



# INSTALLATION AND OPERATION MANUAL

## GARLAND INDUCTION DUAL-ZONE BASE-LINE COOKERS

with **RTCSmp TECHNOLOGY**  
Real-time Temperature Control System  
multi-point sensing



**CE models** comply with the latest European Norms:  
EN 60335-1, EN 60335-2-36, EN 62233 (EMC/EMV)

**North American models:** ETL listed in compliance with UL 197, CSA C22.2 No.109, NSF-4  
Complies with FCC part 18, ICES-001

### 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**

Users are cautioned that maintenance and repairs must be performed by a Garland authorized service agent using only genuine Garland replacement parts. Garland 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. For a list of authorized service agents and/or genuine replacement parts, please visit our website at [www.garland-group.com](http://www.garland-group.com) (USA and Canadian customers) or [www.manitowocfoodservice.com](http://www.manitowocfoodservice.com) (international customers). The information contained herein, including design and part specifications, may be superseded and is subject to change without notice.



Visit our **Video Gallery** at  
[www.Garland-Group.com](http://www.Garland-Group.com)



**Models:**  
SHDUBA7000  
SHDUBA10000



PLEASE READ ALL SECTIONS OF THIS MANUAL AND RETAIN FOR FUTURE REFERENCE.

THIS PRODUCT HAS BEEN CERTIFIED AS COMMERCIAL COOKING EQUIPMENT AND MUST BE INSTALLED BY PROFESSIONAL PERSONNEL AS SPECIFIED

INSTALLATION AND ELECTRICAL CONNECTION MUST COMPLY WITH CURRENT CODES:  
IN CANADA – THE CANADIAN ELECTRICAL CODE PART 1 AND / OR LOCAL CODES.  
IN USA – THE NATIONAL ELECTRICAL CODE ANSI / NFPA – CURRENT EDITION.

### FOR YOUR SAFETY

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

## WARRANTY






Our warranty statements for induction products are available on-line. Please visit our website at [www.garland-group.com/minisite/service](http://www.garland-group.com/minisite/service) to download the latest revision. If you might have any questions, please contact Garland.

## USING THIS MANUAL

This manual contains important information regarding safety, installation, operation, maintenance, and troubleshooting. They must be read entirely and carefully by the installers and operators before the equipment is installed and taken into operation. This manual must always be available for reference at the place of operation.

Throughout this manual, the induction unit type "RTCSmp Dual Zone Base-Line" is referred to as "induction unit".

## DESCRIPTION OF WARNING SYMBOLS

|   |  |
|---|--|
|    | 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.   |
|   | This dangerous voltage warning symbol indicates a risk of electric shock and hazards from dangerous voltage.   |
| CAUTION   | This symbol alerts a hazardous situation, which if not avoided, COULD cause minor to moderate personal injury or property damage. The relevant safety precautions MUST be implemented at all times.  |
|  | Electromagnetic field.   |
|  | <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p><b>Warning</b><br/> <b>Risk of fire or electric shock</b><br/> <b>Do not open</b></p> </div> <div style="text-align: center;">  </div> <p>To reduce the risk of fire or electric shock,<br/>do not remove or open cover.<br/>No user serviceable parts inside.<br/>Refer servicing to qualified personnel.</p> |

## CONTACTS

Garland Commercial Ranges Ltd.  
 1177 Kamato Road, Mississauga, Ontario, Canada. L4W 1X4  
 T: 1-905-624-0260 | F: 1-905-624-5669 | [www.garland-group.com](http://www.garland-group.com)

USA Sales, Parts and Service    1-800-424-2411  
 Canadian Sales                    1-888-442-7526  
 Canada or USA Parts/Service    1-800-427-6668  
 International Sales and Service [www.ManitowocFoodservice.com](http://www.ManitowocFoodservice.com)

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# 1 Safety Requirements

**WARNING**

This product contains chemicals known to the State of California to cause cancer. Installation and servicing of this product could expose you to airborne particles of glass wool / ceramic fibers. Inhalation of airborne particles of glass wool / ceramic fibers is known to the State of California to cause cancer.

**IMPORTANT**

Warning labels mounted directly on the induction unit must be observed at all times and kept in a fully legible condition.

**IMPORTANT**

To ensure your work environment is safe, you must follow all of the safety instructions contained in this manual, the existing national regulations for accident prevention with electrical systems, as well as any relevant company-specific safety instructions.



The induction unit should only be used if and only if the installation of the electrical system is fitted by an approved installation contractor in accordance with specific national and local regulations.

## 1.1 Risk Involved By Disregarding Safety Information

Disregarding the safety instructions may cause harm to people, the surroundings, and the induction unit. Garland is not responsible for any damages or personal injury caused by failure to observe the safety requirements. Risks involved when disregarding safety precautions may include:

- Death or injury caused by electric shock.
- Injury due to burns from contacting overheated cooking surface, cookware, or oil and grease.
- Damage to the induction unit caused by using unsuitable cookware.

## 1.2 Safety Instructions for Operator

Please follow the following rules to avoid personal injuries and property damages:

- When the unit is in use, heat transfers from cookware to the glass-top; the glass-top can become hot. To avoid burn injuries, do not touch the heating area when the unit is in use.
- The induction unit heats up cookware and cooks food quickly. Do not leave an empty pan on the unit and do not leave the unit unattended during operation.
- If the glass-top is cracked or broken, switch off the induction unit immediately and if possible and safe, disconnect it from the power supply. Do not touch any parts inside the induction unit.
- Persons with cardiac pacemakers should consult their doctors whether they are safe near an induction unit.
- If the power cord is damaged, have it replaced immediately by an approved service technician.
- Ensure no liquid can enter into the induction unit. Do not let water or food overflow the cooking area. Do not use hoses to clean or power wash the induction unit or its vicinity.
- Do not put any other items on the glass-top except non-empty induction cookware.
  - Do not leave any object such as paper, cardboard, or cloth between the cookware and the cooking surface, as this might start a fire.

- Metallic objects are heated up very quickly when placed on the induction unit when the unit is in use. Do not place any objects such as closed cans, aluminum foil, cutlery, jewelry, or watches on the induction unit when the unit is in operation.
- Do not place credit cards, phone cards, tapes, or any objects sensitive to magnetism on the cooking surface.
- Do not place any vessels made of aluminum or plastics on the glass-top.
- The induction unit has an internal air-cooling system. Do not block the air intake and exhaust openings with objects such as cleaning cloths or containers. Any obstruction to the air intake and exhaust could cause the unit to overheat and to switch off.
- Switch the unit 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 unit, he/she will have to turn the unit ON intentionally.
- A dirty air intake filter blocks the fresh air intake. Clean the air intake filter (dishwasher-safe) at least once a week or as often as necessary.
- Use only induction suitable cookware with proper sizes and made of proper material. The induction suitable cookware should also be in good condition without any uneven, arched or partially detached bottoms.
- Protect the induction unit from moisture if the unit is placed next to high steam emitting equipment such as pasta cookers, steamers, and water bath.
- Do not place the induction unit next to a heat producing unit such as an oven or a deep fryer.

### 1.3 Improper Use of the Equipment

The reliability of the induction unit can only be guaranteed when it is used properly. The induction unit must always be operated within the limits provided in the technical specifications. Please also refer to chapter 9 **Important Rules** for using induction equipment.

### 1.4 Unauthorized Modification and Use of Spare Parts

Please contact Garland if you intend to make any changes on the induction unit. For safety reasons, always use genuine parts and accessories approved by Garland. Any unauthorized modification as well as any installation of unapproved components will void all warranty.

### 1.5 Pan Detection

Energy is transferred to cookware when the induction system detects a suitable pan on the heating area. The green indicator light signals to communicate the Pan Detection process:

- When the unit is ON without any pan on the hob, the green indicator light flashes; the unit is in pan detection mode.
- As soon as a pan is put on the hob, the heating process is engaged and the indicator light stops flashing and remains bright. However, the indicator light will keep flashing if the unit is not detecting any pan or an unsuitable pan is placed on the hob.

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

## 1.6 Cooking Zone Monitoring

Each cooking zone is monitored by multiple temperature sensors beneath the glass-top. The sensors can detect overheated empty pans or overheated oil and grease. When this occurs, the system stops the energy supply to the pan. You must turn the unit off and let it cool down before restarting it.

**CAUTION**

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

## 2 Components and Features

### 2.1 Application

The RTCSmp Dual Base-Line units are specially designed as compact table-top cooking equipment. The cookers can be used for many applications such as cooking, warming, flambéing, and brazing. To guarantee the reliability and performance of the induction equipment, please observe all safety, installation, and operation requirements mentioned in this manual.

### 2.2 Components Included

- 1 RTCSmp Induction Base-Line Cooker
- 6' (1829mm) cord and plug supplied (60 cycle units only)
- Installation and Operation Manual

### 2.3 Features

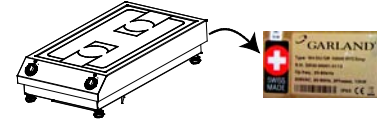
Garland offers two power ratings— 7kW and 10kW— for the RTCSmp Dual Countertop induction units. Built with a robust construction, the induction units are compact and powerful with a revolutionary RTCSmp-Technology (Realtime Temperature Control System with Multi-Point sensing). The RTCSmp Technology monitors the energy supply, the state of the induction coil, power board, CPU, and the cooking zone in realtime. Please review the following features this induction unit offers:

- Compact table-top design with stainless steel body and high impact Ceran® glass-top.
- Sloped, easy to see front panel with adjustable controls for easy operation.
- Integrated cooling fan keeps electronics cool.
- Air deflector prevents hot exhaust air to be pulled back into the unit.
- Removable and dishwasher-safe air intake filter.
- Compact and flat profile.
- Thermostatically controlled overheat sensor shuts off the unit preventing damage from pans cooking dry.
- Instant energy transmission to the cookware only, not to the surrounding air.
- Electronic output limitation continually monitors the energy transfer to the cookware, ensuring the most efficient energy transfer possible.
- Easy to install.
- Simple to operate. Adjust cooking power level simply by turning the knob.

### 3 Dimensions and Technical Specifications

#### 3.1 Rating Plate

The rating plate specifies important information such as model number, serial number, and electrical specifications. The rating plate is affixed to the back of the unit, at the lower right corner.



#### 3.2 Nomenclature and Models

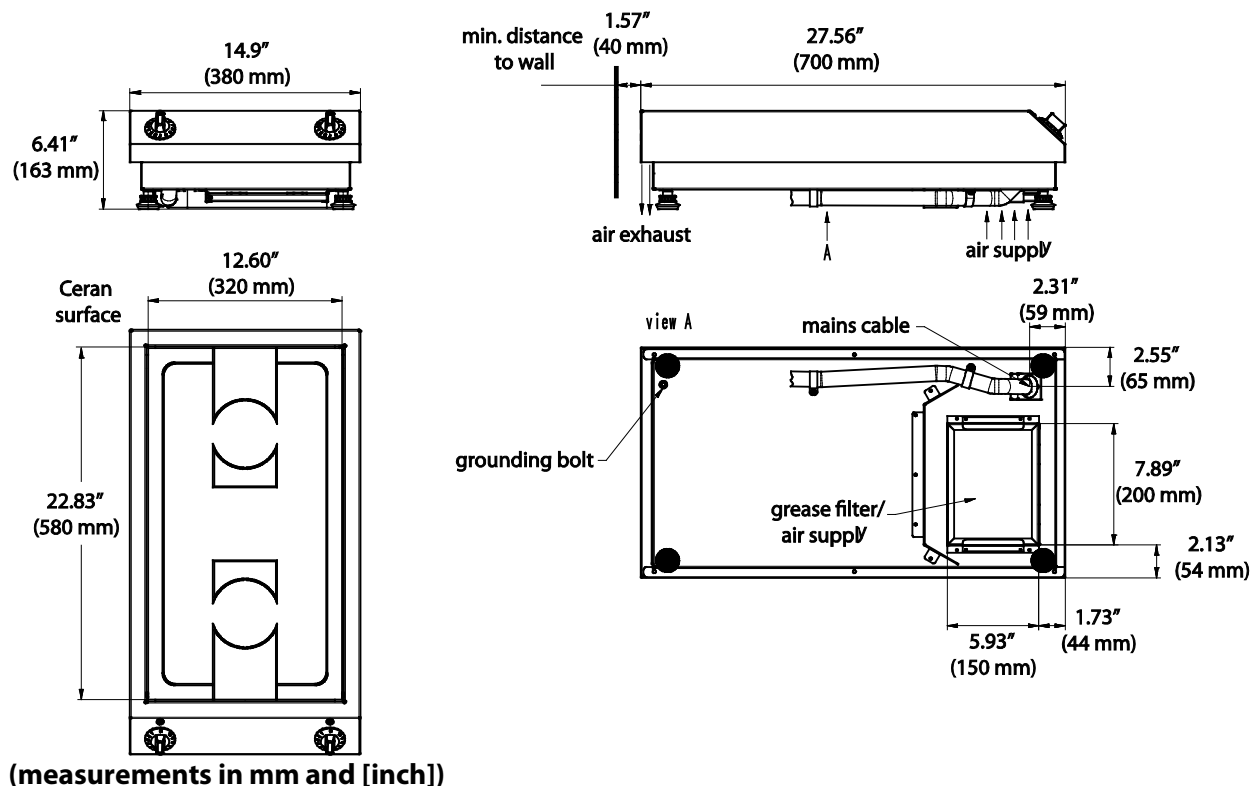
| Series           | Dual Hobs/<br>Specialty | Function          | Power<br>(Watt) | Models                    |
|------------------|-------------------------|-------------------|-----------------|---------------------------|
| SH =<br>Slim Hob | DU = Dual               | BA =<br>Base Line | 7000<br>10000   | SHDUBA7000<br>SHDUBA10000 |

#### 3.3 Weight





| Model  | Shipping Weight |                 | Net Weight      |                 |
|--------|-----------------|-----------------|-----------------|-----------------|
|        | SHDUBA7000      | SHDUBA10000     | SHDUBA7000      | SHDUBA10000     |
| Weight | 24 kg / 52.9 lb | 26 kg / 57.3 lb | 22 kg / 48.5 lb | 24 kg / 52.9 lb |

#### 3.4 Dimensions

| Model             | Glass Top Only (width x depth) | Overall Dimensions (width x depth x height)  |
|-------------------|--------------------------------|--|
| SHDUBA7000/ 10000 | 12.60" x 22.83" (320 x 580 mm) | 14.90" x 27.56" x 6.41" (380 x 700 x 163 mm) |



### 3.5 Electrical Specifications

| Model       | Voltage               | Power                    | Plug Configuration   |
|-------------|-----------------------|--------------------------|--|
| SHDUBA7000  | 208 V AC / 3Ph / 60Hz | 7000 W (2x 3500W) / 22A  | <br>NEMA 15-30P |
| SHDUBA7000  | 400 V AC / 3Ph / 50Hz | 7000 W (2x 3500W) / 11A  | <br>EU 5-Pole   |
| SHDUBA7000  | 440 V AC / 3Ph / 50Hz | 7000 W (2x 3500W) / 10A  | Plug Not Included  |
| SHDUBA10000 | 208 V AC / 3Ph / 60Hz | 10000 W (2x 5000W) / 30A | <br>NEMA 15-50P |
| SHDUBA10000 | 400 V AC / 3Ph / 50Hz | 10000 W (2x 5000W) / 16A | <br>EU 5-Pole   |
| SHDUBA10000 | 440 V AC / 3Ph / 50Hz | 10000 W (2x 5000W) / 15A | Plug Not Included  |

### 3.6 Operating Conditions

|   |  |
|---|--|
| Max. Tolerance of Nominal Supply Voltage                        | +6 /-10 %  |
| Network impedance (Zmax.)                                       | 0.25 Ω   |
| Supply frequency  | 50/60 Hz   |
| Ingress Protection class  | IP X3  |
| Minimal Diameter of Cooking Pan                                 | 5" (12cm)  |
| Maximum Ambient Temperature                                     | In Storage > -4°F to +158°F (-20°C to +70°C)<br>In Operation >+ 41°F to +104°F (+5°C to +40°C) |
| Maximum Relative Air Humidity                                   | In Storage > 10% to 90%<br>In Operation > 30% to 90%   |
| Clearance from Combustible Material                             | Min. 1.57" (40mm)  |
| Installation Clearance  | Min. 1.57" (40mm) behind the unit, 0.79" (20mm) on either sides                                |
| Installation Clearance (when installed in a tight space/corner) | Min. 1.57" (40mm) on all sides   |

### 3.7 Compliances

- **North American models:**  
ETL listed in compliance with UL 197, CSA C22.2 No.109, NSF-4. Complies with FCC part 18, ICES-001
- **CE models** comply with the latest European Norms:  
EN 60335-1, EN 60335-2-36, EN 62233 (EMC/EMV)

## 4 Installation

### IMPORTANT

- Kitchen designers and installation contractors are responsible for designing and installing correctly the appropriate support structures and ventilation system for the cooking equipment.
- The installation, including electrical 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 national and local regulations. The warning signs and rating plates on the cooking equipment must strictly be followed.
- Read ALL SECTIONS carefully, comply with all requirements listed and ensure all inspection is done by qualified personnel.
- Refer to the technical data given in chapter **3 Dimensions and Technical Specifications**.
- **Induction equipment that is not installed correctly will have warranty voided. See Warranty, p.2.**

### 4.1 Location

- The RTCSmp counter top unit must be installed securely on a flat and even surface. The induction unit must be set up in a way that it cannot fall down or move to an uneven position.
- Level and adjust the height of the unit by adjusting the feet. The unit can be secured in place with the Tabletop Self-adhesive Foot Pads (part# 72264020). See **4.3 Adjustable Feet**.
- Do not place the induction unit on or near a hot surface or any heat producing equipment such as an oven or a deep fryer.
- Protect the induction unit from steam if the unit is placed next to equipment giving off lots of steam such as pasta cookers, steamers, and water bath.
- Allow easy access to the front control panel.
- Keep the induction unit away from combustible materials, vapors or liquids.

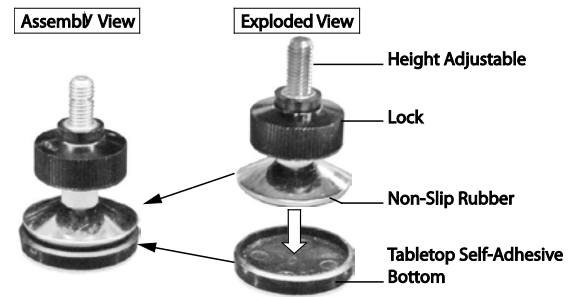
### 4.2 Ventilation

Proper cool air intake and ventilation is essential to the reliability and functioning of the induction unit. Please ensure all requirements listed below are met:

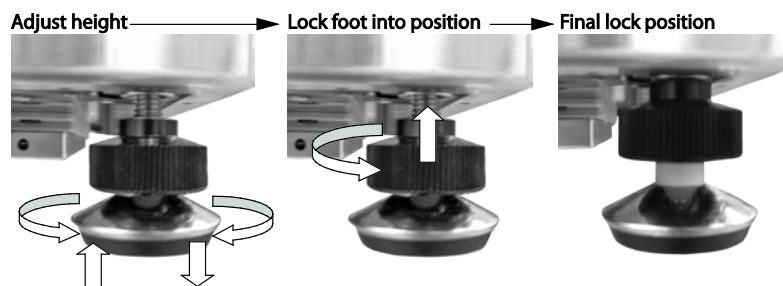
- This induction unit is equipped with an internal air cooling system. Ensure the air supply and air exhaust outlets are not blocked. **CLEARANCE:** minimum 1.57" (40mm) behind the unit, and minimum 0.79" (20mm) on either side of the unit.
- Should this induction unit be installed in a tight space or corner, a minimum distance of 1.57" (40mm) to the surrounding walls must be provided.
- Ensure the induction unit does not take in hot ambient air from other surrounding units and appliances, especially when the unit is placed close to a heat generating equipment such as a fryer or an oven.
- The air intake temperature must not exceed 104°F (40°C).

## 4.3 Adjustable Feet

- The feet (provided) on the countertop unit are height-adjustable and lockable. (Feet Complete Assembly part# 95000120)
- There are non-slip rubber pads on the feet.
- Optional: the feet can be inserted into the Tabletop Self-Adhesive Foot Pads (part# 72264020). These pads can be affixed onto the counter surface.



- To adjust the height of the unit, simply rotate the feet to raise or lower the unit.
- To lock the feet into position, rotate the plastic locks counter-clockwise and tighten them against the bottom of the unit.



## 4.4 Electrical Installation

### IMPORTANT

- Refer to the specifications in chapter **3 Dimensions and Technical Specifications** **AND** the rating **plate/instruction labels on the unit**. Always refer to the rating plate/instruction labels on the unit to verify the electrical data. Rating plate/label information overrides the information listed in this manual.
- Ensure the supply voltage and the line current match the specifications given on the rating plate. A stable mains supply must be provided.

|                |   |
|----------------|---|
| <b>CAUTION</b> | Wrong voltage will damage the induction unit. Follow strictly the specifications on the rating plate. |
|----------------|---|

- The electrical connections must satisfy the national and local electrical codes.
- If ground fault current protective switches are used, they must be provided with selective activation and designed for a minimum fault current of 30mA. Multiple generators with a mains connection must not be connected to a single fault current protective switch.
- This induction unit is equipped with a power cable which can be connected with the necessary plug to the socket. Ensure the plug is easily accessible for disconnecting from the power supply. Put the control knob in the 0 (OFF) position BEFORE connecting to the electrical supply.

**To setup the unit for operation:**

1. Ensure the control knob is at the 0 (OFF) position.

**ON-Position**

Any position where "0" is not pointing to the LED light. The light is on.

**OFF-Position**

"0" is pointing to the LED light. The light is off.

2. Remove all objects from the glass top and check that the glass top is neither cracked nor broken.

**CAUTION**

Do not continue if the glass top is cracked or broken.  
Contact an authorized service agency for assistance.

3. Connect the unit to the power supply.
4. Perform the Function Test. See chapter **5 Function Test**.

## 5 Function Test

### IMPORTANT

#### CAUTION

When the unit is in use, the cookware will warm up the glass-top. To avoid burn injuries, do not touch the glass-top.

- Remove all objects from the glass-top and verify that the glass-top is not cracked or broken.

#### CAUTION

Do not continue if the glass-top is cracked or broken. Immediately switch off the unit and if possible and safe, disconnect it from the power outlet. Contact a Factory Authorized Service agency.

- Before carrying out the function test, the user must understand how to operate the unit.
- Always use a pan suitable for induction cooking, having a bottom diameter of at least 5"(12cm). See **6.1 Proper Induction Cookware** and **6.2 Proper Placement of Cookware on Dual Hobs**.
- NEVER LEAVE AN EMPTY PAN ON AN INDUCTION HOB.**

### To perform a function test:

- Put some water in the pan and place it in the center of the heating zone.
- Turn the control knob to a position between 1 and 12. The LED indicator lamp lights up and the water is heated.



#### ON-Position

Any position where "0" is not pointing to the LED indicator light. The LED is on.



#### OFF-Position

"0" points to the LED indicator light. The LED is off.

- Take the pan away from the hob. Power transmission stops and the indicator lamp starts to blink.
- Place the pan back on the heating area. The LED indicator lamp lights up continuously again and the heating process resumes.
- Turn the control knob to the OFF/"0"-position. The heating process stops; the indicator lamp goes off.

**NOTE:** The green indicator lamp illuminates continuously when energy is being transferred to the pan.

If the indicator lamp remains off, check:

- Is the induction unit connected to the power supply?
- Is the control knob in an ON-Position?

If the indicator lamp keeps blinking and a pan is placed in the heating zone:

- Are you using a suitable pan? See chapter **6.1 Proper Induction Cookware**.
- Is the pan placed in the center of the hob? See chapter **6.2 Proper Placement of Cookware on Dual Hobs**.

For further assistance, see chapter **10 Troubleshooting** or call a Factory Authorized Service agency.

## 6 Operating Instructions

### IMPORTANT

- Induction units are more powerful, heat up pans quicker, and cook food faster than conventional cooking equipment. Your induction unit will require different use and care than other conventional equipment. Do not operate the induction equipment without reading this manual and follow all safety requirements. Refer to chapter **1 Safety Requirements**.
- This appliance is for professional use and shall be used only by qualified personnel.

### CAUTION

Do not put any empty cookware on the heating area when the induction unit is ON. The induction unit heats up empty pans very quickly. Overheated empty pan can cause personal injury and damages to cookware and the induction unit. To avoid overheating, always put food products or oil into the pan before turning the induction unit on.

- Induction unit offers short cooking time. When you turn the power level up, the temperature of the pan and its contents is changed quickly. Therefore especially when you heat up oil or grease, check the cooking process frequently to prevent the oil or grease from overheating and burning.
- **BROIL-DRY PROTECTION**

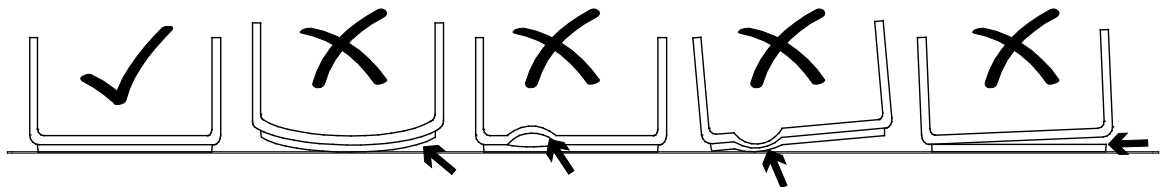
The RTCSmp electronic temperature control monitors overheating at the pan base. When an overheated pan (overheated oil, empty pan) is detected, energy transfer from the generator to the pan will be stopped immediately. You must turn the unit off, let it cool down before re-starting the unit.

### 6.1 Proper Induction Cookware

**IMPORTANT** Using unsuitable cookware on the induction unit can cause the unit to fail prematurely, void your warranty, or incur high service costs. Refer to **Warranty**, p.2.

- **IMPORTANT: CONDITION OF COOKWARE**

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 glass-top cannot detect temperature correctly. **These pans will overheat the sensors below and eventually will damage them.** Illustration below shows examples of good and bad pans in cross-sections.



- **Size**

**Minimum size:** The bottom of the cookware must have a diameter of at least 5" (12cm). Otherwise, the sensors will not detect the pan properly.

**Do not use oversized pans** on the induction unit. The bottom of the pan must fit the glass. A hot, oversized pan may damage the electronic components inside the induction unit.

• **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 has an induction compatible symbol on the pan bottom.



**Boil Test**

To verify the performance of a pan for induction cooking: Add one liter of cold water into the pan and bring it to boil. The time needed to boil one liter of water should be:

- SH/DU/BA 7000 (2x3500W), approximately 140 seconds
- SH/DU/BA 10000 (2x5000W), approximately 85 seconds

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

**6.2 Proper Placement of Cookware on Dual Hobs**

The RTCSmp Dual Countertop model has two cook zones (dual hobs). Each cook-zone is equipped with the latest RTCSmp sensor technology which enables temperature controls in realtime. To obtain the optimal results from the sensors, you must always place the pan in the center of the hob, which is indicated by the markings on the glass.

**CAUTION** Pans and pots must not cover more than one cook zone. Otherwise, electronic components of the induction unit can be damaged.



**DO NOT**

- (A): Place one pan over two cook-zones.  
 (B): Place multiple pans on a single cook-zone.



**DO**

- (C) and (D): Place one pan on each hob, and each pan is placed in the center of the hob.

**6.3 Power Control**

Set the desired power level by turning the control knob and the unit is **immediately ready** for operation. When the green indicator lamp lights up, energy is being transferred to the cookware.



**ON-Position**  
 Any position where “0” is not pointing to the LED indicator light. The LED is on.

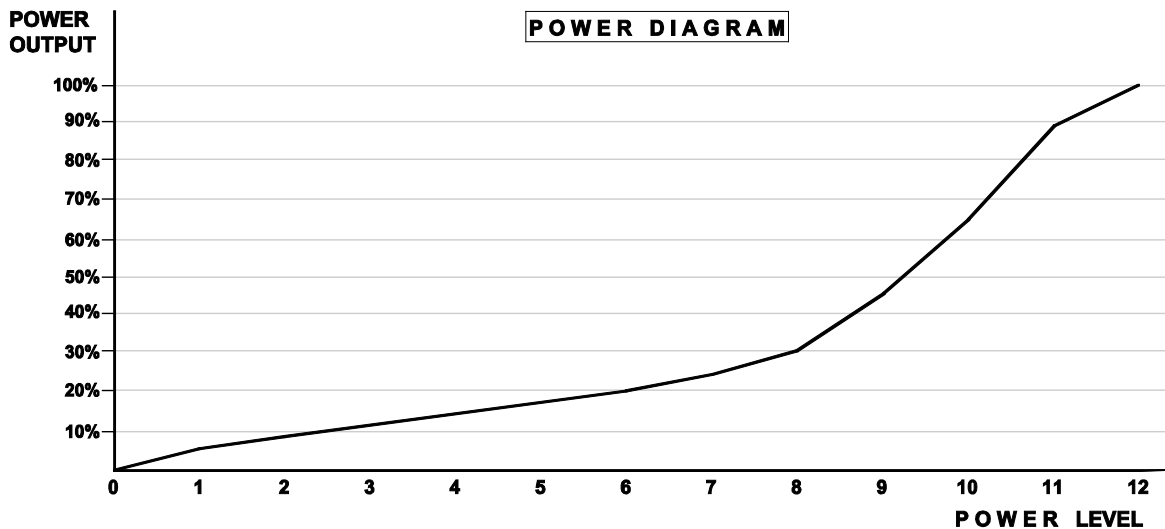


**OFF-Position**  
 “0” is pointing to the LED indicator light. The LED is off.

Set and adjust the power level by turning the control knob:

- Position (1) indicates minimum power.
- Position (12) indicates maximum power.

The following Power Diagram indicates that when you increase the power level, the power output does not increase linearly. The difference in power output between two higher power levels is much larger than that between two lower power levels.



## 6.4 No Pan No Heat

Energy is transferred to cookware when the induction system detects a suitable pan on the heating area. The green indicator light signals to communicate the Pan Detection process:

- When the unit is ON without any pan on the glass-top, the green indicator light flashes; the unit is in pan detection mode.
- As soon as an induction pan is put on the glass-top, the heating process is engaged and the indicator light stops flashing and remains bright. However, the indicator light will keep flashing if the unit is not detecting any pan or an unsuitable pan is placed on the glass-top.
- When you remove the pan from the heating area, power transfer to the pan is stopped immediately.

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

## 6.5 When Unit is Not In Use

**Best Practice:** If the induction unit is not in use, ensure the control knob is in the 0 (OFF) position.

- Switch the unit 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 unit, he/she will have to turn the unit ON intentionally.

## 7 Cleaning

The cleaning of the Ceran® glass is identical to cleaning other similar glass surfaces. You may use any non-abrasive Ceran® glass cleaning products available from a grocery or hardware store.

### CAUTION

Ensure NO LIQUID CAN ENTER into the induction unit. Do not let water or food overflow the cooking area. Do not use hoses to clean or power wash the induction unit or its vicinity.



### IMPORTANT

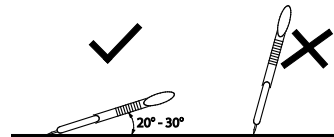
- **DO NOT USE:** corrosive or abrasive cleaning agents, such as grill sprays, oven sprays, stain removers, rust removers, scouring powder, and rough sponges.
- Let the Ceran® glass-top cool down before cleaning.
- Ensure to remove all residues of cleaning agents from the glass-top. Use a clean moist cloth to wipe off any such residues.

### IMPORTANT Air Intake Filter

**A dirty, blocked air intake filter can cause electronic damage to the induction unit.** Ensure to clean the Air Intake Filter at least once a week or as often as required. The Air Intake Filter is dishwasher-safe. Wipe the filter dry before inserting it back into the holder.

### Glass and Body Cleaning

1. Use razor blade scraper or non-scratching sponge to remove all residues on the glass.
  - When scraping, ensure you angle your razor blade scraper at about 20° to 30° from the glass.



2. Wipe the glass clean with a damp cloth.
3. To clean the stainless steel body, use regular stainless steel cleaners available from a hardware store.

### Visual Inspection of Silicone Seal

Check the silicone seal around the glass. Call service as soon as possible if you notice:

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

When the silicone seal is broken, water penetration can cause the induction unit to fail and the malfunction can cause personal harm.

## 8 Maintenance

### CAUTION

Maintenance and servicing work other than cleaning as described in this manual must be done by an authorized service personnel.



**Do not open the induction unit – dangerous electric voltage inside!**

The induction unit may only be opened by an authorized service personnel.

A good maintenance of the induction unit requires regular cleaning, care and servicing. The operator has to ensure all components relevant for safety are in perfect working order at all times.

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

## 9 Important Rules

**Six Simple rules to ensure reliable and repeatable performance of your induction unit:**

- Keep kitchen temperature below 105°F (40°C).
- Never place your induction units next to any grease generating or heat generating equipment.
- Clean the intake filter at least once a week or as often as required.
- Use only pans that fits the glass, do not use oversized pans.
- Never pre-heat the pan. Place the pan on the cooking area only when you are ready to cook.
- Do not use dented pans; it will cause damages to the electronics.

# 10 Troubleshooting



Do not open the induction unit – dangerous electric voltage inside!

The induction unit may only be opened by an authorized service personnel.

## CAUTION

**STOP** and **DO NOT USE** the induction unit if any part of the unit is cracked or broken. Turn off the induction unit immediately and if possible and safe, disconnect the unit from the power supply. Do not touch any parts inside the unit.

## 10.1 Common causes for induction unit failure

One or more of the following conditions may affect the function or contribute to the failure of an induction unit:

- 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 unit is ON.

### Symptoms

When a malfunction occurs, the induction unit may be in one of the following states:

- The induction unit stops working immediately.
- The induction unit continues to work in a power reduction mode.

The green indicator light may also blink at regular intervals.

### Corrective steps

Use the following sections to locate the problem area(s) and to take only the corrective action(s) indicated. Ensure you exercise safety precautions at all time.

Only an authorized service technician would have the training and correct tools to diagnose the internal components accurately and thoroughly. Contact a Factory Authorized Service agency for assistance. For a list of Garland authorized service agencies, please visit our websites at [www.Garland-Group.com](http://www.Garland-Group.com) (USA/Canadian customers) or [www.ManitowocFoodservice.com](http://www.ManitowocFoodservice.com) (international customers).

## 10.2 Problems and Possible Causes

| Problem  | Possible Causes  | Action To Take By Operator   |
|--|--|--|
| <b>Pan does not heat, green LED lamp is OFF (dark)</b>   | No power supply.   | Check the electrical supply, e.g. power cable plugged into the wall socket.<br>Check primary fuses.  |
|  | Control knob is in OFF-position.   | Turn control knob to an ON-position.   |
|  | Defective induction unit.  | Ensure knob is in OFF-position and if possible and safe, disconnect the unit from the power supply. Contact your authorized service agency.    |
| <b>Pan does not heat, green LED lamp is blinking. If LED lamp blinks at intervals, see next section.</b> | Pan is too small.  | Use a suitable pan with bottom diameter larger than 5" (12cm).   |
|  | Pan is not placed in the center of the heating zone; pan is not detected by sensor.  | Move the pan to the center of the heating zone.  |
|  | Unsuitable pan.  | Select a pan recommended for the induction unit.   |
|  | Defective induction unit.  | Ensure knob is in OFF-position and if possible and safe, disconnect the unit from the power supply. Contact your authorized service agency.    |
| <b>Poor heating, green LED lamp is ON (shining)</b>  | Air-cooling system obstructed.   | Verify that air inlet and outlet are not blocked.<br>Ensure the Intake Air Filter is clean.  |
|  | Ambient temperature is too high; the cooling system is not able to keep the induction unit in normal operating conditions. | Verify that no hot air is sucked in by the fan.<br>Reduce the ambient temperature. The intake air temperature must be lower than 104°F (40°C). |
|  | One phase is missing (for units with three phase supply only).   | Check primary fuses.   |
|  | Defective induction unit.  | Ensure knob is in OFF-position and if possible and safe, disconnect the unit from the power supply. Contact your authorized service agency.    |
|  | Pan used is not ideal.   | Select a pan recommended for induction cooking. Then compare results of different pan used.  |
| <b>Unit does not react to control knob positions</b>   | Defective control switch.  | Ensure knob is in OFF-position and if possible and safe, disconnect the unit from the power supply. Contact your authorized service agency.    |
| <b>Power/heating level seems to be reduced, <u>fan is working</u></b>                                    | Air-cooling system is blocked.<br>Internal fan is dirty.   | Verify that air inlet and outlet are not obstructed. Ensure the Intake Air Filter is clean.<br>Contact your authorized service agency.         |
| <b>Power/heating level seems to be reduced, <u>fan does not work</u></b>                                 | Defective fan or fan control.  | Ensure knob is in OFF-position and if possible and safe, disconnect the unit from the power supply. Contact your authorized service agency.    |
| <b>After a longer continuous operation, Power/heating level seems to be reduced</b>                      | Overheated induction coil; cooking area is too hot.<br>Overheated oil in pan.<br>Pan is empty.                             | Switch the unit off. Safely remove pan. Wait until the heating zone has cooled down before turning the unit ON again.                          |

**NOTE:** The fan starts when the ambient temperature in the control area exceeds 131°F/55°C. At heat temperatures higher than 158°F/70°C, the controller automatically reduces the power to keep the unit in normal operating conditions. The cooker operates audibly irregular.

### 10.3 Indicator Lamp Flashes at Intervals (for Operators)

The indicator lamp flashes to signal a specific problem area. Counting the number of short flashes after each long flash will give the possible causes. Example: “— .... — ....” The LED 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 cancelled.

| #Flashes | Possible Causes   | Action To Take By Operator  |
|----------|---|---|
| 1        | Unsuitable induction cooking pan. Cooking pan is not placed in the center of the heating zone. Internal wiring/coil connection malfunction. (1)             | Check pan material.<br>Check pan placement on cooking area.<br>Contact your authorized service agency.  |
| 2        | Unsuitable induction cooking pan. Internal software overcurrent. (1)  | Check pan material.<br>Contact your authorized service agency.  |
| 3        | Air-cooling system obstructed. Internal heat sink overheated. (1)   | Let unit cool down.<br>Verify that air inlet and outlet are not obstructed.<br>Check and clean air filter.<br>Contact your authorized service agency.   |
| 4        | Overheated cooking zone. Sensor unit failure. (1)   | Let unit cool down.<br>Verify that air inlet and outlet are not obstructed.<br>Check and clean air filter.<br>Contact your authorized service agency.   |
| 5        | Error on rotary power switch. (1)   | Contact your authorized service agency.   |
| 6        | Ambient temperature too high (the cooling system is not able to keep the induction unit in normal operating conditions). Internal component overheated. (1) | Let unit cool down.<br>Verify that air inlet and outlet are not block. Check and clean air filter.<br>Verified that no hot air is sucked in by the fan.<br>Reduce the ambient temperature. The intake air temperature must be lower than 104°F (40°C).<br>Contact your authorized service agency. |
| 7        | Warning from cooking empty sensor or coil connection failed. (1)  | Check food in the pan or empty pan.<br>Contact your authorized service agency.  |
| 8        | Sensor error, internal board or heat sink. (1)  | Contact your authorized service agency.   |
| 10       | Internal electronic failure. (1)  | Contact your authorized service agency.   |

- (1) The induction unit stops working immediately.
- (2) The induction unit continues to work in power reduction mode.

## 10.4 Troubleshooting with Error Codes (for Service Technicians)

The indicator lamp flashes to signal a specific problem area. Counting the number of short flashes after each long flash will give the possible causes. **Example:** “— .... — ....” The LED 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 cancelled.

To obtain the internal data and error code for troubleshooting, you need an IR Adapter, proper connectors, and software. The table below is a reference guide. For further information and assistance, please contact Garland Technical Service.


| Error Code | #Flashes | Reason   | Things To Check   |
|------------|----------|--|---|
| E01        | 1        | Hardware overcurrent. Induction coil not detected. (1)                                   | Check cooking pan material.<br>Check pan placement on cooking zone.<br>Check wiring and connection on induction coil. |
| E02        | 2        | High coil current. Software overcurrent. (1)   | Check cooking pan material.   |
| E03        | 3        | Heat sink (KK) temperature too high. (1)   | Check installation/air flow (supply of cool air).<br>Check fan operation.   |
| E04        | 4        | Cook zone temperature too high. Failure of sensor unit or sensor unit not connected. (1) | Check sensor unit.<br>Pan empty.  |
| E05        | 5        | Rotary power switch error. Defective potentiometer or broken cable. (1)                  | Check potentiometer and its wiring.   |
| E06        | 6        | Internal temperature too high “generator”. (1)   | Check installation/air flow (supply of cool air).   |
| E10        | 10       | Communication BUS error. (1)   | Check all wiring.   |
| E12        | No Flash | High heat sink (KK) temperature. (2)   | Check installation/air flow (supply of cool air).<br>Check fan operation.   |
| E20        | No Flash | High internal temperature. (2)   | Check installation/air flow (supply of cool air).   |
| E21        | 8        | Heat sink (KK) temperature sensor error. (1)   | Check wiring. Check heat sink sensor.<br>Contact Garland.   |
| E24        | 8        | Board sensor error. (1)  | Check temperature sensor. Contact Garland.  |
| E29        | 7        | Coil connection error. Empty pan detected or sensor error. (1)                           | Check cooking pan. Check sensors.   |
| E30        | 6        | CPU temperature too high. (1)  | Check installation/air flow (supply of cool air).   |
| E41        | 4        | Sensor 1 overheated or defect. (1)   | Check cook zone (coil) sensor 1.  |
| E42        | 4        | Sensor 2 overheated or defect. (1)   | Check cook zone (coil) sensor 2.  |
| E43        | 4        | Sensor 3 overheated or defect. (1)   | Check cook zone (coil) sensor 3.  |
| E44        | 4        | Sensor 4 overheated or defect. (1)   | Check cook zone (coil) sensor 4.  |
| E45        | 4        | Sensor 5 overheated or defect. (1)   | Check cook zone (coil) sensor 5.  |
| E46        | 4        | Sensor 6 overheated or defect. (1)   | Check cook zone (coil) sensor 6.  |

(1) The induction unit stops working immediately.

(2) The induction unit continues to work in power reduction mode.

## 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, your waste disposal service or your equipment dealer.

**IMPORTANT** Induction units, sent for disposal, can be brought back into operation and their use should be avoided.

**NOTE** The unit 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 induction unit.

# **Garland** Installation & Operation Manual

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GARLAND INDUCTION DUAL BASE-LINE COOKERS with RTCSmp TECHNOLOGY

Garland Commercial Ranges Ltd.  
1177 Kamato Road, Mississauga,  
Ontario, CANADA L4W 1X4

T. 1-905-624-0260  
F. 1-905-624-5669  
[www.garland-group.com](http://www.garland-group.com)

USA Sales, Parts and Service 1-800-424-2411  
Canadian Sales 1-888-442-7526  
Canada or USA Parts/Service 1-800-427-6668

