INSTALLATION AND OPERATION MANUAL

GARLAND INDUCTION MODULE-LINE COOKTOPS DUAL/QUAD

with RTCSmp TECHNOLOGY
Real-time **T**emperature **C**ontrol **S**ystem
multi-**p**oint sensing

Models:

MODU7000
MODU7000 FL
MODU10000
MODU14000 FL
MOQU14000
MOQU20000
MOQU21000
MOQU24000
MOQU28000 FL

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.

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

FOR YOUR SAFETY

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

WARNING

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY, OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT

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 for USA and Canada. For international customers, please visit www.manitowocfoodservice.com. The information contained herein, including design and part specifications, may be superseded and is subject to change without notice.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

Part # 4532415 Rev 2 (1/15/14)

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WARRANTY

Our warranty statements for induction products are available on-line. Please visit our website at 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 Built-In Module 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.
 **Warning** **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.	

CONTACTS

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Canadian Sales	1-888-442-7526
Canada or USA Parts/Service	1-800-427-6668
International Sales and Service	www.ManitowocFoodservice.com

CONTENTS

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 working 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 the 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.
- 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 plastic vessels and aluminum objects such as aluminum foil on the glass-top.

- The induction unit has an internal air-cooling system. Do not block the air inlet and outlet slots with objects such as containers. Any air obstruction could cause the unit to be overheated and to switch off.
- 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.
- 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.

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 refer to section ***9 Important Rules*** of 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 if and only if 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 a 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.

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

When you remove the pan from the heating area, power transfer to the pan is stopped immediately. If the pan is put back in the heating zone, the selected power will be transferred to the pan again.

After switching the unit off, there is no heat retained inside the unit.

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 Application, Components Overview

2.1 Application

The unique RTCSmp Module-Line Cooktops are specially engineered for building the most flexible kitchen operation. The Module-Line Family offers a wide selection of cooking surfaces: single, dual, quad cooktops with round, full or a combination of round and full induction coils. In addition, griddle, braising pan, and wok cooking options are also available.

These RTCSmp units provide numerous great features including fast heat up time, precise temperature monitoring and control, temperature consistency, ease of use and maintenance. To guarantee the induction units' reliability and performance, please observe all safety, installation, and operation requirements mentioned in this manual.

2.2 Components and Features

Built with a robust construction, the RTCSmp Induction Module-Line Cooktop is modular and powerful with the 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. RTCSmp also limits the energy supply during peak load and its special control eliminates interference noises.

The module-line models include a number of components which allow for optimal flexibility in designing an efficient kitchen. The unique features of each component are outlined below. See also chapter ***3 Dimensions and Technical Specifications***.

Each built-in Module-Line concept consists of: induction generator(s), control unit(s), coil carrier sheet(s) with coils and sensors, operation unit(s) with rotary switch(es), 6mm thick Ceran glass-top(s), mounting frame(s) with silicone gaskets, and cables.

Induction Generator:   **OR**	Can be installed up to 10 feet away from other components. | All electrical connections can be accessed externally through plug connections. | Closed aluminum housing with an integrated cooling fan to keep electronics cool. | Integrated air guiding system to direct exhaust air out of the housing. Types: IN/MO 7000FL, IN/MO 14000FL, IN/MO 7000, IN/MO 10000
Control Unit: 	Information and diagnostic hub for the whole induction unit. | IR interface with diagnostic system for service. | Connections to other unit components via plug connections. | Compact design and easy to install using special installation tabs/brackets. Types: IN/MO7000/10000, IN/MO7000/14000

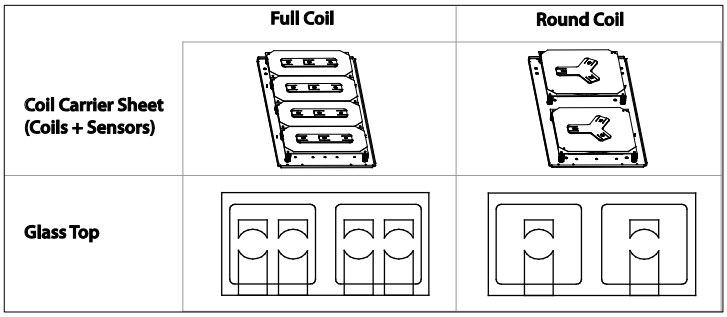
Coil Carrier Sheet:

Multiple options available: round or full coil in single, dual, quad, or combination of round/full coil configurations. | Compact and low profile design.

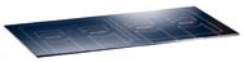
Full Coil (FL): Rectangular in shape. Several large or small pans can be placed on one surface at the same time.

Round Coil: One pan is used for each heat-zone. Round coils have higher power density and energy efficiency.

Visual differences between full and round coil carrier sheets and the corresponding glass-tops:



Glass-Top:



6mm thick Ceran glass-top. | Easy to clean and maintain. | Glass-top patterns match the corresponding coil versions underneath: Full-Coil or Round-Coil.

Types:
Dual: 360x360x6mm; 650x375x6mm; 720x360x6mm
Quad: 650x650x6mm; 720x720x6mm

Installation Frame:

Installation/mounting frame is supplied for flush mounting the coil carrier sheet(s) and glass-top. | Silicone gaskets (not shown) included.

Five Sizes of Frames:
- for -360 or -360FL dual models with 360x360x6mm glasstop
- for -650 or -650FL dual models with 650x375x6mm glasstop
- for -720 or -720FL dual models with 720x360x6mm glasstop
- for -650 or -650FL quad models with 650x650x6mm glasstop
- for -720 or -720FL quad models with 720x720x6mm glasstop

Operation Unit:

The power switch (Operation Unit) regulates the temperature in power levels 1 to 12. | Simple to operate; adjust the temperature setting simply by turning the knob. | LED light indicator (not shown) signals the ON/OFF state, pan detection process and error codes. | Pre-assembled with plastic knob, LED light and cable.

Cable Kit:

2.5-meter cable kit(s) for 208V or 400V is included. Each kit includes cables for induction coils, sensors, and CAN/BUS connections. Fan cables are included where applicable.

Options:
4-meter Cable Kit (208V); 4-meter Cable Kit (400V); 6-meter Cable Kit (208V); 6-meter Cable Kit (400V)

3 Dimensions and Technical Specifications

3.1 Rating Plate

The rating plate contains important information such as model number, serial number, and electrical specifications. The rating plate is affixed to the side of the induction generator, next to the mains connection.

3.2 Nomenclature and Models

Series	Style/ Function	Power (Watt)	Glass Size (mm)	Voltage* (Volts)	Models
MO = module-line	**DU** = Dual	**7000** **10000**	**360** x 360 **650** x 375 **720** x 360	**208**	**MODU7000360-208, MODU10000360-208** **MODU7000650-208, MODU10000650-208** **MODU7000720-208, MODU10000720-208**
	DU = Dual with **FL**=Full coil(at end)	**7000** **14000**	**360** x 360 **650** x 375 **720** x 360		**MODU7000360FL-208** **MODU14000360FL-208** **MODU14000650FL-208** **MODU14000720FL-208**
	QU = Quad	**14000** **20000** **21000** **24000**	**650** x 650 **720** x 720		**MOQU14000650-208, MOQU20000650-208** **MOQU14000720-208, MOQU20000720-208** **MOQU 21000720-208** **MOQU24000720-208**
	QU = Quad with **FL**=Full coil(at end)	**28000**	**650** x 650 **720** x 720		**MOQU28000650FL-208** **MOQU28000720FL-208**

* Other voltage options are available. Please consult your dealer for details.

3.3 Models and Components Charts

Models and Components Charts are provided in section ***4 Installation***. For each model, a list of components and their electrical connections are shown. Quantities are specified on the charts. For the dimensions of the components, refer to the technical drawings in section ***4 Installation***.

3.4 Electrical Specifications

Model - DUAL	Voltage	Power	# Circuits	Conductor Size	# Coils	#Cook-Zones
MODU7000360FL	208 V AC/ 3Ph/ 60Hz	7000W(2x3500 W)/ 22A	1	AWG 10	2 rectangular coils	1
	400 V AC/ 3Ph/ 50Hz	7000W(2x3500 W)/ 11A	1	1.5mm^2		
	440 V AC/ 3Ph/ 50Hz	7000W(2x3500 W)/ 10A	1	1.5mm^2		
MODU7000360 MODU7000650 MODU7000720	208 V AC/ 3Ph/ 60Hz	7000W(2x3500 W)/ 22A	1	AWG 10	2 round coils	2
	400 V AC/ 3Ph/ 50Hz	7000W(2x3500 W)/ 11A	1	1.5mm^2		
	440 V AC/ 3Ph/ 50Hz	7000W(2x3500 W)/ 10A	1	1.5mm^2		
MODU10000360 MODU10000650 MODU10000720	208 V AC/ 3Ph/ 60Hz	10000W(2x5000 W)/ 30A	1	AWG 8	2 round coils	2
	400 V AC/ 3Ph/ 50Hz	10000W(2x5000 W)/ 16A	1	2.5mm^2		
	440 V AC/ 3Ph/ 50Hz	10000W(2x5000 W)/ 15A	1	2.5mm^2		
MODU14000360FL MODU14000650FL MODU14000720FL	208 V AC/ 3Ph/ 60Hz	14000W(4x3500 W)/ 22A	2	AWG 10	4 rectangular coils	2
	400 V AC/ 3Ph/ 50Hz	14000W(4x3500 W)/ 11A	2	1.5mm^2		
	440 V AC/ 3Ph/ 50Hz	14000W(4x3500 W)/ 10A	2	1.5mm^2		
Model - QUAD	**Voltage**	**Power**	**# Circuits**	**Conductor Size**	**# Coils**	**#Cook-Zones**
MOQU14000650 MOQU14000720	208 V AC/ 3Ph/ 60Hz	14000W(4x3500 W)/ 22A	2	AWG 10	4 round coils	4
	400 V AC/ 3Ph/ 50Hz	14000W(4x3500 W)/ 11A	2	1.5mm^2		
	440 V AC/ 3Ph/ 50Hz	14000W(4x3500 W)/ 10A	2	1.5mm^2		
MOQU20000650 MOQU20000720	208 V AC/ 3Ph/ 60Hz	20000W(4x5000 W)/ 30A	2	AWG 8	4 round coils	4
	400 V AC/ 3Ph/ 50Hz	20000W(4x5000 W)/ 16A	2	2.5mm^2		
	440 V AC/ 3Ph/ 50Hz	20000W(4x5000 W)/ 15A	2	2.5mm^2		
MOQU2100720	208 V AC/ 3Ph/ 60Hz	21000W(Round Coil 2x3500W + Full Coil 4x3500 W)/ 22A	3	AWG 10	2 round + 4 rectangular coils	4
	400 V AC/ 3Ph/ 50Hz	21000W(Round Coil 2x3500W + Full Coil 4x3500 W)/ 11A	3	1.5mm^2		
	440 V AC/ 3Ph/ 50Hz	21000W(Round Coil 2x3500W + Full Coil 4x3500 W)/ 10A	3	1.5mm^2		
MOQU2400720	208 V AC/ 3Ph/ 60Hz	24000W(Round Coil 2x5000W + Full Coil 4x3500 W)/ 30A	3	(1x) AWG 8 (2x) AWG 10	2 round + 4 rectangular coils	4
	400 V AC/ 3Ph/ 50Hz	24000W(Round Coil 2x5000W + Full Coil 4x3500 W)/ 16A	3	(1x) 2.5mm^2 (2x) 1.5mm^2		
	440 V AC/ 3Ph/ 50Hz	24000W(Round Coil 2x5000W + Full Coil 4x3500 W)/ 15A	3	(1x) 2.5mm^2 (2x) 1.5mm^2		
MOQU28000650FL MOQU28000720FL	208 V AC/ 3Ph/ 60Hz	28000W(8x3500 W)/ 22A	4	AWG 10	8 rectangular coils	4
	400 V AC/ 3Ph/ 50Hz	28000W(8x3500 W)/ 11A	4	1.5mm^2		
	440 V AC/ 3Ph/ 50Hz	28000W(8x3500 W)/ 10A	4	1.5mm^2		

3.5 Operating Conditions

Max. Tolerance of Nominal Supply Voltage	+6 /-10 %
Network Impedance (Zmax.)	0.25Ω
Supply frequency	50/60 Hz
Amperage Nominal Value — 400V, 3Ph	10A for the 7kW generator (4 x 1.5mm^2) 15A for the 10kW generator (4 x 2.5mm^2) 2 x 10A for the 14kW generator (2 x (4 x 1.5mm^2))
Amperage Nominal Value — 208V, 3Ph	20A for the 7kW generator (4x AWG 10) 29A for the 10kW generator (4x AWG 8) 2 x 20A for the 14kW generator (2 x (4 x AWG 10))
Ingress Protection class	IP X0
Maximum Ambient Temperature	In Storage > -4°F to +158°F (-20°C to +70°C) In Operation >+ 41°F to +104°F (+5°C to +40°C)
Maximum Relative Air Humidity	In Storage > 10% to 90% In Operation > 30% to 90%
Temperature/Power Regulator	Potentiometer 10 kOhm
LED Indicator Lamp	24VDC / max. 40mA (Green)
Clearance from materials for generator	Min. 1.57"(40mm) for air intake and exhaust openings Min. 0.39"(10mm) for side clearance
Min. Induction Cooking Pan Diameter	5" (12cm)
Max. Air Flow of Fan is 70.63 cfm (120 m^3 /h), Fresh Air Inlet Opening of 10.08 sq. in. (6500 mm^2) is required.	

3.6 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.
- When designing kitchen cabinets for the induction equipment, please take into account all installation requirements, including factors such as: ease of electrical installation, size of the power conductor, and length of the wires.
- 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 Compartment Protection

To protect the induction unit and wiring, we recommend isolating the generator, the coil carrier sheets, and the wires in separate electrical compartments inside the cabinet.

The illustrations below show two installation versions. In Figure **A**, all module-line components are installed inside one single compartment and the wires are exposed. In Figure **B**, the interior space of the cabinet is divided. The coil carrier sheet, the control unit and their wiring are protected inside the upper compartment; the generator and its wiring are protected inside the lower compartment. Extra storage space can also be created.

IMPORTANT:	To ensure reliability of the induction unit, the cabinet/compartments must have sufficient ventilation for the exhaust. Build up of hot exhaust air will cause the unit to reduce power or to switch-off.

Figure A

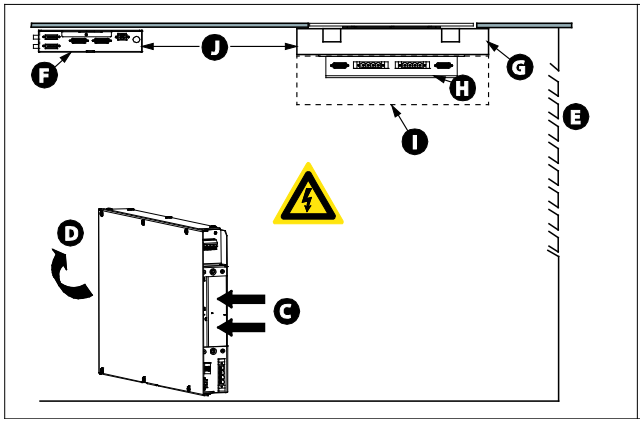
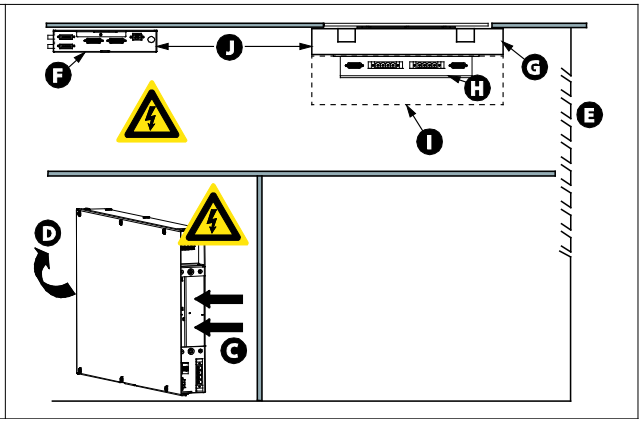


Figure B



The call-outs in the illustrations show:

(**C**) Hot air exhaust from the generator.

(**D**) Air intake through the air intake opening on the generator.

(**E**) Louvered air exhaust opening installed on the cabinet.

(**F**) Control Unit mounted to the underside of the countertop.

(**G**) Mounting frame.

(**H**) Coil Carrier Sheet inserted into the Mounting Frame.

(**I**) **CLEARANCE**: minimum 10cm / 3.94". See section ***4.4 Coil Carrier Sheet, Ceran Glass and Mounting Frame***.

(**J**) Ensure the distance between the control unit and the coil carrier sheet is **less than 80cm/31.5"**.

4.2 Induction Generator

4.2.1 Location

- The induction generator can be installed around heat-producing equipment such as an oven, if and only if the ambient temperature is below 104°F (40°C). An external fan must be used to remove the air away from the induction unit. NOTE: Additional fans and cooling controls are the responsibility of the installer.
- Prevent moisture, hot ambient air or greasy fume being drawn in by the induction generator, especially when the equipment is side-by-side or in the vicinity of a fryer or oven.
- Keep all the combustible materials, vapors or liquids away from the generator.
- Ensure the installed location of the generator is safe from any ingress of liquid into the immediate vicinity.
- Ensure the cable connections are accessible for service.

4.2.2 Ventilation

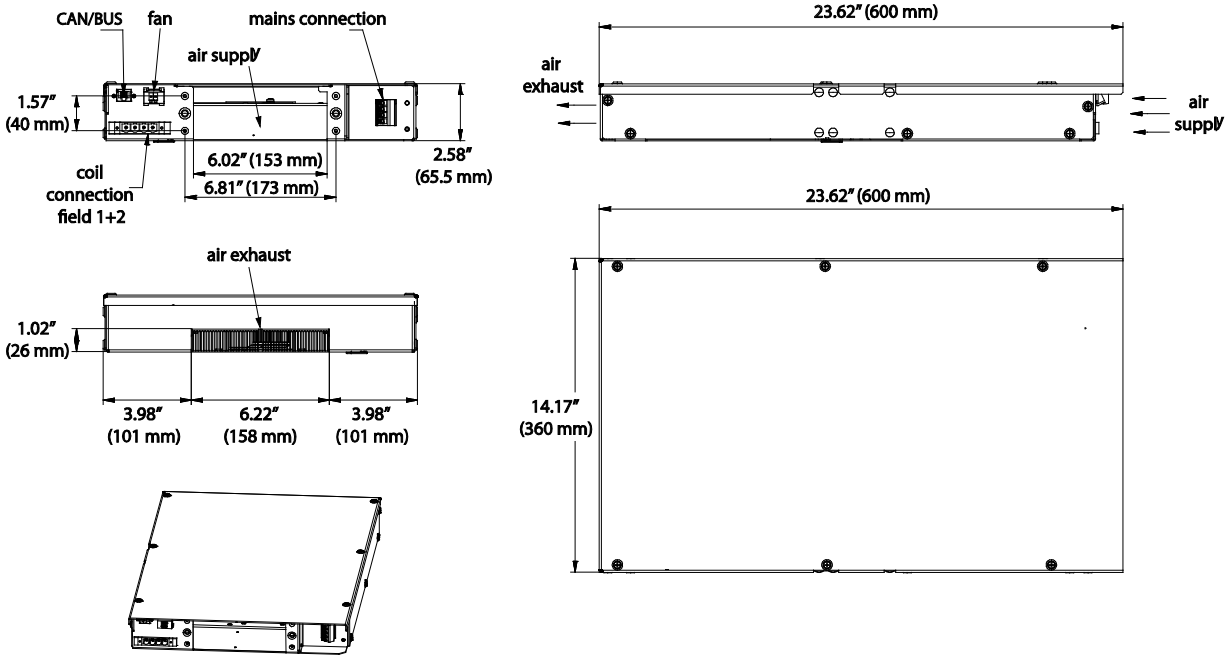
Proper cool air intake and ventilation is essential to the reliability and functioning of the induction unit. Please ensure all requirements listed below are met:

- The induction generator has an air intake and an air exhaust openings. Ensure these openings are not blocked. **Clearance** from obstructions: minimum 1.57"(40mm) for the air intake and exhaust openings; minimum 0.39"(10mm) for the sides.
- The air intake temperature must not exceed 104°F (40°C). If the generator is installed directly under the coil or in the same chamber of the cabinet as the coil, ensure the ventilation system will keep the ambient temperature for operation below 104°F (40°C).
- Maximum air flow of the fan is 70.63 cfm (120 m^3 per hour) and therefore a minimum opening of 10.08 sq. in. (6500 mm^2) is required around the fresh air inlet.
- An optimal air circulation and air flow must not be restricted by the installation.
- When installing the units, ensure the intake air and exhaust air are conducted separately. The in-take air and exhaust air must not mix. To avoid build-up of hot exhaust air inside the counter, draw the exhaust air out of the counter, or provide a separate exhaust air plenum. Build up of hot exhaust air will cause the induction unit to reduce power or to switch-off.
- Ensure the induction unit does not take in hot ambient air from other surrounding units and appliances, especially when the installed location of the unit is close to heat generating equipment such as a fryer or an oven.

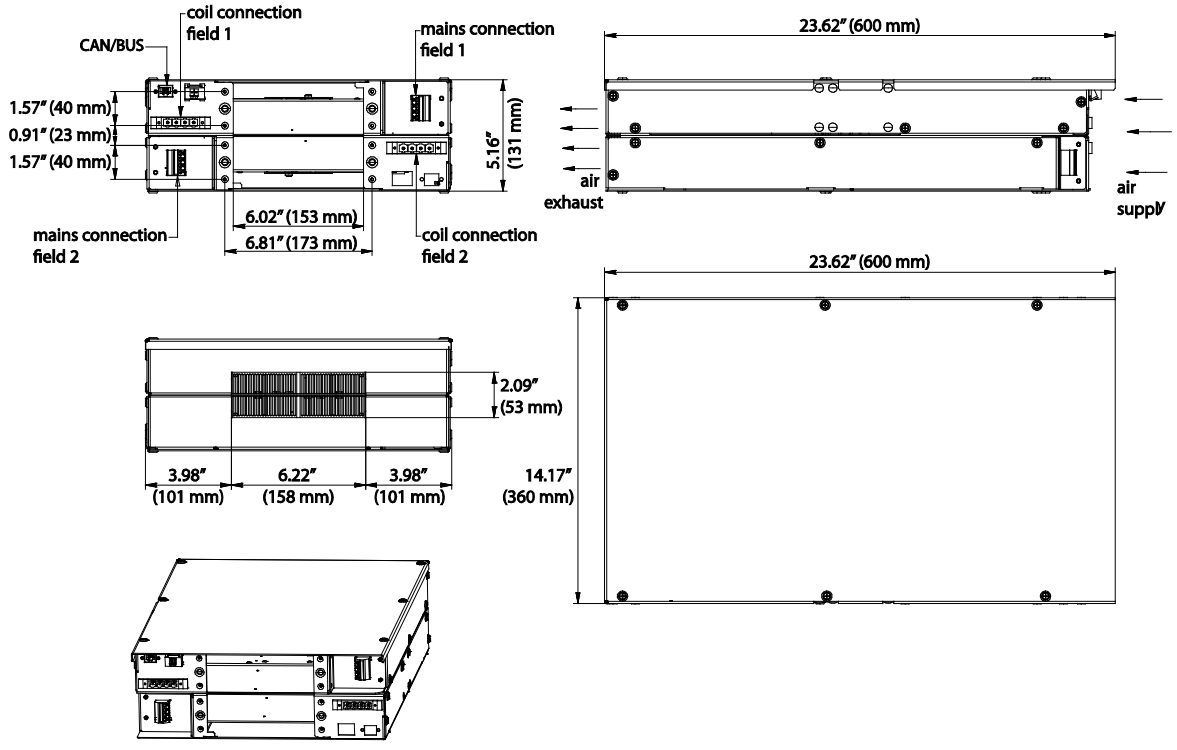
- It is highly recommended that an exhaust fan be installed into the cabinet at an appropriate location. This will force hot air out the cabinet and away from the induction unit. Consult an electrical or installation expert for the most appropriate location to install a cabinet exhaust fan.
- The intake air should be filtered by an air intake filter. **IMPORTANT:** Kitchen air often contains grease laden vapors. Grease deposits inside the generator may cause overheating. Failure to provide clean fresh cooling air may void warranty.

4.2.3 Dimensions

Models: MODU7000/ 10000 MOQU14000/ 20000/ 21000/ 24000



Models: MODU14000/ 20000 MOQU21000/ 24000/ 28000



4.3 Control Unit and Operation Unit (Power Switches)

4.3.1 Location

- Distance of the control unit from the coil carrier sheet: MAX. 31.50" / 80cm.
- Distance of the control unit from the operation unit (power switch): MAX. 31.50" / 80cm.
- Ensure the Service Interface window of the control unit (see *4.3.4 Dimensions—Control Unit*) is not blocked and is easily accessible for service.
- Ensure the cable connections are accessible for service.

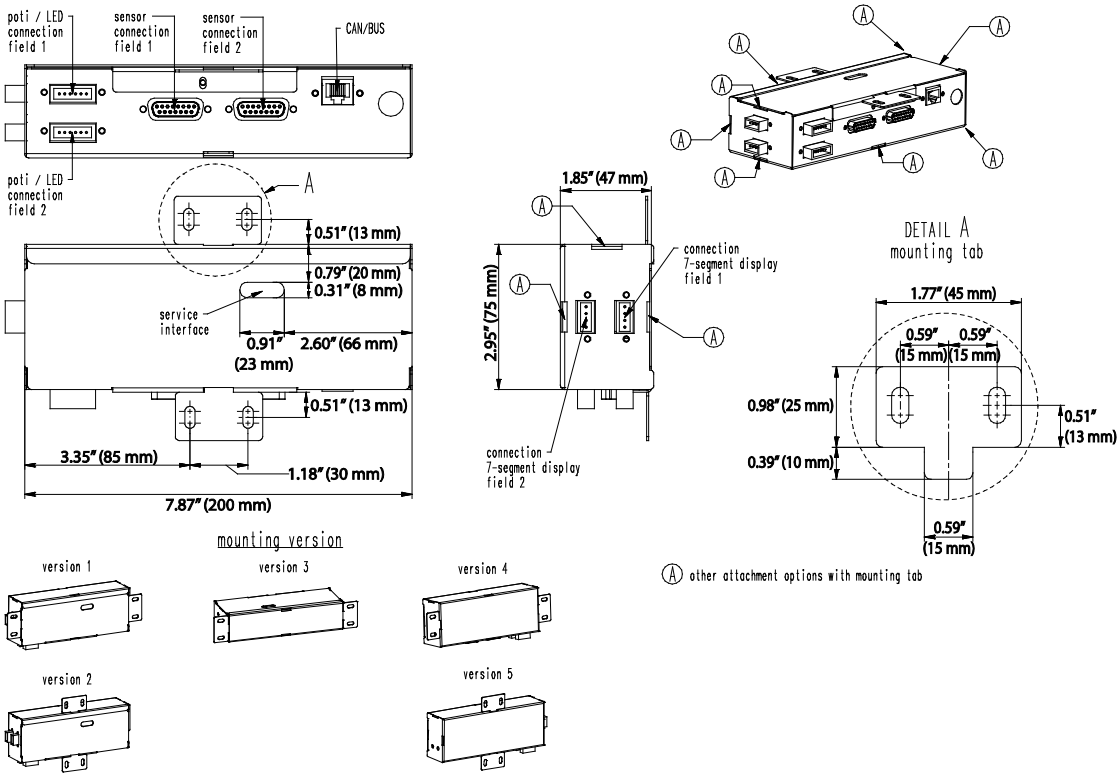
4.3.2 Ventilation

- The control and operation units can be installed around heat-producing equipment such as an oven, if and only if the ambient temperature is below 104°F (40°C). An external fan must be used to remove the hot ambient air away from the control unit.
- Prevent moisture, hot or greasy ambient air being drawn into the installation compartment. Pay attention to the ventilation when the induction unit is installed next to other induction units, appliances, fryers and ovens.

4.3.3 Mounting Methods

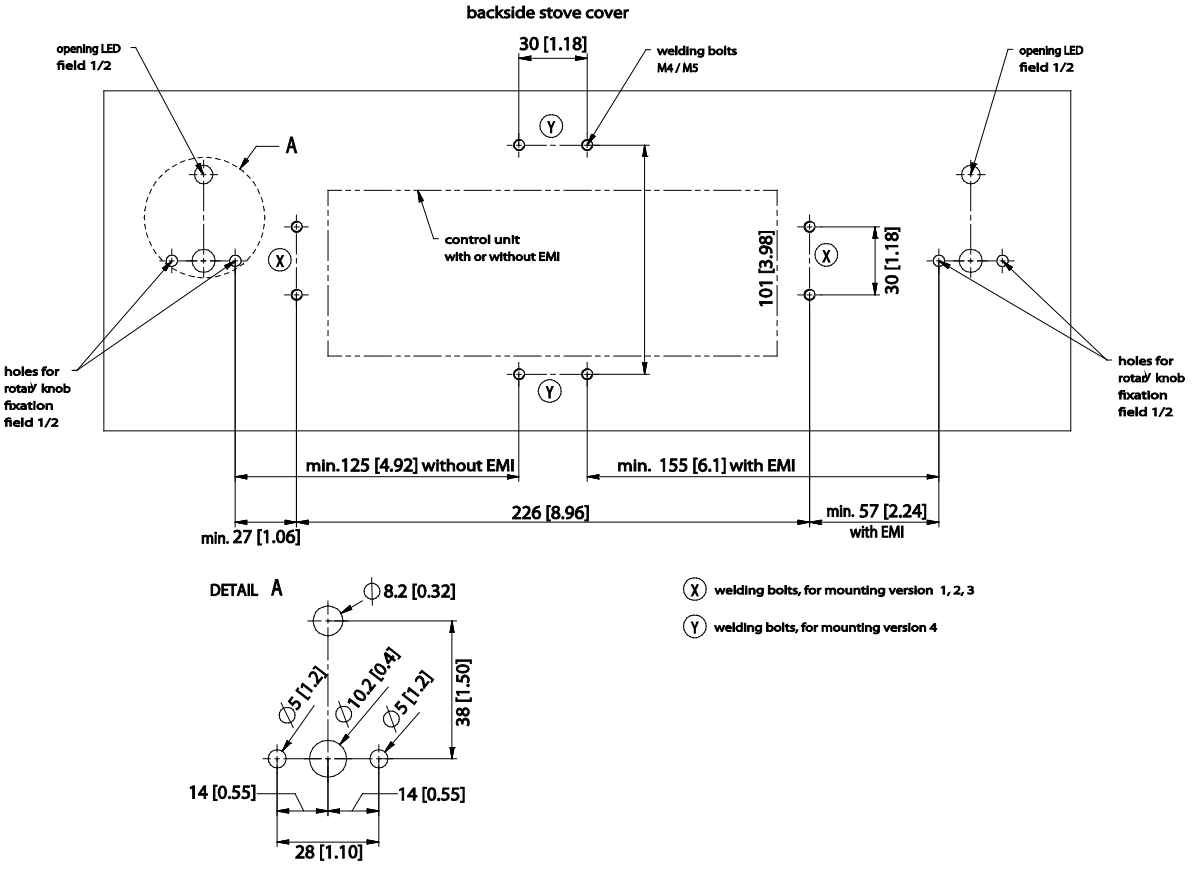
- **Control Unit:**
  - Installation brackets are provided for mounting the control unit. See "Mounting Version" in section ***4.3.4 Dimensions– Control Unit***.
  - Mount the control unit directly onto the cabinet compartment wall/shelf, or
  - Stud-mount the control unit onto the back of the cabinet front panel. Use the dimensions provided in section ***4.3.5 Dimensions Guide*** as a template for installing the control unit, the operation units (power switches) and the LED Indicator lights.
- **IMPORTANT: To prevent the operation units (power switches) from rotating during operation, secure these units onto the panel with two (2) M4 screws.** See section ***4.3.5 Dimensions Guide***.

4.3.4 Dimensions – Control Unit



4.3.5 Dimensions Guide (Holes/Studs)

Dimensions in mm [inch]

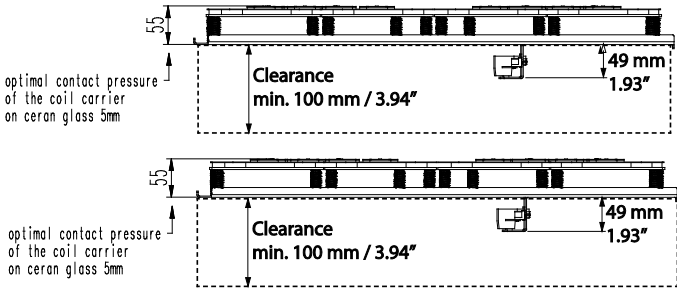


4.4 Coil Carrier Sheet, Ceran Glass and Mounting Frame

The module-line cooktops are to be flush mounted. The cooktop assembly composes of a Ceran glass top, coil carrier sheet(s), and mounting frame. The glass and coil carrier sheet are to be inserted into the mounting frame. Please follow all the location, ventilation and clearance requirements listed in this section.

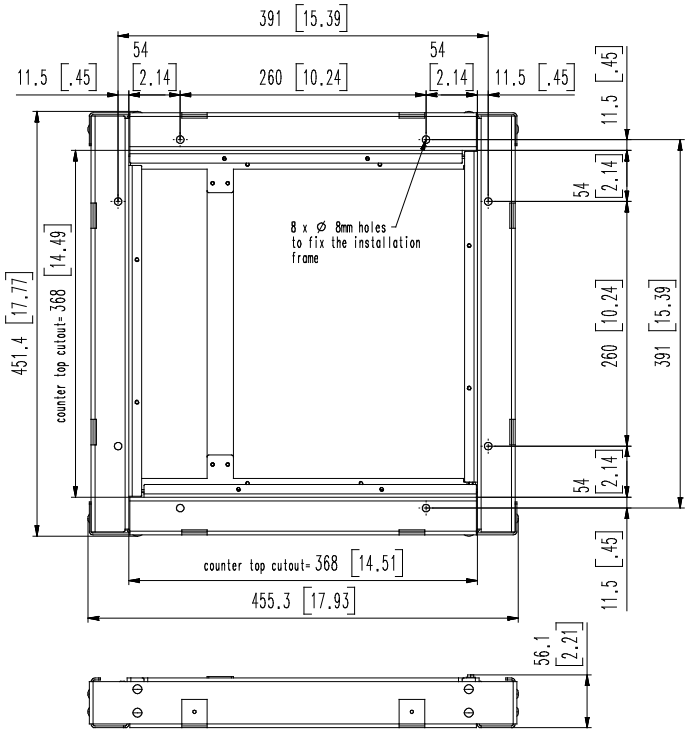
4.4.1 Location & Ventilation

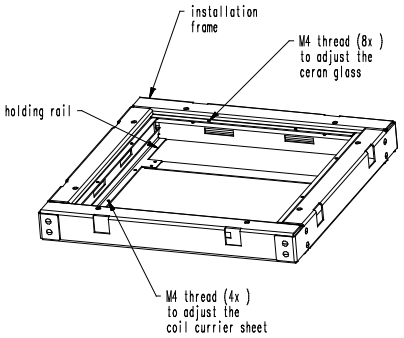
- Distance from the control unit to the coil carrier sheet: MAX. 31.50" / 80cm.
- Clearance below the coil carrier sheet/mounting frame: MIN. 3.94" / 10cm. This clearance must be maintained for installation and service. Ensure this area can be easily accessible for service.



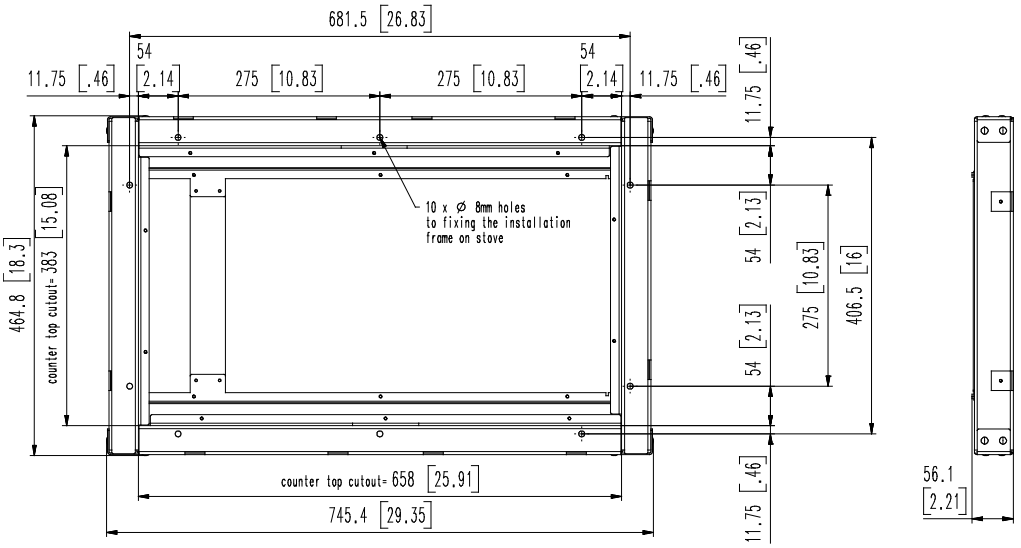
- MUST NOT install or store any metallic objects or components below the coils.
- When placed in the vicinity of the coils, objects/components made of steel must be non-magnetic.
- Ensure the installed location of the generator is safe from any ingress of liquid into the immediate vicinity.
- The coil carrier sheet can be installed around heat-producing equipment such as an oven, if and only if the ambient temperature is below 104°F (40°C). An external fan must be used to remove the air away from the induction unit.
- Prevent moisture, hot ambient air or greasy fume being drawn into the installation compartment, especially when the appliances are side-by-side or in the vicinity of a fryer or oven.
- Keep all the combustible materials, vapors or liquids away from the coil carrier sheet.

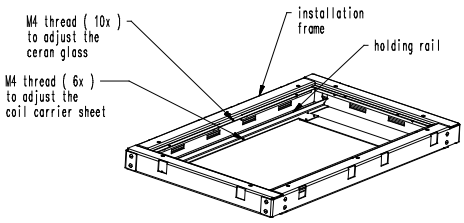
4.4.2 Dimensions – Mounting Frame [for glasstop size 360x360mm]



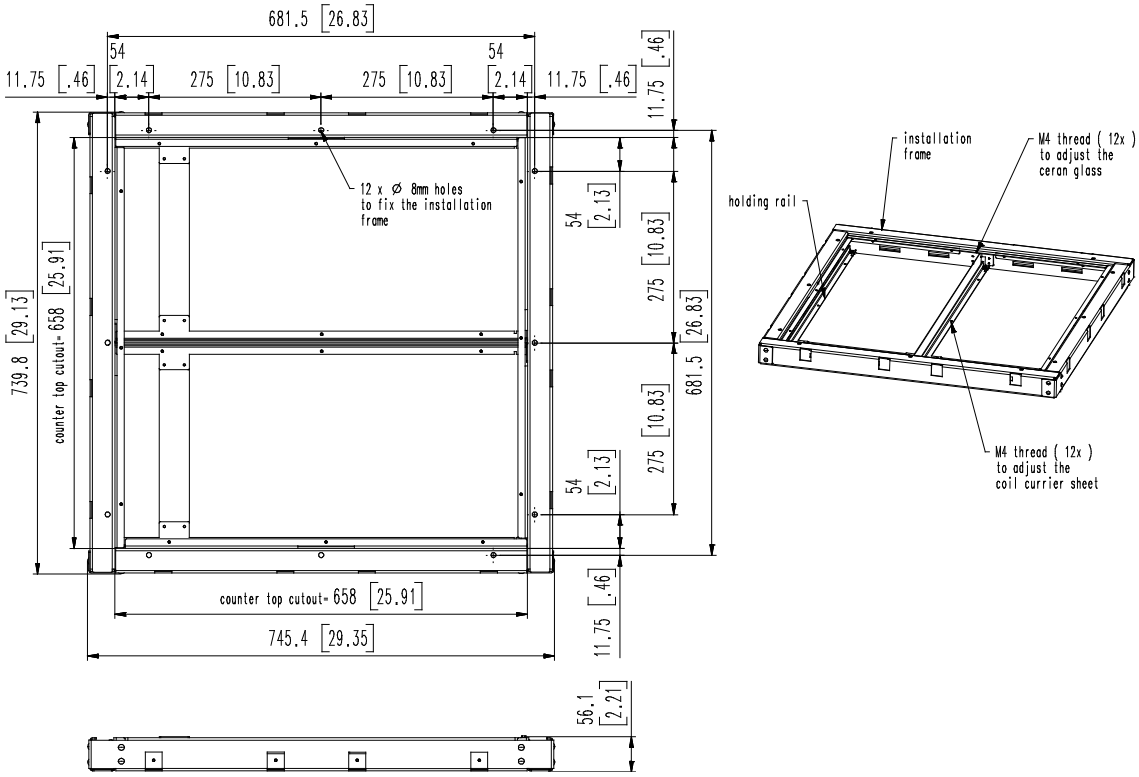


4.4.3 Dimensions – Mounting Frame [for glasstop size 375x650mm]

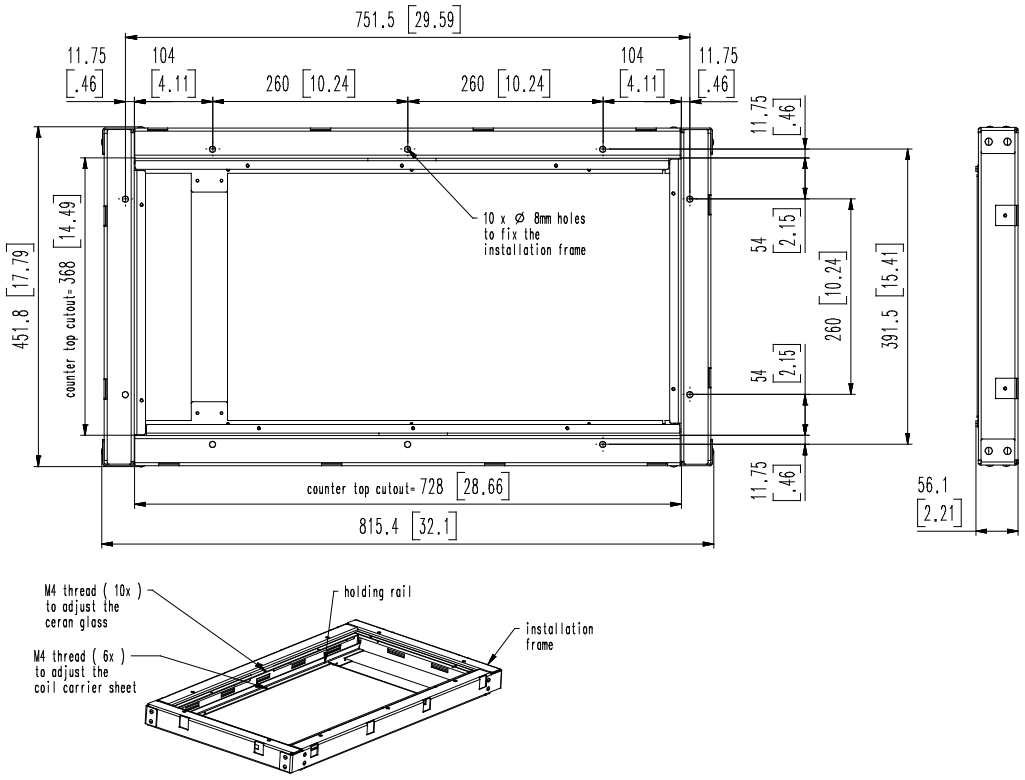




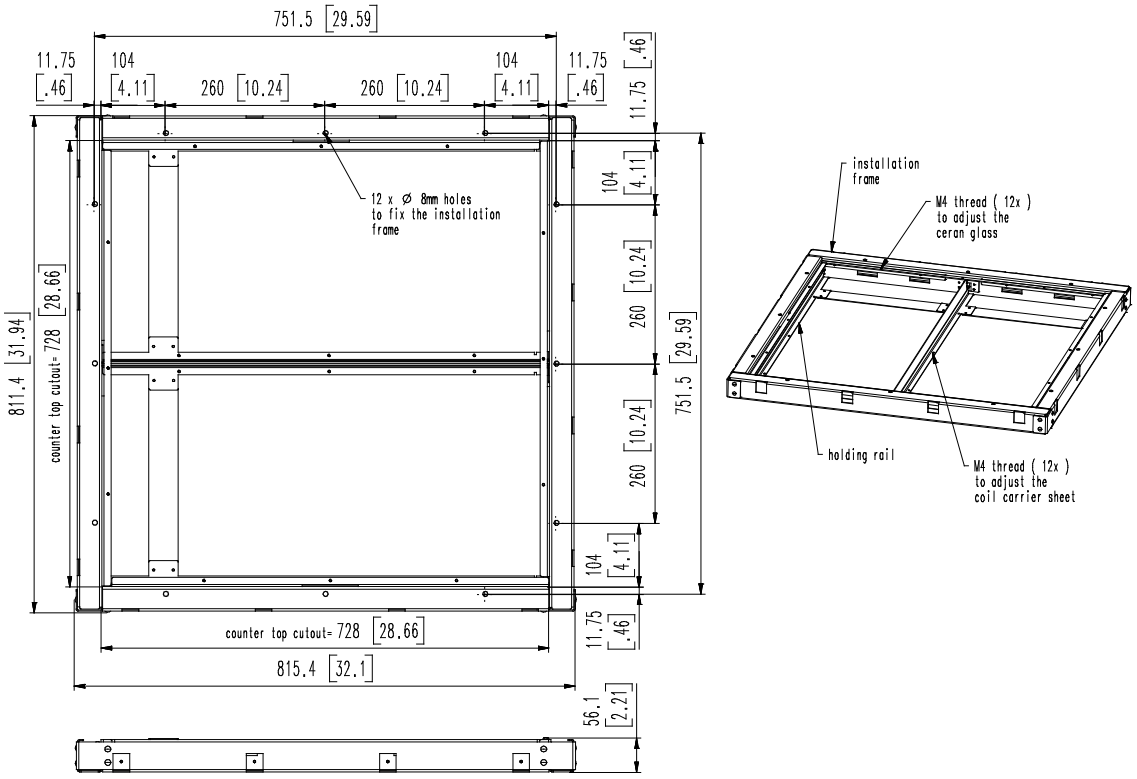
4.4.4 Dimensions – Mounting Frame [for glasstop size 650x650mm]



4.4.5 Dimensions – Mounting Frame [for glasstop size 360x720mm]



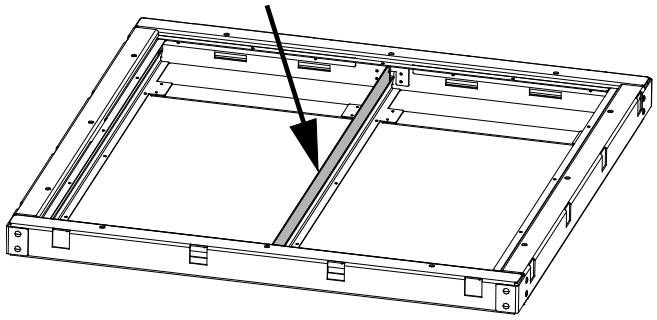
4.4.6 Dimensions – Mounting Frame [for glasstop size 720x720mm]



4.4.7 Installation Steps

IMPORTANT

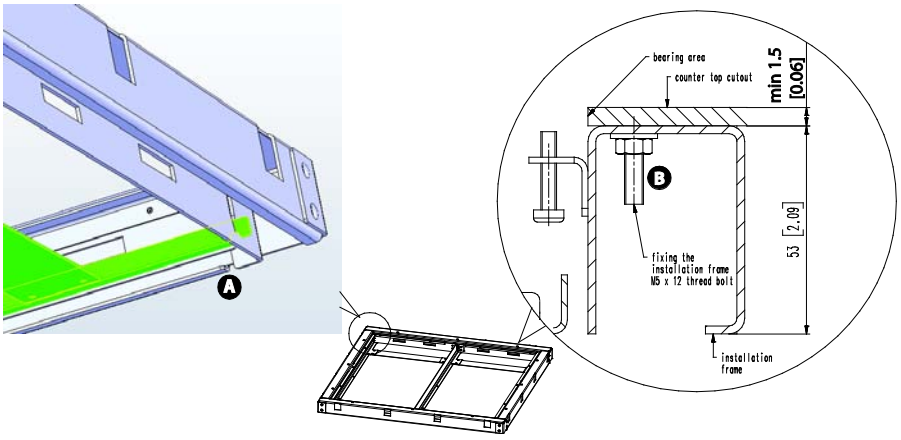
- **COUNTERTOP CUT-OUT DIMENSIONS** are specified in the mounting frame drawings.
- The mounting frames are to be stud-mounted onto the underside of the countertop. The minimum thickness of the countertop for mounting the frame is 1.5 mm / 0.06 inches, which is about 16-gauge. The maximum thickness for this application is 3.00 mm / 0.12 inches, which is about 10-gauge.
- Refer to section ***4.3.1 Location and Ventilation***. Ensure all the location and ventilation requirements are met.
- When installing two coil carrier sheets on the same frame, you must install a **non-magnetic steel partition plate** between the two coil carrier sheets.



IMPORTANT

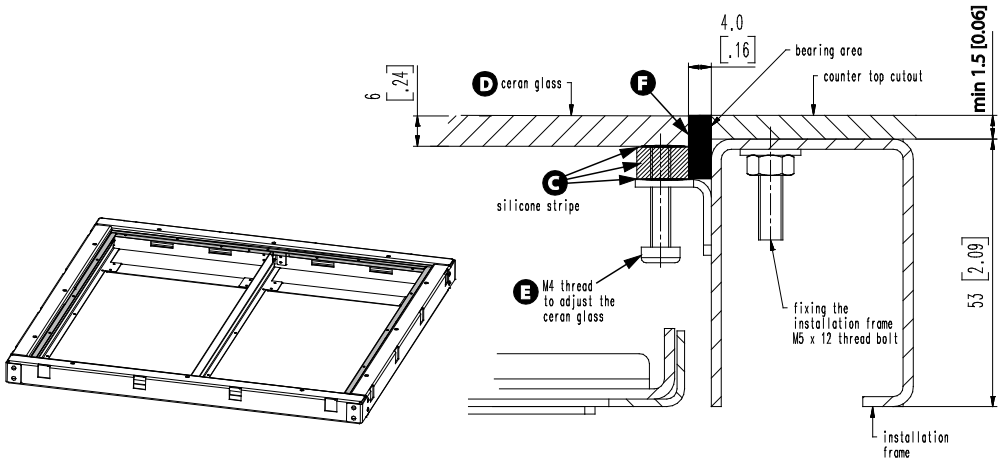
To protect the induction unit from water penetration, you must apply and bond the silicone adhesive properly to create a water-tight seal. Before you begin the installation, it is very important to use isopropyl alcohol (minimum 70%) or equivalent to clean the flanges/edges and the counter surfaces where the silicone adhesive will be applied.

To install the mounting frame and Ceran glass:



A. Orientation: The mounting frame assembly has a set of retaining rails that are <u>hinged at the BACK</u> of the frame. The rails can <u>drop down at the FRONT</u> for installing the coil carrier sheet. Ensure to install the frame in the correct orientation according to the design/layout plan.

B. Secure the mounting frame to the underside of the counter surface. Stud-mounting method is shown.



C. **NOTE:** BEFORE applying any silicone adhesive, CLEAN glass, silicone gaskets, frame, and tops with isopropyl alcohol or similar.

Apply a line of silicone adhesive PACTAN onto the bracket before placing the silicone gaskets/stripes (provided) on top. After placing the silicone stripe onto the bracket, apply silicone adhesive on top of the silicone stripe. PACTAN is not provided (part number = 70000015).

D. Examine the Ceran glass before installation.

i. Then carefully lower the glass onto the silicone stripe.

NOTE: When installing multiple glass-tops side by side, ensure to orient all the logos on the glass-tops the same direction.

ii. Align the edges of the glass with the edges of the countertop cut-out.

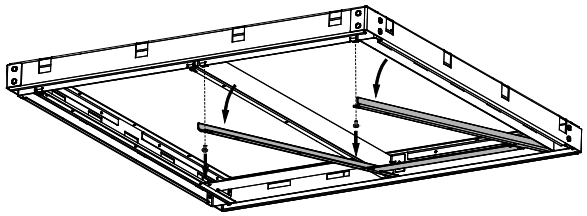
E. Level the glass by adjusting the screws.

F. To provide a water tight seal, apply silicone sealant completely around, filling any gaps between the glass and the counter-top surface.

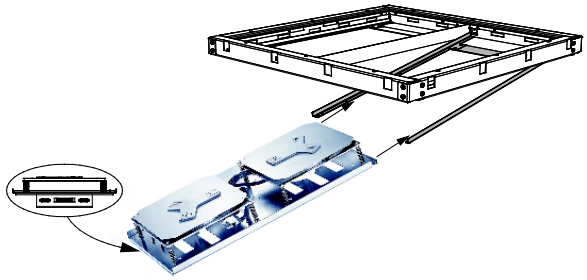
IMPORTANT Wait for the silicone adhesive to cure before installing the coil carrier sheet.

To install the coil carrier sheet:

G. Loosen the two screws to free the retaining rails. The rails are hinged at the hooks at the back.



H. Guided by the retaining rails, carefully insert the back end of the coil carrier sheet into the frame. The coil and sensor connectors should be facing the front. The retaining rails provide additional support to the coil carrier sheet.



I. While holding the coil carrier sheet together with the retaining rails, swing the rails back into the original position and tighten the screws.

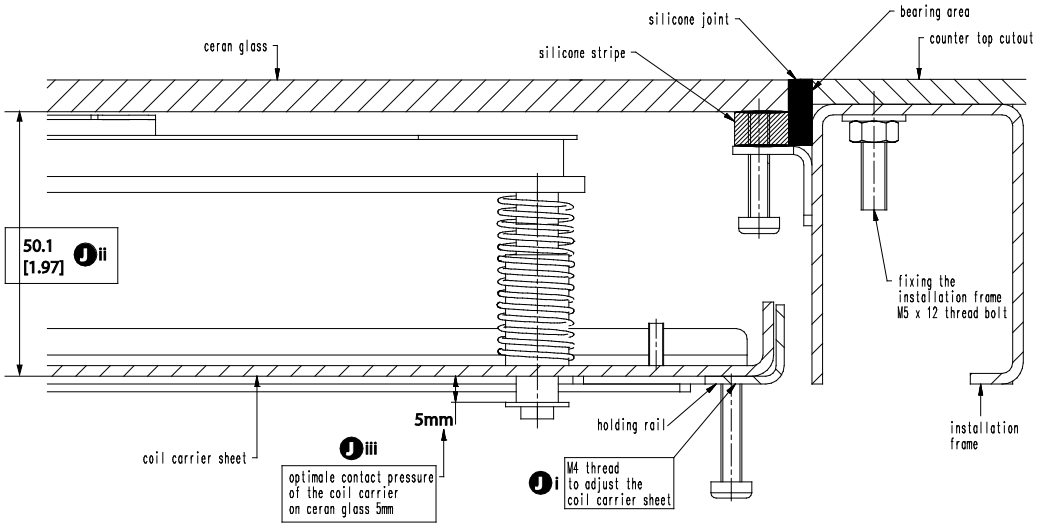
J. The coils and temperature sensors installed on the coil carrier sheet must exert a constant pressure of 5mm to the Ceran glass. This pressure ensures the temperature monitoring to work properly. Do not allow any gap between the temperature sensors and the glass. You MUST set the pressure correctly.

To adjust the pressure correctly:

i. Tighten or loosen the M4 screws to adjust the pressure correctly.

ii. Distance from the underside of the coil carrier sheet to the Ceran glass: **50mm +/- 2mm**.

iii. Bolts of the coil carrier sheet: protrude **5mm** from the coil carrier sheet.

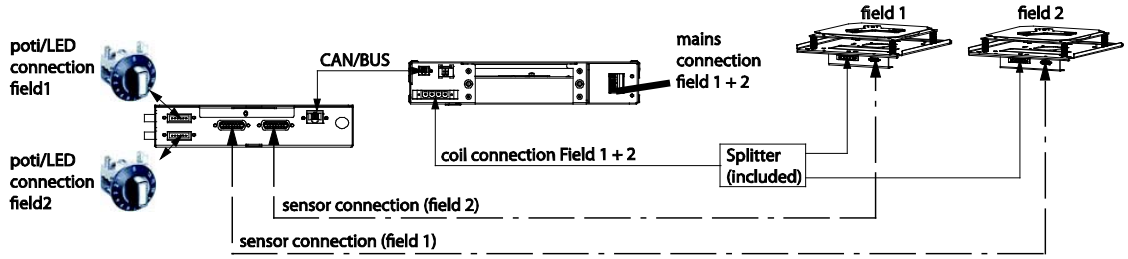


4.5 Models, Components and Cable Connections

4.5.1 CHART 1 – Module-Line Round Coil Dual Models

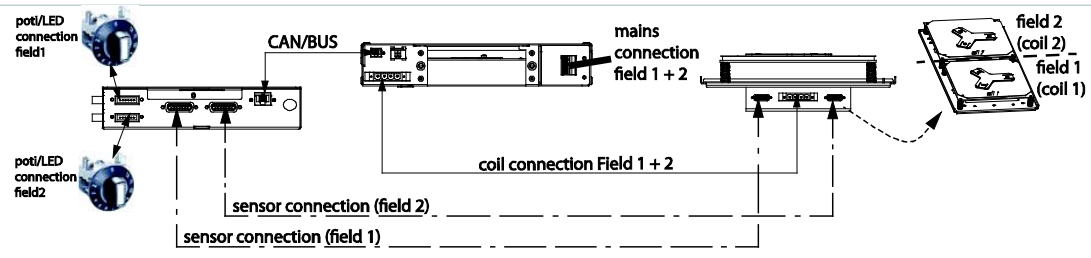
ROUND COILS, DUAL MODELS	GLASS	MOUNTING FRAME	GENERATOR	COIL CARRIER SHEET (coils + sensors)	CONTROL UNIT	OPERATION UNIT	CABLE KIT
MODU 7000 360	(2x) 360 x 360 x 6 mm	(2x) Frame for 360 x 360mm glass	(1x) IN/MO7000	(2x) 344 x 355 mm Round Coil, Each 3.5 kW	(1x) IN/MO 7000/10000	(2x)	(1x) IN/MO 7000/10000 -360 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
MODU 10000 360	(2x) 360 x 360 x 6 mm	(2x) Frame for 360 x 360mm glass	(1x) IN/MO10000	(2x) 344 x 355 mm, Round Coil, Each 5.0 kW	(1x) IN/MO 7000/10000	(2x)	(1x) IN/MO 7000/10000 -360 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)

7000 360
10000 360
Installation



MODU 7000 650	(1x) 375 x 650 x 6 mm	(1x) Frame for 375 x 650mm glass	(1x) IN/MO7000	(1x) 319 x 624 mm, Round Coil, Each 3.5 kW	(1X) IN/MO 7000/10000	(2x)	(1x) IN/MO 7000/10000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
MODU 7000 720	(1x) 375 x 720 x 6 mm	(1x) Frame for 375 x 720mm glass	(1x) IN/MO7000	(1x) 354.5 x 689 mm Round Coil, Each 3.5 kW	(1x) IN/MO 7000/10000	(2x)	(1x) IN/MO 7000/10000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
MODU 10000 650	(1x) 375 x 650 x 6 mm	(1x) Frame for 375 x 650mm glass	(1x) IN/MO10000	(1x) 319 x 624 mm Round Coil, Each 5.0 kW	(1X) IN/MO 7000/10000	(2x)	(1x) IN/MO 7000/10000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
MODU 10000 720	(1x) 375 x 720 x 6 mm	(1x) Frame for 375 x 720mm glass	(1x) IN/MO10000	(1x) 354.5 x 689 mm Round Coil, Each 5.0 kW	(1x) IN/MO 7000/10000	(2x)	(1x) IN/MO 7000/10000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)

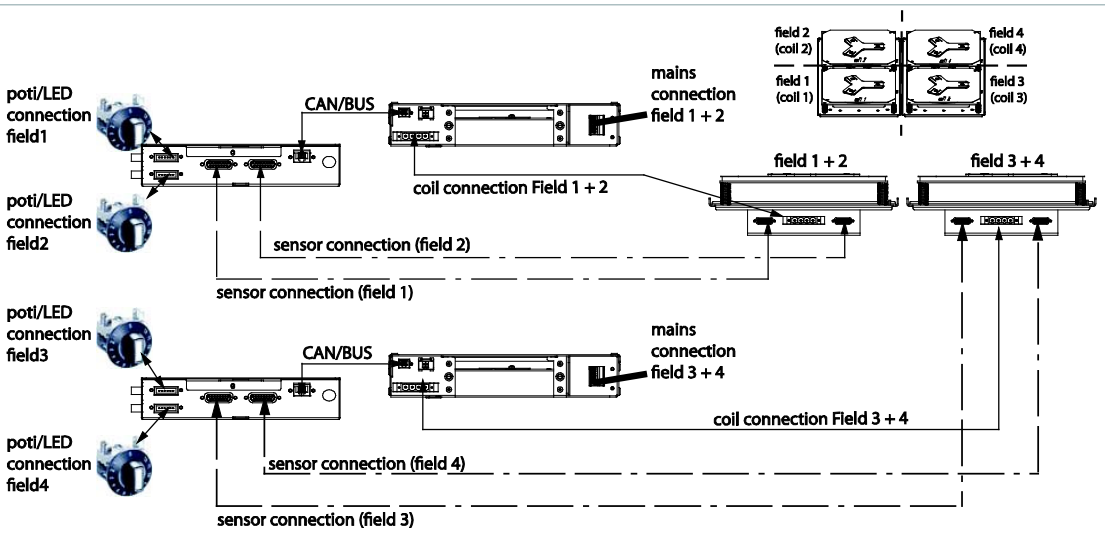
7000 650
7000 720
10000 650
10000 720
Installation



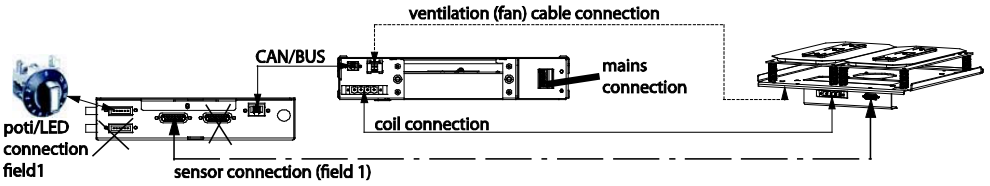
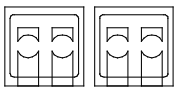
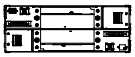
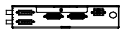
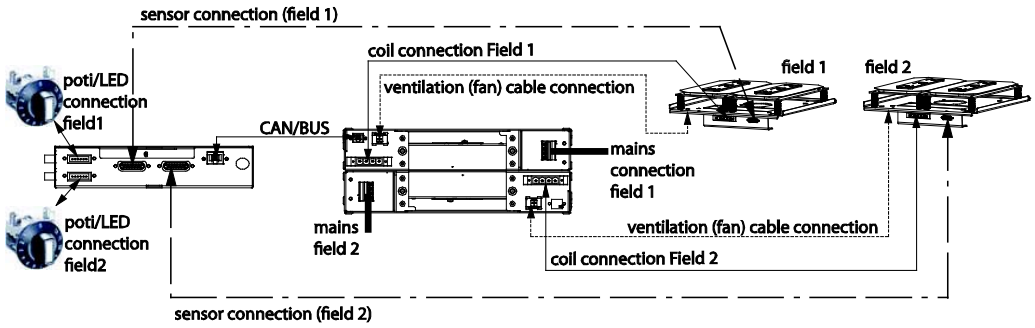
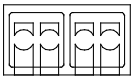
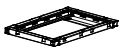
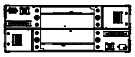
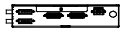
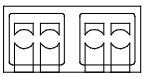
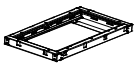
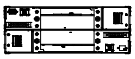
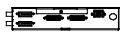
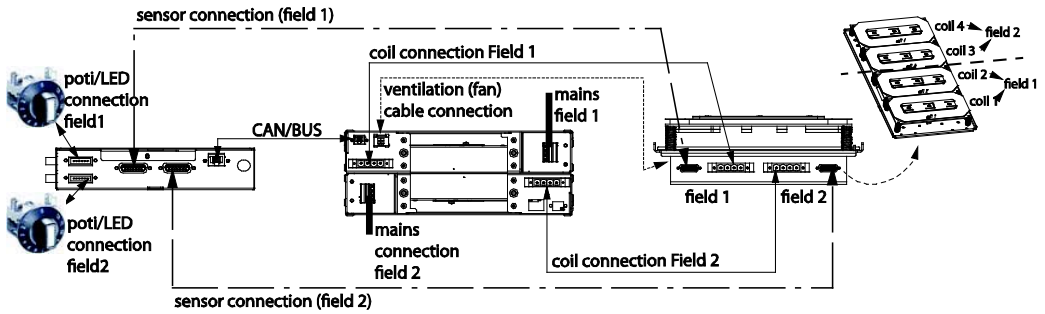
4.5.2 CHART 2 – Module-Line Round Coil Quad Models

ROUND COIL, QUAD MODELS	GLASS	MOUNTING FRAME	GENERATOR	COIL CARRIER SHEET (coils + sensors)	CONTROL UNIT	OPERATION UNIT	CABLE KIT
MOQU 14000 650	(1x) 650 x 650 x 6 mm	(1x) Frame for 650 x 650mm glass	(2x) IN/MO7000	(2x) 319 x 624 mm Round Coil Each 3.5 kW	(2x) IN/MO 7000/10000	(4x)	(2x) IN/MO 7000/10000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
MOQU 14000 720	(1x) 720 x 720 x 6 mm	(1x) Frame for 720 x 720mm glass	(2x) IN/MO7000	(2x) 354.5 x 689 mm Round Coil Each 3.5 kW	(2x) IN/MO 7000/10000	(4x)	(2x) IN/MO 7000/10000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
MOQU 20000 650	(1x) 650 x 650 x 6 mm	(1x) Frame for 650 x 650mm glass	(2x) IN/MO10000	(2x) 319 x 624 mm Round Coil Each 5.0 kW	(2x) IN/MO 7000/10000	(4x)	(2x) IN/MO 7000/10000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
MOQU 20000 720	(1x) 720 x 720 x 6 mm	(1x) Frame for 720 x 720mm glass	(2x) IN/MO10000	(2x) 354.5 x 689 mm Round Coil Each 5.0 kW	(2x) IN/MO 7000/10000	(4x)	(2x) IN/MO 7000/10000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)

14000 650
14000 720
20000 650
20000 720
Installation



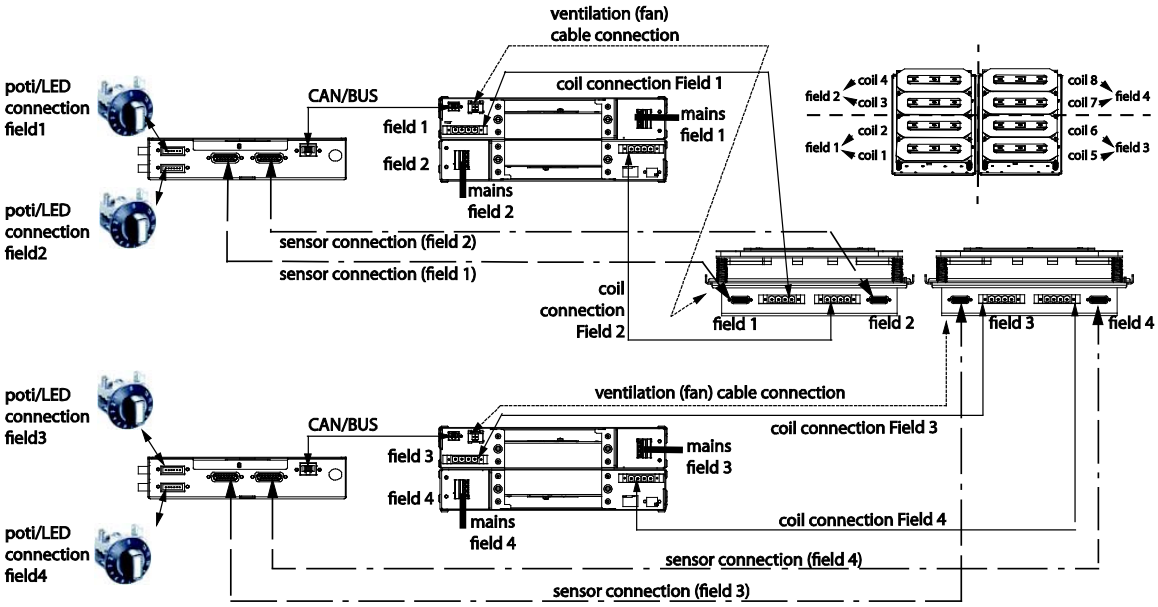
4.5.3 CHART 3 – Module-Line Full Coil Dual Models

FULL COIL, DUAL MODELS	GLASS	MOUNTING FRAME	GENERATOR	COIL CARRIER SHEET (coils + sensors)	CONTROL UNIT	OPERATION UNIT	CABLE KIT
MODU 7000 360FL							(1x) IN/MO7000FL-360 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
	(1x) 360 x 360 x 6 mm	(1x) Frame for 360 x 360mm glass	(1x) IN/MO7000FL	(1x) 344 x 355 mm 2 Rectangular Coils Each 3.5 kW	(1x) IN/MO 7000/14000	(1x)	
7000 360FL Installation							
MODU 14000 360FL							(1x) IN/MO14000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
	(2x) 360 x 360 x 6 mm	(2x) Frame for 360 x 360mm glass	(1x) IN/MO14000FL	(2x) 344 x 355 mm 2 Rectangular Coils Each 3.5 kW	(1x) IN/MO 7000/14000	(2x)	
14000 360FL Installation							
MODU 14000 650FL							(1x) IN/MO14000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
	(1x) 375 x 650 x 6 mm	(1x) Frame for 375 x 650mm glass	(1x) IN/MO14000FL	(1x) 319 x 624 mm 4 Rectangular Coils Each 3.5 kW	(1x) IN/MO 7000/14000	(2x)	
MODU 14000 720FL							(1x) IN/MO14000 Cable Kit, 2.5-meter (Options: 4-meter or 6-meter Kit)
	(1x) 360 x 720 x 6 mm	(1x) Frame for 360 x 720mm glass	(1x) IN/MO14000FL	(1x) 354.5 x 689 mm 4 Rectangular Coils Each 3.5 kW	(1x) IN/MO 7000/14000	(2x)	
14000 650FL 14000 720FL Installation							

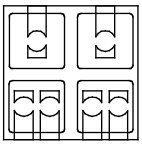
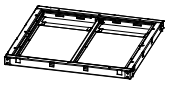
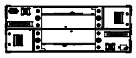
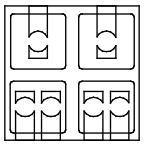
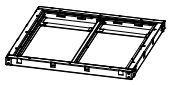
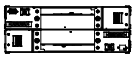
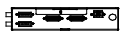
4.5.4 CHART 4 – Module-Line Full Coil Quad Models

FULL COIL, QUAD MODELS	GLASS	MOUNTING FRAME	GENERATOR	COIL CARRIER SHEET (coils + sensors)	CONTROL UNIT	OPERATION UNIT	CABLE KIT
MOQU 28000 650FL	(1x) 650 x 650 x 6 mm	(1x) Frame for 650x 650mm glass	(2x) IN/MO14000FL	(2x) 319 x 624 mm 4 Rectangular Coils Each 3.5 kW	(2x) IN/MO 7000/14000	(4x)	(2x) IN/MO14000 Cable Kit, 2.5-meter (Option: 4-meter or 6-meter Kit)
MOQU 28000 720FL	(1x) 720 x 720 x 6 mm	(1x) Frame for 720x 720mm glass	(2x) IN/MO14000FL	(2x) 354.5 x 689 mm 4 Rectangular Coils Each 3.5 kW	(2x) IN/MO 7000/14000	(4x)	(2x) IN/MO14000 Cable Kit, 2.5-meter (Option: 4-meter or 6-meter Kit)

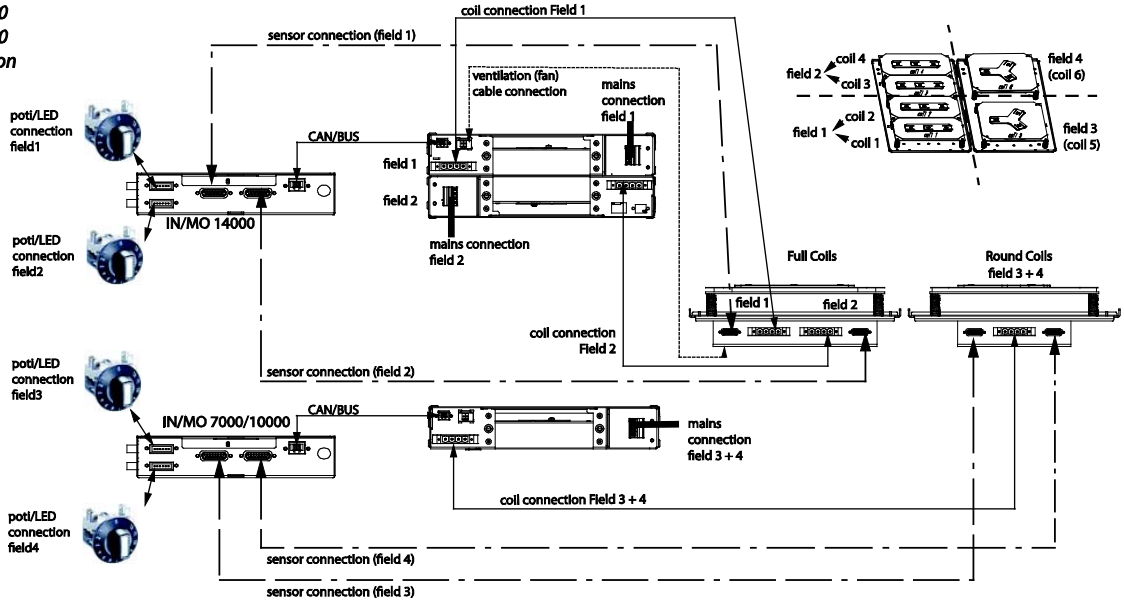
28000 650FL
28000 720FL
Installation



4.5.5 CHART 5 – Module-Line Full and Round Coil Quad Models

FULL & ROUND COILS COMBINED, QUAD MODELS	GLASS	MOUNTING FRAME	GENERATOR	COIL CARRIER SHEET (coils + sensors)	CONTROL UNIT	OPERATION UNIT	CABLE KIT
MOQU 21000 720	 (1x) 720 x 720 x 6 mm	 (1x) Frame for 720 x 720mm glass	 (1x) IN/MO14000FL  (1x) IN/MO10000	 (1x) 354.5 x 689 mm 4 Rectangular Coils Each 3.5 kW  (1x) 354.5 x 689 mm 2 Round Coil Each 3.5 kW	 (1x) IN/MO 14000  (1x) IN/MO 7000/10000	 (4x)	(1x) IN/MO14000 Cable Kit, for Full Coils Connections, 2.5-Meter Kit AND (1x) IN/MO 7000/10000 Cable Kit, for Round Coils Connections, 2.5-Meter Kit Options: 4-Meter or 6-Meter Cable Kits
MOQU 24000 720	 (1x) 720 x 720 x 6 mm	 (1x) Frame for 720 x 720mm glass	 (1x) IN/MO14000FL  (1x) IN/MO10000	 (1x) 354.5 x 689 mm 4 Rectangular Coils Each 3.5 kW  (1x) 354.5 x 689 mm 2 Round CoilS Each 5.0 kW	 (1x) IN/MO 14000  (1x) IN/MO 7000/10000	 (4x)	(1x) IN/MO14000 Cable Kit, for Full Coils Connections, 2.5-Meter Kit AND (1x) IN/MO 7000/10000 Cable Kit, for Round Coils Connections, 2.5-Meter Kit Options: 4-Meter or 6-Meter Cable Kits

21000 720
24000 720
Installation



4.6 Electrical Installation

All electrical connections must be installed by a qualified electrician.

IMPORTANT

- Refer to the electrical 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. The 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.

CAUTION	Wrong voltage will damage the induction unit. Follow strictly the specifications on the rating plate.

- The electrical installation 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.
- The electrician must equip the generator with a mains cable in accordance with the applicable regulations. Ensure the mains cable connection is absolutely correct.
- The electrician must ensure the induction unit can always be disconnected from the power supply by a switch, in accordance with the applicable regulations.
- All the cables must be routed/protected and tension free.
- The coils and sensor cables must not rest on one another.
- 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 knobs are at the OFF-Position.

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

OFF-Position
"0" points to the LED light. The light is off.

2. Remove all objects from the glass-tops.

3. Connecting the components:

   IMPORTANT:

   - Always connect the cables according to the labels affixed next to the connectors and on the cables.
   - The cables—coils, sensors, CAN/BUS, mains— must be connected correctly.
   - Ensure the insertion tongues of the RJ-45 cable (CAN/BUS) are fully engaged.
   - **The coil and sensor cables must be routed and MUST NOT rest on one another.**
   - **The coil sensor and RJ45 cables must be routed and MUST NOT rest on one another.**
   - **All the coil/sensor connectors have to be connected correctly before turning on the unit.**

   Please review the components and cable connections charts in section ***4.5 Models, Components and Cable Connections***.

4. Connect the unit to the power supply.
5. 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:

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

3. Take the pan away from the hob. Power transmission stops and the indicator lamp starts to blink.
4. Place the pan back on the heating area. The LED indicator lamp lights up continuously again and the heating process resumes.
5. 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 heating zone? See chapter ***6.2 Proper Placement of Cookware***.

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. See ***Warranty***, p.2. 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**

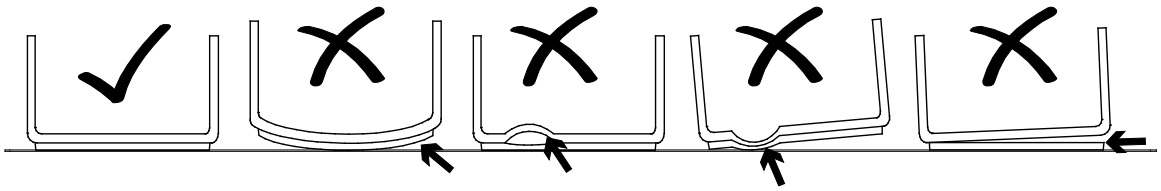
  The RTCSmp electronic temperature control monitors overheating at the pan base. When an overheated pan (overheated oil, empty pan) is detected, energy transfer from the generator to the pan will be stopped immediately. You must turn the unit off, let it cool down before re-starting the unit.

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.



- **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:

- Coil with 3500W, approximately 140 seconds
- Coil with 5000W, 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.

- **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.

6.2 Proper Placement of Cookware

The RTCSmp Module-Line model has one or more cooking zones. 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 cooking zone at a time. Otherwise, electronic components of the induction unit can be damaged.

Quad configuration is shown in the photos. Same principle applies to other RTCSmp Module-Line models.

NEVER put a single pot across multiple cook-zones (Round or Rectangular Coils)

NEVER put multiple pans on a single ROUND coil.

CORRECT. One pan for each ROUND coil. Each pan is placed in the center of the cook-zone.

CORRECT. One large pan is placed in the center of a cook-zone for RECTANGULAR coils.

CORRECT. Multiple pans are placed within one cook-zone for RECTANGULAR coils. **IMPORTANT:** When multiple pans are used on rectangular coils, do not let the pans touch each other as the pans might fuse if there is excessive heat.

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.

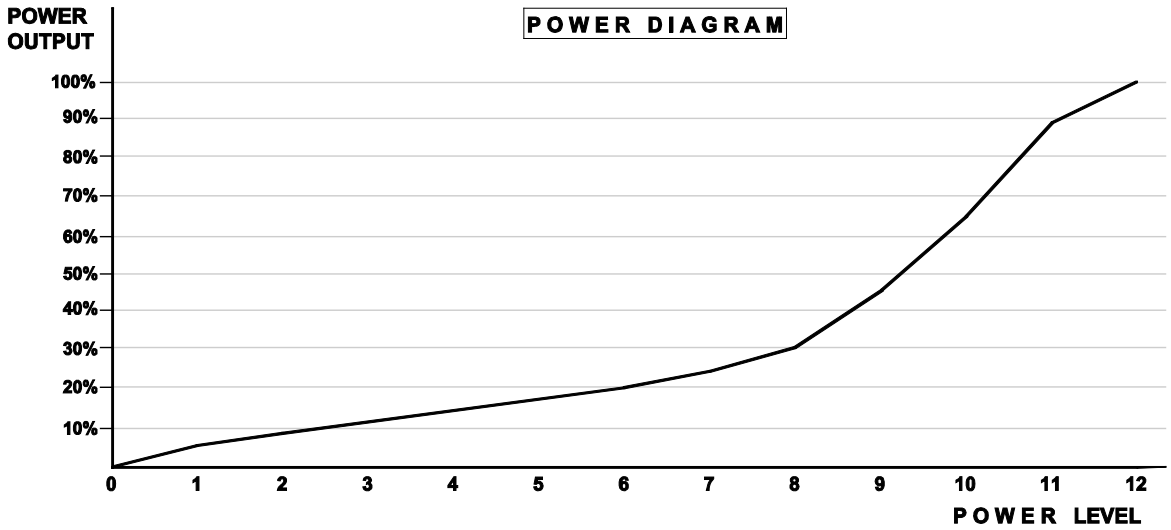
ON-Position
Any position where "0" is not pointing to the LED light. The light is on.

OFF-Position
"0" points to the LED light. The light 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 regular glass cleaning products available from a 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

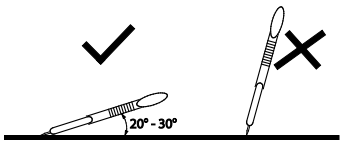
- **DO NOT USE**: corrosive or abrasive cleaning agents, such as grill sprays, oven sprays, stain removers, rust removers, scouring powder, and rough sponges.
- Let the Ceran glass-top cool down before cleaning.
- Ensure to remove all residues of cleaning agents from the glass-top. Use a clean moist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

- Using unsuitable cookware such as non-induction pans or oversized pans.
- High ambient temperature.
- Inadequate ventilation causing hot air to re-enter through the air intake slots.
- Dirty air intake filter.
- Empty pans are left on the cook-top while 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 induction unit continues to work as usual.

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 website www.garland-group.com.

10.2 Problems and Possible Causes

Problem	Possible Causes	Action To Take By Operator
Pan does not heat, green LED lamp is OFF (dark)	No power supply.	Check the electrical supply, e.g. power cable plugged into the wall socket. 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.
Pan does not heat, green LED lamp is blinking. **If LED lamp blinks at intervals, see next section.**	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.
Poor heating, green LED lamp is ON (shining)	Air-cooling system obstructed.	Verify that air inlet and outlet are not blocked.
	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. 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.
Unit does not react to control knob positions	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.
Power/heating level seems to be reduced, fan is working	Air-cooling system is blocked. Internal fan is dirty.	Verify that air inlet and outlet are not obstructed. Contact your authorized service agency.
Power/heating level seems to be reduced, fan does not work	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.
After a longer continuous operation, Power/heating level seems to be reduced	Overheated induction coil; cooking area is too hot. Overheated oil in pan. Pan is empty.	Switch the unit off. Safely remove pan. Wait until the heating zone has cooled down before turning the unit ON again.
Small metallic objects (eg. spoon) are heated on the heating area.	Pan detection mode is set incorrectly.	Ensure knob is in OFF-position and if possible and safe, disconnect the unit from the power supply. Contact your authorized service agency.

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

10.3 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. And it 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. (3)	Check cooking pan material. Check pan placement on cooking zone. Check wiring and connection on induction coil.
E02	2	High coil current. Software overcurrent. (3)	Check cooking pan material.
E03	3	Heat sink (KK) temperature too high. (1)	Check installation/air flow (supply of cool air). Check fan operation.
E04	4	Cook zone temperature too high. Failure of sensor unit or sensor unit not connected. (1)	Check sensor unit. 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). 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. 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.
(3) The induction unit continues to work as usual.

NOTES

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 detailled 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

GARLAND INDUCTION MODULE-LINE DUAL/QUAD COOKTOPS with RTCSmp TECHNOLOGIES

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