

SBF Series

ELECTRIC CONNECTIONLESS STEAMER

INSTALLATION - OPERATION - MAINTENANCE



BLODGETT OVEN COMPANY

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PART NUMBER 170106 REV B (12/11)

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

FOR YOUR SAFETY

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

WARNING

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

NOTIFY CARRIER OF DAMAGE AT ONCE

IT IS THE RESPONSIBILITY OF THE CONSIGNEE TO INSPECT THE CONTAINER UPON RECEIPT OF SAME AND TO DETERMINE THE POSSIBILITY OF ANY DAMAGE, INCLUDING CONCEALED DAMAGE. WE SUGGEST THAT IF YOU ARE SUSPICIOUS OF DAMAGE TO MAKE A NOTATION ON THE DELIVERY RECEIPT. IT WILL BE THE RESPONSIBILITY OF THE CONSIGNEE TO FILE A CLAIM WITH THE CARRIER. WE RECOMMEND THAT YOU DO SO AT ONCE.

IMPORTANT - READ FIRST - IMPORTANT

- WARNING:** WHEN YOU OPEN THE DOOR, STAY AWAY FROM STEAM COMING OUT OF THE UNIT. STEAM CAN CAUSE BURNS.
- WARNING:** BEFORE CLEANING THE OUTSIDE OF THE STEAMER, DISCONNECT THE ELECTRIC POWER SUPPLY. KEEP WATER AND CLEANING SOLUTIONS OUT OF CONTROLS AND ELECTRICAL COMPONENTS. NEVER HOSE OR STEAM CLEAN ANY PART OF THE UNIT.
- WARNING:** ALLOW COOKING CHAMBER TO COOL BEFORE CLEANING.
- WARNING:** DO NOT MOVE THE UNIT WITH WATER IN THE CAVITY OR DRAIN PAN.
- WARNING:** ALLOW WATER IN DRAIN PAN TO COOL BEFORE EMPTYING.
- WARNING:** DO NOT PUT HANDS OR TOOLS INTO THE COOKING CHAMBER UNTIL THE FAN HAS STOPPED TURNING.
- WARNING:** DO NOT OPERATE THE UNIT UNLESS THE REMOVABLE RIGHT SIDE PANEL HAS BEEN RETURNED TO ITS PROPER LOCATION.
- WARNING:** USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY THE MANUFACTURER OR AN AUTHORIZED DISTRIBUTOR VOIDS ALL WARRANTIES AND CAN RESULT IN BODILY INJURY TO THE OPERATOR AND DAMAGE THE EQUIPMENT. SERVICE BY OTHER THAN FACTORY-AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.
- WARNING:** HIGH VOLTAGE EXISTS INSIDE CONTROL COMPARTMENTS. DISCONNECT FROM BRANCH CIRCUIT BEFORE SERVICING. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH.
- WARNING:** DO NOT USE CHEMICALS OTHER THAN MILD DETERGENTS TO CLEAN THE COOKING CHAMBER.
- WARNING:** CAREFULLY READ THE OPERATION INSTRUCTION LABEL BEFORE OPERATION OF THE UNIT.
- WARNING:** DO NOT USE REVERSE OSMOSIS (RO) OR DISTILLED WATER IN THE STEAMER.
- CAUTION:** SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.
- CAUTION:** DO NOT INSTALL UNITS WITHIN 2 INCHES OF A HEAT SOURCE SUCH AS A BRAISING PAN, DEEP FRYER, CHAR BROILER OR KETTLE.
- NOTICE:** DO NOT USE ANY DE-GREASER THAT CONTAINS POTASSIUM HYDROXIDE OR SODIUM HYDROXIDE OR THAT IS ALKALINE.

Table of Contents

Important Operator Warnings	page 1
References.....	page 2
Equipment Description.....	page 3
Inspection and Unpacking	page 1
Installation	page 5-6
Operation	page 7-8
Cleaning.....	page 9
Maintenance.....	page 10
Troubleshooting.....	page 11
Installation Instructions for Pan Racks	page 12
Service Log	page 13

References

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

NFPA/70 - The National Electrical Code

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

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

Equipment Description

WARNING
DISCONNECT ELECTRICAL POWER BEFORE
CHANGING FUSES. FAILURE TO DO SO WILL
CAUSE ELECTRICAL SHOCK OR DEATH.



The 3E-SBF holds three standard 12" x 20" x 2-1/2" or two 12" x 20" x 4" steamer pans.



The 6E-SBF holds six standard 12" x 20" x 2-1/2" or four 12" x 20" x 4" steamer pans.

Your 3E-SBF or 6E-SBF Connectionless Steamer is designed to give years of service. It has a stainless steel cavity (cooking chamber) which is served by an inside water reservoir which is electrically heated. A powerful blower circulates the steam in the cavity to increase heating efficiency.

The cavity holds up to three or six steam table pans (12" x 20" x 2-1/2" deep). An 18 gauge stainless steel case encloses the cavity and the control compartment that houses electrical components. Door hinges are reversible (the door may be set to open from the left or right). Operating Controls are on the front panel.

Both connectionless steamers are equipped with fully electronic controls. These units are readily identified by their unique control panels. A rocker switch is used to turn the unit on and off.

Inspection & Unpacking

CAUTION

SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT. TAKE CARE TO AVOID PERSONAL INJURY OR DAMAGE TO THE UNIT BY STAPLES LEFT IN THE WALLS OF THE CARTON.

CAUTION

THIS UNIT WEIGHS BETWEEN 150 AND 170 POUNDS (68 TO 77 Kg) DEPENDING ON SIZE. INSTALLER SHOULD USE PROPER EQUIPMENT TO LIFT SAFELY.

The steamer will be delivered completely assembled in a heavy shipping carton strapped to a skid. On receipt, inspect carton carefully for exterior damage. If damage is evident, notify the local carrier immediately and file a damage claim. The manufacturer assumes no liability for damage incurred in transit. Reconfirm that the voltage at the location is compatible with the steamer you received.

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

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

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

Installation

CAUTION

DO NOT INSTALL THE UNIT WITHIN 2 INCHES OF A HEAT SOURCE (SUCH AS A BRAISING PAN, DEEP FAT FRYER, CHAR BROILER OR KETTLE).

WARNING

GROUNDING INSTRUCTIONS:
THIS APPLIANCE MUST BE CONNECTED TO A GROUNDED METALLIC, PERMANENT WIRING SYSTEM, OR AN EQUIPMENT GROUNDING CONDUCTOR MUST BE RUN WITH THE CIRCUIT CONDUCTORS AND CONNECTED TO THE EQUIPMENT GROUNDING TERMINAL ON THE STATION.

WARNING

DO NOT USE REVERSE OSMOSIS (RO) OR DISTILLED WATER IN THE STEAMER.



Electrical Supply Connection - Observe all local, national, or other applicable codes. Three phase models of the Connectionless Steamer are supplied with a cord set ready to be connected to a power supply. See the chart below for the correct matching receptacle (not supplied with the unit).

Single phase models are designed to be directly connected (hard wired) to the electrical supply and allow sufficient loop in the flexible conduit to facilitate inspection, servicing, and cleaning.

Branch Circuit Protection

Each 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.

Field Wiring Table - Use copper wire only - insulation rating (90°C)

VOLTAGE (60 Hz Only)	KW		RATED CURRENT DEMAND	
	3-Pan	6-Pan	3-Pan	6-Pan
208 3 PHASE	9 KW	10 KW	25 AMPS	28 AMPS
240 3 PHASE	9 KW	10 KW	22 AMPS	25 AMPS
480 3 PHASE	9 KW	10 KW	11 AMPS	13 AMPS

Plug and Receptacle Chart

VOLTS	PHASE	PLUG		RECEPTACLE	
		9 KW	10 KW	9 KW	10 KW
208	3	15-30P	15-50P	15-30R	15-50R
240	3	15-30P	15-50P	15-30R	15-50R
480	3	L16-30P	L16-30P	L16-30P	L16-30P
208	1	-	-	-	-
240	1	-	-	-	-

Water Connection(s) - Units Manual Filled

No water connection is needed. The water will be poured directly into the water cavity reservoir. Avoid the use of any chemically treated water specifically filtered water.

Water Connection(s) - Units with Autofill

Make sure that the incoming water connection is made with a 3/4" H. COLD water hose. Rigid pipe is not required. The water pressure should be between 30 and 60 PSIG. Higher pressures will require the use of a pressure regulator. Make sure that all connections are tight with no leaks - no matter how small.

Drain Connection

The connectionless steamer should be manually drained to the bottom containment pan supplied by the factory. If the unit is connected to a drain, do not connect more than two units to one drain line or pressure from one unit will effect the second unit.

Installation

WARNING

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

CAUTION

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

Drain Line Installation - Units with Autofill or Units with Drain Kit

The drain line should not be less than: 1-1/2" for single units, or 2" for double units. There must be a 2" air gap to the (non-pressurized) building drain. Make sure that the drain is sloped AWAY and DOWN from the steamer and that there are no obstructions in the line. Failure to observe these requirements may cause a water trap in the drain line and produce enough back pressure to prevent proper cavity draining - resulting in condensate water leaking from the door. Drain line must NOT be made of plastic pipe. It must be able to withstand boiling water.

There must be a free air gap between the end of the hose and the building drain. The free air gap should be as close as possible to the unit drain. There must also be no other elbows or other restrictions between the unit drain and the free air gap.

Steam Vent Assembly

Remove steam diverter assembly from literature bag which can be found inside of unit. Slide loose end as shown over unit steam outlet, tighten worm gear clamp with flat head screw driver. Be sure steam outlet is pointing in the upward position (shown at left).

Stacking Units

Remove drain containment pan from the bottom of unit(s). Unscrew to remove adjustable legs from base of unit(s). Unfasten nuts and bolts on stand platform(s). Place unit(s) on stand platform. Align the (4) leg holes with the holes in the platform. Secure unit(s) to stand platform(s) using bolts and washers provided in step 2 as shown in detail "A" in figure 1 below.

For double stacked units only: By loosening the left screw and removing the right screw provided, mount steam exhaust bracket assembly to the back panel of the top unit as shown in detail "B" of figure 1. Attach the steam exhaust hose from the bottom unit's steam outlet tube to the top unit's steam exhaust bracket assembly using hose clamps provided as shown in figure 2. (Note: steam exhaust hose may need to be cut to fit.)

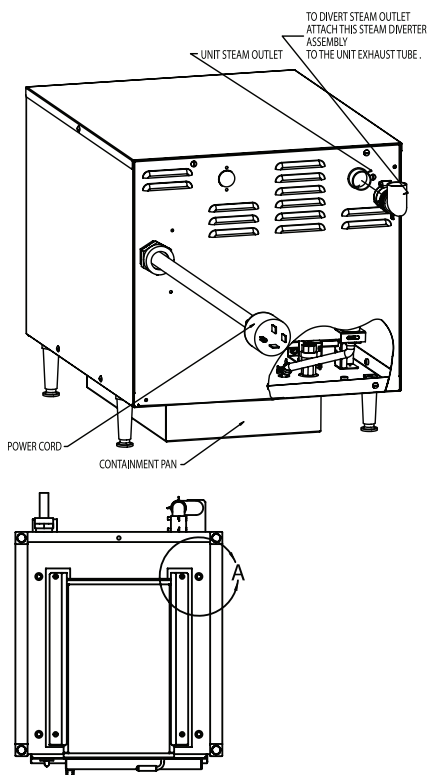


FIGURE 1

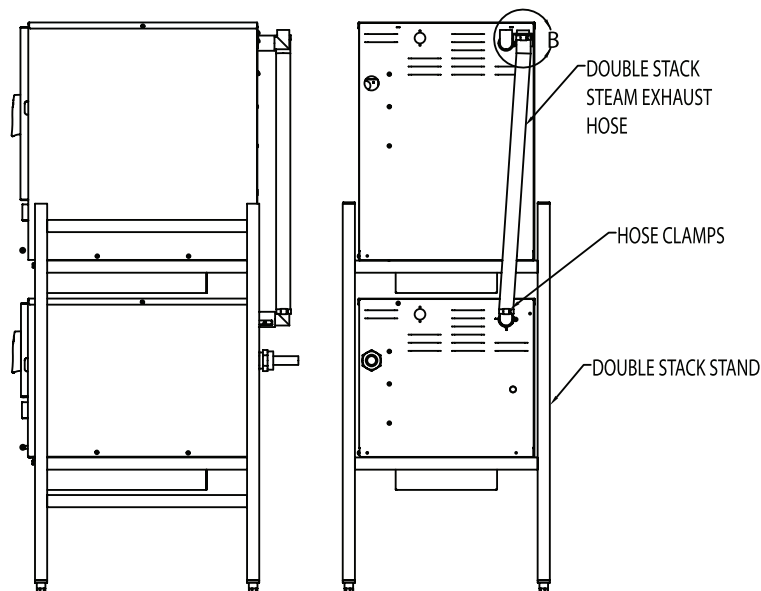
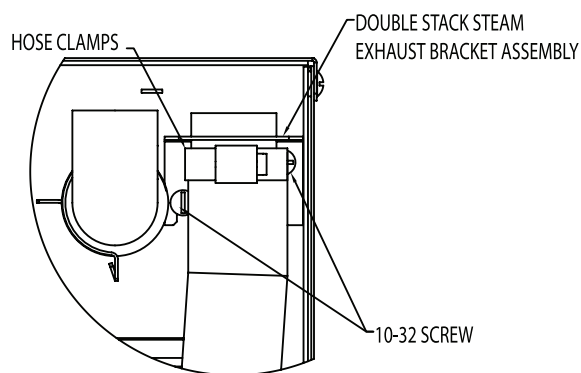
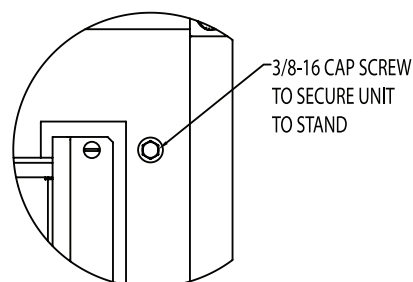


FIGURE 2



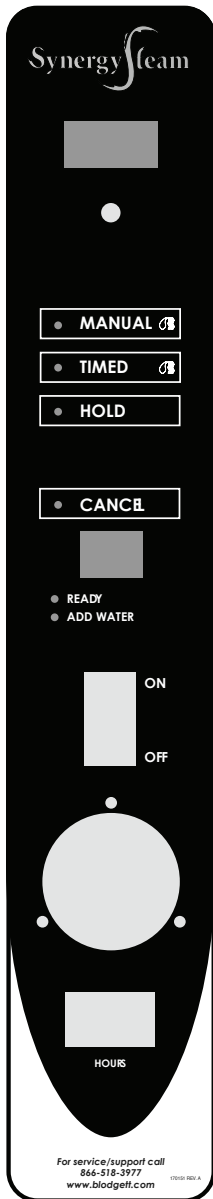
DETAIL B



DETAIL A

Operation

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



TIME display

TIMER knob

MANUAL button & indicator

TIMED button & indicator

HOLD button & indicator

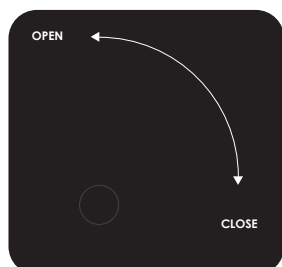
CANCEL button & indicator

FAULT display

ON/OFF rocker switch

Temperature gauge

Hour meter



Open/Close
handle

A. Controls

Operator controls are on the front right of the unit. The connectionless steamer control panels have the following touch pads and indicator lights:

1. The ON/OFF rocker switch gets the unit ready for use, or shuts it off.
2. The HOLD indicator light shows that the cavity is at holding temperature.
3. The TIMED indicator light stays on when the timer is operating.
4. The ADD WATER indicator light is lit when it is time to add water.
5. The open and closed position of the drain valve allows the unit to be filled with water or drained.
6. The ready indicator light indicates the unit has achieved the ready temperature.
7. Temperature gauge indicates internal temperature of cavity.
8. Hour meter records cumulative hours of operation.
9. The HI TEMP (error code 6) indicator comes on when the bottom of the water reservoir becomes too hot.
10. The FAULT display shows the current fault.

B. Push Buttons

1. In the HOLD position, the steam generator stays at a low boil or “holding” temperature. Factory set at 160°F.
2. When a cook time is set, the TIMED light will illuminate. The unit steams until the timer counts down to zero and goes into HOLD. At that time, the HOLD light illuminates and a beeper sounds.
3. When the MANUAL button is pushed, the unit steams continuously. The green MANUAL light will stay illuminated.
4. CANCEL button should be pushed to stop beeping.

C. Operating Procedure

1. Make sure drain handle is in close position. With the cooking chamber water reservoir “empty” press the ON/OFF rocker switch to ON. The ADD WATER light will illuminate when manual filling. Pour water into the reservoir through the door. When the water level comes up to the hi float the reservoir is full and 5 beeps will sound. Then the ADD WATER light goes off.

Unit with autofill (optional) will start to fill automatically.

2. The unit will be ready in about 20 minutes.

Operation

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

WARNING
DO NOT EMPTY UNTIL WATER IS COOL.
EMPTY DRAIN PAN. PAN WILL NOT HOLD
ALL WATER FROM THE RESERVOIR.
DO NOT OVER FILL DRAIN PAN.



3. Load food into pans in uniform layers. Pans should be filled to about the same levels, and should not be mounded.
4. Open the door and slide the pans onto 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 2-1/2" deep pan in the bottom slot of the pan racks.
5. Close the door. Take one of the following steps:
 - a. 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 CANCEL to stop beeping.
 - b. If you want to steam continuously, push MANUAL button. The green light will illuminate. The unit will continue steaming at a temperature of 203°F or higher.
 - c. If you want to maintain food at holding temperature, push the HOLD button.
6. 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.
7. To shut off the unit, press the ON/OFF rocker switch to OFF.
8. To drain the remaining water in the water reservoir, move the drain handle to the OPEN position. The drain pan will not hold all of the water in the reservoir. Allow water to cool before draining. Pull drain pan slowly from the unit to avoid spilling.

Cleaning

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

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 ACIDIC CLEANSER, DELIMER/DESCALER OR CHEMICAL PRODUCTS TO CLEAN THE UNIT.

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.



To keep your connectionless steamer in proper working condition, use the following procedure to clean the unit.

A. Suggested Cleaning Supplies:

1. Mild detergent
2. Stainless steel exterior cleaner such as Zepper®
3. Cloth or sponge
4. Plastic or wood handle brush with soft bristles
5. Spray bottle
6. Measuring cup
7. Nylon pad
8. Towels
9. Plastic disposable gloves

B. Procedure

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

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

 - a. Press the ON/OFF rocker switch to OFF to turn the steamer off. Open the door.
 - b. Drain the water from the unit into the drain pan and allow the unit to cool before cleaning. (Note: If the cavity is full of water, the drain pan will not hold the entire amount and must be emptied more than once.)
 - c. After the unit has cooled, remove pan and pan racks from the cavity.
 - d. Use a mild detergent to wipe down the steamer cavity, the float/probe on the inside back panel wall and the pan racks.
 - e. Rinse the unit to remove detergent.
 - f. Attach pan racks. Unit is ready for use.

Maintenance

The connectionless steamers are designed for minimum maintenance, and no user adjustments should be necessary. Certain parts may need replacement after prolonged use. If there is a need for service, only authorized representatives should perform the work.

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

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

Troubleshooting

Your steamer is designed to operate smoothly and efficiently if properly maintained. However, the following is a list of checks to make in the event of a problem. Wiring diagrams are furnished inside the service panel.

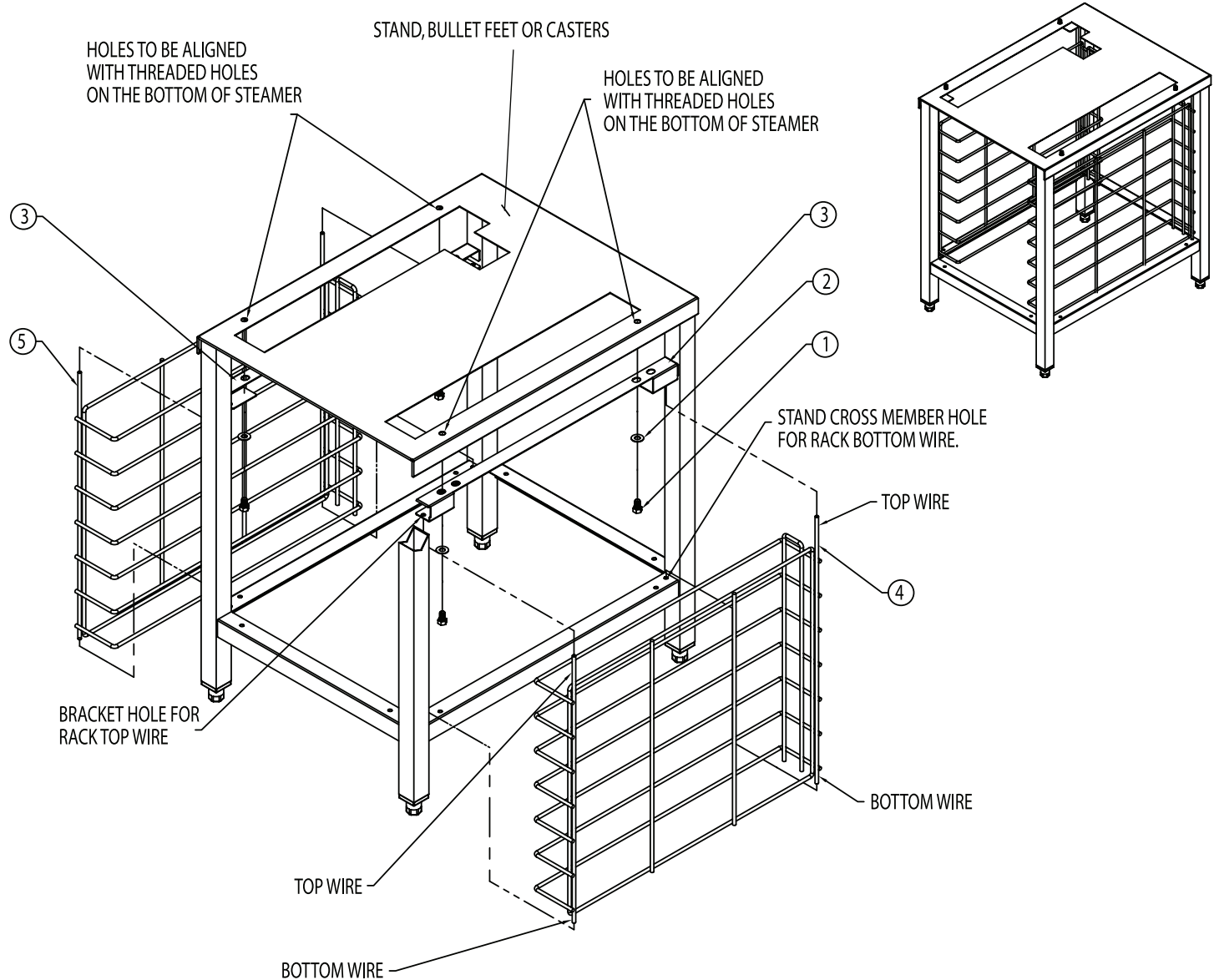
SYMPTOM	WHO	WHAT TO CHECK
No power.	User	a. Check wall circuit breaker. b. Call for service technician.
Any unusual operation.	User	a. Press ON/OFF rocker switch to turn steamer off. Press again to turn steamer on. b. Call for service technician.
No steam.	User	a. Check and add water as required. (For autofill units, turn unit off and on) b. Ensure door is closed. c. Call for service technician.
Door pops open.	User	a. Ensure drain and vent are not plugged. No more than two units should be attached to a single drain line. b. Check door pin adjustment per above. c. Call for service technician.
HI TEMP indicator (error code 6) is displayed.	User	a. Wait 30 minutes for the unit to cool down, fault display should go off. Turn unit on. b. Call for service technician.
Dial gage will not read 212.	User	a. This may be normal, altitude and water purity may affect temperature reading on the gage.

Installation Instructions

Pan Racks for Single Stands Only

Assembly Instructions

1. Unpack racks kit.
2. Identify parts.
3. Unscrew and remove screws #1 and washers #2 from the bottom of your steamer. Do not move the steamer. This will allow the bottom threaded holes to stay aligned with the holes on the stand.
4. Secure brackets #3 using screws #1 and washers #2 thru the holes on the stands and into the threaded holes on the bottom of your steamer.
5. To place racks on stand, align wires from top of the rack with the corresponding holes in bracket #3. Push the rack all the way up into the bracket. Align bottom of the rack wires with the holes in the stand leg and allow rack to fall in position.



Service Log

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

Date	Maintenance Performed	Performed By



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