

**Technical instruction  
Manual for use and maintenance**



## **ELECTRIC CONVECTION OVENS**

### **MODELS**

**FK45 – FK45W – FK60 – FK60W – FK120 –  
FK120W**

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These appliances comply with requirements of E.E.C EN 60335-1 / 72/23

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**SOTIRIOS D. PRODANAS & CO**

***PROFESSIONAL ELECTRIC & GAS MACHINES FOR RESTAURANT – PATISseries – SNACK BAR***

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# CONVECTION OVEN & HUMIDITY

## FK45, FK60, FK120

## FK45W, FK60W, FK120W

### SPECIFICATIONS

The tables below refer to the specifications of models FK.

#### Overall Dimensions

MODEL	LENGTH mm	WIDTH mm	HEIGHT mm
FK45	670	620	470
FK60	670	800	470
FK120	670	800	880
FK45W	670	620	470
FK60W	670	800	470
FK120W	670	800	880

#### Chamber Dimensions

MODEL	LENGTH mm	WIDTH mm	HEIGHT mm
FK45	440	430	350
FK60	440	620	350
FK120	440	620	700
FK45W	440	430	350
FK60W	440	620	350
FK120W	440	620	700

#### Electrical Supply

**FK45/FK45W** 230V AC / 400V 3N AC 50Hz

**FK60/FK60W** 230V AC / 400V 3N AC 50Hz

**FK120/FK120W** 230V AC / 400V 3N AC 50Hz

#### IP Grating

IP 20

#### Appliance's Safety

Complies to **EN 60335-1**, **EN 60335-2-42** and **EN 60335-2-46** requirements.

**CE** marking.

#### Power

MODEL	POWER IN TOTAL
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FK45 / FK45W	6.000 Watt
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FK60 / FK60W	6.600 Watt
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FK120 / FK120W	13.200 Watt
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### **Main Parts**

- AISI 430 stainless steel body.
- AISI 430 stainless steel chamber.
- AISI 430 stainless steel perforated shelf.
- AISI 430 stainless steel tray.
- Nickel-plated griddles.
- AISI 430 stainless steel rotating door with pyrex glass and insulating silicon rubber.
- Heat insulated handle.
- Bakelite thermostat and timer's operating knobs.
- Sprinkler system for model's FK45W, FK60W, FK120W.

### **Electrical Components**

- Wire heating elements:

FK45 : : 2 x 3.000 Watt

FK60 : 2 x 3.300 Watt

FK120 : 4 x 2.000 Watt / 2 x 2.600 Watt

FK45W :2 x 3.000 Watt

FK60W : 2 x 3.300 Watt

FK120W : 4 x 2.000 Watt / 2 x 2.600 Watt

- Thermostats 0-300°C with indicating lamp.
- 60 min timer.
- One chamber lighting lamp.
- Two switches with indicating lamp.
- Motor and relay.
- Terminals' fasteners.
- Polyamide fastener lids.
- Gland for supply cord.
- Earth terminal.
- Potential equivalent terminal, marked P.A.
- Polyamide connector strip for supply cord.

# 1. GENERAL INFORMATION

- ⇒ This technical manual includes instructions for the installation, operation, care and maintenance of ovens type FK manufactured by **NORTH**. Please, read carefully and keep it for future reference. This manual should be referred to both by installing or service technicians and the operators of the equipment.
- ⇒ After you remove the packing make sure that no damage was caused during shipping. If in doubt, we recommend that an authorized technician examine the appliance before you proceed with the installation.
- ⇒ The appliance requires electrical connection. Before proceeding, make sure that main voltage meet the requirements of the appliance. This information is available on a label, on the right side of the appliance, as you face it. **In case of incongruence or if in doubt, do not connect the apparatus. Ask for the equipment to be checked by specialized personnel.**
- ⇒ **NORTH** ovens equipment are commercial grade appliances and should, there for, be used by personnel who are specially trained in their use.
- ⇒ Exclusively specialized technicians according to specifications valid in the country where installation is taking place must carry out all procedures concerning installation and connection of the appliance.
- ⇒ Before any routine cleaning, disconnect from electricity mains. The same procedure must be followed in case of malfunction of the appliance, while waiting for the service technician.
- ⇒ Authorized personnel using original spare parts only must exclusively carry out any repairs.
- ⇒ The manufacturer cannot be held responsible for damage caused to persons, animals or property due to misuse, tampering, unauthorized modification, or uses other than ones mentioned and / or considered in this manual.

## **2. TECHNICAL INSTRUCTIONS**

# **INSTALLATION AND SERVICE INSTRUCTIONS**

NORTH CONVECTION OVENS ARE PROFESSIONAL EQUIPMENT.  
ALL ASSEMBLY AND CONNECTION PROCEDURES,  
TESTING AND REQUIRED REPAIRS  
MUST BE CARRIED OUT  
BY SPECIALIZED AND AUTHORIZED PERSONNEL ONLY.

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NORTH ENTERPRISES CANNOT BE HELD RESPONSIBLE  
FOR ANY NEGATIVE CONSEQUENCES IN CASE OF  
INTERVENTIONS BY NON-SPECIALIZED TECHNICAL PERSONNEL  
OR DUE TO NONCOMPLIANCE WITH FACTORY INSTRUCTIONS.

## 2.1 INSTALLATION OF THE APPLIANCE.....

After making sure the appliance is intact, place it in position so that it is stable and there is adequate operating space around it.

Make sure that all parts are at hand:

- Convection oven
- Four plated griddles.
- Tray.
- Instruction manual.

**Attention !** To avoid accidents, keep all packing materials (cardboard, plastic bags, metal items, etc) away from children.

**Important !** Install the oven on a flat non-flammable surface, away from flammable walls.

## 2.2 ELECTRICAL CONNECTION.....

Remove the small lid on the lower right side of the appliance rear.

- Enter a suitable supply cord through the gland.
- Depending on the available power supply connect the cables.

<b>Three phases power supply (HO7RNF 5X4 –FK120/FK120W)</b>
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Connect the phases to L1, L2, L3.
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Connect neutral to N1 or N2.
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Connect the earth.
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<b>Two-phases power supply (HO7RNF 4X2.5 – FK45/FK45W / FK60/FK60W)</b>
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Connect the phases to L1 &L2
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Connect neutral to N1 or N2
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Connect the earth
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<b>Single-phase power supply (HO7RNF 4X2.5 – FK45/FK45W / FK60/FK60W)</b>
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Remove the provided bridges and short circuit L1, L2.
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Connect the phase to L1 or L2, the neutral to N1 or N2 and earth to earth terminal.
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- Connect P.A. terminal to water piping using a 10 mm<sup>2</sup> wire.
- For FK45W, FK60W and FK120W connect sprinkler system to water supply.

**IT IS STRONGLY RECOMMENDED TO USE A QUALIFIED ELECTRICIAN FOR ALL ELECTRICAL CONNECTIONS.**

**THE MANUFACTURER CANNOT BE HELD RESPONSIBLE FOR ACCIDENTS AND DAMAGE CAUSED TO PERSONS, ANIMALS OR PROPERTY DUE TO NONCOMPLIANCE WITH THESE INSTRUCTIONS.**

### 2.3 POSSIBLE PROBLEM.....

Even if the appliance is used correctly, some problems may arise for various reasons. The table that follows mentions some possible problems and some possible causes.

**In case of problem we control first if the electrical supply to the machine is right or not.**

POSSIBLE PROBLEM	POSSIBLE CAUSES
Machine is not operating	Check if there is damage to 1) the general switch on/off 2) the thermostat 3) the relay 4) the timer 5) the heating element
Low operating of the machine	Check if there is damage to 1) the heating element 2) the edge of supply cord connected with the heating element 3) the contact on relay.
Lighting is not operating	Check if there is damage to 1) the lighting lamp 2) the switch on/off 3) the internal lamp holder.
Non normal temperature	Possible temperature deviation of thermostat + , - °C
Heating air is not operating	Check if there is damage to 1) the cord 2) the motor
EXTRA FOR MODELS	FK45W,FK60W,FK 120W
Sprinkler system is not operating	Check if there is damage to 1) the sprinkler's press button 2) the valve
Continuity water flow in to the chamber	Check if there is damage to 1) the sprinkler's press button 2) the valve

### 2.4 REPLACEMENT OF ELECTRICAL ELEMENTS.....

To replace heating elements remove the back cover of the appliance. Remove the internal perforated frame from the four holding screws. Release the wires and remove the heating element holding screws.

Follow the same procedure for the motor.

For the relay is replaced just by removing the back cover.

For the timer, thermostat, indicating lamps switches and sprinkler system remove the left section on the front cover.

**CUT OFF THE POWER SUPPLY BEFORE COVER REMOVAL.**

## **2.5 TRAINING.....**

The personnel who are to install and connect the appliance must train the users appropriately so that they can handle the operation and safety measures of the appliance.

### **ATTENTION !!!**

- Check that main voltage in your working area is suitable for the settings on the label and that the appliance is properly earthed.
- Before any service activity takes place or any parts are replaced on the appliance, make sure that power supply is turned off.

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### **3. OPERATION INSTRUCTIONS**

## **INSTRUCTIONS TO PERSONNEL FOR OPERATION AND CARE OF CONVECTION OVENS**

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TESTING AND REQUIRED REPAIRS MUST BE CARRIED OUT  
BY SPECIALIZED AND AUTHORIZED PERSONNEL ONLY.

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NON-SPECIALIZED TECHNICAL PERSONNEL OR DUE TO  
NONCOMPLIANCE WITH FACTORY INSTRUCTIONS.

### **3.1 TURNING ON THE APPLIANCE .....**

After making sure the appliance has been correctly connected to electricity, you can start using it.

#### **Thermostat.**

Depending on the heating requirement set the thermostat 0-300°C. Thermostat will control heating element and the chamber's temperature. During operation indicating lamp is on.

#### **Timer.**

Set timer (up to 60 min). After present time elapses heating stops, but motor and chamber's lighting keep on operation.

The switch on the upper side of the panel is the main switch on/off (on when position 1 and off when in position 0).

### **3.2 CLEANING AND MAINTENANCE.....**

Turn off the heating elements before any cleaning or maintenance procedures. Let the appliance cool and make sure it has been unplugged from the main supply.

- At the end of the working day, remove the griddles or the tray's base of the oven and clean them thoroughly, empty and clean the tray placed at the bottom.
- Clean with a wet cloth the surfaces on the side of the appliance and the door.
- Never use running water to clean the appliance.
- At least twice a year, check the electrical wirings.