

# **Master Series Electric Induction Range**

R·T·C·S. Induction Quad Cook-Top with Convection Oven Base

## Installation, Operation and Maintenance Manual



models

GME36-I14C GME36-I20C

**Original Instructions** 



#### **READ THIS MANUAL**

## **A**Warning

Read this manual thoroughly before installing, operating, or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.

This manual must always be available for reference at the place of operation.

This manual is intended for kitchen consultants, cabinet designers, fabricators, installers, owners and operators of our appliances.

Owners, consultants, fabricators and designers:

In order for the appliance to function safely and normally, you must read and understand all specific and critical requirements (such as location, ventilation, clearance) when designing the location and/or the cabinet for the appliance.

Installers, operators and staff:

Date of Installation

For your safety and safety of the others, you must observe all safety instructions during installation, operation and maintenance of the equipment.

Should you require technical assistance, call your factory authorized service agent or distributor. Always have your model and serial number available when you call.

Your Factory Authorized Service Company and Contact					
Information					

Your Equipment Supplier and Contact Information
Model Number
Serial Number

#### **ABOUT THIS MANUAL**

Throughout this manual, the induction appliance model indicated on the cover page is referred to as **appliance**, **induction appliance** or **equipment**.

A period (.) is used in this manual as the decimal separator. Original measurements are in imperial. Measurements in metrics are provided for reference.

Not ALL models, options and accessories are available in all geographical regions. Please consult your equipment supplier for the availability of the specific products in your region.

#### WARRANTY

Please visit our website at www.garland-group.com to review or download a copy of the Warranty Statement.

## **Safety Notices**

#### **DEFINITIONS**

#### **A** DANGER

Indicates a hazardous situation that, if not avoided, will result in death or serious injury. This applies to the most extreme situations.

#### **A** Warning

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

#### **∴** Caution

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

#### **Notice**

Indicates information considered important, and is used to address practices not related to physical injury. For example, messages relating to property damage.

NOTE: Indicates useful, extra information about the procedure you are performing.

Reference: ANZI Z535.6-2011

#### SAFETY SYMBOLS AND WARNINGS ON THE APPLIANCE



This symbol alerts you to a hazardous situation that WILL or COULD cause serious bodily harm or death. Be alert and implement relevant safety precautions.



#### **DANGER - HIGH VOLTAGE**

This dangerous voltage warning symbol indicates a risk of electric shock and hazards from dangerous voltage.



#### **Electromagnetic Field**



RISK OF FIRE OR ELECTRIC SHOCK! DO NOT OPEN!

To reduce the risk of fire or electric shock, do not remove or open cover. No user-serviceable parts inside.

Refer servicing to qualified personnel.

## CAUTION / ATTENTION

DISCONNECT FROM SUPPLY CIRCUIT BEFORE OPENING Υ COUPER L'ALIMENTATION ELECTRIQUE AVANT D'OUVRIR Η DESCONECTAR DEL CIRCUITO DE SUMINISTRO ANTES DE ABRIR Αποσυνδέστε από τον καλωδιακό εξοπλισμό πριν ανοίξετε الفصل الجهاز عن الدائرة الكهربية قبل الفتح.

#### **DISCLAIMERS**

#### **A** DANGER

Disregarding any safety instructions may cause harm to people, the surroundings, and the equipment. The manufacturer and/or authorized representative are not responsible for any damages or personal injury caused by failure to observe any safety instructions. Risks involved when disregarding safety instructions include, but not limiting to:

- Death or injury caused by electric shock.
- Burn injury caused by contacting hot cooking surface, cookware, or oil and grease.
- Damage to the equipment caused by using unsuitable cookware.

#### **A** DANGER

Do not install or operate equipment and/or accessories that have been misused, abused, neglected, damaged, or altered from that of original manufactured specifications.

#### **A** DANGER

Contact the manufacturer if you intend to make any changes on the equipment. For safety reasons, always use genuine parts and accessories approved by the manufacturer or authorized representative. Refer to the warranty documents for your equipment.

## **A** DANGER

Owners and operators are cautioned that maintenance and repairs must be performed by an authorized service agent using only genuine replacement parts. The manufacturer will have no obligation with respect to any product that has been improperly installed, adjusted, operated or not maintained in accordance with national and local codes and/or installation instructions provided with the product or any product that has its serial number defaced, obliterated or removed, and/or which has been modified or repaired using unauthorized parts or by unauthorized service agents.

#### **A** DANGER

Improper installation, adjustment, alteration, service, or maintenance of this appliance or installation of a damaged appliance can result in DEATH, INJURY, EQUIPMENT DAMAGE, and void the warranty.

#### **A** DANGER

All utility connections and fixtures must be maintained in accordance with local and national codes.

## **A** Warning

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. Never use flammable oil soaked cloths or combustible cleaning solutions for cleaning.

#### **A**Warning

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by a person responsible for their safety. Do not allow children to play with this appliance.

### **▲**Warning

This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm. Operation, installation, and servicing of this product could expose you to airborne particles of glass-wool or ceramic fibers, crystalline silica, and/or carbon monoxide. Inhalation of airborne particles of glass-wool or ceramic fibers is known to the State of California to cause cancer. Inhalation of carbon monoxide is known to the State of California to cause birth defects or other reproductive harm.

#### **A** Warning

Authorized Service Representatives are obligated to follow industry standard safety procedures, including, but not limited to, local/national regulations for disconnection / lock out / tag out procedures for all utilities including electric, gas, water and steam.

#### **Notice**

This appliance is not approved or authorized for home or residential use, but is intended for commercial applications only. The manufacturer and/or authorized representative will not provide service, warranty, maintenance or support of any kind other than in commercial applications.

#### **Notice**

Routine adjustments and maintenance procedures outlined in this manual are not covered by the warranty.

NOTE: Proper installation, care and maintenance are essential for maximum performance and trouble-free operation of your equipment. Visit our website for manual updates, translations, or contact information for service agents in your area.

#### **CORRECT DISPOSAL OF THIS PRODUCT**



This marking shown on the product indicates that the product should not be disposed as household waste or regular commercial waste. Instead it shall be handed over to the applicable collection

point for the recycling of electrical and electronic equipment. By ensuring this product is disposed correctly, you will help prevent potential harm to the environment or human health, which could otherwise be caused by inappropriate waste handling of this product.

For more detailed information regarding recycling of the product, please contact your local city office or your waste disposal service.

#### **▲** DANGER

Induction appliances, sent for disposal, can be brought back into operation and their use must be avoided.

NOTE: The appliance is built with common electrical, electromechanical and electronic parts. No batteries are used.

NOTE: The owner and operator are responsible for the proper and safe disposal of the appliance.

#### **Important**

Additional Safety Notices are stated in the relevant sections throughout the manual.

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# Section 1 General Information

## **Description of Product**

ALL IN ONE, the Garland Master Series Induction Range is engineered to incorporate Garland Induction with Garland's Convection Oven. Garland's Induction cook tops with Boil Dry Protection and Automatic Pan Detection cook faster and are energy efficient. The well-crafted convection oven base is reliable, durable and functional.

#### **GARLAND INDUCTION**

The RTCS®/RTCSmp® Induction Technology monitors continuously in realtime, the energy supply, temperature of the cook zone, and the state of the components such as the induction coil. This monitoring system ensures the most efficient energy transfer, as well as maximizes safety:

- Safety functions such as Automatic Pan Detection and Boil Dry Protection are therefore guaranteed.
- The appliance generates power only when a pan is in contact with the cook zone surface.
- When a malfunction occurs, the integrated fault diagnostic system reports the malfunction instantly.

Your induction appliance is versatile and suitable for many applications throughout the day, such as cooking, warming up, keeping warm, flambéing and roasting of food. All these applications are possible because:

- Temperature control is instantaneous and precise.
   Instant energy transmission from inverter coil to the bottom of cookware, allows for fast startup time.
- High power is possible for braising application and quick sauté.
- High power also means you can heat up a large stockpot quickly (3.5kW coil or above).

NOTE: To guarantee the reliability and performance of the appliance, you must use the recommended types and sizes of pans with the appliance. See section 3 Operation.

#### **GARLAND CONVECTION OVEN**

- Oven cavity is stainless steel and fully insulated.
- Flat convection motor allows for flush mount at the back.
- Backward inclined fan blade allows for efficient air flow and quiet operation.
- Chrome plated, removable rack guides with one (1) oven rack.
- Heat resistant, cool-to-the-touch oven door handle.
- Off-Cook-Cool, 3-position convection fan control.

#### **PRODUCT COMPLIANCE**

Full certification pending, CSA.

The GME36 series Induction Range complies with the standards CSA 22.2 No. E60335– latest edition, the UL197 – latest edition and the NSF#4 – latest edition. The installation and connection of this appliance must comply with current codes. In Canada – The Canadian Electrical Code Part 1 and in the USA – The National Electrical Code.

EMC - FCC Part 18 Compliant \*

Industry Canada Compliant ICES001 (CS1PR11)

Sanitary-NSF4

\* WARNING FCC Notice: Part 18 This equipment has been tested and found to comply with the limits for industrial and commercial ISM equipment, pursuant to part 18 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation, operation and maintenance manual, may cause harmful interference to radio communications. Operation of these equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

#### **ACCESSORIES**

Included with the appliance:

Description	Part Number	Quantity
Oven Rack	4522409	1
25-7/16" x 20" [646 x 508mm]		
Air Filter	4533038	1
16.16" x 3.38" x 0.38"		
[410 x 86 x 10mm]		

Not included with the appliance:

Induction cooking equipment requires **Induction Ready** pans to operate. Please consult your equipment supplier for a list of our pan selection and prices.





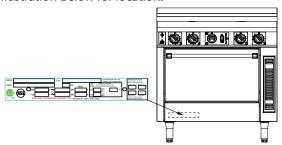


General Information Section 1

## **Serial Plate Location**

The serial plate specifies the model number, serial number, and electrical specifications of the appliance.

See illustration below for location.



## **Model Number**

The model number is located on the serial plate. This manual covers the following models:

GME36-I14C, GME36-I20C

#### **READING THE MODEL NUMBER**



1	G	Garland Brand
2	M	Master Series
3	E	Electric Equipment
4	36	Width, 36" model
5	I	Garland Induction Range Top
6	14, 20	Four (4) 3.5kW or 5kW Hobs
7	С	Garland Convection Oven

## **Serial Number**

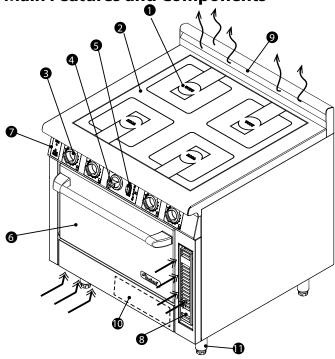
The serial number is located on the serial plate.

#### **READING THE SERIAL NUMBER**

Example: 16 04 1001 00289

1	Year of manufacture: 2015 (15), 2016 (16),
2	Month of manufacture: <b>01</b> , <b>02</b> , <b>03</b> , <b>04</b> ,
3	Factory Code: Garland (1001)
4	5-Digit Sequential Number

## **Main Features and Components**



Direction of airflow—fresh air.

Direction of airflow—hot exhaust air.

## **Garland Induction Range Top**

- 1. 4x 3.5kW or 5.0kW RTCSmp Induction hobs
- 2. Ceran® glass 6mm thick
- 3. Induction operation control with indicator lamp.
  Control switch has a 360° rotation, power levels from 1 to 12.

#### **Garland Convection Oven**

- 4. Oven operation control (in F or C, specified on order)
- 5. Off-Cook-Cool, 3-position convection fan control
- 6. Efficient and quiet 5kW electric convection oven

#### **Air Management System**

- 7. Indicator lamp for internal cooling fans
- 8. Removable, dishwasher-safe fresh air intake filter, hidden behind access panel. Filter must be inspected and cleaned at least once a week.
- 9. Air system exhaust vent

#### **Other Features**

- 10. Integrated circuit breaker, for both induction and oven, hidden behind kick-plate.
- 11. 6-inch [152mm] adjustable legs. Option: Polyurethane (non-markings) swivel casters with front brakes or deck fasteners.

# Section 2 Installation

#### INSTALLATION SAFETY—DISCLAIMER

## **A** DANGER

Installation must be carried out by registered installation contractors only.

The contractors are responsible for interpreting all instructions correctly and performing the installation in compliance with all applicable national and local regulations.

The warning signs and serial plates on the equipment must strictly be followed.

## **A** Warning

This equipment is intended for indoor use only. Do not install or operate this equipment in outdoor areas.

## INSTALLATION SAFETY—CLEARANCE AND VENTILATION

#### **A** DANGER

#### **Risk of Fire or Shock or Equipment Failure**

All minimum clearances must be maintained. Air intake vents and exhaust vents must not be blocked or be restricted by the installation.

#### **∴** Caution

This equipment must only be operated under an approved ventilation system in accordance with all applicable national and local regulations. Exceptions may apply.

#### **∴** Caution

Where this appliance is to be positioned in close proximity to a wall, partitions, kitchen furniture, decorative finishes, etc., it is recommended that they be made of non-combustible material, if not, they shall be clad with suitable non-combustible heat-insulating material, and that the closest attention be paid to fire prevention regulations.

(P/N 2624300)

#### **∴** Caution

Do not position the air intake vent near steam or heat exhaust of another appliance.

#### INSTALLATION SAFETY—ELECTRICAL

## **A** DANGER

All electrical connections must be carried out by a certified electrical contractor, who is responsible for the correct rating and installation of the appliance. The contractor has to comply with all legal safety regulations and all applicable national and local electrical codes.

#### **A** Warning

Markings and warning labels mounted directly on the equipment must be observed at all times and kept in a fully legible condition.

### **▲**Warning

This equipment must be grounded.

#### **Notice**

Ensure the supply voltage and the line current match the specifications given on the serial plate affixed to the appliance. Wrong voltage will damage the appliance. A stable power supply must be provided.

#### **Notice**

Always refer to the serial plate on the appliance to verify the electrical data. When the data listed on the serial plate is different than that listed in this manual, contact the manufacturer or the authorized representative. Installation Section 2

#### PERSONAL PROTECTION

## **A** DANGER

All utilities (gas, electric, water and steam) must be OFF to all equipment and locked out of operation according to national/regional, as well as company approved practices during installation, maintenance and servicing. Always allow appliance to cool.

## **A DANGER**

Use appropriate safety equipment during installation, maintenance and servicing.

## **A** DANGER

Never stand, sit, or lean on the equipment! They are not designed to hold the weight of an adult, and may collapse or tip if misused in this manner.

## **A** DANGER

To avoid cardiac pacemaker malfunction, consult your physician or pacemaker manufacture about effects of electromagnetic field on your pacemaker.

## **A** Warning

Markings and warning labels mounted directly on the equipment must be observed at all times and kept in a fully legible condition.

### **A** Warning

Risk of burns from high temperatures. You may get burnt if you touch any of the parts during operation. Surfaces close to the cooking area including side panels may get hot enough to burn skin. Use extreme caution to avoid coming in contact with hot surfaces or hot grease. Wear personal protective equipment.

#### **∴** Caution

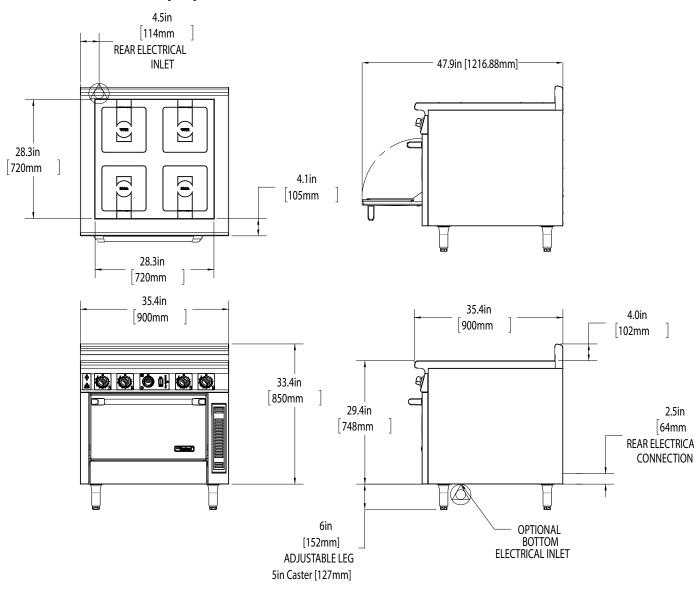
Use caution when handling metal surface edges of all equipment.

Section 2 Installation

## **Specifications**

## **DIMENSIONS**

Measurements in inches and [mm].



### **WEIGHTS**

Model	Ship Weight (approximate)		Shipping Crate Dimensions
	kg	lb	
GME36-I14C	200	440	45" x 45" x 45"
GME36-I20C	200	440	45" x 45" x 45"

## **OPERATING CONDITIONS**

For the appliance to function properly, the following conditions must be maintained.

Maximum Tolerance of Nominal Supply Voltage	+5 /-10 %
Supply frequency	50/60 Hz
Minimal Diameter of Induction Pan	12cm [5"]

Installation Section 2

#### **INSTALLATION CLEARANCE**

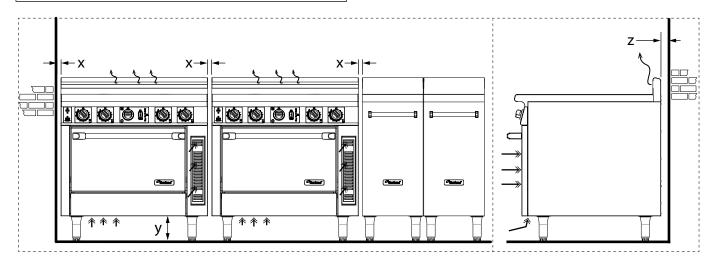
## **A** DANGER

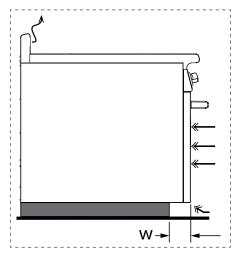
## **Risk of Fire or Shock or Equipment Failure**

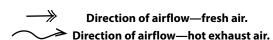
All minimum clearances must be maintained. Air intake vents and exhaust vents must not be blocked or be restricted by the installation.

#### NOTE:

- Adequate clearance must be provided for servicing, ventilation and proper operation.
- The range must be kept clear of combustible material.







Clearance Dimension	MI	MINIMUM			
From Non-Combustible	mm	inch			
х	0	0			
y (with legs)	152	6			
y (with casters)	127	5			
z	0	0			
w *	76	3			

<sup>\*</sup> When installed without legs on a non-combustible curb or platform, the front of the unit should extend at least 3 inches or 76 mm such that the ventilation gap will not be blocked.

Section 2 Installation

#### **ELECTRICAL SPECIFICATIONS**

Model	Voltage	Total kW	Loading per Phase (kW)		Amperage (A)					
			X-Y	X-Z	Y-Z	Z-N	1 Phase	х	Y	Z
GME36-I14C	120V / 208V	Total 21.1kW (Induction Range Top 4x 3.5kW, Oven 5.1kW)	10.4	5.3	5.3	0.1	Not available	66.4	66.4	44.3
GME36-I20C	120V / 208V	Total 26.8kW (Induction Range Top 4x 5.0kW, Oven 5.1kW)	12.3	7.2	7.2	0.1	Not available	82.2	82.2	60.3

#### **Electrical Cable**

 Power supply cable is not included. This equipment is intended to be installed with fixed permanent wiring.
 All electrical safety warnings must be complied. See installation safety at the beginning of this chapter.

#### **Three Phase Connection**

 Unless otherwise noted, all ranges are shipped from the factory for three phase connection.

## **Wiring Diagram**

• Wiring diagram is shipped loose with the equipment.

## **Installation Instructions**

#### **UNCRATING**

- Check the crate for possible damage sustained during transit. Carefully remove the appliance from the crate and again check for damage. Any damage to the appliance must be reported to the carrier immediately.
- All packing material must be removed from the appliance. The protective material covering the stainless steel must be removed immediately, after the unit is installed.
- All ranges are shipped from the factory with legs or casters fitted unless specially ordered without.
- Do not remove permanently affixed labels, warnings or data plates from the appliance, for this may void approvals and create a safety hazard.

#### **LEGS**

- All ranges are shipped from the factory with legs installed unless otherwise specified. Legs must be adjusted to a minimum height of 6" [152mm] in order to comply with NSF standards. See Installation Clearance.
- When the range is specified for dais or cove base mounting, it is shipped less legs.

#### **CASTERS**

- The front casters on the unit are equipped with brakes to limit the movement of the range without depending on the electrical connection to limit appliance movement.
- A restraint can be attached to the unit near the electric connection. If the restraint is disconnected, be sure to reconnect it after the range has been returned to its originally installed position.

Installation Section 2

#### **LOCATION**



Read and understand all installation safety instructions regarding Clearance and Ventilation at the beginning of this chapter.

- The range should be installed on a firm, smooth and level floor designed to withstand the weight of the fully laden appliance.
- Place the range in installed location and level from side to side, back to front, and diagonally. This leveling must be done with the unit under the hood and in its normal operating position.
- Similar to other electronic equipment, induction equipment is sensitive to moisture and high heat.
   Protect the induction appliance from heat, steam and grease generated by other equipment, such as oven, deep fryer, pasta cooker, steamers, and water bath.
- The controls on the front panel must not be blocked or obstructed.
- Keep the induction appliance away from combustible materials, vapors or liquids.
- If the range is to be dais or cove mounted, the base on which it is to be set should be level. Otherwise, the range must be shimmed to level.
- Legs / casters must be fitted to the oven where it is installed on a combustible floor.

### **VENTILATION**



Read and understand all installation safety instructions regarding Clearance and Ventilation at the beginning of this chapter.

- The induction range is equipped with an integrated air management system for efficient air cooling and exhaust. Air intake and exhaust vents must never be obstructed.
- Ensure the induction appliance does not take in hot ambient air or steam from another appliance, especially when the appliance is installed next to heat generating equipment such as fryers or ovens.
- The area in which the appliance is installed must be adequately ventilated to provide air for removal of steam, heat generated by the appliance, etc.

#### **ELECTRICAL CONNECTION**

### **▲** Warning

Prior to installation, check the electrical supply to ensure input voltage and phase match the equipment voltage rating and phase. Many local codes exist, it the responsibility of the owner/installer to comply with these codes.

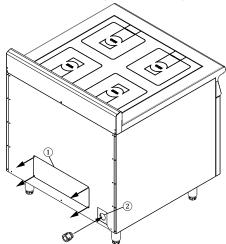
#### **A** Warning

This appliance must be grounded and all field wiring must conform to all applicable local and national codes.

- Power supply cable is not included. This equipment is intended to be installed with fixed permanent wiring.
- Adequate means of disconnection of the supply must be provided in all poles in accordance to all applicable local and national codes.
- It is recommended to allow enough slack on the electrical cord to allow the appliance to be pulled out for proper cleaning and maintenance.
- On ranges the supply entrance is located at the rear or alternatively on the main bottom. The supply terminal block is accessible from the front.

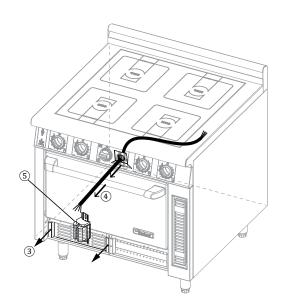
#### To route cable from the back:

- 1. Remove the access panel from rear.
- 2. Install cable connector (NOT Included) to inlet.



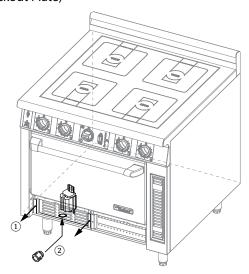
- To access the terminal block, open the kick-plate (not shown) below the oven section and then remove the electrical panel.
- 4. Feed cable through wireway (not shown) to terminal block at front.
- 5. Make connections at terminal block (3 phases, neutral and ground).

Section 2 Installation

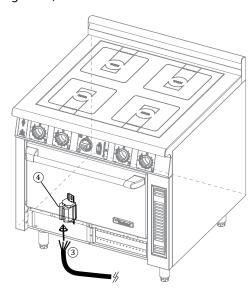


#### To route cable from the bottom:

- 1. To access the terminal block, open the kick-plate (not shown) below the oven section and then remove the electrical panel.
- 2. Install cable connector (NOT Included) to inlet. (Bottom Knockout Plate)



- 3. Feed cable through the bottom inlet.
- 4. Make connections at terminal block (3 phases, neutral and ground).



## Commissioning

- 1. Open the kick-plate below the oven section and locate the circuit breaker. Ensure all circuit breakers are set to the ON (1) position.
- 2. Ensure that all controls are in the OFF position and turn on the main electrical supply.
- 3. Perform function test for each section of the range in accordance with the instructions given in Induction/ Oven Function Test and the Operating Instructions.
- 4. Check that the product functions correctly and that the voltage supply to the unit does not drop more than 5% when all sections are operated simultaneously.

Installation Section 2

## **Function Test**



- Before Function Tests, read and understand all installation safety instructions regarding Personal Protection.
- Observe also ALL operation safety requirements in section 3 Operation.

#### **IMPORTANT: AIR MANAGEMENT SYSTEM**



Incorporated in the Range are internal cooling fans to manage airflow efficiently. These cooling fans are turned on automatically when:

- Any one of the induction hob is ON.
- Oven COOK/COOL switch is "I" (ON).
- Internal thermostat reads above set temperature.

#### INDUCTION COOK-TOP FUNCTION TEST

Testing procedure, for each induction hob:

- 1. Examine the cookware for induction cooking:
  - Pans must be induction ready. See details in section 3 Operation.
  - Minimum pan size: Pan must have bottom diameter larger than 12cm [5"]. Otherwise, the pan will not be heated. This is a safety feature. The sensors do not detect pan smaller than this minimum size.
- 2. Put some water in an induction pan and place it in the center of a cook-zone.
- 3. Turn the control knob to a ON position. The indicator lamp illuminates and the water is heated.



ON Position Any position between power levels "1" to "12". Indicator lamp. is on.



OFF Position "0" on dial is pointing to the Indicator lamp. The lamp is off.

4. The Air System Cooling Fan indicator lamp is ON.

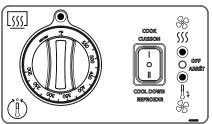


- Remove the pan away from the cook-zone.
   NOTE: When power transmission to the pan bottom stops, the indicator lamp blinks.
- 6. Place the pan back on the cook-zone. The heating process resumes.
  - NOTE: The indicator lamp illuminates continuously again when energy is being transferred to the pan.
- Turn the control knob to the OFF position. The heating process stops; the indicator lamp goes off.

#### **OVEN FUNCTION TEST**

Test the oven heat and fan functions using different COOK/COOL, Dial, and door settings according to the table below.

Oven dial is in the OFF position when °F or °C is pointing to the dial indicator lamp; the lamp is OFF.



COOK/ COOL Switch	Oven Dial	Door	Oven Heat Elements	Oven Fan	Air System Fan
0	OFF / Set Temp.	OPEN / CLOSE	OFF	OFF	ON* / OFF*
I	OFF	OPEN	OFF	OFF	ON
I	OFF	CLOSE	OFF	ON	ON
I	Set Temp.	CLOSE	ON	ON	ON
I	Set Temp.	OPEN	OFF	OFF	ON
II	OFF / Set Temp.	OPEN	OFF	ON	ON* / OFF*
II	OFF / Set Temp.	CLOSE	OFF	OFF	ON* / OFF*

<sup>\*</sup> Air system fan is ON if internal thermostat reads above set temperature; OFF if thermostat reads below set temperature.

If the appliance does not function as expected, refer to section 5 Troubleshooting.

# Section 3 Operation

#### **OPERATION SAFETY—DISCLAIMER**

#### **A** DANGER

The on-site supervisor is responsible for ensuring that operators are made aware of the inherent dangers of operating this equipment.

## **A** DANGER

Risk of fire/shock/equipment failure. All minimum clearances must be maintained. Do not obstruct vents or openings.

## **A** Warning

This equipment is intended for indoor use only. Do not install or operate this equipment in outdoor areas.

#### **Notice**

The reliability of the appliance can only be guaranteed when it is used properly. The appliance must always be operated within the limits and/or the operating conditions provided in this manual.

#### **Notice**

Avoid dropping any hard objects onto the equipment. Damages to the heating surface will shortened the life cycle of the equipment or incur high service costs.

# Notice—Models with Glass-Top Use Only Induction Suitable Cookware

Use only induction suitable cookware with proper sizes and made of proper material. The induction suitable cookware must be in good condition without any uneven, arched or partially detached bottoms.

Using unsuitable cookware can cause the appliance to fail prematurely, void your warranty, or incur high service costs.

#### **Notice—Induction Griddles / Braising Pans**

NEVER heat any cooking pan on the griddle plate or in the braising pan. Heating cooking pan with these equipment will damage these equipment. Heat only food products on the griddle plate or in the braising pan.

#### **OPERATION SAFETY—PERSONAL PROTECTION**

#### **Notice**

Induction appliances are more powerful, heat up pans quicker, and cook food faster than conventional cooking equipment. Your induction appliance will require different use and care than other conventional equipment.

Do not operate the equipment without reading this manual and understanding all safety requirements.

#### **A** DANGER

If any part of the appliance is cracked or broken, **Stop** and **Immediately disconnect the appliance or** appropriate part of the appliance from the supply. Do not touch any parts inside the appliance.

Disconnect electric power at the main power disconnect for all equipment being serviced.

Failure to disconnect the power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.

Contact an authorized service agency for assistance.

## **A** DANGER

Do not operate any appliance with a damaged or pinched cord or a damaged plug. All repairs must be performed by a qualified service company.

## **A** DANGER

Keep power cord AWAY from HEATED surfaces. DO NOT immerse power cord or plug in water. DO NOT let power cord hang over edge of table or counter.

#### **A** DANGER

To avoid cardiac pacemaker malfunction, consult your physician or pacemaker manufacture about effects of electromagnetic field on your pacemaker.

## **A** DANGER

Never stand, site, or lean on the equipment! They are not designed to hold the weight of an adult, and may collapse or tip if misused in this manner.

Operation Section 3

#### **∴** Caution

#### **Short Cook Time**

Induction appliances cook food faster than conventional cooking equipment. To avoid overheating and burning, check the cooking process frequently. Never leave the appliance unattended during operation.

#### **⚠** Caution

Metallic objects are heated up very quickly when placed on the induction cook zone during operation. To avoid injury,

DO NOT place any objects such as closed cans, aluminum objects (aluminum foils), cutlery, jewelry, or watches on the appliance.

DO NOT place any object such as paper, cardboard, or cloth on the cooking surface, because this creates a fire hazard.

DO NOT place credit cards, phone cards, tapes, or any objects that are sensitive to magnetism on the appliance.

DO NOT use the appliance for storage.

DO NOT place any paper products, cooking utensils, cutlery, plastic vessels or food on the appliance.

#### **∴** Caution

Aluminum foil must not be used with induction cooktop! Aluminum foil may ignite and cause a fire!

#### **Notice**

Do not use the cooktop for food preparation such as cutting and chopping.

## **A**Warning

Risk of burns from high temperatures. You may get burnt if you touch any of the parts during operation. Surfaces close to the cooking area including side panels may get hot enough to burn skin. Use extreme caution to avoid coming in contact with hot surfaces or hot grease. Wear personal protective equipment.

#### **Cooking with Induction Glass-Tops Models**

#### **A**Warning

#### **Never Leave An Empty Pan On Cooktop**

Induction appliances heat up empty pans very quickly. Never operate the appliance with an empty pan. Do not pre-heat pan. Always put food products, water or oil into the pan before turning on the appliance. Failure to do so will result in irreparable damage.

#### **Notice**

#### **Broil-Dry Protection**

Cook zones are monitored by temperature sensors. The sensors can detect overheating at the base of a cooking pan.

When an overheated pan (overheated oil, empty pan) is detected, the appliance stops transferring energy to the pan immediately. You must turn off the appliance and let it cool down before re-starting the appliance.

#### **∴** Caution

#### **Do Not Touch Overheated Appliance**

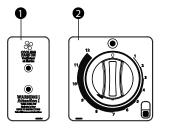
To avoid burn injuries, do not touch the appliance when a pan is overheated and take all the necessary precautions when removing the overheated pan.

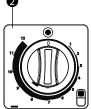
#### **A** Warning

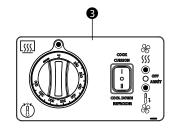
Steam can cause serious burns. Always wear some type of protective covering on your hands and arms when removing lids or pans from the appliance. Lift the lid or pan in a way that will direct escaping steam away from your face and body.

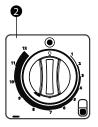
Section 3 Operation

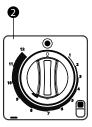
## **Controls**







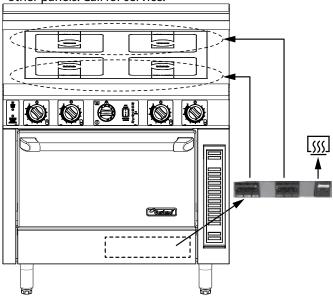




### **Important**

### Shutdown using circuit breaker

For emergency shutdown, switch off the circuit breakers that are located behind the kickplate. Do not open any other panels. Call for service.



## **A** DANGER

Disconnect electric power at the main power disconnect for all equipment being serviced.

Failure to disconnect the power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.

Contact an authorized service agency for assistance.

#### • AIR MANAGEMENT SYSTEM



Incorporated in the Range are internal cooling fans to manage airflow efficiently. These cooling fans are turned on automatically when:

- Any one of the induction hob is ON.
- Oven COOK/COOL switch is "I" (ON).
- Internal thermostat reads above set temperature.



#### **NOTE**

When the RED indicator lamp is ON, the cooling fans might have failed and/or internal temperature is too high:

- IMMEDIATELY, TURN OFF THE OVEN if it is on.
- Refer to section 5 Troubleshooting.

# **②** INDUCTION CONTROL AND INDICATOR LAMP Power Level Settings

Set the desired power level by turning the control knob and the appliance is immediately ready for operation.

- Power level (1) = lowest power
- Power level (12) = highest power



## **ON Position**

Any position between power levels "1" to "12". Indicator lamp is on.



#### **OFF Position**

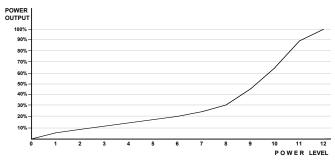
"0" on dial is pointing to the Indicator lamp. The lamp is off.

When the indicator lamp shines continuously, energy is being supplied to the bottom of the cookware.

The Power Diagram (below) show that the difference in power output between two higher power levels is much larger than that between two lower power levels. Operation Section 3

This power level and output relationship gives you a fine simmer-rate control in the low power range, and an instant response in the high power range.

#### POWER DIAGRAM: POWER LEVEL 0 TO 12



The settings from (1) to (9) span the lower 50% of the total Power Output; the settings from (10) to (12) cover the 50% to 100% output range.

#### **Reading Signals from the Indicator Lamp**

**Pan Detection Mode:** When the appliance is ON but without any pan sitting on the cooking surface, the appliance is in Pan Detection mode and the indicator lamp flashes.

As soon as a pan is put into the cook zone, the pan engages the heating process and the indicator lamp stops flashing and remains bright.

However, the indicator lamp will keep flashing if the appliance is unable to detect the pan or an unsuitable pan is used.

When a fault occurs, the indicator lamp flashes at intervals. See section 5 Troubleshooting.

# **3** CONVECTION OVEN HEAT AND FAN CONTROLS Starting up the Oven

- 1. Set the COOK/COOL switch to the COOK "I" position.
- Set the oven dial to desired temperature. Dial indicator lamp is ON.
- 3. When oven door is closed,
  - · Oven heat is ON.
  - · Oven fan is ON.

When oven door is opened,

- Oven heat is OFF.
- Oven fan is OFF.

It will take approximately 15 minutes for the oven to reach 350°F (177°C) from cold. Best results will be attained when the oven is allowed to preheat for 30 minutes or more for thorough heat saturation.

#### **Cooling down the Oven**

NOTE: Perform cool down procedure before shutting down or to lower the oven temperature during idle periods.

- 1. Set the oven dial to OFF position (°F or °C position marked on dial).
- 2. Set the COOK/COOL switch to the COOL "II" position.
- 3. Open oven door:
  - Oven heat is OFF.
  - Oven fan is ON.

#### Shutting down the Oven

NOTE: It is recommended to cool down the oven before shutting down to avoid premature oven motor failure.

- 1. Set the oven dial to OFF position (°F or °C position marked on dial).
- 2. Set the COOK/COOL switch to OFF "O" position.

Table below shows how the oven heat and fan functions are interlocked with the COOK/COOL, Dial and Door settings.

COOK/ COOL Switch	Oven Dial	Door	Oven Heat Elements	Oven Fan	Air System Fan
0	OFF / Set Temp.	OPEN / CLOSE	OFF	OFF	ON* / OFF*
I	OFF	OPEN	OFF	OFF	ON
I	OFF	CLOSE	OFF	ON	ON
I	Set Temp.	CLOSE	ON	ON	ON
I	Set Temp.	OPEN	OFF	OFF	ON
II	OFF / Set Temp.	OPEN	OFF	ON	ON* / OFF*
II	OFF / Set Temp.	CLOSE	OFF	OFF	ON* / OFF*

<sup>\*</sup> Air system fan is ON if internal thermostat reads above set temperature; OFF if thermostat reads below set temperature.

Section 3 Operation

## **Working with Induction Equipment**

#### **IMPORTANT RULES—OPERATION AND MAINTENANCE**

Follow these simple rules to ensure reliable and repeatable performance of your induction equipment:

Use only pans that fits the glass. Do not use oversized pans.



Never pre-heat the pan. Place the pan on the cook zone only when you are ready to cook.



2 Clean the intake filter at least once a week or as often as required.



Do not use dented pans because it will cause damages to the electronics

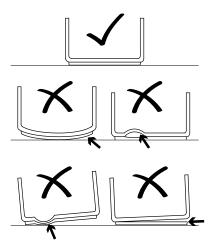


Operation Section 3

## **Proper Induction Cookware**

#### **CONDITION**

- Pans with layer separation (outward and inward bubbles), arching or partially detached bottoms must be replaced.
- When these pans are used, the sensors under the glasstop cannot detect temperature correctly. These pans will overheat the sensors and eventually will damage the sensors and the generator. (Below, examples of good and bad pans in cross-sections.)



#### **MATERIAL**

 USE cookware made of conductive and magnetic materials. If the pan bottom attracts a magnet, the pan is suitable for induction cooking. Look for cookware that is labeled suitable for induction or with an induction compatible symbol.



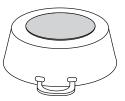
- **DO NOT USE** cookware made of aluminum, copper, glass, ceramics or conventional stainless steel.
- NOTE—Aluminum inserts on bottom:

Cookware base inserted with areas of aluminum reduces the magnetic area for induction cooking. The appliance may supply less energy to the cookware or have difficulties in detecting the pan.



NOTE—Non-magnetic cookware with a small magnetic base:

The exposed non-magnetic metal on the base may affect the induction field and subsequently, less energy may be suppled to the cookware.



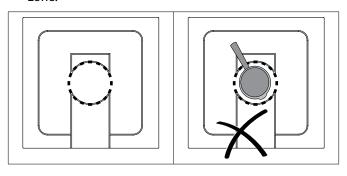
#### **BOIL TEST**

To test the efficiency of a pan for induction cooking, perform a boil test. See instructions in section 5 Troubleshooting.

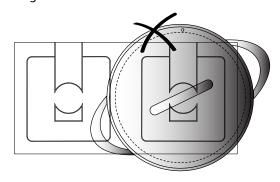
Section 3 Operation

#### **SIZE OF PAN**

 MINIMUM SIZE: The bottom of pan must have a minimum diameter of 12cm [5"] (below, dotted lines).
 Otherwise, the pan will not be heated. This is a safety feature such that the sensors do not detect and heat up small metal objects, such as jewelery. NOTE: For personal safety, never place any small metallic objects on a cook zone.

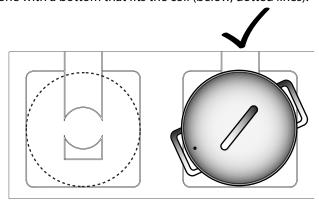


 DO NOT USE OVERSIZED PAN! The bottom of the pan must fit the glass. When a hot, oversized pan covers the silicone seal underneath, the heat from the pan may dry out the silicone overtime. When the silicone seal drys out and breaks, liquid can penetrate into the appliance and damage the electronics.



(A dual cook-top is shown as an example.)

• PAN MUST FIT THE GLASS! The best pan to use is the one with a bottom that fits the coil (below, dotted lines).



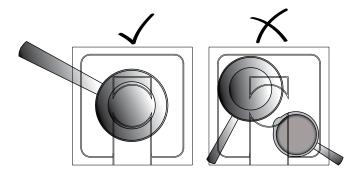
(A dual cook-top is shown as an example.)

## **Placing Pan On A Cook Zone**

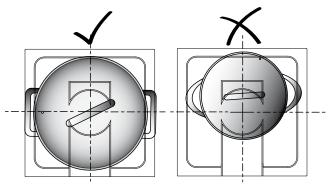
Each cook zone of our appliances is equipped with the latest RTCS® or RTCSmp® sensors. These sensors monitor temperature and cookware continuously in realtime.

To obtain optimal results from the sensors, you must **always place pan in the center of the cook zone**. Otherwise, the bottom of the pan is heated unequally and the food inside the pan may burn.

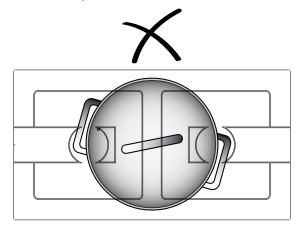
PLACE MAXIMUM ONE PAN PER COOK ZONE.



ALWAYS PLACE PAN IN THE CENTER OF A COOK ZONE.



PAN MUST NOT COVER MORE THAN ONE COOK ZONE ON A DUAL/QUAD OR ON TWO SINGLE UNITS.



Operation Section 3

## Automatic Pan Detection, No Pan No Heat

When a temperature or a power level is selected, the appliance supplies energy only when a pan is placed in the cook zone.

When you remove the pan from the cook zone, the appliance stops power supply immediately. If the pan is put back in the cook zone, power supply resumes.

NOTE: Switch off the cook-top by means of the control. Do not rely on the Pan Detection as the ON-OFF control.

NOTE: Pan with a bottom diameter smaller than 12cm or 5" is not detected by the system.

## When Appliance Is Idle

#### **BEST PRACTICE:**

When the induction appliance is not in use, always put the control knob in the 0 (OFF) position.

#### **Notice**

Switch the appliance OFF if you take the cookware away for a while. This will prevent the heating process to start automatically and unintentionally when a pan is placed back on the heating area. If any person needs to use the induction appliance, he/she will have to turn the appliance ON intentionally.

Section 3 Operation

## **Working with Convection Oven**

#### **OVEN MOTOR**

The motor on your range convection oven is maintenance free since it is constructed with self-lubricating sealed ball bearings. It is designed to provide durable service when treated with ordinary care.

Since the blower wheel is in the oven cavity it is at the same temperature as the oven. If the motor is stopped while the oven is hot, the heat from the blower wheel is conducted down the shaft and into the armature of the motor. This action could shorten the motor life.

NOTE: We recommend, at the end of the bake or roasting period or before shutting down completely, that the doors be left open. Set the COOK/COOL switch to the COOL "I" position. The fan should run for at least 20 minutes. The "FAN" should never be turned "OFF" when the oven is "HOT".

NOTE: Any food or other matter which becomes lodged in the fan must be removed as soon as the oven and oven fan are OFF and the oven is cool.

#### **LOAD SIZE AND PANS**

- The oven will hold:
  - Three (3) standard full size sheet pans (18" x 26") or GN1/1 pans, or
  - Six (6) 12" x 20" x 2.5" steam table pans, or
  - One (1) 21" x 18" x 7" roast pan with cover.
- Allow air circulation around the product. Center pans on oven racks.
- Never place pans directly on the oven bottom. Instead, use the lowest rack position which will allow the air to circulate within the oven cavity.

#### **TEMPERATURE GUIDELINES**

- Generally, set the oven temperature 25°F to 50°F (10°C to 25°C) lower than temperature used in standard ovens.
- Cooking times may be 2% to 3% less than time used in standard ovens.
- Keep a close check on any product being prepared for the first time. The size of the load, temperature of the product going in, and moisture content are the major factors that influence necessary cook times and temperatures. Record successful times and temperatures for future reference.
- Preheat the oven thoroughly before loading. It will take approximately 15 minutes for the oven to reach 350°F (177°C). Best results will be attained when the oven is allowed to preheat for 30 minutes or more for thorough heat saturation.

 When rethermalizing frozen products, preheat oven to 50°F (25°C) higher than the cooking temperature to compensate for heat loss before and after loading. Return thermostat to the cooking temperature after loading.

#### **BEST PRACTICE**

- Use the right size and kind of pan for the job and always ensure adequate airflow around pans.
- To conserve energy, turn the oven off and cool down when not in use.

# Section 4 Maintenance

#### MAINTENANCE SAFETY—DISCLAIMER

## **A** DANGER

It is the responsibility of the equipment owner to perform a Personal Protective Equipment Hazard Assessment to ensure adequate protection during maintenance procedures.

## **A** Warning

A good maintenance of the appliance requires regular cleaning, care and servicing. The site-supervisor and the operator must ensure all components relevant to safety are in perfect working order at all times.

NOTE: Cleaning tools and supplies are not provided.

#### **DANGEROUS ELECTRICAL VOLTAGE**

#### **A** DANGER

Do not open the appliance. Maintenance and servicing work other than cleaning as described in this manual must be done by an authorized service personnel.

#### **A** DANGER

If any part of the appliance is cracked or broken, **Stop** and **Immediately disconnect the appliance or appropriate part of the appliance from the supply**. Do not touch any parts inside the appliance.

Disconnect electric power at the main power disconnect for all equipment being serviced.

Failure to disconnect the power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.

Contact an authorized service agency for assistance.

#### MAINTENANCE SAFETY—CLEANING

#### **▲** Warning

Never use a high-pressure water jet for cleaning or hose down or flood interior or exterior of the equipment with water. Ensure that no liquid can enter into the equipment.

## **▲**Warning

Allow heated equipment / glass surface to cool down before attempting to clean, service or move.

## **A**Warning

When cleaning the exterior, care should be taken to avoid front power switch and the electrical cords. Keep water and cleaning solutions away from these parts.

#### **∴** Caution

Do not use caustic cleaners on any part of the equipment. Use mild, non abrasive soaps or detergents, applied with a sponge or soft cloth.

#### **∴** Caution

Ensure to remove all residues of cleaning agents from the cooking surfaces. Use a clean moist cloth to wipe off any such surfaces.

#### **∴** Caution

Using commercial cleaning fluids or chemicals: Read the directions for use and precautionary statements before use. Pay attention to the concentration of cleaner and the length of time the cleaner remains on the foodcontact surfaces or equipment surfaces.

#### **Notice**

#### **Inspect and Clean Fresh Air Intake Filter**

We strongly recommend using air intake filters in all installations to protect the equipment from grease particles. A dirty, blocked air intake filter blocks the air vent and can cause damages to the electronic components. Inspect, clean or replace the air intake filters at least once a week or as often as necessary.

#### **A** Warning

#### **Inspect Silicone Seal**

When the silicone seal is broken, water penetration could cause the appliance to fail, and any malfunction could cause personal harm.

Section 4 Maintenance

#### PERSONAL PROTECTION

#### **A** DANGER

All utilities (gas, electric, water and steam) must be OFF to all equipment and locked out of operation according to national/regional, as well as company approved practices during installation, maintenance and servicing. Always allow appliance to cool.

## **A** DANGER

Use appropriate safety equipment during installation, maintenance and servicing.

## A DANGER

Never stand, sit, or lean on the equipment! They are not designed to hold the weight of an adult, and may collapse or tip if misused in this manner.

#### **A** DANGER

To avoid cardiac pacemaker malfunction, consult your physician or pacemaker manufacture about effects of electromagnetic field on your pacemaker.

## **A**Warning

Markings and warning labels mounted directly on the equipment must be observed at all times and kept in a fully legible condition.

#### **A** Warning

Risk of burns from high temperatures. You may get burnt if you touch any of the parts during operation. Surfaces close to the cooking area including side panels may get hot enough to burn skin. Use extreme caution to avoid coming in contact with hot surfaces or hot grease. Wear personal protective equipment.

#### **∴** Caution

Use caution when handling metal surface edges of all equipment.

Maintenance Section 4

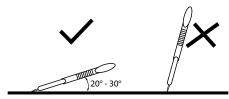
## **Daily Cleaning and Maintenance**

#### **GLASS CLEANING**



NOTE: The cleaning of Ceran® glass is identical to cleaning other similar glass surfaces. You may use any regular glass cleaning products available from a hardware store.

You may use a razor blade scraper or a non-scratching sponge to remove tough residues. When scraping, place your razor blade scraper at an angle of about 20° to 30° from the glass. Then wipe clean the glass with a cleaning product.



#### VISUAL INSPECTION OF SILICONE SEAL

Inspect the silicone seal around the glass perimeter. Call for service immediately if you notice:

- · Cracks on the silicone seal.
- The silicone seal comes away from the glass/housing or moves when you press down on the seal.

#### **A**Warning

### **Inspect Silicone Seal**

When the silicone seal is broken, water penetration could cause the appliance to fail, and any malfunction could cause personal harm.

#### STAINLESS STEEL

- Clean the stainless steel surface using a soft cloth with a mild detergent and/or a food-safe liquid cleaner designed to clean stainless steel.
- 2. Wipe dry with a soft clean cloth.

#### NOTE:

- If it is necessary to use a non-metallic scouring pad, always rub in the direction of the grain in the metal to prevent scratching. Wash a small area at a time and rinse the washed area with a clean sponge dipped into a disinfectant and wipe dry with a clean soft cloth before it can dry.
- Use only wood, or plastic tools to scrape off heavy deposits of grease or oil. Do not use ordinary steel scrapers or knives as particles of iron may become embedded and rust. NEVER USE STEEL WOOL.

#### **OVEN**

- Clean the oven interior using the same method mentioned for cleaning stainless steel.
- Clean the oven racks and guides with hot soapy water and dry thoroughly.

NOTE: Any food or other matter which becomes lodged in the fan must be removed as soon as the oven and oven fan are OFF and the oven is cool.

### **CONTROL KNOBS**

The control knobs are fitted tightly to the shafts. If necessary, pull knobs out to clean. When replace, ensure the knobs are oriented correctly.

Section 4 Maintenance

## **Weekly Cleaning and Maintenance**

#### **OVEN**

Deep clean the oven interior with an appropriate oven cleaner. Always follow manufacturer's instructions on the cleaning products.

#### **AIR INTAKE FILTER**

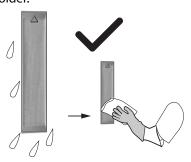
1. The air intake filter is located at the front, behind the access panel adjacent to the oven. Lift up the access panel and slid out the filter from the holder.



2. The filter is dishwasher-safe.



3. The filter must be DRY before you put it back into the holder.





## **Yearly Maintenance**

**Best Practice:** Have the equipment examined once a year by an authorized technician.

#### **General Maintenance Tips:**

- Inspect all induction cookware to ensure proper condition.
- Inspect oven door to ensure a tight fit.
- Have an authorized technician to inspect and ensure that:
  - The thermostat is properly calibrated.
  - All the air system cooling fans are working properly.
  - All the induction unit ventilation fans are working properly.
  - All indicator lamps are working properly.
  - No grease built-up behind the air filter.

# Section 5 Troubleshooting

#### **DANGEROUS ELECTRICAL VOLTAGE**

## **▲** DANGER

If any part of the appliance is cracked or broken, **Stop** and **Immediately disconnect the appliance or appropriate part of the appliance from the supply**. Do not touch any parts inside the appliance.

Disconnect electric power at the main power disconnect for all equipment being serviced.

Failure to disconnect the power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.

Contact an authorized service agency for assistance.

## **A** DANGER

Do not open the appliance. Maintenance and servicing work other than cleaning as described in this manual must be done by an authorized service personnel.

#### **A** Warning

Markings and warning labels mounted directly on the equipment must be observed at all times and kept in a fully legible condition.

NOTE: Routine adjustments and maintenance procedures are not covered by the warranty.

## When problem occurs

- Use the table below to record the details of the LEDs and the situation. This information is valuable to technician for solving the problem. Additional form is provided at the end of the section.
- Follow the Troubleshooting Charts before calling service.

#### **INCIDENT RECORD**

Prob TIME	lem occurred on DATE: :
	Air System Cooling Fan LED Signal:  • GREEN ON □ RED ON □  Both LEDs OFF/Dark □
LED Signals	Induction LED Signal:  Not Applicable. Not using induction hob at the time
	Oven setting:  COOK ☐ COOL ☐ OFF ☐
Oven	Convection Oven Fan is operating normally?  • Yes □ NO □
ð	Oven is heating:  ■ Normally □ Too Hot □ Too Cold □
	Describe the situation under which the malfunction occurs. Did same or similar problem occur before.
	When? The problem occurs:
_	After switching on the appliance(s)
ituation	When operating the appliance(s)
itua	After a long period of operation
S	During peak meal service
	Early morning
	Frequency? Malfunction occurs:
	• Just once
	Occasionally
	Repeatedly

Section 5 Troubleshooting

## **Air System Troubleshooting**

PROBLEM	POSSIBLE CAUSE	ACTION TO TAKE	
RED indicator lamp ON  WARRING    Action Close    The cycle for  The cycle for  Rest on Secretarian  T	<ul> <li>Fresh air intake opening is blocked.</li> <li>The cooling fan(s) has failed.</li> <li>Internal heat sensor has failed.</li> <li>Internal temperature is too high.</li> </ul>	<ol> <li>IMMEDIATELY, TURN OFF THE OVEN if it is on.</li> <li>Check air filter. Ensure filter is clean and the air intake opening is not blocked.</li> <li>Check ventilation gap (under kickplate) is not blocked.</li> <li>Check other indicators of the induction and oven sections.</li> <li>Record details of problem.</li> <li>Contact an authorized service agency.</li> </ol>	
Lamp is OFF when:  Any one of the induction hobs is ON.  Oven COOK/COOL switch is "I" (ON).	<ul> <li>Indicator lamp has failed.</li> <li>Oven circuit breaker is OFF.</li> </ul>	<ol> <li>Check Oven circuit breaker and main power supply.</li> <li>Contact an authorized service agency.</li> </ol>	

## **Convection Oven Troubleshooting**

\* Solutions are listed for reference. For personal safety, any part replacement, adjustment, wiring or calibration must be performed by authorized service technicians.

PROBLEM	POSSIBLE CAUSE	SOLUTION*
Oven too hot or not hot enough.	Thermostat out of calibration.	Check calibration.
	Insufficient tension on springs.	Adjust tension.
Door will not stay closed.	Broken spring.	Replace part.
	Broken hinge link.	Replace part.
Door will not stay open.	Too much tension on springs.	Adjust tension.
Door is not closing on one side.	Door warped.	Replace part.
Door not level or low in center.	Trunnion support loose.	Level and tighten.
Door not level of low in center.	Trunnion support worn.	Replace part.
COOK/COOL switch set to COOK position.	No power to oven.	Check power supply.
Light off. Oven fan is working.	Defective COOK/COOL switch.	Replace part.
Light on. Over fair is working.	Faulty wiring.	Check condition of wires and connections.
	Oven door open.	Close door.
	Door switch out of alignment.	Align switch.
COOK/COOL switch set to COOK position.	Defective COOK/COOL switch.	Replace part.
Light off. Oven fan is not working.	Defective door switch.	Replace part.
	Faulty wiring.	Check condition of wires and connections.
	Defective motor.	Replace part.
	Blower wheel rubbing on oven baffle.	Adjust blower wheel.
Noisy oven fan motor.	Blower wheel loose on motor shaft.	Tighten blower wheel.
·	Defective motor.	Replace part.
	Door switch out of alignment.	Align switch.
COOK/COOL switch set to COOL position.	Defective COOK/COOL switch.	Replace part.
Light on. Oven fan is not working.	Defective door switch.	Replace part.
	Faulty wiring.	Check condition of wires and connections.

Troubleshooting Section 5

## **Induction Cook-Top Troubleshooting**

#### **COMMON PROBLEMS**

One or more of the following conditions may affect the function or cause the induction equipment to fail:

- Using unsuitable cookware such as non-induction pans, oversized pans, or damaged pans.
- High ambient temperature.
- Inadequate ventilation causing hot air to re-enter through the air intake slots.
- Dirty air intake filter.
- Empty pan is left on the hob when the appliance is ON.

#### **SYMPTOMS**

- When a malfunction occurs, the appliance may be in one of the following states:
  - The appliance switches off immediately.
  - The appliance continues to operate in a power reduction mode.
  - The appliance continues to operate normally.
- Appliance equipped with an indicator lamp or a digital display, see section *Troubleshooting Chart* — *Error Code / Flash Code*.
- Appliance without an indicator lamp / digital display, or the lamp is malfunction, see section *Troubleshooting* Without Error Code / Flash Code.

#### **BOIL TEST FOR INDUCTION COOKWARE**

To test the efficiency of a pan for induction cooking, perform a boil test.

This test is not applicable to griddles and braising pans. NEVER heat any cooking pan on a griddle plate or in a braising pan.

(Test for 3.5kW or 5.0kW Induction Coil)

Perform a boil test to verify the performance of a pan for induction cooking.

- Add one liter of cold water into the pan (optimal when use pan with bottom diameter of 24cm) and bring it to boil. Compare the total boil time to the guideline below:
  - 3.5kW Coil, approx. 140 seconds
  - 5.0kW Coil, approx. 85 seconds

If time to boil exceeds the above guideline, then the pan is not suitable for achieving optimal efficiency. Please contact your supplier to purchase suitable induction pans.

If the induction appliance does not function as expected despite using quality induction pans, refer to the troubleshooting charts.

Section 5 Troubleshooting

## TROUBLESHOOTING WITHOUT ERROR CODE / FLASH CODE

Symptom	Possible Cause	Action
Pan does not heat up on glass-top.	No power supply.	Check incoming power supply (Example, power
No heat to griddle or braising pan.		cable plugged into the wall socket). Check kitchen
Indicator lamp is OFF (dark).		main fuse box.
Digital display is OFF (dark).	Control knob is in OFF-position.	Turn control knob to an ON-position.
	Defective equipment	Put knob in OFF-position. Only if possible and safe,
		disconnect the appliance from the power supply.
		Contact an authorized service agency.
Pan does not heat up and indicator	Pan is too small.	Use a suitable pan with bottom diameter larger than
lamp blinks continuously. If Indicator		12cm[5"].
lamp blinks at intervals, see next	Pan is not placed in the center of the hob;	Move the pan to the center of the hob.
section.	pan is not detected by sensor.	·
(Not applicable to griddles or braising	Unsuitable pan.	Select only induction-ready cookware.
pans.)	Defective equipment	Put knob in OFF-position. Only if possible and safe,
,		disconnect the appliance from the power supply.
		Contact an authorized service agency.
Poor heating, indicator lamp / digital	Air-cooling system is obstructed.	Verify that air vents are not obstructed. Ensure the
display is ON		fresh air filter is clean.
, ,	Unsuitable pan. (Not applicable to	Select various induction-ready cookware for
	griddles or braising pans.)	induction cooking. Then compare the results.
	Ambient temperature is too high. The	Verify that no hot air is taken in by the fan.
	cooling system is not able to keep the	Reduce the ambient temperature. The intake air
	appliance in normal operating conditions.	temperature must be lower than 40°C [104°F].
	One phase is missing (for equipment with	Check incoming power supply (Example, power
	three phase supply only).	cable plugged into the wall socket). Check kitchen
		main fuse box.
	Defective equipment	Put knob in OFF-position. Only if possible and safe,
		disconnect the appliance from the power supply.
		Contact an authorized service agency.
Appliance does not react to control	Defective control switch.	Put knob in OFF-position. Only if possible and safe,
knob positions		disconnect the appliance from the power supply.
•		Contact an authorized service agency.
Power/heating level seems to be	Air-cooling system is obstructed. Internal	Verify that air vents are not obstructed. Ensure the
reduced	fan is dirty.	fresh air filter is clean.
	,	Contact an authorized service agency.
After a long period of continuous	Overheated induction coil; cooking area	Switch the appliance off. Safely remove pan, if any.
operation, the power/heating level	is too hot.	Wait until the appliance has cooled down before
seems to be reduced	Overheated pan. Pan is empty.	turning it ON again.
Small metallic objects (e.g. spoon) are	Pan detection function is defective.	Put knob in OFF-position. Only if possible and safe,
heated up in the cook zone.		disconnect the appliance from the power supply.

Troubleshooting Section 5

#### TROUBLESHOOTING — ERROR CODE / FLASH CODE

#### Appliance equipped with an indicator lamp:

The indicator lamp flashes to signal a specific problem. To find the possible cause, count the number of short flashes after each long flash.

Example: "— ...." The lamp gives a long flash for 0.6 seconds. Then it gives 4 short flashes (indicated by the dots in the example). The sequence repeats until the error is canceled.

• Appliance equipped with a digital display: The display may show an error code, example: E04.

Number of Flashes	Error Code	Problem	Action
(Indicator Lamp)	( Display)	N 10 .:	N 10 ::
1 ""	F04	Normal Operation.	Normal Operation.
1 ""	E01	Unsuitable induction cooking pan.	Check pan material.
		Internal wiring/coil connection	Contact an authorized service agency.
2 ""	F02	malfunction. (1)	Charlenge material
2 "——"	E02	Unsuitable induction cooking pan. Coil/software overcurrent. (1)	Check pan material.
3 ""	E03	Air-cooling system obstructed. Fan mal-	Contact an authorized service agency.  Let appliance cool down.
3 ——	L03	function. Internal heat sink overheated.	Verify that air vents are not obstructed.
		(1)	Check and clean air filter.
			Contact an authorized service agency.
4 ""	E04	Overheated cook zone. Overheated pan	Let appliance and/or pan cool down.
	E17 E18	detected. Sensor failure. Overheated or	Check pan material.
		defective sensor. (1)	Verify that air vents are not obstructed.
	E27 E28	,	Check and clean air filter.
	E41 E42 E43	NOTE: Errors E41 to E46, griddles and	Contact an authorized service agency.
	E44 E45 E46	braising pans may continue to operate.	,
5 ""	E05	Power switch/potentiometer error. (1)	Contact your authorized service agency.
6 ""	E06	Ambient temperature too high (the	Let appliance cool down.
		cooling system is not able to keep the	Verify that air vents are not obstructed.
	E30	induction appliance in normal operating	Check and clean air filter.
		conditions). Internal component	Verified that no hot air is taken in by the
		overheated. (1)	fan. Reduce the ambient temperature. The
			intake air temperature must be lower than
			40°C [104°F].
			Contact an authorized service agency.
7 "— —"	E29	Generator component failure. Problem	Let equipment/ pan cool down.
	E47	with control wiring. Warning from	Check food in the pan or empty pan.
		overheated pan / cooking empty sensor	Contact an authorized service agency.
		or coil connection failed. (1)	
		NOTE: E47 on griddles/braising pans	
8 ""	E21	indicates that griddle plate is too hot.  Sensor error from heat sink or CPU.	Varification variety and the base variety
8 ~— —	EZI	Board overheated. Ambient temperature	Verify that air vents are not obstructed. Check air filter. Reduce ambient
	E24 E25 E26	beyond normal operating range. (1)	temperature.
		beyond normal operating range. (1)	Contact an authorized service agency.
10 "—	E10	Internal electronic failure. (1) or (2)	Contact an authorized service agency.
No flash code	E11	Multi-Line model only: 24V Voltage too	Contact your authorized service agency
		low. (1).	to check power connection, 24V, power
		1641. (1):	board and display.
No flash code	E12	Power reduction. Warning of high	Let equipment/ pan cool down. Check
	E13	heat sink temperature. Cook zone	pan material. Verify that air vents are not
	E13	temperature too high. Sensor warning of	obstructed. Check and clean air filter.
		high temperature. (2)	Verified that no hot air is taken in by the
No flash code	E19	Warning of high internal temperature. (2)	fan. Reduce ambient temperature. The
	E20		intake air temperature must be lower than
			40°C [104°F].
			Contact an authorized service agency.
No flash code	E22	Griddle only. RTCS/CU sensor defect. (1)	Contact an authorized service agency.

<sup>(1)</sup> The appliance switches off immediately. (2) The appliance operates in a power reduction mode. (3) The appliance operates normally.

Section 5 Troubleshooting

## **Incident Record**

Record the details of the LEDs and the situation at the time when problem occurs. This will help technician to diagnose the problem.

Prob TIME	lem occurred on DATE: ::
	Air System Cooling Fan LED Signal:  GREEN ON □ RED ON □  Both LEDs OFF/Dark □
LED Signals	Induction LED Signal:  Not Applicable. Not using induction hob at the time
	flashes.) LED blinks () but no short/long flashes  Oven setting: COOK COOL OFF
Oven	Convection Oven Fan is operating normally?  • Yes \( \subsetermine \text{NO} \subsetermine \)  Oven is heating:
	Normally    Too Hot    Too Cold      Describe the situation under which the malfunction occurs. Did same or similar problem occur before.
Situation	<ul> <li>When? The problem occurs:</li> <li>After switching on the appliance(s)</li></ul>
	Early morning
	Occasionally

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Prob TIME	llem occurred on DATE: E:
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	Oven setting:  COOK COOL OFF
Oven	Convection Oven Fan is operating normally?  • Yes □ NO □
ð	Oven is heating:  Normally □ Too Hot □ Too Cold □
	Describe the situation under which the malfunction occurs. Did same or similar problem occur before.
	When? The problem occurs:
	After switching on the appliance(s)
Situation	When operating the appliance(s)
itua	After a long period of operation
S	During peak meal service
	Early morning
	Frequency? Malfunction occurs:
	• Just once
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