer
No concentrate is dispensed	<ul style="list-style-type: none"> • Concentrate switch is in "OFF" position • Bag-in-box is empty • Bag-in-box connector is pointing up (This position can create a partial vacuum in the concentrate tube which may prevent product from being pumped to the dispense spout) • Concentrate pickup tube is kinked • Concentrate pump tubing is clogged 	<ul style="list-style-type: none"> • Ensure switch is in "ON" position • Ensure bag-in-box is not empty; replace with new bag-in-box if empty • Position bag-in-box with connector pointing down to provide a positive pressure in the concentrate tube • Inspect tubing routing and ensure concentrate tubing is not kinked • Periodically clean and sanitize tubing per the Cleaning and Sanitizing procedure section in this instruction manual
Machine does not dispense or fill	<ul style="list-style-type: none"> • Transformer is blown • Blown fuse on controller 	<ul style="list-style-type: none"> • (Refer to Control Diagnostic diagram) Check if green LED on control board is illuminated when machine is powered on. Green LED indicates that control is receiving proper supply voltage from transformer. Replace transformer if LED does not illuminate. • Check fuse and replace if necessary
Water is cold when dispensed	<ul style="list-style-type: none"> • Fill circuit watchdog timer has been activated • Faulty thermistor • Faulty water tank heater 	<ul style="list-style-type: none"> • Ensure water supply to machine is on and reset power to machine to reset watchdog timer • Check if Red "Therm/Fail" LED is illuminated. Replace thermistor if LED is illuminated. • Check for "open" heater and replace if necessary
Drink is too weak or strong		<ul style="list-style-type: none"> • Refer to Drink Strength Adjustment section
Drink is too hot or cold		<ul style="list-style-type: none"> • Refer to Thermostat Adjustment section
Off taste of coffee	<ul style="list-style-type: none"> • Poor water quality, to include high chlorine level, heavy mineral concentration or stale water 	<ul style="list-style-type: none"> • Addition of a taste and odor filter to incoming water • Drain water from tank, remove and delime. If necessary, flush tank with fresh water.

If you still need help, call our service department at (800) 695-4500 (USA & Canada only) or (502) 425-4776 (Monday through Friday, 8 am - 8 pm EST) or an authorized service center in your area. Please have the model and serial numbers ready so that accurate information may be given.

Prior authorization must be obtained from Grindmaster Corporation's Technical Services Department for all warranty claims.

Models LCD2-1 & LCD2-3 Parts List



Controller
 61800-02 - Auto/Remote/3-Portion
 61800-05 - Manual/Remote
 62354 - LCD 2-3-*-M models
 10 Minute dispense max.

Part #	DESCRIPTION
61108	PROBE, WATER LEVEL
61128	PROBE, THERMISTOR
61131	RELAY, HEATER
61191	SWITCH, VACUUM 14" BDR
61800-02	CONTROLLER, AUTO/REMOTE/3-PORZION
61822	TUBING, 3/16 ID PUMP TUBING
61994	PUMP, 3 ROLLER
61999	CAP, LCD DISPENSE SPOUT
61805	FITTING, QCD LIQUIBOX
62249	RESTRICTOR, LCD SPOUT
62251	VALVE, DUMP
62264	ELEMENT, HEATING 240V 5000W
62265	ELEMENT, HEATING 240V 6600W
62274	DIFFUSER, SPOUT
62293	TUBING, 1/8 ID PUMP TUBING
62297	VALVE, INLET 2.5GPM
62338	PUMP, 2 ROLLER
68133	FITTING, SCHOLLE "T" BIB
71147	GROMMET, PROBE



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