

# Installation and Service Instructions



ES10PB

## ES10 Series Top Open / Full Pan Counter Top Steamer

**ES10PB:** Push Button Operation with Direct Water Connect

No equipment may be returned without written authorization from EmberGlo (or Midco International Inc.). Returned goods must be shipped prepaid to the factory.

ES10 Series - Designed to operate without distilled water, direct water hookup, stainless steel construction

### Specifications:

- 240 volts 60HZ AC 3200 watts, max 13.3 amps or 208 volts 60HZ AC 2400 watts, max 11.6 amps
- Manual pump (push button)
- Open generator
- Full pan size
- Spring loaded adjustable hinge with 60° or 90° opening
- Food grid
- Quick connect fittings

This manual contains sufficient information for installation of the EmberGlo steamer in normal locations.

In the United States, installation must conform with local codes.

**PURCHASER: Retain these instructions for future use.** Post in a prominent location near the steamer.

**CODE COMPLIANCE IS THE SOLE RESPONSIBILITY OF THE INSTALLER.**

### Limited Warranty

The Limited Warranty can be found on [www.emberglo.com](http://www.emberglo.com). To file a claim follow the directions given in the warranty, or contact EmberGlo by mail, phone or e-mail.

4140 W. Victoria Street / Chicago, IL 60646  
Phone: 866 705 0514 Fax: 866 580 8700  
E-mail: [orders@emberglo.com](mailto:orders@emberglo.com)

This warranty does not apply to damages resulting from accident, misuse, abuse or alteration.

**⚠ WARNING:** Additions, changes, conversions and service must be performed by an authorized EmberGlo representative or service agency. Use only EmberGlo specified and approved parts.

**⚠ CAUTION:** Cooking equipment should be used in an environment protected by an automatic fire suppression system. Consult the National Fire Protection Association NFPA Code 96 or the latest edition of Standards for Installation of Equipment for Removal of Smoke and Grease-Laden Vapors From Commercial Cooking Equipment.

**⚠ 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.**

Do not store or use gasoline or other flammable liquids and vapors in the vicinity of this or any other appliance.

NOTE: EmberGlo ES10 Series steamers use a cast aluminum steam generator with two cast in electric heating elements. For best steaming, the generator casting should contain some mineral deposits. During final inspection each generator casting is pre-seasoned with a solution of baking soda and water. The water marks and mineral deposits seen on a new generator casting when the perforated food pan is removed is your assurance that the unit has passed final inspection test and will readily produce steam.

**AVOID ERROR IN PARTS SELECTION.** When ordering use complete EMBERGLO Part Number and Description. Furnish Model Number, Bill of Material Number and Serial Number (if available) from the specification plate found on the product.

**IMPORTANT:** Availability of parts as well as specifications are subject to change without notice. Please consult factory for item availability.

**SAFETY INFORMATION TERMS:** The following terms are used to identify hazards, safety precaution of special notations and have standard meanings throughout this manual. They are printed in all capital letters using a bold type face as shown below, and preceded by the exclamation mark symbol. When you see the safety alert symbol and one of the safety information terms as shown below, be aware of the hazard potential.



**DANGER:** Identifies the most serious hazards which will result in severe personal injury or death.  
**WARNING:** Signifies a hazard that could result in personal injury or death.  
**CAUTION:** Identifies unsafe practices which would result in minor personal injury or product and property damage.



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*Quality Designed for Proven Performance*

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# ES10 Series - Installation

ES10 steamers feature a 4" deep full size steam table pan. The steamer lid is equipped with two counter-balanced spring hinges and offers two handles on the front of the lid, projecting forward.

Dimensions		
	Inches	Centimeters
<b>HEIGHT</b> (lid closed)	9 3/4"	24.77
<b>HEIGHT</b> (lid open 90 degrees) with lid handle mounted on front corner of lid, projecting forward	29"	73.66
<b>WIDTH</b>	22 1/2"	57.15
<b>DEPTH</b>	22"	55.88

**Electrical Specifications:** The generator casting contains two heating elements, each rated for 1600 Watts, 13.3 amps, 120 Volts, 60 Hz. Models are available for use on 50 Hz. (non-USA, export only) electrical service. Call your distributor for more information. Standard units are furnished with a six foot, four conductor (2 Hot/1 Neutral/1 Ground) cord. This cord is equipped with a male twist-lock plug and matching loose female receptacle for convenient field installation.

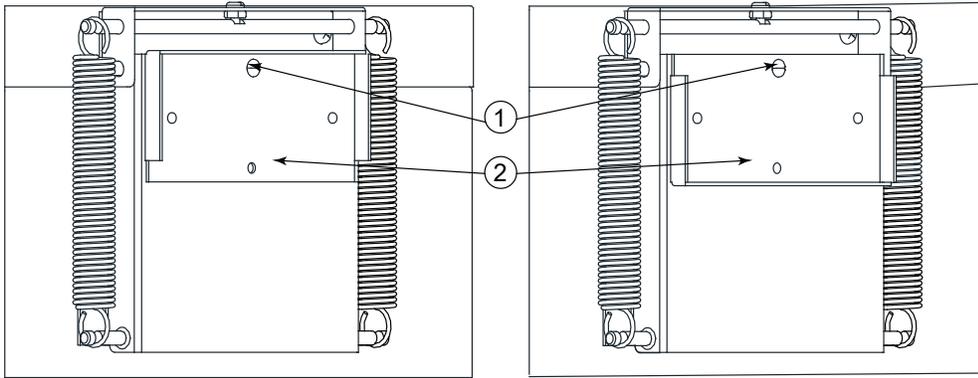
**Electrical Installation:** Female twist-lock receptacle, supplied loose with the steamer, should be installed by a qualified electrician. Refer to wiring diagram, (Figure 3).

**NOTE:** Female receptacle must be wired to assure that voltage to the individual heating elements does not exceed 150 volts. G terminal is wired to Ground and W terminal is wired to Neutral. Protect circuit with a 15 amp double pole circuit breaker.

When choosing a location for the steamer, be sure that there is adequate space over the unit to lift lid completely.

1. All ES10 models should be placed on level surface. The power cord should be plugged into a 240 volt, single phase 60Hz grounded outlet.
2. ES10PB: Connect water hose assembly to water supply system. The supply end has 1/8" female pipe fitting and should be attached down stream to a shut-off valve. Steamer end of hose has a quick connect fitting which snaps onto mating fitting on steamer. This fitting has an automatic shut-off valve that allows steamer to be disconnected without shutting off water supply. After connecting, turn on water and check for leaks.
3. EmberGlo steamers do not require a separate hood for vapor produced during operation according to the Uniform Mechanical Codes per the International Conference of Building Officials Code. There are **no requirements in NSF Standard 4 (2006e) for steamers to have ventilation.**
4. To adjust the angle of the lid to 60° or 90°:
  1. With the lid closed, loosen and remove slotted screw. Set aside.
  2. Remove lid stop by sliding it up and away from the steamer.
  3. Adjust lid stop for desired position (60° or 90° open) and place on steamer.
  4. Insert and tighten slotted screw.

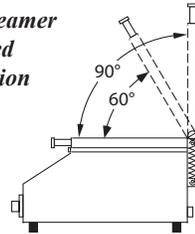
See Figure 1a, 1b and 1c for orientation of lid stop.  
Factory default setting is 60°.



**Figure 1a**  
Back of ES Series Steamer  
60° Opening Position

**Figure 1b**  
Back of ES Series Steamer  
Lid Stop Reversed  
90° Opening Position

Item #	Part #	Description
1	HW1-099	#8-32 X 5/16" Slotted Pan Head Screw 18ss
2	1421-21	Lid Stop



**Figure 1c**

**Before Using:**

1. Remove the protective plastic covering.
2. Connect to a water supply using direct connect fittings.
3. Plug into 240 VAC outlet.
4. Push power switch (item 4 in Figure 2) to the ON position (light on) and allow approximately 15-20 minutes to reach operating temperature.
5. Test to make sure unit will generate steam.
6. Press the steam button (item 3 in Figure 2) several times to remove the air from the system, you will notice it will start to steam. The steamer is now ready to use.

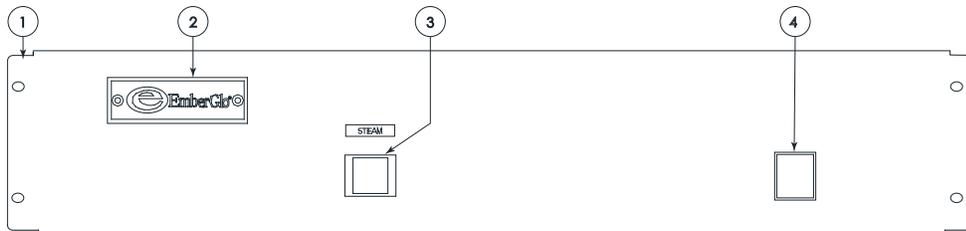
**General Operating Instructions:**

1. Open lid, place food on grid and close lid.
2. ES10PB: Push the steam button momentarily for each operation. Do not hold button more than one second.

**Note:** After installation, operate several times until the water hose fills with water.

3. Open lid and remove food.
4. For efficiency and safety purposes, keep lid closed when not in use. This keeps the food pan hot and reduces condensation in the steam chamber.

To shut off, push power switch to OFF position (light off).



**Figure 2**  
ES10PB Steamer - Front Panel

Item #	Part #	Description
1	2512-22	Switch Panel
2	5622-00	Name Plate
3	8423-36	Steam Push Button
4	8423-34	On/off Switch

# ES10 Series - Operation

DO NOT CONNECT TO A CIRCUIT OPERATING AT MORE THAN 120 VOLTS TO GROUND

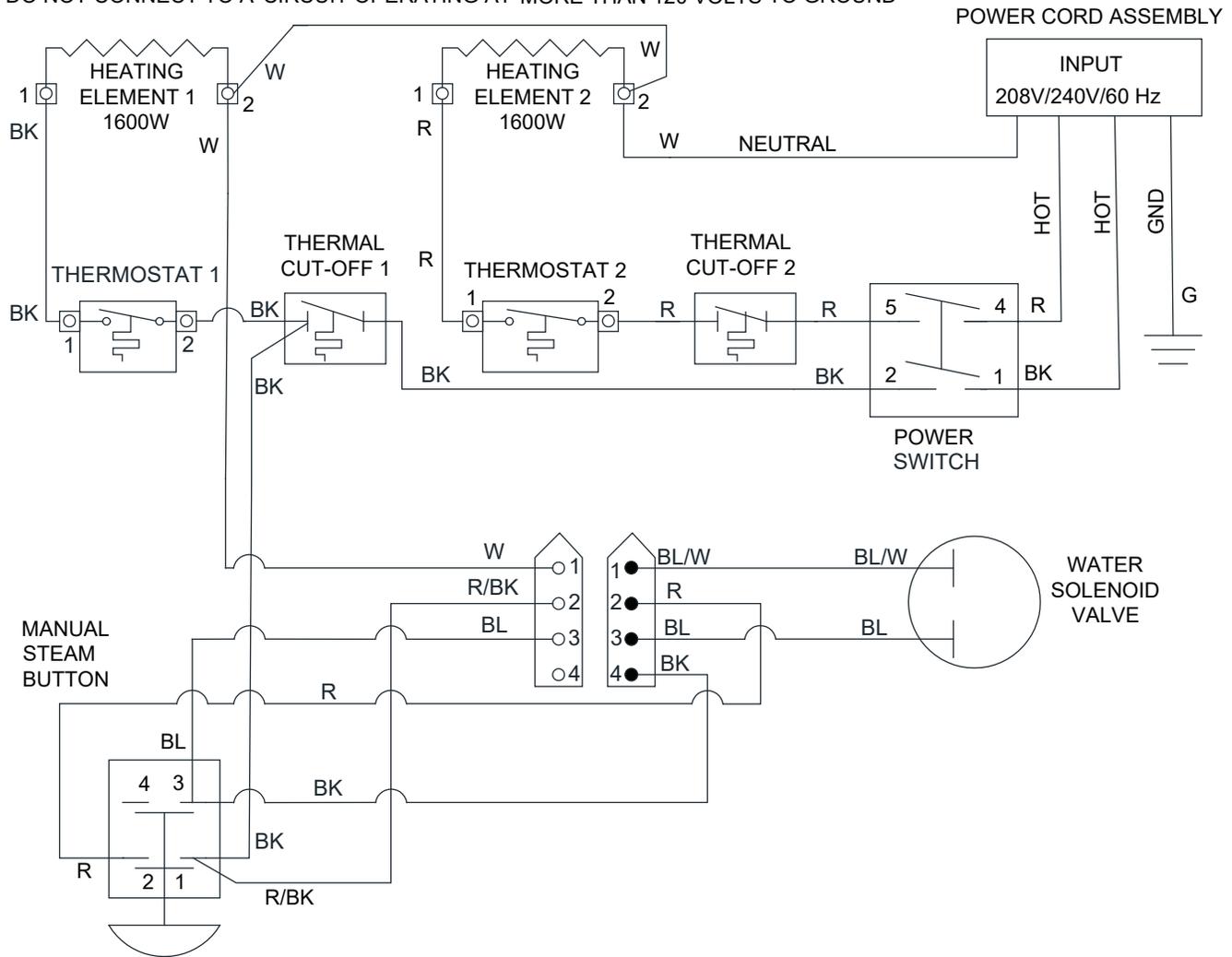


Figure 3  
ES10PB Wiring Diagram

**IMPORTANT: KEEP LID CLOSED WHEN NOT IN USE.** This keeps the food pan hot and reduces condensation in the steam chamber. When steamer is first installed, or when reconnecting water hose, operate steam button several times to purge air from lines.

To Sustain Optimum Cooking Performance: It is important to maintain the correct amount of steam generated. Pressing the button (ES10PB) too long will flood the generator with too much water. On the other hand, not pressing the button (ES10PB) long enough and not spraying enough water will **not** produce enough steam on the generator to properly cook the food in the desired time.

Recommended Pumping and Button Pressing Times for Proper Water Levels in the Generator:

**ES10PB** - It is important to hold the button in for 1 second every 20 seconds.

Recommended Procedure for Understanding the Amount of Steam Generated:

1. On a cool steamer take the food rack and food pan out of the steamer so that the generator and water nozzle can be seen.
2. Warm up the unit for 10 to 15 minutes.
3. ES10PB - Push the button long enough to spray water on the generator surface.
4. Watch the water turn into steam. All of the water should evaporate in approximately 20 to 30 seconds.

By pushing the button (ES10PB) and watching the time it takes to evaporate the water, the user will learn how to reach the optimal cooking results.

## ES10 Series - Maintenance

**Food Pan and Grid** on all models should be removed and washed with a detergent or run through a dishwasher.

**⚠ WARNING: Perform all maintenance when the unit is cool.**

**⚠ WARNING: Under no circumstances should the entire steamer be run through a dishwasher. If any of the switches or components get wet they can malfunction. Never try to use a device that has been wet— replace it.**

**Exterior of the unit** should be wiped with a damp cloth or cleaned with a stainless steel cleaner.

**ES10PB Strainers:** To wash the strainer located in hose:

1. Remove hose.
2. Remove quick connect fitting.
3. Reverse hose (connect steamer end to supply valve). Drain into sink or bucket.
4. Run water through hose to clean.
5. Return to original connections.

There is a strainer in inlet of solenoid valve that normally does not require cleaning but under extreme conditions may have to be removed and cleaned.

**Generator:** The cavity in the generator may accumulate lime and is cleaned by scraping or wire brushing. Do not remove all of this deposit since a thin coating improves steaming.

**Water Nozzle:** The water nozzles (the round cap in front center of generator) may be pulled out for cleaning. Clean small holes and inside of tube with spring clip provided in the tube.

**Water Inlet:** If the tube through generator is limed, remove plug at bottom and push lime out with a wire or small rod.

*Daily*

*As Required*

**⚠ DANGER: Before attempting service, unplug power cord.**

**⚠ WARNING: Perform all service when the unit is cool.**

We recommend any service be done by qualified service personnel. Refer to separate Parts List for parts identification and assembly guide.

1. All electrical components are contained in enclosure behind switch panel. For access, remove sloping front and switch panel.
2. To adjust lid, loosen screws in lower hinge. With lid closed, tighten screws.
3. Thermostat is set to control temperature from 350° to 375°, and we suggest replacement if off calibration. Thermostat may be removed by:
  - A. Removing electric enclosure covers and switch panel.
  - B. Removing wires from thermostat terminals.
  - C. Removing two screws holding thermostat.
  - D. Pull capillary straight out to remove bulb.

**⚠ CAUTION: Capillary tube is critical and care should be taken not to “kink”.**

4. If water nozzle should clog with lime, remove by lifting up then clean small holes with paper clip or similar tool. Lime inside tube is removed by flexing tube, then shaking or washing out lime.
5. The water inlet is cleaned by removing plug at bottom and pushing lime out with wire or rod.

**⚠ DANGER: Read and understand this bulletin thoroughly before starting any troubleshooting. An inadvertent service error could result in severe personal injury or death. Only a trained experienced service technician should attempt any repair procedure.**

Qualified service agencies are available at most locations—Refer to EmberGlo listing of Authorized Service Agencies included in Standard Equipment Catalog.

Important: Defective wiring or loose connections can simulate the defects outlined below. Check associated wiring before replacing a component.

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1. Confirm electric cord is securely plugged in.
2. Confirm receptacle is energized—reset breaker or repair house wiring.

**⚠ WARNING:** The following checks should be done with electric cord removed from receptacle.

3. Confirm continuity in 4-conductor cord—replace if defective.
  4. Confirm continuity in double pole, single throw power switch (the two adjacent terminals are switch terminals and the remote terminal is a tie-terminal). Replace if defective.
- 

1. Confirm male twist-lock plug is plugged in and properly twisted (rotate clockwise).
  2. Confirm continuity each of two Thermostats—replace if defective.
  3. Confirm continuity each of two Thermal Cutoffs - replace if defective.
- 

1. Defective light in switch— replace entire switch.
- 

1. All Models: Clogged water nozzle, water inlet or strainers—check and clean as required, see Maintenance and Service sections.
  2. Model ES10PB:
    - A. Confirm Water Shut-Off Valve is on and Water Hose Assembly is properly hooked up, see Operation section. A quick way to confirm water line is operational is to disconnect Water Hose at quick disconnect fitting and push a small probe into quick disconnect fitting—water should flow freely.
    - B. Confirm continuity of Water Solenoid Valve—replace if defective.
  3. Model ES10PB: Confirm continuity of Steam Push Button Switch when depressed—replace if defective.
  4. Water Solenoid Valve: Confirm 120 volts to GND on terminals 2 and 5 of Power Switch, both terminals of both Thermal Cut-Offs, and terminal 3 of steam button. With steam button depressed, confirm 120 volts to GND on terminal 4 of Power Switch and blue lead terminal of Water Solenoid Valve. An audible click should be heard when Valve is energized. If no click, jumper white lead terminal of Valve to GND. If click is heard with jumper attached, white neutral wires are faulty from Valve thru both heater elements to neutral on 4-conductor cord. Locate fault and repair. If no click, Water Solenoid Valve is defective and should be replaced.
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**⚠ WARNING:** The following check should be done with power cord plugged in and properly twisted. Use extreme care as bare wire terminals and/or bare wires are exposed.

1. Water Solenoid Valve seat is dirty and valve cannot close completely or is defective. Clean or replace as required.
- 

***Unit Does Not Heat  
Switch On, Light Out***

***Unit Does Not Heat  
Switch On, Light On***

***Unit Heats  
Switch On, Light Out***

***Unit Heats,  
But Does Not  
Steam—No Water  
Evident, Light Out***

***Unit Floods—Selector  
Switch to Cycle***

# ES10 Steamer Heating and Cooking Guide

These suggestions are made only to help the operator get started. Since each location will have different portions and different requirements, each operator must determine his own operation habits. Please remember that the steamer conserves its steam in the drawer and therefore does not often need repeated shots. The main exception is when frozen product must be defrosted.

**If a product is at room temperature or refrigerated**, start with 2 shots. This ensures that the food pan is full of steam.

**If a product is frozen**, start with 3 shots because condensation on the cold product eliminates the steam quickly.

Breads	Refrigerated	Frozen
Bread	1 to 2 shots of steam	2 min
Bagels	1 to 2 min	3 to 4 min
Bao Buns	5 to 7 min	12 min
Croissant	15 seconds	
Muffin	1-2 shots of steam	
Pastries	1 to 2 min	3 to 4 min
Tamales	5 min	10 min
Tortillas	1 shot of steam for 10 seconds	

Dairy		
Cheese Melting for Nachos Shredded (1/2 lb)		2 min

Eggs		
Soft Boiled		6 min
Poached		3 min
Scrambled (dz)		5 min

Meat	Refrigerated	Frozen
Bratwurst	8 min	16 min
Breakfast sausage	8 min	14 min
Chicken breast (lg)	15 min	25 to 30 min
Chicken breast (precooked)	5 min	15 min
Deli meats	2 to 3 min	
Hamburger	4 min	4 min
Hot dogs	4 min	8 min
Italian sausage	4 min	8 min
Ribs (precooked)	10 min	18 min

Noodles and Rice	Refrigerated	Frozen
Macaroni (2 qt. cooked, 1 pt. water, 2 oz. oil)		5 min
Egg Noodles (2 qt. cooked, 1 pt. water, 2 oz. oil)		6 to 7 min
Rice (precooked)	5 min	8 to 10 min
Spaghetti (2 qt. cooked, 1 pt. water)		5 min

Vegetables	Refrigerated	Frozen
Artichokes	25 to 30 min	50 min
Asparagus	10 min	14 min
Brussels	15 min	18 min
Broccoli	10 min	12 min
Carrots sliced	4 min	8 min
Carrots whole baby (2 lb)	15 to 20 min	
Cauliflower	12 min	16 min
Corn on the cob	3 min	5 min
Fennel	10 min	
Green beans	4 min	8 min
Pea pods	6 min	9 min
Peas	5 min	8 min
Potatoes 8 whole (3 oz each)		20 min
Potatoes mashed (2 qt)		8 min
Squash, Acorn 4 (8 oz each)		12 to 20 min
Squash, Zucchini -sliced frozen (1 lb)		10 Min

Seafood	Refrigerated	Frozen
Large clams	4 min	8 min
King crab	8 min	12 min
Snow crab	6 min	10 min
Fish filets	6 min	8 to 10 min
Lobster 8 oz Tails	8 min	14 to 16 min
Lobster whole (1 lb)	10 min	
Lobster whole (1/2 lb)	14 min	
Scallops	5 min	8 to 10 min
Shrimp	4 min	6 min

