



STEAMER

INSTALLATION AND OPERATION MANUAL ALL MODELS



**6 - PAN HIGH EFFICIENCY
BOILERLESS CONVECTION STEAMER**



www.energystar.gov

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GENERAL

Sterling Manufacturing, LLC produces the Sterling High Efficiency Boilerless Convection Steamer with the highest quality workmanship and materials available. Please read this entire manual and carefully follow the instructions provided for installation, use and maintenance to ensure many years of satisfactory performance.

The Steamer comes in a variety of Voltage, Phase and Wattage configurations. All units accommodate six 2-1/2" or four 4" full size steam table pans. The Steamer is designed to cook most food products cooked in a commercial kitchen and doubles as an NSF® Approved Holding cabinet. The Steamer is designed to be placed on a countertop or on a Sterling Manufacturing Steamer Stand in either a single or double steamer configuration.

UNPACKING

Your Steamer was inspected, calibrated and tested before leaving the factory. The transportation company assumes full responsibility for safe delivery. Immediately after unpacking, check for possible shipping damage. If damage is found, save the packaging material and contact the shipping company immediately.

INSTALLATION CODES AND STANDARDS

The Steamer must be installed in accordance with:

In the USA:

1. All State and Local Codes.
2. National Electric Code, ANSI/NFPA-70 (latest edition).
3. Vapor Removal from Cooking Equipment, NFPA-96 (latest edition).

In Canada:

1. All Local Codes
2. Canadian Electric Code, CSA C22.2 (latest edition).

INSTALLATION

LOCATION AND PLACEMENT

All Sterling Steamers are designed to be placed directly on a countertop or on a Sterling Manufacturing Steamer Stand in either a single or double steamer configuration. The installation location must provide for adequate clearances for proper operation and servicing. The minimum clearance is 2" (5.1 cm) on sides and 4" (10.2 cm) at rear of unit.

High humidity air is vented from the exhaust at rear of unit. Condensation may occur on nearby surfaces.

LEVELING

The Steamer must be installed in a level condition regardless of sitting on a countertop or being mounted to a Steamer Stand.

COUNTERTOP INSTALLATION

The Steamer is shipped with four bullet feet with a 1-1/2" (3.8 cm) height adjustment. Each foot has an adhesive backed non-slip pad attached to the bottom, which will keep the Steamer from sliding on the countertop under normal use. Adjust the four feet as needed to level the Steamer in both front-to-back and side-to-side directions.

ON A STAND WITH ADJUSTABLE FEET

When installing the Steamer(s) onto a Steamer Stand with adjustable feet, follow the directions provided with the Stand to ensure proper installation of the support brackets prior to mounting the Steamer(s). When proper installation of the support brackets is verified, bolt the Steamer(s) to the support brackets on the Stand using hardware provided with the Stand. Level the Steamer(s) front-to-back and side-to-side by adjusting the four feet on the Stand.

On A Stand With Casters

When installing the Steamer(s) onto a Steamer Stand with casters, follow the directions provided with the Stand to ensure proper installation of the support brackets prior to mounting the Steamer(s). When proper installation of the support brackets is verified, lock the two locking casters located on the front of the Stand by pressing the lever to the lock position prior to bolting the Steamer(s) to the support brackets on the Stand using the hardware provided with the Stand.



WARNING: When using a stand equipped with casters, the floor must be level and flat. Failure to have a stand with casters on a level surface can result in a “TIPPING” hazard that could result in serious injury.



WARNING: Electrical and grounding connections must comply with the applicable portions of the National Electrical Code and/or other local codes.

ELECTRICAL CONNECTIONS

The Sterling Manufacturing, LLC Steamer was designed, manufactured and tested to meet or exceed the strict standards of safety and construction guidelines set forth by Underwriters Laboratories®. If any of these instructions are not completely understood, or you have doubt as to whether your supply receptacle is of the correct voltage, amperage or is properly grounded, consult a qualified electrician or serviceman.

ELECTRICAL SUPPLY

This Steamer was supplied from the factory with a cord and plug. The receptacle requirements varies between models. The AC power requirements are listed on the Data Tag located on the right side panel at the rear of the unit. Note that the receptacles that accept the plugs

are commonly used in both 208 and 240 volt installations. Make sure the voltage at the supply receptacle is within +/- 10% of the voltage listed on the unit's Data Tag. Connection to any other voltage may permanently damage your Steamer or cause premature component failure. This type of damage is NOT covered by the warranty.

NOTE: Because the Sterling Steamers have passed the Underwriter's Laboratories® Input Average Test, several Models are shipped with electrical plugs that match the amperage rating on the Data Tag. This is acceptable only because of the high efficiency rating of the steamers.

GROUNDING

To reduce the risk of electric shock in the event of an electrical short circuit, this appliance must be grounded. The unit is equipped with a cord having a grounding wire and a plug having a grounding prong, which must be plugged into an outlet that is properly installed and grounded. Under no circumstances should the plug be cut or bent to fit a receptacle other than the one specified.

HARD WIRE OPTION

Optionally, a permanent electrical supply connection may be made for all units other than those mounted on a Steamer Stand with casters. This can be accomplished by using rigid or flexible conduit. Consult a qualified electrician or serviceman to ensure all wiring is performed to electrical codes.

WATER CONNECTION

This appliance is available in both Manual-Fill and Auto-Fill versions. The Model Number located on the Data Tag incorporates either an MF or AF designating which unit you have.

MANUAL-FILL (Not Connected)

A Manual-Fill unit does not require any water line connection. Simply fill the cooking chamber with 2½ gallons of water before turning the Steamer on.

AUTO-FILL (Connected)

An Auto-Fill unit must be connected to a water supply. The connection location is on the back of the Steamer. The specifications for the connection are:

1. 10-60PSI
2. 32-175°F, (0-80°C)
3. 3/4" MGHT Fitting

Use an NSF Approved appliance hose to connect from a spigot/shutoff valve to the Steamer. It must also be installed with adequate backflow protection to comply with all applicable Federal, State and Local Codes.

NOTE: *The Owner/Installer is responsible for the water connection of this appliance. The components required to connect this appliance to a water supply are not provided.*

IMPORTANT: *Always keep the level sensing probes (located inside chamber under Trivet at right front) clean. This will help to ensure proper working conditions.*

DRAIN

A 4" full size steam table pan must be installed in the slide rails located under the Steamer during use. Operation of the Steamer without this drain pan can cause damage. Simply drain the Steamer at the end of the day by turning the drain valve

handle located just below the door. Allow the water to cool and carefully empty pan.

OPTIONAL DRAIN CONNECTION

Sterling Manufacturing LLC, offers an optional drain pan as an accessory for the ability to permanently connect a drain. Run a hose from the drain pan to a funnel fitting leaving a 1" (2.54cm) gap between the hose and the top of the funnel. There must be slope in the drain hose towards the funnel or floor drain.

HOOD VENTILATION

A ventilation hood is usually not required for the Steamer, therefore in most cases the Steamer can be placed anywhere in the kitchen. Please check your local building code requirements before completing the installation.

IN-FIELD MODIFICATIONS

Any in-field modifications made to this Steamer without written authorization from the Sterling Manufacturing, LLC Engineering Department will void your warranty. Please call 800-426-4211, 8AM-5PM EST, Mon.-Fri. to reach the Sterling Manufacturing, LLC Engineering Department.

OPERATION DAILY PREPARATION



WARNING: The Steamer will be hot during cooking and holding operations. Use care when operating, cleaning or servicing the Steamer. The cooking chamber may contain live steam and hot water. Stay clear when opening the door.

FILLING WITH WATER - MANUAL-FILL UNIT

Close the drain valve on the front of the unit. Slide open the Fill Cover on the front of the Trivet (water reservoir cover) located inside the chamber and pour 2½ gallons of ordinary tap water into the cooking chamber. Water consumption will depend on the products being cooked, the cooking mode and the length of time the door is open. In most cases, 2½ gallons of water will last several hours or more. Check the water level between batches. If a LOW WATER condition causes the LOW WATER Light and Alarm to come on, simply turn the Steamer off, refill the chamber with water and turn back on. If a shutdown occurred during a cooking cycle, the cycle will resume at the point it stopped. However, a time adjustment may be necessary due to the temperature of the water used to fill the Steamer.

FILLING WITH WATER - AUTO-FILL UNIT

Close the drain valve on the front of the unit and verify the water supply valve is turned on. The Steamer will automatically fill and then maintain the proper water level when turned on. There is no need to manually fill the Steamer.

If a HIGH WATER condition causes the HIGH WATER Light and Alarm to come on, turn unit off, turn off water supply valve and slowly drain chamber before opening door and call for service.

IMPORTANT: Always keep the level sensing probes (located inside chamber under Trivet at

right front) clean. This will help to ensure proper working conditions.

NOTE: The Steamer will consume more water while cooking in À La Carte Mode than in Batch Mode.

PREHEATING

For best results, the Steamer should be preheated before starting the first cook cycle of the day or after being off for extended periods. With the water level full and the unit turned on, turn the timer to 10 minutes and set the Hold Thermostat to 205°F, or if holding only, set Hold Thermostat to desired hold temperature. When the cycle is complete, the steamer is ready for use.

COOKING

Place food to be cooked into cooking chamber and set the timer to the desired cook time. When the cycle is complete, the Steamer will automatically go into Hold Mode. However, you must manually turn the timer to the Hold position to turn off the End-Of-Cycle Buzzer. If switching to Hold Mode after cooking is undesirable, or if you wish not to use the timer, simply set the timer to the Continuous cook position.

You can check or remove food at anytime during cooking or holding. Just open the door, check or remove the food and close the door. You DO NOT have to turn the unit off to open the door.

NOTE: Opening the door to check food will extend cook times.

BATCH COOK

Cooking in this mode maximizes efficiency while cooking large quantities of food product.

À LA CARTE

Cooking in this mode maximizes speed while slightly reducing efficiency for rapid cooking of smaller quantities of food product.

STEAMER

OPERATION

HOLDING

Follow preheating instructions before holding. To hold food, turn the timer to the Hold position and set the Hold Thermostat to the desired hold temperature. To prevent the growth of harmful bacteria, it is recommended that you hold food at a temperature of 150°F (66°C) or higher.

RE THERMALIZATION

The cooking compartment maximum capacity is (6) 2-1/2" deep pans, each 20-3/4" long x 12-3/4" wide with a capacity of 9 quarts and a load of 18.75 lbs. maximum per pan or (4) 4" deep pans, each 20-3/4" long x 12/3/4" wide with a capacity of 14.5 quarts and a load of 30 lbs. maximum per pan.

CLEANING



WARNING: Do not use a water jet, pressure washer or hose to clean any exterior surfaces of the Steamer.

DAILY CLEANING

At the end of each day, the Steamer should be drained and cleaned. First, turn the Steamer off and allow several minutes for it to cool down. Always use caution when draining a hot or warm Steamer. Remove the Trivet by sliding it forward. Then remove the Dual Impingement Baffles which incorporate the pan racks by first lifting and then tilting them slightly towards the center of the cooking chamber. These parts are dishwasher safe or can be easily cleaned in a sink. Clean cooking chamber with mild non-chloride detergent, rinse and leave door ajar.

AUTO-FILL UNITS

IMPORTANT: Always keep the level sensing probes (located inside chamber under Trivet at right front - see Fig.1), float and the inside of cooking chamber clean. This will help to ensure proper working conditions.

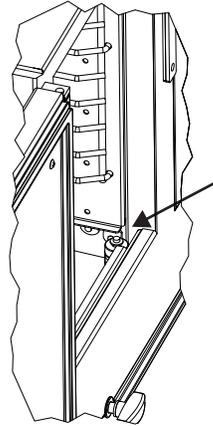


Fig. 1

IMPORTANT:

Keep Water Level Probes, Float and Cooking Chamber Clean to ensure proper Auto-Fill operation. Failure to keep these clean may result in: Over-Filling, Not Filling or Irregular Filling Conditions.

ADDITIONAL CLEANING - IF NEEDED

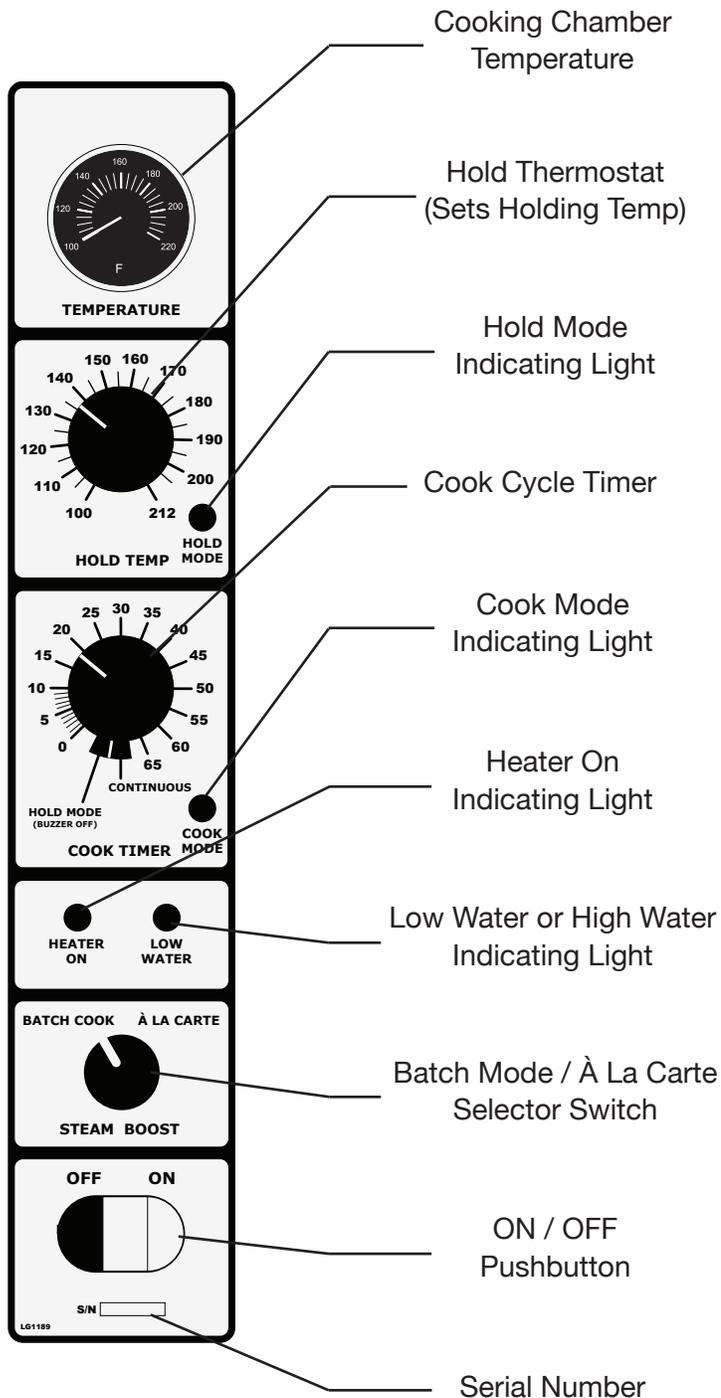
1. With drain valve closed and Steamer off, add 8oz. (0.24 liters) or 1 cup of white vinegar to the cooking chamber.
2. If a Manual-Fill unit, pour 2½ gallons of water into cooking chamber and turn unit ON, if an Auto-Fill unit simply turn unit ON. Set the timer to 15 minutes.
3. When the time expires, allow Steamer to cool down and drain chamber.
4. Repeat steps 1 and 2 without adding the white vinegar.
5. Proceed with the daily cleaning instructions.

Clean the exterior surfaces with a damp cloth. To remove discolorations, use a nonabrasive cleaner or polish.

DOOR SEAL

Clean the sealing surfaces of the cooking chamber and door seal daily to remove food acids. Do Not use any solvents or sharp objects. Use a mild non-chloride detergent to clean door seal and rinse thoroughly.

Leave the door slightly open when not in use to extend door seal life.



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COOKING TIPS

For The Fastest Cook Times, Try One Or More Of The Following Methods.

GENERAL COOKING TIPS

- For fastest recovery, **KEEP HOLD DIAL SET AT 205°F.**
- **AVOID PUTTING LIDS ON PANS.** Using a lid can double or even triple cooking times. Use lids only on soups, sauces, or anything desired crunchy.
- **USE PERFORATED PANS WHENEVER POSSIBLE.** You can put a solid pan on the rack beneath the food being cooked to catch drippings if needed.
- If you must use a solid pan, add 1 cup (8oz. or 0.24 liters) of water to the pan per pound (453 g) of product being cooked. This will shorten cook times and help the food cook more evenly.
- Using deep solid pans will lengthen cook times by 10-40%. Shallow pans are better. For Example: 10 lbs. of frozen peas takes less time if cooked in two 2.5” pans than one 4” pan.

HIGH VOLUME

During high volumes or if your staff tends to open and close the door frequently, set the timer dial to Continuous. This will shorten the recovery time between batches.

SELECT THE RIGHT COOK MODE

BATCH COOK

Cooking in this mode maximizes efficiency while cooking large quantities of food product.

À LA CARTE

Cooking in this mode maximizes speed while slightly reducing efficiency for rapid cooking of smaller quantities of food product.

The Examples Below Are Based On Using Batch Mode. Using À LA CARTE Mode Will Shorten Cook Times.

FROZEN VEGETABLES: Using perforated pans, roughly 1 minute per pound plus 1 minute per pan.

Example: 15lbs. of corn in 3 perforated pans will take approximately 18 minutes to cook.

RICE: DO NOT COVER. Most rice takes about 25 minutes. Institutional rice takes about 35. Use 1.8 parts water to 1 part rice. *Example: 5 cups of rice requires 9 cups of water.*

DRY PASTA: Preheat water in a 4” solid pan. Add pasta. Cook time is similar to stove top - stirring is not required.

SCRAMBLED EGGS: Use plastic wrap to cover the bottom of a 4” solid pan and fill with eggs. Cook until done - approximately 25 minutes. **DO NOT STIR.** Invert the eggs into another 4” solid pan. Hold at 160°F.

FROZEN PANCAKES: Layer pancakes in a perforated pan and cook for 6 -10 minutes until internal temperature reaches 150°F. Hold at 140°F.

PRECOOKED BREAKFAST MEAT: Rethermalize precooked sausage and bacon. Cook until internal temperature reaches 165°F, approximately 20-30 minutes depending on quantity. Hold at 160°F.

CORNBREAD: DO NOT COVER. Use milk instead of water and cook for 15 minutes or until a knife comes out clean. It will be moist, but not soggy.

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COOK TIMES

These cook times are to be used as a guideline and are based on Batch Cooking Mode. Using À La Carte Mode will shorten cook times. Times will vary with each kitchen.

VEGETABLES	Amount	Cook Time	Pan Type
Aparagus Spears, frozen	5lbs.	7	Perforated
Asparagus Spears, fresh	5lbs.	5	Perforated
Broccoli Spears, frozen	10lbs.	12	Perforated
Broccoli, fresh	10lbs.	15	Perforated
Carrots, Whole Baby, frozen	5lbs.	8	Perforated
Carrots, Crinkle Cut, frozen	5lbs.	7 to 8	Perforated
Carrots, Sliced, fresh	10lbs.	9 to 11	Perforated
Cauliflower Florets, frozen	5lbs.	6	Perforated
Cauliflower Florets, fresh	5lbs.	8	Perforated
Celery, 1" Diagonal Cut	5lbs.	7	Perforated
Corn Whole Kernel, frozen	12lbs.	7	Perforated
Corn, 6" Cob Ears	5.5lbs.	13	Perforated
Green Beans, frozen	10lbs.	12	Perforated
Lima Beans, frozen	10lbs.	13	Perforated
Mixed Vegetables, frozen	5lbs.	7	Perforated
Peas, frozen	5lbs.	7	Perforated
Potatoes, Whole, 8oz. (100 ct)	10lbs.	45	Perforated
Potatoes, Quartered	8lbs.	16	Perforated
Zucchini, Slices	10lbs.	8	Perforated

RICE

Sticky, 1:1 Water to Rice	Any	25	Solid 2.5"
Par Boiled, 1.8:1 Water to Rice	Any	35	Solid 2.5"

SEAFOOD

Shrimp, thawed	16-20 ct	10	Perforated
Lobster Tail, fresh		11	Perforated
Lobster, 2lbs. Live		9 to 10	Perforated
Snow Crab, frozen		7	Perforated

MEAT

Hamburger Patties, frozen	3lbs.	20	Perforated
Hot Dogs, Beef, 8/lb. (240 ct)	30lbs.	20	Perforated
Hot Dogs, Beef, 4/lb. (200 ct)	30lbs.	30	Perforated

1 YEAR PARTS & LABOR WARRANTY

Sterling Manufacturing, LLC (Sterling) warrants that your steam cooker will be free of defects in material and workmanship under normal use for a period of one (1) year from the date of shipment from the factory.

During the warranty period, Sterling agrees to repair or replace, at it's option, F.O.B. factory, any part which proves to be defective due to defects in material or workmanship, provided the equipment has not been altered in any way, and has been properly installed, maintained, and operated in accordance with the instructions in the Steamer Installation and Operation Manual.

During the warranty period, Sterling also agrees to pay any factory authorized equipment service agency (within the continental United States and Canada) for reasonable labor required to repair or replace parts due to defects in material or workmanship, provided the service agency has received advance approval from Sterling factory service to perform the repair or replacement. This warranty includes travel time not to exceed two hours and mileage not to exceed 50 miles (100 miles round trip), but does not include post start-up assistance or training, tightening of loose fittings or external electrical connections, minor adjustments, maintenance or cleaning. Sterling will not reimburse the expense of labor required to repair or replace parts after the one year warranty period.

Proper installation is the responsibility of the owner-user, or installing contractor and is not covered by this warranty. While Sterling products are built to comply with applicable standards for manufacturers, including Underwriters Laboratories (UL) and the National Sanitation Foundation (NSF), it is the responsibility of the owner and installer to comply with any applicable local codes that may exist.

Sterling makes no other warranties or guarantees, whether expressed or implied, including any warranties of performance, merchantability, or fitness for any particular purpose. Sterling's liability on any claim of any kind, including negligence, with respect to the goods and services covered hereunder, shall in no case exceed the price of the goods and services, or parts thereof, which give rise to the claim. In no event shall Sterling be liable for special, incidental, or consequential damages, or damages in the nature of penalties.

This constitutes the entire warranty, which supercedes and excludes all other warranties, whether written, oral or implied.