

# INSTRUCTIONS

## GAS & ELECTRIC COMBI, CONVECTION & STEAM OVENS

*DIRECT STEAM  
(BOILERLESS)*

*INDIRECT STEAM  
(WITH STEAM GENERATOR)*

*(LEFT HINGED DOOR)*

<i>CE6HD</i>	<i>ML-138010</i>		
<i>CE10HD</i>	<i>ML-138012</i>	<i>CG10FI</i>	<i>ML-138048-Z</i>
<i>CE10FD</i>	<i>ML-138016</i>		
<i>CE20HD</i>	<i>ML-138014</i>		
<i>CE20FD</i>	<i>ML-138018</i>		

*(RIGHT HINGED DOOR)*

<i>CE6HD</i>	<i>ML-138011</i>
<i>CE10HD</i>	<i>ML-138013</i>
<i>CE10FD</i>	<i>ML-138017</i>
<i>CE20HD</i>	<i>ML-138015</i>
<i>CE20FD</i>	<i>ML-138019</i>



701 S. RIDGE AVENUE  
TROY, OHIO 45374-0001

937 332-3000

[www.hobartcorp.com](http://www.hobartcorp.com)

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## 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.

KEEP AREA AROUND OVEN CLEAR OF COMBUSTIBLES. DO NOT OBSTRUCT COMBUSTION AND VENTILATION OPENINGS ON THE OVEN.

# TABLE OF CONTENTS

GENERAL .....	5
INSTALLATION .....	5
Unpacking .....	5
Installation Codes and Standards .....	5
Location .....	6
Door Opening .....	6
Stacking Kits .....	6
Leveling .....	6
Water Requirements .....	6
Water Quality Statement .....	6
Plumbing Connections .....	6
Water Supply Connections .....	7
Drain Connection .....	7
Gas Supply Connections .....	7
Testing the Gas Supply System .....	8
Flue Gas Exhaust .....	8
Electrical Connection .....	9
Vent Hood .....	9
Before First Use .....	9
OPERATION .....	10
Door Switch .....	10
Door Opening and Closing .....	10
Loading the Oven .....	10
Unloading the Oven .....	11
Cooking Modes .....	11
Control Panel .....	11
Initial Start-Up .....	14
Setting the Internal Clock .....	14
Setting the Temperature .....	14
Setting the Timer .....	15
Setting the Humidity .....	15
Setting the Vent Position .....	15
Setting the Fan Speed .....	16
Fast Cool Down .....	16
Selecting the Cooking Mode .....	17
Preheating the Oven .....	17
Using Convection Mode .....	17
Using Steam Mode .....	18
Using Combi Mode .....	18
Temperature Probe .....	19
Using the Product Temperature Probe .....	20
Using the 10 Position Timer .....	21
Writing a Cooking Phase .....	22

## TABLE OF CONTENTS (CONT.)

Erasing a Cooking Phase .....	22
Writing a Cooking Program.....	23
Modifying a Cooking Program.....	24
Reviewing a Cooking Program .....	24
Erasing a Cooking Program.....	24
Using a Cooking Program.....	25
Setting a Preheat Delayed Start .....	25
Add a Barcode to a Program (If Optional Barcode Scanner Was Ordered).....	26
Remove a Barcode From a Program .....	26
Using the Scanner .....	27
Combi Oven Bluetooth Capabilities .....	27
MAINTENANCE .....	29
Service Adjustments .....	29
Door Locking and Gasket Inspection .....	29
Service and Parts Information.....	29
Shutting Down the Oven .....	29
STAINLESS STEEL EQUIPMENT CARE AND CLEANING.....	30
CLEANING .....	31
TROUBLESHOOTING .....	34
Autodiagnosics.....	34
Service Parameter Setup.....	35

# INSTALLATION, OPERATION AND CARE OF GAS & ELECTRIC COMBI, CONVECTION & STEAM OVENS

## SAVE THESE INSTRUCTIONS

### GENERAL

The Gas & Electric Combi, Convection & Steam Ovens are single compartment ovens that provide convection heating and/or steaming in the cooking chamber.

The Hobart **Combi Gas** or **Electric** ovens are sized **6**, **10**, or **20** levels high. The 6 level ovens are **Half** depth only. The 10 and 20 level ovens are either **Full** or **Half** depth. All models include a **D**igital programmable control. The **bold** numbers and letters explain the model-number conventions.

The 6 or 10 level ovens can be installed on a suitable countertop using the 2" legs (standard) or the optional 6" legs. The 6 or 10 level ovens can also be installed on an accessory stand. The accessory stand may be equipped with an accessory Pan Slide which provides rack or pan storage underneath the oven. On 6 or 10 level ovens, the accessory Landing Table can load or unload all racks in one motion when the oven is mounted on the accessory stand. Additional racks are also available accessories. The 20 level ovens are installed with legs and come with a Trolley to allow loading or unloading all racks in one motion. An optional Hose Spray accessory supplied by others can be installed near the oven to facilitate easy cleaning of the accessory racks.

### INSTALLATION

#### UNPACKING

Immediately after unpacking the oven, 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.

Prior to installation, verify that the electrical and water service agrees with the specifications on the oven data plate and in this manual.

#### INSTALLATION CODES AND STANDARDS

In the United States, the Hobart Combi Oven must be installed in accordance with:

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 No.70, latest edition) available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
4. Vapor Removal from Cooking Equipment, (NFPA-96, latest edition) available from NFPA.

In Canada, the Hobart Combi Oven must be installed in accordance with:

1. Local codes.
2. CAN/CGA-B149.1 Natural Gas Installation Code (latest edition).
3. CAN/CGA-B149.1 National Fuel Gas Code (latest edition), available from The Canadian Gas Association; 178 Rexdale Blvd.; Etobicoke, Ontario; Canada M9W 1R3.
4. Canadian Electrical Code (CSA C22.2 No.3, latest edition) available from the Canadian Standards Association, 5060 Spectrum Way, Mississauga, Ontario, Canada L4W 5N6.

## LOCATION

Allow space for operating the oven. Do not obstruct the ventilation ports above the oven. To provide ventilation access, allow 1" clearance on the left side of the oven and 2<sup>1</sup>/<sub>2</sub>" clearance at the rear. A suitable amount of space (18" minimum) should be provided on the right side of the machine for operation, cleaning and service. Ensure a level floor is available for operation of the 20 level units with trolley system.

## DOOR OPENING

The standard oven is delivered with the door hinged on the left. If the door opening needs to be changed, contact your authorized Hobart Service office.

## STACKING KITS

Stacking kits are available to allow ovens to stack, one on top of the other (available for 6 and 10 level ovens only). Assembly Instructions are included with the kit.

## LEVELING

Use a spirit level on a rack in the oven to make sure the oven is level, both front-to-back and side-to-side. On 20 levels, accessory stands, and optional 6" legs, adjust the leveling feet on the bottom of the legs by turning the feet in or out to level the oven. After the drain is connected, check for level by pouring water onto the floor of the compartment. All water should drain through the drain opening.

## WATER REQUIREMENTS

**NOTICE** As with all steam related products, water filtration and regular filter replacements coupled with routine deliming are required. Your local Hobart Service office can recommend a water treatment system to meet the needs of your local water conditions. Contact your local Hobart Service representative for water treatment offerings.

## WATER QUALITY STATEMENT

The fact that a water supply is potable is no guarantee that it is suitable for steam generation. Proper water quality can improve the taste of the food prepared in the oven, reduce liming and extend equipment life. Local water conditions vary from one location to another. The recommended proper water treatment for effective and efficient use of this equipment will also vary depending on the local water conditions. Your water supply must be within the general guidelines outlined in the chart below.

Other factors affecting steam generation are iron content, amount of chlorination, chlorine, and dissolved gasses. Water supplies vary from state to state and from locations within a state. Therefore it is necessary that the local water treatment specialist be consulted before the installation of any steam generating equipment. Ask your municipal water supplier for details about your local water supply prior to installation or contact your local Hobart representative.

Water hardness should be treated by a water conditioner (water softener and/or in-line water treatment). Low water hardness may also require a water treatment system to reduce potential corrosion. Water treatment has been shown to reduce costs associated with machine cleaning, reduce deliming and reduce corrosion of metallic surfaces.

WATER SUPPLY GENERAL GUIDELINES	
Supply Pressure	30-60 psig
Hardness	less than 3 grains*
Silica	less than 13 ppm
Total Chloride	less than 4.0 ppm
PH	range 7-8
Un-Dissolved Solids	less than 5 microns

\* 17.1 ppm = 1 grain of hardness

## PLUMBING CONNECTIONS

**▲ WARNING** Plumbing connections must comply with applicable sanitary, safety and plumbing codes.

## WATER SUPPLY CONNECTIONS

Connect treated potable water (cold) to the inlet. Untreated water contains scale producing minerals which, if supplied, can precipitate and adhere to the surfaces inside the oven. This can result in early component failure and reduced product life.

## DRAIN CONNECTION

**NOTICE** In order to avoid any back pressure in the oven, do not connect solidly to any drain.

The 1" NPT threaded fitting on the condenser box must be extended a minimum of 12" (305 mm) - maximum of 72" (1829 mm) away from combi base, to an open air gap type drain. Do not reduce the 1" NPT drain piping throughout its length. Provide a suitable floor sink with a minimum depth of 12" (305 mm). The floor sink is NOT to be directly under the combi and should be at a distance so that steam vapors will not enter the combi from underneath. The drain should slope down away from the combi ¼" for every foot of drain pipe length. The drain pipe should be either iron or copper. DO NOT use PVC pipe; PVC pipe may lose its rigidity or glue may fail.

Temperatures in the combi can reach as high as 212°F (100°C). Local codes may require that the temperature of drain water be no greater than 140°F (60°C). At the end of the day, when purging the generator, some provision for lowering the water temperature should be provided by the user or installer to meet this code requirement.

The drain hose for the drip tray should be installed and routed with a constant decline (Fig. 1).

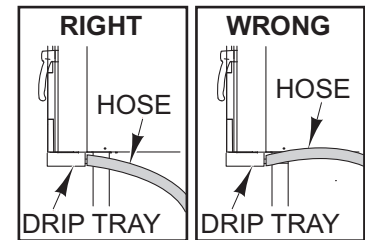


Fig. 1

## GAS SUPPLY CONNECTIONS

**NOTICE** Gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

A ¾" NPT minimum inside diameter gas supply line is required. If quick disconnect devices are used, make sure it is sized properly for data plate BTU/hr. rating.

Codes require that a manual gas shutoff valve be installed in the gas line ahead of the combi oven. The gas line must be capable of delivering gas to the combi oven without excessive pressure drop at the minimum rate specified on the rating plate.

MINIMUM RATE	
Gas Input	¾" NPT
Natural	5.5" - 10.5" W.C.
Propane	11" - 13" W.C.

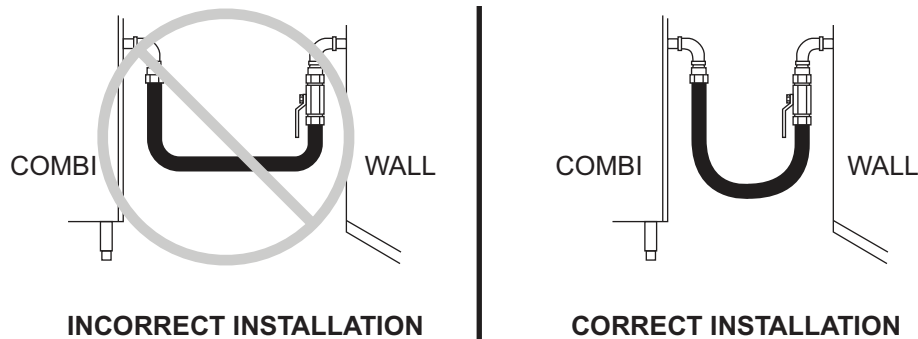
Inadequate gas supply could result in burner noise and poor burner performance.

The proper sizing and installation of the gas connection is important for the machine to operate within its design specifications. In some installations, the gas supply may not be sufficient enough to allow all the gas equipment to operate properly at peak loads; or when other equipment with a high BTU/hr. input requirement is operating. The connection to the machine becomes even more important in this type of location. Flexible gas connectors with quick disconnect or swivel fittings (when used) and gas connectors beyond the length necessary will reduce the BTU/hr. flow capacity to the machine.

## GAS SUPPLY CONNECTIONS (CONT.)

**NOTE:** Do not use corrugated stainless steel tubing for commercial gas equipment supply connections.

**NOTE:** A straight gas connection is the ideal condition for the rated BTU/hr. flow capacity of the connector. If a straight connection is not possible and a flexible gas connector is used, do not twist, kink or excessively flex the connector beyond a U-shape. Flexing the gas connector as described will restrict gas flow or may damage the connector.



Changing a flexible gas connector may raise the BTU/hr. flow capacity enough to allow the machine to operate within its design specifications. (i.e. Removing the quick disconnect fitting, installing a shorter gas connector or installing a larger diameter gas connector.)

An alternative may be to move the equipment to a different gas supply location in the kitchen. (i.e. Closer to the main supply into the kitchen or away from other equipment with high BTU/hr. input requirements.)

The combi oven is equipped with a factory preset pressure regulator. Natural gas pressure regulators are preset for 5.0" W.C. (1.2 kPa). Propane gas pressure regulators are preset for 10.0" W.C. (2.46 kPa). No further adjustment should be required. Check gas pressures with a manometer at time of installation to verify that they agree with the pressures specified.

**⚠ 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.

Model	Volts	Hertz	Phase	Amps (Max Used)	BTU/Hr	*Fuse (Amps)
CG10FI	120	60	1	5.0	60,000	1

\* Fuse rating is based on electrical standard 125% increase over actual amps used.

## FLUE GAS EXHAUST

DO NOT obstruct the flow of flue gases from the flue located on the top of the combi oven. It is recommended that the flue gases be vented to the outside of the building through a ventilation system installed by qualified personnel. Information on the construction and installation of ventilating hoods may be obtained from Vapor Removal from Cooking Equipment, NFPA-96 (latest edition) available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.



## ELECTRICAL CONNECTION

**⚠ 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.

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

**⚠ WARNING** Disconnect electrical power supply and follow lockout / tagout procedures.

The wiring diagram is located on the inside surface of the right side panel as you face the oven. Use copper wire rated for at least 194°F (90°C) for the connection.

**NOTICE** Do not drill a hole in the back panel for electrical connection. Use the strain relief locations on the lower right side or the knockout on the back panel (Fig. 2). This will allow proper access to components for service.

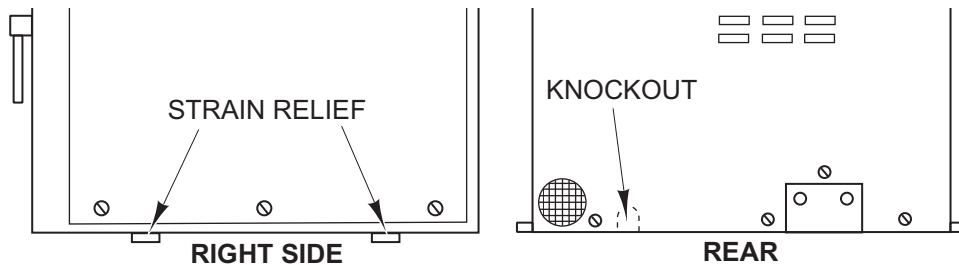


Fig. 2

**⚠ WARNING** Do not connect the gas model to the electrical supply until after gas connections have been made.

Model	Volts	Hertz	Phase	Amps (Max Used)	Watts	*Fuse (Amps)
CE6HD	208 230-240 480	60	3	22.2 20.1-21.9 9.6	8000 8000-8700 8000	30 30 15
CE10HD	208 230-240 480	60	3	44.4 40.2-43.7 19	16000 16000-17400 16000	60 60 25
CE10FD	208 230-240 480	60	3	59.4 53.6-58.4 26	21400 21400-23300 21400	80 80 35
CE20HD	208 230-240 480	60	3	88.8 80.3-87.5 39	32000 32000-34800 32000	125 110 50
CE20FD	208 230-240 480	60	3	103.8 93.8-102.1 45	37400 37400-40700 37400	150 150 60

\* Fuse rating is based on electrical standard 125% increase over actual amps used.

**NOTE:** Single-phase blower motors are used on these ovens so there is no need to check direction of motor rotation. The fan will rotate in the proper direction.

## VENT HOOD

Some local codes may require the Combi oven to be located under an exhaust hood. Information on the construction and installation of ventilating hoods may be obtained from Vapor Removal from Cooking Equipment, NFPA Standard No. 96 (latest edition).

## 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 oven. Operate the oven at 482°F for 45 minutes in Convection Mode.

# OPERATION

**⚠ WARNING** The oven and its parts are hot. Use care when operating, cleaning or servicing the oven. The cooking compartment contains live steam. Stay clear when opening door.

## DOOR SWITCH

The oven is equipped with a feature that shuts off power to the oven cavity when the door is opened. The oven will resume cooking once the door is closed.

## DOOR OPENING AND CLOSING

To open the door (Fig. 3), turn the handle to the horizontal position. Allow a few seconds for steam to escape before pulling the door open.

To close the door (Fig. 3), position handle in the horizontal position and push the door closed. Rotate handle to the vertical position to secure door.

## LOADING THE OVEN

### Loading 6 or 10 Level Ovens

Place the product to be cooked in suitable containers. Open the door and slide into the rack guides or place the containers securely on racks in the oven. Close the door.

### Loading 6 or 10 Level Ovens With Landing Table And Removable Insert

Place removable insert on the landing table. Place the product to be cooked in suitable containers and slide into the rack guides or place the containers securely on racks on the removable insert (Fig. 4). Place the handle into the removable insert. Open the door. Position the landing table directly in front of the open oven cavity. While holding the landing table in position with one hand, with the other hand, release the insert and gently roll the removable insert into the oven cavity. Make sure that the landing table does not separate from the oven during the transfer. Remove the handle from the insert and close the door.

### Loading 20 Level Ovens

Place the product to be cooked in suitable containers and slide into the rack guides or place the containers securely on racks on the trolley (Fig. 5). Place the handle into the trolley. Open the door. Line up the trolley with the trolley slots on the oven and push the trolley into the oven cavity. Remove the handle from the trolley and close the door.

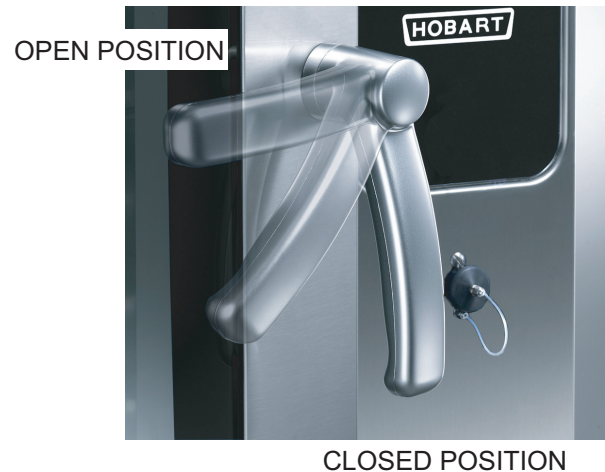


Fig. 3

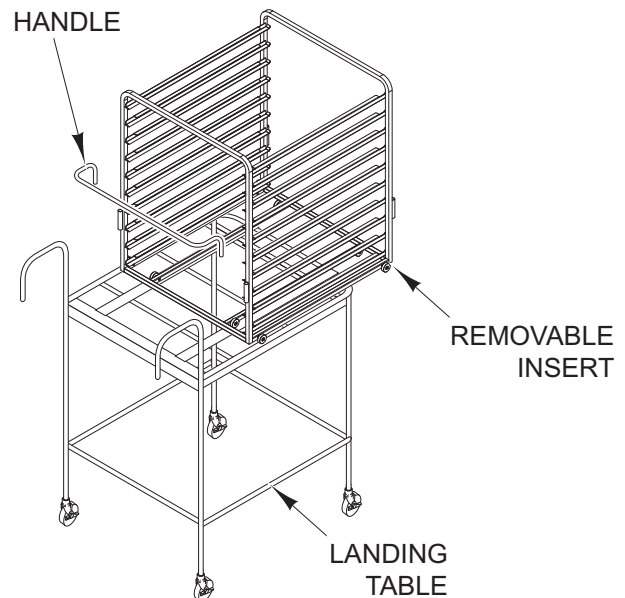


Fig. 4

## UNLOADING THE OVEN

### Unloading 6 or 10 Level Ovens

Open door partially to allow hot air and steam to escape. Remove the product from the rack guides or racks in the oven. Close the door.

### Unloading 6 or 10 Level Ovens With Landing Table And Removable Insert

Open door partially to allow hot air and steam to escape. Position the landing table (Fig. 4) directly in front of the oven cavity. Insert the handle into the removable insert. Using protective gear, carefully roll the removable insert onto the landing table. Make sure that the landing table does not separate from the oven during transfer. Close the door.

### Unloading 20 Level Ovens

Open door partially to allow hot air and steam to escape. Insert the handle into the trolley. Using protective gear, pull the trolley (Fig. 5) out of the oven. Close the door.

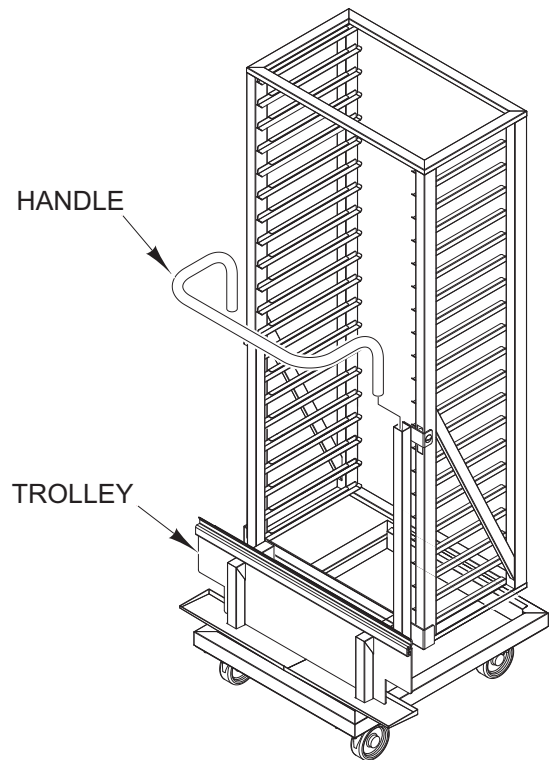


Fig. 5

## COOKING MODES

There are three modes of cooking available with the Combi Oven.

### Convection Mode

Convection Baking involves baking, browning, roasting, etc. without adding steam or moisture to the process. Hot air is circulated to maintain even temperatures throughout the oven.

### Steam Mode

Steam cooking is used for stewing, poaching, and gentle cooking of products cooking in water. Steam flows without pressure into the oven. The fan circulates the steam to all parts of the oven.

### Combi Mode

Combi baking/steaming is used for baking, roasting, or braising when steam needs to be added to the oven during a convection baking operation.

## CONTROL PANEL

The control panel (Fig. 6) has a screen that displays to the user the functions in progress. All features are displayed on the screen and adjusted by using the buttons on the control panel.

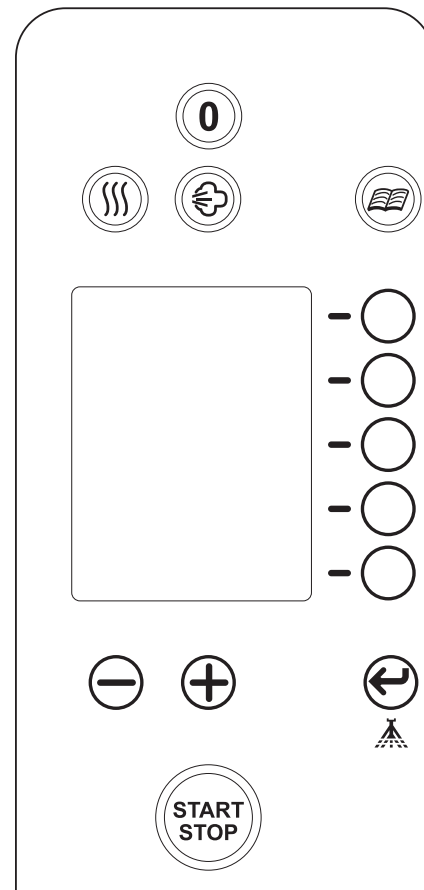

























Fig. 6

## CONTROL PANEL BUTTONS

	ON/OFF Button	Press this button to turn the oven on or off.
	Convection Mode	Press this button to set the oven to Convection Mode. The button will illuminate to indicate it has been selected.
	Steam Mode	Press this button to set the oven to Steam Mode. The button will illuminate to indicate it has been selected.
	Combi Mode	Press both buttons to set the oven to Combi Mode. The buttons will illuminate to indicate they have been selected.
	Program Button	Press this button to use an existing program or to write a new program. (Press and hold 3 seconds to name program.) Also used to access 10 position timers.
	Enter Button (also used as Humidity Injector Button)	Press this button to confirm a program selection. When used during Convection Mode, humidity will be injected into the oven cavity. (Press and hold 3 seconds to save recipe.)
	Minus Button	Press this button to decrease setting feature such as temperature or time.
	Plus Button	Press this button to increase setting feature such as temperature or time.
	Selection Line Button (total of five)	Press these buttons to select the feature displayed in the control panel next to each Selection Line. These features will change depending on the screen being displayed.
	START/STOP Button	Press this button to start or stop a program or cooking cycle. (Press and hold 3 seconds for preheat.)

DISPLAY SCREEN ICONS		
<b>44 EXAMPLE</b>	Program Number (Name)	This indicates the current program number, if used.
<b>PH 1/10</b>	Cooking Phase	This indicates the cooking phase in progress. The oven can be set from 1 to 10 phases.
	Delayed Preheat Timer	This icon indicates that the oven has a delayed timer set for preheat. (Only displayed if no timer has been selected.)
	Temperature (Delta T)	This icon is selected when adjustment of the temperature is needed.
	Delta T	This icon appears when Delta T is selected. Core probe readings control rising set temperatures on a set scale.
	Timer (Core Probe)	This icon is selected when adjustment of the timer is needed.
	Core Probe	This icon appears when the core probe is being used to monitor the internal temperature of a product.
	Vent Open/Closed	This icon indicates that the oven cavity vent is open or closed. Press the Selection Line Button next to the icon to toggle. (Convection Mode only.)
	Humidity	This icon indicates that humidity is present in the oven.
	Humidity Arrow	An arrow may appear next to the humidity icon to indicate whether more or less humidity is needed in the oven.
	Fan Speed	This icon indicates the fan speed in the oven. The value range is 1 to 4.
	Manual Operation/ No Timer	This icon is used to show that a function is in continuous mode. It is commonly used when the timer is not set or when the 10 position timer function is used.
	Cool Down	This icon appears when the oven is set to cool down from high temperatures.
	Service/Hours Remaining	These icons remind the operator to perform a service on the machine such as delime of the cavity or routine service check. The machine will continue to operate regardless of the number displayed.
	Barcode	This icon appears when the oven has a program assigned to a specific barcode.

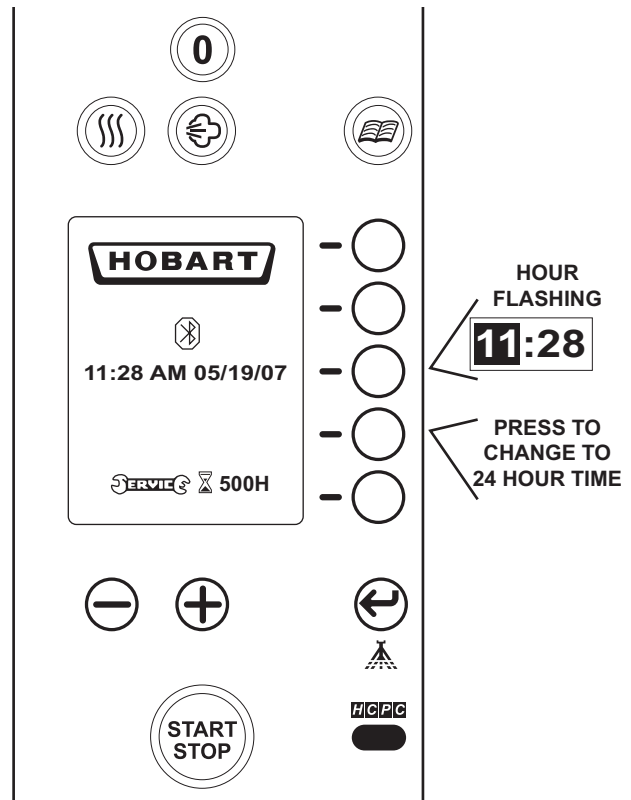
## INITIAL START-UP

When the machine is connected to electrical power, the display screen will show the current time and date as set in the oven and the countdown for service/delimiting. The internal clock should be set at this time.

## SETTING THE INTERNAL CLOCK

1. Press and hold the Selection Line Button next to the time and date. The hour portion of the time will flash.
2. Use the Plus/Minus Buttons to adjust the hour.
3. Press the Enter Button. The minute portion of the time will flash.
4. Repeat steps 2 and 3 until the time and date are set.

**NOTE:** Press the Selection Line Button below the time and date to toggle the time between 12 hour and 24 hour time.

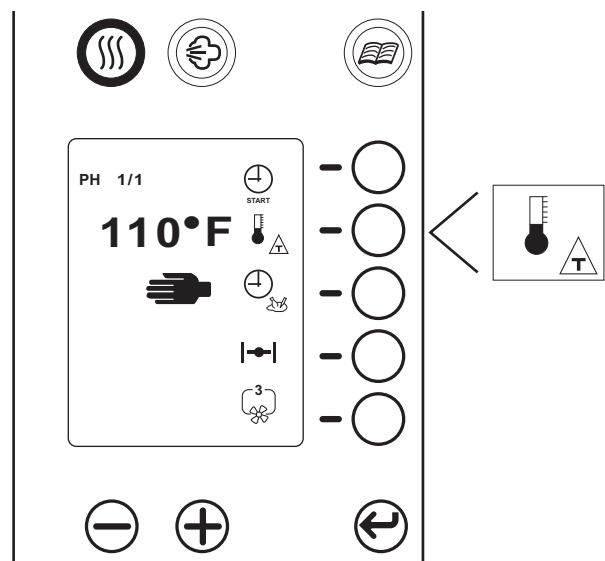


## SETTING THE TEMPERATURE

1. Select the cooking mode by pressing the Convection, Steam or Convection and Steam (Combi) Button(s).
2. Press the Selection Line Button next to the Temperature icon. The icon will be highlighted to indicate that it has been selected and the set temperature will be shown.
3. Use the Plus/Minus Buttons to adjust the temperature. After a few seconds the Temperature icon will change contrast and the set oven cavity temperature will be displayed.

**NOTE:** Press and hold the Selection Line Button next to the Temperature icon to view the current oven temperature.

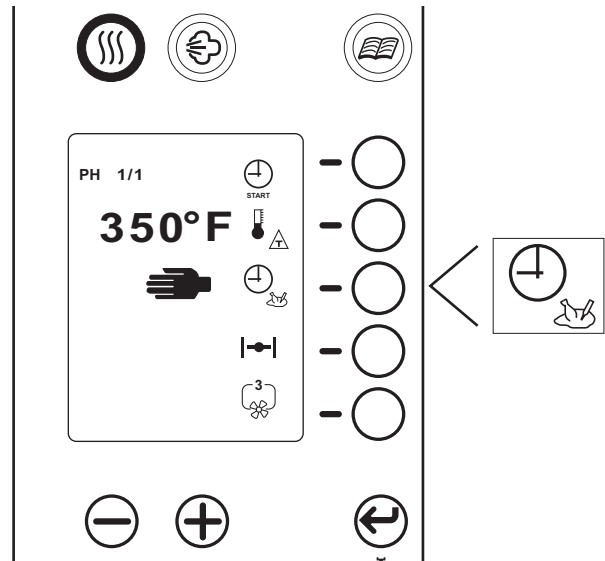
**NOTE:** The degree symbol next to the temperature will be solid when the oven is heating. The symbol will be open when the oven temperature equals the set temperature.



## SETTING THE TIMER

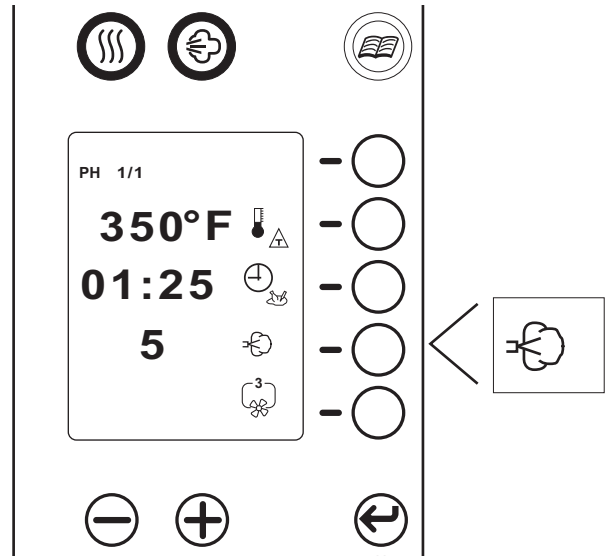
1. Select the cooking mode by pressing the Convection, Steam or Convection and Steam (Combi) Button(s).
2. Press the Selection Line Button next to the Timer icon. The icon will be highlighted to indicate that it has been selected and the set timer will be shown.
3. Use the Plus/Minus Buttons to adjust the timer. After a few seconds the Timer icon will change contrast and the set timer will be displayed.

**NOTE:** The Hand icon indicates the timer is in continuous mode and no timer is used or that the 10 position timer function is in use. (See Using the 10 Position Timer.)



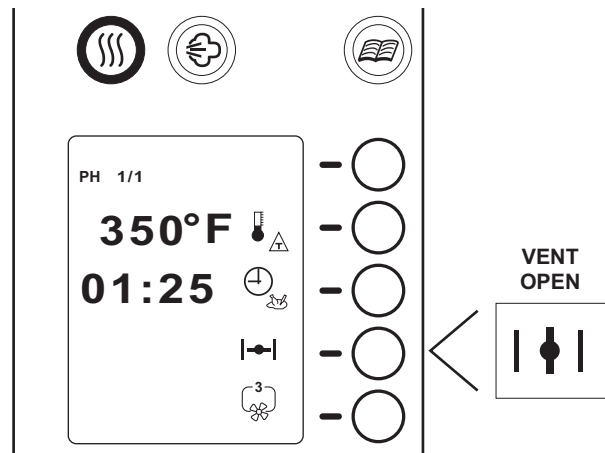
## SETTING THE HUMIDITY

1. Select Combi Mode by pressing the Convection Button and Steam Button.
2. Press the Selection Line Button next to the Humidity icon. The icon will be highlighted to indicate that it has been selected and the set humidity will be shown.
3. Use the Plus/Minus Buttons to adjust the humidity. After a few seconds the Humidity icon will change contrast and the set humidity will be displayed.



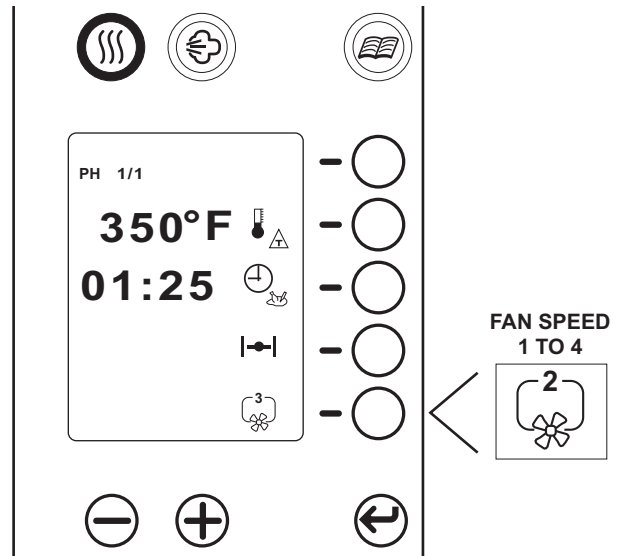
## SETTING THE VENT POSITION

1. Select Convection Mode by pressing the Convection Button.
2. Press the Selection Line Button next to the Vent Position icon. The icon will toggle between the open and closed position.



## SETTING THE FAN SPEED

1. Select the cooking mode by pressing the Convection, Steam or Convection and Steam (Combi) Button(s).
2. Press the Selection Line Button next to the Fan Speed icon. The icon will be highlighted to indicate that it has been selected.
3. Use the Plus/Minus Buttons to adjust the fan speed. After a few seconds the Fan Speed icon will change contrast.

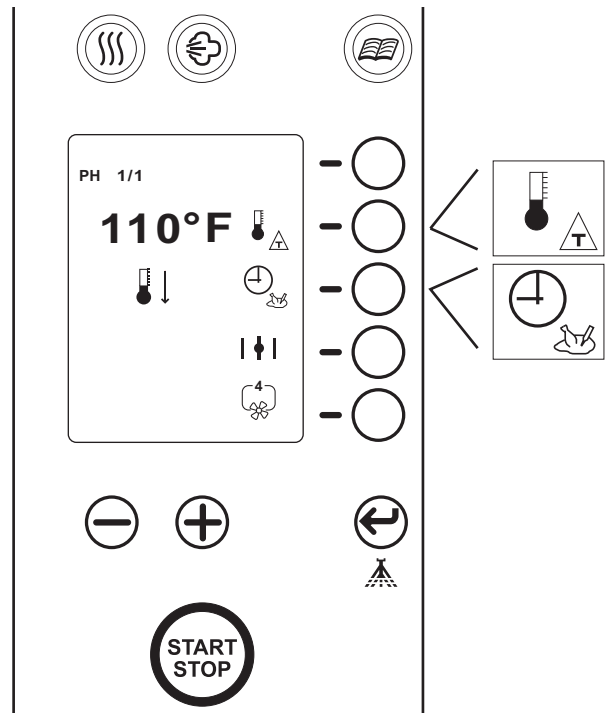


## FAST COOL DOWN

This feature is used to cool down the oven quickly. It may be necessary to do this when changing from a high temperature operation to one that requires lower temperatures.

1. Press the Selection Line Button next to the Timer icon. The icon will be highlighted to indicate that it has been selected.
2. Press and hold the Minus Button until the Cool Down icon appears.
3. Press the Selection Line Button next to the Temperature icon. The icon will highlight to indicate that it has been selected and the set cool down temperature will be shown.
4. Use the Plus/Minus Buttons to adjust the oven to the desired cool down temperature.
5. Press the START/STOP Button.

**NOTE:** Choosing another mode will stop above process.





## SELECTING THE COOKING MODE

After selecting one of the cooking modes, the default temperature for that cooking mode is displayed. The oven cavity lights will be on (only if the door is closed).

## PREHEATING THE OVEN

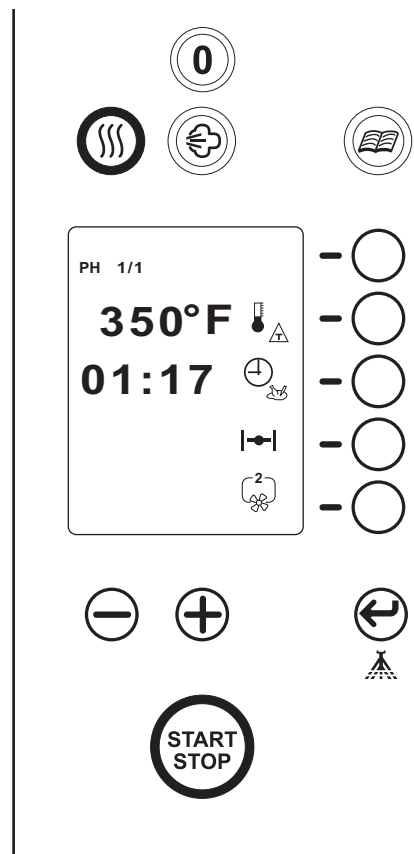
1. Set the cooking mode or use a program.
2. Press and hold the START/STOP Button for 3 seconds. The buzzer will sound and the oven will automatically preheat to the correct cooking temperature. The timer, if set, will not count down. When the set temperature is reached the buzzer will sound again to indicate the oven is ready to be loaded.
3. Load the oven and press the START/STOP Button.

## USING CONVECTION MODE

1. If the screen is blank (sleep mode), turn on the oven by pressing the ON/OFF Button.
2. Press the Convection Button to select convection mode. The button will illuminate to indicate it has been selected.
3. Set the oven temperature.
4. Set the timer.
5. Set the vent position.
6. Set the fan speed.

**NOTE:** Preheating the oven is recommended.

7. Load the oven and press the START/STOP Button.
8. If called for in the recipe, press the Humidity Injector Button to add a short blast of steam to the cavity.
9. When the timer has counted down, the buzzer will sound for 5 seconds and the oven cavity lights will flash.
10. Press the START/STOP Button to silence the buzzer and end the cooking session.
11. Unload the oven.

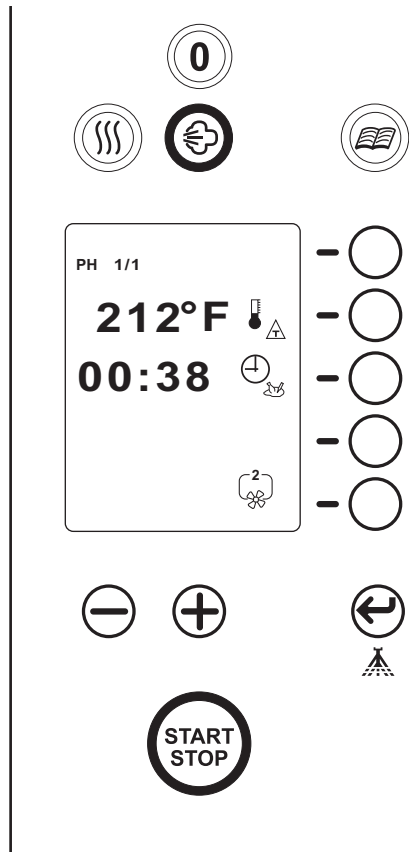


## USING STEAM MODE

1. If the screen is blank (sleep mode), turn on the oven by pressing the ON/OFF Button.
2. Press the Steam Button to select steam mode. The button will illuminate to indicate it has been selected.
3. Set the oven temperature.
4. Set the timer.
5. Set the fan speed.

**NOTE:** Preheating the oven is recommended.

6. Load the oven and press the START/STOP Button.
7. When the timer has counted down, the buzzer will sound for 5 seconds and the oven cavity lights will flash.
8. Press the START/STOP Button to silence the timer and end the cooking session.
9. Unload the oven.

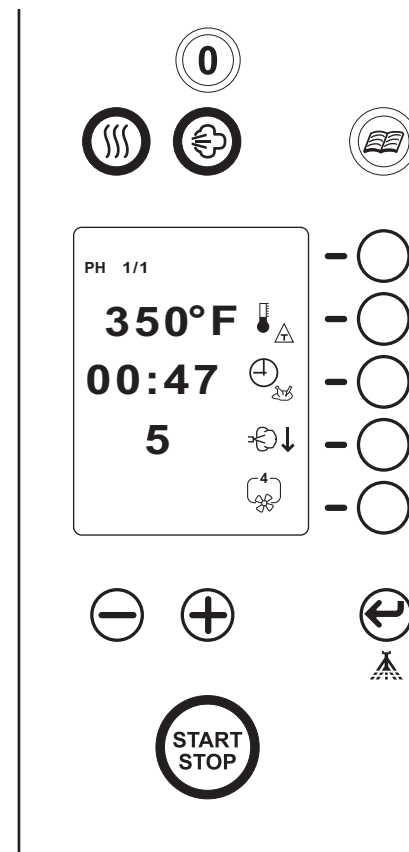


## USING COMBI MODE

1. If the screen is blank (sleep mode), turn on the oven by pressing the ON/OFF Button.
2. Press the Convection and Steam Button to select combi mode. Both buttons will illuminate to indicate they have been selected.
3. Set the oven temperature.
4. Set the timer.
5. Set the humidity level.
6. Set the fan speed.

**NOTE:** Preheating the oven is recommended.

7. Load the oven and press the START/STOP Button.
8. When the timer has counted down, the buzzer will sound for 5 seconds and the oven cavity lights will flash.
9. Press the START/STOP Button to silence the timer and end the cooking session.
10. Unload the oven.



## TEMPERATURE PROBE

The probe temperature defines the final temperature of the product for any cooking phase. The oven cooking cycle stops when the product temperature reaches the probe temperature setting. Total cooking time is not known or entered when using the probe.

There are two ways to control the oven temperature when using the probe:

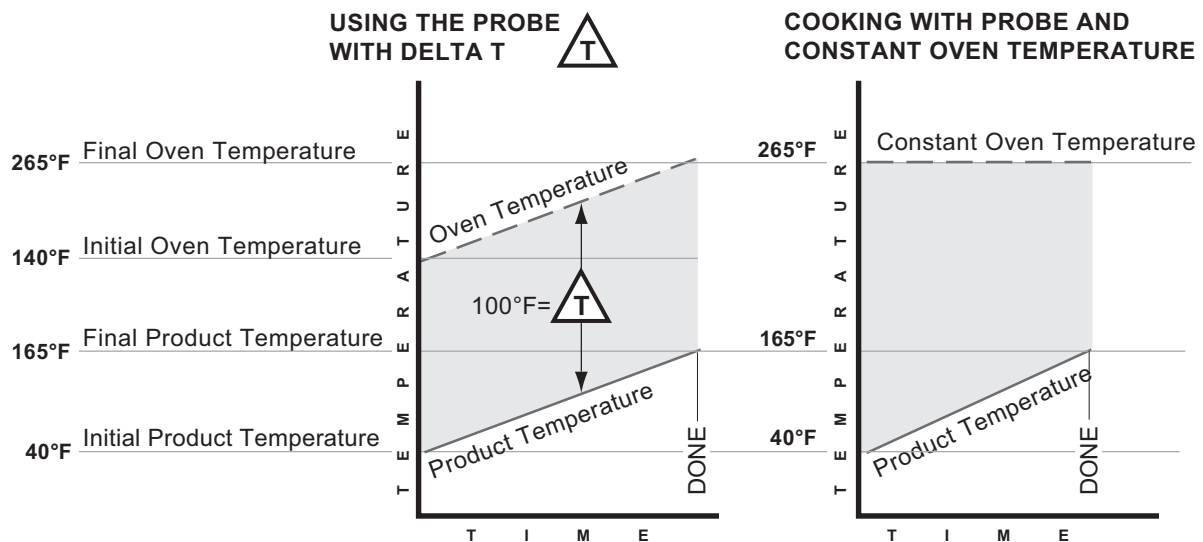


- Setting the oven temperature at a constant value. The oven maintains the set temperature throughout the cook cycle and ends when the product reaches the probe temperature setting.



- Setting the probe using Delta T. The oven temperature gradually increases as the internal temperature of the product increases, always maintaining the oven at a set number of degrees warmer than the product. Delta T can provide a slow cooking process that allows the product to reach the required final internal temperature with maximum product yield.

The graph below shows the two ways of controlling the oven temperature when using the core probe. The "100°F" value for Delta T is used to show how the oven works and is not typical of any particular cooking program.



## USING THE PRODUCT TEMPERATURE PROBE

### Setting the Cooking Core Probe Temperature

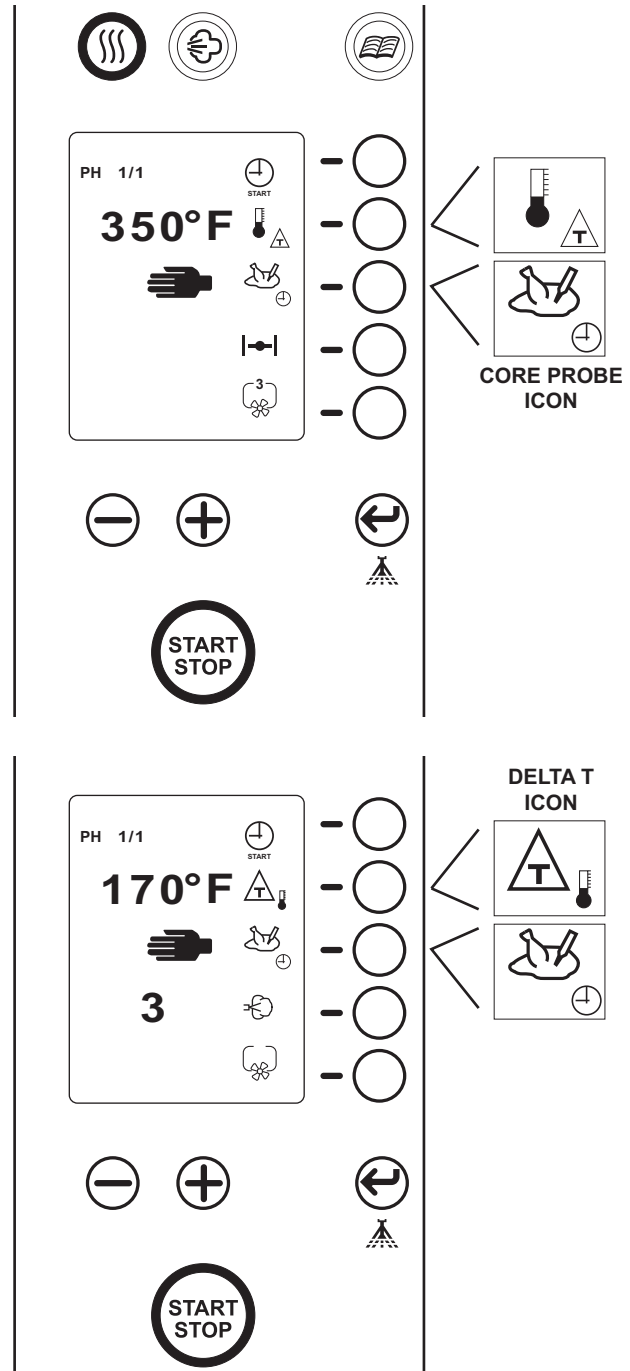
1. Insert the pointed end of the core probe into the product so that the tip is approximately in the middle of the product to be cooked.
2. Load the product into the oven.
3. Run the probe cable out the side of the door opening and close the door.
4. Connect the temperature probe (Fig. 7) to the connector below the control panel.
5. Press and hold the Selection Line Button next to the Timer icon. The icon will change to the Core Probe icon and display the set core probe temperature.
6. Press the Selection Line Button next to the Core Probe icon. The icon will be highlighted to indicate that it has been selected.
7. Use the Plus/Minus Buttons to adjust the core probe set temperature. After a few seconds the Core Probe icon will change contrast and the current temperature measured by the probe will be displayed.
8. Set all other cooking mode settings.
9. Press the START/STOP Button.

### Setting Delta T

1. Select the cooking mode by pressing the Convection Button and/or Steam Button.
2. Press and hold the Selection Line Button next to the Temperature icon. The icon will change to the Delta T icon and display the set temperature difference between the oven cavity and the core probe.
3. Press the Selection Line Button next to the Delta T icon. The icon will be highlighted to indicate that it has been selected.
4. Use the Plus/Minus Buttons to adjust the Delta T set point temperature. After a few seconds the Delta T icon will change contrast and the current oven cavity temperature will be displayed.
5. Set the core probe temperature by following the instruction above.
6. Set all other cooking mode settings.
7. Press the START/STOP Button.



Fig. 7



## USING THE 10 POSITION TIMER

**NOTE:** The 10 position timers are only available in standard cooking modes. This feature can not be used with a cooking program, delta T, core probe or standard timer.

1. Select the cooking mode by pressing the Convection, Steam or Convection and Steam (Combi) Button(s).
2. Set the oven temperature, fan speed, humidity level and/or vent position.
3. Press the START/STOP Button.
4. Press the Program Button to enter the 10 position timer mode. (The Program Button will flash and the screen will change to show 10 position timers.)
5. Press the Selection Line Button next to the timer position to be set. The position timer will be highlighted to indicate that it has been selected.

**NOTE:** Each Selection Line Button controls two positions. Press the button to toggle between each timer position.

6. Use the Plus/Minus Buttons to adjust the timer position setting. After a few seconds the timers will begin countdown.

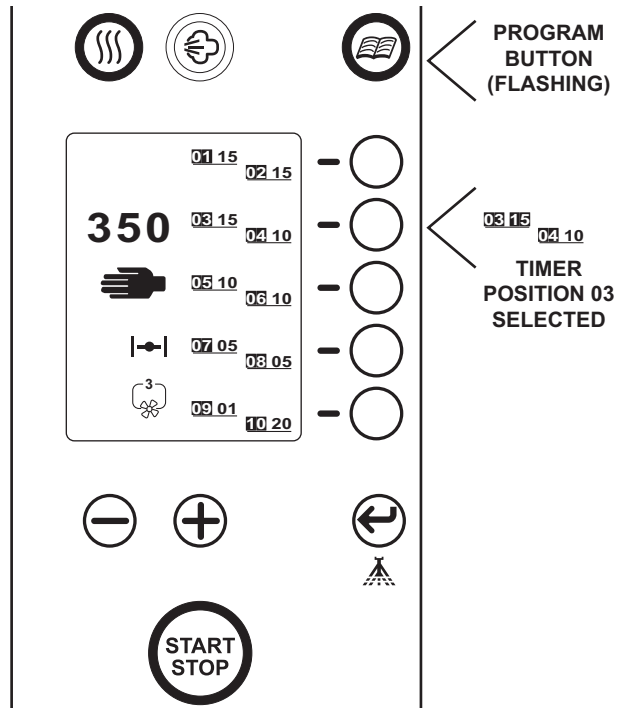
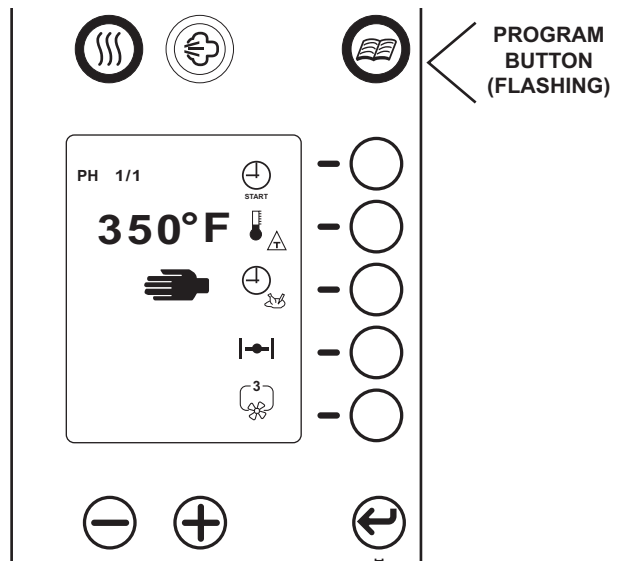
**NOTE:** Each position timer can be set from 0 to 59 minutes.

7. When a timer position reaches 0, the buzzer will sound for five seconds and the timer position will flash.
8. Open door and remove the product from that position.

**NOTE:** The other positions continue to countdown while the door is open. Remove product quickly and close door.

**NOTE:** If the START/STOP Button is pressed while position timers are active, each timer will pause and not continue countdown until the START/STOP Button is pressed again. The START/STOP Button will illuminate to indicate timer positions are active.

**NOTE:** Cooking settings can be modified while position timers are active. Press the Program Button and adjust the desired cooking settings. The timers will continue to countdown while adjusting the cooking settings.



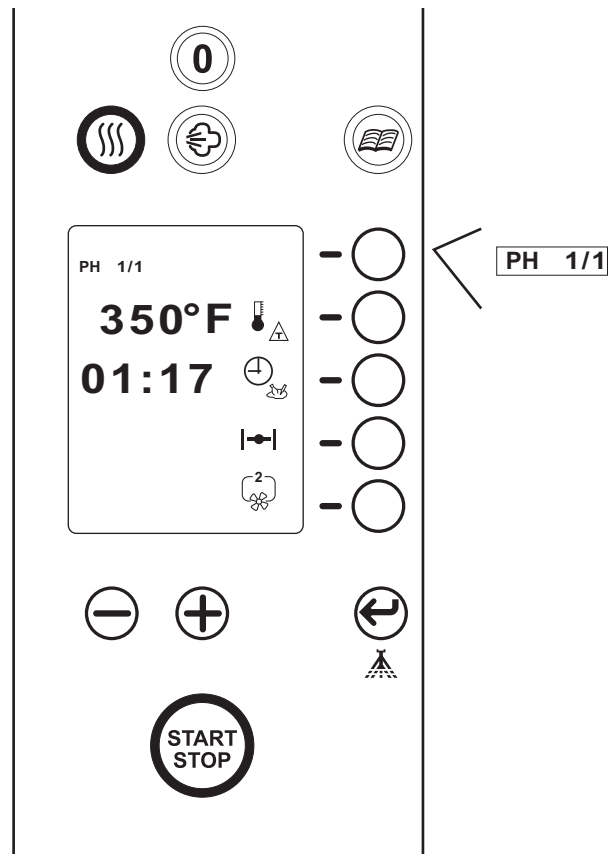
## WRITING A COOKING PHASE

It is possible to link up to 10 cooking phases without using the program function.

1. Select the cooking mode by pressing the Convection Button and/or Steam Button.
2. Set cooking temperature or Delta T temperature.
3. Set cooking time or use the core probe. The Cooking Phase will indicate 1 of 1.
4. Set the vent position or the humidity level, depending on the cooking mode being used.
5. Set the fan speed.
6. Press the top Selection Line Button to add a phase. The Cooking Phase will indicate that is ready for the next phase 2 of 2.
7. Repeat steps 1 through 6 for each phase.

**NOTE:** Press the top Selection Line Button to review the cooking phases.

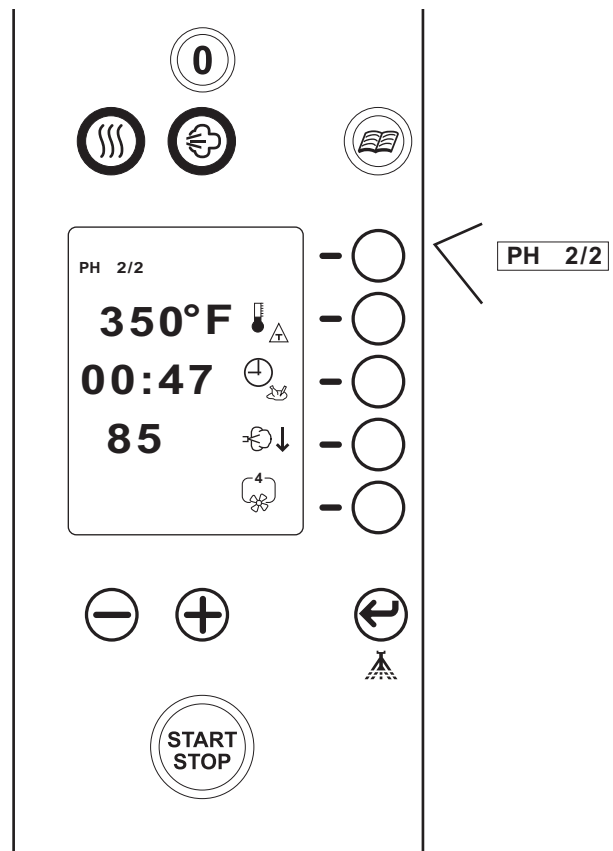
8. Load product, close door and press the START/STOP Button to begin cooking phases.



## ERASING A COOKING PHASE

1. Press the top Selection Line Button until the phase to be erased is displayed.
2. Press and hold the top Selection Line Button. The buzzer will sound and the phase will be erased.

**NOTE:** Once a phase is erased the remaining phases automatically renumber.



## WRITING A COOKING PROGRAM

It is possible to write and store up to 100 cooking programs with a maximum of 10 phases each.

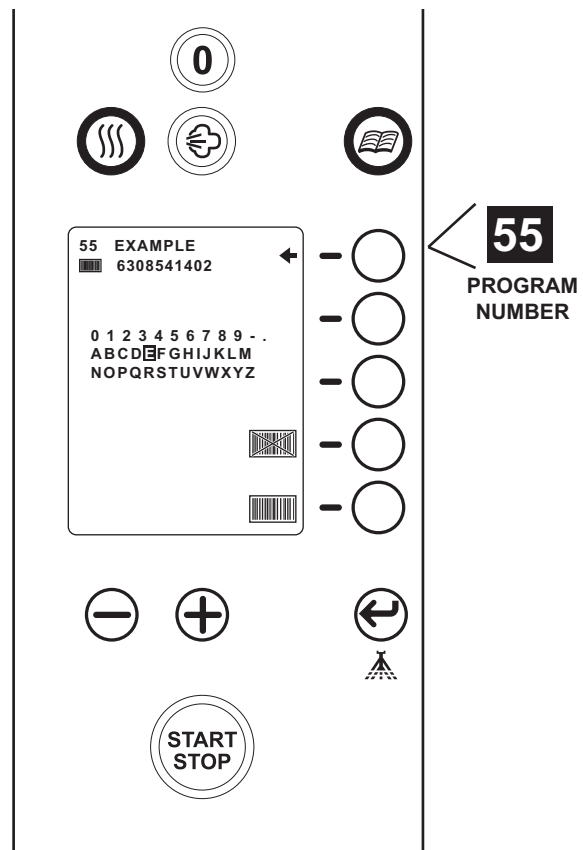
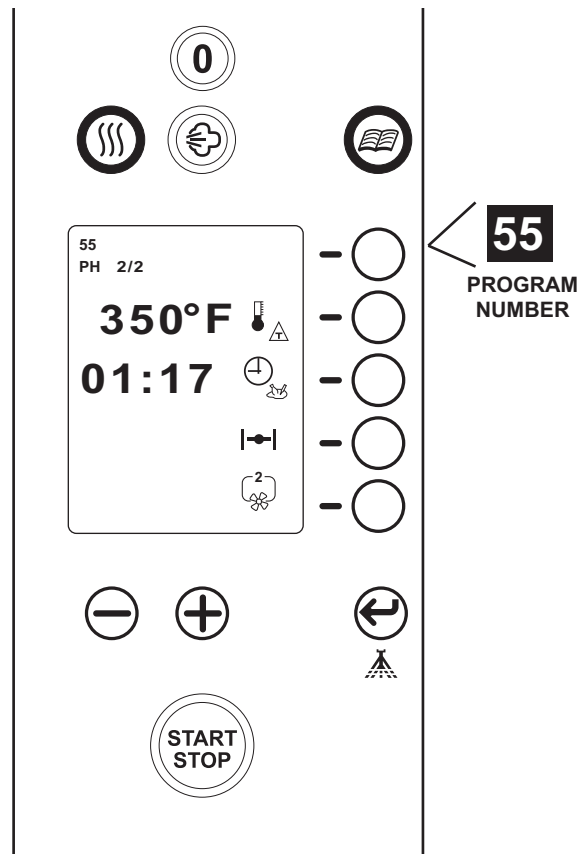
**NOTE:** The oven is also equipped to use an optional HCPC-HACCP recording system to facilitate fast, easy and accurate data management via wireless communication to a PC. Contact your local Hobart representative for more information.

1. Press the Program Button to select program mode. The button will illuminate to indicate it has been selected and will display recipe "00".
2. Use the Plus/Minus Buttons to select the program number that will identify this program.
3. Input all cooking phases. The program number will blink to indicate that it has not been stored.
4. Press and hold the Program Button. The display will change and show the available characters that can be used to name the program.
5. Use the Plus/Minus Buttons to place the flashing cursor over the character to be used.
6. Press the Enter Button to add the character to the name. The characters will be added to the right of the program number on the display screen.
7. Repeat steps 5 and 6 to add more characters to the program name.

**NOTE:** Use the top Selection Line Button next to the arrow icon to erase a character or to backspace.

8. After the program has been named, press and hold the Enter Button to store the name with the program number. The buzzer will sound and the program number will stop blinking to indicate that the program has been stored.

**NOTE:** A program can also be made after a cooking cycle has been run. Press the Program Button, use the Plus/Minus Buttons to navigate to a number to store the program and press the Enter Button. Use the steps above to name the program.



## MODIFYING A COOKING PROGRAM

1. Press the Program Button to select program mode. The button will illuminate to indicate it has been selected.
2. Use the Plus/Minus Buttons to select the program to be modified.
3. Modify the desired cooking phases. The program number will blink to indicate that it has not been stored.

**NOTE:** A modified program can be run before storing. After the program has run, it can then be stored. It is not possible to insert a phase into a program.

4. Press and hold the Enter Button. The buzzer will sound and the program number will stop blinking to indicate that the program has been stored.

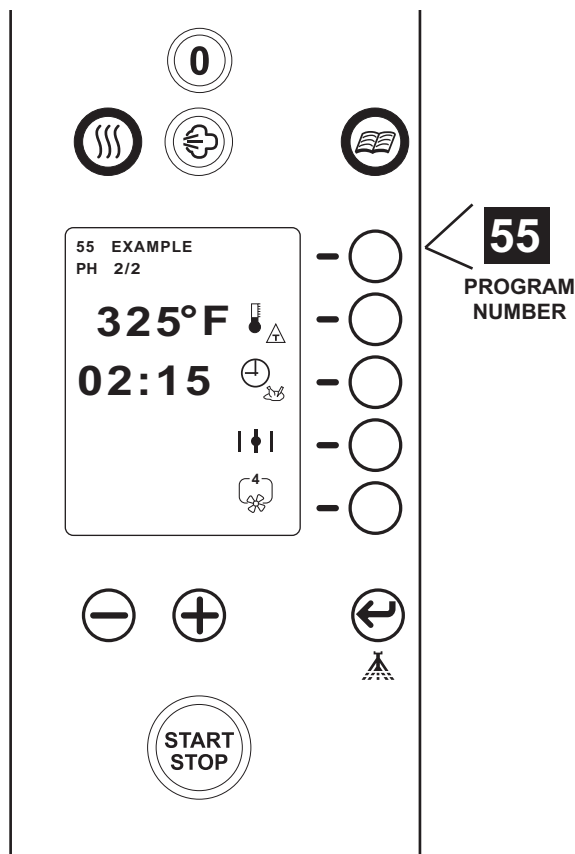
## REVIEWING A COOKING PROGRAM

1. Press the Program Button to select program mode. The button will illuminate to indicate it has been selected.
2. Use the Plus/Minus Buttons to select the program number to be reviewed. The screen will display the first phase of the program.
3. Press the top Selection Line Button to scroll through the phases of the program.
4. Press the Selection Line Button next to the temperature icon to view the set temperature on each phase.
5. Press the START/STOP Button to view total cooking time for the selected program.

**NOTE:** The total cooking time for all phases will be displayed unless one of the phases uses the core probe or continuous timer mode.

## ERASING A COOKING PROGRAM

1. Press the Program Button to select program mode. The button will illuminate to indicate it has been selected.
2. Use the Plus/Minus Buttons to select the program to be erased.
3. Press and hold the Enter Button. The buzzer will sound and the program will be erased.





## USING A COOKING PROGRAM

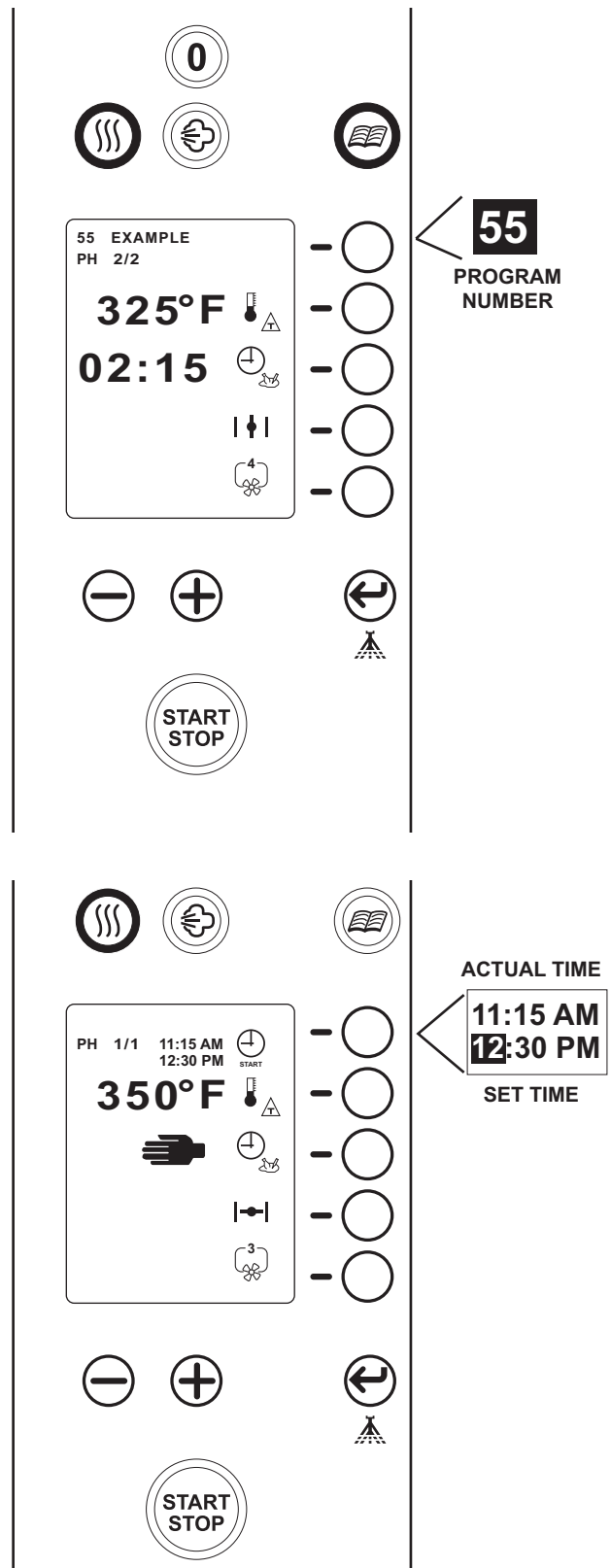
1. Press the Program Button to select program mode. The button will illuminate to indicate it has been selected.
2. Use the Plus/Minus Buttons to select the program number to be used. The screen will display the first phase of the program.
3. Press the START/STOP Button to start the program. The total time remaining will be displayed and the buzzer will sound for one second at the completion of each phase.

**NOTE:** The total cooking time for all phases will be displayed unless one of the phases uses the core probe or continuous timer mode.

## SETTING A PREHEAT DELAYED START

It is possible to program the oven to start preheating at any set time. This feature can be used to conserve energy and maximize efficiency.

1. Select a cooking mode and set the preheat temperature.
2. Press the Selection Line Button next to the Delayed Timer icon. The actual time will be displayed and the hour portion of the preheat time will be flashing.
3. Use the Plus/Minus Buttons to adjust the hour.
4. Press the Enter Button. The minute portion of the time will flash.
5. Use the Plus/Minus Buttons to adjust the minute.
6. Press the START/STOP Button.



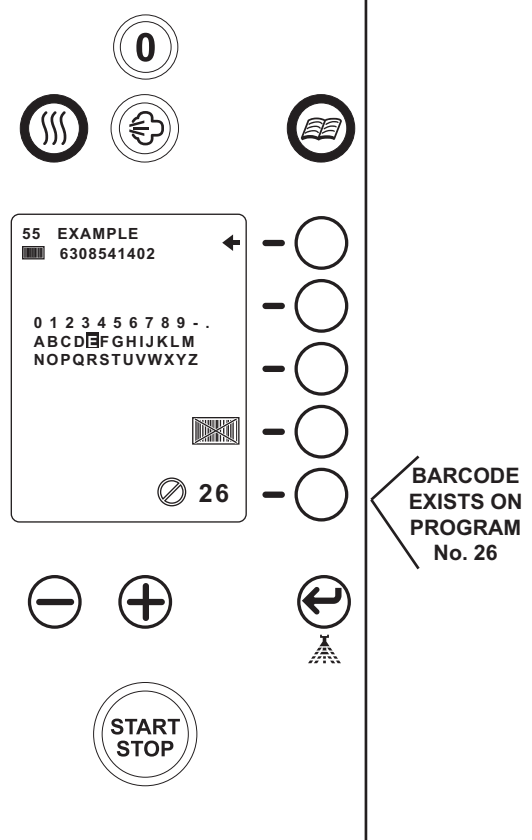
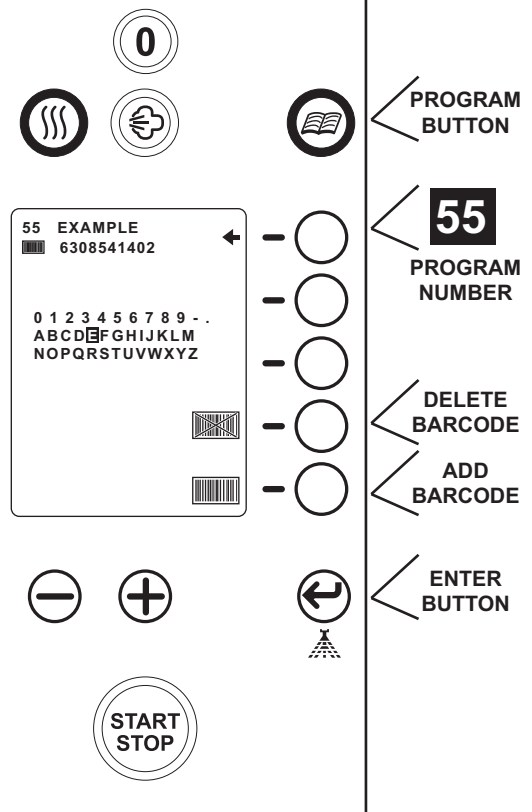
## ADD A BARCODE TO A PROGRAM (IF OPTIONAL BARCODE SCANNER WAS ORDERED)

1. Press the Program Button to select program mode.
2. Use the Plus/Minus Buttons to select the program number to add a barcode.
3. Press and hold the Program Button. The display will change and show the available characters that can be used to name the program.
4. Press the Selection Line Button next to Add Barcode icon. The icon will be highlighted to indicate that it has been selected.
5. Scan the barcode of the product within 10 seconds (Fig. 8). The scanned barcode will now be displayed in a number code beneath the program number and name.
6. Press and hold the Enter Button to store the barcode with the program number. The buzzer will sound and the program number will stop blinking to indicate that the program has been stored.

**NOTE:** A barcode can only be associated with one program. When adding a barcode, if it is already associated with a recipe, the icon will change to a stop icon and will display the program number that barcode is associated to.

## REMOVE A BARCODE FROM A PROGRAM

1. Press the Program Button to select program mode.
2. Use the Plus/Minus Buttons to select the program number to remove a barcode.
3. Press and hold the Program Button. The display will change and show the available characters that can be used to name the program.
4. Press and hold the Selection Line Button next to Remove Barcode icon. The barcode number will erase to indicate that the barcode has been removed.
5. Press and hold the Enter Button to store the program without a barcode.



## USING THE SCANNER

**⚠ WARNING** The oven and its parts are hot. Use care when operating, cleaning or servicing the oven. The cooking compartment contains live steam. Stay clear when opening door.

1. Scan barcode of product (Fig. 8). The oven will activate the program associated and will start automatically in preheat mode.
2. Once the oven is preheated, load the oven and close the door. Once the door is shut, the oven will start the timer and begin.

**NOTE:** If the combi is in use (start button activated); scanning a barcode will not change operation.

**NOTE:** The optional barcode scanner comes standard with a PC software program. This program enables custom barcodes to be created and used in conjunction with the methods described above. Instructions for this method are in a separate document.

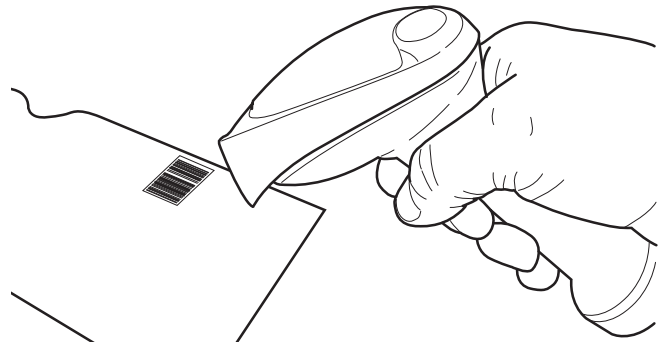


Fig. 8

## COMBI OVEN BLUETOOTH CAPABILITIES

The combi oven is equipped with a Bluetooth® device that is always active. Typical range for connectivity is approximately 10 feet.

The main use of this capability is transferring programs to and from the oven. To transfer files, a Bluetooth capable device is required such as a phone, PDA, or laptop computer.

### Pair with Bluetooth Enabled Device

1. Ensure Bluetooth is enabled on the device to be paired with the oven.
2. In the Bluetooth setup application, click OK.
3. Search for devices (Fig. 9).
4. Select the device to pair with (Fig. 10).
5. Enter numeric passkey for the device. The passkey is "0000". The device should now be paired with the oven (Fig. 11).

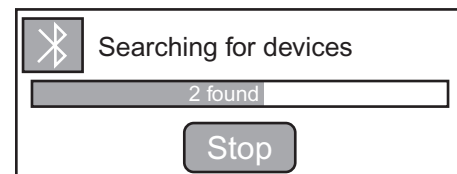


Fig. 9

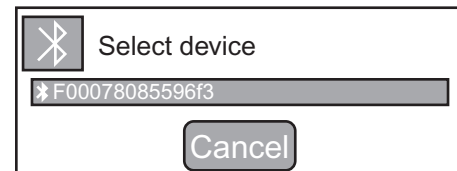


Fig. 10

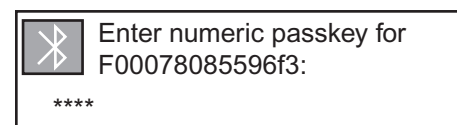


Fig. 11

## Sending recipes via Bluetooth

All files to be transferred to the oven must be on the device before pairing with the oven. Use the software provided with the scanner to create recipes. To get the files on the Bluetooth device, refer to the instructions provided with the Bluetooth device in use. Contact your local Hobart representative for more information.

1. Ensure Bluetooth is activated on device and already paired with combi.
2. In the media application, select pictures.
3. Navigate to the recipe file to be transferred.
4. Highlight the file (Fig. 12).
5. Press the Menu key.
6. Click Send Using Bluetooth (Fig. 13).
7. Click a Bluetooth enabled device.
8. Click Send (Fig. 14).
9. A progress bar will display and the oven will make an audible sound to confirm file transfer.

**NOTE:** If an "Unable to connect" error occurs, verify that Bluetooth is enabled on the device and that the device is paired with the oven.

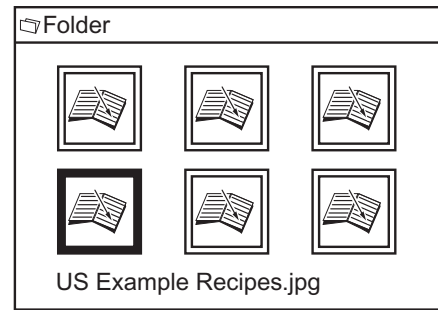


Fig. 12

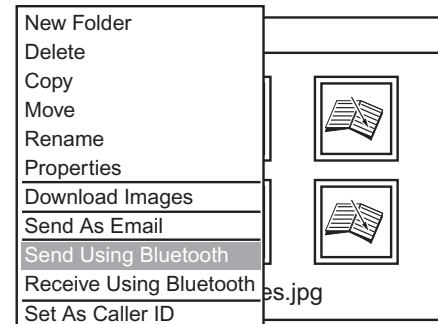


Fig. 13

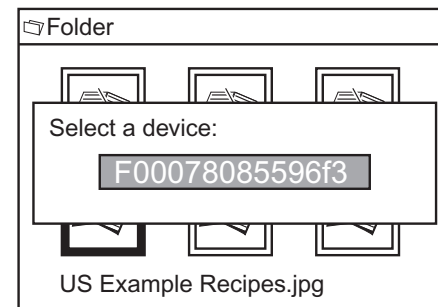


Fig. 14

# MAINTENANCE

**⚠ WARNING** Disconnect electrical power supply and follow lockout / tagout procedures.

**NOTICE** Fluorescent lamp in display panel contains a small amount of mercury. Please dispose of according to local, state or federal laws.

## SERVICE ADJUSTMENTS

The Combi Oven default settings can be customized to fit your own personal needs using service parameter setup. Contact your local Hobart Service office for any adjustments needed on this equipment.

## DOOR LOCKING AND GASKET INSPECTION

During oven operation, if air or steam blows out from the top, sides, or underneath to door, the door may need adjustment. Inspect the door locking movement and the door gasket.

### Door Locking Inspection

When closing door, the locking action should be smooth with no binding and not require excessive force to turn the door handle. The door must exert enough pressure on the gasket to prevent steam from exiting the oven cavity. If the door locking is extremely tight, contact your local Hobart Service office for any repairs or adjustments needed on this equipment.

### Door Gasket Inspection

Visually inspect the door gasket for cracks, splits, and missing sections.

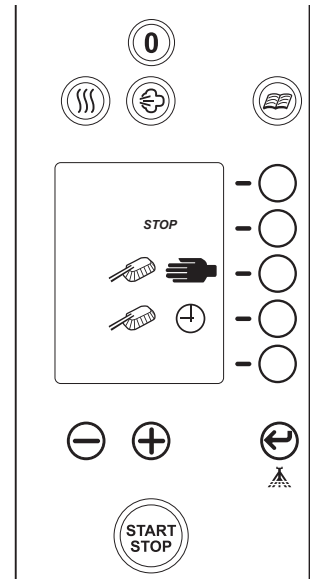
Using a dollar bill or a strip of plain paper approximately the same size, position the paper between door and gasket then close the door. The paper should fit tightly and not be easily removed when pulled. Check tightness near the corners and in the center locations at the left, top and right sides of door. If the door gasket is not sealing properly, contact your local Hobart Service office for any repairs or adjustments needed on this equipment.

## SERVICE AND PARTS INFORMATION

Contact your local Hobart Service office for any repairs or adjustments needed on this equipment.

## SHUTTING DOWN THE OVEN

1. Press the ON/OFF Button. The display screen will show the Cleaning and Shutdown icons.
2. Press the Selection Line Button next to the icon to be performed.



DISPLAY SCREEN CLEANING AND SHUTDOWN ICONS		
<i>STOP</i>	Stop Only	Select this feature if the oven will be shutdown and not cleaned.
<i>STOP</i>	Stop and Drain	Select this feature if the oven boiler (if equipped) should be drained before shutdown.
<i>STOP</i>	Stop and Do Not Drain	Select this feature if the oven boiler (if equipped) should not be drained before shutdown.
	Manual Clean Cycle	Select this feature if the oven cavity is to be cleaned manually.
	Auto Clean Cycle	Select this feature if the oven cavity is to be cleaned automatically.

# STAINLESS STEEL EQUIPMENT CARE AND CLEANING

(Supplied courtesy of NAFEM. For more information, visit their web site at [www.nafem.org](http://www.nafem.org))

**Contrary to popular belief, stainless steels ARE susceptible to rusting.**

Corrosion on metals is everywhere. It is recognized quickly on iron and steel as unsightly yellow/orange rust. Such metals are called "active" because they actively corrode in a natural environment when their atoms combine with oxygen to form rust.

Stainless steels are passive metals because they contain other metals, like chromium, nickel and manganese that stabilize the atoms. 400 series stainless steels are called ferritic, contain chromium, and are magnetic; 300 series stainless steels are called austenitic, contain chromium and nickel; and 200 series stainless, also austenitic, contains manganese, nitrogen and carbon. Austenitic types of stainless are not magnetic, and generally provide greater resistance to corrosion than ferritic types.

With 12-30 percent chromium, an invisible passive film covers the steel's surface acting as a shield against corrosion. As long as the film is intact and not broken or contaminated, the metal is passive and stain-less. If the passive film of stainless steel has been broken, equipment starts to corrode. At its end, it rusts.

## Enemies of Stainless Steel

There are three basic things which can break down stainless steel's passivity layer and allow corrosion to occur.

1. Mechanical abrasion
2. Deposits and water
3. Chlorides

**Mechanical abrasion** means those things that will scratch a steel surface. Steel pads, wire brushes and scrapers are prime examples.

**Water** comes out of the faucet in varying degrees of hardness. Depending on what part of the country you live in, you may have hard or soft water. Hard water may leave spots, and when heated leave deposits behind that if left to sit, will break down the passive layer and rust stainless steel. Other deposits from food preparation and service must be properly removed.

**Chlorides** are found nearly everywhere. They are in water, food and table salt. One of the worst chloride perpetrators can come from household and industrial cleaners.

## So what does all this mean? Don't Despair!

Here are a few steps that can help prevent stainless steel rust.

### 1. Use the proper tools.

When cleaning stainless steel products, use non-abrasive tools. Soft cloths and plastic scouring pads will not harm steel's passive layer. Stainless steel pads also can be used but the scrubbing motion must be in the direction of the manufacturers' polishing marks.

### 2. Clean with the polish lines.

Some stainless steel comes with visible polishing lines or "grain." When visible lines are present, always scrub in a motion parallel to the lines. When the grain cannot be seen, play it safe and use a soft cloth or plastic scouring pad.

### 3. Use alkaline, alkaline chlorinated or non-chloride containing cleaners.

While many traditional cleaners are loaded with chlorides, the industry is providing an ever-increasing choice of non-chloride cleaners. If you are not sure of chloride content in the cleaner used, contact your cleaner supplier. If your present cleaner contains chlorides, ask your supplier if they have an alternative. Avoid cleaners containing quaternary salts; it also can attack stainless steel and cause pitting and rusting.

### 4. Treat your water.

Though this is not always practical, softening hard water can do much to reduce deposits. There are certain filters that can be installed to remove distasteful and corrosive elements. To insure proper water treatment, call a treatment specialist.

### 5. Keep your food equipment clean.

Use alkaline, alkaline chlorinated or non-chloride cleaners at recommended strength. Clean frequently to avoid build-up of hard, stubborn stains. If you boil water in stainless steel equipment, remember the single most likely cause of damage is chlorides in the water. Heating cleaners that contain chlorides have a similar effect.

### 6. Rinse, rinse, rinse.

If chlorinated cleaners are used, rinse and wipe equipment and supplies dry immediately. The sooner you wipe off standing water, especially when it contains cleaning agents, the better. After wiping equipment down, allow it to air dry; oxygen helps maintain the stainless steel's passivity film.

### 7. Never use hydrochloric acid (muriatic acid) on stainless steel.

### 8. Regularly restore/passivate stainless steel.

Job	Cleaning Agent	Comments
Routine cleaning	Soap, ammonia, detergent, Medallion	Apply with soft cloth or sponge.
Fingerprints and smears	Arcal 20, Lac-O-Nu Ecoshine	Provides barrier film
Stubborn stains and discoloration	Cameo, Talc, Zud, First Impression	Rub in direction of polish lines.
Grease and fatty acids, blood, burnt-on foods	Easy-off, DeGrease It Oven Aid	Excellent removal on all finishes
Grease and Oil	Any good commercial detergent	Apply with soft cloth or sponge.
Restoration/Passivation	Benefit, Super Sheen	

## Review

1. Stainless steels rust when passivity (film-shield) breaks down as a result of scrapes, scratches, deposits and chlorides.
2. Stainless steel rust starts with pits and cracks.
3. Use the proper tools. Do not use steel pads, wire brushes or scrapers to clean stainless steel.
4. Use non-chlorinated cleaners at recommended concentrations. Use only chloridefree cleaners.
5. Soften your water. Use filters and softeners whenever possible.
6. Wipe off cleaning agent(s) and standing water as soon as possible. Prolonged contact causes eventual problems.

To learn more about chloride-stress corrosion and how to prevent it, contact the equipment manufacturer or cleaning materials supplier.

Developed by Packer Engineering, Naperville, Ill., an independent testing laboratory.

# CLEANING

**⚠ WARNING** The oven and its parts are hot. Always allow the oven to cool before cleaning.

The Combi oven must be cleaned regularly in order to maintain performance. The automatic clean function provides a quick and easy way to keep the oven cavity clean. However, periodic cleaning is required to the exterior to ensure continued safe, reliable operation. Review the cleaning instruction provided.

The oven has considerable amounts of stainless steel that will require proper care. Review the section Stainless Steel Equipment Care and Cleaning for additional information about proper care for stainless steel.

## Daily Cleaning

1. Remove any large pieces of food that may be in the oven cavity before starting a cleaning cycle.
2. Perform one of the cleaning cycles.
3. Clean the door gasket with a soft, clean, damp cloth after every cleaning cycle. This will ensure a long life for the gasket.
4. Do not use cleaners containing grit, abrasive materials, bleach, harsh chemicals, chlorides, acidic based detergents or chlorinated cleaners.
5. Do not use steel wool on stainless steel or glass surfaces.
6. Be cautious with new or improved cleaning formulas; use only after being well tested in an inconspicuous place.
7. Clean the door glass exterior.

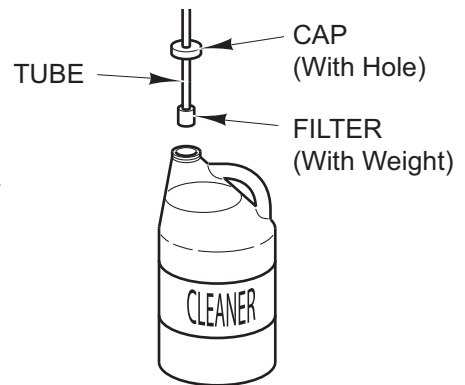


Fig. 15

## Weekly Cleaning

1. Clean any air vents on the exterior of the oven. Dust can collect on the vent openings. Clogged vents can cause oven components to overheat.
2. Remove wire racks and wipe the rack support rails.

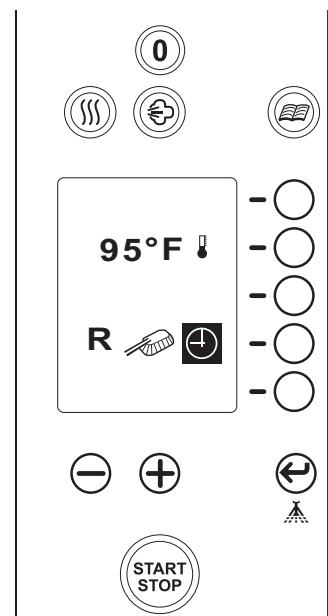
## Changing the Chemical Bottle (Fig. 15)

1. Remove cap and tube from empty bottle.
2. Place tube with filter and weight into new bottle until it reaches the bottom of the bottle.
3. Slide cap down the tube and tighten cap on the bottle.

## Quick Rinse Cycle

**NOTE:** The quick rinse cycle is an automatic cycle that does not use detergent. This feature can be used to give the oven cavity a quick rinse between product uses.

1. Press the Selection Line Button next to the Auto Clean Cycle icon.
2. Use the Minus Button to select "0" detergent to be used.
3. Press and hold the Minus Button until an "R" appears instead of a "0".
4. Press the START/STOP Button to begin the quick rinse cycle.



## Manual Clean Cycle

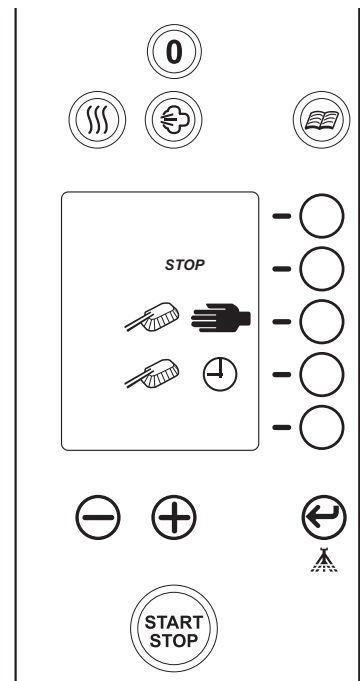
1. Press the Selection Line Button next to the Manual Clean Cycle icon.
2. Press the START/STOP Button to begin the clean cycle. The buzzer will sound to indicate that the interior is ready to be sprayed with an appropriate detergent.
3. Open the door and spray the detergent.
4. Close the door, the clean cycle will restart and end with the appropriate rinse of the cavity.

## Automatic Clean Cycle

**NOTE:** Before using the auto clean cycle, make sure that the detergent pump tube is inserted correctly into the detergent container and that enough detergent is available.

1. Press the Selection Line Button next to the Auto Clean Cycle icon.
2. Use the Plus/Minus Buttons to select the clean cycle time and amount of detergent to be used. The time and detergent values are preset. Select the preset value depending on the level of cleaning needed.
3. Press the START/STOP Button to begin the clean cycle.

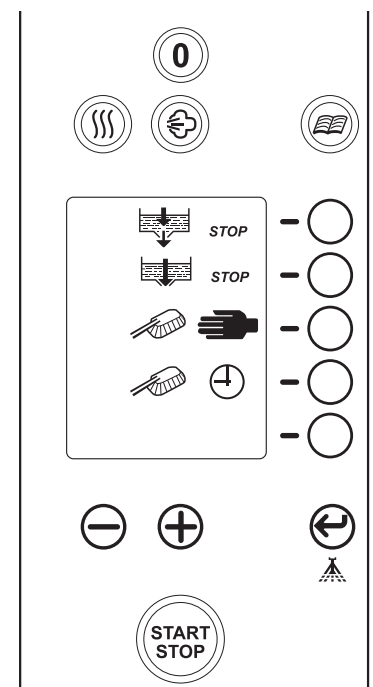
**NOTE:** There may not be any visible signs that the automatic clean cycle has begun. This will depend on the temperature of the oven cavity.



Preset Automatic Clean Cycle Values (times may vary depending on automatic cool down)								
Level	Detergent Dose	Time	Level	Detergent Dose	Time	Level	Detergent Dose	Time
0	0	0:25	3	15	0:47	6	30	1:12
1	5	0:30	4	20	0:55	7	35	1:20
2	10	0:38	5	25	1:04	8	45	1:29

## Descaling the Boiler

1. Press the ON/OFF Button and press the Selection Line Button next to the Stop and Drain icon. The boiler will drain.
2. Fill the boiler with white vinegar or similar descaling product using the steam inlet at the top right hand side of the cavity. Use 5 quarts for 6-Pan ovens, 6 quarts for 10-Pan ovens, or 10 quarts for 20-Pan ovens.
3. Select Steam Mode and wait 30 to 45 minutes. Do not start the steam cycle.
4. Press the ON/OFF Button and press the Selection Line Button next to the Stop and Drain icon. The boiler will drain.
5. Select Steam Mode again to rinse the boiler. Do not start the steam cycle.
6. Select a clean cycle to finalize the descaling process.





## Delimiting the Cavity

Oven cavity delimiting should be done on a regular basis. The frequency depends on oven use, quality of the local water supply and what type of water treatment system is used. Even with the use of a water treatment system, periodic delimiting of the oven cavity is still required. If lime scale build up becomes visibly noticeable, then the oven cavity delimiting should be performed.

**NOTICE** Delimiting should only be performed on a cool oven after a clean cycle has occurred.

**NOTE:** All components inside the oven cavity, such as the heating elements, racks, rack guides and interior glass, can be sprayed with white vinegar or a delimiting product.

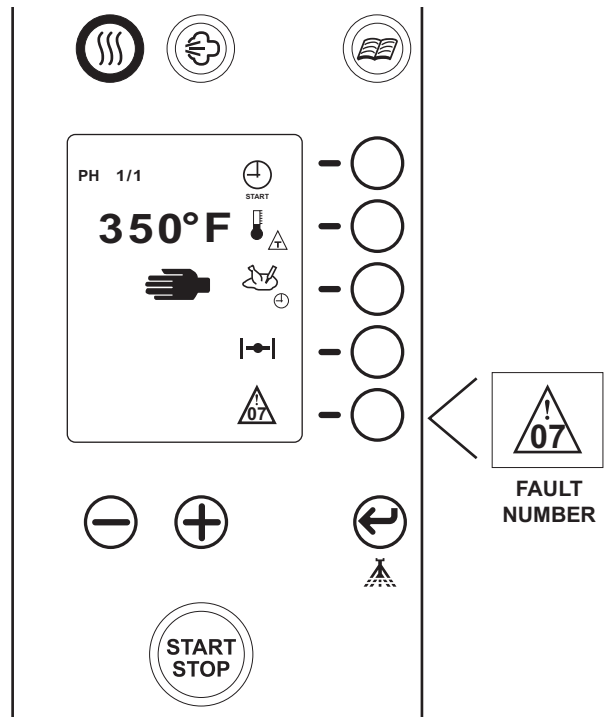
1. Spray the entire oven cavity with white vinegar (full strength) and let it stand for 15 minutes. Or use a delimiting product. When using a delimiting product other than white vinegar, follow the directions on the product label.
2. Close the oven door.
3. Rinse the oven cavity using the automatic clean cycle and set the cycle to "0".

# TROUBLESHOOTING

## AUTODIAGNOSTICS

The microprocessor of the oven constantly checks the proper functioning of the machine and indicates any problems with a number inside a symbol located in place of the fan speed. See the Fault Symbols Chart for more information.

- Faults must be corrected, otherwise they will be displayed each time a function using the faulty component is selected.
- The fault display stays on if the corresponding mode or function cannot be used.
- The last 99 faults are stored in the control board memory.
- If a fault occurs during a cooking program, the program will stop.
- If a fault is displayed before starting a program, it will not be possible to start that program.



FAULT SYMBOLS CHART		
FAULT	ELECTRIC COMBI	GAS COMBI
00	Electronic components overheat (CPU)	
01	Cavity overheat	
02	Not used	Boiler overheat
03	Cavity probe fault	
04	Spout probe fault	
05	Condensats probe failure	
06	Not used	Not used
07	Core probe fault or probe not connected	
08	Fan motor fault	
09	Lack of water	
10	Power failure to elements	Not Used
11	Component power overheat	Not Used
12	Not used	Defect of boiler heating
13	Not used	Burner defect for 6/10 level or upper 20 level
14	Not used	Burner defect for lower 20 level
15	Not used	Not used
16	Temperature probe grounded	

## SERVICE PARAMETER SETUP

The internal settings of the combi oven can be customized to fit your own personal needs. The chart below is provide to show you what functions can be modified. All system modifications must be made by an authorized Hobart technician.

Contact your local Hobart Service office for any adjustments needed on this equipment.

<b>SYSTEM PARAMETER FUNCTIONS</b>		
<b>Parameter Number</b>	<b>Function</b>	<b>Use this function to:</b>
<b>1</b>	Oven number	Assign each oven a number.
<b>2</b>	Service use only.	Service use only.
<b>3</b>	Display contrast	Change display contrast.
<b>4</b>	Fahrenheit or Celsius	Change oven to use Fahrenheit or Celsius.
<b>5</b>	Oven with hood	Service use only.
<b>6</b>	Audible frequency.	Change timer beeper volume.
<b>7</b>	Program keypad lockout	Lock the oven to program changes.
<b>8</b>	Flashing oven lights	Allow oven lights to flash or not.
<b>9 (Gas)</b>	Power level	Power level designation.
<b>9 (Ele.)</b>	ASDA	Service use only.
<b>10</b>	Maximum temperature setting	Change maximum temperature.
<b>11</b>	Set temperature	Change default convection temperature.
<b>12</b>	Maximum steam setting	Change maximum temperature.
<b>13</b>	Humidity range	Change setting range (1-5, 0-10, or 0-100).
<b>14</b>	Service use only.	Service use only.
<b>15</b>	Demo mode	Service use only.
<b>16</b>	Core probe	Adjust variant settings.
<b>17</b>	Service use only.	Service use only.
<b>18</b>	Service use only.	Service use only.
<b>19</b>	Service use only.	Service use only.
<b>20</b>	Detergent usage	Change detergent time adjustment.
<b>21</b>	Fan speed	Adjust minimum fan speed.
<b>22</b>	Fan rotation	Adjust time between fan direction change (2 to 4).
<b>23</b>	Fan stopping	Change how quick the fan stops.
<b>24</b>	Oven run time	Service use only.
<b>25</b>	Service use only.	Service use only.
<b>26</b>	Service use only.	Service use only.
<b>27</b>	Temperature display	Change oven to display actual or set temperature.
<b>28</b>	Service use only.	Service use only.
<b>29</b>	Service use only.	Service use only.
<b>30</b>	Bluetooth	Associate with reader barcodes.

