

## Countertop Impingement Conveyor Ovens



351ICOEB, 351ICOED, 351ICOEBV, 351ICOEVD

REVISED 08/2023

Congratulations on your purchase of Cooking Performance Group commercial cooking equipment! At Cooking Performance Group, we take pride in the design, innovation, and quality of our products. To ensure optimal performance, we have outlined the following instructions and guidelines in this manual carefully for your review. Cooking Performance Group declines any responsibility in the event users do not follow the instructions or guidelines stated here.

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## Product Overview

Conveyor ovens are commonly used in commercial restaurants to continuously and consistently cook products such as pizza, chicken wings, sandwiches, and more. Its main structure is a chamber with fans, electric heating elements, and several air guide boxes made to direct streams of hot air throughout the cavity while a conveyor belt traverses the oven chamber. You only need to put the food product on one side of the belt. The product is then transported into the chamber to cook, and it comes out on the other side of the chamber after being cooked at the designated preset time and temperature.

## Key Features

- Easy to clean
- Stainless steel construction
- Programmable touchscreen controller
- Stackable design
- Integrated air impingement



**Intertek**  
5013357  
Conforms to  
NSF/ANSI 4



**Intertek**  
5013357  
Conforms to  
UL STD. 197

Conforms to UL STD. 710B  
(Ventless models have been tested to UL710B)

## Safety Precautions

### **CAUTION:**

Failure to comply with the following operation instructions could lead to potential hazards and/or unsafe practice and could result in injury and damage to product and property.

### **NOTICE:**

Local codes regarding installation vary greatly from one area to another. The National Fire Protection Association, Inc., states in its NFPA96 latest edition that Local codes are "Authority Having Jurisdiction" when it comes to requirement for installation of equipment. Therefore, installation should comply with all Local codes. This product is intended for commercial use only. Not for residential use.

### **WARNING:**

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other equipment.

Improper installation, adjustment, alteration, service, or maintenance could lead to property damage, injury, or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing CPG equipment. This manual must be retained for future reference.

### **ELECTRICAL WARNING:**

Equipment lines must be reliably grounded, and equipotential terminals of equipment are recommended to be connected. It is also highly recommended to install the leakage protector, which shall be confirmed by the professional and technical personnel of the installation company.

## Specifications

	351ICOEB	351ICOED	351ICOEVB	351ICOEVD
Dimensions	18.4" H x 31.7" W x 32.5" D	18.4" H x 31.7" W x 32.5" D	18.4" H x 31.7" W x 32.5" D	18.4" H x 31.7" W x 32.5" D
Voltage	208V	240V	208V	240V
Amps	30	30	30	30
Wattage Consumption	6700W	6700W	6700W	6700W
Wattage Output	6600W	6600W	6600W	6600W
Phase	1	1	1	1
Operational Clearances	3" side, 1" back, 36" front	3" side, 1" back, 36" front	3" side, 1" back, 36" front	3" side, 1" back, 36" front
Max Temperature	570 F	570 F	570 F	570 F
Ventless	No	No	Yes	Yes
Plug Type	Hardwired or NEMA 6-50P	Hardwired or NEMA 6-50P	Hardwired or NEMA 6-50P	Hardwired or NEMA 6-50P

**NOTE:** If there are other pieces of cooking equipment on either side of the oven, there should be at least 24" of space between units.

**NOTE:** Each oven requires its own electrical connection.

**NOTE:** You cannot convert voltages with these units. If you have the wrong voltage, you will need to purchase a unit with the correct voltage.

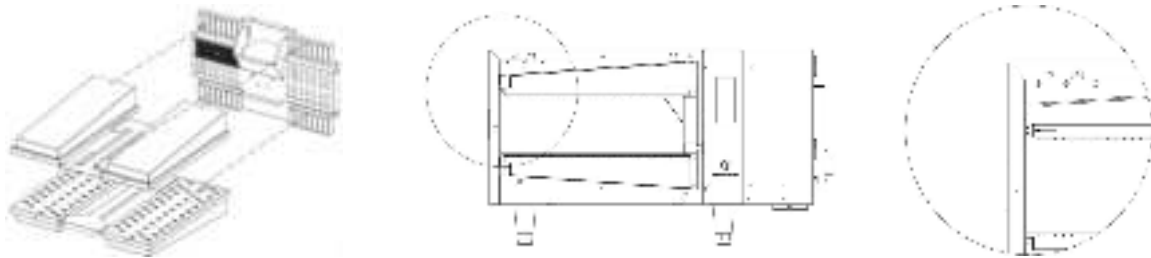
**NOTE:** Unit comes wired with 1-Phase configuration, but can be converted to 3-Phase. When converted to 3-Phase, the amperage drops to 15A.

## Installation Instructions

**Note:** Installation must be performed by a licensed service technician.

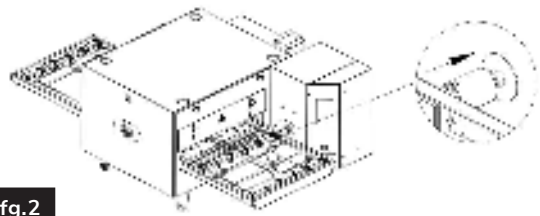
1.
  - a. When installing a ventless model (see specification table on page 4 for ventless models), choose a countertop location and ensure there is adequate clearance left on all sides of the unit (see specification table for minimum operational clearances). Note: Proper ventilation is crucial to safe and optimum performance. Although these units do not need to be placed under a hood, it is imperative to maintain adequate clearance and airflow around the oven.
  - b. When installing a non-ventless model (see specification table on page 4 for non-ventless models), choose a location under a ventilation hood. Ensure there is adequate clearance left on all sides of the unit (see specification table for minimum operational clearances). Note: Proper ventilation is crucial to safe and optimum performance. Ensure that the oven is installed underneath a ventilation hood according to all applicable local and national codes.

fg.1

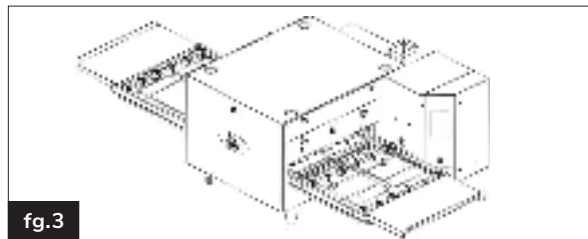


2. Connect impingement plates to the air outlet within the chamber. Ensure the top impingement finger assemblies are facing down, and the bottom impingement finger assemblies are facing up. Move the top impingement finger assembly to the left and make sure it is fixed by the hook. **(fig. 1)**
3. Put the conveyor belt in place by sliding it through the chamber (from right to left), and ensure the belt is locked in place by securing the drive shaft into the groove by pressing the spring by hand. **(fig. 2)**
4. Before beginning operation, ensure the left and right side crumb trays are pushed in, and the extension plates are attached on both ends of the conveyor belt. **(fig. 3)**

fg.2



fg.3

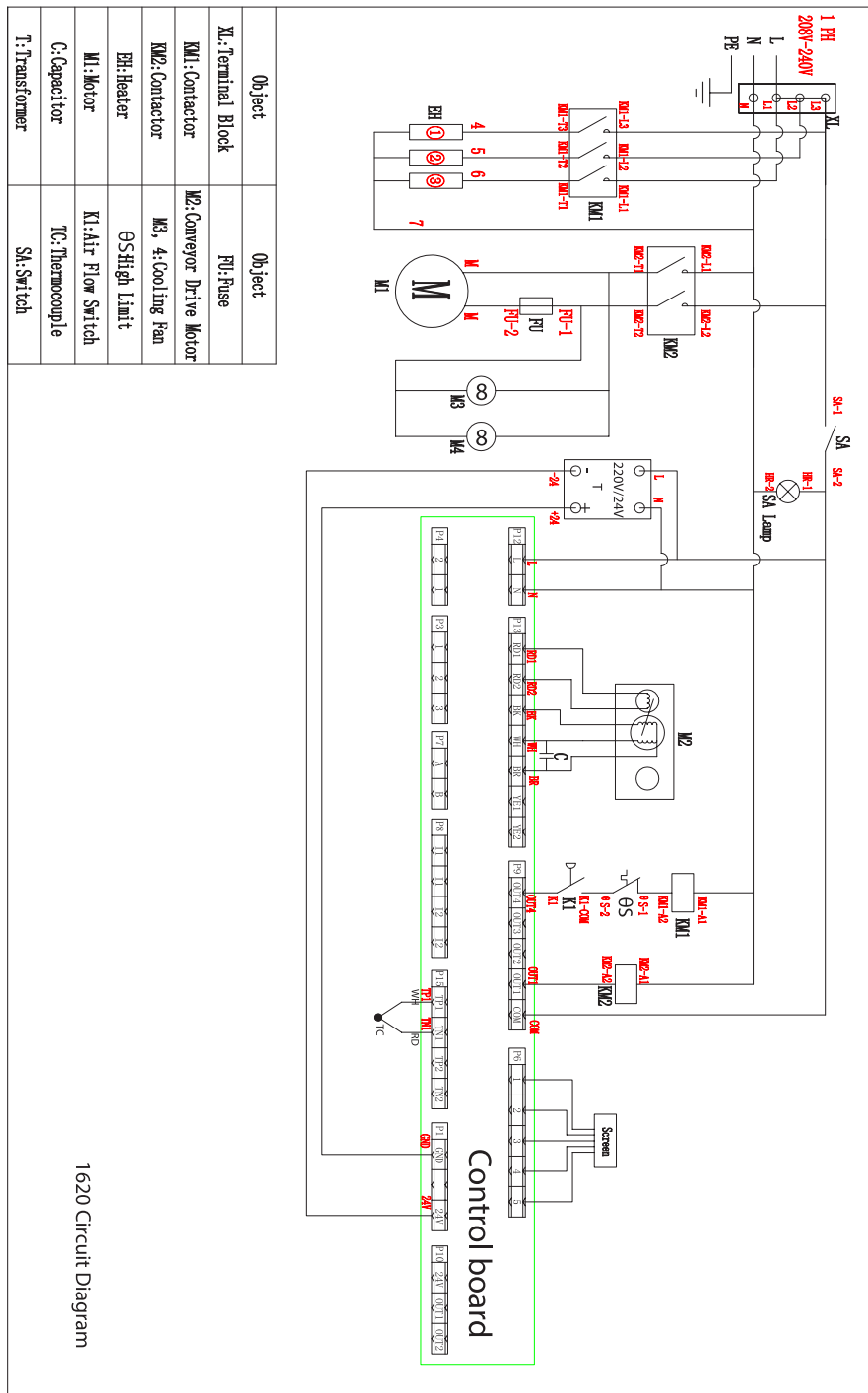


## Electrical Connection

1. Ensure voltage shown on unit nameplate matches the voltage being supplied through the electrical connection.
2. The manufacturer requires the installation to be performed according to national and local codes and must be performed by a licensed technician.
3. The unit must be electrically grounded in accordance with all local and national codes (in the USA, the National Electrical code ANSI/NFPA no. 70 is applicable).

## Electrical Diagrams

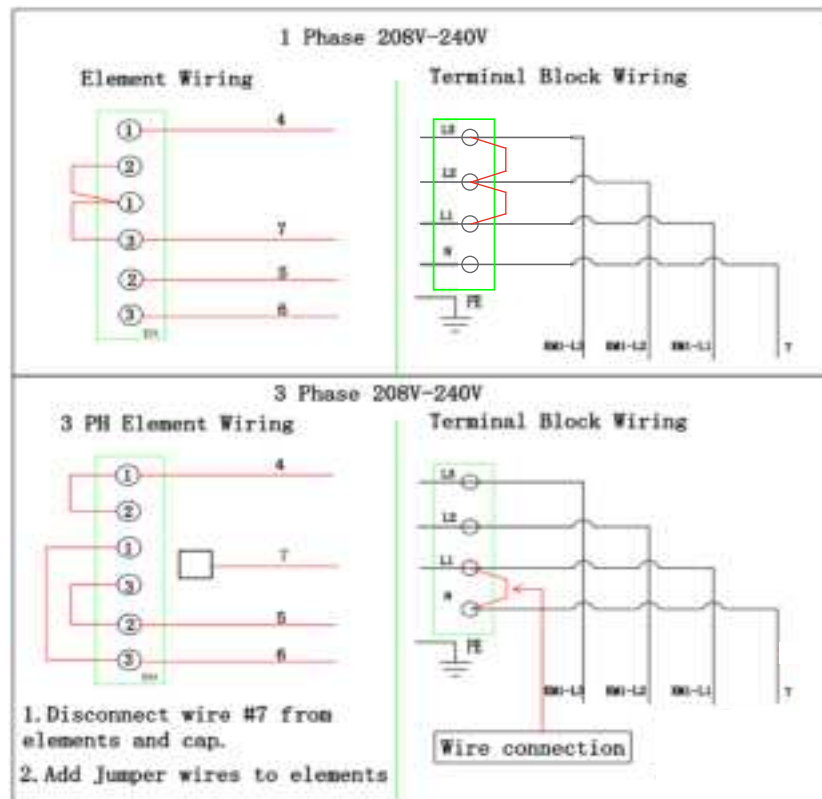
### 1 Phase:





## Electrical Diagrams

### 1-Phase to 3-Phase Field Conversion Diagram:



#### Terminal Block Wiring Change

**Step 1:** Locate the incoming power terminal block inside the control box.

**Step 2:** Remove only the jumper wire that connects L1 and L2 on the terminal block.

**Step 3:** Remove only the jumper wire that connects L2 and L3 on the terminal block. (Save this jumper wire to be used in next step)

**Step 4:** Use the jumper wire removed from step 3 and install connecting L1 and N terminals.

**Step 5:** Connect one incoming leg of power to L1

**Step 6:** Connect the other incoming leg of power to L2

**Step 7:** Connect the third incoming leg of power to L3

**Step 8:** Verify that all screws are tight and wires are secure on the terminal block area after wiring has been changed.

Control box wiring is now complete.

#### Heating Element Wiring Change

Remove the back panel of the oven and gain access to the wire connections on the element.

**Step 1:** Remove wire #7 and use a Hi Temperature porcelain nut to cap off wire. Be sure to use Hi Temperature fiberglass tape to secure cap.

**Step 2:** Remove jumper wires from connections 3 and 1 on heating element. Remove jumpers from connections 1 and 2 on heating element.

**Step 3:** Use jumpers provided to connect terminals 3 and 1 on element, 2 and 3 on element, and 1 and 2 on element as picture in diagram.

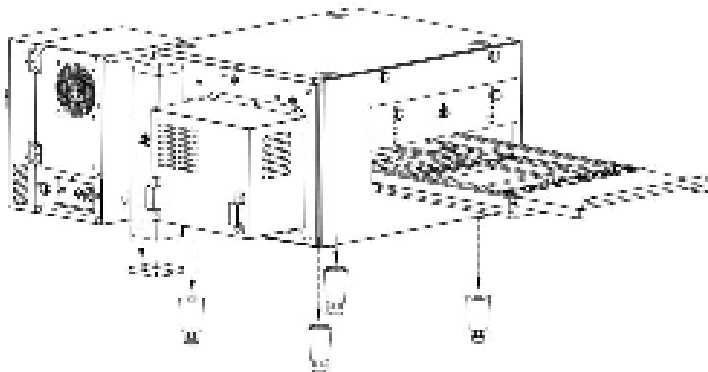
Element wiring is now complete.

Verify change by running the oven and using an amperage clamp on each incoming leg of power to see if all three legs draw amperage during heating cycle.

## Oven Stacking Instructions

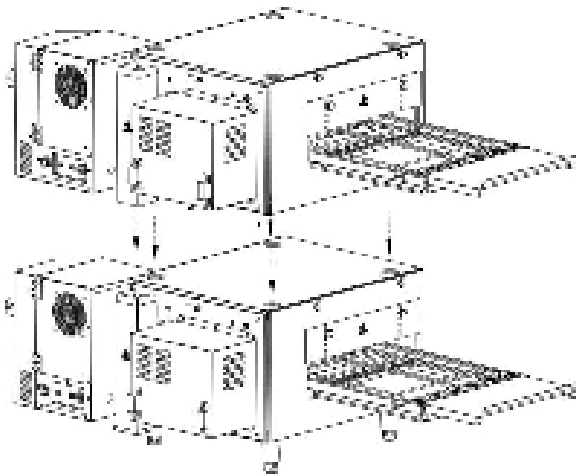
**NOTE:** Requires two like ovens.

**NOTE:** Stacking should be performed by an authorized technician.



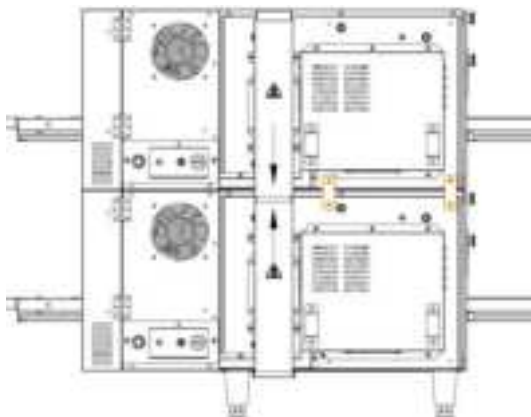
**Figure 1**

Use a wrench to remove the 4 feet off the upper device, and use a screwdriver to remove the bottom plate on the flue.



**Figure 2**

Each unit has 4 protrusions on the bottom and 4 depressions on the top. When stacking, the bottom protrusions on the top unit correspond with the depressions on the bottom unit.



**Figure 3**

The top unit is placed onto the bottom unit, the upper flue is embedded in the lower flue, and then the connecting plate is installed, and the cover is tightened with the nut to fix the ovens together.



## Operating Instructions

### Controller Location and Function

#### **WARNING:**

When the oven is operating normally, do not turn off the unit using the emergency power switch without progressing through the standard cool down process. Doing this could potentially overheat components causing internal damage to the unit.

Computer Board

Emergency  
Power Switch



### Power On

1. When powering on the unit, press the "Emergency Power Switch", causing the touchscreen to light up and enter the boot interface shown below.
2. Next, press the "Power On" button, which will lead you into the "Free Mode" interface shown below



#### KEY



Cooking time setting: Click the time window to set the cooking time.



Cooking temp setting: Click the temp window to set the temp time.



Preheating status.  
Preheating



Preheating  
Completed



Cooling  
Down

**NOTE:** When the temperature on the right side of the temperature icon is not displayed, press "Preheating Status" and the live temperature reading will be displayed on the right side for 5 seconds.

## Shut Down



To shut down the oven, long press "Shut Down" for 3 seconds then shut down the unit. If the temperature is higher than 195 degrees Fahrenheit, it will automatically enter cool down mode and shut down once the cool down has been completed.



### WARNING:

During the automatic cool down process, do not turn off using the emergency power switch. Doing so could cause high temperature damage to the unit!

## Menu Mode



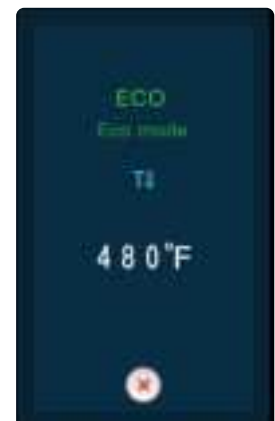
Click "Menu Mode" icon to enter menu list as shown below.



Choose a recipe to enter the cooking interface as shown above.






Press the "ECO Mode" button to enter ECO mode as shown below. This maintains the cavity temperature at 250 degrees Fahrenheit, stops the conveyor belt from moving, and darkens the touchscreen to save power during downtime.





## New Menu Setting


-  1. On the menu list interface, click the "New Recipe" button to enter the new recipe interface shown below.
-  2. Select the picture, set the recipe name, and set the cooking time and temperature.
-  3. Once complete, click the save button to save the menu.

## Delete Menu

To delete an existing recipe, long press the recipe on the menu list interface. This will prompt the delete window to pop up as shown below.



## U Disk Read/Write Menu


-  On the menu list interface, click "USB Read & Write Menu" to enter the USB read and write menu interface as shown below.



**Menu Writing:** Input USB to the computer board to upload a recipe.

**Menu Reading:** Input USB to the computer board to download existing recipe.

## Settings

-  Click the "Settings" button to enter the settings interface screen as shown below.



**Chain State:** Conveyor belt direction can be changed to forward (right to left) or reverse (left to right).

**Factory Setting & Diagnostic:** Need password to gain access (contact the manufacturer to obtain password).

**View Event Log:** View past event information.

**Add Images:** Upload custom images.

**Time/Date:** Set the time and date on your unit.

## Cleaning & Maintenance

**WARNING:** Use only non-abrasive cleaners. Abrasive cleaners could scratch the finish of your unit, marring it's appearance and making it susceptible to dirt accumulation. Do not use steel wool, other abrasive cleaners, or cleaners/sanitizers containing chlorine, iodine, ammonia, or bromine chemicals as these will deteriorate the stainless steel and glass material and shorten the life of the unit.

### Daily Cleaning

Step	Operation
1	Please check that the oven is cooled and the power is completely turned off according to the warnings previously mentioned.
2	Clean the outside of the oven with a soft cloth and medium detergent.
3	Use a hard nylon brush to clean the cooling fan and the cooling air outlet.
4	Check that all cooling fans are operating properly (there is air flowing in and out of the electrical box).
5	Use a hard nylon brush to clean the conveyor belt.
6	Remove crumb pan, clean, and replace.

**CAUTION:** If the cooling fan does not work properly, replace it immediately. If the oven runs without sufficient cooling, the parts inside the oven will be damaged.

### Monthly Cleaning

Step	Operation
1	Caution: Make sure oven is totally powered off and unplugged. Do not clean the oven until it's cooled down.
2	Remove the following components from the oven: crumb trays, extension plates, left and right baffles, and conveyor assembly.
3	When taking out each impingement finger assembly and shutter, take note of the installation position on each assembly to confirm that they get re-installed in the proper position
4	Write a number on the three components of each impingement finger assembly that you disassembled to help you re-assemble them correctly.
5	Clean the components of the air guide box and clean the inside of the oven with a wet cloth.
6	Assemble the impingement finger assembly, and then install the impingement finger assembly back into the oven according to the position number written on it.
7	Reinstall the left and right baffles.
8	Reinstall conveyor chain assembly.
9	Check the tightness of the conveyor belt, which should be able to pull up 2-3" (50-70mm). If necessary, adjust the belt tightness by turning the belt tightness adjusting screws at one end (right side) of the belt retaining shaft.
10	Re-Install the crumb trays.

#### RECOMMENDED CLEANING AGENTS



**NOBLE**  
CHEMICAL INC.  
#999SUNBRIGHT  
**Sunbright**  
Lemon Dish Soap



**NOBLE**  
CHEMICAL INC.  
#999KNOCKOUT  
**Knockout**  
Heavy Duty Oven  
& Grill Degreaser &  
Carbon Remover



**NOBLE**  
CHEMICAL INC.  
#147BLASTQT  
**Blast**  
Liquid Oven & Grill  
Cleaner