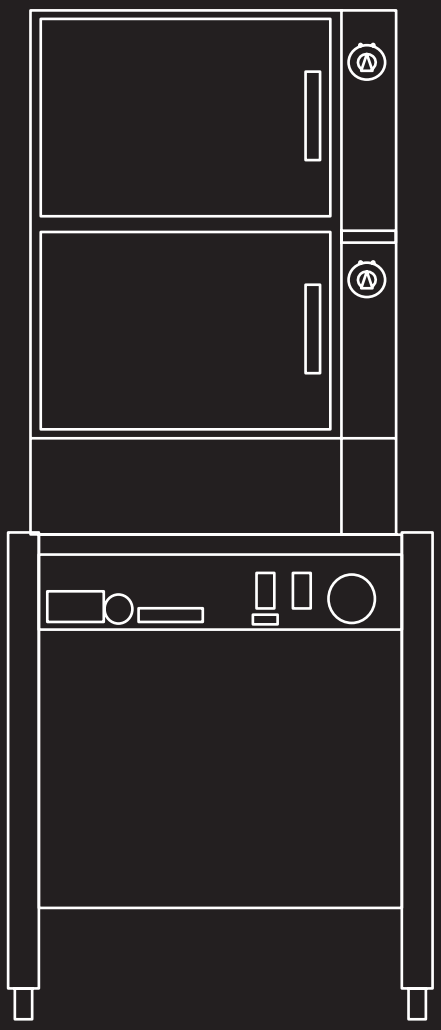
OPERATOR MANUAL

IMPORTANT INFORMATION, KEEP FOR OPERATOR

This manual provides information for:

MODEL HY-PLUS-SE ATMOSPHERIC CONVECTION STEAMER ON A ELECTRIC BOILER BASE

· For Models: HY-6SE and HY-10SE
· Capacity: 6 or 10 Steamer Pans (12” x 20” x 2-1/2”)



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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.

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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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.

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. WE SUGGEST 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.

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. INSTALLATION MUST COMPLY WITH APPLICABLE CODES.

NOTICE: DO NOT INSTALL THE UNIT IN ANY WAY WHICH WILL BLOC K THE RIGHT SIDE VENTS , OR WITHIN 12 INCHES OF A HEAT SOURCE SUCH AS A BRAISING PAN , DEEP FRYER , CHAR BROILER OR CONVECTION OVEN.

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

WARNING: TO AVOID DAMAGE OR INJURY, FOLLOW THE WIRING DIAGRAM EXACTLY WHEN CONNECTING A UNIT. AN ELECTRICAL GROUND IS REQUIRED.

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

WARNING: DO NOT CONNECT THE DRAIN DIRECTLY TO A BUILDING DRAIN. DAMAGE TO THE EQUIPMENT MAY RESULT.

WARNING: BLOCKING THE DRAIN MAY BE HAZARDOUS.

IMPORTANT: IMPROPER DRAIN CONNECTION WILL VOID WARRANTY.

WARNING: WHEN YOU OPEN A COMPARTMENT DOOR, STAY AWAY FROM STEAM COMING OUT OF THE UNIT. CONTACT WITH STEAM CAN CAUSE BURNS.

WARNING: BEFORE CLEANING THE OUTSIDE OF THE STEAMER, DISCONNECT ELECTRIC POWER. KEEP WATER AND CLEANING SOLUTIONS OUT OF CONTROLS AND ELECTRICAL COMPONENTS. NEVER HOSE OR STEAM CLEAN ANY PART OF THE UNIT. SERIOUS INJURY COULD RESULT.

WARNING: LET COOKING CHAMBERS COOL BEFORE CLEANING. HOT SURFACES CAN CAUSE BURNS.

WARNING: CAREFULLY READ THE WARNINGS AND FOLLOW THE DIRECTIONS ON THE LABEL OF EACH CLEANING AGENT USED. DIRECT CONTACT WITH SOME AGENTS CAN CAUSE INJURY.

WARNING: DO NOT MIX DE-LIMING AGENTS (ACID) AND DE-GREASERS (ALKALI) IN THE STEAM GENERATOR OR ON THE COOKING CHAMBER WALLS. HARMFUL GASSES MAY RESULT.

WARNING: DO NOT PUT HANDS OR TOOLS INTO THE COOKING CHAMBER, UNTIL THE FAN HAS STOPPED TURNING. THE ROTATING FAN CAN CAUSE INJURIES.

WARNING: DO NOT OPERATE THE UNIT UNLESS THE REMOVABLE RIGHT SIDE PANELS HAVE BEEN RETURNED TO THEIR PROPER LOCATIONS. DAMAGE TO THE UNIT COULD OCCUR.

CAUTION: DO NOT LOCATE THE BOILER CABINET DIRECTLY OVER A FLOOR DRAIN OR FLOOR SINK. HUMIDITY OR WATER FROM A DRAIN WILL DAMAGE ELECTRICAL PARTS OF A UNIT.

NOTICE: DO NOT USE CLEANING OR DE -LIMING AGENTS THAT CONTAIN SULFAMIC ACID OR ANY CHLORIDE, INCLUDING HYDROCHLORIC ACID. IF THE CHLORIDE CONTENT OF ANY PRODUCT IS UNCLEAR , CONSULT THE MANUFACTURER. DO NOT USE CLEANING OR DE-LIMING AGENTS THAT CONTAIN MORE THAN 30% PHOSPHORIC ACID.

WARNING: HIGH VOLTAGE EXISTS INSIDE CONTROL COMPARTMENTS. DISCONNECT POWER SOURCE BEFORE SERVICING. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH.

IMPORTANT - READ FIRST - IMPORTANT

WARNING: **DO NOT EXPOSE SKIN TO ESCAPING STEAM. SEVERE BURNS CAN RESULT.**

CAUTION: **MAKING ANY ELECTRICAL OR MECHANICAL CHANGE IN THE UNIT WITHOUT PRIOR WRITTEN APPROVAL FROM ENGINEERING WILL VOID ALL WARRANTIES.**

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

WARNING: **DO NOT OPERATE THE UNIT UNLESS ALL REMOVABLE PANELS (RIGHT, LEFT, FRONT AND REAR) HAVE BEEN PROPERLY INSTALLED.**

NOTICE: **USE NO DE-GREASER THAT CONTAINS POTASSIUM HYDROXIDE OR SODIUM HYDROXIDE OR IS ALKALINE.**

WARNING: **USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY THE MANUFACTURER OR THEIR AUTHORIZED SERVICE AGENTS VOIDS ALL WARRANTIES AND CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE THE EQUIPMENT. SERVICE PERFORMED BY OTHER THAN FACTORY AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.**

DANGER: **HIGH VOLTAGE EXISTS IN 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, Illinois 60062

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

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

NFPA/70 The National Electrical Code
NFPA/96 Ventilating Hoods

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

AMERICAN NATIONAL STANDARDS INSTITUTE
1403 Broadway, New York, New York 10018

Equipment Description

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

HY-SE steamers have two steam compartments with individual controls mounted on an electric boiler base.

The HY-SE Steamer is designed to bring you years of service. It has two stainless steel cavities (cooking chambers) and a control compartment, which houses the electrical components and steam valves. In each cavity, a powerful blower circulates the steam for increased heating efficiency. Each cavity, depending on model, will hold either three or five steam table pans (12" x 20" x 2-1/2").

A 16 gauge stainless steel case encloses the cavities and the control compartment that house electrical components. The door hinges are reversible (the doors may be hung to open from the left or right).

Operator Controls are located on the front panel.

The steamer cavities are mounted on a cabinet base containing an electric steam boiler that generates low pressure steam. The boiler is small enough to fit in a 24-1/8" wide by 34-3/16" deep by 29-3/16" tall (maximum) cabinet. The boiler is constructed of 1/4" thick steel, which is certified by the American Society of Mechanical Engineers (ASME) for pressure vessels. All welds are hydrostatically tested. The boiler is also equipped with required instruments, fittings, and controls per CSD-1 (Controls and Safety Devices for automatically fired boilers). Heating elements with low watt density ensure longer life for the unit. The boiler is available for three phase 60 Hertz service in the following voltage and power combinations:

208 Volts	**240 Volts**	**480 Volts**
24 Kilowatt	24 Kilowatt	24 Kilowatt
36 Kilowatt	36 Kilowatt	36 Kilowatt
48 Kilowatt	48 Kilowatt	48 Kilowatt

The drain system includes a spray condenser, which suppresses any steam escaping from the chamber and cools condensate water going into the drain.

Water Quality & Treatment

REDUCE SCALE PROBLEMS BY USING AND MAINTAINING A WATER SOFTENER FOR YOUR STEAMER!

It is essential that the boiler be supplied with water that will not form scale at an unacceptable rate. The boiler was engineered to minimize scale, but its formation depends on water hardness and how much the unit is used.

In some areas of the United States the water is low enough in mineral content to avoid scale build-up. However, most water supplies carry heavy loads of minerals. This will form scale on the boiler, reduce its steam output, and possibly cause premature component failure.

Your water utility or local water quality dealer can tell you about the minerals in your water. The water going to the steam generator should have:

1. Between 1 and 30 ppm total dissolved solids (TDS)
2. A pH (acidity rating) of 7.0 - 8.0
3. Total alkalinity less than 120 ppm
4. Silica less than 13 ppm
5. Chlorides less than 30 ppm
6. Sulfates less than 40 ppm
7. Chlorine less than 10 ppm

Please follow these simple precautions:

1. Do not rely on unproven water treatment equipment which is sold for scale prevention or scale removal. They frequently don't work. The best way to prevent scale is to supply the purest possible water.

2. If your water contains scale-forming minerals, as most water does, use a well maintained water treatment system. Whether an exchangeable softener cartridge or a regenerating system is chosen, a regular exchange system is essential.

3. Installing a water meter on supply line to the steamer will provide an accurate gauge of water use, and will help determine when to exchange cartridges or regenerate the softener. Using treated water will provide longer generator life, higher steam capacity, and reduce maintenance requirements.

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

5. Pressure boilers are available with two separate water intakes:

   one for the boiler (treated water)
   one for the spray condenser (untreated water).

   The steam generator only uses 14 to 31% of a steamer's water. Since water treatment systems are typically sized by total GPH (gallons per hour), the second intake could reduce treatment requirements by up to 80%, resulting in significant savings.

Installation

WARNING
MAKING ANY ELECTRICAL OR MECHANICAL CHANGE IN THE UNIT WITHOUT PRIOR APPROVAL WILL VOID ALL WARRANTIES.

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.

WHEN THE UNIT IS RECEIVED, IMMEDIATELY INSPECT IT FOR EXTERNAL OR INTERNAL DAMAGE. REPORT ANY DAMAGE TO THE FREIGHT CARRIER. After inspection, keep the unit in its shipping container until it is installed. It can be installed on combustible and non-combustible floors. Minimum clearances are:

Right Side	2 inches
Left Side	4 inches
Rear	6 inches

In order to service the unit properly, access with at least 24 inches clearance is needed on the right side.

Level the unit front to rear and left to right by adjusting its legs. Levelness may be checked by using a spirit level on top of the cabinet.

A free flow of air around the boiler promotes efficient operation. Similarly, keep the area directly around the appliance clear of combustible material.

Installation must conform with local codes, or in the absence of local codes, with the National Electrical Code should be followed (ANSI/NFPA-70-1987 - or latest edition).

1. Electrical Supply Connection

Provide the proper voltage (60 Hz, Three Phase) as specified on the electrical information plate attached to the unit. The current draw and minimum recommended wire size and insulation temperature ratings are shown in the table below. Use only copper wire. Local codes and/or the National Electrical Code should be followed (ANSI/NFPA-70-1987 - or latest edition).

AN ELECTRICAL GROUND IS REQUIRED. The ground terminal is located next to the supply terminal block in the electrical enclosure. The main supply knockout hole is sized for a 1½" conduit fitting. The auxiliary supply knockout is sized for a ¾" conduit fitting. Copies of the electrical schematic are located in the electrical enclosure on the equipment and in this manual. In Canada, electrical service must comply with the Canadian Electrical Code, CSA C22.1, Part 1, and/or local codes.

Voltage	Power Rating (Kilowatt)	Current Draw (Ampere)	Supply Wire		Ground Wire		Rating
			AWG	mm	AWG	mm	
208	24	67	2	6.5	8	3.3	90°C
208	36	100	2/0	9.3	6	4.1	90°C
208	48	100 (Main) 34 (Auxiliary)	2/0 6	9.3 4.1	6 10	4.1 2.6	90°C 90°C
240	24	58	3	5.8	8	3.3	90°C
240	36	87	1	7.3	8	3.3	90°C
240	48	87 (Main) 29 (Auxiliary)	1 8	7.3 3.3	6 10	4.1 2.6	90°C 90°C
480	24	29	3 8	5.8 3.3	10 10	2.6 2.6	75°C 90°C
480	36	44	1/0 6	8.3 4.1	10 10	2.6 2.6	75°C 90°C
480	48	58	2/0 3	9.3 5.8	8 8	3.3 3.3	75°C 90°C

Installation

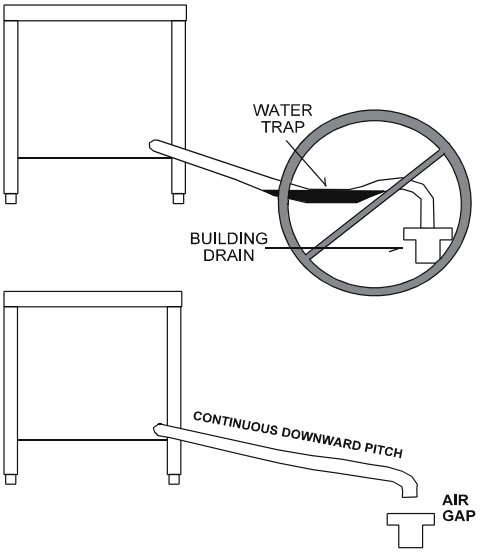
WARNING
THE UNIT MUST BE INSTALLED BY PERSONNEL WHO ARE QUALIFIED TO WORK WITH ELECTRICITY AND PLUMBING. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO THE EQUIPMENT. THE UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.

CAUTION
SHIPPING STRAPS ARE UNDER TENSION. THEY CAN SNAP BACK VIOLENTLY AND CAUSE INJURY WHEN CUT.

CAUTION
MAKING ELECTRICAL OR MECHANICAL CHANGES TO THE UNIT WITHOUT APPROVAL FROM THE FOOD SERVICE ENGINEERING DEPARTMENT WILL VOID WARRANTIES.

IMPORTANT
IMPROPER DRAIN CONNECTION WILL VOID WARRANTY.

CAUTION
DO NOT LOCATE THE BOILER CABINET DIRECTLY OVER A FLOOR DRAIN OR FLOOR SINK. HUMIDITY OR WATER WILL DAMAGE ELECTRICAL.



Leave an air gap between the hose and the building drain, and don't allow water traps in the line.

2. Water Connection

a. Cold water is supplied via a 1/2" NPT pipe connection at the rear of the unit. A check valve (back siphonage device) must be installed in accord with local plumbing codes.

b. Water pressure should be between 30 and 60 PSI. If it is over 60 PSI, a pressure regulator is required. A strainer screen at the connection is also recommended, to trap any debris before it can enter the system.

c. The boiler uses water at the maximum rate per hour shown below.

MAXIMUM WATER CONSUMPTION		
Unit	**Gallons/Hour**	**Liters/Hour**
24 kW	8.2	31
36 kW	12.5	47.3
48 kW	16.9	64

3. Drain Connection

a. The drain connection is made at the rear of the unit with 1 - 1/4" NPT pipe. DO NOT USE PLASTIC PIPE. DRAIN PIPING MUST WITHSTAND STEAM AND BOILING WATER. Extend the drain piping to a nearby floor drain. Piping of 1 - 1/4" NPT (or 1 - 1/2" NPT) is acceptable for distances of six feet or less. If the distance to the drain is further than six feet, use 2" NPT piping.

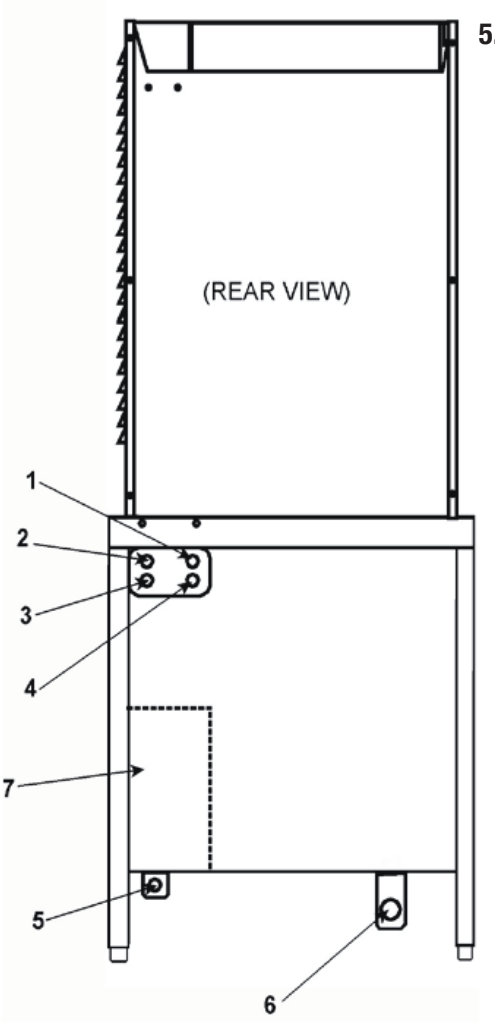
b. The drain line must be installed with a constant downward pitch. Do not permit any water traps in the line. DO NOT CONNECT THE LINE DIRECTLY TO ANY BUILDING DRAIN. A vertical air gap of at least two inches must be maintained between the drain line and the building drain unless otherwise specified by local plumbing codes.

4. Safety Valve

Ensure that the safety valve (see picture, Page 12) is vented properly. The following Installation Instruction WARNING is quoted from the safety valve manufacturer:

"During operation this valve may discharge large amounts of steam and/or hot water. Therefore, to reduce the potential for bodily injury and property damage, a discharge line MUST be installed that:

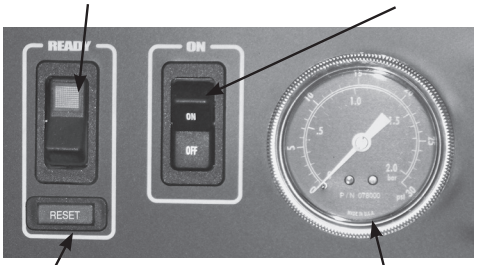
a. is connected from the valve outlet to a safe point of discharge with no intervening valve.
b. allows complete drainage of both the valve and the discharge line.
c. is independently supported and securely anchored so as to avoid applied stress on the valve.
d. is as short and straight as possible.
e. terminates freely to atmosphere where any discharge will be clearly visible and is at no risk of freezing.
f. terminates with a plain end which is not threaded.
g. is constructed of a material suitable for exposure to temperatures of 375°F or greater
h. is, over its entire length, of a pipe size equal to or greater than the valve outlet."



5. Utility Connections

1. Cold water (untreated).
2. Cold water (treated).
3. Hot water (for faucet on 36” and wider units with kettles).
4. Steam outlet (for power take-off).
5. Not used.
6. Drain (for boiler, steamers and condenser spray). Also for kettle condensate and sink where used.
7. Electrical (conduit through underside, terminals at the right on the inside).

Initial Start-Up



Operating Controls are located on the front of the cabinet base unit.

WARNING
STAY AWAY FROM STEAM COMING OUT FROM THE UNIT. STEAM CAN CAUSE SEVERE BURNS.

After the unit has been installed, test it to ensure that it is operating properly.

1. Remove literature and packing material from the interior and exterior of the unit.

2. Make certain the water supply is turned on.

3. Turn on electrical power to the unit.

4. Turn the on/off switch on the cabinet front panel to the "ON" position:
   - The boiler drain valve will close and the unit will fill with water.
   - When the water level reaches the "mid" probe, the red RESET light will come on.
   - Push the START switch.
   - The green light in the switch will come on and the RESET light will go out. The heater element contactors will close.
   - When the water level reaches the "hi" probe, the water supply to the boiler will shut off.

5. After about 15 minutes, the gauge pressure will rise. When the pressure reaches 12 PSI (83 kPa), the main burner will turn off. Thereafter, as pressure decreases, the contactors will close to maintain the 12 PSI (83 kPa) level.

6. To shut the unit down, turn the on/off switch to OFF. When it has cooled to approximately 130°F, the boiler will automatically drain.

If the boiler functions as described above, it is ready for use. If it does not, contact your authorized Service Agent.

7. When steam is available for the cavity, choose one of the following:

   a. Set the timer to the desired time for timed steaming.

   b. Turn the timer to the manual ON position for continuous steam.

   NOTE: The door must be shut before steam will enter the cavity. If the door is opened when the timer is on, the flow of steam will stop.

   c. Let the steamer sit idle until needed.

8. If the unit will not be used for an extended period, turn off power to the individual steamer compartments. Turn off power to the electric pressure boiler.

If the unit functions as described above, it is ready for use. If it does not, contact your Authorized Service Agent.

Operation

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

A. Controls

Operating controls are located on the front panel of the unit.

a. The on/off switch starts the unit or shuts it off.

b. The RESET indicator lights to show that the boiler has filled with water and that the heater element contactors can close.

c. The start switch (momentary) closes the heater element contactors. It also restarts the unit if electrical power is interrupted, or if a low water condition in the boiler disables the unit.

d. Timers are located on the front right side of the unit. There are two timers — one each for the upper and lower cavities.

The timer is used in two ways:

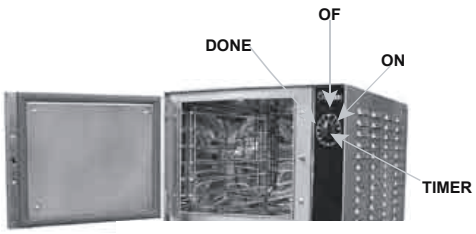
1. Turning the timer to any setting delivers steam to the cavity until the timer runs down to OFF. At that time a red LED switches on and a beeper sounds and the steam flow to the compartment stops.

2. When turned all the way to the ON position, the timer allows continuous steaming. A green LED is turned on, and the timer does not time down. Steam continues until the timer knob is turned to the OFF position.

Operation

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

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



Timer Controls for each of the two cavities are identical.

B. Operating Procedure

1. Turn on the water supply to the unit.
2. Turn on electrical power to the unit.
3. Turn the on/off switch on the front of the cabinet to “ON.”
   a. The boiler drain valve will close and the unit will fill with water.
   b. When the water reaches the “mid” probe, the red RESET light will come on.
   c. Press the start switch.
   d. The green light in the switch will come on, the RESET light will go off, and the heater element contactors will close.
   e. When the water level reaches the “hi” probe, the water supply to the boiler will shut off.
   f. After about 15 minutes, the pressure gauge will indicate that the pressure is rising. When it reaches 12 PSI (83 kPa), the heater contactors will open. Thereafter, the contactors will close as the pressure decreases to maintain the pressure at 12 PSI (83 kPa).
   g. To shut down the unit, turn the on/off switch to OFF. The unit will drain automatically after it has cooled to about 130ºF.
4. Load food into pans so that it is in uniform layers. For best results, pans should be filled to about the same levels, and should be even on top.
5. Open the door and slide the pans onto the supports. If you will only be steaming one pan, put it in the middle rack position.
6. Close the door.

   NOTE: The door must be closed before steam will enter the cavity. If the door is opened when the timer is on, the steam will stop.
7. Turn the timer to one of the following settings:
   a. If you want to steam for a definite period of time, set the timer to that time. Steam will be delivered to the cavity for that time, and then stop. A buzzer and red LED will indicate that the timed cycle is complete. Steam flow stops.
   b. If you want to steam continuously, turn the timer to the ON position. A green light will come on. Steam will be delivered to the cavity until the timer is returned to OFF.
8. Open the door.
9. Using a pad or oven mitt to protect your hands, remove the pans from the steamer.
10. To shut down the steamer, turn the Timer to the OFF position.

Sequence of Operation

CAUTION
ESCAPING STEAM MAY CAUSE SEVER BURNS. STAY AWAY FROM THERMOSTATIC AIR VENT AND PRESSURE RELIEF VALVES.

When electrical power is turned on to the unit, the following happens:

- The drain valve closes
- The water valve opens
- The unit fills with water

As the boiler fills, the water is detected by two probes. The first of these is the "mid" probe, which activates the RESET light. The second ("hi" probe) is reached when the boiler is full, and shuts off the water supply. As the water supply drops below this probe, the water supply opens until it is again reached.

A thermostatically-controlled air vent remains open while the boiler fills. As steam begins to develop, this vent will close. Some steam may escape from this vent before it is fully closed (at approximately 200ºF).

Once the pressure has reached 12 PSI (kPa), the operating pressure switch will open the heater element contactors. As pressure decreases, the heater element contactors close to maintain the pressure at 12 PSI (83 kPa).

If something causes the pressure to pass 14½ PSI, (100 kPa), a high-limit safety switch will electrically shut down the boiler. If this happens, the unit should not be re-started until the problem which caused the shut-down has been corrected.

As an additional safety measure, the unit is equipped with an A.S.M.E.-certified safety valve which will open to relieve excess pressure at 15 PSI. The ability of this valve to discharge steam pressure is greater than the boiler's ability to generate steam.

When the "ON/OFF" switch is turned "OFF," a thermostatic switch mounted on the boiler shell will keep the drain valve closed until the temperature drops to approximately 130°F (77°C). Then the switch opens, and water drains from the boiler. A vacuum breaker allows air to enter the boiler.

Steamer Compartment 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 DEGREASERS (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 REMOVABLE INTERIOR PARTITIONS HAVE BEEN PUT BACK IN THEIR PROPER LOCATIONS.

DON'T USE ANY CLEANING OR DE-LIMING AGENT THAT CONTAINS ANY SULFAMIC AGENT OR ANY CHLORIDE, INCLUDING HYDROCHLORIC ACID (HCl). TO CHECK FOR CHLORIDE CONTENT SEE ANY MATERIAL SAFETY DATA SHEETS PROVIDED BY THE CLEANING AGENT MANUFACTURER. 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 IMPLEMENT (SUCH AS A SPOON, SCRAPER OR WIRE BRUSH) THAT MIGHT SCRATCH STAINLESS STEEL SURFACES. 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 Steamer in proper working condition, clean the unit each day. This regular cleaning will reduce the effort required to clean the cavities.

A. Suggested Tools

1. Mild detergent
2. Stainless steel exterior cleaner such as Spray Degreaser, Zepper®
3. De-greaser, such as EncompasS®, Malone 34®, Puritan Puribrute®, or Con-Lie®
4. Cloth or sponge
5. Plastic wool or a brush with soft bristles
6. Spray bottle
7. Measuring cup
8. Nylon pad
9. Towels
10. Plastic disposable gloves

B. Procedure

1. Outside

a. Prepare a warm solution of 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 panel 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. Inside

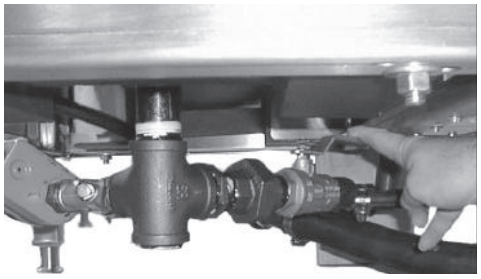
Remove the fan/baffle partition from inside the unit and place it into a utility sink. Wash the cooking chamber(s) and fan/baffle partition with a warm solution of mild detergent and water. If needed, use a de-greaser with a plastic scouring pad. Rinse parts thoroughly with clean water and replace fan/baffle partition. Make sure the drain holes at the back of each cavity are free of food particles or other debris.

Boiler Cleaning

WARNING
WATER AND VALVES MAY BE VERY HOT, AND MAY CAUSE BURNS. PROTECT HANDS FROM HOT SURFACES AND WATER.

WARNING
USE SAFETY GLASSES AND RUBBER GLOVES AS RECOMMENDED BY DE-LIMING AGENT MANUFACTURER.

CAUTION
DO NOT USE A CLEANING OR DE-LIMING AGENT THAT CONTAINS SULFAMIC ACID OR ANY CHLORIDES, INCLUDING HYDROCHLORIC ACID (HCL). IF THE CHLORIDE CONTENT OF ANY PRODUCT IS UNCLEAR, CONSULT THE MANUFACTURER.



The manual drain valve is located under the boiler.

Whenever the boiler is turned off and allowed to cool to about 130ºF, it drains automatically. This should be done every day to minimize scale buildup inside the boiler.

In addition to this draining, however, the following cleaning procedure should be followed using a regular schedule. This will prevent the accumulation of lime on the water level probes and interior surfaces of the boiler. The actual time between these scheduled cleanings depends on the water quality and hours of operation. Minimally, We recommend cleaning the boiler at least once each month.

A. Suggested Tools

1. 1/2” hardened square wrench extension
2. Pipe Joint compound (approved for 300ºF steam)
3. Delimer Descaler
4. Spray Degreaser
5. Nylon pad(s)

B. Procedure

1. Turn the boiler on/off switch to the OFF position.
2. Slowly open the manual drain valve to empty the boiler. The valve is located under the boiler.
3. Close the manual drain valve.
4. Turn off water supply to the boiler.
5. Allow the boiler to cool. This takes several hours, so it is recommended that you cool the boiler overnight.
6. Turn on/off switch to “ON” to close the automatic drain valve.
7. Using a 1/2” hardened square wrench extension, remove one of the 1-1/4” NPT pipe plugs from the front of the boiler.
8. Pour 32 ounces of de-limer into the boiler.
9. Replace the pipe plug. Use pipe joint compound, and tighten the plug securely.
10. Turn on water supply to allow water to fill the boiler.
11. When the reset light appears, press the START switch.
12. Allow boiler pressure to develop. Let it stand for approximately 15 minutes after pressure has built up. A badly limed unit may require more than 15 minutes.

Cleaning

WARNING
SOLUTION AND VALVES WILL BE VERY HOT, AND MAY CAUSE BURNS. PROTECT HANDS FROM HOT SURFACES AND CONTINUE TO USE PROTECTIVE GLOVES.

13. Set steamer timers for 10 minutes.
14. When steamer timers sound, turn them to OFF and open the doors.
15. When the fans have stopped, remove fan baffle partitions using protective gloves, and rinse with clean water.
16. Completely wipe out steamer chambers using a degreaser and nylon pad, if necessary. Rinse thoroughly with clean water.
17. Replace fan baffle partitions.
18. Wait 10 minutes for the compartments to air dry, then close the steamer doors.
19. Turn the on/off switch OFF, and slowly open the manual drain valve.
20. When the boiler has drained completely, close the manual drain valve and turn the on/off switch to “ON” to fill the boiler with water.
21. After the RESET light comes on, press the start switch.
22. Allow boiler pressure to develop.
23. Set steamer timers for 10 minutes.
24. When steamer signal sounds, turn timers off.
25. If the boiler is not to be used, it may be turned off. It is ready for normal operation.

Steamer Maintenance

WARNING
BEFORE REPLACING ANY PART TURN OFF THE ELECTRICAL POWER TO THE UNIT. DEATH OR INJURY COULD RESULT FROM CONTACT WITH HIGH VOLTAGE.

The 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 Service Representatives should do the work.

Periodic Inspection: The manufacturer recommends that service personnel check the unit thoroughly at least once a year. The inspection should include electrical wires and connections. The inside of the control compartment should also be thoroughly cleaned.

Door Latch Adjustment: If steam or condensate is observed leaking from around the door, take the following steps:

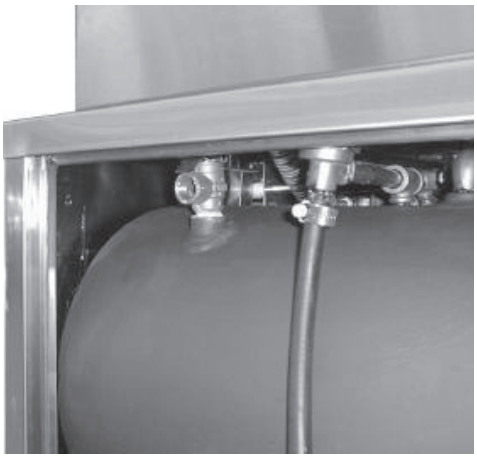
1. Check the condition of the door gasket. Replace it if it is cracked or split.
2. Inspect the cooking chamber drain for blockage.
3. Adjust the latch pin to allow for changes that might occur as the gasket ages.
    a. Loosen the lock nut at the base of the latch pin, then turn the latch pin ¼ turn 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.
    d. Continue adjusting the pin clockwise until the door fits tightly enough to prevent leakage.
    e. If leakage is still present, repeat steps a. through c. until leakage stops.

A Maintenance and Service Log is provided at the back of this manual. Each time maintenance is performed on the unit, enter the date the work was done, what was done, and who did it.

Maintenance

WARNING
USE ONLY MANUFACTURER-SUPPLIED PARTS. USING SUBSTITUTE, UNAUTHORIZED OR "GENERIC" PARTS CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE THE EQUIPMENT.

WARNING
DO NOT EXPOSE SKIN TO ESCAPING STEAM. SEVERE BURNS MAY RESULT.



One of the pressure relief safety valves is located on the top left rear of the boiler.

Your boiler is designed to minimize maintenance, but certain parts may need to be replaced after prolonged use. For the most part, no user adjustments should be necessary. If a need for service arises, only Authorized Representatives should perform the work.

Among the most common problems is the rapid build-up of scale in the boiler. To avoid this, always supply water that has a low mineral content, which meets the standards described in the Water Quality section of this manual.

A. Periodic Inspection

The unit should be inspected by a qualified service technician at least once each year. The inspection should include electrical wires and connections, cleaning the inside of the control enclosure and pilot burner adjustment, if required.

At the back of this manual (with the information about our warranty) is a Maintenance and Service Log. Each time maintenance is performed on the unit, enter the date on which it was done, what was done, and who did it. Keep this log with the warranty.

In addition to yearly inspections by a qualified service technician, a weekly check of the following will help prevent down time and ensure continued efficient operation.

1. Pressure gauge operation
2. Proper water level (gauge)
3. Strainer in water feed line (clear?)
4. Air inlets for gas burner jets (clean?)
5. Drain piping (free running? No blockage?)

At least twice each month, check the safety valve to be sure it is working properly. When pressure reaches five PSI on the gauge, lift the lever to vent steam, then release it, allowing it to snap back into place.

B. Component Replacement

Boilers are easy to service. The design is simple, and controls are readily accessible.

Before replacing any part, **COMPLETELY SHUT OFF THE GAS AND ELECTRICAL POWER TO THE UNIT**.

Troubleshooting

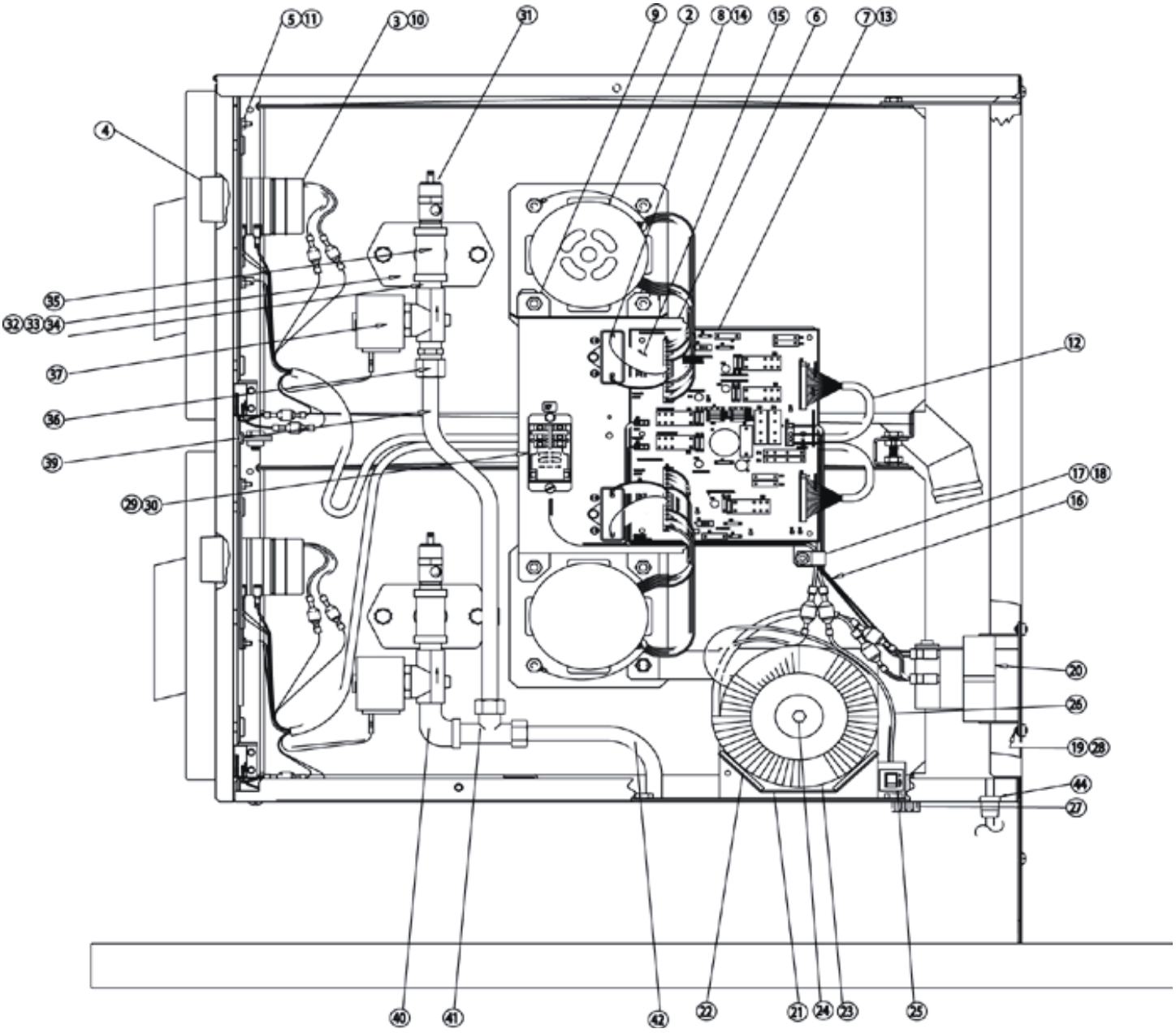
Do not operate the unit if it malfunctions or has damaged or broken parts. Steam boilers are designed to operate smoothly and efficiently when maintained properly. However, the following is a list of checks to make if there is a problem. Electrical schematics are provided in this manual, and inside the unit electrical enclosure. IF THE ITEM ON THE LIST IS MARKED WITH (X), THE WORK SHOULD ONLY BE DONE BY A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE.

SYMPTOM	WHO	WHAT TO CHECK
Boiler does not fill with water.	User	a. Is water supply connected and is water present? b. Is water pressure low (less than 30 PSI)? c. Is strainer screen (if used) clogged? d. Is on/off switch in base cabinet turned on? Is the amber light in the on/off switch "ON"? e. Is the manual drain valve open?
	Authorized Service Rep Only	f. Is the Water Level Control Board defective? Check for loose electrical connections on water fill solenoid. (X) g. Is the water fill solenoid valve defective? (X) h. Is the solenoid drain valve open or leaking? Check for loose electrical connections on solenoid drain valve. (X)
Boiler overfills with water.	User	a. Is the boiler level? Check levelness of unit with a spirit level. b. Is the water pressure too high? (Greater than 60 PSI?)
	Authorized Service Rep Only	c. Is the Water Level Control Board defective? Check for loose electrical connections on "hi" water fill solenoid. (X) d. Is the water fill solenoid valve defective? (X) Check for debris on valve seat. e. Is the "hi" water probe sensing level? Clean water level probe and probe well (located in boiler). (X)
Boiler under fills with water.	User	a. Is the boiler level? Check levelness of unit with a spirit level.
Water enters boiler slowly.	User	a. Is strainer screen (if used) clogged? b. Is the water pressure too low? (Less than 30 PSI)? c. Is the water supply line too small?
	Authorized Service Rep Only	d. Is the water fill solenoid defective? (X)
RESET light does not come on.	Authorized Service Rep Only	a. Is the Is the Water Level Control Board defective? Check for loose electrical connections on "mid" water fill solenoid. (X) b. Is the "mid" water probe sensing level? Clean water level probe and probe well (located in boiler). (X) c. Is the indicator light defective? (X)
Heater(s) will not come on.	Authorized Service Rep Only	a. Are contactors defective? (X) b. Is the heater burned out? Check voltage and amperage on each line at each heater. (X) c. Is the contactor control relay defective? Note: Relay controls all contactor coils. (X)
Heater(s) does (do) not shut off after reaching operating pressure.	Authorized Service Rep Only	a. Is the pressure gauge defective? (X) b. Is the operating pressure switch defective? No adjustment is allowed. Replace the switch if defective. (X) c. Are the contactors defective? (X) d. Is the contactor control relay defective? (X)

Troubleshooting

SYMPTOM	WHO	WHAT TO CHECK
Boiler builds pressure but shuts down. RESET light comes on.	User	a. Is the water level below the “mid” water level probe? Verify that the water supply is sufficient to maintain the water level at or above the “mid” water level probe.
	Authorized Service Rep Only	b. Is the operating pressure switch defective? No adjustment is allowed. Replace the switch if defective. NOTE: If the high-limit pressure switch has shut down the unit, it should not be restarted until the problem which caused the shut-down has been corrected. (X) c. Is the “mid” water level probe unable to detect water? Clean the water level probe and probe well (located in the boiler). (X)
Safety relief valve opens.	Authorized Service Rep Only	a. Are the operating pressure switch and/or high-limit pressure switch defective? No adjustment is allowed. Replace defective switches. (X) b. Is the safety relief valve defective? Replace with ASME approved 15 PSI valve with “HV” marking. (X)
Boiler blows down immediately when turned off.	Authorized Service Rep Only	a. Is the thermostatic switch defective? Check for loose electrical connections on switch. (X)
Boiler does not drain.	Authorized Service Rep Only	a. Is the thermostatic switch defective? (X) b. Is the solenoid drain valve defective? (X) c. Are the solenoid drain valve or hoses blocked? (X)
Boiler does not build pressure with heaters on.	User	a. Is the steam power take-off valve open or leaking? b. Is the pressure gauge defective?
	Authorized Service Rep Only	c. Is the air vent leaking steam? (X) d. Is the solenoid or manual drain valve open or leaking? NOTE: Excessive make-up water added to the boiler reduces steam production. (X)
Timer control will not operate.	User	a. Is the electrical supply turned on? b. Is the ON/OFF switch in the base cabinet turned on? c. Is boiler started? Is the green light in the ON/OFF switch lit? d. Are any fuses blown?
No steam to cavities.	User	a. Has steam pressure developed? b. Is steam supply turned on? c. Is the door closed? (Doors must be closed before steam will enter the cavity).
Door leaking steam or water.	User	a. Are the drain holes at the rear of the cavity blocked? b. Does the door gasket need replacement? c. Is the door latch in need of adjustment? (See the Maintenance section). d. Is the unit level?
Excessive steam coming from the vent pipe.	User	a. Is the water supply turned on? b. Is the condenser hose kinked or obstructed? c. Is the condenser spray solenoid working?

Parts List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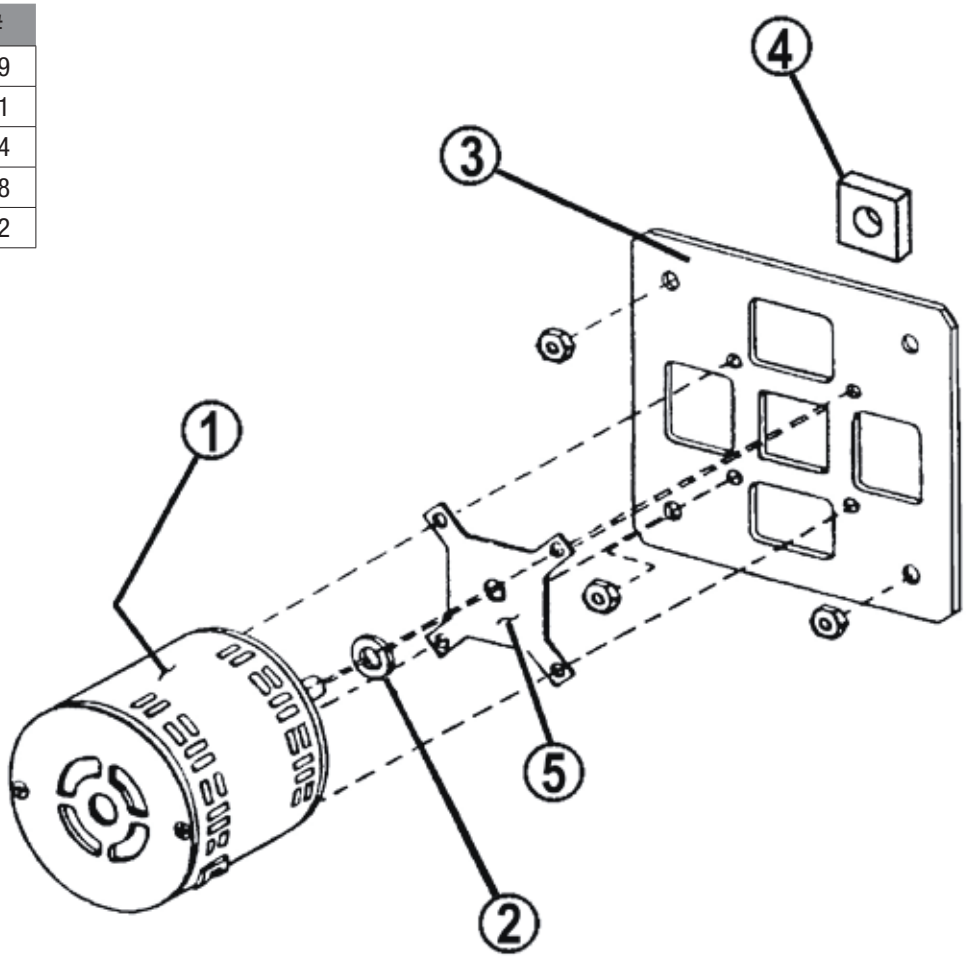
Parts List

Key	Description	Part #
1	UPPER CAVITY DRAIN HOSE	088847
2	MOTOR ASSEMBLY	096740
3	TIMER	096826
4	KNOB, TIMER	123100
5	PC BOARD, HY-PLUS LIGHT AND TIMER	130457
6	BRACKET, BOARD MTG	096888
7	STEAMER CONTROL BOARD	102222
8	CAPACITOR, 3 MFD - SE	096813
9	SHIELD, MOTOR DRIP	119844
10	NUT, ROTARY SHAFT SEAL	101145
11	NUT, KEPS 6-32	071289
12	HARNESS, UPPER CONTROL	130450
13	POST, PC BOARD MTG	099901
14	SCREW, 6-32	069777
15	JUMPER, VOLTAGE SELECT - SE	100960
16	HARNESS, SPRAY VALVE - SE & SG	130449
17	CABLE CLAMP	087958
18	NUT, 10-32	071256
19	NUT, 8-32	002632
20	TRANSFORMER, 75VA 480V - SE - 480V	121717
20	TRANSFORMER, 75VA 208/240V - SE	121716

Key	Description	Part #
21	BRACKET, TRANSFORMER MTG - SE - 480V	102287
22	RUBBER PAD - SE - 480V	102292
23	TRANSFORMER, 230V - SE - 480V	101111
24	SCREW, 1/4-20 X 2-1/4 - SE - 480V	119836
25	CIRCUIT BREAKER, 2 AMP - SE - 480V	119836
26	WIRE, 4” - SE - 480V	130467
27	BUSHING - SG & SE	012864
28	LOCK WASHER #8 - SG & SE	12971
29	RELAY, DPDT 24VAC - SG & SE	121733
30	SCREW, 8-32 X 3/8 - SG & SE	069789
31	VALVE, SAFETY	143470
32	MANIFOLD FITTING	099249
33	GASKET	099250
34	NUT, 1/4-20	012940
35	TEE	013201
36	SOLENOID VALVE	113014
37	NIPPLE, 3/8	013202
38	CONNECTOR	054493
39	TUBE, UPPER	100551
40	ELBOW	042364
41	TEE	100553
42	TUBE, SUPPLY	100552
43	LOWER CAVITY DRAIN HOSE	088848

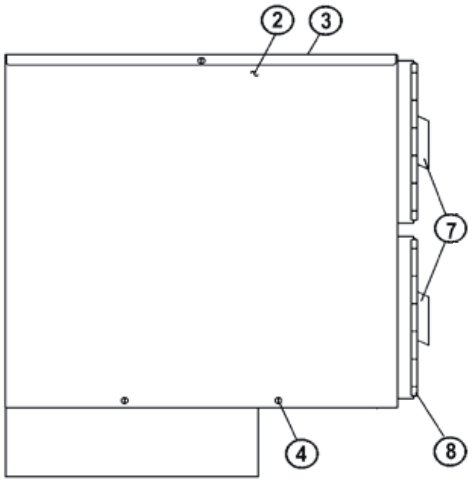
Parts List

Key	Description	Part #
1	MOTOR	096739
2	SLINGER WASHER	096831
3	MOTOR MOUNTING PLATE	094134
4	SHAFT SEAL	096868
5	PLATE SEAL HOLDER	096752

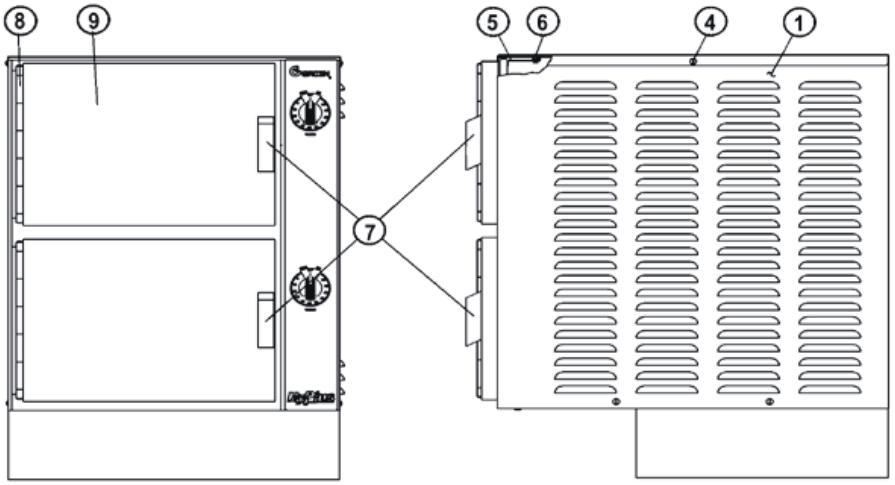


Parts List

Key	Description	Part #
1	COVER, RIGHT SIDE (6-PAN)	143778
1	COVER, RIGHT SIDE (10-PAN)	159866
2	COVER, LEFT SIDE (6-PAN)	123184
2	COVER, LEFT SIDE (10-PAN)	159867
3	COVER ASSEMBLY, TOP	123182
4	SCREW, 10-32 X 3/8 TRUSS HEAD	004173
5	RETAINER, TOP	123156
6	SCREW, 8-32 X 3/8 SLOTTED HEX HEAD	004173
7	DOOR HANDLE	129723
8	DOOR HINGE (6-PAN)	130868
8	DOOR HINGE (10-PAN)	125928
9	OUTER DOOR (6-PAN)	130858
9	OUTER DOOR (10-PAN)	125922



LEFT SIDE (TOP)

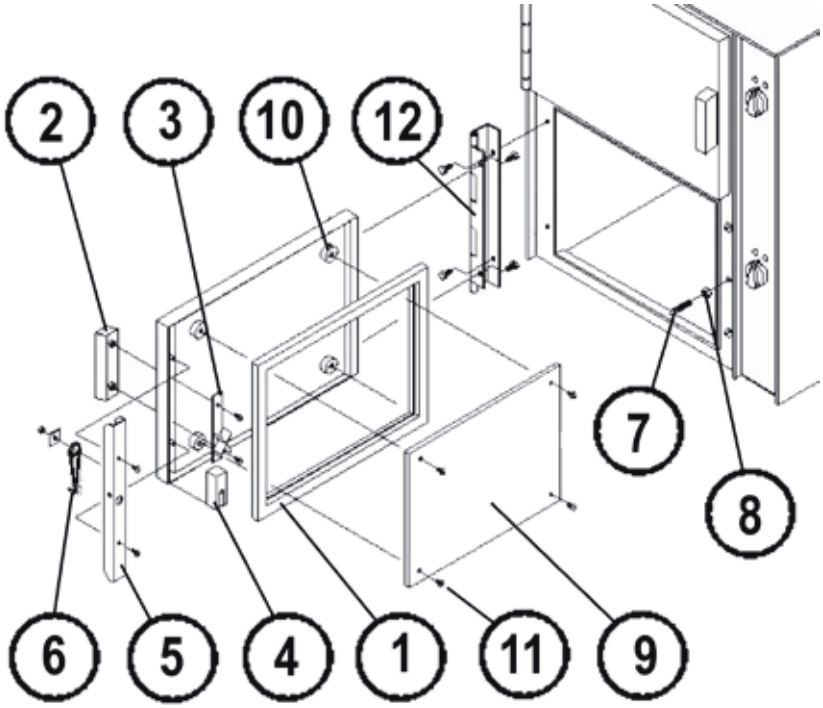


FRONT VIEW (TOP)

Parts List

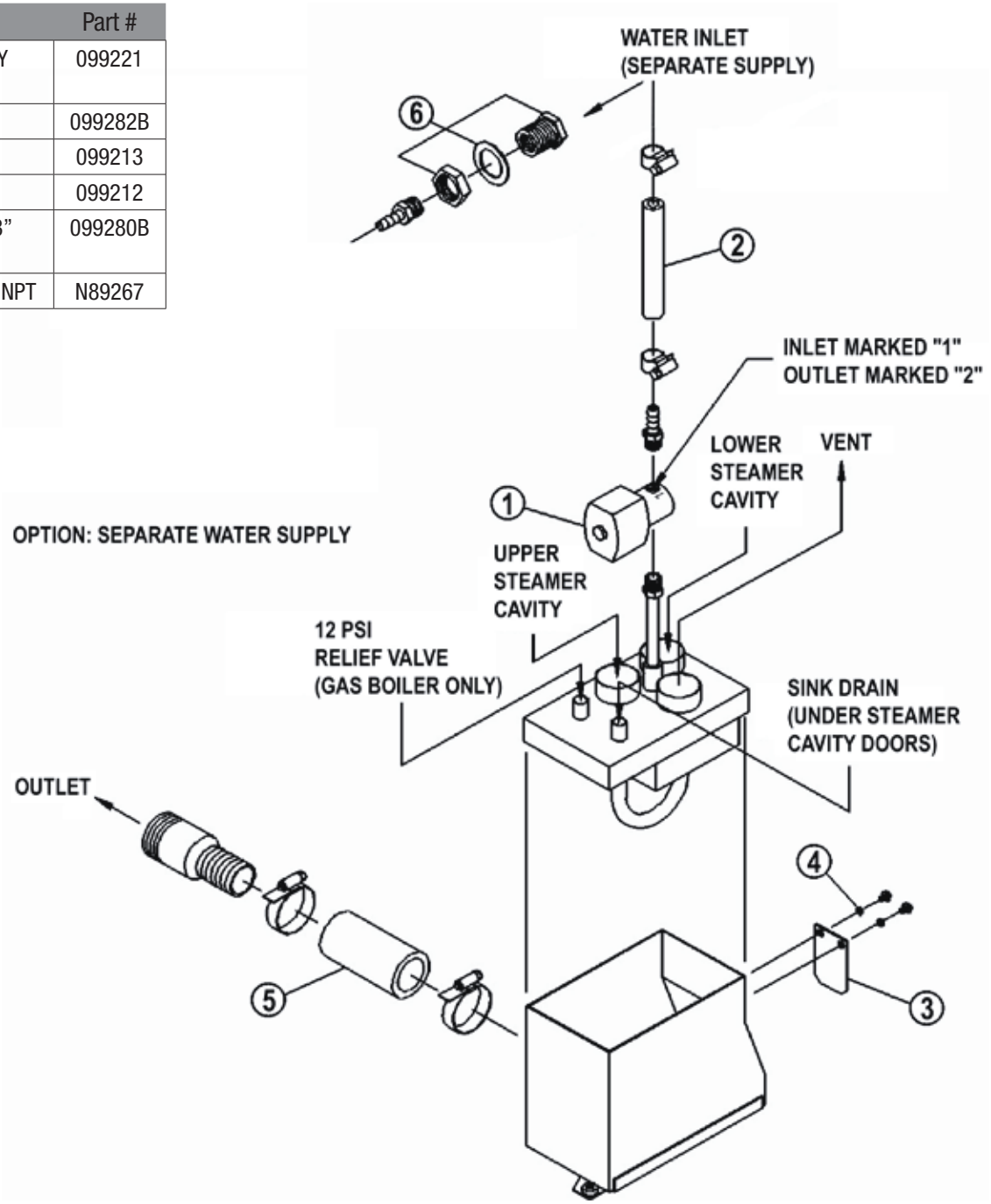
Key	Description	Part #
1	DOOR GASKET (6-PAN)	094147
1	DOOR GASKET (10-PAN)	125907
2	DOOR HANDLE	070123
3	DOOR CAM	074252
4	MAGNET ASSEMBLY	069762
5	U-CHANNEL ASSY. (6-PAN) (INCL. DOOR SPRING 078911)	094144
5	U-CHANNEL ASSY. (10-PAN) (INCL. DOOR SPRING 078911)	125925
6	LATCH SPRING	078911
7	LATCH PIN	078914
X	LEFT PAN RACK (6-PAN)	094148
X	LEFT PAN RACK (10-PAN)	125901
8	LOCK NUT	003823
9	INNER PANEL (6-PAN)	130863
9	INNER PANEL (10-PAN)	125927
10	DOOR SPACER	071206
11	DOOR SCREWS	005764
12	DOOR HINGE (6-PAN)	130868
12	DOOR HINGE (10-PAN)	125928
13	OUTER DOOR (6-PAN)	130858
13	OUTER DOOR (10-PAN)	125922
X	INSULATE BOARD (6-PAN)	094142
X	INSULATE BOARD (10-PAN)	125926
X	BLOWER COVER/RIGHT PAN RACK (6-PAN)	096788
X	BLOWER COVER/RIGHT PAN RACK (10-PAN)	125902

X-Not Shown



Parts List

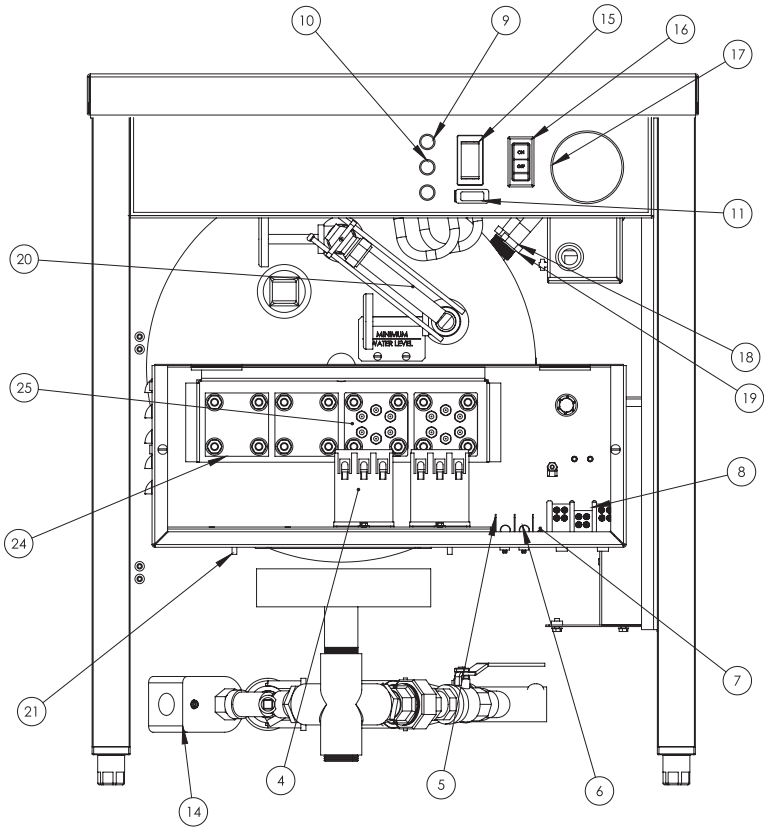
Key	Description	Part #
1	SOLENOID VALVE (SPRAY CONDENSER)	099221
2	HOSE D " ID X 8" LONG	099282B
3	RUBBER FLAP	099213
4	SPACER	099212
5	HOSE, OUTLET 1 "ID X 3" LONG	099280B
6	ANCHOR COUPLING, D" NPT	N89267

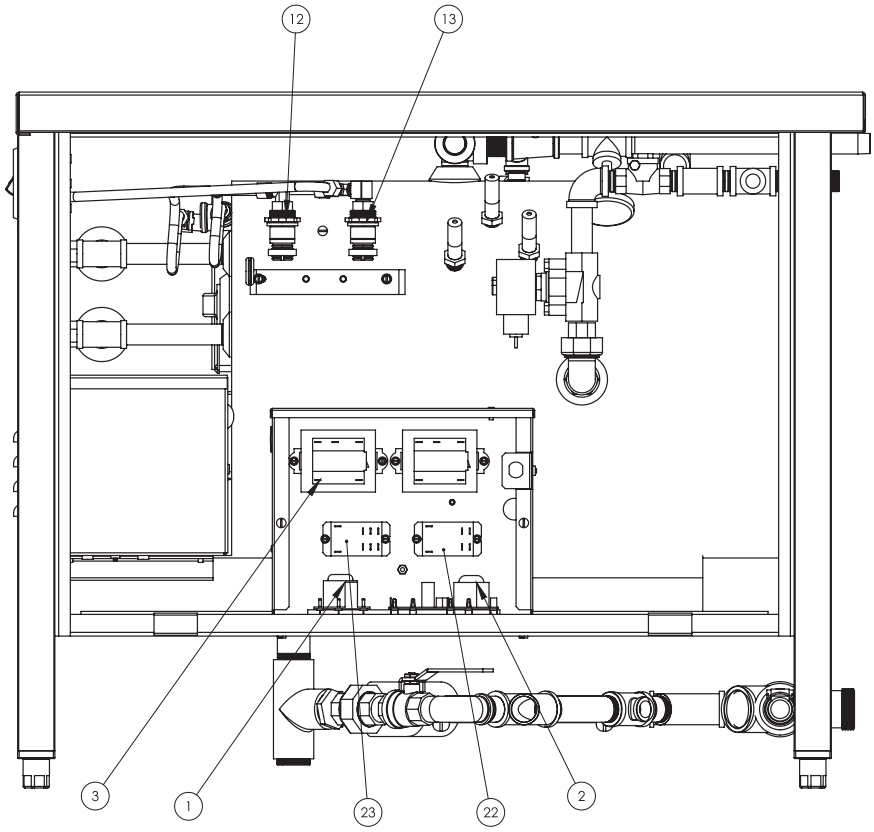


Parts List

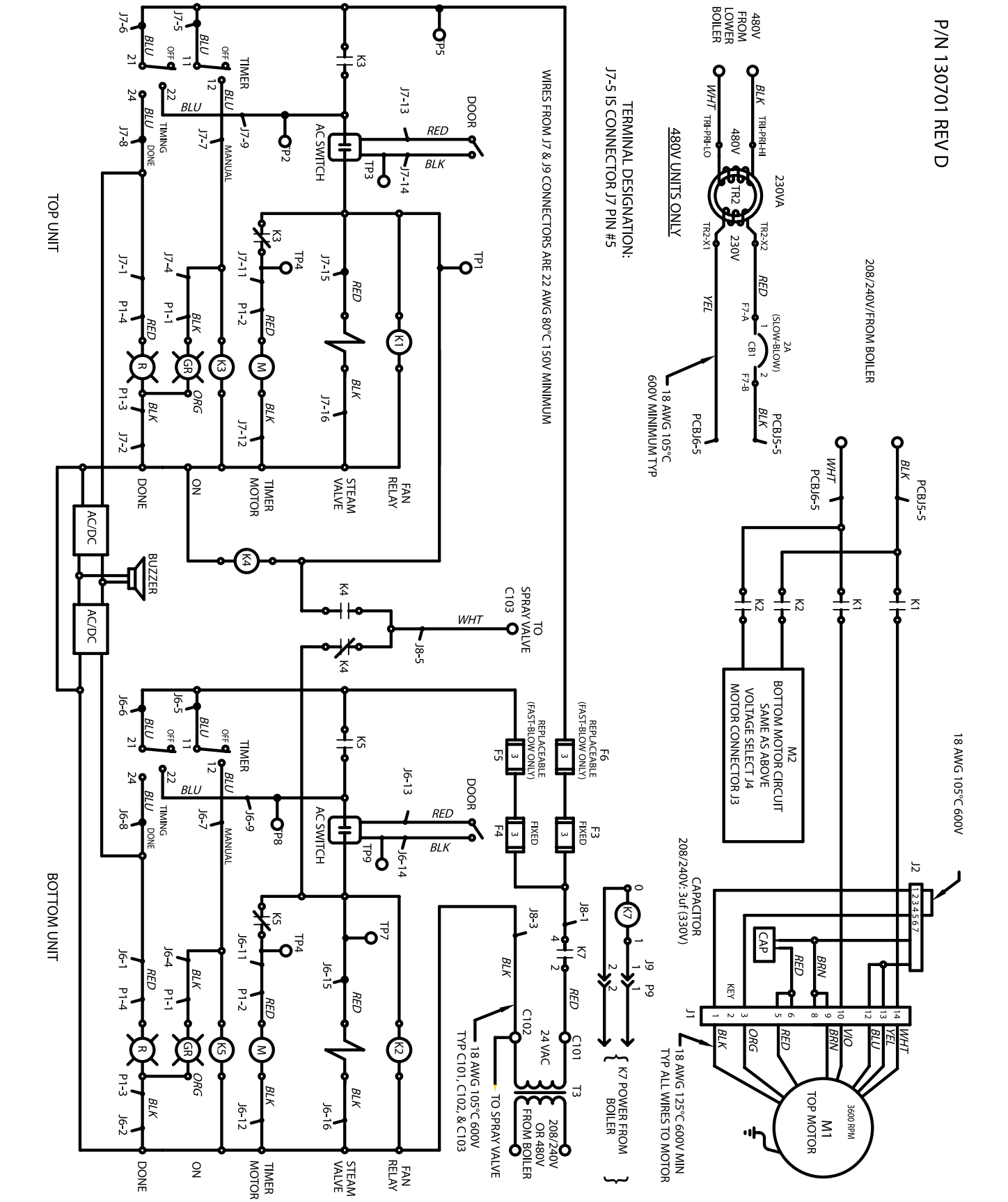
Key	Description	Part #
1	WATER LEVEL BOARD, SINGLE	122192
2	WATER LEVEL BOARD, DOUBLE	116016
3	TRANSFORMER 208/240V PRIMARY/24V SECONDARY, 75VA	121716
4	CONTACTOR	148102
5	FUSEHOLDER	096809
6	FUSE	071489
7	GROUND TERMINAL	119829
8	TERMINAL BLOCK	99295
9	LIGHT AMBER	116384
10	LIGHT RED	116383
11	LAMP RESET	099289
12	PRESSURE RELIEF VALVE	099244
13	DRAIN VALVE	074594
14	SWITCH, RESET	099290
15	SWITCH, POWER	088876
16	PRESSURE GAUGE	078000
17	WATER LEVEL PROBE	014356
18	WATER LEVEL PROBE EXTENSION	041885
19	SIGHT GLASS	126031
20	THERMOSTAT	077985
21	RELAY, CUTOUT	119814
22	RELAY, DPDT 24VAC	121733
23	GASKET, ELEMENT	003494
24	ELEMENT 208V 12KW ELEMENT 240V 12KW ELEMENT 480V 12KW	148593 148594 148595
x	TOP PANEL	104341
x	FRONT PANEL OVERLAY	170165
x	BOILER ASSEMBLY	130443
x	SIDE PANEL	143777
x	FRONT PANEL	135981
x	REAR PANEL	143743
x	HARNESS, FRONT PANEL	130445
x	HARNESS, MACHINE ELECTRIC	130473
x	HARNESS, CONTACTOR 24 KW	148567
x	HARNESS, CONTACTOR 36 & 48 KW	148568
x	HARNESS, ELEMENT SINGLE	148590
x	HARNESS, ELEMENT DOUBLE	148591
x	HARNESS, 240V LINE	130483
x	HARNESS, CONTACTOR BOX CONTROL	148569
x	HARNESS, CONTROL	148621

x - Item not depicted/called out in drawing or photograph.

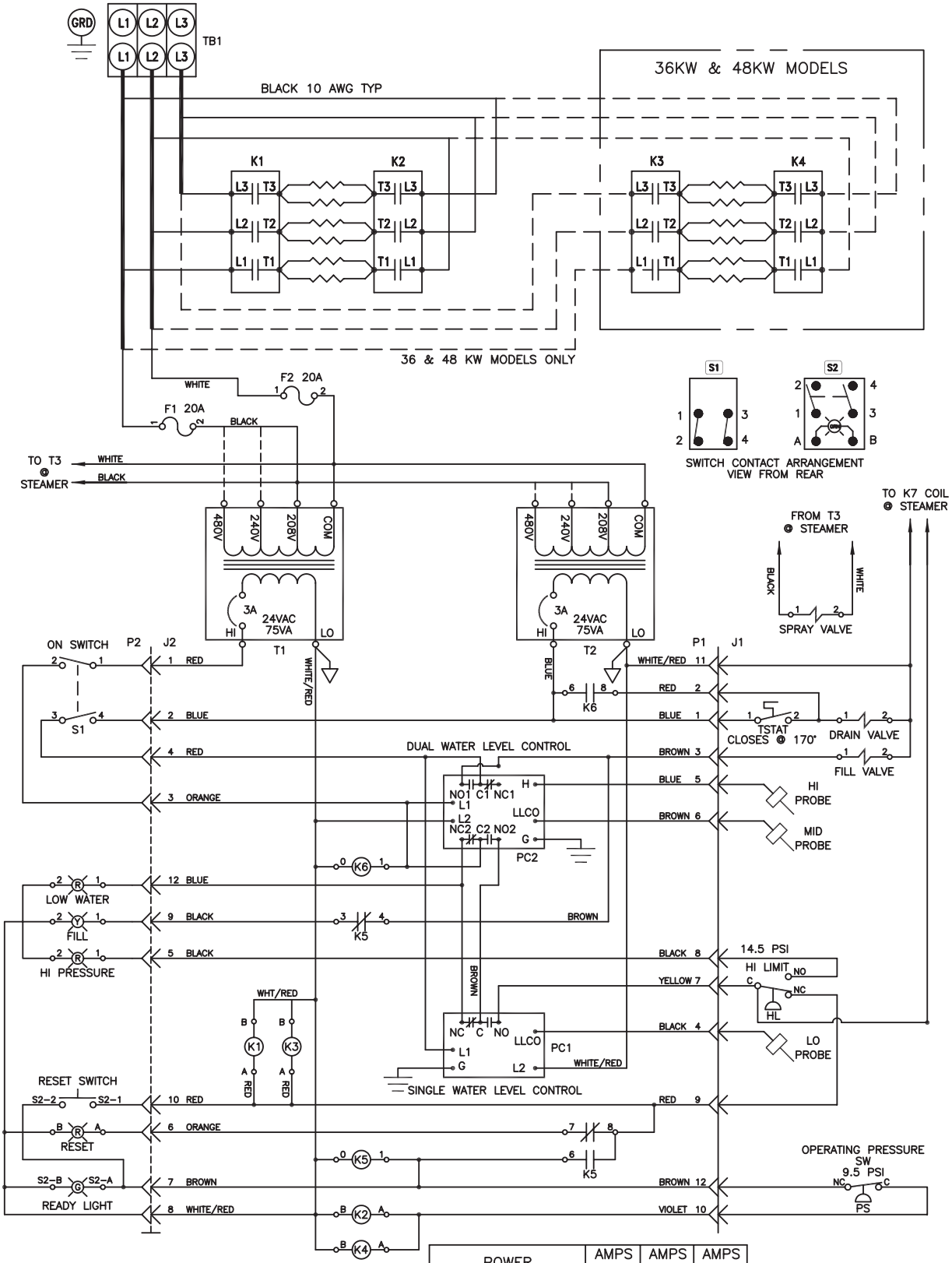




Electrical Schematic



Electrical Schematic



POWER	AMPS @208V	AMPS @240V	AMPS @480V
24KW (2 ELEMENTS)	67	58	29
36KW (3 ELEMENTS)	100	87	44
48KW (4 ELEMENTS)	133	116	58

Service Log

Model No:	Purchased From:
Serial No:	Location:
Date Purchased:	Date Installed:
Purchase Order No:	For Service Call:

Date	Maintenance Performed	Performed By