PART NUMBER 182376, REV. A (07/24)

SERVICE MANUAL

IMPORTANT INFORMATION, KEEP FOR OPERATOR

888-994-7636, fax 888-864-7636
unifiedbrands.net

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. 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.

This manual provides information for:

SMARTSTEAM® PRO CONNECTIONLESS STEAMER, DOMESTIC

GSSP-CL-3E/3ES/5E/5ES &
(2)GSSP-CL-3ES/5ES
GSSP-CL-3G/3GS/5G/5GS &
(2)GSSP-CL-3GS/5GS

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INTRODUCTION

Since 1907 Groen has been in the business of designing and manufacturing the finest commercial appliances for the food service industry. Chefs, cooks and kitchen support personnel have come to depend upon the quality of construction and the reliability of operation.

Groen, in turn, depends upon our service centers and their field service personnel to keep the equipment in top operation condition. In order to do this, our designs are made with service and reliability in mind.

Once the Groen equipment is sold, manufactured, delivered and installed, our reputation is clearly in your hands. As part of our team, we value your efforts and input to our production design.

We will do all we can to make your job of keeping the equipment in perfect working order as easy as we can. Together, we will keep our customers satisfied.

GROEN CERTIFIED SERVICE

The SmartSteam Pro Connectionless Steamer has been carefully designed to provide many years of efficient and reliable service. Part of the quality program is Groen Certified Service. This includes:

- Groen certifies that all equipment delivered to our customers has been inspected and tested for compliance with the specifications.
- Groen certifies that all parts required for service and maintenance will be readily available.
- Groen certifies that this manual will be updated by means of periodic service bulletins to provide the most up-to-date information for field maintenance and service personnel.

WARRANTY & NON-WARRANTY REPAIR

Groen Warranty provisions are clearly presented in the customer's Operator Manual. Certain procedures for the cleaning and/or adjustment of the SmartSteam Pro Connectionless Steamer are presented in this manual for reference, but not warranty related.

SAFETY

The Groen SmartSteam Pro Connectionless has been designed with safety in mind. This includes safety to the operating and maintenance personnel, safety to the facility in which the equipment is installed and safety to the equipment itself.

The steamer has been designed to the highest industry standards and has been certified by the National Sanitation Foundation Testing Laboratory (NSF), Underwriters Laboratory (UL) and/or CSA (gas) "E Star" Certification agency.

The steamer contains several devices which are specially used to prevent unsafe conditions. If they are disconnected during service, make sure they are reinstalled properly and tested before the steamer is operated.

The safety precautions in the manuals are in accordance with ANSI 535 Standard. Three different signal words alert you to a hazardous situation: DANGER, WARNING, AND CAUTION.

DANGER: The signal word danger indicates that a hazardous situation exists and could result in serious injury or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- When you open the steamer door, be very careful to avoid escaping steam. Steam can cause burns.
- After removing the fan baffle partition, do not put your hands or other object into the cooking cavity until the fan comes to a complete stop. Rotating fan blades can cause severe injury!

WARNING: The signal word WARNING tells you that a possibly hazardous situation is present, and if not avoided, could cause serious injury or death.

- Always turn off steamer power before removing partitions or panels.
- Disconnect the steamer from the power source before performing any service.
- Unit has disconnect power switch located on the rear panel.

CAUTION: The signal word CAUTION warns you of a hazardous situation which, if not avoided, may result in minor or moderate injury.

- Steamer may be hot. Take precaution to prevent any contact with hot surfaces.
- Be sure all interior partitions have been installed before operating the steamer.
- All steamer operators and service personnel should be familiar with correct and safe operating procedures.
- Be sure steamer drain is not blocked as this could result in improper steamer operations.

Two other signal words, not directly related to personal safety, are also used in this manual: NOTICE and IMPORTANT

NOTICE: Notice is used to alert you to hazards that may result in component and/or equipment damage.

IMPORTANT: Important is used to highlight an operating or maintenance tip or suggestion.

GLOSSARY OF TERMS

The following abbreviations and terms are used in this manual:

BTU	British Thermal Unit
GPM	Gallons per Minute
LED	Lighting Emitting Diode
MM	Millimeter
NEC	National Electric Code
N.P.T.	National Pipe Thread
NSF	National Sanitation Foundation
PSI	Pounds per Square Inch (Pressure)
U.L.	Underwriter's Laboratory, Inc.

TOOLS & SUPPLIES

CAUTION: CARE SHOULD BE TAKEN IN USING THE CORRECT TOOLS AS INDICATED. USING THE WRONG TOOL MAY INFLICT DAMAGE TO THE PART BEING REMOVED, INSTALLED AND/OR ADJUSTED. MAKE SURE THAT THE CALIBRATIONS ON INSTRUMENTS ARE PERIODICALLY CHECKED FOR ACCURACY.

This section identifies the tools, instruments and supplies which will be required and useful in the inspection, repair and testing of the equipment described in this manual.

Most likely, many of these tools and supplies are already in your kits and are used in everyday maintenance. Make sure to only use the specified sealants, compounds and dressings recommended by Groen.

REQUIRED TOOLS

- Screw Drivers: Flat Blade No.1 and No. 2
- Phillips No.1 and No. 2
- Socket Wrenches: ¼" through 7/8"
- Nutdrivers (metric and inches)
- Open Ended Wrenches
- Pipe Wrenches: 6" and 8" size
- Allen Wrenches: 1/16" through ¼"
- Slip Joint pliers: Channel Lock or Equivalent
- Wire Crimpers

RECOMMENDED INSTRUMENTS

- Digital Multimeter: Fluke Model 77 or equivalent

HELPFUL HARDWARE

- Extension Mirror
- Screw Starter
- Level: 18" Model
- Fuse Puller

RECOMMENDED SUPPLIES

- Pipe Thread Compound: Brand: LACO Pipe Tite Stik No. 11176 or equivalent
- Motor Sealant Grease: Bel-ray
- 2" Aluminum Duct Tape
- Removable Thread Locker: Loctite Type 242 (Door), Loctite Type 222 (Exterior)
- Clear Silicone Sealant: Dow Corning Type 732
- Silicone Heat Sink Compound: Non-Fluid Oil Corp., Chemplex 1381
- High Temperature Anti-Seize and Lubricating Compound: Bostix NEVER SEEZ NSBT-16

HOW TO USE THIS MANUAL

Read this manual completely before attempting any disassembly or repairs.

Please note the similarities and differences between the various models described in the manual.

Before making repairs, you should have knowledge of the steamer operation as described in the Operations Section of this manual and a good understanding of service techniques as presented by the Groen Service School.

This service manual should be taken with you on all service calls. Use the correct tools in accordance with the procedures shown and use only Groen Certified Replacement Parts when performing steamer repairs.

OPERATION

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

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

CONTROLS

Touchscreen Graphic Display

ON/OFF Push Button

Operator controls are on the front right of the unit.

The Groen SmartSteam Pro Connectionless control panel has the touchscreen graphic display and the ON/OFF push button and drain handle.

The touchscreen graphic display allows the user to enter and exist the four cook modes (MANUAL, TIMED, LOW TEMP and HOLD) and select various settings with different menus with the controls. The display also provide several audio and/or visual indicators to the user as cleaning reminders, when the unit reached ready temperature, hours of operation, error codes, etc.

The ON/OFF button get the Groen SmartSteam Pro Connectionless ready for use or shuts it off.

COOK MODE OPERATIONS

1. At the home screen or idle mode, the steam generator stay at a low boil or ready temperature.
2. When the TIMED button is pushed, time can be set by entering the time in the HH:MM format. The unit steams until the timer counts down to zero and goes into HOLD mode while timer counts up. At that time the STOP light illuminates and a beeper sounds.
3. When the MANUAL button is pushed, the unit steams continuously.
4. When LOW TEMP mode is pushed, temperature can be set by entering numbers (between 145-175°F), The Unit steams and maintains the cavity temperature around the set temperature. and count-up timer runs and counts the cooking time.

5. HOLD mode the steam generator maintains the cavity at specified temperature. This specified temperature can be varied between 145-175°F from the settings menu.

OPERATING PROCEDURE

1. Press the ON/OFF push button. The screen will display a CLOSE DRAIN pop-up with CONFIRM button. When CONFIRM is pressed, the unit will display Fill Reservoir screen. When water reaches high probe the heat turns on, if the door is closed. Fill sequence in complete and the display screen will transition to MANUAL mode and preheating continues until READY icon turns on (about 15-20).
2. Load food into pans in uniform layers. Pans should be filled to about the same levels, and should not be mounted.
3. Open the door and slide the pans on to the supports. If you will only be steaming one pan, put it in the middle position. Some foods will cause foam. When cooking foods that foam, such as shrimp, put an empty solid 2 ½' deep pan in the bottom slot of the pan racks.
4. Close the door. When the READY indicator is lit, take one of the following steps:
   - If you want to steam the food for a certain length of time, push the TIMED button and set the desired time with the TIMER knob. The timer will automatically run the steamer for the set time and then go into HOLD. A beeper will sound. Then push "X" button to stop cancel "HOLD".
   - If you want to steam continuously, push MANUAL button. The unit will continue steaming until stopped.
   - If you want to steam at certain temperatures (between 145-175°F). Push LOW TEMP button, set the required temp in Set Temperature screen and press start.
   - Push "X" to stop producing steam.
5. To remove pans from cavity, 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 off the unit, press the ON/OFF push button. The screen will display a shutdown screen instructing the user to Open Door and allow unit to cool for 45 minutes before draining reservoir and cleaning.

TYPICAL QUESTIONS

The following is a sequence of events typical to SmartSteam Pro Connectionless Steamers.

COOKING FOOD

To use the steamer, ensure the cavity door is closed, press the ON/OFF push button to on (button light illuminates). The unit verifies NO water is present in the unit, allows user to continue cooking.

A relay (electric) or gas valve (gas) energizes and provides power to the heating circuit for the steam reservoir. This heats the steam reservoir to boil the water-creating the required steam. When the cavity is heated around 180ºF, the READY icon comes on with an audible alert indicating that the cooking can start. When it is desired to cook food in the cavity, the pans are inserted into the cavity and the door is closed.

Steamer starts in MANUAL mode and heat-up time is about 20 minutes after the steamer is switched on, if all above conditions are met.

When the MANUAL button is pushed, the unit cycles the heat to maintain the cooking temperature.

When the TIMED button is pushed, the display allows time to be entered in hours and minutes, the heater turns on and cycles the heat to maintain the cooking temperature, and the timer counts down to zero automatically switching to HOLD with audible alert and timer begins to count up. Heaters will cycle on and off to maintain cavity temperature at the preset HOLD temperature, which can be changed from the settings menu. At any time while in TIMED & HOLD mode, the "+1m" button will add one minute of cook timer or transition HOLD to TIMED mode for one minute turning heaters on and cycles the heat to maintain the cooking temperature.

When the door is open the display shows the door open icon. If "Compensating Timer" is set to "On", the timer stops counting down, and the heater stops heating. Close the door to resume timing and heating. If "Compensating Timer" is set to "Off", then timer will continue to count down even if door opens and closes.

When the timer counts down to zero the display shows three dashes, the beeper sounds, and the heater cycles on and off slowly to keep the water temperature just above the ready temperature. Push the CANCEL button to stop the beeper.

The "X" button may be pushed at any time to stop the MANUAL or TIMES modes.

If the door is open during the cooking process, the door interlock switch causes power to be removed from the convection motor. The relay or gas valve opens the circuit of the source of heat, instantly reducing the heat from the steam reservoir.

WATER ENTRY INTO STEAM RESERVOIR

CAUTION: **A SCALED RESERVOIR OR DEBRIS WILL CAUSE ERROR CODES. WHEN A PROBE HAS EXCESSIVE SCALE IT WILL NOT FUNCTION PROPERLY.**

NOTICE: **WHEN POWERED OFF, WATER SHOULD BE DRAINED AFTER 45 MINUTES, THERE SHOULD NOT BE ANY WATER INSIDE CAVITY DURING POWER ON.**

On power up, if any water is detected in any of the probes, the unit will show pop-up message to drain the water and clean the probes.

The HIGH WATER probe determines if there is a full and proper level of water in the steam reservoir. If the water level goes down below the HIGH WATER probe, the probe is open by the water level getting low. This causes the triggering of Low water Pop-up in manual fill units. Instructing users to fill the water manually.

During the water filling, when sufficient amount of water filled above HIGH WATER probe, unit will have Audible alarm and Fill reservoir screen moves to previous screen / cook screen.

SERVICE CODES

Error codes are normally cause by probes or timing issues (fill time and drain time).

A error code is generated when the electronic controls are blind to the status of the steam reservoir (i.e., probes are not working) or by a blocked drain. The error may stop the machine from running and the error code number will be displayed as a pop-up message on the touchscreen. Error codes protect the steam reservoir from irreparable damage.

HEATER CONTROL

NOTICE: **IF THE DOOR IS OPEN, THE HEATING CIRCUIT WILL NOT BE ENERGIZED AND THE HEATING CIRCUIT WILL NOT TURN ON UNTIL THE DOOR IS CLOSED.**

After the reservoir is initially filled and the diagnostic is complete, the relay (electric) or gas valve (gas) energizes providing power to the heating circuit. Then the control monitors the cavity temperature with RTD and determines when the cavity is in "ready" condition.

If the unit is at the required temperature and the Home screen displayed (no cooking mode selected), the heater control cycles the heating circuit power relay or gas valve and maintains the ready conditions by cycling the elements based on the cavity temperature to maintain 180F.

If the MANUAL mode is on, unit cycles the heat to maintain the cavity to cook temperature.

If HOLD mode is on, unit maintains the cavity at specified temperature. This specified temperature can be varied between 145-175°F from the settings menu:

A High-Limit thermostat is provided as a safety device on each steam reservoir to monitor the internal temperature of the steam reservoir. This temperature is set for 250ºF and will shut down the steamer if there is very little or no water and the steamer cavity starts to overheat.

DRAINING WATER FROM THE STEAM RESERVOIR

When water is drained from the reservoir, it goes to the Manual Drain pan controlled by a Manual Drain valve or goes to the drain line, if the drain hose is connected instead of the Manual Drain pan.

A manual drain valve is connected to each steam reservoir. This valve should be turned open, permitting water from the steam reservoir to drain out. This manual valve should be closed before the unit is turned on.

When the required level of water is filled, an alert will notify the user to stop filling the water.

When the unit is turned off, a Shutdown screen appears and instructing the users to wait for 45 minutes before draining the water to the drain pan or into the drain line. some water may be left in the reservoir in order to protect cavity bottom from damage. this water can be removed with sponge.

LOW WATER LEVEL DETECTION

Because prolonged operation with less than the required amount of water in the steam reservoir could present a dangerous situation, the control takes action to prevent the situation.

If the low probe is satisfied, the heat turns on and continues operation. If the low probe is not satisfied, within the 5 minutes of call for water, the heater will turns off and wait for the user to fill the water back to the level.

INSTALLING, CLEANING & TESTING

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 QUIPMENT. THE UNIT MUST BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES.

CAUTION: DO NOT INSTALL THE UNIT WITH THE REAR VENTS BLOCKED, OR WITHIN 2 INCHES OF A HEAT SOURCE SUCH AS A BRAISING PAN, DEEP FAT FRYER, CHARBROILER OR KETTLE. TO AVOID DRAINAGE PROBLEMS, LEVEL THE UNIT FRONT TO BACK, AND PITCH IT SLIGHTLY TO THE FRONT.

WARNING: TO AVOID DAMAGE OR PERSONAL INJURY, FOLLOW THE WIRING DIAGRAM EXACTLY WHEN CONNECTING THE UNIT.

CAUTION: EACH UNIT MUST HAVE A SEPARATE GROUND WIRE FOR SAFE OPERATION.

ELECTRIC MODEL INSTALLATION

ELECTRICAL SUPPLY CONNECTION

1. Panel Removal – Right Side: Open the wiring and control panel by removing screws from the right side panel. Slide the panel forward and set it aside.
2. Supply Voltage: The unit must be operated at the rated name plate voltage. The name plate can be found on the right side panel.
3. Phase Selection: Refer to steamer wiring diagram (pages 15-16) and element wiring (pages 8-9).
4. Terminal Block: The terminal block for incoming power is located at the back of the control compartment, the ground terminal is located in the wiring compartment near the terminal block.
5. Supply Wire: The equipment grounding wire must comply with the National Electrical Code (NEC) requirements. The wiring diagram on the inside of the unit's right side cover gives directions for the proper connection of the terminal block to the supply power. The proper wire must be used or the unit will not meet Underwriters Laboratories and NEC requirements. The electric hole is sized for a 1" conduit fitting on the GSSP-CL-3E and GSSP-CL-5E.
6. Branch Circuit Protection: Each SmartSteam Pro Connectionless Steamer, including individual units of stacked models, should have its own branch circuit protection and ground wire. Current and power demands for each unit are as shown below.

AMPERAGE/RESISTANCE CHART

Model	Voltage/Phase	Amperage	Resistance
GSSP-CL-3E	208 3-PHASE	25	8.3
GSSP-CL-3E	240 3-PHASE	22	10.9
GSSP-CL-3E	480 3-PHASE	11	43.6
GSSP-CL-3E	208 1-PHASE	44	4.7
GSSP-CL-3E	240 1-PHASE	38	6.3
GSSP-CL-5E	208 3-PHASE	34	6.1
GSSP-CL-5E	240 3-PHASE	29	8.3
GSSP-CL-5E	480 3-PHASE	15	32
GSSP-CL-5E	208 1-PHASE	58	3.6
GSSP-CL-5E	240 1-PHASE	50	4.8

GAS MODEL INSTALLATION

Although Groen recommends the SmartSteam Pro Connectionless Steamer is installed near non-combustible surfaces, the following minimum clearances are to any surface, combustible or non-combustible.

Right Side: 2 inches

Left Side: 2 inches

Rear: 6 inches

However, for easy service, at least 6 inch clearance should exist for right side access to gas shut-off valve.

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 the flow of air for combustion and ventilation must be removed. Do not obstruct the flue cover or rear 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/NFPA 54, or the National Gas and Propane Installation Code, CAS B149.1.

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

ELECTRICAL SUPPLY CONNECTION

Provide 115 VAC, 60 HZ, 1 PH, 15 AMP service. Bring wire in through hole on the back panel. Each cavity requires a separate cord for connection. Local codes and/or the National Electrical Code should be observed in accordance with ANSI/NFPA 70. AN ELECTRICAL GROUND IS REQUIRED. The wiring diagram, located in the service compartment and in this manual. Maximum load is 2-1/2 AMPS. In Canada provide electrical service in accordance with the Canadian Electrical Code, CSA C22.2 part 1 and/or local codes.

GAS SUPPLY CONNECTION

Connection to the gas supply shall be in accordance with the chart below. Supply pressure must be at least 4.5" W.C. (maximum 14" W.C.) for natural gas or 12" W.C. (maximum 14" W.C.) for LP gas. In Canada, the installation must conform to the Canadian Gas Code, CAN 1-B149. Installation Codes for Gas Burning Appliances and Equipment and/or local codes. Check all gas connections for leaks prior to unit operation.

RATINGS FOR GAS CHART

Model	BTU	OPERATING PRESSURE	INCOMING GAS FEED RATE	
			MIN	MAX
3G Natural	54,000	4.30" WC	5"WC	14" WC
3G Propane	54,000	10.5" WC	12" WC	14" WC
5G Natural	58,000	4.30" WC	5"WC	14" WC
5G Propane	58,000	10.5" WC	12" WC	14" WC

INSTALLATION

NOTICE: THE QUALITY OF THE WATER IS A FACTOR IN THE PROPER PERFORMANCE OF THE STEAMER. THE WATER SUPPLY SHOULD HAVE A MINIMUM VALUE OF 30-40 PARTS PER MILLION OF TOTAL DISSOLVED SOLID (TDS).

Many of the problems associated with the degraded performance or non-operation of the SmartSteam Pro Connectionless Steamer can be traced directly to improper installation and/or lack of proper and periodic cleaning-all of which is the responsibility of the customer.

This section is provided to determine that the equipment was installed correctly, to indicate the proper cleaning techniques ads to be used by Groen customers and steamer test procedures.

It is to be expressly noted that ALL work associated with the installation and cleaning of the SmartSteam Pro Connectionless Steamer is NOT covered by the Groen warranty provisions.

LEVEL INSTALLATION

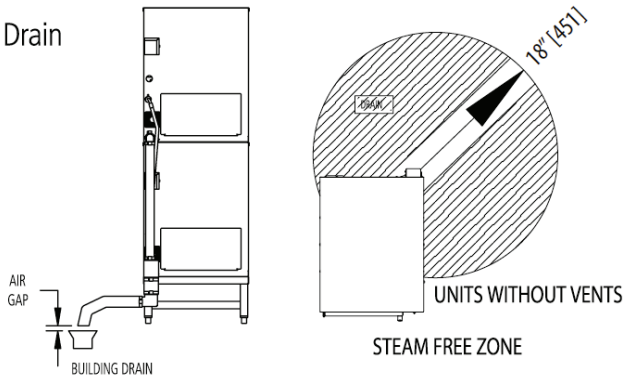
It is preferable that the steamer be installed level side to side (left to right) and slightly pitched (1 to 5 degrees) back to front, with the front always being lower that the rear. This allows the condensate water to go to the drain at the front of each cavity.

Make sure that all leg extensions are tight against the floor and that the steamer is supported on all four legs.

DRAIN LINE INSTALLATION (OPTIONAL)

The drain kit is an optional accessory.

Proper Drain



Do not install rear of unit within 24" radius from the drain outlet to any steam producing device. Do not install steamer directly above steam venting floor drains.

If the floor drain "only" services this steamer, then the drain may be located within the steam-free zone. The steam-free zone must be covered if other appliances cause steam at the floor drain.

INSTALLATION CHECKLIST

General

- ☐ Refer to Installation on page 6
- ☐ Do not install steamer directly above steam venting floor drain
- ☐ Make sure the unit rear vents are not blocked and the unit is not within 2" of a heat source
- ☐ Make sure the steamer is level or pitched slightly forward
- ☐ Check that fan is clean and clear of foreign materials

Gas Connection Checks

- ☐ Make sure installation conforms to local codes
- ☐ Make sure steamer is installed under a ventilation hood. Check that the flue and all vents are free of obstruction
- ☐ Check that gas supply is 5" W.C. (min) to 14" W.C. (max) for natural gas, and 12" "W.C. (min) to 14" W.C. (max) for propane
- ☐ Check that gas supply piping is ½" NPT
- ☐ Verify operating gas pressure per chart on page 6

Electrical Checks

- ☐ Make sure the steamer is properly grounded
- ☐ Verify that the electrical connections conform to all local codes and the NEC requirements
- ☐ Make sure the power supply branch circuit conforms to the specifications indicated on the steamer nameplate

Steamer Door Check

- ☐ Make sure the door gasket is making good contact with the cavity frame
- ☐ Instruct operators to leave the door open when the steamer is shut down overnight or longer

Drain Connections

- ☐ Make sure drain plumbing connections comply with local codes
- ☐ Make sure drain line is 1- 1/12" and 2- 1/2" on stacked units
- ☐ Check that drain line is suitable for boiling water. Make sure PVC is not being used for drain plumbing
- ☐ Check that drain line is pitched downward
- ☐ Make sure drain line is free of obstruction
- ☐ Make sure drain is not connected to a building drain

GENERAL CLEANING

WARNING: DISCONNECT THE POWER SUPPLY BEFORE CLEANING THE OUTSIDE OF THE STEAMER. KEEP WATER AND CLEANING SOLUTIONS OUT OF CONTROLS AND ELEVTRICAL COMPONENTS. NEVER HOSE OR STEAM CLEAN ANY PART OF THE UNIT.

AVOID CONTACT WITH ANY CLEANSER, DELIMING AGENT OR DEGREASER AS RECOMMENDED BY THE SUPPLIER. MANY ARE HARMFUL. READ THE WARNINGS AND FOLLOW THE DIRECTIONS.

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

DON'T OPERATE THE UNIT UNLESS THE REMOVABLE PARTITION HAS BEEN PUT BACK IN ITS PROPER LOCATION.

DO NOT USE ANY CLEANING 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.

WARNING: DO NOT DISASSEMBLE PROBES DURING CLEANING AS BREAKAGE WILL RESULT. USE HOT WATER TO WASH OUT PIVOT JOINTS OF PROBE.

To keep your SmartSteam Pro Connectionless Steamer in proper working condition, us the following procedure to clean this unit. This regular cleaning will reduce the effort required to clean the steam reservoir and cavity.

SUGGESTED TOOLS

- Mild detergent or vinegar
- Stainless steel exterior cleaner such as Zepper
- Cloth of sponge
- Spray bottle
- Nylon pad
- Towels
- Plastic disposable gloves

PROCEDURE EXTERIOR CLEANING

1. 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. 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 on the side or rear panels.
2. To remove material which may be struck to the unit use a fiber brush, or a plastic or rubber scraper with a detergent solution.
3. Stainless steel surfaces may be polished with a recognized stainless steel cleaner such as "Zepper".

PROCEDURE INTERIOR CLEANING

Clean the unit daily or as residue builds upon the bottom of the oven cavity.

1. Press OFF push button to turn the steamer off. Open the door.
2. Allow unit to shutdown, drain the water and allow the unit to cool before cleaning.
3. After the unit has cooled, remove steam lid, pan racks, and drain guard from the cavity.
4. Use a mild detergent to wipe down the steamer cavity and the probes on the right side wall. Clean steam lid, pan racks and drain guard. Use brush provided to clean out condensate and overflow drains.
5. Rinse the unit to remove detergent.
6. Reinstall drain guard, pan racks and steam lid. Unit is ready for use.

HEAVY USER DELIMING MAINTENANCE PROGRAM

WARNING: FOLLOW THE HANDLING INSTRUCTIONS PROVIDED WITH THE DELIMER/ DESCALER, INCLUDING THE RECOMMENDATIONS FOR THE PROTECTIVE RUBBER GLOVES, PROTECTIVE CLOTHING/BOOTS AND PROTECTIVE EYEWEAR.

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

WARNING: ALLOW THE STEAMER TO COOL COMPLETELY BEFORE DELIMING. HOT SURFACES CAN CAUSE SEVERE BURNS.

PURPOSE

SmartSteam Pro Connectionless Steamers are designed to require only a daily cleaning of the steamer cavity, pan racks, steam lid and probes to maintain full performance. Daily cleaning may not be sufficient to control scale build-up, when a connectionless steamer is operated in a heavy duty, continuous operation in an area with extreme hard water.

The following procedure outlines steps for optional periodic deliming for steamers in heavy duty applications and extreme water conditions. The frequency of the deliming depends upon the severity of the scale build-up and individual operators.

RECOMMENDED TOOLS & CLEANERS

- Nylon scrub pad, cloth or sponge: Scotch-Brite™ medium duty scrubbing sponges are preferred. DO NOT use metal scrub pads.
- Delimer/Descaler: Groen Delimer Descaler (PN 114800), Commercial Lime Away or any equivalent. DO NOT use any cleaning or deliming agent that contains Citric Acid, any Sulfamic agent or any chloride, including Hydrochloric Acid.
- Vinegar: Commercial vinegar (5 to 7% strength) has been used successfully by a number of SmartSteam users as a descaler. Follow the same instructions as when using delimer/descaler.

CLEANING STEPS

Manual delime process can be performed by doing the following:

1. Press ON/OFF push button to turn the steamer off. Open the steamer door.
2. Allow the steamer to shutdown, drain and to cool completely before cleaning.
3. After the steamer has cooled completely, remove the pan and racks.
4. Remove any spilled foods from the reservoir.
5. Press ON/OFF push button to turn the steamer on. Wait for the stem reservoir to start to fill or fill the water manually upto the required water level.

   NOTE: Use protective gear, including eye wear for the following steps involving delimer/descaler.

6. Add delimer/descaler (or vinegar) to the water in the steam reservoir, push TIMED, and set the timer for 20 minutes. Close the steamer door.

   NOTE: ADDITIONAL AMOUNTS OF DELIMER AND LONGER TIME SETTINGS ARE NOT RECOMMENDED, THEY WILL NOT INCREASE THE EFFICIENCY OF THE PROCEDURE.

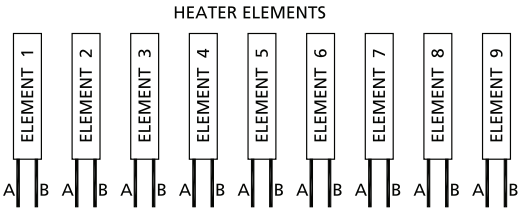
7. When the beeper sounds, press ON/OFF push button to turn the steamer off. Open the steamer door and wait for the steam reservoir to drain.
8. Press ON/OFF push button to turn the steamer on and wait for the steam reservoir to again fill with water. Use a nylon scrub pad to remove the loosened scale.
9. Press ON/OFF push button to turn the reservoir off and drain the water from the steam reservoir.

10. Wipe down steamer cavity and steam reservoir to remove all traces of scale and cleaning solution. Reinstall the pan racks and the steam lid.

NOTE: IF SALE BUILD-UP REMAINS, REPEAT THE PROCEDURE (STEPS 5 - 10) AS NECESSARY.

ELEMENT WIRING

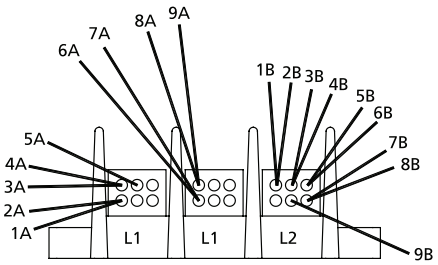
GSSP-CL-3E: 208/240V 1-PHASE



LEGEND

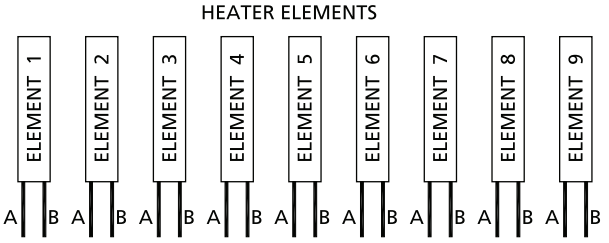
A - RED
B - WHITE

NOTE: WHEN CONVERTING FROM 3 PHASE TO 1 PHASE, ADD A JUMPER WIRE FROM A TO C ON TERMINAL BLOCK TB1 AS SHOWN ON THE WIRING DIAGRAM



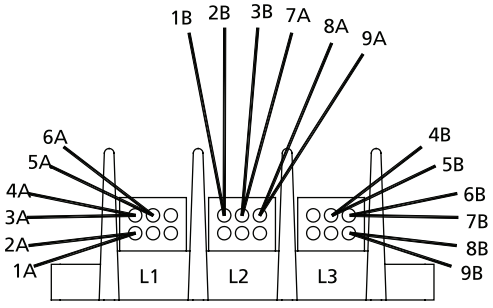
ELEMENT TERMINAL BLOCK

GSSP-CL-3E: 208/240V 3-PHASE



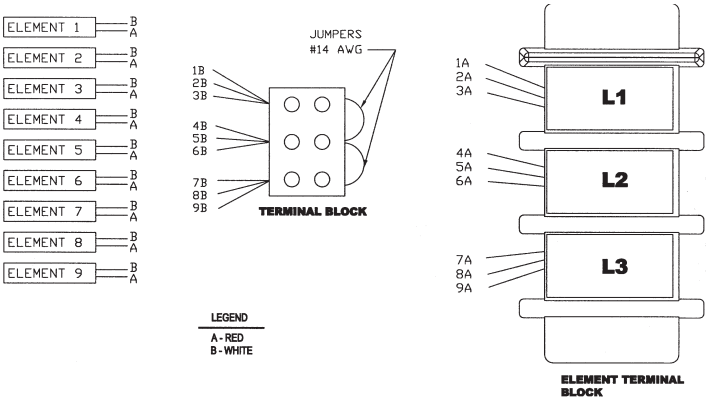
LEGEND

A - RED
B - WHITE

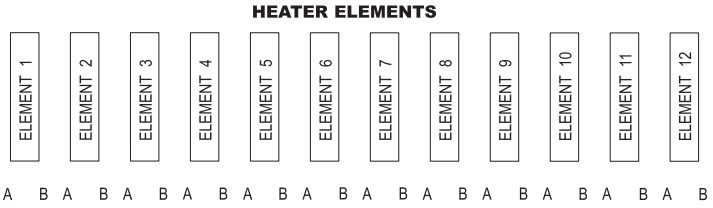


TERMINAL BLOCK

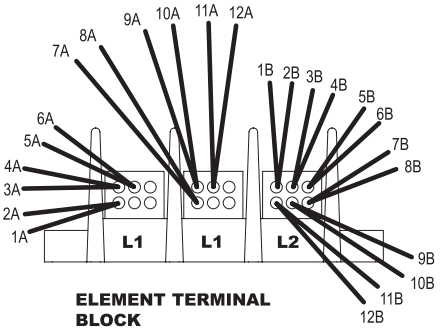
GSSP-CL-3E: 480V 3-PHASE, USING 277V ELEMENTS IN WYE CONFIG.



GSSP-CL-5E: 208/240V 1-PHASE

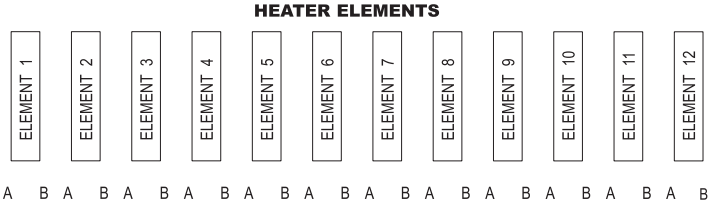


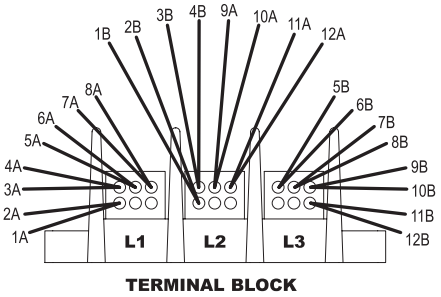
NOTE: WHEN CONVERTING FROM 3 PHASE TO 1 PHASE, ADD A JUMPER WIRE FROM A TO C ON TERMINAL BLOCK TB1 AS SHOWN ON THE WIRING DIAGRAM



ELEMENT TERMINAL BLOCK

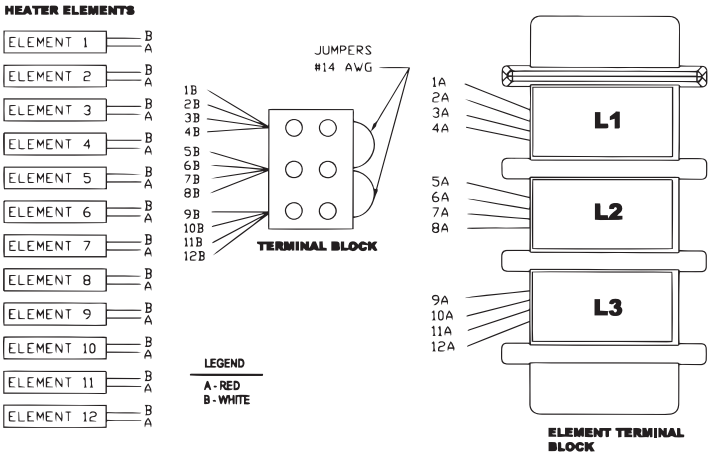
GSSP-CL-5E: 208/240V 3-PHASE





TERMINAL BLOCK

GSSP-CL-5E: 480V 3-PHASE, USING 277V ELEMENTS IN WYE CONFIG.



TROUBLESHOOTING

DIAGNOSTICS

1. Make sure lithium battery is installed in the back of the touchscreen display.
2. Apply power to the GSSP and turn the ON/OFF switch located on the rear back panel to “on”. The touchscreen should start loading the application with progress bar. Once loading is complete the touchscreen should go blank. If the application screen does appear, then check the fuse and both circuit breakers (one left of the cavity fan motor and one on the control transformer).
3. Push the power button on the front of the unit. The green LED on the button should illuminate and “self-diagnostic” should appear. Note: Quickly press and hold the “menu” button until the unit displays “Entering Service Mode”. If executed in time, no water should start filling into the reservoir.
4. Press “Service” and enter “9999” then press “Enter”; then press the down arrow until “Parameters” is shown. Press “Parameters” and enter “7256” then press “Enter”. Select “Select Model” highlighted in blue and from the list select the appropriate model being tested and press “Save”.
5. Press the “back” button and select “V**********” highlighted in blue for entering “Serial Number”. Note: If it is a single cavity unit enter the serial number using this format: 0000XXXXXXX-X (i.e., 00001234567-1); if it is double stacked cavity unit, the serial number format 00XXXXXXX-X-T (i.e., 001234567-1-T). To “T” for top cavity or “B” for bottom, select for the last character hold to 2 or 8 button for at 1 second.
6. Press the “back” button and select “HH:MM” highlighted in blue for “Time”. Enter time in HH:MM format and press am/pm for the appropriate and press “Save”.
7. Press the “back” button and select “MM/DD/YYYY” highlighted in blue for “Date”. Enter date in MM/DD/YYYY format and press “Save”. Press “Accept” if date is correct or “Change” if date needs corrections.
8. Press the “back” button and select “MM/DD/YYYY” highlighted in blue for “Manufacturing Date”. Enter date in MM/DD/YYYY format and press “Save”. Press “Accept” if date is correct or “Change” if date needs corrections.
9. Press the “back” button to “Service” menu and select “Diagnostics”. Before continuing visual check and make sure all harnesses are in place and the connectors are properly seated. “Board Communication” status should be “Active” in green for proper communication between touchscreen display and I/O board. Check I/O board for flashing blue LED. No communication or break in communication for more than 5 seconds will show “Lost” status.
10. Scroll down to “Control Voltage” and confirm the value for 24 VAC at the secondary of the control transformer. Values should be between 22 and 26 VAC and solid red LED on I/O board. Record value on sheet 8.
11. Check “Board Temp” value and confirm temperature inºF/C. The value should between 70°F(21°C) and 149°F(65°C). Record value on sheet 8.
12. Check “High Limit Thermostat” and confirm their states. Thermostat status should read “Closed” on the touchscreen display.
13. Check “Cavity RTD" and confirm it shows some temperature.
14. Disconnect the RTD connection, make sure it displays XXX°F, the connect back and verify that it shows some temperature again.
15. Turn on “Cooling Fan” for 5-10 seconds and confirm the mA value. Values should between 50 and 260 mA (no LED on I/O board). Then turn valve off and value should drop to 0 mA.
16. Check “Water Level Low”, “Water Level High”, and “Water Level Overflow” probe status and confirm their states. All probe status should read “Open” on the touchscreen display and no LEDs on the I/O board should be illuminated.
17. With one end of a jumper wire attach or touch the metal tip of the low probe inside the cavity; with the other end of the jumper wire, ground to the cavity bottom, status should change next “Water Level Low” from “Open” to “Closed” on the touch screen display and the low probe orange LED should illuminate on the I/O board. Remove the jumper wire and “Water Level Low” from “Closed” to “Open” on the touch screen display and the low probe LED should turn off the I/O board.
    - Repeat for the following water level probes:
        - High water level probe (yellow LED)
        - Overflow water level probe (red LED)
18. Press back button to exit “Diagnostics” menu and affirm “Restart” to continue to functional test.

ERROR CODES

Error #	Error Name/ Trouble Condition	Error Type	Displayed Error Description	Corrective Action
01	Low Probe Error - Out of Sequence	Fatal	During heating or start-up, Low Probe is not detecting water and water is detected at high probe for more than 10 seconds.	Drain Unit & Clean Cavity Probes & Restart Unit. If error does not clear, Call for Service 888-994-7636.
02	Probe Error - Start-Up	Fatal	During start-up, low probe is not detected within 15 min.	No water detected If unit has water - Drain Unit & Clean Cavity Probes If error does not clear, Call for Service 888-994-7636.
02	Probe Error - Start-Up	Fatal	During start-up, low, or high, or both probes are not detected (Open) within 5 mins	No water detected If unit has water - Drain Unit & Clean Cavity Probes If error does not clear, Call for Service 888-994-7636.

Error #	Error Name/ Trouble Condition	Error Type	Displayed Error Description	Corrective Action
04	Overflow Error	Fatal	Overflow probe is detected for more than 10 seconds Low & high probe are open Low or high probe are open	Clean Cavity Stop Filling. After shutdown clean all probes, and overflow drains before restarting the unit. Refer to manual for cleaning instructions. If error does not clear, Call for Service 888-994-7636.
04	Overflow Error	Fatal	Overflow probe is detected for more than 10 seconds Low & high probe are open Low or high probe are open	Clean Cavity After shutdown clean all probes and overflow drains before restarting the unit. Refer to manual for cleaning instructions. If error does not clear, Call for Service 888-994-7636.
06	Hot Fill Time Exceeded - During Heating	Non-Fatal / Warning	During heating, water not detected at probes within 5 mins of call for water	Add water to continue cooking
08	Communication Failure	Fatal	IO Board to Controller Board Communication has been disrupted . Error can only be cleared by cycling main power switch.	Drain water if present. Cycle Main Power Switch on the rear of unit to clear error. If error does not clear, Call for Service 888-994-7636.
09	Control Voltage Error	Fatal	24 volt DC supply voltage is out of range	Call for Service 888-994-7636
10	Start-Up - Drain Timeout - Probe Shorted/Drain Blocked	Fatal	Water detected at one or more probes while draining during start-up for more than XX mins. Probes are shorted / drain port is blocked	Probes are shorted / drain port is blocked. Drain cavity, clean probes and cavity If error does not clear, Call for Service 888-994-7636.
11	Control Temperature Exceeded	Fatal	I/O board has exceed preset temperature of 185°F/85°C	Call for Service 888-994-7636
12	Low Voltage	Fatal	Transformer output voltage is between 19 and 20.5 V	Call for Service 888-994-7636
13	Low Voltage	Fatal	Transformer output voltage is below 19V	Turn off main power and Call for Service 888-994-7636
14	High Voltage	Fatal	Transformer output voltage is above 31V	Turn off main power and Call for Service 888-994-7636

Error #	Error Name/ Trouble Condition	Error Type	Displayed Error Description	Corrective Action
15	Fill Valve Failure	Fatal	Fill Valve / Fill Valve circuit current is out of range for the current state of the valve. Standard operating current is between 150mA to 500mA.	Call for Service 888-994-7636
18	Cooling Fan Failure	Fatal	Cooling Fan / Cooling Fan circuit is out of range for the current state of the valve. Standard operating current is between 50mA and 260mA.	Call for Service 888-994-7636
20	Maximum Temperature Exceeded	Fatal	Hi limit Tstat Triggered due to excess heat	Unit has exceeded its maximum operating temperature. Call for Service 888-994-7636
21	Heating Circuit Failure or Gas Control Relay	Fatal	Heating circuit current is out of range for the current state of the circuit. Standard operating current is between 200 mA to 1000 mA (Electric Model) Standard operating current is between 200 mA to 900 mA (Gas Model)	Call for Service 888-994-7636
23	Door Open	Warning	During cook, hold and delime modes, leaving door open for longer than 2 minutes (default) will show pop up message and sound a continuous tone alarm. Counter will start again unless the door is closed. Open time will be settable in settings, Off, 2 min, 5 min, 10 min.	Close door to return to normal operation.
24	Invalid Date Format	Warning	Data entry does not meet specific constraints	MM/DD/YYYY is an invalid date.
25	Invalid Time Format	Warning	Data entry does not meet specific constraints	Hour field cannot have a value greater than 12
26	Invalid Time Format	Warning	Data entry does not meet specific constraints	Hour field cannot have a value greater than 24

Error #	Error Name/ Trouble Condition	Error Type	Displayed Error Description	Corrective Action
27	Invalid Time Format	Warning	Data entry does not meet specific constraints	Minute field cannot have a value greater than 59
28	Invalid Cook Time	Warning	Time entered for Cook mode or Timers is greater than 10 hours	Cook time cannot be more than 12 hours
31	Incorrect Code	Warning	Occurs when incorrect service or parameter code is entered or if save is selected prior to all digits being entered	Enter correct 4 digit code
32	Internal Battery Failure	Warning	Internal battery voltage is Low	Battery must be replaced to maintain settings and timers
33	Model Not Selected	Warning	Occurs when a model has not been entered into Parameters screen. Will occur only at first power up of display, (field/factory)	Model must be entered prior to operation
34	RTD Failure During Cooking	Warning	RTD value is out of range	Only Manual Cook mode available Call for Service 888-994-7636
35	RTD Failure during Start-Up	Warning	RTD value is out of range	Only Manual Cook mode available XX hours remaining until lockout Call for Service 888-994-7636
36	Overfill Warning	Non-Fatal / Fatal	Overflow probe is detected for more than 10 seconds. All Probes are good	Stop Filling. Drain unit till the high probe.
37	Hot Fill - Add Water Warning	Non-Fatal	Water not detected at low probe and other probes	Add water
38	Cold Fill - Add Water Warning	Non-Fatal	Water not detected at any probe during start-up for 10 min	Drain unit, Clean probes and restart unit or Call for Service 888-994-7636
39	Water Detected During Start-Up	Non-Fatal	Water detected at one or more probes during start-up	Drain cavity, clean probes and cavity before filling reservoir
40	No Call For Water - Fill Failure	Fatal	During heating, water not detected at High probe within 10 mins of call for water.	Check water fill connection or Call for Service 888-994-7636

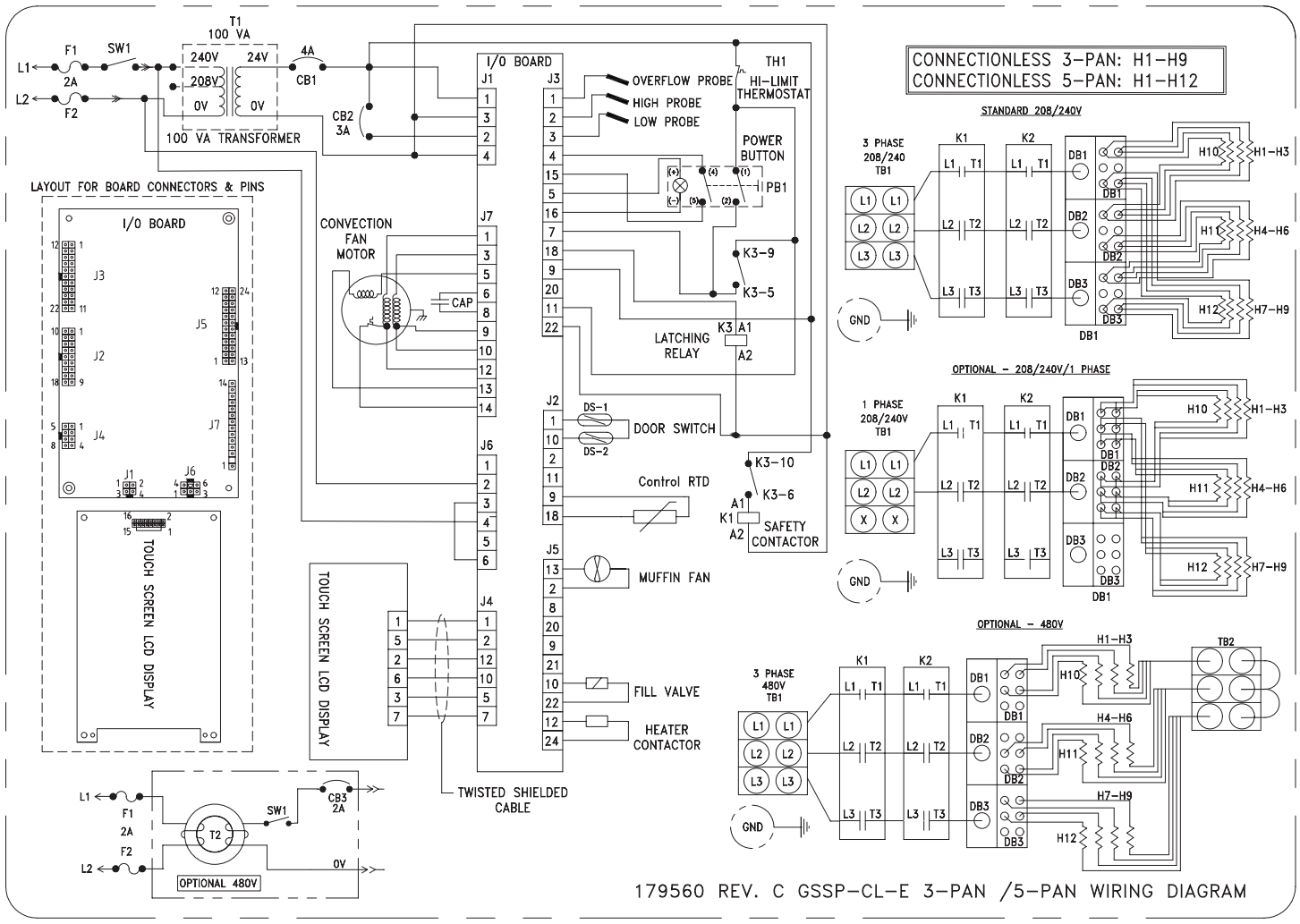
AMPERAGE/RESISTANCE CHART

Model	Voltage/Phase	Amperage	Resistance
GSSP-CL-5E	208 Three Phase	34	6.1
GSSP-CL-5E	240 Three Phase	29	8.3
GSSP-CL-5E	480 Three Phase	15	32
GSSP-CL-5E	208 Single Phase	58	3.6
GSSP-CL-5E	240 Single Phase	50	4.8
GSSP-CL-3E	208 Three Phase	25	8.3
GSSP-CL-3E	240 Three Phase	22	10.9
GSSP-CL-3E	480 Three Phase	11	43.6
GSSP-CL-3E	208 Single Phase	44	4.7
GSSP-CL-3E	240 Single Phase	38	6.3

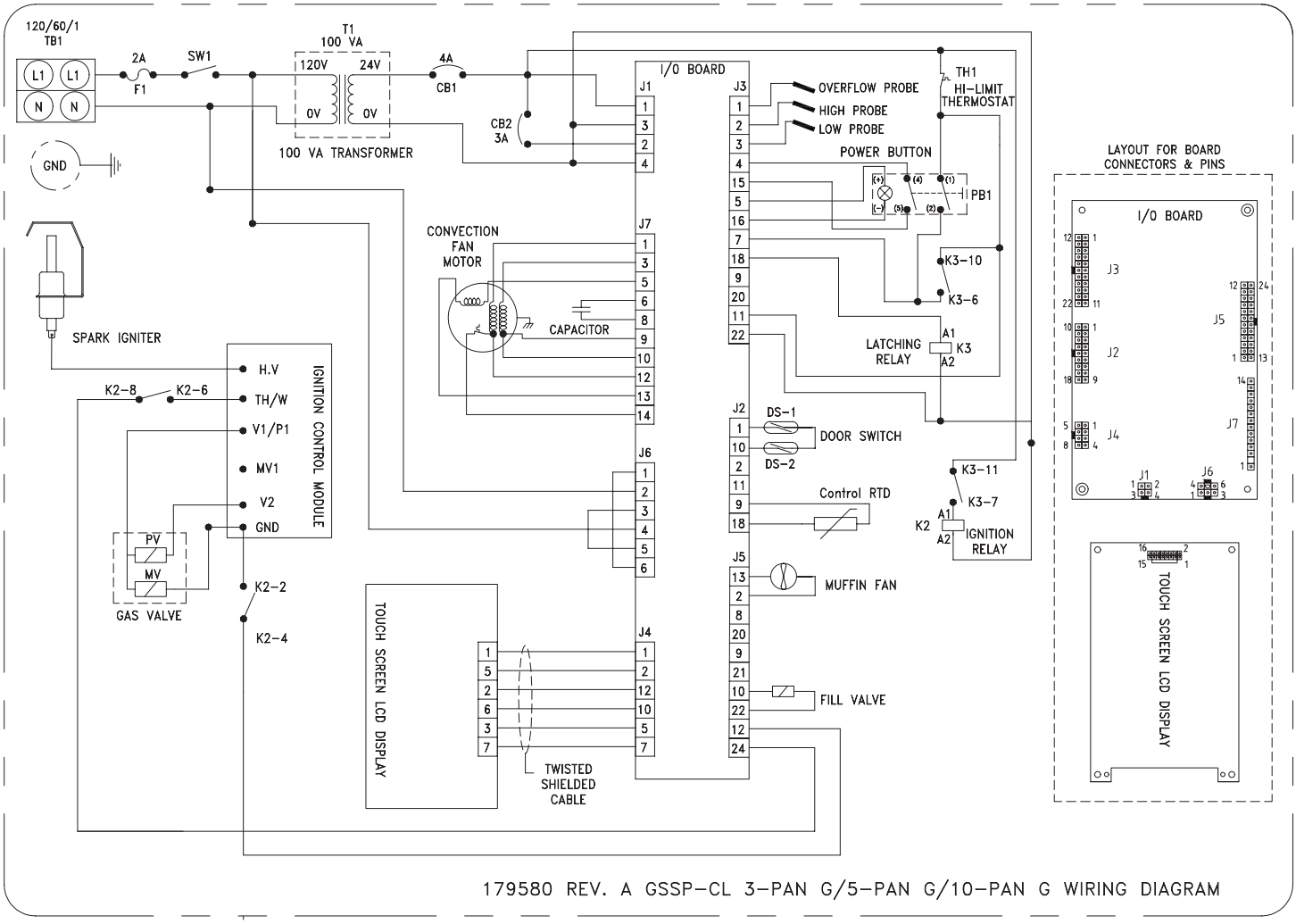
GAS ORIFICE SIZE CHART (ALTITUDE ABOVE SEA LEVEL IN FEET)

Natural	5G Size	5G P/N	10G Size	10G P/N	3G Size	3G P/N
Blank	Blank	145645	Blank	145645	Blank	145645
0-2000	#39 (.0995)	145646	#41 (.0960)	145993	2.40 mm (.0945)	147132
2001-4000	#40 (.0980)	145647	3/32 (.0938)	145648	2.35 mm (.0925)	147133
4001-6000	3/32 (.0938)	145648	2.25 mm (.0886)	145994	2.25 mm (.0886)	145994
6001-8000	2.3 mm (.0906)	145649	2.15 mm (.0846)	145995	#44 (.0860)	147134
Propane	**5G Size**	**5G P/N**	**10G Size**	**10G P/N**	**3G Size**	**3G P/N**
0-2000	1.65 mm (.0650)	145716	1.45 mm (.0571)	145996	#53 (.0595)	145986
2001-4000	1/16 (.0625)	145717	#54 (.0550)	145997	1.50 mm (.0591)	145719
4001-6000	1.55 mm (.0610)	145718	1.35 mm (.0531)	145998	1.45 mm (.0571)	145996
6001-8000	1.50 mm (.0591)	145719	#55 (.0520)	145999	#54 (.0550)	145997

Wiring Diagram & Schematics

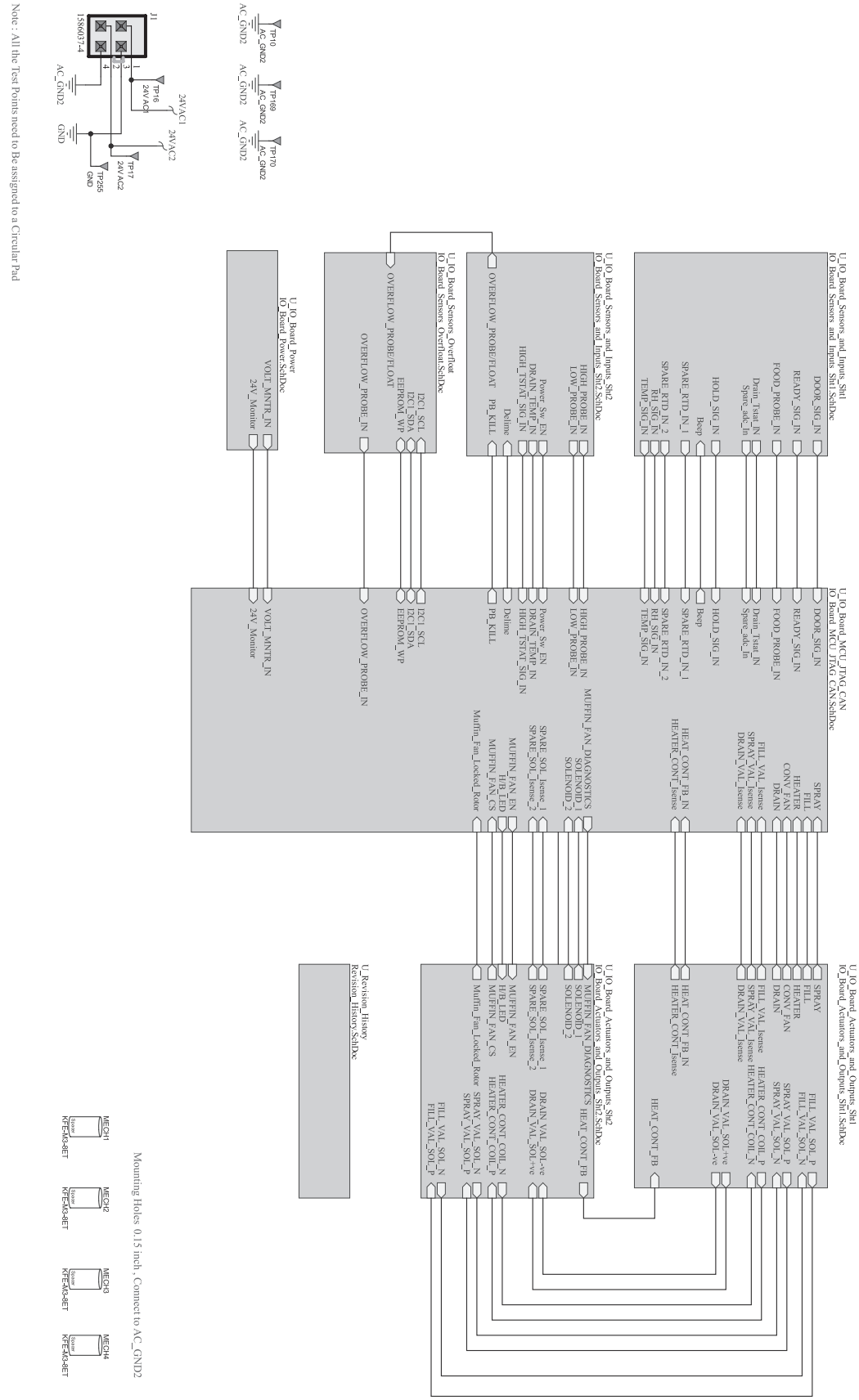


Wiring Diagram & Schematics

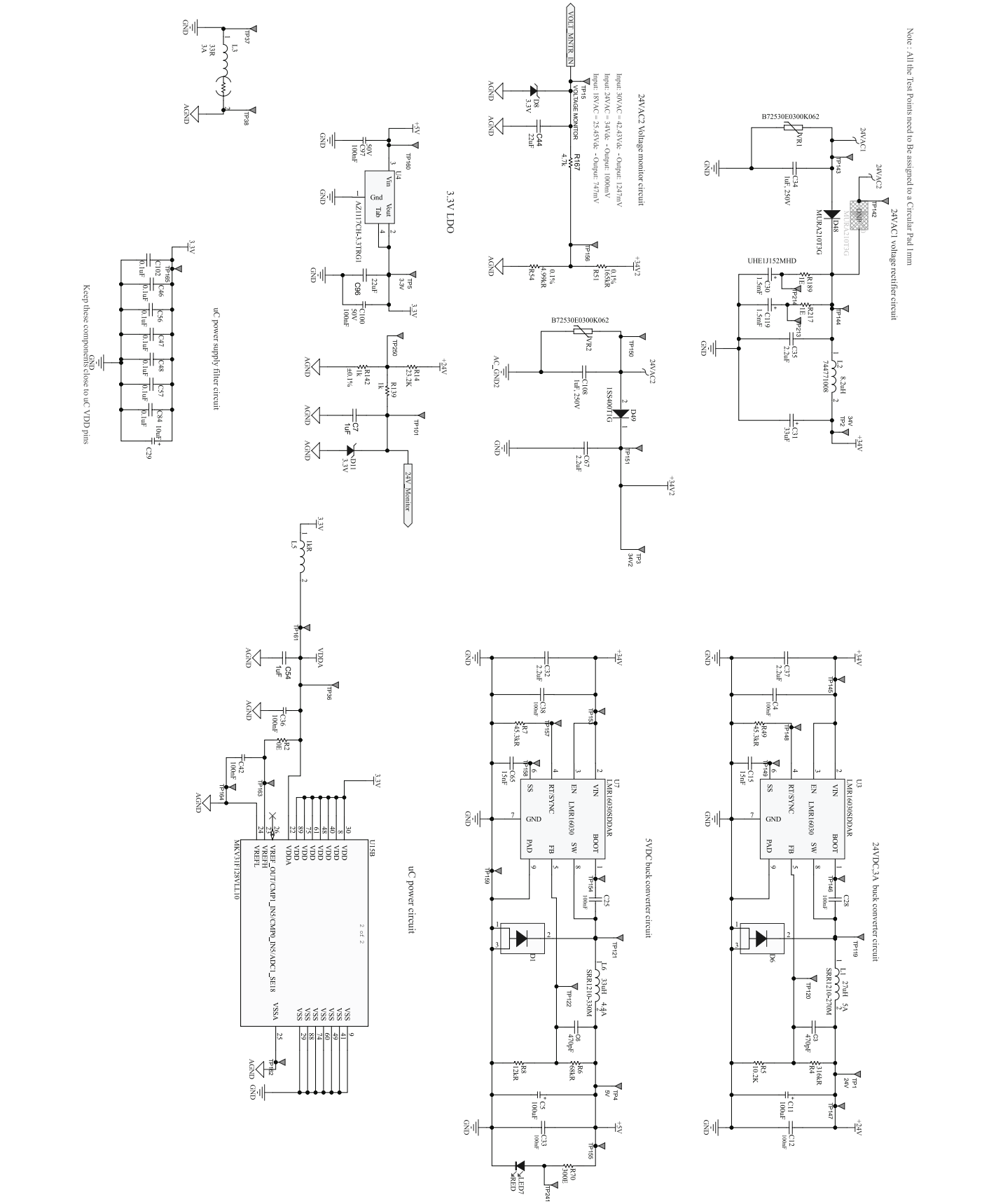


179580 REV. A GSSP–CL 3–PAN G/5–PAN G/10–PAN G WIRING DIAGRAM

Wiring Diagram & Schematics

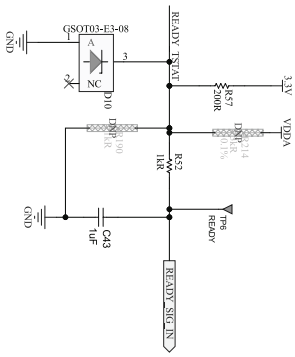


Wiring Diagram & Schematics

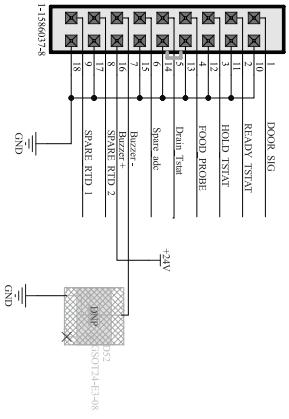


Wiring Diagram & Schematics

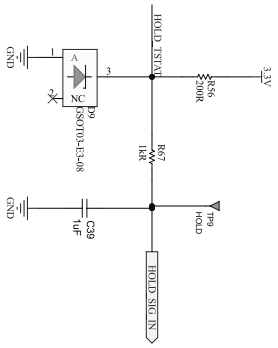
Ready Thermostat /RTD input



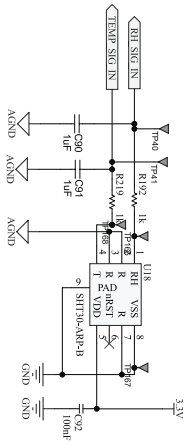
Text in Blue



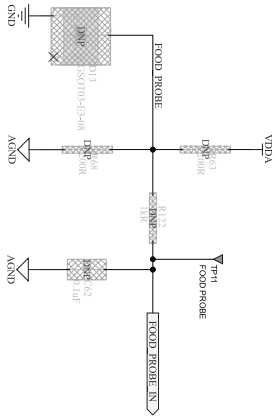
Hold Thermostat input



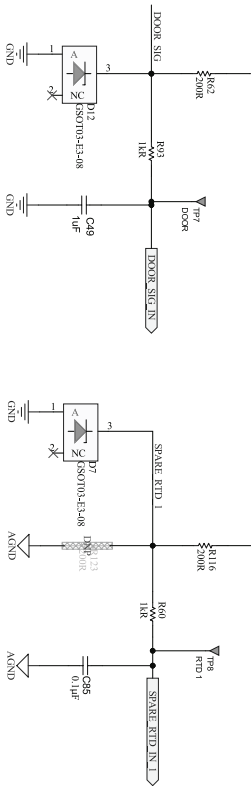
RH and temperature sensor



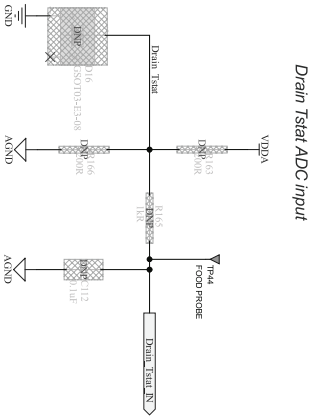
Food probe ADC input



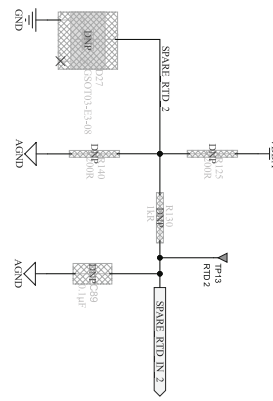
Door switch input



Drain Tstat ADC input

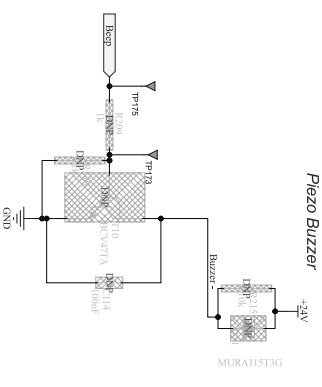


Spare RTD 2 ADC input

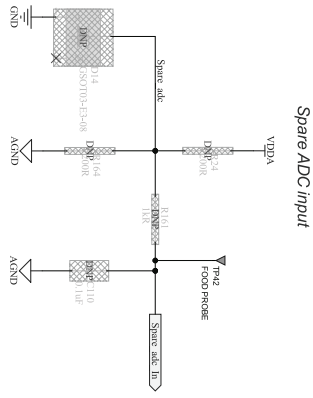


Spare RTD 1 ADC input

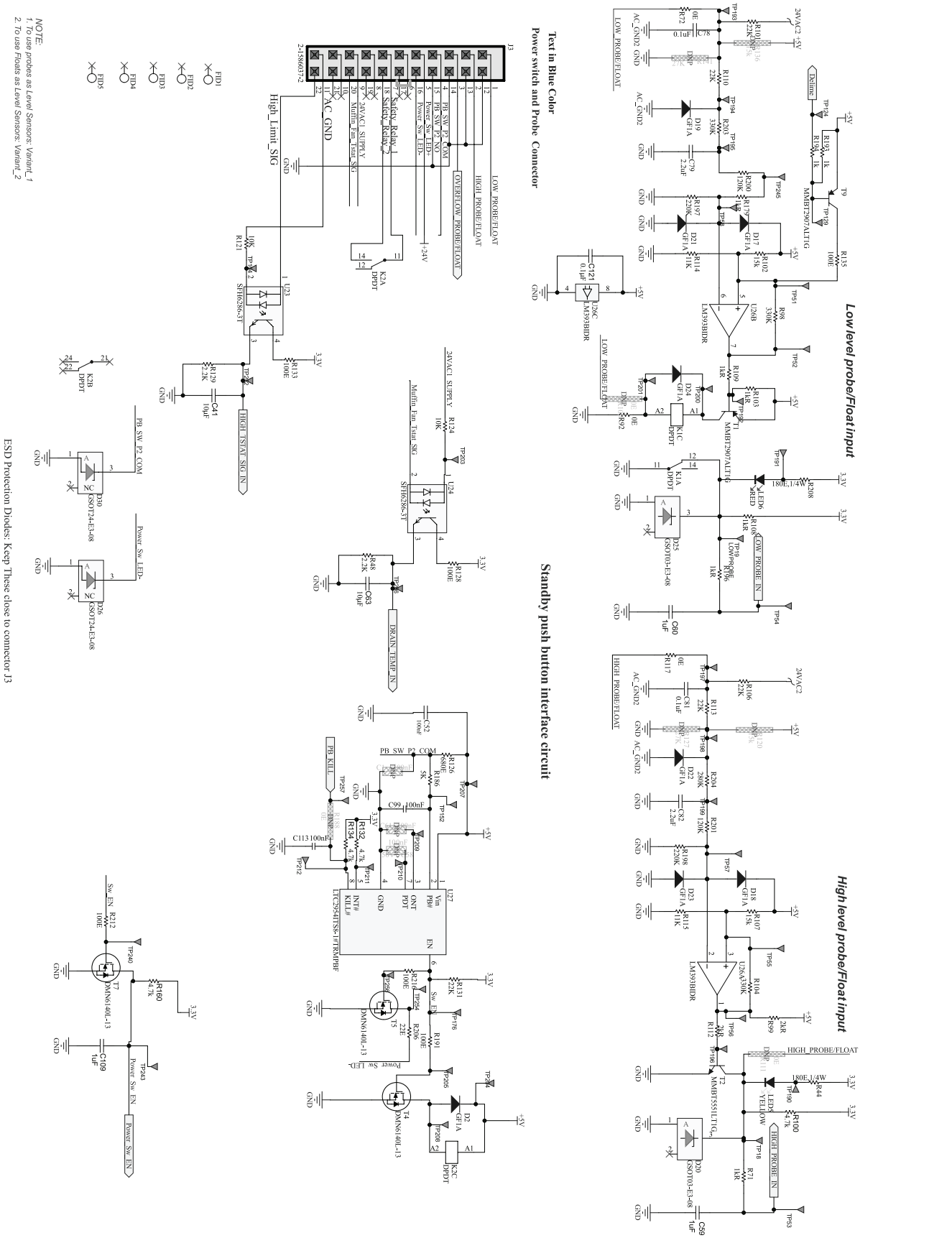
Piezo Buzzer



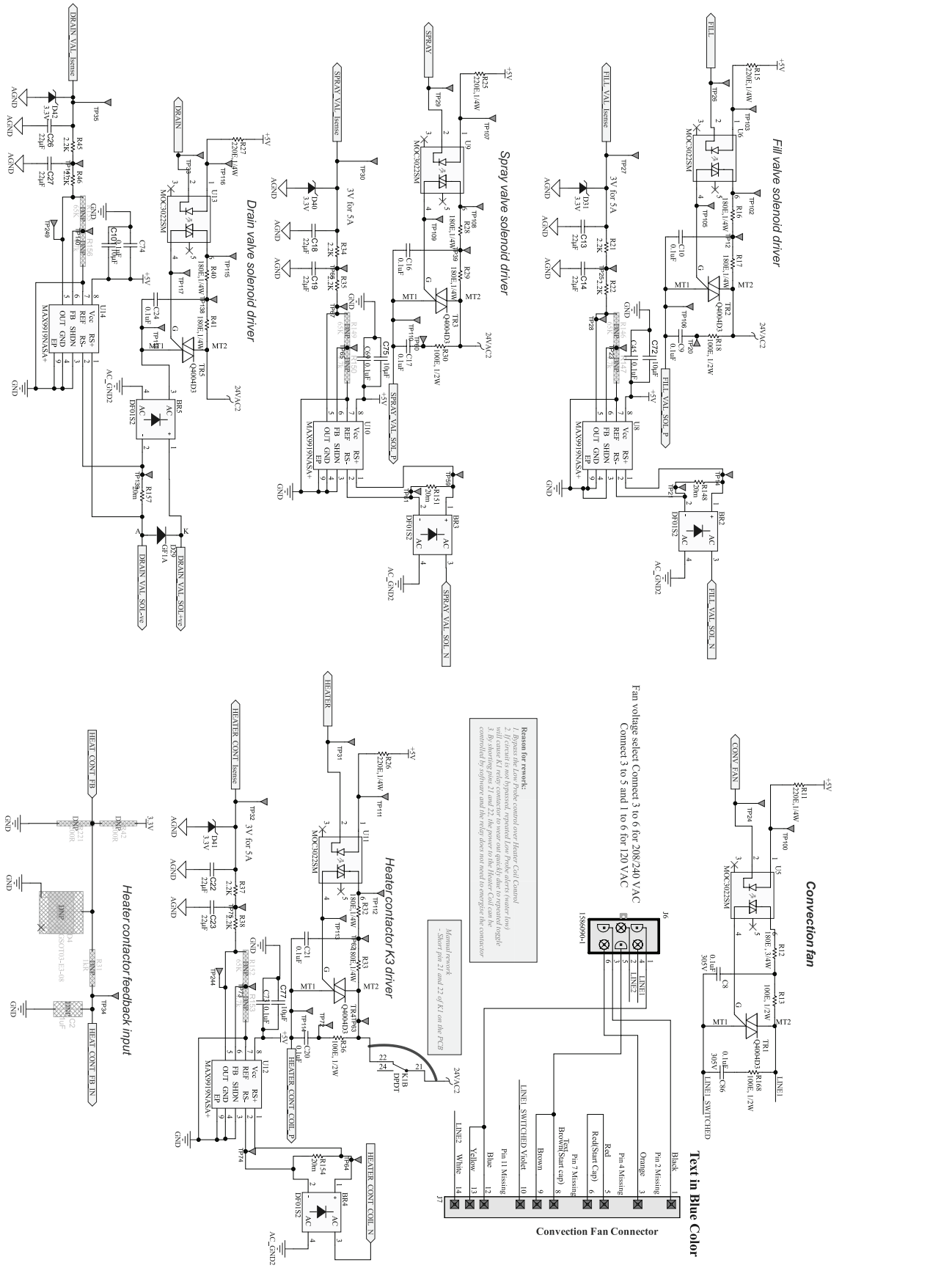
Spare ADC input



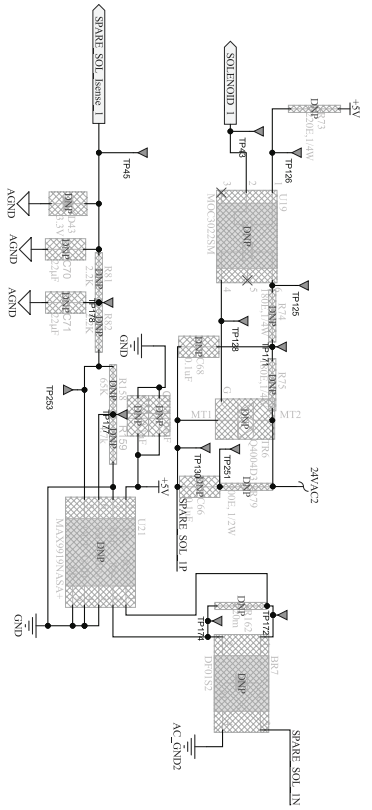
Wiring Diagram & Schematics



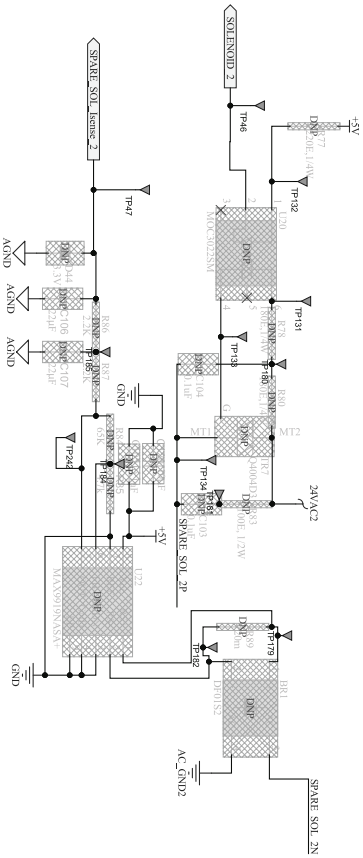
Wiring Diagram & Schematics



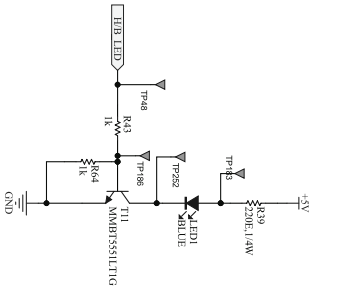
Wiring Diagram & Schematics



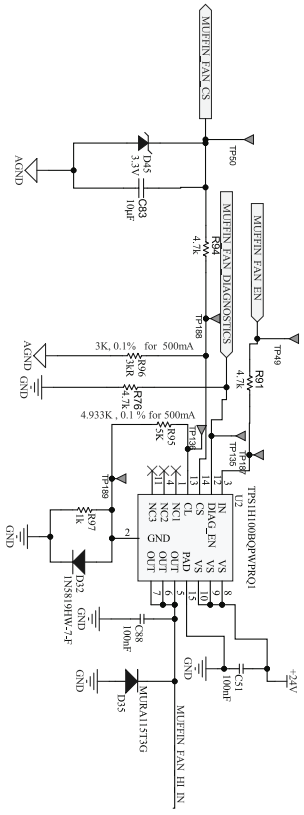
Spare solenoid driver 1



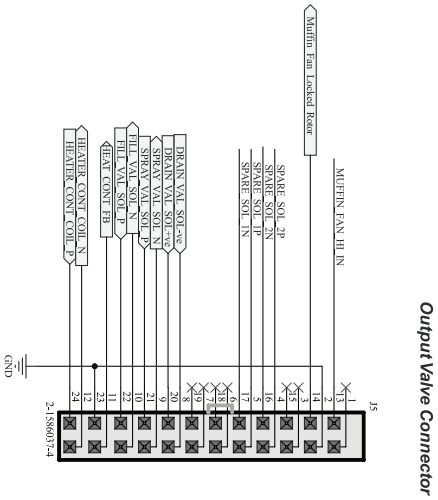
Spare solenoid driver 2



HeartBeat LED



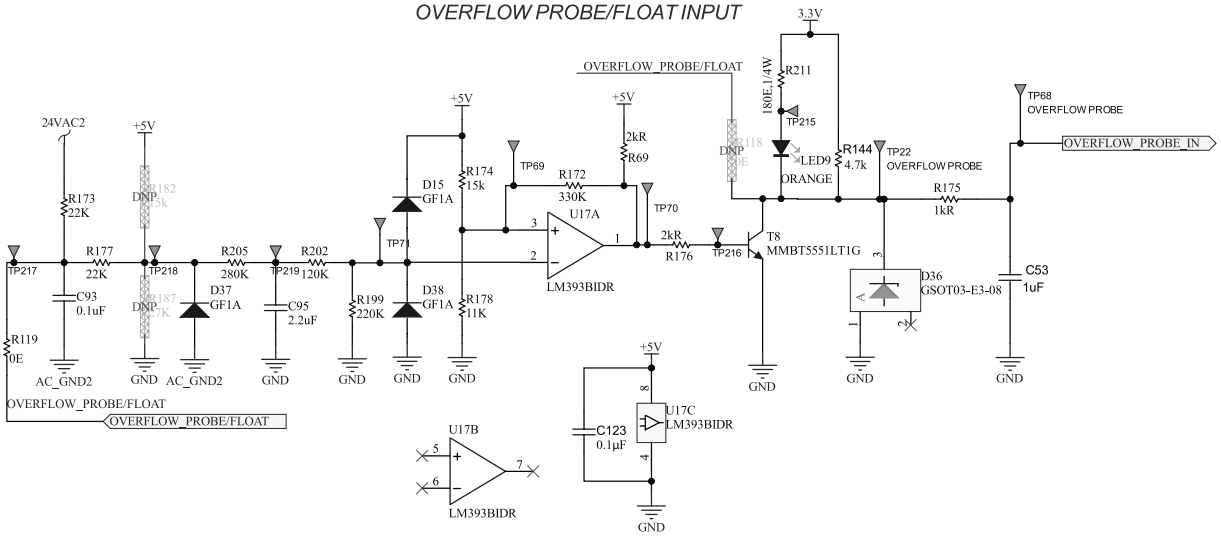
Muffin Fan



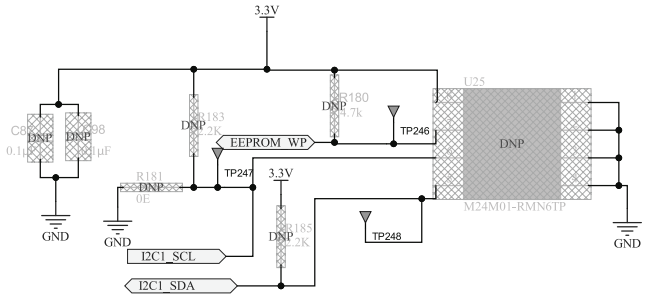
Output Valve Connector

Wiring Diagram & Schematics

OVERFLOW PROBE/FLOAT INPUT



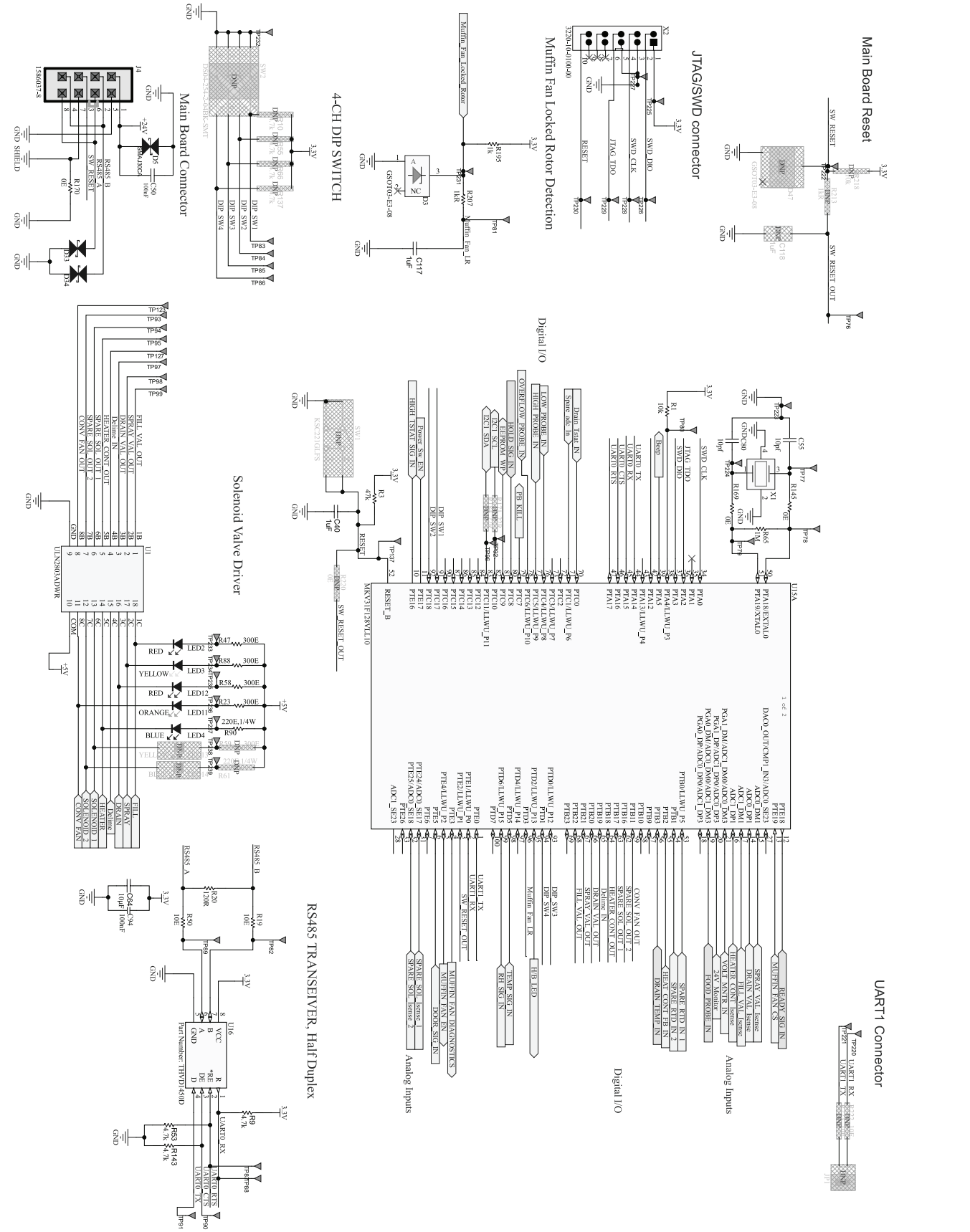
EEPROM



Place the Capacitors close to Pin VCC and VSS

NOTE:
1. To use probes as Level Sensors: Variant_1
2. To use Floats as Level Sensors: Variant_2

Wiring Diagram & Schematics



ASSEMBLY / DISASSEMBLY

WARNING: AFTER SERVICING GAS PIPING ON GAS MODELS, CHECK FOR GAS LEAKS BEFORE PUTTING UNIT BACK IN SERVICE.

WARNING: DISCONNECT THE STEAMER FROM ELECTRIC POWER BEFORE BEGINNING ANY SERVICE PROCEDURES.

GENERAL INFORMATION

This section provides common removal and installation procedures for parts.

The following procedures are based upon having access to the steamer on all four sides. If the steamer is installed between other appliances and there is not enough room on the sides for access, the steamer must be pulled out from its position to gain proper access.

Care should be taken in moving the steamer so as not to stress or pull on the electrical, gas and water connections.

CAVITY COMPARTMENT SIDE PANELS

For part number, see section on the steamer model parts list.

REMOVAL

1. With a Phillips screw driver remove the two 10-32 screws on the lower edge of the panel and one at the top edge (at the center of the top panel overhang). The panel is retained to the steamer by these three screws and three spring-like clips at the rear edge.
2. Once the screws are removed, the panel can be pulled forward about 1 inch, then lowered from behind the top panel overhang.

TOP COVER

For part number, see section on the steamer model parts list.

NOTE: Under normal conditions the top should never have to be removed. The most likely reason for removing it is if the panel itself has been damaged by a falling object.

1. Remove right side and left side panels.
2. At the front on each side, remove the #10-32 screw securing the top to the front panel (see illustration).

STEAMER DISPLAY CONTROL

REMOVAL

1. Unplug the display control harness from I/O board.
2. Using Phillips screw driver, carefully remove the four or five screws (number depends on model) holding the control display enclosure to the front panel. Carefully make sure harness and USB cable passes through hole in front panel.
3. Using a Phillips screw driver, remove the four M3 screws and carefully remove board. Disconnect control harness and USB cable from board.

INSTALLATION

1. Position the board on four studs on control enclosure.
2. Secure the board to control enclosure with four 3M screw and tighten with Phillips screw driver.
3. Connect harness and USB cable to control board. Install control enclosure housing while carefully inserting harness and cable through the holes in the front panel and securing with #10-32 screws.
4. Connect control harness to I/O board.

I/O BOARD

REMOVAL

1. Unplug all connectors.
2. Using a 5/26" socket, remove fout 6/32" lock nuts and remove the board from four studs on the high voltage panel.

INSTALLATION

1. Position the board on four studs on the high voltage panel.
2. Install 6/32" lock nuts onto the studs and tighten in place using a 5/16" socket.
3. Insert all jacks in the same connector locations as per removal. Press firmly to make sure the jack is fully seated on the board.

STEAM RESERVOIR DRAIN VALVE

The unit should be turned off and there should be no water in the boiler. The steam reservoir drain valve is located to the right of the steamer cavity.

REMOVAL

1. Turn off power and disconnect steamer from the branch circuit. Remove right side panel. Let steamer drain completely.
2. Using spring clamp pliers, disconnect ONE END of the silicone drain hose by loosening the drain hose clamp from the drain fitting coming from the cavity drain. Remove clamp.
3. With channel lock pliers, remove the plastic connector from the drain valve.
4. Remove the handle adapter nuts with 10-32 spanner.
5. Pull the drain handle from the front of the unit & Remove the handle adapter from the side of the cavity.
6. With the help of channel lock pliers / adjustable pipe wrench, gently remove the drain valve from the unit.

INSTALLATION

1. Attach new drain valve to threaded pipe, welded to the boiler. make sure the handle mounting facing front of the unit.
2. Fix the nylon elbow fitting to the drain valve, the sliding end of the elbow should be facing back of the unit.
3. Slide the silicone hose into the nylon connector and install the hose clamp over the nylon connector.

TESTING

Operate steamer and allow steam reservoir to fill or fill the reservoir manually. Check for leaks and observe if drain valve fully closes. Turn off steamer and observe that drain valve opens and the steam reservoir drains.

1. Reinstall right side panel.

DOOR REMOVAL/INSTALLATION/ALIGNMENT

For part number, see section on the steamer model parts list.

REMOVAL

1. To remove the door, turn off the steamer power and allow the steamer to cool. Then open the door and, while supporting the weight of the door, remove hinge pin or remove door-to-hinge bolts.
2. Place the door on a flat, clean table or similar support, with gasket facing up. Be careful not to scratch door surface.
3. Inspect door gasket for signs of cuts, or other defects which may impair its function. Replace if necessary. **NOTE**: Gasket not covered under terms of warranty.

INSTALLATION

1. To install the door, apply NEVER-SEEZ lubricant to hinge pin. Align door with hinge and insert hinge pin, or apply Loctite 242 to the door-to-hinge bolts, then install door and mounting bolts. Snug bolts only, Do **NOT** tighten mounting bolts at this time.

ALIGNMENT

1. Place a piece of masking tape over the door latch pin (bullet) hole in the door.
2. Close the door until the door latch pin just penetrates the masking tape. Make sure the door pin contacts only the door latch spring.

3. If door pin does not strike the center of the masking tape or spring hole in the U-channel. Loosen the hinge-to-oven bolts and align the door to the door pin. Tighten hinge-to-oven mounting bolts.
4. You should be able to pull a dollar bill or comparable piece of paper with some effort, from between the gasket and steamer cavity with the door closed. To adjust the hinge side, loosen the door-to-hinge bolts and align the door gasket with the oven cavity. Tighten the door-to-hinge mounting bolts.
5. Operate steamer and check for leaks.

DOOR REVERSAL PROCEDURES

1. Turn off steamer power and allow steamer to cool.
2. To remove door, support door while removing hinge-to-steamer bolts.
3. Place door with hinge on a flat, clean table (or similar support), with the gasket facing up. Be careful not to scratch the door surface. **NOTE**: Do not remove the hinge from the door.
4. Note and record distance between jam nut and end of door locking pin (bullet). This information will be needed during bullet installation in Step 6.
5. Loosen jam nut with a 1/2 inch wrench, remove door latch pin and jam nut.
6. Coat latch pin threads with NEVER-SEEZ high temperature (1800 degree F) anti-seize and lubricating compound. Install door latch pin and jam nut directly across steamer cavity from old bullet location. Install these two items so that jam nut-to-end of bullet distance is approximately the same as measured in Step 4.
7. Remove the two 1/4-20 truss head screws from above and below the old bullet location and install them above and below the new bullet location.
8. Remove screws and U-channel from the door. Take magnet and block assembly from present location and place it at the opposite end of the door channel, with magnet facing outward from the door.
9. Remove screws. Remove door handle from cam.
10. Apply NEVER-SEEZ high temperature (180ºF) anti-seize and lubricating compound to the cam and Loctite 242 to screw threads.
11. Turn handle and cam 180º from their original positions and install them on the door with screws. Be sure handle and cam move smoothly.
12. Be sure door handle is in the DOWN position. Turn U-channel 180º from its original position, hold door spring in U-channel open with a screwdriver or similar tool, and install U-channel.
13. Check operation of the cam. Push up on the door handle and check if the spring opens. If the spring does not open, cam and spring are NOT correctly aligned and problem must be corrected.
14. Apply a light amount of Loctite 242 to screws, then install screws.
15. Apply Loctite 242 to the hinge-to-steamer bolts, then install door and hinge mounting bolts. Do **NOT** tighten mounting bolts at this time.
16. Align door to steamer. Refer to Alignment procedure above. **NOTE**: There is a door switch inside the front panel of the steamer, on each side of the cavity. It is pre-wired in parallel, so no wiring change is necessary when the door is reversed.
17. Close steamer door and operate steamer. If steamer fan does not operate, check location of door magnet and try operation again. If fan operation problem still exists, refer to the Troubleshooting section.
18. Allow steamer to operate for approximately 5 minutes, and then check for leaks. If there are no leaks, the steamer is ready for operation. If there are leaks around the door, recheck door alignment, and if necessary, door gasket installation.

DOOR SWITCH

One normally open door switch is factory-installed on each side of the steamer cavity. Activated (that is, closed) by the proximity of the door magnet, they are wired in parallel so that only one switch at a time will affect steamer operation.

1. Remove the side panel for access to the door switch that is to be replaced.
2. Unplug the door switch leads from the steamer harness.
3. The switch is held in place with two small 4-40 screws. With a slotted screwdriver, remove these screws and the switch may be removed.
4. To install the switch use the two 4-40 screws and a screwdriver with a screwstarter features.
5. Connect switch leads to steamer harness.
6. Test steamer operation.
7. Replace side panel.

DOOR GASKET

For part number, see section on the steamer model parts list. Door Gasket not covered under terms of warranty.

REMOVAL

1. Turn off steamer power and allow to cool.
2. Remove the door using ne of these following two methods:
   - Support door weight and remove hinge pin or
   - Support weight of the door and remove the two door-to-hinge bolts
3. Place the door on a flat, clean smooth table or similar support with handle hanging over edge. Be careful not to scratch the door.
4. Remove four (or eight) 8-32 truss head screws and remove inner door panel.
5. Remove and discard door gasket.
6. Clean back of the inner door panel. Be sure old sealant is completely removed.

INSTALLATION

1. Install new door gasket around inner panel as shown in the illustration. Be sure the inner door panel flange is fully inserted into the door gasket groove.
2. Apply a high temperature silicone sealant, such as a GE RTV 159 or equivalent, to the four door spacers.
3. Apply Loctite 242 to inner door panel mounting screws.
4. Install inner door panel and door gasket on the door spacers, and tighten mounting screws.
5. Align door with hinge and insert hinge pin OR apply Loctite 242 to the door-to hinge bolts, then install door and mounting bolts. Do **NOT** tighten bolts at this time.
6. Align door to steamer and tighten bolts.

Please refer to Alignment procedure above.

PROBE

REMOVAL

1. Turn off the steamer power and disconnect the steamer from the branch circuit.
2. Remove the right side cover from the steamer.
3. Disconnect the water level probe harness wire.
4. Using a 11/16" open wrench, loosen water probe.
5. Remove the probe from the cavity.

INSTALLATION

1. Apply a small amount of sealant to threads on new water probe.
2. Insert new probe into threaded coupling and tighten with the 11/16" open wrench.
3. Attach the harness wire.
4. Turn on the branch circuit power supply.
5. Turn ON the steamer and test.

ELEMENT

REMOVAL

1. Turn off the steamer power and disconnect the steamer from the branch circuit.
2. Using a screwdriver, remove both left and right side panels.
3. Remove rear element access panel.
4. Fold insulation out of the way.
5. Remove element insulation cover by removing the 6ea 7/16" x 32 nuts using a ratchet and 7/16" socket.
6. Remove element insulation.
7. Loosen but do not remove the element brackets using the 6 remaining 7/16" x 32 nuts using a rachet and 1/16" socket.
8. Trace the wires of the element back to the element terminal bock and remove the wires with a #2 flat blade screwdriver.
9. Slide the element out from the back of the nit through the element access area to replace.

INSTALLATION

1. Slide the new element into the appropriate opening of the element bracket through the rear access panel.
2. Install the element wires into the element terminal block from which the original element terminal block was installed using a #2 flat blade screwdriver.
3. Tighten the 7/16" x 32 nuts supporting the element brackets using a ratchet and 7/16" socket.
4. Replace element insulation.
5. Replace element insulation cover and secure using a ratchet and the remaining 7/16" x 32 nuts.
6. Replace and secure rear element access panel using a #2 flat blade screwdriver and the 5-10/32" screws.
7. Recheck all wire connections and screws.
8. Using a screwdriver, replace both left and right side panels.
9. Reconnect power supply.

BURNER

REMOVAL

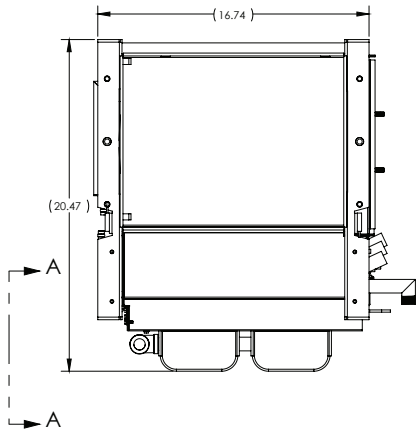
1. Disconnect power and gas supplied to the unit.
2. Remove the left side panel by removing the three exterior screws.
3. Remove the side access panel by removing the two 10x32 nuts.
4. Unplug the HIS and flame sensor.
5. Remove the 5-14" screws on the holding plate near the ignition tube and on the bottom of the holding plate.
6. Loosen the ¾" compression fitting on the ignition tube and move it toward the base.
7. Slide the burner out the left side of the unit.

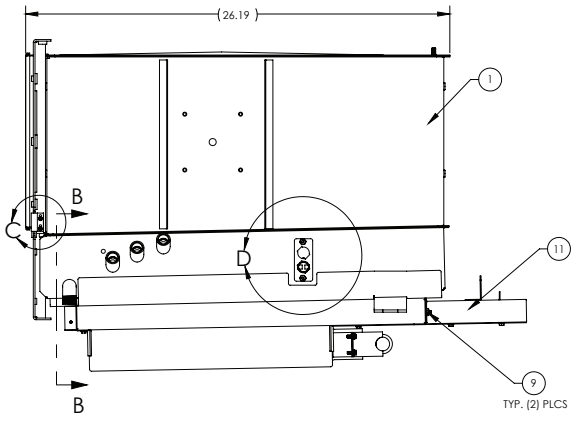
INSTALLATION

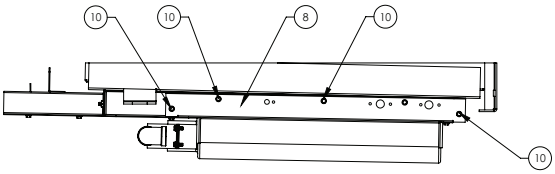
1. Slide the new burner into the left side of the unit.
2. Attach the ignition tube and tighten the 3/4" compression fitting.
3. Install the 5-14" screws into the holding plate.
4. Plus in the HIS and flame sensor.
5. Turn on gas supply and power the unit.
6. NOTE: The ignition tube does not receive gas until the burners are active.
7. Install the side access panel with the 2 10x32 nuts.
8. Re-install the left side panel with the three exterior screws.

GSSP-CL-3G/5G
GAS CAVITY ASSEMBLY
179138

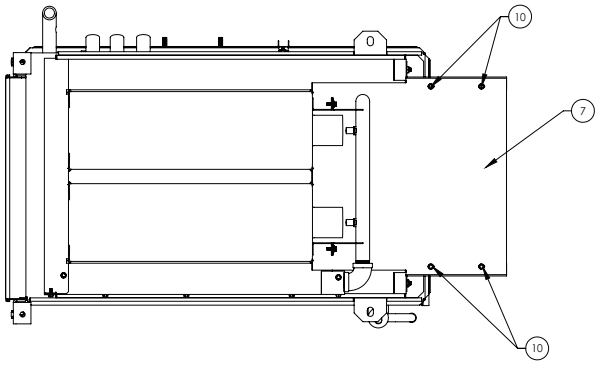
Parts List

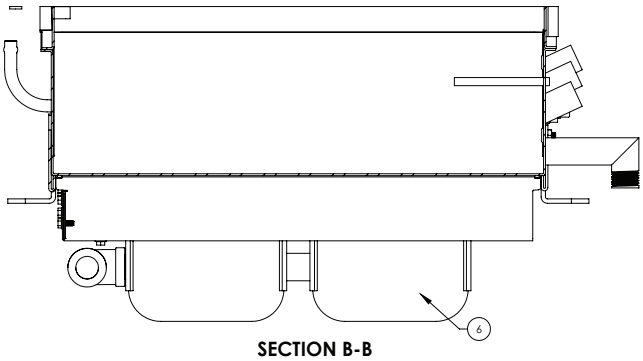






SECTION A-A





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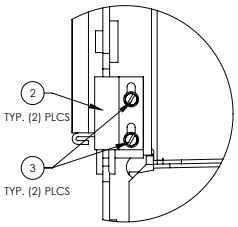
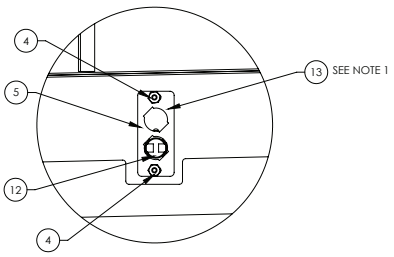
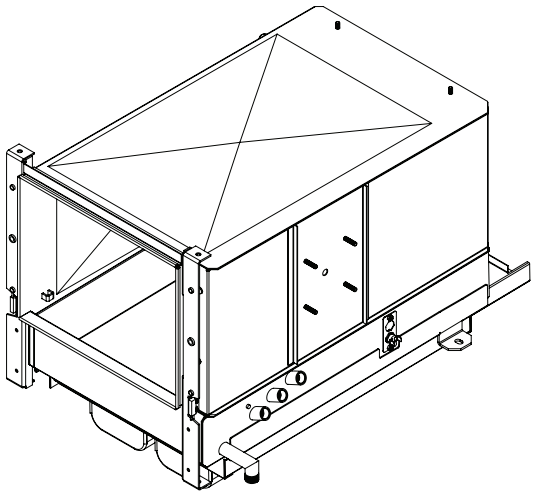


DETAIL C
SCALE 1 : 1

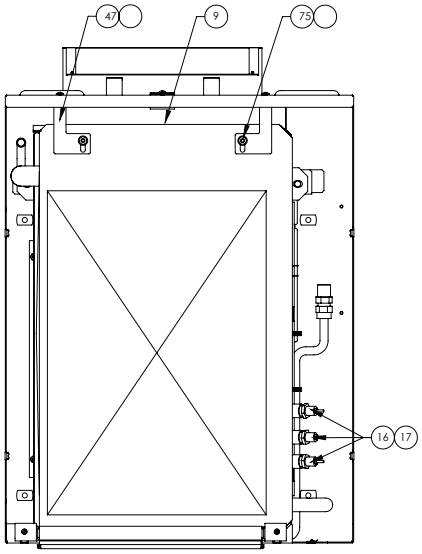


DETAIL D
SCALE 1 : 2



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
13	179368	3M 468MP, 1" WIDE ADHESIVE TRANSFER TAPE	1
12	144484	THERMOSTAT, HI-LIMIT, SSB-3/5	1
11	146507	WELDMENT, FLUE EXTENTION, SSB-5G	1
10	144110	SCREW, #8 X 1/2 HEX HD SLOT MACHINE SELF, 410SS	11
9	071256	NUT HEXHEAD KEPS 10-32	2
8	145088	WELDMENT, LEFT COMB CHAMBER ACCESS	1
7	143986	WELDMENT, FLUE EXTENSION BRACKET BOTTOM	1
6	143976	BURNER ASSEMBLY, INFRARED	1
5	178091	PLATE, READY & HOLD SENSOR. GSSP	1
4	069784	8-32 KEPS NUT	2
3	096841	SCREW #4-40 X1/4" HEX MS	4
2	096857	SWITCH, DOOR	2
1	179137	WELDMENT, CAVITY ASM, GSSP-CL, 3 PAN GAS	1

Parts List



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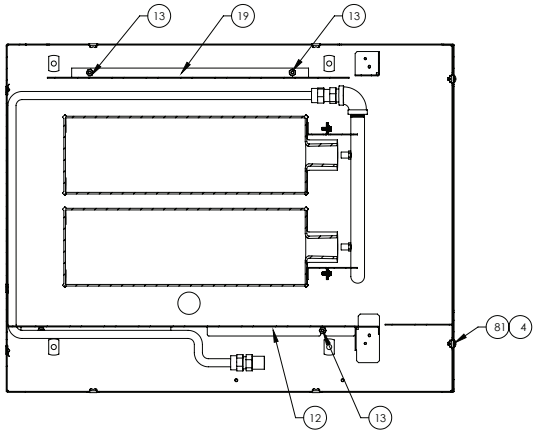

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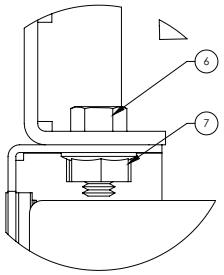
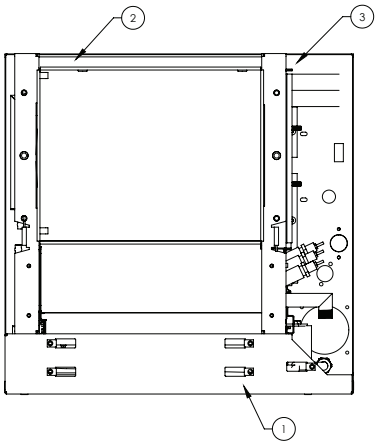
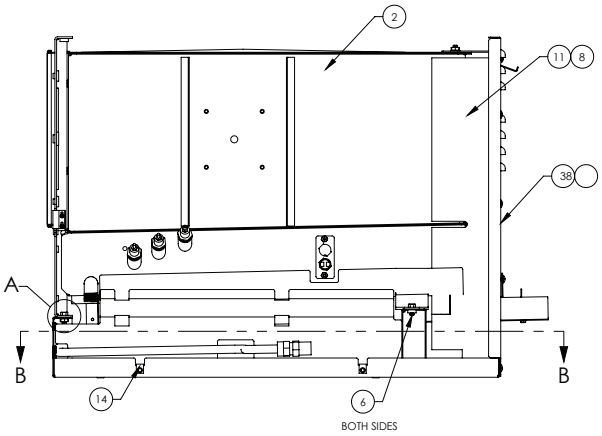


DETAIL A
SCALE 2 : 1





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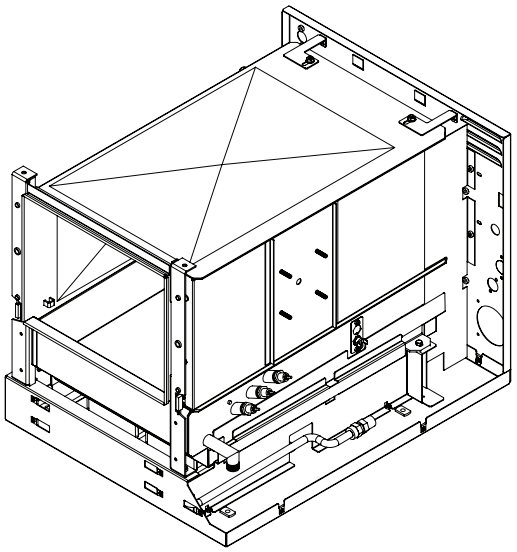
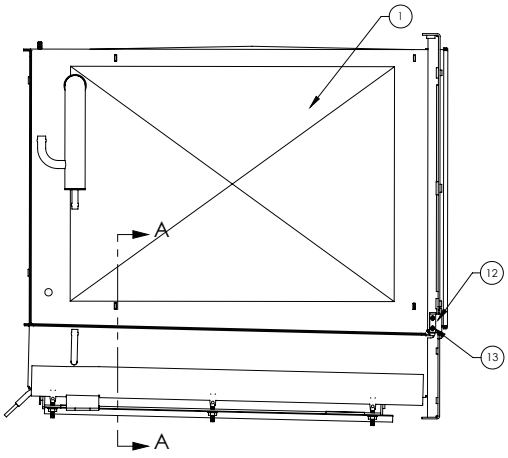
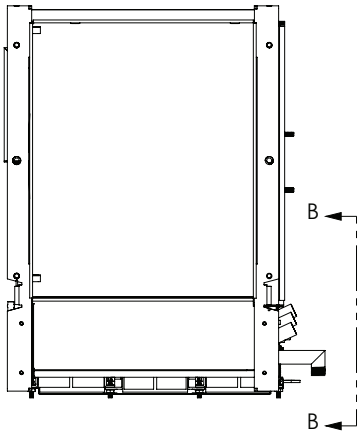
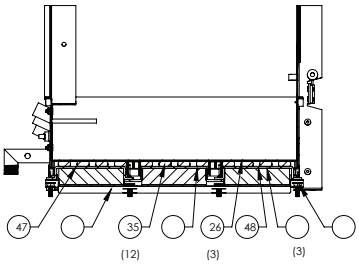


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
20	179951	HI-TEMP, FLEX TUBE, BURNER INTAKE 48"	1
19	144127	PANEL, BOTTOM LEFT FIREWALL, SSB-5G	1
18	042359	TAPE DUCT 3" WIDE	100 IN.
17	078938	PIPE DOPE (NOT SHOWN)	.03 OZ
16	141285	WATER PROBE	3
15	179084	DRAIN GUARD & PROBE BAFFLE, GSSP-BL	1
14	FA NUT0404	NUT, #10 "U" TINNERMAN	11
13	071256	NUT HEXHEAD KEPS 10-32	4
12	179130	PANEL, BOTTOM RIGHT FIREWALL, GSSP-CL	1
11	143889	PANEL, REAR FIREWALL, SSB-3G/E	1
10	149373	INSULATION, SIDE, SSB-3E/G	1
91	43893	INSULATION, BACK, SSB-3G/E	1
8	004173	SCREW, TRS HEAD 10-32 X 3/8	7
7	NT1101	NUT- HEXSERRATEDZINC 1/4-20	4
6	005608	SCREW, HEX HEAD CAP, 1/4"-20	4
51	42744	BRACKET, RIGHT HAND PANEL	1
4	142745	BRACKET, LEFT HAND PANEL	1
3	179117	WELDMENT, REAR PANEL & FLUE SUPPORT, GSSP-CL-3G	1
2	179138	CAVITY ASSEMBLY, GSSP-BL-3G	1
1	179098	WELDMENT, BASE PAN ASM, GSSP-CL	1

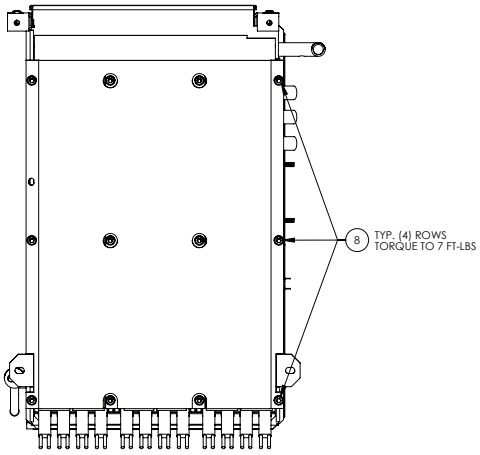
Parts List

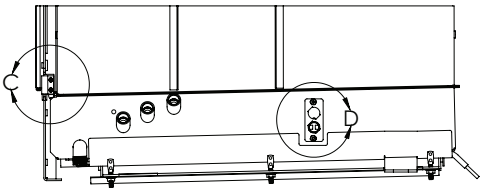




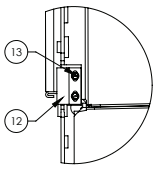


SECTION A-A

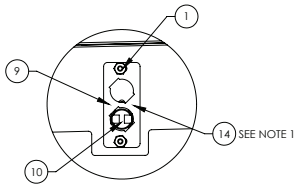




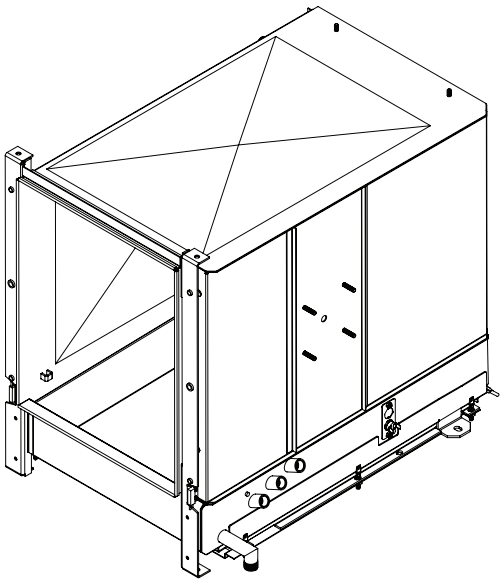
SECTION B-B



DETAIL C
SCALE 1 : 2



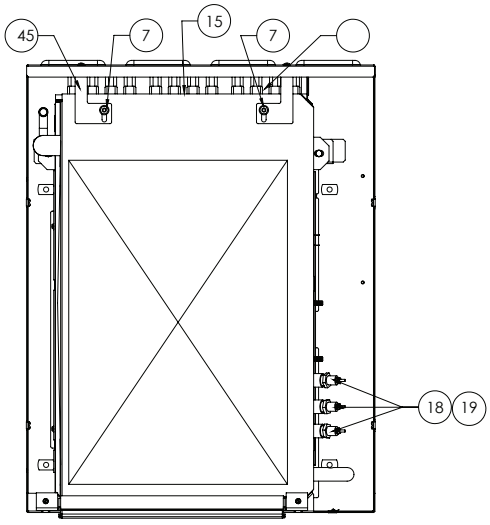
DETAIL D
SCALE 1 : 2



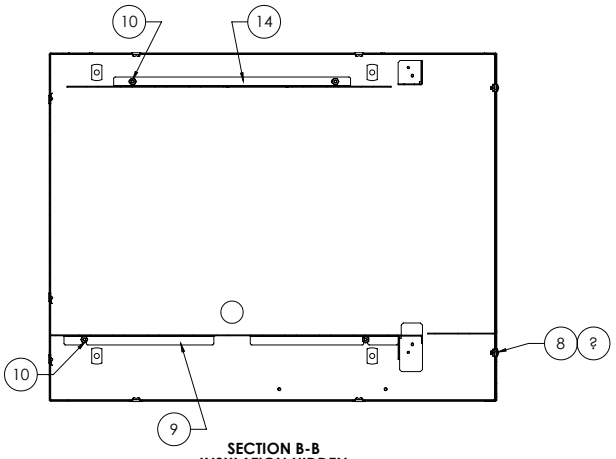
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
14	179368	3M 468MP, 1" WIDE ADHESIVE TRANSFER TAPE	1
13	096841	SCREW #4-40 X1/4" HEX MS4	
12	096857	SWITCH, DOOR	2
11	069784	8-32 KEPS NUT	2
10	144484	THERMOSTAT, HI-LIMIT, SSB-3/5	1
9	178091	PLATE, READY & HOLD SENSOR. GSSP	1
8	NT1101	NUT- HEXSERRATEDZINC 1/4-20	12
7	141538	PANEL, INSULATION HOLD-DOWN	1
6	140178	INSULATION	3
5	141536	BRACKET, ELEMENT HOLD-DOWN, MIDDLE	1
4	141537	BRACKET, ELEMENT HOLD-DOWN, LEFT & RIGHT SIDE	2
3	REFERENCE	ELEMENT (REFER TO WORK ORDER)	12
2	147693	SHEET, GRAPHITE	3
1	179155	WELDMENT, CAVITY ASM, GSSP-CL-5E	1

GSSP-CL-5E
BASE & CAVITY ASSEMBLY
179444

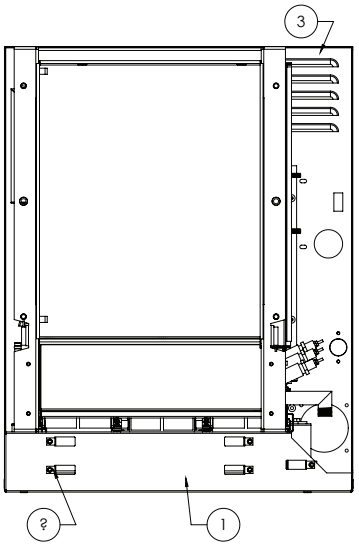
Parts List

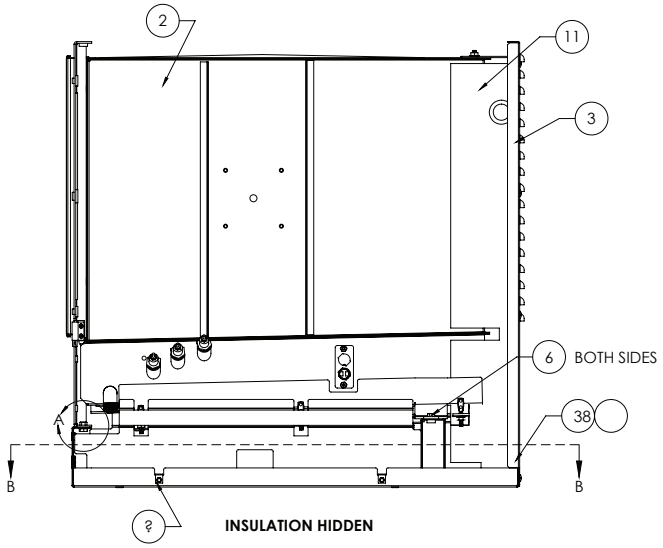


INSULATION HIDDEN

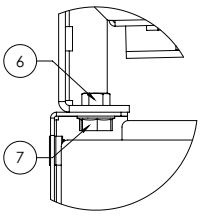


SECTION B-B
INSULATION HIDDEN

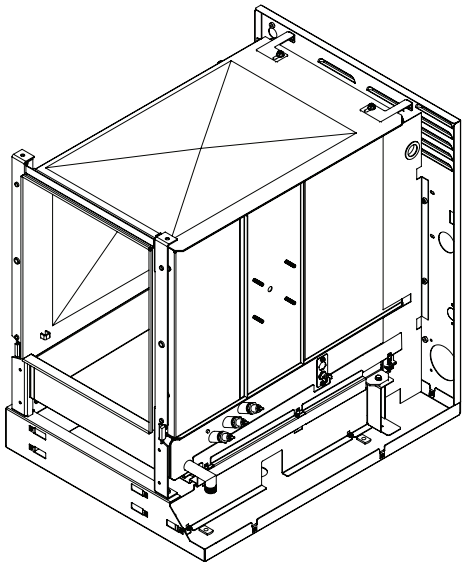




INSULATION HIDDEN

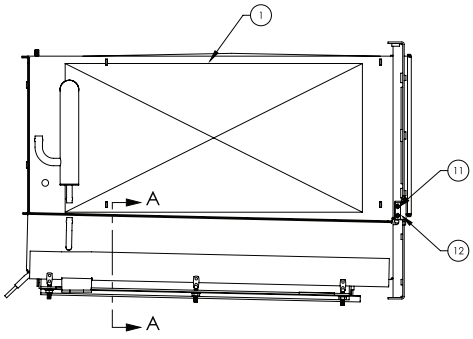


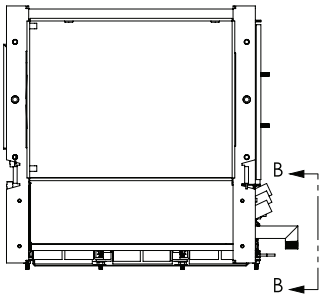
DETAIL A
SCALE 1 : 1

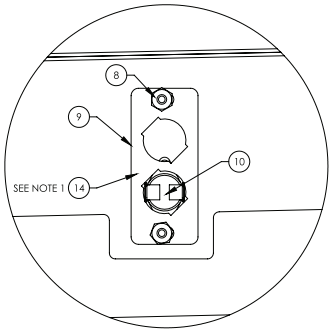


ITEM NO.	PART NUMBER	DESCRIPTIONQ	TY.
1	179098	WELDMENT, BASE PAN ASM, GSSP-CL	1
2	179159	CAVITY ASSEMBLY, GSSP-CL-5E	1
3	179157	WELDMENT, REAR PANEL, GSSP-CL-5E	1
4	142745	BRACKET, LEFT HAND PANEL	1
5	142744	BRACKET, RIGHT HAND PANEL	1
6	085199	SCREW HEX HEAD 1/4-20 X 3/8	4
7	NT1101	NUT- HEXSERRATEDZINC 1/4-20	4
8	004173	SCREW, TRS HEAD 10-32 X 3/8	6
9	179130	PANEL, BOTTOM RIGHT FIREWALL, GSSP-CL	1
10	071256	NUT HEXHEAD KEPS 10-32	4
11	143655	PANEL, REAR FIREWALL	1
12	149465	INSULATION, TOP & SIDE, SSB-5	1
13	097015	SNAP BUSHING 1-3/8" INCH	1
14	179096	PANEL, LOWER LEFT FIREWALL, GSSP-CL	1
15	142624	INSULATION, BACK SSB-5	1
16	FA NUT0404	NUT, #10 "U" TINNERMAN	11
17	179084	DRAIN GUARD & PROBE BAFFLE, GSSP-BL	1
18	141285	WATER PROBE	3
19	078938	PIPE DOPE (NOT SHOWN)	.03 OZ
20	042359	TAPE DUCT 3" WIDE (NOT SHOWN)	100 IN.

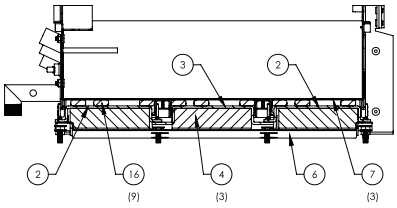
Parts List



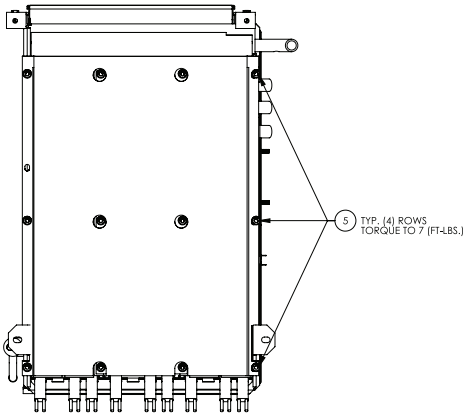


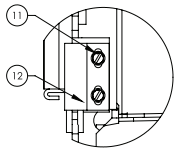


DETAIL D

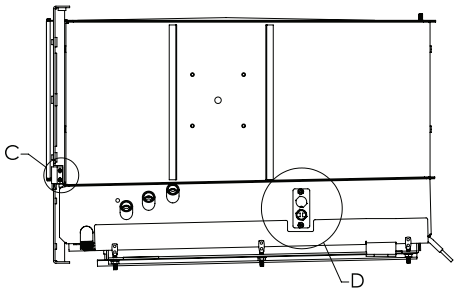


SECTION A-A

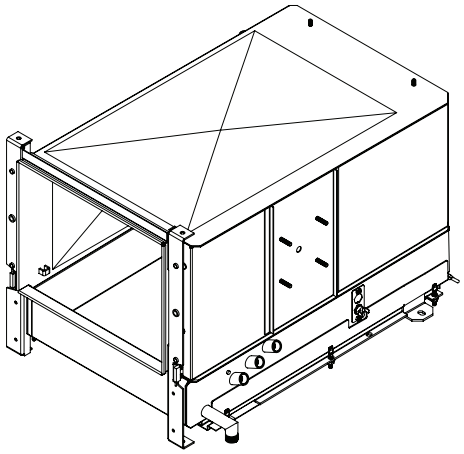




DETAIL C



SECTION B-B

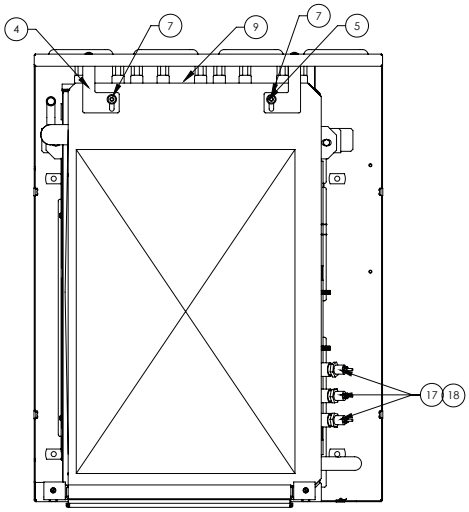


NOTES:

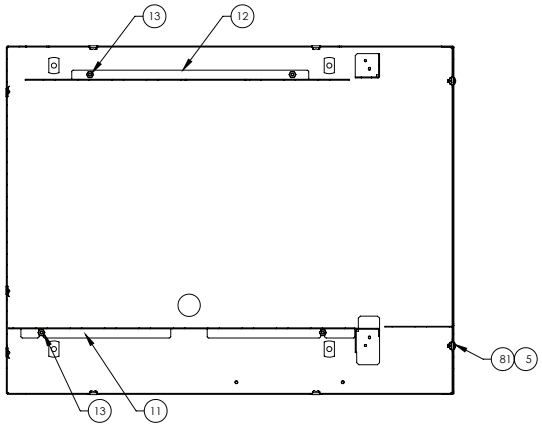
1. APPLY 1 INCH OF ITEM NO. 14 TO CAVITY WALL, CENTERED BETWEEN TWO STUDS THEN PEEL PROTECTIVE BACKING AWAY. ASSEMBLY ITEMS 9 AND 10 THEN FIRMLY PRESS ITEMS 9 AND 10 TO CAVITY WALL, ENSURING PROPER ADHESION.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
14	179368	3M 468MP, 1" WIDE ADHESIVE TRANSFER TAPE	1
13	REFERENCE	ELEMENT (REFER TO WORK ORDER)	9
12	096857	SWITCH, DOOR	2
11	096841	SCREW #4-40 X1/4" HEX MS	4
10	144484	THERMOSTAT, HI-LIMIT, SSB-3/5	1
9	178091	PLATE, READY & HOLD SENSOR. GSSP	1
8	069784	8-32 KEPS NUT	2
7	147693	SHEET, GRAPHITE	3
6	141538	PANEL, INSULATION HOLD-DOWN	1
5	NT1101	NUT- HEXSERRATEDZINC 1/4-20	12
4	140178	INSULATION	3
3	141536	BRACKET, ELEMENT HOLD-DOWN, MIDDLE	1
2	141537	BRACKET, ELEMENT HOLD-DOWN, LEFT & RIGHT SIDE	2
1	179127	WELDMENT, CAVITY ASM, GSSP-CL-3E	1

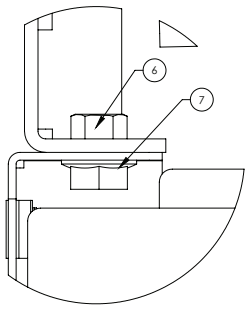
Parts List



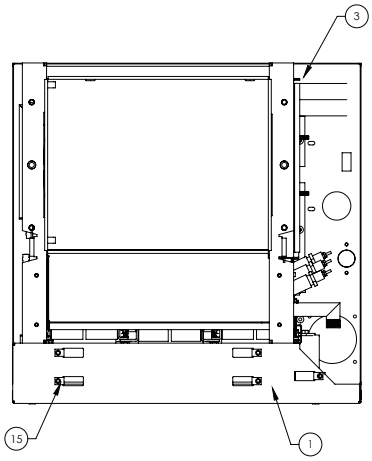
INSULATION HIDDEN

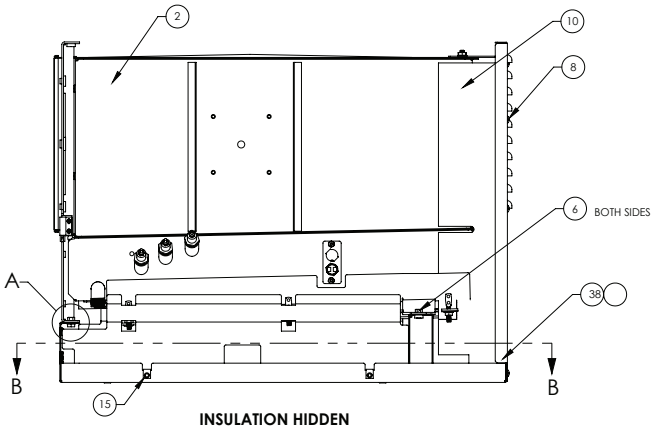


SECTION B-B
INSULATION HIDDEN

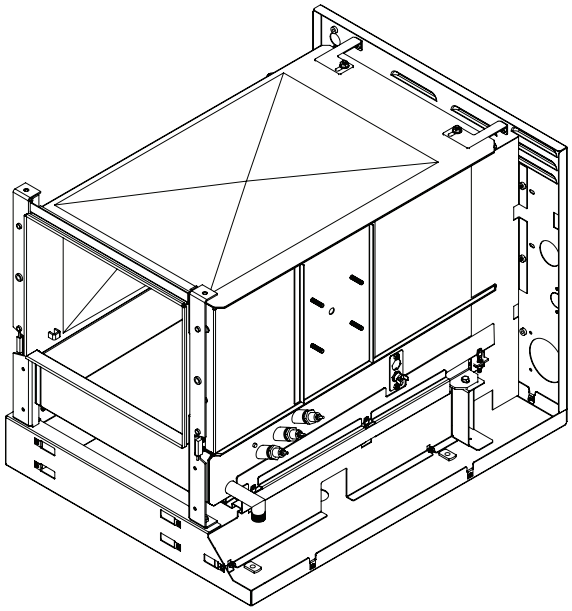


DETAIL A
SCALE 2 : 1





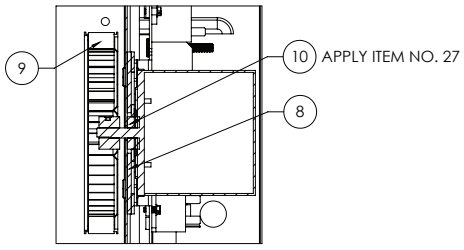
INSULATION HIDDEN



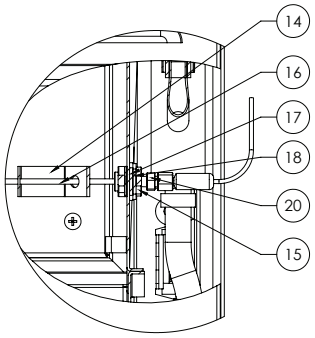
19	042359	TAPE DUCT 3" WIDE (NOT SHOWN)	100 IN.
18	078938	PIPE DOPE (NOT SHOWN)	.03 OZ
17	141285	WATER PROBE	3
16	179084	DRAIN GUARD & PROBE BAFFLE, GSSP-BL	1
15	FA NUT0404	NUT, #10 "U" TINNERMAN	11
14	149373	INSULATION, SIDE, SSB-3E/G	1
13	071256	NUT HEXHEAD KEPS 10-32	4
12	179096	PANEL, LOWER LEFT FIREWALL, GSSP-CL	1
11	179130	PANEL, BOTTOM RIGHT FIREWALL, GSSP-CL	1
10	143889	PANEL, REAR FIREWALL, SSB-3G/E	1
9	143893	INSULATION, BACK, SSB-3G/E	1
8	004173	SCREW, TRS HEAD 10-32 X 3/8	6
7	NT1101	NUT- HEXSERRATEDZINC 1/4-20	4
6	085199	SCREW HEX HEAD 1/4-20 X 3/8	4
5	142744	BRACKET, RIGHT HAND PANEL	1
4	142745	BRACKET, LEFT HAND PANEL	1
31	79128	WELDMENT, REAR PANEL, GSSP-CL-3E	1
21	79097	CAVITY ASSEMBLY, GSSP-CL-3E	1
11	79098	WELDMENT, BASE PAN ASM, GSSP-CL	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.

GSSP-CL-3G/5G
ELECTRICAL ASSEMBLY
179425

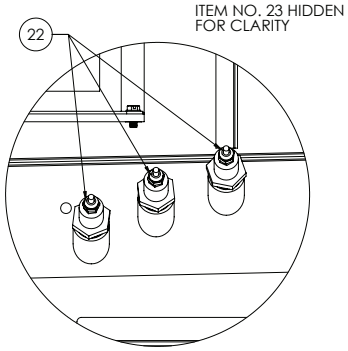
Parts List



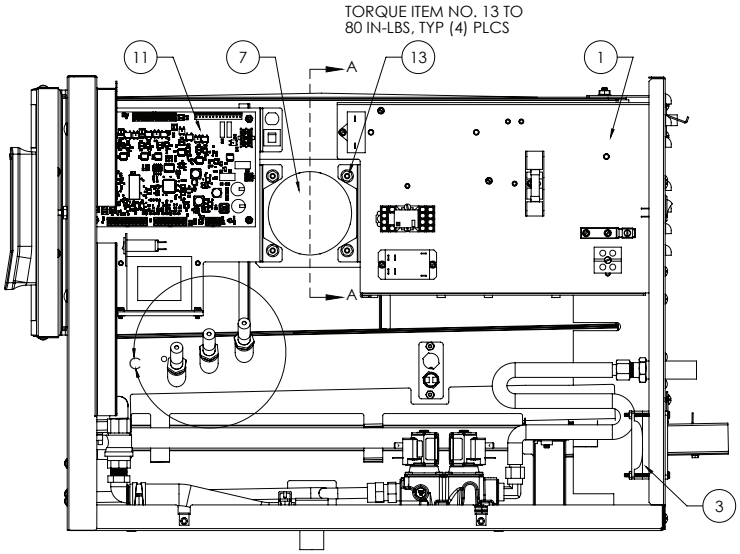
SECTION A-A
SCALE 1 : 2

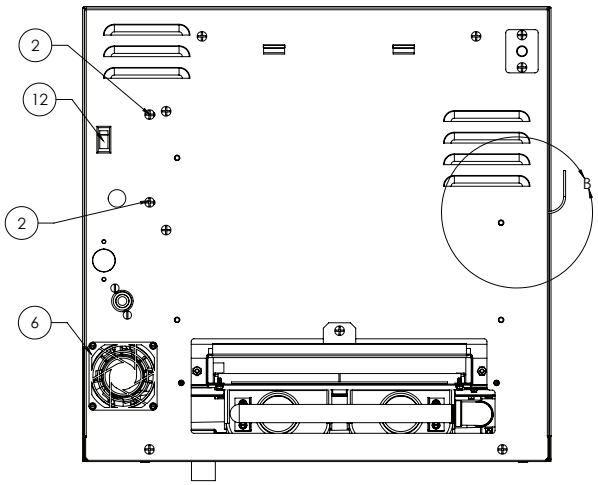


DETAIL B
SCALE 2 : 3



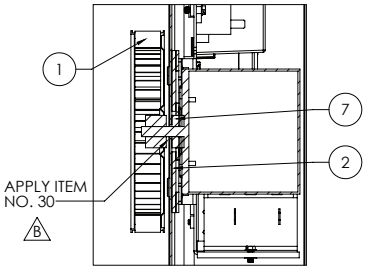
DETAIL C
SCALE 2 : 3



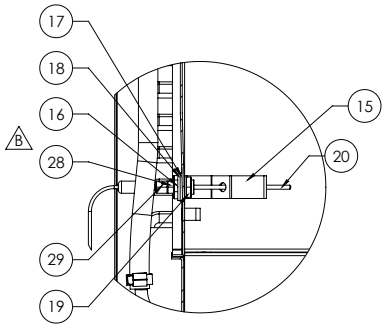


ITEM NO.	PART NUMBER	DESCRIPTIONQ	TY.
1	182142	HIGH VOLTAGE ELECTRICAL ASM, GSSP-CL, 3/5G	1
20	04173	SCREW, TRS HEAD 10-32 X 3/8	2
3	178955	FAN, 24VDC MUFFIN 80MM, GSSP	1
4	140182	SCREW, 6-32 X 2 LG HEX HD SLOT	4
50	71289	NUT HEXAGON KEPS 6-32	4
6	143664	GUARD, 80MM FAN, PLASTIC	1
7	146880	MOTOR ASM., STEAMER BLOWER	1
80	94135	MOTOR INSULATOR	1
90	96790	WHEEL ASM BLOWER (STEAMER)	1
10	096868	SEAL STEAMER MOTOR	1
11	182145	I/O BOARD ASM, GSSP-CL, 3 & 5 PAN	1
12	EL SWT140	SWITCH, ROCKER RSCA201-VB-B-1VN*	1
13	NT1101	NUT- HEXSERRATEDZINC 1/4-20	4
14	143714	BRACKET, PROBE PROTECTOR, VORTEX	1
15	071231	TEMPERATURE PROBE FITTING	1
16	085187	PROBE, TEMPERATURE	1
17	071252	FIBER WASHER	1
18	071253	WASHER, TEMPERATURE PROBE	1
19	070452	NUT, 7/16-28 TEMP PROBE	1
20	071217	FITTING, MALE TEMPERATURE PROBE	1
21	071284	NUT, COMPRESSION 1/8	1
22	125496	NUT, #8-32 NYLON LOCKING SS	3
23	101143	BOOT, PLASTISOL	3
24	182100	J1 & J3, LOW VOLTAGE HARNESS - 24VAC (NOT SHOWN)	1
25	182101	J2, LOW VOLTAGE HARNESS - INPUT & OUTPUT	1
26	178265	HARNESS, WIRE, J4	1
27	099948	LUBRICANT MOTOR SHAFT SEAL	.01

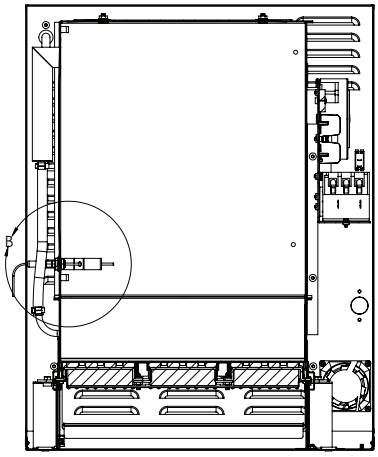
Parts List



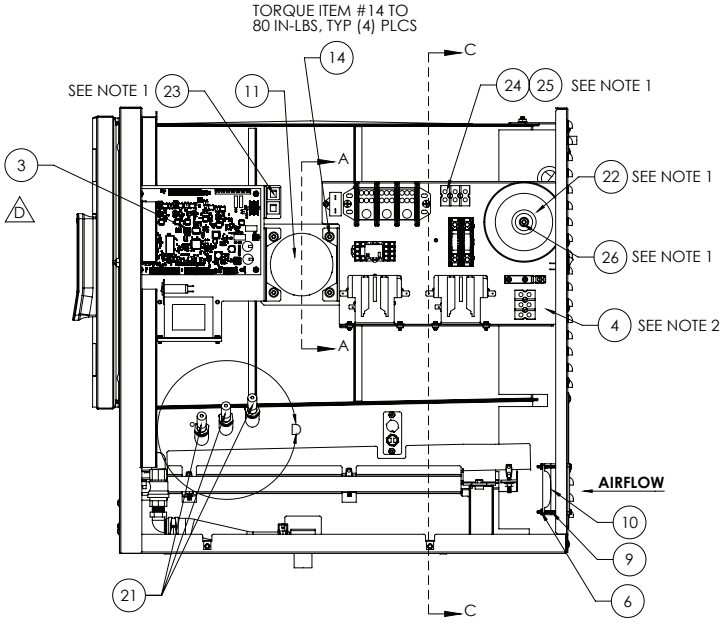
SECTION A-A
SCALE 1 : 2

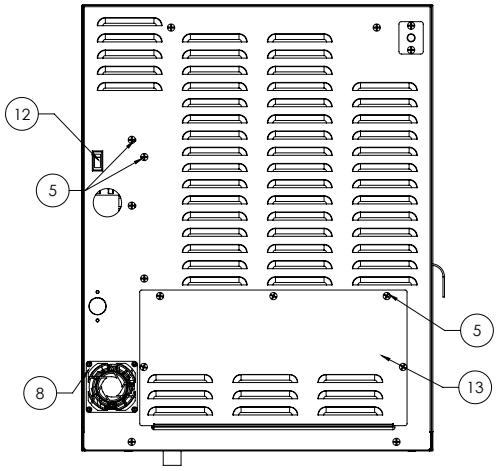


DETAIL B
SCALE 1 : 2

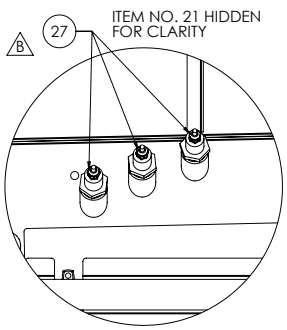


SECTION C-C
SCALE 1 : 4



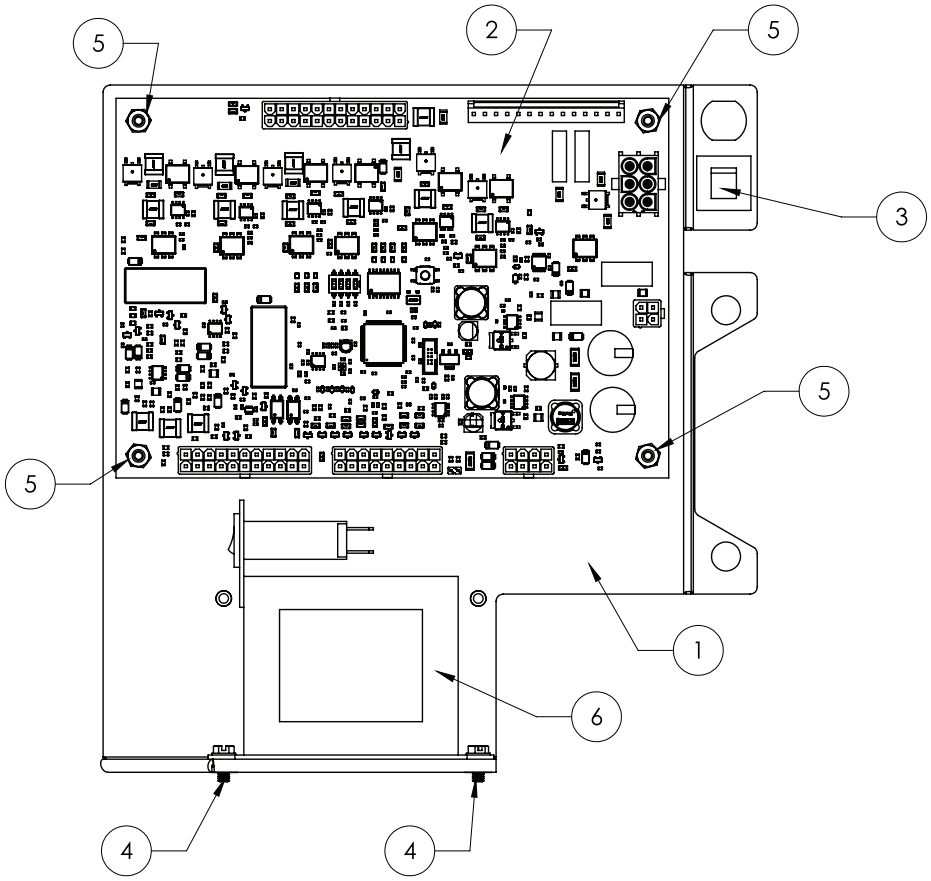


ITEM NO.	PART NUMBER	DESCRIPTIONQ	TY.
1	096790	WHEEL ASM BLOWER (STEAMER)	1
2	094135	MOTOR INSULATOR	1
3	182145	I/O BOARD ASM, GSSP-CL, 3 & 5 PAN	1
4	178126	HIGH VOLTAGE ELECTRICAL ASM, GSSP-BL, 3/5E	1
5	004173	SCREW, TRS HEAD 10-32 X 3/8	7
6	071289	NUT HEXAGON KEPS 6-32	4
7	096868	SEAL STEAMER MOTOR	1
8	143664	GUARD, 80MM FAN, PLASTIC	1
9	140182	SCREW, 6-32 X 2 LG HEX HD SLOT	4
10	178955	FAN, 24VDC MUFFIN 80MM, GSSP	1
11	146880	MOTOR ASM., STEAMER BLOWER	1
12	EL SWT140	SWITCH, ROCKER RSCA201-VB-B-1VN*	1
13	141963	PANEL, ELEMENT ACCESS	1
14	NT1101	NUT- HEXSERRATEDZINC 1/4-20	4
15	143714	BRACKET, PROBE PROTECTOR, VORTEX	1
16	071231	TEMPERATURE PROBE FITTING	1
17	071252	FIBER WASHER	1
18	071253	WASHER, TEMPERATURE PROBE	1
19	070452	NUT, 7/16-28 TEMP PROBE	1
20	085187	PROBE, TEMPERATURE	1
21	101143	BOOT, PLASTISOL	3
22	119856	TOROID, 1-3/8 ID 2-3/8 OD X	REF.
23	119836	CIRCUIT BREAKER, 2 AMP, RESETTABLE	REF.
24	003888	TERMINAL BLOCK 3-POLE	REF.
25	005056	SCREW ROUND HEAD 8-32 1 1/4"	REF.
26	NT1101	NUT- HEX SERRATED ZINC 1/4-20	REF.
27	125496	NUT, #8-32 NYLON LOCKING SS	3
28	071217	FITTING, MALE TEMPERATURE PROBE	1
29	071284	NUT, COMPRESSION 1/8	1
30	099948	LUBRICANT MOTOR SHAFT SEAL	.1 OZ
31	182100	J1 & J3, LOW VOLTAGE HARNESS - 24VAC (NOT SHOWN)	1
32	182101	J2, LOW VOLTAGE HARNESS - INPUT & OUTPUT (NOT SHOWN)	1
33	182102	J5, LOW VOLTAGE HARNESS - INPUT & OUTPUT (NOT SHOWN)	1
34	182105	HIGH VOLTAGE HARNESS - 480V, 240V, & 208V, 3PH (NOT SHOWN)	1
35	178265	HARNESS, WIRE, J4 (NOT SHOWN)	1



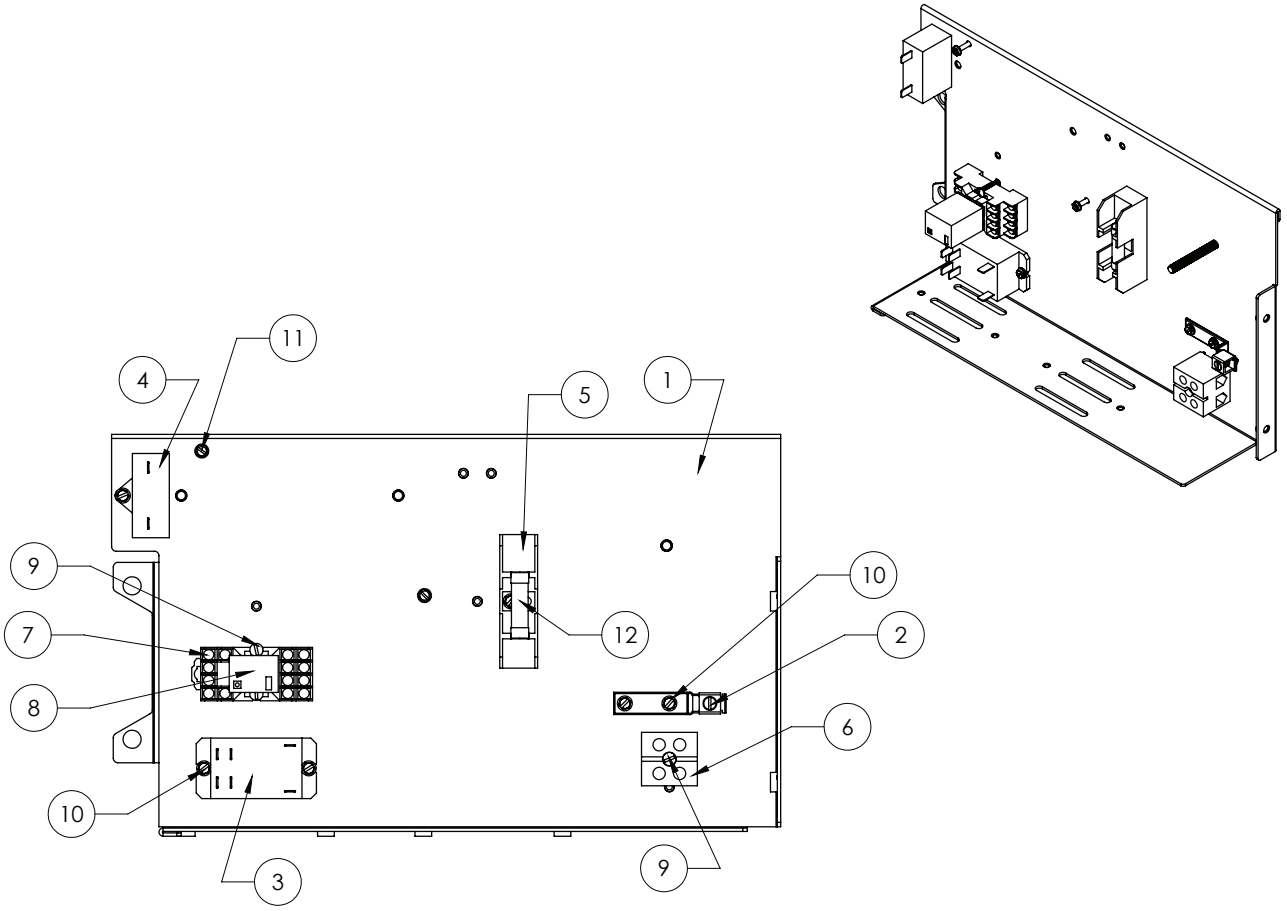
DETAIL D
SCALE 1 : 2

Parts List



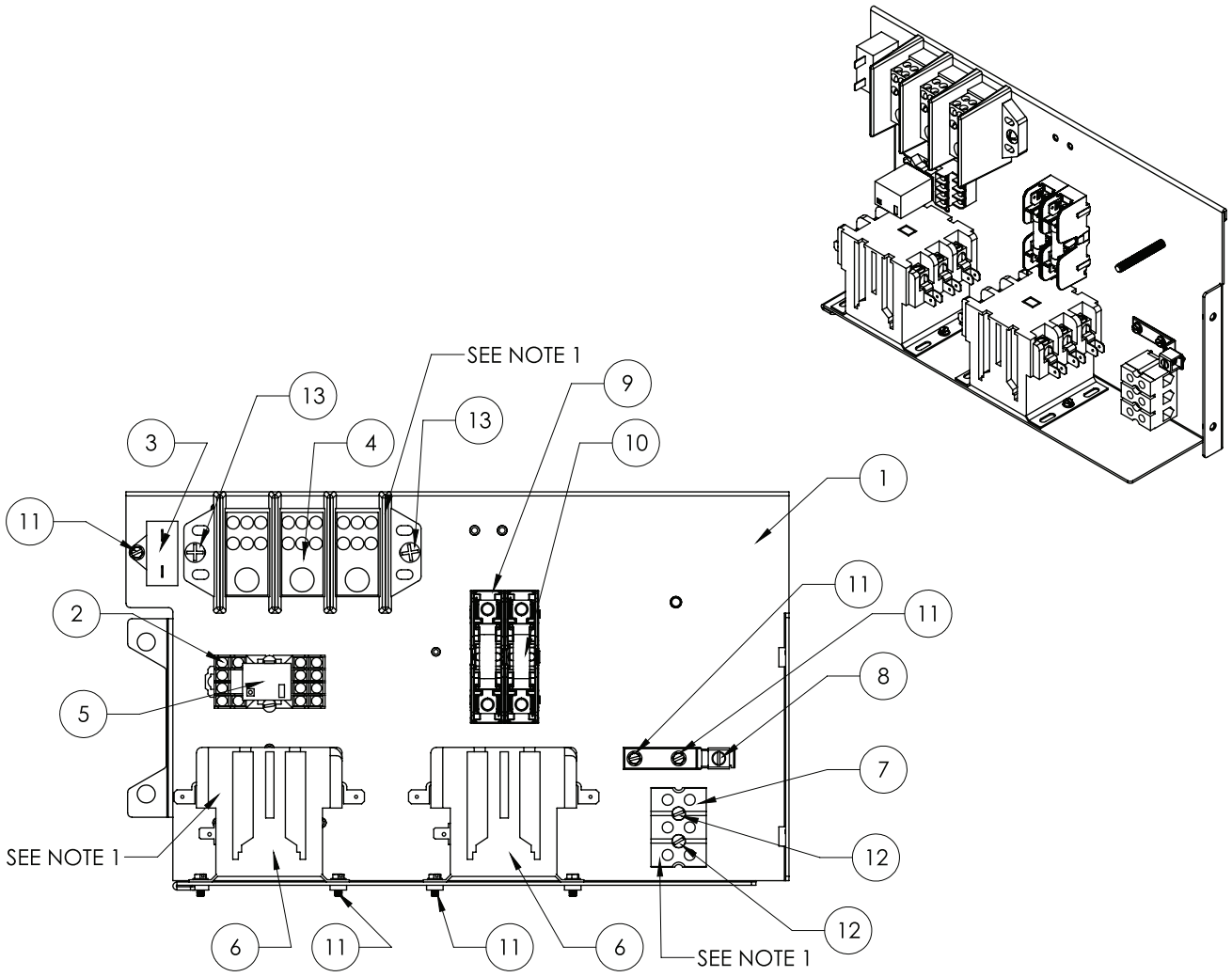
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	178051	WELDMENT, I/O BOARD PANEL, 3/5/10 PAN	1
2	178098	ASSEMBLY, I/O BOARD	1
3	178166	CIRCUIT BREAKER, 3 AMP, RESETTABLE	1
4	069789	SCREW HEX SLOTTED HD W/WASHER #8-32 X 3/8"	2
5	119855	NUT, 6-32 LOCK INSERT	4
6	178093	TRANSFORMER, 100 VA	1

Parts List



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	178049	PANEL WELDMENT, HIGH VOLTAGE, GSSP-BL, 3/5 PAN	1
2	106412	MECHANICAL LUG,GROUND, #2 - #8	1
3	119814	RELAY, 24 VAC DPST	1
4	096812	CAPACITOR FOIL 6 MFD	1
5	077840	FUSEBLOCK 1 POLE	1
6	003887	TERMINAL BLOCK 2P	1
7	178164	SOCKET, RELAY	1
8	178165	RELAY, 4PDT, 24VAC	1
9	005056	SCREW ROUND HEAD 8-32 1 1/4"	3
10	069789	SCREW HEX SLOTTED HD W/WASHER #8-32 X 3/8"	6
11	069787	SCREW, 6-32	2
12	182092	FUSE, 2 AMP, TIME DELAY	1

Parts List

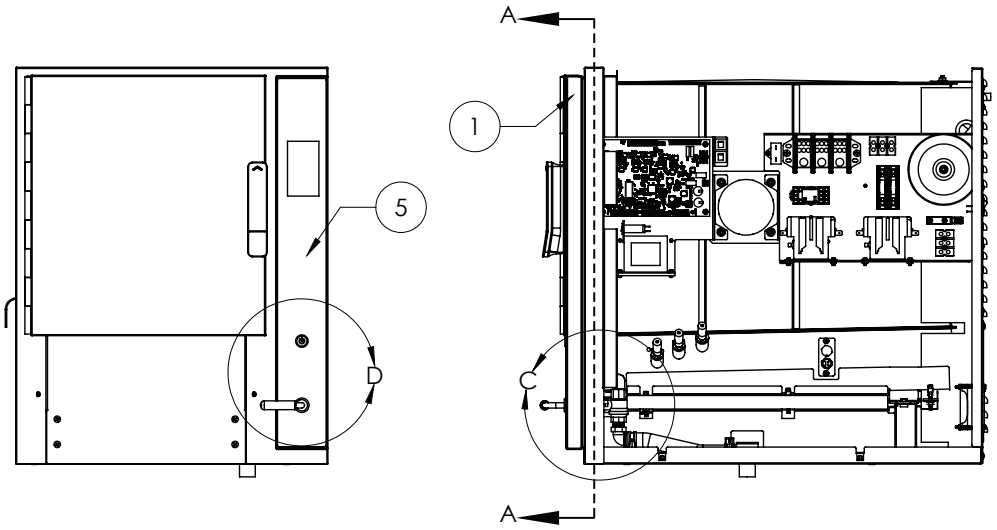


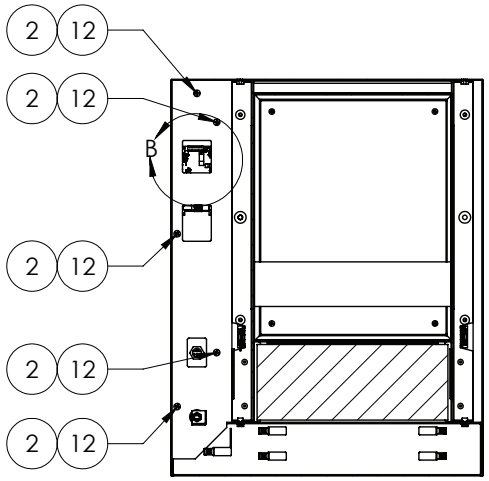
NOTES:

1. TORQUE SETTING FOR SET SCREWS
   - P/N 145081 - 40 IN. LBS.
   - P/N 003888 - 20 IN. LBS.
   - P/N 070185 - 35 IN. LBS.

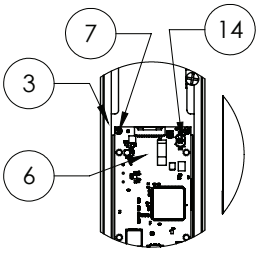
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	178049	PANEL WELDMENT, HIGH VOLTAGE, GSSP-BL, 3/5 PAN	1
2	178164	SOCKET, RELAY	1
3	096813	CAPACITOR FOIL 3 MFD	1
4	070185	TERMINAL BLOCK	1
5	178165	RELAY, 4PDT, 24VAC	1
6	145081	CONTACTOR, 50 FLA 3P HCOIL	2
7	003888	TERMINAL BLOCK 3-POLE	1
8	106412	MECHANICAL LUG,GROUND, #2 - #8	1
9	096809	FUSE BLOCK, 2 POLE, CLASS CC	1
10	182092	FUSE, 2 AMP, TIME DELAY	2
11	069789	SCREW HEX SLOTTED HD W/WASHER #8-32 X 3/8"	9
12	005056	SCREW ROUND HEAD 8-32 1 1/4"	4
13	116100	SCREW, #10-32 X .75	2

Parts List

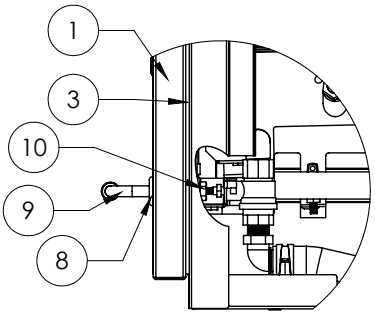




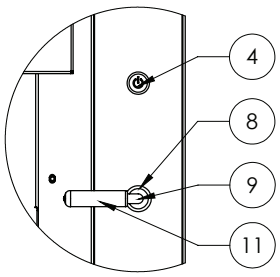
SECTION A-A



DETAIL B
SCALE 1 : 5



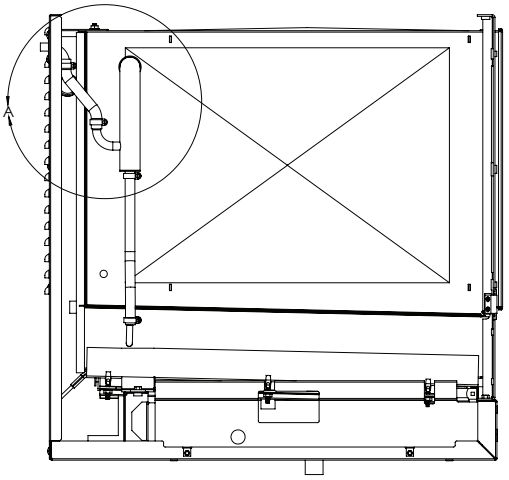
DETAIL C
SCALE 1 : 5



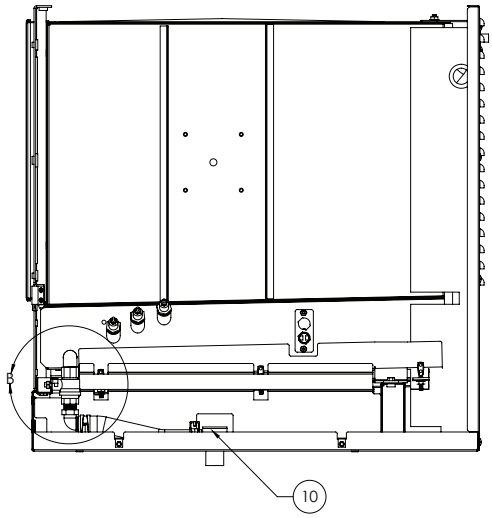
DETAIL D
SCALE 1 : 5

ITEM NO.	PART NUMBER	DESCRIPTIONQ	TY.
1	177993	WELDMENT, CONTROL PANEL ASM, 5/10 PAN	1
2	FA NUT0404	NUT, #10 "U" TINNERMAN	5
3	178457	GASKET, CONTROL ENCLOSURE, GSSP, 5/10 PAN	1
4	178088	SWITCH, POWER, ON/OFF	1
5	179438	OVERLAY, GSSP-CL-5 PAN	1
6	178096	ASSEMBLY, CONTROL BOARD (X51), 4.3 LCD, TOUCH SCREEN	1
7	178175	SCREW, M3 X 0.5MM THD X 6 MM LG, PHILLIPS, PAN HEAD	4
8	141670	GROMMET, 3/8" ID WITH 3/16" GROOVE	1
9	179090	SHAFT, DRAIN ACTUATOR, GSSP-CL	1
10	012809	NUT, HEXAGON 3/8-24	1
11	141668	HANDLE, SHAFT	1
12	004173	SCREW, TRS HEAD 10-32 X 3/8	5
13	179085	USB CORD, CONTROL BOARD, 4.36 LCS, TOUCH SCREEN	1
14	178460	BATTERY, DISPLAY CONTROL, GSSP	1

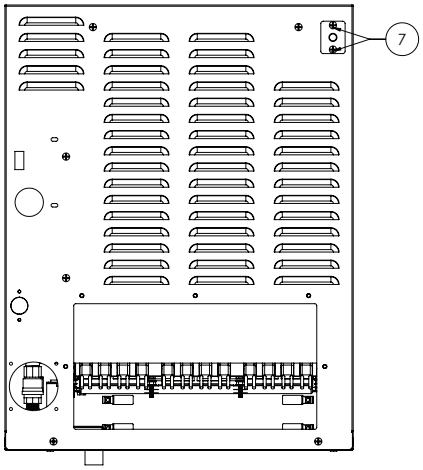
Parts List

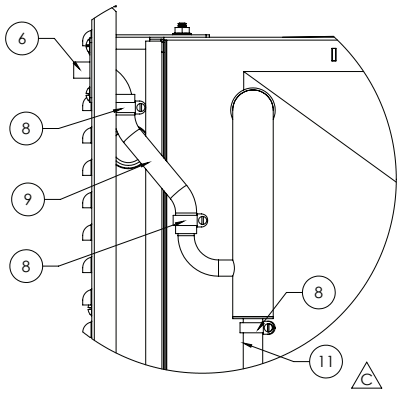


LEFT SIDE
INSULATION HIDDEN

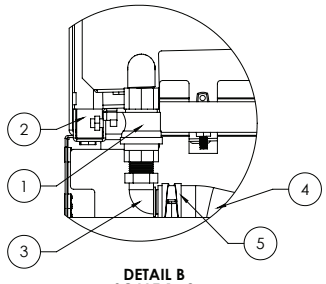


RIGHT SIDE
INSULATION HIDDEN





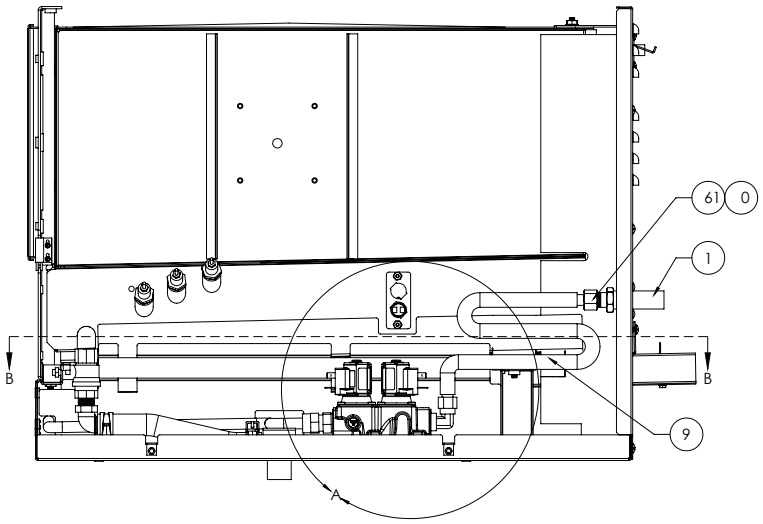
DETAIL A
SCALE 1 : 2

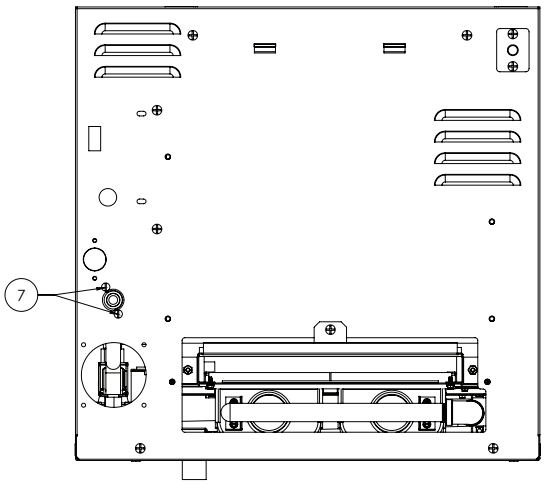


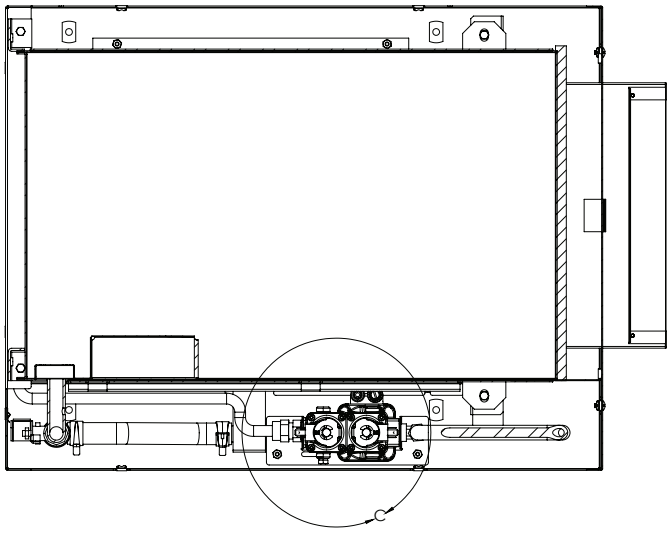
DETAIL B
SCALE 1 : 2

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	NT1127	1/2" BALL VALVE W/SHORT HANDLE	1
2	179152	BRACKET, DRAIN VALVE CONNECTION	1
3	142548	ELBOW 1/2"NPT TO 3/4 HOSE BARB 90DEG.	1
4	179109	HOSE, DRAIN VALVE TO DRAIN BOX, GSSP-CL	1
5	138457	CLAMP, CONSTANT TENSION CTB-27	2
6	179131	WELDMENT, STEAM EXHAUST,GSSP-CL	1
7	004173	SCREW, TRS HEAD 10-32 X 3/8	2
8	093482	CLAMP HOSE LOW PRESSURE	4
9	179111	HOSE, CAVITY STEAM EXHAUST, GSSP-CL	1
10	179100	WELDMENT, DRAIN BOX, GSSP-CL	1
11	179443	HOSE, CONDENSED STEAM TO DRAIN, GSSP-CL-5	1

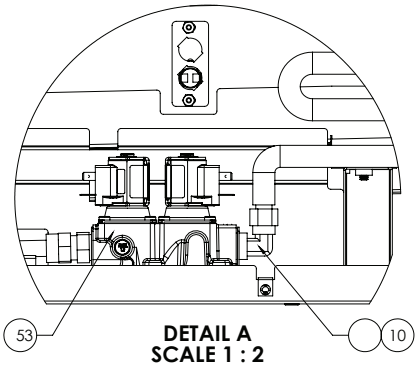
Parts List



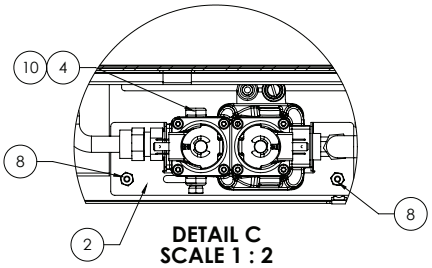




SECTION B-B



DETAIL A
SCALE 1 : 2



DETAIL C
SCALE 1 : 2

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	178465	GAS INLET PIPING ASM, 1/2" NPT, GSSP, 3/5/10 PAN	1
2	174356	BRACKET GAS VALVE	1
3	061163	ELBOW 90 DEG 1/2 NPT X 1/2 CC	1
4	010286	PLUG PIPE 1/8" NPT RECESSED HEX	1
5	098443	VALVE GAS JOHNSON CONTROLS NAT	1
6	171044	CONNECTOR FEMALE 1/2" TUBE X 1/2" NPT	1
7	005764	SCREW TRUSS HEAD MACHINE	2
8	071256	NUT HEXHEAD KEPS 10-32	2
9	NT1561-02	FLEXIBLE TUBE, GAS, 22" LONG	1
10	078938	PIPE DOPE	.01 OZ

GRAPHIC USER INTERFACE

GENERAL NOTES

Minimum touch area id 40 (.312") x 40 (.312") pixels. Actual icons may be smaller.

All buttons will invert their format when pressed and an audible beep will be heard to indicate actuation.

Menu items will change from black text to gray text when pressed and an audible beep will be heard to indicate actuation. Menu items with user selectable field will change from blue text to gray when pressed and an audible beep will be heard. Black text will not change.

Menu, back arrow and "X" buttons will invert their format when pressed and an audible beep will be heard to indicate actuation. Background touch area will change to white and shape will change to black.

When a button is pressed, action occurs upon release or if held for a preset period of time. Beep can be turned off in Settings.

Menus will scroll via button push only. Arrow buttons on lists will increment list 1 item per push or will continue to scroll up or down when held. When the top of the list is reached, scrolling will stop and the up arrow will not be displayed.

When the bottom of the list is reached, scrolling will stop and the down arrow will not be displayed. On the Select Name screen, the list is continuous and either arrow button will continuously scroll the list.

Display will dim to Level 1 after 10 minutes of non-use unless in a cook screen. Touching the screen or any popup will increase screen brightness to preset level..

User changeable items in lists are shown in blue color.

If screen inputs are inactive for 60 seconds (unless in Unit Status, Diagnostics or an active pop up), the screen function will timeout and return to the Start up screen (during startup) or Home screen (non-cook modes) or Cook / Hold screen (cook/hold modes).

All list buttons will have a gray gradient, lessening left to right. Entire list button area is touchable.

When entering data, data fields will always start with a default setting (ie. HH:MM:SS) showing on the screen. User can change existing values by starting to type a new value. Date fields will require selection of the month, day or year field before editing.

Door opening - Always shuts down circulation fan and heating circuit. Water fill allowed to proceed. Circulation fan delays for 15 seconds after door close.

Circulation Fan runs during Manual and Timed cook modes at ready temperature. In Low Temp Cook and Hold modes the circulation fan runs when the cavity temperature is below set point temperature; fan will start a 5 minute on and 5 minutes off cycle rate when the set point is reached.

Alarms can be silenced by pushing any available button.

The pre-heating progress bar is only displayed during the initial heat up when the Home, Manual, Low Temp, and Hold mode screens are advanced. Progress bar will have three steps: filling of the progress bar will be based on the cavity temp via the RTD. Progress bar filling will be scaled between cold start cavity temperature [Typ. 70 °F] to the target temperature. When target temperature is reached the progress bar will disappear and the ready icon will illuminate and one 3 second beep will be audible. (The target temperature is variable based on the mode selected by the user [different for cook, hold and low temp modes]).

After initial heat up and ready status is achieved, the ready icon becomes the primary indicator for temperature for the cavity showing if the cavity temperature is at, below or above the control set temperature. The ready icon will illuminate solid green when cavity temperature is ±5°F from the target temperature. When cavity temperature is below than 5°F from the target temperature, then the ready icon will start Blinking. When cavity temperature is more than 5°F from the target temperature, then the ready icon will be in Blinking. Blinks at rate of 1 second on and 1 second off.

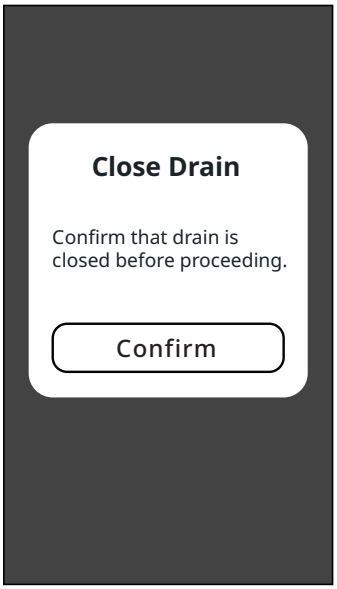
When ready temperature is reached one 3 second beep will be audible in all instances. When the cavity temperature drops 5ºF below or lower than the set point, three .5 second beep will audible.

INITIAL STARTUP

When initially starting the app, users are shown a startup screen. Providing a progress indicator, the purpose of this initial startup screen is to provide brand recognition as well as alleviate any progress stress to users.

Application Loading

Startup
Close Drain



Startup
Image 3

APPLICATION LOADING

Application Loading screen appears when ever power is provided to the unit including after a power disruption. Progress bar will be Blue during loading and screen goes blank when fully loaded.

STARTUP

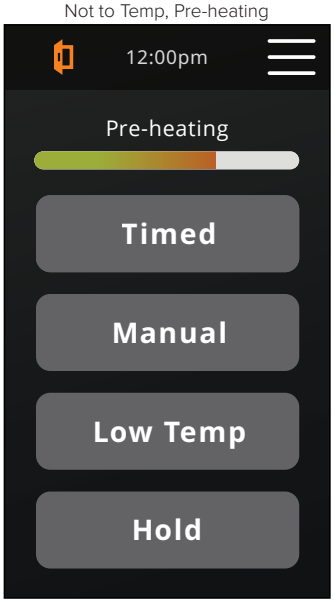
When front power button is pressed to the turn the unit on the control conducts a check on probes; If control recognizes both probes are open, then control screen will display the close drain pop-up. After “Confirm” button is pressed, screen will transition to “Fill Reservoir” screen.

If probes are closed, control will display pop-up to drain unit. Control monitors for 5 minutes for low probe transition.If the control recognizes a make to break transition on the low probe, after 5 seconds on the break the screen will display the close drain pop-up. If no probe transition within 5 minutes, control will display a draining/cleaning Error pop-up (Fatal Error).

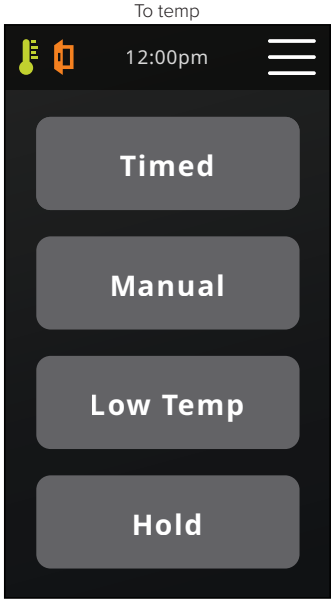
Units will scroll through 3 “picture” screens (Noodles, Broccoli, Shrimp) but the message on each will instruct to Close Drain, Fill Reservoir.

HOME

Home
Not to Temp, Pre-heating



Home
To temp



HOME NOT TO TEMP

Door symbol is active for every screen and will only be visible when the door is open.

HOME TO TEMP

When “Timed” button is pressed, control display changes to “Timed Cook Time Setup” screen.

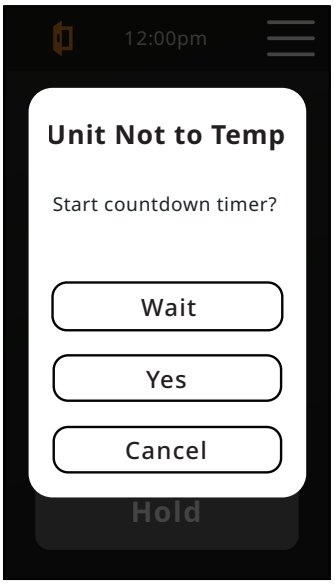
When “Manual” button is pressed, control display changes to “Manual Cook After Startup” screen.

When “Low Temp” button is pressed, control display changes to “Set Temperature” screen.

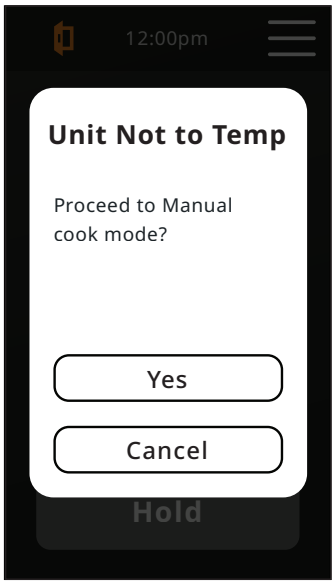
When “Hold” button is pressed, control display changes to “Hold Mode” screen.

When cook modes is selected, if unit is not to temp then “Not to Temp “ pop-up appears.

Not To Temp
Timed



Not To Temp
Manual



NOT TO TEMP TIMED

Pop up occurs after entering cook time after Timed Cook selection prior to Pop up occurs after entering cook time after Timed Cook selection prior to preheating is complete or when timed cook mode is selected and time is entered after the unit has been in Hold mode and cooled down below Ready temperature.

Cancel – Returns to Home screen. Yes – Goes to Timed cook screen. Starts Cook Mode even though unit has not finished preheating. Timer will begin counting down. Wait – Goes to Timed cook screen and timer does not start counting until ready temperature is reached. If button is not pressed in 10 seconds, returns to preheating screen and ignores previous selection. Pop up disappears when preheat temp is reached if occurring within 10 seconds and screen changes to Timed cook screen.

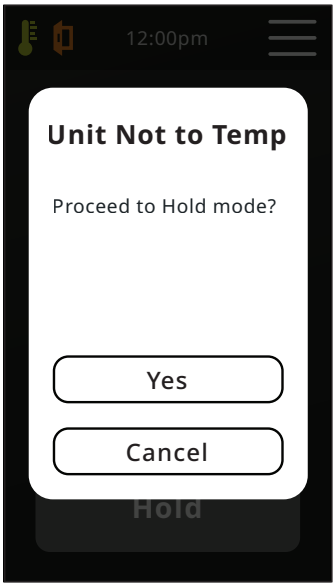
NOT TO TEMP

Pop up occurs after Manual Cook selection and prior to preheating is complete or when Manual cook mode is selected and the unit is in Hold mode and cooled down below Ready temperature.

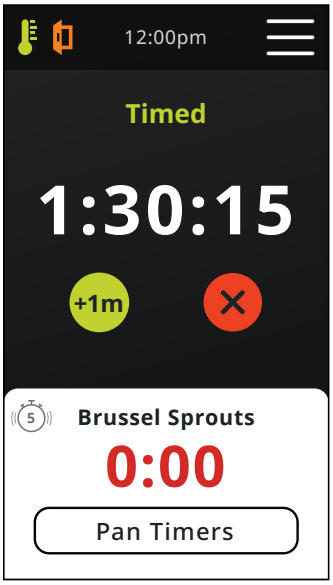
Cancel – Returns to Home screen. Yes - Goes to Manual cook screen. Starts Cook Mode even though unit has not finished preheating. Ready light will not be illuminated.

Warning – Low Water. new pop up: Warning - Low Water with an audio alarm. When water breaks the low-probe. After 5 min the heater turns off. Message to user to fill reservoir to maximum level. 15 seconds after the low probe is made, the message will disappear.

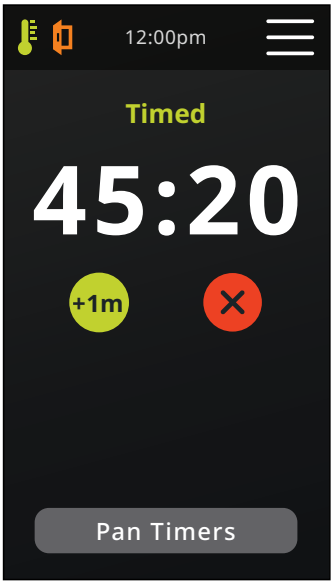
Not To Temp
Hold



Timed Cook
During cook with expired timer



Timed Cook
No timer <30



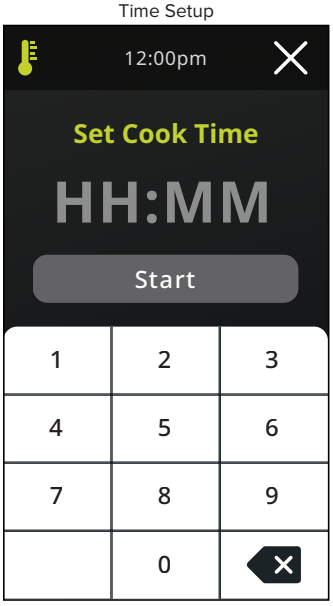
NOT TO TEMP HOLD

Pop up occurs after Hold selection and prior to preheating is complete.

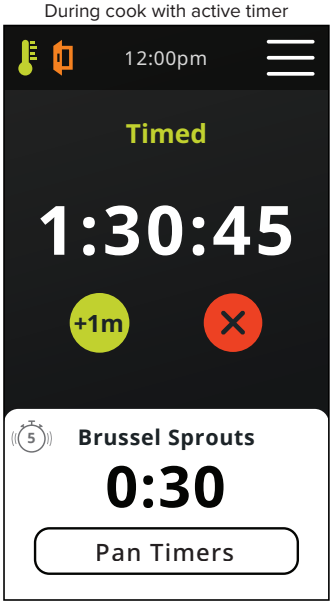
Cancel - Returns to Home or Pre-heating screen. Yes - Goes to Hold screen and starts Hold Mode even though unit has not finished preheating. Ready light will not be illuminated.

TIMED COOK

Timed Cook
Time Setup



Timed Cook
During cook with active timer



TIME SETUP

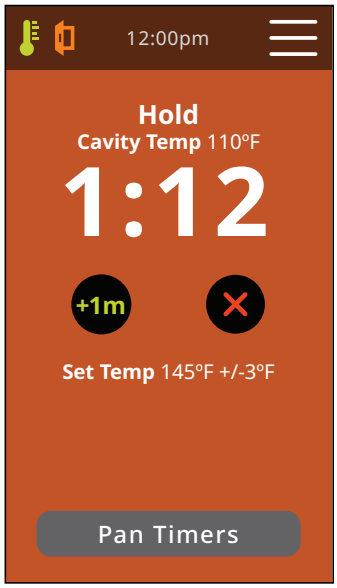
Before entering the timed cook screen, the user has to set the time for steaming. Back button removes on character from the right. Time entry defaults to HH:MM - This changes to zeros as soon as first number is pressed. Limit hours to 12, Greater than 12 hours will show error.

TIMED COOK

Count down timer displays H:MM:SS. When time is less than 1 hour, display will show MM:SS. Text will be sized to fit screen and enlarge when time is less than 60 minutes. When door is open, seconds will stop counting down - Timer is paused during door opening (Function depends on Compensating Timer setting in Settings). If timed cook expires when in a menu or other screen, control will give 3 beeps (1/2 sec on, 1/2 sec off) but will allow user to continue activity. Control will return to Cook / Hold screen after 60 seconds of inactivity. Pan timer section will only display one timer at a time. Timer will not display until it is within 30 seconds of expiration. Once displayed, timer can be cleared by pressing on the countdown time prior to expiration. This will stop the timer and no alarm or further notifications will be given. Upon expiration, the format will change color to red and begin blinking and an alarm (Two beeps, 1/2 sec on, 1/2 sec off, repeated every 5 sec) will sound. The alarm sound will be differentiated from the main Timed Cook alarm. The audible alarm will continue until silenced by tapping the flashing “0:00”. Once acknowledged, the timer will disappear. If a second timer reaches 30 sec prior to acknowledgment of the previous alarm, the previous alarm will be replaced with the new timer. Once the latest timer has reached zero and been acknowledged, any previous unacknowledged timers will be displayed in order of last to expire, will show as flashing red zeros, will alarm and will need to be acknowledged. This will be repeated for every expired timer that was not acknowledged. All timers and cook time are paused during door openings (Function depends on Compensating Timer setting in Settings). +1m adds 1 minute to cook time for each press. 10 presses adds 10 min.“X” takes you to the “Stop Steaming?” pop up. “X” will not cancel any pan timers. Hold Temp = 145-155F. User defined in settings menu.

Stop Steaming
Popup

Timed Cook
Hold mode + No timer <30



STOP STEAMING

Yes- Returns to Home screen and unit goes into ready mode

No - Unit returns to cook screen and continues cook operation

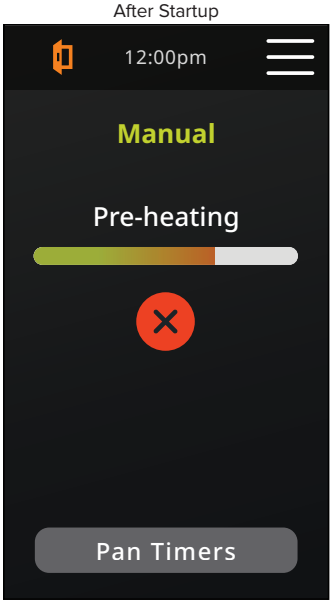
TIMED COOK HOLD MODE

When Cook Time reaches zero, screen background changes to orange, 3 beeps will sound, unit will enter Hold mode and Time will begin to count up. Count up timer displays H:MM:SS. When time is less than 1 hour, display will show MM:SS. Text will be sized to fit screen and reduce when time is greater than 60 minutes. Count up time is limited to 10 hours. After ten hours, count up timer will reset and begin counting up from zero. Count up timer does not pause with door openings. +1m will remain active in Hold mode for 10 min. and then it will disappear and the "X" button will center on the screen. In Hold mode, Ready light is illuminated as long as temperature is above "ready" temperature. "X" - Returns to home screen if above ready temperature. Returns to Preheating home screen if below ready temperature. When unit is in Hold Mode, fan will be off unless the unit is cycling on the heating algorithm. Default Hold temperature =145ºF unless otherwise changed by user under Settings.

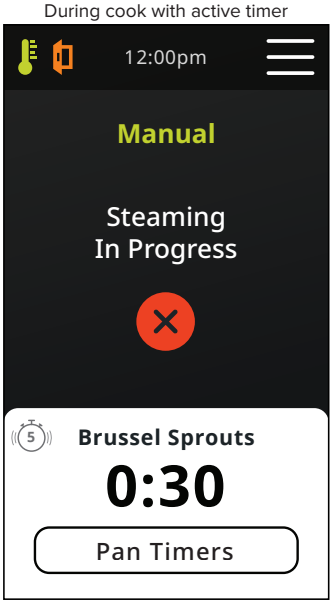
MANUAL COOK

After diagnostics check and water filling to the low probe is complete and the high probe is made, the preheating screen will appear with audio alert (4 short beeps @ 1 second intervals) in manual fill units only, and the unit will begin to heat in Manual mode with a progress bar. In manual fill units, Heating circuit will be energized, when water detected at low probe. The fill screen will move to Cook screen after water reaches High probe or after 5 minutes of Low probe being made. After 10 minutes of low probe being made, and door was not being closed, then heating circuit de-energizes. Door Open pop-up will be displayed after 5 minutes timer and plus timing selection from Settings menu. Progress bar will have three steps: progress bar will be getting the temperature inputs from cavity RTD, filling of the progress bar will be based on the cavity temp. Progress bar filling will be scaled between cold start cavity temperature [Typ. 70 °F] to the target temperature; 100% filled cavity temperature is 100% of the target temperature. 100% fill will indicate ready temp has been reached. When target temperature is reached, the progress bar will disappear the "Pre-heating" message will change to "Steaming In Progress" on the Manual Cook screen, ready light will illuminate and one 3 second beep will be audible. If red X is pressed while in pre-heating, screen will transition to Home screen with Pre-heating bar.

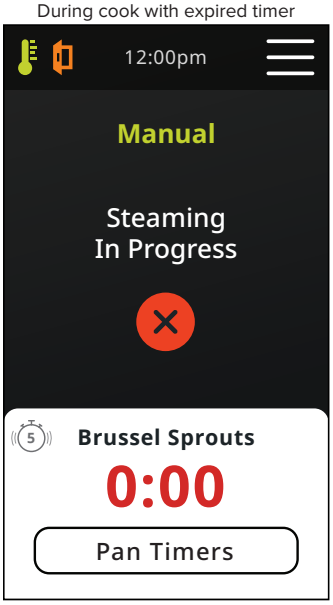
Manual Cook
After Startup



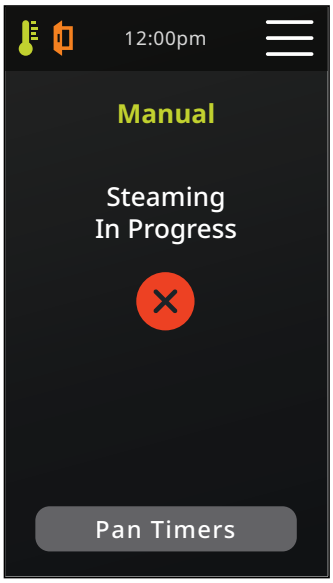
Manual Cook
During cook with active timer



Manual Cook
During cook with expired timer



Manual Cook
No timer <30 and
cleaning shutdown clock



Stop Steaming
Popup

MANUAL COOK NO TIMER

Pressing "X" will show acknowledgment pop up.

Pan Timer function is same as Timed Cook screen.

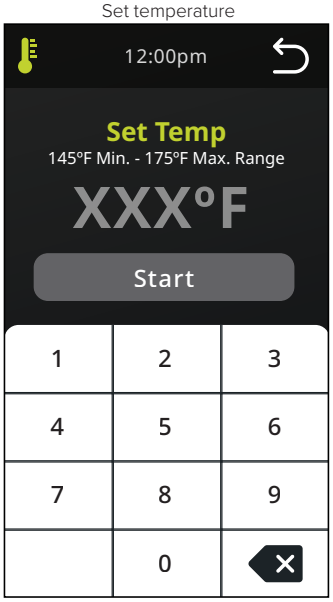
STOP STEAMING

Yes - Returns to Home screen if above ready temp or Pre-heating screen if below ready temp.

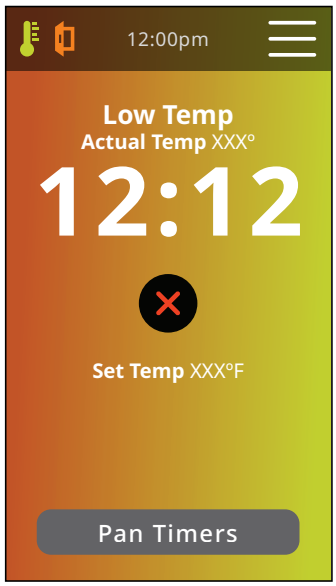
No - Unit returns to manual screen and continues manual operation.

LOW TEMP

Low Temp
Set temperature



Low Temp

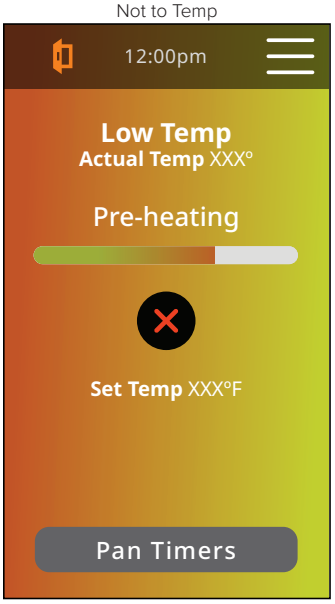


SET TEMPERATURE

When Low Temp is pressed, the screen will transition to numerical keypad. Temperature is set by entering 3-digit entry with 145-175ºF range. After "Start" button is pressed, the control targets the set temperature via RTD and the Ready icon disappears. Once set cavity temperature is reached, the Ready icon reappears with audible alert and display transitions to the "Low Temp" cook screen with timer starting to count up. Unit maintains cavity temperature by controlling heat source via cycling algorithm. If cavity temperature is greater than the set point, after clicking on the start button, "Temp too High" pop-up is displayed with continue and cancel buttons. Continue - Enters to low temp screen. Cancel - Enters to home page / pre-heat home page. Once mid-point cavity temperature is reached, the Ready icon reappears with audible alert and time will begin to count up. Count up timer displays H:MM:SS. When time is less than 1 hour, display will show MM:SS. Text will be sized to fit screen and reduce when time is greater than 60 minutes. Unit maintains cavity temperature by controlling heat source via cycling algorithm. Pressing the back arrow exits and returns to Home screen.

Pressing "X" will show acknowledgment pop up.

Low Temp
Not to Temp



Low Temp
Temp too High

NOT TO TEMP

If cavity temperature is below the set point on the initial heat up and after self-diagnostics, the "Low Temp" main screen will display a pre-heating progress bar.

TEMP TOO HIGH

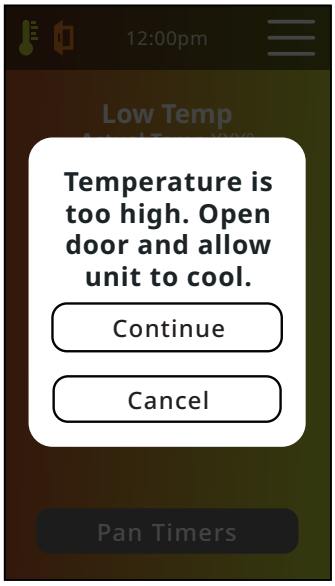
When you are in low temp screen and actual temperature goes above the set temp then "Temp too High " pop-up is displayed.

Okay - Pop-up hides and Low temp screen is visible.

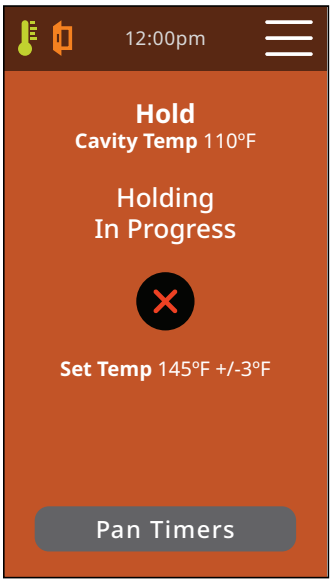
Pop-up remains displayed until the cavity lowers 10°F than the target temperature or the Okay button is pushed. Once mid-point cavity temperature is reached, the Ready icon reappears with audible alert and display transitions to the "Low Temp" main screen with timer starting to count up.

Stop Low Temp
Popup

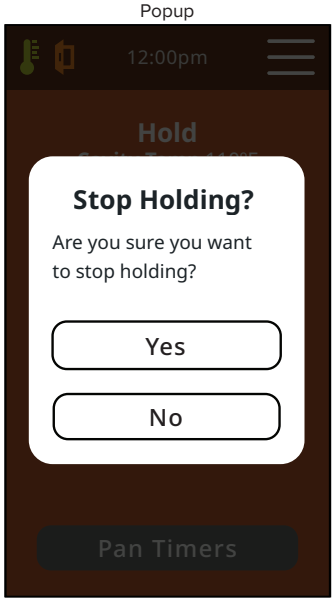
Temp to High



Hold Mode
No timer <30



Stop Holding
Popup



STOP LOW TEMP

Yes - Returns to Home screen if above ready temp or Pre-heating screen if below ready temp.

No - Unit returns to low temp screen and continues low temp operation.

TEMP TO HIGH

If cavity temperature is greater than the set point, after clicking on the start button, “Temp too High” pop-up is displayed with continue and cancel buttons.

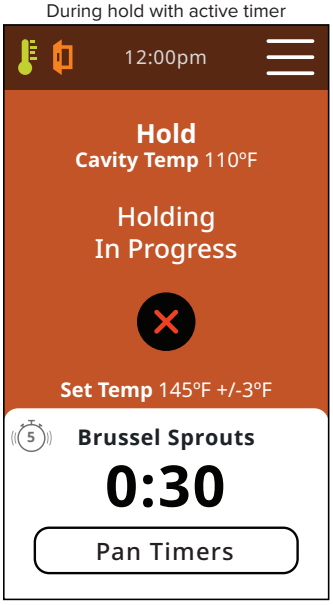
Continue - Enters to low temp screen.

Cancel - Enters to home page / pre-heat home page.

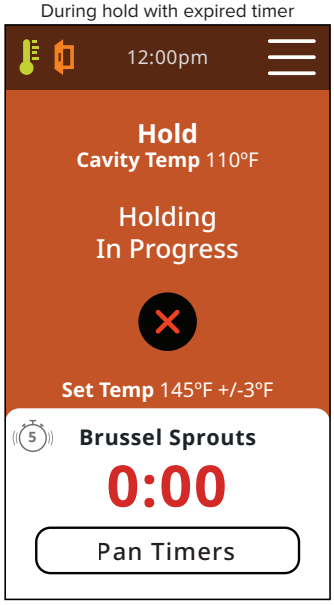
HOLD MODE

This mode is entered from the Home page only. This is similar to Hold after Timed Cook but has some different functionality.

Hold Mode
During hold with active timer



Hold Mode
During hold with expired timer



HOLD MODE

Pressing “X” will show acknowledgment pop up.

Pan Timer function is same as Timed Cook screen.

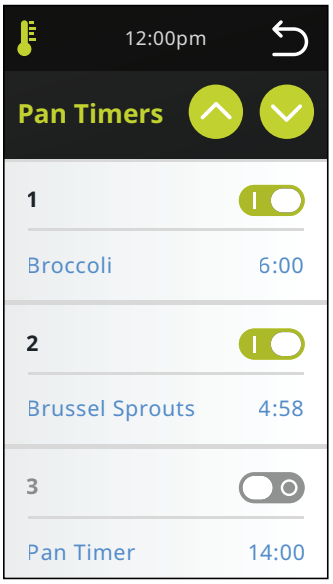
STOP HOLDING

Yes- Returns to Home screen and unit goes into ready mode.

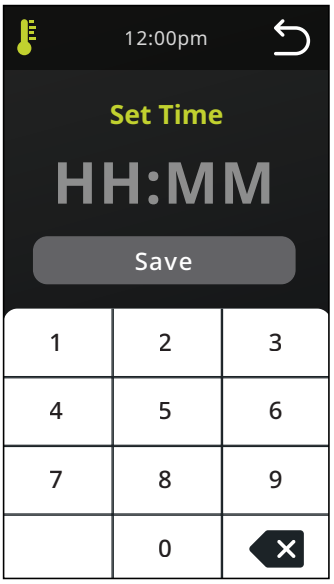
No - Unit returns to hold screen and continues holding operation.

PAN TIMERS

Pan Timer



Set Time



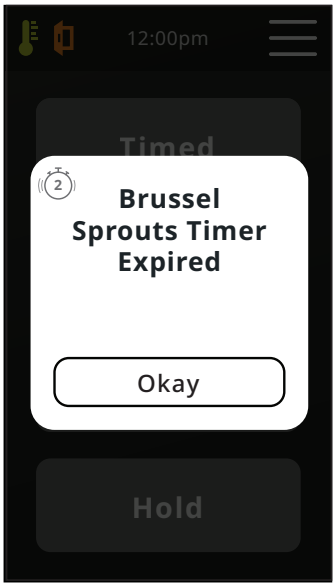
PAN TIMER

Timer names will default to Pan Timer and initial time display will default to HH:MM. Once timer has started, time display will change to H:MM:SS. When timer is stopped or completed, the previous time set will be displayed in HH:MM. Pressing the Time or Name will bring up an input screen. When pressing Time or Name, the touch area will be colored grey to indicate a “press”. Pressing the toggle will change the toggle to green background, move the toggle to uncover “I”, ungrey the timer # and begin timer countdown. Timers count down on screen if active. Expired timers will have the timer # and toggle switch greyed out and toggle will move to uncover the “0”. The name and time will immediately show previously set values when a timer expires or is turned off. There is no pause function. Preset timer data is remembered unless main power is disconnected. Timers will stop during door openings based on selection in settings. Timers are limited to 12 hours.

Set Name

Pan Timer Done

Home screen and non-cook screens



SET NAME

List will always default to “Pan Timer” when setting the timer name Pan Timer Alfredo, Asparagus, Beans, Broccoli, Brussel Sprouts, Buns, Cabbage, Cake, Carrots, Casserole, Cauliflower, Chicken, Dumplings, Eggs, Fish, Ham, Hamburger, Hotdogs, Mac & Cheese, Meat, Nacho Cheese, Pasta, Peas, Potatoes, Puddings, Rice, Shellfish, Spaghetti, Spinach, Squash, Tamales, Tomato and Vegetables.

PAN TIMER DONE

If a timer goes off while on the home screen or a non-cook screen, a popup will appear as an acknowledged alert. Pushing “Okay” will silence the alarm, and close the pop up. If multiple timers are expiring, each subsequent timer will silence the previous one and only the last timer will be shown. Popup will show the number of the expiring timer plus the saved timer name including the text “... Timer Expired” I.e. Brussels Sprout Timer Expired.

Longer than Cook

Timed cook modes

Hold Mode - Timer Setting

Only in hold mode

LONGER THAN COOK

If a Pan timer is set for longer than an active “cook” time, a pop up warning will appear when the timer is started. Okay - Returns to Timed Cook screen.

HOLD MODE TIMER SETTING

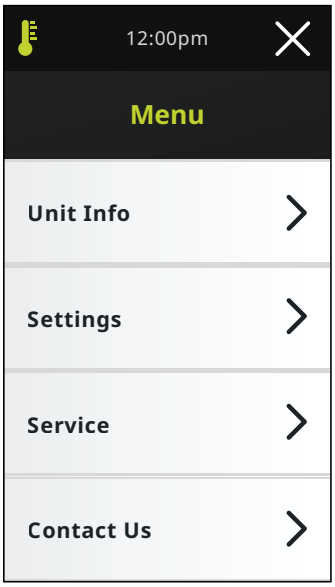
Pop up occurs when a timer is activated / started in Hold mode.

Yes - Starts timer

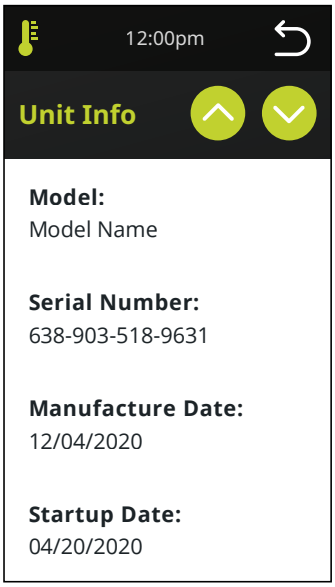
Cancel - Returns to timer screen.

MENU

Menu



Unit Info



MENU

The menu screen will be accessible on the majority of screens and provide quick access to more finite functions.

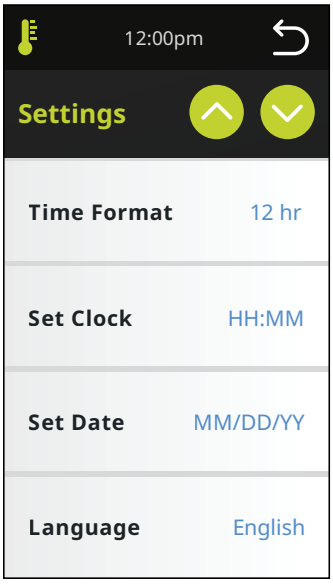
“X” returns you to the Home screen if you are not in cook mode. If cooking, “X” returns to active cook screen. If in fatal error mode, “X” returns screen to Error pop up. If in Initial Service mode, “X” shows Restart? pop up.

Service menu is password protected - Screen will pop up to enter password. Preset 4 digit numeric password is common to all units and is not changeable.

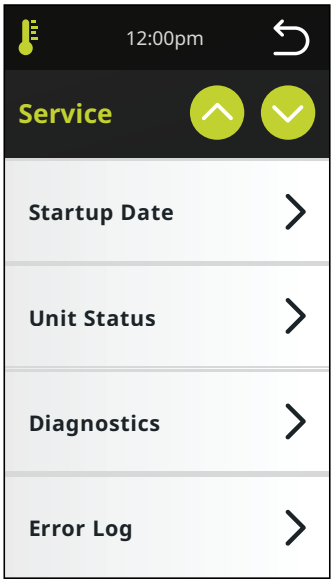
UNIT INFO

"Back" arrow takes you back one screen. Unit Info screen to include: Model, Serial Number, Manufacture Date, Startup Date, Firmware Version, Total Runtime. Model, Serial Number and Manufacture Date are entered from Parameters menu. Startup date is entered from Service menu. Total run time is recorded from the moment the power switch is toggled on and the circuit latches.

Settings



Service



SETTINGS

User will click on button to change data. Data will either toggle between choices or pop up an input window. Default values will be set in firmware and shown in **Bold** below. Settings screen to include: Time Format (12 hr, 24 hr), Set Clock (**Default=Parameter setting**), Set Date (**Default=Parameter setting**), Language (**Eng**), Temp Indication (**F**, C), Door Alarm (Off, 2 min, 5 min, 10 min), Keyboard Beep (**On**, Off), Brightness (1-20%,2 - 40%,3 - 60%,**4 - 80**%,5 - 100%), Number of Timers (1-10, **Default = # of pans from Parameters**), Compensating Timers (On, **Off**), Timer Screen Lock (On, **Off**), Alarm Volume (Low, **Mid**, High - Volume setting will apply to all sounds except keyboard beeps which will only be on/off).

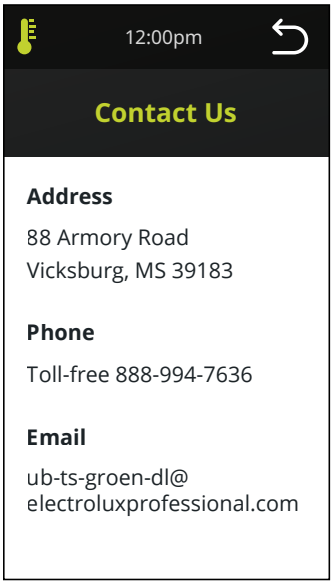
Hold Temp: If the user wants to change the hold temp, they touch the number and a pop up comes up to set the temperature screen that is on page 8, screen 1.

SERVICE

Service screen to include Startup Date (grayed out after setting), Unit Status, Diagnostics, Error Log, Documents (Operation, Error Descriptions, Parts List), Data Retrieval, Firmware Update, RTD Calibration (only if RTD is used) and Parameters.

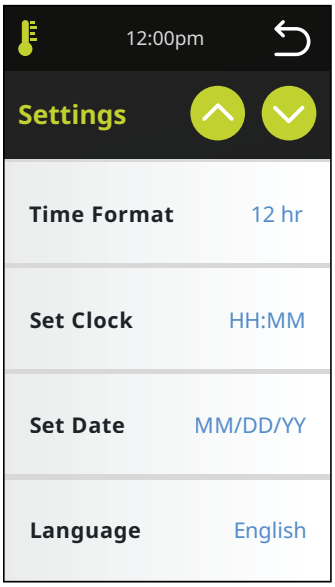
Startup date will be entered and then asked to confirm. Once confirmed, date button text will be grayed out and date will be locked but can be changed in Parameters.

Contact Us

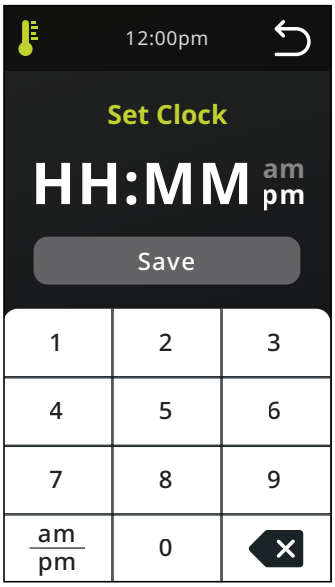


SETTINGS

Settings



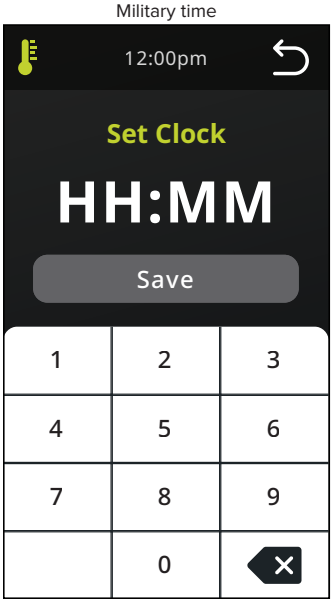
Set Clock



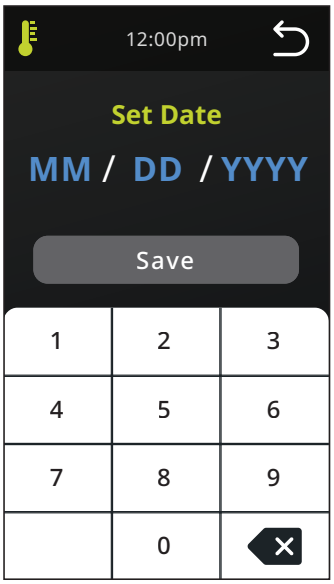
SET CLOCK

If data is changed and not saved, no changes are made and unit returns to Home or Cook screen after 60 seconds.

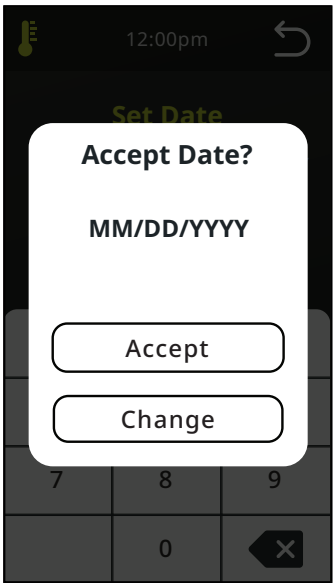
Set Clock
Military time



Set Date



Date Confirmation



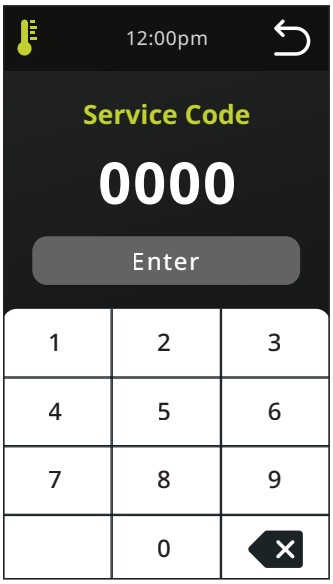
DATE CONFIRMATION

Accept - Accepts the date, locks the data and greys out the Startup date button in the Service menu.

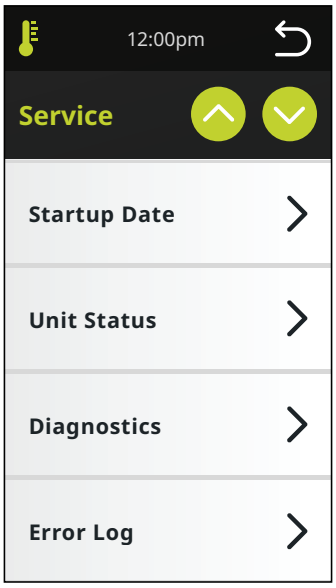
Change - returns to Install Date screen and retains original data entry.

SERVICE

Service Code



Service



SERVICE CODE

Code: 9999.

Each digit will be briefly displayed and then replaced with an "*" to hide the code.

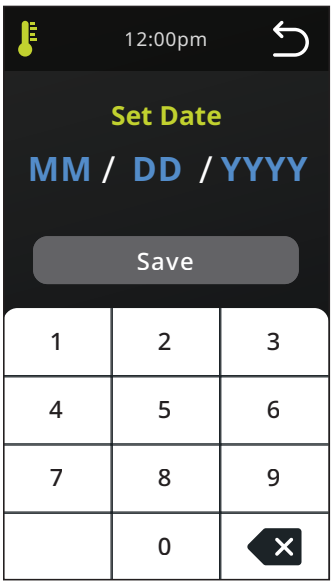
SERVICE

Data to be stored includes 8 hours of operational data and maximum of 50 errors (including operational data at time of error). Each error to be cleared from memory after 120 calendar hours. All data from internal memory will be downloaded. No ability to select time or dates will be provided.

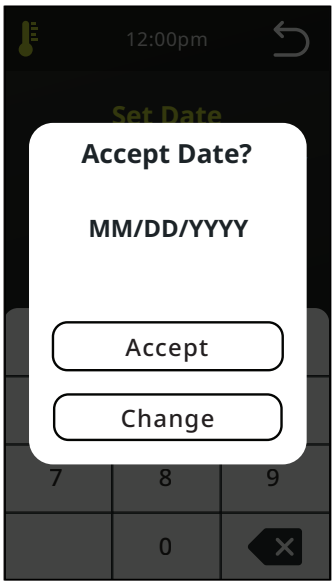
Data is to be output in simple text file.

No data will be recorded during data retrieval.

Startup Date



Date Confirmation



STARTUP DATE

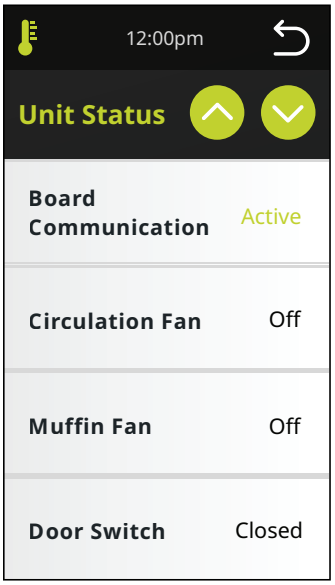
Date will be entered by selecting each individual data box. Default value in the box should be MM, DD, YYYY. Text in the boxes should be blue to indicate to the user that it can be changed.

DATE CONFIRMATION

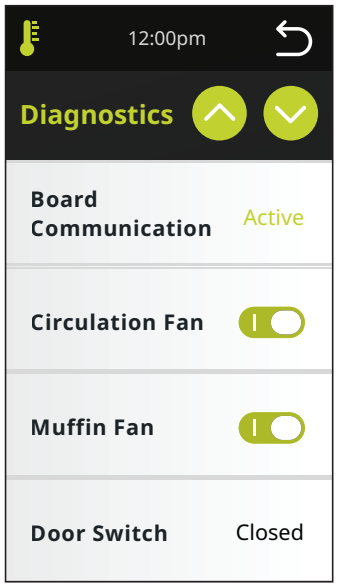
Accept - Accepts the date, locks the data and greys out the Startup date button in the Service menu.

Change - returns to Install Date screen and retains original data entry.

Unit Status



Diagnostics



UNIT STATUS

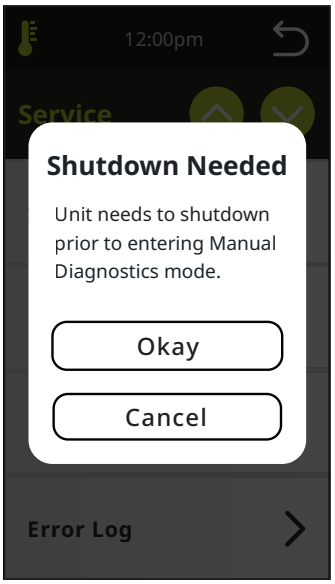
Unit Status list to include: Board Communication (Active (green font) / Lost (red font)), Circulation Fan (On/Off), Fill Valve (On/Off xxx mA), Water Level Low (Open/ Closed), Water Level High (Open/Closed), Water Level Overflow (Open/Closed) (only with 3rd sensor), RTD (XXX°C or XXX°F), Door Switch (Open/ Closed), Board Temp (XXX°C or XXX°F), Control Voltage (XXXV) and Contactor (xxx mA).

Unit Status can be used during any functions other than data download and firmware update. Screen update is real time. Screen dimming is disabled. Readings below 32mA will be shown as 0.

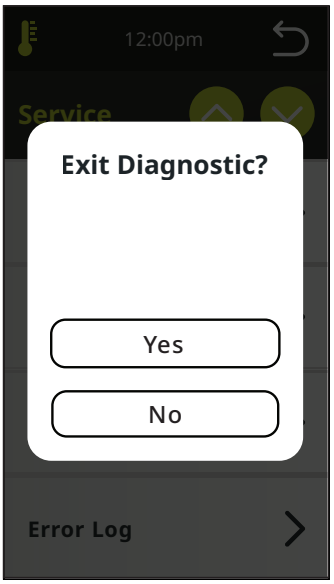
DIAGNOSTICS

Diagnostics includes: Board Communication (Active (green font) / Lost (red font)), Circulation Fan (On/Off), Fill Valve (On/Off Xxx mA), Cooling Fan (On/ Off Xxx mA), Water Level Low (Open/Closed), Water Level High (Open/Closed), Water Level Overflow (Open/Closed) (only with 3rd sensor), Door Switch (Open/ Closed), High Limit Thermostat (state only, (Open/Closed), RTD (XXX°C or XXX°F), Board Temp (XXX°C or XXX°F), Control Voltage (XXXV), Contactor (On/Off Xxx mA). Items which are status only and cannot be activated should show the text in black instead of blue including the mA values for items that can be toggled. Screen update is real time. mA will be rounded to nearest 10 mA and below 32mA will show 0. Diagnostics cannot be activated in Data retrieval or software update modes. In Service Mode (from Startup screen),selecting Diagnostics will allow for manual operation of components. After exiting menu, unit displays popup with Exit Diagnostics - Yes/No. If accepted, unit will exit diagnostic mode regardless of what was changed in Diagnostics mode. If not in Service Mode, selecting Diagnostics will trigger a pop up stating that the unit will go through a shutdown cycle first and ask for confirmation. If user cancels, screen goes back to Service Menu. If users accepts, unit shows shutdown screen and proceeds through shutdown sequence. After shutdown, Diagnostics screen is displayed. Upon exiting Service Menu via back button, unit displays popup with Restart acknowledgment. Manual mode requires all safeties to be active to prevent overheating, overfilling, etc. Consider only activating for short period. Circulation Fan (On/Off), Fill Valve (On=30 secs, Off=Default), Cooling Fan (On/Off), Water Level Low (Open/Closed), Water Level High (Open/ Closed), Water Level Overflow (Open/Closed) (only with 3rd sensor), Door Switch (Open/Closed).

Shutdown Needed



Restart



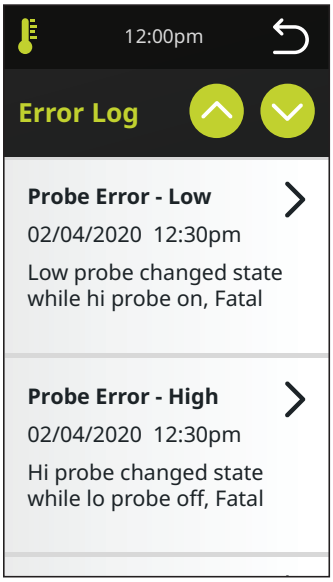
SHUTDOWN NEEDED

Pop up occurs after selecting Diagnostics but prior to entering Diagnostic Mode.

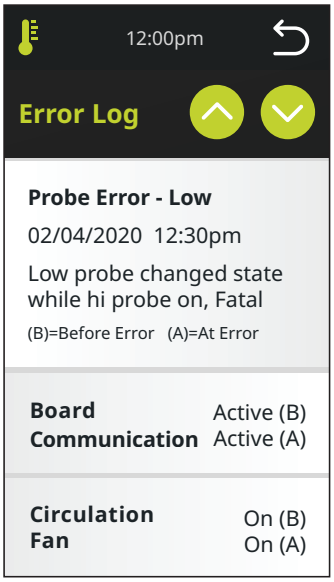
Okay - Unit shuts down and displays Diagnostics menu.

Cancel - Unit returns to Service Menu.

Error Log



Error Log
Error Details



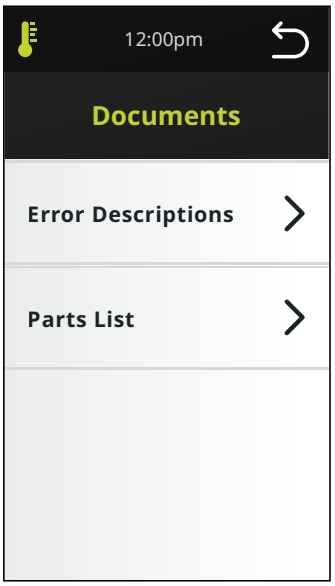
ERROR LOG

Errors are shown in order of newest received. Codes are shown along with date, time, and description text.

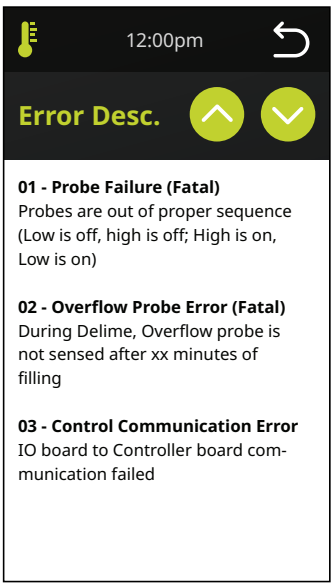
Selecting arrow will move to Error Details screen.

Error details will show values 5 seconds before the error (B) and immediately after the error (A). Time format should match the user setting.

Documents



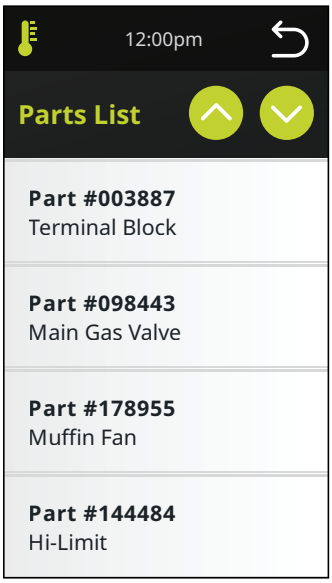
Error Description



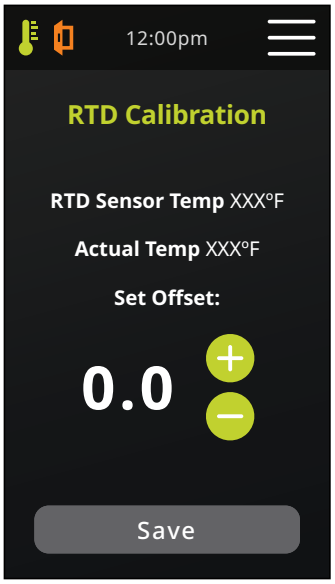
ERROR DESCRIPTION

Current above content for example only. Content to be updated based on the actual Error codes.

Parts List



RTD Calibration



PARTS LIST

Current above content for example only. Content to be updated based on the latest release of the part numbers.

Should not be model specific. Include all parts and denote by model as necessary.

RTD CALIBRATION

RTD Calibration is provided in the 'Service' page. The page can be accessed only by entering into service mode. Entry to this page is restricted during normal operation.

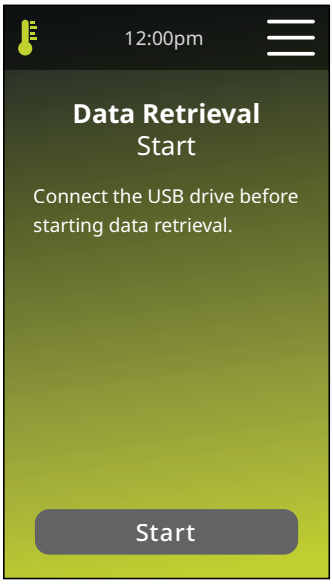
RTD Sensor Reading is the temperature read by the RTD sensor and the field is NOT editable.

Set Offset is the offset that the technician intends to apply. The offset can be adjusted with a step of 0.1. The technician's objective is to adjust the offset so that the Actual Temp Reading field matches with the reading shown by the device which is used to measure the actual temperature of the unit.

Actual Temp Reading is NOT editable directly but the value changes if there is change in offset value. It shows the value of final calibrated temperature and the value should match with the temperature value read by the device used by the technician before applying the offset.

The technician can apply the offset by clicking on the Save button..

Data Retrieval
Start



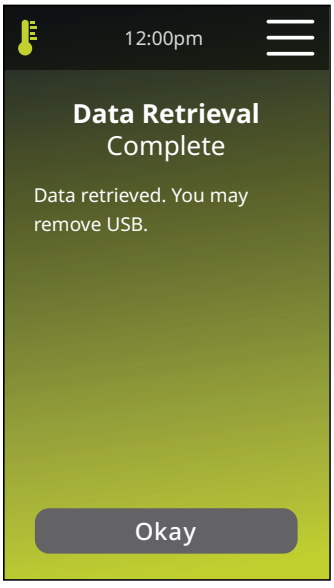
Data Retrieval
Downloading

DATA RETRIEVAL DOWNLOADING

Cancel stops data download and returns to Service Menu screen.

Spinning animation indicates download in progress. Will not show how far process has progressed.

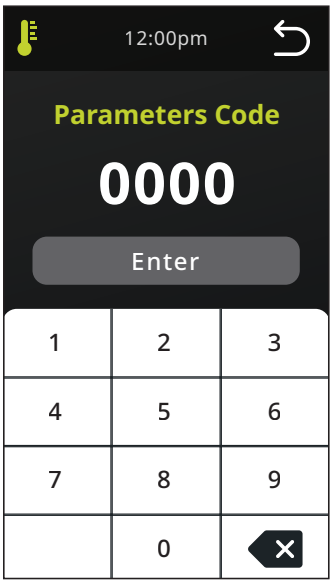
Data Retrieval
Downloaded



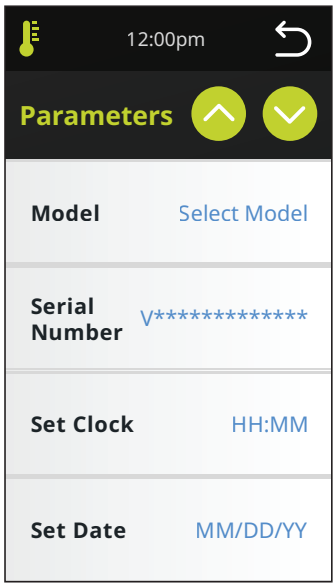
DATA RETRIEVAL DOWNLOADED

Okay returns back to Service screen.

Parameters Code



Parameters



PARAMETERS CODE

Parameters screen is protected by common, unchangeable 4 digit password (7256). Note: After making any changes in parameters sections, unit has to be power cycled. (The Power button on the front and rear of the unit to be turned off and turned On to reflect the indented changes).

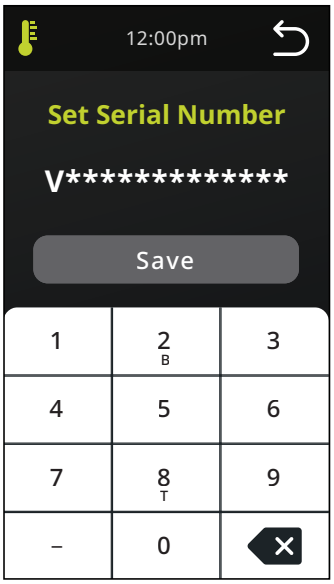
Each digit will be briefly displayed and then replaced with an "*" to hide the code.

PARAMETERS

Parameters screen to include: Model (**Select Model**), Serial Number (**V**********), Set Clock (**HH:MM**), Set Date (**MM/DD/YY**), Number of Pans (**Derived from Model**), Manufactured Date (**Defaults to Unit Date**) but is changeable and Startup Date which allows for change if incorrect date is entered in Service screen). Parameters auto-populate the Unit Info and Settings screen.

Model Selection

Serial Number Entry



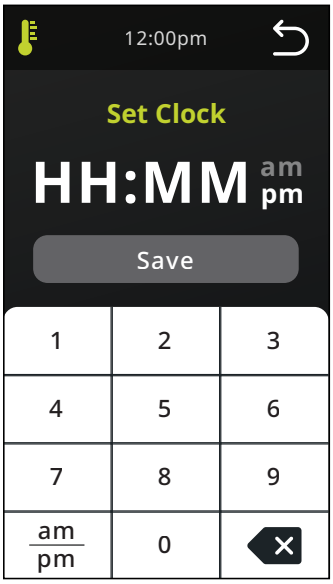
MODEL SELECTION

Screen functionality should be the same as the Timer list. Selecting a Model Name and the Save button will store the information and display it in the Unit Info screen. Selecting Save returns back to the Parameters screen. The Model Name selection will automatically set the Number of Pans and gas/electric. Model names match what is on the data tag. New models will need to be added via firmware changes and can be done when the UL construction file is updated. Model name selections will include: GSSP-CL-3E; GSSP-CL-3G; GSSP-CL-5E; GSSP-CL-5G. If entering model number from start up error pop up, Save takes back to start up screen.

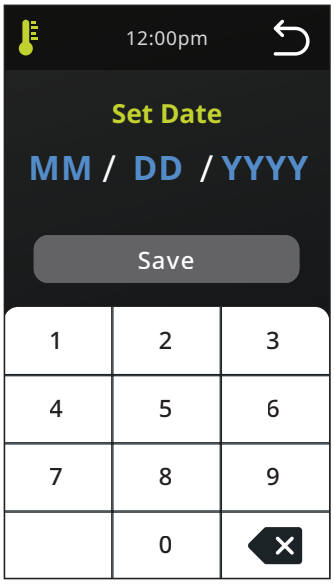
SERIAL NUMBER ENTRY

Serial number will always begin with a V and will have 13 additional characters which may include "-"'s and the letter T or B at the end. Letters T and B are selected by holding down the 2 or 8 key for 1 second. Selecting Save stores the data, populates the Unit Info screen and returns back to the Parameters screen.

Set Clock



Set Date



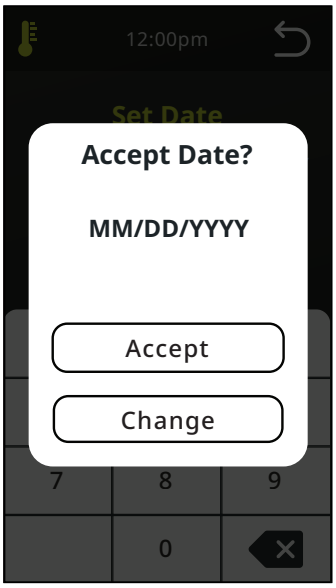
SET CLOCK

Selecting Save stores the data, populates the Settings screen and returns back to the Parameters screen.

SET DATE

Selecting Save stores the data, populates the Manufactured Date in Parameters, populates the Settings screen and returns back to the Parameters screen.

Date Confirmation



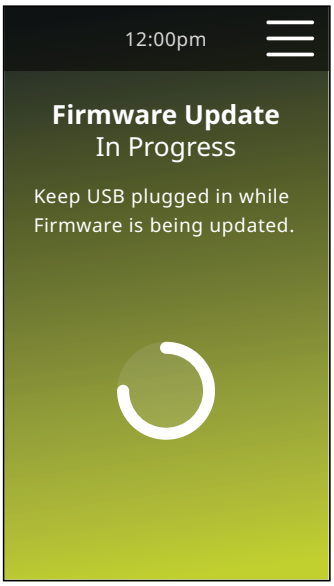
DATE CONFIRMATION

Accept - Accepts the date, locks the data and greys out the Startup date button in the Service menu.

Change - returns to Install Date screen and retains original data entry.

Firmware Update
Start

Updating Firmware



FIRMWARE UPDATE

User shall connect a USB drive which shall have the executable files needed for firmware update.

Start will initiate the Firmware update process.

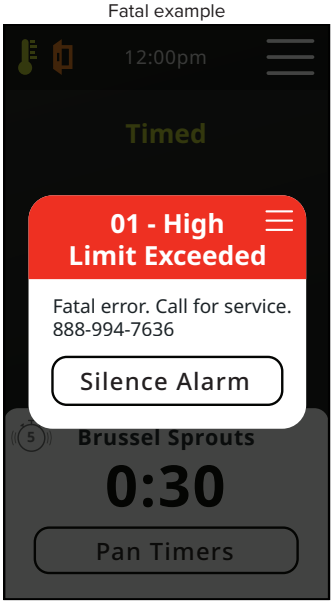
UPDATING FIRMWARE

Firmware update screens to be based on standard shiptide screen. IIC to develop and maintain existing themes as close as possible.

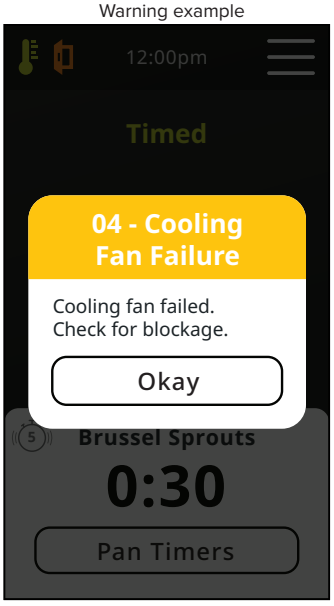
The UI will undergo a automatic reset during the firmware update process.

ERRORS

Error
Fatal example



Error
Warning example



ERROR FATAL

When a fatal error occurs, a pop up will be displayed and an alarm tone will sound (continuous beep for 10 seconds, repeating every 60 seconds). If multiple errors occur, only the last error will be displayed. All errors will be recorded in the error log along with the status of each component. Upon fatal error, the unit will immediately go into a shutdown process (to be defined for each type of fatal error), but the error will remain on the screen until the power button is switched off. If errors still exist at start up, unit will re-alarm. “Silence Alarm” button will stop the audible alarm but leave the pop up on the screen. The Pop up will contain the menu icon in the upper right corner of the pop up to allow access to the Menu. If the screen sits inactive for 60 seconds or if the “X” button is pressed from the Menu, the error pop up will return. If Service Mode is entered at start up after a fatal error, unit will go to the Service Code screen and allow Service functions to be performed. Certain fatal errors may allow for a user to perform a limited action like Delime unit. If the power button is turned off prior to shutdown process completing, the error popup will disappear and the shutdown screen will be shown until shutdown is complete, and then the screen will go blank.

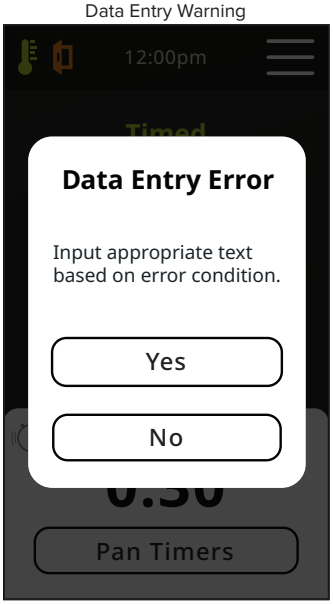
ERROR WARNING

When a non-fatal error occurs, a pop up will be displayed and an alarm tone will sound (continuous beep for 10 seconds, repeating every 60 seconds). If multiple errors occur, the last error will be displayed. Once it is cleared by pressing Okay button, previous errors will be displayed sequentially. All errors will be recorded in the error log along with the status of each component.

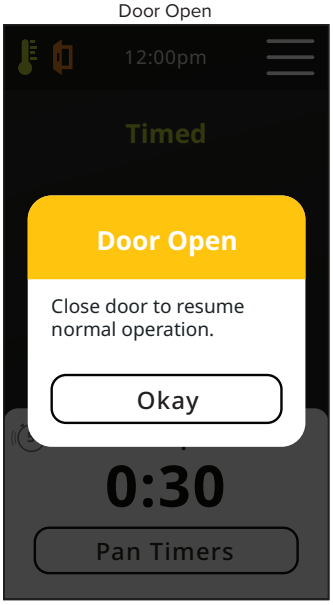
Okay Button - Silences and removes alarm pop up until power is cycled. If error reoccurs after power cycle, pop up will reoccur.

Buttons and actions will vary with error type.

Error
Data Entry Warning



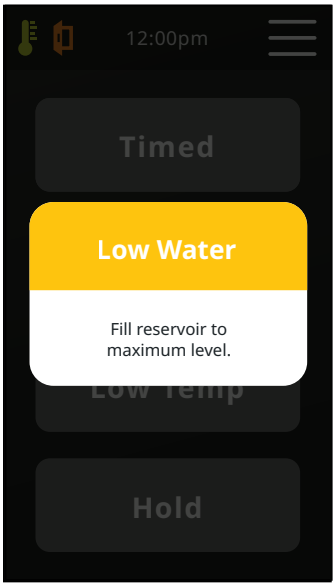
Warning
Door Open



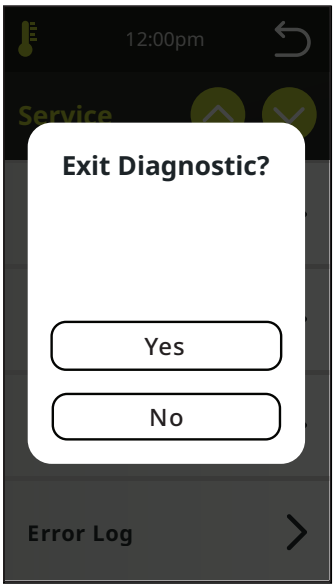
WARNING DOOR OPEN

During cook, hold and delime modes, leaving door open for longer than 2 minutes (default) will show pop up message and sound a continuous tone alarm. Pop up will go away and alarm will silence by pressing the OK button or by shutting the door. Counter will start again after pressing the OK button or reopening the door. Open time will be settable in settings, Off, 2 min, 5 min, 10 min. Door open icon will always show on screen regardless of alarm status.

Warning
Low Water - Manual Fill



Restart



WARNING LOW WATER

Warning - Low Water with an audio alarm. When water breaks the low-probe. After 5 min the heater turns off. Message to user to fill reservoir to maximum level. 15 seconds after the low probe is made, the message will disappear.

RESTART

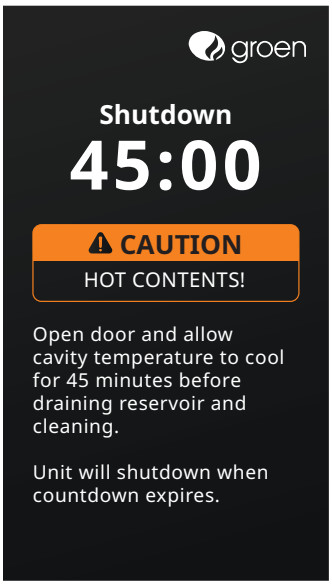
Pop up occurs after exiting the Service screen after engaging Diagnostics.

Restart - Unit shuts down and restarts.

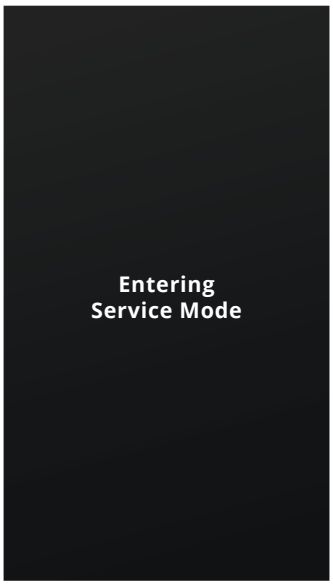
Cancel - Unit returns to Diagnostics.

SHUTDOWN

Shutdown



Service Mode



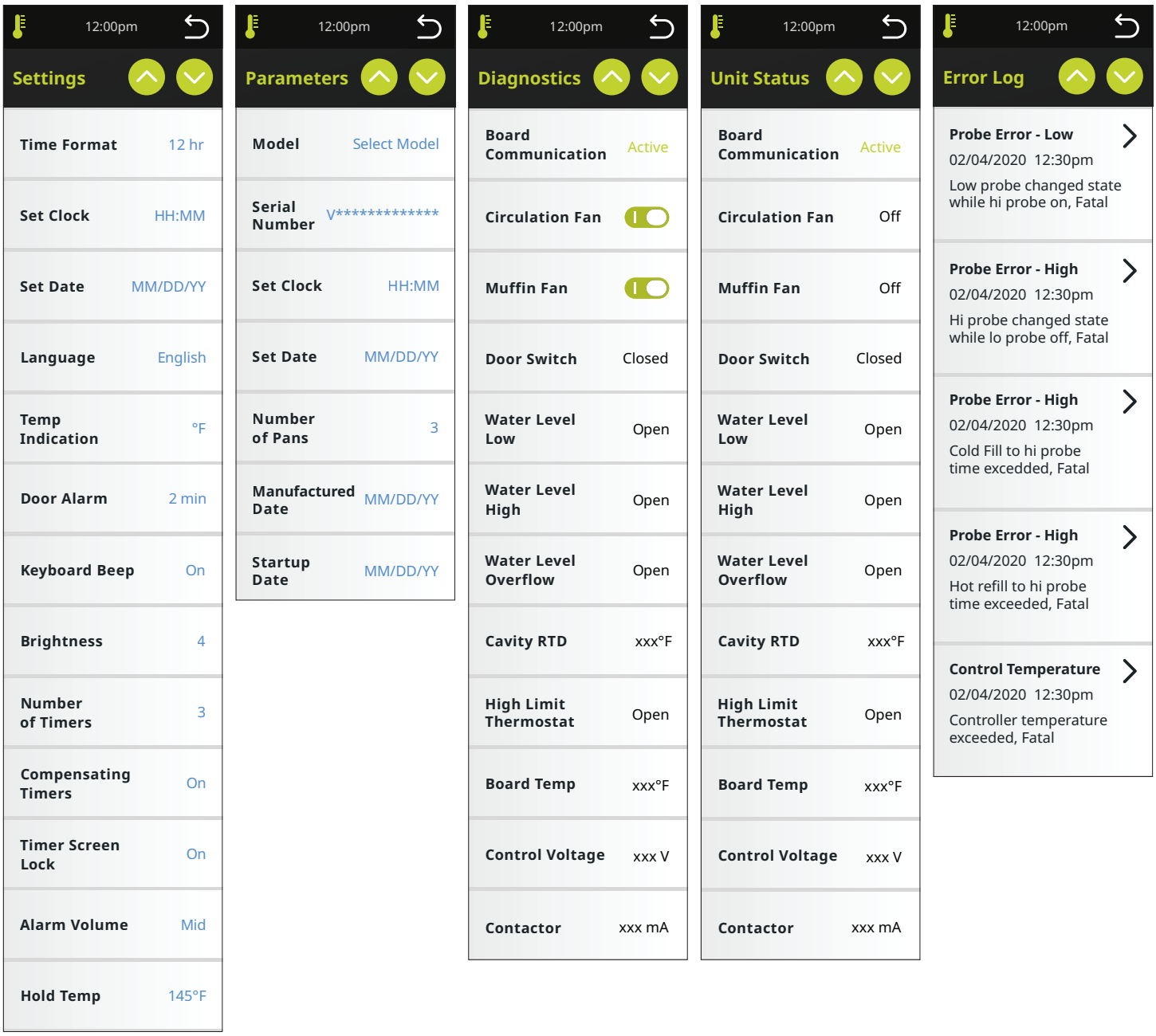
SHUTDOWN

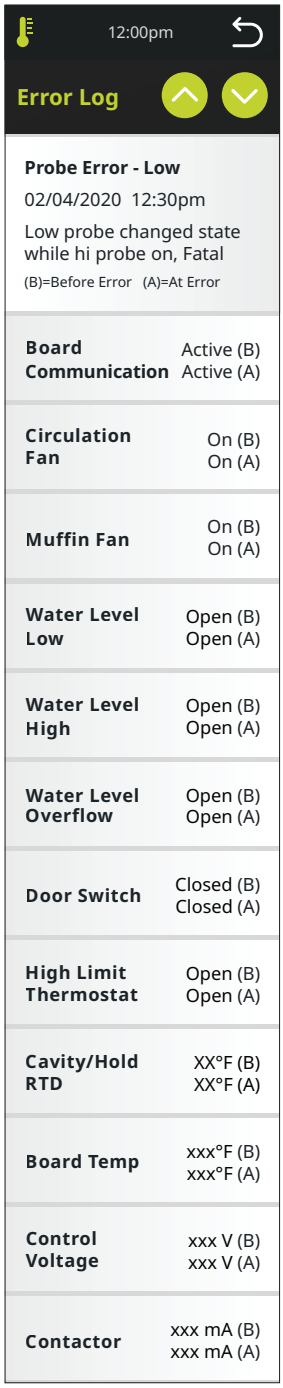
Shutdown screen will appear when power switch is turned off and power switch will darken. Screen will come up instructing the user to drain the reservoir and allow the unit to cool. After 45 minutes the screen goes blank. Circulation fan and heating contractor goes off as soon as Shutdown begins. If power is pressed again, startup sequence happens.

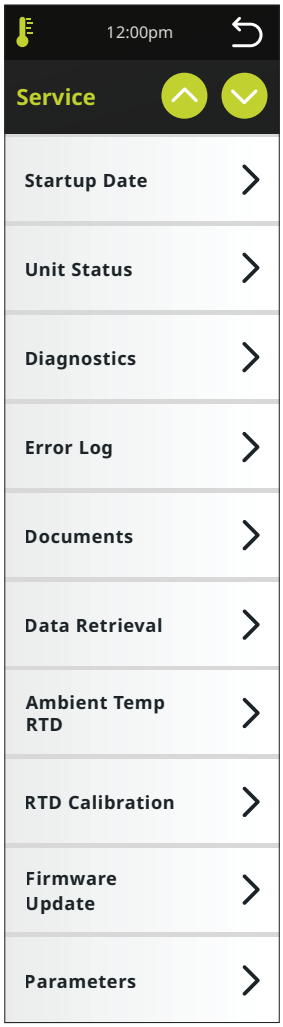
SERVICE MODE

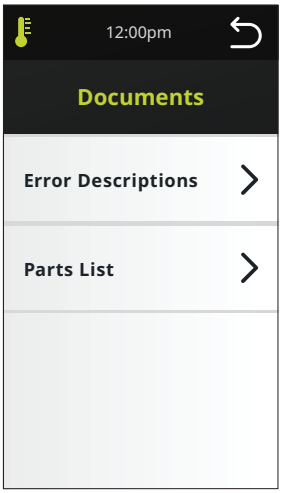
Bypass during start up by pressing the Hamburger menu in the first 5 seconds.

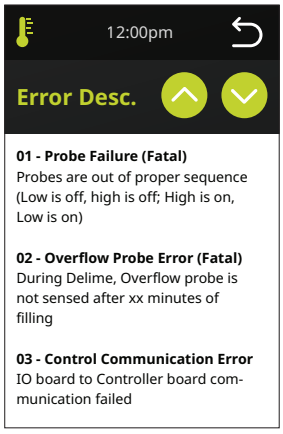
ALL MENUS

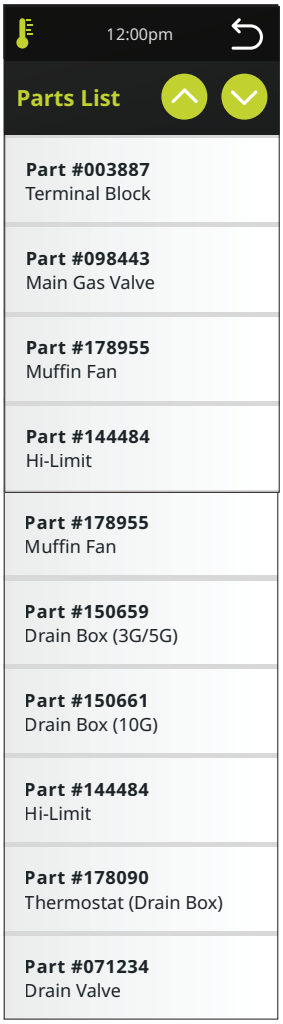

12:00pm
Settings
Time Format 12 hr
Set Clock HH:MM
Set Date MM/DD/YY
Language English
Temp Indication °F
Door Alarm 2 min
Keyboard Beep On
Brightness 4
Number of Timers 3
Compensating Timers On
Timer Screen Lock On
Alarm Volume Mid
Hold Temp 145°F
12:00pm
Parameters
Model Select Model
Serial Number V**********
Set Clock HH:MM
Set Date MM/DD/YY
Number of Pans 3
Manufactured Date MM/DD/YY
Startup Date MM/DD/YY
12:00pm
Diagnostics
Board Communication Active
Circulation Fan
Muffin Fan
Door Switch Closed
Water Level Low Open
Water Level High Open
Water Level Overflow Open
Cavity RTD xxx°F
High Limit Thermostat Open
Board Temp xxx°F
Control Voltage xxx V
Contactor xxx mA
12:00pm
Unit Status
Board Communication Active
Circulation Fan Off
Muffin Fan Off
Door Switch Closed
Water Level Low Open
Water Level High Open
Water Level Overflow Open
Cavity RTD xxx°F
High Limit Thermostat Open
Board Temp xxx°F
Control Voltage xxx V
Contactor xxx mA
12:00pm
Error Log
Probe Error - Low
02/04/2020 12:30pm
Low probe changed state while hi probe on, Fatal
Probe Error - High
02/04/2020 12:30pm
Hi probe changed state while lo probe off, Fatal
Probe Error - High
02/04/2020 12:30pm
Cold Fill to hi probe time excedded, Fatal
Probe Error - High
02/04/2020 12:30pm
Hot refill to hi probe time exceeded, Fatal
Control Temperature
02/04/2020 12:30pm
Controller temperature exceeded, Fatal

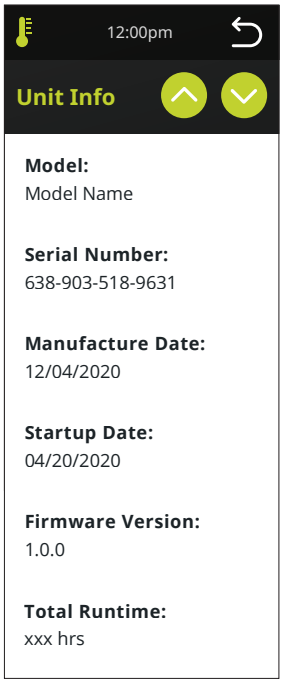

12:00pm
Error Log
Probe Error - Low
02/04/2020 12:30pm
Low probe changed state while hi probe on, Fatal
(B)=Before Error (A)=At Error
Board Communication
Active (B)
Active (A)
Circulation Fan
On (B)
On (A)
Muffin Fan
On (B)
On (A)
Water Level Low
Open (B)
Open (A)
Water Level High
Open (B)
Open (A)
Water Level Overflow
Open (B)
Open (A)
Door Switch
Closed (B)
Closed (A)
High Limit Thermostat
Open (B)
Open (A)
Cavity/Hold RTD
XX°F (B)
XX°F (A)
Board Temp
xxx°F (B)
xxx°F (A)
Control Voltage
xxx V (B)
xxx V (A)
Contactor
xxx mA (B)
xxx mA (A)


12:00pm
Service
Startup Date
Unit Status
Diagnostics
Error Log
Documents
Data Retrieval
Ambient Temp RTD
RTD Calibration
Firmware Update
Parameters


12:00pm
Documents
Error Descriptions
Parts List


12:00pm
Error Desc.
01 - Probe Failure (Fatal)
Probes are out of proper sequence (Low is off, high is off; High is on, Low is on)
02 - Overflow Probe Error (Fatal)
During Delime, Overflow probe is not sensed after xx minutes of filling
03 - Control Communication Error
IO board to Controller board communication failed


12:00pm
Parts List
Part #003887
Terminal Block
Part #098443
Main Gas Valve
Part #178955
Muffin Fan
Part #144484
Hi-Limit
Part #178955
Muffin Fan
Part #150659
Drain Box (3G/5G)
Part #150661
Drain Box (10G)
Part #144484
Hi-Limit
Part #178090
Thermostat (Drain Box)
Part #071234
Drain Valve


12:00pm
Unit Info
Model:
Model Name
Serial Number:
638-903-518-9631
Manufacture Date:
12/04/2020
Startup Date:
04/20/2020
Firmware Version:
1.0.0
Total Runtime:
xxx hrs

Service Log

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

Date	Maintenance Performed	Performed By