

OPERATOR MANUAL

Part Number 142113 Rev C

OM-HY-5G

DOMESTIC

MODELS: HY-5G, (2)HY-5G
HyPerSteam™
Atmospheric Convection
Steamer

*Self-Contained
Gas Heated*

Capacity: 5 Steamer Pans [per cavity] (HY-5G)
(12" x 20" x 2½")



HY-5G



(2)HY-5GF

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.

POST IN A PROMINENT LOCATION

INSTRUCTIONS TO BE FOLLOWED IN THE EVENT USER SMELLS GAS. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING YOUR LOCAL GAS SUPPLIER. AS A MINIMUM, TURN OFF GAS AND CALL YOUR GAS COMPANY AND YOUR AUTHORIZED SERVICE AGENT. EVACUATE ALL PERSONNEL FROM THE AREA.

WARNING

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.



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 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:** FOLLOW THE WIRING DIAGRAM EXACTLY WHEN CONNECTING A UNIT TO AVOID DAMAGE OR INJURY. WIRING DIAGRAM IS LOCATED ON THE INSIDE OF THE RIGHT PANEL.
- 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. DO NOT USE A CLEANING OR DE-LIMING AGENT THAT CONTAINS MORE THAN 30% PHOSPHORIC ACID.
- 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 CIRCUIT BEFORE SERVICING. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH.

Table of Contents

OPERATOR WARNINGS 2

REFERENCES 3

EQUIPMENT DESCRIPTION 4

INSPECTION AND UNPACKING 4

WATER QUALITY AND TREATMENT 5

INSTALLATION AND START-UP 6

OPERATION 10

CLEANING 12

MAINTENANCE 14

TROUBLESHOOTING 14

PARTS LIST 15

ELECTRICAL SCHEMATICS 19

SERVICE LOG 20

WARRANTY 22

References

CSA International
8501 East Pleasant Valley Road
Cleveland, OH 44131

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

NATIONAL FIRE PROTECTION ASSOCIATION
60 Batterymarch Park
Quincy, Massachusetts 02269

NFPA/70 The National Electrical Code

NSF INTERNATIONAL
789 N. Dixboro Rd.
P.O. Box 130140
Ann Arbor, Michigan 48113-0140

Equipment Description

Your Groen HY-5G or (2)HY-5G 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 gas-heated. A powerful blower circulates the steam in the cavity to increase heating efficiency.

Each cavity holds up to five steam table pans (12" x 20" x 2½" deep). An 18 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 HY-5G steamer is equipped with fully electronic controls and a button-activated, pre-programmed CLEAN cycle. These units are readily identified by their unique control panels. The On-Off switch is operated by touch pad controls, and the distinctive symbol for steam is integrated into the panel.

The drain system on all models includes a spray condenser, which helps keep steam from escaping from the chamber and cools drain water.

BURNER FIRING RATE		
Steamer	Natural Gas at 3.2" W.C.	L.P. Gas at 10.5" W.C.
HY-5G	62,000	62,000
(2)HY-5G	124,000	124,000



The HY-5G steamer holds five standard 12" x 20" x 2½" steamer pans.



The (2)HY-5G holds up to five pans per cavity.

Inspection and Unpacking

The Steamer will be delivered completely assembled in a heavy shipping carton strapped to a skid. On receipt, inspect carton carefully for exterior damage.

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

Carefully cut the straps 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.

CAUTION
THE HY-5G WEIGHS 203 POUNDS (92 KG). THE (2)HY-5G WEIGHS 460 POUNDS (207 KG). YOU SHOULD GET HELP AS NEEDED TO LIFT THIS WEIGHT SAFELY.

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

When starting installation, check packing materials to make sure loose parts such as the condensate drip tray are not discarded with this material.

Water Quality and Treatment

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

Most water supplies contain minerals which form scale. It is this scale which could lead to an early component failure.

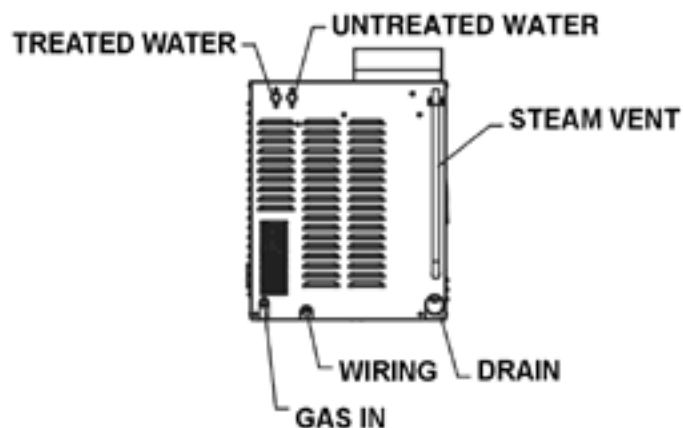
Your local water utility can tell you about the minerals in your water. The water going to the steam generator should have between 30 and 40 parts per million (ppm) total dissolved solids (TDS) and should have a pH (acidity rating) of 7.0 to 9.0. Please follow these simple precautions:

1. The best way to prevent scale is to use a Groen PureSteem™ Water Treatment System which has been specifically designed for Groen steamers and combination ovens. **Do not rely on unproven water treatment systems** sold for scale prevention and removal. **They are not specifically designed to work with Groen steamers and combination ovens.**
2. A well-maintained water treatment system and a regular cartridge replacement schedule is essential.
3. Using a Groen PureSteem™ Water Treatment System will provide longer steam generator/boiler life, higher steam capacity, and reduce maintenance requirements.
4. If you notice a slowdown in steam production or an increase in deliming, have the steamer checked for scale build-up. This could be an indication that the water treatment cartridges need replacing. Heavy scale reduces the unit's ability to boil water, and can even cause component failure.

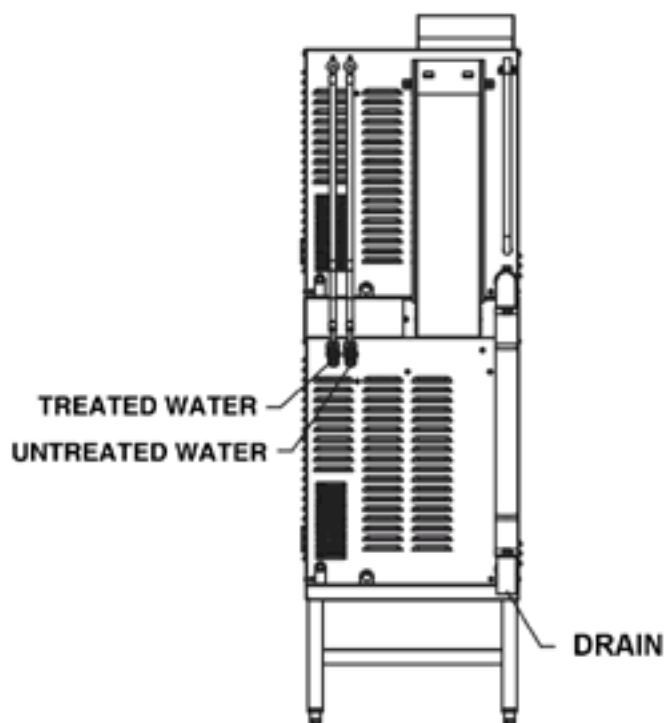
MINIMIZE SCALE PROBLEMS BY INSTALLING AND MAINTAINING A GROEN PureSteem™ WATER TREATMENT SYSTEM AND BY DELIMING THE STEAMER REGULARLY.

The Groen HY-5G Steamer features two separate water inlets — one for the steam generator/boiler (treated water), the other for the spray condenser (untreated water). The second intake will reduce treatment requirements resulting in significant savings.

The dual water connections are side by side on the rear of the unit. When seen from the back of the unit, the treated water intake is on the left.



HY-5G



(2)HY-5GF

The second water connection can reduce treated water requirements.

Installation and Start-Up

WARNING

THE UNIT MUST BE INSTALLED BY PERSONNEL WHO ARE QUALIFIED TO WORK WITH GAS, 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 OR LEFT SIDE VENTS BLOCKED OR WITHIN 12 INCHES OF A HEAT SOURCE (SUCH AS A BRAISING PAN, DEEP FAT FRYER, CHARBROILER OR KETTLE).

TO AVOID DRAINAGE PROBLEMS, LEVEL THE UNIT FRONT TO BACK, OR PITCH IT SLIGHTLY TO THE REAR.

A. Installation

The HY-5G steamer is suitable for installation on or near both combustible and noncombustible surfaces.

Minimum installation clearances are:

Right Side	2 inches
Left Side	2 inches
Rear	6 inches

However, for easy service at least **12 inches** clearance is required for the **right** side of the unit, and it may **not be installed within 12 inches of a heat source**, as stated in the Caution above.

The unit must be installed in a well-ventilated room with an adequate air supply. The steamer must be installed beneath a ventilation hood, since gas combustion products exit the appliance.

Any item which might obstruct or restrict the flow of air for combustion and ventilation must be removed. Do not obstruct the flue cover or any front, side, rear, or top vents after installation.

The area directly around the appliance must be cleared of all combustible material. The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1, latest edition, including the following:

The unit and its individual shutoff valve must be **disconnected** from the gas supply system during any pressure testing of that system at test pressures **in excess of ½ PSI (3.45 kPa)**. It must be **isolated** from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures **equal to or less than ½ PSI (3.45 kPa)**.

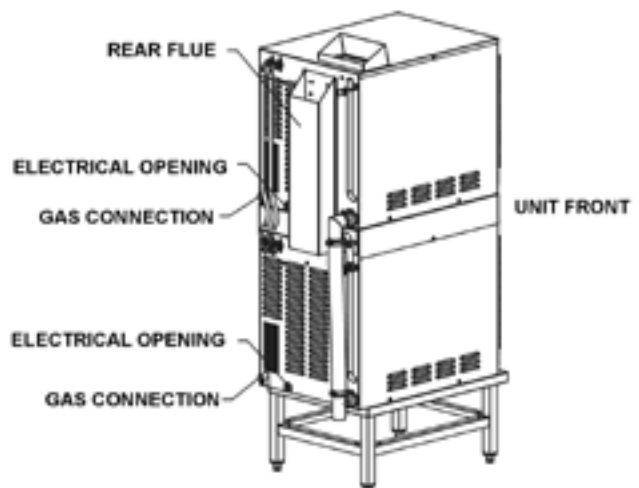
1. Electrical Supply Connection

Provide 115 VAC, 60 HZ, 1 PH, 15 AMP service. Bring wire in through hole on the lower left back panel. Each cavity requires a separate cord for connections. Local codes and/or the National

Electrical Code should be observed in accordance with ANSI/NFPA 70-1987 (or latest edition). **AN ELECTRICAL GROUND IS REQUIRED.** The electrical schematic is located in the service compartment and in this manual. Maximum load is 2½ AMPs. In Canada, provide electrical service in accordance with the Canadian Electrical Code, CSA C22.1 Part 1 and/or local codes.

2. Gas Supply Connection

Connection to the gas supply can be completed with ½" NPT pipe or approved equivalent. Although the immediate connection to the appliance is ½" NPT, gas supply piping must be large enough to provide 62,000 BTU/hr/cavity. Supply pressure must be at least 4.5" W.C. (maximum 14" W.C.) for natural gas or 12" W.C. (maximum 14" W.C.) for LP gas. In Canada, the installation must conform to the Canadian Gas Code, CAN 1-B149, Installation Codes for Gas Burning Appliances and Equipment and/or local codes. Check all gas connections for leaks prior to unit operation.



After the unit has been connected to the gas supply, all gas joints must be checked for leaks. **No flame should be used when checking for leaks.** A thick soap solution or other suitable leak detector should be used.

For a unit on casters, complete connection to the gas supply with connectors that comply with the standard for connectors for moveable gas appliances, ANSI Z21.69 — latest edition. Restrain movement of the unit by attaching a cable or chain to the eyelet (provided at the back of the frame) and anchoring the cable or chain to the wall or floor. Make the length and location of the cable such that the unit cannot pull on the gas connection while the cable is connected.

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 and must deliver a flow rate of 1.5 to 3.0 gallons per minute. If pressure is above 60 PSIG, a pressure regulator will be needed.

$\frac{3}{4}$ inch female NH connectors (garden hose type) are used to attach the water supply to the inlet valves. One connector is for the steam generator (treated), the other is for the spray condenser (untreated). **Minimum inside diameter of the water feed line is $\frac{1}{2}$ inch.** Use a washer in the hose connection. Do not allow the connection to leak, no matter how slowly. Do not over tighten hose connections. Treated (softened) water goes to the right (seen from the rear of the unit), and untreated water to the left. Connections for both are made as shown on Page 5. Though not recommended, an adapter to use a single water intake is available, P/N 138473.

3. Drain Connection

Level the steamer front to back, or pitch it slightly to the rear (maximum $\frac{1}{4}$ inch) by adjusting the optional legs or bullet feet on optional stand.

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

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

There must be a 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 free air gap.

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

Install the drain line with a constant downward pitch.

IMPORTANT: Do not allow water traps in the line. A trap can cause pressure build-up in the cavity, which may cause the door gasket to leak.

4. Factory Stacked Units

This section is applicable only if you are installing factory-stacked units. If you plan to stack steamers yourself, whether purchasing a new one for stacking or a kit to stack two units you already own, you will require **OM-HY-5G(S), RETROFIT SUPPLEMENT** (Part Number 121087).

Installing stacked steamers is similar to installing a single unit. The steamers are stacked and assembled at the factory and delivered with the water connections and drain hoses required for a single point connection.

A. Water Connection

The same water supply connection is used for both units. At the water inlet valves, $\frac{3}{4}$ inch female NH connectors (garden hose type) are used for the water supplies. There are two connections to be made. Treated water (softened) is connected to the right valve fitting (looking from the rear of the unit) and untreated water to the left fitting.

B. Electrical Supply Connection

Separate, individual electrical connections will be required for each steamer in the stack. Each Steamer must have its own branch circuit protection.

C. Gas Connection

Separate gas connections are required for each steamer in the stack. Gas supply must be adequate under all conditions as listed on page 6.

OM-HY-5G

D. Drain Connection

Steamers must be leveled front to back, or pitched to the rear (maximum ¼ inch) by adjusting the bullet feet on the stand.

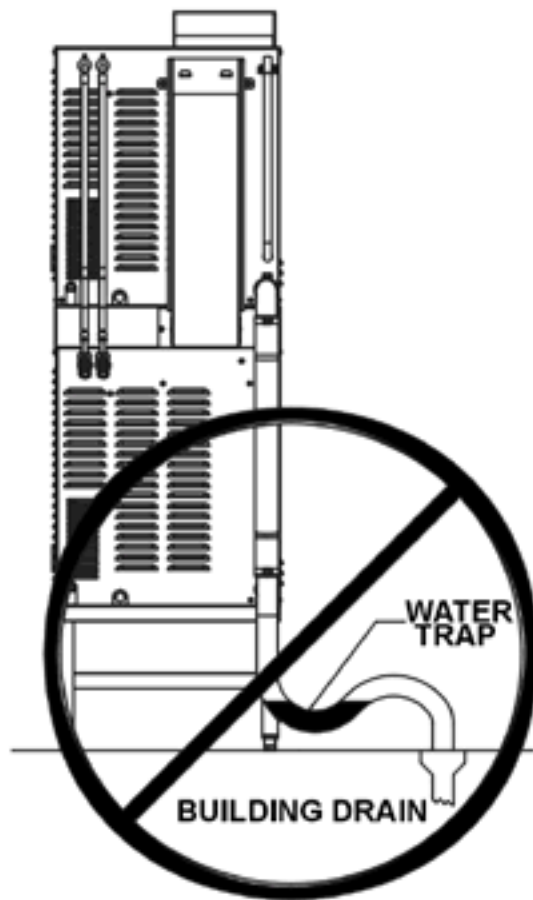
A 2 inch ID hose may be attached to the unit drain. It must be rated for very hot water.

WARNING
DO NOT CONNECT THE UNIT DRAIN DIRECTLY TO THE BUILDING DRAIN.

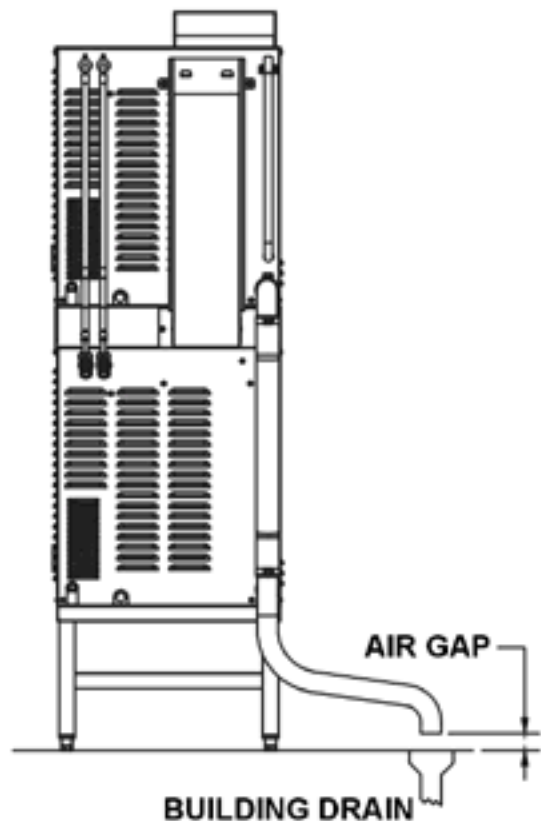
Ensure that there is a free air gap between the end of the unit drain and the building drain. This gap should be as close as possible to the unit drain. Do not allow elbows or restrictions between the unit and the free air gap.

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

Install the line with a constant downward pitch.



IMPROPER DRAIN LINE CONNECTION



PROPER DRAIN LINE CONNECTION

Proper Drain Line Connection - Drain Line must have a constant downward pitch of at least 1/4" per foot. (2)HY-5G shown.

Initial Start-Up

After the HY-5G Steamer has been installed, test it to ensure that the unit is operating correctly.

1. Remove all literature and packing materials from the interior and exterior of the unit.
2. Make sure the water supply line is open.
3. Make sure that the gas supply line is open and that the manual knob on the main gas valve is turned to the "on" position. This valve is located behind the front access panel on the right side of the unit.
4. Turn on electrical service to the unit. The HY-5G will not operate without electrical power. Do not attempt to operate the unit during a power failure.
5. The steamer will not operate until the pilot burner has been ignited. To light the pilot burner, activate the pilot switch located behind the sliding door located on the right cover panel. When the pilot ignition sequence has been successfully completed, a green light - on the pilot switch will glow.
6. The "trial for ignition" period is roughly 90 seconds. If the pilot burner does not light within about 90 seconds after the switch is activated, the ignition system automatically stops gas flow to the pilot burner and stops the ignition trial. If this happens, turn off the pilot switch and repeat the trial for ignition. During the initial start-up, the pilot may require several trials for ignition until all the air is bled from the gas piping. Subsequent start-ups should require only about 5 seconds to achieve pilot ignition.

NOTE: See Automatic Operation of Pilot at the end of this section.

7. Once the pilot burner flame has been established (the green light on the pilot switch is on), press the "ON" switch for the desired steamer cavity. The steam generator will fill with water.
- NOTE:** The door **MUST** be closed for the main (high) burner to work.
8. When the steam generator has filled with water, the low and main burners will ignite automatically. Within 8-10 minutes the READY light will come on, indicating that the

water has reached its standby temperature. When the READY light is displayed, you may take any one of the following steps:

- a. Set the timer to the desired time for timed steaming.
- b. Turn the timer knob to the manual ON position for continuous steam.
- c. Let the unit stay at standby temperature.



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

9. To shut down the unit, press the ON switch into the off position. The steam generator will then drain. You may also switch off the pilot switch to conserve energy.
10. If the HY-5G Steamer behaves as described, the unit is functioning correctly and ready for use.

Automatic Operation of Pilot

Once the pilot burner is lit, it essentially functions as a standing pilot. In this state, if the pilot is accidentally extinguished (by a very strong gust of wind for example), it will re-ignite automatically. The unit will completely shut down for a few seconds while the pilot is re-ignited. Then the unit will come back on and resume operation in the mode and with the (running) timer value existing just prior to shutdown. The pilot switch may be turned off during "off hours" to conserve energy.

After the unit has been running, if the pilot burner ever fails to re-ignite automatically within 90 seconds, wait 5 minutes before you attempt to reactivate it. In the unlikely event that ignition problems persist, contact your authorized Groen Service Agency.

NOTE: For operation at high altitudes (2000 feet and above) please consult the Groen Food Service Engineering Department.

Operation

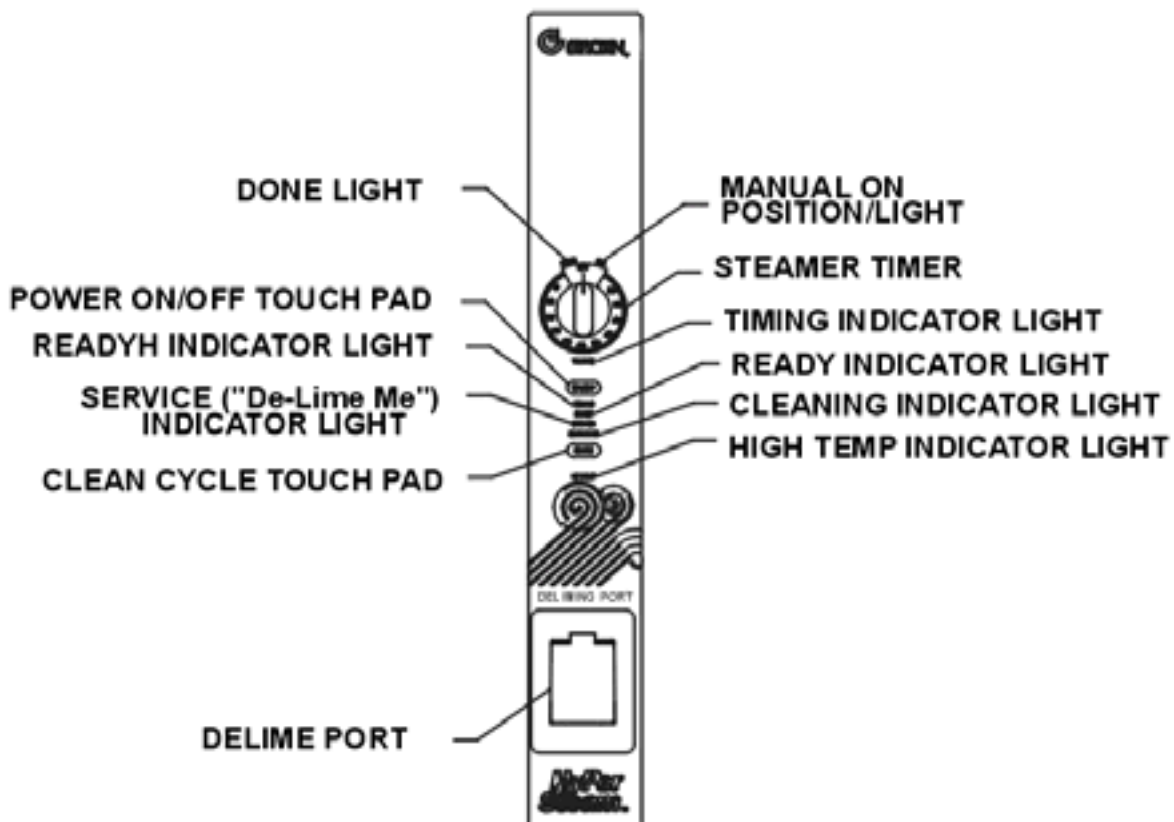
WARNING
ANY POTENTIAL USER OF THE EQUIPMENT MUST BE TRAINED IN SAFE AND CORRECT OPERATING PROCEDURES.

A. Controls

Operator controls are on the front right of the unit.

The HY-5G control panel has the following touch pads and indicator lights:

- ! The ON/OFF touch pad gets the HyPerSteam ready for use, or shuts it off.
 - ! The READY indicator light shows that the steam generator is at standby temperature and the cavity is hot enough to begin steaming.
 - ! The CLEANING indicator light is lit when the unit is operating in the cleaning mode.
 - ! The SERVICE indicator light shows when the water level probes have stopped working, and need to be cleaned (normally an indication of lime deposits).
- When one probe fails, the SERVICE light flashes briefly every few seconds, but the unit will continue to operate. De-lime the unit as soon as possible.*
- If the problem continues, both probes may fail. Then the steamer stops working, the light will flash repeatedly and the beeper will sound. **At this point you must turn off the power and contact an Authorized Groen Service Representative for repair.***
- ! The HI TEMP indicator light comes on when the steam generator is too hot.
- The unit will automatically shut off, and cannot be turned on again until the steam generator cools and the HI TEMP indicator light goes out.*
- ! The TIMING indicator light stays on when the timer is running.
 - ! The CLEAN touch pad is used to start the automatic 50 minute cleaning cycle.



The timer is used in three ways:

- 1 In the OFF position the steam generator stays at a low boil or “holding” temperature.
- 2 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.
- 3 With the timer turned to the ON position, the unit steams continuously. The green light stays lit. The steamer will **not** time down.

B. Operating Procedure

1. Press the ON/OFF touch pad for the steamer. The steam generator will fill, and heat until the READY light comes on. (About 8-10 minutes.)
2. Load food into pans 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 for that period. 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 production stops.

- ! 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.



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

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/OFF touch pad to OFF. The steam generator will automatically drain.

Cleaning

To keep your HY-5G 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 (Part Number 114800)**, *commercial* Lime-Away® (not the store brand for residential use) 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 louver on the side or rear panels.
- 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®.



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 REMOVABLE PARTITION HAS BEEN PUT BACK IN ITS PROPER LOCATION.

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. DON'T USE ANY CLEANING OR DE-LIMING AGENT THAT CONTAINS MORE THAN 30% PHOSPHORIC ACID.

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 ANY STAINLESS STEEL 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.

Steam Generator and Cooking Chamber

On a regularly scheduled basis, or if the SERVICE light is on, follow the simple de-liming instructions below. This procedure should be followed for each cavity. **REMEMBER: DON'T ALLOW DE-LIMING AGENTS TO MIX WITH DE-GREASERS.**

- a. Ensure that the unit is turned on.
- b. Set the timer to "OFF".
- c. Using a glove or towel for hand protection, carefully open the deliming port. The port may be hot, and a small amount of pressureless steam may escape as you open the port.
- d. Add two cups of de-liming agent.
- e. Close the deliming port cover.
- f. Holding in the "CLEAN" button, press and release the ON button.
- g. The clean cycle will start, and take approximately 30 minutes.
- h. When the cleaning cycle is complete, the CLEANING light will flash and the unit will beep.
- i. Wipe out the inside of the steamer cavity.
- j. If the steamer is to be used, turn the "ON" switch on. When READY light turns on, the steamer is ready for operation, set the timer to the "ON" position.

NOTES:

1. If the clean cycle ends abruptly, the CLEANING light will flash five times per second. This indicates that the clean cycle was aborted.

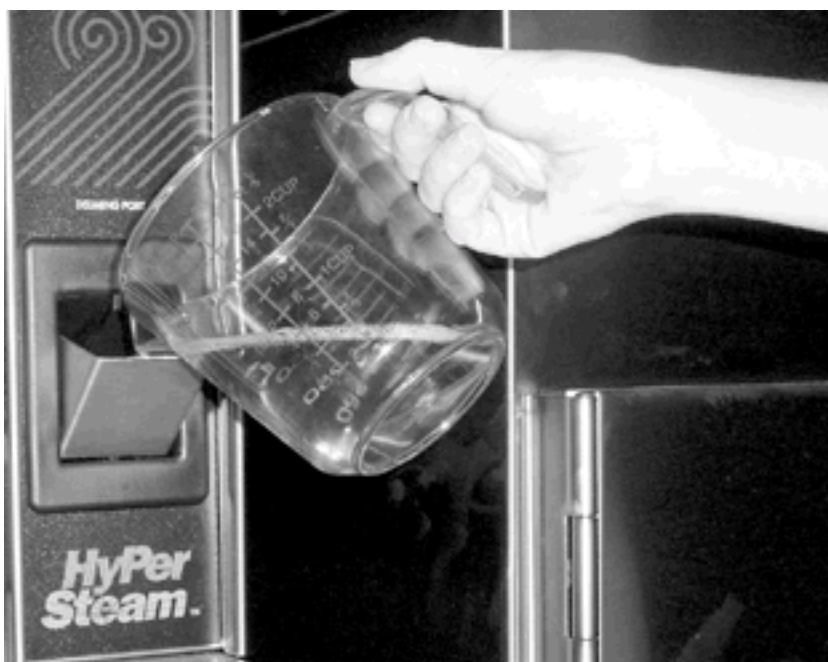


WARNING
SHOULD A CLEAN CYCLE BE INTERRUPTED, IT IS POSSIBLE THAT SOME CLEANING SOLUTION IS STILL PRESENT IN THE STEAM GENERATOR. RE-RUN THE CLEAN CYCLE AND CONFIRM THAT THE WATER IS DRAINING.

2. In the event of a power outage during a clean cycle, rerun the clean cycle when the power is restored.
3. To abort a clean cycle, turn the "ON" switch off for one second and turn it back on.
REMEMBER, DE-LIMING AGENT MAY STILL BE PRESENT IN THE STEAM GENERATOR.

If the SERVICE light is on:

1. Take the actions listed in Troubleshooting Section of this manual. Turn the steamer off for 10 seconds and then re-start.
2. Repeat steam generator cleaning cycle.



Maintenance

The HY-5G 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 authorized Groen representatives should perform the work.

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

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 door 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. The hinge may also be adjusted.

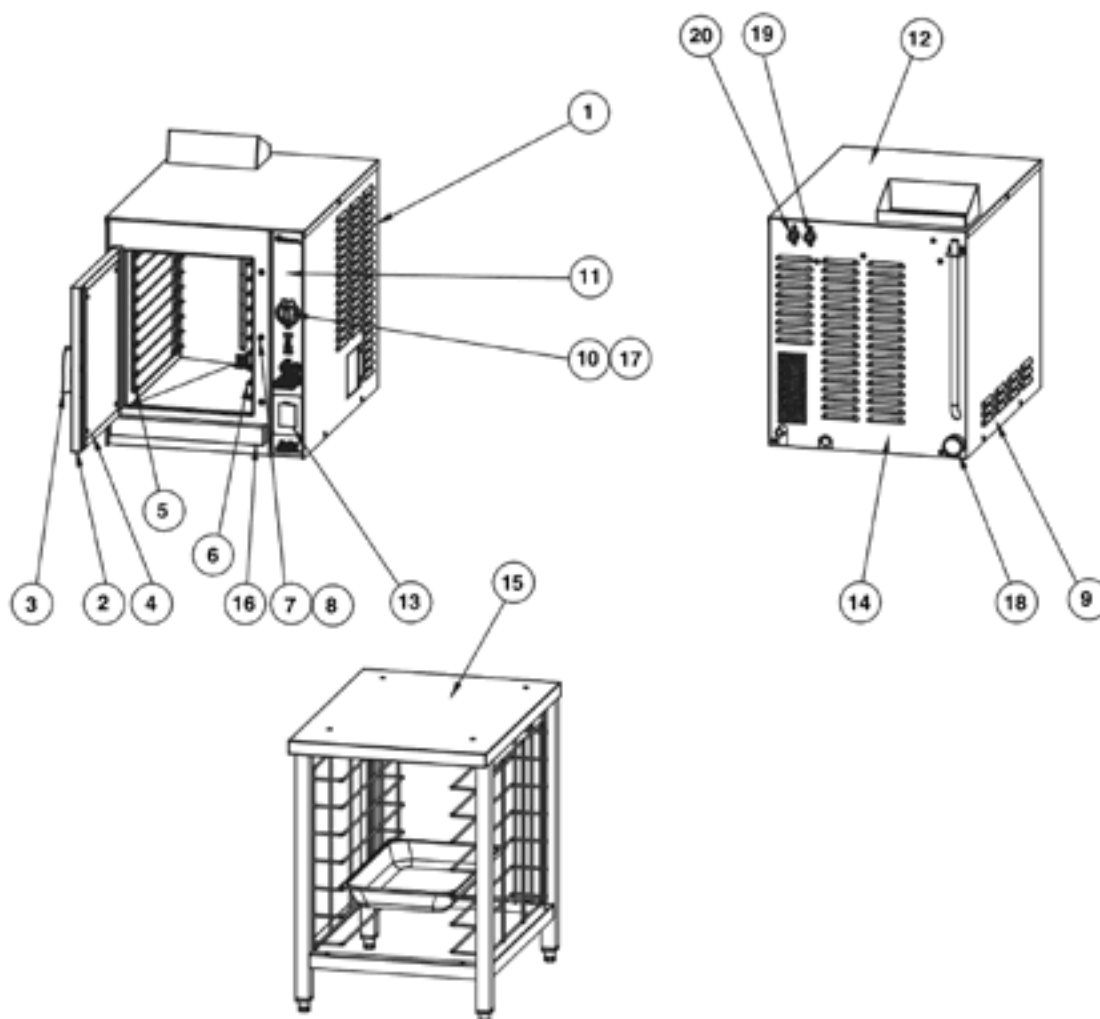
Troubleshooting

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 (x), it means that the work should be done by a factory-authorized service representative.

SYMPTOM	WHO	WHAT TO CHECK <small>(If item is marked X, work should be done by a factory authorized service rep)</small>
Pilot will not light	User	a. Are electrical connections made with a ground? b. Is gas supply connection made? c. Is pilot ignition switch on? d. Is gas valve turned on? e. Are building fuses or circuit breakers all right? f. Are there drafts which could blow out the pilot?
	Auth Service Rep Only	g. Is spark ignition cable connected to module? (X)
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?
Service 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?(X) c. Is the drain properly vented? (X)

Parts List - HY-5G

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



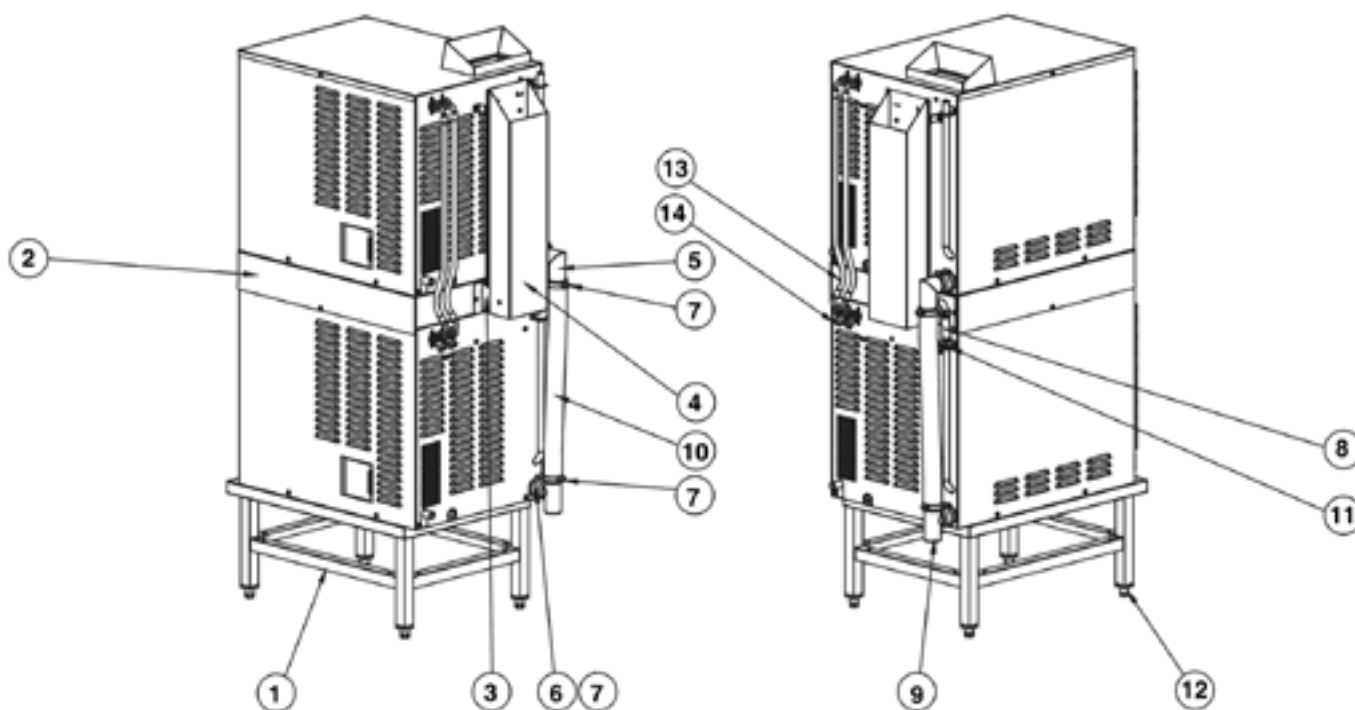
Key	Description	New	Key	Description	New
1	Right Side Panel	138532	13	Funnel, Delime	106624
2	Door Assy, Complete	125922	14	Back Panel	138530
3	Door Handle	129723	15	Optional Table	100913
4	Door Gasket	125907	16	Drip Tray	094151
5	Left Pan Rack	125901	17	Timer Fastener Nut	101145
6	Blower Cover/Rack (fan baffle)	125902	18	Drain Tube	138546
7	Door Latch Pin	078914	19	Water Valve Single	071235
8	Door Pin Lock Nut	003823	20	Water Valve Double	100934
9	Left Side Panel	138534	x	Motor Shaft Seal	096868
10	Timer Knob	123100	x	Optional Legs	041121
11	Front Panel Overlay	138424	x	Groen De-limer/De-scaler	114800
12	Top Panel	138536	x	Cavity Fan	096790

x - Item not depicted/called out in drawings

Parts List - (2) HY-5G

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

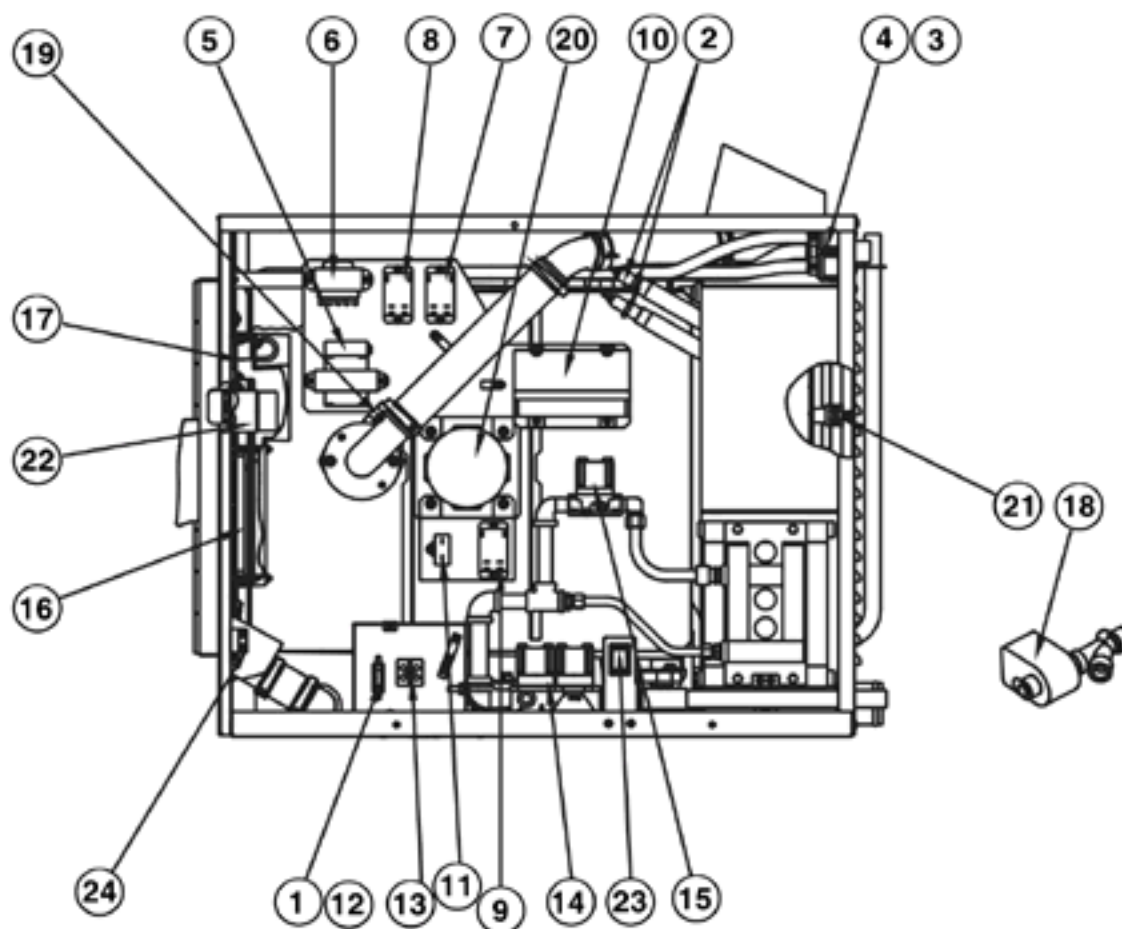
Parts listed below only apply to model (2) HY-5G. Common parts are listed on page 15.



Key	Description	Part No.	Key	Description	Part No.
1	Table	138579	8	Hose Vent	138463
2	Spacer	138594	9	Drain T-Connector	126003
3	Flue, Inside	138406	10	Hose Drain	138471
4	Flue, Vertical	138401	11	Clamp, Hose 9/16" - 1 1/16" DIA	099284
5	Drain and Vent Pipe	138458	12	Bullet Foot	042505
6	Hose 2" ID x 2" Lg	090742	13	Water Hose	138470
7	Clamp, Hose 1 3/4" - 2 1/2" DIA	015663	14	Hose Connector	101189

Electrical Parts List - HY-5G

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

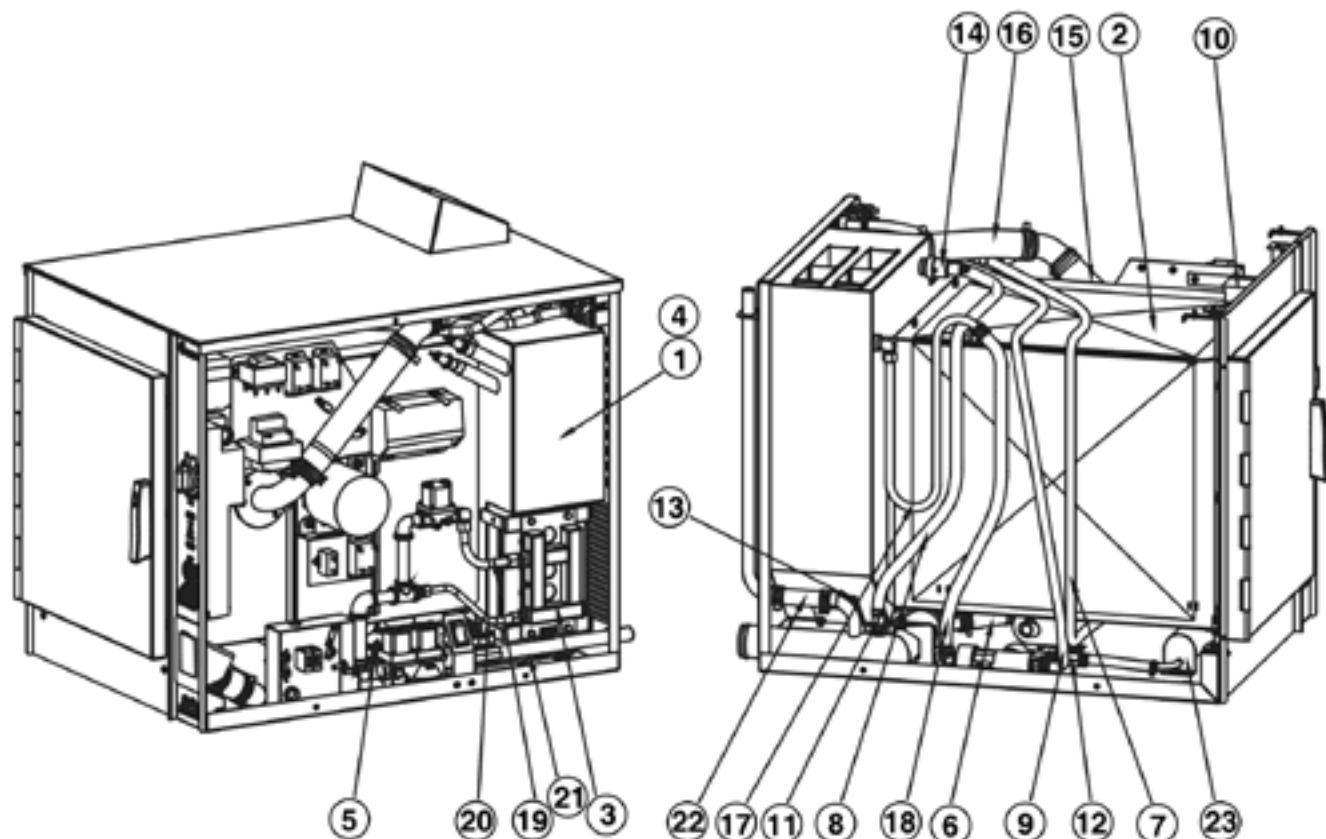


Key	Description	Part No.	Key	Description	Part No.
1	Fuse, 3 Amp	077853	15	Gas Valve	099906
2	Water Level Probes	070178	16	Control Board	119801
3	Water Valve Single	071235	17	Timer Board	119817
4	Water Valve Double	100934	18	Drain Valve	074594
5	Transformer 120V Primary / 24V Secondary 75VA	106233	19	Ready Thermostat	099947
6	Transformer 115/230V Primary / 20VAC CT Secondary	119815	20	Motor Assy	146880
7	Relay, 12VDC	119813	21	Overtemp Sensor	096892
8	Relay, 24VAC	119814	22	Timer	096826
9	Relay, 24VDC	138420	23	Pilot Switch	087951
10	Ignition Module	085153	24	Door Switch	096857
11	Capacitor	096813	x	Harness, Power	130397
12	Fuse Holder	077854	x	Harness, Control	130399
13	Terminal Block	003887	x	Harness, Drain	130398
14	Main Gas Valve	098443	x	Harness, Transformer	119871
			x	Harness, Door + Switch	119878

x - Item not depicted/called out in drawings

Parts List - HY-5G

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



Key	Description	Part No.	Key	Description	Part No.
1	Steam Generator	138521	13	Gasket	106232
2	Cavity	138549	14	Pressure Relief	132183
3	Manifold Asm - Natural Gas	138585	15	Hose, 10 1/2" Steam Inlet	138445
	Manifold Asm - Propane	138586	16	Hose, 7 7/8" Steam Inlet	138446
4	Insulation Steam Generator	138588	17	Trap	106229
5	Drain Hose Steam Generator	138464	18	Hose, Trap	138451
6	Drain Hose	138465	19	Tube, High Fire	138425
7	Hose, Water Fill	138467	20	Tube, Low Fire	138426
8	Hose, Condensate	138468	21	Tube, Pilot	138427
9	Hose, Delime (Single Stack)	138449	22	Hose, Vent	138447
10	Cavity Insulation	096738	23	Delime Tank ASM	138415
11	Water Flow Reducer	112720	x	Hose, Delime (Double Stack)	138450
12	Check Valve	138428			

x - Item not depicted/called out in drawings

HY-5G Wiring Diagram
P/N 130396 Rev A

Service Log

Model No. _____

Serial No. _____

Date Purchased _____

Purchase Order No. _____

Purchased From _____

Location _____

Date Installed _____

For Service Call _____

Date	Maintenance Performed	Performed by

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*
(U.S. & Canadian Sales Only.)

Groen warrants to original commercial purchaser/users that foodservice equipment manufactured by Groen ("Groen Equipment") (other than CapKold foodservice equipment) shall be free from defects in material and workmanship for (12) twelve months from the date of installation or fifteen (15) months from date of shipment from Groen, whichever date first occurs (the "Warranty Period"), in accordance with the following terms and conditions:

- I. This warranty is limited to replacement parts and related labor for Groen Equipment located at its original place of installation in the United States and Canada.
- II. Damage to Groen Equipment that occurs during shipment must be reported to the carrier, and is not covered under this warranty. The reporting of any damage during shipment is the sole responsibility of the commercial purchaser/user of such Groen Equipment.
- III. For Groen Convection Combo™ Steamer-Ovens, HyPerSteam™ Convection Steamers and HyPlus™ Pressureless Steamers, Groen further warrants to the original commercial purchaser/users of such Groen Equipment that the atmospheric steam generators or boilers contained in such Groen Equipment shall be free from defects in material and workmanship for twenty-four (24) months from the date of installation or twenty-seven (27) months from date of shipment from Groen, whichever date first occurs, provided that: (a) the original purchaser/user shall have also purchased and installed a Groen PureSteam Water Treatment System™ for use in connection with such Groen Convection Combo™ Steamer-Oven, HyPerSteam™ Convection Steamer or HyPlus™ Pressureless Steamer on or before the date such Groen Equipment was installed, (b) the original purchaser/user has continuously used such Water Treatment System in connection with such Groen Equipment from the date of installation, and (c) the commercial purchaser/user shall have maintained such Water Treatment System in accordance with the maintenance and filter cartridge replacement recommendations of Groen, and otherwise maintained such Oven or Steamer in accordance with all other operational and maintenance recommendations of Groen.
- IV. Groen further warrants to the original commercial purchaser/users of Groen Convection Combo™ Steamer-Ovens that the electronic relay and control board contained in such Groen Convection Combo™ Steamer-Oven shall be free from defects in material and workmanship for twenty-four (24) months from the date of installation or twenty-seven (27) months from date of shipment from Groen, whichever date first occurs.
- V. During the Warranty Period, Groen, directly or through its authorized service representative, will either repair or replace, at Groen's sole election, any Groen Equipment determined by Groen to have a defect in material or workmanship. As to any such warranty service during the Warranty Period, Groen will be responsible for related reasonable labor and portal to portal transportation expenses (time & mileage) incurred within the United States and Canada.
- VI. This warranty does not cover boiler maintenance, calibration, periodic adjustments as specified in operating instructions or manuals, consumable parts (such as scraper blades, gaskets, packing, etc.), and 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 Groen Equipment. This warranty does not cover damage to Groen Equipment caused by poor water quality or improper boiler maintenance.

- VII. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED 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.**
- VIII. 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 Groen Equipment (other than CapKold foodservice equipment) ordered after September 11, 2001).**



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

OM-HY-5G
Part Number 142113 Rev. C