



TURBO ELECTRICAL OVEN

## MODEL

## DISCOVERY 10

695970- ENGLISH  
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# INSTRUCTION MANUAL

DUE TO THE CONSTANT IMPROVEMENTS INTRODUCED TO OUR EQUIPMENTS, THE INFORMATIONS CONTAINED IN THIS INSTRUCTIONS MANUAL MAY BE CHANGED WITHOUT PREVIOUS NOTICE.

<b>SUMMARY</b>	
<b>1. INTRODUCTION .....</b>	<b>2</b>
1.1 Safety .....	2
<b>2. COMPONENTS AND TECHNICAL FEATURES..</b>	<b>2</b>
<b>3. INSTALLATION AND PRE-OPERATION .....</b>	<b>3</b>
3.1 Placing .....	3
3.2 Electrical Installation.....	3
3.3 Water Points Connection .....	3
<b>4. OPERATION PROCEDURES .....</b>	<b>4</b>
4.1 Oven Control Panel .....	4
4.2 Oven operation procedures for products with steam..	5
4.3 Oven operation procedures for products without steam .....	5
<b>5. CLEANING .....</b>	<b>5</b>
<b>6. MAINTENANCE .....</b>	<b>7</b>
<b>7. PROBLEM RESOLUTION.....</b>	<b>7</b>
<b>8. ELECTRICAL DIAGRAMS.....</b>	<b>8</b>

This product was developed to be used in commercial kitchens. It is used, for example, in restaurants, cafeterias, hospitals, bakeries, etc.

- The production process should be done in a continuous way in industrial scale;
- The workplace is in an atmosphere of corrosive, explosive with dust or gas.

The instructions below must be followed to avoid accidents  
non-compliance can cause serious injuries:

**1.1.2** If the Equipment physically falls down, in any way suffers any kind of damage or has stopped working for any reason, it is necessary to call specialized technical assistance.

**1.1.4** Keep hands or any kind of devices, tools, accessories away from the moving parts of the Equipment while it is turning on and processing recipes to avoid potential damages to the Equipment and injuries to the end user.

**1.1.5** Never operate the Equipment while wearing clothes with long sleeves, especially on the wrists.

**⚠ This Equipment cannot be operated by persons (children included) with reduced mental, sensorial or physical capacities. Unexperienced persons or persons without proper training of knowledge cannot operate this equipment. Only apt and trained persons or persons under the supervision of an apt and trained supervisor must operate the equipment.**

**⚠ Always disconnect the Equipment from the power supply when: It is not being used, before realizing any cleaning or maintenance, before you place or take out any accessories, before you realize any kind of procedure or service with the unit.**

**⚠ Do not use the Equipment if there is any damage to the cord or plug. Make sure that the cord does not stay on the edge of a working table, station or furniture and make sure it is not in contact with hot surfaces. If the Cord is not in good conditions of use, to avoid accidents it must be replaced by the supplier, an authorized technician or someone qualified for the service.**

**⚠ If any emergency arises disconnect the Equipment from the power supply, unplug it from the electrical socket.**

**⚠ Never spray water directly on to the equipment.**

**Picture 01**



- 01 – Glass  
02 – Door  
03 – Rollers  
04 – Motor Housing  
05 – Control Panel

Breakers and cables Dimension Table		
Model	Breakers	Cable
	415V	415V
Discovery 10	40A	6 mm <sup>2</sup>

### 3.3 Water Points Connection

1 - The ovens and food displays must be connected to a cold water pipeline.

2 - Before turning on the hydraulic part, unload the water conductors of the building to remove possible dirt from the pipe.

3 - It is necessary to provide a ¾ screw for the meter to connect the hose to the water entrance.

- 4 - Before turning on the hydraulic hose it is necessary to check the water exit according to the recommendation of the table below.

Indicated Hydraulic Pressure		
QUANTITIES	DISCOVERY 10	
	minimum	maximum
mm water column	5000	15000
kg per sq cm	0,5	1,5
Bar (absolute atmosphere)	0,5	1,5
Psi (pound force per square inch)	7,11	21,33

**IMPORTANT NOTE:**

1 - In most cases, the installation in the hydraulic net can be made without a filter. In critical conditions it is recommended that the water be filtered or treated, avoiding calcification and internal corrosion of the appliance.

2 - It is extremely important that the hydraulic net has pressure according to the one established in the table so that the appliance works perfectly. If there's lack of pressure, it is recommended water pump to reach the values mentioned. When the pressure is very strong, an installation of a pressure regulator is recommended.

Diagram illustrating the correct installation of a 240V electric oven. The oven is connected to a breaker in the wall. The connection is made using a "Steck or Weg plug (wall)" and a "Steck or Weg pin (Oven)".

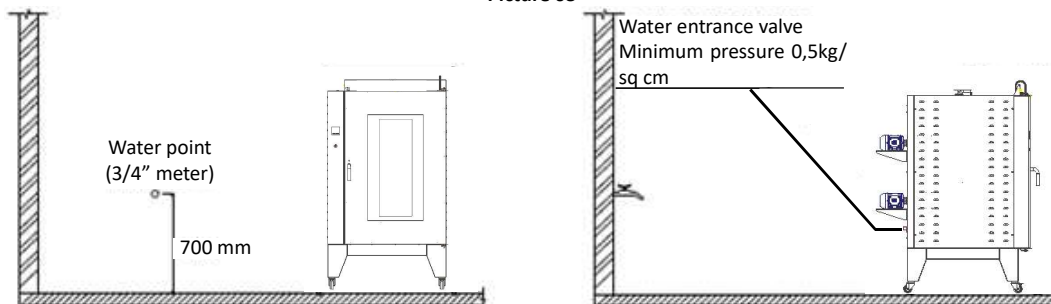
1 - The breakers must be exclusive to the equipment.

2 - The dimensioning of the cables in the table below is for maximum length of 25 meters.

3 - Grounding is mandatory.

4 - For 415V feeding a neutral cable must be available apart from the grounding.

Picture 03

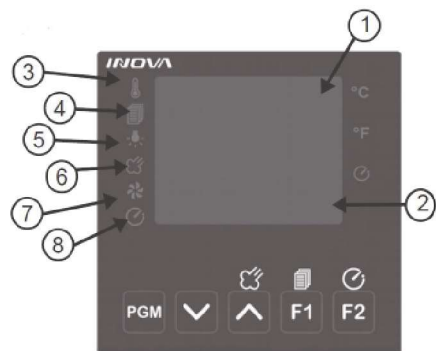


#### Important observations

- 1 - A distance of 100mm far from the laterals and to the oven to ventilation must be respected.
- 2 - A minimum of 700mm of physical space for the maintenance must be provided, if possible.
- 3 - The Oven must not be positioned next to heat spots (close to stoves, frying pens, grills, etc) or other appliances that expel fat poor heat. The control panel ventilation is necessary and the motor must be far from heat sources, to avoid damages to the appliance electric system.
- 4 - The appliances have swiveling casters with breaks, and those can be locked so that the oven doesn't move from the installation spot. We recommend that the four wheels be locked.

## 4. OPERATION PROCEDURES

### 4.1 Oven Control Panel



**PGM** Programming button.

**Down Button**: diminishes the programed value and activates the lamp.

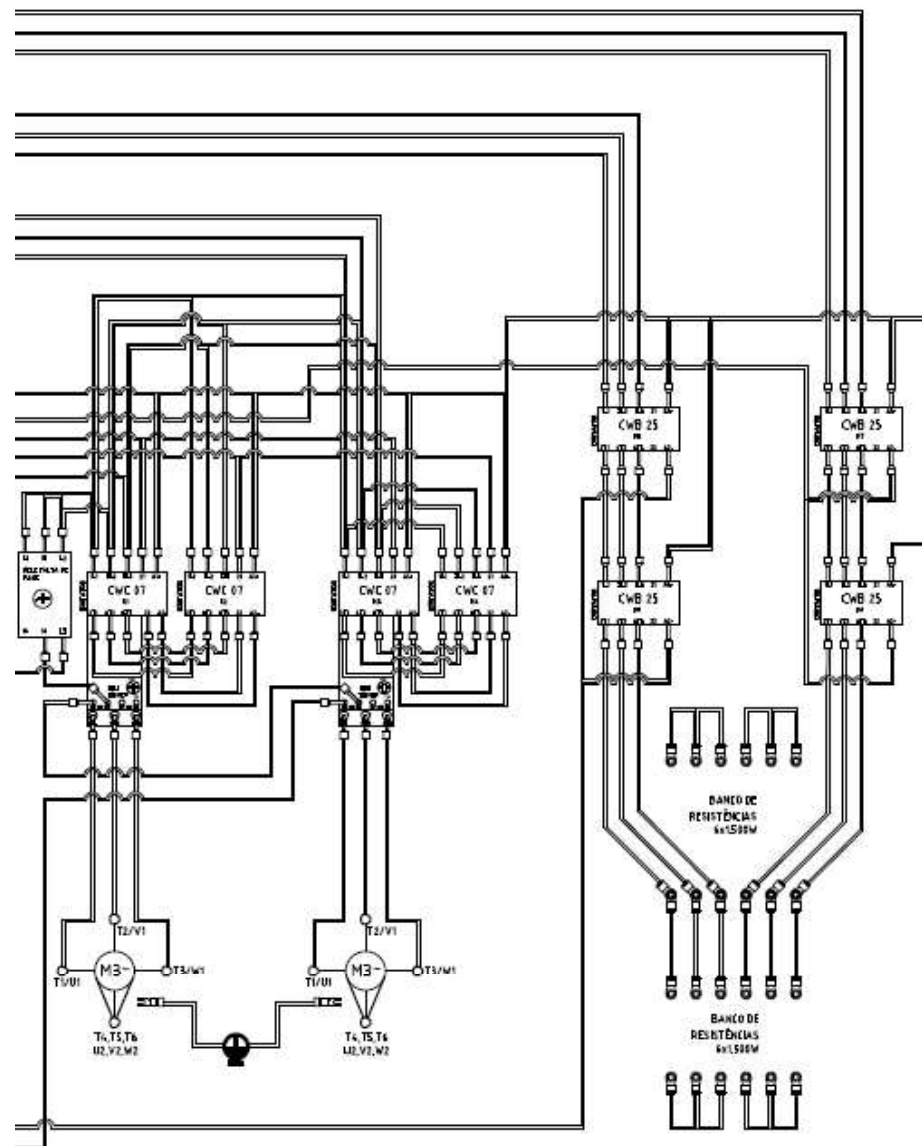
**Up Button**: increases the programmed value and activates the steam.

**F1** Turbine activation button.

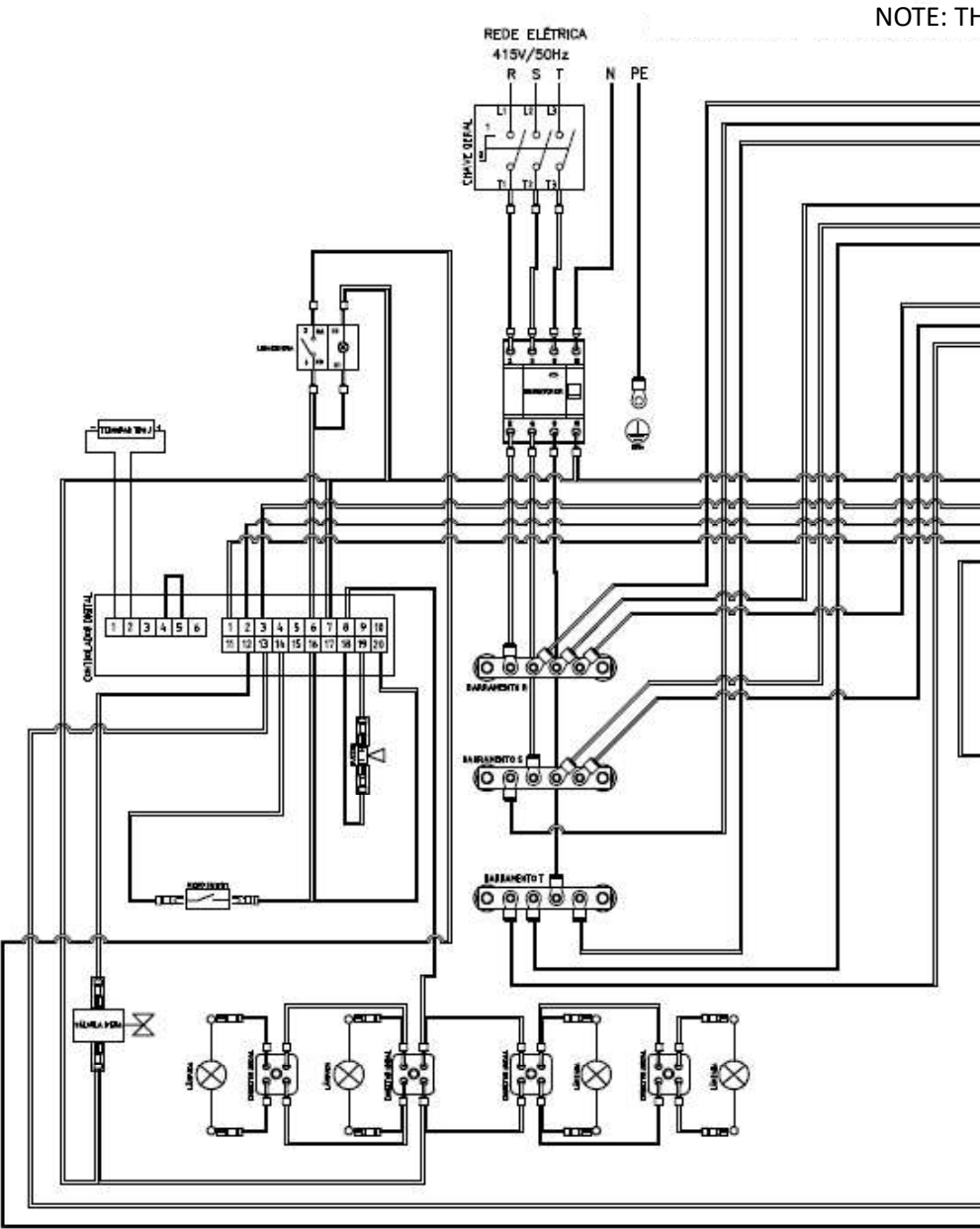
**F2** Timer activation Button.

- (01) Display the indicates the temperature present in the temperature sensor or the programmable parameters.
- (02) Display the indicated time or the value of the programmable parameters.
- (03) Led indicating the exit of the switched heating exit.
- (04) Not used.
- (05) Led indicating the exit of the activated lamp.
- (06) Led indicating the exit of the activated lamp
- (07) Led indicating the exit of the activated lamp
- (08) Not used.

## 1E 2 THERMAL RELAYS MUST BE SET TO AUTOMATIC RESET MODE



8. ELECTRICAL DIAGRAMS



NOTE: TH

IMPORTANT: THE THERMAL RELAYS MUST BE SET TO A CURRENT OF 2A.

4.2 Oven operation procedures for products with steam

- 1 - Turn on the oven;
- 2 - Adjust the cooking temperature;
- 2.1 - Adjust the cooking time;
- 3 - Wait for the oven to reach the chosen temperature;
- 4 - Open the oven door following the safety procedure;
- 5 - Put the products to be baked;
- 6 - Close the oven door;
- 7 - Turn on (Time Button).
- 8 - Turn on the steam.

4.3 Oven operation procedures for products without steam

- 1 - Turn on the oven;
- 2 - Adjust the cooking temperature;
- 2.1 - Adjust the cooking time;
- 3 - Turn off the automated steam;
- 4 - Adjust the clock;
- 5 - Wait for the oven to reach the chosen temperature;
- 6 - Open the oven door following the safety procedure;
- 7 - Put the products to be baked;
- 8 - Close the oven door;
- 9 - Turn on (Time Button).

To open and close the oven door:

When opening the oven door, stay behind it and open it in two steps;

- 1 - Only unlock the knob and wait for the heat and steam to escape;
- 2 - Open completely the door to the procedures.

5. CLEANING

The appliance must be totally clean and hygiene:

- Before being used for the first time;
- After being used every day;
- When it's not used for a long time;
- Before working with it again after a long time that had not been used.
- Wash all the parts with water and neutral soap.
- After a long inactive usage time

Daily Care:

- 1 - With the oven cold and turned off, use a wet cloth or sponge and clean inside and outside the oven.

The daily and careful cleaning of the ovens is extremely important to the hygiene of the products as well as the energy saving and maintenance of the appliance.

Keeping the cooking camera clean helps in the conversion of the heat molecules, keeping the oven efficient.

Week procedure:

- 1 - The oven must be turned off and cold;
  - 2 - Apply descaling with a spray or a brush all over the internal surface of the oven;
  - 3 - Close the oven door and let it act for 5 to 10 minutes;
- Such procedure must be done with the oven turned off;
- v4 - With a wet cloth, clean the product;

- 5 - With the help of a dry cloth rinse the clean parts;
- 6 - For the final drying, close the oven door and program it in 140/150 Celsius Degree and leave it open for 5 minutes.

Important information about the cleaning process:

- 1 - Never use steel sponge, sandpaper, spatula, etc;
- 2 - Keep the cooking camera as new;
- 3 - To clean the cooking camera only use sponge and detergent;
- 4 - Never throw water directly on the oven surfasse. It can compromise the control panel or electric components;
- 5 - Do not throw cold water on the hot glass;
- 6 - To the external cleaning of the oven and glasses it is recommended use of the wet cloth with alcohol or with detergent and also dry cloths. To look like new a wet cloth with liquid vaseline can be used (for external finishing).
- 7 - Do not use the oven to store things;
- 8 - Do not put any kings of objects around or under the rack;
- 9 - For the procedures below, it is necessary to use protection goggles and impermeable gloves up to the forearm.
- 10 - The daily cleaning of the appliance is mandatory. Such procedure will bring safety to the opertor and also no contamination of the products.
- 11 - The absence of cleaning may cause fire in the appliance camera.

Scan the QR Code and get information about the stainless steel care.



Product	Working mode	Heating temperature Cº	Baking temperature ºC	Time (minutes)
Bagguete	Hot air with steam	190/200	155/160	16
Manioc powder biscuit	Hot air with steam	190/200	155	18
Manioc powder Cookie	Hot air	190/200	150	12
Cakes	Hot air	190/200	150	20
Little éclairs	Hot air	190/200	150	12
Cookies	Hot air	190/200	135	10
Croissant	Hot air with steam	190/200	165	20
Little pies	Hot air	190/200	170	12
Enroladinho (rolls)	Hot air	190/200	140	12
Esfiha	Hot air	190/200	145	25/30
Open Esfiha	Hot air	190/200	170	10
Sweet rolls	Hot air	190/200	130/140	25
Italian loaf	Hot air with steam	190/200	150	25
Hot dog bun	Hot air	190/200	140	20
Hamburger buns	Hot air	190/200	145	20
Rolls	Hot air with steam	190/200	150/155	15/17
Brazilian cheese bread	Hot air with steam	190/200	140/150	15/20
Empanadas	Hot air	190/200	170	12
Pizzas	Hot air	190/200	200	10
Bread pudding	Hot air	190/200	135	25/30
doughnuts	Hot air	190/200	135/145	25/35
Gum cookie (sequilhos)	Hot air	190/200	175	10
Meringue	Hot air	190/200	130	20

**Observation:**

It is necessary to preheat the oven and such procedure may take 10 minutes to heat. The oven temperature will be one programmed in the controller by the operator being able to vary from 1 to 5 degrees (+ or -).

The times and temperatures here presented are guides that must be adjusted according the recipes and sizes of each product and preferences of the client.

**Tips about bread and sweet dough**

**Loading:**

- 1 - When working with sweet dough it is important to respect the capacity of the oven.
- 2 - When loading the oven with sweet bread dough (milk

bread loaf, homemade bread loaf, etc) it is necessary to leave vacancy for each baking tray that is put.

**Growings:**

- 1 - It is important to observe that the dough growth reaches 70% of growth when working with a conventional oven. The dough must be really fresh.

**Temperature:**

- 1 - The convection ovens work in lower temperature than the ones observed in conventional deck ovens. We recommend that sweet dough must be baked in temperatures from 130 to 155 Celsius Degree.

**6. MAINTENANCE**

The maintenance must be considered a group of procedures that aims to maintain the appliance in its best working condition, providing the working life and safety.

- \* Cleaning –Check Item 5 Cleaning of this manual.
- \* Wiring – Check all the cables about the damage and all the electrical contacts related to the tighten or corrosion.
- \* Contacts – The on/off button, emergency button, reset button, electronic circuit, etc. Verify the appliance so that all the components are working correctly and that the operation of the appliance is normal.
- \* Installation – Check the installation of the appliance according to the item 2 Installation and Pre Operation of this manual.

- 1 - Items to be checked and executed montly:

- Check the electrical instalation;
- Measure the outlet tension;
- Measure the working chain and compare with the nominal;
- Check the tightening of all the electrical terminals of the

- appliance to avoid any possible bad contact;
- Check possible screw spindle of eletric motor;
- Verify the wiring and electric cable to possible overheating, poor isolation and mechanic damage.

- 2 - Items to be checked or executed every 3 months:
- Verify electric components as turn on/off button, emergency button, reset button and electronic circuits as signs of overheating, poor isolation or mechanic damage.
- Check possible bearing clearance.
- Verify theretainers, o’rings and v’rings and sealing systems.

Scan the **QR Code** to obtain basic information on safety and maintenance.



**7. PROBLEMS SOLUTION**

PROBLEMS	CAUSES	SOLUTIONS
- The oven doesn´t turn on.	- Lack of phase; - Turned off breaker - Unregulated or open door;	- Check if there is electric power; - Check the breaker. - Readjust the door and stopper until the end.
- Motor doesn´t spin	- Lack of phase; - Fan locked in protective grille or steam pipe; - Unregulated or open door;	- Check the phase; - Make the componentes repositioning; - Readjust the door and stopper until the end.
- Oven causing shocks.	- Irregular grounding.	- Check grounding.
- Protection breaker unframed.	- Breaker not well dimensioned.	- Check the nominal power of the oven and remeasure the breaker.
- Oven heating excessivily	- Poor ventilation of the room.	- Check ventilation system;
- Steam doesn´t work.	- Lack of water in the hydraulic net - Low pressure of the hydraulic net; - There os water but it doesn´t flow to the camera.	- Check hydraulic net; - Check hydraulic net; - Obstructed steam tube, execute cleaning or the repositioning of the item;
- The oven takes too long to bake.	- Very low temperature; - Dirty cooking camera - Excessive loading.	- The temperature is not appropriate, readjust it; - Execute cleaning; - Verify the loading capacity of the appliance;
- Uneven Baking.	- Very low temperature; - Dirty cooking camera; - Uneven oven; - Excessive loading.	- Not appropriate time and temperature, readjust; - Even the appliance; - Execute cleaning; - Verify the loading capacity of the appliance.
- Products with odor.	- Dirty cooking camera;	- Execute cleaning.