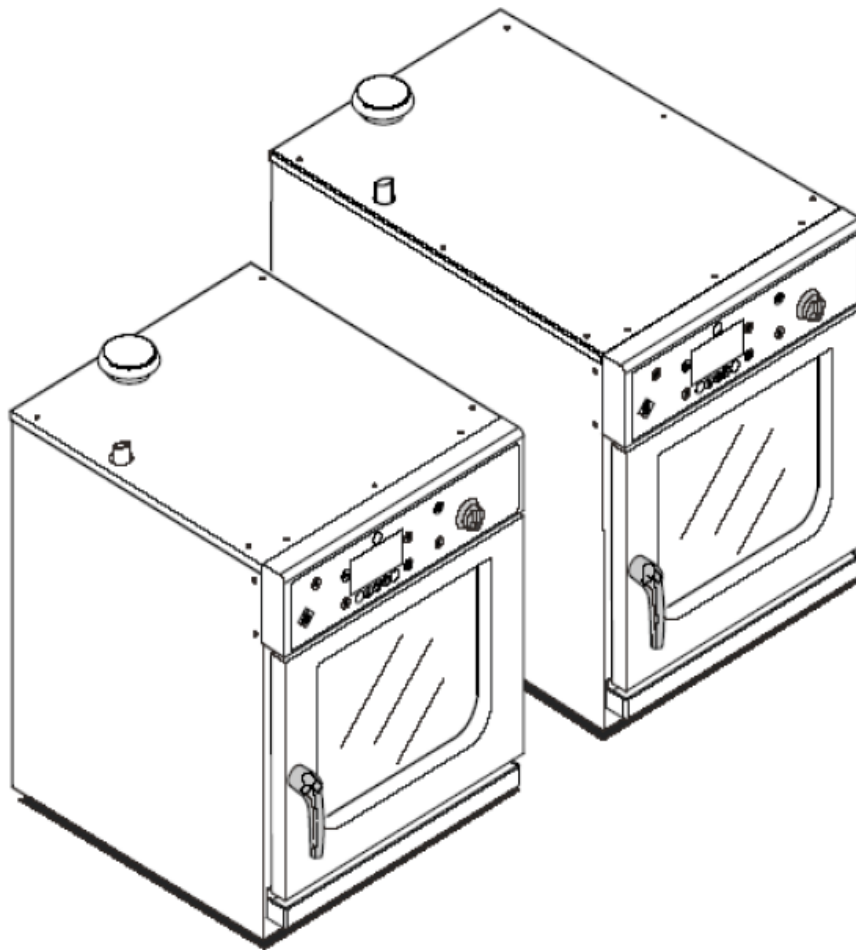


Operating Manual

Electric *SpaceSaver*TM & Electric *SpaceSaver*TM Plus



Model	Model No.
Electric <i>SpaceSaver</i> TM 605	ECS-605
Electric <i>SpaceSaver</i> TM Plus 610	ESC-610

LIMITED WARRANTY FOR HENNY PENNY EQUIPMENT

Subject to the following conditions, Henny Penny Corporation makes the following limited warranties to the original purchaser only for Henny Penny appliances and replacement parts:

NEW EQUIPMENT: Any part of a new appliance, except baskets, lamps, and fuses, which proves to be defective in material or workmanship within two (2) years from date of original installation, will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor. Baskets will be repaired or replaced for ninety (90) days from date of original installation. Lamps and fuses are not covered under this Limited Warranty. To validate this warranty, the registration card for the appliance must be mailed to Henny Penny within ten (10) days after installation.

FILTER SYSTEM: Failure of any parts within a fryer filter system caused by the use of the non-OEM filters or other unapproved filters is not covered under this Limited Warranty.

REPLACEMENT PARTS: Any appliance replacement part, except lamps and fuses, which proves to be defective in material or workmanship within ninety (90) days from date of original installation will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor.

The warranty for new equipment covers the repair or replacement of the defective part and includes labor charges and maximum mileage charges of 200 miles round trip for a period of one (1) year from the date of original installation.

The warranty for replacement parts covers only the repair or replacement of the defective part and does not include any labor charges for the removal and installation of any parts, travel, or other expenses incidental to the repair or replacement of a part.

EXTENDED FRYPOT WARRANTY: Henny Penny will replace any frypot that fails due to manufacturing or workmanship issues for a period of up to seven (7) years from date of manufacture. This warranty shall not cover any frypot that fails due to any misuse or abuse, such as heating of the frypot without shortening.

0 TO 3 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for parts, labor, or freight. Henny Penny will either install a new frypot at no cost or provide a new or reconditioned replacement fryer at no cost.

3 TO 7 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for the frypot only. Any freight charges and labor costs to install the new frypot as well as the cost of any other parts replaced, such as insulation, thermal sensors, high limits, fittings, and hardware, will be the responsibility of the owner.

Any claim must be presented to either Henny Penny or the distributor from whom the appliance was purchased. No allowance will be granted for repairs made by anyone else without Henny Penny's written consent. If damage occurs during shipping, notify the sender at once so that a claim may be filed.

THE ABOVE LIMITED WARRANTY SETS FORTH THE SOLE REMEDY AGAINST HENNY PENNY FOR ANY BREACH OF WARRANTY OR OTHER TERM. BUYER AGREES THAT NO OTHER REMEDY (INCLUDING CLAIMS FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES) SHALL BE AVAILABLE.

The above limited warranty does not apply (a) to damage resulting from accident, alteration, misuse, or abuse; (b) if the equipment's serial number is removed or defaced; or (c) for lamps and fuses. THE ABOVE LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS, AND ALL OTHER WARRANTIES ARE EXCLUDED. HENNY PENNY NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY.

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Intended use The *SpaceSaver*™ combi is intended for use exclusively for commercial applications. It is not to be operated as a household appliance and doing so voids any warranty and liability

SpaceSaver™'s must only be used to cook food using the specified grills, containers, baking trays, mobile oven racks and inserts. Only clean drinking water may be used for steam generation in the appliance.

Incorrect usage The *SpaceSaver*™ should not be used for the following purposes:

- as a storage cupboard
- as a smoker
- for drying cloths or cutlery
- for heating acids, caustic agents or other chemicals
- for heating flammable liquids
- for melting fats or salts
- for heating rooms
- for frying
- for heating sealed containers such as tins
- as a dish washer
- for cleaning air filters
- operation without insertion rails/mobile oven racks

Hazards when incorrectly used



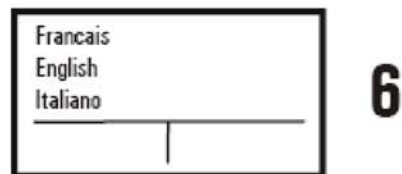
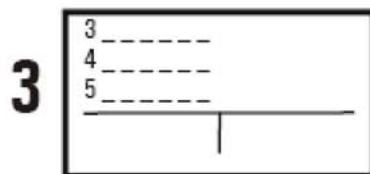
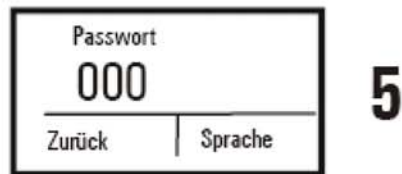
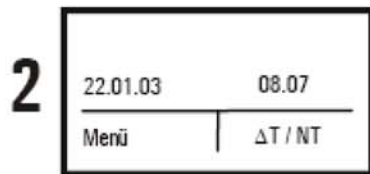
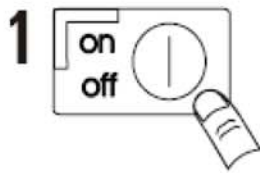
Improper use of appliance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before using this appliance.

Do not operate the appliance without the fan cover in place, or personal injury could result. Disconnect the power to the unit when opening the fan cover, and after closing, lock the cover in place.

Training of operating personnel

Before the *SpaceSaver*™ is used for the first time, operating personnel are to be made aware of the residual risks that exist even when the appliance is operated correctly and procedures in the event of faults or a fire.

Changing the language



Safety instructions

The *SpaceSaver*™ conforms to all safety standards. However, this does not rule out all risks, such as those caused by operator error.

The following safety instructions must therefore be observed when operating the *SpaceSaver*™.



- Do not place cooking containers where the food being cooked generates liquid e. g.(stock, roasting juices) above eye level, as the food must be watched continuously during cooking.
- Open the door only slightly, allow the steam to escape and then open it all the way to the stop position. If the door is opened during operation, especially during steaming, large amounts of steam may escape.
- Do not peer into the steam exhaust vent or hold your hand over it. Hot steam is vented periodically during a cooking operation.
- Wear protective gloves when opening door after cooking. The cooking container, grills, mobile oven rack, door sides and the temperature sensor can still be very hot.
- Remove the food probe from cooked product before removing it from the unit.
- When pulling the load out, ensure you do not stab yourself with the sensor.
- Do not leave the sensor hanging loose outside the door; replace in its holder.

Transport through cold surroundings

After transporting from cold surroundings into a warm installation space, the combi steamer must be allowed to warm up to room temperature before power is connected to it and it is switched on.



Do not operate the combi steamer at temperatures below 40°F (4°C). The unit may not operate properly or damage to the electronic controls could result

Cleaning



Always wear chemical splash goggles or face shield and protective rubber gloves when cleaning the cooking space with corrosive cleaning agents. Severe burns and possible blindness could result. Observe the manufacturer's instructions. If solution comes in contact with your eyes, rinse thoroughly with cool water and see a physician immediately.



To prevent damage, appliances with "WaveClean" must always be connected to hard- and soft water!



To prevent burns, only carry out cleaning and maintenance tasks when the oven has cooled down (below 140°F (60°C)).

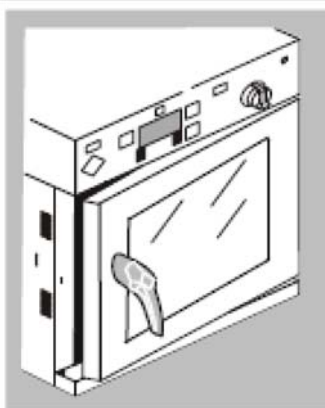
Defective appliance

CAUTION

Do not operate the appliance with a damaged door seal. Broken or damaged door seals may result in damage to electrical and electronic components.

Replacement should only be undertaken by a certified service technician. The door seal is pushed into place. When fitting, perfect seating is essential, i.e. the seal must be pushed fully into its housing and sit firmly. Grease, high temperatures and cleaning residues shorten the service life of the door seal.

WARNING



To prevent personal injury or property damage:

- **Avoid continuous operation at high temperatures and remove grease and cleaning residues regularly.**
- **The combi steamer should only be operated with a correctly functioning magnetic door switch. If faulty, advise service personnel immediately. Chemicals could spray into the eyes or onto the skin of the operator, during automatic cleaning and cause irritation and burns.**
- **Do not operate the appliance if the glass panel is damaged! The appliance must not be operated if the glass is broken (cooking space light and door panel). Food that is in the oven if the glass shatters must be disposed of (danger of glass splinters).**

After use After use close the water supply line shut-offs.

NOTICE

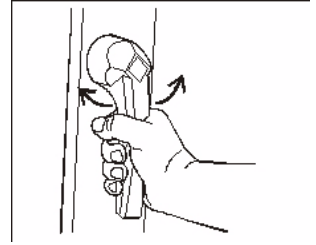
To prevent condensation forming in the appliance, leave the door slightly ajar when not in use.

As the appliance door is well insulated, condensation may form on the double-glazed panels if the oven is not used for a long time. This disappears after a short while once the appliance is being used.

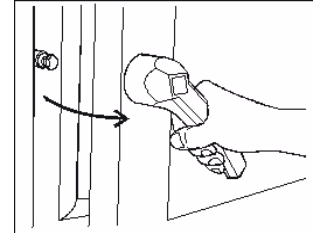
Door lock of

Opening

1. Turn door handle to the right or left.
The door then opens.

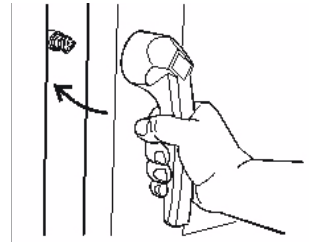


2. Open the door fully. If the door handle is released, it returns to the vertical position.

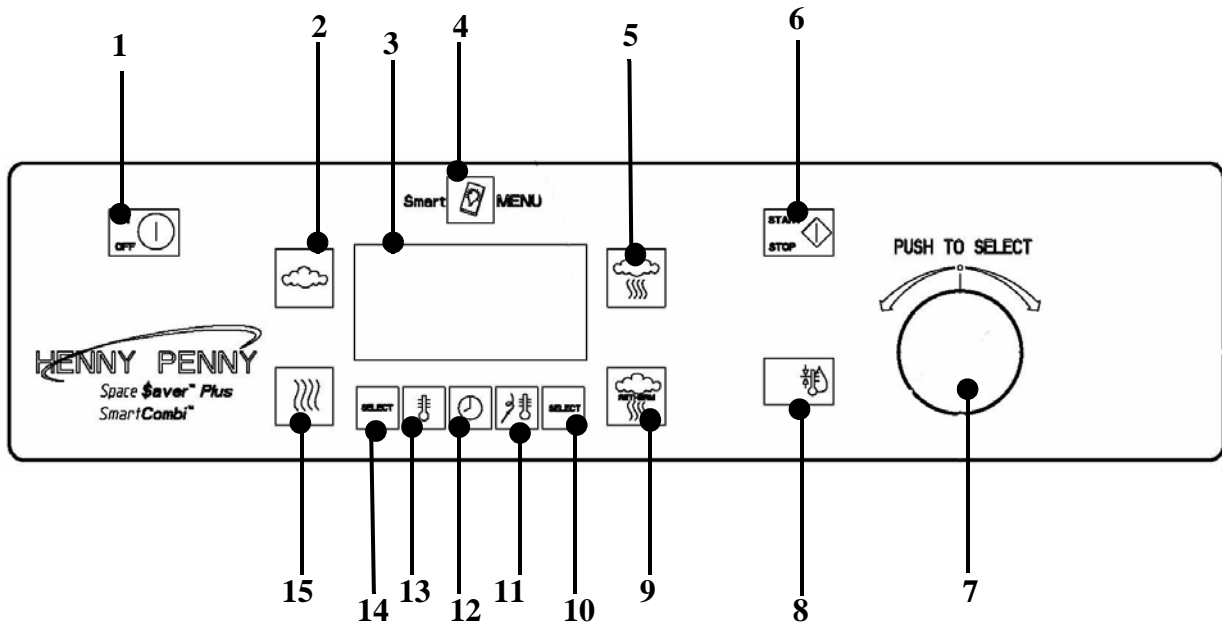


Closing

- Press the door closed with door handle vertical.



SpaceSaver™ display and console

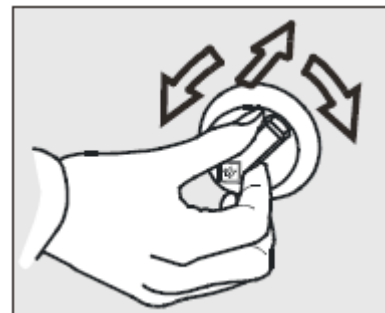


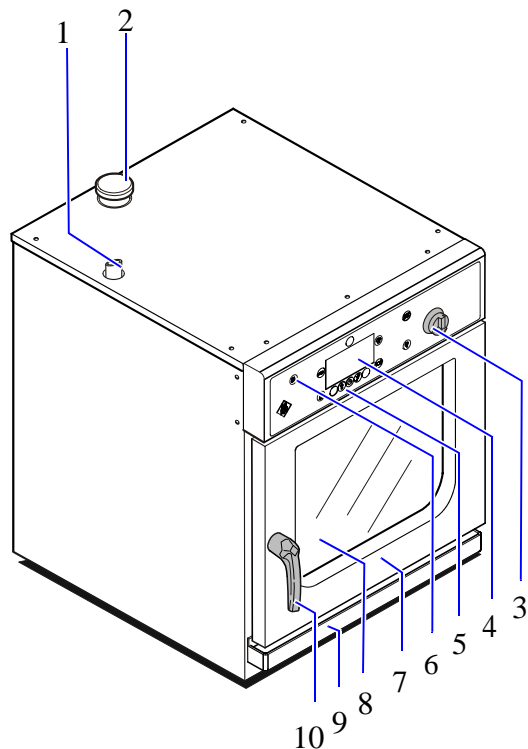
- 1 ON/OFF button
- 2 Cooking mode button with LED:
Moist Heat
- 3 Display: program, temperature,
time and additional functions
- 4 Selector button: Smart Menu
- 5 Cooking mode button with LED:
Combi steaming
- 6 Start/Stop button
- 7 Adjusting toggle: CombiDial
- 8 Selector button: Ready2Cook
- 9 Cooking mode button with LED:
Rethermalization
- 10 Right Select button
- 11 Selector button: probe
temperature measurement
- 12 Selector button: cooking time
- 13 Selector button: cooking
temperature
- 14 Left Select button
- 15 Cooking mode button with LED:
Dry heat

CombiDial

Turn right/left: setting the
temperature, time, etc.

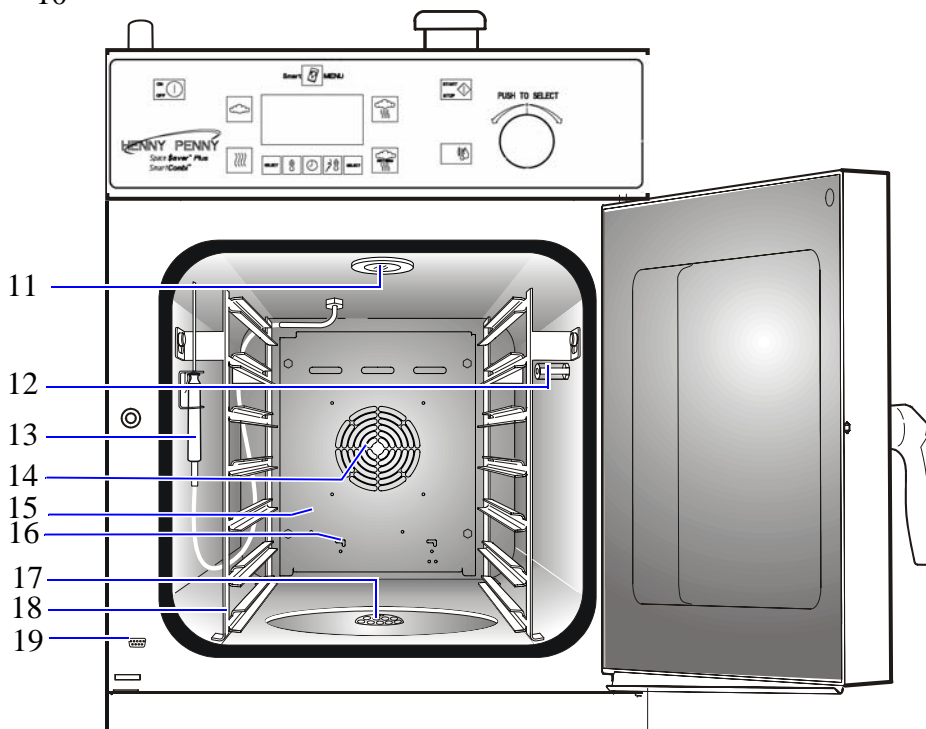
Press: confirm the selected
setting





SpaceSaver™ & SpaceSaver™ Plus

- 1- Steam outlet vents
- 2- Air intake vents for cooking chamber
- 3- Combidial
- 4- Display
- 5- Film keypad with LEDs
- 6- On/Off switch
- 7- Appliance door
- 8- Insulating glass pane
- 9- Condensate catch trough
- 10- Door handle
- 11- Cooking chamber illumination
- 12- Temperature sensor for cooking chamber
- 13- Core-temperature probe
- 14- Fan
- 15- Fan cover
- 16- Cartridge holder
- 17- Bottom drain
- 18- Insert rack
- 19- Data socket (RS232)



Operation

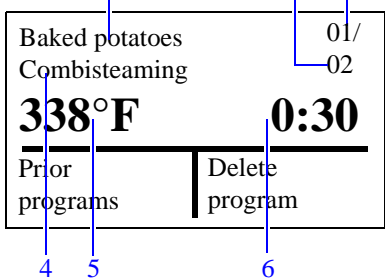
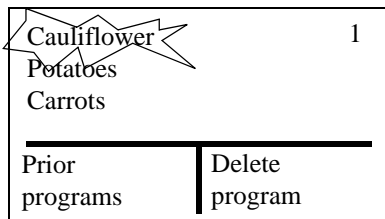
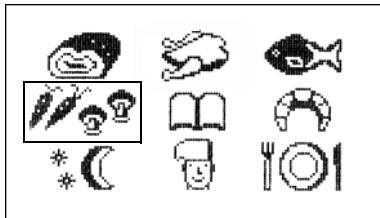
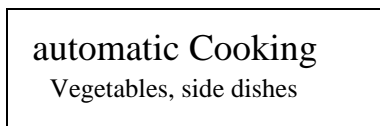
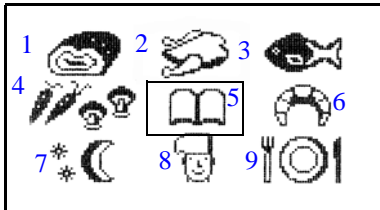
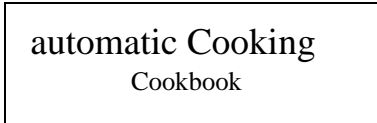
Operating modes The *SpaceSaver*TM has a number of different operating modes:

- Smart Menu automatic cooking
- Moist Heat
- Combination of Moist and Dry heat
- Dry Heat
- Rethermalization
- Delta-T cooking
- Slow Roast & Holding (SRH)
- Steam Injection
- Rest Period
- Rack Control

Additional functions Cooking processes can be adjusted individually using functions such as:

- Start time pre-selection
- Preheating
- Humidity control
- Manual steam injection
- Auto-reverse fan
- End-of-step signal

"Smart Menu"



The Smart Menu cooking programs were developed to have the clear advantage of being adaptable to your specific requirements and wishes and saveable in the corresponding category. Switch on the steamer with the On/Off button and press the Smart Menu button:

Pictograms for the individual program groups are displayed in the bottom display.

The selected program group is bordered by a rectangle.

Program groups		
1	Meat	Steak, pork roast
2	Poultry	Chicken, turkey
3	Fish	Redfish, trout
4	Vegetables, side dishes	Carrots, mushrooms, potatoes
5	Cookbook	Contains the programs of all program groups
6	Bakery products	Bread, croissants
7	Overnight cooking	Core-temperature cooking, low-temperature cooking
8	MyChef - Special	Individualised programs
9	Perfection	Plated meals, banquets

The selected program group is displayed as text in the top display.

Move the selection frame to the desired program group, e.g. Vegetables, side dishes, with the CombiDial.

Pressing the CombiDial opens the directory of the program group.

The first cooking program appears and flashes in the alphabetically arranged list.

Scroll through the list with the CombiDial and push it to call up the program.

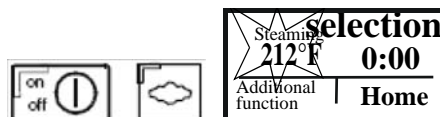
The display shows the following:

- 1 Name of the cooking program
- 2 Number of program steps
- 3 The program step displayed
- 4 Cooking type of the current program step
- 5 Temperature (setpoint) of the program step
- 6 Time or core temperature (in this case, time) of the program step

Prior programs	Pressing the Right-Side Selection button displays the last program used.
Preheating	For optimum cooking results, we recommend the "Ready2Cook" button (Page 44).
Different programs	Different programs can be selected (Page 20).
Location of the selection frame	The location of the selection frame after the Smart Menu button is pressed can be set (Page 20).

Moist Heat Mode

Setting the temperature



Use the “moist heat” program to boil, steam, blanch and preserve.

Switch on the *SpaceSaver*™ with the “On/ Off” button. Press the Moist Heat button <the display shows “212°F” “(100°C)” and “0:00”.

Turn the CombiDial to adjust the cabinet temperature and press the CombiDial to confirm:

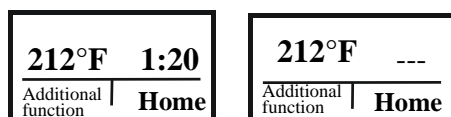
Tender steam: 86°F to 210°F (30°C to 99°C)

Steaming: 212°F (100°C)

Forced steaming 214°F to 266°F (101°C to 130°C).

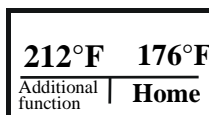
Setting the time

Select time display by turning the CombiDial. Time can be set from 1 min to 9 hours 59 min.



Continuous mode: With Time set to “0:00”, turn the CombiDial to the left and hold for 3 seconds <, display will change Time to “---“ Continuous Run.

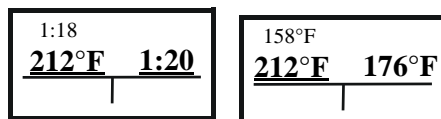
Probe Temperature Setting



Press the Combi-Dilot twice after setting the Moist Heat temperature to program the Probe temperature. Turn the CombiDial to chosen temperature and then press CombiDial to set the Probe temperature.

NOTE: If a cooking time is entered before entering the Probe temperature, the cooking temperature is ignored, as the Probe temperature always takes priority.

Start Moist Heat



After setting the temperature and timer or Probe temperature, press the Pre-Heat button, if preheating is needed. Press the “Start/Stop” button to start the cooking cycle. Display shows the **selected cooking temperature** along with the time or probe setting, and also, the actual cooking time, if in Continuous Run and the actual Probe temperature.

Displaying actual temperatures

To display the actual cooking temperature, press and hold the Cooking Temperature button for 8 seconds.

Changes while in cooking cycle



Time, temperature and probe temperature can be changed during a cooking cycle by pressing the selection function and using the CombiDial to make changes.

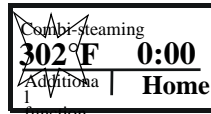
End of Moist Heat Mode

When timed cycle or probe temperature is reached, the unit will buzz. Press the Start/Stop button or open the door to turn off the buzzer.

Combination of Moist and Dry Heat Mode

“Combi-steaming“ is especially suited to large roasts, cakes and pastries.

Setting the temperature



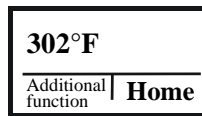
Press the “On/Off” button..

Press the “Combi Mode” button and the display shows “302°F< (150°C)” and “0:00”.

Turn the CombiDial to adjust the flashing temperature and press the CombiDial to confirm.

Temperature range: 86°F-482°F (30°C - 250°C).

Setting the time

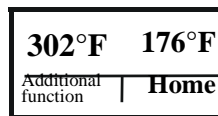


Select the time by turning the CombiDial.

Time can be set from 1 min – 9 hours 59 min.

Continuous mode: With the time set to “0:00”, turn the CombiDial to the left and hold for 3 seconds <, the time display changes to “---” (Continuous Run).

Probe Temperature Setting

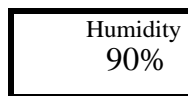


Press the CombiDial twice after setting the temperature to set the Probe temperature.

Turn the CombiDial to desired temperature and then press it to confirm the probe temperature.

NOTE: If a cooking time is entered before entering the Probe temperature, the cooking temperature is ignored, as the Probe temperature always takes priority.

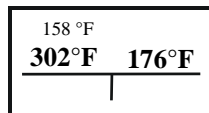
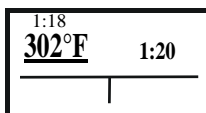
Humidity Control



Press the CombiDial twice after setting the setpoint

temperature to set the humidity. Use the CombiDial to set the humidity from 0-100% in 10% steps and then press the CombiDial to confirm percentage of humidity.

Using the Combi mode



After setting the temperature and timer, or probe temperature, press the “Start/Stop” button. The display shows the **selected cooking temperature**, along with the time or probe setting. It also shows the actual cooking time if in Continuous Run and the actual probe temperature.

The Pre-Heat Mode may be used to pre-heat the unit before placing product into the unit.

To display the actual cooking temperature, press and hold the “Cooking Temperature“ button.

Changing the setting



Use the time, temperature or core temperature buttons, and the CombiDial to change the parameters during combi-steaming.

End of Combi mode

After the cooking time has elapsed or when the core temperature is reached, the signal sounds and the cooking lighting will flash to indicate that the program has ended. Pressing the “Start/Stop“ key or opening the steamer door prematurely cancels (confirms) the buzzing and flashing.

Dry Heat Mode

Setting the temperature



“Dry Heat” cooking is best suited to products that do not require any humidity.

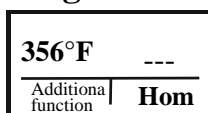
Press the “On/Off” button.

Press the Dry Heat button and the display shows 356°F “180°C” and “0:00” appear.

Turn the CombiDial to adjust the cabinet temperature. Press the CombiDial to confirm:

Temperature range: **86°F** - 482°F (30°C - 250°C).

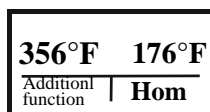
Setting the time



Select the time display by turning the CombiDial to set the time between 1 minute and 9 hours 59 minutes.

Continuous mode: With time set to “0:00”, turn the CombiDial to the left and hold for 3 seconds <, the time display changes to “---” for Continuous Run.

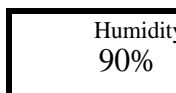
Probe Temperature Setting



Press the CombiDial twice after setting the Dry Heat temperature to set the probe temperature. Turn the CombiDial to desired temperature and then press it to confirm the probe temperature.

Note: If a cooking time is entered before entering the final core temperature, the control system will ignore this, as the core temperature always takes priority.

Humidity Control

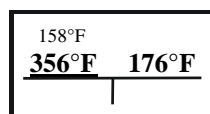
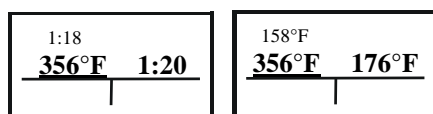


An appropriate cooking chamber humidity can be achieved for food containing a lot of water by setting the steam quantity below 100%. The excess steam is extracted from the cooking chamber, condensed and blown out.

Press the CombiDial twice after setting the setpoint core temperature and set the steam quantity. The steam quantity can be set from 0-100% in 10% steps with the CombiDial.

With a setting of 100%, the cooking chamber humidity can rise to 100%, depending on the product type and quantity.

Starting Dry Heat mode



After setting temperature and timer, or probe temperature, press the “Start/Stop” button or the Pre-Heat button. The display now shows the **selected cooking temperature** along with the time or probe setting.. It also shows the **actual cooking time**, and the **actual probe temperature** if in Continuous Run.

If using the Ready2Cook Mode, open door and load when unit buzzes.

Displaying actual temperatures



To display the actual cooking temperature, press and hold the Cooking Temperature button.

Changing the setting



Time, temperature and probe temperature can be changed during a cook cycle by pressing the selection function using the CombiDial to make changes.

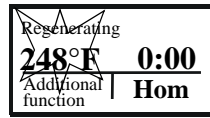
End of Dry Heat mode

The buzzer sound at the end of the cooking time or when the core temperature is reached. Press the “Start/Stop” key or open the steamer door to switch off the buzzer.

Rethermalization Mode

This mode is used to reheat meals on plates or dishes, or cooked foods in pans or on grids, without any loss of quality. This mode has a special pre-set air circulation setting.

Setting the temperature



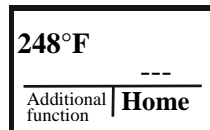
Press the “On/Off” button.

Press the “Retherm” button and the display shows “248°F (120°C) and “0:00”.

Turn the CombiDial to confirm.

Temperature range: 86°F - 356°F (30°C -180°C).

Setting the time

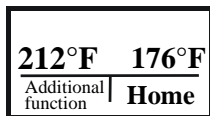


Select the time by turning the CombiDial.

Time can be set from 1 min - 9 hours 59 min.

Continuous mode: With time set to “0:00”, turn the CombiDial to the left and hold for 3 seconds < the time display changes to “---” for Continuous Run.

Probe Temperature Setting



Press the CombiDial twice after setting the retherm

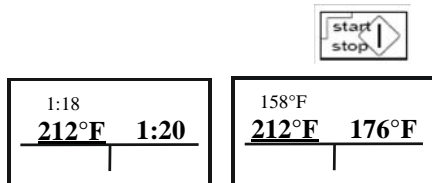
temperature to set the probe temperature. Turn the CombiDial to desired temperature and then press it to confirm the probe temperature.

Note: If a cooking time is entered before entering the final core temperature, the control system will ignore this, as the core temperature always takes priority.

Humidity Control

Press the CombiDial twice after setting the setpoint core temperature and set the steam quantity. The steam quantity can be set from 0-100% in 10% steps with the CombiDial.

Using Retherm mode



After setting the temperature and timer, or probe temperature, press the “Start/Stop” button. (The unit can be heated by pressing the Ready2Cook button.) The display now shows the **selected cooking temperature**, along with the time or probe setting.. It also displays the **actual cooking time**, and the **actual probe temperature** if in Continuous Run.

The temperature display shows **the remaining cycle time** (in continuous mode “---”) or the actual core temperature.

Displaying actual temperatures

To display the actual cooking temperature, press and hold the Cooking Temperature button.

Changing the setting



Time, temperature and probe temperature can be changed during a cooking cycle by pressing the selection function using the CombiDial to make changes.

End of Retherm mode



After the moist heat time is over and the probe temperature is reached, a buzzer sounds¹ and the interior lights flashes, indicating that the cycle is over. Pressing the “Start/Stop” button before opening the door cancels the program.

1. The duration of the sound and flashing is adjustable.
see Page . .

Probe Cooking

Probe cooking is particularly recommended for food requiring long cooking.

Probe cooking works in all modes. Here, the temperature is measured with a probe inserted down into the center of the food being cooked and compared to the (selected) probe temperature to be reached. As soon as the probe temperature has been reached, the power and water supplies of the steamer are shut off

The advantages of this are:

- Lower energy and water consumption
- No overcooking of product
- Higher yields/Lower weight loss

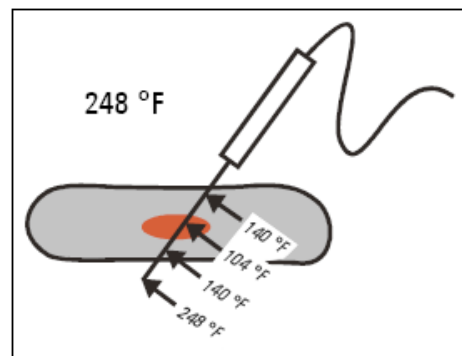
It is recommended that probe cooking be used with all cooking processes if possible.



NOTICE

To ensure that the nominal probe temperature is reached and the product is cooked thoroughly, the cooking temperature must be set at least 7°F (5°C) higher.

The Food Probe comes with a 4-point sensor. It measures the core temperature of the product in 4 different points, with the coolest point controlling the cooking process.

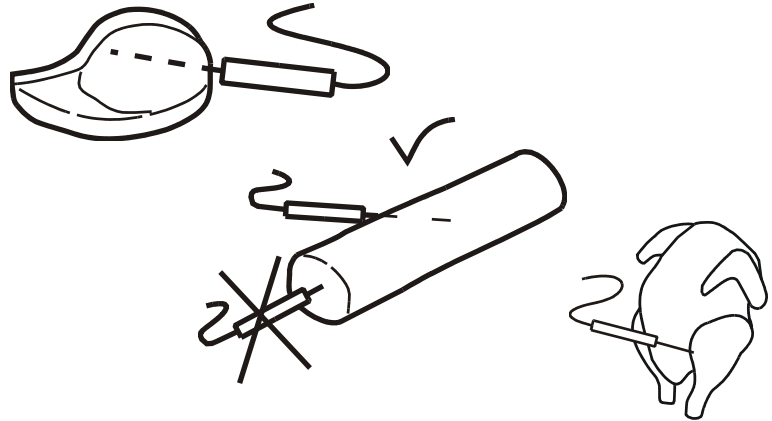


Temperatures on the probe at 248°F chamber temperature (example)

Positioning the probe

When cooking a number of products, always position the probe in the center of the product and also set the product **in the center of the oven chamber** (center shelf).

Always place the probe into **the thickest part of the food** to be cooked. When cooking items with bones, e.g. cutlets, push the probe in adjacent to the bones (insulate the bones).



When cooking long items, such as smoked pork loin, push in the probe crossways. If the probe is placed longitudinally, a hole remains in the middle of the slice when the product is cut up.

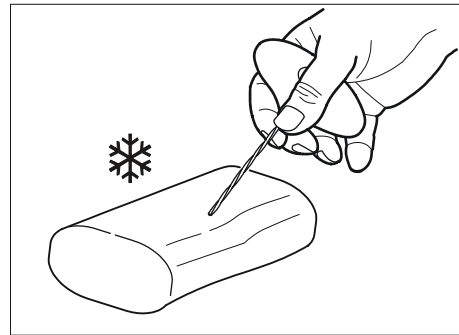
When cooking poultry (differing weight distribution), such as chickens, place the probe in the inside of the leg. The probe should always be pushed in completely, or measurement errors may occur.

**Do not overheat core-
temperature probe**

So that the temperature probe can be inserted into frozen food, **DO Not** heat probe with a lighter or another heat source. Overheating can cause the temperature probe to explode.

Drill an insertion channel

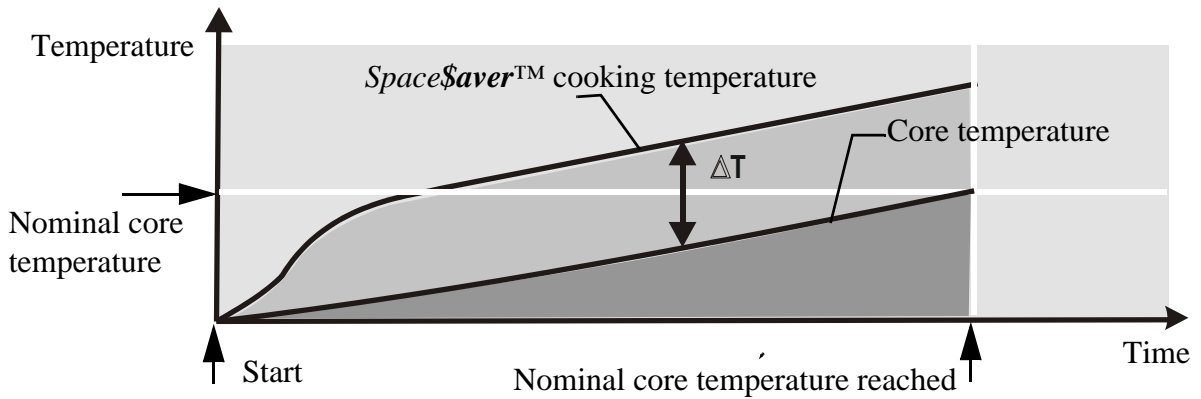
With frozen food, first drill an insertion channel with a hand drill and then insert the temperature probe.



Delta-T cooking

When using Delta-T cooking, the probe is always used. The cooking temperature of the combi is base upon the core temperature of the product being cooked and the set Delta-T temperature. In general, the following equation can be applied for Delta -T cooking:

$$\text{Actual core temperature} + \text{Delta-T temperature} = \text{Combi Cooking temperature}$$



Delta-T cooking

Press the On/Off” button.

Press Right-Select button to select “DT/SRH”

“DT cooking” and “SRH” shows in display, and “DT cooking” flashes.

Press Right-Select button again or CombiDial to confirm "DT cooking".

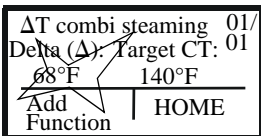
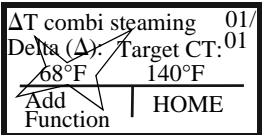
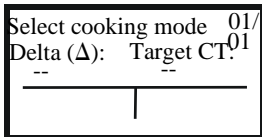
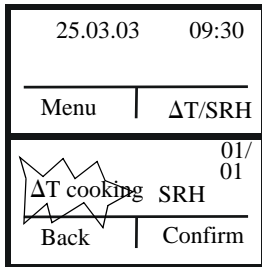
Display shows “Cooking Mode?”.

Press the desired cooking mode button, “Dry Heat”, “Moist Heat” or “Combi”.

The display shows the selected cooking mode, the preselected DT temperature 68°F (20°C) and the preselected target core temperature 140°F (60°C). The DT temperature flashes.

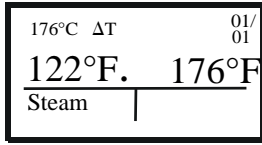
Press the CombiDial to confirm the DT temperature

Set the flashing target cooking temperature with the CombiDial and press it to confirm.



Cooking mode	ΔT	Target CT
Dry Heat	34-394°F (1-201°C)	106-210°F (41-99°C)
Moist Heat	34-8°F (1-31°C)	
Combi steaming	34-304°F (1-151°C)	

Starting Delta-T cooking



Press the Start/Stop button.
The display shows the current cooking and set probe temperatures.

Current temperature display

To display the actual cooking & probe temperature, press and hold the Cooking or Probe Temperature buttons.

End of Delta-T cook cycle



The buzzer sounds when the probe temperature has been reached. Press the “Start/Stop” button or open the steamer door to turn the buzzer off.

Hints on Delta-T cooking

The higher the temperature difference, the greater the weight loss and the more intensive the browning. To ensure that the cooking time is not too long, the Delta-T setting should be at least 50°F (10°C). This type of cooking means that slow operation times can be made use of. Use a pre-selected start time with this method.

Large roasts	ΔT	Core-temperature
Roast beef	122-131°F 50 – 55°C	118-136°F 48 – 58°C
Fillet of beef	122-140°F 50 – 60 °C	122-140°F 50 – 60°C
Veal roast	122-158°F 50 – 70°C	172°F 78 °C
Blade shoulder of pork	5122-158°F 50 – 70°C	172°F 78 °C
Cooked ham	122-140°F 50 – 60°C	172°F 78 °C

For further Delta-T cooking suggestions, see < the “Practical Tips“ section

Slow Roast & Hold (Over-night Cooking)

Temperatures ranging from 155-212°F (60 -100°C) are used in low temperature cooking (SRH). The benefits are as follows:

- Less drying out
- Even cooking
- Less crust formation
- More yield/Less shrinkage

SRH has two phases:

- 1 - Cooks product to a set core temperature
- 2 - Lets product “rest”, “mature” or tenderize for maximum results

There are two ways of cooking at low temperatures.

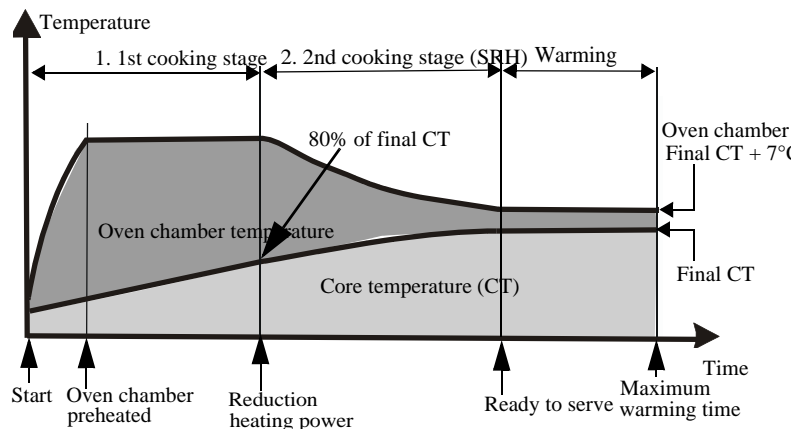
SRH without using the probe

Set temperature 7°F (5°C) higher than the desired final core temperature. The minimal difference in temperature is sufficient for low-temperature cooking

If a crisp crust is wanted, first sear at a higher temperature before completing cooking at the lower temperature.

SRH using the probe

SRH program first sears (browns) the product then automatically goes to the cooking process. When the core temperature reaches 80% of its setpoint (see the graph), the unit goes into a holding and maturing process. .



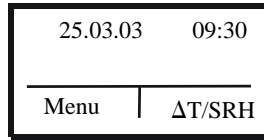
Note: if the difference between oven chamber and core temperature is less than 7°F (5°C), the final core temperature may not be reached

Food	Final core temperature (temp. to be maintained)	Cooking temperature	Program stages
Roast beef	132°F (55°C)	140°F 60°C	1. Dry Heat 2. SRH
Roast pork	167°F (75°C)	176°F 80°C	
Roast veal	158°F (70°C)	167°F 75°C	
Roast lamb	167°F (75°C)	176°F 80°C	

Setting SRH cooking mode

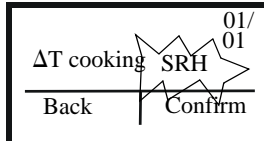
Press the On/Off button.

Before SRH cooking, enter the **first program** step, i.e. "Dry Heat", "Moist Heat", "Combination of Moist and Dry Heat" or "Rethermalization" (see also the "Entry of several program steps" chapter).



Press the Right-Select button to select "DT/SRH"

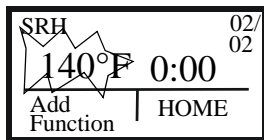
"DT" and "SRH" shows in display and "DT cooking" flashes.



Turn CombiDial to select "SRH" and press to confirm.

Select a cooking mode for the first step of the SRH process

The display shows cooking temperature of 140°F (60°C) flashes in the display.



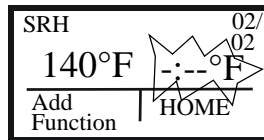
Turn the CombiDial to set the temperature 86-250°F (30-120°C) and press to confirm.

The display flashes cooking time "0:00".

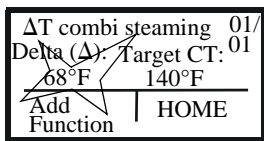
Turn the CombiDial to set the cooking time, or press CombiDial again to change from time to probe cooking.



The temperature display flashes. Set the final core temperature 104-210°F (40-99°C) with the CombiDial.



Note: If a cooking time is entered before entering the final core temperature, the control system will ignore this, as the core temperature always takes priority.



Once the core temperature is entered, press the CombiDial to enter another program step.

Pressing the CombiDial twice, the display reverts to the first program step.

Starting SRH

Start the program with the Start/Stop button.

The display shows:

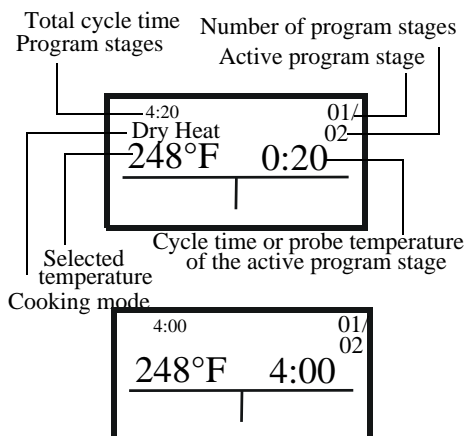
Number of program steps

Current program step

Cooking temperature

Cooking mode

Probe temperature or Time remaining.



Steam injection

The "Steam Injection" cooking mode can be used for baking pieces of dough that require lots of steam.

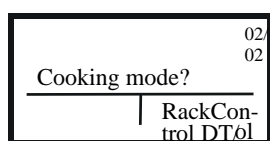
NOTICE

If the cooking temperature is higher than 266°F (130°C), steam injection will not work!

Cool down the cooking chamber to below 266°F (130°C) with Ready2Cook if necessary.

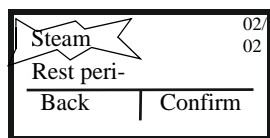
Selecting steam injection

Switch the appliance on with the "On/Off" button. The button LED illuminates.

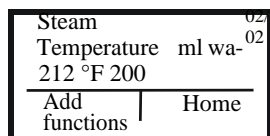


Call up the menu with the Right-Side Select button.

Scroll through to "Steam" with the CombiDial.

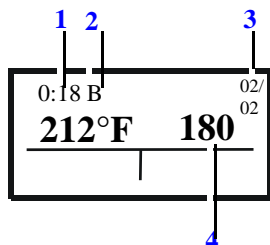


The "Steam" menu item flashes.



Press the CombiDial or Right-Side Select button (input) and use the CombiDial to set the temperature at 86 - 266°F (30-130°C) and the water quantity (0 - 5,000 ml).

To enter another program step, press the CombiDial or start the program with the Start/Stop or Ready2Cook button.

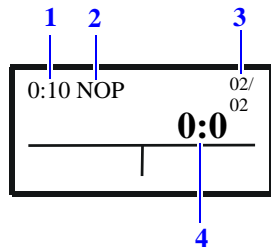
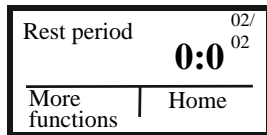
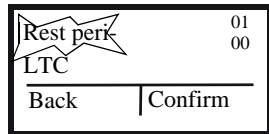
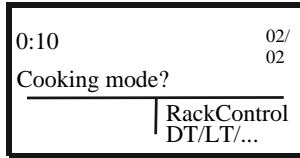


The display shows the following while the program is running:

- 1 Remaining time of all program steps
- 2 Cooking type B = steam
- 3 The number of the active program step
- 4 Remaining water quantity (ml)

Rest period

Selecting rest period



An operational pause (NOP) can be selected with the "rest period" cooking type.

Switch the appliance on with the "on/off" button.

The button LED illuminates.

Call up the menu with the right-hand selector button.

Scroll through to Rest period with the combidial.

The "Rest period" menu item flashes.

Select the menu item by pressing the right-hand selector button or the combidial.

Set the rest period (in minutes) with the CombiDial.

Press the CombiDial to enter an additional program step.

Press the "start/stop" button to start the program.

The display shows the following while the "Rest period" program step is running:

- 1 Remaining time of all program steps.
- 2 NOP = No Operation = Rest period
- 3 The number of the active program step
- 4 Remaining time of the active program step

Changing settings

Default settings

The *SpaceSaver™* comes from the factory pre-set. These settings can be changed to your individual needs to a certain extent.

To access the Settings Mode

1 Man. cleaning
2 WaveClean
3 HACCP
4 Setup
5 Diagnosis
6 Save
cookbook
7 Load
cookbook

08.05.2003 08:45
Menu | DT/SRH



Press the Left-Side Select button to access the Menu Mode. Once in the Menu Mode and display shows “Menu”, use the CombiDial to scroll down to “4.Setup”..

Press CombiDial to select “4 Setup”.

Display shows "Password" and “000”.

Press the Right-Hand Select button to select the display language.

Enter the password “111” using the CombiDial and confirm using the “Start/Stop” button.

Password
000
| Language



Once the time and date are set, you can turn the CombiDial to page through the other settings (see following table).

Setting 000
Time/Date
11:55 08.05.2003
Back | Save



The display shows “Time/Date” and the setting number “000”.

Press the CombiDial to set the next flashing time/date setting. Turn the CombiDial to set the new value and confirm by pressing the Right-Hand Select button.

Press the CombiDial to select the next setting or press the “Left-Hand Select button to return to the start-up display.

1 Settings	2 No.	3 Standard setting	4 Setting range	5 Explanation
Time/Date	000	Local time operator	Time/date	Automatic change between summer time / winter time See parameter No. 144 for date format
Light flashes	023	On	On/Off	"On" means that when cooking is completed, the light will flash in addition to the buzzer sounding. The duration of the flashing matches the buzzer, i.e. if the buzzer is set to "0", the light will not flash (even if flashing is activated).
Preheating factor %	082	15	0-30%	Increase the preheating factor if fully loaded with large amounts (roasts, bread loaves) so that the temperature does not drop too severely.
Water maintenance litre	076	0	0-90,000 L in 100-L increments	For external water-treatment systems, for connection to soft water only. Confirm receipt of the maintenance request with the "Read" button. The maintenance request is repeated until maintenance occurs and the "Done" button is finally pressed.
Date format	144	DD.MM.YY YY	DD.MM.YYYY YYYY/MM/DD MM/DD/YYYY	TT = Day MM = Month JJJJ = Year 12 or 24 hour clock
Temperature display	006	in °C	°C/°F	The temperature display in °F is not linked to the English display text.
Cookbook	097	Free	Free	Programs in the Cookbook can be changed, deleted, or saved.
			Locked:	Programs in the Cookbook cannot be changed, deleted, or saved. However, changes can be made during cooking.
			Fully locked	Changes cannot be made to the Cookbook or during the cooking process.
Time delay fan	032	Off	Off/On	When "On", the fan runs during the time delay to cool the oven chamber with a block of ice in the bottom drawer. For this purpose, place the perforated container in the closed container, fill with approximately 4 litres of water and allow to freeze. Insert the ice block into the perforated container at the lowest level. This allows a temperature of 57°F to be maintained for up to 6 hours
Cooling water	024	Standard	Minimum - Maximum	"Minimum" setting: Minimum water consumption but higher condensation temperature and greater amount of waste steam. "Maximum" setting: Maximum water consumption but lower condensation temperature and less waste steam.

1 Settings	2 No.	3 Standard setting	4 Setting range	5 Explanation
Time ext. Hood (seconds)	083	60	0 - 600	An external air extraction hood can be switched on at the end of the program.
Time buzzer (seconds)	084	20	0 - 180	0 = buzzer off In addition to the buzzer, the Start/Stop button can also be made to flash; see setting 023
Altitude	015	0 -500 m	0 - 500 m; 500 -1000 m; 1000 -1500 m >1500 m	Ask your nearest weather station about the altitude (above sea level). Set 0 - 500m if the altitude is unknown.
Password	096	111	000-500	Individual passwords can be set up here.
Moist Heat temperature	235	212°F (100°C)	86-266°F (30-130°C)	The pre-defined temperatures can be individually set up for the cooking process within the limits shown here.
Combi steaming temp.	236	266°F (130°C)	86-482°F (30-250°C)	
Dry Heat temp.	237	356°F (180°C)	86-482°F (30-250°C)	
Retherm temperature	238	248°F (120°C)	86-356°F (30 -180°C)	
SRH temp.	239	140°F (60°C)	140-212°F (60-100°C)	
DT cooking temperature	240	68°F (20°C)	34°F-212°F (1-100°C)	
DT probe temperature	241	140°F (60°C)	86-210°F (30-99°C)	
Smart Menu history	242	0	0 -10	Press “History” to display the programs that were last used (max. 10) and restart.
Standard Category	397	Cookbook	Meat, Poultry, Fish, Vegetables, Side dishes, Bakery prod- ucts, Overnight cooking, MyChef - Special; Perfection	
Scroll direction	225	Normal	Normal/Inverse	The direction of the CombiDial can be adjusted as required in the menus and Custom Library.

1 Settings	2 No.	3 Standard setting	4 Setting range	5 Explanation
Cookbook number	403	100	0 Only your own cooking programs 1 German; 2 UK English; 3 Italian; 4 French; 5 Dutch; 6 Spanish 7 Polish; 8 Danish; 9 Russian; 10 Czech; 11 Lithuanian; 12 Latvian; 13 Chinese UK China; 14 Chinese Big5 Taiwan; 15 Korean; 16 Hebrew; 17 Slovenian; 18 Croatian; 19 Hungarian; 21 Swedish; 22 Turkish; 23 Slovakian; 24 Serbian; 25 Greek; 26 Portuguese; 100 US English	Different country-specific cookbooks can be loaded via cookbook switching. Deleted AutoChef cooking programs can also be restored here. For this purpose, select cookbook number and then save. Press "Save" after switching the cookbook. "analysis" appears for up to 5 minutes. Cooking programs created on the appliance remain in tact when switching occurs.

Custom Programming

Creating your own programs

The *SpaceSaver*™ stores 300 cooking programs. There are two options for entering your own recipes in the recipe book.

1. Duplicate a program from the cookbook, adjust the temperature, time etc. of the individual program steps as desired and save in the cookbook with a new name.
2. Create new programs steps and save in the cookbook. It makes no difference whether you save an entered program first or start it and then save it.

Copying a cooking program



Press the "SmartMenu" button and select the cooking program category with the CombiDial.

- Select the cooking program from the list with the CombiDial. After the CombiDial is pressed, the display shows the name of the cooking program, the number of program steps and the accompanying temperature and time values.
- Set the temperature and time values with the CombiDial and add program steps if necessary. The asterisk next to the program name indicates that the original program was changed.
- Pressing and holding the "SmartMenu" button copies the program and shows the previous program name in the display.
- Enter a new program name with the CombiDial and save it.

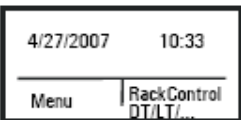
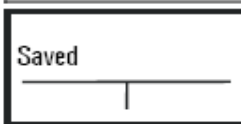


Saving changed program

Pressing and holding the "SmartMenu" button saves the new cooking program.



- The display shows the category overview.
- Select a category and press the CombiDial. The message "Saved" appears for 5 seconds. The "initial screen" appears in the display once again.



Always save duplicated programs with a new name.

Additional functions

You can optimise the cooking cycle by using additional functions.

Delayed Start Time

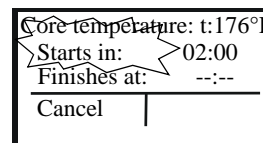
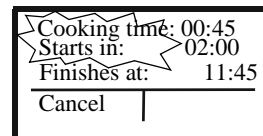
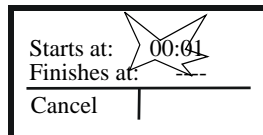
In a delayed start, the cooking program doesn't start until the set delay time has counted down. The oven chamber temperature is shown in the display during countdown.



If using the delayed start, temperatures in the oven chamber may promote the growth of harmful bacteria on the products to be cooked. The food may spoil, causing sickness if eaten.

Always consider potentially hazardous product before using the delayed start. This is NOT an overnight function, but may be useful between lunch and dinner. Ice can be used in the oven cavity to keep food cool for a short period.

Setting the time delay



Cancel the delayed start

Note

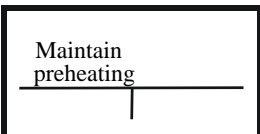
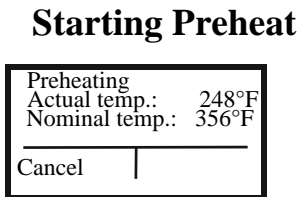
1. Enter or select the cooking program.
2. Press and hold down the Cooking Time button.
The display shows a flashing "Starts at: 00:01". Use the CombiDial to enter the time.
 - After the countdown, if a cooking program is using **cooking time** and not probe core temperature, the finishing time is calculated and displayed in the "Finishes at:" field.
 - If the cooking program uses **probe temperature**, only the highest nominal probe temperature is displayed.
3. Start the program with the Start/Stop button or the CombiDial countdown. The light is off during the delayed start.
4. After the countdown has finished, the cooking program begins.

Press the "Cancel" Left-Side Select button to cancel and delete the delayed start time.

To avoid production and preparation bottlenecks, you can prepare the food as normal, load the SpaceSaver™ and select the desired cooking program long before the cooking process is due to begin. Any power outage during the countdown does not change the time in which the cooking program starts.

Ready2Cook

Many cooking programs (e.g. baking) require the oven to be preheated. The Preheat Mode has a temperature range of to preheat the oven chamber up to 527°F (275°C).



Press the Ready2Cook button: the *SpaceSaver*™ will heat to about 15% above the temperature of step 1, of the program or set temperature. (This addition can be changed, as described under the “Change settings” section up to a maximum of 30%.)

Press and hold the Ready2Cook button for 3 seconds, and the *SpaceSaver*™ automatically goes to 527°F (275°C), regardless of the set temperature.

When preheat temperature is reached, buzzer will sound and the display shows the holding temperature. (Standby Mode).

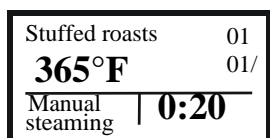
Open door, insert product, close door and start cooking cycle.

Ready2Cook cannot be permanently programmed in cooking programs. The function must always be started manually!

Steam Injection

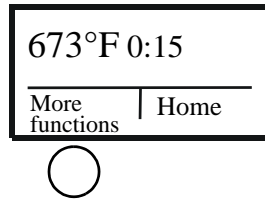
This function cannot be used in a custom program.

Steam injection can be used, during operation, with all cooking modes except for “Moist Heat”.



Press the Left-Hand Select button to inject extra moisture.

More functions



The additional functions can be used to adapt individual cooking steps to the food to be cooked or to improve the cooking results. The Left-Select button can be used to call up the additional function while the data is being entered. Please note that not all of the additional functions are available.

It is also possible to modify the additional functions during operation. To do this, press the temperature, time or probe temperature button. Then press the CombiDial, call up the required step and then use the Left-Select button to call up “More functions”.

Dehumidifying the oven chamber

SpaceSaver™ and *SpaceSaver™ Plus* are equipped with the SES¹ steam extraction system. The SES extracts steam from the cooking chamber and condenses it when cooking is complete. This prevents larger amounts of steam escaping when the door is opened.

The SES is activated for the last program step by default. With cooking programs shorter than 6 minutes, the SES is not activated. This function can be deactivated via the additional functions.

In contrast to cooking chamber dehumidification, the SES has no effect on the cooking result.

Fan cycle

This function is used to drive the fan in intermittent mode. Note that the oven is heated only during the phase when the fan is running. “T1” is displayed on the screen. This function can be combined with the reduced fan speed.

1. SES = Steam Exhaust System

RackControl

For single-step cooking programs, the "RackControl" additional function allows monitoring of five (different) cooking times.

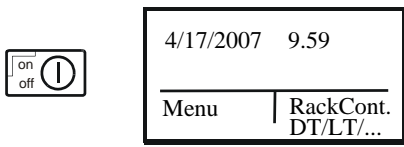
If products with different cooking times, e.g. potatoes, cauliflower, peas, carrots and meat, are to be cooked at one time or if the same dishes are to be cooked at different times, we recommend using the "RackControl" function.

"RackControl" indicates the completion of cooking times started at different intervals with a 10-second audible signal. The cooked food can be removed.

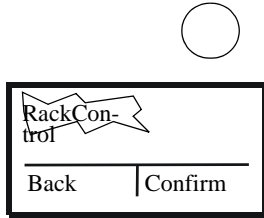
The cooking process is not interrupted here (continuous operation).

"RackControl" is especially helpful when regenerating plated meals. While the Combisteamer is working in "RackControl" mode in continuous operation, the cooking times of the batches used at different times can be monitored.

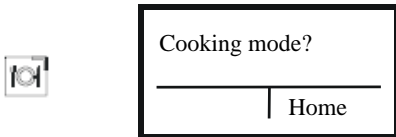
Activating "RackControl"



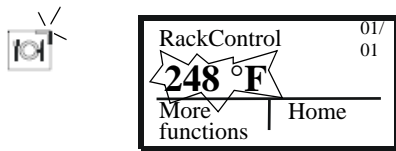
Switch on the steamer with the "on/off" button and select "RackControl" with the right-hand selector button.



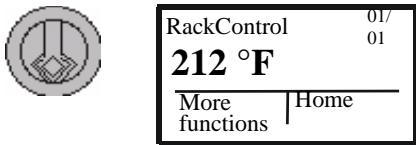
Confirm the flashing "RackControl" display with the right-hand selector button.



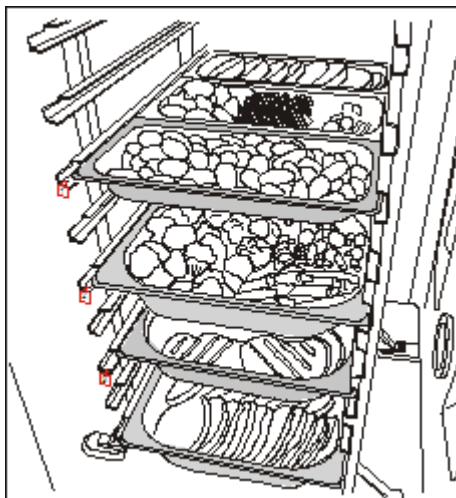
The "Cooking mode?" prompt appears in the display. Press the cooking mode button (e.g. Rethermalization)



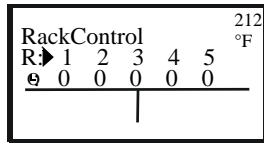
The button LED illuminates. The preset temperature for the selected cooking mode flashes in the display. The pre-selected temperature can be changed with the combidial.



Accept the temperature by pressing the combidial and switch to the time setting. Enter the default cooking time for the batch by turning the combidial to the right/left. Do not press the combidial after entering the time. Press the "start/stop" button. The button LED flashes, and the cooking process now runs in continuous operation.



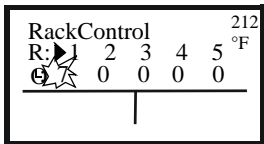
Place containers with food in the cooking chamber and mark as R1, R2 etc. with heat-resistant tags.



The display shows the cooking time (Θ) for all 5 areas (R) of 0 min.

The arrow indicates the range selected for the time specification.

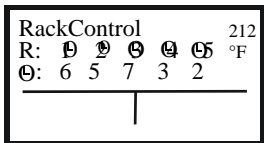
The individual areas for time entry are selected by turning the combidial left/right.



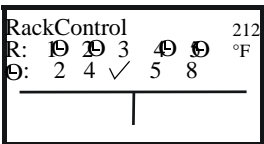
Press the CombiDial to enter the time:

The previously selected time of 7 min (example) appears flashing in the display.

Change the time, if necessary, by turning the combidial to the left/right and accept and start the changed time by pressing it.

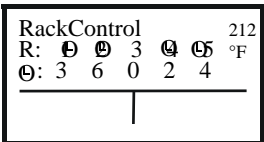


The clock symbol (Θ) next to the rack number indicates the start countdown, and the number below it indicates the remaining time.



The signal sounds once the time has expired.

The clock symbol next to the area number disappears from the display. The checkmark in the field below this reminds you that the cooking time has expired, but the food has not yet been removed.



"0" is displayed instead of the checkmark when the food container is removed.

New dishes (example) can be placed in the areas that have become available. Start the cooking time for the newly loaded area as described above.

Terminating "RackControl"

"RackControl" is terminated when the "start/stop" button is pressed.

Note:

"RackControl" programs can also be saved

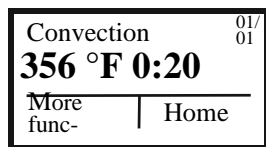
End-of-step signal

With multi-step cooking programs, the end-of-step signal can be activated for each cooking step.

As a result, the end of the cooling step (time expired/probe temperature reached) is signalled by a 10-second audible tone. The next cooking step is started immediately, i.e. starting of the next cooking step is not delayed by the signal.

An end-of-step signal does not need to be activated for the last cooking step in a cooking program, as the completion of the **cooking program** is indicated via a 20-second audible signal.

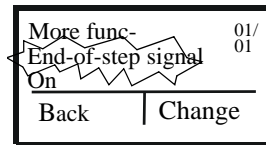
Call up the "More functions" menu with the left-hand selector button after entering the temperature and time values.



Select "End-of-step signal" with the combidial.

The selected menu item flashes.

Activate the end-of-step signal by pressing the combidial or the right-hand selector button (Change).



Then return to the Setup menu by pressing the left-hand selector button (Back).

Practical tips

Cool down mode

The steaming mode can be used for cooling down the oven chamber. Press Moist Heat button. Set the required temperature, enter the time and then press Start/Stop. The steamer quickly cools down without filling the room with noise and heat.

Moist heat

The Moist Heat Mode is used for Steaming, Tender Steaming and Forced Steaming, i.e. cooking, steaming, blanching, poaching, simmering and preserving.

Advantages of moist heat

- Meals have an appetizing color, crisp consistency and their own strong flavors.
- Moist heat is particularly good for preserving vitamins and minerals.
- Even if you steam different foods together, such as fish and vegetables, strong flavors are not transferred.
- You need less spice, fat and salt.
- You can work fast, as the steam is produced very quickly.

The following should be taken into consideration:

- Perforated pan with a depth of 1-1/2 to 2-1/2" (40 - 65 mm) are particularly suited to steaming. These allow short cooking times and prevent food at the bottom of the pan from overcooking.
- It is essential to break up lumps in frozen food to ensure that everything cooks through evenly.
- If you are steaming different foods in a single load, you will need to bear in mind the cooking times for the various foods.
- When preserving, the cooking time depends on the product type, package size and consistency. The SpaceSaver™ is ideal for creating 1/2 to 3/4 preserves. Please use the usual method for preserving.

Moist heat tips

- **Rinse, butter and season** vegetables after steaming.
- To produce **thickened vegetables**, use stock. Steam the vegetables in perforated containers and collect the stock in non-perforated containers.
- **Steam long grain rice** in non-perforated containers. For one part of rice, you need 1 1/2 parts of cold water or cold stock for cooking.

- **Steam noodles** in non-perforated containers. For one part noodles, you need at least 5 parts water for cooking.
- To **steam dumplings** place dumplings on top of a perforated container lined with greaseproof paper. Uncover immediately after cooking. If they are to be served over a longer time, keep warm in water thickened with starch.
- Sprinkle table salt directly onto **potatoes** before steaming, or soak in saltwater for 15 minutes.

Tender steaming

Advantages of Tender steaming

- Foods cooked in a moisture laden environment which can be temperature controlled from 86°F to 210°F (30°C to 99°C) .
- Your food retains more vitamins.
- You can reduce the weight loss in meat and sausages, and achieve optimum flavor, aroma and color.
- You avoid burst skins when boiling or warming sausage products.
- You achieve optimum food quality with sensitive foods such as terrines, galantines, flans, stuffing, crème caramel and diet foods.
- Well suited to the use of vacuum bags following the vacuum-sealing process.
- Precise cooking sets egg whites optimally, i.e. they do not leak from the food.

The following should be taken into consideration:

Tender steaming tips

- Remember that the cooking time is longer in comparison to steaming at 212°F (100°C).
- Allows **small pastries and breads** made from yeast dough, bread dough or flaky pastry, to proof at a temperature of 90°F (32°C).
- You can swell **grains** carefully for whole food dishes such as muesli.
- Poached **trout** if you sprinkle the fish with vinegar or wine.
- You can boil **ham** and **sausage products**.
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-

Forced steaming
Advantages of Forced steaming

- Forced steaming is mainly suited to non-sensitive foods, such as potatoes, beets, and carrots.
- Cooking times are shortened in comparison with steaming at 212°F (100°C) by approximately 10%.

The following should be taken into consideration:

- For a small load, select a cooking temperature between 221°F and 230°F (105°C and 110°C), and for a full load between 230°F and 266°F (110°C and 130°C).

Forced steaming tips

- For gentle rethermalization with minimum cooking times for **preportioned foods**, use covered pans.

Combination Mode (moist and dry heat)

Controlled cooking of large pieces of meat and baking casseroles, etc., using a combination of moisture and heat.

Advantages of Combination Mode

- Oven conditions are always optimum with moist & dry heat.
- Food does not dry out, weight loss is reduced
- The flavour and aroma of the food is retained as much as possible.
- Food cooks very quickly, with minimum weight loss.
- Flavors are not transferred when a number of different foods are cooked together in one load. Mixed loads are possible at any time.
- Bakery products, such as yeast dough, puff pastry and bread dough rise perfectly.
- Large pieces of meat are sealed immediately by the steam, so that the meat no longer needs searing.

The following should be taken into consideration:

- Preheat the *SpaceSaver*™ for at least 10 - 15 minutes before baking using the preheating function.
- The higher the oven temperature, the more the food will brown; however, the higher the weight loss.
- Food begins to brown at a temperature of 248°F (120°C) upwards.
- Reduces the overall cooking temperature by 20 - 30% as compared to conventional cooking methods.

Combination mode tips

- Place meat **on** a grid. This allows the meat's pores to be sealed on all sides. The meat is cooked evenly without having to turn it.
- To make sauces, place a bowl under the grid containing the roasts. Place bones, mirepoix (roasted vegetables), herbs and spices in this bowl, and gradually add water or stock.

Dry Heat

The Dry Heat Mode is suitable for all roasts and cakes and pastries that do not require additional humidity.

Advantages of dry heat only

- You have a higher capacity than standard oven
- You will achieve even cooking results thanks to the auto-reverse fan.
- You can reduce the fat requirement by up to some 95% compared with conventional cooking methods.

The following should be taken into consideration:

- Preheat the *SpaceSaver*™ for at least 10 - 15 minutes before cooking using the preheating function.
- The higher the oven temperature, the quicker the food browns, but with greater weight loss.

Dry heat cooking tips:

- Pre-made products suited to convection ovens should be used for cooking food coated in breadcrumbs or use browning oil to brown any breadcrumb-coated food.

Slow Roast & Hold (SRH)

Advantages of SRH

- Red meat is particularly suited to slow roasting.
- As a result of gentle cooking, the uncooked weight of large pieces of meat remains virtually intact, thus preventing excessive shrinkage and toughening.
- A little steam is also required so that surface of the food does not dry out and the fan will only run when it is cycled.

The following should be taken into consideration:

- The oven chamber temperature should be just above the required temperature of the food to be cooked (e.g. at least 7°F (5°C)).
- The higher the oven chamber's temperature, the higher is the roasting shrinkage.
- This cooking method does not produce a crust.

SRH tips

- You can keep prepared meals warm for up to two hours at an oven temperature of 149°F (65°C), while the fan cycles, without the surface drying out.

Rethermalization

This program not only enables you to rethermalize food on plates or trays within a short period, but also with full-size GN pans.

Advantages of Rethermalization

- You always achieve the optimum oven chamber conditions with rethermalization.
- You can produce food in advance during quiet periods and arrange them on plates or trays.
- Individual portions ensures better food presentation
- There is no need to keep the food warm so there is no loss of quality.
- The ready-to-serve meals do not dry out during rethermalization.
- Neither condensation puddles nor dried edges form on the plates.
- For banquets, you can rethermalize any number of dishes as required.
- You can load the oven plate racks effortlessly from all sides.

The following should be taken into consideration:

- Always preheat the *SpaceSaver*™ using the preheating function.
- For regeneration times and temperatures, please refer to the following table.
- After preheating, load the *SpaceSaver*™ with the prepared plates or trays quickly. This procedure ensures that the warm air remains in the *SpaceSaver*™.
- Large, bulky food components such as dumplings, stuffed meats, and casseroles need longer for rethermalization than, for example, cuts off a roast, portions of vegetables, rice, quartered or chipped potatoes.
- Distribute the components of the meal evenly and in small individual portions on the plate. Avoid large areas of overlap and different heights of the components.
- After rethermalization, pour sauce on to the plate using a sauce dispenser.

Rethermalization tips

- Place **fish** and **meat** on a bed of product, so that it rethermalizes evenly and does not stick to the plate.
- Cook **meats** to rare state, so that it will be cooked to medium after rethermalization.
- **Vegetables, rice** and **noodles** should be buttered and seasoned before rethermalization.
- Cut or break up dense lumps of product.
- If there is a long distance from the kitchen to the serving area, use a **heat retaining cover**. Place the heat-retaining cover over the product before using the *SpaceSaver™* for prewarming.
- At large banquets, **operate with** a number of oven plate racks. Plates can be kept warm up to a maximum of 20 minutes using thermal covers; ideal is 15 minutes. You can rethermalize further batches during this period. This allows you to serve your guests with food all at the same time.
- Save your favorite rethermalization programs for standard plates in the rethermalization recipe book. This guarantees smooth running of banquets or your à la carte business.

Regeneration guidelines

The regeneration time and temperature are dependent on the number of dishes.

Model	With GN grate Dishes up to dia. 11 in (28cm)	Rethermalization temperature	Rethermalization time
<i>SpaceSaver™</i>	6	248-266°F 120-130°F	4-8 min.
<i>SpaceSaver™ Plus</i>	12	248-266°F 120-130°C	4-8 min.

Cleaning

CAUTION

Safety notes *To prevent damage to the appliance:*

- *Always turn appliance off before cleaning.*
- *Clean appliance after every use.*
- *Do not use a high-pressure water or steam cleaner to clean the appliance*
- *Do not use abrasive cleaners, or cleansers/sanitizers containing chlorine, bromine, iodine, or ammonia chemicals. These abrasives and chemicals deteriorate the stainless steel and shorten the life of the cabinet.*
- *Do not allow cleaning agent to remain inside the appliance longer than specified.*



To reduce the risk of fire, the appliance should be kept clean (if necessary after each cooking process) and free of grease. During some cooking processes, e.g. grilling chicken, a thick film of grease will form in the oven chamber and outside of the unit. This grease film increases the risk of fire.

Cleaning the outside of the unit

Wipe the outside of the unit with lukewarm water, a domestic washing up liquid detergent and a soft cloth. Do not use abrasives or a scouring sponge.

Cleaning the inside of the unit

The Manual Cleaning Program in the SpaceSaver™ helps the operator in cleaning the unit.

The “WaveClean” cleaning system automatically cleans the unit without any supervision.

Cleaning the door gasket

CAUTION

To prolong the life of the door gasket, keep the gasket clean and dry. Grease can deteriorate the gasket. Clean the door gasket during the cleaning process (WaveClean or manual cleaning) using lukewarm water and a standard detergent liquid before drying thoroughly.

Cleaning the door



To avoid burns, allow the unit to cool before cleaning.

CAUTION

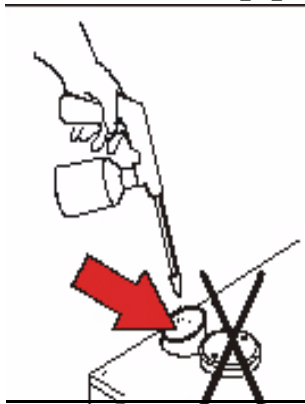
The glass panes are provided with a special infrared-reflective coating.

Do **not use abrasives or cloth** for cleaning.

Do not use grill cleaner, as it can cloud the surface of the glass.

Lime residue on the glass pane can be removed with vinegar or citric acid.

Cleaning the steam exhaust pipe



If the unit is not cleaned regularly with WaveClean and it is mostly used in convection mode for grilling, the exhaust pipe has to be cleaned to prevent clogging. Every time the machine is being cleaned manually, liquid detergent has to be sprayed into the exhaust pipe (see picture). No flushing with water is necessary. External pipes which are connected to the exhaust pipe have to be inspected regularly for clogging. If the combi-steamer is equipped with a hood, twice a year the connection pipe between the combi-steamer and the hood has to be removed and liquid detergent has to be sprayed into the exhaust pipe and into the hood opening. Use a liquid detergent with maximum 10% sodium or potassium hydroxide.

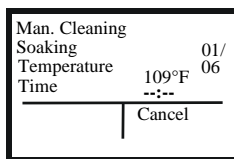
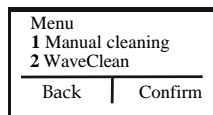
Manual cleaning

Preparation of the oven chamber

CAUTION

Remove baking trays, grids and containers from the unit before starting manual cleaning. These extra pieces will deflect the water and the cleaning process will be disrupted. Clean the trays, grids and pans separately, e.g. in a dishwasher.

Selecting manual cleaning



Turn unit on with the On/Off button and today's date shows in the display. Press the Left-Select button and display shows "Menu". Press the CombiDial to confirm Manual Cleaning and then start by pressing the Right-Select button **twice**.

If the unit is too hot, the machine is cooled automatically. Until the soaking temperature is reached, the display shows "--:--".

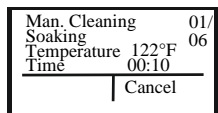
Until the soaking temperature is reached, the display shows the time as "--:--".

CAUTION

Do not spray cold water into the hot cooking space using a hand sprayer or onto the appliance door for cooling purposes. Sudden cooling can distort the interior of the unit and could cause the glass panel in the door to shatter.

See the Cool Down Mode in the Practical tips Section to cool the unit down quickly.

Soaking



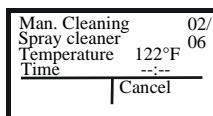
Once the unit temperature reaches 122°F (50°C), the display shows "Soaking" and the remaining time.

WARNING

Spraying cleaner



Always wear chemical splash goggles or face shield and protective rubber gloves when cleaning the unit. The cleaning solution is highly alkaline. Avoid splashing or other contact of the solution with your eyes or skin. Severe burns and possible blindness can result. Carefully read the instructions on the cleaner. If solution comes in contact with your eyes, rinse thoroughly with cool water and see a physician immediately. Additional breathing protection may be needed because of the fumes.



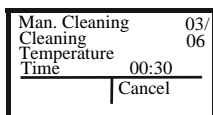
When soaking time is over “Spray cleaner” appears in the display. Open the door and spray the interior, the heat source and the fan wheel (via the openings in the ventilation guide plate) with cleaner



Do not operate the appliance without the fan cover in place, or personal injury could result. Disconnect the power to the unit when opening the fan cover, and after closing, lock the cover in place.

Cleaning

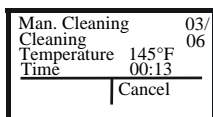
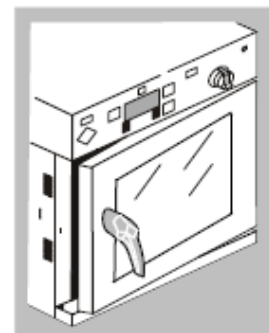
Timer starts after door is closed.



Do not leave the cleaner on any longer than stipulated in the program, or corrosion to the stainless steel could result

The actual cleaning process begins after 15 minutes of working-in time (Moist Heat Mode).

The cooking chamber is heated to 176°F (80°C) here. The display shows the current temperature and the remaining time..



Rinsing

When timer counts down to “0:00”, "Rinse chamber” shows in the display. Open the door and use the Manual Rinse (left Select Button) to thoroughly rinse the interior of the unit. Make sure to clean behind the air baffle. Then shut the door again.

Cleaning door seal

Clean the door seal as described in the section "Cleaning door seal". Then close the door again:

Drying

Drying is started automatically once the door has been closed (Dry Heat at 266°F or 130°C, 5 minutes). The cooking chamber is heated to 266°F here. The display shows the current temperature and the remaining time.

When the timer counts down to “0:00”, the buzzer sounds. Open the door and leave it open slightly until the next time it is used. This extends the life of the door gasket and prevents dampness building-up in the unit.

Deliming See Deliming Section of the Service Manual.

“WaveClean“ cleaning



WaveClean does not clean the door gasket. It must be cleaned separately. See Cleaning door gasket section.

"2-in-1" combination cartridge

"WaveClean" is an automatic cleaning system that cleans and rinses the cooking chamber with a combination cartridge ("2-in-1").

Only this original cartridge may be used for this purpose. We are not liable for damage caused by the use of other products.

Storage of cartridges

Store the cartridges in a locked place in accordance with the hazardous materials regulations. Store under 95°F (35°C), or room temperature, with lids down, and protected from dampness and direct sunlight.



Keep cartridges out of the reach of children.

Preparing the unit

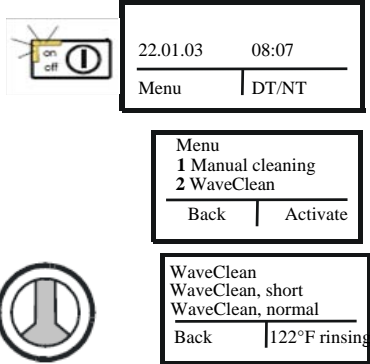


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-

- Before cleaning, check the floor drain for blockage, or water could overflow onto the kitchen floor.
- Remove all pans and grids from the unit before starting the “WaveClean” process, or damage to the pump could result.

Leave only the pan racks in the unit and close the door. Do not leave baking trays, grids or containers, but clean these separately, e.g. in the dishwasher. Containers collect the cleansing water and thus interrupt the cleaning cycle. This may cause the pump to run dry and might also damage it!

Select the cleaning level



Turn unit on by pressing the “On/Off” button. The button lights up and the display shows the start-up program.

Press the Left-Select button and “Cleaning Menu” shows in the display.

Turn the CombiDial to select “WaveClean” and and press to confirm the cleaning level:

- WaveClean, short: approx. 1.0 hour .
- WaveClean, normal: approx. 2.0 hours
- WaveClean, extra: approx. 3.0 hours

All programs require the same amount of water, despite the different cleaning times.

Cooking chamber too hot

"WaveClean" does not start until the cooking chamber has reached a temperature of 122°F (50°C). If the temperature is too high, the cooking chamber is **automatically** cooled. "Temperature too high" appears in the display

CAUTION

Do not cool the hot interior of the unit by spraying it with cold water or filling it with ice. Sudden cooling can distort the interior of the unit and could cause the glass panel in the door to shatter.

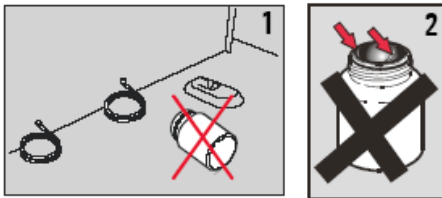
See the Cool Down Mode in the Practical Tips Section.

Insert cartridge

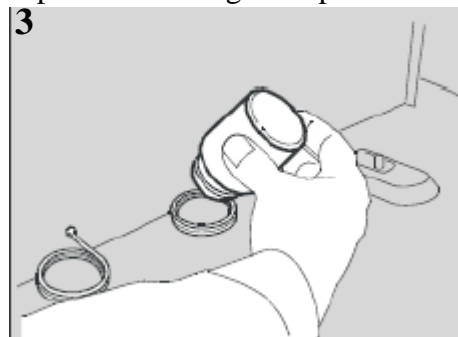
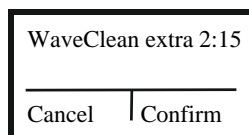
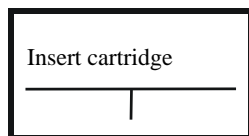
CAUTION

To prevent damage to the cartridge's wax seal:

- Put a cartridge in place only when a prompt appears in the display.
- Place a cartridge in the holder, do not put on the oven base [1].
- Only use cartridges with undamaged wax seals. If the wax seal is damaged, the cleaner or rinsing agent can enter the cleaning cycle prematurely or might not dissolve. A complete cleaning process may not take place.



After selecting a cycle, the display shows "Insert cartridge" after the oven chamber has reached the cleaning temperature. Unscrew the top of the cartridge and place the cartridge.



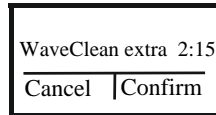
[3] in the Foldaway Cartridge Assembly..

Use only Henny Penny 2-in-1 cartridges.

Two cartridges can be used if unit needs more cleaning and "WaveClean extra" should be selected.

Start WaveClean

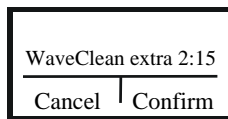
Close the door and then press the Right-Hand Select button. The display shows “WaveClean” and the time remaining as the timer counts down.



DO NOT open door during WaveClean operation, or burns or personal injury could result.

Cancel WaveClean

"This command automatically starts a Rinsing Cycle (duration: approximately 10 minutes). Loss of power also starts this cycle.

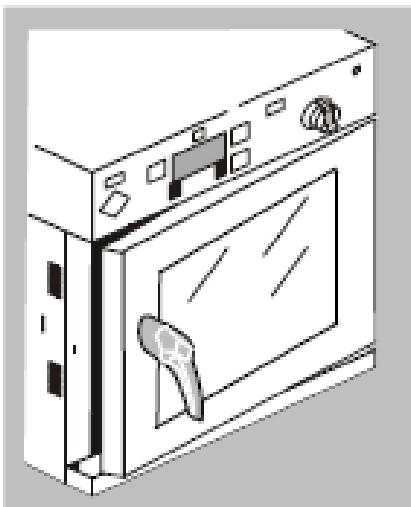
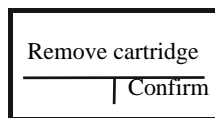


For safety reasons, the “WaveClean” program can only be ended with a Forced Rinse Cycle.

Note: There is a short time when the process cannot be interrupted (while the cartridge is being emptied)End “WaveClean“

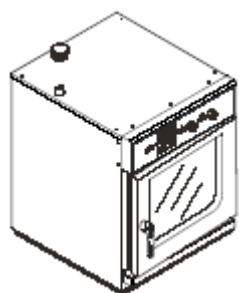
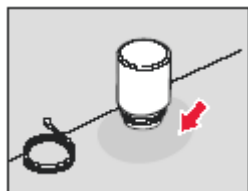
Completion of “WaveClean”

When cleaning is complete, the appliance switches off automatically. When restarted, the "Remove cartridge" request appears in the display. Open the door and remove the empty cartridge. Thoroughly rinse out any residual cleaner or rinser with the hand shower. Close the door again and confirm the removal of the cartridge with the Right-Side Select button.



If unit needs more rinsing, use the Manual Rinse (left Select Button). Leave door open to allow interior to dry completely and turn the power off.

"WaveClean" Problems



Problem	Possible cause	Remedy
<ul style="list-style-type: none"> Cartridges do not activate properly 	Appliance is tilted	Align appliance horizontally
	Power failure Appli. malfunction	Service
<ul style="list-style-type: none"> Residual cleaner and rinse water remain in the cartridge 	Cartridge too close to floor due to bent holder	Bend cartridge holder back into place
	Heater defective	Service
<ul style="list-style-type: none"> Rinse water activates with the cleaner 	Circulation pump defective	

Brown/black discolouration of the cooking chamber floor may occur below the cartridge. This discolouration is harmless and has no negative effects. Leave door open slightly until the next use. This extends the service life of the door seal and prevents stale moisture accumulating in the cooking chamber.

Information on "WaveClean®"

The Combisteamer can be operated up to 90 PPM (5 DH) without additional water treatment measures. Water with a total hardness greater than 0 PPM (0 DH), however, contains lime, which can build up in the cooking chamber over time.

Even if "WaveClean" cleaning or manual cleaning occurs comparatively infrequently, the quantity of lime deposited is so small that, from a technical standpoint, the appliance generally experiences no negative effects. White deposits (lime) can appear in the cooking chamber, however.

"WaveClean extra"

The "2-in-1" cleaning cartridge has been optimised for the removal of especially strong grease soiling and burnt-in soiling. It can only dissolve a certain amount of the lime residue. The cooking chamber can remain white with excessive quantities of lime.

In this case, regular cleaning with "WaveClean extra" (e.g. daily) should be carried out, even if the degree of soiling is low.

Water softening

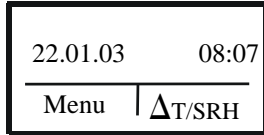
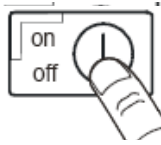
An additional measure for the prevention of lime deposits is the softening of the soft water to 0 PPM (0 DH).

Errors

Error message	Cause	Correction
No water	Water valve closed, appliance defective	Water valve open Contact customer service
Unit overheated	Appliance defect	Stop using appliance; Call Certified Service Agent
High limit	Appliance defect	Call Certified Service Agent
Fan high limit	Fan overheating. Defective cooling	Allow to cool down. Appliance can be used. Call Certified Service Agent
Electronics too warm	Defective cooling, ambient temperature too high	Appliance can be used, set a lower temperature. Call Certified Service Agent
Electronics too hot	See above	Appliance cannot be used any more Call Certified Service Agent
Food probe defective	Probe defective	Cooking programs without core temperature can still be used. Call Certified Service Agent
Chamber temperature probe defective	Probe defective	Cooking programs without core temperature can still be used. Core temperature probe is used as a replacement sensor. Do not introduce core temperature sensors into the products. The core temperature probe must remain inside the oven chamber. Call Certified Service Agent
Risk of freeze damage	Temperature <32°F (0°C)	Only operate the appliance at temperatures of <32°F (0°C) and above. Freezing may lead to cracks in pipes and components.
Battery empty	Backup battery empty Normal operating life 8 years	Settings are lost if the power fails. Otherwise, normal operation possible. Call Certified Service Agent
Carry out the configuration program.	The electronics were replaced without essential configuration being carried out.	Call Certified Service Agent Carry out the configuration program.
Drain probe defective	Temperature measurement for drain water defect. Cooling water is switched on intermittantly. Otherwise, normal operation possible	Call Certified Service Agent
HW-Fail Temp UREF0 too high	Core-temperature probe or keypad defective	Replace core-temperature probe or keypad, call customer service

CD = Customer service department

Resetting (initializing) the control electronics

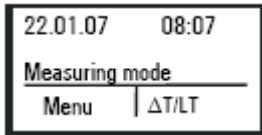


Program running errors (e.g. specified settings were not kept); can be corrected by resetting (initializing) the electronic controls. This resets the electronics to the start mode. The stored program will not be deleted.

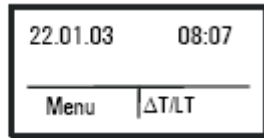
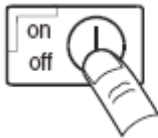
To reset the system, press and hold the On/Off button (with the appliance switched on) for approx. 8 seconds until the control electronics turn off.

The electronics will switch back on after approx. 10 seconds. The appliance is now in the start mode (standby) and the following appears in the start screen display

Measuring mode



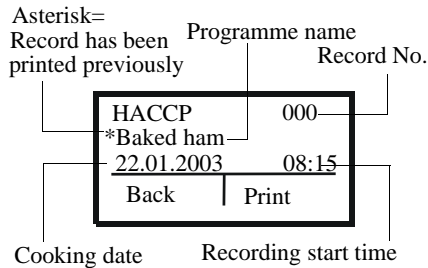
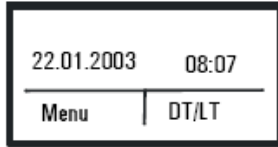
If when resetting the control electronics the "on/off" button is accidentally pressed for longer than 8 sec. with the appliance switched off, the electronics change into the measuring mode.



To deactivate the measuring mode again, the "on/off" button must be pressed for 20 sec. with the appliance switched off. Then the control electronics change to the normal operating mode again.

HACCP

Printing reports



The *SpaceSaver*™ stores up to 200 HACCP reports, depending on the number of program stages.

A laptop or a serial mini-printer¹ is used to produce the reports via the RS 232 serial interface. The maximum length of the RS 232 connecting cable must not exceed 3 m.

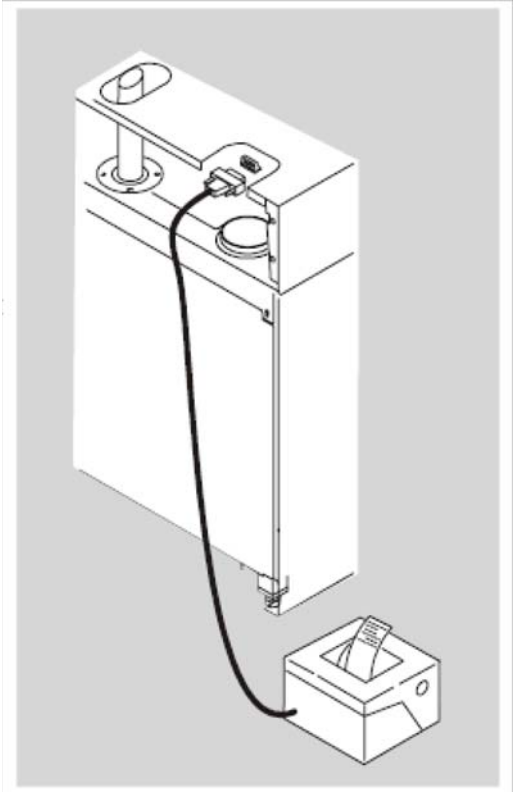
Use the Left-Select button to call up the menu in the display.

Select HACCP with the CombiDial and press to confirm.

The display shows the last report (latest) record entered marked as “000”. The higher the number, the older the report.

Breaks can occur between the report numbers in the HACCP memory. These are caused by cooking programs that take less than one minute, since these are not logged.

Press the Right-Select button to print the selected report.



1. Serial printer, 40 columns, RS 232 interface, Setting: 9600, N, 8.1

The HACCP report

A summary of the product core temperature settings will be printed out in hourly blocks. The cycle time (5, 10 or 15 min) is indicated after the information on the time.

Press and hold the Right-Select button to print the reports from the report selected to the latest ("000") report (day or week overview).

The data can also be exported to a PC as a text file. To do this, start up a terminal program installed in the PC (e.g. hyperterminal).

Serial No.: 01234567
 Appliance model: 6.1
 Date of printout: 23.06.2003
 Abbreviations: CM = Cooking mode,
 S = Moist, CD = Combi steaming,
 HC = Dry Heat R = Rethermalization,
 CT = Core temperature
 Cooking program: Right
 Cooking date: 19.06.2003 8:59
 End: 10:38
 Cooking time: 1:39

Cooking mode	Step No.	No.	CM	Temp		Time	
				Min	Max	CT	Nominal
		1	S	96	133	-	1:00 0:49
		2	CS	99	99	75	- 0:00
		3	CS	99	161	85	- 00:11
		4	CS	157	179	90	- 00:06
		5	HC	179	199	95	- 0:27

Core temperature values

8:59 45, 25, 30, 38, 45, 52 5 min.
 58, 62, 68, 72, 75, 78 5 min.
 09:58 82, 84, 89, 92, 93, 94 5 min.
 94, 95 5 min.

Special events

Door was opened




**Henny Penny Corporation
P.O.Box 60
Eaton, OH 45320**

**1-937-456-8400
1-937-456-8402 Fax**

**Toll free in USA
1-800-417-8417
1-800-417-8434 Fax**

www.hennypenny.com

*** f_Am05-046-B***

Henny Penny Corp., Eaton, Ohio 45320, Revised 08-01-08 

Manufactured by:

MKN Maschinenfabrik
Wolfenbüttel, Germany