

OPERATOR MANUAL

IMPORTANT INFORMATION, KEEP FOR OPERATOR

This manual provides information for:

MODEL HY-5G & (2)HY-5G

HYPERSTEAM™

ATMOSPHERIC

CONVECTION STEAMER

- Self Contained
- Gas
- Capacity: 5 Steamer Pans [per cavity] (HY-5G) (12" x 20" x 2-1/2")



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

WARNING / 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 the 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.

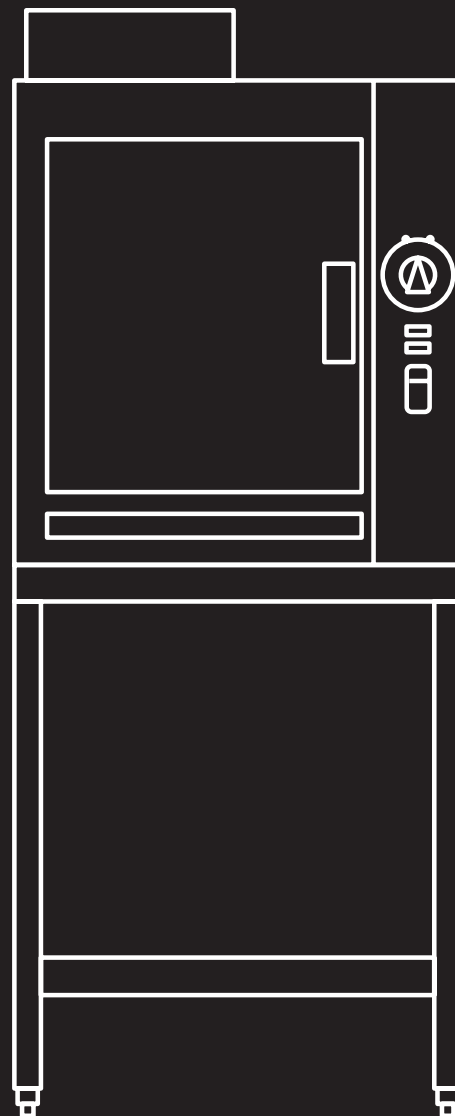
NOTIFY CARRIER OF DAMAGE AT ONCE

It is the responsibility of the consignee to inspect the container upon receipt of same and to determine the possibility of any damage, including concealed damage. Groen suggests that if you are suspicious of damage to make a notation on the delivery receipt. It will be the responsibility of the consignee to file a claim with the carrier. We recommend that you do so at once.

Manufacture Service/Questions 888-994-7636.

Information contained in this document is known to be current and accurate at the time of printing/creation. Reference our product line website for the most updated product information and specifications.
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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 DRAIN 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.

References

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

NSF INTERNATIONAL
P.O Box 130140
789 N. Dixboro Road
Ann Arbor, MI 48105, USA

NFPA – NATIONAL FIRE PROTECTION ASSOCIATION
1 Batterymarch Park
Quincy, MA 02169

ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE
1899 L Street, NW, 11th Floor
Washington, DC 20036

CSA INTERNATIONAL
178 Rexdale Blvd.
Toronto, ON
Canada M9W1R3

ICC – INTERNATIONAL CODE COUNCIL
500 New Jersey Avenue, NW
6th Floor, Washington, DC 20001

Equipment Description

WARNING
BEFORE REMOVING ANY PARTITION OR PANEL, TURN OFF THE ELECTRICAL POWER AND LET THE FAN STOP ROTATING. BEFORE WORKING ON ANY ELECTRICAL COMPONENT, DISCONNECT THE POWER SOURCE FROM THE UNIT.

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.

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.

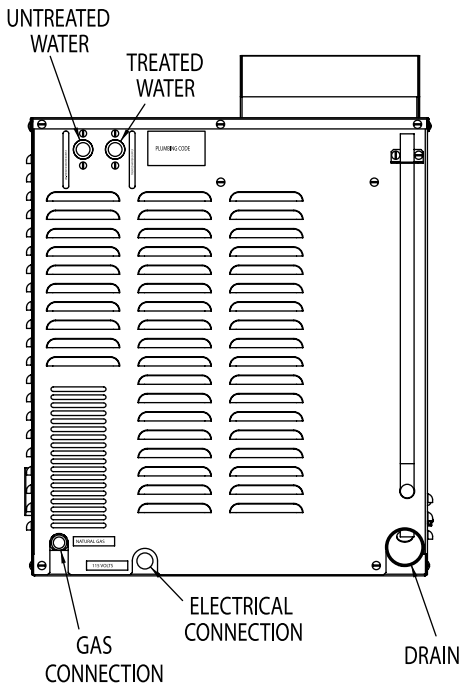
The drain system on all models includes a spray condenser, which helps keep steam from escaping from the chamber and cools drain water.



BURNER FIRING RATES		
STEAMER	NATURAL GAS at 3.2" W.C.	LP 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.

Water Quality & Treatment



REAR VIEW

It is essential to supply the steam generator with water that will not form scale or cause corrosion. Even though the steam generator is engineered to minimize scale formation and the effects of corrosion, their development depends on the quality of your water and the number of hours per day you operate the equipment.

Most water supplies are full of minerals and chemicals which are not suitable for use in a steam generator.

Water quality varies from state to state and city to city. It is necessary that you know and understand the quality of the water you are using. Your water utility can tell you about the minerals and chemicals in your water. The water going to the steam generator should be within these guidelines.

WATER QUALITY REQUIREMENTS:

Containment	Water Supply
pH	7 to 9
Total Dissolved Solids (TDS)	30 to 60 ppm
Hardness	less than 60 ppm
Chlorine and Chloramine	less than .1 ppm
Chlorides	less than 30 ppm
Silica	less than 12 ppm
Undissolved Solids	less than 5 microns

In order to accurately choose the correct water treatment solution, a water quality test has to be performed. If a "Free Start-up" is requested, the ASA will perform a water quality test and Groen (UB) will be able to suggest the best solution for your water quality. If it isn't, your local manufacturing representative can coordinate this for you.

After the "Free Start-up" is performed, UB will add an additional 1-year parts and labor warranty. If UB suggests a water treatment system, the system is purchased from UB, installed and maintained, water related service issues will be covered for the duration of the warranty period.

Inspection & Unpacking

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

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

The Steamer is delivered completely assembled in a heavy crate attached to a skid. On receipt, inspect carefully for exterior damage.

Carefully detach the crating from the skid and carefully cut any straps securing the unit to the skid. Be careful to avoid personal injury or equipment damage from staples in the crating material and the skid.

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.

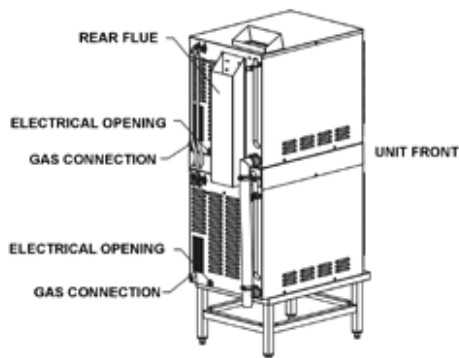
Installation

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. THE UNIT MUST BE INSTALLED BY A LICENSED PLUMBER OR GAS FITTER WHEN INSTALLED WITHIN THE COMMONWEALTH OF MASSACHUSETTS.

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



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 1/2 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 1/2 PSI (3.45 kPa).

1. Electrical Supply Connection

Provide 115 VAC, 60 HZ, 1 PH, 15 AMP service. Bring conduit in through open frame on the under-side of cabinet. 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 2 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 1/2" NPT pipe or approved equivalent. Although the immediate connection to the appliance is 1/2" NPT, gas supply piping must be large enough to provide 62,000 BTU/hr. 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. 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.

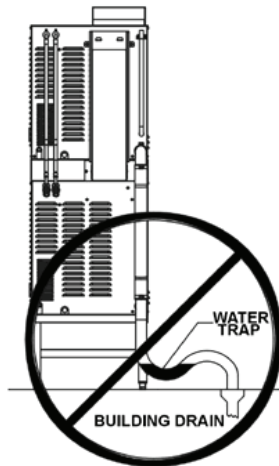
Installation

WARNING

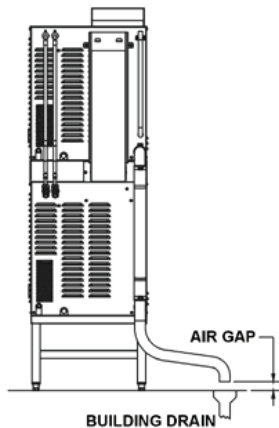
DO NOT CONNECT THE DRAIN DIRECTLY TO A BUILDING DRAIN. BLOCKING THE DRAIN IS HAZARDOUS.

CAUTION

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



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.

3. Water Connection

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. Two 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 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.

4. Drain Connection

Level the steamer front to back, or pitch it slightly to the rear (maximum 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). 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. 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.

5. 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, two 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 8.
- D. **Drain Connection:** Steamers must be leveled front to back, or pitched to the rear (maximum 1/4 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. 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. Install the line with a constant downward pitch.

Initial Start-Up

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



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. Operator must turn off and then back on to reset. 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.

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 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 next to the main gas valve. When the pilot ignition sequence has been successfully completed, a green light - on the pilot switch (old models) - and on the electrical panel (new models) 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 left.
7. Once the pilot burner flame has been established (the green light on the pilot switch (old models) or electrical panel (new models) 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 burner to work.
8. When the steam generator has filled with water, the burners will ignite automatically. Within approximately 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.
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.

Operation

WARNING
ALL POTENTIAL USERS OF THE EQUIPMENT
SHOULD BE TRAINED IN SAFE AND CORRECT
OPERATING PROCEDURES.

NO ATTEMPT SHOULD BE MADE TO
OPERATE THIS EQUIPMENT DURING
A POWER FAILURE.

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



NOTE: Before the steamer can be operated as described in this section, the pilot burner flame must be established. For details see the Initial Start-Up section and the Automatic Operation of Pilot on previous page.

A. Controls

Operator controls are on the front right of the unit. The control panel has the following touch pads and indicator lights:

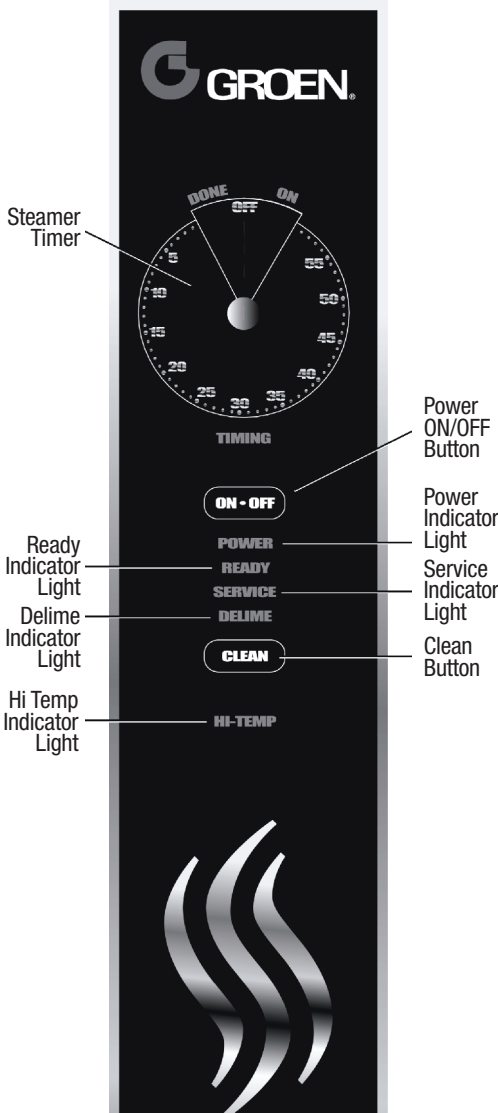
- The ON/OFF touch pad gets the HyPerSteam ready for use, or shuts it off.
- The READY indicator light shows that the steam generator is at standby temperature and the cavity is hot enough to begin steaming.
- The DELIME indicator light is lit when the unit is operating in the cleaning mode.
- The SERVICE 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 is not working, the DELIME light flashes briefly every few seconds. If both probes fail the SERVICE light will come on continuously and the beeper will sound.

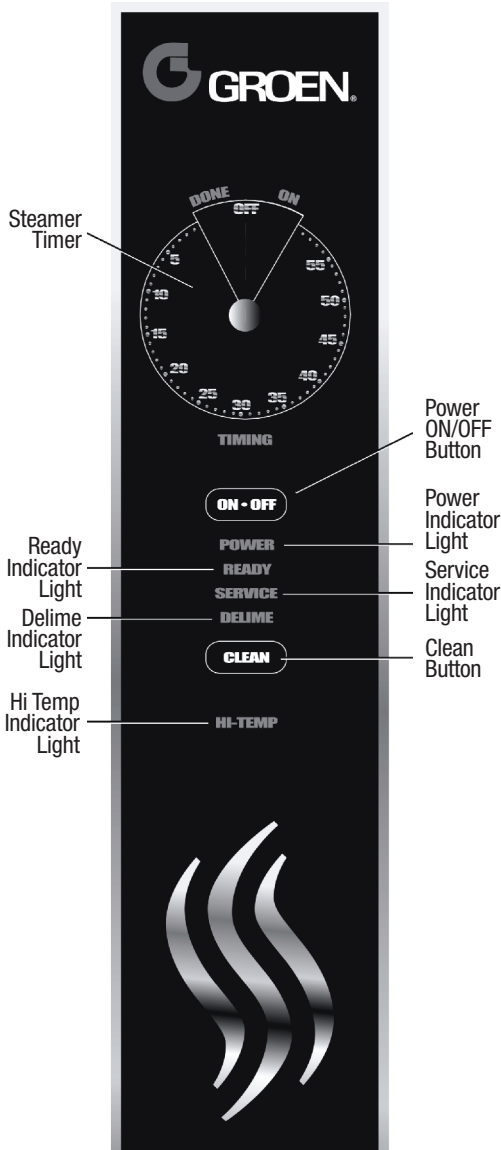
- The HI TEMP indicator light comes on when the steam generator is too hot.
- The unit will automatically shut off, and cannot be turned on again until the steam generator cools and the HI TEMP indicator light goes out.
- The TIMING indicator light stays on when the timer is running.
 - The CLEAN touch 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. Steaming stops, the DONE light (a red light on older models) 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.



Operation



B. Operating Procedure

1. Press the ON switch/pad for the steamer. The steam generator will fill, and heat until the READY light comes on. (Aprox. 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.
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. The steam generator will automatically drain.

Cleaning

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 DELIMING 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 IMPLEMENT (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.



To keep your HY-5G Steamer in proper working order, use the following procedure to clean the unit. This regular cleaning will reduce the effort required to clean the steam generators and cavities.

A. Suggested Tools

- a. Mild detergent
- b. Stainless steel exterior cleaner such as Zepper®
- c. Steam generator de-liming agent, such as Groen Delimer Descaler. A liquid de-liming agent will be easier to use than crystals or powders. See the warning about chlorides, below
- d. De-greaser
- e. Cloth or sponge
- f. Plastic wool or a brush with soft bristles
- g. Spray bottle
- h. Measuring cup
- i. Nylon pad
- j. Towels
- k. Plastic disposable gloves
- l. Funnel

B. Procedure

1. Outside
 - 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®.
2. Steam Generator and Cooking Chamber
Regular deliming, depending on your steamer usage and local water quality, must be done to enhance performance and prolong the life of your HyPerSteam™ convection steamer. Steamer must be turned off after every use to prevent lime scale buildup - do not run steamer continuously.

ALWAYS USE HOT PADS OR MITTS WHEN HANDLING HOT STEAMER PANELS OR RACKS.

RECOMMENDED TOOLS & CLEANERS:

- Groen Delimer/Descaler (Part Number [114800](#)). Do NOT use any product containing chlorides or sulfamic acid, including hydrochloric acid.
- Nylon scrub pad, cloth and/or sponge

Cleaning

CAUTION
NEVER LEAVE A CHLORINE SANITIZER IN CONTACT WITH STAINLESS STEEL SURFACES FOR LONGER THAN 30 MINUTES. LONGER CONTACT CAN CAUSE CORROSION.



Delimiting Port

DELIMITING STEPS HY-5G (Use Touch Pad):

STEP 1

Press ON/OFF to turn steamer off. Open door.

STEP 2

Let cavity cool for 5 minutes or longer. While cool, wipe out cavity. Close door.

STEP 3

Press and hold CLEAN while also turning steamer on by pressing ON/OFF, until only DELIME and POWER lights remain on (all lights will turn on, then off, except DELIME and POWER).

STEP 4

After 5 minutes, beeper will beep rapidly, signaling you to add Groen Delimer/ Descaler. Door(s) must remain closed for entire delime cycle.

STEP 5

Pour 1 pint (2 cups) of delimer PER CAVITY into upper and /or lower delimiting port(s) and then close port(s). Press CLEAN. Double-stacked unit cavities may be delimited together or separately

STEP 6

Delime cycle will start, taking about 30 minutes. When delime cycle is complete, DELIME light will appear, DONE light will flash and beeper will beep.

STEP 7

Press ON/OFF to turn steamer off. Let cavity cool for 5 minutes or longer. Open door, wipe out inside of cavity and wipe door gasket. Close door.

STEP 8

To use steamer, press ON/OFF. When READY light appears, steamer is ready to use.

NOTES:

- If DELIME light flashes rapidly (5 times per second), press DELIME to restart delime cycle.
- If power outage occurs during delimiting, delime cycle must be restarted. Press DELIME.
- For best performance, do not interrupt delime cycle. If delime cycle must be stopped, press ON/OFF to turn on. Set timer for 5 minutes. After beeper beeps, press ON/OFF to turn off. Let cavity cool for 5 minutes or longer, carefully open door(s) and wipe out cavity completely.

Maintenance

NOTE
THE UNIT CONTAINS NO FUSES THAT SHOULD
BE REPLACED BY THE OPERATOR.

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 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.

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

1. Check the door gasket. Replace 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. Turn the latch pin $\frac{1}{4}$ turn clockwise, and re-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

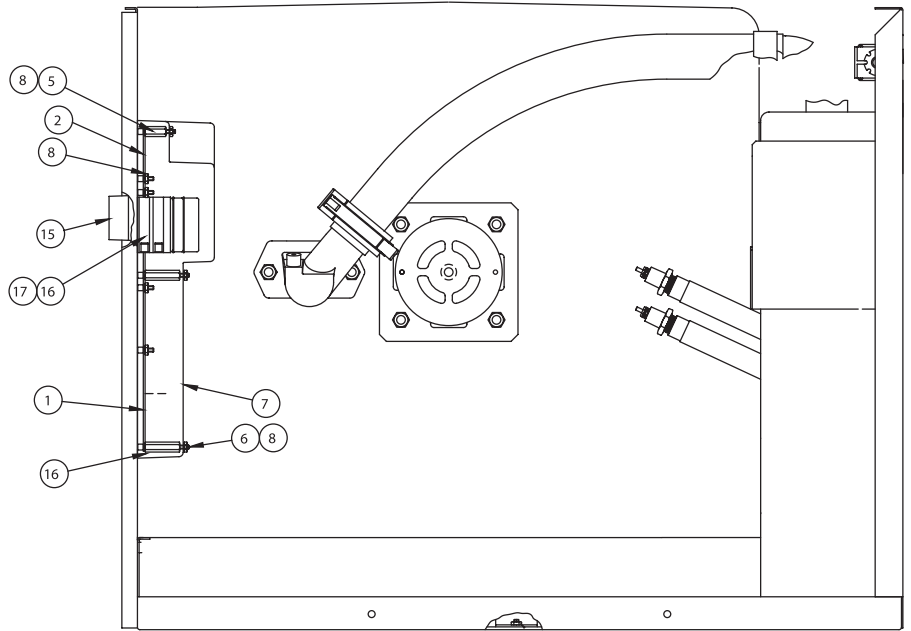
This Groen Steamer is designed to operate smoothly and efficiently if properly maintained. However, the following is a list of checks to make in the event of a problem. Wiring diagrams are furnished inside the service panel. If an item on the check list is marked with (X), it means that the work should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

SYMPTOM	WHO	WHAT TO CHECK
Pilot will not light.	User	<ul style="list-style-type: none"> 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?
	Authorized Service Rep Only	<ul style="list-style-type: none"> g. Is spark ignition cable connected to module? X
Steam generator does not fill with water.	User	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> a. Is the water spray hose kinked or obstructed?
	Authorized Service Rep Only	<ul style="list-style-type: none"> b. Is the water spray solenoid connected? X c. Is the drain properly vented? X

Parts List

Control & Timer Assembly

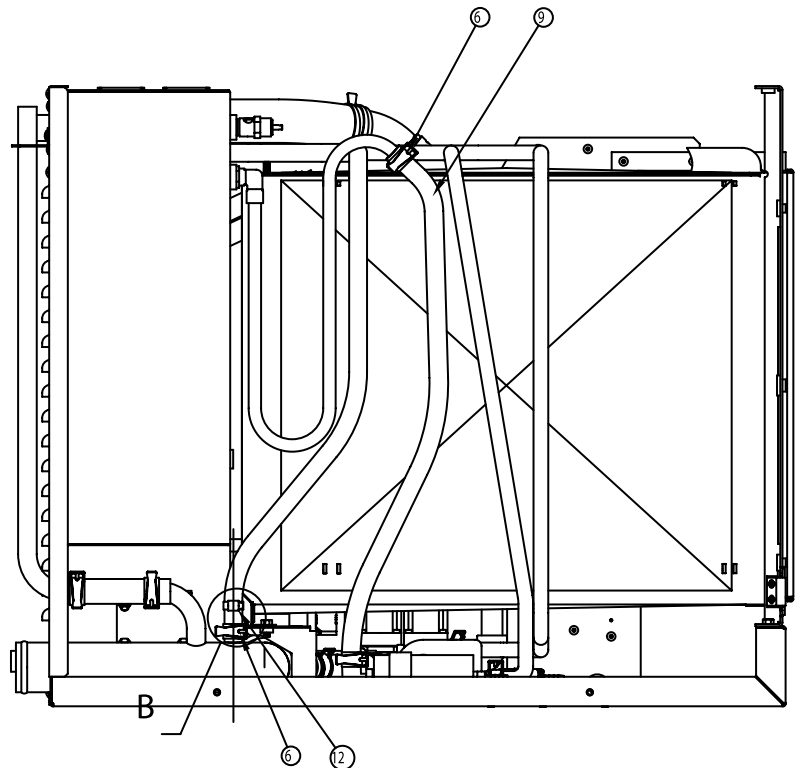
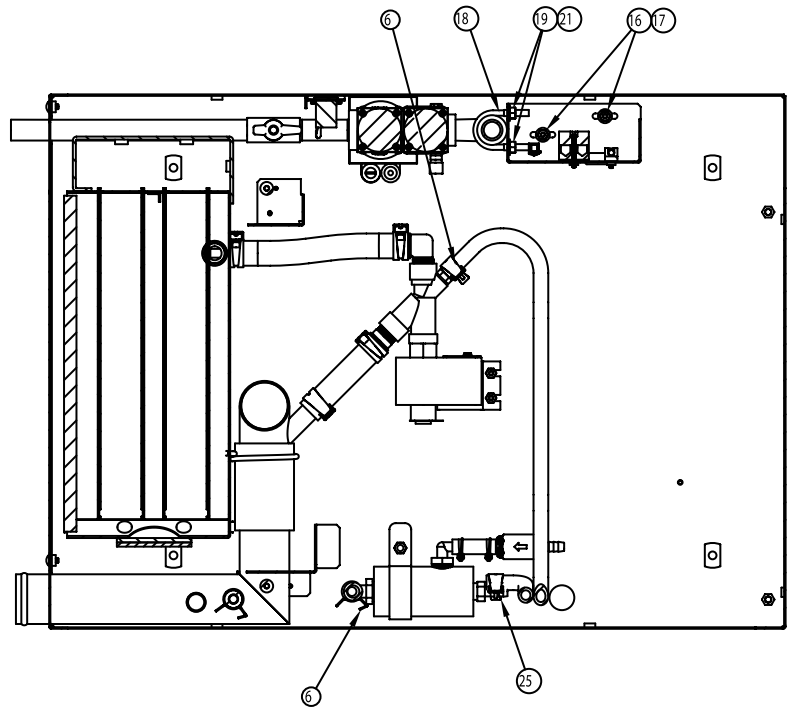
Key	Description	Part #
1	STEAMER CONTROL BOARD ASSEMBLY	141082
2	LIGHT & TIMER PC BOARD ASM	137233
5	STANDOFF, 6-32, 3/4" LONG	119826
6	STANDOFF, 6-32, 1-1/4" LONG	119827
7	COVER, PANEL CONTROL	143255
8	NUT, LOCK, NYLON INSERT, 6-32	119855
-	HARNESS, JUMPER, CONTROL BD TO RIBBON CONN	123122
-	HARNESS, TIMER MOTOR	123120
-	JUMPER, VOLTAGE SELECT, 120VAC	123123
-	HARNESS, TRANSFORMER 2	119871
-	HARNESS, READY SWITCH	119878
15	KNOB, TIMER	123100
16	TIMER, STEAMER, 24VAC, 60HZ	Z096826
17	NUT, ROTARY SHAFT SEAL, 3/8-32	101145
-	Sink Drain Fitting	099943
-	Upper Left Panel	123184
-	Top Panel	123182
-	Back Panel	125799



Parts List

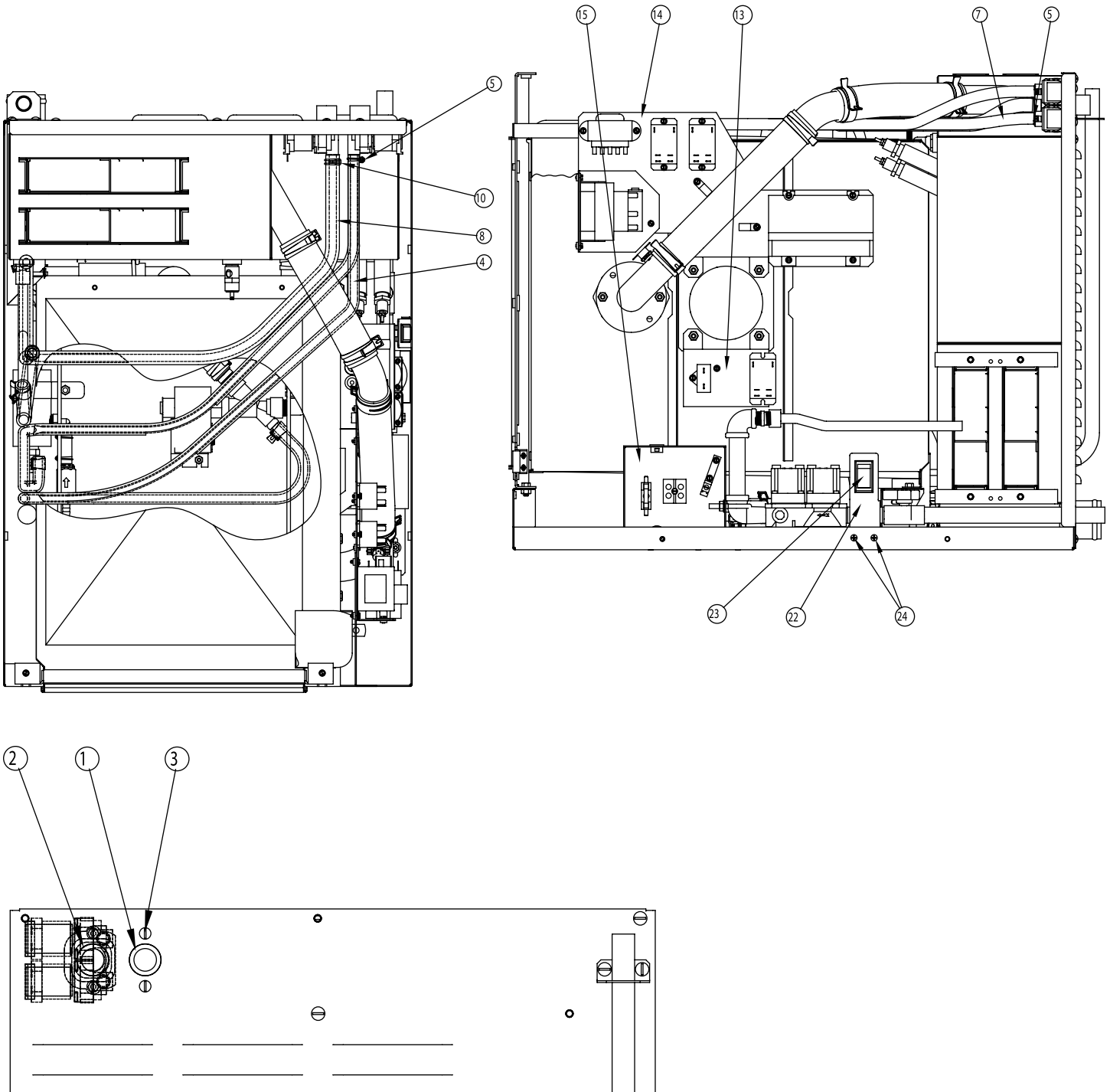
Electrical & Gas Assembly

Key	Description	Part #
1	VALVE, WATER, SINGLE WAY	100934
2	VALVE, WATER, SINGLE INLET, DUAL OUTLET	Z071235
3	SCREW, TRS HD, 8-32, 3/8" LONG	Z005764
4	HOSE, CLEAR PVC, 3/8" ID, WATER FILL, 64" LONG	138467
5	CLAMP, HOSE, DOUBLE WIRE, DW-9.5	127527
6	CLAMP, CONSTANT TENSION, CTB-19	126095
7	HOSE, CLEAR PVC, 3/8" ID, EDUCTOR, 46" LONG	138452
8	HOSE, BLACK RUBBER, 3/8 ID, CONDENSATE, 42" LONG	138468
9	HOSE, 1/2 I.D. X 24.0 LONG	138451
10	CLAMP, DOUBLE WIRE, DW-12	127662
11	REDUCER, WATER FLOW (.078 ID)	Z088877
-	CLAMP, HOSE, SS, 1/4 MIN, 25/32 MAX	Z093482
13	ASSEMBLY, ELECTRICAL, BOTTOM	138561
14	ASSEMBLY, ELECTRICAL, TOP	138551
15	ASSEMBLY, MAIN POWER BOX	138429
16	NUT, HEX KEPS, 10-32	Z071256
17	WASHER, FLAT, 10	Z010414
18	U BOLT, 1-1/8 ID, 1/4-20 THRD, FOR 3/4" PIPE	N87786
19	NUT, HEX SERRATED, 1/4-20	NT1101
-	ASSEMBLY, GAS TRAIN	142109
21	WASHER, PLAIN, 1/4	Z005472
22	BRACKET, SWITCH	106451
23	SWITCH, ROCKER, SP-ST	Z087951
24	SCREW, FLAT HEAD, PHILLIPS, 8-32, 3/8" LONG	127178
25	CLAMP, CONSTANT TENSION, CTB-16	127522
-	HARNESS, POWER	130397
-	HARNESS, DRAIN	130398
-	HARNESS, CONTROL HY-5G	141836
-	CABLE, HI VOLTAGE, SPARK IGNITION	106495
-	HARNESS, CONTROL BOARD	141084
32	SCREW, HEX WSHR HD, 10-32, 3/8" LONG	Z069773



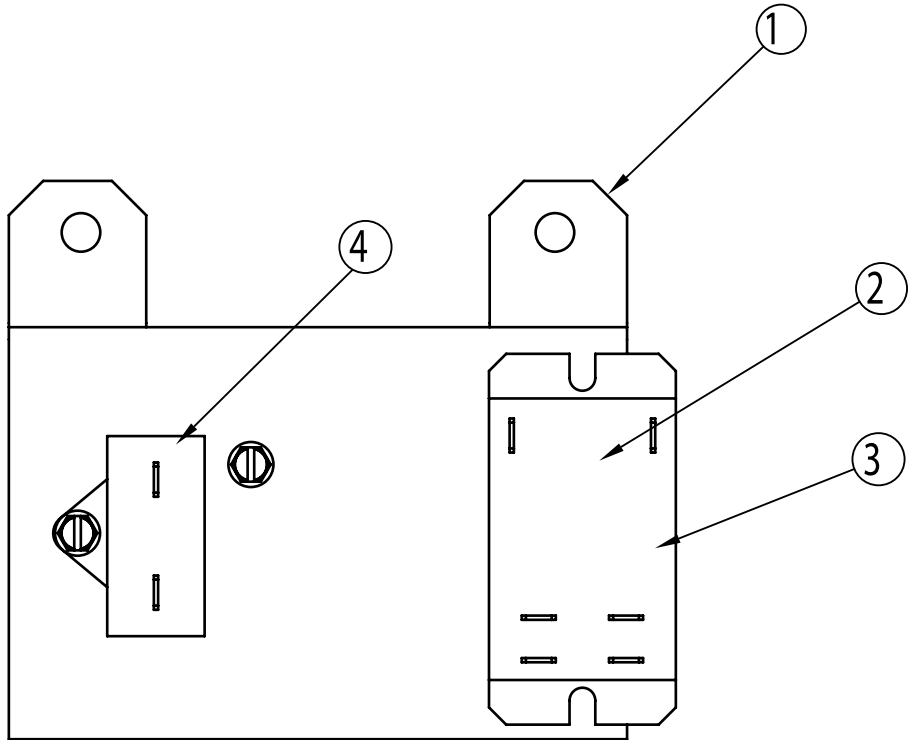
Parts List

Electrical & Gas Assembly



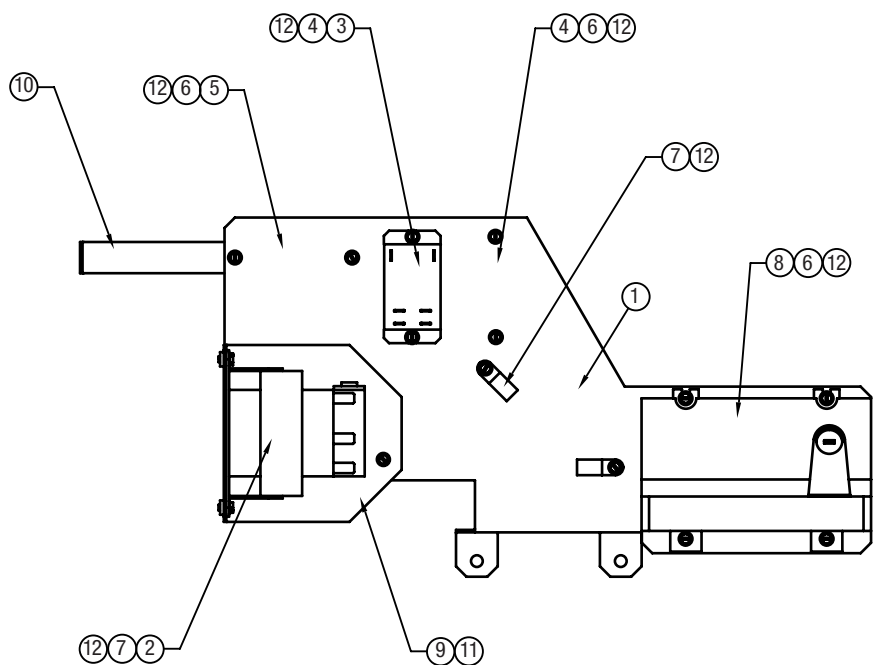
Parts List Bottom Electrical Assembly

Key	Description	Part #
1	WELDMENT, BOTTOM BRACKET	138455
2	SCREW, HEX WSHR HD, 6-32, 3/8" LONG	Z069788
3	RELAY, DPST, NO, 24VDC	138420
4	CAPACITOR, FOIL, 3 MFD	Z096813
-	LOCTITE, #242	Z073282



Parts List Top Electrical Assembly

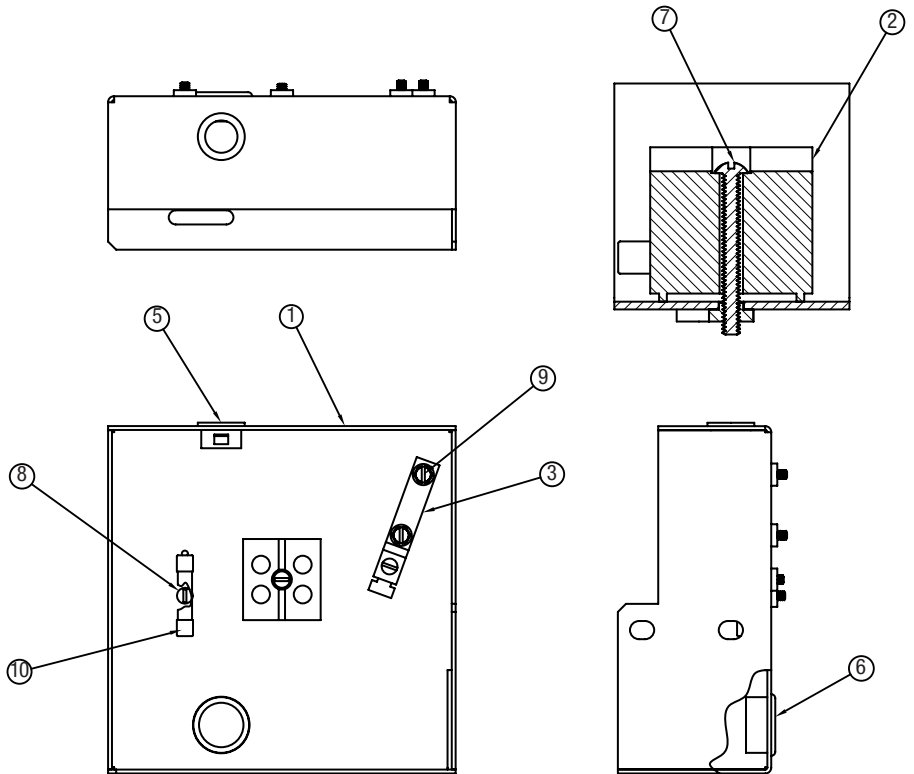
Key	Description	Part #
1	WELDMENT, TOP BRACKET	138453
2	TRANSFORMER, 75VA 120/24	121715
3	RELAY, CUTOUT, 24V	119814
4	RELAY, 12 VDC	119813
5	TRANSFORMER, 115V/230V:24V, 30VA	119815
6	SCREW, HEX WSHR HD, 6-32, 3/8" LONG	Z069788
7	SCREW, HEX WSHR HD, 6-32, 1/4" LONG	Z069777
8	IGNITION MODULE, GAS, 25V	Z085153
9	CLAMP, 1/2 DIA LOOP, NYLON	Z089343
10	WELDMENT, MOUNTING SUPPORT	138454
11	BRACKET, TRANSFORMER	148624
12	LOCTITE, #242	Z073282



Parts List

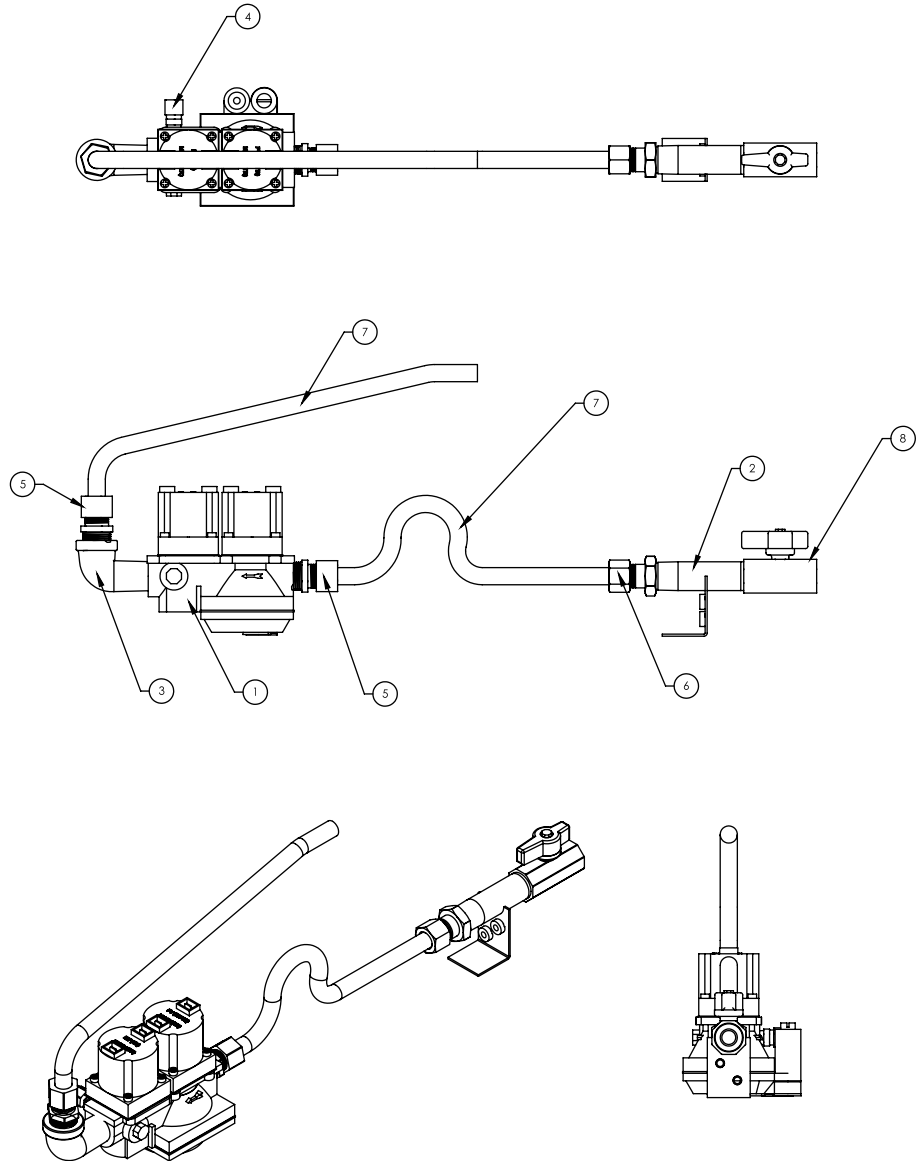
Main Power Box Assembly

Key	Description	Part #
1	WELDMENT, MAIN POWER BOX	138456
2	TERMINAL BLOCK, 2-POLE	Z003887
3	LUG, GROUND, #14 - #6 AWG	129714
4	FUSE HOLDER, TYPE 3 AG	Z077854
5	BUSHING, SNAP, 1/2 ID	Z009884
6	BUSHING, SNAP, 11/16 ID	Z012864
7	SCREW, RND HD, 6-32, 1-1/4" LONG	Z011236
8	SCREW, PAN HD, 6-32, 3/8" LONG	Z009697
9	SCREW, HEX WSHR HD, 6-32, 3/8" LONG	Z069788
10	FUSE, 3.0 AMP, TYPE 3 AG	Z077853
-	LOCTITE, #242	Z073282



Parts List Gas Train Assembly

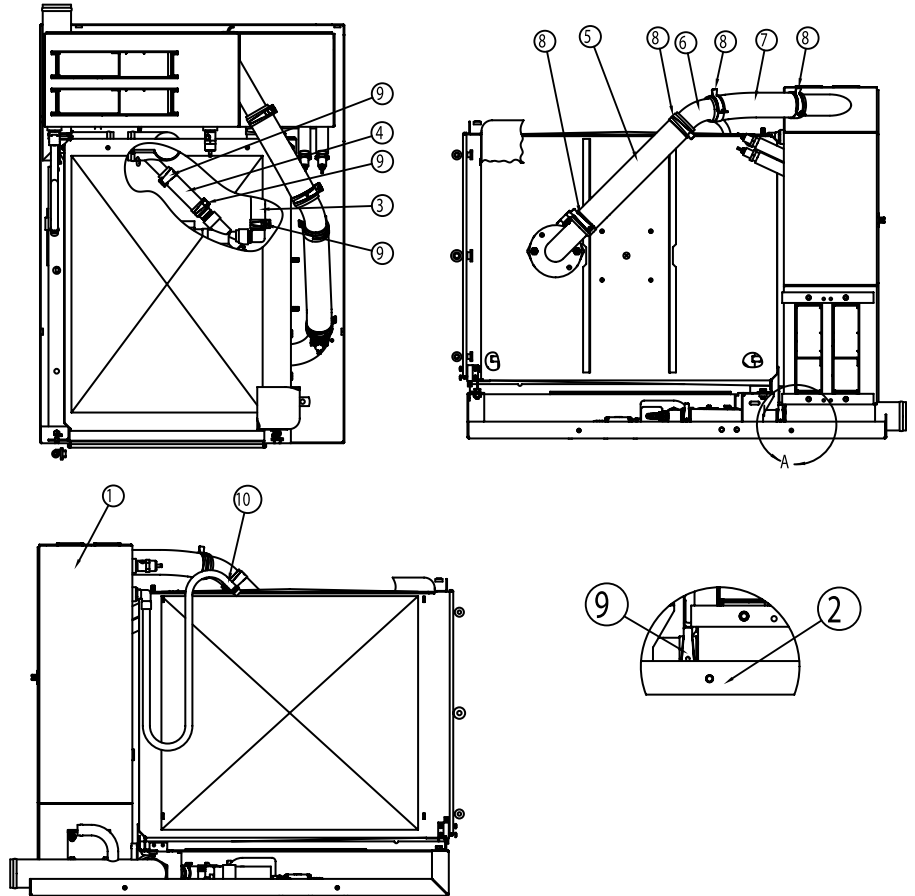
Key	Description	Part #
1	VALVE, GAS	Z098443
2	ASSEMBLY, PIPE BRACKET	171016
3	ELBOW, STREET, 90 DEG, 1/2 NPT	Z004185
4	CONNECTOR, STRAIGHT, 1/8 NPT TO 1/4 TUBE	Z075055
5	CONNECTOR, STRAIGHT, 3/8 NPT TO 1/2 TUBE	Z054494
6	CONNECTOR, STRAIGHT, 1/2 NPT TO 1/2 TUBE	171044
7	TUBING, FLEXIBLE, GAS, SS, 1/2 OD, 14" LONG	NT1561
8	VALVE, GAS, MANUAL SHUT-OFF, 1/2 NPT	Z098458
-	PIPE DOPE	Z078938
-	CAP, PROTECTOR, INTERNAL, 3/4 IPS	Z001252



Parts List

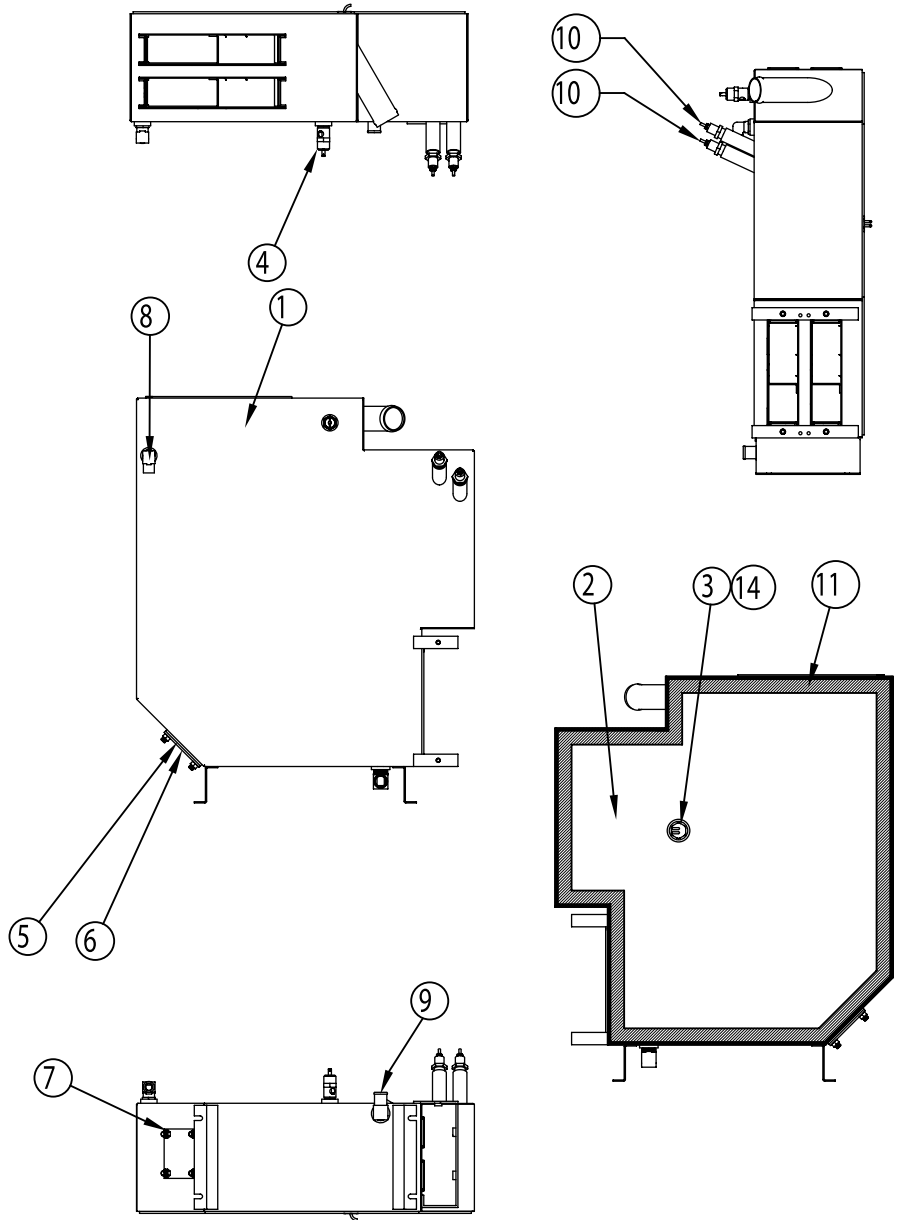
Steam Generator & Plumbing Assembly

Key	Description	Part #
1	ASSEMBLY, STEAM GENERATOR, HY-5G	141820
2	NUT, HEX SERRATED, 1/4-20	NT1101
3	HOSE, CLEAR PVC, REINFORCED, 3/4 ID, 7-3/8" LONG	138464
4	HOSE, CLEAR PVC, REINFORCED, 3/4 ID, 4" LONG BOILER DRAIN	138465
5	HOSE, SANTOPRENE, 1-1/2 ID, STEAM, 10-1/2 LONG	138445
6	TUBE, 45 DEG BEND, 1.50 OD, SS	138412
7	HOSE, SANTOPRENE, 1-1/2 ID, STEAM, 8-1/4 LONG	138446
8	CLAMP, HOSE, CONSTANT TENSION, CTB-47	127526
9	CLAMP, HOSE, CONSTANT TENSION, CTB-27	138457
10	TRAP, BOILER	106229



Parts List Steam Generator Assembly

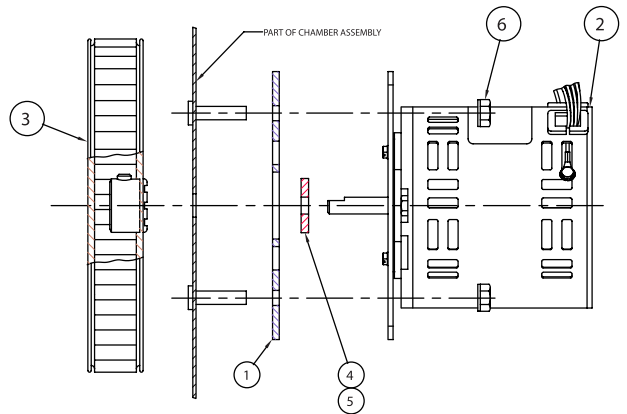
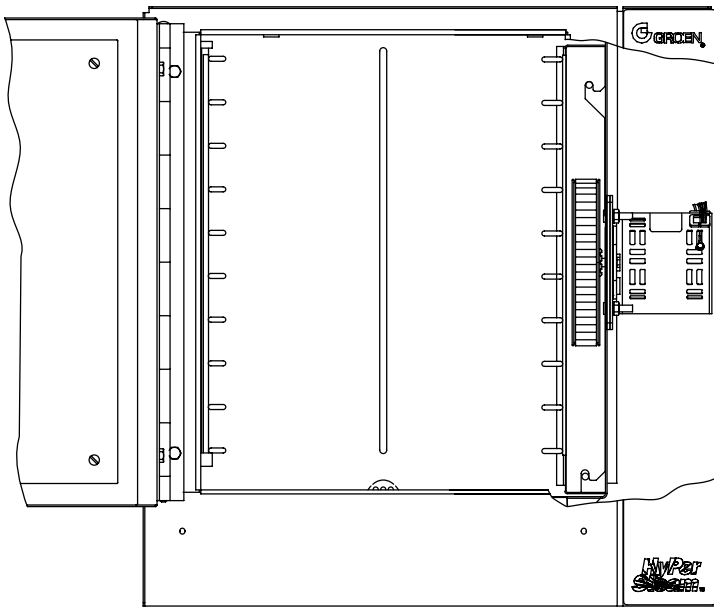
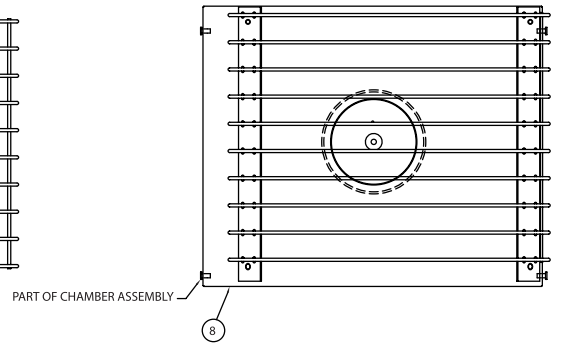
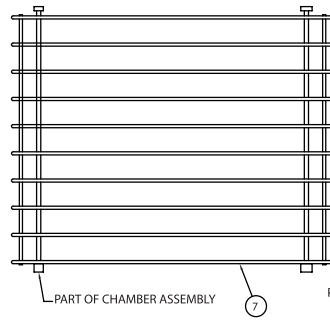
Key	Description	Part #
-	ASSEMBLY, STEAM GENERATOR, SERVICE, HY-5G	138521S
1	WELDMENT, STEAM GENERATOR, HY-5G	141821
2	INSULATION, STEAM GENERATOR, HY-5G	138588
3	SENSOR, OVER TEMP	Z096892
4	VALVE, PRESSURE RELIEF, 1/2 PSI, 3/8 NPT	140867
5	GASKET, DRAIN	106232
6	PLATE, DRAIN	106226
7	NUT, HEX KEPS, 5/16-18	Z012941
8	ELBOW, 90 DEG, COMPRESSION, 3/8 NPT TO 1/2" TUBE	Z090737
9	ELBOW, 90 DEG, COMPRESSION, 1/2 NPT TO 3/4" TUBE	138442
10	PROBE, WATER LEVEL	141424
-	PIPE DOPE	Z078938
-	TAPE, DUCT, 3" WIDE	Z042359
14	SLEEVING, VARGLAS, 7/16	152010



Parts List

Blower/Rack Assembly

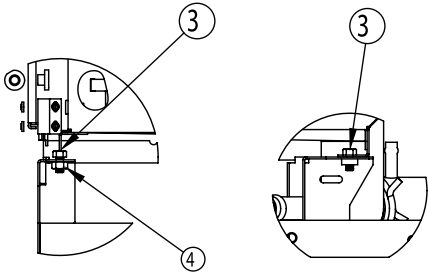
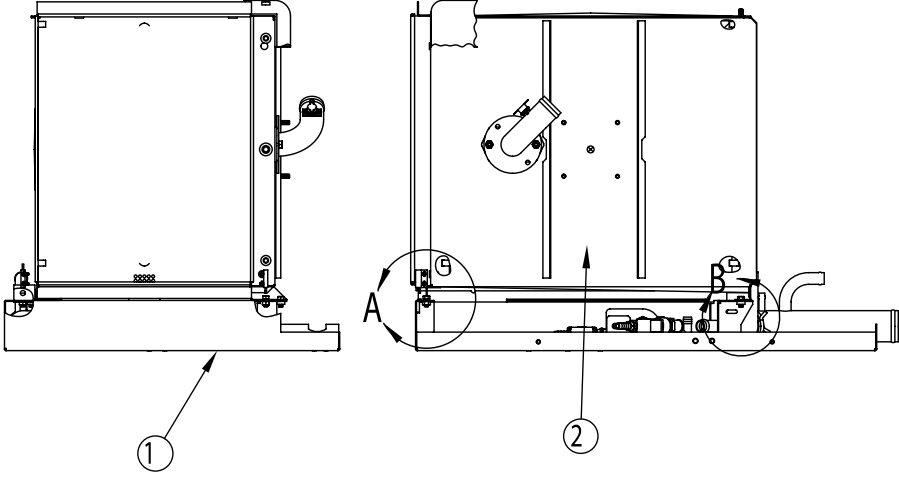
Key	Description	Part #
1	INSULATOR, MOTOR	Z094135
2	MOTOR, BLOWER	146880
3	WHEEL, BLOWER	Z096790
4	SEAL MOTOR	Z096868
5	LUBRICANT, MOTOR SHAFT SEAL	Z099948
6	NUT, HEX SERRATED, 1/4-20	NT1101
7	WIREFORM	NT1801
8	ASSEMBLY, BLOWER COVER, HY-5	162915



Parts List

Base & Cavity Assembly

Key	Description	Part #
1	BASE PAN ASSEMBLY	142128
2	CAVITY & DRAIN ASSEMBLY	138550
3	SCREW, HEX HEAD CAP, 1/4-20, 1/2" LONG	Z005608
4	NUT, HEX SERRATED, 1/4-20	NT1101
-	LOCTITE, #242	-



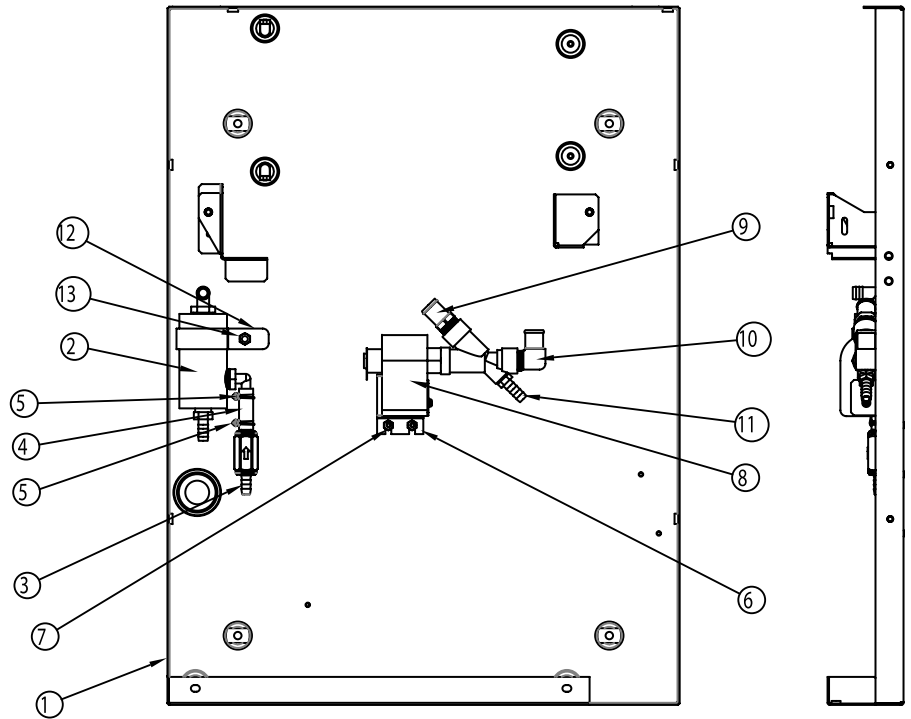
DETAIL A

DETAIL B

Parts List

Base Pan Assembly

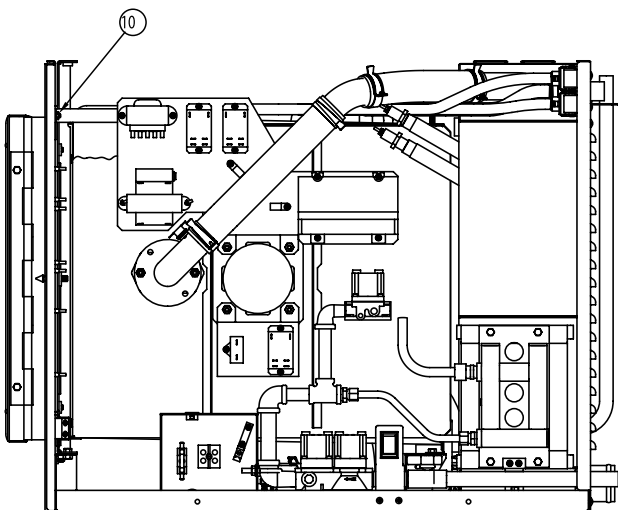
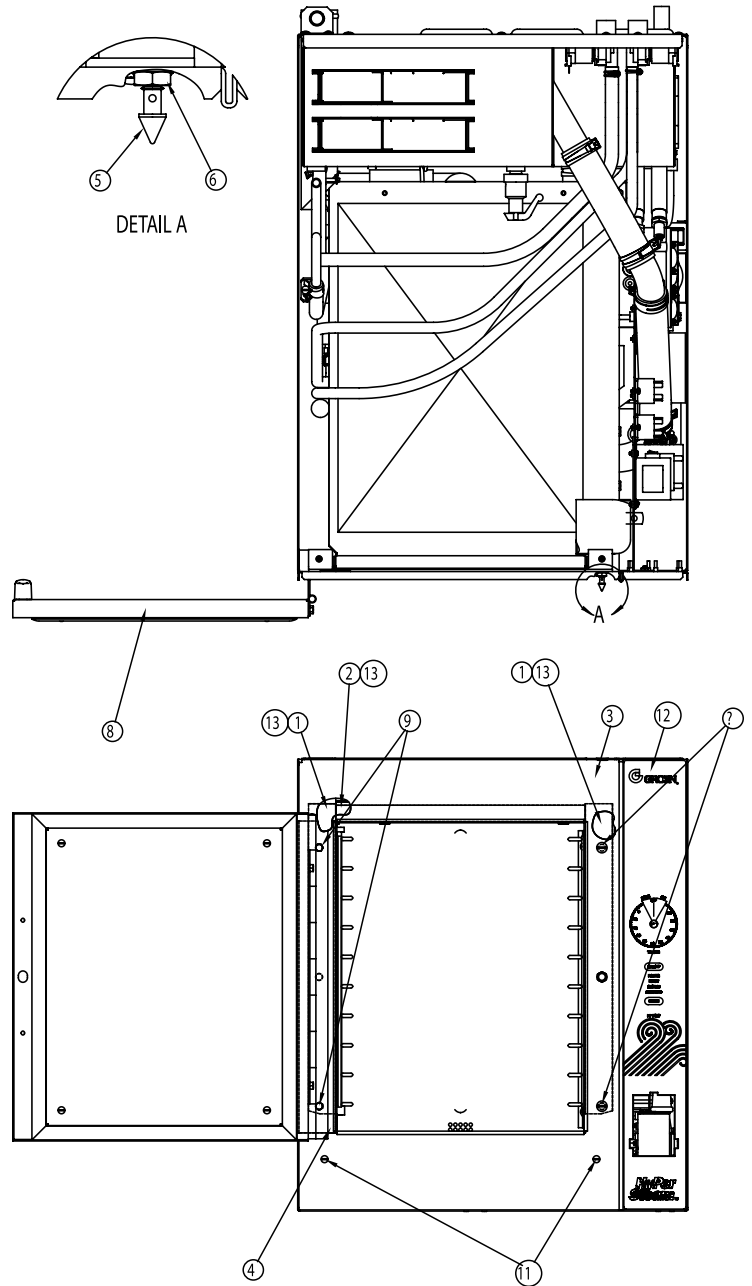
Key	Description	Part #
1	WELDMENT, BASE PAN HY-5G	138500
2	DELIME EDUCTOR ASSEMBLY HY-5G	142131
3	VALVE, CHECK, 3/8 HOSE BARB	138428
4	HOSE, REINFORCED PVC, CLEAR, 3/8 ID, 1-3/4" LONG	138448
5	CLAMP, HOSE, DOUBLE WIRE, DW-9.5	127527
6	BRACKET, DRAIN VALVE	138592
7	NUT, HEX KEPS, 10-32	Z071256
8	VALVE, SOLENOID, 1/2 NPT, 24 VAC	Z074594
9	FITTING, STRAIGHT, 1/2 NPT TO 3/4 HOSE	138441
10	ELBOW, 90 DEG, 1/2 NPT TO 3/4 HOSE	138442
11	FITTING, 1/4 NPT TO 3/8 HOSE BARB	Z069732
12	STRAP, PIPE, 1-1/2"	141693
13	NUT, HEX SERRATED, 1/4-20	NT1101
-	LOCTITE, #242	-
-	PIPE DOPE	-



Parts List

Door & Front Panel Assembly

Key	Description	Part #
1	INSULATION, LEFT AND RIGHT	125929
2	INSULATION TOP	Z096846
3	WELDMENT, FRONT PANEL, W/DELIME PORT	138539
4	PANEL, FRONT, LEFT SIDE	125947
5	PIN, DOOR LATCH	Z078914
6	NUT, HEX JAM, 5/16-18	Z003823
7	SCREW, TRUSS HEAD, 1/4-20, 1/2" LONG	Z012700
8	ASSEMBLY, DOOR, 5-PAN	125922
9	SCREW, HEX HD CAP, 1/4-20, 1/2" LONG	Z005608
10	NUT, HEX KEPS, 10-32	Z071256
11	SHOULDER SCREW - DRIP TRAY	Z070467
12	OVERLAY, PANEL FRONT W/ DELIME	138424
-	LOCTITE, #242	-
13	SILICONE, CLEAR	-



Parts List

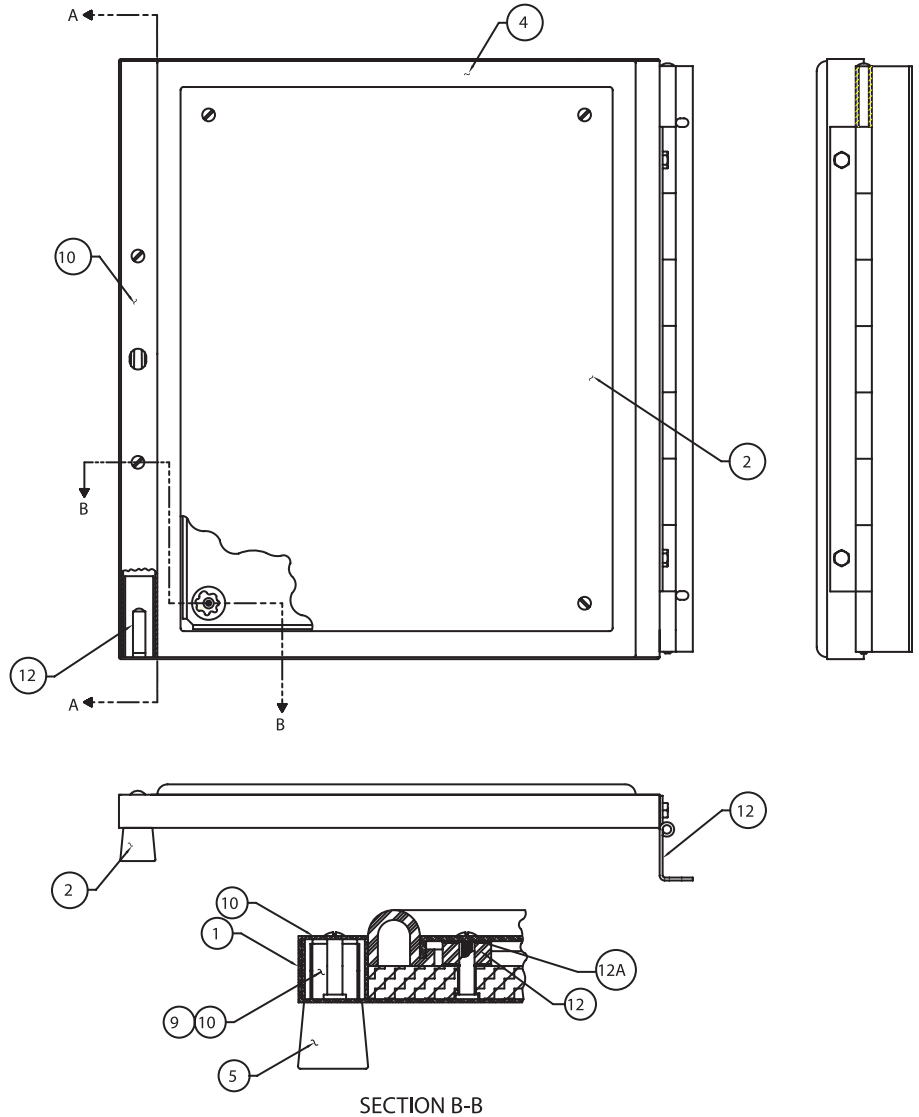
Delime Educator Assembly

Description	Part #
BODY, EDUCTOR, ROUND	141241
EDUCTOR, ORIFICE (0.107 IN)	141240
ELBOW, 90 DEGREES, 1/2 NPT TO 1/2 HOSE BARB	106613
ELBOW, 90 DEG, 1/2 NPT TO 3/8 HOSE BARB	139126
MALE ADAPTER, 3/8 NPT TO 3/8 HOSE BARB	106614
PIPE DOPE	-

Parts List

Door & Front Panel Assembly

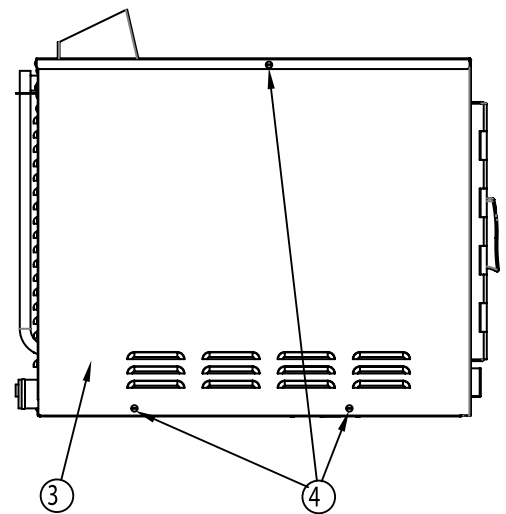
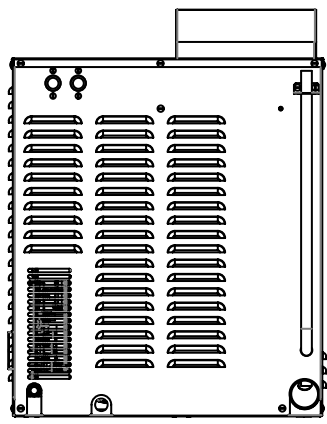
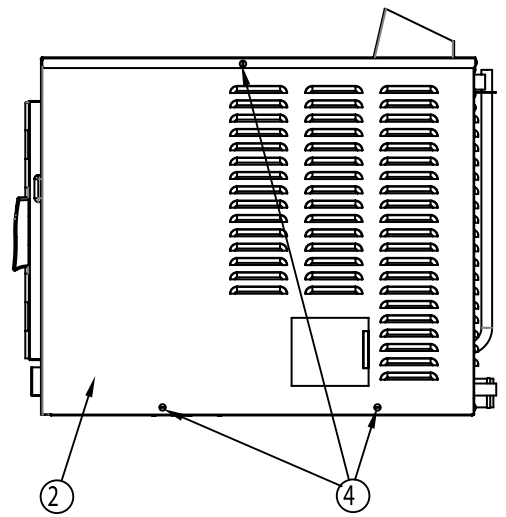
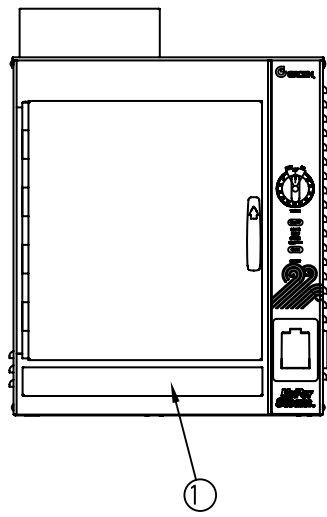
Key	Description	Part #
1	WELDMENT, DOOR, FRONT PANEL, 5-PAN	125923
2	PANEL, GASKET RETENTION, 5-PAN	125927
4	GASKET, DOOR, 5-PAN	125907
5	HANDLE	129723
6	CAM, DOOR, UNLATCH LIFT	Z074252
6a	BRACKET, DOOR CAM, LEFT	Z074255
6b	BRACKET, DOOR CAM, RIGHT	Z074254
6c	PLATE, BASE, DOOR CAM	Z074253
7	SCREW, PHILLIPS HD, 8-32, 3/8" LONG	129732
8	BRACKET, DOOR LATCH	125925
9	SPRING	Z078911
10	ROLLER, SPRING	Z078912
10	CLIP, SPRING RETAINER	Z081616
11	SPACER, DOOR LATCH	Z094146
12	MAGNET, DOOR	Z069754
12a	BLOCK, MAGNET MOUNTING	Z069755
14	HINGE, DOOR, 5-PAN	125928
15	SCREW, CAP, HEX HD, 1/4-20, 1/2" LONG	Z005608
-	BOARD, INSULATION, 5-PAN	125926
-	SPACER, INSIDE DOOR PANEL	Z071206
-	NUT, HEX KEPS, 10-32	Z071256
-	COMPOUND, LUBRICATING	-
-	SEALANT, RED, RTV 159	-
-	SILICONE, ALUMINUM	-
-	LOCTITE 242	-



Parts List

Side Cover Kit

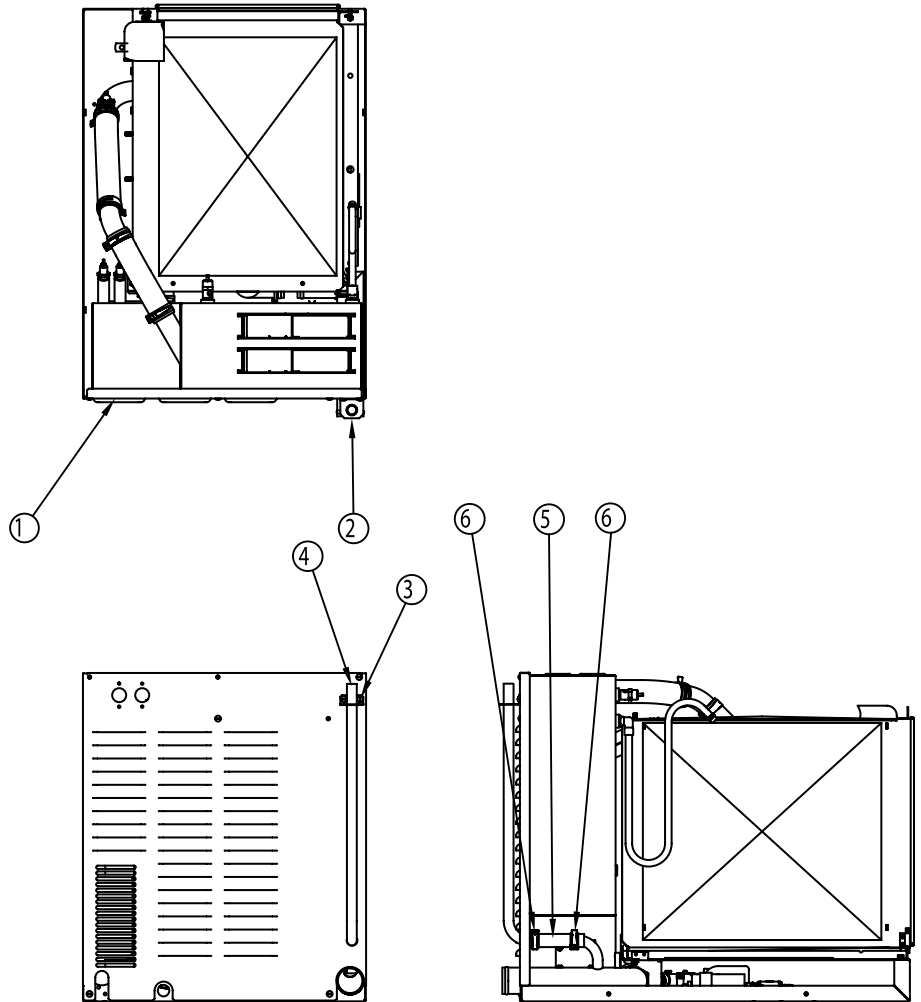
Key	Description	Part #
1	TRAY DRIP	Z094151
2	WELDMENT, COVER, RIGHT SIDE	138532
3	WELDMENT, COVER, LEFT SIDE	138534
4	SCREW TRS HD 10-32 X 3/8"	Z004173



Parts List

Rear Cover & Vent Assembly

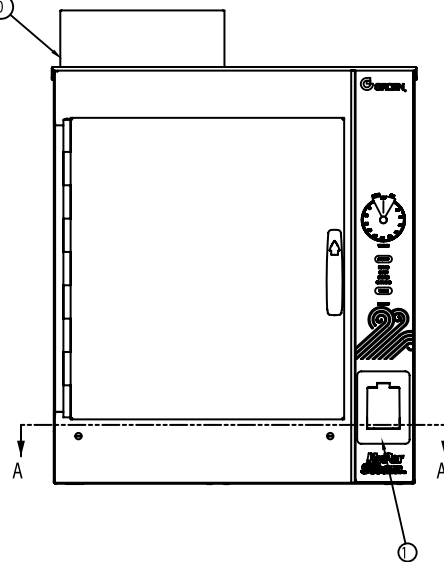
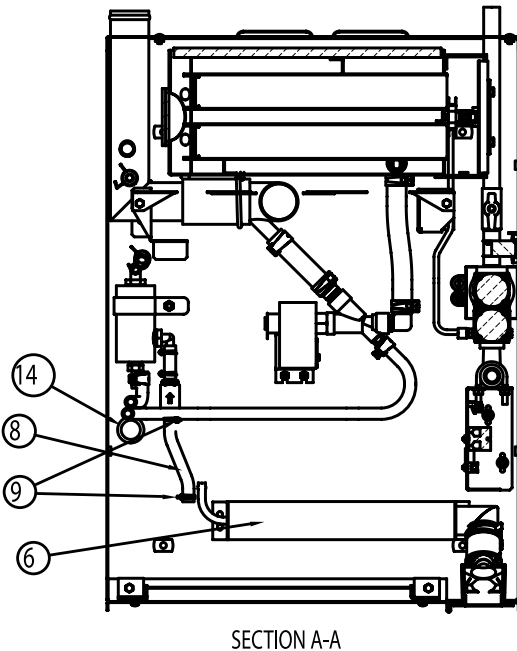
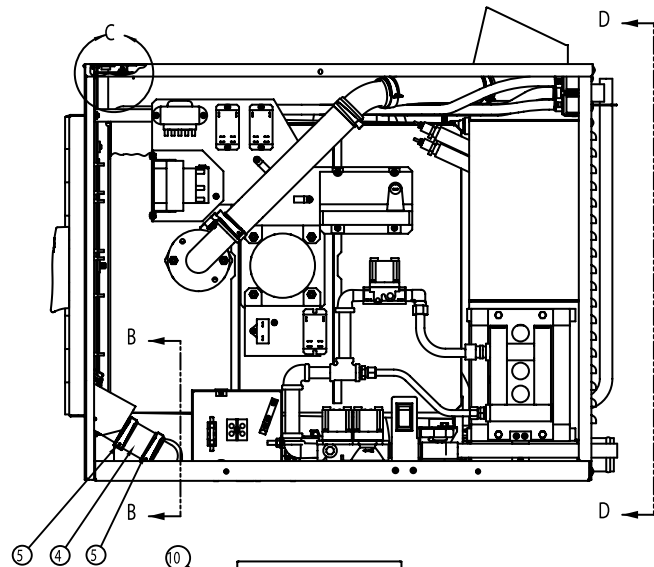
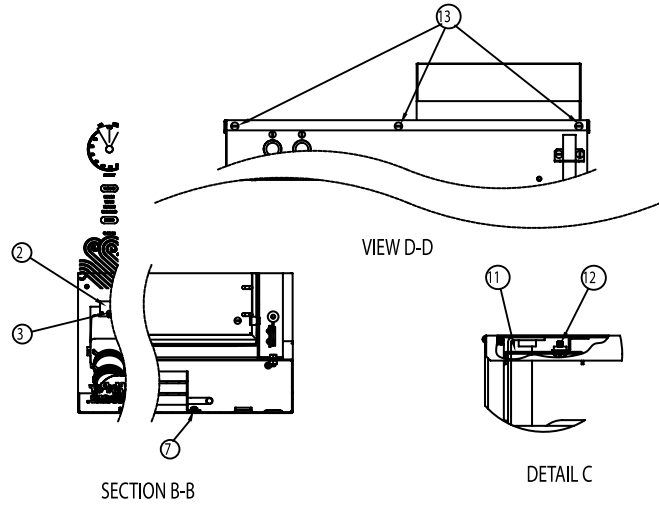
Key	Description	Part #
1	WELDMENT, REAR COVER	138530
2	BRACKET, STEAM VENT	138413
3	SCREW, TRS HD, 10-32, 3/8" LONG	Z004173
4	TUBE, STEAM VENT	138544
5	HOSE, SANTOPRENE, 3/4 ID, STEAM VENT, 4-1/2" LONG	138463
6	CLAMP, CONSTANT TENSION, CTB-24	127524
-	LOCTITE, #242	-



Parts List

Single Unit Stacking Kit

Key	Description	Part #
1	ASSEMBLY, FUNNEL	106624
2	KEEPER	106531
3	SCREW, PHILLIPS PAN HEAD, SELF-TAPPING, #8	106591
4	HOSE, SANTOPRENE, 1-1/2 ID, CLEANOUT, 2-1/2" LONG	106580
5	CLAMP, CONSTANT TENSION, CTB-47	127526
6	WELDMENT, DELIME TUBE ASSEMBLY	138415
7	NUT, HEX KEPS, 10-32	Z071256
8	HOSE, REINFORCED PVC, CLEAR, 3/8" ID, 4" LONG	138449
9	CLAMP, HOSE, DOUBLE WIRE, DW-9.5	127527
10	WELDMENT, TOP COVER	138536
11	BRKT, TOP RETAINER	123156
12	SCREW, TRS HD, 8-32, 3/8" LONG	Z005764
13	SCREW, TRS HD, 10-32, 3/8" LONG	Z004173
14	PLUG, 1" SNAP IN, POLYETHYLENE	139000



Parts List

Double Unit Stacking Kit

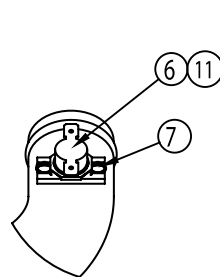
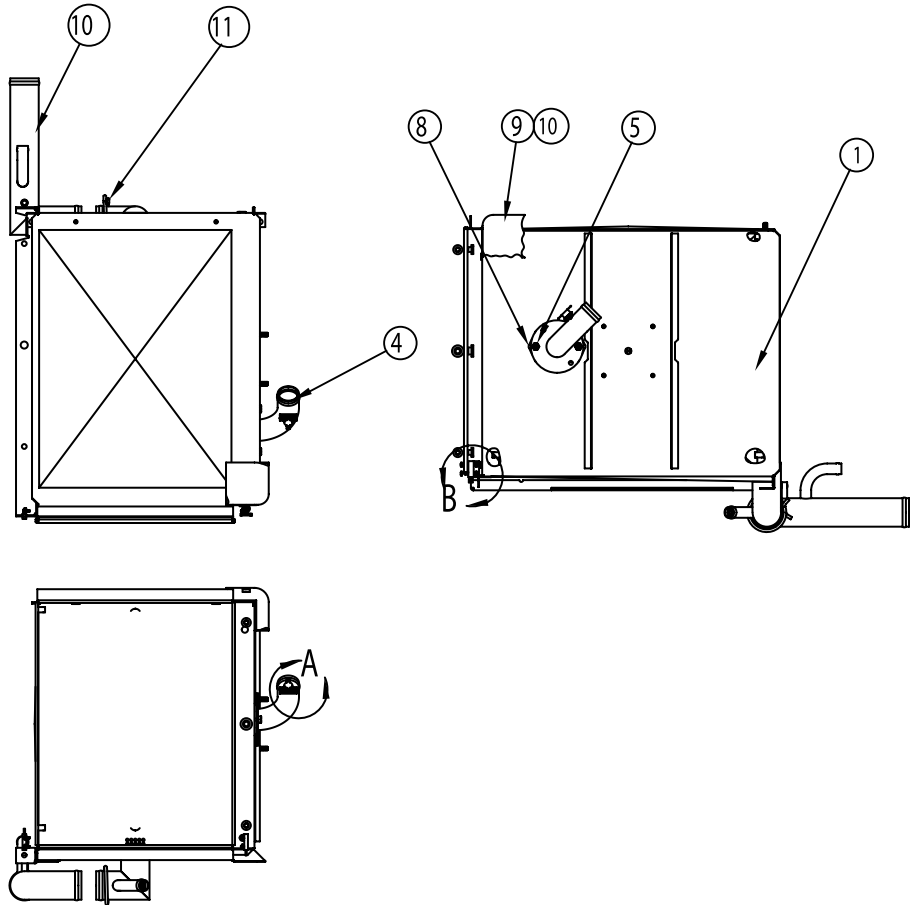
Description	Part #
ASSEMBLY, FUNNEL	106624
ASSEMBLY, HORIZONTAL FLUE	138405
BRACKET, MOUNTING VERTICAL	138409
BRACKET, TOP RETAINER D/S	138410
CLAMP	106530
CLAMP, CONSTANT TENSION, CTB-47	127526
CLAMP, HOSE, 2-1/2 DIA	Z013616
CLAMP, HOSE, DOUBLE WIRE, DW-9.5	127527
CLAMP, HOSE, WORM DRIVE, 1-1/2"	Z099284
CONNECTOR, HOSE, 2 WAY, 3/4 NGH	101189
TEE, DRAIN, 2"	126003
HOSE ASM, WATER, 3/8 ID, 28" LONG	138470
HOSE, DRAIN, 2 ID, 2" LONG	Z090742
HOSE, REINFORCED PVC, CLEAR, 3/8" ID, 1-3/4" LONG	138448
HOSE, REINFORCED PVC, CLEAR, 3/8" ID, 54" LONG	138450
HOSE, SANTOPRENE, 1-1/2 ID, CLEANOUT, 2-1/2" LONG	106580
HOSE, SANTOPRENE, 3/4 ID, VENT CONNECTION, 4-1/2" LONG	138463
HOSE, SILICONE, REINFORCED, 2 ID, 26" LONG	138471
KEEPER	106531
LOCTITE, #242	-
NUT, HEX KEPS, 10-32	Z071256
SCREW, HEX HEAD CAP, 1/4-20, 3/4" LONG	Z005609
SCREW, HEX HEAD CAP, 3/8-16, 5/8" LONG	Z005449
SCREW, PHILLIPS PAN HEAD, SELF-TAPPING, #8	106591

Description	Part #
SCREW, TRS HD, 10-32, 3/8" LONG	Z004173
SCREW, TRS HD, 8-32, 3/8" LONG	Z005764
TEE, 3/8 HOSE BARB	138432
WASHER, FLAT, 10	Z010414
WASHER, FLAT, 3/8	Z005830
WASHER, HOSE, 3/4	122143
WASHER, LOCK, SPLIT, 3/8	Z005618
WASHER, PLAIN, 1/4	Z005472
WELDMENT, DELIME TUBE ASSEMBLY	138415
WELDMENT, DRAIN & STEAM VENT	138458
WELDMENT, FRONT DOUBLE STACK	139002
WELDMENT, SKIRT SPACER - HY-5G	138594
WELDMENT, TOP COVER	138536
WELDMENT, VERTICAL FLUE	138401

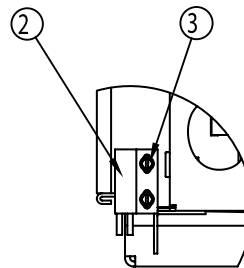
Parts List

Cavity & Drain Assembly

Key	Description	Part #
1	WELDMENT, CAVITY ASSEMBLY, HY-5G	138549
2	SWITCH, DOOR	Z096857
3	SCREW #4-40 X 3/8" HEX MS	106422
4	WELDMENT, STEAM-IN MANIFOLD	138419
5	NUT- HEXSERRATEDZINC 1/4-20	NT1101
6	THERMOSTAT, SNAP-DISK	Z099947
7	SCREW, RND HD, 6-32, 3/16" LONG	Z058599
8	GASKET, STEAM-IN MANIFOLD	Z099250
9	INSULATION, CAVITY	125936
10	WELDMENT, DRAIN EXTENSION	138546
11	HOSE, REINFORCED SILICONE, 2 ID, 3-1/2" LONG	125955
12	CLAMP, SINGLE WIRE, HC-38	126010
-	HEAT SINK COMPOUND	-
-	LOCTITE, #242	-
-	TAPE, DUCT, 3" WIDE	-



DETAIL A

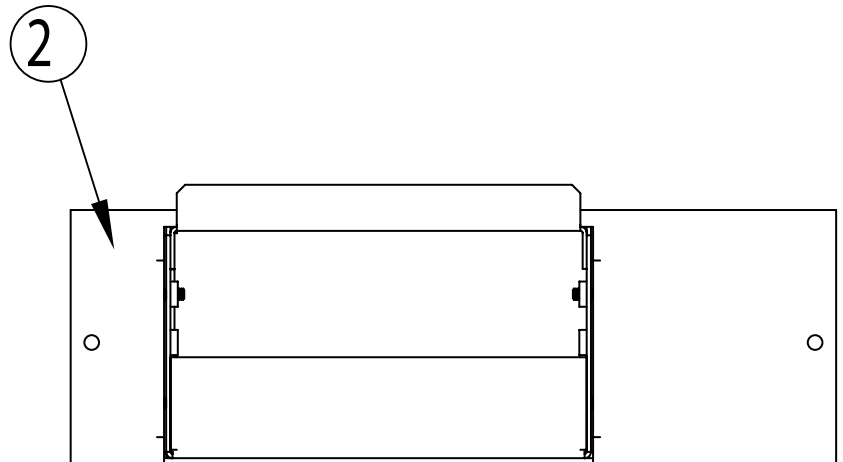
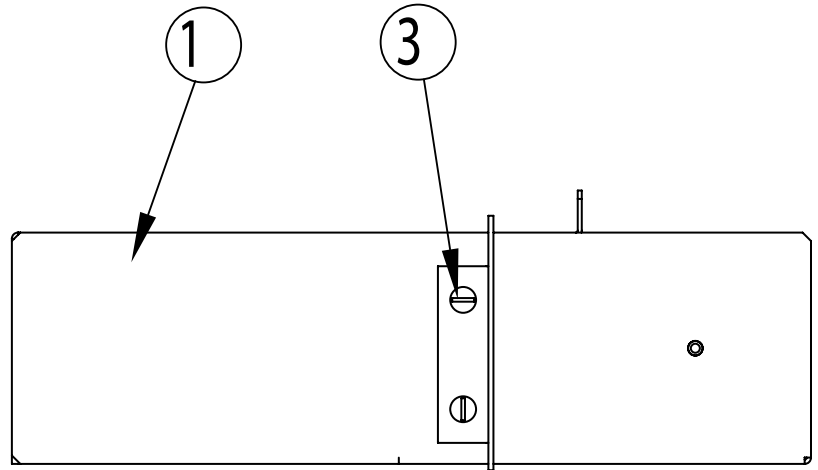


DETAIL B

Parts List

Horizontal Flue Assembly

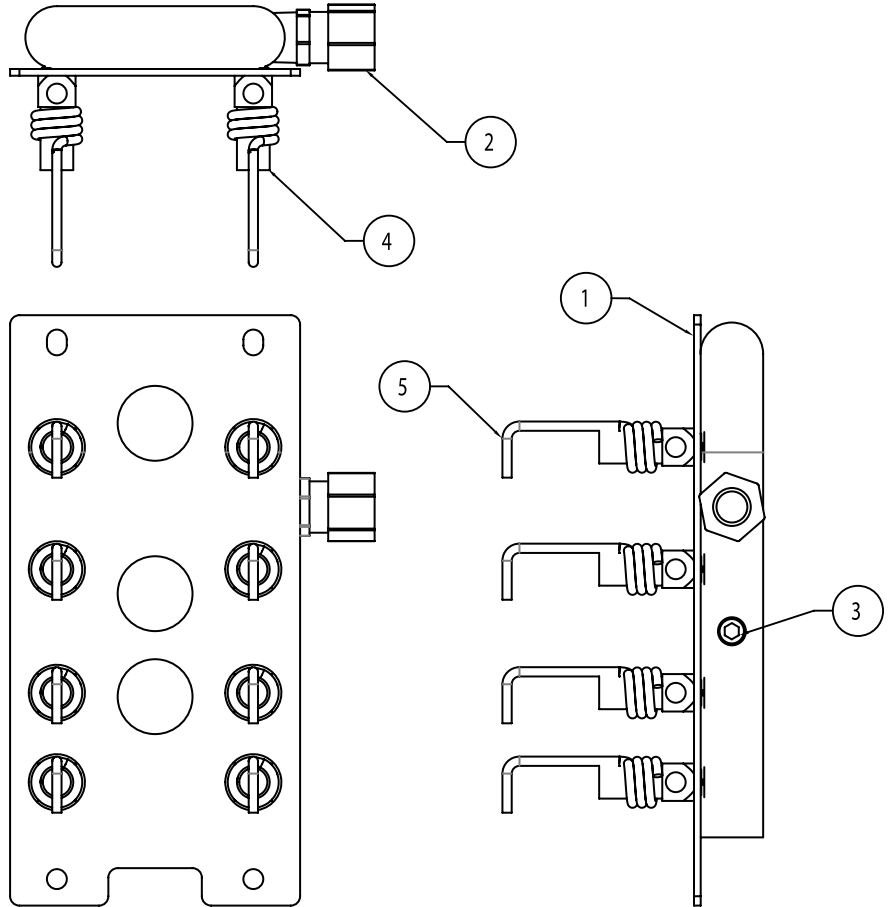
Key	Description	Part #
1	WELDMENT, HORIZONTAL FLUE	138406
2	COVER, BRACKET, HORIZONTAL FLUE	138598
3	SCREW, TRS HD, 8-32, 3/8" LONG	Z005764



Parts List

Burner Manifold Assembly

Key	Description	Part #
1	WELDMENT, BURNER MANIFOLD	171704
2	CONNECTOR, 3/8 NPT TO 1/2 TUBE, COMPRESSION	Z054493
3	PLUG, PIPE, 1/8 NPT, RECESSED HEX	Z010286
4	BURNER JET (PER ELEVATION /GAS TYPE TABLE)	see below
5	SPREADER, FLAME	Z056965
-	SCREW, FILLISTER HEAD, SLOTTED, 10-32, 1/4" LONG	Z090797
-	SCREW, CAP, HEX HD, 1/4-20, 1/2" LONG	Z005608
-	SCREW, HEX HD, SLOTTED 8-32, 3/8" LONG	Z069789
-	SHIELD, FLAME	138466
-	TUBE, PILOT CONTROL, 1/4" DIA	138427
-	WELDMENT, PILOT BRACKET	138571
-	PILOT, NATURAL GAS	Z098649
-	KIT, CONVERSION TO PROPANE	Z079802
-	PILOT, PROPANE	Z098642



NATURAL GAS BURNER JETS		
0-2000'	BURNER JET #640 (0.0550)-1/8 NPT	Z090854
2001-4000'	BURNER JET #640 (0.0520)-1/8 NPT	Z090856
4001-6000'	BURNER JET #640 (0.0512)-1/8 NPT	Z090857
6001-8000'	BURNER JET #640 (0.0492)-1/8 NPT	Z090858
8001-10000'	BURNER JET #640 1.20MM (0.0472)-1/8 NPT	Z090859

PROPANE GAS BURNER JETS		
0-2000'	BURNER JET #640 (0.0310)-1/8 NPT	Z090867
2001-4000'	BURNER JET #640 (0.0310)-1/8 NPT	Z090867
4001-6000'	BURNER JET #640 (0.0295)-1/8 NPT	Z090868
6001-8000'	BURNER JET #640 (0.0280)-1/8 NPT	112608
8001-10000'	BURNER JET #640 (0.0276)-1/8 NPT	155842

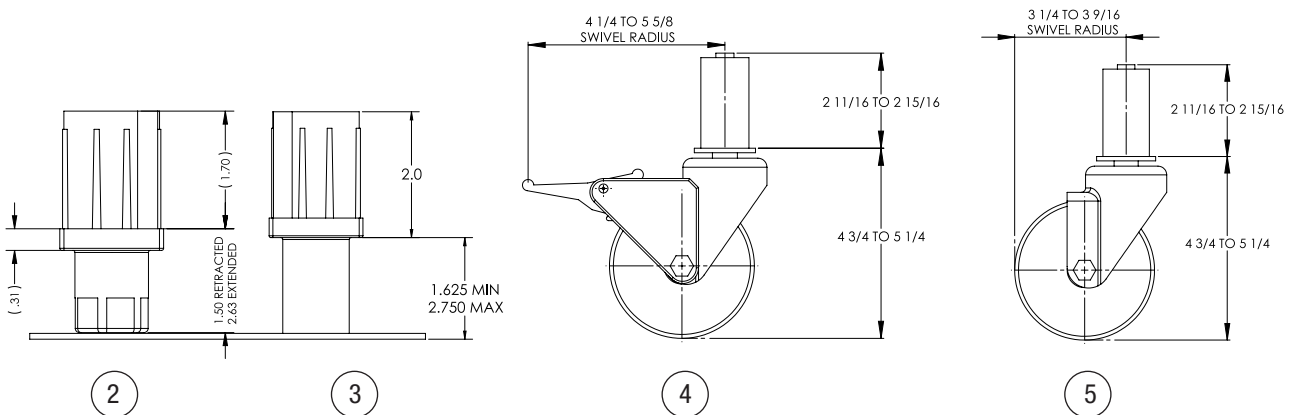
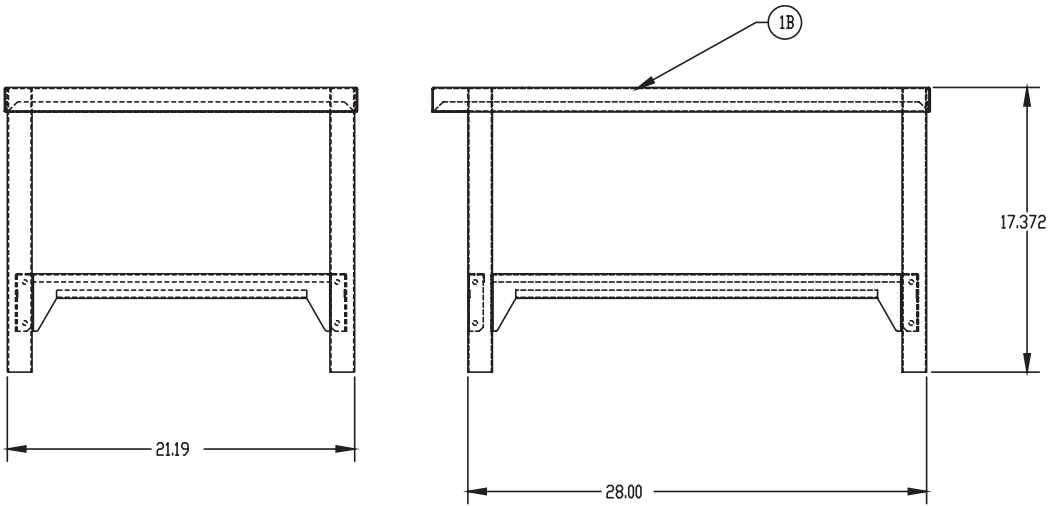
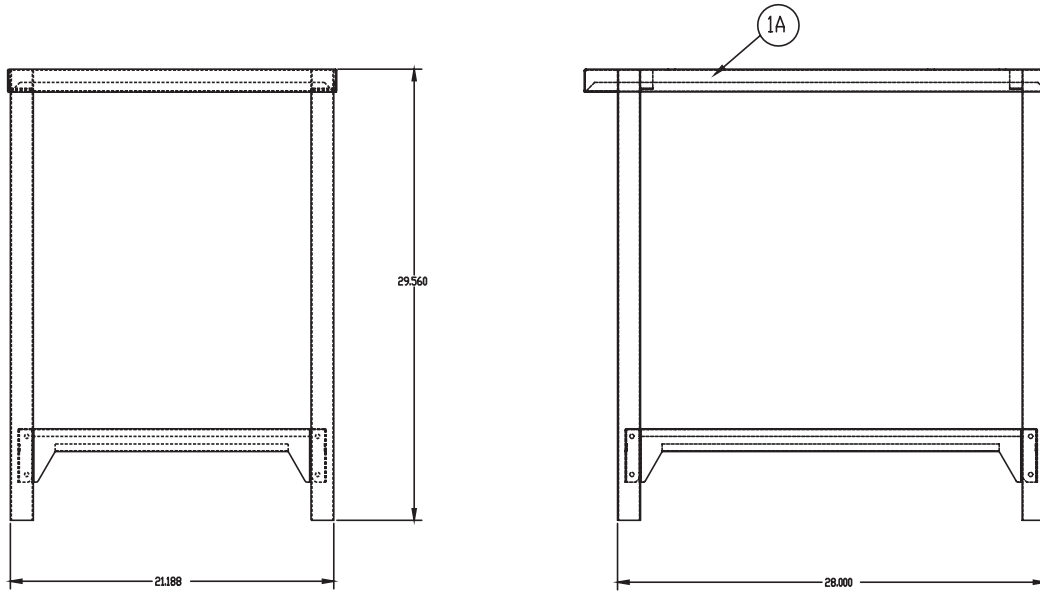
Parts List

Single & Double Stands

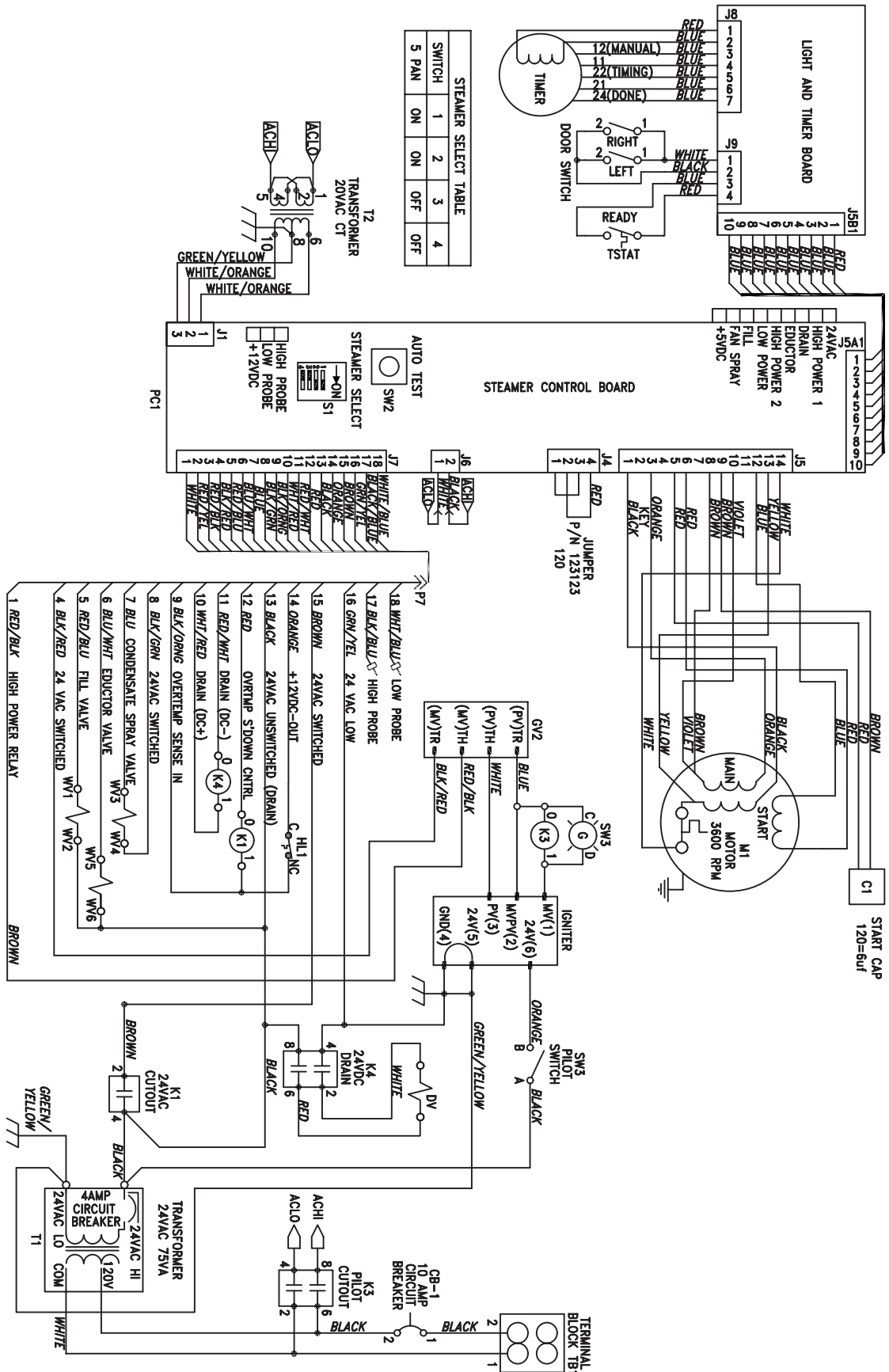
Key	Description	Part #	HY-5G	(2)HY-5G
1A	WELDMENT, STAND, 29-9/16 H, 21-3/16 W, 28 D	143672	X	
1B	WELDMENT, STAND, 12-1/2 H, 21-3/16 W, 28 D	138580		X
2	INSERT, BULLET FOOT, 1-1/2 TUBE	Z042505	X	X
3	INSERT, FLANGED FOOT, 1-1/2 TUBE	Z097615	X	X
4	CASTER, LOCKING, 1-1/2 TUBE	140115	X	X
5	CASTER, NON-LOCKING, 1-1/2 TUBE	140116	X	X
6	LEG, 4-INCH, ADJUSTABLE	Z041121	X	

Parts List

Single & Double Stands



Electrical Schematic



5 PAN WIRING DIAGRAM
P/N 141835 REV E

