



INSTALLATION & OPERATION MANUAL

CORE COMBI OVENS

ELECTRIC MODELS

CORE-61-208	6-PAN HALF SIZE
CORE-61-240	6-PAN HALF SIZE
CORE-61-480	6-PAN HALF SIZE
CORE-62-208	6-PAN FULL SIZE
CORE-62-240	6-PAN FULL SIZE
CORE-62-480	6-PAN FULL SIZE
CORE-101-208	10-PAN HALF SIZE
CORE-101-240	10-PAN HALF SIZE
CORE-101-480	10-PAN HALF SIZE
CORE-102-208	10-PAN FULL SIZE
CORE-102-240	10-PAN FULL SIZE
CORE-102-480	10-PAN FULL SIZE

GAS MODELS

CORE-61-NAT	6-PAN HALF SIZE
CORE-62-NAT	6-PAN FULL SIZE
CORE-101-NAT	10-PAN HALF SIZE
CORE-102-NAT	10-PAN FULL SIZE



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

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.

RETAIN THIS INSTRUCTION MANUAL FOR FUTURE REFERENCE

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INSTALLATION, OPERATION, AND CARE OF CORE COMBI OVEN

SAVE THESE INSTRUCTIONS

GENERAL

The Justa by Vulcan CoreCombi Ovens are available in four sizes and operate on natural gas or electric power. The unit is equipped with a factory pre-programmed 10" touch-screen control with multifunction modes and a USB port. Custom recipes can be added on the screen or loaded from a USB port.

The wash system reduces the need for daily manual cleaning of the oven. The short wash cycles take care of any mid-day cleaning needs without shutting down afternoon production. The cleaning and descale features are used with nonproprietary chemicals. The combi is equipped with an auto-reversing fan, Light Emitting Diode (LED) light strip, cool touch door, multi-point food probe, and grab-and-go wire racks.

The CoreCombi Oven (Fig. 1) is produced with quality workmanship and material. Proper installation, usage, and maintenance of the oven will result in years of satisfactory performance.

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



Fig. 1

Pan and Sheet Capacity (Qty)				
	CORE-61	CORE-62	CORE-101	CORE-102
12" x 20" Hotel Pans	6	12	10	20
13" x 18" Sheet Pans (half size)	6	12	10	20
18" x 26" Sheet Pans (full size)	-	6	-	10

INSTALLATION

Before installing, verify the electrical and/or gas supply agrees with the specifications on the data plate located on the lower front corner of the left side panel. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan immediately.

UNPACKING

Each oven is inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment.

Immediately after delivery, unpack and check for shipping damage. If the oven is damaged, save the packing material and contact the carrier immediately.

There is a five-day limitation on filing freight damage claims with the freight company. Freight damage is not covered under warranty.

HANDLING

⚠ WARNING Make sure the lifting device used has a lifting capacity suitable for the weight to be lifted and has been well maintained.

⚠ WARNING Perform the handling operations using a lifting device rated 20% higher than the weight of the combi.

⚠ WARNING Do not stand or walk under the unit when lifting or handling it. Failure to observe these instructions could cause serious injury.

Follow the instructions for lifting the combi included in the stand or stacking kit ordered with the unit.

INSTALLATION CODES AND STANDARDS

In the United States, the Vulcan 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 Vulcan 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.

DOOR OPENING

The oven is delivered with the door hinged on the right and cannot be reconfigured.

LOCATION

Allow space for operating the oven. Do not obstruct the ventilation ports above the oven. To provide ventilation access, allow 2" clearance on the left side of the oven and 2" clearance on the right and 2-1/2" at the rear. A suitable amount of space (18" minimum) should be provided on the left side of the machine for service access. External heat sources from other equipment may require space or heat shield (adding 3" to total external width, eliminating left clearance need). Ensure a level floor is available for operation.

DIMENSIONS

The dimensions shown in Figure 2 are for standalone units or units on a stand.

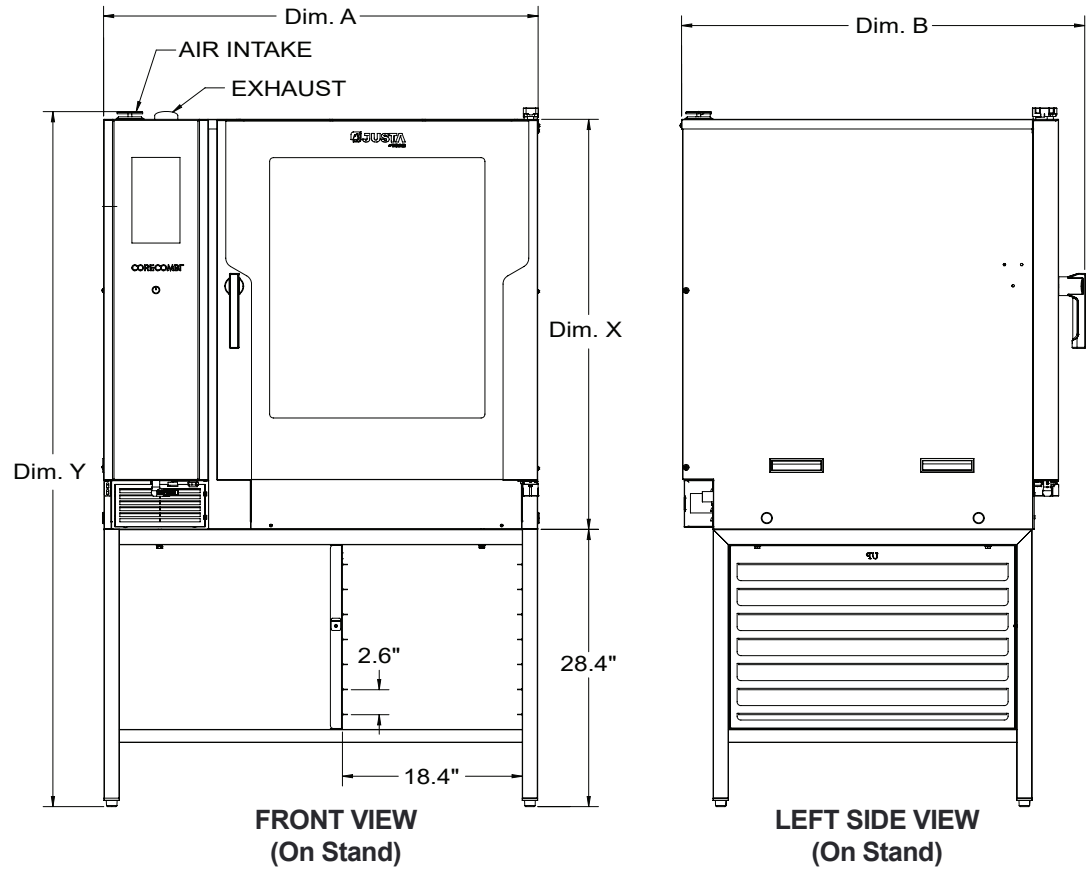


Fig. 2

Model	Width (Dim. A)	Depth (Dim. B)	Height (Dim. X)	Height w/Stand (Dim. Y)
CORE-61	35"	34.3"	32.3"	59.9"
CORE-62	44.5"	41.3"	32.3"	60.0"
CORE-101	35"	34.3"	42"	69.8"
CORE-102	44.5"	41.3"	42"	69.8"

The dimensions shown in Figure 3 are for stacked units. Only units of the same heat source can be stacked. Stacking combinations include any 6-pan combi oven on any similarly powered 6-pan or 10-pan combi oven. Half pan units can only be stacked on half pan units. Full pan units can only be stacked on full pan units.

NOTE: Stacked 6-pan on 6-pan units will use 6" casters. Stacked 6-pan on 10-pan units will use 2.9" casters.

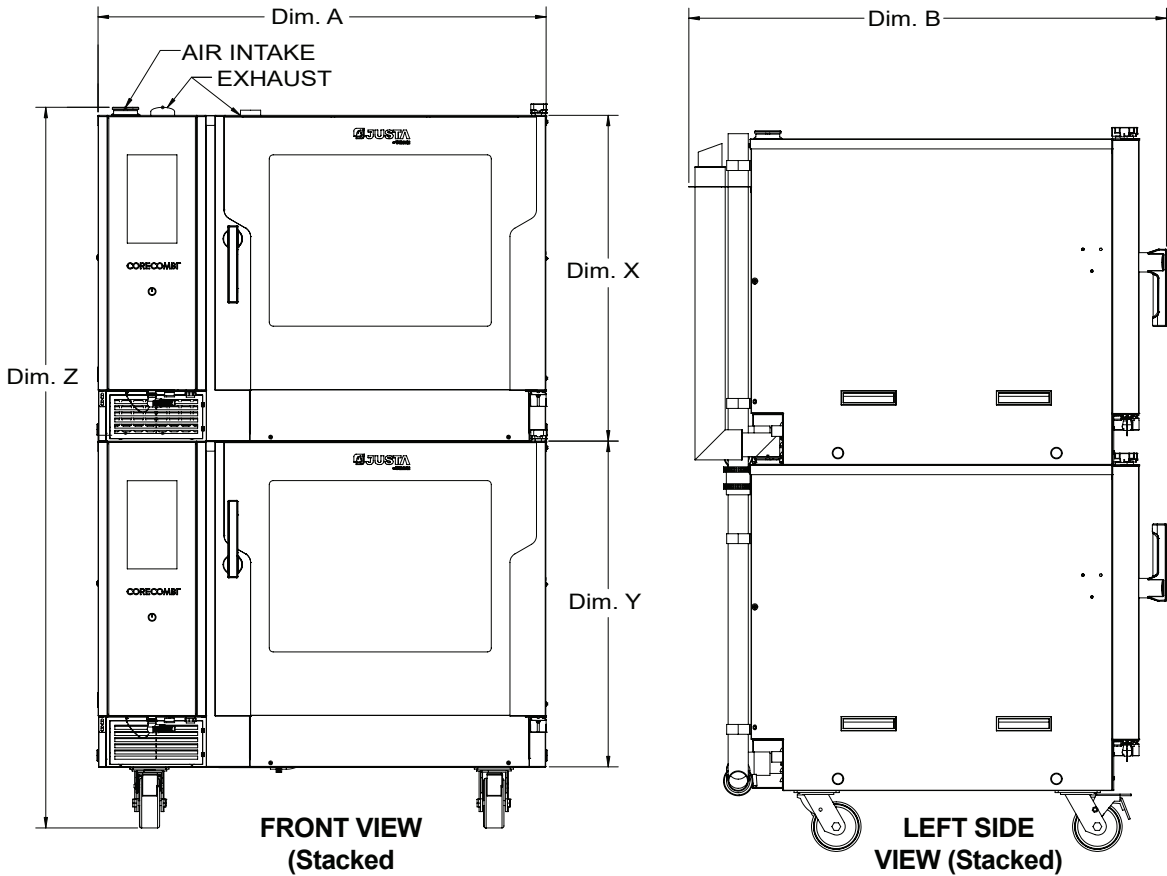


Fig. 3

Models	Width (Dim. A)	Depth (Dim. B)	Height (Dim. X) (Upper Oven)	Height (Dim. Y) (Lower Oven)	Height (Dim. Z) (Total)
CORE-61 on CORE-61	35"	40.4"	32.3"	32.3"	76.7"
CORE-62 on CORE 62	44.5"	47.4"	32.3"	32.3"	76.7"
CORE-61 on CORE-101	35"	40.4"	32.3"	42"	78"
CORE-62 on CORE-102	44.5"	47.4"	32.3"	42"	78"

STACKING KITS

Stacking kits are available to allow ovens to stack, one on top of the other. 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. Adjustment of the leveling feet on the bottom of the legs can be made 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 oven cavity. All water should drain through the drain opening. Adjust leveling if necessary.

WATER QUALITY STATEMENT

The fact that a water supply is potable is no guarantee that it is suitable for steam generation. All steam equipment is subject to contamination and failure due to chemical and mineral content found in water. A suitable Water Treatment System and regular filter replacements coupled with routine deliming is the recommended minimum. Damage as a result of poor water quality or lack of required owner/operator maintenance is the responsibility of the owner/operator.

Your water supply must be within these general guidelines.

NOTE: Failure to properly maintain water quality or preventative procedures for water can lead to issues not covered under warranty.

WATER SUPPLY GENERAL GUIDELINES*	
Dynamic Water Pressure	18-87 psi (30-60 recommended)
Hardness	1 to 3 grains (17.1 ppm = 1 grain of hardness)
Silica	less than 13 ppm
Chloramines**	zero
Chlorides**	less than 30 ppm***
Total Chlorine****	zero
PH	range 7-8
Un-Dissolved Solids	less than 5 microns
Alkalinity	less than 20 ppm
Total Dissolved Solids (TDS)	less than 60 ppm

* Testing of water is always done AFTER water filter or water treatment used. Water quality does change with usage and should be checked after idle times to see if the condition worsens.

** A carbon block filter system should always be used to remove Chlorine and Chloramine. If a water softener is used, a carbon block is still required. Check with your local water treatment specialist for proper sizing and replacement intervals for the carbon block cartridge.

*** If the Chlorides exceed 30 ppm and the oven is used more than 4 - 8 hours during the day in steam or combination mode, the cavity will require rinsing every 4 - 8 hours. Failure to do so will result in corrosion and rusting of the oven cavity and interior parts. A Reverse Osmosis water treatment system can be installed to eliminate chlorides from the water but an external storage tank would be required. Preventative washing and rinsing may be needed more than once a day to prevent compounding of contaminants inside cavity.

**** Total Chlorine of 4.0 ppm is the max limit for the building water supply. A carbon block filter must still be used to remove all Chlorine and Chloramines from the water. Failure to do so will result in corrosion and rust in the cooking cavity which is not covered under warranty.

Other factors affecting steam generation are iron content, amount of chlorination and dissolved gases. 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.

User Responsibility

This product must be installed, cleaned and maintained as described in this Manual. It is the responsibility of the owner and installer to comply with local codes.

WATER REQUIREMENTS

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

WATER CONDITIONING

It is important to furnish the combi oven with treated water to reduce scale formation. Scale formation will reduce steam output, cause premature component failure, and shorten equipment life. Most water supplies contain scale producing minerals such as Calcium and Magnesium. As steam is generated, the minerals are deposited into the oven cavity.

This may cause several problems:

1. Reduced heat transfer efficiency.
2. Premature heating element failures.
3. Deposits inside the cavity that can lead to deterioration of the cavity and glass.

These problems are common to any manufacturer's steamer regardless of design, but they can all be minimized by furnishing the combi oven with treated water and/or performing routine deliming and filter maintenance.

The desired water properties can best be achieved by using a properly maintained water treatment system. Strainers or filters will not remove minerals from the water.

Steamers that operate over a long period of time without the benefit of a water treatment system develop a heavy scale build up. These systems should be cleaned before using.

FILTER SYSTEM

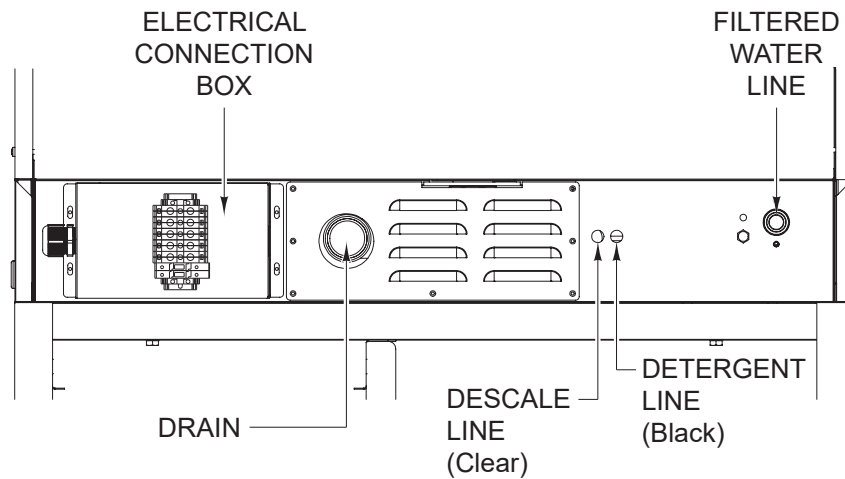
In addition to water conditioning for the control of solids, you must have a carbon block filter installed and maintained. Carbon block filters remove the chlorine and chloramines disinfectants from the water. Chlorine/chloramines will erode the oven cavity, rack guides, racks, and internal components, which is not covered under warranty. Check with your local water treatment specialist for proper sizing and replacement intervals for the carbon block cartridge.

Water feed lines to the oven must be flushed before final connection. Particles in the water could clog tubing and components that supply water for steam production and drain cooling. If the water supply is not free of sediment or cloudy after several minutes of flushing, a sediment filter must be installed before use.

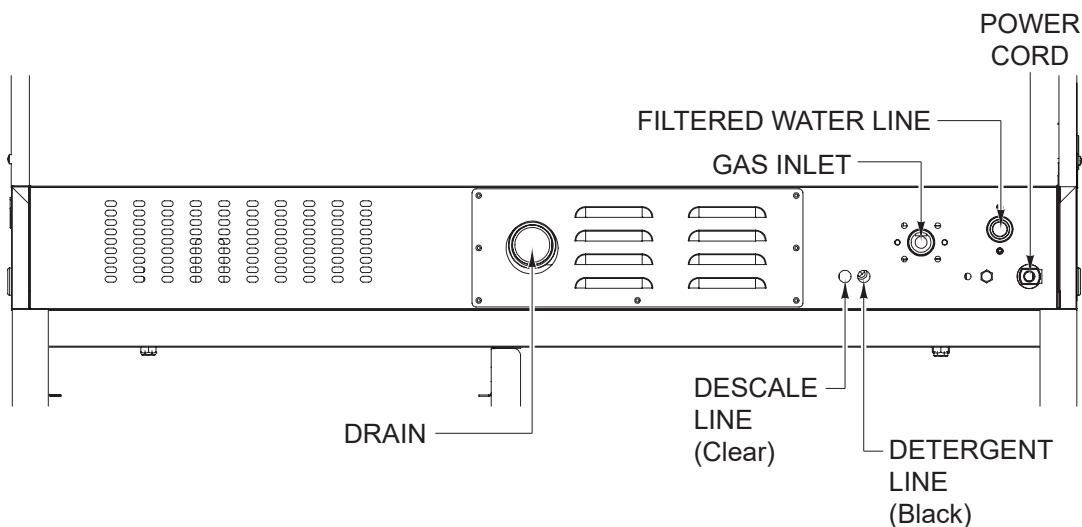
PLUMBING CONNECTIONS

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

NOTE: Failure to properly connect the water line will result in equipment failure not covered under warranty.



ELECTRIC COMBI OVEN CONNECTIONS (Typical)



GAS COMBI OVEN CONNECTIONS (Typical)

Fig. 4

WATER SUPPLY CONNECTIONS

Connect the treated cold water supply line, min of $\frac{3}{8}$ " ID, to the $\frac{3}{4}$ " garden hose inlet on the rear of the combi oven. A water filter system is required for the water supply line going to the treated water inlet (Fig. 4) of the combi oven. Follow the recommendations for use and installation instructions shipped with the water filter. If a water filter is not installed, the combi oven warranty is limited.

NOTE: Failure to properly connect the water line will result in equipment failure not covered under warranty.

DRAIN CONNECTION

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

The 2" drain at the rear of the combi must be extended a minimum of 12" (305 mm) - maximum of 72" (1,829 mm) away from combi base to an open air gap type drain. Do not reduce the 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. The drain should slope down away from the combi ¼" for every foot of drain pipe length. The drain pipe should be metal. DO NOT use PVC pipe; PVC pipe may lose its rigidity or glue may fail.

NOTE: Drain kit installation information is included with the drain kit. Local codes apply.

GAS SUPPLY CONNECTIONS

⚠ WARNING 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 they are sized properly for data plate BTU/hr. rating.

Codes require 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.

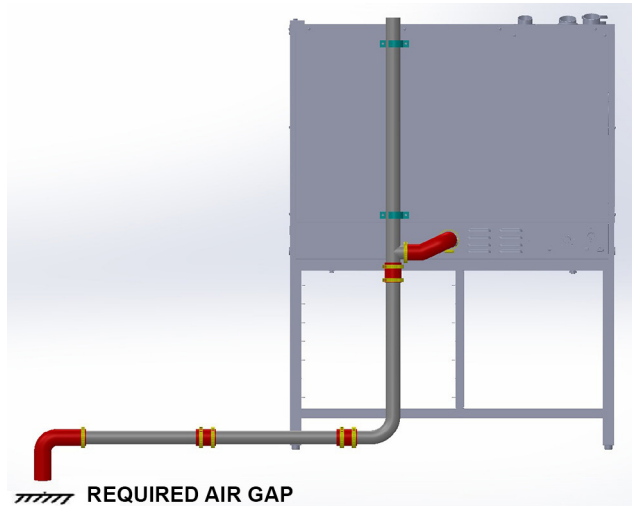
Inadequate gas supply could result in burner noise and poor burner performance.

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.

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

NOTE: Tethering is required for units equipped with casters, either on a stand or stacked.

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 (Fig. 5). Flexing the gas connector as described will restrict gas flow or may damage the connector.



MINIMUM RATE	
Gas Input	¾" NPT
Natural	6-1/2" - 10" W.C.
Propane	11" - 14" W.C.

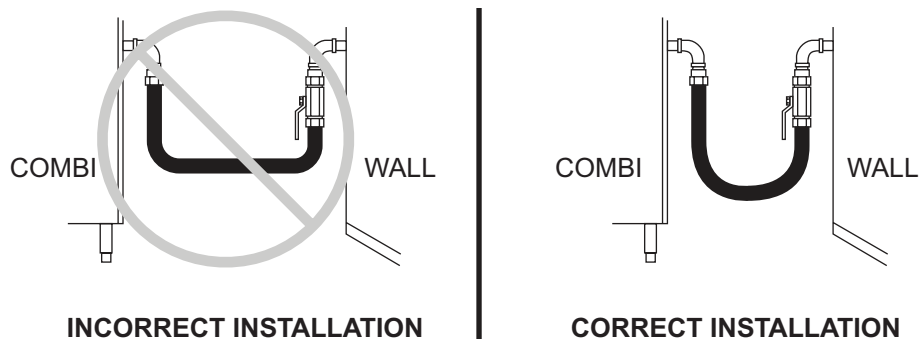


Fig. 5

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 **NOT** equipped with a factory preset pressure regulator. An external pressure regulator is required for proper operation and performance. Natural gas pressure regulators should be set for 6.5" to 10" W.C. Propane gas pressure regulators should be set for 11" to 14" W.C. Check gas pressures with a manometer at time of installation to verify they agree with the pressures specified.

NOTE: If the inlet gas pressure is correct with the external regulator, but there is still an abnormal or backfire noise, see Flue Gas CO2 Adjustment below to adjust the valve and reduce this noise.

Conversion kits for high altitude and propane (LP) installations are available and are to be field installed as needed.

⚠ 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.

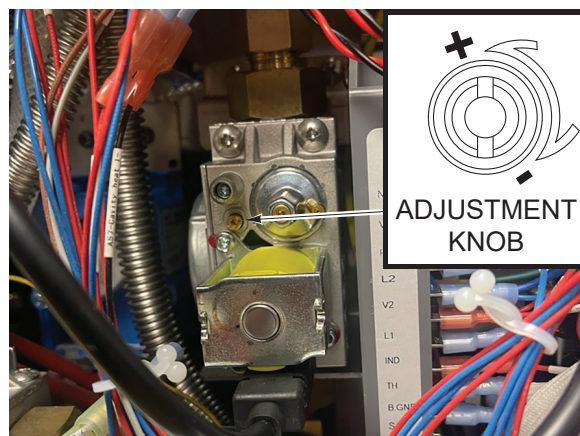
Model	Volts	Hertz	Phase	Amps (Max Used)	Max BTU/Hr	*Breaker (Amps)
CORE-61 NAT	120	60	1	10	49,500	15
CORE-62 NAT	120	60	1	10	106,500	15
CORE-101 NAT	120	60	1	10	83,500	15
CORE-102 NAT	120	60	1	10	152,000	15

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

Flue Gas CO2 Adjustment

1. Turn on the oven and ensure oven combustion runs normally.
2. Test the flue gas parameter to measure the CO2 quantity proportion.
3. Adjust the gas quantity to increase (“+”) or decrease (“-”) the proportion of CO2. The proper proportion of CO2 is between 9.0 to 9.3%.

NOTE: Each installation is unique and thus the machine may operate optimally even if the CO2 proportion is not in this range.



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.

FLUE GAS EXHAUST

⚠ WARNING The flue is shipped loose on stacked units and must be installed prior to operation. Failure to install will cause service issues and will void warranty.

NOTE: Flue assembly instructions for stacked units provided with stacking kit instructions.

DO NOT obstruct the flow of flue gases from the flue located on the top of the combi oven. It is recommended 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.

⚠ WARNING The output temperature of the exhaust fumes reach 480°F.

ELECTRICAL CONNECTION

⚠ WARNING Appliances equipped with a flexible electric supply cord are provided with a three-prong grounding plug. It is imperative 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 be in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2, as applicable.

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

Electric Model Connection

The wiring diagram is located on the inside surface of the left 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 provided. This will allow proper access to components for service.

To make the electrical connections, remove the cover from the electrical connection box on the rear of the unit. Insert the power supply cable through the strain relief near the terminal block (Fig. 6).

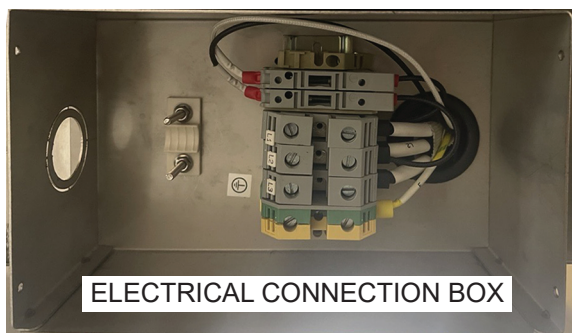


Fig. 6

Once the optimal cable length is established for the connections to the terminal block, clamp the cable to the strain relief. Connect the cables with the terminal block as indicated on the wiring diagram. The wires on the terminal block must be clamped firmly.

Gas Model Electrical Connection

The spark ignition in this appliance can cause electrical noise that can false trigger the Ground Fault Circuit Interrupter (GFCI) detection. Some GFCIs are more sensitive than others. The use of a higher trip tolerance GFCI will reduce nuisance tripping. Contact Technical Support for more information.

GROUNDING

The oven must be properly grounded. Connect the ground conductor to the terminal block in the position indicated on the terminal block label.

Model	Volt	PH	HZ	KW	AMP
CORE-61E-208	208V	3	60	12KW	35A
CORE-61E-480	480V	3	60	12KW	15A
CORE-62E-208	208V	3	60	22KW	63A
CORE-62E-240	240V	3	60	22KW	55A
CORE-62E-480	480V	3	60	22KW	27A
CORE-101E-208	208V	3	60	18KW	52A
CORE-101E-480	480V	3	60	18KW	22A
CORE-102E-208	208V	3	60	36KW	102A
CORE-102E-240	240V	3	60	36KW	88A
CORE-102E-480	480V	3	60	36KW	44A

* Breaker 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

Local codes may require the 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. Remove any packaging material and instructions from inside and outside of the unit as the surfaces will get hot. Operate the oven at maximum thermostat setting for 45 minutes.

OPERATION

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

⚠ WARNING The oven compartment may contain hot steam; hot steam can cause burns, use caution when opening the loading door.

DOOR OPENING AND CLOSING

To open the door (Fig. 7), turn the handle to the right or left. Allow a few seconds for steam to escape before pulling the door open.

After the steam escapes, fully open the door to load or unload oven contents.

NOTE: The door handle is under spring tension and returns to the vertical position after the door opens.

Push door firmly to close.

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.

LOADING THE OVEN

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.

NOTE: On 6-level ovens, six pans can be loaded when using the racks. Only five pans can be loaded if the racks are not used. On 10-level ovens, 10 pans can be loaded when using the racks. Only nine pans can be loaded if the racks are not used.

UNLOADING THE OVEN

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.

OVEN DRAINS

Keep the oven drain free of blockage:

1. Inspect the oven drain daily for any blockage.
2. Remove any particles or debris from the perforated strainer daily (more often if needed).
3. Avoid large debris from entering drain by always leaving screen cover on.



Fig. 7

CONTROLS

Powering Up the Oven

NOTE: Ensure all water, drain, electrical, and/or gas connections have been made before attempting to power up the oven. Ensure the manual gas shutoff valve is open on gas units.

Once power has been supplied to the unit, touch the Press to Activate button on the **Oven Is Off Screen** (Fig. 8).

When the oven turns on, the **Home Screen** (Fig. 9) will display. The **Home Screen** (Fig. 9) is the starting screen for all oven operations and will display when the oven is ready for use.

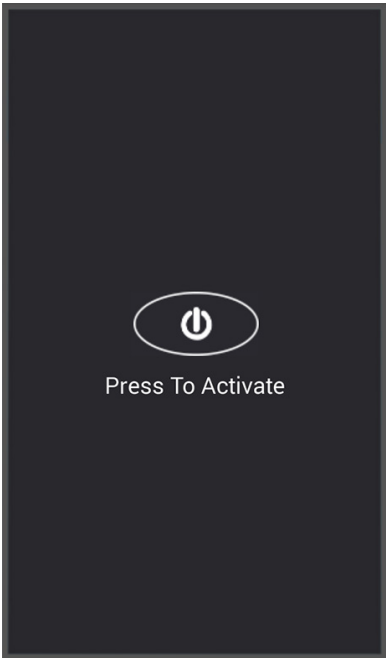


Fig. 8



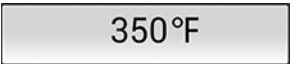
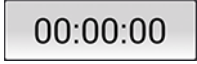
Fig. 9

DISPLAY SCREEN BUTTONS

The oven modes and settings are adjusted by touching the various buttons on the display. Review the charts below for information about buttons on the various screens.

Home Screen Buttons

BUTTON	NAME	ACTION
	Convection Mode	Touch this button to set the oven to Convection Mode. The button will turn RED to indicate it has been selected. The button will be gray when not selected.
	Steam Mode	Touch this button to set the oven to Steam Mode. The button will turn BLUE to indicate it has been selected. The button will be gray when not selected.

BUTTON	NAME	ACTION
	Combi Mode - Low Steam	Touch this button to set the oven to Combi Mode. The letter "L" will appear in the upper right corner and the color of the button will be BLUE transitioning to mostly RED. Touching the combi mode button again will cycle through the different combi modes. The button will be gray when not selected.
	Combi Mode - Medium Steam	Touch this button to set the oven to Combi Mode. The letter "M" will appear in the upper right corner and the color of the button will be equally BLUE transitioning to RED. Touching the combi mode button again will cycle through the different combi modes. The button will be gray when not selected.
	Combi Mode - High Steam	Touch this button to set the oven to Combi Mode. The letter "H" will appear in the upper right corner and the color of the button will be mostly BLUE transitioning to RED. Touching the combi mode button again will cycle through the different combi modes. The button will be gray when not selected.
	Temperature Icon	Touch and hold this icon to display the current temperature of the oven cavity.
	Temperature Icon (Preheating)	An arrow will appear next to the temperature icon when the oven temperature is rising, such as during preheating.
	Temperature Setting Display	Shows set and current temperature. Touch the window to access the keypad for Temperature Adjustment Screen . The temperature can be adjusted at any time.
	Timer Icon	Touch this icon to use the timer. 00:00:00 will display in the Timer Setting Display. Touch and hold this icon to put the oven in continuous mode. 99:99:59 will display.
	Timer Setting Display	Shows set and remaining time. Touch the window to access keypad for Timer Adjustment Screen . NOTE: After cook time ends, touch to add time.
	Probe Icon	Touch this icon to change from timer mode to probe temperature mode to cook by monitoring the internal temperature of a product. The Timer Setting Display will change to the Probe Temperature Display. The temperature probe must be used for this function to operate properly (see Using the Temperature Probe).
	Probe Temperature Display	Shows set temperature for probe cooking. Touch the window to access keypad for Probe Temperature Adjustment Screen .
	Vent Icon (Open)	Allows the cavity vent to be opened or closed during a recipe or step. When the button is touched, the icon toggles indicating the opened or closed setting. This feature can be programmed into a step or manually adjusted by touching the button while a recipe is running. The icon will be gray when not available.
	Vent Icon (Closed)	
	Spritzer Burst Icon	Touch this icon to release water into the oven cavity. Default spritz time is 2 seconds.
	Spritzer On Icon	This icon displays when water is being dispensed into the oven cavity during a recipe.

BUTTON	NAME	ACTION
	Fan Speed Icon	This icon indicates the fan speed in the oven. The value range is 1 to 3. Touch the icon to toggle the different speeds.
	Multi-Timer Icon	Touch this icon to use the multiple position timer feature. This feature only operates in direct cooking mode. This feature is not available with recipe cooking mode.
	Stage Navigation Icons	Touch these buttons to navigate through the various stages of a cooking mode or recipe. The number in the button will indicate the stage. Recipes can have up to 15 stages. When creating a recipe, use the button on the right to add another stage. Touch and hold the button on the left to delete the current stage.
	Save Icon	Touch this button to save current recipe. The Recipe Screen will display.
	Start Icon	Touch this button to begin a cooking cycle. The display below the button will indicate the cooking cycle status.
	Pause Icon	Touch this button to pause a cooking cycle. The display below the button will indicate the cooking cycle status.
	Stop Icon	Touch this button to stop cooking.
	Recipe Icon	Touch this button to access the saved recipes on this oven. The Recipe Selection Screen should appear.
	Cool Down Icon	Touch this button to access the Oven Cool Down Screen .
	Settings Icon	Touch this button to access the Settings Screen .
	Help Icon	Touch this button to access helpful information about the current screen being displayed.
	Wash Cycle Icon	Touch this button to access the Select Wash Cycle Screen .

Miscellaneous Buttons

BUTTON	NAME	ACTION
	ON Button	This button appears on the Oven Is Off Screen . Touch this button to turn the oven on.
	OK or Enter	This button will appear on various screens, usually on screens that require input. Touch this button to enter or accept information.
	Cancel	This button will appear on various screens, usually on screens that require input. Touch this button to cancel or undo information entered and not used.

BUTTON	NAME	ACTION
	Back	This screen may appear on various screens that display information. Touch this button to return to the previous screen.
	Home Icon	Touch this button to return to the Home Screen .
	Trash Icon	Touch this button to delete items selected.
	Select All Icon	Touch this button to select all the items that appear on the display.
	USB Icon	Touch this button to save selected data to a USB device or to upload data from a USB device.

DAILY SHUTDOWN

1. Clean the oven interior (See CLEANING).
2. Leave door open.

EXTENDED SHUTDOWN

1. Perform DAILY SHUTDOWN procedure.
2. Turn off the circuit breakers and/or gas supply.
3. Turn off the water supply.
4. Leave door open.
5. Check water filtration upon returning to use.

COOKING MODES

Three cooking modes give the combi ovens their versatility in baking; grilling; roasting; steaming; proofing; rethermalization; low-temp cooking; blanching and finishing; “Healthy-Fry” techniques; and high-yield, low-shrinkage cooking.

Convection mode

Cook with dry convection heat. A vent control lets out humidity for the bone-dry environment perfect for pastries, breads, coloring, and glazing. Inject steam at any time with a touch of a button.

Steam mode

Cook with fan-assisted steaming up to 266°F to steam fish, shellfish, rice, vegetables, and meats, or for poaching terrines and pâtés.

Combination mode

Cook with dry and moist heat while maintaining the desired humidity levels (low, medium, or high) you want, reducing shrinkage and weight loss. Combination mode is ideal for meat and poultry dishes, rethermalizing meals, bain-marie cooking, and plated banqueting.

OPERATION MODES

There are two operation modes; Direct Cooking and Recipe Cooking. The Direct Cooking mode allows the user to enter the cooking settings manually and begin a cooking cycle. The Recipe Cooking mode requires the user to select a preset recipe from the list and begin a cooking cycle.

Direct Cooking Mode

NOTE: All cooking modes have similar setup steps, with some variations. Convection Mode is used as the example in the steps below. The cooking mode icon selected will be colored as shown in the Display Screen Buttons Chart. Cooking modes not selected will be gray.

1. From the **Home Screen** (Fig. 10), touch the desired cooking mode.

NOTE: Each cooking mode has preset temperatures that will appear in the display.

2. Touch the Temperature Setting Display (Fig. 10) and enter the desired temperature on the **Temperature Adjustment Screen** (Fig. 11). Touch OK.

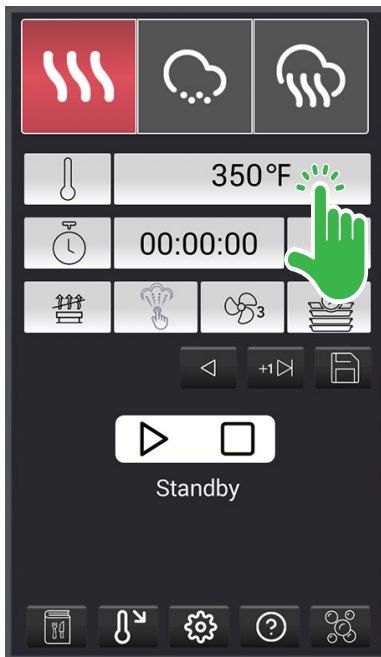


Fig. 10

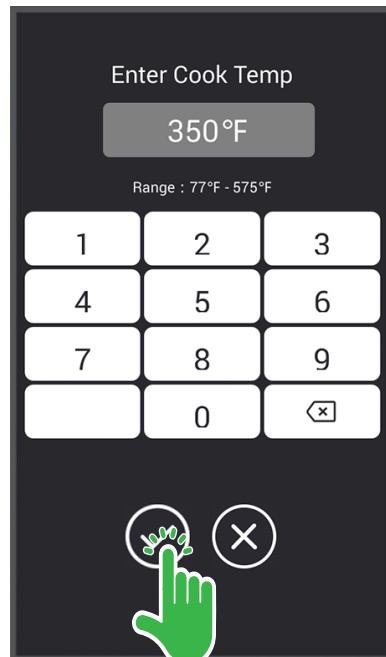


Fig. 11

3. Touch the Timer Setting Display (Fig. 12) and enter the desired time on the **Timer Adjustment Screen** (Fig. 13). Touch OK.

NOTE: If multiple rack position timers are desired instead of a single timer, skip Step 3 and see Multiple Position Timer Mode.

NOTE: If the temperature probe will be used instead of a single timer, skip Step 3 and see Temperature Probe Mode.

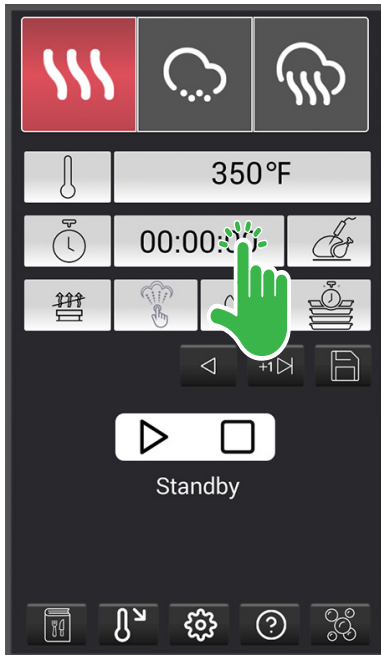


Fig. 12

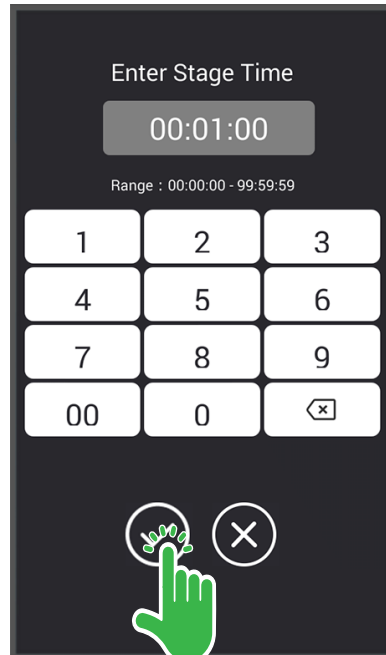


Fig. 13

4. Touch the Vent icon (Fig. 14) to toggle between the open and closed position.

5. Touch the Fan Speed icon (Fig. 15) to toggle between the various available fan speeds.

NOTE: A number will appear in the fan speed icon. The higher the number, the faster the fan speed.

NOTE: There are three humidity levels in Combi Cooking mode. The Humidity level is controlled by the Combi Cooking mode selected.

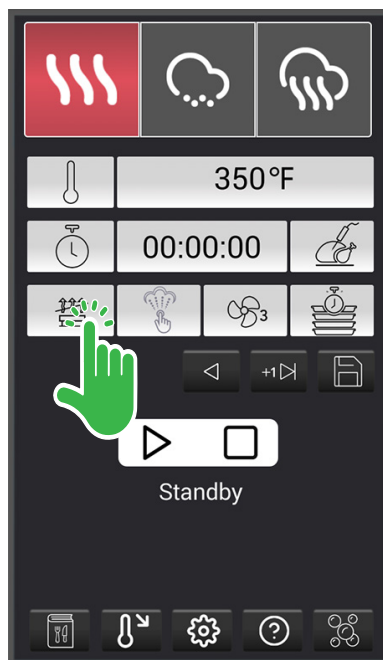


Fig. 14

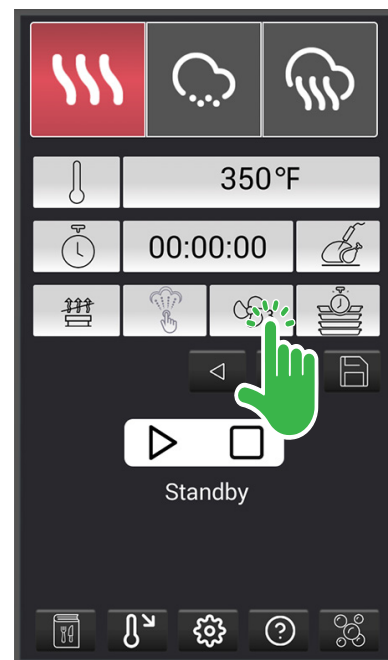


Fig. 15

6. If additional cooking mode stages are desired, touch the right stage navigation button (Fig. 16). The number in the button will increase.

NOTE: The oven can hold up to 15 cooking mode stages.

7. Repeat Steps 1 through 5 for each cooking mode stage.

NOTE: It is recommended to preheat the oven before loading the oven with product. If the internal oven temperature is already at temperature, skip Step 8 and proceed to Step 9.

8. Touch the Start button to begin preheating the oven. The message area of the display will show "Preheating". The Timer Display will show the estimated time remaining for the preheat cycle. Once preheating is complete, the message area will show "Load".



Fig. 16

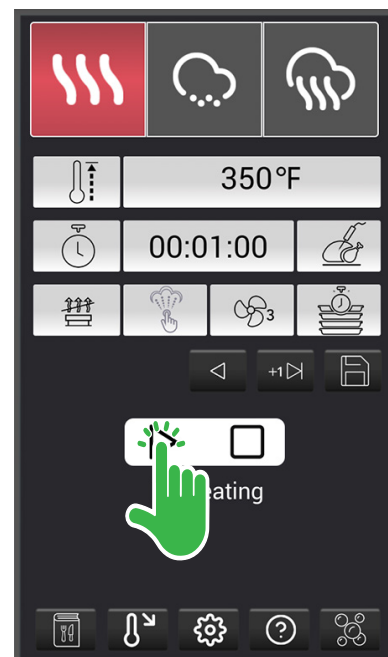


Fig. 17

9. Load the oven, close the door, and touch the Start button (Fig. 17). The cooking cycle will begin and the message area will show "Cooking" and the time remaining.

10. If called for in the cooking cycle, touch the Spritzer Burst button (Fig. 18) to add a short blast of steam to the cavity.
11. When the timer has counted down, the buzzer will sound and the oven cavity lights will flash.
12. Press the OK button on the **Unload Screen** (Fig. 19) to silence the buzzer and end the cooking cycle or add more time by touching the Add Time button.
13. Unload the oven.



Fig. 18

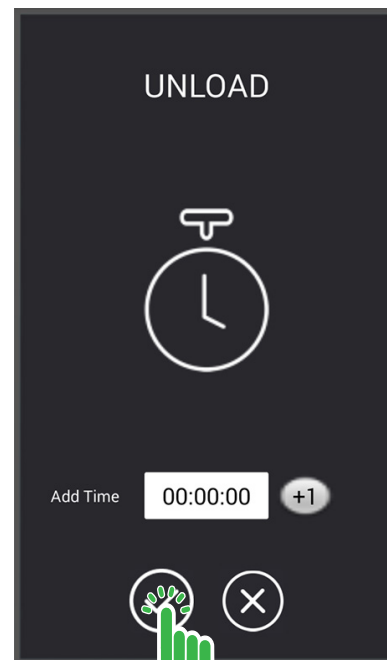


Fig. 19

Recipe Cooking Mode

NOTE: Recipes can be adjusted after being selected if the system parameters settings allow the operator to do so.

1. From the **Home Screen**, touch the Recipe button (Fig. 20). The **Recipe Folder Selection Screen** will be displayed.
2. Touch the recipe folder (Fig. 21) containing the desired recipe. The **Recipe Selection Screen** will be displayed.

NOTE: Use the Back button to return to the **Home Screen** or **Recipe Folder Selection Screen**.



Fig. 20

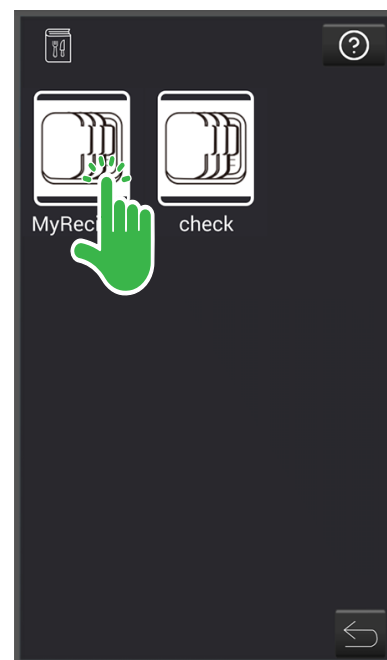


Fig. 21

- From the **Recipe Selection Screen**, touch the recipe from the list or use the search field (Fig. 22) in the upper right of the display and enter the recipe name. Once the recipe is select, the **Home Screen** will be displayed and the recipe icon and name will be at the bottom of the display.
- Preheat the oven, if required, by touching the Start button.
- Load the oven, close the door, and touch the Start button (Fig. 23). The cooking cycle will begin and the message area will show "Cooking" and the time remaining.

NOTE: To create a new recipe, see Creating a Recipe.

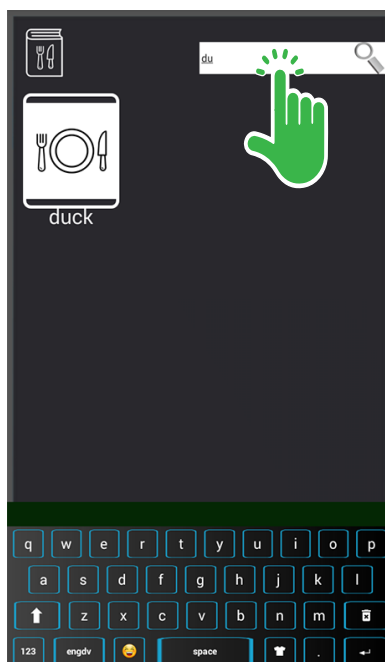


Fig. 22



Fig. 23

CREATING A RECIPE

Recipes are a convenient way to ensure consistent cooking times are used. Recipes can be created on the oven or can be loaded from a USB device (see Loading Recipes).

NOTE: All cooking modes have similar setup steps, with some variations. Convection Mode is used as the example in the steps below. The cooking mode icon selected will be colored as shown in the Display Screen Buttons Chart. Cooking modes not selected will be gray.

- From the **Home Screen** (Fig. 24), touch the desired cooking mode.

NOTE: Each cooking mode has preset temperatures that will appear in the display.

- Touch the Temperature Setting Display (Fig. 24) and enter the desired temperature on the **Temperature Adjustment Screen** (Fig. 25). Touch OK.

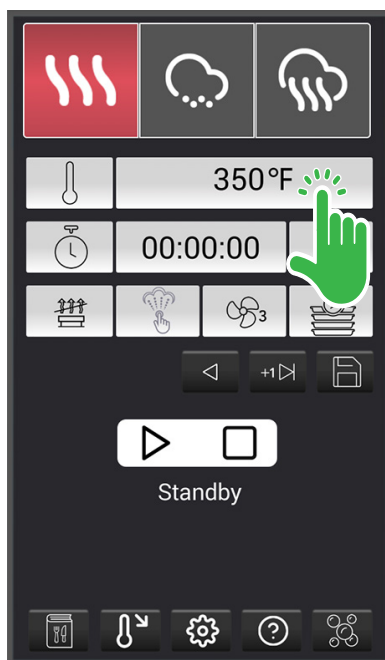


Fig. 24

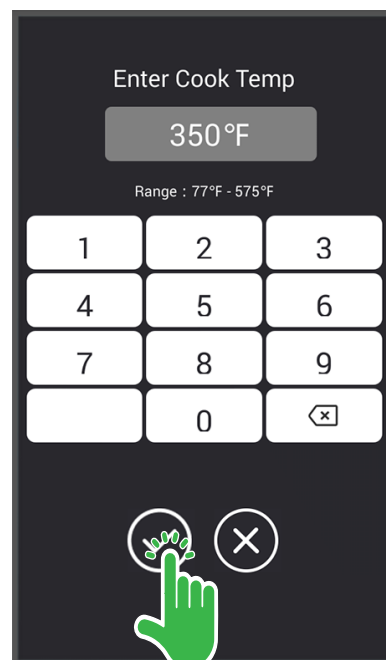


Fig. 25

- Touch the Timer Setting Display (Fig. 26) and enter the desired time on the **Timer Adjustment Screen** (Fig. 27). Touch OK.

NOTE: Multiple rack position timers cannot be used with stored recipes.

NOTE: If the temperature probe will be used instead of a single timer, skip Step 3 and see Temperature Probe Mode.

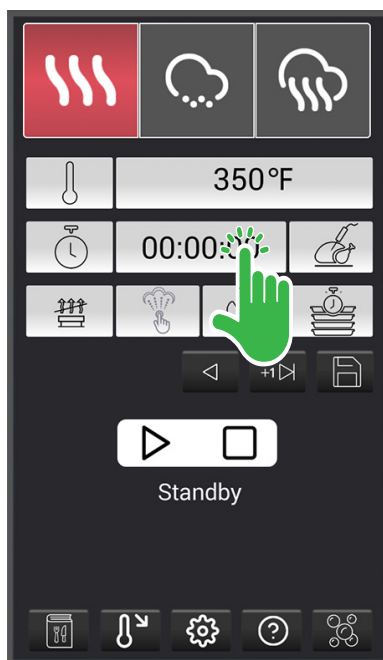


Fig. 26

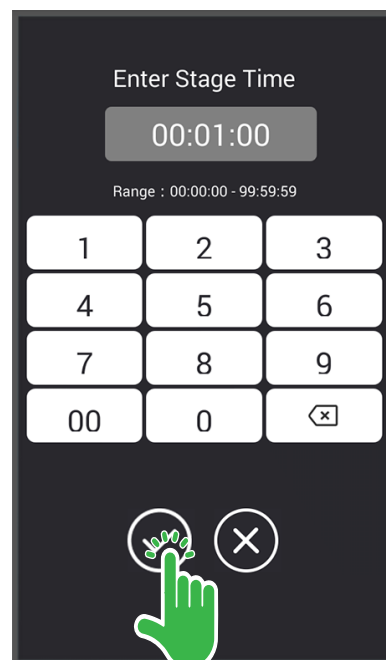


Fig. 27

- Touch the Vent icon (Fig. 28) to toggle between the open and closed position.

- Touch the Fan Speed icon (Fig. 29) to toggle between the various available fan speeds.

NOTE: A number will appear in the fan speed icon. The high the number, the faster the fan speed.

NOTE: There are three humidity levels in Combi Cooking mode. The Humidity level is controlled by the Combi Cooking mode selected.

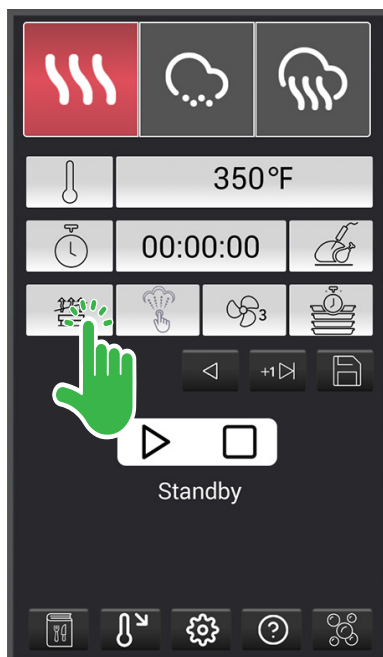


Fig. 28

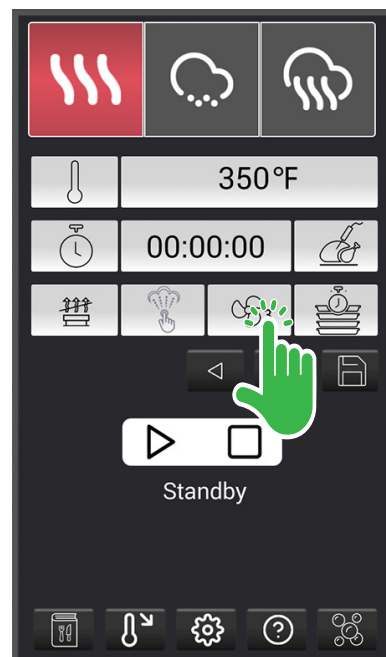


Fig. 29

- If additional cooking mode stages are desired, touch the right stage navigation button (Fig. 30). The number in the button will increase.

NOTE: The oven can hold up to 15 cooking mode stages.

- Repeat Steps 1 through 5 for each cooking mode stage.
- Humidity bursts can be added by creating a cooking mode stage for the spritzer burst. Touch the Spritzer Burst button (Fig. 31) to add a short blast of steam to the cavity.

NOTE: Use the stage navigation buttons to review the recipe and make any adjustments.

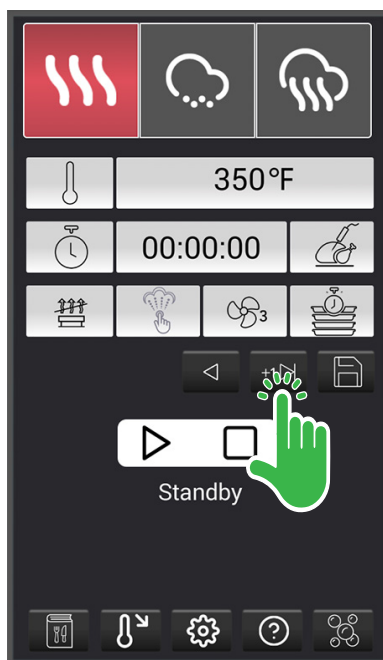


Fig. 30

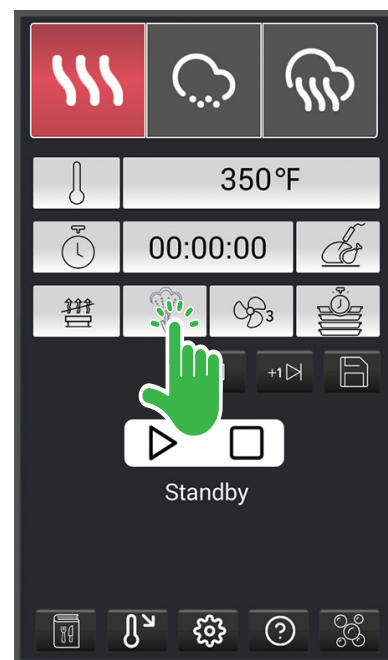


Fig. 31

- Once the recipe has been reviewed and confirmed accurate, touch the Save button (Fig. 32). The **Recipe Folder Selection Screen** will be displayed.

- On the **Recipe Folder Selection Screen** (Fig. 33), touch the folder to save the recipe.

NOTE: If creating a new folder, go to Step 11. Otherwise, go to Step 13.

- Touch the recipe icon in the upper left corner of the display. The **Recipe Folder Name Screen** will be displayed.

- Type the new folder name and touch OK (Fig. 34).

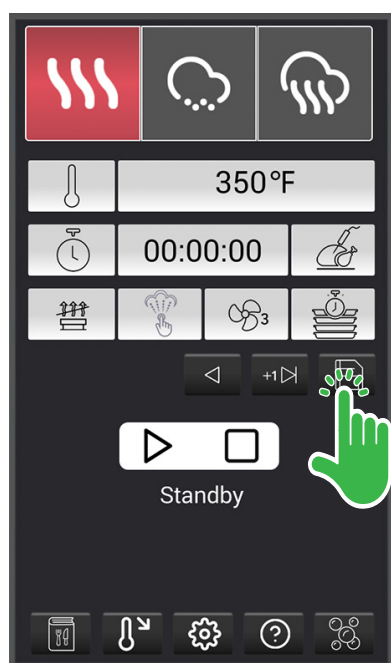


Fig. 32

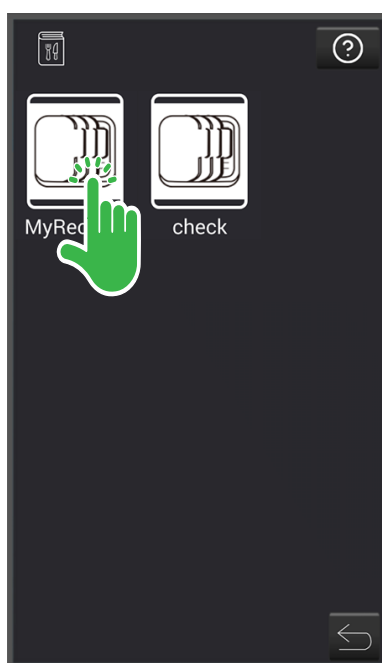


Fig. 33

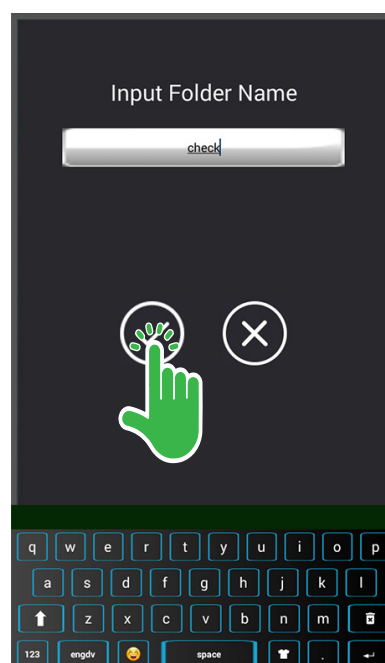


Fig. 34

13. On the **Recipe Name Screen** (Fig. 35), touch the name field and type the recipe name.
14. Touch the image field and select the desired image.
15. Touch the folder fields to assign the recipe to a different folder.
15. Touch OK (Fig. 36) to save the recipe name.
16. To use the recipe, see Recipe Cooking Mode.

NOTE: A recipe can also be made after a Direct Cooking Mode cycle has been run. Touch the save button and follow Steps 9 through 16.

NOTE: A recipe cannot be renamed. If a recipe needs to be renamed, select the recipe and touch the save button. Follow Steps 9 through 16 above to assign the recipe a new name.

DELETING A RECIPE

NOTE: Recipes can be deleted individually or as a group. It is recommended a backup copy is made before deleting recipes from the oven.

1. From the **Home Screen**, touch the Recipe button (Fig. 37). The **Recipe Folder Selection Screen** will be displayed.
2. Touch the recipe folder (Fig. 38) containing the recipe to be deleted. The **Recipe Selection Screen** will be displayed.

NOTE: Use the Back button to return to the **Home Screen** or **Recipe Folder Selection Screen**.

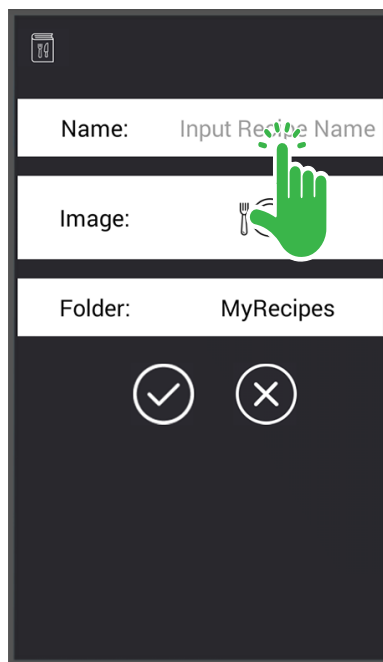


Fig. 35

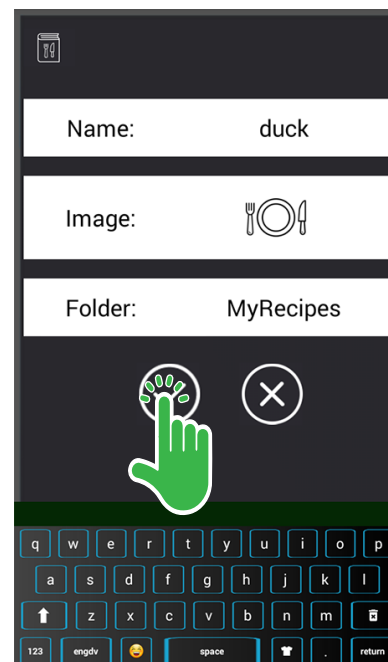


Fig. 36



Fig. 37

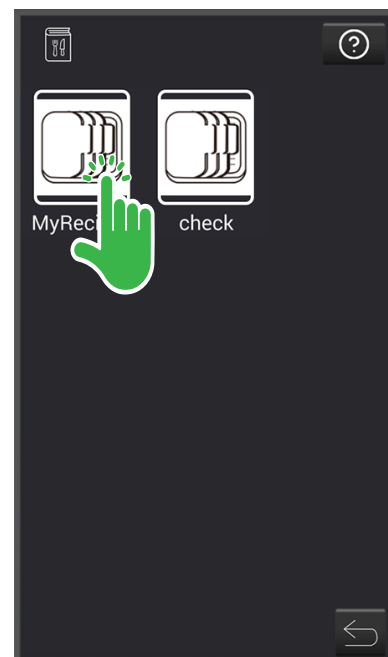


Fig. 38

3. From the **Recipe Selection Screen** (Fig. 39), touch the trash button.

4. Select as many recipes to delete as desired. A red outline (Fig. 40) will identify the recipes selected.

NOTE: All recipes in a folder can be selected by touching the ALL button in the lower left corner of the display.

5. Touch the OK button. The **Confirm Delete Screen** (Fig. 41) will display. Touch the OK button. The recipe will be deleted.

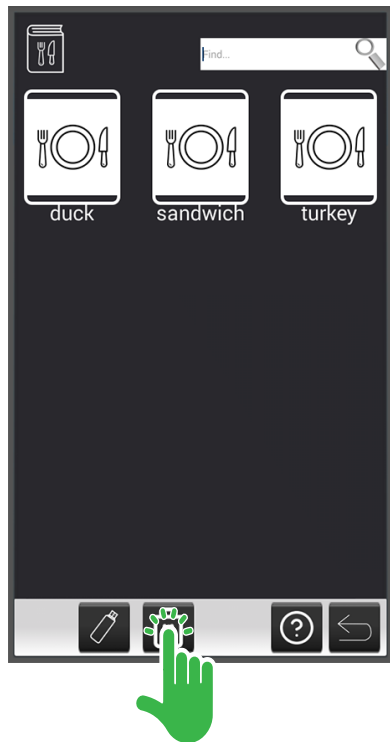


Fig. 39

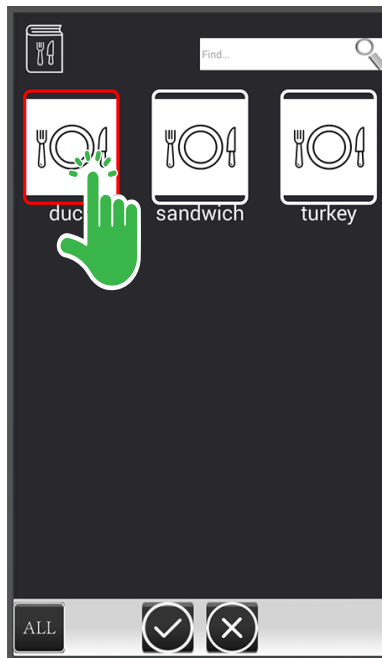


Fig. 40

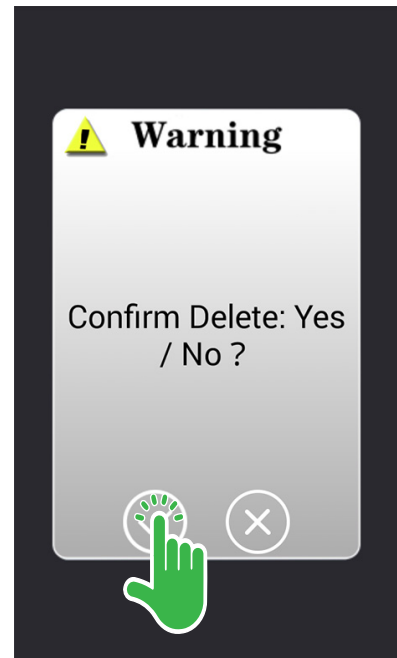


Fig. 41

COPYING RECIPES TO/FROM USB DEVICE

Recipes can be copied to a USB device and/or copied from a USB device. This provides added reassurance that proven recipes will not be lost. This also allows recipes to be created and shared on multiple ovens.

1. Remove the cap (Fig. 42) from the USB port located under the control panel.
2. Insert a suitable USB device.
3. From the **Home Screen**, touch the Recipe button (Fig. 43). The **Recipe Folder Selection Screen** will be displayed and the USB icon will appear in the lower left corner (Fig. 44).
4. Touch the recipe folder (Fig. 44) containing the recipe to be copied. The **Recipe Selection Screen** will be displayed.



Fig. 42

NOTE: Entire recipe folders can be copied by touching and holding the folder until the folder is outlined in red to signify the folder has been selected.

5. From the **Recipe Selection Screen** (Fig. 45), touch the USB button. The **USB Upload/Download Screen** will be displayed.



Fig. 43

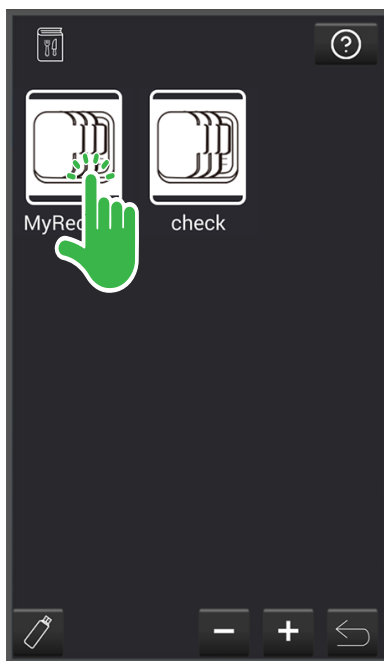


Fig. 44

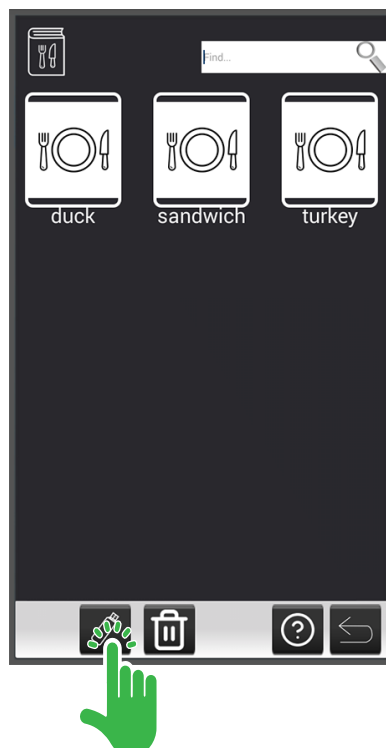


Fig. 45

6. From the **USB Upload/Download Screen** (Fig. 46), touch the Upload or Download button. The **Recipe Selection Screen** (Fig. 47) will be displayed.

7. Select as many recipes to copy as desired. A red outline (Fig. 47) will identify the recipes selected.

NOTE: All recipes in a folder can be selected by touching the ALL button in the lower left corner of the display.

8. Touch the OK button. A warning screen (Fig. 48) will display to ensure the USB is **NOT** removed until copying is complete. Touch the OK button once the display shows "Copying Completed".



Fig. 46

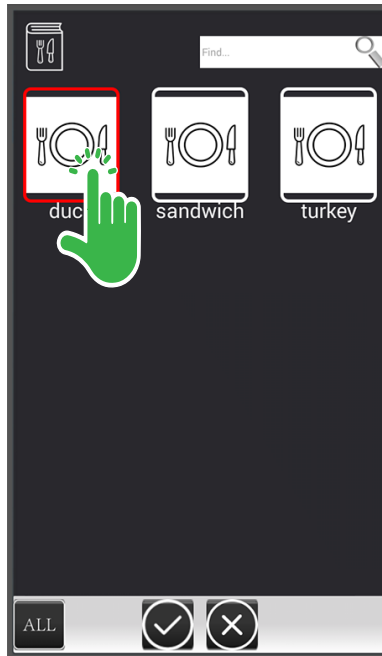


Fig. 47

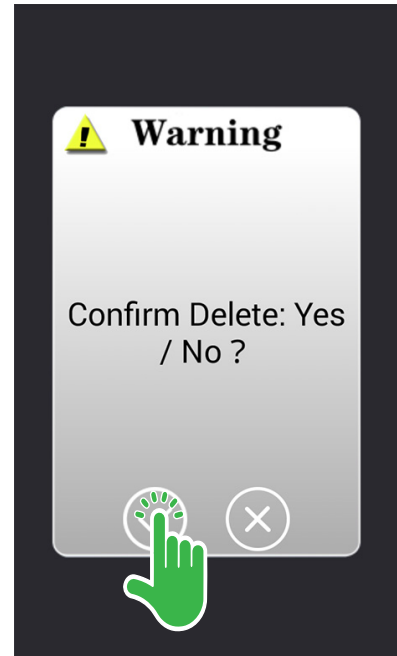


Fig. 48

9. Remove the USB device from the port and replace the USB cap.

MULTIPLE POSITION TIMER MODE

NOTE: The multiple position timers are only available in direct cooking mode. This feature cannot be used with a recipe cooking mode or probe temperature cooking.

NOTE: The available multiple position timers will match the number of available pans that can be loaded into the oven. The 6-pan oven is used as the example in the following steps.

NOTE: Ensure all temperature, humidity, fan speed, and vent position settings are the same for all items being cooked. It is recommended to set these before setting the multiple position timers.

1. From the **Home Screen** (Fig. 49), touch the multi-timer button. The **Multiple Position Timer Screen** will be displayed.
2. Touch the time section (Fig. 50) of the rack position and enter the desired time on the **Multiple Timer Adjustment Screen** (Fig. 51). Touch OK.

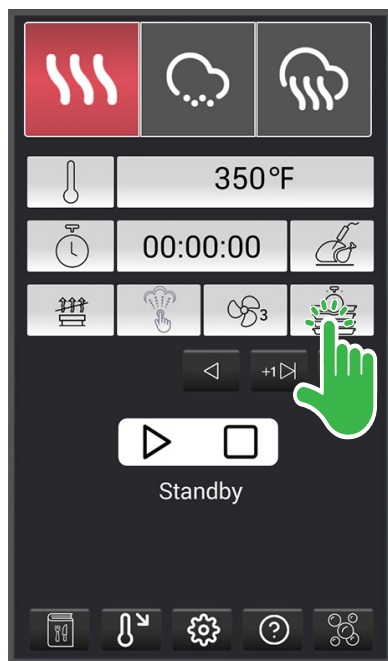


Fig. 49

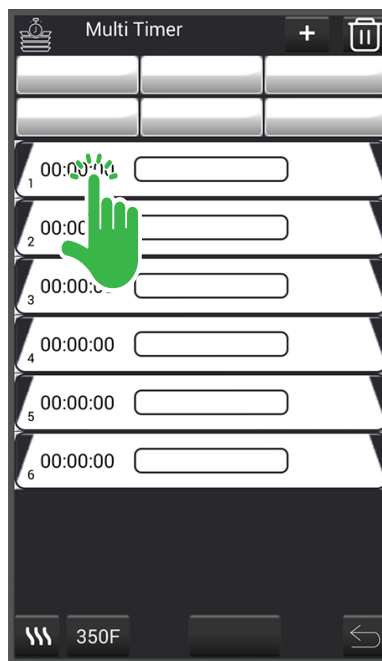


Fig. 50

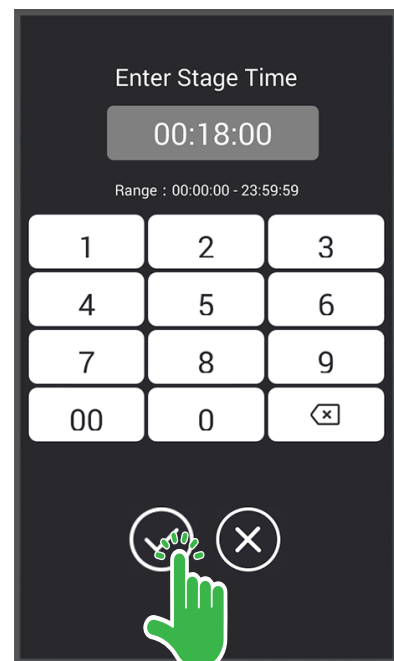


Fig. 51

3. Repeat Step 2 for each rack position.

NOTE: The cooking mode and temperature will display at the bottom of the **Multiple Position Timer Screen**.

4. Touch the back button to return to the **Home Screen**.
5. When a timer position reaches 0, the buzzer will sound and the timer position will have an open door icon next to the timer position.
6. Open the door and remove the product from that position. The remaining timers will continue to countdown when the door is opened.

NOTE: If the pause button on the **Home Screen** is pressed while position timers are active, each timer will pause and not continue countdown until the Start button is touched.

NOTE: Cooking settings can be modified while position timers are active. See Direct Cooking Mode. The timers will continue to count down while adjusting the cooking settings.

NOTE: Labels can be added to each available rack position. See Setting Multiple Position Timer Labels.

SETTING MULTIPLE POSITION TIMER LABELS

1. From the **Multiple Position Timer Screen**, touch the add button (Fig. 52) and type the text for a label. The text typed will appear in one of the blank fields (Fig. 53) above the position timer section of the display.
2. Touch the text field button (Fig. 54), the field will have a red line around the button, and then touch the blank label field on the position timer to assign the timer a name.
3. Repeat Steps 1 and 2 for each rack position label.

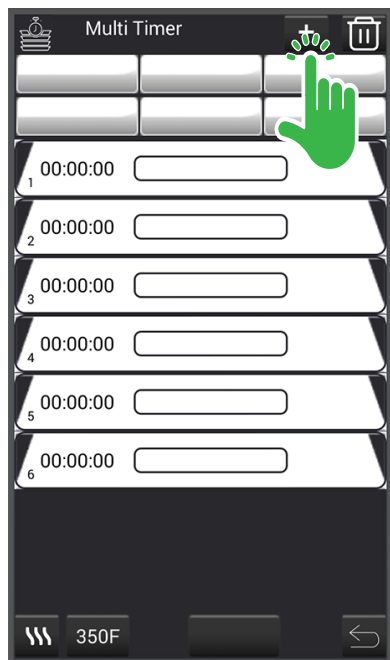


Fig. 52

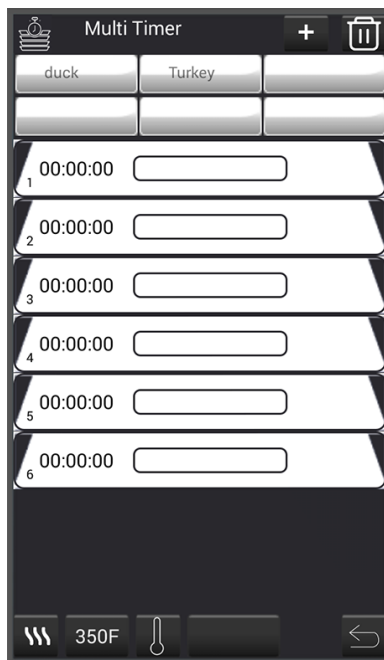


Fig. 53

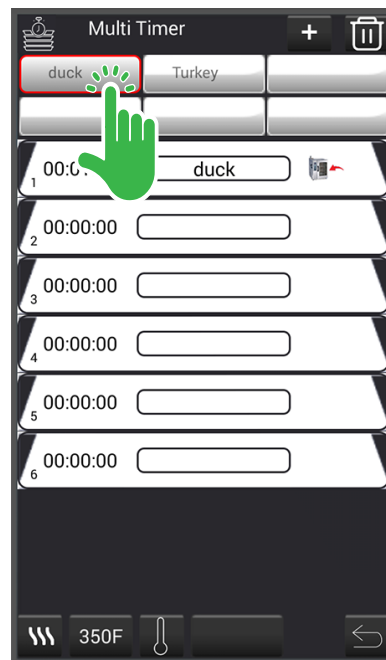


Fig. 54

4. To delete a label, touch the text field button of the text to delete, the field will have a red line around the button, and then touch the Trash icon in the upper right corner of the display.

TEMPERATURE PROBE MODE

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

The oven is set at a constant value. The oven maintains the set temperature throughout the cook cycle and ends when the product reaches the probe temperature setting. This is often associated with low temperature cook and hold methods, but can easily be used for everyday cooking by probe temperature ensuring consistency in final product temperature.

NOTE: Follow these steps after selecting the desired cooking mode and adjusting all other cooking mode settings.

1. Insert the pointed end of the core probe into the product so 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 to the connector below the control panel (Fig. 55).
5. On the **Home Screen** (Fig. 56), touch the probe button. The timer display will change to probe temperature display (Fig. 57).
6. Touch the Probe Temperature Display (Fig. 57) and enter the desired temperature on the **Probe Temperature Adjustment Screen** (Fig. 58). Touch OK.



Fig. 55

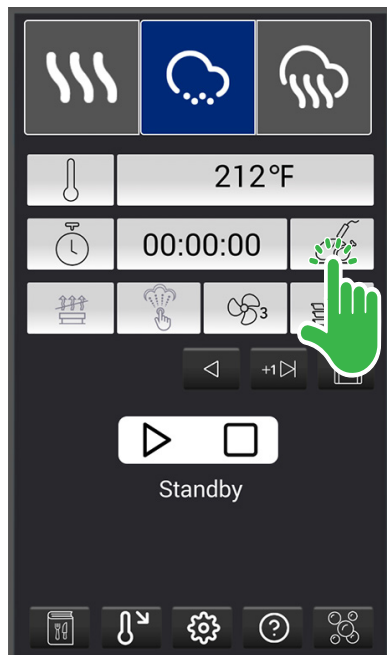


Fig. 56

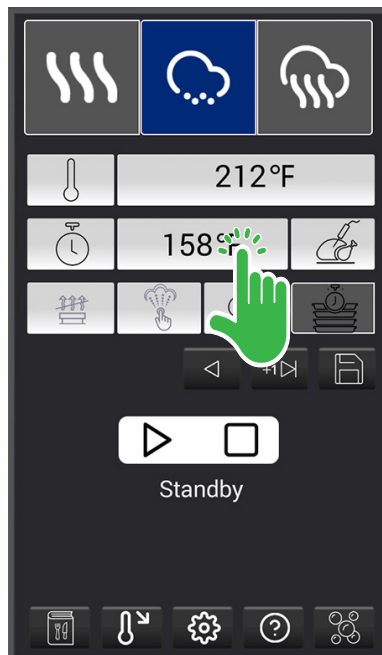


Fig. 57



Fig. 58

7. Press the Start button to begin the cooking cycle.

COOL DOWN MODE

When the oven temperature is higher than the required temperature for cooking, the oven can be quickly cooled to a lower temperature.

1. From the **Home Screen**, touch the Cool Down button (Fig. 59). The **Enter Cool Down Temp Screen** will be displayed.
2. Enter the desired temperature on the **Enter Cool Down Temp Screen** and touch the OK button (Fig. 60). The **Oven Cool Down Screen** will be displayed (Fig. 61).

NOTE: The oven vent will open and the fan speed will increase. The current cavity temperature will be shown and will progressively decrease.

NOTE: Cool down can be cancelled at any time by touching the cancel button.

3. Open the door to allow heat to escape from the cavity quicker.

NOTE: When the oven cavity temperature reaches the set cool down temperature, the forced cooling ends and returns to the **Home Screen** (Fig. 59).



Fig. 59

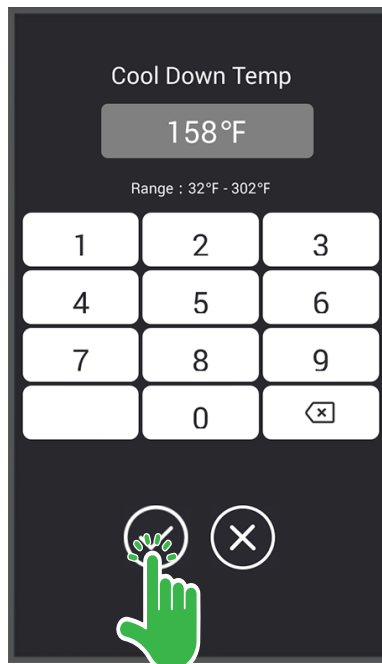


Fig. 60

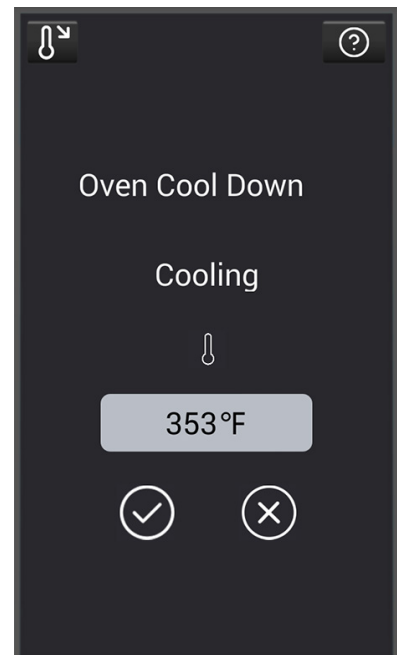


Fig. 61

STAINLESS STEEL EQUIPMENT CARE AND CLEANING

(Supplied courtesy of NAFEM. For more information, visit their web site at 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 chloride free 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 and to prevent corrosion. Daily cleaning and rinsing of the cavity is key to remove the contaminants found in water (even after filtration in some cases and based on water conditions) and food that can compound to higher levels in the cavity/steam generator. Performing daily cleaning and rinsing in conjunction with proper water filtration will prevent corrosion of stainless steel and lime scale build-up. Failure to manage proper daily cleaning and maintenance of water quality can void warranty. The combi oven is equipped with a built-in cleaning function to provide a quick and easy way to keep the oven cavity clean. 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.

When possible, open the door after the cleaning cycle, overnight or for long periods of non-use. This will prolong the life of the gaskets and hinges as it relieves the pressure and ensures the oven cavity is free of moisture.

CLEANING REMINDERS

⚠ WARNING Harsh, corrosive, inappropriate chemicals and untreated water can destroy the protective passivation layer of stainless steel leading to corrosion.

NOTICE The chemical effects of water contaminants, salt, and/or vinegar or other acidic substances during cooking could create long-term effects of corrosion in the cooking compartment. At the end of a cooking cycle with these substances, clean the equipment thoroughly with detergent and rinse well. This is in addition to daily cleaning/rinsing of the cavity.

NOTICE Do not dispose of oil, grease, fat, or solid debris down the drain inside the combi cavity.

NOTICE Do not use cleaners containing grit, abrasive materials, bleach, harsh chemicals, acidic based detergents, chlorides (ammonia), or chlorinated cleaners. Never use hydrochloric acid (muriatic acid) on stainless steel.

NOTICE Do not use steel wool on stainless steel or glass surfaces.

NOTICE Be cautious with new or improved cleaning formulas; use only after being well tested in an inconspicuous place.

NOTE: The liquid detergent for cleaning the cooking compartment must have certain chemical characteristics. The detergent should have a pH level between 8-12 and be free of chlorine/ammonia and have viscosity and density levels similar to water.

NOTE: Pot and pan detergent used in sinks or hand dishwashing detergent is NOT recommended.

NOTE: If detergent is questionable for use, we recommend to share the MSDS sheet with a Vulcan representative for review/approval.

DAILY CLEANING

1. Remove any large pieces of food that may be in the oven cavity before starting a cleaning cycle.
2. Ensure the drain strainer (Fig. 62) in the oven is clear of debris. Lift upward to remove. Empty strainer into trash. Rinse clean in sink. Install into oven. The strainer **MUST** be in place before starting a cleaning cycle.
3. Perform one of the cleaning cycles (see Cleaning Cycles).
4. After every cleaning cycle, use a soft, clean, damp cloth to wipe the door gasket, door glass, and drip trays on the door and below the oven door opening.
5. Clean the drain strainer.



Fig. 62

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. Depress the tabs (Fig. 63) on the vent cover and remove the foam filter.
3. Clean the foam filter in a sink with warm soapy water. Rinse with clean water. Dry the foam filter thoroughly and return filter to the vent and install the vent cover.



VENT COVER

Fig. 63

Door Gasket

1. Clean the gasket-sealing surface of the oven door to remove food acids for maximum gasket life. Do not use any solvents or sharp instruments.
2. Wash with a cloth moistened in a solution of mild detergent and warm water.
3. Rinse with a fresh cloth moistened with warm water to remove all traces of detergent.
4. Wipe dry with a clean cloth.

NOTICE Never apply food oils or petroleum lubricants directly to the door gasket. Petroleum-based solvents and lubricants will reduce the gasket life.

Leave Oven Door Open

Leave the oven door slightly open when the oven is not in use. When the oven is idle, never latch the door and apply pressure to the door gasket. Leaving the gasket under pressure can cause permanent deformation and reduce the gasket life.

Door

⚠ WARNING Allow the glass to cool before cleaning. Cleaning while hot may cause the glass to shatter.

1. Using a plastic scraper, gently scrape heavy buildup off door glass. Residue can be removed with a glass cleaner when oven is cool.
2. Clean the drip tray (Fig. 64) on the bottom of the door with warm soapy water.
3. Clean the drip tray (Fig. 65) under the door opening with warm soapy water.
4. The inner glass doors can be opened by releasing the tabs on the top and bottom of the door while pulling the outer door away from the inner glass.

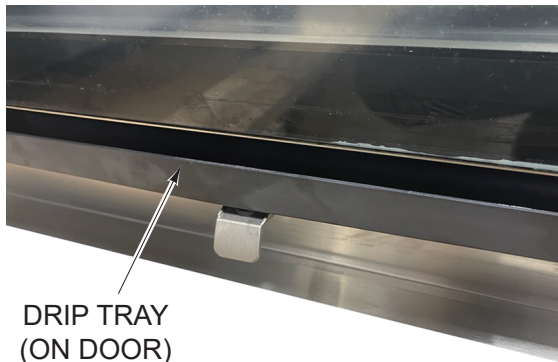


Fig. 64



Fig. 65

4. The inside of the door can be cleaned using a clean cloth moistened with warm, soapy water. Rinse with a clean cloth moistened with clean water, and dry with a clean cloth.

CHANGING THE CHEMICAL BOTTLE

⚠ WARNING The oven cleaner is caustic. Exposure to cleaner chemicals could result in injury. Whenever contact with the oven cleaner or wash water is possible, refer to cleaner packaging and/or the (Material) Safety Data Sheet/(M) SDS, for Personal Protective Equipment (PPE) and handling requirements.

The detergent container is located under the oven. Follow any directions on the detergent container per detergent manufacturer instructions. Replace the empty detergent container with a full one.

1. Remove cap and tube from empty bottle (Fig. 66).
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.



Fig. 66

CLEANING CYCLES

Daily cleaning and rinsing of the cavity is REQUIRED to remove the contaminants found in water and in food that can compound to higher levels in the cavity (even after filtration and based on your water conditions). Performing daily cleaning and rinsing in conjunction with proper water filtration will extend the life of the equipment. Failure to manage proper daily cleaning and maintenance of water quality can void the warranty.

The combi oven has five cleaning cycles.

Cleaning Cycle	Duration	Use Case
Rinse	00:20:00	This cycle provides a quick rinse between cooking cycles. No detergent is used.
Quick	00:40:00	This cycle provides a quick rinse with detergent between cooking cycles.
Standard	00:53:00	This is the standard wash to be preformed at the end of each day. Detergent is used.
Deep	01:24:00	This is a deep clean of the combi oven. This cycle utilizes steam and detergent to provide the oven cavity with a thorough deep cleaning. This cycle should be used weekly.
Delime Generator	02:08:00	This cycle is used to delime the steam generator and the oven cavity. Once this cycle has been started it cannot be cancelled, even with a power interruption. This cycle will use the delime chemical. See Descaling for more information.

RUNNING A WASH CYCLE

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

⚠ WARNING Do not attempt to open the door during a wash cycle.

NOTICE Always prepare the oven for a wash cycle before starting a wash cycle. Ensure large food particles have been removed and the drain strainer is installed and clean. All pans MUST be removed from the interior of the oven before starting a wash cycle. Ensure there is sufficient detergent in the bottle for a cleaning cycle.

1. From the **Home Screen**, touch the Wash Cycle button (Fig. 67).The **Select Wash Cycle Screen** will be displayed.
2. From the **Select Wash Cycle Screen** (Fig. 68), touch the desired cleaning cycle.

NOTICE The Delime Generator cycle cannot be canceled.



Fig. 67

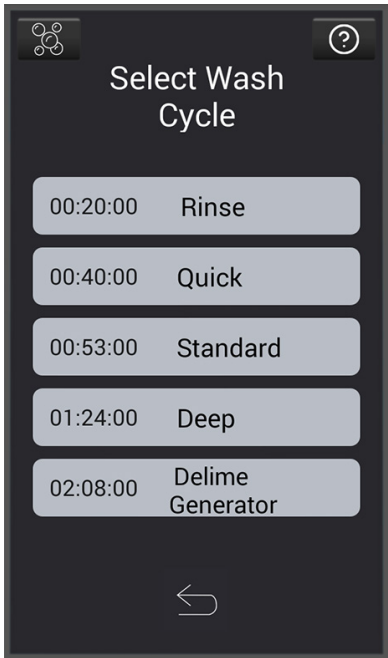


Fig. 68

3. The cleaning cycle will begin and the **Cleaning Cycle In Progress Screen** (Fig. 69) will display showing the time remaining for the cleaning cycle.

NOTE: If the oven temperature is too high to begin a cleaning cycle, the display (Fig. 70) will notify the user and begin a cool down cycle. Once the oven temperature is low enough, the wash cycle will begin.

NOTE: If the cancel button (Fig. 70) is touched during the cleaning cycle, the display (Fig. 71) will notify the user and ask the user to verify the cancel request.

NOTE: If a wash cycle is cancelled while in progress or an error occurs during a wash cycle, chemicals will remain in the oven cavity. The oven will display a warning and prompt the user to perform a rinse wash cycle before allowing the oven to be used.

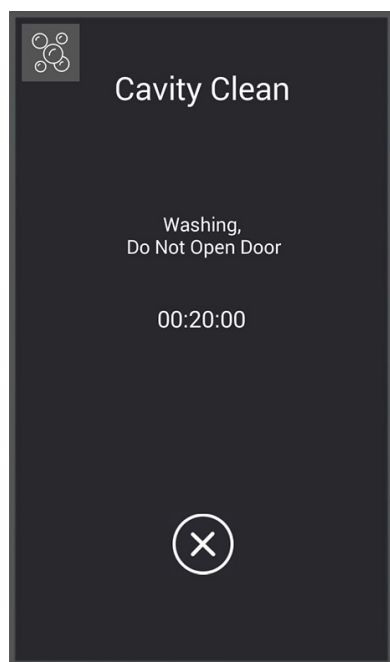


Fig. 69

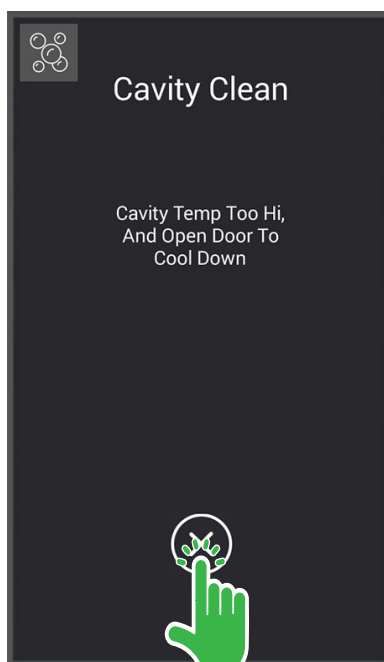


Fig. 70

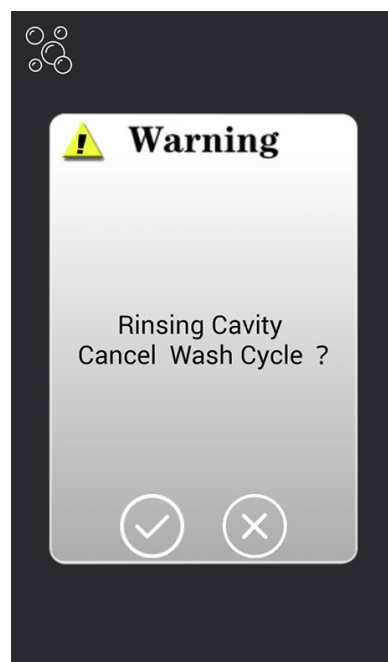


Fig. 71

After the wash cycle, the oven will automatically shut down. It can then be used again.

DESCALING

⚠ WARNING Read and follow the instructions on the deliming material package. Avoid contact with skin and eyes. Wear plastic or rubber gloves and safety goggles when handling. Wash thoroughly after handling. If deliming solution comes in contact with skin or eyes, rinse thoroughly with clean water.

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

Oven cavity deliming 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 deliming of the oven cavity is still required. If lime scale build up becomes visibly noticeable in the oven cavity, deliming should be performed. To prevent the formation of lime scale deposits in the steam generator, the descaling operation is recommended to be performed at least once a month. In areas with hard water, the operation should be increased. Scale build-up can reduce that capacity causing the machine to operate unsatisfactory, or cause service needs. Failure to manage proper descaling of the steam generator and cavity can void the warranty.

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

NOTE: All components inside the oven cavity can remain in the oven during the deliming cycle.

RUNNING A DELIMING WASH CYCLE

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

⚠ WARNING Do not attempt to open the door during a wash cycle.

NOTICE Always prepare the oven for a wash cycle before starting a wash cycle. Ensure large food particles have been removed and the drain strainer is installed and clean. All pans **MUST** be removed from the interior of the oven before starting a wash cycle. Ensure there is sufficient detergent in the bottle for a cleaning cycle.

1. From the **Home Screen**, touch the Wash Cycle button (Fig. 72). The **Select Wash Cycle Screen** will be displayed.
2. From the **Select Wash Cycle Screen** (Fig. 73), touch the Delime Generator cleaning cycle.

NOTICE The Delime Generator cycle **cannot** be canceled



Fig. 72

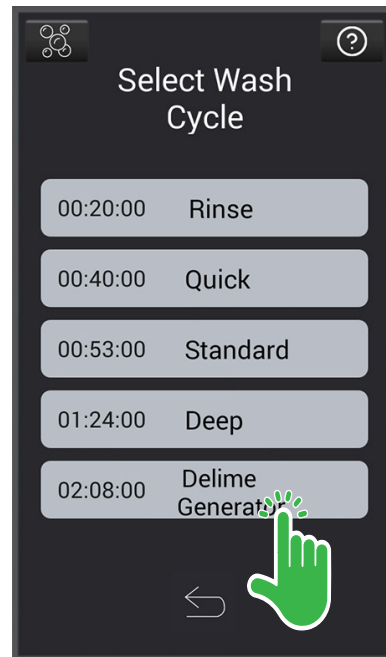


Fig. 73

MAINTENANCE

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

DOOR LOCKING AND GASKET INSPECTION

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

Door Locking Inspection

When closing door, the latch engagement should be smooth with no binding and not require excessive force. The door must exert enough pressure on the gasket to prevent steam from exiting the oven cavity. If the door requires excessive pressure to close and latch, contact your local Vulcan Authorized Service 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 Vulcan Authorized Service for any repairs or adjustments needed on this equipment.

Door Gasket Replacement

Contact your local Vulcan Authorized Service to replace the gasket.

COOLING FAN

Each combi has a cooling fan below the control panel used to circulate air through the controls and components area. Routine monthly inspection of the cooling fan vent is recommended. Make sure the cooling fan is operating and free of obstruction, dust, and debris.

IMPORTANCE OF CLEANING

Daily cleaning and rinsing of the cavity is key to remove the contaminants found in water (even after filtration in some cases and based on water conditions) and food that can compound to higher levels in the cavity/steam generator. Performing daily cleaning and rinsing in conjunction with proper water filtration will prevent corrosion of stainless steel. Failure to manage proper daily cleaning and maintenance of water quality can void warranty. See the CLEANING section in this manual.

OVEN LIGHT REPLACEMENT

Contact your local Vulcan service office if the LED lights on the door assembly need to be replaced.

SERVICE AND PARTS INFORMATION

Contact your authorized service office for any repairs or adjustments needed on this equipment.

ACCESSING THE SYSTEM SETTINGS SCREENS

Some of the internal settings of the combi oven can be customized to fit your own personal needs. The settings are password protected. The following screens and charts are provided to show you what functions or features can be modified or viewed. All system modifications must be made by an authorized Vulcan technician.

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

- 1. From the **Home Screen**, touch the Settings button. (Fig. 74). The **Settings Screen** will be displayed (Fig. 75).
- 2. From the **Settings Screen**, touch the Service Parameters button (Fig. 75), enter the password, and touch OK on the **Enter Password Screen** (Fig. 76).



Fig. 74



Fig. 75



Fig. 76

NOTE: Use the Service Parameters Screen Chart to make any required adjustments or to view available data.

Service Parameters Screen Chart	
Function	Description
Product Count	This will display the Recipe name and the number of times the recipe was used. This data can be cleared.
Run Time Record	This will display information about various functions of the combi and how long or how many times the feature was used. This data can be cleared.
Diagnostic	For service only.
View Event Log	This will display any event issues such as errors. This data can be loaded to an external USB device or cleared.
View System Log	This will display any system issues. This data can be loaded to an external USB device or cleared.
Service Password	This screen is used to reset or change the system password. For service only.

- From the **Settings Screen**, touch the Appliance button (Fig. 77), enter the password, and touch OK on the **Enter Password Screen** (Fig. 78).

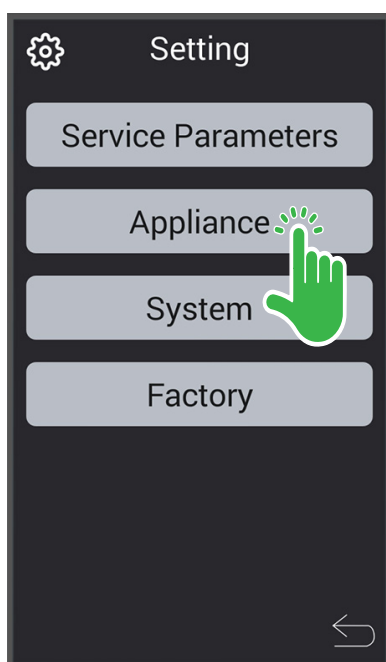


Fig. 77

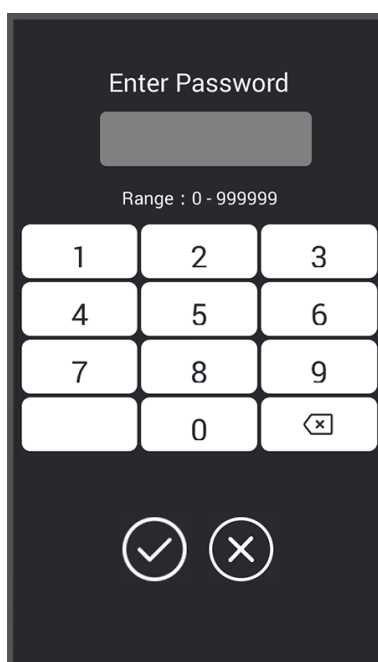


Fig. 78

NOTE: Use the Appliance Screen Chart to make any required adjustments or to view available data.

Appliance Screen Chart	
Function	Description
File Appliance	The information stored under the Appliance Screen can be copied to or from an external USB device. Recipe images can be accessed and edited from this function.
Temperature Unit	Celsius or Fahrenheit. Default = Fahrenheit
Recipe Password	Determines if a password is required to save or modify a recipe. Default = No
Boiler Enabled	Yes
Boiler Preheat Temperature	The preheat temperature can be adjusted. Range = 86°F - 185°F. Default = 176°F
Appliance Password	Determines if the Appliance settings are password protected. Default = Yes
Demo Mode	When enabled, the heat and water inlets are disabled. Requires oven restart to enable. Default = No
Restore Appliance Default	Will reset all appliance settings to factory default.
Core Probe Enables	Default = Yes
Idle Fan Close Time	The idle fan close time can be adjusted. Range = 00:00:00 - 01:00:00. Default = 00:00:01
Show Recipe Detail	Default = Yes
1/2 Power	Default = No
Water Boil Temperature	Default = 207°F
Open-door Time Compensation	The open door time compensation can be adjusted. Range = 0 - 10. Default = 0
Lock Manual Screen	Default = No

Appliance Screen Chart	
Function	Description
Lock Shelf Cook Recipe	Default = No
Force Cool With Water	Default = Yes
Alarm Type	Default = Time
Preheat Delta	The Preheat Delta can be adjusted. Range = -10°F - 70°F. Default = 0°F
Probe Temperature Offset	The Probe Temp Offset can be adjusted. Range = -20°F - 20°F. Default = 0°F
Number of Shelf	Default = 6. This parameter should be preset at the factory for 10-Pan units.
Usage	This will display the kWh being used. This data can be cleared.

4. From the **Settings Screen**, touch the System button (Fig. 79), enter the password, and touch OK on the **Enter Password Screen** (Fig. 80).



Fig. 79

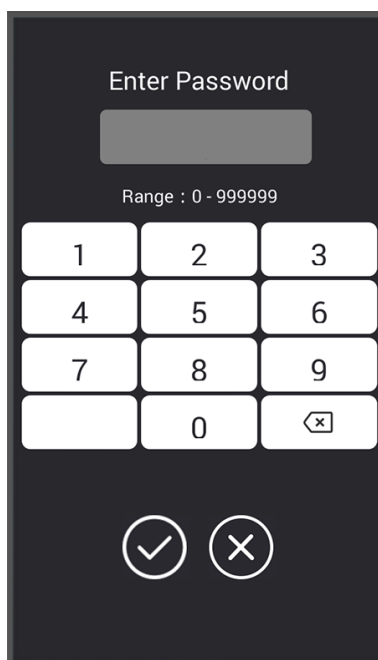


Fig. 80

NOTE: Use the System Screen Chart to make any required adjustments or to view available data.

System Screen Chart	
Function	Description
System Information	This screen will display the current operating system, APP version, control version, and use date.
Language	The language displayed on the screen can be adjusted to any language available on the system. English is the only language available at this time.
Date	Touch to set the date.
Time	Touch to set the time.
Display & Sound	Used to adjust the following: Display Brightness, Default = 10 Alert Volume, Default = 5 Backlight Dim Time, Default = 00:00:00 Screen Beep, Default = Yes Alert Sound, Default = Yes

System Screen Chart	
Function	Description
Update Software	Used to update the software from an external USB device. The USB must be insert before touching this button.
Update Firmware	Used to update the firmware from an external USB device. The USB must be insert before touching this button.

5. From the **Settings Screen**, touch the Factory button (Fig. 81), enter the password, and touch OK on the **Enter Password Screen** (Fig. 82).



Fig. 81

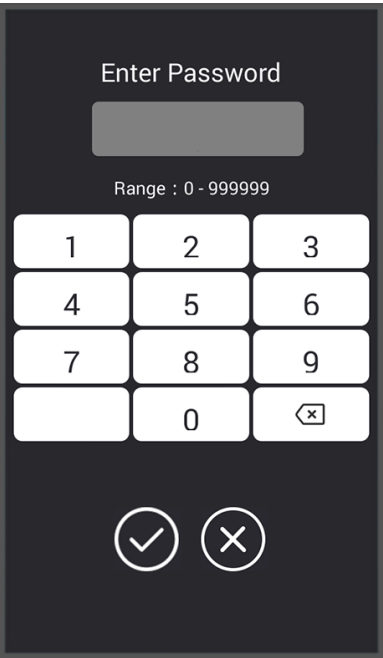


Fig. 82

NOTE: Use the Factory Screen Chart to make any required adjustments or to view available data.

Factory Screen Chart	
Function	Description
Upload Factory Settings From USB	Use to load factory settings from a USB device.
Upload Factory Settings To USB	Use to load factory settings to a USB device.
Machine Type	For service use only.
Max Hot Air Temp	For service use only. Range = 482°F - 575°F. Default = 575°F
Max Steam Temp	For service use only. Range = 212°F - 270°F. Default = 270°F
Max Combi Temp	For service use only. Range = 482°F - 575°F. Default = 575°F
Max Core Probe Temp	For service use only. Range = 194°F - 208°F. Default = 208°F
Fan Speed	For service use only. Default = multi
Fan Direction	For service use only. Default = double
Fan Direction Open Time	For service use only. Range = 00:01:00 - 01:00:00. Default = 00:03:50
Fan Direction Close Time	For service use only. Range = 00:00:05 - 00:30:00. Default = 00:00:10
Spritzer On Time	For service use only. Default = 00:00:02
Spritzer Off Time	For service use only. Default = 00:00:10
Delta T Period Time	For service use only.
Cavity Probe Offset	For service use only. Default = 0°F
Steam Cycle Period	For service use only. Default = 00:00:20
Edit Steam Generator Delime	For service use only.
Edit Cavity Clean	For service use only.
Flowmeter (Pulse/L)	For service use only. Default = 550
Quench Temp	For service use only. Default = 176°F
Cavity Heat Power	For service use only.
Steam Generator Heat Power	For service use only.
Engineering Setting	For service use only.
Fan Max Speed	For service use only. Default = 1500
Restore Factory Default	For service use only.
Wash Pump On Time	For service use only. Default = 00:00:30
Wash Pump Off Time	For service use only. Default = 00:00:06
Steam Generator Inlet Alarm Value	For service use only. Default = 20L
Steam Generator Refill Alarm Value	For service use only. Default = 10L
Machine Heat Type	For service use only.
Machine Real Temp	For service use only.
Factory Password	For service use only.

TROUBLESHOOTING

DIAGNOSTICS

The oven constantly monitors itself to ensure it is functioning properly. If any issues are detected, a warning or notification screen will appear on the display similar to the sample shown (Fig. 83). Touch the OK or cancel button to resolve the issue and clear the message.

- 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.
- Faults are stored in the control board memory until cleared by service.
- If a fault occurs during a cooking program, the program could stop.

NOTE: If the equipment does not operate correctly, try to solve simple problems using this table. Contact Vulcan Service as needed.

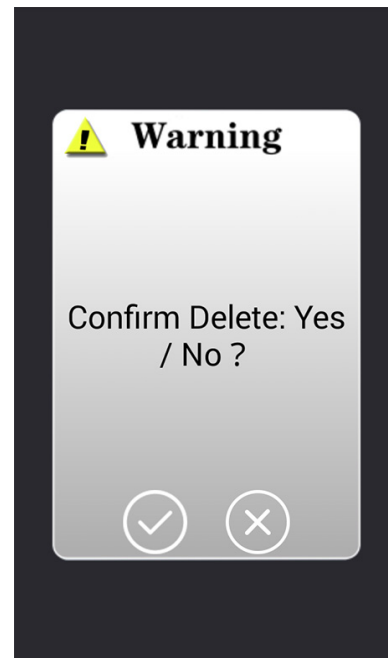


Fig. 83

ISSUE	POSSIBLE CAUSE	SOLUTION
The equipment does not turn on.	The main power is not switched on.	Switch on the main power.
	The circuit breaker was tripped.	Reset the circuit breaker.
Steam is not generated.	The water valve is closed or clogged.	Open the water valve and check filters and in-line water screens.
Water is not drained from the cooking chamber.	The drain is clogged.	Clean the drain screen.
		Free the drain from any residue.
The inner walls are covered with limescale.	The water is too hard; the water softener is empty.	Connect the equipment to a water softener (with dechlorinator).
		Regenerate the water softener or change the filtration cartridges used.
		Delime the cooking compartment.
There are spots in the cooking compartment.	Quality of the water.	Properly filter the water.
	Poor detergent.	Use the recommended detergent.
	Insufficient rinsing.	Run the rinse cycle.
Steam escapes from the door.	Door gasket damaged.	Replace the gasket.
	Door not adjusted correctly.	Contact service.
The gas equipment does not turn on.	Gas valve closed.	Open the gas valve and verify proper pressure supplied to unit.
No water.	The water valve is closed.	Open the water valve and check filters and in-line water screens.
Overheating of the electronic components.	Cooling fans obstructed.	Free the air passage.