VULCAN

INSTALLATION & OPERATION MANUAL, FOR ELECTRIC CONVECTION OVENS

MODELS:

ET8, ET8R, ETH8, ETH8R,
ET88, ET88R, ETH88, ETH88R,
ET10, ET10R, ETH10, ETH10R,
ET1010, ET101R, ETH101, ETH11R

(208/240, 480, 440, 220/380 VOLTS - ALL PHASES)

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FORM F-30518 Rev. A (10-91) (Formerly 115726)

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INSTALLATION AND OPERATION MANUAL
ET8, ET10 SERIES ELECTRIC CONVECTION OVENS INDEX

PLEASE KEEP THIS MANUAL FOR FUTURE REFERENCE

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

The manufacturer suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

INSTALLATION

UNCRATING

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, check for possible shipping damage. If the oven is found to be damaged after unpacking, save the packaging material and contact the carrier within 15 days of delivery.

Before installing, verify that electrical service agrees with the specifications on the rating plate. If the two voltages do not agree, do not proceed with the installation. Contact your dealer or Vulcan-Hart immediately.

LOCATION

Do not install the oven closer than 1" from back, 0" from side walls. Oven should be positioned for easy accessibility for servicing.

RATING PLATE INFORMATION

The rating plate will be found mounted above the switch panel. **NOTE:** All double stack oven rating plates list total K.W. rating for both ovens on each rating plate.

INSTALLATION CODES AND STANDARDS

Your Vulcan oven must be installed in accordance with:

1. State and local codes.
2. In the United States, the National Electrical Code, ANSI/NFPA No. 70 (latest edition).
3. In Canada, the Canadian Electrical Code, Part 1, C22.1 (latest edition).

ASSEMBLY - SINGLE OVENS

Leg Installation

The ovens are shipped with the leg stand base bolted in place to the bottom of the oven. Legs are shipped wrapped inside the oven compartment.

1. Remove the legs from the oven compartment. Note that two sides of each leg have pre-drilled holes facing the inside of the leg stand frame.
2. Tilt the oven back and insert the front legs with pre-drilled holes toward the inside (Fig. 1).

Fig. 1

3. Bolt legs to leg stand frame with the ¼-20 thread forming screws provided (two bolts per leg) (Fig. 2).

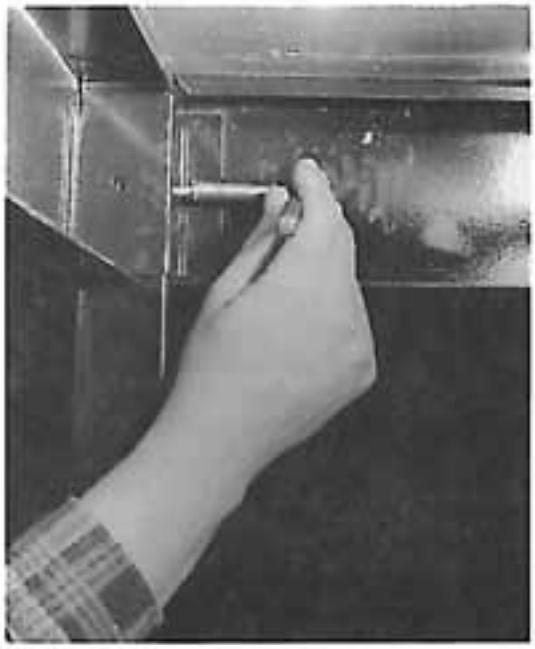


Fig. 2

4. Lift oven from the rear, tilting forward until the rear legs can be inserted into the leg stand (remember to insert the legs with the mounting holes to the inside of the leg stand frame) (Fig. 3).

Fig. 3

5. Bolt rear legs to leg stand frame with the ¼-20 thread forming screws provided (two bolts per leg) (see Fig. 2).

The completed leg assembly is shown in Fig. 4.

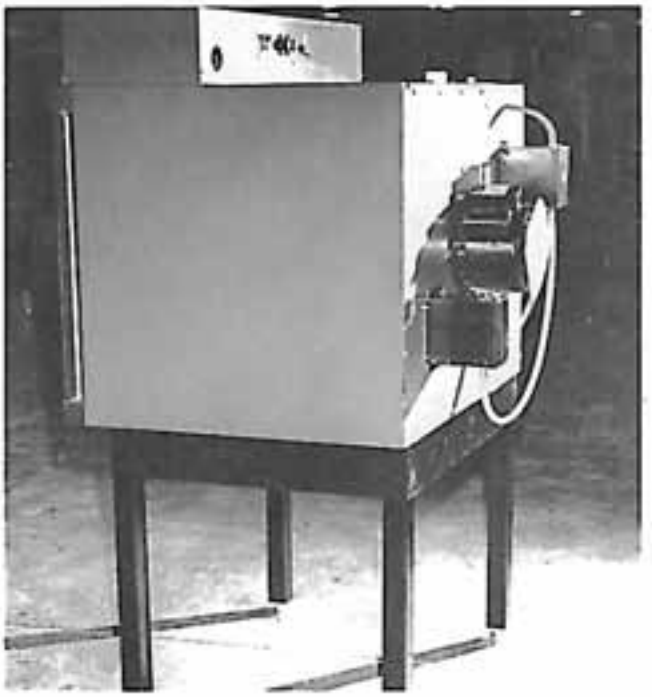


Fig. 4

Casters

If the oven is to be installed on casters, assemble the casters to the legs provided. Place the locking casters on the front legs and non-locking casters on the rear legs.

ASSEMBLY - STACKED OVENS

Stacked ovens are shipped in two sections with individual 6" legs mounted on the bottom oven.

1. Position bottom oven as near to final location as possible.

2. Set top oven on bottom oven and align sides and fronts of both ovens.

3. Bolt upper section and lower section bodies together with the mounting strips provided (Fig. 5).

Fig. 5

4. Install vent connection tube (Fig. 6).

Fig. 6

5. Fasten upper and lower sections together at front (Fig. 7).

Fig. 7

6. Install dual finishing piece with two sheet metal screws.

7. Install ovens in final position.

8. Install oven rack supports. Insert hooks into slots provided in side linings.

9. Using a carpenter's level placed on a rack, adjust the feet on the bottom of each leg so that oven is level from front to back and side to side. **NOTE:** Level oven when in permanent position only.

Casters

If the stacked ovens are to be installed on casters, assemble the casters to the legs provided. Place the locking casters on the front legs and non-locking casters on the rear legs.

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE ANSI/NFPA-70 (LATEST EDITION) AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE THAT YOU ARE WORKING ON THE CIRCUIT.

Units wired for three phase service may be changed to single phase, or single phase ovens may be changed to three phase as shown on the wiring diagram and connection decal (except for three-phase motor construction).

1. Select the size and type of field wires in accordance with National Electrical Code, suitable for carrying the oven's rated amps and voltage. For equipment rated over 100 amps, 75°C field wires must be used.

2. Bring the conduit containing the proper size field supply wires from the bottom of the control compartment through the 2" hole provided.

3. Connect the phase leads (as well as neutral lead in 220/380 or 240/415 volt ovens) to the field terminal block identified by X, Y, Z sections.

4. Connect the green grounding lead to the labeled ground lug.

5. Bring the supply interconnecting leads (A1, A2, A3, etc.) which are connected to the top oven, through the opening provided between the two sections and connect them to the bottom oven components as shown in the wiring diagram and schematic decal mounted on the breaker closure. Make sure the breakers are turned to the ON position.

NOTE: 1. ET8 and ET8R ovens (single section oven) are constructed similarly to the top section of ET88 and ET88R. In order to convert an ET8 or ET8R to an ET88 or ET88R (double section) in the field, disconnect the supply leads from the old oven and move the oven away. Locate the new oven (ET8 or ET8R, bottom section) in the desired location and mount the old ET8 or ET8R on top of the new oven following installation instructions in this manual.

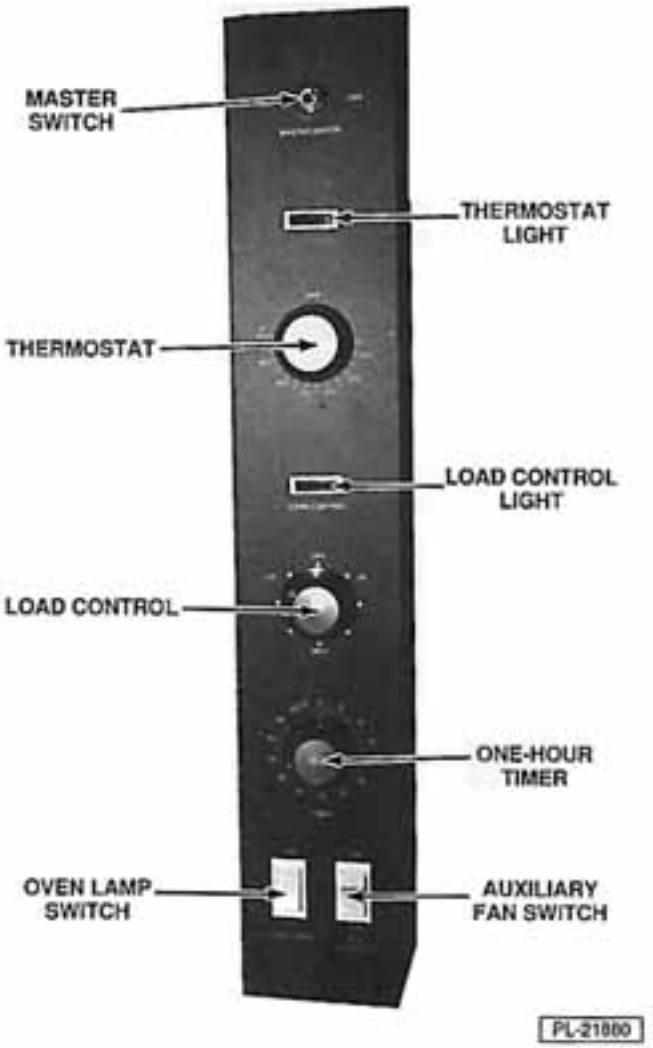
2. In 220/380 or 240/415 volt models, the oven operates on either 220 or 240 volts between the neutral and the phase leads; therefore, it is essential that the neutral wire, independent from grounding wire which is used to ground the oven frame, be included in the main supply leads.

OPERATING INSTRUCTIONS

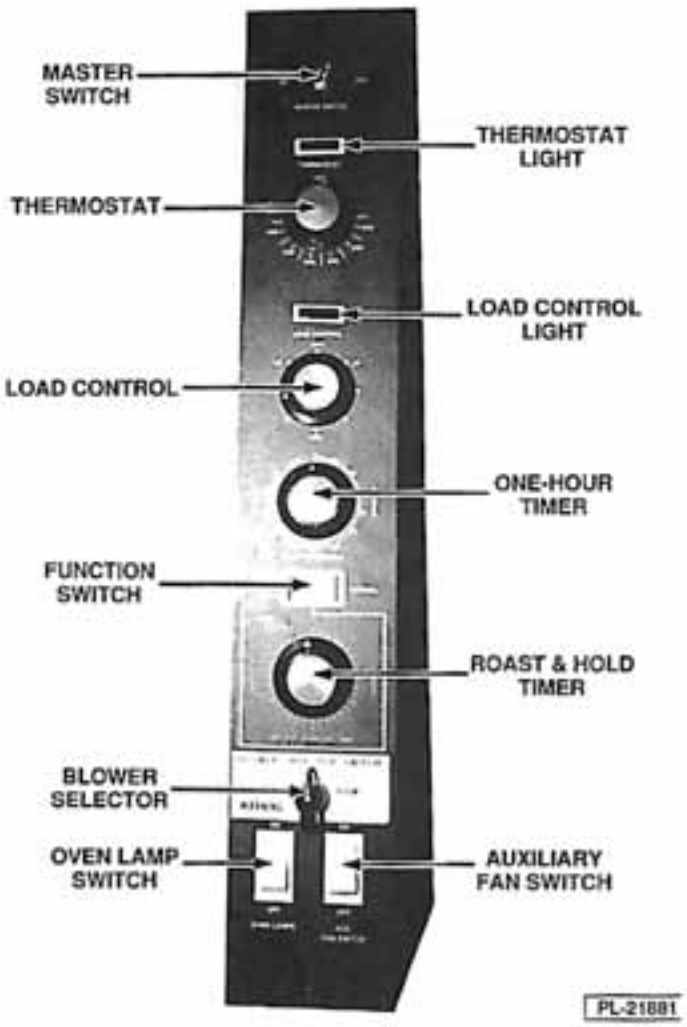
WARNING: THE OVEN AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE OVEN.

WARNING: WHEN USING CONVECTION OVENS, DO NOT STAND DIRECTLY IN FRONT OF THE OVEN WHILE OPENING THE OVEN DOOR. ALTHOUGH OPENING THE OVEN DOOR WILL AUTOMATICALLY SHUT THE FAN OFF, SOME HEAT ESCAPES. STEP AWAY TO AVOID HOT AIR.

CONTROLS



Standard Oven
Fig. 8



Roast & Hold Oven
Fig. 9

Moisture Vent Damper (Not Shown) — Located above the control panel. Open the damper in order to exhaust excess moisture caused by cooking products with a high moisture content. Close damper when dry products are being cooked. Settings between OPEN and CLOSED permit selection for the best performance.

Master Switch — The main ON-OFF switch connects and disconnects the electric supply to the oven controls, turning the oven on and off.

Thermostat Light — When lit, indicates that the oven is preheating or has not recovered to the thermostat temperature setting during a cooking cycle.

Thermostat — A snap-acting on-off type control, the thermostat regulates the oven temperature from 200°F through 500°F. Turn dial clockwise to increase temperature and counterclockwise to decrease temperature.

Load Control Light — When lit, indicates load control is operating in range between HIGH and LOW settings.

Load Control — An infinite switch which permits variation of heat input between OFF and 100 percent of input. **NOTE:** With load control in OFF position, oven will not heat.

DIAL SETTING	PERCENT OF FULL INPUT
HI	100%
HI–	83%
MED+	72%
MED	60%
MED–	48%
LO+	37%
LO	27%
OFF	0%

Timer (1-Hour) — Select for any time interval up to one hour. At the end of selected interval, an electric buzzer will give a continuous signal. Turn timer to HOLD position to stop buzzer or when timer is not in use.

Timer (5- or 12-Hour) (Roast and Hold Ovens Only) Roast timer - 5-hour (Optional 12-hour) — Used to set the time interval for the roasting portion of the roast and hold cycle. When timer reaches the "H" setting, the timer switches the temperature control of the oven from the adjustable thermostat (main) to the fixed (160°F) thermostat for the holding portion of the cycle.

Function Switch (Roast & Hold Ovens Only) — Used to select normal or roast and hold mode. Also selects fan speed on 208 and 240V models:

NORMAL - HIGH SPEED
ROAST & HOLD - LOW SPEED

Blower Selector (480V Roast & Hold Only) — The blower speed selector switch requires the operator to manually set the blower speed. For normal operation, turn speed selector knob to the left. For low operation of roast and hold oven, turn speed selector switch to the right. On 480V ovens, the blower speed is automatically selected by the Function Switch.

Oven Lamp Switch — Rocker switch that controls the interior oven lights. Turn on lights only when loading, unloading or checking product. Continual burning of lights will result in short bulb life. (Bulb replacement not covered under warranties.)

Auxiliary Fan Switch — Controls operation of fan when doors are in open position. This permits rapid cooling of oven.

OPERATING THE OVEN

In baking, the oven, its design, and proper functioning are of great importance. However, product quality and satisfactory results are also dependent on the recipe, the ingredients used, and the accuracy and the care with which the ingredients are measured and the recipe instructions followed.

Air Circulation

The fan in the oven moves high volume air over the heating elements, through perforated side liners and over products. No insulating layer of cool air can remain around the product being cooked. Heat is immediately and continually supplied to surface of product. As a result, products cook as quickly as their size and nature permit.

Control Settings

The Vulcan method of air circulation and the load control allow you to control convection cooking by adjusting the oven for the product result you desire from your recipes.

The thermostat controls the air temperature in the oven and cuts the heating elements off when air is at the thermostat setting. The load control governs the amount of heat going into the oven and governs the time it will take the air in the oven to return to the selected thermostat setting with a specific load.

If four racks of product cook properly at 350°F with a load control setting of MED in 15 minutes, one rack should also cook properly at 350°F in 15 minutes. But since with one rack you have only a ¼ load, not as much heat is needed. By changing the load control to LOW, the single rack load will receive a proportionally smaller amount of heat. It will take the same time at the same temperature as the four-rack load and be cooked to the same brownness and consistency.

The cooking charts in this manual give recommended load control settings for various loads of different products.

Temperature Adjustment

The oven will cook or bake full or partial loads at standard recipe temperatures when the load control is properly set. As with any oven, you may wish to use a temperature of up to 25°F higher or lower than the recipe, for the particular product result that you prefer.

Time Reduction

The oven does not require special recipes. Excellent results can be obtained from any good commercial recipe with reduced cooking times.

When first cooking a product, check product at one-half the recipe time. It may then be done, or additional cooking time may need to be re-estimated.

Forced air convection cooking is faster than conventional oven cooking, and therefore, overcooking is more common. Take care not to cook products faster than is practical for the best results. Since forced convection supplies heat to the surface of the product, the thicker or more massive a product is for its type, the longer it will take to absorb enough heat to cook.

NOTE: Once established, oven times and load control settings should be noted on your recipe.

RACK ARRANGEMENTS

Maximum operating capacity of the convection oven is six racks per section. Five racks are supplied as standard equipment. The 11-position rack supports provide for maximum flexibility and proper rack spacing.

The following arrangements are recommended. The position numbers are in numerical sequence starting at the bottom (Fig. 10).

Arrangement #1 (Shown in Fig. 10)

Five racks in positions #2, #4, #6, #8 and #10 for oven "broiling," cookies or reconstitution of frozen lunches at maximum capacity. Also recommended position for general baking in sheet pans with products not over 2½" high.

Arrangement #2

Four racks in positions #1, #4, #7 and #10 for general baking in sheet pans, muffin pans, pie or cake pans, and pudding molds 3½" high with products not over 4" high. Can also be used for casseroles or meat dishes in #200 series food service pans 12" x 20" x 2½".

Arrangement #3

Three racks in positions #1, #5 and #9 for baking breads or cakes in loaf or tube pans and high meringue pies. Also used for casseroles, meat dishes or roasting in pans up to 5½" deep with products up to 6" high.

Arrangement #4

Two racks in positions #1 and #6 for roasting turkeys and other roasts up to 7" high.

NOTE: With the rack in position #1, there is limited space for a water pan (see cooking chart).

NOTE: When mixed loads or partial loading is regular practice, some users have developed other rack arrangements to suit their particular needs.

Fig. 10
Old style door gasket shown.

PREHEATING - STANDARD OVEN

1. Select and make the proper rack arrangements for the product to be cooked.
2. Make sure the doors are closed.
3. Turn the master switch ON.
4. Set the load control as desired. (A HIGH load control setting is recommended for preheating.)
5. Set the thermostat dial for the recipe temperature or the temperature established by experience.

The thermostat light will come on and remain on until the oven reaches the set temperature. This will be 10 to 15 minutes for settings from 300°F to 400°F.

Do not load the oven for baking until the thermostat light comes on for the third time (preheating cycle only).

ET8, ET88, ET10, ET10R & ET1010 OVENS WITH ROAST AND HOLD FEATURES

Your Vulcan oven with optional roast and hold features is equipped with a five-hour timer and two-speed motor in addition to the standard control package. A twelve-hour timer may be ordered at additional cost in place of the five-hour timer, for all roast and hold ovens.

CAUTION: On 440 or 480 volt ovens, the selection of motor speed is the operator's responsibility. Motor should be set to HIGH in normal mode and LOW in roast and hold mode. Failure to follow these recommendations can result in unsatisfactory oven performance.

NOTE: On 440 or 480 volt units, it is possible to inadvertently leave the motor speed selector switch in the HIGH or OFF position. If in the HIGH position, meat shrinkage will increase. If in the OFF position, uneven heat distribution can be expected.

NOTE: It is NOT recommended that the oven be operated with the motor speed switch in the OFF position.

PREHEATING - ROAST AND HOLD OVEN

Normal Operation

1. Select and make the proper rack arrangements for the product to be cooked.
2. Make sure the doors are closed.
3. Turn the master switch ON.
4. Place function switch to NORMAL mode.
5. On 208 and 240 volt operation, the high motor speed is automatically provided.
6. On 440 or 480 volt operation, there is a three-position motor speed selector switch (Normal-Off-Low). This switch must be manually turned to the NORMAL position.
7. Set the load control as desired.
8. The five- or twelve-hour timer will not function in this mode.

The thermostat light will come on and remain on until the oven reaches the set temperature. This will be 10 to 15 minutes for settings from 300°F to 400°F.

Do not load the oven for baking until the thermostat light comes on for the third time (preheating cycle only).

Roast and Hold Operation

1. Select and make the proper rack arrangements for the product to be cooked.
2. Make sure the doors are closed.
3. Turn the master switch ON.
4. Place function switch to ROAST & HOLD mode.
5. On 208 and 240 volt operation, the lower motor speed is automatically provided.
6. On 440 or 480 volt operation, the motor speed selector switch must be turned to low.
7. Set the load control switch to HI.

The thermostat light will come on and remain on until the oven reaches the set temperature. This will be 10 to 15 minutes for settings from 300°F to 400°F.

Do not load the oven for baking until the thermostat light comes on for the third time (preheating cycle only).

LOADING THE OVEN

1. Before loading, set load control dial to proper setting for product and load to be cooked (see suggested settings in cooking chart in this manual).
2. Ensure AUX FAN switch is in the OFF position. If this switch is not in the OFF position, hot air will escape when doors are opened.
3. Open doors. The oven fan and heating elements will automatically cut off when the doors are open.
4. Load as quickly as practical to conserve heat.
5. Center pans on racks. Sheet or roast pans 18" x 26" should be centered on rack. Food service and pudding molds approximately 12" x 20" each can be loaded two to the rack and centered.

   NOTE: Take care to avoid spilling batter or liquids while loading.
6. Close doors. The oven will start cooking.
7. **Standard Oven:** Set timer to the required time (see cooking chart).

   Roast & Hold Oven: Set the five- or twelve-hour timer to desired cooking time.
8. **Standard Oven:** The oven will cook product at the desired temperature for the period set on the timer. At the end of the cooking time, timer buzzer will sound. Turn timer to HOLD position to stop the buzzer.

   Roast and Hold Oven: The oven will cook product at the desired temperature for the period set on the timer. At the end of the cooking time, the oven control will automatically switch from the cooking thermostat to the preset holding thermostat. The oven will hold product in this manner until the oven is turned off. The fan will cycle on and off while oven is in the holding mode.
9. Check the product for proper consistency and unload, or set for additional time as required.

UNLOADING THE OVEN

Make arrangements so that adequate counter space is available for the products to be unloaded from the oven. Rapid unloading will conserve heat, and this is essential if you are reloading for high production. On multiple loading, close the doors between each load and allow the oven to recover its preset temperature. Unloading is easier if the racks are pulled forward for better access to the pans, or if a baker's peel is used.

BACK-UP THERMOSTAT

All ET10, ET10R, ET1010 and ET101R ovens are equipped with a back-up thermostat. Should the primary thermostat control fail, the back-up thermostat is set to open at 550°F and reclose when the oven temperature cools to 400°F.

POWER OUTAGE

In case of a power outage, the oven will automatically shut down. When power is restored to the lines, the oven will resume its normal operation. However, if the oven is to be left unattended during a power outage, push the master switch to the OFF position. When power is restored to the lines, push master switch to the ON position, wait for the oven to preheat, then resume normal cooking operations.

CARE AND CLEANING

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY BEFORE CLEANING.

Daily

Allow the oven to cool before cleaning.

Stainless steel oven fronts should be cleaned with a damp cloth. Stubborn soil may be removed with detergent. **(DO NOT USE "DAWN".)**

CAUTION: Do not use scouring powder except with great care. Scouring powder is extremely difficult to remove completely. It can build up accumulations that will damage the oven. It will scratch and fog glass and can even damage and remove corrosion resistant finishes.

Painted surfaces may be cleaned with a cloth using a detergent solution.

Nickel plated racks and rack supports may be removed for cleaning.

As Required

The side liners are removable for cleaning. Normally this is not necessary, but will be helpful if batter or liquid is accidently spilled into the fan. It is recommended that the perforated side liners be removed at least twice yearly in order to remove debris trapped behind the linings.

After processing some foods at low temperatures, odors may linger in the oven. These odors may be cleared by setting the thermostat at 500°F, setting the load control at HI, then allowing the oven to operate unloaded for 30 to 45 minutes.

LUBRICATION

All Vulcan-Hart electric convection oven motors are permanently lubricated and require no additional maintenance.

COOKING CHART

IMPORTANT: Recommended temperatures, times, number of racks and load control settings are intended as a guide only. Adjustments must be made to compensate for variations in recipes, ingredients, preparation and personal preference in product appearance.

The oven does not require special recipes. Excellent results can be obtained from any good commercial recipe with reduced cooking times.

RECOMMENDED TEMPERATURES, TIMES AND LOADS FOR ROASTING

Meat roasting is most satisfactory at temperatures of 225°F to 325°F for beef, lamb, poultry and ham; 325°F for fresh pork as recommended by USDA and American Meat Institute.

A pan, approximately 12" x 20" x 1", full of water may be placed in the oven bottom. This water supplies humidity to reduce shrinkage. Water should be added if necessary during roasting.

Roasting pans should be no deeper than necessary to hold drippings, usually 2" to 2½".

Cooking time and shrinkage may vary with roasting temperature, cut, grade of meat and degree of doneness. Smaller cuts will generally show greater time savings than larger cuts at a given temperature.

ROASTING TEMPERATURE CHART

PRODUCT	TEMP. °F	LOAD CONTROL SETTING	APPROXIMATE TIMES
Standing Rib Roast — Oven Ready	250	HI	3 to 4 Hrs. — Rare 4 to 4½ Hrs. — Med.
Rolled Rib Roasts — 20 to 22 lb.	275	HI	4 Hrs. — Med.
Veal Roast — 15 lb.	300	HI	3 Hrs. — Med. Well
Turkeys — 15 to 20 lb.	300	HI	3 Hrs.
Meat Loaf — 8 to 10 lb.	350	HI	45 to 60 Minutes

RECOMMENDED TEMPERATURES, TIMES AND LOADS FOR BAKING

PRODUCT	TEMP. °F	TIME IN MINUTES	NO. OF RACKS	LOAD CONTROL SETTING
Cakes				
Sheet Cakes 18x26x1" pan				
Scaled 4½ to 6 lb. per pan	325 to 360	20 to 23	5	MED+ TO MED–
Scaled 6 to 7½ lb. per pan	335 to 350	22 to 25	4	MED TO MED–
Sheet Cakes 18x26x2" pan	300 to 325	25 to 35	4	MED TO MED–
Equals (2) 12x18x2" pans				
Scaled 10 to 12 lb. per 18x26x2" pan, or 5 to 6 lb. per 12x18x2" pan	300 to 325	25 to 35	3	MED TO MED–
Angel or Sponge Cakes				
Sheet Pans 18x26x1"				
Scaled 5 to 6 lb. per pan	300 to 325	15 to 20	4	LO+
Loaf or Tube Pans	315 to 340	20 to 30	3-4	MED– TO LO
Cupcakes	350 to 400	6 to 12	4	MED TO MED–

RECOMMENDED TEMPERATURES, TIMES AND LOADS FOR BAKING

PRODUCT	TEMP. °F	TIME IN MINUTES	NO. OF RACKS	LOAD CONTROL SETTING
Frozen Fruit Pies	350 to 375	30 to 45	4	MED TO MED–
			3	MED–
Pumpkin or Custard Pies	300 to 350	30 to 45	4	MED TO MED–
			3	MED– TO LO+
Cobblers				
12x18x2" or 12x20x2½" pans	350 to 400	30 to 45	4	MED
			3	MED–
Meringue Pies	350 to 425	6 to 10	4	MED TO MED–
			3	MED TO MED–
			2	MED TO MED–
Fruit Turnovers				
18x26x1" pans	350 to 375	15 to 25	5	MED TO MED–
			4	MED TO MED–
			3	MED– TO LO+
NOTE: Pies and cobblers; fruit, custard and pumpkin pies in pie pans should be placed on 18x26x1" pans for baking.				
Cookies				
Rolled or Pressed	350 to 400	6 to 12	5	MED TO LO+
			4	MED– TO LO+
			3	LO+
Drop	350 to 400	6 to 15	5	MED TO MED–
			4	MED– TO LO+
			3	LO+
Brownies	350	12 to 20	5	MED TO MED–
			4	MED– TO LO+
Yeast Breads NOTE: Yeast breads should be fully proofed for best results.				
Rolls — 1 oz.	350 to 400	5 to 10	4	MED TO MED–
			3	MED–
1½ to 2½ oz.	350 to 400	8 to 15	4	MED TO MED–
			3	MED– TO LO+
Loaf Bread — 1 lb.	325 to 375	20 to 40	3(30)Pans	MED–
			2(20)Pans	LO+
Sweet Rolls & Danish Pastry	325 to 375	5 to 15	4	MED TO MED–
			3	MED– TO LO+
Biscuits				
Rolled ½" thick	350 to 400	5 to 15	4	MED TO MED–
Muffins	325 to 375	6 to 18	4	MED–
				MED– TO LO+
Corn Bread				
18x26x1" Pan, 5 to 7 lb. per pan	335 to 400	10 to 20	4	MED TO MED–
18x26x2" Pan, 8 to 20 lb. per pan	335 to 400	15 to 25	4	MED TO MED–
			3	MED– TO LO+
Corn Muffins	335 to 385	10 to 20	4	MED TO MED–
				MED– TO LO+

OVEN BROILING OR FRYING

PRODUCT	TEMP. °F	TIME IN MINUTES	NO. OF RACKS	LOAD CONTROL SETTING
Fish Sticks & Portions				
Frozen Breaded — 1 oz.	350 to 400	6 to 10	4	HI– TO MED
			2 & 3	MED+ TO MED–
2½ to 3 oz.	350 to 375	8 to 15	4	MED+ TO MED
			2 & 3	MED TO MED–
Chicken Pieces—Broiled or Oven Fried				
2 to 2½ lb. bird	375 to 425	8 to 15	4 to 5	HI– TO MED
			2 & 3	MED+ TO MED–
2½ to 3 lb. bird	350 to 400	15 to 25	4	MED+ TO MED
			2 & 3	MED TO MED–
Lobsters				
1 to 1½ lb.	400 to 450	8 to 14	2 to 4	HI TO MED
Lobster Tails — Frozen				
½ to ¾ lb.	350 to 400	10 to 15	2 to 4	HI– TO MED
Hamburger Patties				
8 per lb.				
Med. to Well Done	400 to 450	5 to 6	4 to 6	HI– TO MED+
			2 & 3	MED+ TO MED
6 per lb.	400 to 450	7 to 10	4 to 6	HI TO HI–
			2 & 3	HI– TO MED+
4 per lb.	375 to 450	8 to 12	4 to 6	HI
			2 & 3	HI– TO MED+

REHEATING PREPARED FOODS

Frozen French Fries	400 to 450	6 to 8	4	HI– TO MED
			2 to 3	MED+ TO MED–
Frozen TV Dinners	350 to 400	10 to 12	4 to 5	HI TO MED
			2 to 3	MED+ TO MED–
Frozen Entrees				
¾" to 1" thick	300 to 350	10 to 20	2 to 5	HI TO MED
Frozen Meals				
8 oz. foil pkg.	350 to 400	20 to 30	2 to 5	HI

CASSEROLES

Food Service Pans				
2" to 3" deep	325 to 375	15 to 25		
3" to 4" deep	325 to 375	20 to 35	2 to 4	MED+ TO MED–
Ramekins or Foil Pans	350 to 400	5 to 6	4 to 5	HI TO MED+
			2 to 4	MED+ TO MED
Frozen		10 to 15		

RECOMMENDED TEMPERATURES, TIMES & LOADS—MISCELLANEOUS PRODUCTS

PRODUCT	TEMP. °F	TIME IN MINUTES	NO. OF RACKS	LOAD CONTROL SETTING
Baked potatoes				
120 count per 50 lb.	400 to 450	20 to 25	2 to 5	HI– TO MED
100 count per 50 lb.	400 to 450	25 to 40	2 to 5	HI– TO MED
80 count per 50 lb.	400 to 425	30 to 45	2 to 5	MED+ TO MED–
Pizzas				
Frozen or with Prebaked Crust	425 to 475	5 to 10	4	HI– TO MED
			2 & 3	MED TO MED–
"Grilled" Cheese Sandwiches	400 to 425	8 to 10	4	HI– TO MED
			2 & 3	MED+ TO MED–

NOTES ON SPECIAL PROCEDURES FOR BAKING

Yeast Bread: Cooking starts immediately in the convection oven. Yeast breads do not usually rise as much in a convection oven as in a conventional oven. Therefore, it is usually necessary to allow fuller proof, 2½ to 3 times increase in volume for best results.

Pies: When baking pies in your convection oven, 3 or 4 pies should be put on an 18x26" sheet or bun pan. This procedure helps the bottom crust to bake, makes handling easier and reduces the possibility of boilover spoiling the appearance of the pies on the lower racks.

COOKING PROBLEMS AND CORRECTIONS

PROBLEM	CAUSE	REMEDY
Uneven browning or overcooking at edge of pans.	Load control set too high. Too many racks used.	Reduce load control setting. Reduce number of racks being used. (See cooking chart in this manual.)
Pulling to the edge of the pan or spilling.	Oven out of level. Warped sheet pans.	Have oven leveled, on the racks, side to side and front to back. The rack should check dead level side to side, and from level to 1/8" low at the front from front to back. Pans used for baking batter products should be kept separated from general purpose pans. If any pan shows a tendency to warp, it should be removed from the baking group.
Overbrowning before done or shrinking and overbrowning at edges.	Load control set too high.	Reduce load control setting. (See cooking chart in this manual.)
Excessive shrinkage.	Forgetting to maintain water in oven. Roasting temperature too high.	Put a pan of water in oven or add water to pan. Lower the roasting temperature.

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