Models
CSL
CSM
CSB
CSG

HENNY PENNY
Sure Chef® Combi-Steamers

Applications Manual and Cooking Guide

HENNY PENNY™
Global Foodservice Solutions

CSL
CSM
CSB
CSG

WARNING

This manual should be retained in a convenient location for future reference.

Wiring diagram for this appliance is located on the inside access door below the control panel.

Post in a prominent location, instructions to be followed in event user smells gas. This information shall be obtained by consulting the local gas supplier. (Gas units only)

DANGER

FOR YOUR SAFETY DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE. (Gas units only)

Keep appliance area free and clear from combustibles.

Do not obstruct the flow of combustion and ventilation air. Adequate clearance must be left all around appliance for sufficient air to the combustion chamber. (Gas units only)

WARNING

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

Dear Customer:

Congratulations on your decision to purchase a new Henny Penny Sure Chef® Combi-Steamer. In our opinion, you now possess the most advanced combi-steamer in the industry. As you begin to become familiar with its operation and more confident in the results, you will see the incredible potential for quality, variety and productivity this unit has to offer. In fact, this new concept in cooking may change your entire approach to hot food production.

The Sure Chef Combi-Steamer is not difficult to operate. But it is a fairly complex piece of equipment. We recommend a thorough study of this Application Manual. It is filled with information, suggestions and explanations that will help you achieve the potential of the unit. Keep the manual in a safe place, but accessible for easy reference.

Henny Penny products are known for their outstanding craftsmanship, leading edge technology and user-friendly operation. As a company, we believe in establishing a partnership with our customers that leads both parties to long-term success. In that spirit, we remain interested in any questions, comments, suggestions or ideas you may have concerning the combi-steamer you have purchased, as well as this manual.

We hope you enjoy good food and good profits with your new Sure Chef Combi-Steamer. Welcome to the world of imaginative cooking!

Henny Penny Corporation

800-417-8417

Table of Contents

Indication of Safety Warnings

Throughout this manual you will see the following words and symbols relating to important issues of personal safety and proper operation. Their usage is described here:

DANGER

The word DANGER indicates an imminent hazard which will result in highly serious injury, such as severe burns.

WARNING

The word WARNING is used to alert you to a procedure, that if not performed properly, may cause personal injury.

CAUTION

The word CAUTION is used to alert you to a procedure that, if not performed properly, may damage the equipment.

IMPORTANT

The word IMPORTANT is used to highlight especially important information

NOTE

The word NOTE is used to separate additional useful subject matter for the sake of clarity.

Glossary of Terms *for Sure Chef® Combi-Steamers*

For a better understanding of the settings, functions and general operation of Sure Chef Combi-Steamers as described in this manual, please familiarize yourself with the following terms, definitions and symbols.

Auto Flush–A built-in feature that periodically and automatically drains, flushes and refills the steam generator.

Cooking Mode–Any of several settings that produce a particular cooking medium or environment.

Steam Mode–Cooking by pressureless steam produced in the built-in steam generator and circulated by the high-speed fan.

Convection Mode–Dry heat produced by heating elements and circulated by the high speed fan.

Combination Mode–A cooking mode that combines steam and convection heat to produce a controlled environment.

Temperature Control–The method in which the cooking temperature in the cabinet is selected or changed.

Timer–A switch that sets and measures cooking time in the cabinet and stops the cooking process when time has elapsed.

Digital Readout (LED)–A lighted panel that displays the mode, function or other information about the operation of the unit.

Food Probe–A device that monitors the internal temperature of food product during cooking and stops the cooking process at a preselected temperature.

Probe Cooking–Any cooking method that utilizes the food probe.

Hand Held Sprayer–A spray nozzle for cleaning the unit that is attached to a retractable hose built into the unit and connected to the unit's water line.

Tender Steaming–A low temperature cooking method used to produce delicate foods with less air turbulence at temperatures between 86° (30°C) to 212°F (100°C).

Rethermalizing Mode–A cooking mode that quickly brings precooked (chilled) product back to serving temperatures and conditions.

Programming–A function that allows the storing of up to 99 sets of cooking steps (recipes in the unit's memory.

Steam Injection–A feature of the Convection mode that sprays a 4-second burst of water onto the heating elements to create a small amount of steam momentarily. Often used to help in the browning of certain foods.

Half-Energy–A function that shuts off half the heating elements in order to extend the cooking time for slow-cooked product.

Half-Fan Speed–A function that reduces fan speed by one-half for less turbulence.

Pulse Fan–A function that operates the fan intermittently: On for 10 seconds, off for 110 seconds. Often used in cooking delicate items.

Fully Digital–All control panel functions are controlled by computer and activated by touch pad buttons.

Delta T Cooking–A cooking technique that raises the cooking temperature in the cabinet in direct relationship to the rise in product's internal temperature. Often used in preparing large fresh or cured meat roasts.

Auto Reverse Fan–A function that operates the fan 2 minutes forward then 2 minutes reverse. Helps produce even browning.

Filterless Grease Extraction–A feature of the Auto Reverse Fan that removes grease from the air centrifugally, eliminating the need for grease filters.

SDHC–The acronym for Smart Digital Humidity Control. This is a control technology that automatically measures and regulates the level of humidity in the cooking cabinet.

Cool Down–A feature that quickly reduces the cabinet temperature by allowing the fan to operate while the door is open.

Forced Steaming–A cooking method in which convection heat is used to drive up cabinet temperatures, allowing steaming at temperatures between: 213° (101°C) and 265°F (130°C).

Sure Chef® Combi-Steamers – Features *at a glance*

Models

Sure Chef Combi-Steamers come in three electric models: CSB, CSM, and CSL; and one gas model, CSG.

Sizes

- Model Sizes are designated by the number of 12" x 20" x 2½" pans each is capable of holding.

- Electric models come in five sizes: 6 (6-pan, counter model), 10 (10-pan, counter model), 1020 (20-pan, counter model*), 20 (20-pan, floor model) and 40 (40-pan, floor model**).

- Gas models come in three sizes: 10 (10-pan, counter model), 12 (12-pan, counter model), and 20 (20-pan, floor model).

NOTE: *Features vary according to model type. Accessories tend to vary according to unit size. You may occasionally see references such as CSB/M/L-6. This means that the reference applies to all electric models in that size. A reference such as CSL-6/10/20/40 applies to the CSL model in all sizes.*

* *The 1020 model is designed for holding up to (10) full size 18" x 26" bun pans with adaptor, as well as (20) 12" x 20" x 2½ " steam pans.*

** *The 40 model is designed to hold up to (20) 18" x 26" bun pans with adaptor.*

Feature	CSL	CSM	CSB	CSG
Auto Flush	●	●	●	●
Auto-Reverse Fan	●	●	●	
Cooking Modes				
Combination	●	●	●	●
Convection	●	●	●	●
Rethermalizing	*In Combination*	●		●
Steam	●	●	●	●
Tender Steaming	*In Steam*	●		●
Cool-Down	●	●	●	
Delta-T Cooking	●			
Digital Readout	●	●		●
Dual Glass Door	●	●	●	
Electro-Mechanical Controls		●	●	●
Electronic Touch Pad Controls	●	●		
Filterless Grease Extraction	●	●	●	
Hand Held Sprayer	●	●	*Optional*	●
Half Energy	●	●		
Half Fan	●	●		
Probe Cooking	●	●	*Optional*	●
Programmable Operation	●	●		
Pulse Fan	●			
SDHC	*Full*	*Limited*		
Steam Injection	●	●		

All units require drain and water source.

Units can be ordered with left-hand hinged door, optional.

Please specify phase and voltage with order. These cannot be changed in the field.

Loading & Unloading

Your Sure Chef Combi-Steamer includes a Mobile Oven Rack that is integral to the unit's operation. All food product is loaded onto the oven rack which is then loaded into the cooking cabinet.

- **Floor Models**–CSB/M/L-20 and 40, and CSG-20, use Mobile Oven Racks designed to roll directly into cabinets. Door closes and seals around Mobile Oven Rack.

- **Counter Models**–CSB/M/L-6, 10 and 1020, and CSG-10 and 12 utilize Transport Carts upon which Mobile Oven Racks may be placed. The Transport Cart is rolled up to the unit, and the Mobile Oven Rack rolls directly into the cabinet.
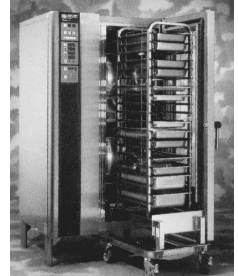
IMPORTANT: *During the loading and unloading process for counter models, lock front casters of Transport Cart when cart is stationary. Lock front wheels on Mobile Oven Rack with locking lever near right front wheel. Unlock wheels of Mobile Oven Rack ONLY when rolling in or out of unit. This will keep Mobile Oven Rack stable on Transport Cart.*
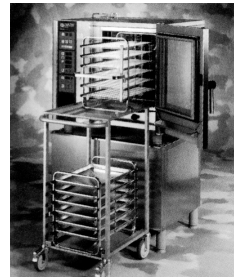
Full Loads

To Load

- Place food product on appropriate grids, pans and racks. Load onto Mobile Oven Rack.

- Preheat unit to desired temperature.

- Open door slightly until fan stops and heat dissipates. Open door fully with care.

- (Floor models) Roll loaded Mobile Oven Rack directly into unit.
  (Counter models) Roll loaded Mobile Oven Rack on Transport Cart up to unit.
  Lock front casters on Transport Cart to prevent movement. Release wheel lock on Mobile Oven Transport Cart and roll into unit.

- Shut door and begin cooking.

To Unload

- Signal will sound when cooking cycle is complete

- Open door slightly until fan stops and heat dissipates. Open door fully with care.

- (Floor models) Roll Mobile Oven Rack straight out of unit and to appropriate location.
  (Counter models) Roll Transport Cart up to unit, lock front casters on Transport Cart and roll Mobile Oven Rack out of unit and onto Transport Cart. Lock front wheel of Mobile Oven Rack. Release locked front caster on Transport Cart and roll away from unit to appropriate location.

Partial Loads

Individual pans or racks of product can be easily loaded or unloaded while the unit is in operation.

- Open door slightly until fan stops and heat dissipates. Open door fully with care.

- Load or unload pans or racks directly to or from Mobile Oven Rack in unit. It is not necessary to remove Mobile Oven Rack.

- Shut door. Cooking process continues automatically.

DANGER

Opening Door During Operation

Open door slightly to allow hot steam and/or vapors to escape. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result. When steam and/or heat has dissipated open door fully with care. Escaping hot steam and/or vapors can cause serious burns. Interior surfaces extremely hot, including pans, grids and oven racks. To prevent burns, allow unit to cool, or use appropriate heat resistant protective mitt or pad when handling.

Tips

- No flavor transfer occurs during cooking, so consider load by the type of cooking mode (Steam, Convection, Combination) being used.

- When cooking for longer periods, or on Continous cooking, load items that will be done sooner toward the front of the rack. These can be removed individually when done.

- For greatest efficiency, try to cook with full loads. In general, cooking times and temperatures are not affected by the quantity of product in the cooking cabinet.

- When loading roasts, or large cuts of meat, place product directly on racks and load near the bottom of the Mobile Oven Rack. Load an empty pan directly beneath roast to catch drippings and roast bones.

- For counter models, consider ordering Combi-Steamer Base Units. Several styles are available that include enclosed pan storage for convenient access to pans, grids and racks.

Sure Chef® Combi-Steamer models CSL-6/10/1020/20/40

1 ON/OFF switch
2 ON indicator light (green)
3 Message display
   • NO WATER warning–check water supply
   • Displays steam exhaust flap position
   • Displays SDHC humidity level
   Cooking mode selection key (lighted display indicates the selected mode)
4 STEAM mode–86°F to 266°F (30°C to 130°C)
   • Normal steaming, pre-set at 212°F (100°C)
   • Tender Steaming 86°F to 212°F (30°C to 100°C)
   • Forced steaming, 213°F to 266°F (101°C to 130°C)
   • Light ring around Steam key flashes when cabinet temperature exceeds
     pre-selected temperature by 20°F (10°C)
5 COMBINATION mode–86°F to 575°F (30°C to 300°C)
   • Pre-set to 320°F (160°C) and 100% SDHC
   • Control humidity with SDHC function (7)
   • Rethermalize in this mode
6 CONVECTION mode–86°F to 575°F (30°C to 300°C)
   • Pre-set to 320°F (160°C) and 100% SDHC
   • Reduce humidity with SDHC function (7)
7 SDHC Smart Digital Humidity Control
   • Six possible moisture levels from 100% to 0%
   • Control humidity in Combination mode
   • Reduce humidity (from cooking product) in Convection mode
8 CABINET TEMPERATURE indicator key
   • Press to indicate temperature selection. Adjust and select with SELECT arrow keys (16)
   • Press and hold to display actual cabinet temperature
   • Key lights up during preheating
9 Interior cabinet temperature display
10 TIMER activation key
   • Press to activate cook time. Adjust and select with SELECT arrow keys (16)
11 COOKING TIME display
   • Selected time (0 to 24 hr) displayed with period between hours and minutes. When
     timer selection is activated, period flashes. Actual cooking time remaining is displayed
     with flashing colon between hours and minutes.
12 PROBE COOKING activation key
   • Press to activate Probe Cooking function. Adjust and select food internal "done"
     temperature range from 68°F to 210°F (20°C to 99°C) using SELECT arrow keys (16).
   • Upon reaching "done" temperature, audio signal sounds and unit shuts off automatically
13 Actual food probe temperature display
14 Pre-selected "done" temperature display
15 Continuous Run key
16 SELECT arrow keys for temperature, time and food probe temperature
17 PROGRAM activation key
   • Press to enter programming function and display program number
18 Program number (1 to 98 for cooking programs, plus number 99 pre-programmed for cleaning)
19 Program stage (1 to 9 intervals)
20 Program START key
21 Program SELECT arrow keys
22 SPECIAL FUNCTIONS activation key (press to display)
23 STEAM INJECTION
   • Four-second burst of steam in Convection mode between 250°F (120°C) and 480°F (250°C)
24 PULSE FAN
   • Fan runs ON 10 seconds, OFF 110 seconds
25 HALF-FAN SPEED
26 COOL DOWN
   • Fan continues to operate when door is open, reducing cabinet temperature rapidly
27 DELTA-T Cooking
28 HALF-ENERGY
29 Unit serial number
   Please refer to this number when requesting service

Control Panel Functions *at a glance*

Sure Chef® Combi-Steamer models CSM-6/10/1020/20/40

1. ON indicator light (green)
2. Message display
   - NO WATER warning–check water supply
   - Displays steam exhaust flap position
3. Mode selection switch (lighted display indicates the selected mode)
4. STEAM mode–212°F (100°C)
   - For steaming, stewing, blanching, preserving, etc.
   - 212°F (100°C), and 100% humidity
   - Steam Mode LED flashes when cabinet temperature exceeds 239°F (115°C) in Steam mode
5. CONVECTION mode–86°F to 575°F (30°C to 300°C)
   - For roasting, baking grilling, etc
   - Pre-setting: flap closed
6. COMBINATION mode–86°F to 575°F (30°C to 300°C)
   - For Combi-Steaming instead of roasting and glazing or baking with moisture
   - Forced Steaming between 213°F to 266°F (101°C to 130°C)–firm vegetables or potatoes are cooked more quickly
   - Pre-setting: flap closed
7. TENDER STEAMING mode–86°F to 210°F (30°C to 99°C)
   - For blanching, poaching, simmering, soaking, vacuum cooking
   - Pre-setting: flap closed
   - Message display flashes when cabinet temperature exceeds pre-selected temperature by 20°F (10°C)
8. RETHERMALIZING mode–86°F to 575°F (30°C to 300°C)
   - For reheating pre-cooked (chilled) food
   - Pre-setting: Flap closed
9. PROGRAM function
   - Create and store up to 99 cooking programs of 9 steps each
10. CABINET TEMPERATURE indicator key
    - Key lights up during preheating
    - Press key to display cabinet temperature
11. TEMPERATURE SELECTION dial
12. TEMPERATURE DISPLAY
    - Displays selected cooking temperature
    - Displays cabinet temperature when CABINET TEMPERATURE key is pressed
13. TIMER activation key
    - Select time using the TIMER/PROBE COOKING dial (15)
    - Press key to activate timer
14. COOKING TIME display
    - Shows actual cooking time remaining
15. TIMER/PROBE COOKING dial
    - Set TIMER for 0 minutes to 120 minutes, press TIMER activation key (13)
    - Set PROBE temperature from 68°F to 210°F (20°C to 99°C), press PROBE COOKING key (16)
    - Select "CR" for Continuous Run
16. PROBE COOKING key
    - Select food internal "done" temperature using TIMER/PROBE COOKING dial (15)
    - Press key to select Probe Cooking function
17. PROBE COOKING display
    - Upper display indicates actual internal food temperature
    - Lower display shows pre-selected "done" temperature

Additional functions

18. HALF-FAN SPEED
19. STEAM INJECTION
    - Four-second burst of steam in Convection mode between 250°F (120°C) and 480°F (250°C)
20. COOL DOWN
    - Fan continues to operate when door is open, reducing cabinet temperature rapidly
21. HALF-ENERGY
22. SDHC (Smart Digital Humidity Control) operational in Convection, Combination and Rethermalizing modes
    - Pre-setting for all modes: flap closed
    - Lighted display: Left–moisture removed to 50% humidity. Right–all moisture removed (0%), flap open. No display–no moisture removed (100%), flap closed.

Programming (press and display)

23. Program number (1 to 99)
24. Program stage (1 to 9 intervals)
25. Program START key
26. Program SELECT arrow keys
27. Unit serial number
    Please refer to this number when requesting service

Control Panel Functions *at a glance*

Sure Chef® Combi-Steamer models CSB-6/10/1020/20/40

SURE CHEF
COMBI-STEAMER
CSB-6
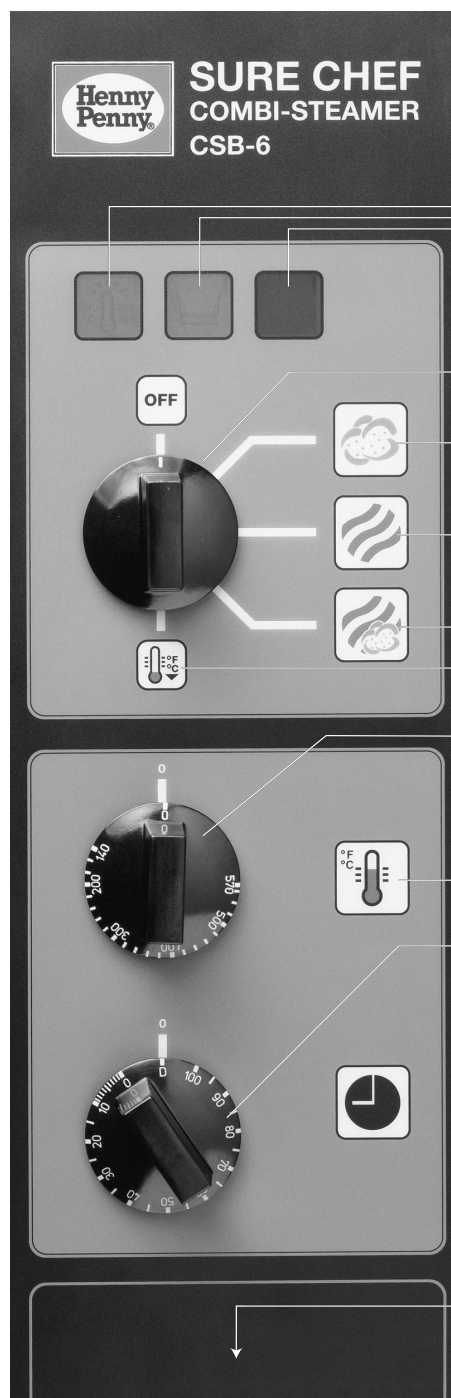
1 Warning light– lights red when cabinet temperature exceeds 239°F (115°C) in Steam mode
2 NO WATER Warning light–check water supply
3 ON indicator light (green)

4 Mode selection switch
5 STEAM mode–212°F (100°C)
 • For steaming, stewing, blanching, preserving...
6 CONVECTION mode–140°F to 575°F (60°C to 300°C)
 • For roasting, baking grilling, etc.
7 COMBINATION mode–140°F to 575°F (60°C to 300°C)
 • For Combi-Steaming instead of roasting and glazing or baking with moisture rethermalizing
 • Forced Steaming between 213°F to 266°F (101°C to 130°C)–firm vegetables or potatoes are cooked more quickly

8 Additional function COOL DOWN
 • Fan continues to operate when door is open, reducing cabinet temperature rapidly
9 TEMPERATURE selection dial
 • For convection and combination modes
10 HEAT ON indicator
 • Lights during preheating
11 TIMER (0 to 100 minutes)
 • Set on "D" for Continuous Run

12 FOOD PROBE DISPLAY 68°F to 210°F (20°C to 99°C)–(optional feature)
 • Indicates pre-selected food probe temperature
 • Indicates internal temperature of food
13 FOOD PROBE pre-selected TEMPERATURE switch–(optional feature)
14 Unit serial number
 Please refer to this number when requesting service.

Control Panel Functions *at a glance*

Sure Chef® Combi-Steamer models CSG-10/12/20

SURE CHEF
COMBI-STEAMER
CSG-20

1   Warning light–lights red when cabinet temperature exceeds 239°F (115°C)
2   NO WATER warning light (red)–check water supply
3   ON indicator light (green)

4   Digital COOKING/PROBE TEMPERATURE display–actual cabinet
    or internal food/probe temperature
5   PROBE COOKING indicator display

6   Mode selection switch (lighted display indicates the selected mode)
7   STEAM mode–212°F (100°C)
    • For steaming, stewing, blanching, preserving, etc.
8   CONVECTION mode–86°F to 575°F (30°C to 300°C)
    • For roasting, baking grilling, etc
9   COMBINATION mode–86°F to 575°F (30°C to 300°C)
    • For Combi-Steaming instead of roasting and glazing or baking with moisture
    • Forced Steaming between 213°F to 266°F (101°C to 130°C)–firm vegetables
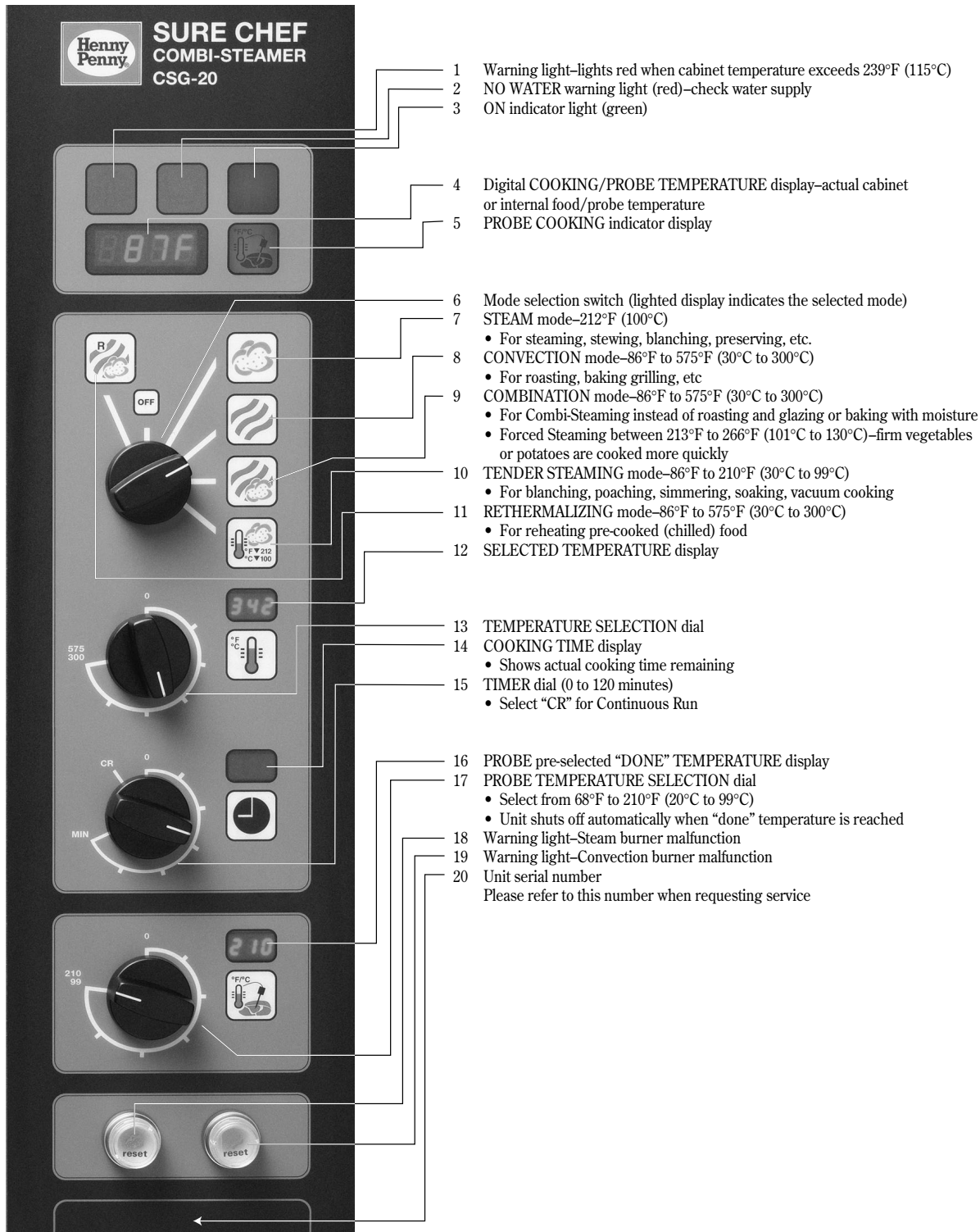   or potatoes are cooked more quickly
10 TENDER STEAMING mode–86°F to 210°F (30°C to 99°C)
    • For blanching, poaching, simmering, soaking, vacuum cooking
11 RETHERMALIZING mode–86°F to 575°F (30°C to 300°C)
    • For reheating pre-cooked (chilled) food
12 SELECTED TEMPERATURE display

13 TEMPERATURE SELECTION dial
14 COOKING TIME display
    • Shows actual cooking time remaining
15 TIMER dial (0 to 120 minutes)
    • Select "CR" for Continuous Run

16 PROBE pre-selected "DONE" TEMPERATURE display
17 PROBE TEMPERATURE SELECTION dial
    • Select from 68°F to 210°F (20°C to 99°C)
    • Unit shuts off automatically when "done" temperature is reached
18 Warning light–Steam burner malfunction
19 Warning light–Convection burner malfunction
20 Unit serial number
    Please refer to this number when requesting service

Basic
Operations

Cooking Modes

CSL models have three basic cooking modes:

Steam Mode   **Convection Mode**   **Combination Mode**

Fully digital operation of the CSL offers a wider range of control within these modes. Therefore...

Tender Steaming
is accomplished in the Steam Mode.

Rethermalizing
is accomplished in the Combination Mode.
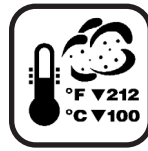
CSM models have five basic cooking modes:

Steam Mode   **Convection Mode**   **Combination Mode**   **Tender Steaming Mode**   **Rethermalizing Mode**

CSB models have three basic cooking modes:

Steam Mode   **Convection Mode**   **Combination Mode**

CSG models have five basic cooking modes:

Steam Mode   **Convection Mode**   **Combination Mode**   **Tender Steaming Mode**   **Rethermalizing Mode**

Cooking Modes *(continued)*

CSL

Steam mode–*for moist heat*

The steam generator produces hygienic steam and releases it pressureless into the cooking cabinet where it is is circulated at high speeds by the fan. The unit's control system allows only as much steam into the cabinet as the food is able to absorb. The cooking temperature in this mode can be regulated from 86°F (30°C) to 265°F (130°C) to accomplish Tender Steaming as well as normal steaming.

Convection mode–*for dry heat*

Powerful heating elements heat the air inside the cabinet. The fan circulates this hot, dry air evenly throughout the interior. Temperature can be regulated precisely between 86°F (30°C) to 575°F (300°C)

- Cooking environment can be manipulated extensively with additional functions and SDHC.

CSM

Steam mode–*for moist heat*

The steam generator produces hygienic steam and releases it pressureless into the cooking cabinet where it is is circulated at high speeds by the fan. The unit's control system allows only as much steam into the cabinet as the food is able to absorb. The cooking temperature in this mode is fixed at 212°F (100°C).

Convection mode–*for dry heat*

Powerful heating elements heat the air inside the cabinet. The fan circulates this hot, dry air evenly throughout the interior. Temperature can be regulated precisely between 86°F (30°C) to 575°F (300°C)

- Cooking environment can be manipulated extensively with additional functions and SDHC.

CSB

Steam mode–*for moist heat*

The steam generator produces hygienic steam and releases it pressureless into the cooking cabinet where it is is circulated at high speeds by the fan. The unit's control system allows only as much steam into the cabinet as the food is able to absorb. The cooking temperature in this mode is fixed at 212°F (100°C).

Convection mode–*for dry heat*

Powerful heating elements heat the air inside the cabinet. The fan circulates this hot, dry air evenly throughout the interior. Temperature can be regulated precisely between 140°F (60°C) to 575°F (300°C)

CSG

Steam mode–*for moist heat*

The steam generator produces hygienic steam and releases it pressureless into the cooking cabinet where it is is circulated at high speeds by the fan. The unit's control system allows only as much steam into the cabinet as the food is able to absorb. The cooking temperature in this mode is fixed at 212°F (100°C).

Convection mode–*for dry heat*

A powerful heat exchanger heats air through an indirect process–exhaust fumes cannot enter the cooking cabinet. The fan circulates this hot, dry air evenly throughout the interior. Temperature can be regulated precisely between 86°F (30°C) to 575°F (300°C).

Combination mode–*for variable temperature moist heat*

The unit's control system combines both Steam and Convection modes to create a humid cooking environment at temperatures higher or lower than 212°F (100°C). Temperatures can be selected from 86°F (30°C) to 575°F (300°). Cooking environment remains at optimal humidity to prevent food from drying out.

- Cooking environment can be manipulated extensively with additional functions and SDHC.
- Rethermalizing is accomplished in this mode at 60% SDHC or less.
- Cooking Modes can be used individually, in sequence or in any combination to achieve desired results.

Combination mode–*for variable temperature moist heat*

The unit's control system combines both Steam and Convection modes to create a humid cooking environment at temperatures higher or lower than 212°F (100°C). Temperatures can be selected from 86°F (30°C) to 575°F (300°C). Cooking environment remains at optimal humidity to prevent food from drying out.

- Cooking environment can be manipulated extensively with additional functions and SDHC.

Tender Steaming mode–*for low temperature moist heat*

In this mode, an automatic sensor keeps the pre-selected temperature constant within a moist cooking environment. Temperatures can be selected from 86°F (30°C) to 210°F (99°C). Temperature may vary +/- 3½°F (1°C)

Combination mode–*for high temperature moist heat*

The unit's control system combines both Steam and Convection modes to create a humid cooking environment at temperatures higher than 212°F (100°C). Temperatures can be selected from 140°F (60°C) to 575°F (300°C). Cooking environment retains 100% humidity to prevent food from drying out.

- Cooking Modes can be used individually, in sequence or in any combination to achieve desired results.

Combination mode–*for variable temperature moist heat*

The unit's control system combines both Steam and Convection modes to create a humid cooking environment at temperatures higher than 212°F (100°C). Temperatures can be selected from 86°F (30°C) to 575°F (300°C). Cooking environment remains at optimal humidity to prevent food from drying out.

Tender Steaming mode–*for low temperature moist heat*

In this mode, an automatic sensor keeps the pre-selected temperature constant within a moist cooking environment. Temperatures can be selected from 86°F (30°C) to 210°F (99°C). Temperature may vary +/- 3 ½°F (1°C)

Cooking Modes *(continued)*

Rethermalizing mode–*for optimum reheating*

This is a specialized mode that combines moist and dry heat to create the ideal environment for reheating previously cooked foods. Rethermalizing restores the look, taste and temperature of food without drying or water marks. Temperatures can be selected from 86°F (30°C) to 575°F (300°C).

- Cooking environment can be manipulated extensively with additional functions and SDHC.
- Humidity is limited to a maximum of 60%.
- Cooking Modes can be used individually, in sequence or in any combination to achieve desired results.

Rethermalizing mode–*for optimum reheating*

This is a specialized mode that combines moist and dry heat to create the ideal environment for reheating previously cooked foods. Rethermalizing restores the look, taste and temperature of food without drying or water marks. Temperatures can be selected from 86°F (30°C) to 575°F (300°C)

- Cooking Modes can be used individually, in sequence or in any combination to achieve desired results.
- Humidity is controlled to approximately 60%.

Steam Mode *moist heat at 212°F (100°C)*

Advantages

- Extremely short preheating time
- Excellent food consistency
- Conserves nutrients, color
- No added fats or oils
- Cook different products at same time with no taste transfer
- Can be partially unloaded for serving convenience
- No need to boil water in pots

Cooking examples

- Cooking preparations
  Tomatoes concasees, garnish, mushrooms, blanched vegetables for stuffing, peeling, etc.
- Starters, appetizers
  Scrambled, poached or boiled eggs; vegetable pate, asparagus, stuffed vegetable, canneloni
- Entrees
  Cooked beef, ham, turkey legs, steamed fish, chicken breasts
- Sides
  Rice, dumplings, pasta, fresh and frozen vegetables, boiled potatoes

Cooking methods

- Steaming
- Stewing
- Blanching
- Poaching
- Simmering
- Soaking
- Thawing
- Rethermalizing
- Preserving

Steam Mode *moist heat at 212°F(100°C) – (continued)*

CSL

Operation

- Turn unit on
- Select STEAM mode and select CR

- Preheat until "warm-up" control light goes out. Temperature will remain at 212°F (100°C).

- Load mobile oven rack, place or roll into cabinet

Setting

- Select TIMER and set desired cooking time OR select PROBE COOKING and set desired probe "done" temperature OR select continuous operation

 or or

CSM

Operation

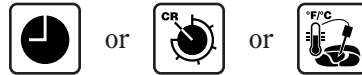- Set on STEAM mode, activate TIMER and set on CR

- Preheat until "warm-up" control light goes out. Temperature will remain at 212°F (100°C).

- Load mobile oven rack, place or roll into cabinet

Setting

- Set desired cooking time and activate TIMER OR set on continuous operation OR set desired probe "done" temperature and activate PROBE COOKING

 or or

CSB

Operation

- Set on STEAM mode, and set TIMER on Continuous Run

 D

- Preheat until window is misted over. Temperature will remain at 212°F (100°C).
- Load mobile oven rack, place or roll into cabinet

Setting

- Set desired cooking TIME OR continuous operation OR set desired PROBE (optional) "done" temperature

 or **D** or

CSG

Operation

- Set on STEAM mode, set TIMER on CR

- Preheat until "warm-up" control light goes out. Temperature will remain at 212°F (100°C).

- Load mobile oven rack, place or roll into cabinet

Setting

- Set desired cooking TIME OR set on continuous operation OR set desired PROBE "done" temperature

 or or

Unload

When done, open door slightly until fan stops and steam dissipates. Open door fully to remove pans. Unit automatically shuts off when door is opened.

Unload

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Unload

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DANGER

Opening Door During Operation

Open door slightly to allow hot steam and/or vapors to escape. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result. When steam and/or heat has dissipated open door fully with care. Escaping hot steam and/or vapors can cause serious burns. Interior surfaces extremely hot, including pans, grids and oven racks. To prevent burns, allow unit to cool, or use appropriate heat resistant protective mitt or pad when handling.

CSL
CSM
CSB
CSG

Tips

- Determine which foods can be cooked together for the greatest efficiency. This is best done by considering the cooking modes and temperatures. Keep in mind that fish, meat, vegetables, fruit, etc can be cooked at the same time because there is no flavor transfer.

- Potatoes should always be cooked in perforated pans. This allows steam to circulate for faster, more even cooking.

- In general, two shallower pans are better than one deeper pan. This avoids bruising.

- Dumplings should be placed in shallow pans not too close together.

- Rice is the only type of food to which water must be added prior to cooking. Longer soaking times mean shorter cooking times.

- Tomatoes can be skinned easily when steamed for 30 to 60 seconds, then chilled in cold water.

- Stock can be collected by inserting a container in the bottom of the mobile oven rack.

Convection Mode *dry heat 86°F to 575°F (30°C to 300°C)*

CSL
CSM
CSB
CSG

Advantages

- Powerful heating capability up to 575°F (300°C), even when fully loaded
- Fast pre-heating
- Convection heat for faster cooking than traditional methods
- Even heating for high quality food production
- Consistent cooking and even browning at any rack level
- No added fats or oils
- Cook different products at same time with no taste transfer
- Can be partially unloaded for serving convenience

Cooking examples

- Cooking preparations
  Roasted bones for stock, melting butter, thawing frozen prepared foods, etc.
- Starters, appetizers
  Meatballs, roast beef, grilled ham, sausage, chicken wings, quiches, tarts, breadsticks, bread, rolls, etc.
- Entrees
  Beef and pork roasts, ribs, chicken whole or piece, turkey, frozen lasagna, pizza, pizza rolls,
- Sides
  Baked potatoes, souffles
- Desserts
  Sponge cake, marble cake, puff pastries, frozen fruit puffs, pies, etc.

Cooking methods

- Broiling
- Roasting
- Baking
- Browning
- Thawing

CSL

Operation

- Turn unit on
- Select CONVECTION mode and select CR

- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet

Setting

- Select desired cooking TEMPERATURE

- Select TIMER and set desire cooking time OR select PROBE COOKING and set desired probe "done" temperature OR select continous operation

CSM

Operation

- Set on CONVECTION mode, activate TIMER and set on CR

- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet

Setting

- Set desired cooking TEMPERATURE

- Set desired cooking TIME and activate timer OR set on continuous operation OR set desired probe "done" temperature and activate PROBE COOKING

CSB

Operation

- Set on CONVECTION mode, and set TIMER on Continuous Run

- Preheat until set temperature is reached

- Load mobile oven rack, place or roll into cabinet

Setting

- Set desired cooking TEMPERATURE 140°F to 575°F (60°C to 300°C)

- Set desired cooking TIME OR continuous operation OR set desired PROBE (optional) "done" temperature

CSG

Operation

- Set on CONVECTION mode, set TIMER on CR

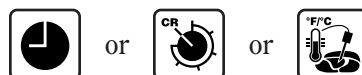- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet

Setting

- Set desired cooking TEMPERATURE

- Set desired cooking TIME OR set on continuous operation OR set desired probe "done" temperature

Unload

When done, open door slightly until fan stops and steam dissipates. Open door fully to remove pans. Unit automatically shuts off when door is opened.

Unload

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DANGER

Opening Door During Operation

Open door slightly to allow hot steam and/or vapors to escape. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result. When steam and/or heat has dissipated open door fully with care. Escaping hot steam and/or vapors can cause serious burns. Interior surfaces extremely hot, including pans, grids and oven racks. To prevent burns, allow unit to cool, or use appropriate heat resistant protective mitt or pad when handling.

CSL
CSM
CSB
CSG

Tips

Cooking times

Proper cooking times will vary depending on the quality, weight or size of the product. Generally, cooking time is not affected by the size of the load. However, avoid overloading grids or pans so air will circulate evenly around product.

Roasting, broiling

- Always preheat unit at 575°F (300°C), then set to desired temperature.
- For steaks, chops, cutlets, or loin cuts, 1/2" to 1" thickness is ideal.
- Cook on grids with drip pans below. This allows even browning on sides and bottom.
- Try to place similar sized product on same grids.

Browning, finishing

Preheat to 575°F (300°C), or until light goes out. After loading, set to desired temperature.

Fish

Do not cover with flour.

For whole fish, wrap tail in foil and support it from underneath with raw potatoes. Cook in previously unheated enameled pans.

Baking

- Preheat to baking temperature. In general, Combi-Steamer baking temperatures will be 70°F to 80°F (20°C to 25°C) LOWER than traditional ovens.
- When baking bread and rolls, use only every second rack. Baking trays should not be higher than 2 3/4" (7.0 cm).
- When baking frozen prepared food items, preheat to 575°F (300°C), do not defrost. Then set to desired baking temperature, load and begin.
- Defrost frozen bread dough and let rise for a short time before baking.
- When baking full loads of "wet" product (frozen or dough), remove built-up humidity with SDHC* or open door briefly.

> **☀ DANGER**
>
> ### Opening Door During Operation
>
> Open door slightly to allow hot steam and/or vapors to escape. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result. When steam and/or heat has dissipated open door fully with care. Escaping hot steam and/or vapors can cause serious burns. Interior surfaces extremely hot, including pans, grids and oven racks. To prevent burns, allow unit to cool, or use appropriate heat resistant protective mitt or pad when handling.

*Available on CSL and CSM models, only

Combination Mode
For variable temperature moist heat, 86°F to 575°F (30°C to 300°C)

Advantages

- Fast preheating
- The ability to cook with steam at temperatures above 212°F (100°C)
- Less shrinkage of food due to dehydration
- More servings per uncooked pound
- Automatic basting
- Food retains more nutrients and flavor
- No added fats or oils
- Even heating for high quality food production
- Even heating for large meat portions
- Cook different products at same time with no taste transfer
- Consistent cooking and even browning at any rack level
- Can be partially unloaded for serving convenience

Cooking examples

- Cooking preparations
  Roasted bones for stock
- Starters, appetizers
  Quiche, pastas, bread, rolls (frozen), etc.
- Entrees
  Roast (beef, veal, pork, lamb) stuffed peppers, roast whole chicken, turkey legs, casseroles, lasagna, etc.
- Sides
  Potatoes au gratin, baked potatoes, frozen vegetables, baked apples, etc
- Desserts
  Yeast dough (choux pastry)

Cooking methods

- Combi-steaming
- Combi-baking
- Browning
- Braising
- Combi-roasting
- Glazing
- Basting

Combination Mode *for variable temperature moist heat – 86°F to 575°F (30°C to 300°C)*

CSL

Operation
- Turn unit on
- Select COMBINATION mode and select CR

- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet

Setting
- Select desired cooking TEMPERATURE

- Select TIMER and set desired cooking time OR select PROBE COOKING and set desired probe "done" temperature OR select continuous operation

or   or

CSM

Operation
- Set on COMBINATION mode, activate TIMER and set on CR

- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet

Setting
- Set desired cooking TEMPERATURE

- Set desired cooking TIME and activate timer OR set on continuous operation OR set desired probe "done" temperature and activate PROBE COOKING

or   or

CSB

Operation
- Set on COMBINATION mode, and set TIMER on Continuous Run

D

- Preheat until set temperature is reached

- Load mobile oven rack, place or roll into cabinet

Setting
- Set desired cooking TEMPERATURE 212°F to 575°F (100°C to 300°C)

- Set desired cooking TIME OR continuous operation, OR set desired PROBE (optional) "done" temperature

or   D   or

CSG

Operation
- Set on COMBINATION mode, set TIMER on CR

- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet
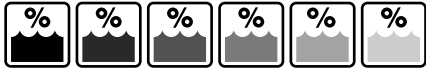
Setting
- Set desired cooking TEMPERATURE

- Set desired cooking TIME OR set on continuous operation OR set desired PROBE "done" temperature

or   or

• Use SDHC to achieve desired humidity, if necessary

Unload

When done, open door slightly until fan stops and steam dissipates. Open door fully to remove pans. Unit automatically shuts off when door is opened.

• Use SDHC to achieve desired humidity, if necessary

Unload

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DANGER

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In Combination Mode steam is not visible. Cabinet looks dry, but is full of steam. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result.

Combination Mode *(continued)*

Tips

- To ensure even cooking and browning, always cook roasts on grids with plenty of space around each roast for air to circulate.

- When practical, place meat grain parallel to the air circulation for even better results.

- Cook large, fat encrusted roasts in STEAM mode for the first one-third of the total cooking time. This helps seal in juices, flavors and nutrients, and reduces shrinkage.

- Condensation and juices can be collected in a pan under the roasts, to be used later with roasted bones for sauce stocks.

- Use chicken grid to roast whole chickens upright for even cooking and browning.

- When combi-steaming poultry and other juicy items, use SDHC* to regulate humidity in the cooking environment (CSL, CSM models, only).

*Available on CSL and CSM models, only

Tender Steaming *Low temperature steaming, 86°F to 210°F (30°C to 99°C)*

NOTE: *Tender Steaming not available on CSB models.*

Advantages

- Fast preheating
- Gentle steaming for a variety of delicate items.
- Excellent consistency and taste for different many kinds of meat and fish.
- Lower cooking temperatures mean less sticking and crumbling.
- Less shrinkage results in juicier, more attractive portions, especially when held in display merchandisers.
- No added fats or oils.
- Less cooking time required than traditional methods.
- The ability to select and maintain desired cooking temperature at lower levels.
- Can be partially unloaded for serving convenience

Cooking examples

- Cooking preparations
  Blanching bacon and ham, soups, sauces, stocks, fish garnishings, etc.
- Starters, appetizers
  Poached eggs, seafood, cakes, pates, etc.
- Entrees
  Fish (salmon, sole, orange roughy), poultry, vacuum cooking items, boneless chicken and turkey filets, beef filets, sausages, etc...
- Sides
  Vegetable casseroles
- Desserts
  Fruit, cheese cakes, delicate moist items, etc.

Cooking methods

- Scalding
- Poaching
- Thawing
- Proofing

- Simmering
- Blanching
- Rethermalizing

- Soaking
- Vacuum cooking
- Preserving

Tender Steaming *Low temperature steaming – 86°F to 210°F (30°C to 99°C)*

CSL

Operation

- Turn unit on
- Select STEAM mode and select CR

Setting

- Set desired Tender Steaming TEMPERATURE
  86°F to 210°F(30°C to 99°C)

- Preheat until set temperature is reached
  or "warm-up" control light goes out

- Select TIMER and set desired cooking time
  OR select PROBE COOKING and set desired probe
  "done" temperature OR select continuous operation

- Load mobile oven rack, place or roll into cabinet

or   or

CSM

Operation

- Set on TENDER STEAMING mode, activate TIMER
  and set on CR

Setting

- Set desired Tender Steaming TEMPERATURE
  86°F to 210°F(30°C to 99°C)

- Preheat until set temperature is reached
  or "warm-up" control light goes out

- Set desired cooking time and activate TIMER
  OR set on continuous operation OR set desired probe
  "done" temperature and activate PROBE COOKING

- Load mobile oven rack, place or roll into cabinet

or   or

CSG

Operation

- Set on TENDER STEAMING mode,
  set TIMER on CR

Setting

- Set desired Tender Steaming TEMPERATURE
  86°F to 210°F(30°C to 99°C)

- Preheat until set temperature is reached
  or "warm-up" control light goes out

- Set desired cooking TIME
  OR set on continuous operation
  OR set desired PROBE "done" temperature

- Load mobile oven rack, place or roll into cabinet

or   or

Unload

When done, open door slightly until fan stops and steam dissipates. Open door fully to remove pans.
Unit automatically shuts off when door is opened.

Notes

- When Tender Steaming, fan will operate intermittently in order to slow down the cooking process and maintain the selected cooking temperature (+/- 1/2°F).

- To maintain selected cooking temperatures below 149°F (65°C), fan operates at half-speed.

- When cabinet temperature falls below any selected Tender Steaming temperature, fan will automatically adjust to full speed until selected temperature is regained.

Unload

When done, open door slightly until fan stops and steam dissipates. Open door fully to remove pans.
Unit automatically shuts off when door is opened.

Notes

- When Tender Steaming, fan will operate intermittently in order to slow down the cooking process and maintain the selected cooking temperature (+/- 1/2°F).

- To maintain selected cooking temperatures below 149°F (65°C), fan operates at half-speed.

- When cabinet temperature falls below any selected Tender Steaming temperature, fan will automatically adjust to full speed until selected temperature is regained.

Unload

When done, open door slightly until fan stops and steam dissipates. Open door fully to remove pans.
Unit automatically shuts off when door is opened.

DANGER

Opening Door During Operation

Open door slightly to allow hot steam and/or vapors to escape. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result. When steam and/or heat has dissipated open door fully with care. Escaping hot steam and/or vapors can cause serious burns. Interior surfaces extremely hot, including pans, grids and oven racks. To prevent burns, allow unit to cool, or use appropriate heat resistant protective mitt or pad when handling.

Tips

Cooking times

The same principles for Steam mode apply. Generally, the lower the cooking temperature, the longer the cooking time.

Cooking temperatures

Approximate temperature ranges for some common items that can be Tender Steamed:

Soup garnishings:	167°F to 194°F (75°C to 90°C)
Fish, seafood:	149°F to 194°F (65°C to 90°C)
Pork, veal:	161°F to 167°F (72°C to 75°C)
Chicken/white meat:	167°F to 185°F (75°C to 85°C)
Chicken/dark meat:	176°F to 194°F (80°C to 90°C)
Poultry (other):	176°F (80°C)
Beef, lamb:	135°F to 165°F (58°C to 74°C)
Desserts:	149°F to 194°F (65°C to 90°C)

Seasoning

Season lightly. A food's natural food taste, as well as the taste of seasonings, is intensified by low temperature cooking. For this reason, also use less essences or reducing agents.

Texture, appearance

Tender Steaming is especially valuable in preparing certain foods for presentation in display merchandisers.

• Excellent color
• Firm structure for clean portioning
• Less shrinkage, for plump, taught skins
• Fewer and smaller "bursts", even when skin is damaged

Rethermalizing

Advantages

- Different food products can be reheated without being covered.
- Food can be cooked and then reheated and served hours later.
- Allows more time to prepare dishes and trays.
- Allows foodservice operation to run more efficiently.
- Perfect function for handling large, catered orders in off-peak hours.
- Rethermalize directly on plates or in pans.
- Reduced humidity prevents water drops from forming on plated food when rethermalized.

Cooking examples

- Starters, appetizers
  Pasta, vegetable dishes, macaroni & cheese, casseroles, spring rolls, etc
- Entrees
  Roasts, casseroles, frozen meat and fish, frozen entrees, ribs, leg of veal,
  stuffed vegetable dishes, etc.
- Sides
  Rice, potatoe pancakes, noodles, vegetables, potatoes, fries, etc.
- Desserts
  Fruit pies, cheese cakes, stewed fruit, etc.

Rethermalizing *(continued)*

CSL

Operation

- Turn unit on
- Select COMBINATION mode and select CR

Setting

- Select Rethermalizing TEMPERATURE

- Select TIMER and set desired cooking time OR select PROBE COOKING and set desired probe "done" temperature OR select continuous operation

or   or

- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet

CSM

Operation

- Set on RETHERMALIZING mode, activate TIMER and set on CR

Setting

- Set Rethermalizing TEMPERATURE
  Generally between 280°F (140°C) and 320°F (160°C)

- Set desired cooking TIME and activate timer OR set on continuous operation OR set desired probe "done" temperature and activate PROBE COOKING

or   or

- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet
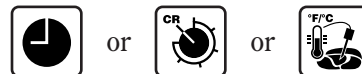
CSB

Operation

NOTE: CSB models do not have Rethermalizing mode. REHEATING is possible in any of the three operating modes – STEAM, CONVECTION, COMBINATION

- Set desired cooking MODE.
  This will depend on the type of food being reheated.

or   or

- Set TIMER on Continuous Run

D

- PREHEAT to the selected mode temperature

- Load mobile oven rack, place or roll into cabinet

CSG

Operation

- Set on RETHERMALIZING mode, set TIMER on CR

Setting

- Set Rethermalizing TEMPERATURE
  Generally between 280°F (140°C) and 320°F (160°C)

- Set desired cooking TIME
  OR set on continuous operation
  OR set desired PROBE "done" temperature

or   or

- Preheat until set temperature is reached or "warm-up" control light goes out

- Load mobile oven rack, place or roll into cabinet

- Use SDHC to achieve desired humidity, if necessary
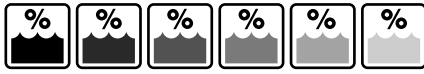
Notes

- Proper rethermalizing temperatures will vary according type of food.
- Normally, a setting of 60% SDHC or lower is preferred for Rethermalizing.
- Proper rethermalizing times depend on type of food, starting internal food temperature and number of plates or pans. Times should average from 5 to 8 minutes.
- When practical, consider using probe cooking to rethermalize. Ideal serving temperatures are easier to achieve.

- Use SDHC to achieve desired humidity, if necessary

Notes

- Proper rethermalizing temperatures will vary according type of food.
- Rethermalizing mode limits humidity to maximum of 60%. Therefore, SDHC range is limited to 60%, 30% or 0%.
- Proper rethermalizing times depend on type of food, starting internal food temperature and number of plates or pans. Times should average from 5 to 8 minutes.
- When practical, consider using probe cooking to rethermalize. Ideal serving temperatures are easier to achieve.

Setting

- Set reheating TEMPERATURE
  Generally between 280°F (140°C) and 320°F (160°C)

- Set desired cooking TIME
  OR set on continuous operation,
  OR set desired PROBE (optional) "done" temperature

  or **D** or

Notes

- Proper rethermalizing temperatures will vary according type of food.
- Humidity levels in both Steam and Combination modes will be 100%.
- Proper rethermalizing times depend on type of food, starting internal food temperature and number of plates or pans. Times should average from 5 to 8 minutes.
- When practical, consider using probe cooking to rethermalize. Ideal serving temperatures are easier to achieve.

Notes

- Proper rethermalizing temperatures will vary according type of food.
- Rethermalizing mode controls humidity to approximately 60%.
- Proper rethermalizing times depend on type of food, starting internal food temperature and number of plates or pans. Times should average from 5 to 8 minutes.
- When practical, consider using probe cooking to rethermalize. Ideal serving temperatures are easier to achieve.

CSL
CSM
CSB
CSG

DANGER

Unload

When done, open door slightly until fan stops and heat dissipates. Open door fully to remove pans. Unit automatically shuts off when door is opened.

Opening Door During Operation

Open door slightly to allow hot steam and/or vapors to escape. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result. When steam and/or heat has dissipated open door fully with care. Escaping hot steam and/or vapors can cause serious burns. Interior surfaces extremely hot, including pans, grids and oven racks. To prevent burns, allow unit to cool, or use appropriate heat resistant protective mitt or pad when handling.

Tips on Rethermalizing

- Reheat servings on plates, especially for large functions
- Special mobile oven rack
  - Designed to hold plates for rethermalization
  - Rolls in and out easily
  - Thermal cover available to keep plates warm for short periods, or during transport
- Make sure food is arranged evenly on plates
- Sauces–pour over product before reheating, or on side after reheating
- Program rethermalization settings for similar, recurring situations*
- Use SDHC to "fine tune" rethermalization to achieve desired results*

*Available on CSL and CSM models, only

Forced Steaming *High temperature steaming, 213°F to 266°F (101°C to 130°C)*

**CSL
CSM
CSB
CSG**

Advantages

- Creates an intensified cooking process
- Shorter cooking times
- Retains color, nutrients
- Less shrinkage

Cooking examples

- Potatoes, carrots, celery
- Frozen prepared foods

Tips

Cooking temperatures
Approximate temperatures for Forced Steaming items:

Celery:	230°F (110°C)
Carrots:	240°F (115°C)
Potatoes:	257°F (125°C)
Turnips, yams:	248°F (120°C)
Frozen lasagna:	248°F (120°C)
Frozen vegetables:	248°F (120°C)
Rice	248°F (120°C)

Forced Steaming *High temperature steaming, 213°F to 266°F (101°C to 130°C)*

CSL

Operation

- Turn unit on
- Select STEAM mode and select CR

Setting

- Select desired Forced Steaming TEMPERATURE
213°F to 266°F (101°C to 130°C)

- Preheat until set temperature is reached
or "warm-up" control light goes out

- Select TIMER and set desired cooking time
OR select PROBE COOKING and set desired probe
"done" temperature OR select continuous operation

- Load mobile oven rack, place or roll into cabinet

CSM

Operation

- Set on COMBINATION mode, activate TIMER
and set on CR

Setting

- Select desired Forced Steaming TEMPERATURE
213°F to 266°F (101°C to 130°C)

- Preheat until set temperature is reached
or "warm-up" control light goes out

- Set desired cooking time and activate TIMER
OR set on continuous operation OR set desired probe
"done" temperature and activate PROBE COOKING

- Load mobile oven rack, place or roll into cabinet

CSB

Operation

- Set on COMBINATION mode, and set TIMER
on Continuous Run

Setting

- Select desired Forced Steaming TEMPERATURE
213°F to 266°F (101°C to 130°C)

- Preheat until set temperature is reached

- Set desired cooking TIME
OR continuous operation
OR set desired PROBE (optional) "done" temperature

- Load mobile oven rack, place or roll into cabinet

CSG

Operation

- Set on COMBINATION mode, set TIMER on CR

Setting

- Select desired Forced Steaming TEMPERATURE
213°F to 266°F (101°C to 130°C)

- Preheat until set temperature is reached
or "warm-up" control light goes out

- Set desired cooking TIME
OR set on continuous operation
OR set desired PROBE "done" temperature

- Load mobile oven rack, place or roll into cabinet

CSL
CSM

Advantages

Control humidity to:
- Improve quality of foods with different textures and consistency
- Enable precise finishing of delicate items
- Cook a wide variety of foods at the same time, including sauces, stocks
- Achieve proper cooking intensity for doughy pastries

Increase humidity to:
- Achieve basting
- Retain foods natural flavors and nutrients
- Prevent dehydration for increased portions

Remove humidity to:
- Achieve browning
- Increase crispness and texture
- Maintain consistent environment when baking or roasting "wet" foods

Cooking examples
- Crisp crusts for roast chicken
- Tender consistency for beef and pork roasts, ribs, casseroles, meat loaf, etc.
- Even consistency for light breads, cakes, pastries, etc.
- Perfect browning for au gratin dishes, casseroles, fruit pastries, dumplings, etc.

Full SDHC – CSL Models

1
2
3
4
5
6

100%

0%

Limited SDHC – CSM Models

100%

50%

0%
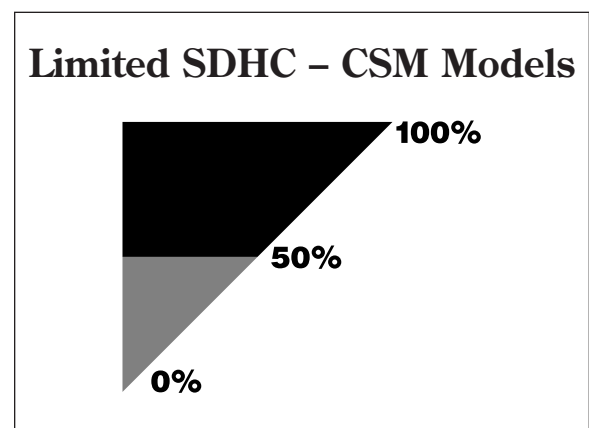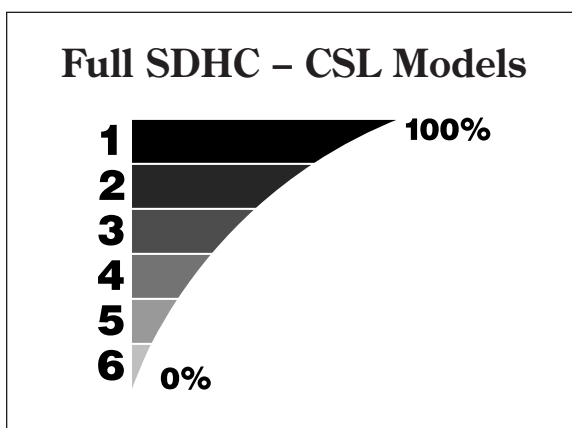
Using the SDHC function gives you the ability to maintain or adjust the humidity level when cooking in Convection or Combination modes. With this flexibility, you can create the ideal cooking environment for a wide range of items, at any stage in the cooking process.

Cooking Functions: SDHC *(continued)*
For controlling humidity in the cooking environment

CSL

Operation

• Select mode–either CONVECTION
  or COMBINATION
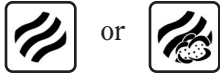
• Select desired SDHC level.
  Six levels are available:
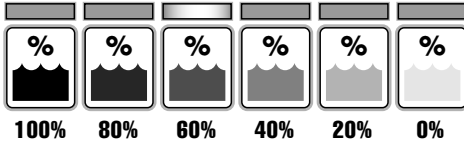
%	%	%	%	%	%
100%	**80%**	**60%**	**40%**	**20%**	**0%**

• Message display indicates exhaust flap position

Open   **Closed**
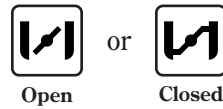
Setting

• Set desired cooking TEMPERATURE

• Select timer, probe cooking or continuous operation

CSM

Operation

• Select from CONVECTION, COMBINATION
  or RETHERMALIZING modes

• Set SDHC at 0%, 50% or 100%.

Message display indicates selection as follows:
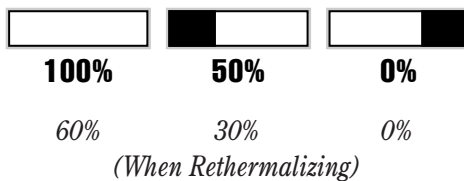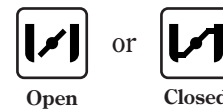
100%	50%	0%
60%	*30%*	*0%*

(When Rethermalizing)

• Message display indicates exhaust flap position

Open   **Closed**

Setting

• Set desired cooking temperature

• Set desired cooking TIME and activate timer
  OR set desired PROBE "done" temperature and activate
  probe cooking OR set on continuous operation

Control

- Press selected SDHC to display the actual humidity in the cooking cabinet
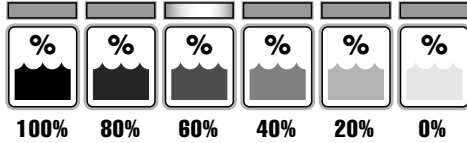
100%	80%	60%	40%	20%	0%

- Select SDHC function and/or change levels at any stage of the cooking process to achieve desired results

- Input SDHC levels along with times and temperatures when programming cooking procedures

Tips

- SDHC is most effective with food items that have high moisture content

- One of the best approaches to using SDHC is to observe the cooking process and react with the appropriate SDHC level. Use SDHC when:

  - Food perspires

  - Condensation forms on the pans

  - When browning needs to proceed more rapidly

  - Any situation in which humidity needs to be maintained or adjusted

- SDHC is also well suited to controlling the variable humidity that occurs when cooking fully or partially frozen meats, casseroles, entrees or side dishes.

- Use SDHC benefits, such as faster cooking times–especially for frozen items–to make your foodservice production schedule more efficient.

Control

- Select SDHC function and/or change levels at any stage of the cooking process to achieve desired results

%	0% Moist	50% Moist	100% Moist

- Input SDHC levels along with times and temperatures when programming cooking procedures

Tips

- SDHC is most effective with food items that have high moisture content

- One of the best approaches to using SDHC is to observe the cooking process and react with the appropriate SDHC level. Use SDHC when:

  - Food perspires

  - Condensation forms on the pans

  - When browning needs to proceed more rapidly

  - Any situation in which humidity needs to be maintained or adjusted

- SDHC is also well suited to controlling the variable humidity that occurs when cooking fully or partially frozen meats, casseroles, entrees or side dishes.

- Use SDHC benefits, such as faster cooking times–especially for frozen items–to make your foodservice production schedule more efficient.

Cooking Functions: Probe Cooking
For achieving precise "done" temperatures

Using the Probe Cooking function allows you to select the desired "done" temperature as well as the cooking temperature. The probe measures the food's actual internal temperature and displays it on the control panel.

Advantages

- Achieve precise, repeatable cooking results
- Prevents overcooking, less waste
- Results in less shrinkage, more portions
- Requires no constant observation of cooking process
- High food quality with improved production efficiency
- Eliminates the need for wasteful intrusive testing methods, such as needle, finger, fork or cut
- Built-in probe and control panel display makes Probe Cooking easy to accomplish

Cooking methods

Probe Cooking function can be used in all modes

Cooking examples

Roasts, meats, poultry, casseroles, frozen entrees, soups, etc. rethermalizing plated portions

CSL

Operation

Probe Cooking possible in all modes.

- Load mobile oven rack, place or roll into cabinet.
- Insert probe tip into the thickest portion of the meat or other food item on center rack

NOTE: *Be sure probe is clean and cool prior to insertion*

Setting

- Select desired cooking TEMPERATURE

- Select PROBE COOKING and set desired probe "done" temperature–68°F to 210°F (20°C to 99°C)
- Selected "done" temperature is displayed– timer does not operate

Control

- No operator control or observation is necessary
- Completion signal sounds when "done" temperature is reached. Unit shuts off automatically.
- Change previous settings when necessary

CSM

Operation

Probe Cooking possible in all modes.

- Load mobile oven rack, place or roll into cabinet.
- Insert probe tip into the thickest portion of the meat or other food item on center rack

NOTE: *Be sure probe is clean and cool prior to insertion*

Setting

- Set desired cooking TEMPERATURE

- Set desired probe "done" temperature and activate PROBE COOKING
- Selected "done" temperature is displayed– timer does not operate

Control

- No operator control or observation is necessary
- Completion signal sounds when "done" temperature is reached. Unit shuts off automatically.
- Change previous settings when necessary

CSB

Operation

NOTE: *Probe Cooking function and Food Probe are optional on model CSB*

Probe Cooking possible in all modes.

- Load mobile oven rack, place or roll into cabinet.
- Insert probe tip into the thickest portion of the meat or other food item on center rack

NOTE: *Be sure probe is clean and cool prior to insertion*

Setting

- Set desired cooking TEMPERATURE
- Set desired PROBE "done" temperature
- Selected "done" temperature is displayed– timer does not operate

Control

- No operator control or observation is necessary
- Completion signal sounds when "done" temperature is reached. Unit shuts off automatically.
- Change previous settings when necessary

CSG

Operation

Probe Cooking possible in all modes.

- Load mobile oven rack, place or roll into cabinet.
- Insert probe tip into the thickest portion of the meat or other food item on center rack

NOTE: *Be sure probe is clean and cool prior to insertion*

Setting

- Set desired cooking TEMPERATURE

- Set desired PROBE "done" temperature
- Selected "done" temperature is displayed– timer does not operate

Control

- No operator control or observation is necessary
- Completion signal sounds when "done" temperature is reached. Unit shuts off automatically.
- Change previous settings when necessary

CSL
CSM
CSB
CSG

Tips for Probe Cooking

- When roasting meat for sliced cold servings, food probe temperature should be set approximately 9°F (5°C) lower than normal "done" temperature because the roast continues to cook as it cools.

- A hot probe may sear the meat on contact, leaving a hole or scar when probe is removed. Always cool the probe prior to insertion.

- Probe "done" temperature can be changed or reset at any time in the cooking process.

Example

The fully-cooked internal temperature of a roast may be 176°F (80°C). But, you may wish to change modes or accelerate the cooking time when the internal temperature reaches140°F (60°C). At that point, change mode, increase cooking temperature and reset probe "done" temperature to the fully cooked setting.

CAUTION

Probe sensor may be extemely hot. When not in use, always place in holder. Do not let probe sensor hang loose outside the cooking cabinet. Remove probe sensor from food before unloading unit.

Probe Cooking Guide to "Doneness"

Meat	Probe "Done" Temp	Appearance
Beef		
Rare	130°F (55°C)	Dark, blood red
Medium rare	140°F (60°C)	Red meat, blood-red juice
Medium	145°F (63°C)	Light pink core
Well done	167°F to 189°F (75°C to 85°C)	Gray-brown throughout
Veal		
Fully cooked	155°F to 170°F (69°C to 77°C)	Reddish-brown to gray-white
Pork		
Medium	150°F (65°C)	Light pink
Well done	167°F to 176°F (75°C to 80°C)	Pale brown to gray-white
Cured	150°F (65°C)	Pale red-brown or nearly colorless
Lamb		
Fully cooked	165°F (74°C)	Gray to pale-red meat, clear juice
Mutton		
Fully cooked	165°F (74°C)	Pale gray meat, red juice
Poultry		
Fully cooked	185°F (85°C)	White meat, nearly colorless juice

Additional Functions: Cool Down
To reduce cabinet temperature quickly

COOL-DOWN is a convenience function that enables the fan to continue operating when the door is open, dissipating heat quickly.

Advantages

• Achieve rapid reduction in cabinet temperature when switching to a lower cooking temperature from a higher cooking or preheating temperature

• Saves time for efficient operation

• Prevents overcooking and dehydration

DANGER

Opening Door During Operation

Open door slightly to allow hot steam and/or vapors to escape. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result. When steam and/or heat has dissipated open door fully with care. Escaping hot steam and/or vapors can cause serious burns. Interior surfaces extremely hot, including pans, grids and oven racks. To prevent burns, allow unit to cool, or use appropriate heat resistant protective mitt or pad when handling.
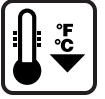
CSL

Operation

Cool-down may be used in any mode. Unit must be in operation with door closed.

⎰🍪⎱ ⎰〰⎱ ⎰🍪〰⎱

• Select SPECIAL FUNCTION

SF

• Select COOL-DOWN

⎰🌡°F°C▼⎱

• Open door with care

• Close door when desired cabinet temperature is achieved to continue cooking

Control

• Lighted display indicates Cool-Down function in operation

• Actual cabinet temperature is displayed with flashing digits

CSM

Operation

Cool-down may be used in any mode. Unit must be in operation with door closed.

⎰🍪⎱ ⎰〰⎱ ⎰🍪〰⎱ ⎰🍪〰⎱ ⎰🌡°F▼212 °C▼100⎱

• Select COOL-DOWN

⎰🌡°F°C▼⎱

• Open door with care

• Close door when desired cabinet temperature is achieved to continue cooking

Control

• Lighted display indicates Cool-Down function in operation

• Actual cabinet temperature is displayed with flashing digits

CSB

Operation

Unit must be in operation with door closed.

• Set mode switch to COOL-DOWN

⎰🌡°F°C▼⎱

• Open door with care

• Close door when desired cabinet temperature is achieved to continue cooking

Additional Functions: Steam Injection

To add immediate in Convection mode (248°F to 482°F (120°C to 250°))

CSL
CSM

STEAM INJECTION is a feature of the Convection mode that, when activated, sprays an immediate burst of water (up to 4-seconds) onto the heating elements to create a briefly humidified environment in the cooking cabinet. Often used to help in the browning of certain foods.

Advantages

- Improves rising and browning
- Adds slight glaze to pastries
- Prevents dehydration
- Additional control for fruit or meat pastries and other items with varied textures and consistency

Tips

- Steam Injection should be used sparingly. It is not meant as a means of maintaining a humidified cooking environment. Use Combination Mode or Forced Steaming.
- Generally, Steam Injection is used early in the baking process to improve dough and pastry rising

CSL

Operation

STEAM INJECTION can only be used in
CONVECTION mode

- Select SPECIAL FUNCTION

SF

- Press STEAM INJECTION and hold to activate.
  Display will light. Hold for up to 4 seconds per
  burst. Release to stop at any time.

- Repeat as desired

Settings

- Cooking temperature must be set between
  248°F to 482°F (120°C to 250°C)

NOTE: Steam Injection will not operate until temperature
        of 248°F (120°C) or higher is achieved.

- Can be used at any time in the cooking process

CSM

Operation

STEAM INJECTION can only be used in
CONVECTION mode

- Press STEAM INJECTION and hold to activate.
  Display will light. Hold for up to 4 seconds per
  burst. Release to stop at any time.

- Repeat as desired

Settings

- Cooking temperature must be set between
  248°F to 482°F (120°C to 250°C)

NOTE: Steam Injection will not operate until temperature
        of 248°F (120°C) or higher is achieved.

- Can be used at any time in the cooking process

Additional Functions: Half Fan Speed
For gentler cooking

CSL
CSM

HALF FAN SPEED is a feature that reduces fan speed by one-half for less turbulence in the cooking environment.

Advantages
- Maintains a gentle cooking environment
- Less turbulence when rising or finishing delicate pastries
- Even cooking and browning

Tips
- Use Half Fan Speed for baking large braided or shaped loaves
- Create an even gentler cooking climate by combining Half Fan Speed with the Pulse Fan function*.
- The Half Fan Speed function may be input into any cooking program

* Fan operates intermittently on Pulse Fan. See "Pulse Fan" operation, page 55.

CSL

Operation

HALF FAN SPEED can be used in any MODE

- Select desired cooking time, temperature and/or probe "done" temperature

  or

- Select SPECIAL FUNCTION

  SF

- Select HALF FAN SPEED.
  Display will light when activated.

CSM

Operation

HALF FAN SPEED can be used in any MODE

- Set desired cooking time, temperature and/or probe "done" temperature

  or

- Select HALF FAN SPEED.
  Display will light when activated.

Additional Functions: Half Energy
To reduce heat output and energy consumption

CSL
CSM

HALF ENERGY is a feature that efficiently reduces the unit's electrical operating requirement to about half of the energy normally used.

Advantages

- Saves on energy costs when operated during hours of peak power rates
- Helps control "slow" cooking process at desired lower temperatures

NOTE: *In most cases, cooking times will be longer when using HALF ENERGY feature.*

CSL

Operation
HALF ENERGY can be used in any MODE

- Select desired cooking time (adjusted for Half Energy), temperature and/or probe "done" temperature

or

- Select SPECIAL FUNCTION

SF

- Select HALF ENERGY.
  Display will light when activated.

E
1/2

CSM

Operation
HALF ENERGY can be used in any MODE

- Set desired cooking time (adjusted for Half Energy), temperature and/or probe "done" temperature

or

- Select HALF ENERGY.
  Display will light when activated.

E
1/2

Additional Functions: Pulse Fan
Fan operates intermittently

PULSE FAN is a control feature that runs the fan on and off at intervals.
It is available only on CSL models

Advantages

- Creates a gentler cooking environment, and promotes even cooking at lower temperatures.
- Conserves energy over longer cooking times
- Helps control climate for slow-cooking

Advantages of Slow Cooking

- Meat tenderizes as it cooks, releasing tastier juices
- Meat retains moisture and juices, resulting in less shrinkage and weight loss. This means more portions served per uncooked pound.
- Convenience of cooking and holding overnight, with no supervision necessary
- Energy efficient and economical way to prepare roasts

Cooking Examples

Consider using PULSE FAN when cooking medium to large cuts of meat, such as leg of lamb, beef roast, cured ham, leg of veal, pork roast, turkey.

Operation
PULSE FAN can be used in any MODE

- Select desired cooking time, temperature and/or probe "done" temperature

  or

- Select SPECIAL FUNCTION

  SF

- Select PULSE FAN.
  Display will light when activated.

Tips

- When cooking roasts, Pulse Fan can be used after the internal temperature reaches 140°F (60°C). At that point, it is not necessary to maintain the cooking temperature with the fan running constantly. The existing heat is enough to complete the cooking process with Pulse Fan operation.
- Pulse Fan can be programmed at any stage of the cooking process.
- For low temperature cooking, experiment by using Pulse Fan along with the Half Speed Fan and/or Half Energy features to create the desired gentle cooking environment for various items.
- Use SDHC to remove excess moisture from the cabinet.

Two-Stage Slow Cooking

1. After preheating, roast for a short time at temperatures from 248°F (120°C) to 356°F (180°C).
2. For the duration of the cooking process, set at low temperatures, from 135°F (57°C) to 194°F (90°C) using Pulse Fan. As the internal food temperature rises and the cabinet temperature decreases, both environments converge to a point at which cooking and holding can continue for up to 24 hours without overcooking.
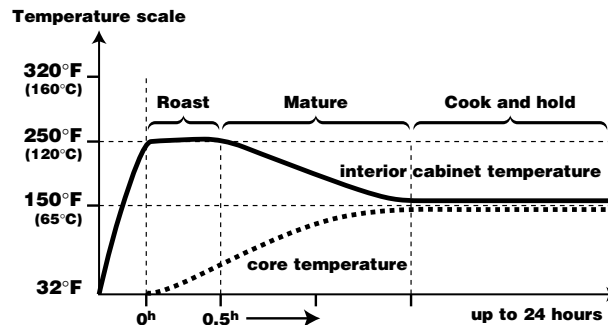
Simple Slow Cooking

Often done overnight, this process simply establishes the proper difference between cabinet and probe temperatures–the rest is automatic. As a general rule, set the cooking temperature 9°F (5°C) above the desired probe "done" temperature for the item you are cooking.

For example:

6 lb (2.7 kg) Roast Beef			
Probe "done" temperature	=	126°F	(52°C)
	+	9°F	(5°C)
Cooking temperature	=	135°F	(57°C)
Cooking time	=	5 hours	

When holding, reduce the cabinet temperature to match the probe "done" temperature.
Foods cannot be cooked and held for more than 24 hours.

Additional Functions: Delta-T Cooking
Specialized cooking method

CSL

DELTA-T cooking is a special built-in function that automatically causes the cooking temperature to rise slowly, in direct proportion to the rise in the internal temperature of the food product. The Delta-T, or "difference in temperature" is the constant difference between the two.

Advantages

- Creates a specific, gentle cooking process for hams and large cuts of marinated meat
- Causes proteins to coagulate and meat fibers to swell, retaining juices and nutrients
- Rapidly created outer crust prevents loss of proteins and other nutrients

Operation

DELTA-T function can be used in any MODE

- Select desired cooking MODE

- Select PROBE COOKING and set desired "done" TEMPERATURE

- Select SPECIAL FUNCTION

  SF

- Select DELTA-T

  △T

- Enter Delta value using temperature selection keys

  ▲ ▼

Tips

- In general, the Delta-T, or temperature difference determines the cooking time. The greater the difference, the faster the item will cook. Experience has shown that the Delta-T should not be less than 68°F (20°C), nor greater than 158°F (70°C).

- The Delta-T function can be programmed, making the process automatic
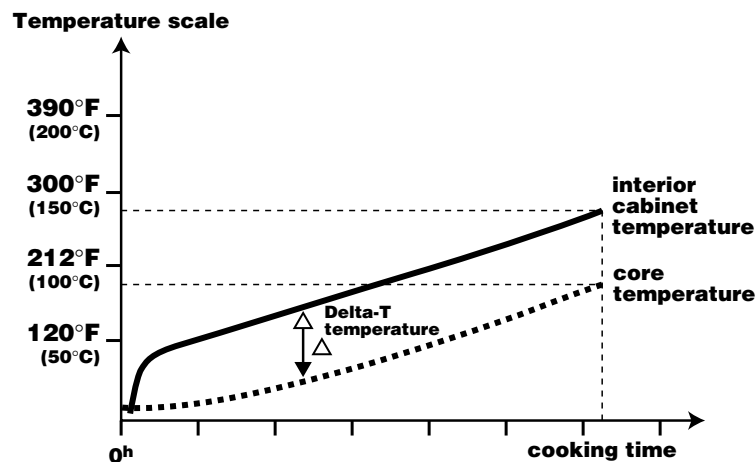
Quick Guide To Programming

CSL
CSM

Both CSM and CSL models are equipped with programming capability. Operators can input different parameters, such as Mode, Time, Temperature, Probe Cooking and Special Functions, to create a customized cooking program that will operate the unit automatically to these parameters.

The numbered control panel functions illustrated in this section correspond to those in Control Panel Functions, pp 11-12. If you are not already familiar with the CSL and CSM control panels, please review those pages before attempting to program your CSL or CSM unit.

Memory

- Up to (99) total cooking programs–(98) are available to operator. Program 99 is set at the factory for Cleaning.
- Up to (9) stages (sets of parameters) are available for each cooking program.

Control

- Automatic–Unit begins operation when program START key is pressed. Unit shuts down when last program stage has been completed.

- Manual Override–Program operation can be interrupted at any time by simply selecting or setting a new value or special function. The new value or function affects cooking process only in the stage in which the program was overridden. Overriding the program DOES NOT cancel it. When the new value or function is achieved, and/or that stage of the program is completed, program operation continues with the next programmed stage, or shuts down unit if program is complete.

IMPORTANT–*On CSL models, program may be inadvertently canceled under the following circumstance: If operator activates Probe Cooking while unit is operating in a programmed stage in which Probe Cooking is NOT utilized.*

- Program Lock–Cooking programs can be locked to prevent any unauthorized or undesired changes to the program. If a program number is locked out, "NP" will be displayed, and no input can be received under that number.

NOTE: *The program display will flash when a program number is selected in which no program has been placed.*

Programming the CSL Model

Note: The CSL unit is fully digital. The internal clock feature on this unit permits automatic start-up. See "Setting the clock" and "Setting automatic start-up time" below.

To Program

- Begin by pressing PROG (17)
- Select program number using program SELECT arrow keys (21)
- Enter the individual values (mode, temperature, time/probe temperature) and additional functions desired for each of nine available cooking stages
- Save program by pressing PROG key (17)
- To start cooking program, press program START key (20)

To change a saved program

- Repeat process to modify the values set
- Save program by pressing PROG key (17)

To lock a program

- Set TIMER to "1111." Press Left (DOWN) SELECT arrow key (21). "NP" will be displayed.
- To unlock, repeat using Right (UP) arrow key. "P" will be displayed.

CSL
CSM

Setting the clock
• Press the TIMER key (10)
• Set clock time (military time) using SELECT arrow keys (16)
• Press and hold TIMER key (10). While TIMER key is pressed, switch unit off and then back on using ON/OFF key (1).
• Switch unit off again
• Wait (4) seconds, then switch unit back on. Real time is now stored and displayed.

Setting automatic start-up time
• Press TIMER key (10) until the period in the time display flashes
• Set the desired start-up time (military time) using SELECT arrow keys (16)
• Set cooking mode, temperature, time/probe temperature, and additional functions as usual, or select a program number
• Enter automatic start-up function by pressing both SELECT arrow keys (16) simultaneously. When the programmed time is reached, unit will automatically start up.

Delta-T Cooking
• Select PROG (17)
• Select program number using program SELECT arrow keys (21)
• Select any cooking MODE.
• Set desired probe temperature value using the temperature SELECT arrow keys (16)
• Press SPECIAL FUNCTIONS key (22).
• Press DELTA-T key (27) and enter Delta value using the temperature SELECT arrow keys (16)
• Save program by pressing PROG key (17)

Programming the CSM Model

To Program
• Begin by turning the mode selector dial (3) to PROG (9)
• Select program number using program SELECT keys (26)
• Enter the individual values (mode, temperature, time/probe temperature) and additional functions desired for each of nine available cooking stages.

   IMPORTANT–*If you wish to use the same mode in two consecutive intervals of a program you must reset the mode before programming the next interval. This is done by quickly turning the mode selector dial (3) away from and back to the original mode setting without selecting another mode.*

• Save program by pressing both program SELECT arrow keys (26) simultaneously
• Turn unit off for 4 seconds. Then turn back on
• To start cooking program, press program START (25) key

NOTE:
• PROG must be selected each time a program is started
• The mode selector dial must be set to OFF for at least 4 seconds prior to selecting PROG

To change a saved program
• Repeat process to modify the values set
• Press both program SELECT arrow keys (26) to save changes

To lock a program
• Set mode selector dial (3) to PROG (9). Press timer activation key (13). Set TIMER (15) to "110." Press Right (DOWN) SELECT arrow key (26). "NP" will be displayed.
• To unlock, repeat using Left (UP) arrow key. "P" will be displayed.

Cleaning

Your Sure Chef® Combi-Steamer MUST be cleaned at least once a day to ensure proper hygiene and continued trouble-free operation. For best results, use Henny Penny Oven and Grill Cleaner and the Henny Penny hand-pump sprayer.

TO CLEAN

1) Leave mobile oven racks, grids and containers in the cooking cabinet

2) Allow cooking cabinet to cool down below 130°F (55°C)

3) Spray all interior cabinet surfaces–even behind the pivoted air baffle–as well as oven rack, grids and pans thoroughly with Oven and Grill Cleaner

NOTE: If using Program Cleaning (CSL, CSM models only), set mode selector switch on PROG, select program 99 and press START. Skip steps 4 thru 6.

4) Let cleaner act for approximately 20 minutes

5) Set Combi-Steamer on STEAM mode

6) Steam for 15 minutes

7) Repeat process for heavily soiled cabinet

8) Rinse thoroughly with built-in hand sprayer (optional on CSB models)

NOTES

• To activate the hand-sprayer water flow, pull hose to full extension and release to rest-position. Squeeze spray gun lever.

• The rails on which oven rack rolls into the unit (table top units, only) can be removed for cleaning.
  To remove the rails, shift the rails horizontally toward the front of the unit, then pull up.

• The air baffle, covering the left side of the interior cabinet, provides even airflow and protects operator from heating elements and fan. To open the baffle for cleaning:

1. Turn unit off

2. For table top units, remove the left oven rack rail by pulling it towards front of unit, then up

3. Using a flat-head screwdriver, turn the two quick fastening locks one-quarter turn counterclockwise. Baffle will swing open for cleaning.

NOTE – *floor units have 2 air baffles that open in this manner*

Opening Door During Operation

Open door slightly to allow hot steam and/or vapors to escape. KEEP FACE AND HANDS AWAY FROM OPENING or burns could result. When steam and/or heat has dissipated open door fully with care. Escaping hot steam and/or vapors can cause serious burns. Interior surfaces extremely hot, including pans, grids and oven racks. To prevent burns, allow unit to cool, or use appropriate heat resistant protective mitt or pad when handling.

Cleaning *(continued)*

WARNING

Do not spray cold water into the interior cabinet at temperature above 212° (100°C), or burns could result.

CAUTION

- Do not clean with a high pressure cleaner. Damage to the unit may result.
- Do not treat stainless steel surfaces with acids or expose to acidic vapors. Damage, discoloration and/or chemical degradation may result.
- Do not use chlorine bleach on stainless steel
- Temperature increase of the door glass may exceed 60°F
- Turn off water supply to unit when not in use for long periods

Installation – Electric Units

INTRODUCTION

This section provides the installation instructions for the Henny Penny Electric Combi-Steamers.

NOTE: *The installation of this unit must conform to all local, state, and federal codes. In the absence of codes use ANSI/NFPA No. 70-latest edition.*

NOTE: *Canadian installations must conform with the Canadian electrical code, C22.1, Part 1 and/or local codes.*

WARNING

Do Not puncture the cabinet with any objects such as drills or screws as electrical shock, or component damage could result.

NOTE: *The installation of this equipment should be performed by a qualified technician.*

LOCATION

The proper location of the unit is very important for operation and convenience. Choose a location which will provide easy loading and unloading without interfering with the final assembly of food orders.

NOTE: *Adequate clearance must be provided for servicing and for operation.*

Table Units:

Minimum clearances have to be maintained from the adjacent walls.

	Left Side	Right Side	Back Side
CSB,CSM,CSL-6, 10, 1020	6" (150mm)	2" (50mm)	2" (50mm)

NOTE: *14" (350mm) is recommended at the left side of the unit for service purposes.*

Place the combi-steamer on an original Henny Penny stand or on a level and sturdy surface. Recommended stand height is 28.5" (725mm).

Minor unevenness of the surface/floor can be compensated by adjusting the legs of the stand or the appliance.

The weight of the units are as follows:

CSB, CSM, CSL-6	297 lbs.	(134.5 kg)
CSB, CSM, CSL-10	349 lbs.	(158.0 kg)
CSB, CSM, CSL-1020	507lbs.	(230.0 kg)

Installation planning should encourage sufficient space to keep the transport trolley/mobile rack at the left-hand side of the unit.

NOTE: *Ventilation must conform to local, state and national codes. Consult your local fire department or building authorities.*

CAUTION

When moving the unit with a pallet jack ensure it is located under the 1-5/8" x 1-5/8" structure frame before lifting the unit.

Installation – Electric Units *(continued)*

Floor Units:

NOTE: *Adequate clearance must be provided for servicing and for operation.*

Minimum clearances have to be maintained from the adjacent walls.

	Left Side	Right Side	Back Side
CSB, CSM, CSL-20, 40	14" (350mm)	2" (50mm)	2" (50mm)

Place the combi-steamer on a level and sturdy surface. Minor unevenness of the surface/floor can be compensated by adjusting the legs of the appliance (+-15mm).

NOTE: *The unit must be fixed to the floor to prevent moving when pushing oven racks into unit.*

The oven rack must be positioned vertically in the unit, not tilting.

For minor unevenness in floor, the oven rack can be leveled using the optional leveling device. If necessary, construct ramps to level floor in front of units.

The weights of the units are as follows:

CSB, CSM, CSL-20   764 lbs. (345.5 kg)

CSB, CSM, CSL-40   1066 lbs. (483.5 kg)

Installation planning should encourage sufficient space for an additional roll-in rack at the left-hand side of the unit. (20 pan - 29", 40 pan - 52")

When moving the unit with a pallet jack, ensure it is located under the 1-5/8" x 1-5/8" structuring frame before lifting unit.

CAUTION

Do Not support the unit at the service door. Damage to the unit will result.

ELECTRICAL SUPPLY

Standard electrical supply for all Combi-Steamers is 208-240 volt, 3 phase, 50-60 Hz.

NOTE: *The power connections are located behind the service door (see section 5-3).*

Each unit requires a separate fused service according to the following table: (3 phase only)

Model	Voltage	Phase	Amps	Load
CSL/M/B-6	208V	3	27	9.6KW
CSL/M/B-6	208V	1	46	9.6KW
CSL/M/B-6	240V	3	27	9.6KW
CSL/M/B-6	240V	1	40	9.6KW
CSL/M/B-10	208V	3	52	18.6KW
CSL/M/B-10	240V	3	45	18.6KW
CSL/M/B-1020	208V	3	88	31.5KW
CSL/M/B-1020	240V	3	76	31.5KW
CSL/M/B-20	208V	3	103	37.2KW
CSL/M/B-20	240V	3	90	37.2KW
CSL/M/B-40	208V	3	175	63KW
CSL/M/B-40	240V	3	152	63KW

NOTE: *When the oven is installed it must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electric Code, ANSI/NFPA 70-1990.*

WARNING

Do Not use conduit as a supply ground, or electrical shock could result.

NOTE: *All connections must comply with the oven data plate. A separate fused disconnect switch or circuit breaker (not furnished) MUST be installed in the electrical supply line FOR EACH OVEN!*

NOTE: *The electrical diagram is located behind the service door.*

The electric supply terminal block, located behind the service door, is clipped on a mounting rail which is attached to the frame of the unit. The three phases of the power cord are connected to the three gray colored terminals. Ground is connected to the yellow-green terminal.

NOTE: *The phase sequence does not have to be observed because of the automatic reversing action of the fan motor.*

CHANGES IN VOLTAGE

To change voltages of the Combi-Steamers (ex: 208 to 240 volt) the following has to be changed:

1) Air and steam elements
2) Contactor LS5
3) CSM and CSL units - the wires on the control panel transformer and the interior light transformer must be switched to the correct voltage terminals.

Installation – Electric Units *(continued)*

WATER SUPPLY

The Combi-Steamer should only be connected to a cold water supply which meets the quality requirements by the EPA on drinking water. Soft water must be at least 5 or 6 grains.

The recommended water supply pressure is 44 psi, but 22 to 87 psi will work.

CAUTION

Should the water pressure exceed 87 psi, a pressure regulator must be installed into the supply line or damage to the unit could result.

The water connection is done on a 3/4" NPT thread fitting, and a manual shut off valve must be installed between the main cold water supply and the units supply line.

CAUTION

A minimum water conductivity of 20 micro Siemens is required for proper operation. If below this figure the steam generator will over-fill.

NOTE: *A check valve is built into the unit to prevent backflow.*

DRAIN CONNECTION

The Combi-Steamer is to be installed to comply with the applicable Federal, State, or local plumbing codes.

The unit has an integrated vented drain system which acts as a reverse flow check valve, so it may be connected directly with a P-trap to the drain system.

CAUTION

The drain must have a constant slope and a diameter of 2 inches over its entire length to ensure sufficient discharge during Auto Flush from the steam generator, which is 3/4 quarts per second.

The drain must be steam temperature resistant pipe, which average drain temperature is 150°F (65°C). No hose should be used.

Installation – Gas Units

INSTALLATION GAS UNITS

This section provides the installation instructions for the Henny Penny Gas Combi-Steamers

NOTE: *The installation must conform with local codes or in the absence of local codes, with ANSI Z223.1 latest edition and electrical code ANSI/NFPA No. 70 latest edition.*

NOTE: *For Canadian installations it should be done in accordance with the CAN/CGA B149.1 or.2 installation code and/or local code and the Canadian electrical code, Part 1, CSA C22.1 for the electrical features.*

WARNING

Do Not puncture the cabinet with any objects such as drills or screws as electrical shock, or component damage could result.

NOTE: *The installation of this equipment should be performed by a qualified technician.*

LOCATION-CSG

The proper location of the unit is very important for operation and convenience. Choose a location which will provide easy loading and unloading without interfering with the final assembly of food orders.

CAUTION

Adequate clearance must be considered during installation between the unit and combustible walls. Also, clearance should be provided for servicing and operation of the unit. The minimum clearances are as follows:

Left Side	Right Side	Back Side
14" (350mm)	4" (100mm)	4" (100mm)

Place the Combi-Steamer on an original Henny Penny stand or on a level and sturdy surface. Recommended stand height is 22" (555mm).

WARNING

Due to the size of the steam generator, the left side of the unit weighs more than the right side. This weight difference must be compensated by placing the lifting device more towards the left side of the unit, or damage to the unit or personal injury could result.

CSG

Minor unevenness of the surface/floor can be compensated by adjusting the metal legs of the stand or the appliance. The weight of the units are as follows:

CSG-10 556 lbs. (252 Kg)
CSG-12 529 lbs. (240 Kg)
CSG-20 1015 lbs. (460 Kg)

> ### CAUTION
>
> Do Not obstruct the flow of combustion and ventilation air to and from the unit. DO NOT obstruct the ventilation holes in the panels of the unit, as these provide the combustion air for the burner, or damage to the unit could result.

VENTILATION-CSG

The gas Combi-Steamers all should be located with a provision for venting into an adequate exhaust hood or ventilation
system. We recommend you consult a local ventilation or heating company to help in designing an adequate system.

NOTE: *Ventilation must conform to local, state, and national codes. Consult your local fire department or building authorities.*

Ventilation of CSG-12:

NOTE: *The Combi-Steamer CSG-12 is not suitable for connection to Type B Gas Vent and must be installed under a ventilation hood.*

Your Henny Penny Combi-Steamer CSG-12 is shipped fully assembled. In a second smaller carton you will find a draft hood which has to be assembled to the unit.

Ventilation of CSG-12 table top version:

The draft hood must be assembled over the two flue outlets at the back of the Combi-Steamer CSG-12.

Ventilation of CSG-12 stacked version:

The stacked version kit comprises two different draft hoods, one with a single outlet and the second with a double outlet.
A flue riser completes the stacked version flue assembly. Fix the single outlet draft hood over the flue outlets of the lower unit. Place the flue riser over the top flue collar of the draft hood. Attach the double outlet draft hood over the flue outlets of the upper unit so that the flue riser projects into the lower opening of this draft hood.

Ventilation of CSG-10:

The draft hood must be installed over the flue risers on top of the Combi-Steamer CSG-10 when the flue gas is discharged via a Type B gas vent.

When the flue gas of a CSG-10 is discharged to a ventilation hood the draft hood will not be installed.

Ventilation of CSG-20:

The draft hood must be installed over the flue risers on top of the Combi-Steamer CSG-20 when the flue gas is discharged via Type B gas vent.

When the flue gas of a CSG-20 is discharged to a ventilation hood the draft hood will not be installed.

WATER SUPPLY-CSG

The Combi-Steamer should only be connected to a cold water supply which meets the quality requirements by the EPA on drinking water. Soft water must be at least 5 or 6 grains.

The recommended water supply pressure is 44 psi, but 22 to 87 psi will work.

CAUTION

Should the water pressure exceed 87 psi, a pressure regulator must be installed into the supply line or damage to the unit could result.

CAUTION

Both water and gas connections are 3/4" NPT fittings. Be sure to connect to proper pipe. Check label on unit for each.

The water connection is done on a 3/4" NPT thread fitting, and a manual shut-off valve must be installed between the main cold water supply and the units supply line.

CAUTION

A minimum water conductivity of 20 micro Siemens is required for proper operation, If below this figure the steam generator will over-fill.

NOTE: *A check valve is built into the unit to prevent backflow.*

DRAIN CONNECTION-CSG

The Combi-Steamer is to be installed to comply with the applicable Federal, State, or local plumbing codes.

The unit has an integrated vented drain system which acts as a reverse flow check valve, so it may be connected directly with a P-trap to the drain system.

CAUTION

The drain must have a constant slope and a diameter of 2 inches over its entire length to ensure sufficient discharge during Auto Flush from the steam generator, which is 3/4 quarts per second.

The drain must be steam temperature resistant pipe, which average drain temperature is 150°F (65°C). No hose should be used.

ELECTRICAL SUPPLY-CSG

The gas Combi-Steamer requires 120 volt, single phase, 60 Hertz, 15 amp, 3 wire grounded service. The gas unit is factory equipped with a grounded cord and plug.

WARNING

DO NOT DISCONNECT THE GROUND PLUG. This unit MUST be adequately and safely grounded or electrical shock could result. Refer to local electrical codes for correct grounding procedures or in absence of local codes, with the National Electrical Code, ANSI Z223.1 latest edition and electrical code ANSI/NFPA No. 70-1990 latest edition. In Canada, all electrical connections are to be made in accordance with the CAN/CGA B149.1 or .2 installation code and/or local code and the Canadian electrical code, Part 1, CSA C22.1.

CAUTION

Before connecting incoming power to the unit, no more than 120 volts should show at each leg to ground. Connecting a high leg to the black lead of the unit will severly damage many electrical components in the unit and void all warranties. Call your local electrician or electric power supply company.

NOTE: *The unit will not function and the reset signal will stay on with the white wire connected to the live black wire and the black connected to neutral. An electrical schematic is located behind the left side panel of unit. A separate fused disconnect switch, or circuit breaker, must be installed for each unit.*

GAS SUPPLY-CSG

The gas Combi-Steamer is factory available for either natural or propane gas. Check the data plate to determine the proper gas supply requirements.

DANGER

DO NOT attempt to use any gas other than that specified on the data plate. Conversion kits can be installed by your distributor if required. Incorrect gas supply could result in a fire or explosion resulting in severe injuries and/or property damage.

WARNING

To avoid possible serious personal injury, the installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1-1988 or latest edition. In Canada, CAN/CGA-B 149.1 Natural Gas Installation Code CAN/CGA-B 149.2 Propane Installation Code.

All Henny Penny Combi-Steamers are equipped with two heat exchanger systems. One is responsible for steam production, the second for convection heat. Each individual heat exchanger is heated with a separate burner assembly.

CSG

GAS SUPPLY-CSG

RIGHT
MINIMUM PULL of equipment away from wall permissible for accessibility to Quick Disconnect Device
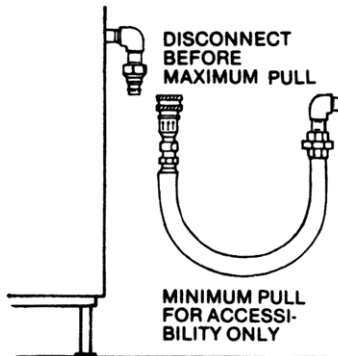
WRONG
AVOID SHARP BENDS AND KINKS when pulling equipment away from wall. (Maximum pull will kink ends, even if installed properly, and reduce Connector life.)

CABLE RESTRAINT

Please refer to the illustration below when installing cable restraint on all moveable units.

I-bolt is to be secured to the building using acceptable building construction practices.

CAUTION

DRYWALL CONSTRUCTION
Secure I-bolt to a building stud. DO NOT attach to drywall only. Also, locate the I-bolt at the same height as the gas service. Preferred installation is approximately six inches to either side of service. Cable restraint must be at least six inches shorter than flexible gas line.

RIGHT

Couplings and hose should be installed in the same plane as shown at left. DO NOT OFFSET COUPLINGS – this causes torsional twisting and undue strain causing premature failure.
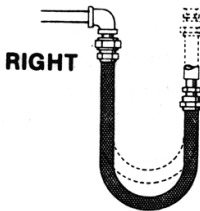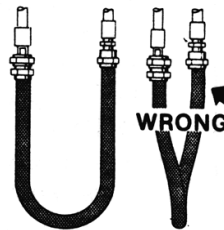
RIGHT

This is the correct way to install metal hose for vertical travers. Note the single, natural loop.

Allowing a sharp bend, as shown at right, strains and twists the metal hose to a point of early failure at the coupling.
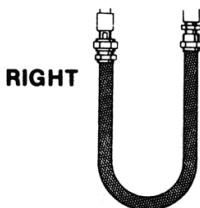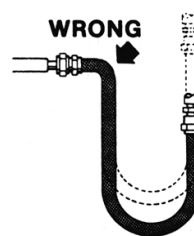
RIGHT

Maintain the minimum or larger bending diameter between the couplings for longest life.

Closing in the diameter at the couplings, as shown at right, creates double bends causing work fatigue failure of the fittings.

RIGHT
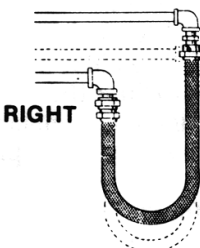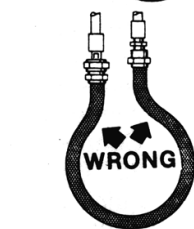
In all installations where "self-draining" is not necessary, connect metal hose in a vertical loop.

DO NOT CONNECT METAL HOSE HORIZONTALLY...unless "self-draining" is necessary then use support on lower plane as shown at left.

CAUTION

Utilize elbows when necessary to avoid sharp kinks or excessive bending. For ease of movement, install with a "lazy" loop. Gas appliance must be disconnected *prior to maximum* movement. *(Minimum movement is permissible for hose disconnection.)*

Installation – Gas Units *(continued)*

GAS SUPPLY *(continued)*

A steam burner gas valve and dry heat burner gas valve respectively are responsible for the gas supply to the individual burners. The Combi-Steamer models CSG have manual shut-off valves, that can be reached from the front without tools.

The manual shut-off valves of these units are located behind the service cover under the operator panel. To operate the valves, unscrew the 2 knurled screws and pull the service cover off.

GAS LEAK TEST-CSG

After the piping and fittings have been installed, check for gas leaks. A simple checking method is to turn on the gas and brush all connections with a soap solution. If bubbles occur, it indicates escaping gas. In this event, the piping connection must be redone.

DANGER

Never use a lighted match or open flame to test for gas leaks. Escaping gas could cause an explosion resulting in severe personal injury and/or property damage.

GAS PRESSURE-CS

The gas pressure should be measured when all other gas appliances in the kitchen are on high flame. The minimum and maximum incoming line flow pressures should be as follows:

Natural: 7-11" water column

Propane: 11" water column

CAUTION

During pressure testing note the following:
1. The Combi-Steamer and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressure in excess of 1/2 psig (3.45 kPa). Turn OFF main gas shut-off valve or main gas supply line.
2. The appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 1/2 psig (3.45 kPa).
3. If incoming w.c pressure is over 14" w.c. a separate regulator must be installed before the manual gas shut-off valve.

CSG

<div style="border:1px solid">

WARNING

TO PREVENT DAMAGE TO THE CONTROL VALVE REGULATOR DURING INITIAL TURN ON OF GAS IT IS VERY IMPORTANT TO OPEN MANUAL SHUT-OFF VALVE VERY SLOWLY.

</div>

NOTE: *After turning on the gas, the manual shut-off valve must remain open, except during pressure testing as outlined in the above steps, or when necessary during service maintenance.*

This incoming pressure reading can be taken by installing a gas pressure gauge on the front of the unit's main gas valves test port. This should be done with all gas appliances in operation on the same gas supply line. Should the manifold pressure drop below the desired level, consult your local gas utility service.

Cooking Guidelines

The following section offers basic guidelines for preparing a wide variety of menu items in the Sure Chef® Combi-Steamers. As you gain experience with this equipment you may wish to add items or adjust times, temperatures or other recommendations to suit your own preferences. You will find a blank chart at the end of this section to assist you in recording your own recipes or adjustments.

Below is a key to terms and abbreviations used in these guidelines:

Pans, Grids

Perf	=	Perforated
Unperf	=	Unperforated
Alum	=	Aluminum
Gran	=	"Granite" style enamel pan
Chicken Grid	=	Special grid for cooking whole birds upright
Grid	=	Grid Shelf
Sheet	=	Sheet Pan

Modes

C	=	Combination
CV	=	Convection
S	=	Steam
TS	=	Tender Steam
RT	=	Rethermalizing

Cooking Examples

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Chicken/Poultry									
Food	**Hints**	**Proper Container or Grid**	**CSB Mode**	**CSM Mode**	**CSL Mode**	**CSG Mode**	**Temp. in °F(°C)**	**Approx. Cook Time in Min.**	**Special Function**
Roast Chicken	Dry, season, tie, preheat	Chicken grid, grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	355 - 390 (180 - 199)	40 - 45	SDHC
Rotisserie Style Chicken	Dry, season, tie, preheat	Chicken grid, grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	340 - 390 (171 - 199)	30 - 40	SDHC
Chicken Legs	Fresh/frozen, thawed, season, preheat	Grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	390 (199)	30 - 40	SDHC
Chicken Leg Quarters	Fresh/frozen, thawed, season, preheat 575°	Grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	325 - 400 (163 - 205)	20 - 25	SDHC
Chicken Breasts	Fresh/frozen, thawed, season, preheat	Grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	350 (177)	30 - 40	SDHC
Chicken Breasts	Fresh/frozen, thawed, boneless, skinless	Grid, ¾″ Gran ¾″ Non Perf	CV	CV	CV	CV	320 - 450 (160 - 232)	12 - 17	SDHC
Chicken Thighs	Fresh/frozen, thawed, season, preheat	Grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	350 (177)	30 - 40	SDHC
Half Chicken	Fresh/frozen, thawed, season, preheat	Grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	350 (177)	30 - 40	SDHC
Chicken Wings	Fresh/frozen, thawed, season, preheat	Grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	320 - 350 (160 - 177)	5 C 10 - 15 CV	SDHC
Cooked Chicken	For salads, etc.	Grid, ¾″ Perf Pan	S	TS	S	TS	175 (80)	35 - 40*	Probe 180°F (82°C)
Cornish Game Hen	Fresh/frozen, thawed, season, preheat	Grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	350 (177)	10 C 20 - 30*CV	SDHC
Goose	Season, could be stuffed	Grid, 1½″ Gran	S/C/CV	S/C/CV	S/C/CV	S/C/CV	285 - 390 (141 - 199)	120 - 150	SDHC
Duck	Season	Grid or 1½″ Gran	C/CV	C/CV	C/CV	C/CV	280 - 390 (138 - 199)	20 - 60	SDHC
Duck Breast (Vacuum Cooking)	Boned, vacuum well	Grid	S	TS	S	TS	160 (71)	40 - 60	
Turkey, Whole	Stuff possibly, season, baste if needed	Grid, ¾″ Pan	C/CV	C/CV	C/CV	C/CV	265 - 350 (129 - 177)	12 - 25/lb	Probe 180°F (82°C)
Turkey Tenderloin	Fresh/thawed, try different modes and medias	Grid	S/C/ CV/TS	C/CV	S/C/CV	TS/C/CV	320 - 350 (160 - 177)	15 - 20	Probe 170°F (76°C)
Turkey Breast	Season	Grid	S/C/CV	S/C/CV	S/C/CV	S/C/CV	275 - 355 (135 - 180)	20 - 30/lb	Probe 180°F (82°C)

Chicken/Poultry

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Turkey Breast, Bone In	Season	Grid	S/C/CV	S/C/CV	S/C/CV	S/C/CV	275 - 355 (135 - 180)	25 - 30/lb	Probe 180°F (82°C)
Turkey Cutlets	Bread if needed	¾″ Gran Pan	CV	CV	CV	CV	390 (199)	10 - 15	SDHC
Liver Paté	Fill into forms, cover well	Grid	C/CV	C/CV	C/CV	C/CV	285 (141)	90 - 120	SDHC
Oven Fried Chicken	Follow recipe to bread, place on pans	Grid, ¾″ Unperf Pan	CV	CV	CV	CV	450 (233)	15 - 20	SDHC

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Beef									
Food	**Hints**	**Proper Container or Grid**	**CSB Mode**	**CSM Mode**	**CSL Mode**	**CSG Mode**	**Temp. in °F(°C)**	**Approx. Cook Time in Min.**	**Special Function**
Filet Steak	Season, oil lightly, preheat to 575°F (300°C)	Grid	CV	CV	CV	CV	520 - 540 (281 - 282)	7 - 9	SDHC
Sirloin Steak	Season, oil lightly, preheat to 575°F (300°C)	Grid	CV	CV	CV	CV	520 - 540 (281 - 282)	8 - 10	SDHC
Roast Beef Time Cook	Season	Grid, 3/4″ Gran	S/C/CV	S/C/CV 1/2 Fan	S/C/CV 1/2 Fan	S/C/CV	180 - 320 (83 - 160)	10 - 18/lb	
Roast Beef Probe Cook	Season, use probe	Grid, 3/4″ Gran	CV	CV 1/2 Fan	CV 1/2 Fan	CV	225 - 320 (107 - 160)		Probe 130°F (55°C) Rare
Rib Roast	Season	Grid, 1 1/4″ Perf Pan	CV	CV 1/2 Fan if Cook	CV 1/2 Fan if Low Temp Cook	CV Low Temp	325 (163)	15 - 18/lb	Probe 130° (55°C)
Beef Tenderloin Roast	Season	Grid, 1 1/4″ Perf Pan	C/CV	C/CV	C/CV	C/CV	285 - 320 (160 - 216)	15 - 30 per Roast	Probe 130°F (55°C) Rare
Short Ribs	Season	2 1/2″ Pan	C	C	C	C	275 (135)	30 - 35/lb	
Beef Stew	Brown meat first with CV. Mix rest of ingredients, cover, cook	2 1/2″ Pan	C/CV	C/CV	C/CV	C/CV	225 - 275 (107 - 135)	5 CV 1 - 1 1/2 hrs. C	
Meatballs	Prepare recipe	3/4″ Granite	C/CV	C/CV	C/CV	C/CV	350 (177)	10 C/5 CV	SDHC
Meatloaf	Smooth surface of meatloaf, possibly fill in forms or loaf pans.	Mold on Grids	S/C/CV	S/C/CV	S/C/CV	S/C/CV	300 - 340 (149 - 172)	50 - 70	Probe 160°F (71°C)
Beef Liver	Cut into 1/4″ to 1/2″ slices, flour, preheat, spray pan	3/4″ Granite	C/CV	C/CV	C/CV	C/CV	480 (249)	8 - 10	
Beef Rolls	Season, cook in sauce	2 1/2″ Pan	C	C	C	C	265 - 285 (130 - 141)	60 - 80	
Veal Chops	Season, preheat to 575°F (300°C)	Grid	CV	CV	CV	CV	430 - 465 (222 - 241)	10 - 12	SDHC
Veal Leg	Season, use drip pan for drippings	Grid Plus 2 1/2″ Pan	S/C/CV	S/C/CV	S/C/CV	S/C/CV	285 - 340 (141 - 172)	80 - 90	Probe 150°F (66°C)
Osso Bucco	Marinate, use equal slices	2 1/2″ Pan	C	C	C	C	285 - 340 (141 - 172)	80 - 90	
Veal Sweet Breads	Rinse three times in cold water, prepare again	1 1/2″ Pan	C	TS	S	S	175 (80)	10 - 18	
Corned Beef	Fresh	2 1/2″ or 4″ Pan	C	C	C	C	270 - 290 (132 - 143)	150	

Other Meats

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Hamburgers	Preheat to 575°F (300°C)	Grid, 1½″ Gran	CV	CV	CV	CV	395 - 430 (202 - 222)	15	SDHC
Veal Cutlets	Bread, oil pan lightly	1½″ Granite	CV	CV	CV	CV	485 (252)	6 - 8	SDHC
Venison Leg	Boned, seasoned well	Grid, ¾″ Pan	S/C/CV	S/C/CV	S/C/CV	S/C/CV	285 - 320 (141 - 160)	60 - 70	Probe 145°F (63°C)
Venison Shoulder	Marinate, season	2½″ Pan	C	C	C	C	285 - 300 (141 - 160)	80 - 100	Probe 145°F (63°C)
Roast Venison	Braise, use drip pan	2½″ Pan	C	C	C	C	285 - 300 (141 - 160)	90 - 120	Probe 145°F (63°C)
Pheasant	Season, rub oil, preheat	Grid, ¾″ Unperf Pan	C/CV	C/CV	C/CV	C/CV	280 - 340 (138 - 172)	25 - 35	SDHC
Quail	Season, rub oil, preheat	Grid, ¾″ Unperf Pan	C/CV	C/CV	C/CV	C/CV	280 - 340 (138 - 172)	25 - 35	SDHC
Lamb Leg	Season, could stuff, no oil, boned possible	Grid	C/CV	C/CV	C/CV	C/CV	265 (129)	20 - 30/lb	SDHC Probe 140°F (60°C)
Lamb Rack	Season, French cut	Grid, ¾″ Gran	CV	CV	CV	CV	285 - 355 (141 - 179)	10 - 20/lb	SDHC Probe 135°F (58°C)
Lamb Chops	Season, score, oil lightly, preheat to 575°F (300°C)	Grid, ¾″ Gran	CV	CV	CV	CV	480 (249)	6 - 10	SDHC
Lamb Filets	Season, lightly oil, preheat to 575°F (300°C)	Grid, ¾″ Gran	CV	CV	CV	CV	480 (249)	6 - 12	SDHC
Lamb Stew	Braise meat first, mix in pan with ingredients, cover well	¾″ Gran, then 2½″ Pan	C/CV	C/CV	C/CV	C/CV	285 - 480 (141 - 249)	40 - 80	

Pork

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Pork Loin, Boneless	Season well	Grid, ¾″ Gran	C/CV	C/CV	C/CV	C/CV	300 - 355 (149 - 177)	10 - 15/lb	SDHC Probe 170°F (77°C)
Pork Loin, Boneless	Season well, time cook	Grid, ¾″ Gran	S/C/CV	S/C/CV	S/C/CV	S/C/CV	225 - 355 (107 - 177)		SDHC Probe 170°F (77°C)
Pork Chops	Score with knife, oil, rub in seasoning, preheat to 575°F (300°C)	Grid, ¾″ Alum Perf	CV	CV	CV	CV	395 - 430 (202 - 221)	10 - 15	SDHC
Pork Cutlets (Fried)	Oil pan, bread pork	¾″ Gran ¾″ Perf Pan	CV	CV	CV	CV	390 - 430 (199 - 221)	10 - 15	SDHC
Pork Medallions	Season, oil lightly, preheat to 575°F	Grid	CV	CV	CV	CV	485 (252)	6 - 8	
Fresh Ham	On grid or in pan	Grid or ¾″ Perf Pan	S/C/CV	S/C/CV	S/C/CV	S/C/CV	212 - 325 (100 - 163)	S/C/CV 15 - 30/lb	Probe 171°F (77°C)
Bacon	Place paper layer on pan, preheat	Alum Perf Pan	C	C	C	C	400 (205)	5 - 7	
Ham, Smoked	Whole or sliced, on grid or in pans	Grid or 2½″ Unperf Pan	C	C	C	C	212 (100)	15 - 17/lb	SDHC Probe 150°F (77°C)
Spare Ribs	Marinate or season, preheat to 575°F (300°C)	Grid, ¾″ Perf Pan	C/CV	C/CV	C/CV	C/CV	356 - 374 (180 - 188)	30	SDHC
Baby Back Ribs	Marinate or season, preheat to 212°F	Grid, ¾″ Perf Pan	S/C	S/C	S/C	S/C	212 - 350 (100 - 177)	20 - 40	SDHC
Pork Shoulder	Season well, seal shortly in steam mode	Grid or ¾″ Gran.	S/C/CV	S/C/CV	S/C/CV	S/C/CV	300 - 355 (145 - 177)	20 - 30/lb	SDHC Probe 170°F (77°C)
Pork Roast (Low Temp)	Season well	Grid or ¾″ Gran.	S/C/CV	S/C/CV	S/C/CV	S/C/CV	225 - 250 (107 - 121)	20 - 25/lb	SDHC Probe 170°F (77°C)
Sausage, Links	Place on grid or in pans	Grid, Alum Perf, ½″ Pan, Half Sheet	C/CV	C/CV	C/CV	C/CV	320 - 350 (160 - 177)	8 - 12	SDHC
Sausage, Patties	Dredge in flour, place on pan or grid	Grid, Alum Pan, ½″ Pan, Half Sheet	C/CV	C/CV	C/CV	C/CV	320 - 350 (160 - 177)	8 - 10	SDHC
Sausage, Italian, Brats, etc.	Place on grid or in pans	Grid, Perf Pans, Alum Pan	S/C CV	S/C	S/C CV	S/C CV	212 (100) 450 - 500 (233 - 260)	13 - 15 8 - 13	
Hot Dogs	Place on grid or in pans	Grid, Perf Pans	S	S	S	S	212 (100)	10	

						Pork			
Food	**Hints**	**Proper Container or Grid**	**CSB Mode**	**CSM Mode**	**CSL Mode**	**CSG Mode**	**Temp. in °F(°C)**	**Approx. Cook Time in Min.**	**Special Function**
Ham Hocks	Place on grid or in pans	Grid, 3/4″ Pan	C/CV	C/CV	C/CV	S/CV	320 - 350 (160 - 177)	8 - 10/lb	SDHC
Sausage	Retherm - cooked sausages	Grid, 3/4″ Pan	C	C	C	C	212 (100)	7 - 11	Probe 140°F (60°C)
Smoked Sausage	Place on grid or in pans	Grid, 3/4″ Pan	C/CV	C/CV	C/CV	C/CV	280 - 350 (138 - 177)	5 - 10	SDHC
Pork Tenderloin Roast	Season lightly, peel silver skin, preheat to 450°F	Grid, 3/4″ Perf Pan	CV/C	CV/C	CV/C	CV/C	375 - 425 (191 - 218)	10 - 15	SDHC Probe 161°F (72°C)
Pork Tenderloin Breaded	Fresh or frozen breaded	3/4″ Gran	CV/C	CV/C	CV/C	CV/C	380 - 450 (194 - 249)	8 - 10	SDHC

Seafood									
Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Whole Salmon	Bend out belly bones, prop up with potatoes from inside	¾″ or 1½″ Unperf Pan	S/C	S/C/TS	S/C	TS/S/C	165 - 212 (74 - 100)	25 - 45	Probe 145°F - 150°F (63°C - 66°C)
Salmon Steaks	Lightly oil, season	Grid, ¾″ Gran	C	C	C	C	450 (233)	6 - 12	SDHC
Salmon Fillets	Place in serving dish, season, oil lightly	Grid, ¾″ Unperf	C	TS/C	C	TS/C	165 - 212 (74 - 100)	8 - 15	
Orange Roughy	Bread or season lightly, add vegetables	¾″ Unperf	C	TS/S	S/C	TS/S	165 - 212 (74 - 100)	8 - 12	SDHC
Scrod/Cod	Bread, top with crumbs or season, and add vegetables	¾″ Unperf	C/CV	C/CV	C/CV	C/CV	212 - 350 (100 - 177)	8 - 15	SDHC
Tuna Shark Sword Steaks	Lightly oil, season, preheat oven	Grid, ¾″ Gran	CV	CV	CV	CV	450 (233)	8 - 12	SDHC
Pollock, Blue Fish	Season, add vegetables	¾″ Unperf	C	TS/C	S/C	TS/C	165 - 212 (74 - 100)	8 - 12	
Sole, Rolled	Season, add vegetables, add wine	1½″ Unperf	C	TS/C	S/C	TS/C	165 - 212 (74 - 100)	10 - 14	SDHC
Turbot	Season, add wine, vegetables	1½″ Unperf	C	TS/C	S/C	TS/C	165 - 212 (74 - 100)	10 - 14	
Sole, Flounder	Season, add vegetables, wine	¾″ Unperf	C	TS/C	S/C	TS/C	165 - 212 (74 - 100)	8 - 14	
Trout, Fried	Bread, lightly oil pan	¾″ Gran	C	CV	CV	CV	450 (233)	8 - 14	SDHC
Catfish Fillets	Bread, lightly oil pan	¾″ Gran	C	CV	CV	CV	450 (233)	8 - 14	SDHC
Perch, Breaded	Bread, lightly oil pan	¾″ Gran	CV	CV	CV	CV	450 (233)	8 - 14	SDHC
Halibut Steaks	Season lightly, lightly oil	Grid, ¾″ Gran	CV	CV	CV	CV	450 (233)	8 - 14	
Trout, Au Bleu	Blend belly out, season lightly	¾″ Unperf	S	S/TS	S	S/TS	160 - 212 (72 - 100)	10 - 15	

Seafood

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Mussels, Oysters	In shell	1½″ Unperf	S	S/TS	S	S/TS	165 - 212 (74 - 100)	8 - 14	
Shrimp, Peeled	Thawed, peeled (time will depend on size)	1½″ Unperf	S	S/TS	S	S/TS	160 - 212 (72 - 100)	6 - 14	
Peel & Eat Shrimp	In shell, season	1½″ Unperf	S	S	S	S	212 (100)	4 - 10	
Escargots	In shell, stuffed, frozen	¾″ Pan	C	C	C	C	350 (177)	6 - 10	SDHC
Scallops, Bay	Fresh/frozen, thawed	¾″ Unperf	S	S/TS	S	S/TS	165 - 212 (74 - 100)	4 - 8 6 - 12*	
Scallops, Sea	Fresh/frozen, thawed	¾″ Unperf	S	S/TS	S	S/TS	165 - 212 (74 - 100)	6 - 10 7 - 15*	
Lobster, Whole	Fresh	Grid or ¾″ Perf	S	S	S	S	212 (100)	10 - 14	
Lobster, Tails	Frozen, thawed, split	¾″ Perf or Unperf	S/C/CV	S/C/CV	S/C/CV	S/C/CV	212 - 350 (100 - 177)	10 - 20	
Fish, Breaded	Frozen, preheat to 575°F	¾″ Gran, Alum Perf	C	C	C	C	320 - 420 (160 - 216)	10 - 15	SDHC
Stuffed Lobster	Fill evenly	¾″ Unperf	C/CV	C/CV	S/C/CV	S/C/CV	165 - 212 (74 - 100)	10 - 20	Probe 145°F (63°C)
Salmon Mousse	Fill molds evenly	Grid or ¾″ Unperf	S	C/TS	S/C	C/TS	165 - 212 (74 - 100)	15 - 20	
Fish Terrine	Fill molds evenly	Grid or ¾″ Unperf	S	C/TS	S/C	C/TS	165 - 212 (74 - 100)	30 - 45	Probe 145°F (63°C)
Fish Balls	Form well, cover until needed	1½″ Unperf	S	C/TS	S/C	C/TS	165 - 212 (74 - 100)	12 - 16	

If Tender Steaming, use longer cooking times.

Cooking Examples *(continued)*

			Vegetables						
Food	**Hints**	**Proper Container or Grid**	**CSB Mode**	**CSM Mode**	**CSL Mode**	**CSG Mode**	**Temp. in °F(°C)**	**Approx. Cook Time in Min.**	**Special Function**
Broccoli	Fresh	2¹/₂″ Perf	S	S	S	S	212 (100)	5 - 8	
Broccoli	Frozen	2¹/₂″ Perf	S	S	S	S	212 (100)	5 - 10	
Cauliflower	Fresh	2¹/₂″ Perf	S	S	S	S	212 (100)	5 - 10	
Cauliflower	Frozen	2¹/₂″ Perf	S	S	S	S	212 (100)	5 - 10	
Carrots, Baby	Fresh	2¹/₂″ Perf	S	S	S	S	212 (100)	10 - 15	
Carrots, Baby	Frozen	2¹/₂″ Perf	S/C*	S/C	S/C	S/C	212 - 240 (100 - 116)	12 - 18	
Carrots, Coins	Fresh	2¹/₂″ Perf	S	S	S	S	212 (100)	6 - 10	
Carrots, Coins	Frozen	2¹/₂″ Perf	S	S	S	S	212 (100)	8 - 10	
Carrots, Sticks	Fresh	2¹/₂″ Perf	S	S	S	S	212 (100)	8 - 10	
Corn, Cob	Fresh	2¹/₂″ Perf	S*	S*	S*	S*	212 (100)	8 - 14	
Corn, Cob	Frozen	2¹/₂″ Perf	S*	S*	S*	S*	212 (100)	8 - 14	
Corn, Cut	Frozen	2¹/₂″ Perf	S	S	S	S	212 (100)	7 - 14	
Asparagus	Fresh	2¹/₂″ Perf	S	S	S	S	212 (100)	6 - 10	
Asparagus	Frozen	2¹/₂″ Perf	S	S	S	S	212 (100)	6 - 12	
Brussels Sprouts	Fresh	2¹/₂″ Perf	S	S	S	S	212 (100)	6 - 12	
Green Beans	Fresh	2¹/₂″ Perf	S	S	S	S	212 (100)	6 - 12	
Green Beans	Frozen	2¹/₂″ Perf	S	S	S	S	212 (100)	10 - 15	
Lima Beans	Frozen	2¹/₂″ Perf	S*	S*	S*	S*	212 (100)	8 - 14	
Tomatoes	Blanched for concessees	³/₄″ Perf	S	S	S	S	212 (100)	2 - 3	

Forced steaming may be used.

Vegetables

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Zucchini	Sliced, strips	1½″ - 2½″ Unperf	S	S	S	S	212 (100)	5 - 8	
Yellow Squash	Sliced, strips	1½″ - 2½″ Unperf	S	S	S	S	212 (100)	5 - 8	
Spinach	Fresh	1½″ - 2½″ Perf	S	S	S	S	212 (100)	6 - 8	
Spinach	Frozen, thawed	1½″ - 2½″ Perf, Unperf	S	S	S	S	212 (100)	10 - 18	
Mushrooms, Whole	Wash, sprinkle with lemon or white wine	1½″ - 2½″ Perf, Unperf	S	S	S	S	212 (100)	6 - 8	
Onions, Whole	Cut top and bottom off	2½″ Perf, Unperf	S	S	S	S	212 (100)	2 - 5	
Peas	Frozen, season	1½″ - 2½″ Perf, Unperf	S	S	S	S	212 (100)	4 - 12	
Snow Peas	Frozen	1½″ - 2½″ Perf, Unperf	S	S	S	S	212 (100)	3 - 6	
Cabbage, Cut	Fresh	2½″ Perf	S	S	S	S	212 (100)	4 - 8	
Cabbage, Leaves	Fresh	2½″ Perf	S	S	S	S	212 (100)	4 - 8	
Peppers	Fresh, for stuffed	1½″ Perf	S	S	S	S	212 (100)	6 - 7	
Mixed Vegetables	Frozen	1½″ - 2½″ Perf, Unperf	S	S	S	S	212 (100)	8 - 18	
Spaghetti Squash	Cut in half, seed	1½″ Perf	S	S	S	S	212 (100)	20 - 35	
Carrots, Sliced	Vacuum packed	Grid	S	S	S	S	212 (100)	12 - 25	
Vegetable Souffles	Distribute evenly in pans	1½″ - 2½″ Unperf	C/CV	C/CV	C/CV	C/CV	285 - 320 (141 - 160)	30 - 50	SDHC
Vegetable Platters	Precook, season, add butter before serving	Grid	S	C/RT	S/C	C/RT	230 - 265 (110 - 129)	8 - 10	SDHC

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Potatoes, Legumes									
Food	**Hints**	**Proper Container or Grid**	**CSB Mode**	**CSM Mode**	**CSL Mode**	**CSG Mode**	**Temp. in °F(°C)**	**Approx. Cook Time in Min.**	**Special Function**
Potato, Boiled	Peeled, quartered, season, toss well	³/4″ - 2¹/2″ - 4″ Perf	S/C	S/C	S/C	S/C	212 - 260 (100 - 122)	25 - 40	
Potato, Skin on	Cut if needed, season, toss well	³/4″ - 2¹/2″ - 4″ Perf	S/C	S/C	S	S/C	212 - 260 (100 - 122)	25 - 40	
Potato, Fried	Cut, season, toss well, preheat pan. Potatoes can be steamed first, then fried	³/4″ Unperf then ³/4″ Gran	CV / S	CV / S	CV / S	CV / S	445 (229) / 212 (100)	15 / 15	SDHC
Potato, Augratin	Cut even slices, preheat to 575°F	1¹/2″ Unperf or 1¹/2″ Gran	C/CV	C/CV	C/CV	C/CV	300 - 400 (145 - 205)	35 - 40	SDHC
Potato, Stuffed	Prepare potatoes, arrange in or on pans	Alum Perf or ³/4″ Unperf	CV	CV	CV	CV	390 (199)	15 - 20	SDHC
Potato, Roasted	Cut, steam first for 25 min., remove, preheat 450°F CV, season and oil lightly	³/4″ Gran	S / CV	S / CV	S / CV	S / CV	212 (100) / 350 (177)	20 - 25 / 15 - 20	
Potato, Vacuumed	Peel, quarter, place in vacuum bag, seal, place on grid	Grid	S	S	S	S	212 (100)	25 - 30	
Potato, Baked	Wash, season if needed, place on grid	Grid, ³/4″ Pan	C	C	C	C	320 - 380 (160 - 193)	30 - 40	
Potato, Dumpling	Prepare recipe, let soak in water until cooked	³/4″ Unperf	S	S	S	S	212 (100)	12 - 20	
Potato, Quartered	Peel, cut, soak in water until needed, preheat pan	³/4″ Unperf	S/C	S/C	S	S	212 - 250 (100 - 122)	25 - 40	
Potato, Sweet	Peel, cut, soak until needed	1¹/2″ - 2¹/2″ Perf	S/C	S/C	S/C	S/C	212 - 240 (100 - 116)	25 - 40	
Beans, Dry	Wash, soak until needed	2¹/2″ Unperf	S	S	S	S	212 (100)	25 - 40	
Rice, Instant	Follow directions on box	2¹/2″ Unperf	S	S	S	S	212 (100)	8 - 25	
Rice, Long Grain Converted	Soak to shorten cook time, 1 part rice to 1¹/2 part water	2¹/2″ Unperf	S*	S*	S/C*	S/C*	212 - 240 (100 - 116)	30 - 40	
Rice Pudding	Sugar, cinnamon, milk, eggs	2¹/2″ Unperf	S	S/TS	S/C	S/TS	145 - 212 (63 - 100)	35 - 40	

Forced steaming may be used.

Potatoes, Legumes

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Semalina	Hot water, drop of oil	2½″ Unperf	S	S	S	S	212 (100)	18 - 30	
Noodles	Spaghetti, egg, macaroni, cook small batches. NOTE: stir halfway through cooking	2½″ Unperf	S	S	S	S	212 (100)	10 - 15	
Lasagna (from scratch)	Fill until 1″ from rim	2½″ Unperf	C/CV	C/CV	C/CV	C/CV	285 - 320 (141 - 160)	35 - 40	SDHC
Grain Cereals	Prepare cold, leave to soak, shortens the cooking time	2½″ Unperf	C	C	C	C	175 - 212 (80 - 100)	10 - 20	

Breads									
Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Brown Bread	Let dough rise, every second runner	¾″ Gran, ½ Sheet Pan	C/CV	C/CV TS	S/C/CV	C/CV TS	320 - 355 (160 - 180)	18 - 30	SDHC
White Bread	Every second runner, let proof*	Grid, Alum Perf	CV	CV TS	S/CV	C/CV TS	320 - 355 (160 - 180)	18 - 30	SDHC
French Bread	Form well, proof,* every second runner	¾″ Gran	C/CV	C/CV TS	S/C/CV	C/CV TS	320 - 355 (160 - 180)	20 - 25	SDHC
Bread, Rolls	Form well, proof,* every second runner	¾″ Gran	C/CV	TS/C/CV	S/C/CV	CV TS	320 - 355 (160 - 180)	10 - 15	SDHC Steam Inject
Whole Wheat Bread	Form well, proof,* every second runner	¾″ Gran	C/CV	C/CV TS	S/C/CV	C/CV TS	320 - 355 (160 - 180)	20 - 25	SDHC
Rolls, Par Baked	Place on pans	¾″ Gran	C/CV	C/CV	C/CV	C/CV	320 - 345 (160 - 174)	5 - 10	SDHC
Croissants	Place on pan, proof* as required	¾″ Gran	C/CV	C/CV TS	S/C/CV	C/CV TS	320 - 370 (160 - 188)	12 - 20	SDHC
Quick Breads	Fill pans evenly	Grid	C/CV	C/CV	C/CV	C/CV	300 - 340 (149 - 172)	25 - 40	SDHC
Bread Sticks, Par Baked	Place on pans, brush with melted butter. Use steam injection to brown.	¾″ Gran	CV	CV	CV	CV	360 - 380 (183 - 193)	5 - 10	SDHC Steam Inject
Bagels, Raw	Proof,* preheat oven	¾″ Gran	CV	CV TS	S/CV	CV TS	360 - 380 (183 - 193)	12 - 16	SDHC
Danish	Prepare dough, proof* as required	¾″ Gran	C/CV	CV TS	S/C/CV	C/CV TS	300 - 330 (149 - 166)	12 - 20	SDHC
Muffins	Spray tins with non-stick spray, fill tins evenly every second runner. Special functions Half Fan speed.	Grids	C/CV	C/CV	C/CV	C/CV	325 - 340 (163 - 172)	15 - 25	SDHC Half Fan
Cinnamon Rolls	Proof* as required	¾″ Gran	C/CV	C/CV TS	S/C/CV	C/CV TS	300 - 325 (149 - 163)	12 - 18	SDHC
Biscuits, Raw	Prepare recipe	¾″ Gran	CV	CV	CV	CV	320 - 350 (160 - 177)	6 - 12	SDHC
Biscuits, Precooked	Thawed, previously frozen	¾″ Gran	CV	CV	CV	CV	400 (205)	2 - 3	SDHC
Toast	Butter lightly	Grid	CV	CV	CV	CV	480 (249)	3 - 5	SDHC

All proofing is done at 95°F (35°C). Tender Steaming may be used for proofing.

Desserts

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Fruit Pies	From scratch, frozen, brush water or egg on top	Grid or Alum Perf	C/CV	C/CV	C/CV	C/CV	350 - 400 (177 - 205)	20 - 25 30 - 50 If frozen	SDHC Steam Inject
Cobblers	Prepare recipe	1½″ - 2½″ Unperf	C/CV	C/CV	C/CV	C/CV	320 - 360 (160 - 183)	25 - 40	SDHC Steam Inject
Apple Dumpling	Prepare recipe	1½″ - 2½″ Unperf	C/CV	C/CV	C/CV	C/CV	350 - 360 (177 - 183)	15 - 25	SDHC
Cheese Cake	Spread mixture evenly, preheat to 305°F	1½″ Unperf Half Sheet	C/CV	C/CV	C/CV	C/CV	325 (163)	40 - 60	SDHC
Sponge Cake (Genoise)	Spread evenly, preheat to 575°F (300°C)	¾″ Gran	CV	CV	CV	CV	350 - 360 (177 - 183)	15 - 25	Steam Inject
Cake with Crumb Topping	Spread batter and crumbs evenly	¾″ Gran	CV	CV	CV	CV	320 - 355 (160 - 180)	20 - 35	SDHC
Plum Cake	Spread evenly with fruit	¾″ Gran	CV	CV	CV	CV	320 - 335 (160 - 169)	25 - 40	SDHC
Marble Cake	Put batter into forms or ¾″ gran pan	Grid, ¾″ Gran	CV	CV	CV	CV	340 - 360 (172 - 183)	15 - 25	SDHC
Sheet Cake	Prepare recipes, spray pan with non-stick spray	¾″ Gran, Half Sheet	CV	CV	CV	CV	340 - 360 (172 - 183)	15 - 25	SDHC
Yeast Cake	Every second runner	¾″ Gran	C/CV	C/CV	C/CV	CV	320 - 350 (160 - 177)	20 - 30	SDHC
Tea Cookies	Cut shapes	¾″ Gran, Half Sheet	CV	CV	CV	CV	350 - 375 (177 - 191)	9 - 13	SDHC
Brownies	Spread evenly in pan	¾″ Gran, Half Sheet	CV	CV	CV	CV	350 (177)	15 - 20	SDHC
Cookies	Prepare recipe, cut, drop, or form, follow recipe directions	¾″ Gran, Half Sheet	CV	CV	CV	CV	300 - 350 (149 - 177)	5 - 18	SDHC
Angel Food Cake	Fill molds or pans	Grid, Half Sheet	CV	CV	CV	CV	300 - 340 (149 - 171)	20 - 35	SDHC
Vacuum Packed Fruits	Slice fruit, add liqueur or syrup, place in bag, seal	Grid	S	TS	S	TS	175 - 212 (80 - 100)	20 - 30	
Waffles	Frozen	Grid, ¾″ Gran	CV	CV	CV	CV	340 - 360 (172 - 183)	5 - 8	SDHC
Pancakes	Frozen, spray pans	1½″ Gran	CV	CV	CV	CV	350 - 390 (177 - 199)	4 - 8	SDHC

Cooking Examples *(continued)*

Pastry/Miscellaneous

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Strudel	Glaze with either egg, milk or sugar water	¾″ Gran or Alum Perf	C/CV	C/CV	C/CV	C/CV	340 - 400 (171 - 205)	20 - 35	SDHC
Turnovers	Preheat to 575°F	¾″ Gran or ¾″ Alum Perf	CV	CV	CV	CV	390 (199)	15 - 30	SDHC
Sponge Roll Cake	Spread evenly, preheat to 575°F	¾″ Gran	CV	CV	CV	CV	355 - 390 (180 - 199)	10 - 15	SDHC Half Fan
Puff Pastry (1)	Glaze with egg, preheat to 575°F	¾″ Gran or ¾″ Alum Perf	C/CV	C/CV	C/CV	C/CV	355 - 390 (180 - 199)	16 - 24	SDHC
Puff Pastry (2)	Force steam for 10 to 30 seconds	¾″ Gran or ¾″ Alum Perf	C/CV	C/CV	C/CV	C/CV	355 - 390 (180 - 199)	8 - 10	SDHC Steam Inject
Puff Pastry Shell	Every second runner	¾″ Gran or ¾″ Alum Perf	C/CV	C/CV	C/CV	C/CV	355 - 390 (180 - 199)	15 - 20	SDHC
Puff Pastry with Fruit	Spread evenly, glaze with egg	¾″ Gran or ¾″ Alum Perf	C/CV	CV	CV	CV	390 (199)	20 - 25	SDHC Steam Inject
Choux Pastry (1)	Pipe evenly, eclairs, preheat oven	¾″ Gran or ½″ Sheet Pan	CV	CV	CV	CV	375 - 390 (191 - 199)	10 - 1	SDHC
Choux Pastry (2)	Pipe evenly, puffs, every second runner	¾″ Gran or ½″ Sheet Pan	CV	CV	CV	CV	375 - 390 (191 - 199)	10 - 15	SDHC Steam Inject
Fruit Cake with Sponge Cake Base	Fill to ½″ from top	1½″ Gran or 2½″ Unperf	CV	CV	CV	CV	340 - 355 (172 - 180)	30 - 35	SDHC
Garnishing Fruit	Apples, pears, etc., evenly cored	¾″ Unperf	S	S	S	S	212 (100)	6 - 9	
Hot Fruit	Frozen fruit, berries in serving utensils	Grid or 1½″ Unperf	S	S/TS	S/C	S/TS	175 - 212 (80 - 100)	5 - 8	
Stewed Fruit (Pre-seasoned)	Cut fruit, syrup on juice, place in jars	Grid	S	S/TS	S/C	S/TS	190 - 212 (88 - 100)	30 - 40	
Bread Pudding	Prepare recipe, spray pan with non-stick spray	2½″ Unperf	S	S/TS	S/C	S/TS	185 - 212 (85 - 100)	30 - 45	
Créme Carmel	Prepare recipe, fill molds	¾″ - 2½″ Unperf Pan	S	S/TS	S/C	S/TS	185 - 212 (85 - 100)	20 - 30	

Miscellaneous

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function
Eggs, Hard Cooked	Leave in cardboard racks	Grid or Perf Pan	S	S	S	S	212 (100)	10 - 15	
Eggs, Poached	Cook in pan or containers	Grid or 2¹⁄₂″ Unperf	S	S/TS	S/C	S/TS	195 - 212 (91 - 100)	9 - 15	
Egg Royal	Fill in forms or container	Grid or 2¹⁄₂″ Unperf	S	S/TS	S/C	S/TS	212 (100)	20 - 35	
Farmer's Omlet	Distribute the mixture evenly, leave ¹⁄₂″ from rim of pan	1¹⁄₂″ - 2¹⁄₂″ Unperf	C/CV	C/CV	C/CV	C/CV	285 - 320 (141 - 160)	20 - 35	SDHC
Eggs, Scrambled	Make egg mixture, cover until needed, spray or butter pan	2¹⁄₂″ Unperf	S	S/TS	S	S/TS	195 - 212 (91 -100)	15 - 20	
Quiche	Precook most meats, vegetables, distribute evenly egg mixture with cheese	Alum, Grid	C/CV	C/CV	C/CV	C/CV	280 - 325 (138 - 163)	30 - 40	SDHC
Cabbage Rolls	In pan with sauce, fresh or thawed	2¹⁄₂″ Unperf	C/CV	C/CV	C/CV	C/CV	225 - 325 (107 - 163)	25 - 35	SDHC
Stuffed Peppers	In pan with sauce, fresh or thawed	2¹⁄₂″ Unperf	C/CV	C/CV	C/CV	C/CV	225 - 325 (107 - 163)	25 - 35	SDHC
Egg Rolls	Frozen, reheat	Gran or Alum or 2¹⁄₂″ Unperf	C/CV	C/CV	C/CV	C/CV	300 - 400 (149 - 205)	10 - 15	SDHC
Stir Fry	Preheat pan to 450°F	Gran Alum	C/CV	C/CV	C/CV	C/CV	400 - 450 (205 - 233)	10 - 15	SDHC
Chicken Cordon Bleu	Frozen then thawed	³⁄₄″ Gran, 2¹⁄₂″ Unperf	C/CV	C/CV	C/CV	C/CV	300 - 350 (149 - 177)	20 - 35	SDHC
Fish Sticks	Preheat to 575°F	³⁄₄″ Unperf	C/CV	C/CV	CV	CV	350 - 420 (177 - 216)	10 - 20	SDHC
Quiche	Frozen	Grid, Half Sheet	C/CV	C/CV	C/CV	CV	280 - 350 138 - 177)	10 - 25	SDHC
Lasagna	Frozen then thawed	In proper pan	C	C	C	C	275 - 350 (135 - 177)	30 - 75	SDHC Probe 160°F (72°C)
Pizza	Fresh dough, pre-cook crust first. Pre-made or frozen, put directly in oven	Grid, Half Sheet	CV	CV	CV	CV	425 (218)	8 - 15	SDHC
Corn Dogs	Frozen	Gran/Alum	CV	CV	CV	CV	275 - 350 (133 - 177)	10 - 15	SDHC
Burritos	Frozen/fresh	¹⁄₂″ - 2¹⁄₂″ Unperf	CV	CV	CV	CV	275 - 350 (133 - 177)	15 - 20	SDHC
Entrees	Frozen	Grid or in Proper Pan	C	C	C	C	275 - 350 (133 - 177)	40 - 75	Probe 160°F (72°C)
Entrees	Fresh/frozen then thawed	Grid or in Proper Pan	C	C	C	C	275 - 350 (133 - 177)	30 - 50	Probe 160°F (72°C)

Food	Hints	Proper Container or Grid	CSB Mode	CSM Mode	CSL Mode	CSG Mode	Temp. in °F(°C)	Approx. Cook Time in Min.	Special Function

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