

OPERATOR MANUAL

Part Number 121004

OM-HY-3E

DOMESTIC

MODEL: HY-3E
HyPerSteam™
Atmospheric Convection
Steamer

Self-Contained
Electric Heated
Capacity: 3 Steamer Pans
(12" x 20" x 2½")



**THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE.
READ, UNDERSTAND AND FOLLOW THE INSTRUCTIONS AND
WARNINGS CONTAINED IN THIS MANUAL.**

FOR YOUR SAFETY
DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE
VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER
APPLIANCE.



Information contained in this document is known to be current and accurate at the time of printing/creation. Unified Brands recommends referencing our product line websites, unifiedbrands.net, for the most updated product information and specifications.



IMPORTANT — READ FIRST — IMPORTANT

- WARNING:** THE UNIT MUST BE INSTALLED BY PERSONNEL QUALIFIED TO WORK WITH ELECTRICITY AND PLUMBING. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO THE EQUIPMENT. THE UNIT MUST BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES.
- CAUTION:** SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.
- CAUTION:** DO NOT INSTALL THE UNIT IN ANY WAY WHICH WILL BLOCK THE RIGHT SIDE VENTS, OR WITHIN 12 INCHES OF A HEAT SOURCE SUCH AS A BRAISING PAN, DEEP FRYER, CHAR BROILER OR KETTLE.
- CAUTION:** LEVEL THE UNIT FRONT TO BACK, OR PITCH IT SLIGHTLY TO THE REAR, TO AVOID DRAINAGE PROBLEMS.
- WARNING:** TO AVOID DAMAGE OR INJURY, FOLLOW THE WIRING DIAGRAM EXACTLY WHEN CONNECTING A UNIT.
- CAUTION:** DO NOT USE PLASTIC PIPE. DRAIN MUST BE RATED FOR BOILING WATER.
- WARNING:** DO NOT CONNECT THE DRAIN DIRECTLY TO A BUILDING DRAIN.
- WARNING:** BLOCKING THE DRAIN IS HAZARDOUS.
- IMPORTANT:** Improper drain connection will void warranty.
- IMPORTANT:** Do not allow any water traps in the line. A trap can cause pressure to build up inside the cavity during steaming, which will make the door gasket leak.
- WARNING:** WHEN YOU OPEN THE DOOR, STAY AWAY FROM STEAM COMING OUT OF THE UNIT. STEAM CAN CAUSE BURNS.
- WARNING:** BEFORE CLEANING THE OUTSIDE OF THE STEAMER, DISCONNECT THE ELECTRIC POWER SUPPLY. KEEP WATER AND CLEANING SOLUTIONS OUT OF CONTROLS AND ELECTRICAL COMPONENTS. NEVER HOSE OR STEAM CLEAN ANY PART OF THE UNIT.
- WARNING:** ALLOW COOKING CHAMBER TO COOL BEFORE CLEANING.
- WARNING:** CAREFULLY READ THE WARNINGS AND FOLLOW THE DIRECTIONS ON THE LABEL OF EACH CLEANING AGENT. USE SAFETY GLASSES AND RUBBER GLOVES AS RECOMMENDED BY DELIMING AGENT MANUFACTURER.
- WARNING:** DO NOT MIX DE-LIMING AGENTS (ACID) AND DE-GREASERS (ALKALI).
- WARNING:** DO NOT PUT HANDS OR TOOLS INTO THE COOKING CHAMBER UNTIL THE FAN HAS STOPPED TURNING.
- WARNING:** DO NOT OPERATE THE UNIT UNLESS THE REMOVABLE RIGHT SIDE PANEL HAS BEEN RETURNED TO ITS PROPER LOCATION.
- NOTICE:** DO NOT USE A CLEANING OR DE-LIMING AGENT THAT CONTAINS ANY SULFAMIC ACID OR ANY CHLORIDE, INCLUDING HYDROCHLORIC ACID. IF THE CHLORIDE CONTENT OF ANY PRODUCT IS UNCLEAR, CONSULT THE MANUFACTURER.
- NOTICE:** DO NOT USE ANY DE-GREASER THAT CONTAINS POTASSIUM HYDROXIDE OR SODIUM HYDROXIDE OR THAT IS ALKALINE.
- WARNING:** USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR THEIR AUTHORIZED DISTRIBUTOR VOIDS ALL WARRANTIES AND CAN RESULT IN BODILY INJURY TO THE OPERATOR AND DAMAGE THE EQUIPMENT. SERVICE BY OTHER THAN FACTORY-AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.
- WARNING:** HIGH VOLTAGE EXISTS INSIDE CONTROL COMPARTMENTS. DISCONNECT FROM BRANCH BEFORE SERVICING. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH.

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References

UNDERWRITERS LABORATORIES, INC.
333 Pfingsten Road
Northbrook, Illinois 60062

KLENZADE SALES CENTER
ECOLAB, Inc.
370 Wabasha
St. Paul, Minnesota 55102
800 328-3663 or 612 293-2233

NATIONAL FIRE PROTECTION
ASSOCIATION
60 Battery March Park
Quincy, Massachusetts 02269

NFPA/70 The National Electrical Code

NATIONAL SANITATION FOUNDATION
3475 Plymouth Road
Ann Arbor, Michigan 48106

Equipment Description

Your Groen HY-3E HyPerSteam Convection Steamer is designed to give years of service. It has a stainless steel cavity (cooking chamber) which is served by an independent atmospheric steam generator which is electrically-heated. A powerful blower circulates the steam in the cavity to increase heating efficiency.

The cavity holds up to three steam table pans (12" x 20" x 2½"). A 16 gauge stainless steel case encloses the cavity, the steam generator and the control compartment that houses electrical components. Door hinges are reversible (the door may be set to open from the left or right). Operating Controls are on the front panel.

The drain system includes a spray condenser, which helps keep steam from escaping from the chamber.



The HY-3E steamer holds three standard 12" x 20" x 2-½" pans.

Inspection and Unpacking

The HY3-E will be delivered completely assembled in a heavy shipping carton attached to a skid. On receipt, inspect the carton carefully for exterior damage.

CAUTION
SHIPPING STRAPS ARE UNDER TENSION
AND CAN SNAP BACK WHEN CUT.

Carefully cut the straps around the carton and detach the sides of the carton from the skid. Pull the carton up off the unit. Be careful to avoid personal injury or equipment damage from staples which might be left in the carton walls.

Write down the model number, serial number and installation date and keep this information for future reference. Space for these entries is provided at the top of the Service Log in the back of this manual.

CAUTION
THIS UNIT WEIGHS 180 POUNDS (82 KG).
YOU SHOULD GET HELP AS NEEDED TO
LIFT THIS WEIGHT SAFELY.

When starting installation, lift the unit straight up off the skid. Check packing materials to make sure loose parts are not discarded with the material.

Water Conditioning

It is essential to supply the steam generator with water that will not form scale. Even though the steam generator is engineered to minimize scale formation, scale development depends on the hardness of your water and the number of hours you operate the equipment.

In some areas, water is low enough in mineral content to avoid scale formation. But most water supplies are full of minerals which form scale. It is this scale which could lead to an early component failure.

Your water utility can tell you about the minerals in your water. The water going to the steam generator should have between 10 and 30 parts per million (ppm) total dissolved solids (TDS) and should have a pH (acidity rating) of 7.0 or higher. Please follow

these simple precautions:

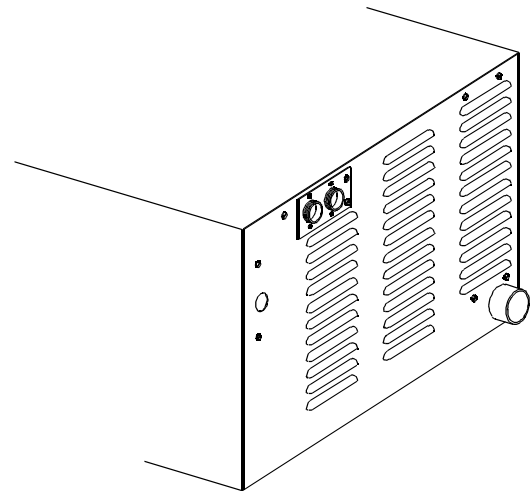
1. **Do not rely on unproven water treatments** which are sold for scale prevention or scale removal. **They don't always work.** The best way to prevent scale is to supply the purest possible water (10 - 20 ppm TDS).
2. If your water contains scale-forming minerals, as most water does, use a well-maintained water softener. Whether an exchangeable softener cartridge or a regenerating system is chosen, a regular exchange schedule is essential.
3. Installing a water meter between the softener and the steamer will provide an accurate gauge of water use, and will help determine when to exchange cartridges or regenerate the softener.

Using a water softener will provide longer generator life, higher steam capacity, and reduce maintenance requirements.

4. If you notice a slowdown in steam production, have the unit checked for scale build-up. Heavy scale reduces the unit's ability to boil water, and can even cause heating elements in the steam generator to overheat and burn out.

MINIMIZE SCALE PROBLEMS, BY USING AND MAINTAINING A SOFTENER, AND BY CLEANING THE STEAMER REGULARLY.

Groen Steamers are also available with an option for two separate water intakes — one for the steam generator (soft water), the other for the spray condenser (untreated water). The steam generator only uses 14 to 31% of a steamer's water.



The optional second water connection can reduce treated water requirements.

Since softener systems are typically sized by total GPH (gallons per hour), the second intake could reduce treatment requirements by up to 80%, resulting in significant savings.

On the HY-3E, the twin water connections are side by side on the rear of the unit. When facing the back of the unit, the treated (softened) water intake is on the right.

Installation and Start-Up

WARNING

THE UNIT MUST BE INSTALLED BY PERSONNEL WHO ARE QUALIFIED TO WORK WITH ELECTRICITY AND PLUMBING. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO THE EQUIPMENT. THE UNIT MUST BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES.

CAUTION

DO NOT INSTALL THE UNIT WITH THE RIGHT SIDE VENTS BLOCKED OR WITHIN 12 INCHES OF A HEAT SOURCE (SUCH AS A BRAISING PAN, DEEP FRYER, CHAR BROILER OR KETTLE).

TO AVOID DRAINAGE PROBLEMS, LEVEL THE UNIT FRONT TO BACK.

1. Electrical Supply Connection

A. Panel Removal

Open the wiring and control panel by removing two screws on the right side panel. Slide the panel forward, and set it aside.

B. Supply Voltage

The unit must be operated at the rated nameplate voltage, plus or minus 10 percent.

C. Phase Selection

Refer to the heater schematic (Pages 15 and 16) for wiring information.

**CAUTION
THE UNIT MUST HAVE A SEPARATE
GROUND WIRE FOR SAFE OPERATION.**

D. Terminal Block

The terminal block for incoming power is located at the back of the control compartment.

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The ground terminal is located in the wiring compartment above the terminal block.
Minimum size for the ground wire is 10 AWG.

E. Supply wire

To determine the type of wire you need for the power supply, find the operating voltage and phase on the unit data plate. Refer to the table provided on the next page or to the label on the unit's back for the correct wire size and insulation temperature rating. The "Electrical Supply Connection" label on back right side of the unit gives directions for proper connection of the terminal block jumpers.

The wire specified has to be used, or the unit will not meet Underwriters Laboratories and National Electric Code requirements.

The knockout hole is sized for a 3/4 inch conduit fitting.

WARNING
TO AVOID DAMAGE OR PERSONAL INJURY, FOLLOW THE ELECTRICAL SCHEMATIC EXACTLY WHEN CONNECTING THE UNIT

ELECTRICAL SUPPLY CONNECTIONS

FIELD WIRING TABLE - USE ONLY COPPER WIRE					
208 VOLT		240 VOLT		480 VOLT	INSULATION RATING
1 PHASE	3 PHASE	1 PHASE	3 PHASE	3 PHASE	
6 AWG	10AWG	8 AWG	10 AWG	14 AWG	THWN (70°C)
8 AWG	10 AWG	8 AWG	10 AWG	14 AWG	THWN (90°C)

F. Branch Circuit Protection

We strongly recommend that the HY-3E Steamer have its own branch circuit protection. Current and power demands for the different units are as follows:

VOLTAGE	PHASE	AMPS	MAX. KW
208	1	39	8
	3	23	8
240	1	33	8
	3	20	8
480	3	10	8

2. Water Connection(s)

Install a check valve to prevent back flow in the incoming cold water line, as required by local plumbing codes.

Water pressure in the line should be between 30 and 60 PSIG (210 and 420 kPa). If pressure is above 60 PSIG, a pressure regulator will be needed.

A 3/4 inch R connector (garden hose type) is used to attach the water supply to the water inlet valve. The minimum water feed line diameter is 1/2 inch (13mm). Use a washer in the hose connection. Do not allow the connection to leak, no matter how slowly.

If you have the twin water connection option, put the treated water (softened) to the right intake (facing the rear of the unit), and untreated water to the left. Connections for both are made as described above.

3. Drain Connection

The HY-3E Steamer must be leveled front to back, or even pitched slightly to the rear by adjustment of the bullet feet on the cabinet base.

A 1 1/2 inch (38mm) ID hose may be attached to the drain pipe (supplied).

WARNING:
DO NOT CONNECT THE DRAIN DIRECTLY TO A BUILDING DRAIN.

There must be at least one-half inch free air gap between the end of the hose and the building drain. The free air gap should be as close as possible to the unit drain. There must also be no other elbows or other restrictions between the unit drain and the two inch free air gap.

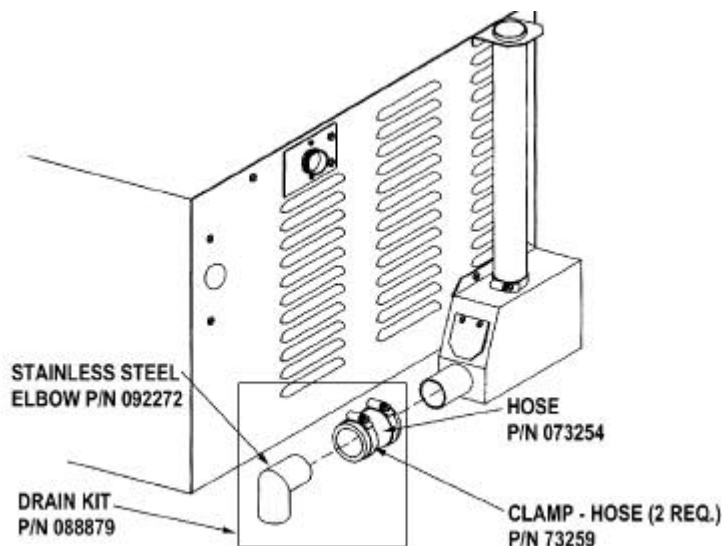
CAUTION
DO NOT USE PLASTIC PIPE. DRAIN MUST BE RATED FOR BOILING WATER.

WARNING
BLOCKING THE DRAIN IS HAZARDOUS.

Install the drain line with a constant downward pitch.

IMPORTANT: Do not allow any water traps in the line. A trap can cause pressure to build up inside the cavity during steaming, which will make the door gasket leak.

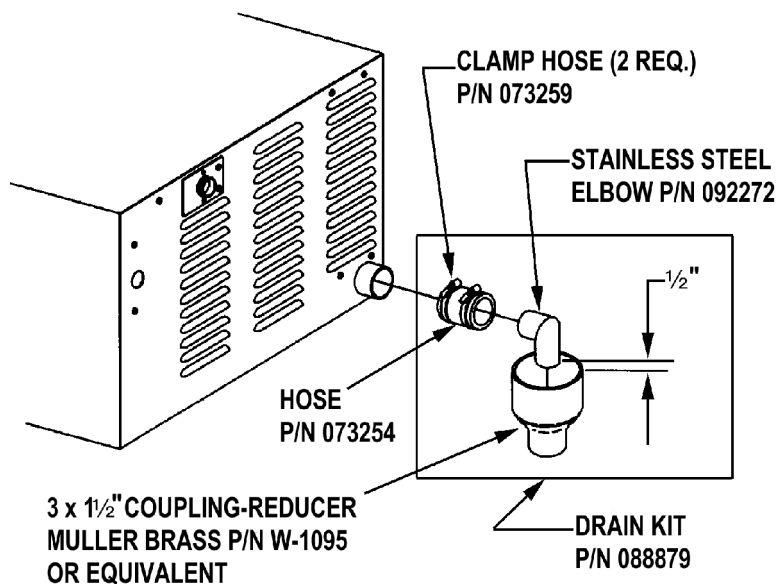
DRAIN LINE INSTALLATION
(WITH DRAIN BOX)



OPTION ONE: To go from Stainless Steel Elbow (P/N 092272) to nearby floor drain, you can use "Radiator" Hose (McMaster-Carr #5297K24 - at least a 212°F rated hose), and one additional hose clamp (P/N 073259).

OPTION TWO: Using the hose (P/N 073254) and two hose clamps (P/N 073259), you can connect 1½" copper tubing to the floor drain. **NOTE: All drain line runs must be pitched downward approximately ½" per foot. No water traps are allowed in the drain line.**

(WITHOUT DRAIN BOX)



From the Muller Brass coupling-reducer (P/N W-1095), you can connect 1½" copper tubing to the floor drain.

WARNING
ANY POTENTIAL USER OF THE EQUIPMENT SHOULD BE TRAINED IN SAFE AND CORRECT OPERATING PROCEDURES.

A. Controls

Operator controls are on the front right of the unit.

The ON switch gets the HyPerSteam ready for use, or shuts it off. The READY indicator light shows that the steam generator is at standby temperature, which means that the cavity is hot enough to begin cooking.

The timer is used in three ways:

- In the OFF position the steam generator stays at a very low boil or “holding” temperature.
- When a cook time is set, the unit steams until the timer runs down to OFF. At that time steaming stops, a red light comes on and a beeper sounds.
- When turned all the way to the ON position, the unit steams continuously. The green light stays lit, and the steamer will **not** time down.

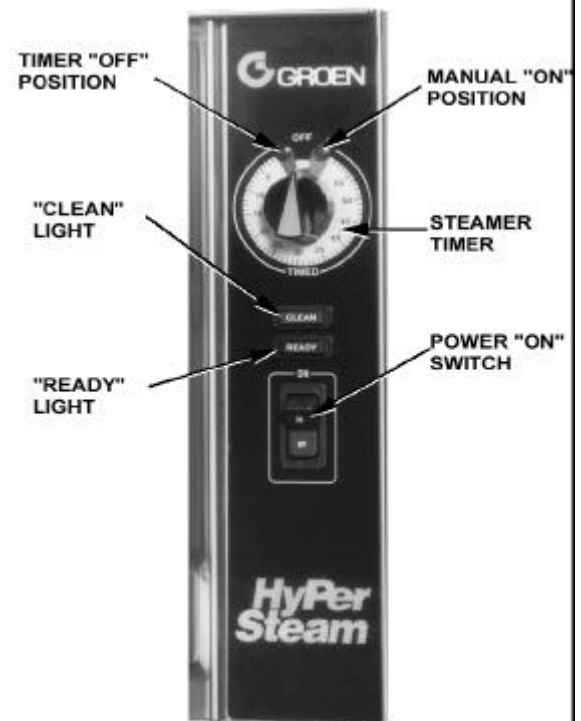
B. Operating Procedure

1. Press the ON switch for the steamer. The steam generator will automatically fill with water, and heat the water until the READY light comes on. The indicator should light within 10 minutes.
2. Load food into pans so that it is in uniform layers. Pans should be filled to about the same levels, and should be even on top.
3. Open the door and slide the pans onto the supports. If you will only be steaming one pan, put it in the middle position.
4. Close the door. With the READY indicator lit, take one of the following steps:
 - If you want to steam the food for a certain length of time, set the timer to that time. The timer will automatically run the steamer for the set time and then turn it off. A red light will come on and a beeper will sound. Steam stops.



WARNING
WHEN YOU OPEN THE DOOR, STAY AWAY FROM THE STEAM COMING OUT OF THE UNIT. THE STEAM CAN CAUSE BURNS.

- If you want to steam continuously, turn the timer to the manual ON position. A green light will come on. The unit will continue steaming until you stop it by turning the timer to OFF. When steaming continuously **YOU MUST CONTROL STEAMING TIME.**
5. Open the door. Remove the pans from the steamer, using hot pads or oven mitts to protect your hands from the hot pans.
 6. To shut down the unit, press the ON switch to the OFF position. The steam generator will automatically drain.



Controls for the HY-3E are simple, and easy to operate.

Cleaning

To keep your HY-3E Steamer in proper working condition, use the following procedure to clean the unit. This regular cleaning will reduce the effort required to clean the steam generator and cavity.

A. Suggested Tools

1. Mild detergent
2. Stainless steel exterior cleaner such as Zepper®
3. Steam generator de-liming agent, such as **Groen Delimer Descaler**, Lime-Away® or an equivalent. A liquid de-liming agent will be easier to use than crystals or powders. See the warning about chlorides, below
4. De-greaser, such as EncompasS®, Malone 34®, Puritan Puribruite®, or Con-Lie®
5. Cloth or sponge
6. Plastic wool or a brush with soft bristles
7. Spray bottle
8. Measuring cup
9. Nylon pad
10. Towels
11. Plastic disposable gloves
12. Funnel



B. Procedure

1. Exterior Cleaning

- a. Prepare a warm solution of the mild detergent as instructed by the supplier. Wet a cloth with this solution and wring it out. Use the moist cloth to clean the outside of the unit. Do not allow freely running liquid to touch the controls, the control panel, any electrical part, or any open louver.
- b. To remove material which may be stuck to the unit, use plastic wool, a fiber brush, or a plastic or rubber scraper with a detergent solution.
- c. Stainless steel surfaces may be polished with a recognized stainless steel cleaner such as Zepper®.



PRECAUTIONS

WARNING

DISCONNECT THE POWER SUPPLY BEFORE CLEANING THE OUTSIDE OF THE STEAMER.

KEEP WATER AND CLEANING SOLUTIONS OUT OF CONTROLS AND ELECTRICAL COMPONENTS. NEVER HOSE OR STEAM CLEAN ANY PART OF THE UNIT.

DON'T MIX DE-LIMING AGENTS (ACID) WITH DE-GREASERS (ALKALI) ANYWHERE IN THE UNIT

AVOID CONTACT WITH ANY CLEANERS, DE-LIMING AGENT OR DE-GREASER AS RECOMMENDED BY THE SUPPLIER. MANY ARE HARMFUL. READ THE WARNINGS AND FOLLOW THE DIRECTIONS!

EVEN WHEN THE UNIT HAS BEEN SHUT OFF, DON'T PUT HANDS OR TOOLS INTO THE COOKING CHAMBER UNTIL THE FAN HAS STOPPED TURNING.

DON'T OPERATE THE UNIT UNLESS THE TWO REMOVABLE INTERIOR PARTITIONS HAVE BEEN PUT BACK IN THEIR PROPER LOCATIONS.

DON'T USE ANY CLEANING OR DE-LIMING AGENT THAT CONTAINS ANY SULFAMIC AGENT OR ANY CHLORIDE, INCLUDING HYDROCHLORIC ACID (HCl). TO CHECK FOR CHLORIDE CONTENT SEE ANY MATERIAL SAFETY DATA SHEETS PROVIDED BY THE CLEANING AGENT MANUFACTURER.

IMPORTANT

DO NOT USE ANY METAL MATERIAL (SUCH AS METAL SPONGES) OR METAL IMPLEMENTS (SUCH AS A SPOON, SCRAPER OR WIRE BRUSH) THAT MIGHT SCRATCH THE SURFACE. SCRATCHES MAKE THE SURFACE HARD TO CLEAN AND PROVIDE PLACES FOR BACTERIA TO GROW. DO NOT USE STEEL WOOL, WHICH MAY LEAVE PARTICLES IMBEDDED IN THE SURFACE WHICH COULD EVENTUALLY CAUSE CORROSION AND PITTING.

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Steam Generator and Cooking Chamber

The steamer cavity and steam generator may be cleaned separately. When cleaning is scheduled, or if the CLEAN light is on, follow these simple deliming instructions. **REMEMBER: DON'T ALLOW DE-LIMING AGENTS TO MIX WITH DE-GREASERS.**

- a. Set the timer to OFF position.
- b. Turn off the steamer for five minutes.



- c. Open the door and allow the cavity to cool.
- d. After the cavity has cooled five minutes, make sure that the fan has stopped and remove the fan baffle partition by lifting it up and toward the center of the cavity.



- e. Wipe out the cavity. **Make sure the drain holes at the back of the cavity are clear of debris.**
- f. Turn on the steamer and pour two cups of **Groen Delimer Descaler** (P/N 114800), Lime-A-Way® or equivalent into the delimer port as shown below. (use a measuring cup or funnel to help prevent spilling). Do not use any de-limer that contains chlorine.
- g. Replace fan baffle partition.
- h. Close door.
- i. Set the timer for 10 minutes. If the CLEAN light comes on, repeat the procedure with double the amount of delimer. If the CLEAN light comes on again, call the authorized Groen Service agent in your area. (See listing enclosed with this manual)..



- j. **WEAR PROTECTIVE GLOVES AND EYE PROTECTION FOR THIS STEP.** When the steamer beeper sounds, turn off the steamer and open the door. After the fan has stopped, remove the fan baffle partition and rinse it well in a sink. Wipe out the cavity completely. If necessary, use a damp nylon pad.
- k. Reinstall the fan baffle.
- l. After 10 minutes, close the door and turn on the steamer to flush the steam generator tank.
- m. Set the time for 10 minutes.



- n. When the beeper sounds, open the door and turn off the steamer. Wipe out the steamer. If it will no longer be used, leave it off. Otherwise, wait 10 minutes and turn it back on. When the READY light comes on, the steamer is ready for operation.

If the CLEAN light stays on:

- a. Check that the water supply is on and that the supply hose is not kinked. With the problem corrected, turn the steamer off or 10 seconds and then re-start.
- b. Repeat steam generator cleaning.

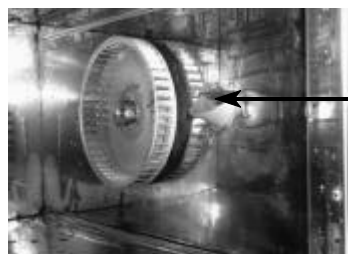
Industry experts agree that regular deliming of your steamer is essential for top-notch performance.

"...Forensic evidence from most disabled steamers usually indicates that deliming isn't happening as frequently as supervisors might think. "The big problem is that operators don't take care of their steamers," said (a) dealer sales manager ... "All steamers break" when they're not delimed, he said. "Deliming is just like changing the oil in your car. No matter how good your car is, if you don't change the oil, it goes down."

"You must delime your steamer ...and when you do delime, do it according to directions in the owner's manual. ...For Groen, you have to take out the racks and get inside, but the process again is simple, tool-less and quick, about 25 minutes..."

*...Food Service
Equipment ReportsK
Vol. 1, m9*

1 Once the cavity has cooled down, reach in and remove the fan baffle partition by lifting it upward and drawing it toward the center of the cavity.



2 Pour two cups of Groen de-liming solution or Lime-A-Way® into the de-liming port.

The process for deliming your HY-3E Steamer is "simple, tool-less and quick."

Maintenance

The HY-3E Steamer is designed for minimum maintenance, and no user adjustments should be necessary. Certain parts may need replacement after prolonged use. If there is a need for service, only Groen personnel or authorized Groen representatives should perform the work.

Always supply water with a low mineral count that meets the standards outlined in the **Water Conditioning** section of this manual.

The unit contains no fuses that should be replaced by the operator

If steam or condensate is seen leaking from around the door, take the following steps:

1. Check the door gasket. Replace it if it is cracked or split.

2. Inspect the cooking chamber drain to be sure it is not blocked.
3. Adjust the latch pin to allow for changes that might occur as the gasket ages.
 - a. Loosen the lock nut at the base of the latch pin, then turn the latch pin $\frac{1}{4}$ turn clockwise, and tighten the lock nut.
 - b. After adjustment, run the unit to test for further steam leakage.
 - c. If there is still leakage, repeat the adjustment.
 - d. Continue adjusting the pin clockwise until the door fits tightly enough to prevent leakage.

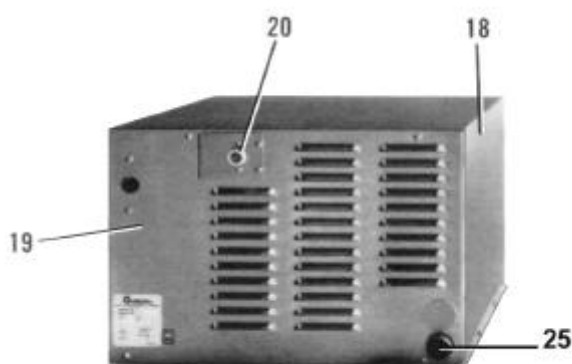
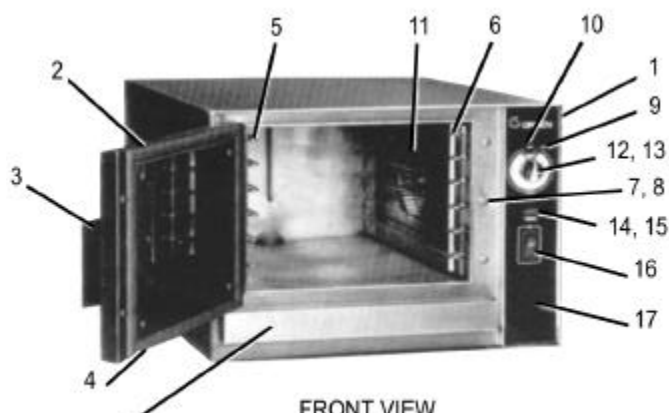
Troubleshooting

This Groen Steamer is designed to operate smoothly and efficiently if properly maintained. However, the following is a list of checks to make in the event of a problem. Wiring diagrams are furnished inside the service panel. If an item on the check list is marked with (), it means that the work should be done by a factory-authorized service representative.

SYMPTOM	WHO	WHAT TO CHECK
! Steam generator does not fill with water.	User	a. Is the ON switch depressed? b. Is the water supply connected? c. Is the water turned on? d. Check for low water pressure (less than 30 PSI or 210 kPa). e. Is the screen at the water connection clogged? f. Has the steam generator been delimed?
! No steam.	User	a. Is the ON switch depressed? b. Is the water supply connected? c. Is the water turned on? d. Are steamer doors open? e. Is the steam generator limed up?
! Red light comes on after four minutes.	User	a. Is the water supply connected? b. Is the water turned on? c. Has the unit been delimed? (Refer to Cleaning Section)
! Excessive steam escaping from rear of unit	User	a. Is the water spray hose kinked or obstructed?
	Auth Service Rep Only	b. Is the water spray solenoid connected?() c. Is the drain properly vented? ()

Parts List

To order parts, contact your authorized Groen Service Agency. Supply the model designation, part description, part number, quantity, and when applicable, voltage and phase.

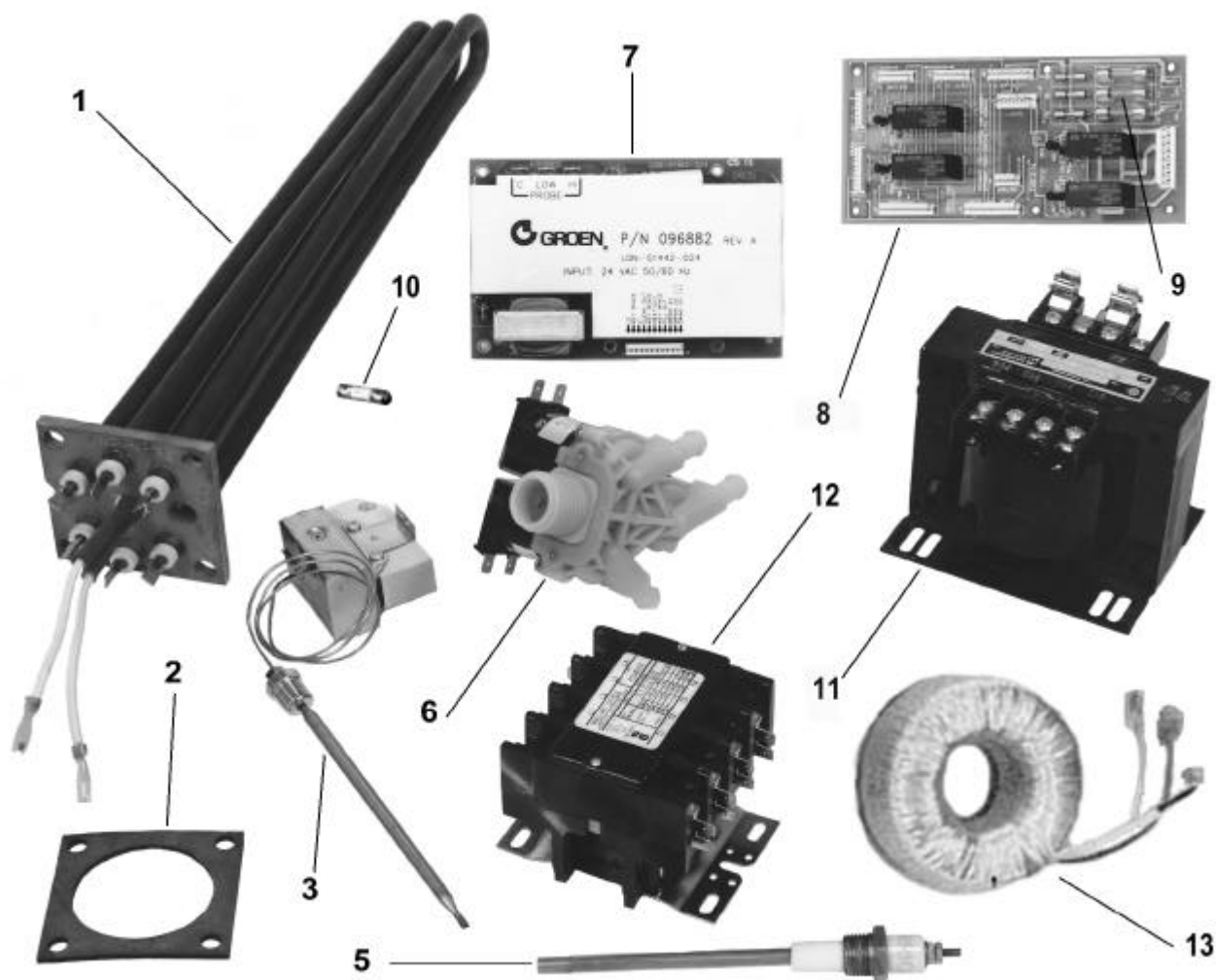


Key	Description	Part No.	Key	Description	Part No.
1	Right Side Panel	096796	18	Top Side Cover	096777
2	Door Assembly, Complete	094150	19	Back Panel	096795
3	Door Handle	070123	20	Water Valve - Two Way	071235
4	Door Gasket	094147	20a	Dual Water Valve	108702
5	Left pan Rack	094148	21	Steamer Table - Optional	100913
6	Blower Cover/Rack	096788	22	Drip Tray	094151
7	Door Locking Pin	078914	23	Timer Fastener Nut	101145
8	Door Pin Lock Nut	003823	24	Tinnerman Clip (for Timer Lamps)	096849
9	Green Timer Lamp	096897	25	Diverter and Vent Assembly	088876
10	Red Timer Lamp	096898	%	Heat Shield	118127
11	Cavity Fan	096790	%	Dual Water Kit	108702
12	Timer	096826	%	Optional Legs	041121
13	Time Knob	040225	%	Drain Box Flap Kit	107143
14	Red Clean Lamp	096889	%	Drain Kit	088879
15	Green Ready Lamp	096890	%	Diverter and Vent Kit	088862
16	Cavity Power Switch	088876	%	P. C. Board Cover	100993
17	Mylar Overlay Plate	096872	%	Supports	099901

% Part Not Shown

Parts List

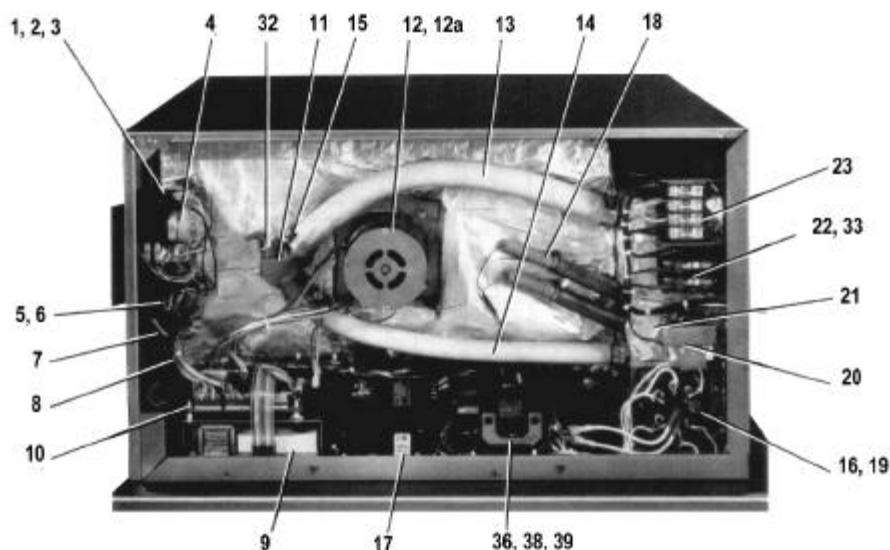
To order parts, contact your authorized Groen Service Agency. Supply the model designation, part description, part number, quantity, and when applicable, voltage and phase.



Key	Description	Part No.	Key	Description	Part No.
1a	Heater Element, 200 Volt	094118	11	Transformer 208/240/480 Volt Pri./ 24 Volt Sec. 75 VA	100912
1b	Heater Element, 208 Volt	094129	For 208/240 Volt Units		
1c	Heater Element, 240 Volt	094130	12	High Heat Contactor	096729
1d	Heater Element, 480 Volt	094132	For 480 Volt Units		
2	Heater Element Gasket	042366	12b	Low Heat Contactor (24 Volt Coil)	101165
3	High Limit Thermostat	094161	12c	High Heat Contactor (240 Volt Coil)	101166
4	Thermostat Clamp	093482	13	Toroid Transformer 480 Volt Pri./ 240 Volt Sec. 115 VA	101110
5	Water Level Probes	070178	14	Fuse Holder*	077854
6	Water Valve - Two Way	071235	*Part Not Shown in Photograph		
7	Water Level Board	096882			
8	Control Board	098666			
9	Fuse, Three Amp	077853			
10	Fuse, 20 Amp	071489			

Parts List

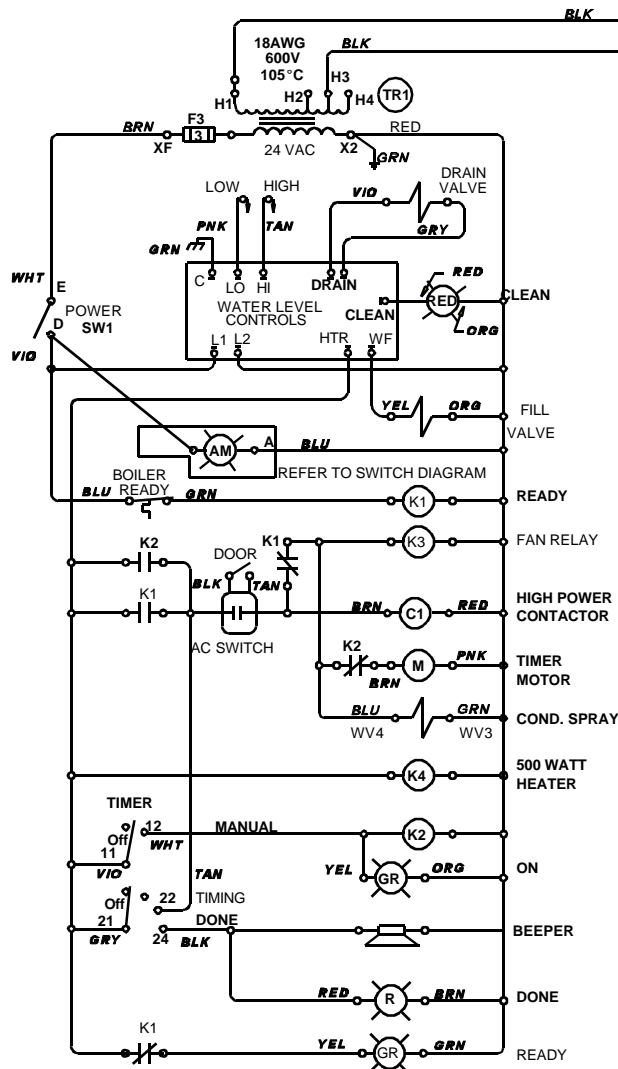
To order parts, contact your authorized Groen Service Agency. Supply the model designation, part description, part number, quantity, and when applicable, voltage and phase.



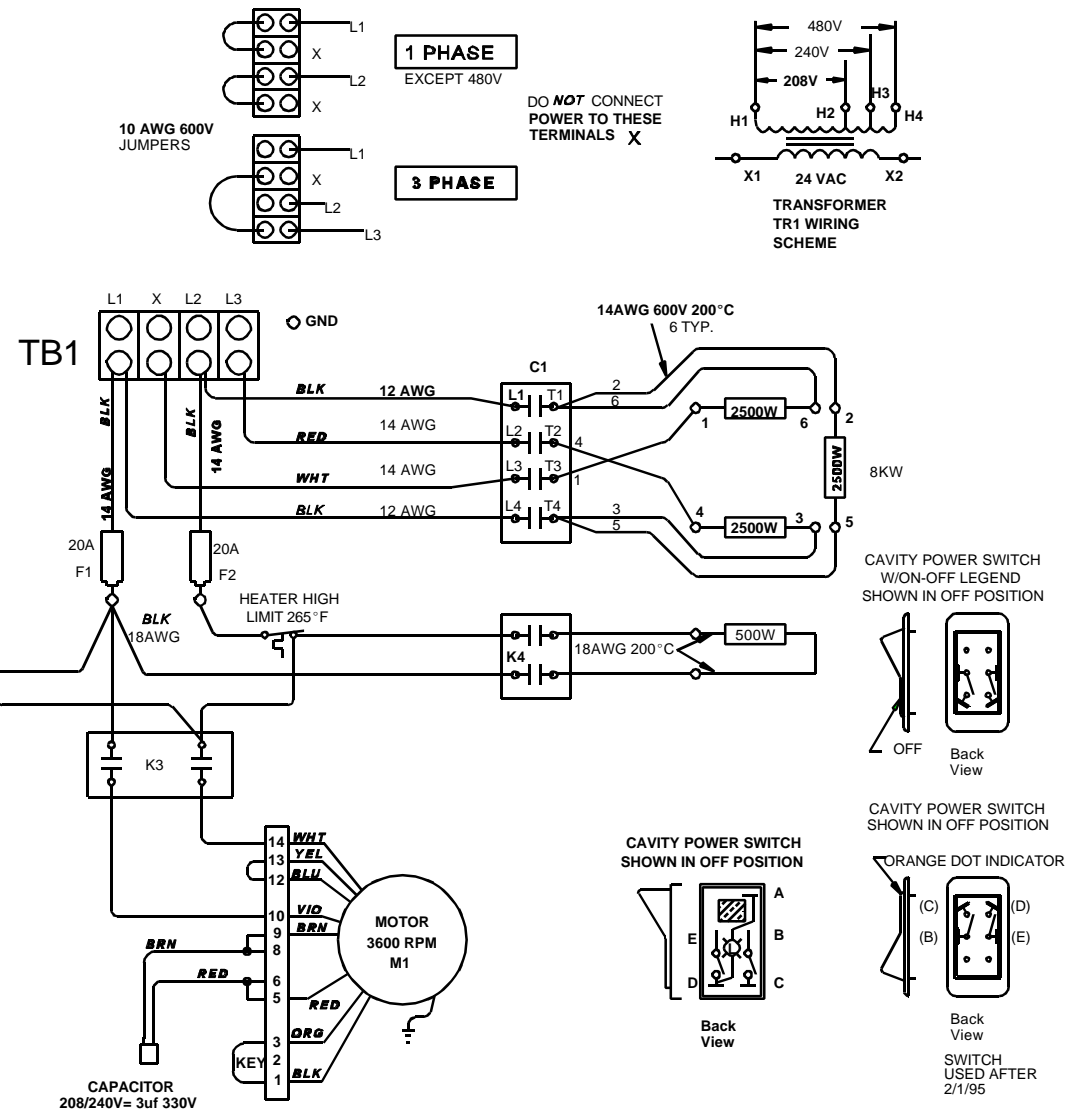
Key	Description	Part No.	Key	Description	Part No.
1	Red Timer Lamp	096898	26	Drain Hose,* Steam Generator	096806
2	Green Timer Lamp	096897	27	Spray Nozzle*	078933
3	Tinnerman Clip	096849	28	Spray Hose*	096807
4	Timer	096826	29	Water Inlet Hose*	096773
5	Red Clean Lamp	096889	30	Motor Capacitor*	096813
6	Green Ready Lamp	096890	31	Drain Hose, Cavity*	112953
7	Cavity Power Switch	096893	32	Ready Thermostat	088865
8	Door Switch	096857	33	20 AMP Fuses	071489
9	Water Level Board	096882	34	3 AMP Fuse*	077853
10	Steamer Control Board	098666	35*	Timer Fastener Nut*	101145
11	Steam Port	118103	208/240 Volt Units		
11a	Steam Port Gasket	099250	36	High Heat Contactor	096729
12	Fan Motor	096740	37*	Harnesses*-Call Groen Authorized Svc Agent	
12a	Motor Seal	096868	480 Volt Units		
13	Upper Steam Hose	100925	38	Low Heat Contactor (24 Volt Coil)	101165
14	Lower Clean Hose	100926	39	High Heat Contactor(240 Volt Coil)	101166
15	Hose Clamps 1-3/8"	010873	40*	Toroid Transformer 115 VA, 480 Volt	101110
16	Electric Heater Gasket	042366		Pri./230 Volt Sec.*	
17	Transformer 208/240/480 Volt Pri./ 24 Volt Sec. 75 VA	100912	41*	Fuse Holder*	077854
19a	Electric Heater, 208 Volt	094129	42*	Fuse .75 AMP SLO-BLO*	101112
19b	Electric Heater, 240 Volt	094130	43*	Harnesses*-Call Groen Authorized Svc Agent	
19c	Electric Heater, 480 Volt	094132	—	Cavity	096825
19d	Electric Heater, 200 Volt	094118	—	Insulation	096738
20	High Limit Thermostat	094161	—	Water Flow Reducer	106445
21	Steam Generator	096836	—	Water Fill Assembly	100988
*21a	Insulation Steam Generator	100922	—	Drain Box (old style)	100975
22	Fuse Block	096809	—	Tube	100975
23	Terminal Block	088214	—	Boiler with Insulation	100923
24	Inlet Water Valve - Two Way*	071235	—	Safety Valve	014355
	Brackets	094189	—	Grommet	003492
25	Drain Valve*	071234	—	Thermostat (old style)	099947
	Brackets	099991	—	Drain Tube Assembly	100989

*Part Not Shown in Photograph

Electrical Schematics



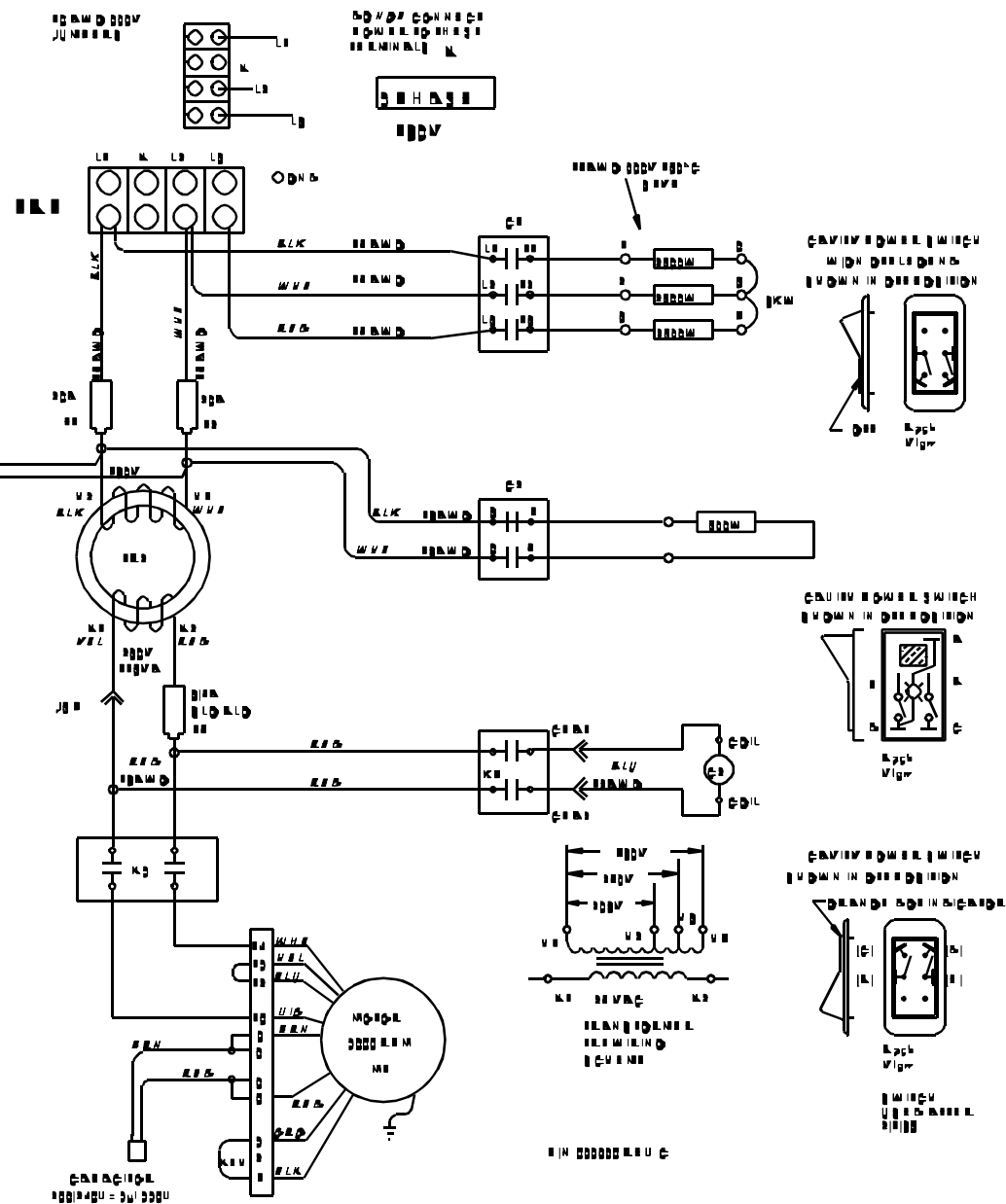
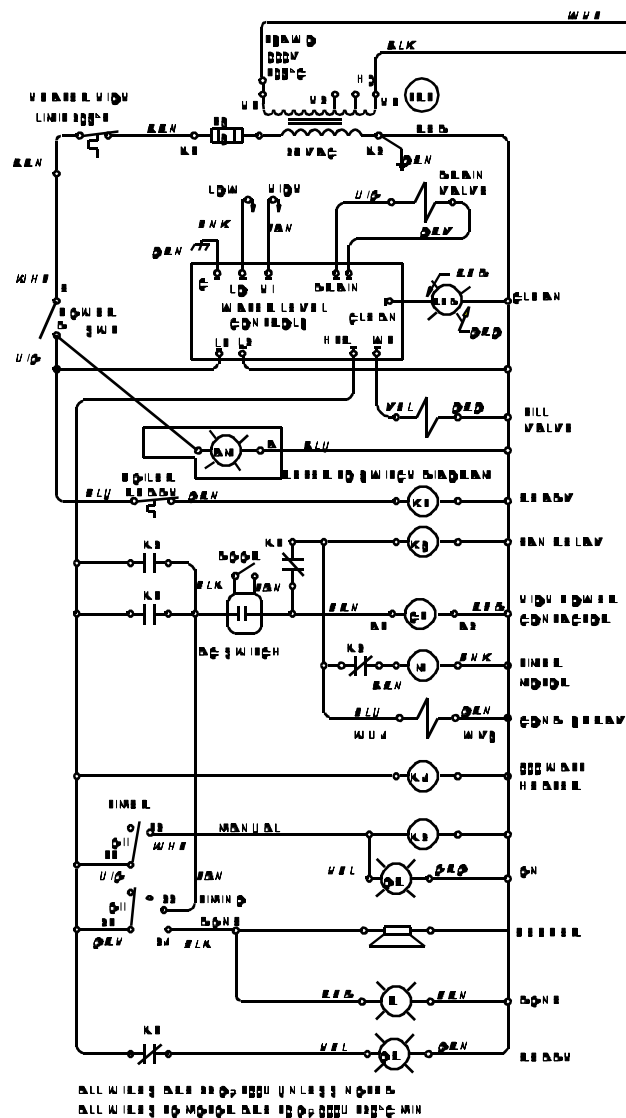
ALL WIRES ARE 22 Ga 150V UNLESS NOTED
ALL WIRES TO MOTOR ARE 18 Ga 600V 125°C MIN.



208 and 240 Volt Models

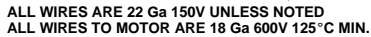
OM-HY-3E

Electrical Schematics



480 Volt Model

OM-HY-3E



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Service Log

Model No. _____
Serial No. _____
Date Purchased _____
Purchase Order No. _____

Purchased From _____
Location _____
Date Installed _____
For Service Call _____

Date	Maintenance Performed	Performed by

LIMITED WARRANTY TO COMMERCIAL PURCHASERS*

(Continental U.S., Hawaii and Canadian Sales Only)

Groen Foodservice Equipment ("Groen Equipment") has been skillfully manufactured, carefully inspected, and packaged to meet rigid standards of excellence. Groen warrants its Equipment to be free from defects in material and workmanship for (12) twelve months with the following conditions an subject to the following limitations.

- I. This parts and labor warranty is limited to Groen Equipment sold to the original commercial purchaser/users (but not original equipment manufacturers {O.E.M.}), at its original place of installation in the continental United States, Hawaii and Canada.
- II. Damage during shipment is to be reported to the carrier, is not covered under this warranty, and is the sole responsibility of the purchaser/user.
- III. Groen,, or an authorized service representative, will repair or replace, at Groen's sole election, any Groen equipment, including but not limited to, drawoff valves, safety valves, gas and electric components, found to be defective during the warranty period. As to warranty service in the territory described above, Groen will absorb labor and portal to portal transportation costs (time and mileage) for the first twelve (12) months from date of installation or fifteen (15) months from date of shipment from Groen.
- IV. This warranty does not cover boiler maintenance, calibration, periodic adjustments as specified in operating instructions or manuals, and consumable parts such as scraper blades, gaskets, packing, etc., or labor costs incurred for removal of adjacent equipment or objects to gain access to Groen Equipment. This warranty does not cover defects caused by improper installation, abuse, careless operation, or improper maintenance of equipment. This warranty does not cover damage caused by poor water quality or improper boiler maintenance.
- V. **THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL GROEN BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.**
- VI. Groen Equipment is for commercial use only. If sold as a component of another (O.E.M.) Manufacturer's equipment, or if used as a consumer product, such Equipment is sold AS IS and without any warranty.

***(Covers all Foodservice Equipment Ordered after October 1, 1995)**



1055 Mendell Davis Drive
Jackson, MS 39272
Telephone 601 372-3903
Fax 601 373-9587

OM-HY-3E (Revised 2/98)
Part Number 121004