

# VULCAN

## INSTALLATION & OPERATION MANUAL

### SG SERIES GAS CONVECTION OVENS

*MODEL*

<i>SG4D</i>	<i>ML-114875</i>
<i>SG4C</i>	<i>ML-114876</i>
<i>SG6D</i>	<i>ML-114877</i>
<i>SG6C</i>	<i>ML-114878</i>



# **IMPORTANT FOR YOUR SAFETY**

**THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.**

**POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.**

## **IMPORTANT**

**IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.**

## **FOR YOUR SAFETY**

**DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

**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.**

**IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.**

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# Installation, Operation and Care of SG4D, SG4C, SG6D & SG6C GAS CONVECTION OVENS

**KEEP THIS MANUAL FOR FUTURE USE**

## **GENERAL**

Model SG4D, SG4C, SG6D and SG6C are equipped with a two-speed  $\frac{1}{2}$  HP (0.37 kw) electric motor, porcelain interior, and two 30,000 BTU/hr burners as standard equipment. A power level control permits variable burner input from 15,000 BTU/hr to 60,000 BTU/hr. Ovens are furnished with five nickel plated oven racks and have eleven rack positions. Oven cool switch allows rapid cool down. Oven interior is porcelain enamel on steel.

Models SG4D and SG6D are equipped with solid state temperature control and 60 minute timer (5 hour timer is optional).

Models SG4C / SG6C have different controls than SG4D / SG6D. Models SG4C and SG6C built before October 1999 had electronic Roast and Hold controls and a Gentle Bake feature. Models SG4C and SG6C built after October 1999 have a programmable control with individual programmable rack times.

Models SG6D and SG6C have a 4" (10 cm) deeper oven cavity than models SG4D and SG4C.

Two single ovens can be ordered with a stacking kit for mounting one oven on top of the other.

Independently opening doors with window are standard; independently opening doors without window or simultaneously opening doors with / without window are optional.

Standard ovens are equipped for 120 volt / 60 hertz / 1 phase electrical service. Available options for models SG4D / SG4C or SG6D / SG6C include: 208 volt / 60 hertz / 1 phase; 240 volt / 60 hertz / 1 phase electrical service; additional oven racks; stainless steel drip pan; casters; and an open stand with lower storage rack and legs or casters.

A set of four legs  $25\frac{3}{4}$ " (82.5 cm) are available with feet or with casters. Legs or casters included with stacking kit are 8" (20.3 cm) high.

Vulcan Gas Convection Ovens are produced with quality workmanship and material. Proper installation, usage and maintenance 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 propane) agree with the specifications on the rating plate located behind the top trim panel on the front of the oven. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan 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, check for possible shipping damage. If the oven is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Carefully unpack oven and place in a work-accessible area as near to its final installed position as possible.

Do not use the doors or their handles to lift the oven.

## LOCATION

The equipment area must be kept free and clear of combustible substances.

When installed, minimum clearance from combustible construction must be 1" (2.5 cm) at the left side, 4" (10 cm) at the right side, and 6" (15 cm) at the rear. Minimum clearance from non-combustible construction must be 0" (0 cm) at the left side, 4" (10 cm) at the right side, and 6" (15 cm) at the rear. The oven may be stored on combustible floors.

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

The oven must be installed so that the flow of combustion and ventilation air will not be obstructed. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room to allow for that required for combustion of gas at the oven burners.

Do not permit fans to blow directly at the oven. Wherever possible, avoid open windows next to the oven. Avoid wall-type fans which create air cross currents within the room.

## INSTALLATION CODES AND STANDARDS

In the United States, Vulcan gas ovens must be installed in accordance with: 1) State and local codes; 2) National Fuel Gas Code, ANSI-Z223.1 (latest edition), available from American Gas Association, 1515 Wilson Boulevard, Arlington, VA 22209; 3) NFPA-96, *Vapor Removal from Cooking Equipment* (latest edition); and 4) National Electrical Code, NFPA-70 (latest edition) available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada, Vulcan gas ovens must be installed in accordance with: 1) Local codes; 2) CAN/CGA-B149.1 *Natural Gas Installation Code* (latest edition) or CAN/CGA-B149.2 *Propane Installation Code* (latest edition), available from Canadian Standards Association, 178 Rexdale Boulevard, Etobicoke, Ontario, Canada M9W 1R3; and 3) *Canadian Electrical Code*, CSA Standard C22.2 No. 3, *Electrical Features of Fuel Burning Equipment* (latest edition).

## 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

When the oven is mounted on casters, it must be installed with the casters supplied, a connector complying with either ANSI-Z21.69 (latest edition) or CAN/CGA 6.16 (latest edition), and a quick-disconnect device complying with either ANSI-Z21.41 (latest edition) or CAN1-6.9 (latest edition). Provide a restraining device for the gas line to limit movement of the oven without depending on the connector and/or any quick-disconnect device or its associated piping to limit oven movement. Remove two screws from the rear of the oven and install the tie down strap shipped with the casters using these screws (Fig. 1). Attach the gas line strain relief to the tie down strap at the rear of the oven (Fig. 1).

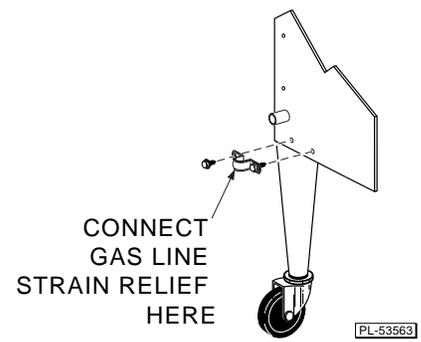


Fig. 1

If disconnection of the restraint is necessary, turn off the gas supply before disconnection. Reconnect the restraint prior to turning the gas supply back on.

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

### Assembling the Legs to the Oven

The legs must be installed on the bottom of the oven. Position oven on its back, taking care not to scratch or damage it. The gas pipe connection protrudes beyond the back; provide for this when the oven is tipped back by resting it on suitable spacers (2 x 4's etc.).

Attach each of the four leg assemblies to the bottom of the oven with the 24 bolts and lockwashers (6 per leg). Carefully raise the oven to its normal position.

### Assembling the Stand to the Oven

Attach each of the four leg assemblies to the bottom of the oven with the 24 bolts and lockwashers (6 per leg). Carefully raise the oven to its normal position.

Attach the undershelf to the legs with 8 bolts and lockwashers (2 per leg).

Install the rack guides into the shelf at desired locations (for pan or flat rack), then attach the rack supports to the top end of the rack guides. Attach rack supports to the leg assembly by removing one middle bolt and reattaching back through the end holes in the rack support (Fig. 2).

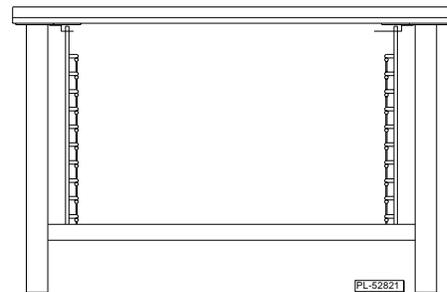
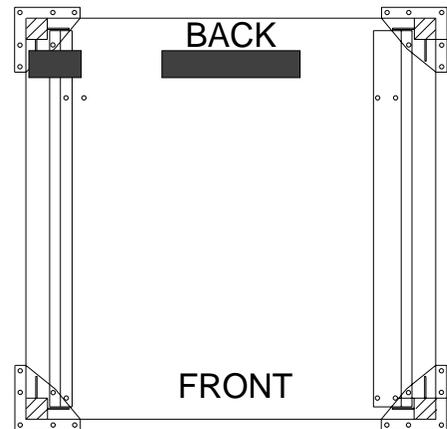


Fig. 2

### ASSEMBLING STACKED OVENS

Unpack the ovens and stack kit. Position the lower oven on its back for access to the oven bottom, taking care not to scratch or damage it. The gas pipe protrudes beyond the back; provide for this when the oven is tipped back by resting it on suitable spacers, 2 x 4's, etc. Attach the four leg assemblies with 24 bolts and lockwashers (6 per leg).

Place the lower oven (with legs or casters) on the floor and remove two  $\frac{7}{16}$ " (1.1 cm) diameter knockouts on each side of the top cover. Remove vent guard and discard it.

Move the oven to the installed position and place upper oven on top of lower oven using the locating studs.

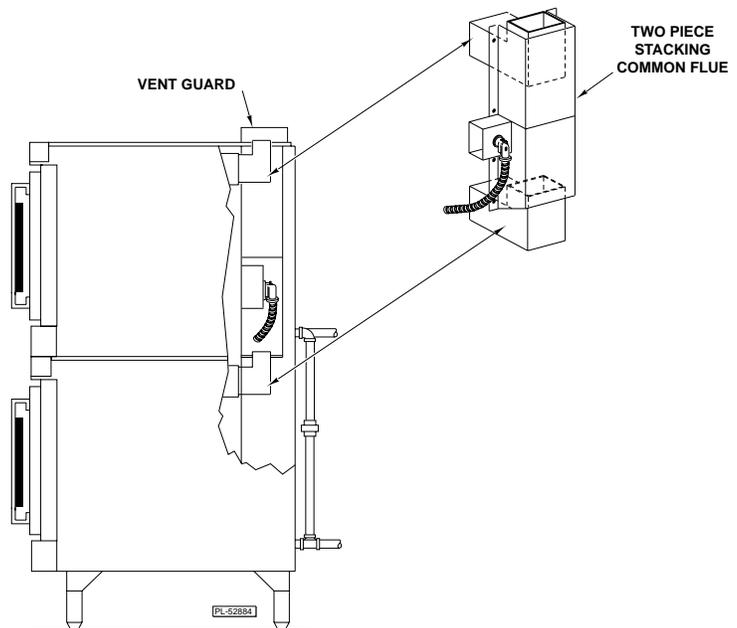


Fig. 3

Remove the rear panel from the upper oven. Install the two-piece stacking common flue (Fig. 3) with the four screws provided. Replace the upper oven's rear panel.

Connect the piping between the upper and lower oven. Pipe compound must be resistant to the action of propane gases. The manual gas valve, located behind the small door in the lower front panel, should remain off until all electrical and gas connections are made and the ovens are ready to be used.

## LEVELING

Make sure that the oven racks are level in the final installed position. If the oven is installed on legs, turn the adjustable feet in or out to level the 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 the 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 SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE THAT YOU ARE WORKING ON THE CIRCUIT.

**WARNING:** APPLIANCES EQUIPPED WITH FLEXIBLE ELECTRICAL POWER SUPPLY CORD ARE PROVIDED WITH A THREE-PRONG GROUNDING PLUG. THIS PLUG MUST BE CONNECTED TO A PROPERLY GROUNDED THREE-PRONG RECEPTACLE. IF THE RECEPTACLE IS NOT THE PROPER GROUNDING TYPE, CONTACT AN ELECTRICIAN. DO NOT REMOVE THE GROUNDING PRONG FROM THE PLUG.

A wiring diagram is located on the inside of the right side panel.

### ELECTRICAL DATA

Model	Volts	Hertz	Phase	Maximum Protective Device AMPS
SG4D	120	60	1	15
SG4C	208	60	1	15
SG6D				
SG6C	240	60	1	15

Compiled in accordance with the National Electrical Code, NFPA-70 (latest edition).

## GAS CONNECTION

### GAS DATA

Model	Input BTU/Hr		Manifold Pressure	
	Natural	LP Gases (Propane)	Natural	LP Gases (Propane)
SG4D, SG4C, SG6D, SG6C	60,000	60,000	3.5" W.C. (0.9 kPa)	10" W.C. (2.5 kPa)

Gas supply connections and any pipe joint compound must be resistant to the action of propane gases. The oven is provided with a regulator integral to the gas solenoid valve and requires no external regulator. Location of the gas inlet is at the rear of the oven. Codes require that a gas shutoff valve must be installed in the gas line ahead of the oven.

Connect the oven(s) to the gas supply after leveling. The gas supply line must be at least the equivalent of  $\frac{3}{4}$ " (1.9 cm) iron pipe. Make sure the pipes are clean and free of obstructions, dirt, or pipe joint compound. The ovens are equipped with fixed burner orifices which match the installation elevation.

Natural gas pressure regulators are preset for 3.5" W.C. (Water Column) (0.9 kPa); propane gas pressure regulators are preset for 10" W.C. (2.5 kPa).

**WARNING:** PRIOR TO LIGHTING, CHECK ALL JOINTS IN THE GAS SUPPLY LINE FOR LEAKS. USE SOAP AND WATER SOLUTION. DO NOT USE AN OPEN FLAME.

After piping has been checked for leaks, all piping receiving gas should be fully purged to remove air.

## **TESTING THE GAS SUPPLY SYSTEM**

When gas supply pressure exceeds ½ psig (3.45 kPa), the oven and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of the system.

When gas supply pressure is ½ psig (3.45 kPa) or less, the oven should be isolated from the gas supply system by closing its individual manual shutoff valve during any pressure testing of the system.

## **ADJUSTMENTS**

### **Air Adjustment**

Although main burner air is adjusted before shipment, it should be checked at the time of installation. Excessive air will cause flames to lift off a burner when cold or may cause flash-back during normal cycling of the oven, particularly when propane gas is used.

Insufficient air will cause flames to burn with a yellow tip and result in carbon accumulation in the flame chamber and heat exchanger tubes.

Contact your local Vulcan-Hart authorized servicer if required.

## **VENT SYSTEM**

**DO NOT** obstruct the flow of flue gases from the flue located on the rear of the oven. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.

Ovens may use an optional down draft diverter flue method. This optional down draft diverter must be purchased from the oven manufacturer and vented to the outside; otherwise, the installation of any such device will void all oven certifications and warranties. When the diverter is supplied, it may be connected to a Type "B" vent.

From the termination of the flue to the filters of the hood venting system, a minimum clearance of 18" (45.7 cm) must be maintained.

Information on the construction and installation of ventilating hoods may be obtained from *Vapor Removal from Cooking Equipment*, NFPA Standard No. 96 (latest edition), available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

# OPERATION

**WARNING:** THE OVEN AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING, OR PERFORMING ANY MAINTENANCE.

## CONTROLS — Models SG4D and SG6D (Fig. 4)

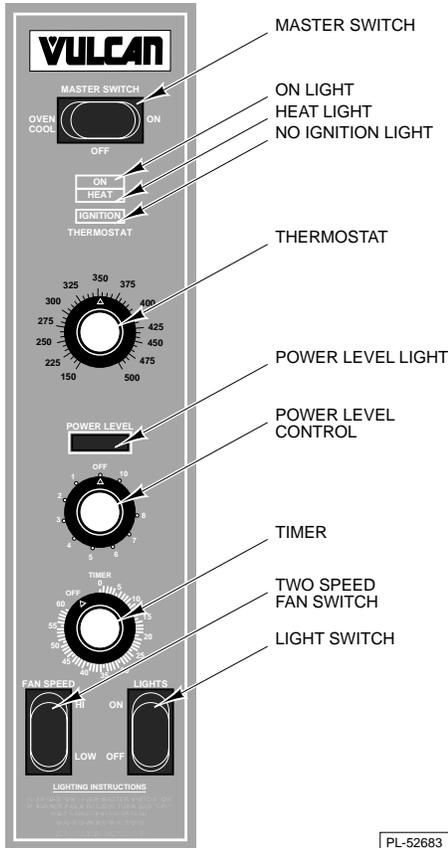


Fig. 4

**Master Switch** • Turns oven control circuits ON or OFF. • OVEN COOL allows the fan motor to run with the doors ajar to speed oven cooling.

**On Light (Amber)** • Lit when Master Switch is ON.

**Heat Light (White)** • Comes on and goes off when the burner cycles on and off.

**No Ignition Light (Red)** • Comes on if burner fails to ignite. When lighting the oven, the No Ignition Light flashes.

**Thermostat** • Controls oven temperature during cooking operation.

**Power Level Light** • When ON, indicates the power level control is operating in the range between the high and low settings.

**Power Level Control** • Selects the % heat input between OFF and 100%. Power Level Control must be on for oven to work.

Dial Setting	Percent of Full Input
10	100%
9	77%
8	73%
7	68%
6	60%
5	53%
4	45%
3	37%
2	28%
1	22%
OFF	0%

**Timer (1 Hr. or 5 Hr.)** • Selects the cooking cycle time. Buzzer sounds continuously when elapsed time counts down to 0; oven does not turn off. Turn timer dial OFF to silence buzzer. When oven is not in use, keep timer at OFF position.

**Two-Speed Fan Switch** • Adjusts air velocity in the oven.

**Light Switch** • Turns lights in the oven on or off.

## 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, push the Master Switch ON, turn the Thermostat to 300°F (149°C), and allow the oven to cycle for 6 to 8 hours before pushing the Master Switch OFF.

## **LIGHTING THE SG4D AND SG6D OVENS**

1. Turn the main gas supply ON.
2. Turn the gas control valve (located behind the small door on the lower front panel) ON.
3. Push the Master Switch ON and turn Thermostat to its maximum setting. Both the ON and HEAT lights should come on. If HEAT light is not on, make sure the oven door(s) are closed.
4. If the oven fails to light, the red No Ignition light will be lit and remain on. Push the Master Switch OFF. Turn gas off.
5. Wait 5 minutes before repeating Steps 1 through 4.

If the oven does not light after three trials, turn off the main gas valve and call a qualified servicer.

## **USING THE SG4D AND SG6D OVENS**

### **Preheating**

1. Select the proper rack arrangement for the product to be cooked. Refer to RACK ARRANGEMENTS, page 19.
2. Make sure the doors are closed.
3. Push the Master Switch ON. The amber ON light will come on, indicating that power to the oven is on.
4. Set the Power Level Control as desired. A power level control setting of 10 is recommended for preheating.
5. Set the two-speed Fan Switch to the desired setting.
6. Set the Thermostat as desired. The Heat light will come on and remain on until the oven reaches the set temperature (approximately 10 to 15 minutes for settings from 300°F (149°C) to 400°F (204°C). Refer to SUGGESTED COOKING GUIDELINES for temperatures and times for various products.
7. Prepare product and place in suitable pans. When the white Heat light goes off, the oven has reached the desired preheat temperature.

### **Cooking**

1. Open doors and load the product into the oven. Place pans in the center of the racks. Close the doors.
2. Set the Timer. After the preset time lapses, turn timer OFF to stop buzzer.
3. When product is done, open doors and carefully remove cooked product from the oven. Wipe up any spills.

### **End of Day**

1. Turn the Thermostat and Power Level Controls OFF.
2. Push Master Switch to OVEN COOL. Leave door ajar while the fan is on to cool the oven.
3. When oven has cooled sufficiently, push Master Switch OFF.
4. Turn gas valve (located behind panel) OFF and clean oven.

### **Extended Shutdown**

Repeat Steps 1 through 4 above. Unplug oven and shut off manual gas valve.

## CONTROLS — Models SG4C and SG6C Built before October 1999 (Fig. 5)

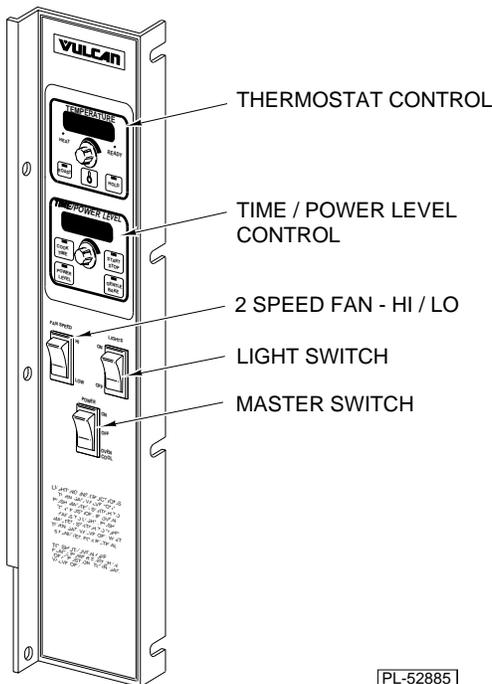


Fig. 5

### THERMOSTAT CONTROL

**Temperature Display** (When not timing product, displays set cook temperature while roast temperature LED is lit and the actual oven temperature for 10 seconds after the Thermometer Button is pushed).

1. The Time / Power Level Display will be lit while the actual temperature is being displayed.
2. The Time / Power Level Display indicator goes off when the display returns to the set temperature.

**Temperature Display** (When product is being timed, displays set hold temperature while Hold button LED is lit and the actual oven temperature for 10 seconds after the Thermometer Button is pushed).

1. The Time / Power Level Display indicator will be lit while the actual temperature is being displayed.
2. The Time / Power Level Display indicator goes off when the display returns to the set temperature.

**Temperature Knob** (When not timing product).

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

**Temperature Knob** (When product is being timed).

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

**Roast Mode Indicator** (If On and not timing product, indicates the roast mode is selected).

1. The displayed temperature settings will be for the roast temperature except for time that the actual temperature indicator is lit.
2. Rotating the Thermostat Knob will change the roast set temperature.
3. When the power level indicator is lit, the roast power setting will be displayed and can be adjusted. Power level settings are changed using the Time / Power Level Knob.
4. Cook time can be adjusted using the Time/Power Level Knob, provided the power level indicator is not lit.
5. The time displayed is the initial set cook time.
6. It is possible to select the Hold mode using the Hold Button.

**Roast Mode Indicator** (If On and product is being timed, indicates the roast mode is selected).

1. The displayed temperature settings will be for the roast temperature except for the time that the actual temperature indicator is lit.
2. Rotating the Temperature Knob will change the roast set temperature.

3. When the power level indicator is lit, the roast power setting will be displayed and can be adjusted. Power level settings are changed using the Time / Power Level Knob.
4. Cook time cannot be adjusted using the Time / Power Level Knob, if the power level indicator is not lit.
5. It is not possible to select the Hold mode using the Hold Button.
6. The time displayed is the time counted down from the initial cook time set.

### **Roast Button**

1. Lights the roast mode indicator. Refer to Roast Mode Indicator, page 11.
2. Selects the Roast mode.
3. Has no effect if timing in the Hold mode.

**Temperature Button and Indicator Light** • Displays the actual oven temperature for about eight seconds, then returns temperature display to the set temperature.

**Heat Light** • When lit, indicates that power is being supplied to the burners.

**Ready Light** • Will be lit any time the actual temperature is within plus or minus 5 F° (3 C°) of the set temperature for the current mode.

### **TIME / POWER LEVEL CONTROL**

**Time / Power Level Display** (While not timing product).

1. Displays the set cook time if Cook Button indicator is lit.
2. Displays cook power level setting if the Power Level indicator is lit and in the roast mode (Roast Button indicator is lit).
3. Displays hold power level setting if the Power Level indicator is lit and in the hold mode (Hold button indicator is lit).

**Time / Power Level Display** (While product is being timed).

1. Displays the counted down cook time if the Cook Time indicator is lit and in the Roast mode.
2. Displays the counted up hold time if the Hold Button indicator is lit and in the Hold mode. Count-up of hold time does not begin until cavity temperature reaches the hold temperature.
3. Pressing the Power Level Button will cause the power level to be displayed and / or adjusted. If in the Roast mode, the roast power level is displayed and can be adjusted. If in the Hold mode, the hold power level is displayed and can be adjusted.

**Time / Power Level Display Colon** • Flashes if product is timing; does not flash if not timing product.

**Cook Time Button** • Switches the Time / Power Level display to display time.

**Cook Time Indicator** • Indicates that the Time / Power Level Display is displaying time.

### **Time / Power Level Knob**

1. Sets the cook time when not already timing and the Cook Time indicator is lit.
2. Sets the power level if the Power Level indicator is lit.
  - a. Sets the roast power level if the Roast Button indicator is lit.
  - b. Sets the hold power level if the Hold Button indicator is lit.

**Power Level Button** • Causes the Power Level indicator to turn on for about eight seconds, after which it will return to indicate the time display mode.

1. Roast power level can be changed if the Roast Button indicator is lit.
2. Hold power level can be changed if the Hold Button indicator is lit.
3. Press the Cook Time Button to return to time display.

**Power Level Indicator** • When lit, indicates the power level can be changed.

1. Displays roast power level when in the Roast mode (Roast Button indicator is lit).
2. Displays hold mode power level when in the hold mode (Hold Button indicator is lit).

**Gentle Bake Button** • Use when cooking delicate product, such as strudel, muffins, cupcakes, meringue pies, etc., to keep product from forming waves on the top. Toggles between the selection of gentle bake mode and no gentle bake mode.

**Gentle Bake Mode** • The Gentle Bake button is lit to indicate you are in Gentle Bake mode.

1. The fan cycles with the heat while in the roast mode and timing product at the power level selected for the roast mode. For instance, ON 15 seconds, OFF 15 seconds at 50% power; On 6 seconds, OFF 14 seconds at 20% power.
2. The fan stays on while the heat cycles in hold at the power setting selected for the hold mode.
3. The fan stays on while heat cycles at 100% power when not timing.
4. Can be switched at any time.

**Not in Gentle Bake Mode** • The Gentle Bake button is not lit.

1. Fan stays on while the heat cycles while in the Roast mode and timing product at the power level selected for roast mode.
2. Fan stays on while heat cycles in Hold at the power setting selected for the hold mode.
3. Fan stays on while heat cycles at 100% power when not timing.
4. Can be switched at any time.

**Stop / Start Button** • Press once to start the timer when cooking a product if a cook time has been set. Press a second time to stop the timer after it has been started.

**Hold Button** • Press to select Hold mode and to specify a hold temperature. The Hold button is lit to indicate you are in Hold mode. Blank temperature ---°F (---°C) indicates there is no 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** • Adjusts air velocity in the oven.

**Light Switch** • Turns lights in the oven on or off.

**Master Switch** • Turns oven control circuits ON or OFF; 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 doors, push the Master Switch to the ON position, turn the Thermostat to 300°F (149°C) and allow the oven to cycle for 6 to 8 hours before pushing the Master Switch to OFF.

## **LIGHTING THE SG4C AND SG6C OVENS**

1. Turn gas supply ON (if required).
2. Turn the gas control valve (located behind the small door on the lower front panel) ON.
3. Push Master Switch to the ON position and set Thermostat to its maximum setting. The Heat light should come on. If Heat light is not on, make sure door is closed.
4. If the oven fails to light, push Master Switch to the OFF position. Wait 5 minutes before retrieval.

## **USING THE SG4C AND SG6C OVENS**

★ Refer to SUGGESTED COOKING GUIDELINES for Time, Temperature and Power Level settings.

### **Preheating**

1. Push Master Switch ON. The Heat light will come on, indicating that power is on.
2. Set Thermostat as desired.
3. Set Power Level as desired.
4. Prepare product and place in suitable pans. When Ready light comes on, 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 Roast temperature and time. Set Hold temperature and Gentle Bake time, if desired. Gentle Bake time may not be more than Roast time. Gentle Bake will cycle the fan during the set time at the beginning of the cooking cycle.
3. Set Power Level Control as desired.
4. Press the Start/Stop button to start the cooking cycle.
5. At the end of the cooking cycle, the buzzer 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.
6. When the product is done, open the doors and carefully remove the cooked product from the oven. Wipe up any spills.

### **End of Day**

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

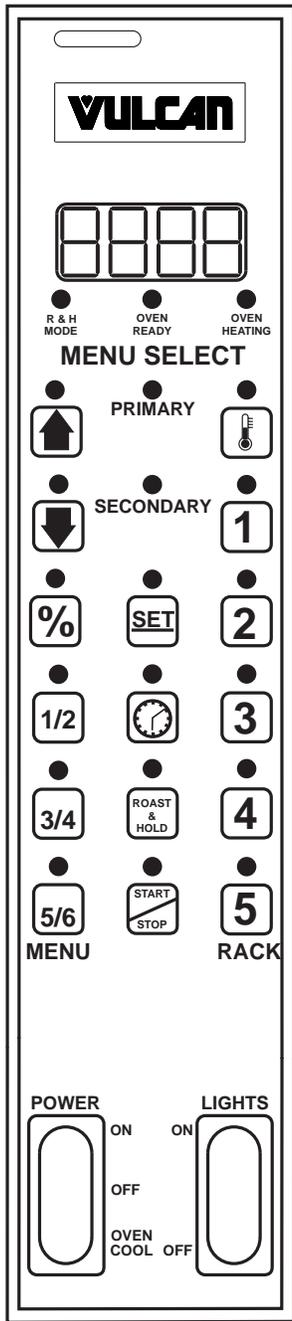
### **Extended Shutdown**

Push Master Switch OFF. Turn the gas valve OFF.

## **ERROR MESSAGES — SG4C AND SG6C OVENS**

- 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-05 Ignition failure. After trying ignition 3 times, contact Vulcan authorized service.
- E-06 Thermocouple probe open. Contact Vulcan authorized service.

**CONTROLS — Models SG4C and SG6C Built after October 1999**



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.



Adjusts the oven heating rate or Power Level from 20 to 100 %.



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.



Selects Roast and Hold mode; also selects Low Fan Speed.



Press once to start; press a second time to stop.



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



Rack Buttons select individual Menu / Rack # Cook Times — once programmed.

## MANUALLY SETTING THE COOK TIME, TEMPERATURE, AND POWER LEVEL

### 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 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 Power Level

- Press the SET button. Press the % button.
- Use the Up and Down Arrow keys to increase or decrease the displayed Power Level value.
- Press the SET button again to save the desired Power Level value 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 Cook Time, Temperature, and Power Level.*

## 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.

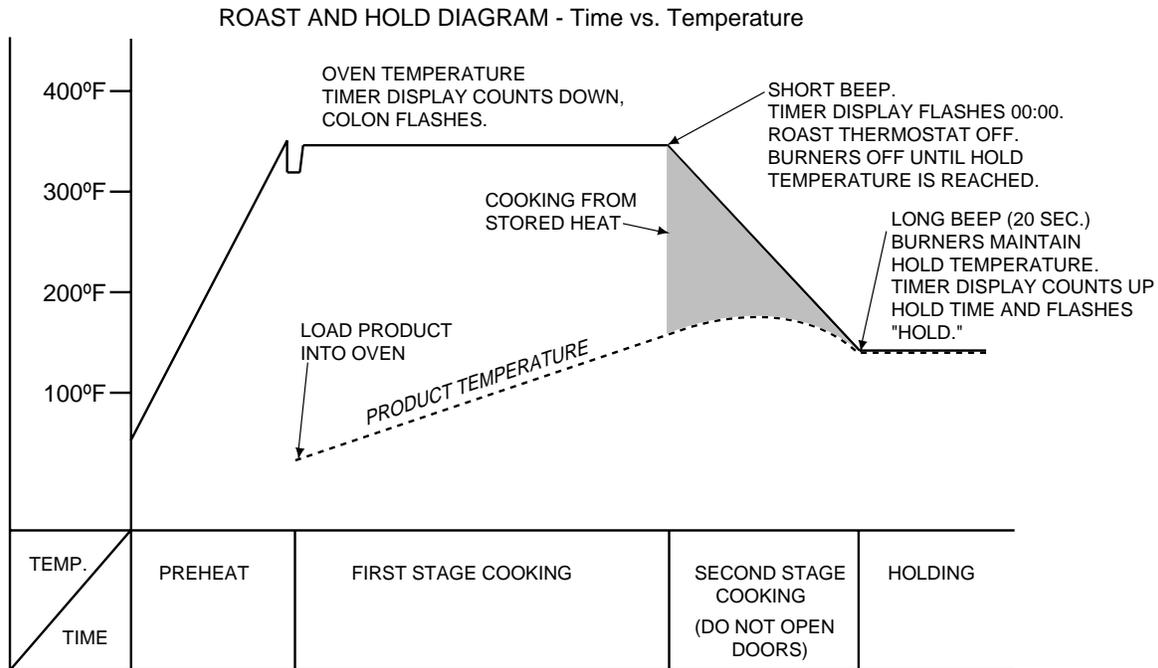
## **SETTING THE OVEN FOR ROAST & HOLD**

- 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

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 burners 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.



PL-51607

## CONSERVING ENERGY

- Turn off unused equipment.
- Adjust menu patterns and cooking/baking schedules for optimum equipment use.
- Reduce thermostat settings in slack periods since gas equipment heats up and recovers quickly.
- Preheat only to required cooking temperature for specific food — not higher.
- Do not open the oven door unless absolutely necessary.
- 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.

## COOKING GUIDELINES

Recommended temperatures, times, number of racks, and power level 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.

## RACK ARRANGEMENTS

All models are supplied with five racks and have a maximum operating capacity of six racks per oven. The eleven-position rack supports provide for flexibility and proper rack spacing.

The following arrangements are recommended. The position numbers are in numerical sequence starting at the bottom (Fig. 6).

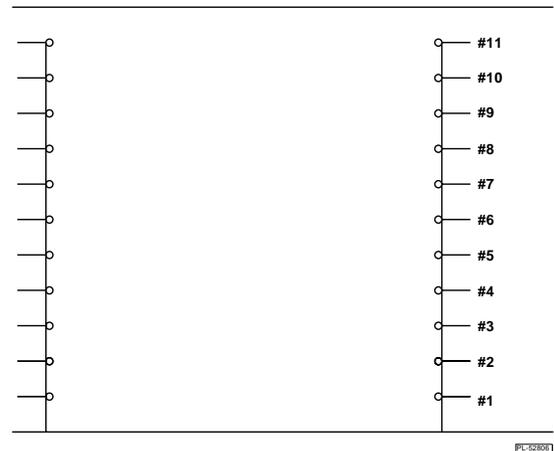
**Arrangement #1** — Five racks in Positions #2, #4, #6, #8, and #10 are for oven broiling, cookies or reconstitution of frozen lunches at maximum capacity. These are also the recommended positions for general baking in sheet pans with products not over 2½" (6.4 cm) high.

**Arrangement #2** — Four racks in Positions #1, #4, #7, and #10 are for general baking in sheet pans, muffin pans, pie or cake tins, and pudding pans 3½" (8.9 cm) high with products not over 4" (10.2 cm) high. This arrangement can also be used for casseroles or meat dishes in #200 series food service pans 12" x 20" x 2½" (30.4 x 50.8 x 6.4 cm).

**Arrangement #3** — Three racks in Positions #1, #5, and #9 are for baking breads or cakes in loaf or tube pans and high meringue pies. This arrangement can also be used for casseroles, meat dishes or roasting in pans up to 5½" (14 cm) deep with products up to 6" (15.2 cm) high.

**Arrangement #4** — Two racks in Positions #1 and #6 are for roasting turkeys and other roasts up to 7" (17.8 cm) high. With the rack in Position #1, there is a limited amount of space for a water pan.

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



RACK POSITION

Fig. 6

## RECOMMENDED TEMPERATURE, TIME, AND POWER LEVEL SETTINGS FOR ROASTING

Meat roasting is most satisfactory at temperatures of 225°F to 325°F (107°C to 162°C) for beef, lamb, poultry, and ham; 325°F (162°C) for fresh pork as recommended by USDA and American Meat Institute.

A 12" x 20" x 1" (30.4 x 50.8 x 2.5 cm) pan with water may be placed in the oven bottom to supply humidity to reduce shrinkage. Add water during roasting as needed.

Roasting pans should be no deeper than necessary to hold drippings, usually 2" to 2½" (5.1 to 6.4 cm).

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 (°C)	POWER LEVEL		APPROXIMATE TIMES
		SG4D,SG6D	SG4C, SG6C	
<b>Standing Rib Roast</b> — Oven Ready	250 (121)	10	100%	3 to 4 Hrs. — Rare 4 to 4½ Hrs. — Med.
<b>Rolled Rib Roasts</b> — 20 to 22 lb. (9.1 to 10 kg)	275 (135)	10	100%	4 Hrs. — Med.
<b>Veal Roast</b> — 15 lb. (6.8 kg)	300 (148)	10	100%	3 Hrs. — Med. Well
<b>Turkeys</b> — 15 to 20 lb. (6.8 to 9.1 kg)	300 (148)	10	100%	3 Hrs.
<b>Meat Loaf</b> — 8 to 10 lb. (3.6 to 4.5 kg)	350 (176)	10	100%	45 to 60 Minutes

**RECOMMENDED TEMPERATURE, TIME, AND POWER LEVEL SETTINGS FOR BAKING**

PRODUCT	TEMP. °F (°C)	TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
				SG4D, SG6D	SG4C, SG6C
<b>Cakes</b>					
Sheet Cake 18x26x1" (45.7x66x2.5 cm)					
Scaled 4½ to 6 lb. (2-2.7 kg) / pan	325-360 (162-182)	20 to 23	5	7 to 4	68 to 45%
Scaled 6 to 7½ lb. (2.7-3.4 kg) / pan	335-350 (168-177)	22 to 25	4	6 to 4	60 to 45%
Sheet Cake 18x26x2" (45.7x66x5 cm)					
Scaled 10 to 12 lb. (4.5-5.4 kg) / pan	300-325 (149-162)	25 to 35	4	6 to 4	60 to 45%
Or, two 12x18x2" (30.5x45.7x5 cm)					
Scaled 5 to 6 lb. (2.3-2.7 kg) / pan	300-325 (149-162)	25 to 35	3	6 to 4	60 to 45%
<b>Angel Food or Sponge Cakes</b>					
Sheet Pans 18x26x1" (45.7x66x 2.5 cm)					
Scaled 5 to 6 lb. (2.3 to 2.7 kg) / pan	300-325 (149-162)	15 to 20	4	3	37%
<b>Loaf or Tube Pans</b>	315-340 (157-171)	20 to 30	3-4	4 to 1	45 to 22%
<b>Cupcakes</b>	350-400 (177-204)	6 to 12	4	6 to 4	60 to 45%
<b>Frozen Fruit Pies</b>	350-375 (177-190)	30 to 45	4	6 to 4	60 to 45%
			3	4	45%
<b>Pumpkin or Custard Pies</b>	300-350 (149-177)	30 to 45	4	6 to 4	60 to 45%
			3	4 to 3	45 to 37%
<b>Cobblers</b>					
12x18x2" (30.5x45.7 x 5 cm) or	350-400 (177-204)	30 to 45	4	6	60%
12x20x2½" (30.5x50x6.3 cm)			3	4	45%
<b>Meringue Pies</b>	350-425 (177-218)	6 to 10	4	6 to 4	60 to 45%
			3	6 to 4	60 to 45%
			2	6 to 4	60 to 45%
<b>Fruit Turnovers</b>					
18x26x1" (45.7x66x2.5 cm) Pans	350-375 (177-190)	15 to 25	5	6 to 4	60 to 45%
<b>NOTE:</b> Pies and cobblers; fruit, custard, and pumpkin pies in pie pans should be placed on 18x26x1" (46x66x2.5 cm) pans.			4	6 to 4	60 to 45%
			3	4 to 3	45 to 37%
<b>Cookies</b>					
Rolled or Pressed	350-400 (177-204)	6 to 12	5	6 to 3	60 to 37%
			4	4 to 3	45 to 37%
			3	3	37%
Drop	350-400 (177-204)	6 to 15	5	6 to 4	60 to 45%
			4	4 to 3	45 to 37%
			3	3	37%
<b>Brownies</b>	350 (177)	12 to 20	5	6 to 4	60 to 45%
			4	4 to 3	45 to 37%
<b>Yeast Breads (after proofing)</b>					
<b>Rolls</b> — 1 oz.	350-400 (177-204)	5 to 10	4	6 to 4	60 to 45%
			3	4	45%
1½ to 2½ oz.	350-400 (177-204)	8 to 15	4	6 to 4	60 to 45%
			3	4 to 3	45 to 37%
<b>Loaf Bread</b> — 1 lb. (453.4 g)	325-375 (162-190)	20 to 40	3(30) Pans	4	45%
			2(20) Pans	3	37%

**RECOMMENDED TEMPERATURE, TIME, AND POWER LEVEL SETTINGS FOR BAKING**

PRODUCT	TEMP. °F (°C)	TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
				SG4D, SG6D	SG4C, SG6C
<b>Sweet Rolls &amp; Danish Pastry</b>	325-375 (162-190)	5 to 15	4	6 to 4	60 to 45%
<b>Biscuits</b> — Rolled ½" (1.3 cm) Thick	350-400 (177-204)	5 to 15	3	4 to 3	45 to 37%
			4	6 to 4	60 to 45%
<b>Muffins</b>	325-375 (162-190)	6 to 18	4	4	45%
			3	4 to 3	45 to 37%
<b>Corn Bread</b>					
18x26x1" (46 x 66 x 2.5 cm) Pan, 5-7 lb. (2.3-3.2 kg) per pan	335-400 (168-204)	10 to 20	4	6 to 4	60 to 45%
18x26x2" (46 x 66 x 5 cm) Pan, 8-20 lb. (3.6-9 kg) per pan	335-400 (168-204)	15 to 25	4	6 to 4	60 to 45%
<b>Corn Muffins</b>	335-385 (168-196)	10 to 20	4	6 to 4	60 to 45%
			3	4 to 3	45 to 37%

**REHEATING PREPARED FOODS**

<b>Frozen French Fries</b>	400-450 (204-232)	6 to 8	4	8 to 6	73 to 60%
			2 to 3	7 to 4	68 to 45%
<b>Frozen TV Dinners</b>	350-400 (177-204)	10 to 12	4 to 5	10 to 6	100 to 60%
			2 to 3	7 to 4	68 to 45%
<b>Frozen Entrees</b>					
¾" - 1" (1.9 – 2.5 cm) Thick	300-350 (149-177)	10 to 20	2 to 5	10 to 6	100 to 60%
<b>Frozen Meals</b> — 8 oz. Foil Pkg.	350-400 (177-204)	20 to 30	2 to 5	10	100%

**OVEN BROILING OR FRYING**

<b>Fish Sticks &amp; Portions</b> Frozen Breaded — 1 oz.	350-400 (177-204)	6 to 10	4	8 to 6	73 to 60%
			2 to 3	7 to 4	68 to 45%
2½ to 3 oz.	350-375 (177-190)	8 to 15	4	7 to 6	68 to 60%
			2 to 3	6 to 4	60 to 45%
<b>Chicken Pieces</b>					
Broiled or Oven Fried					
2 to 2½ lb. (.9 to 1.1 kg) bird	375-425 (190-218)	8 to 15	4 to 5	8 to 6	73 to 60%
2½ to 3 lb. (1.1 to 1.4 kg) bird	350-400 (177-204)	15 to 25	2 to 3	7 to 4	68 to 45%
			4	7 to 6	68 to 60%
<b>Lobsters</b> — 1 to 1½ lb. (.45 to .7 kg)	400-450 (204-232)	8 to 14	2 to 3	6 to 4	60 to 45%
			2 to 4	10 to 6	100 to 60%
<b>Lobster Tails</b> — Frozen					
½ to ¾ lb. (.2 to .3 kg)	350-400 (177-204)	10 to 15	2 to 4	8 to 6	73 to 60%
<b>Hamburger Patties</b>					
8 per lb., Med. to Well Done	400-450 (204-232)	5 to 6	4 to 6	8 to 7	73 to 68%
6 per lb.	400-450 (204-232)	7 to 10	2 to 3	7 to 6	68 to 60%
			4 to 6	10 to 8	100 to 73%
4 per lb.	375-450 (190-232)	8 to 12	2 to 3	8 to 7	73 to 68%
			4 to 6	10	100%
			2 to 3	8 to 7	73 to 68%

## CASSEROLES & MISCELLANEOUS PRODUCTS

PRODUCT	TEMP. °F (°C)	TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
				SG4D, SG6D	SG4C, SG6C
<b>Food Service Pans</b>					
2" to 3" (5.1 to 7.6 cm) deep	325-375 (162-190)	15 to 25			
3" to 4" (7.6 to 10.1 cm) deep	325-375 (162-190)	20 to 35	2 to 4	7 to 4	68 to 45%
<b>Ramekins or Foil Pans</b>	350-400 (177-204)	5 to 6	4 to 5	10 to 7	100 to 68%
Up to 1½" (3.8 cm) deep			2 to 4	7 to 6	68 to 60%
Frozen		10 to 15			
<b>Baked Potatoes</b>					
120 count per 50 lb. (22.7 kg)	400-450 (204-232)	20 to 25	2 to 5	8 to 6	73 to 60%
100 count per 50 lb. (22.7 kg)	400-450 (204-232)	25 to 40	2 to 5	7 to 6	68 to 60%
80 count per 50 lb. (22.7 kg)	400-425 (204-218)	30 to 45	2 to 5	7 to 4	68 to 45%
<b>Pizzas</b> — Frozen or With Prebaked Crust	425-475 (218-232)	5 to 10	4	8 to 6	73 to 60%
			2 to 3	6 to 4	60 to 45%
<b>"Grilled" Cheese Sandwiches</b>	400-425 (204-218)	8 to 10	4	8 to 6	73 to 60%
			2 to 3	7 to 4	68 to 45%

### SPECIAL PROCEDURES FOR BAKING

When baking yeast breads, 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.

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 HINTS

Forced air convection cooking is faster than conventional oven cooking, and therefore, overcooking is more common. Do not 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.

If four racks of a product cook properly at 350°F (177°C) with a power level control setting of 6 in 15 minutes, one rack should also cook properly at 350°F (177°C) in 15 minutes. However, since with one rack you have only a ¼ load, not as much heat is needed. By changing the power level control to 1, 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 browned and finished consistency.

The oven will cook or bake full or partial loads at standard recipe temperatures when the power level control is properly set. As with any oven, you may wish to use a temperature of up to 25 F° (14 C°) higher or lower than the recipe, for the particular product result that you prefer.

When established, note convection oven times and power level control settings on your recipe.

### HIGH LIMIT SWITCH

All ovens are equipped with a high limit switch which senses the temperature of the oven to prevent overheating. The high limit switch operates independently and will automatically shut the oven down should the primary control fail. If this situation occurs, DO NOT attempt to bypass the high limit. Shut the oven down and contact your local Vulcan authorized service agency.

## **CLEANING**

**WARNING:** DISCONNECT THE ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE OVEN BEFORE CLEANING.

Allow the oven to cool before cleaning.

### **Snorkel Tube**

The Snorkel tube opening should never be blocked. If usage of aluminum foil is a common practice during the operation of this oven, be sure to periodically check the Snorkel tube for foil particles. The Snorkel tube should be kept clean at all times for proper operation of the oven. Clean this tube with standard oven cleaner at least once a week. Be sure to thoroughly clean all cleansing solution off the tube before using the oven again. It is also recommended that the oven be run at 400°F (204°C) for 20 minutes before using to burn off any cleaning solution that was not thoroughly rinsed from the tube.

### **Daily**

Exterior stainless steel oven panels should be cleaned with a damp cloth. Stubborn soil may be removed with detergent. (DO NOT USE "DAWN".) Rinse thoroughly and wipe dry with a soft clean cloth. Clean porcelain oven interior daily with soap or detergent and water. Rinse thoroughly and wipe dry with a soft clean cloth. Nickel plated racks and rack supports may be removed for cleaning.

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.

Do not use scouring powder on the glass window; it will scratch and fog the glass.

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 (260°C) and the power level control at 10 and allowing the oven to run unloaded for 30 to 45 minutes.

## **MAINTENANCE**

**WARNING:** THE OVEN AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING, OR PERFORMING ANY MAINTENANCE.

**WARNING:** DISCONNECT THE ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE OVEN BEFORE PERFORMING ANY MAINTENANCE.

### **LUBRICATION**

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

### **VENT**

Periodically check the flue, when the oven is cool, to be sure it is free of obstructions.

### **REPLACING LAMPS**

- Allow oven to cool.
- Remove all racks by pulling forward, lifting up and out.
- Unscrew glass dome from light body.
- Replace the bulb.
- Reassemble glass dome and racks.

# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SUGGESTED CORRECTIVE
Uneven browning or overcooking at edges of pans.	<ol style="list-style-type: none"> <li>1. Power level control setting too high.</li> <li>2. Too many racks used.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce power level control setting. (Refer to Cooking Guidelines.)</li> <li>2. Reduce number of racks used.</li> </ol>
Product pulling to edge of pan or spilling.	<ol style="list-style-type: none"> <li>1. Oven out of level.</li> <li>2. Sheet pans warped.</li> </ol>	<ol style="list-style-type: none"> <li>1. Level oven, on the racks, from 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.</li> <li>2. Keep pans used for baking batter separate from general purpose pans. If any pan shows a tendency to warp, remove it from the baking group.</li> </ol>
Product overbrowning before done or shrinking and overbrowning at edges.	Power level control setting too high.	Reduce power level control setting. (Refer to Cooking Guidelines.)
Excessive shrinkage.	<ol style="list-style-type: none"> <li>1. Failure to maintain water in oven.</li> <li>2. Roasting temperature too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place pan of water (approx. 12"x20"x1" (30.5x51x2.5 cm) in bottom of oven.</li> <li>2. Reduce temperature.</li> </ol>
No Ignition Light remains lit for more than 20 seconds after 3 trials (Models SG4D and SG6D), or "E-05" appears in the display after 3 trials (Models SG4C and SG6C).		<ol style="list-style-type: none"> <li>1. Turn oven off for 5 minutes before attempting to re-light.</li> <li>2. Check gas supply valves to be sure they are open.</li> <li>3. Check electrical power source and connections.</li> </ol>

## SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning this oven, contact the Vulcan Service Agency in your area (refer to listing supplied with the oven), or Vulcan-Hart Company Service Department at the address or phone number shown on the front cover of this manual.