



ECO-KITCHEN
by induction inside

IND Induction Generator

General User's Manual

ORIGINAL INSTRUCTION

CAUTION: READ THE INSTRUCTION BEFORE USING THE MACHINE

Middleby Food Service Equipment (Qingdao) Co., Ltd.
No.1 Jinxuan Road, High tech Zone, Qingdao 266100, Shandong, P. R. China



Table of Contents

1. Safety Instructions	2
1.1 Risks of Negligence of Safety Information	2
1.2 Safety Notes	2
1.3 Notice to User	2
1.4 Unauthorized Change and Part Replacement	4
2. Foreword.....	5
3. Product Features	5
4. Technical Specifications	6
5. Symbols and Instructions	6
6. Installation.....	6
6.1 Heat Radiation Requirements.....	7
6.2 Fire Prevention	7
6.3 Requirements on Electrical Connection.....	7
7. Troubleshooting	8
8. Cleaning & Maintenance	11
9. Regular Servicing.....	11
10. Waste Disposal	12

WARNING: There is high voltage inside! Do not open the cooker!

WARNING: The induction cooker must be disconnected from power supply during clearing or maintenance and when replacing parts!

1. Safety Instructions

1.1 Risks of Negligence of Safety Information

This manual contains safety warnings and precautions on the installation, commissioning and operation of the induction cooker. Negligence of such information may lead to harms to people, environment and equipment, as well as potential risks as follows:

- Electric shock;
- Overheating of wok/pan.
- Overheating of cooker surface.

1.2 Safety Notes

The safety instructions contained in this manual, the applicable national regulations on the prevention of accidents as well as user's internal safety rules must be strictly observed.

1.3 Notice to User

- To prevent electrical shocks, the installation and electrical connection of the induction cooker must be performed by a qualified contractor as per national and local regulations.
- The heating zone has high temperature. To avoid injury (scalding), do not touch this area.
- To avoid dry heating (glowing) of wok/pan, don't leave the appliance on unattended. For the sake of safety, switch the power off.
- To prevent accidents caused by automatic heating of wok/pan, switch off the cooker before removing the wok/pan. This ensures that anyone who wants to use the cooker must switch it on him/herself.
- Don't insert any piece of paper, cardboard, cloth, etc. between the wok/pan and the heating area, as this may initiate a fire.
- Do not place metallic objects such as kitchen utensils, cutlery, cans, aluminum foil and keys on the hob surface within the cooking zone because such things can be heated

up quickly.

- Do not wear watches and rings as these objects can be heated up when in close proximity to the hob surface.
- People with heart pacemakers should consult with the manufacturer or physician before using the induction cooker.
- The entire unit must be reliably grounded. Once the cooker body or electric cable is found broken, immediately switch the unit off, disconnect the power and contact the manufacturer or its authorized servicing personnel.
- Do not place aluminum foil or plastic utensils on the glass-ceramic surface in the heating zone nor use it as storage.
- The contact surface of wok/pan must match that of the Coils module; otherwise, it may lead to reduced performance, malfunction and even damage to the induction cooker. Therefore, only those woks/pans supplied or recommended by the manufacturer can be used.
- Don't place credit cards, phone cards, passenger cards, cassette tapes or other magnetic objects on the surface of the induction cooker.
- There is air cooling system in the induction cooker. To avoid overheating induced shutdown, do not block the air vents.
- Do not let any liquid enter the cooker. Do not spill water or food over the wok/pan. Do not flush the cooker with water. Do not clean the cooker with a steam cleaner.
- Operation beyond the rated values and limits of the induction cooker will result in unreliable operation and even damage. It is advised that the cooker operate at full power, i.e. the power regulator is set to the maximum scale. Select between "3" and "5" when slow fire is required.
- Never turn the induction cooker on and off frequently without any purpose as this may cause damage to the electrical circuit and shorten the service life of the cooker. Normally, the cooker should not be restarted within 3 seconds after it is shut down.
- The induction cooker should be cleaned, maintained and serviced on a regular basis to keep it in good condition and extend its service life.
- There is high voltage inside the cooker. It can only be opened by authorized servicing personnel.



-
- To avoid misuse, all discarded electrical devices must be disposed of safely and properly by the user.
 - There is a small area at the bottom center of the wok/pan that heats slowly. To ensure that oil is evenly heated, stir the oil in the wok/pan.
 - An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring
 - If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
 - Equipment for use in trades, professions, and which is not intended for sale to the general public.

1.4 Unauthorized Change and Part Replacement

Do not make any change to the induction cooker. If the induction cooker needs to be changed, please contact the manufacturer. For safety's sake, please use parts and components certified by the manufacturer. Use of any uncertified parts and components will void all the commitments and warranties of the manufacturer.

2. Foreword

Thank you for choosing our IND product. Before installation and use of this product, please read this manual carefully as it contains important information about the installation, operation and maintenance of the product. Please keep the manual in a place readily available for easy reference.

3. Product Features




IND series of 3-phase induction cookers have the features of strong, compact construction with a stainless steel enclosure, continuously controlled power and higher heating efficiency than conventional cookers. They also have the following unique features:

- Modularized design;
- Electronic circuit with automatic monitor & control and multiple safety protection;
- High efficiency and large power to save cooking time and energy;
- Compact size and light weight;
- Customized designs.

4. Technical Specifications

- Power Supply
 - 220-240 V~, Single phase 3-wire, 50-60 Hz
 - 380-400 V 3N~, 3-phase 5-wire, 50-60 Hz
- Operating Frequency
 - 20-40 kHz
- Ambient Conditions
 - Temperature: Storage -40°C - +50°C; Operation +5°C - +40°C
 - Relative Humidity: Storage 10% - 90%; Operation 30% - 90%
- Wire Requirements
 - 3kW-8kW ≥ $\Phi 1.5\text{mm}^2$
 - 8kW-10kW ≥ $\Phi 2.5\text{mm}^2$
 - 12kW-24kW ≥ $\Phi 6\text{mm}^2$
 - Power cord shall be at least of ordinary polychloroprene sheathed cords (code designation 60245 IEC 57)

5. Symbols and Instructions

-  non-ionizing electromagnetic radiation
-  dangerous voltage
-  equipotentiality

6. Installation

6.1 Heat Radiation Requirements

- Adequate space shall be left in the back and bottom of the unit to allow free flow of air. Improper installation will result in blockage or decrease of airflow and poor radiation of heat;
- The air inlet and outlet should be at least 100mm from any peripheral object (such as wall and floor);
- The inlet cold air should not be mixed with the outlet hot air;
- The inlet air temperature should not exceed 40°C;
- The induction cooker should be away from other heat sources (such as gas cooker or halogen stove). In case several induction cookers are used, they should be at least 100mm apart from each other. Besides, it should be ensured that there is sufficient supply of cold air and the hot air discharged by cookers will not enter other cookers.

6.2 Fire Prevention

All objects in contact with the cooker should be made of non inflammable materials.

6.3 Requirements on Electrical Connection

- Check and make sure that the power supply is consistent with the rating on the nameplate of the product;
- The electrical connection must comply with existing national and local regulations;
- The electrical cable of the product must be connected to the power supply with an appropriate Circuit breaker. (The circuit limitation should be 1.5-2 times of the rating current)

7. Troubleshooting

The cooker can only be opened by authorized servicing personnel.

In case the glass-ceramic panel breaks or cracks, immediately switch off the cooker and disconnect the power. Never touch any exposed part inside the cooker.

When malfunction occurs, the indicator will blink and give some information as follows:

Code	Meaning	Remarks
E1 (01)	No Pan	1) There is no wok/pan or wok/pan is improper, place proper wok/ pan on the cooker; 2) Consult professional personnel
E2 (02)	Over-current in Coils	1) Change the utensil with more ferrous material 2) Consult professional personnel
E3 (03)	Over-temperature of power module, the equipment not working	1) Long working hours in high ambient temperature (>38°C). Cooling needed. 2) If ambient temperature is not high, check if the air-inlet and air-outlet is blocked, or if the warm air from outlet can be sucked into the inlet. 3) Check if the cooling fan of the generator works properly. 4) Check if the grease filter is too dirty.
E4 (04)	Pan temperature too high, causing the equipment to stop working.	1) Check if the cooling fan of the coils works properly. 2) Oil temperature in the pan too high. Lower the power level.
E5 (05)	Damage of power potentiometer, or the power level is not set at the "0" position.	1) Set the power level at "0" position before use. 2) Problem of the power control, Consult professional personnel
—	Reserve	
E7 (07)	Error of temperature sensor	Consult professional personnel

	of the power module.	
E8 (08)	Temperature of power module too high and the generator is working with reduced power.	Same as E3.
E9 (09)	Error of pan temperature sensor.	Consult professional personnel
EA (10)	The voltage of power supply is too low.	<ol style="list-style-type: none"> 1) Ensure proper voltage. 2) Ensure proper wiring. 3) Consult professional personnel
—	Reserve	
EC (12)	Over temperature of coils, the generator stops working.	<ol style="list-style-type: none"> 1) Check if the cooling fan of the coils works properly. 2) Oil temperature in the pan too high. Lower the power level.
ED (13)	Error of Coil temperature sensor.	Consult professional personnel
—	Reserve.	
EF (15)	Surge protection	<ul style="list-style-type: none"> • If this does not happen frequently, ignore it, because automatic restart will be affected. • If this happens frequently, Consult professional personnel
E (16)	Hard protection of driving board.	Consult professional personnel
EP (17)	Error of Hall sensor	Consult professional personnel

Possible Causes of Faults and Correcting Measures

Fault	Possible Cause	Correcting Measure
There is no heating, lamp or indicator is blinking	Error occurs.	Check the Error code list and follow the instructions.
There is no heating, lamp or indicator is off	No power supply;	Check whether the power cord is well connected.
	PCB/ Components are Broken	Consult professional personnel
Heating effect is good but indicator or lamp is off.	Lamp or Indicator is broken.	Replace the Lamp or Indicator Consult professional personnel
Switch does not work or the power could not be adjusted by rotating/sliding Switch.	Switch failure;	Replace the Switch. Consult professional personnel
Power becomes lower than normal power.	The power is limited by the program because the temperature of IGBT or Pan is rising too fast.	Wait for a moment; Avoid heating the empty pan. The pan/wok is not proper, please replace the pan/wok;
	The power is limited by the program because the ambient temperature is too high	Please try to improve the ambient conditions: Cool down the ambient temperature; Keep the induction products away from the hot sources; Check if the ventilation of induction products is good, or if the air filter is blocked.
	Inappropriate Internal Setting Parameters	Consult professional personnel

8. Cleaning & Maintenance

To prevent scalding, do not clean the panel when the surface is hot.

Stains and Removing Method

Stain Type	Removing Method
Slightly soiled, without burning remnant	Wipe clean with a wet cloth, without using cleaning agent.
Sticky substance	Scrape with a wooden scrapper and then wipe clean with a wet cloth.
Scale formed by spilled boiling water	Clean with vinegar or special cleaning agent.
Oil-resistant strainer blockage	Soak the strainer in warm water with cleaning agent, and then clean with a brush.
Sugar, sugary food, plastic and aluminum foil	Remove with a wooden scrapper while the stain is warm, then clean with a cleaning agent. Caution! Avoid scalding.

Other maintenance and servicing work than cleaning and maintenance should be conducted by designated service providers.

Important: Avoid leakage of liquid into the induction cooker. Do not flush with water nor clean with steam cleaner.

9. Regular Servicing

To keep the induction cooker in good condition and extend its service life, it should be cleaned, maintained and serviced on a regular basis.

The grease filter of the induction cooker must be cleaned at least once every three months.

The induction cooker must be checked by authorized technical personnel at least once a year.

Danger! Do not open the induction cooker. There is high voltage inside!

The induction cooker can be opened by authorized personnel only.

10. Waste Disposal

To avoid misuse, all discarded electrical devices must be disposed of properly and safely by the user.

Do not use uncertified or discarded induction cookers.

Our products are made of regular materials. No battery is used inside the products.

Note: The right of interpretation of this User's Manual belongs to Middleby Food Service Equipment (Qingdao) Co., Ltd. The company also reserves the right to make changes to the specifications and information contained herein without further notice.

This Document Contains Confidential information, the Dissemination, Publication, Copying or Duplication of this Document or any hardware, software, or ideas described herein without Prior Written Authorization is Strictly Prohibited.

© 2023 Middleby Food Service Equipment (Qingdao) Co., Ltd

No.1 Jinxuan Road, High tech Zone, Qingdao 266100, Shandong, P. R. China.

Phone: +86532-8667-2001

Fax: +86532-8667-2003

www.middleby.com.cn

