

INSTRUCTIONS

DGC5 & HGC5 SERIES GAS CONVECTION OVENS

MODELS

<i>DGC5</i>	<i>ML-126614</i>
<i>HGC5</i>	<i>ML-126615</i>
<i>HGC5X</i>	<i>ML-126618</i>
<i>HGC5D</i>	<i>ML-126616</i>
<i>HGC5DX</i>	<i>ML-126619</i>



701 S. RIDGE AVENUE
TROY, OHIO 45374-0001

937 332-3000

www.hobartcorp.com

FORM 34312 Rev. E (Apr. 2005)

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.

Installation, Operation and Care of DGC5 & HGC5 SERIES GAS CONVECTION OVENS

SAVE THESE INSTRUCTIONS FOR FUTURE USE

GENERAL

Hobart DGC5 & HGC5 Series Gas Convection Ovens are 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.

Models DGC5, HGC5 and HGC5X feature a solid state temperature control. Models HGC5D and HGC5DX feature programmable controls. One-hour dial timer and buzzer and two-speed $\frac{1}{2}$ HP (0.37 kw) electric motor are standard equipment. Porcelain interior is standard on all models; stainless steel interior is optional. The burner input rating for each oven is 44,000 BTU/hr.

Models HGC5X and HGC5DX have a 4 inches (10 cm) deeper oven cavity.

Hobart offers a stacking kit for mounting one oven on top of another as an option.

The standard 120 V, 60 Hz, 1 PH ovens include cord and plug. Optional electrical specifications require hard wire connection.

On model DGC5, independent door opening is standard and simultaneous door opening is optional. On models HGC5, HGC5X, HGC5D and HGC5DX, simultaneous door opening is standard and independent door opening is optional. All ovens are furnished with five racks.

Other available options include: 5-hour timer, 208/240 V electrical service, additional oven racks, an open stand with lower storage rack and cook and hold.

FEATURES AND OPTIONS

Model	Thermostat	Timer		Oven Lights	Roast & Hold	Legs (Opt.)	Stand With Storage Rack	Voltage
DGC5 HGC5 HGC5X	Solid State	1 Hr. Std.	5 Hr. Opt.	Std.	Opt.	25 $\frac{3}{4}$ " (65 cm)	Opt.	120/60/1 Std. 208/60/1 Opt. 240/60/1 Opt. 240/50/1 Opt.
HGC5D HGC5DX	Programmable	N.A.	N.A.	Std.	Std.	25 $\frac{3}{4}$ " (65 cm)	Opt.	220/380 (3W)/50/3 Opt. 220/380 (4W)/50/3 Opt. 240/415 (4W)/50/3 Opt.
Stacked Ovens						8" (20 cm)		

INSTALLATION

Before installing, verify that the electrical service and type of gas supply (natural or L.P. gases) 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 Hobart Corporation immediately.

UNPACKING

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 near to its final installed position.

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 inch (2.5 cm) at the left side, 4 inches (10 cm) at the right side and 6 inches (15 cm) at the rear. Minimum clearance from noncombustible construction must be 0 inch (0 cm) at the left side, 4 inches (10 cm) at the right side and 6 inches (15 cm) at the rear. The oven may be installed on combustible floors.

The installation location must allow adequate clearances for servicing and proper operation. For solid state and digital control models, there must be 18 inches (46 cm) of clearance on the right side of the oven from any open flame.

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 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 of America:

1. State and local codes.
2. National Fuel Gas Code, ANSI/Z223.1 (latest edition). Copies may be obtained from The American Gas Association, Inc., 1515 Wilson Blvd., Arlington, VA 22209.
3. National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
4. *Vapor Removal From Cooking Equipment*, NFPA-96 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada:

1. Local codes.
2. CSA B149.1 Natural Gas and Propane Installation Code.
3. STANDARD C22.1 Canadian Electric Code (latest edition).
4. CSA C22.1 Canadian Electric Code (latest edition).
5. CSA C22.2 No. 3 Canadian Electric Code (latest edition).
6. CSA Standard C22.2 No. 3 *Electrical Features of Fuel Burning 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

Ovens mounted on casters must use a flexible connector (not supplied by Hobart) that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI-Z21.41 • CSA 6.9. In addition, adequate means must be provided to limit movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit appliance movement. Attach the restraining device at the rear of the oven as shown in Fig. 1.

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).

If disconnection of the restraint is necessary, turn off the gas supply before disconnection. Reconnect this restraint prior to turning the gas supply on and returning the oven to its installation position.

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 leveled front to back and side to side.

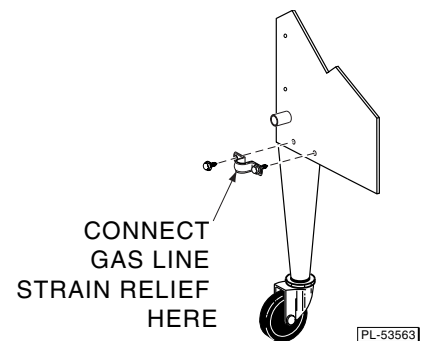


Fig. 1

Assembling the Legs to the Oven

The legs must be installed on the bottom of the oven. Gently position the oven on its side, taking care not to scratch or damage it.

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

Attach the undershelf to the legs with eight bolts and lockwashers (two per leg).

Install the rack guides into the undershelf 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).

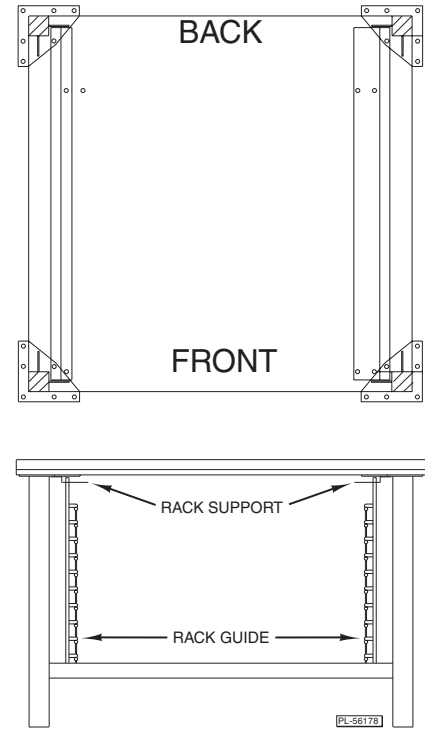


Fig. 2

ASSEMBLING STACKED OVENS

Unpack the ovens and stack kit. Position the oven to be used as the bottom 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 the 24 bolts and lockwashers (six per leg).

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

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

Install the stacking flue (Fig. 3) with the four screws provided.

Connect the piping between the top oven and bottom oven. For all gas supply connections, pipe joint compound must be resistant to the action of propane gases.

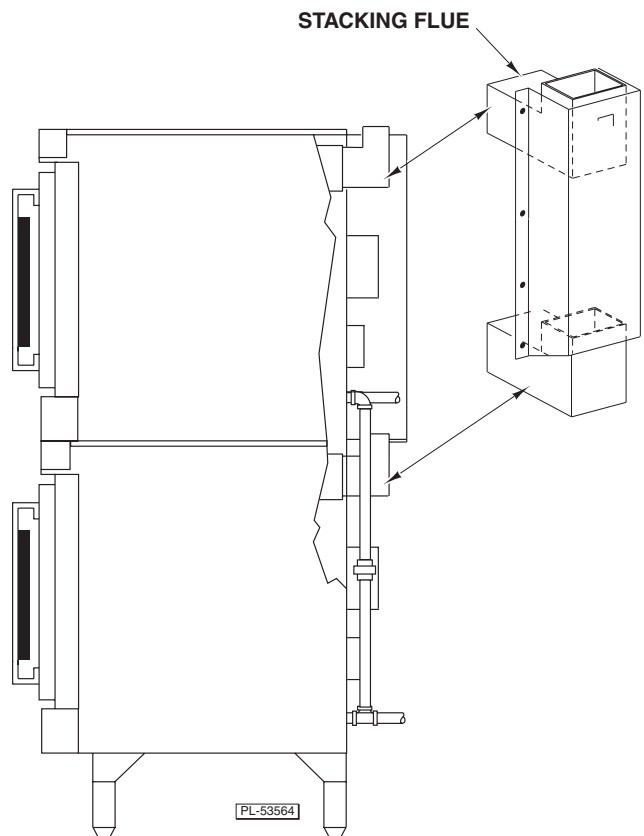


Fig. 3

LEVELING

Ensure 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.

GAS CONNECTION

GAS DATA

MODEL	INPUT RATING		MANIFOLD PRESSURE	
	Natural	L. P. Gases (Propane)	Natural	L. P. Gases (Propane)
DGC5, HGC5, HGC5X, HGC5D, HGC5DX	44,000 BTU/hr	44,000 BTU/hr	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.

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 gas supply after leveling the oven. The gas supply line must be at least the equivalent of $\frac{3}{4}$ inch (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 coincide with installation elevation.

The oven is provided with a regulator integral to the gas solenoid valve and requires no external regulator.

Natural gas pressure regulators are preset for 3.5 inches W.C. (Water Column) (0.9 kPa); propane gas pressure regulators are preset for 10 inches 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 $\frac{1}{2}$ psig (3.45 kPa), the oven and its individual shutoff valve must be disconnected from the gas supply piping system.

When gas supply pressure is $\frac{1}{2}$ psig (3.45 kPa) or less, the oven should be isolated from the gas supply system by closing its individual manual shutoff valve.

BURNER 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 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 Hobart 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 inches (45 cm) should be maintained.

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

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.

WARNING: APPLIANCES EQUIPPED WITH A FLEXIBLE ELECTRIC SUPPLY CORD ARE PROVIDED WITH A THREE-PRONG GROUNDING PLUG. IT IS IMPERATIVE THAT THIS PLUG BE CONNECTED INTO 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 THIS PLUG.

DGC and HGC Series ovens with a 120 V/60 Hz/1 PH electrical specification are equipped with a cord and plug as standard equipment.

A wiring diagram is located on the inside of the control housing.

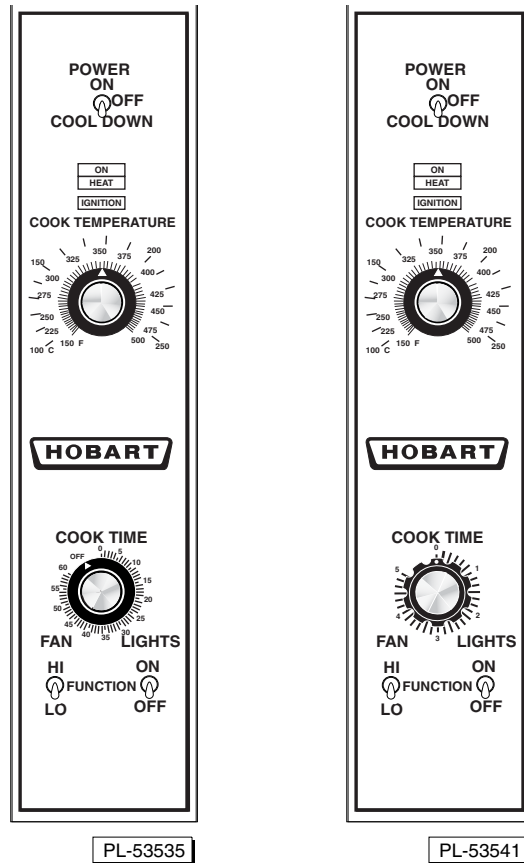
ELECTRICAL DATA

Models	V/Hz/PH	Minimum Circuit Ampacity Maximum Protective Device AMPS
DGC5, HGC5, HGC5X, HGC5D, HGC5DX	120/60/1	15
	208/60/1	15
	240/60/1	15
	240/50/1	15
	220/380 (3W)/50/3	15
	220/380 (4W)/50/3	15
	240/415 (4W)/50/3	15

OPERATION

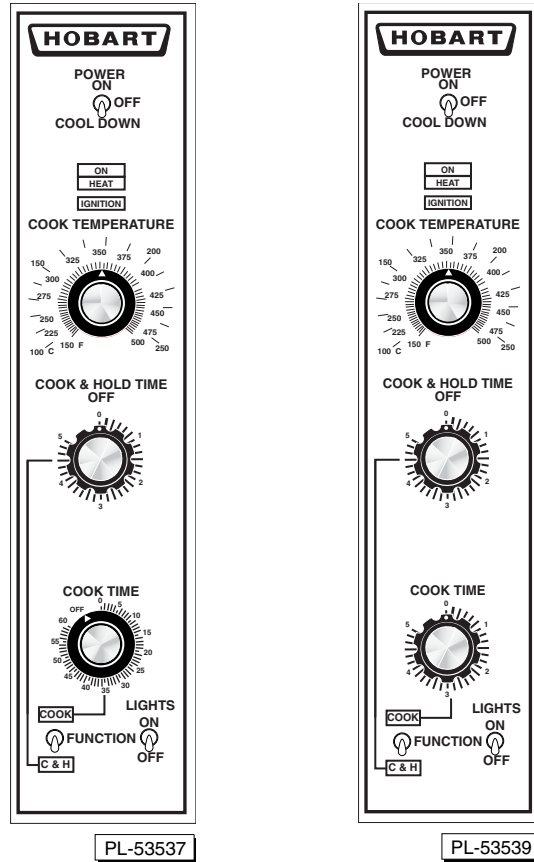
WARNING: THE APPLIANCE AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING OR PERFORMING ANY MAINTENANCE.

CONTROLS (Models DGC5, HGC5 and HGC5X — Without Cook & Hold)



- | | |
|-----------------------------------|---|
| Power Switch | — Turns oven control circuits ON or OFF; COOL DOWN allows the fan motor to run with the doors ajar to speed oven cooling. |
| On Light (Amber) | — Is lit when Power switch is ON. |
| Heat Light (White) | — Comes on and goes off when the burner cycles on and off. |
| Ignition Light (Red) | — Comes on if burner fails to ignite. When lighting the oven, the IGNITION light flashes. |
| Cook Temperature | — Controls oven temperature during cooking operation. |
| Cook Time (1 Hr. or 5 Hr.) | — Sets the bake time. Buzzer sounds continuously after timer counts down to 0. Oven does not turn off. Turn Cook Time to OFF to stop buzzer. When oven is not in use, keep Cook Time at OFF position. |
| Fan Switch | — Allows you to select HI or LO Fan speed. |
| Lights Switch | — Turns the lights in the oven ON or OFF. |

CONTROLS (Models DGC5, HGC5 and HGC5X — With Cook & Hold)



- | | |
|-----------------------------------|---|
| Power Switch | — Turns oven control circuits ON or OFF; COOL DOWN allows the fan motor to run with the doors ajar to speed oven cooling. |
| On Light (Amber) | — Is lit when Power switch is ON. |
| Heat Light (White) | — Comes on and goes off when the burner cycles on and off. |
| Ignition Light (Red) | — Comes on if burner fails to ignite. When lighting the oven, the IGNITION light flashes. |
| Cook Temperature | — Controls oven temperature when Function switch is on COOK or during the first stage of C & H. |
| Cook & Hold Time | — Sets the first stage cooking time in Cook & Hold. |
| Cook Time (1 Hr. or 5 Hr.) | — Sets the Bake time when Function switch is on COOK. Buzzer sounds continuously after Cook Time counts down to 0. Oven does not turn off at end of cycle. Turn Cook Time to OFF to stop buzzer. When oven is not in use, keep Cook Time at OFF position. |
| Function Switch | — Allows you to select COOK or COOK & HOLD (C & H). |
| Cook | — Uses the cook time and high fan speed. |
| C & H | — Uses the Cook & Hold Time setting for the first stage of roasting at the thermostat setting. Selects a hold temperature of 160°F (71°C) for second stage roasting. Uses low fan speed when burners are on; no air circulation when burners are off. |
| Lights Switch | — Turns the 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.
3. Push the Power switch ON
4. Turn the Cook Temperature to 300°F (149°C), and allow the oven to cycle for 2 hours or until no odor is detected before pushing the Power switch OFF.

LIGHTING THE DGC AND HGC SERIES OVENS

1. Turn the main gas supply ON.
2. Place ON/OFF/COOL DOWN switch to the ON position.
3. If the oven fails to light, return the ON/OFF/COOL DOWN switch to OFF. Allow 5 minutes for retrieval.

USING THE DGC AND HGC SERIES OVENS

Preheating

1. Select the proper rack arrangement for the product to be cooked. Refer to RACK ARRANGEMENTS, page 18.
2. Make sure the doors are closed.
3. Push the Power switch ON. The amber ON light will come on, indicating that power to the oven is on.
4. Set the two-speed Fan Switch to the desired setting (without Cook & Hold models).
5. Set Cook Temperature as desired. The HEAT light will come on and remain on until the oven reaches set temperature (approximately 10 to 15 minutes for settings from 300°F (149°C) to 400°F (204°C)). Refer to SUGGESTED COOKING GUIDELINES, pages 19 through 22, for suggested temperatures and times for various products.
6. 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 doors.
2. Set the COOK TIME. After the preset time lapses, turn the COOK TIME to OFF to silence the buzzer.
3. When product is done, open doors and carefully remove cooked product from the oven. Care should be taken when wiping up spills, as oven is still hot.

Cook & Hold (When Equipped)

1. Turn the oven ON.
2. Set the oven Cook Temperature to the desired setting.
3. Position the Function switch to C & H.
4. Set the Cook & Hold Time to the desired Cooking time.
 - The oven will roast the product for the chosen set time and temperature. The oven controller will automatically switch from the cooking thermostat to the holding thermostat at the end of the preset cooking time. In holding mode the oven will maintain a temperature of 160°F (71°C) until the oven is turned OFF. The fan will run at low speed while the burner is on and the unit is operating in Cook & Hold.
5. To turn Cook & Hold off, flip the Functions Switch to the Cook position. The oven temperature will return to the cook temperature setting.

End of Day

1. Turn Cook Temperature to lowest setting.
2. Push the Power switch to COOL DOWN. Leave door ajar while the fan is on to cool the oven.
3. When oven has cooled sufficiently, push the Power switch OFF.

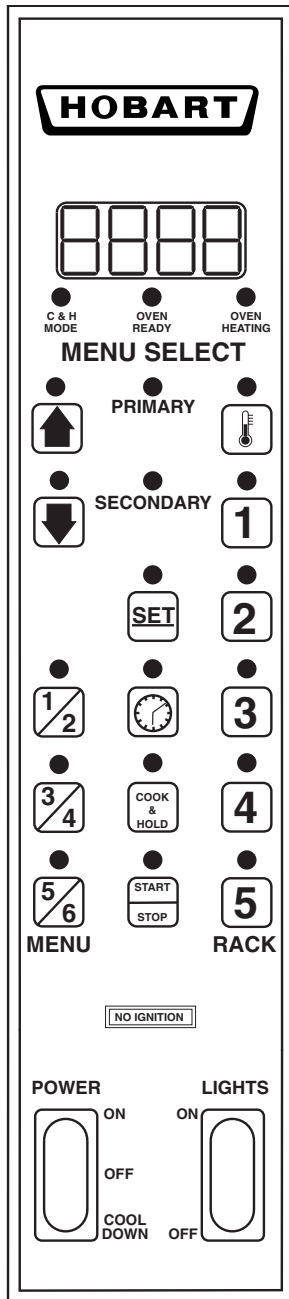
Extended Shutdown

Repeat Steps 1 through 3 of End of Day. Unplug oven and shut off manual gas valve.

CONSERVING ENERGY — ALL MODELS

- 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.

PROGRAMMABLE CONTROLS (Models HGC5D AND HGC5DX)



PL-53540



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.



C & H
MODE

Indicates the oven is in the Cook & Hold Mode.



OVEN
READY

Indicates the oven is preheated and ready for cooking.



OVEN
HEATING

Indicates the oven is preheating or burners have cycled on to maintain temperature setting.



PRIMARY

Primary indicates menu items 1, 3 or 5.



SECONDARY

Secondary indicates menu items 2, 4 or 6.



Up arrow increases and 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.



Selects Cook & 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 Number Cook Times — once programmed.

MANUALLY SETTING THE TEMPERATURE AND COOK TIME

To Set the Temperature

1. Press the SET button. Press the TEMPERATURE button; *StPt* displays to indicate Setpoint.
2. Use the Up and Down arrow keys to increase or decrease the displayed temperature value.
3. Press the SET button again to save the temperature setpoint in the computer.

To Set the Cook Time

1. Press the SET button. Press the TIME button. *Tine* displays to indicate time.
2. Use the Up and Down arrow keys to increase or decrease the displayed cook time (HR:Min).
3. Press the SET button again to save the time setting in the computer.

To Start Cooking

1. Press the START/STOP button.
2. The manual Cook Time counts down to 00:00. Displays [HR:Min] above 1 hour; [Min:Sec] below.
3. The buzzer will sound. To silence the buzzer, press the START/STOP button again.
4. *The control retains the manual settings for temperature and time.*

TO PROGRAM MENU ITEM AND RACK NUMBER 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). This is similar for MENU Buttons 3/4 or 5/6. Any menu item cook time can be changed using the procedure below. Rack number cook times may be programmed if desired but are not required.

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

1. To enter program mode, press and hold the Up and Down arrow buttons until PrOG displays.
2. 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.
3. Press the START/STOP button; LOC displays. Press the START/STOP button a second time to save the Menu Item(s)' COOK TIME(s).
4. 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 Number Cook Times for a Menu Item

1. To enter program mode, press and hold the Up and Down arrow buttons until PrOG displays.
2. Select the Menu Item to be programmed (1 – 6); *Tine* displays to indicate time.
3. Then select the rack number (1 – 5). [*t 1*] indicates rack 1; [*t 2*] indicates rack 2 and so on. Use the Up and Down arrows to increase or decrease the cook time for any rack number.
NOTE: All rack times can be preprogrammed before pressing the START/STOP button to lock.
4. Press the START/STOP button; LOC displays. Press the START/STOP button a second time to save the Menu/Rack Number's COOK TIME(s).
5. To exit program mode, press START/STOP twice.

Always Set the Temperature Before Setting the Time

1. Open the door; *door* will display.
2. Place the desired product on any of the five racks.
3. Close the door. The display should return to the set temperature or the *GROWING BAR*.
4. Press the MENU key once for primary or twice for secondary to select a menu item cook time.
5. Press the START/STOP button. *Pressing the START/STOP button after making a menu selection will time all racks for the selected menu time.*
6. The timer will count down the time remaining for the Menu Item Cook Time.
7. When the time has counted down to 00:00, the buzzer will sound and all Rack Buttons will flash.
8. To silence the buzzer, press the START/STOP button.

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

1. After the set temperature is reached, open the door; *door* displays. Place product(s) in oven.
2. Close the door. The display returns to the set temperature or the *GROWING BAR*.
3. Select the menu item (once for primary or twice for secondary) and the Rack Number to select the Menu/Rack Number Cook Time. If using simultaneous cook times, select the other Menu/Rack Numbers.
4. The timer selects the rack number with the shortest cook time and counts down to 00:00.
5. The buzzer sounds and the rack number flashes. To silence the buzzer, press the flashing Rack Number.
6. Open the door; *door* displays. Remove the finished product and close the door.
7. The next shortest cook time displays, its rack number flashes and the time counts down to 00:00.
8. The buzzer sounds. Press the flashing Rack Number. Open the door; *door* displays. Remove the product and close the door.
9. Repeat steps 7 and 8 until all rack numbers are done.

To Display the Actual Oven Temperature

1. 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 buzzer will sound. To silence the buzzer and end a menu item cooking cycle, press START/STOP. To silence the buzzer and end a rack number cooking cycle, press the Rack Number.

To cancel a cooking cycle which might have been started in error, press and hold the Rack Number 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.

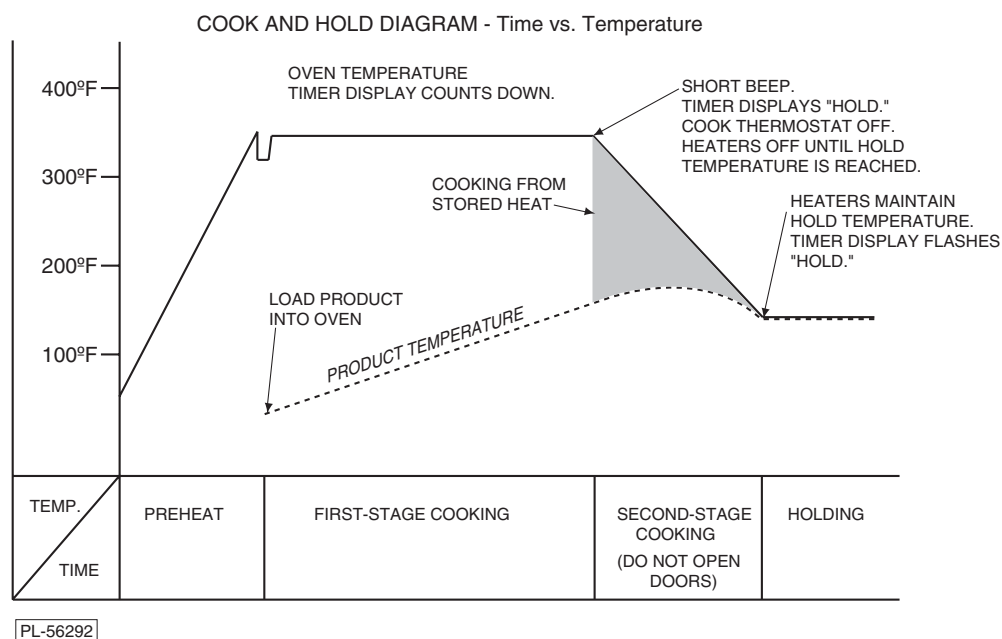
SETTING THE OVEN FOR COOK & HOLD

1. Press the COOK & HOLD button to select cook & hold.
2. 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.
3. *The hold temperature is preset by the computer control at 150°F (66°C).*
4. *The low fan speed is present during Cook & Hold. Use Cook & Hold to select low fan speed.*

COOK & HOLD OPERATION — (When Equipped)

Cook & Hold roasts the product in two stages. During first-stage cooking, the oven temperature is regulated by the temperature setpoint and the time setting. After the time counts down to 00:00, second-stage cooking begins. During second-stage cooking, the heat is 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, the display flashes HOLD (on ovens equipped with Programmable Controls only). Temperature in the oven will be maintained at the hold temperature until the oven is turned off.



PROPER UTENSILS

The use of proper utensils can enhance oven operation. Medium and lightweight pans allow the product to warm faster. Roast meats in shallow pans deep enough to hold all juices yet allow free air circulation.

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. This will ensure the desired doneness is achieved.

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

RACK ARRANGEMENTS

All models are supplied with five racks and have a maximum operating capacity of six racks per oven. 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. 4).

Arrangement #1 — Five racks in positions #2, #4, #6, #8 and #10 are for 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 inches (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 inches (8.9 cm) high, with products not over 4 inches (10 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 cooking in pans up to 5½ inches (14 cm) deep with products up to 6 inches (15 cm) high.

Arrangement #4 — Two racks in positions #1 and #6 are for cooking turkeys and other roasts up to 7 inches (17.8 cm) high.

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

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

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, three or four pies should be put on an 18 x 26" (45.7 x 66 cm) 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.

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 Hobart authorized service agency.

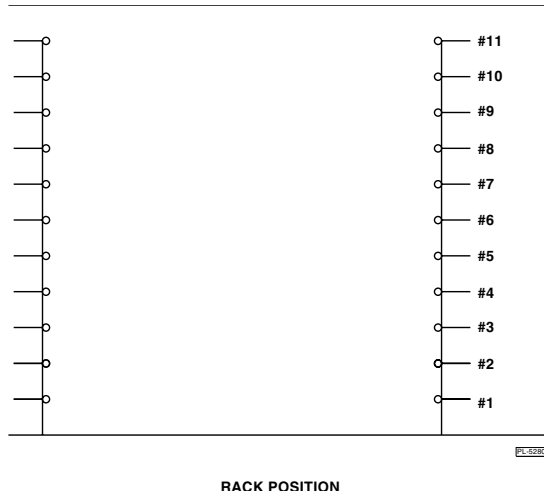


Fig. 4

RECOMMENDED TEMPERATURES AND TIMES FOR ROASTING

Meat roasting is most satisfactory at temperatures of 225 to 325°F (107 to 163°C) for beef, lamb, poultry and ham; 325°F (163°C) for fresh pork as recommended by USDA and American Meat Institute.

A pan, approximately 12 x 20 x 1" (30.4 x 50.8 x 2.5 cm) 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" (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	TEMPERATURE °F (°C)		APPROXIMATE TIMES
Standing Rib Roast — Oven Ready	250	(121)	3 to 4 Hrs. — Rare 4 to 4½ Hrs. — Med.
Rolled Rib Roasts — 20 to 22 lb (9.1 to 10 kg)	275	(135)	4 Hrs. — Med.
Veal Roast — 15 lb (6.8 kg)	300	(149)	3 Hrs. — Med. Well
Turkeys — 15 to 20 lb (6.8 to 9.1 kg)	300	(149)	3 Hrs.
Meat Loaf — 8 to 10 lb (3.6 to 4.5 kg)	350	(177)	45 to 60 Minutes

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 air 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.

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 (-4°C) higher or lower than the recipe for the particular product result that you prefer.

When established, convection oven times and control settings should be noted on your recipe.

SUGGESTED COOKING GUIDELINES

Recommended temperatures, times and number of racks 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 NUMBER OF RACKS FOR BAKING

PRODUCT	TEMP. °F (°C)		TIME IN MINUTES	NO. OF RACKS
Cakes				
Sheet Cakes				
18 x 26 x 1" (45.7 x 66.0 x 2.5 cm) pan				
Scaled 4½ to 6 lb (2 to 2.7 kg)/pan	325-360	(163-182)	20 to 23	5
Scaled 6 to 7½ lb (2.7 to 3.4 kg)/pan	335-350	(168-177)	22 to 25	4
Sheet Cakes				
18 x 26 x 2" (45.7 x 66 x 5 cm) pan	300-325	(149-163)	25 to 35	4
Scaled 10 to 12 lb (4.5-5.4 kg)/pan				
Or, two 12 x 18 x 2" (30.5 x 45.7 x 5 cm) pans	300-325	(149-163)	25 to 35	3
Scaled 5 to 6 lb (2.3 to 2.7 kg)/pan				
Angel or Sponge Cakes				
Sheet Pans 18 x 26 x 1" (45.7 x 66 x 2.5 cm)				
Scaled 5 to 6 lb (2.3 to 2.7 kg)/pan	300-325	(149-163)	15 to 20	4
Loaf or Tube Pans	315-340	(157-171)	20 to 30	3-4
Cupcakes	350-400	(177-204)	6 to 12	4
Frozen Fruit Pies	350-375	(177-191)	30 to 45	4
				3
Pumpkin or Custard Pies	300-350	(149-177)	30 to 45	4
				3
Cobblers				
12 x 18 x 2" (30.5 x 45.7 x 5 cm) or	350-400	(177-204)	30 to 45	4
12 x 20 x 2½" (30.5 x 50 x 6.3 cm)				3
Meringue Pies	350-425	(177-218)	6 to 10	4
				3
				2
Fruit Turnovers				
18 x 26 x 1" (45.7 x 66 x 2.5 cm) pans	350-375	(177-191)	15 to 25	5
				4
NOTE: Pies and cobblers; fruit, custard and pumpkin pies in pie pans should be placed on 18 x 26 x 1" (45.7 x 66 x 2.5 cm) pans for baking.				3
Cookies				
Rolled or Pressed	350-400	(177-204)	6 to 12	5
				4
				3
Drop	350-400	(177-204)	6 to 15	5
				4
				3
Brownies	350	(177)	12 to 20	5
				4

RECOMMENDED TEMPERATURES, TIMES AND NO. OF RACKS FOR BAKING, Cont'd.

PRODUCT	TEMP. °F (°C)	TIME IN MINUTES	NO. OF RACKS
Yeast Breads NOTE: Yeast breads should be fully proofed for best results.			
Rolls — 1 oz	350-400 (177-204)	5 to 10	4 3
1½ to 2½ oz	350-400 (177-204)	8 to 15	4 3
Loaf Bread — 1 lb (453.4 g)	325-375 (163-191)	20 to 40	3(30)Pans 2(20)Pans
Sweet Rolls & Danish Pastry	325-375 (163-191)	5 to 15	4 3
Biscuits — Rolled ½" (1.3 cm) Thick	350-400 (177-204)	5 to 15	4 3
Muffins	325-375 (163-191)	6 to 18	4 3
18 x 26 x 1" (45.7 x 66 x 2.5 cm) pan, 5 to 7 lb (2.3 to 3.2 kg)/pan	335-400 (168-204)	10 to 20	4
18 x 26 x 2" (45.7 x 66 x 5 cm) pan, 8 to 20 lb (3.6 to 9 kg)/pan	335-400 (168-204)	15 to 25	4
Corn Muffins	335-385 (168-196)	10 to 20	4 3

REHEATING PREPARED FOODS

Frozen French Fries	400-450 (204-232)	6 to 8	2 to 4
Frozen TV Dinners	350-400 (177-204)	10 to 12	4 to 5 2 to 3
Frozen Entrees — ¾ to 1" (1.9 to 2.5 cm) Thick	300-350 (149-177)	10 to 20	2 to 5
Frozen Meals — 8 oz Foil Pkg.	350-400 (177-204)	20 to 30	2 to 5

REHEATING PREPARED FOODS, Cont'd.

PRODUCT	TEMP. °F (°C)	TIME IN MINUTES	NO. OF RACKS
Fish Sticks & Portions			
Frozen Breaded — 1 oz	350-400 (177-204)	6 to 10	4 2 to 3
2½ to 3 oz	350-375 (177-191)	8 to 15	4 2 to 3
Chicken Pieces			
Broiled or Oven Fried			
2 to 2½ lb (0.9 to 1.1 kg) bird	375-425 (191-218)	8 to 15	4 to 5 2 to 3
2½ to 3 lb (1.1 to 1.4 kg) bird	350-400 (177-204)	15 to 25	4 2 to 3
Lobsters — 1 to 1½ lb (0.45 to 0.7 kg)	400-450 (204-232)	8 to 14	2 to 4
Lobster Tails — Frozen			
½ to ¾ lb (0.2 to 0.3 kg)	350-400 (177-204)	10 to 15	2 to 4
Hamburger Patties			
8 per lb, Med. to Well Done	400-450 (204-232)	5 to 6	4 to 6 2 to 3
6 per lb	400-450 (204-232)	7 to 10	4 to 6 2 to 3
4 per lb	375-450 (191-232)	8 to 12	4 to 6 2 to 3
CASSEROLES			
Food Service Pans			
2 to 3" (5 to 7.6 cm) deep	325-375 (163-191)	15 to 25	
3 to 4" (7.6 to 10.2 cm) deep	325-375 (163-191)	20 to 35	2 to 4
Ramekins or Foil Pans	350-400 (177-204)	5 to 6	4 to 5 2 to 4
Up to 1½" (3.8 cm) deep			
Frozen		10 to 15	
MISCELLANEOUS PRODUCTS			
Baked Potatoes			
120 count per 50 lb (22.7 kg)	400-450 (204-232)	20 to 25	2 to 5
100 count per 50 lb (22.7 kg)	400-450 (204-232)	25 to 40	2 to 5
80 count per 50 lb (22.7 kg)	400-425 (204-218)	30 to 45	2 to 5
Pizza — Frozen or With Prebaked Crust	425-475 (218-246)	5 to 10	4 2 to 3
Grilled Cheese Sandwiches	400-425 (204-218)	8 to 10	4 2 to 3

CLEANING

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

Allow the oven to cool before cleaning.

Heat Circulation Tube

The heat circulation tube, located in the back of oven cavity, should never be blocked. The heat circulation tube should be kept clean at all times for proper operation of the oven. Clean with standard oven cleaner at least once a week. Be sure to thoroughly clean all cleansing solution off 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 heat circulation 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 are dishwasher-safe and may be removed for cleaning.

For exterior 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 cook temperature to 500°F (260°C) and allowing the oven to run unloaded for 30 to 45 minutes.

GUIDELINES FOR MAINTAINING STAINLESS STEEL SURFACES

There are three basic things that can break down the surface layer of stainless steel and allow corrosion to develop: 1) Abrasion; 2) Deposits and water and 3) Chlorides.

Avoid abrasion from rubbing with steel pads, wire brushes or scrapers that can leave iron deposits on stainless steel; instead, use plastic scouring pads or soft cloths. For stubborn stains, use products such as Cameo, Talc or Zud First Impression. Always rub parallel to the polish lines or with the grain.

Hard water can leave deposits that promote rust on stainless steel. Treated water from softeners or certain filters can eliminate these mineral deposits. Deposits from food must be properly removed by cleaning. Use mild detergent and nonchloride cleaners. Rinse thoroughly. Wipe dry. If using chloride-containing cleaners or sanitizers, ***rinse repeatedly*** to avoid stainless steel corrosion. Where appropriate, apply a polish recommended for stainless steel (such as Benefit or Super Sheen) for extra protection and lustre.

MAINTENANCE

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

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

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 Action
Uneven browning or overcooked edges.	1. Oven is too hot. 2. Too many racks used.	1. Reduce temperature setting (refer to Cooking Guidelines). 2. Use fewer racks to allow better circulation.
Product pulling to edge of pan or spilling.	1. Oven is not level. 2. Sheet pans are warped.	1. Level oven racks - side to side and front to back. The rack should be level side to side and level to 1/8" low at the front from front to back. 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.
Excessive shrinkage.	1. Failure to maintain water in oven. 2. Cooking temperature too high.	1. Place pan of water in bottom of oven measuring 12 x 20 x 1" (30.5 x 51 x 2.5 cm). 2. Reduce temperature.
Ignition light remains lit for more than 20 seconds after 3 trials.	No gas supply.	• Turn oven off for 5 minutes before attempting to relight. • Check gas supply valves to be sure they are open.

SERVICE

Contact your local Hobart-authorized service office for any repairs or adjustments needed on this equipment. Long-term service contracts are available on this and other Hobart products.