



Thermal Circulators
Stainless Steel Integrated Bath System



WSV16/WSV25

For your safety and continued enjoyment of this product,
always read the instruction book carefully before using.

IMPORTANT SAFEGUARDS

When using this electrical appliance, safety precautions should always be observed, including the following:

READ ALL INSTRUCTIONS

1. Carefully read all of the instructions before using this appliance and save for future reference.
2. Do not touch hot surfaces. The lid may get hot while cooking; hold the lid by the handle to avoid getting burned.
3. Do not immerse this appliance, power cord or plug in water or any other liquids.
4. This appliance is not a toy. When used by or near children, close attention is necessary. Store this appliance in a safe place, out of the reach of children.
5. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
6. Unplug from outlet when not in use and before cleaning. Allow machine to cool before putting in or taking out parts or emptying the vessel.
7. Do not attempt to operate (heat) the unit without sufficient water in the vessel to completely cover the bottom rack and to reach the Minimum (MIN) level mark on the sidewall.
8. Be sure not to overfill the vessel; allow sufficient room to accommodate the volume of food pouches when added to the vessel. Make sure food pouches are completely submerged.
9. Stop using the machine immediately if the cord is damaged, and have it replaced by a professional.
10. Always use the manufacturer's original accessories.
11. Do not use this appliance outdoors or on a wet surface. It's recommended for indoor use only.
12. Do not let cord hang over edge of table or counter, or touch heated surfaces.
13. Do not place unit on or near a gas or electric burner, or in a heated oven.

14. Extreme caution must be used when moving an appliance containing hot water or other hot liquids. Always allow the vessel to cool before emptying your appliance.
15. Take care when removing the lid when unit is hot, as hot water will collect on the inside during cooking.
16. Do not use this appliance for other than its intended use.
17. Don't use the appliance if it has fallen or appears to be damaged.
18. It's better not to use an extension cord with this unit. However, if one is used, it must have a rating equal to or exceeding the rating of this appliance.
19. When unplugging unit, grasp the plug, not the cord.
20. Before plugging appliance in or operating, make sure your hands are dry.
21. When unit is ON or in working position, it must be on a stable surface, such as a table or counter.
22. To disconnect, press the POWER (⏻) button for two (2) seconds, then remove plug from wall outlet.
23. If the supply cord is damaged, it must be replaced by the manufacturer, service agent or similarly qualified persons in order to avoid a hazard.
24. This unit is not intended to be used with frozen foods.
25. Do not use a bag larger than 1 gallon when cooking sous vide.

SAVE THESE INSTRUCTIONS

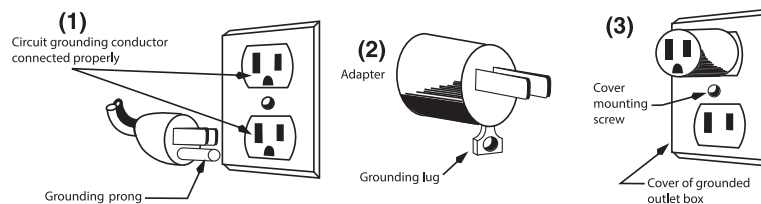
APPROVED FOR COMMERCIAL USE

CONTENTS

Important Safeguards	2
Grounding Instructions	4
Important Notes	4
Introduction to Sous Vide Cooking	5
Food Safety	6
Parts	6
Operating Instructions	8
Time and Temperature Guide	11
Cleaning and Maintenance	13
Troubleshooting	13

GROUNDING INSTRUCTIONS

For your protection, the Waring® Thermal Circulators machines are equipped with a 3-conductor cordset that has a molded 3-prong grounding-type plug, and should be used in combination with a properly connected grounding-type outlet as shown in Figure 1. If a grounding-type outlet is not available, an adapter, shown in Figure 2, may be obtained so that a 2-slot wall outlet can be used with a 3-prong plug. Referring to Figure 3, the adapter must be grounded by attaching its grounding lug under the screw of the outlet cover plate.



CAUTION: Before using an adapter, it must be determined that the outlet cover plate screw is properly grounded. If in doubt, consult a licensed electrician. Never use an adapter unless you are sure it is properly grounded.

Note: Use of an adapter is not permitted in Canada.

EXTENSION CORDS

Use only 3-wire extension cords that have 3-prong grounding-type plugs and 3-pole cord connectors that accept the plug from the appliance. Use only extension cords that are intended for indoor use. Use only extension cords having an electrical rating not less than the rating of the appliance. Do not use damaged extension cords. Examine extension cord before using and replace if damaged. Do not abuse extension cord and do not yank on any cord to disconnect. Keep cord away from heat and sharp edges.

IMPORTANT NOTES

CAUTION: To ensure continued protection against risk of electric shock, connect to properly grounded outlets only.

DO NOT ATTEMPT TO DISASSEMBLE

There are no user-serviceable parts inside the appliance. Do not attempt to service this product. Do not immerse base in water or other liquids. A short power-supply cord is provided to reduce the hazards resulting from entanglement or tripping over a longer cord. An extension cord may be used with care; however, the marked

electrical rating should be at least as great as the electrical rating of the machine.

NOTE: This unit is intended for indoor use at commercial food service establishments. It is not intended for household, industrial or laboratory use. Operate unit at room temperature and if not, allow time for unit to reach room temperature.

NOTE: For the most accurate temperature control, be sure to place lid on vessel when in use.

NOTE: This unit will only properly operate when filled using tap water. Pure (filtered) water or distilled water cannot be detected as there are no dissolved solids in these water types. Salt can be added to pure (filtered) water if needed, but regular tap water is highly recommended for use.

NOTE: Heat water only. Do not use this unit to heat oil, grease or other liquids. Other liquids may become unstable and hazardous.

INTRODUCTION TO SOUS VIDE COOKING

Sous vide (pronounced soo-veed) describes a method of cooking foods, sealed in plastic vacuum bags, in a water bath at precisely controlled temperatures, often much lower than those used in traditional ovens, but for longer periods of time. The technique was first developed in France and named Sous Vide, French for “under vacuum,” though it would more correctly be called “without much air,” since the vacuum sealing doesn’t truly remove all the air from the bag. Removing most of the air from the bags, however, does reduce the chance of bacterial growth and spoilage. And the vacuum-sealed pouches prevent evaporation and the loss of flavor and nutrition, keeping the foods cooked sous vide moist, tender and flavorful.

The high-precision thermostat of the Waring® Thermal Circulators water bath maintains the temperature with a tight window around the set target temperature, so food can be cooked to the perfect temperature effortlessly. Steaks prepared with the sous vide method can be cooked to the desired temperature throughout, instead of charred on the outside, overcooked below that, and perfect just in the center.

A medium-rare steak cooked sous vide will be medium rare from edge to edge; a medium steak will be medium throughout; a medium-well steak, the same all the way through. No guesswork. No critical timing. No chance of overcooking.

Conventional Cooking vs Sous Vide Comparison



Conventional Cooking Method



Sous Vide Cooking Method

FOOD SAFETY

Monitor food temperatures closely for food safety. The United States Public Health Service recommends that hot food be heated and held at a minimum of 140°F (60°C) to help prevent bacteria growth.

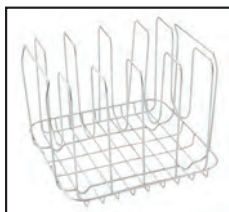
Vacuum-packed food creates a low oxygen environment. With improper handling or preparation, bacteria can grow. We recommend that a HACPP food safety management program be put in place.

PARTS

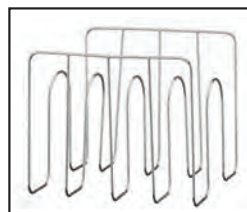
1. **Stainless Steel Lid with Heat-Resistant Plastic Handle** – Always place lid on vessel during cooking to keep temperature stable and reduce steam vapor.
2. **Rack Lift** – Allows user to remove rack and bags from vessel. Keeps single or multiple bags of product in line, allowing water to circulate for evenly cooked results.
3. **Universal Rack** – Ensures food within the bags is completely submerged. Prevents large pouches from touching each other (which can affect the cooking process).
4. **Vessel** – Maximum 16/25 liter (1.5–6.5 gallons) capacity of food and water.
5. **Handles** – Asymmetrically positioned handles to aid in the emptying of the vessel.
6. **Drain Hose** – Drains water from the vessel.
- 6a. **Drain Lever** – Opens or closes the drain.
7. **Water Inlet** – Area where vessel water is drawn into and filtered through the circulating boiler system.
- 7a. **Water Outlet** – Area where filtered water returns back into the vessel from the circulating boiler system.
8. **MIN Level Line** – Indicates the lowest water line. Water must be added to above this line for proper operation.
9. **Drain Hose/Cord Storage** – Rear storage space with hooks for power cord and drain hose.



RACK POSITIONS



Normal configuration: allows 5 (WSV16)/ 8 (WVS25) average size pouches

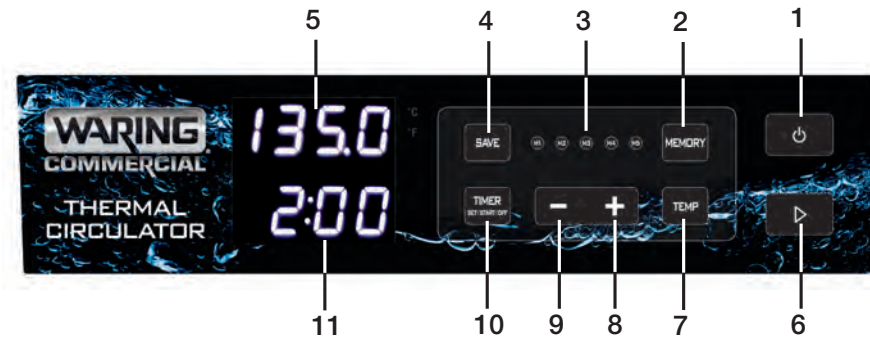


To accommodate longer pouches, use this configuration, which allows pouches up to 11 inches long (WSV25 only)

NOTE: Racks become hot during the heating process. Allow to cool before removing or handling.

OPERATING INSTRUCTIONS

NOTE: Buttons are capacitive touch and only require a light tap with your finger to operate.



Control Panel:

1. **Power Button (⏻):** Touch and hold for 2 seconds to switch the unit on or off.
2. **Memory Button:** Select memory to program memory stations M1–M5.
3. **LED Memory Stations M1–M5**
4. **Save Button:** Saves user programmed settings.
5. **Water Temperature Indicator (C° or F°)**
6. **Start Button (▶):** Starts water circulator.
7. **TEMP Button:** The temperature set range is between 35°C/95°F and 90°C/194°F. Default temperature is: 60°C/140°F.
- 8–9. **(+/-) Buttons:** Increases/decreases time or temp. For fast scroll, press and hold (+/-) buttons.
10. **TIMER (SET/START/OFF) Button:** Set time from 00:00–99:00. Default time is 02:00. Hold timer button for 4 seconds to turn timer off, machine will remain on until manually shut off. Press timer again to default back to 02:00 minutes or to reset time, use +/- arrows.
11. **Time Indicator**

TO SET THE MACHINE FOR USE

1. Be sure the vessel contains water before starting the unit. The water must be over the minimum level (MIN) which is marked on the side wall of the vessel. The unit will not start if water level is below the MIN line and will show error code E001.
2. Plug the cord set into an electrical outlet.
3. Hold the Power button (⏻) for 2 seconds to turn the machine

on. You should hear a “click” tone. The display will show the current temperature of the water in the vessel.

4. To set the cooking temperature:

4.1 Tap the TEMP button once. The screen shows the default temperature of 60°C/140°F and will flash.

4.2 To switch between Fahrenheit and Celsius temperature settings, press and hold TEMP button for 4 seconds. Displayed temperature will flash, then tap again to switch setting. Repeat steps to switch back to Fahrenheit.

4.3 Use the (+/-) buttons to change the cooking temperature to the desired setting. Press and hold (+/-) buttons for fast scroll. The temperature set range is: 35°–95°C/90°–194°F.

5. To set the cooking time:

5.1 Tap the TIMER button. LED displays the time and flashes. The default time of 02:00 should appear. Use the (+/-) buttons to increase /decrease time. Time-set range is 00:00–99:00 hours. Press and hold (+/-) buttons for fast scroll.

5.2 Five seconds after desired time is selected, the display will return to display water temperature.

6. To set memory stations:

First ensure the vessel has been filled with water over the MIN level marking indicated on the inside wall of the vessel. The unit will not start if water is below MIN line and the display will show an error code of E001. Be sure to have followed all instructions on “To Set the Machine for Use” prior to setting MEMORY.

To set a memory station, power unit on; the display will show current water temperature and 2:00 time. Press MEMORY and the M1 memory station will illuminate. Tap TEMP button to set desired water temperature. Temperature will display flashing. Use the +/- buttons to adjust. Next tap the TIMER button to set desired runtime. Time will display flashing. Use the +/- buttons to adjust and press SAVE. Memory M1 has been programmed and will remain set for future use. To set additional memory stations, tap MEMORY and follow the above steps.

7. To start cooking:

7.1 When you have set the desired cooking time and temperature, tap the ▷ button to begin heating the water to set temperature. Or using the MEMORY button, choose the corresponding memory M1–M5, then touch the ▷ button to begin heating the water to the preset temperature. An audible tone will alert as the vessel begins to heat.

- 7.2 When the desired set temperature is reached, the unit will beep 3–5 times, the ▷ button and the time indicator will flash, informing you it is now time to place the food into the vessel. Press TIMER (SET/START/OFF) button. The unit will start to count the cooking time.
- 7.3 Place bagged food into the vessel. Make sure that food is totally immersed into water with the help of the rack or tray provided with this unit.
- 7.4 Place lid on the top of the unit. When set time has elapsed, the unit will beep, alerting you that the process is complete. Remove food from vessel for serving or additional preparations.
- NOTE:** For the most accurate temperature control, be sure to place lid on vessel when in use.
- NOTE:** Elapsed timer does not turn the heater off.
8. When not in memory mode, you can change the cooking temperature or cooking time during the cooking process; just repeat the step 5 or 6.
9. Machine will operate without using the timer as long as the timer function is off. To turn off, hold timer button for 4 seconds. Display will read --:--.

REMOVING FOOD FROM WATER BATH

NOTE: Use **CAUTION** as water, racks, and rack lift are hot. Use heat- proof tongs and oven mitts as needed.

TIME AND TEMPERATURE GUIDE

This table is only meant to serve as a guideline. Temperatures should be adjusted to your preference of doneness. Cooking time should be adjusted to initial temperature, heat transfer characteristics, and thickness of the food being cooked.

	Temperature	Thickness	Time to Core Temperature	Time (Pasteurized to Core)
BEEF				
Tenderloin	138° F/59° C	2 inches	1 hour, 58 min	5 hours, 35 min
Rib Eye Steak	138° F/59° C	1.5 inches	1 hour, 58 min	3 hours, 20 min
Strip Steak	138° F/59° C	1.5 inches	1 hour, 58 min	3 hours, 20 min
Porterhouse Steak	138° F/59° C	1.5 inches	1 hour, 58 min	3 hours, 20 min
Brisket	147° F/64° C		48 hours	3 hours, 21 min
Veal Shank	167° F/75° C		12–24 hours	9 hours, 3 min
LAMB				
Lamb Saddle	138° F/59° C	2.5 inches	2 hours, 16 min	3 hours, 51 min
PORK				
Pork Chop	145° F/63° C	1.75 inches	1 hour, 45 min	4 hours, 2 min
Ribs	140° F/60° C		24–48 hours	1 hour, 6 min
POULTRY				
Chicken Breast	150° F/65° C	1 inch	47 min	1 hour, 36 min
Duck Breast	135° F/57° C	1 inch	60 min	2 hours, 41 min
Chicken Thighs	150° F/65° C	1.5 inches	1 hour, 20 min	3 hours, 3 min
Foie Gras	147° F/64° C	2 inches	2 hours, 16 min	5 hours, 9 min
FISH				
Salmon Filet	130° F/54.4° C	1 inch	1 hour, 39 min	5 hours, 31 min
Cod Filet	129° F/54° C	1 inch	1 hour, 39 min	3 hours, 47 min
Halibut	129° F/54° C	1 inch	1 hour, 39 min	3 hours, 47 min
SHELLFISH				
Shrimp/Prawns	135° F/57° C	1 inch	43 min	5 hours, 21 min
Lobster	145° F/63° C	1 inch	15 min	5 hours, 5 min
Scallops	135° F/57° C	1.5 inches	1 hour, 38 min	2 hours, 29 min

	Temperature	Thickness	Time to Core Temperature	Time (Pasteurized to Core)
VEGETABLES				
Root-Whole (Beets, Carrots, Potatoes, etc.)	190° F/88° C		60 min	
Root-Cut (Beets, Carrots, Potatoes, etc.)	185° F/85° C		30–40 min	
Bulb-Whole (Onions, Shallots, etc.)	194° F/90° C		85 min	
Squash-Cut	185° F/85° C		30 min	
Artichoke Hearts	194° F/90° C		60–75 min	
FRUIT				
Peach Wedges	190° F/88° C		16 min	
Pear Wedges	190° F/88° C		60 min	
Apple Slices	190° F/88° C		40 min	
EGGS IN SHELL				
Soft Poached Egg	143° F/62° C		57 min	44 min
CUSTARD				
Crème Anglaise	179.6° F/82° C		20 min	

NOTE: Times shown in this table are to achieve the absolute specified core temperature. Cook times can be reduced significantly by adding 1 degree to the water bath temperature. The closer the bath temperature is to the core temperature, the longer the cooking time will be.

Raw or unpasteurized food must never be served to individuals with a weakened immune system, children, older adults and those that may be pregnant, as there is higher risk for serious illness.

NOTE: For most accurate temperature control, be sure to place lid on vessel when in use.



CLEANING AND MAINTENANCE

1. Do not leave water in vessel after use. Always drain vessel thoroughly after every use, using the drain hose and drain lever to open and close the release valve.
2. Always keep the water intake filter clean; use brush to clean before and after each use.
3. **Do not put anything into the vessel except clean tap water.**
4. In the event of a bag breaking in the vessel or something being mixed into the water, you will need to clean the vessel. Do not drain the water through the drain hose in this case. Lift the vessel to remove it from the housing and pour everything out. Use a soft cloth or sponge and mild, soapy water to wipe away any residue or items from the vessel.
5. Never immerse the machine unit in water or other liquids for cleaning or rinsing.
6. Never use abrasives or harsh chemicals to clean your unit.
7. Never put the unit in the dishwasher.
8. It is suggested that you periodically run a **cleaning cycle** on your unit. Fill the vessel with clean water to above the MIN fill line. Add mild, soapy detergent (add a non-foam detergent or acidic cleaning liquid into the water). Set temperature at 40°C/104°F and run the machine for 20 minutes. Drain all water from the vessel. You may need to run this cycle twice to make sure that the interior system of the machine is clean and clear. Fill with clean water and drain twice, using the drain hose, to ensure all soap has been flushed out.

NOTE: Any other servicing should be performed by an authorized service representative.

TROUBLESHOOTING

Unit is not operating

1. Check power cord to see if it is firmly plugged into electrical outlet.
2. Examine power cord for any damage.
3. See if electrical outlet is operating by plugging in another appliance.
4. Check if the POWER  button is lit. If it is not, ensure you have pressed this POWER  button for more than 2 seconds.

Digital display shows an error code and unit will not start:

Error Code	Possible causes	Solution
E001	Vessel is empty.	Fill with clean water to above the MIN level.
	Water is too low.	Fill with clean water to above the MIN level.
	The system couldn't identify if there is water in the vessel.	Put a little salt into the water and mix well.
	Electronics fault.	
E002	There is some debris on filter.	Please clean filter well.
	Food bag is blocking the water intake.	Please position bags again. Always use provided pouch racks to properly align the bags.
	Food bag is blocking the water exit hole.	Please position bags again. Always use provided pouch racks to properly align the bags.
	Bag broke and food is blocking water inlet.	Run machine cleaning cycle according to #8 under Cleaning and Maintenance.
	Dirt accumulated inside the interior of the machine circulation system.	Run machine cleaning cycle according to #8 under Cleaning and Maintenance.
	Machine electronics fail.	Contact an Authorized Service Center.
E004	Machine does not have cover.	Put cover on machine.
	Machine electronics fail.	Contact an Authorized Service Center.
E009	Electronic failure.	Contact an Authorized Service Center.
C	Over 200 hours of use	Run cleaning cycle. See page 13, number 8 for directions

DISPOSAL OF THE DEVICE

At the end of the life of your product, it should go to a specially adapted waste-recycling center.

ENVIRONMENT PROTECTION FIRST



1. The symbol on the product or on its packaging indicates that this product may not be treated as household waste. Instead, it should be handed over to the appropriate collection point for the recycling of electrical and electronic equipment.



2. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could be compromised by inappropriate waste handling of this product. For more detailed information about the recycling of this product, please contact your local council office or your household waste disposal service.