VULCAN

INSTALLATION & OPERATION MANUAL

ECO2D & ECO2C ELECTRIC CONVECTION OVENS

MODEL

ECO2D	*ML-114570*
ECO2C	*ML-114572*



Model ECO2D

For additional information on Vulcan-Hart Company or to locate an authorized parts and service provider in your area, visit our website at www.vulcanhart.com

VULCAN-HART
DIVISION OF ITW FOOD EQUIPMENT GROUP, LLC

P.O. BOX 696
LOUISVILLE, KY 40201-0696

WWW.VULCANHART.COM

FORM 30976 Rev. E (Feb. 2009)

Installation, Operation and Care of ECO2D & ECO2C ELECTRIC CONVECTION OVENS

KEEP THIS MANUAL FOR FUTURE REFERENCE

GENERAL

The ECO2D Electric Convection Oven is a single cavity oven and features a solid state thermostat, 1-hour dial timer, two-speed 1/2 HP (0.37 KW) electric motor and five racks as standard equipment. Additional oven racks are optional. Each oven is provided with a standard 208 or 240 volt, 60 Hz., and 1- or 3-phase electrical service. Porcelain oven interior is standard; stainless steel interior is optional. Stainless steel exterior is standard. Door hinged on left is standard.

Model ECO2C has a different control than ECO2D.

A single oven may be installed on an open stand with lower storage rack (optional). A variety of legs, casters and stacking options are available.

Features of the models are shown below:

MODEL	THERMOSTAT	TIMER	ROAST & HOLD	GENTLE BAKE	RACK # COOK TIMES
ECO2D	Solid State	1-Hour Dial			
ECO2C before October 1999	Electronic	Electronic	X	X	
ECO2C after October 1999	Programmable	Programmable	X		X

Your Vulcan Electric Convection Oven is produced with quality workmanship and material. Proper installation, usage and maintenance of your oven will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

INSTALLATION

Before installing, verify that the electrical service and type of gas supply (natural or L.P.) agree with the specifications on the oven rating plate, located on the inside of the top front cover. If the supply and equipment requirements do not agree, do not proceed with installation. Contact your dealer or Vulcan-Hart Company immediately.

UNPACKING

This oven was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking the oven, check for possible shipping damage. If this oven is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Do not use the door or its handle to lift the oven.

© VULCAN-HART, 2009

LOCATION

The installation location must allow adequate clearances for servicing and proper operation.

INSTALLATION CODES AND STANDARDS

In the United States of America:

1. State and local codes.
2) *Vapor Removal From Cooking Equipment*, NFPA-96 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02169-7471.
3) National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02169-7471.

In Canada:

1. Local codes.
2) CSA Standard C22.2 No.1 *Canadian Electrical Code* (latest edition).
3) CSA Standard C22.2 No. 109 *Canadian Standard for Commercial Cooking Equipment* (latest edition).

The above are available from the Canadian Standard Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.

INSTALLING BASIC OVEN

The basic oven must be installed on legs or be mounted on a modular stand. Installations on concrete bases or other supports restricting air circulation underneath the oven is not advisable and may void the warranty.

Ovens Mounted on Casters

Separate instructions for installing casters to the oven are included with the casters.

Note: If the oven is installed on casters and is moved for any reason, it is recommended that the oven be releveled front to back and side to side for even baking.

Ovens mounted on casters must utilize a restraining device to limit stress or strain of field wiring connections. A tie down strap is provided at the rear of the oven. The oven must be secured to the building using the tie down strap and a flexible connector line, not supplied by Vulcan, when the oven is employing casters.

Assembling the Legs to the Single Oven

The 4" (10 cm) or 6" (15 cm) legs are packed inside the oven during shipment and must be installed on the bottom of the oven. Position the oven on its left side, taking care not to scratch or damage it. Thread each of the four leg assemblies into the holes provided on the bottom corners of the oven. Carefully raise the oven to its normal upright position.

Assembling the Chimney to the Single Oven

Remove the oven chimney from inside the oven cavity and use the screws provided to fasten the chimney to the top rear of the oven (Fig. 1). The flanges on the chimney are to be positioned over the top cover.

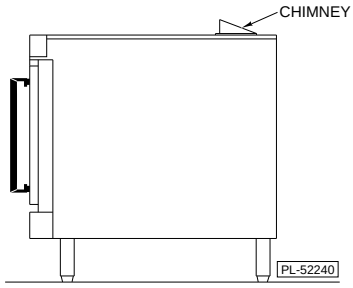


Fig. 1

Assembling the Oven to the Stand

Unpack the oven and stand. Position oven on its back, taking care not to scratch or damage it. Install the two locating studs (included in the stand carton) into the screw plates on the underside of the oven (Fig. 2).

Attach each of the four leg assemblies to the bottom of the stand with the 24 bolts and lockwashers (6 per leg). If casters are used instead of legs, put fixed casters in rear and swivel casters in front. Mount the oven on top of the stand.

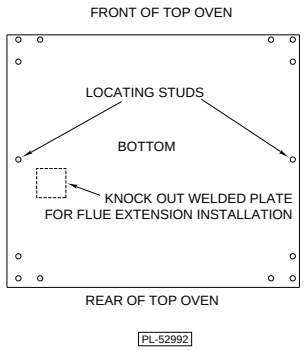


Fig. 2

Assembling Stacked Ovens

Determine which oven will be on the bottom and place it on its left side, being careful to avoid scratching the finish. Install the four $16^{3}/_{4}$" (42.5 cm) legs, using the 24 bolts and lockwashers provided (6 per leg). Place lower oven (with legs) on floor. Remove the two $^{7}/_{16}$" (1.1 cm) knockouts on each side of the top cover and the $1^{3}/_{32}$" (2.8 cm) knockout on the right side of the top cover. Move this oven to the installation position.

Install the two locating studs (included in leg stack set) into the screw plates on the underside of the top oven (Fig. 2) and remove the $1^{3}/_{32}$" (2.8 cm) knockout that will line up with the one removed from the bottom oven. Carefully place the top oven in position above the bottom oven.

LEVELING

Once the oven is in its permanent position, place a carpenter's level on the oven rack. If the oven is installed on legs, turn adjustable feet in or out to level oven front-to-back and side-to-side. If the oven is installed on casters, loosen set screws and turn casters in or out to level oven front-to-back and side-to-side. Retighten set screws after leveling.

ELECTRICAL CONNECTIONS

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

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

ELECTRICAL DATA

	TOTAL KW	3 PHASE LOADING (KW PER PHASE)			NOMINAL AMPS PER LINE WIRE													
					3 PHASE						1 PHASE		2 PHASE, 3 WIRES					
					208 V			240 V			208 V	240 V	220/380 V			240/415 V		
		L1-L2	L2-L3	L1-L3	L1	L2	L3	L1	L2	L3			L1	L2	L3	L1	L2	L3
SINGLE OVEN	5.5	2.5	0	3.0	23.0	10.0	12.0	20.0	9.0	11.0	26.0	23.0	0	4.5	4.5	0	4.9	4.9
STACKED OVEN	11.0	5.0	0	6.0	46.0	20.0	24.0	40.0	18.0	22.0	52.0	46.0	0	9.0	9.0	0	9.8	9.8

Knockouts are provided on the back and bottom of the oven for making conduit connections. Remove the screws from the front control panel for access to the terminal block.

Wire and required hardware for making connections between stacked ovens are furnished with the leg stack set.

Replace the right side panel if it was removed during electrical connection.

Replace the front control panel and turn on the power supply.

OPERATION

⚠ WARNING The oven and its parts are hot. Use care when operating, cleaning or servicing the oven.

CONTROLS — Model ECO2D (Fig. 3)

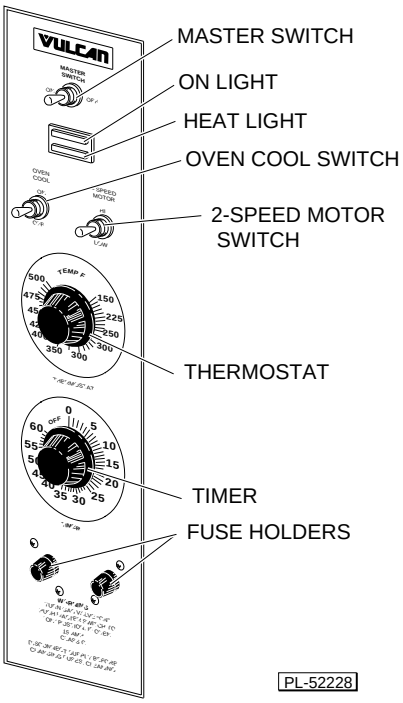


Fig. 3

MASTER SWITCH — Turns oven control circuits ON or OFF.

OVEN COOL SWITCH — Allows the fan motor to run with the doors ajar to speed oven cooling.

THERMOSTAT — Controls oven temperature during cooking operation.

TIMER — Use to set cooking cycle time. Timer range is 0 to 60 minutes. Alarm sounds continuously when elapsed time counts down to 0; oven does not turn off. Turn timer to OFF position to stop alarm. When oven is not in use, keep timer at OFF position.

ON LIGHT (Amber) — Lit when Master Switch or Oven Cool Switch is positioned at ON.

HEAT LIGHT (White) — Comes on and goes off when the heating elements cycle on and off.

2-SPEED MOTOR SWITCH — Adjusts air velocity in the oven. Use the HI setting as the usual operating speed and the LO setting for delicate product like meringue which might be blown around in the oven.

FUSE HOLDERS — Replace fuses with appropriate type described on control panel.

BEFORE FIRST USE

Before using the oven for the first time, it must be "burned in" to release any odors that might result from heating the new surfaces in the chamber.

1. Using a clean damp cloth, wipe the inside of the oven, including the racks.

2. Close the oven doors, turn the Master Switch to ON, turn the Thermostat to 300°F (149°C) and allow the oven to cycle for 6 to 8 hours before turning the Master Switch to OFF.

USING THE ECO2D OVEN

Preheating

1. Turn Master Switch to ON. Amber ON light will come on, indicating that power to the oven is on.

2. Set Thermostat as desired. Refer to SUGGESTED COOKING GUIDELINES for temperatures and times for various products.

3. Prepare product and place in suitable pans. When white HEAT light goes off, oven has reached desired preheat temperature.

Cooking

1. Open doors and load the product into the oven. Place pans in the center of the racks. Close doors.

2. Set the Timer. After the preset time lapses, turn timer to OFF position to stop alarm.

3. When product is done, open doors and carefully remove cooked product from the oven. Wipe up any spills.

End of Day

1. Turn Thermostat to OFF.

2. Turn Oven Cool switch to ON. Leave door ajar while the fan is on to cool the oven.

3. When the oven has cooled sufficiently, push the Master Switch and Oven Cool Switch to the OFF position and clean the oven.

CONTROLS — Model ECO2C Built before October 1999 (Fig. 4)

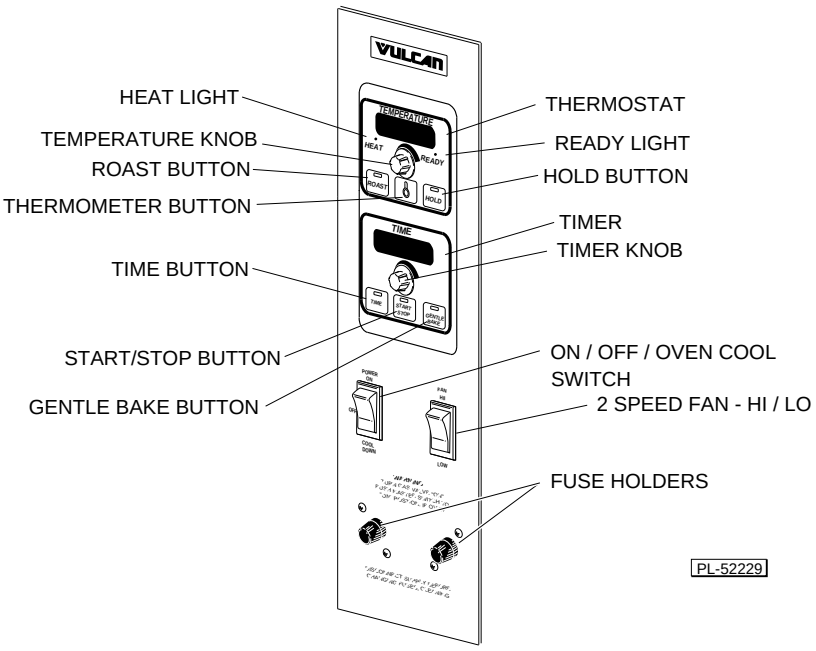


Fig. 4

THERMOSTAT CONTROL

Temperature Display (When not timing product).

Displays set cook temperature while the light in the Roast Button is lit. Will be overridden to display actual cavity temperature for 8 seconds when Thermometer Button is pushed.

1. The light in the Thermometer Button is lit while the actual temperature is being displayed.
2. The light in the Thermometer Button is not lit when the display returns to the set temperature.

Temperature Display (When product is being timed).

Displays set hold temperature while the light in the Hold button is lit. Displays the roast temperature when the Roast button is lit. Will be overridden to display actual cavity temperature for 8 seconds when the Thermometer Button is pushed.

1. The light in the Thermometer Button is lit while the actual temperature is being displayed.
2. The light in the Thermometer Button is not lit when the display returns to the set temperature.

Temperature Knob (When not timing product).

1. Sets the roast temperature when the Roast Button light is lit. The Roast Button light can be turned on by pressing the Roast Button.
2. Sets the hold temperature when the Hold Button light is lit. The Hold Button light can be turned on by pressing the Hold Button.

Temperature Knob (When product is being timed).

1. Sets the roast temperature when the Roast Button light is lit. The Roast Button light cannot be changed by pressing the Roast Button.
2. Sets the hold temperature when the Hold Button light is lit. The Hold Button light cannot be changed by pressing the Hold Button.

Roast Button Light (If On and not timing product, indicates the roast mode is selected).

- The displayed temperature settings will be for the roast temperature except when the light in the Thermometer Button is lit.
- Rotating the Thermostat Knob will change the roast set temperature.
- Cook time can be adjusted using the Timer Knob.
- The time displayed is the initial set cook time.
- It is possible to select the Hold mode using the Hold Button.

Roast Button Light (If On and product is being timed, indicates the roast mode is selected).

- The displayed temperature settings will be for the roast temperature except when the Thermometer Button is lit.
- Rotating the Temperature Knob will change the roast set temperature.
- It is not possible to select the Hold mode using the Hold Button.
- The time displayed is the time counted down from the initial cook time setting.

Roast Button

1. Selects the Roast mode, indicated by the Roast Button Light described above.
2. Has no effect if timing in the Hold mode.

Thermometer Button — When pressed, displays the actual oven temperature for about 8 seconds, then returns to the set temperature.

Heat Light — When lit, indicates that power is being supplied to the heating elements.

Ready Light — Is lit when the actual temperature is within 5°F (3°C) of the set temperature for the current mode, plus or minus.

TIMER CONTROL

Time Display (While not timing product) — Displays the set cook time if the light in the Roast Button is lit.

Time Display (While product is being timed).

1. Displays the counted down cook time if the Roast Button light is lit and in the Roast mode.
2. Displays the counted up hold time if the Hold Button is lit in the Hold mode. Count-up of hold time does not begin until cavity temperature reaches the hold temperature.

Time Display Colon

1. Is flashing if product is timing.
2. Is not flashing if product is not being timed.

Time Button — Press to set cooking cycle time.

Time Button Light — Is lit when the Time Button is pressed.

Timer Knob — Sets the cook time when not already timing and the Cook Time indicator is lit.

Gentle Bake Button

Selects the gentle bake time setting. A roast time must be set first. The gentle bake time can then be set at the roast time value or less. The gentle bake time will be the portion of roast time to operate in the gentle bake mode. Gentle bake mode will start first. When gentle bake time has lapsed, the remainder of the roast time will be in the non-gentle bake mode.

Use when cooking delicate product, such as strudel, muffins, cupcakes, meringue pies, etc., to keep product from forming waves on the top.

Use the Gentle Bake Button to switch between the selection of gentle bake mode and no gentle bake mode time setting. A gentle bake mode time of zero means no gentle bake mode will occur.

The light in the Gentle Bake Button is lit during gentle bake mode.

Gentle Bake Mode

1. The fan cycles (45 seconds ON and 45 seconds OFF) throughout the gentle bake mode.
2. The fan stays on while the heat cycles in hold mode.
3. The fan stays on while heat cycles at 100% power when not timing.
4. Can be switched at any time.

Stop / Start Button

1. Starts timing a product in the mode selected if a cook time has been set.
2. Stops timing a product if a timing sequence is already in progress.

Hold Button — Selects Hold mode.

1. Allows selection of hold temperature.
2. Temperature indication of ---°F (---°C) indicates no hold mode.

Hold Button Light — Is lit when in the Hold mode.

1. When not timing, allows setting / enabling a hold mode setting of ---°F (---°C), meaning no hold will take effect.
2. Any other temperature means that when the actual cook time has ended, the oven will enter the Hold mode and use the hold temperature.

Two-Speed Fan Switch — Sets the oven's convection fan motor at LO or HI speed.

On / Off / Oven Cool Switch

1. ON turns oven control circuits on.
2. OFF turns oven control circuits off.
3. OVEN COOL allows the fan motor to run with the doors ajar to speed oven cooling.

BEFORE FIRST USE

Before using the oven for the first time, it must be "burned in" to release any odors that might result from heating the new surfaces in the chamber.

1. Using a clean damp cloth, wipe the inside of the oven, including the racks.
2. Close the oven door, push the ON / OFF / OVEN COOL switch ON, turn the Thermostat to 300°F (149°C) and allow the oven to cycle for 6 to 8 hours before turning the ON / OFF / OVEN COOL switch OFF.

USING THE ECO2C OVEN

Preheating

1. Close oven door. Push ON / OFF / OVEN COOL switch ON. The HEAT light will come on, indicating that power to the oven is on.
2. Set THERMOSTAT as desired. Refer to SUGGESTED COOKING GUIDELINES for temperatures and times.
3. Prepare product and place in suitable pans. When READY light comes on, oven has reached desired preheat temperature.

Roasting

1. Open the door and load the product into the oven. Place pans in the center of racks. Close the door.
2. Set ROAST temperature and time. Set HOLD temperature and GENTLE BAKE time, if desired. GENTLE BAKE time cannot be more than ROAST time. GENTLE BAKE will cycle the fan during the set time at the beginning of the cooking cycle.
3. Press the START / STOP button to start the cooking cycle.
4. At the end of the cooking cycle, the alarm will sound continuously if the HOLD mode is OFF. If the HOLD mode is ON, there will be a short beep at the beginning of Second Stage Cooking (oven temperature will begin to decline to the HOLD temperature), and a long beep (20 seconds) at the end of the cooking cycle. Refer to ROAST AND HOLD OPERATION.
5. When product is done, open the door and carefully remove cooked product from the oven. Wipe up any spills.

End of Day

1. Push ON / OFF / OVEN COOL switch to OVEN COOL. Leave door ajar while the fan is on to cool the oven.
2. When the oven has cooled sufficiently, push the ON / OFF / OVEN COOL switch to the OFF position and clean the oven.

ERROR MESSAGES — Model ECO2C

E-01 High limit error. Contact Vulcan authorized service.

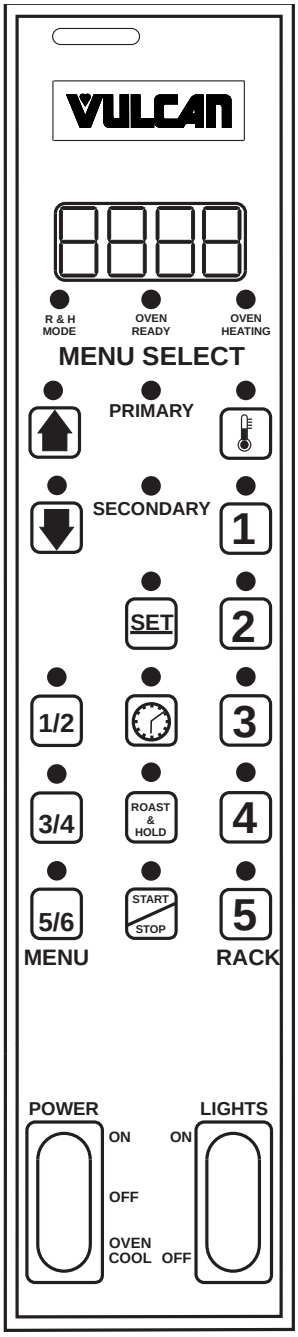
E-02 Low limit error. Contact Vulcan authorized service.

E-03 High ambient temperature, 215°F (102°C). Contact Vulcan authorized service.

E-04 Low ambient temperature, 32°F (0°C). Let control warm up after cold storage.

E-06 Thermocouple probe open. Contact Vulcan authorized service.

When calling for service, please advise what error code was displayed.



Always displays [HR:Min] when setting the Time.
Displays [HR:Min] if the countdown Time is more than 1 Hour.
Displays [Min:Sec] if the countdown Time is less than 1 Hour.
Displays Temperature in °F.

R & H MODE — Indicates the oven is in the Roast and Hold Mode.

OVEN READY — Indicates the oven is preheated and ready for cooking.

OVEN HEATING — Indicates the oven is preheating.

PRIMARY — Primary indicates Menu Items 1, 3, or 5.

SECONDARY — Secondary indicates Menu Items 2, 4, or 6.

Up arrow increases; Down arrow decreases — a displayed Time or Temperature value (if arrow keys are lit).

TEMPERATURE: Use with SET to set the oven Temperature.

SET: Use with Time or Temperature.

TIME: Use with SET to manually set the cooking Time.

ROAST & HOLD — Selects Roast and Hold mode.

START / STOP — Press once to start; press a second time to stop.

1/2 3/4 5/6 — Select Menu Cook Times. Press once for Primary (1, 3, or 5). Press a second time for Secondary (2, 4, 6). See next page.

1 2 3 4 5 — Rack Buttons select individual Menu / Rack # Cook Times — once programmed.

MANUALLY SETTING THE TEMPERATURE AND COOK TIME

To Set the Temperature

- Press the SET button. Press the TEMPERATURE button; *StPt* displays to indicate Setpoint.
- Use the Up and Down Arrow keys to increase or decrease the displayed Temperature value.
- Press the SET button again to save the Temperature setpoint in the computer.

To Set the Cook Time

- Press the SET button. Press the TIME button. *Tine* displays to indicate TIME.
- Use the Up and Down Arrow keys to increase or decrease the displayed Cook Time (HR:min).
- Press the SET button again to save the Time setting in the computer.

To Start Cooking

- Press the START / STOP button.
- The manual Cook Time counts down to 00:00. Displays [HR:Min] above 1 hour; [min: sec] below.
- The buzzer will sound. To silence the buzzer, press the START / STOP button again.

* *The control retains the manual settings for Temperature and Time.*

TO PROGRAM MENU ITEM and RACK # Cook Times

Factory Preset and Programmable Cook Times are shown in the table, below:

MENU SELECTION	MENU ITEM	FACTORY PRESET MENU ITEM COOK TIME	PROGRAMMABLE VALUES					
			MENU ITEM COOK TIME	RACK 1 COOK TIME	RACK 2 COOK TIME	RACK 3 COOK TIME	RACK 4 COOK TIME	RACK 5 COOK TIME
1 / 2 Primary	1	10 min.						
1 / 2 Secondary	2	15 min.						
3 / 4 Primary	3	20 min.						
3 / 4 Secondary	4	25 min.						
5 / 6 Primary	5	30 min.						
5 / 6 Secondary	6	35 min.						

The Primary indicator light with Menu 1 / 2 selects Menu Item 1 (Factory Preset Cook Time = 10 minutes). The Secondary indicator light with Menu 1 / 2 selects Menu Item 2 (Factory Preset Cook Time = 15 minutes). Similarly, for Menu Buttons 3 / 4 or 5 / 6. Any Menu Item Cook Time can be changed using the procedure below. Rack # Cook Times may be programmed if desired but are not required.

To Change the Time Setting for any Menu Item (1 – 6)

- To enter program mode, press and hold the Up and Down arrow buttons until PrOG displays.
- ✤ Select the Menu Item to be programmed (1 – 6). *Tine* displays to indicate TIME. Use the Up and Down arrow buttons to increase or decrease the Menu Item's COOK TIME. Repeat this step for any other Menu Items.
- Press the START / STOP button; LOC displays. Press the START / STOP button a second time to save the Menu Item(s)' COOK TIME(s).
- Press the START / STOP button once to begin cooking (with the Menu Item's Cook Time). To exit, press the START / STOP button a second time.

To Program Individual Rack # Cook Times for a Menu Item

- To enter program mode, press and hold the Up and Down arrow buttons until PrOG displays.
- Select the Menu Item to be programmed (1 – 6); *Tine* displays to indicate TIME.
- ✤ Then select the Rack # (1 – 5). [*t 1*] indicates Rack #1; [*t 2*] indicates Rack #2; ... [*t 5*] indicates Rack #5. Use the Up and Down arrows to increase or decrease the COOK TIME for any Rack #.
- Press the START / STOP button; *LOC* displays. Press the START / STOP button a second time to save the Menu / Rack #'s COOK TIME(s).
- To exit program mode, press START / STOP twice.

Always Set the Temperature Before Setting the Time

- Press the SET button. Press the TEMPERATURE button; *StPt* displays. Use the Up and Down Arrow keys to increase or decrease the Temperature. To save, press the SET button again.

At startup, the display will initially show a *GROWING BAR*. When the oven temperature reaches the Set Point, the set temperature displays. The READY light is lit, the HEAT light goes out, and the oven is ready for you to select the Cook Time, Menu Item Cook Time, or Menu / Rack # Cook Time.

Starting a Timed Cycle On All Racks

- Open the door, *door* will display.
- Place the desired product on any of the five racks.
- Close the door. The display should return to the set temperature or the *GROWING BAR*.
- Press the Menu Key once for Primary or twice for Secondary to select a Menu Item Cook Time.
- Press the START / STOP button *.
- The timer will count down the time remaining for the Menu Item Cook Time.
- When the time has counted down to 00:00, the buzzer will sound and all Rack Buttons will flash.
- To silence the buzzer, press the START / STOP button.

* *Pressing the START / STOP button after making a menu selection will time all racks for the selected menu time.*

Starting a Timed Cycle Using Programmed Individual Menu / Rack # Cook Time(s)

- After the set Temperature is reached, open the door; *door* displays. Place product(s) in oven.
- Close the door. The display returns to the set Temperature or the *GROWING BAR*.
- Select the Menu Item (once for Primary or twice for Secondary) and the Rack # to select the Menu / Rack # Cook Time. If using simultaneous cook times, select the other Menu / Rack #'s.
- The timer selects the Rack # with the shortest Cook Time and counts down to 00:00.
- The buzzer sounds and the Rack # flashes. To silence the buzzer, press the flashing Rack #.
- Open the door; *door* displays; remove the finished product; close the door.

✣ The next shortest Cook Time displays, its Rack # flashes and the time counts down to 00:00.

- The buzzer sounds. Press the flashing Rack #. Open the door, *door* displays. Remove the product, close the door. Repeat from ✣ until all Rack #'s are done.

To Display the Actual Oven Temperature

- Press and hold the Temperature button for 3 seconds to display Actual Oven Temp until released.

To End a Cooking Cycle

At the end of a cooking cycle, the alarm will sound. To silence the alarm and end a Menu Item cooking cycle, press START / STOP. To silence the alarm and end a Rack # cooking cycle, press the Rack #.

To cancel a cooking cycle which might have been started in error, press and hold the Rack button to be terminated and press START / STOP at the same time.

Door and Timing

Opening the door while loading additional product will interrupt all timing functions until the door is closed and the timer resumes. For example, if a product time had diminished to 1 minute and the door was opened for 30 seconds and then closed, the timer would still show 1 minute.

SETTING THE OVEN FOR ROAST & HOLD

- Press the Roast & Hold button to select Roast & Hold.
- Set the first stage Temperature and the Cook Time as described in: MANUALLY SETTING THE TEMPERATURE AND COOK TIME. Press START / STOP to begin cooking.

* *The HOLD Temperature is preset by the computer control at 150°F (66°C).*

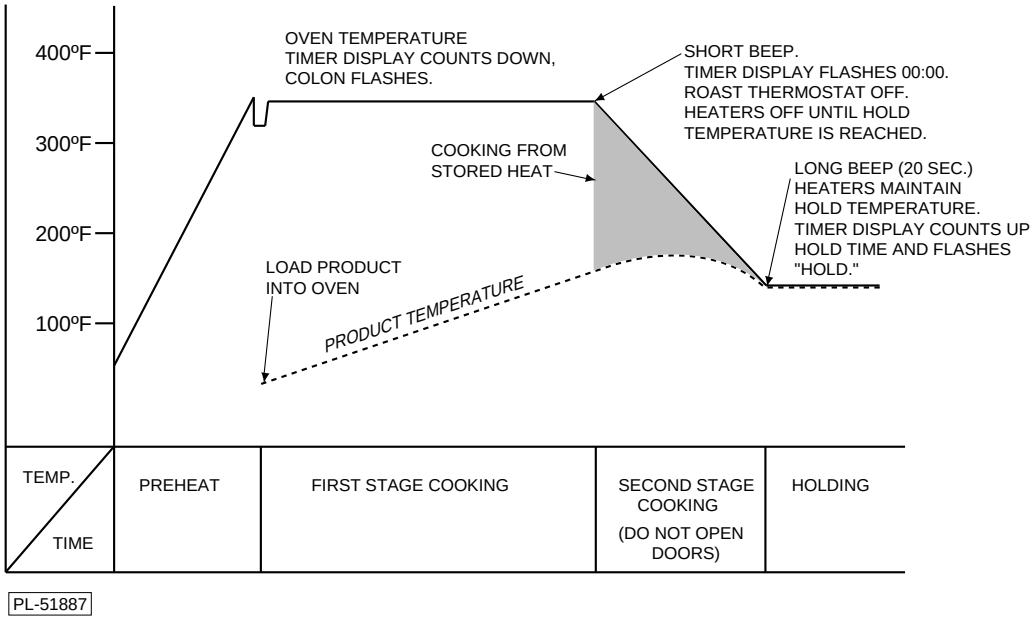
* *The LOW FAN SPEED is present during Roast & Hold. Use R&H to select LOW FAN SPEED.*

ROAST AND HOLD OPERATION — Model ECO2C

Roast and Hold cooks the product in two stages. During First Stage Cooking, the oven temperature is regulated by the Roast thermostat for the amount of time set on the Timer. After the lapsed time counts down to 00:00, Second Stage Cooking begins. During Second Stage Cooking, the heating elements are off as the temperature in the oven declines to the Hold Temperature. The doors should remain closed during Second Stage Cooking.

When the Hold temperature is reached, cooking is done. The Time Display counts up the Hold time and flashes "Hold". Temperature in the oven will be maintained at the Hold temperature until the oven is turned off.

ROAST AND HOLD DIAGRAM - Time vs. Temperature



PL-51887

PROPER UTENSILS

The use of proper utensils can enhance oven operation. Medium and lightweight pans are recommended since it is more economical to bake with lighter pans.

Meats should be roasted in shallow pans deep enough to hold all juices and allow free air circulation.

CONSERVING ENERGY

- Turn off unused equipment.
- Adjust menu patterns and cooking / baking schedules for optimum equipment use.
- Preheat only to required cooking temperature for specific food, not higher.
- Do not open the oven door unless absolutely necessary. Use the window to observe cooking progress.
- Keep area around the oven door clean and free of food particles.
- Any obstruction that prevents the door from closing completely will adversely affect oven efficiency.

OPERATING HINTS

When using the convection oven for the first time with a particular food, check the degree of doneness periodically before the suggested time has elapsed to make sure the desired doneness is achieved.

Record your temperature and time settings for various products. The convection oven can provide consistent, repeatable results.

The convection oven is faster than conventional deck-type ovens; temperature settings are lower and cook times are shorter. Since recipes and foods are subject to many variations and tastes, the guidelines regarding times and temperatures in this manual are SUGGESTIONS ONLY. Experiment with your food products to determine the cooking temperatures and times that give you the best results.

CLEANING

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

Clean outside of the oven daily by wiping with a clean damp cloth.

Clean porcelain oven interior daily with soap or detergent and water. Rinse thoroughly and wipe dry with a soft clean cloth.

Optional Stainless Steel Oven Interior

Soap or detergent and water usually handle routine cleaning. Rinse thoroughly and dry with a soft clean cloth.

For burned-on foods and grease which resist simple soap and water cleaning, an abrasive cleanser (scouring powder) mixed into a paste may be used. Apply with stainless steel wool or sponge, always rubbing with the "grain."

This treatment is equally effective for "heat tint" (slightly darkened areas caused by oxidation). Again, remember to rub in the direction of the polish lines. Rinse with clear water and dry with a soft cloth.

SUGGESTED COOKING GUIDELINES

The following lists are suggested baking times and temperatures for the ECO2D or ECO2C oven. These guidelines, which will vary depending on product temperature, size, shape, etc., are SUGGESTIONS ONLY and should be adjusted to suit your operation.

PRODUCT	TEMPERATURE °F	(°C)	TIME (MINUTES)	NUMBER OF RACKS
BREAD PRODUCTS				
Hamburger Rolls	300	(149)	15	5
Bread - 1 Lb. (454 gr.) Loaves	325	(163)	34	3 (9 loaves)
Rolls	300	(149)	16	5 (60 rolls)
Baking Soda Biscuits	400	(204)	7	3
PASTRIES				
Sheet Cake (2 1/2 Lb. per Pan) (1 kg)	300	(149)	17	5
Frozen Fruit Pies (46 Oz.) (1 kg)	350	(177)	50	5 (5 pies)
Frozen Fruit Pies (26 Oz. [737 gr.] 8" [203 mm] Diam.)	350	(177)	40	5 (10 pies)
Sugar Cookies	300	(149)	15	5
Danish Rolls	350	(177)	12	5
Fruit Cakes	275	(135)	75	3
Cake - 1 Lb. (454 gr.)	300	(149)	19	5 (5 cakes)
MEAT				
Hamburger Patties (5 per Lb. [454 gr.]) (well done)	400	(204)	9 – 10	5 (30 patties)
Hot Dogs	300	(149)	9	5 (200)
Baked Stuffed Pork Chops	375	(190)	40	5 (30 chops)
Roast Beef (10-Lb. [4.5 kg] Roasts)	250	(121)	2 1/2 – 3 hrs.	2 (2 roasts)
FISH				
Fish Sticks	350	(177)	15	5
Lobster Tails	450	(232)	9	5
Halibut Steaks (Frozen, 5 Oz.) (142 gr.)	350	(177)	20	5
Baked Shrimp (Stuffed)	400	(204)	7	5
FOWL				
Turkey, Rolled (18 Lb. [8 kg] Rolls)	310	(154)	3 3/4 hrs.	1
Chicken (2 1/2 Lb. Quartered) (1 kg)	350	(177)	30 – 35	5
Chicken (Breasts)	350	(177)	30	5
OTHER				
Melted Cheese Sandwiches	400	(204)	8	5
Idaho Potatoes (120 Count)	400	(204)	40	5
Beef Pot Pies	400	(204)	30 – 35	5
Macaroni & Cheese	350	(177)	30	5
Turkey Pot Pies	400	(204)	30 – 35	5
TV Dinners	450	(232)	25	5 (15)

ROLLED BEEF ROASTS — Model ECO2C

The following are suggested roasting times and temperatures for model ECO2C. These guidelines, which will vary depending on product temperature, size, shape, etc., are SUGGESTIONS ONLY and should be adjusted to suit your operation.

ROAST TEMPERATURE	200°F (93°C)		250°F (121°C)		300°F (149°C)	
HOLD TEMPERATURE	140°F (60°C)					
DONENESS	RARE	MEDIUM	RARE	MEDIUM	RARE	MEDIUM
WEIGHT OF ROAST POUNDS	HOURS:MINUTES					
8	2:40	3:45	1:45	2:20	1:20	1:40
9	2:50	3:58	1:50	2:25	1:25	1:50
10	3:00	4:15	2:00	2:35	1:30	1:55
11	3:10	4:25	2:05	2:45	1:35	2:00
12	3:20	4:40	2:15	2:50	1:40	2:05
13	3:30	4:50	2:20	3:00	1:45	2:15
14	3:40	5:05	2:25	3:10	1:50	2:20
15	3:45	5:15	2:30	3:15	1:55	2:25
16	3:55	5:30	2:35	3:20	2:00	2:30
17	4:00	5:40	2:40	3:30	2:00	2:35
18	4:10	5:50	2:45	3:35	2:05	2:40
19	4:15	6:00	2:50	3:40	2:10	2:45
20	4:25	6:10	2:55	3:50	2:15	2:50
21	4:30	6:20	3:00	3:55	2:15	2:55
22	4:40	6:30	3:05	4:00	2:20	2:55
23	4:45	6:40	3:10	4:05	2:25	3:00
24	4:55	6:50	3:15	4:15	2:25	3:05
25	5:00	7:00	3:20	4:20	2:30	3:10
26	5:05	7:10	3:25	4:25	2:35	3:15
27	5:15	7:20	3:30	4:30	2:35	3:20
28	5:20	7:25	3:35	4:35	2:40	3:20
29	5:25	7:35	3:35	4:40	2:45	3:25
30	5:30	7:45	3:40	4:45	2:45	3:30

Overall oven interior dimensions may limit the size of larger roasts that can be accommodated.

MAINTENANCE

⚠ WARNING The oven and its parts are hot. Use care when operating, cleaning or servicing the oven.

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

FUSE HOLDERS

Replace fuses with appropriate type described on control panel.

LUBRICATION

The fan motor comes with sealed bearings and requires no lubrication.

The door hinges and mechanism require occasional lubrication with mineral oil.

SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning this model, contact the Vulcan-Hart Service Agency in your area (refer to our website, www.vulcanhart.com for a complete listing of Authorized Service and Parts depots).

When calling for service, the following information must be available: model number, serial number, manufacture date (MD) and voltage.