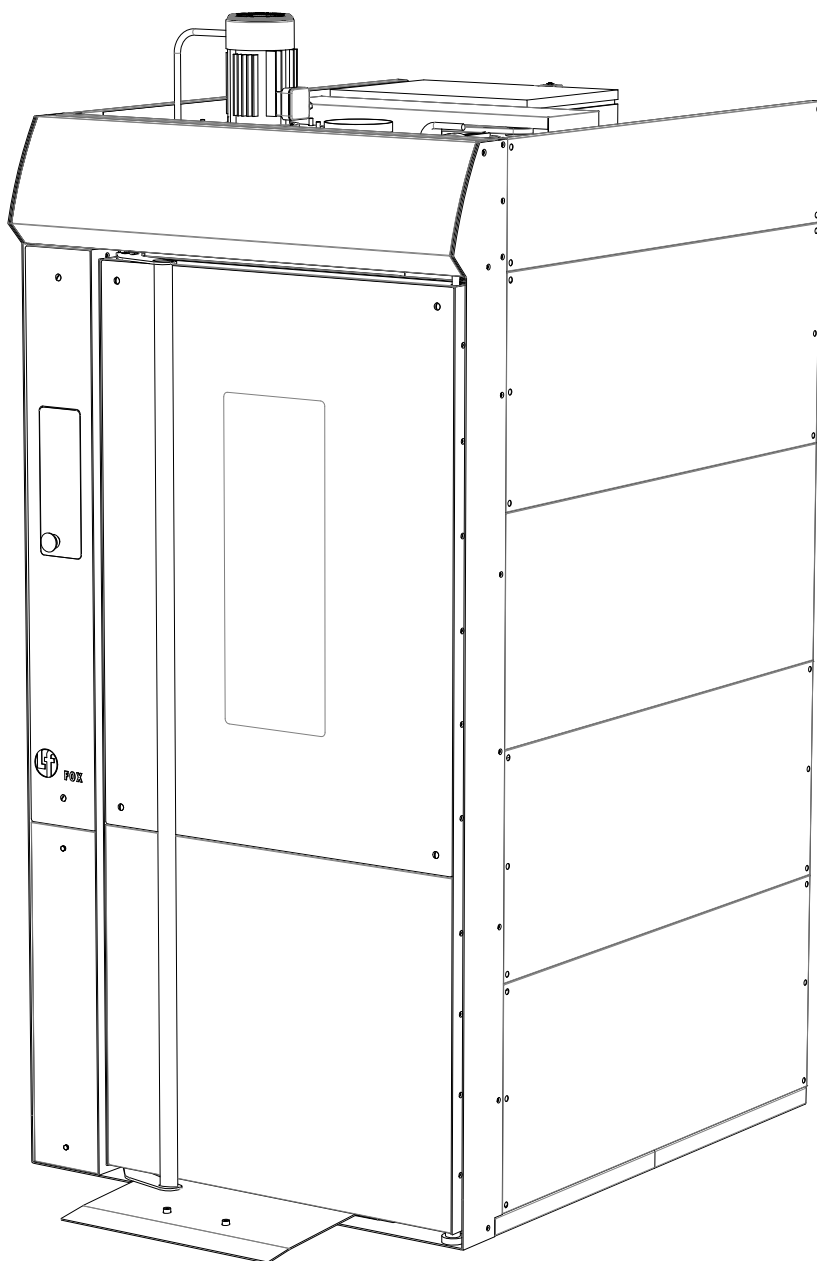




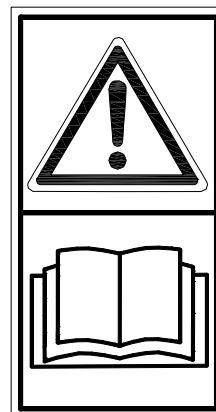
**INSTRUCTION MANUAL  
FOR INSTALLATION,  
MAINTENANCE AND USE**

**ROTARY CONVECTION OVEN FOR BREAD**

**FOX MODEL**



**LFRC 15 T  
LFRCE 15 T**



**Before starting to operate,  
read the user instructions  
carefully**





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The measurements and technical data are not binding. The company reserves the right to make modifications and improvements without prior notice.



## Foreword

This instruction manual was compiled to allow for fast and easy consultation.

For each topic, numerous illustrations and diagrams have been included along with the text to allow for immediate comprehension.

The manual has been divided into different chapters to facilitate consultation.

The information provided in the manual cannot be used for any purpose other than that for which it was written.

The manufacturer reserves all ownership rights with respect to this instruction manual and thus any form of reproduction or divulgence of the same without prior authorisation is strictly forbidden.

The manufacturer reserves the right to modify the content of any section of this manual without prior notice.

To ensure correct and safe operation, the user must follow all instructions provided, said recommendation being applicable at both the site of installation and during use and maintenance.

The manufacturer reserves the right, should it deem fit, to modify both the oven itself and the instruction manual in any way whatsoever without any such change constituting an obligation on its part to update previously manufactured products and/or manuals.

Clients requiring specific technical information or assistance may however contact the staff of the manufacturing company, who will be pleased to assist them with any queries they may have. The manufacturer would also be pleased to receive any information, suggestions or proposals which may lead to an improvement of its products.



## **Part 1: CAUTIONARY NOTES AND GENERAL INFORMATION**

### **1.1 CAUTIONARY NOTES**

Before starting any operation with the oven, please read the warnings in this manual very carefully as they provide important details concerning the safety of the operator, the installation process and maintenance procedures.

Note that this manual must be considered an integral part of the oven equipment and must be preserved for future reference until the product is finally disposed of at the end of its working life.

The user is advised to keep this document in a secure, dry place, close to the oven it refers to, where it will not be exposed to strong sunlight or to dust.

Note that this kind of equipment must be used only by fully-trained personnel.

Baking processes must be supervised by an operator.

The equipment must be used only for the purpose it was designed for, while any other use shall be deemed improper and thus dangerous.

During operation, the outer surfaces of the oven may become extremely hot so great care must be taken!

Switch the machine off if it is not operating in the correct manner.

For repair or maintenance requirements, please contact an authorised or qualified assistance service.

For reference purposes, all of the important information concerning the machine is indicated on the technical characteristics plate (please refer to the “*CE Marking*” section).

When requesting technical assistance, any defects or malfunctioning should be explained in detail so as to allow the technician to rapidly identify the problem and the possible causes.

During installation and maintenance operations, it is advisable to wear protective gloves.

**Caution!** All fire hazard instructions must be carefully followed and observed.

#### **1.1.2 LIABILITY OF THE MANUFACTURER**

The manufacturer shall be deemed liable for any manufacturing defects in accordance with current laws.

The period of validity of the guarantee shall start on the day the equipment was delivered as indicated in the delivery note.

The manufacturer shall not be deemed liable for any fault if the oven has been used without respecting the precautions indicated in this manual or has been subjected to repair work or maintenance procedures carried out by unauthorised personnel.

Moreover, the manufacturer shall not be deemed liable for any fault if the oven has not been used in the appropriate manner.

#### **1.1.3 LIABILITY OF THE PURCHASER**

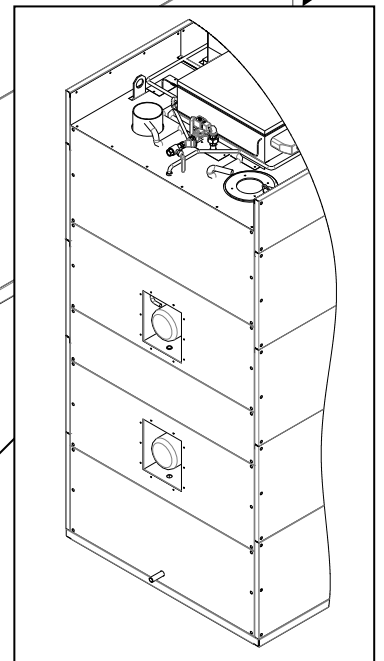
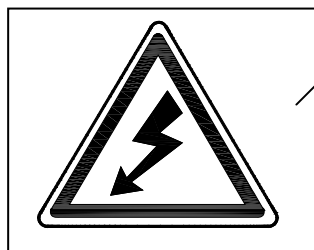
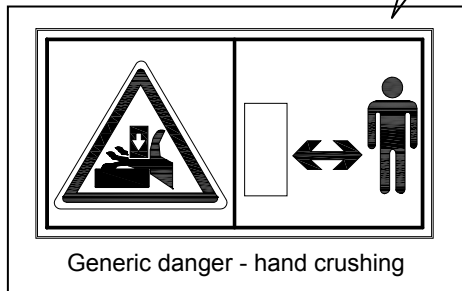
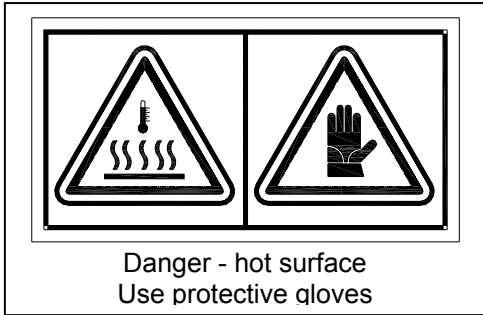
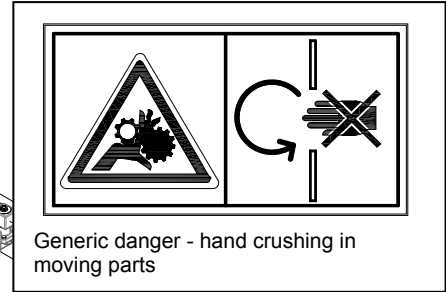
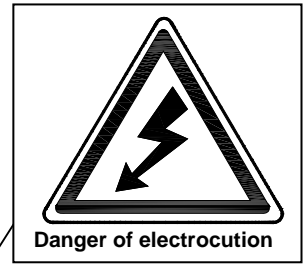
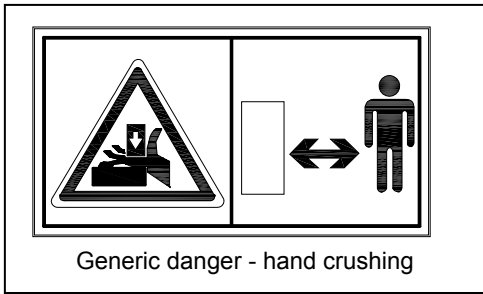
The purchaser must ensure that the site of installation fully corresponds with the requisites indicated by the manufacturer. These conditions are important to ensure proper functioning and performance.

The purchaser shall be responsible for and shall bear the expenses of all work required to create the necessary connections (electric, gas, water supply and discharges).

The power supply systems and discharge tubing must be sized in accordance with the type of machine supplied.



### 1.1.4 WARNING SIGNS



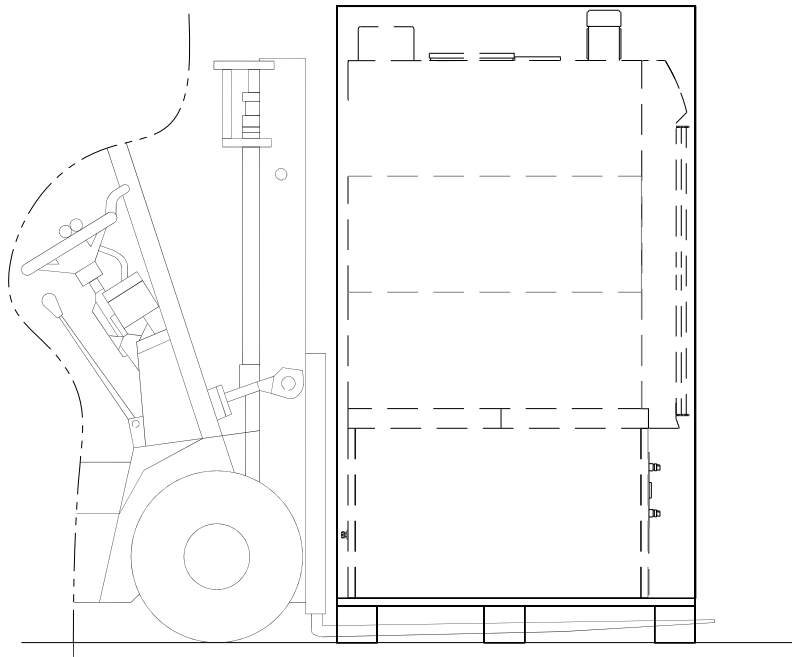


## **1.2 NOTES ON TRANSPORTATION - LOADING AND OFFLOADING**

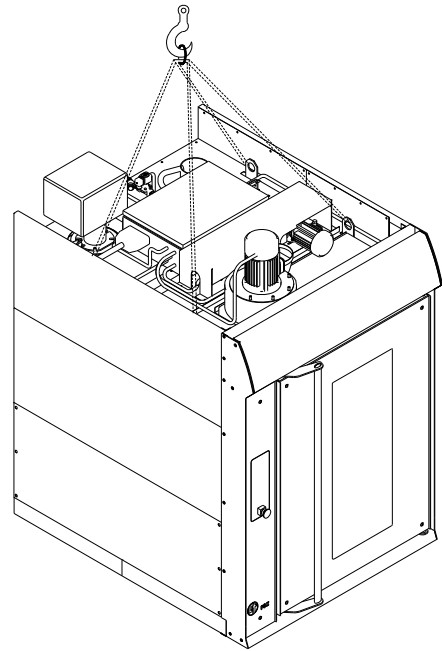
The oven comprises a series of components which must be assembled at the site of installation. Loading and offloading from the delivery vehicle may be carried out using a forklift truck or using ropes of suitable size.



**MOVEMENT WITH A MECHANICAL CRANE**



**MOVEMENT WITH A CRANE**



**Caution!**      **The lifting equipment and ropes must be chosen based on the weight of the piece to be lifted.**

## **1.3 DISPOSAL OF PACKAGING MATERIALS AND DECOMMISSIONING**

Packaging materials must not be discarded in the environment. They should be subdivided into their various types and disposed of as provided for by current local regulations.

When dismantling the oven or when it has to be completely demolished, the owner should contact a waste disposal company or organisation authorised to dispose of such materials.

The waste disposal company will dispose of the different types of waste materials (metals, mineral fibres, glass etc.) at the most appropriate collection points.

*The insulation material contained in the oven wall cavities can cause irritation if it comes into contact with the skin or the human respiratory tract. It is advisable to wear gloves and face masks when handling or when in close proximity to such materials.*

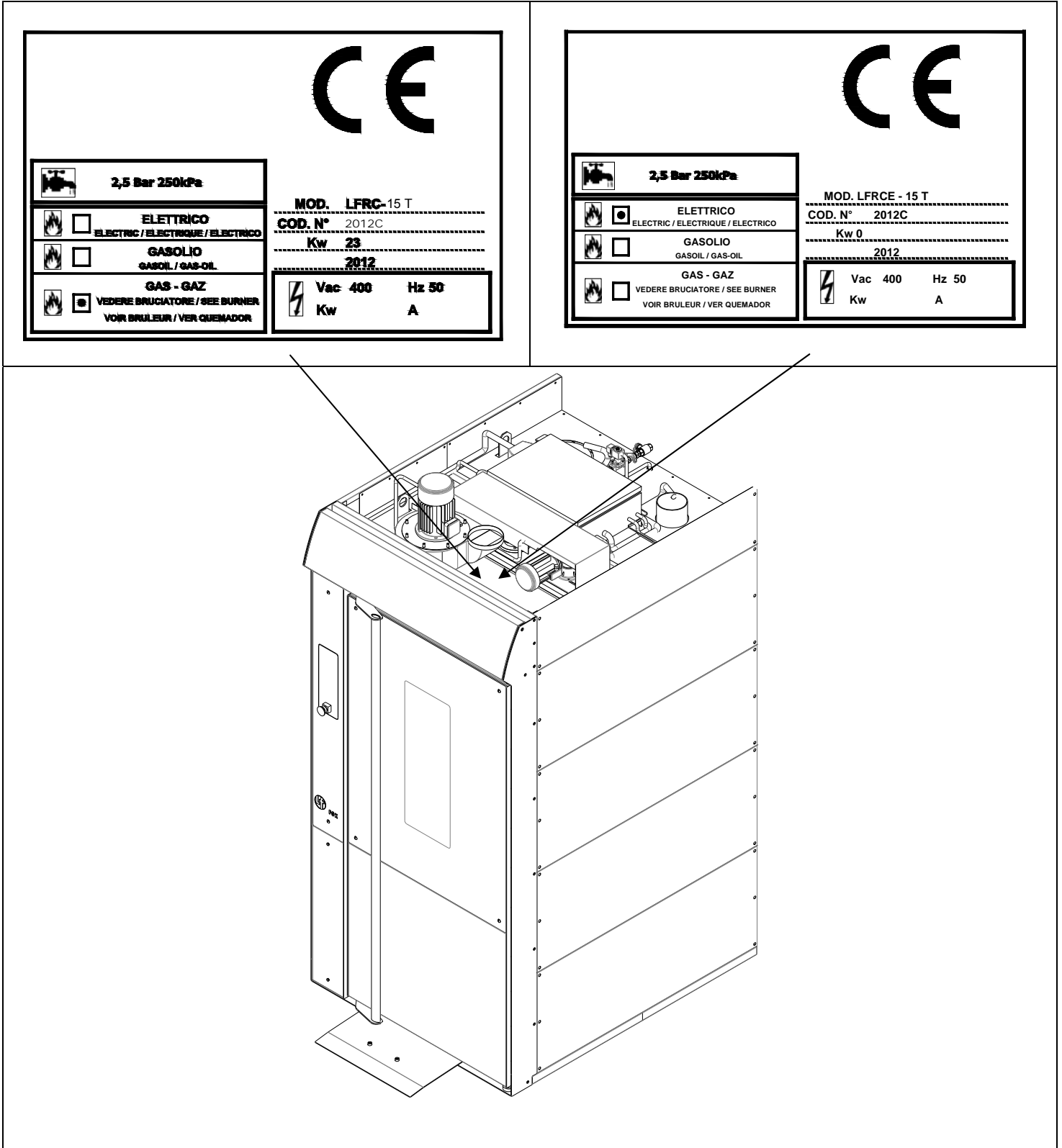




## 1.4 CE MARKING AND SERIAL NUMBER

Each oven has an identification data plate attached to it, which indicates its CE certification number and general technical characteristics.

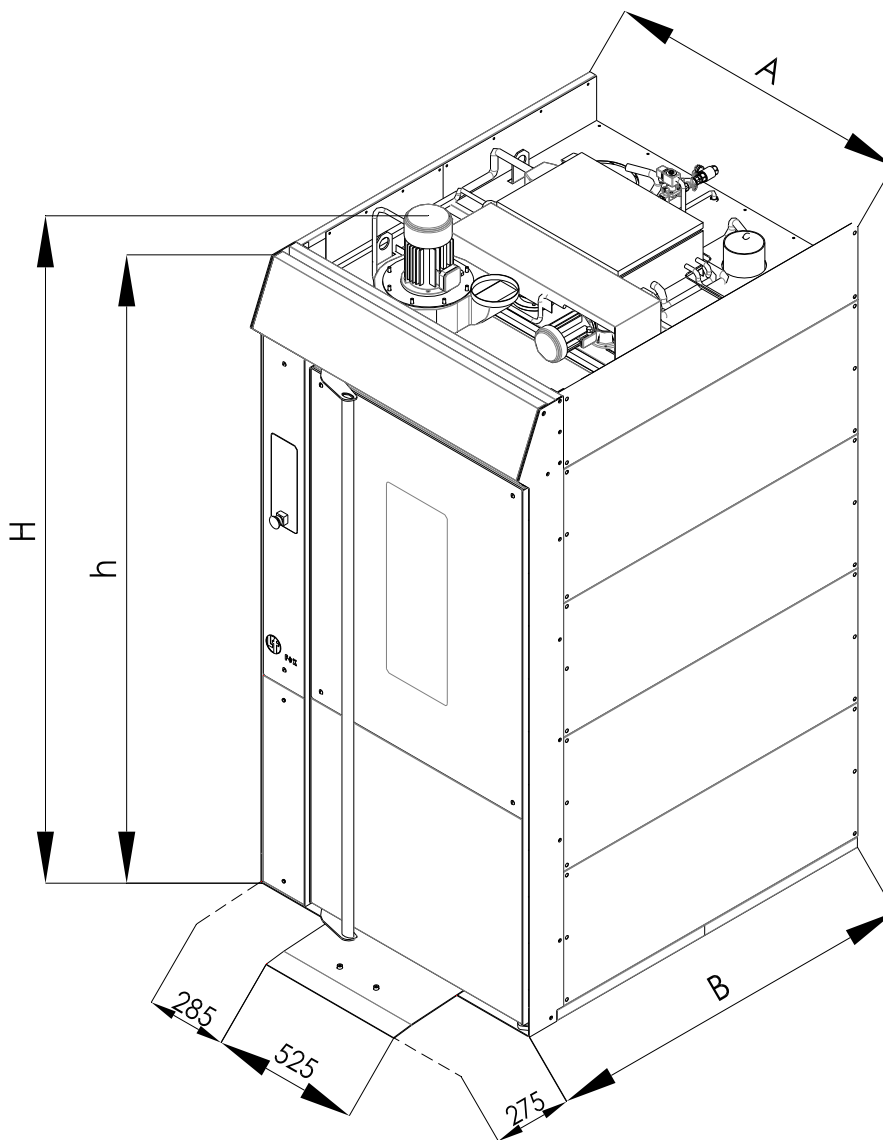
The oven serial number (indicated on an adhesive aluminium film sticker) is always located inside the burner housing on the right-hand side of the oven.





## 1.5 TECHNICAL CHARACTERISTICS AND DIMENSIONS

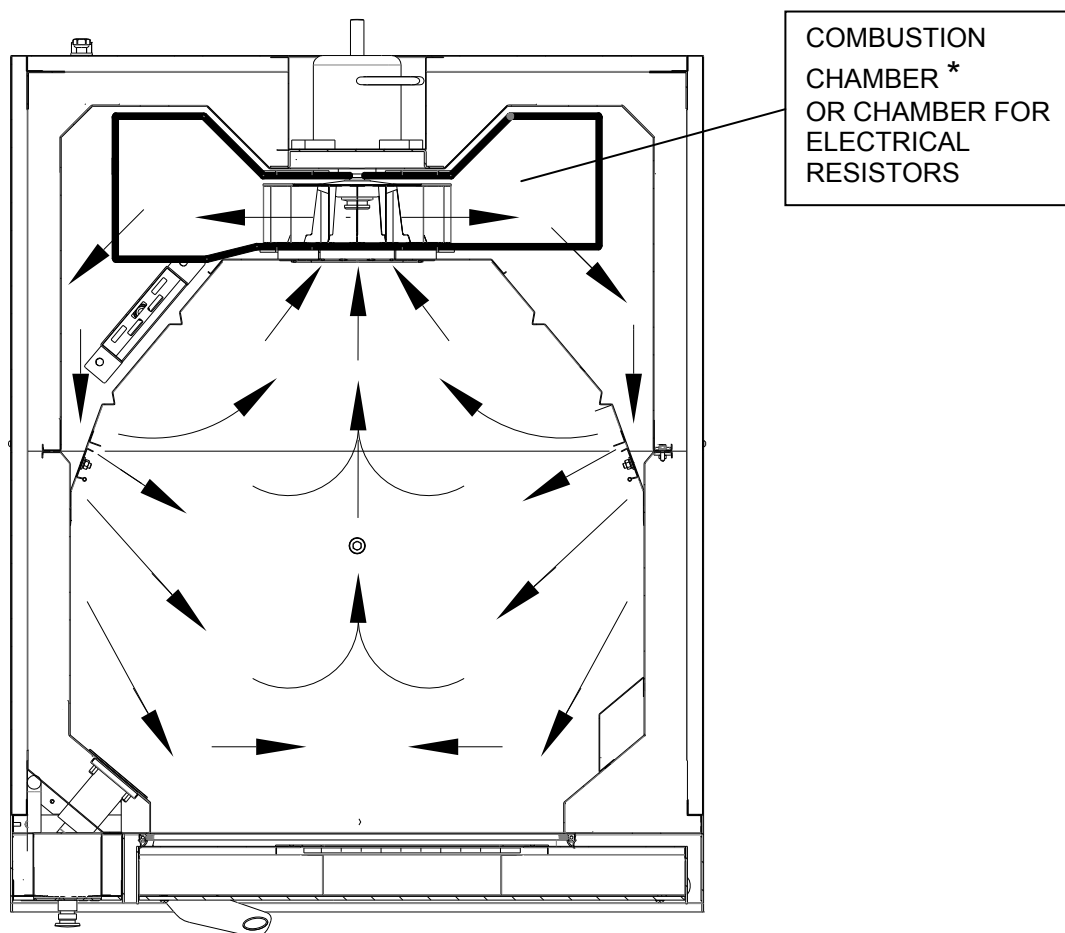
MODELLO MODEL MODELE MODELO	Dimens. teglie Tray dimens. Dimens. Plaques Dim. bandejas	Sup. cottura Baking surface Surf. cuisson Sup. cocción	Teglie Trays Plaques Bandejas	Peso Weight Poids Peso	Dimensioni esterne External dimensions Dimensions extérieures Dimensiones externas			
	cm	m <sup>2</sup>	Nr	Kg	A cm	B cm	h cm	H cm
LFRC 15T	40x60	3.6	15	715	100	125	200	223
	46x66	4,5		735	110	140	222	243



MODELLO MODEL MODELE MODELO	Potenza termica Thermic power Puissance thermique Potencia tèrmica			Assorbimento elettrico con bruciatore Electrical absorption burner Puissance électrique brûleur Potencia eléctrica quemador		Assorbimento elettrico con resistenze Electrical absorption resist. Puissance électrique resist. Potencia eléctrica resistor	
	Kcal/h	BTU/h	Kw	Kw		Kw	
LFRC 15T 4060	28000	112.000	34	2		//	
LFRC 15T 4666	35000	140.000	42	2		//	
LFRC 15T 4060-4666	///	///	//	//		27	

### **1.5.1 TECHNICAL DESCRIPTION**

The principle of operation consists in transmitting heat to the foodstuffs to be baked or defrosted by means of preheated air conveyed by forced circulation. The choice of correct temperatures, correct air speed and uniform distribution of heat allow for optimum exploitation of rotary convection ovens.



\* = for ovens with burners only

**FIG. 4**

A combustion-type or electric heat source is installed on the left-hand wall of the oven. By means of a fan and special devices, the heated air is distributed uniformly over and around the products to be baked. The air is then drawn off through a series of vents and drawn back to the heating unit, where it is heated again and recirculated. The oven is equipped with a humidifier device, which generates the steam required during the baking process for good results and final colour.

The standard version of the oven is fitted with an upper clamp and mechanical system for raising the trolley.

**FRONTAL STRUCTURE:** Constructed entirely in steel.

**INSULATION:** Insulation is ensured by high-thickness, mineral wool panelling, which avoids harmful heat dispersion.

**ELECTRIC SYSTEM:** The electric system is fully compliant with regulations currently in force in the European Union.

**SAFETY DEVICES:** The oven is adequately protected against temperature-setting errors or anomalies of the thermoregulators by means of a safety thermostat located in a position where it cannot be accessed by the user (with a safety temperature set at the fixed value of 300 °C).



## **1.6 APPLICABLE LAWS, TECHNICAL REGULATIONS AND DIRECTIVES**

During operation and especially at the time of installation and commissioning, the following regulations must be observed:

- current laws regulating the equipment installed and operated;
- hygiene/sanitary regulations for kitchen environments;
- municipal and/or local rules and requirements regarding the elimination of fire hazards;
- current regulations aimed at reducing the risk of labour accidents;
- safety rules determined by the local Committee/Board of Electricians;
- rules laid down by the Electricity Board/Company;
- Italian Law n.1083 dated 06 Dec 1971 "Regulations for the safe use of combustible gases";
- UNI-CIG 7129/92 and UNI-CIG 7131/72 "Regulations for gas systems power by the gas mains or LPG";
- any regulations from the gas board;
- any regulations from the Water Board/Company;
- any other local regulations.

## **1.7 SPECIFIC PREPARATION AND REQUIREMENTS AT THE SITE OF INSTALLATION**

As this type of equipment is listed under installation category B<sub>23</sub> (requiring direct connection to a fume exhaust flue or extraction system), it is very important that the environment in which it is installed be well-ventilated and provided with all the prescribed safety vents and openings suitable for the power generated.

The installation site/environment must therefore have the following characteristics:

- flat, perfectly level floor surface,
- a combustion fume evacuation system,
- a steam evacuation system (this must be separate and independent from the fume exhaust system),
- a water takeoff point,
- an electric socket,
- a discharge point, catch basin or other system allowing for collection.



## **1.8 CONNECTION REQUIREMENTS**

**Caution!** All taps, valves and switches used to cut off mains power supplies i.e. isolate the equipment from power supply networks, must be located in positions clearly visible and easily accessible!

### **1.8.1 ELECTRICAL CONNECTION**

The electricity circuit in the room/site where the oven is to be installed must be compliant with the provisions of current laws. It must be sized for the characteristics of the oven as indicated on the oven technical data plate, with an effective grounding/earth connection and an omnipolar circuit breaker between the oven and the power supply network, with a distance between contacts of at least 3 mm for each pole and a differential with characteristics suitable for the rated potential of the oven (1 mA per kW of power).

The oven must be included in a unipotential system. The connection is carried out with the terminal provided on the electric terminal block, marked with the corresponding international symbol and a conductor with a rated section of <10 mm<sup>2</sup>. This connection must occur between all the units installed and the grounding circuit of the building.

Voltage and absorption are shown on the serial number plate.

The installation technician must issue a certificate of compliance for the system. The document should be kept in a safe place.

### **1.8.2 CONNECTION TO THE GAS SUPPLY SYSTEM** (for ovens with burners only)

The gas distribution system in the room or environment where the oven is installed must be compliant with the provisions of current regulations. The terminal to be used for connection of the oven must be fitted with a fast-closing cut-off tap and must be of the approved type. It is advisable, in cases where other pieces of equipment or devices are connected to the same power supply meter, to install an economical type gas supply meter before the cut-off tap to allow for a rapid check of correct operation of the oven. The client must ensure that the network pressure (infeed pressure) is sufficient for correct burner performance. For this purpose, check the table provided below. Operation of the oven is not permitted for values outside the indicated pressure ranges. If pressure values are found which are not the same as those indicated in the table, the user should contact the local gas board or gas company or the firm that installed the supply system.

The calorific value of the gas (H<sub>i</sub>) must be checked with the company which supplies it and should be: Methane  
 G20 – 2H = **kWh/m<sup>3</sup> 9.45**  
 LPG G30 – 3+ = **kWh/kg 12.68**

The installation technician must issue a certificate of compliance for the system. The document should be kept in a safe place.

<b>Rated pressures:</b> for the various types of gas	2nd family gas – Methane H	<b>20 mbar</b>
	3rd family gas – LPG	<b>28-30/37 mbar</b>
<b>Operation permitted</b> if the pressure <b>falls within</b> the range:	2nd family gas – Methane H	<b>from 17 to 25 mbar</b>
	3rd family gas – LPG	<b>from 20/25 to 35/45 mbar</b>
<b>Operation not permitted</b> if the pressure is <b>lower</b> than:	2nd family gas – Methane H	<b>17 mbar</b>
	3rd family gas – LPG	<b>20/25 mbar</b>
<b>Operation not permitted</b> if the pressure is <b>higher</b> than:	2nd family gas – Methane H	<b>25 mbar</b>
	3rd family gas – LPG	<b>35/45 mbar</b>

*N.B. For other EU countries, consult the table in appendix 1*



### 1.8.3 CONNECTION TO THE WATER SUPPLY SYSTEM

The water distribution system at the site where the oven is installed must comply with the provisions of current regulations. The terminal to be used for connection of the oven must be fitted with a fast-closing cut-off tap and must be of the approved type.

The pressure of the water supplied through the supply system must be between 50 and 300 kPa, otherwise, a pressure reduction device must be installed.

The position of the ½" attachment can be seen in the technical drawings/diagrams of each individual model.

The water supply system must also be installed according to the proper standards, using only materials suitable for drinking water.

The installation technician must issue a certificate of compliance for the system. The document should be kept in a safe place.

### 1.8.4 CONNECTION TO THE FUME EXHAUST FLUE

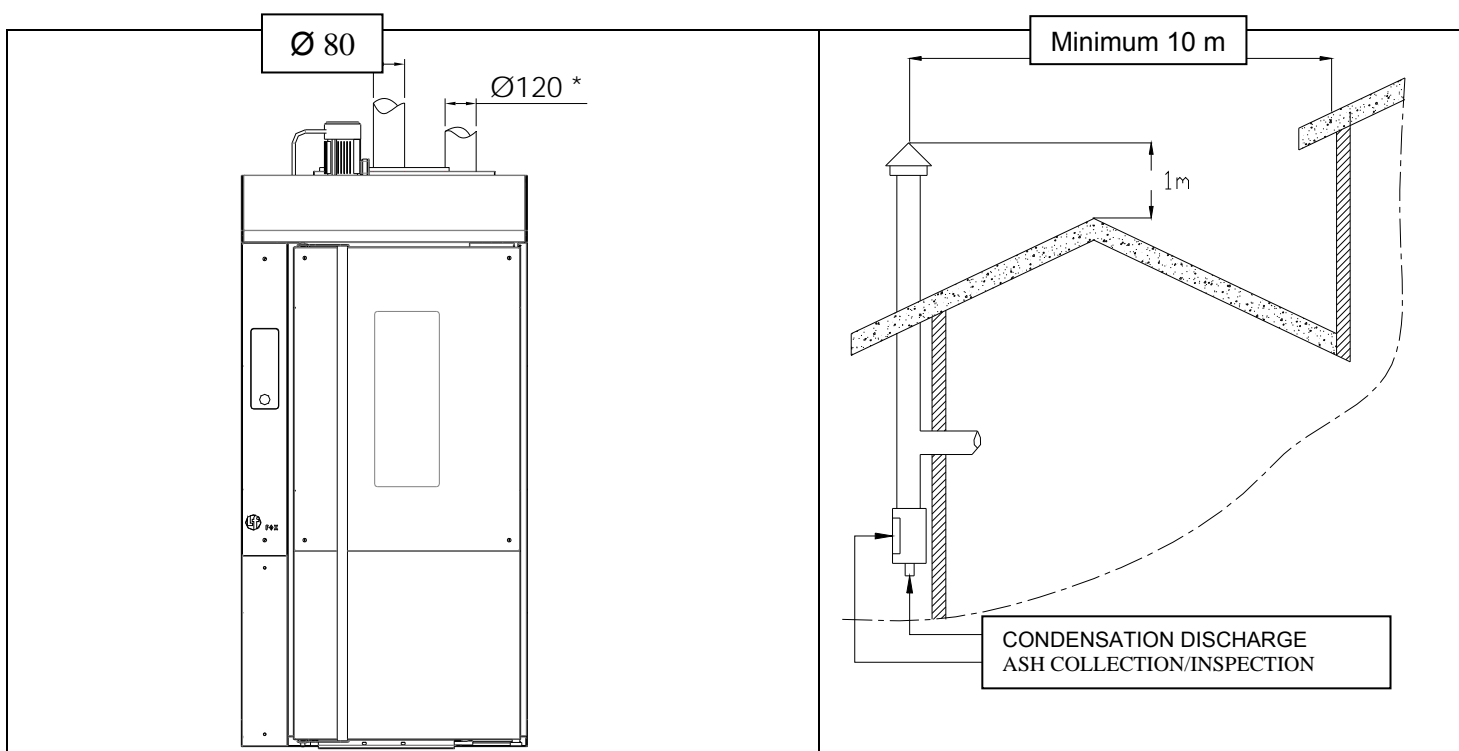
The products of combustion are conveyed into the atmosphere through an exhaust flue by means of a union tube with a 120 mm diameter **(for ovens with burners only)**.

The union tube must be installed on the oven fume draw-off connector head. The exhaust flue and the fume channelling itself must be made of heat resistant material.

**Note:** For the construction of the fume extraction conduits (union tube sections and fume flue) it is advisable to use stainless steel materials.

To ensure effective draught, the mouth of the exhaust flue must be higher by at least 1 metre with respect to the rooftops, parapets and any other obstacle or structure at a point less than 10 metres away. To facilitate insertion of the combustion-checking sensor it will be necessary to create a small aperture at the base of the exhaust flue at a height equal to twice the diameter of the exhaust tubing which has been installed.

At the base of every rising section of the exhaust flue, there must always be a discharge chamber for the collection of solid matter derived from combustion. The discharge tubing and fume flue must have technical characteristics as provided for by current regulations and standards.



\* = for oven with burner only

### **1.8.5 STEAM DISCHARGE**

The steam leaving the baking chamber is emitted into the atmosphere through special steam channelling with a diameter of 120 mm. The steam channelling must be installed on the pressure port of the extraction unit. The steam extraction system must be separate and independent from the fume flue used for extracting the products of combustion.

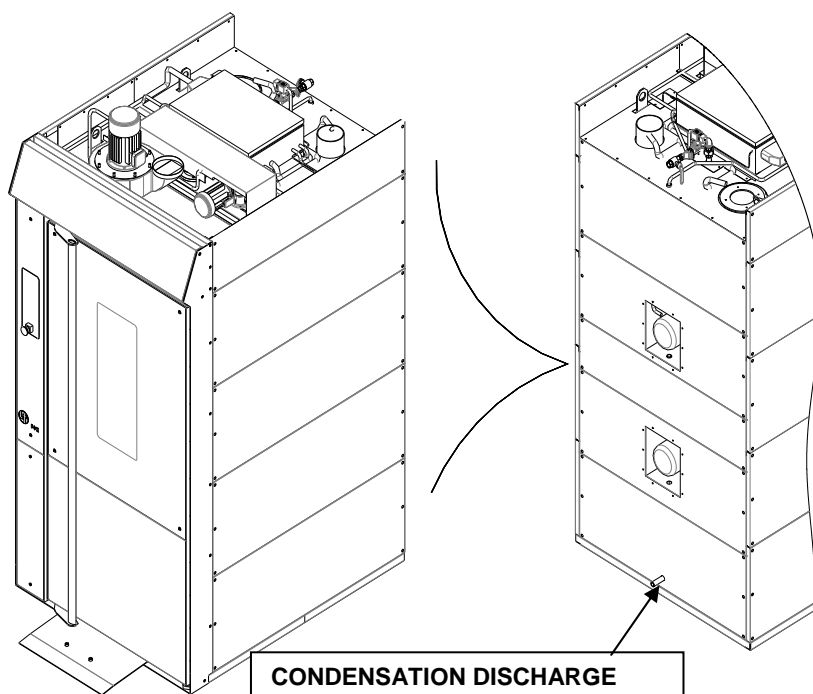
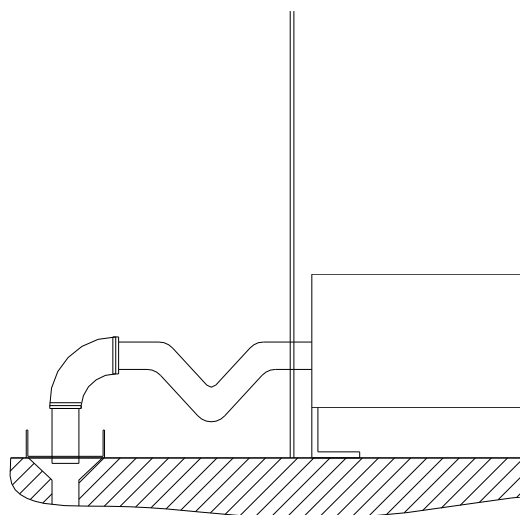
At the base of every rising section of the steam discharge system, there must be a collection chamber with a condensation discharge pipe. This must also be fitted with an adequate aperture for inspection and cleaning.

**Note:** For the construction of the steam extraction conduits, it is advisable to use stainless steel materials.

### **1.8.6 CONDENSATION DISCHARGE**

The condensation discharge outlet is at the rear of the oven as shown in the figure below.

The condensation discharge outlet must never be jointed. This is for hygiene reasons. The removal of condensation must occur by gravitational draw-off and with an open collection system.



### **1.8.7 CHOOSING THE BURNER** (for ovens with burners only)

The burner must be chosen in relation to thermal power and on the basis of the oven model. For this purpose the user must refer to the table in the technical characteristics section of this manual. The burner size must also be suitable for the furnace of the oven model and type.

The burner must have CE certification and the country where the oven is to be set up and installed must appear in the list included in the certificate.



## Part 2: ASSEMBLY AND INSTALLATION



**CAUTION**

### **INSTALLATION TIPS**

The machine must be installed by trained personnel or by the manufacturer. If the machine is installed by external (specialist) personnel, it is advisable to read the installation and adjustment manual that the company provides to trained personnel only.

**Caution!** Assembly, installation and maintenance must be carried out only by personnel authorised and designated by the manufacturer. Commissioning of the equipment must be performed by a qualified burner technician authorised by the manufacturer of the selected burner.

### **2.1 GETTING STARTED**

After removing all the packaging materials, the user must make sure that all parts of the equipment are in perfect order and not damaged in any way.

**In the event of any doubt, contact the supplier.**

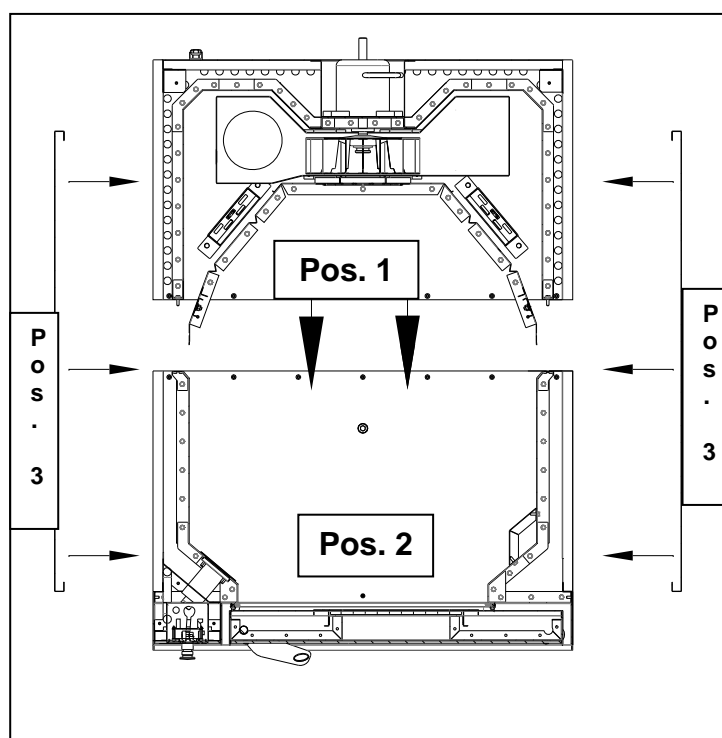
The packaging materials (wooden crates, carton boxes, nails and staples, plastic wrapping etc) must not be disposed of in the environment as they are potential sources of danger and possible pollutants. These materials must be discarded at sites especially created for their disposal.

Empty out all the materials from inside the oven.

**Make sure these materials are in perfect condition.**

Separate the oven into two parts, removing the screws that keep the structure temporarily pre-assembled.

POS.1 rear section of baking chamber  
POS.2 front section of baking chamber



### **2.2 INSTALLATION**

**Caution!** Before starting any connection operations, ensure correspondence between the data on the technical data plate and the characteristics of the local power supply to make sure the equipment is suitable for the type of supply system present at the site of installation.

#### **2.2.1 ASSEMBLY**

Check the following before continuing with assembly:

- the floor surface where the oven is to be mounted must be flat and perfectly level
- the door must be perfectly stable (check for stability in any position).

Use protective gloves when handling the parts to be assembled.

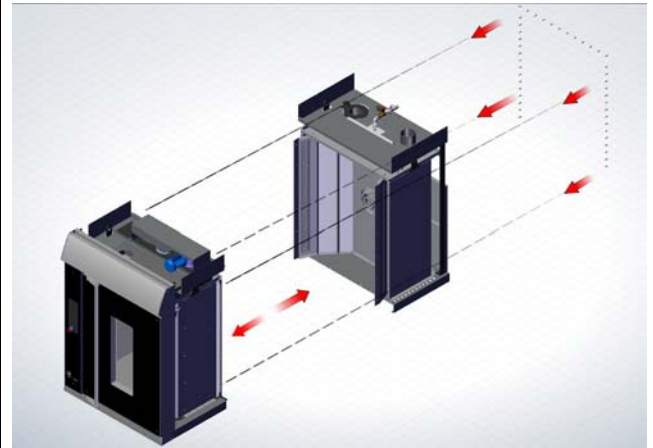




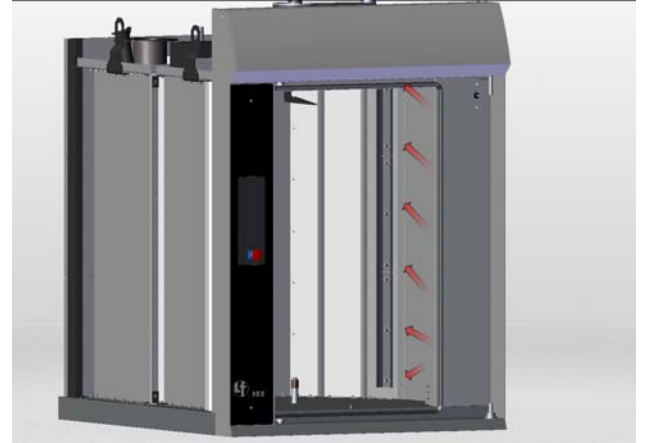
-Position the rear part of the oven (pos. 1) at the site where the oven is to be set up permanently, **taking care not to lean it on the wall, leaving 5 - 10 cm.**

**Apply a bead of silicone sealant to the joint surface and attach the flat fibreglass seal.**

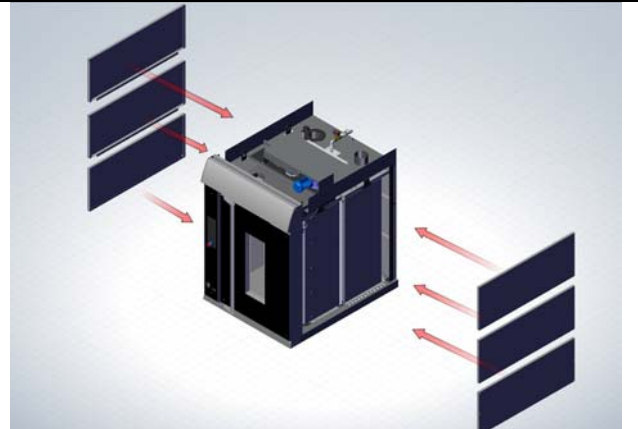
Bring the joint surface of the front part of the oven (pos. 2) close to the joint surface of the rear part and **join the two parts, using the M8 hex head screws and hex nut supplied.** Secure the inner baking chamber base using countersunk head screws.



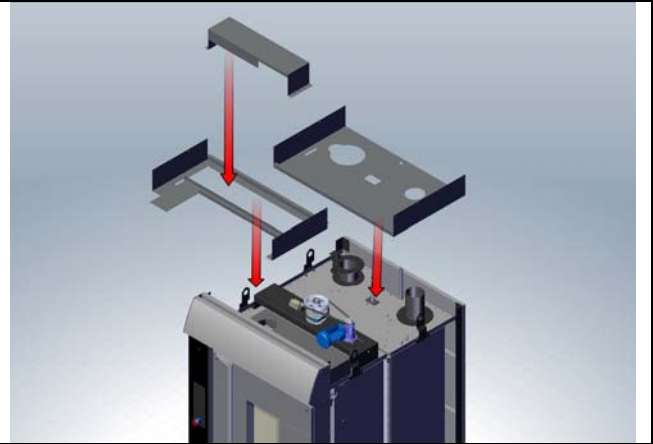
Secure inside the chamber with self-drilling screws in the two sides of the baking chamber as indicated by the arrows below



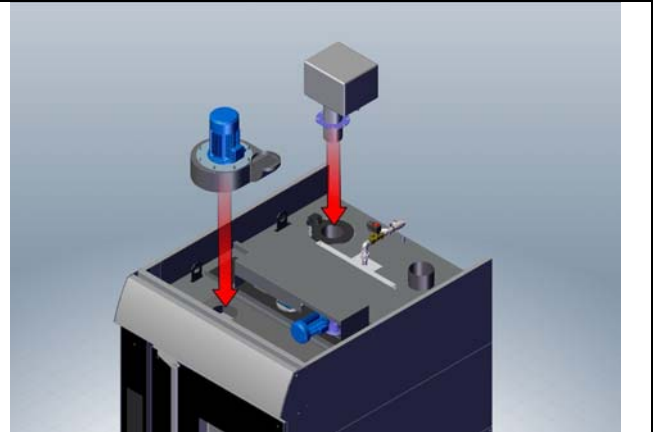
- Then secure the side cover panels, putting mineral wool in the internal sides of the oven, so as to isolate the entire surface of the two sides of the oven.



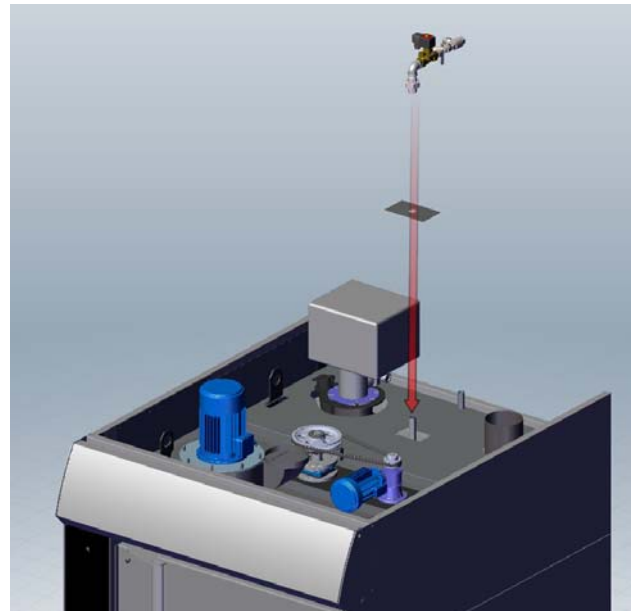
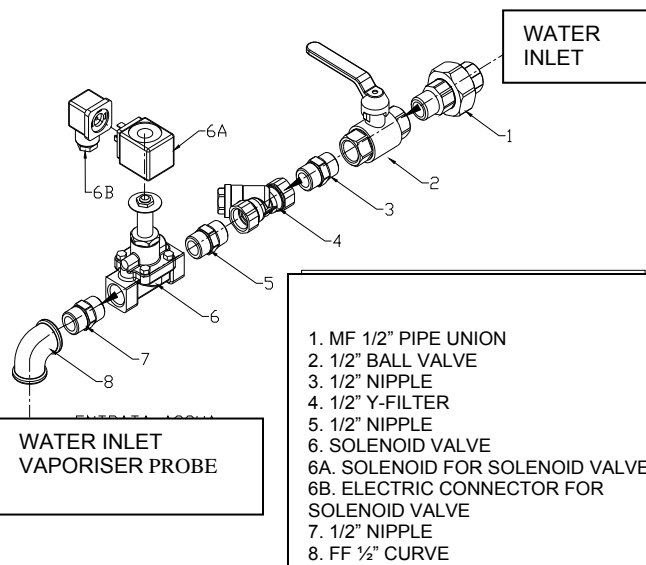
- Secure the top covers starting with the back then the front.



- Position and attach the steam extractor with feeder  
 - Make sure the burner is compatible with the fuel supplied to it.  
 -Fasten the burner to the support plate after having inserted the insulation material seal contained in the packaging.

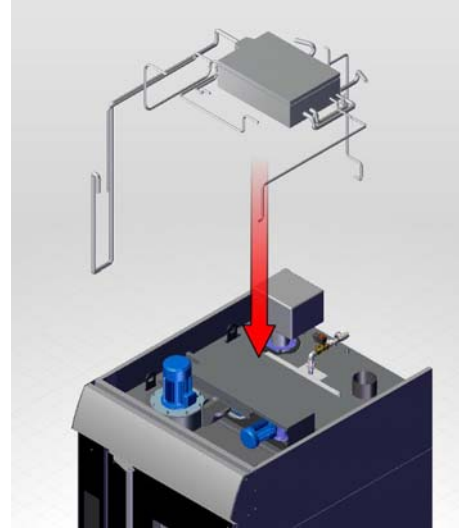


Assemble the solenoid valve + filter unit for water inlet, taking care to put on the hole cover first as shown in the figure.





Position the electrical box and proceed with the various electrical connections of the oven stroke-ends, lights, solenoid valves, burner etc.



- Carefully remove the special protective film from the sections of stainless steel sheet metal.
- Make sure that all the oven power lines have been properly connected in accordance with the procedure provided in the instruction manual.
- Install the extraction flues for the drawing-off of fumes and the discharge of steam, observing certain important instructions listed below:

The fume extraction flue has the function of drawing off and dispersing combustion fumes into the atmosphere in natural draught ovens. The dimensions of the flue will depend on the size and thermal potential required by the thermal system.

The essential requisites of the fume extraction flue are indicated below. It must be:

  - perfectly sealed, impermeable and thermally insulated from the waste products of combustion.
  - made with material suitable to resist over time all thermal and mechanical strain and the action of the fumes produced by combustion and any condensation.
  - installed in the vertical position and free from any throttled points along its entire length.
  - constructed in an adequate manner and thermally insulated so as to avoid condensation or cooling of the fumes, especially if it is located outside the building or in an environment which is not heated.
  - installed at an adequate distance from any combustible or flammable substances by means of an air cavity or insulation material.
  - fitted with a collection chamber for solid or condensed matter. The chamber must be located under the draw-off point of the fume extraction union pipe between the oven and the vertical section of the fume extraction flue.
  - with a circular, square or rectangular internal section with preferably rounded edges.
  - equipped at the uppermost level with a chimney section, which must present specific requisites for correct functioning.
  - free from any mechanical means of extraction located at the top of the pipeline.

- In all ovens equipped with extraction hoods, it is necessary to install a separate steam extraction pipeline, which must never be used as a fume extraction flue.

  - To ensure draught efficiency, long deviations and pipelines should be avoided wherever possible.
  - In cases where lengthy pipeline routing and extensions are required, users are reminded that the necessary inclination must be observed to ensure proper functioning of the equipment.

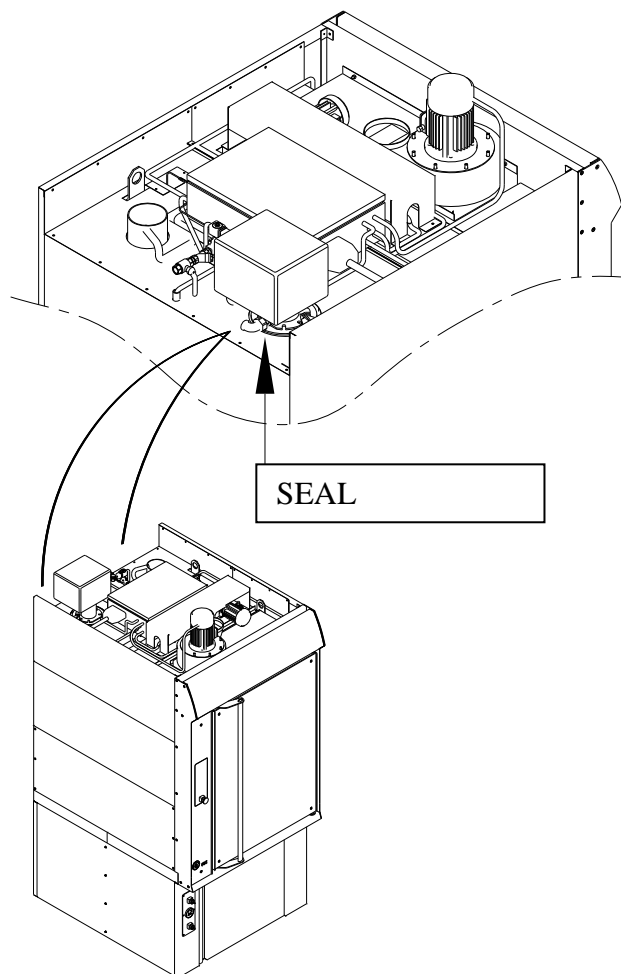


## **2.2.2 INSTALLING THE BURNER** (for ovens with burners only)

The burner must be attached to the combustion chamber access door, making sure that it is securely and properly fastened to the same (carefully follow the mounting instructions in the manual supplied with the burner).

It is recommended that a mineral fibre seal be inserted between the burner support flange and the furnace door.

The flexible connection tubes of the gas oil burner and the electric connection cables must have a length sufficient to ensure easy extraction of the burner.



For gas burners, follow very carefully all regulations and standards currently in force.

## **2.2.3 ELECTRICAL CONNECTION**

**Caution!** The equipment is supplied for the voltage indicated on the technical data plate.

The characteristics of the flexible cable for connection to the mains power line must not be inferior to the type with oil resistant insulation and must not be exposed to ambient temperatures above 50 °C. Moreover, the power cable must be guaranteed for the rated absorbed current.

As already indicated, an omnipolar switch and a circuit breaker with characteristics suitable for the rated oven power (1mA/kW of power) must be installed between the oven and the electric power supply system.

Check the efficiency of the grounding system.

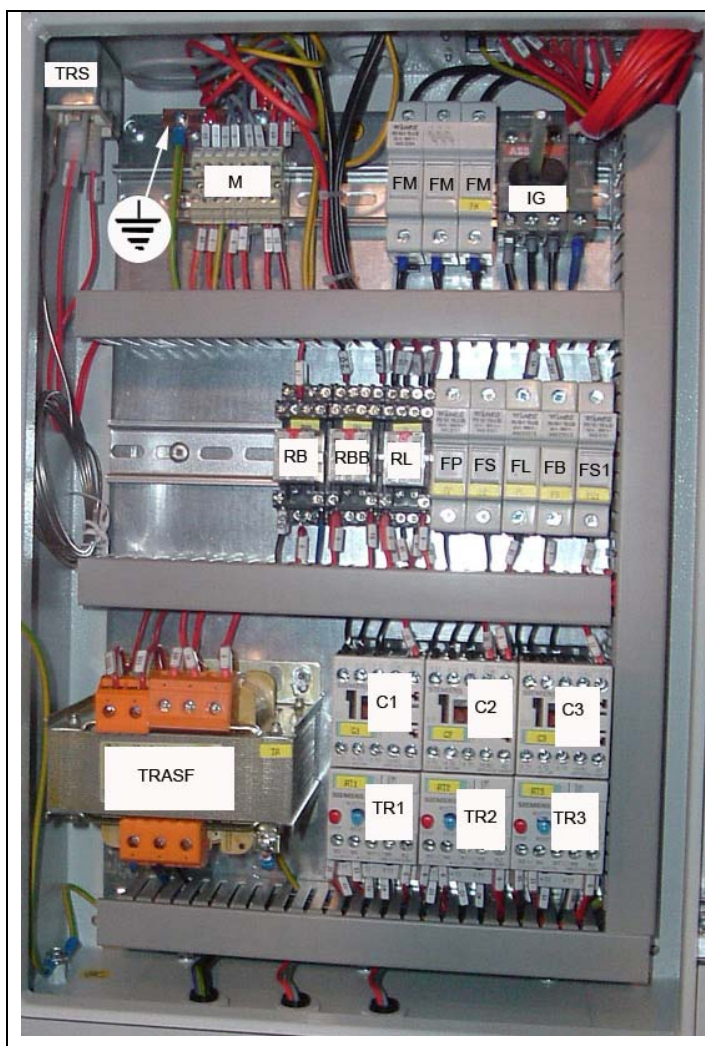
To access the power supply terminal block, open the cover of the terminal block housing box located in the burner unit housing.

Pass the cable through the cable-grip. Carefully connect the conductors to the corresponding terminals in the terminal block. The ground conductor must be longer than the other conductors so that it will be the last to become disconnected in the event of very strong traction of the cable or in the case the cable grip breaks. Tighten the cable grip.

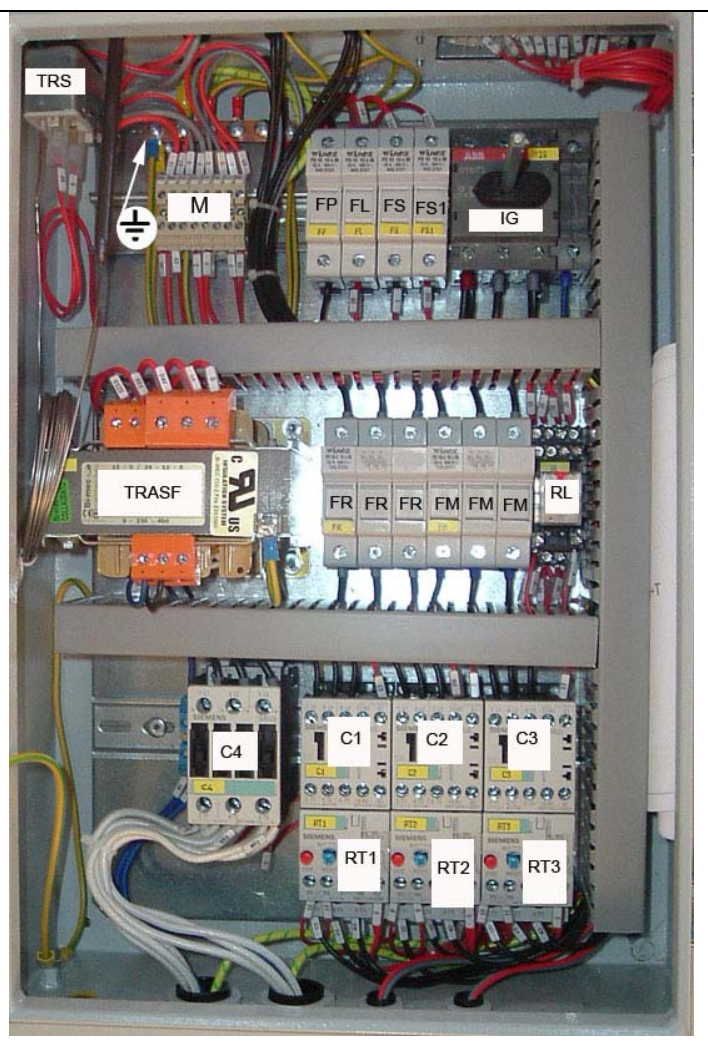


Pos.	Description	Pos.	Description
IG	ON/OFF switch	FB	Burner fuse
M	Terminal block	TRASF	Transformer
FM	Motor fuses	FS1	Digital card fuse
TRS	Safety thermostat	FR	Resistor fuse
RB	Burner relay	C1	Remote trolley rotation switch
RBB	Burner STALLED relay	MT1	Trolley rotation circuit breaker
RL	Light relay	C2	Remote fan switch
FP	Primary fuse	MT2	Fan circuit breaker
FS	Secondary fuse	C3	Remote extractor switch
FL	Light fuse	MT3	Extractor circuit breaker
		C4	Remote resistor switch

### COMBUSTION VERSION



### ELECTRIC VERSION

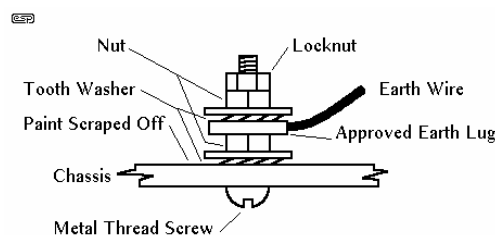




### **2.2.3.1 UNIPOTENTIAL**

The oven must also be included in a unipotential system.

The connection is carried out with the specific terminal in the terminal block marked with the international symbol and a conductor with a rated section of  $<10 \text{ mm}^2$ . This connection must occur between all the units installed and the grounding circuit of the building.



### **2.2.3.2 ELECTRICAL TESTS**

Electrical tests must be carried out at the end of assembly operations and in any case before the oven is actually used.

Testing operations must be performed by professionally qualified technicians and using certified and perfectly efficient instruments of measurement.

The outcome of tests must be recorded in a test report issued and signed by the person who actually conducted the tests. The test report must be submitted to the manufacturer.

#### **CONTINUITY OF THE UNIPOTENTIAL CIRCUIT**

The protection circuit must be examined by competent personnel, who must also make sure that the safety conductors are properly and securely connected.

The protection circuit must be carefully examined, supplying it with a 10-15 Ampere current at a frequency of 50 Hz derived from a PELV source for a period of about 10-15 seconds.

The tests must be performed between the PE connector and the various points which form part of the unipotential protection circuit.

Voltages detected between the PE connector and the test points must not exceed the following levels of voltage reduction: for unipotential protection conductors with sections of  $1 \text{ mm}^2$ , the drop in voltage must not exceed 3 Volts; for conductors of  $1.5 \text{ mm}^2$  section the maximum permissible drop is 2.5 Volts; for sections of  $2.5 \text{ mm}^2$ , the maximum permissible voltage must not exceed 2 Volts and for  $4 \text{ mm}^2$  sections, the voltage must not exceed 1.5 Volts.

#### **INSULATION RESISTANCE TESTS**

To perform these tests a continuous and constant voltage of 500 VDC must be applied between the earth connector and the short-circuited phases. The corresponding value of insulation resistance is determined on the basis of the detected short-circuit value. The test is considered admissible if the value obtained is not lower than  $1 \text{ M}\Omega$ .



## VOLTAGE TESTS

The insulation of the equipment is checked by instantaneously applying an alternating current of 50 Hz and with effective value of 1000 V for one second on the main insulation between the powered parts and the parts indicated below:

- 1- Accessible metal parts which could be powered in the e case of an insulation fault (metallic structure of the oven);
- 2- Other critical parts which could be powered in the case of an insulation fault caused by faulty assembly, e.g. disconnected ground circuit, presence of voltage in the earth connectors etc;
- 3- The metallic parts separated from powered parts only by means of the main insulation and which could be powered in the case of a defect in the insulation or erroneous assembly e.g. wrong connections, loose lead/cable ends, false contacts etc.

During tests, no superficial or destructive discharges must occur. The tests must moreover be carried out when the oven has been fully installed and is functioning. Before carrying out the procedures described above the user should check and disconnect the electric components that would not be able to pass such tests on account of their insufficient sizing.

## REPEATING TESTS AFTER REPLACEMENT OF PARTS

When a part of the oven and its equipment is replaced or modified, the new components must be tested in accordance with the guidelines in this section.

### **2.2.4 CONNECTION TO THE GAS SUPPLY SYSTEM** (for ovens with burners only)

Connection to the gas supply system must be carried out in compliance with current regulations.

The gas delivery system can be of the fixed or disconnecting type; if flexible tubing is used, it must be made of stainless material not subject to corrosion.

If any sealant materials are used during connection, these must be of the approved type and certified for this kind of use.

The gas tube union take-off is positioned on the oven itself in a position which will vary according to the model being used. For this purpose consult the technical data sheets for the oven being installed.

Once the equipment has been connected, the effectiveness of the seals must be tested at all joints and points of connection between the oven and the delivery system. We would advise users to use a leakage identification spray or otherwise cover the piping with a foamy substance that will not cause corrosion. Note that when these test materials have been applied, no leakage indicator bubbles should be seen. The seal test must also be performed on the rapid-closing cut-off tap.

**Caution!** Do not use naked flames to perform these tests!



#### **2.2.4.1 CHECKING THE EFFECTIVENESS OF THE GAS SUPPLY SYSTEM** (for ovens with burners only)

Operation of the equipment with its rated thermal capacity depends on infeed pressure and the calorific capacity of the gas.

**The pressure ranges (delivered pressure) for which operation of the equipment is permitted are indicated in sub-section 1.8.2.** Operation of the oven is not permitted for values falling outside of these pressure ranges. **If pressures are detected which differ from those indicated in the table, the user must contact the gas board or company or the firm which installed the power supply systems.**

The working supply pressure can be detected with a liquid-type pressure gauge (e.g., U-type gauge, with minimum definition of 0.1 mbar).

The local gas board/company can provide information concerning the calorific power of the gas ( $H_i$ ). The value should correspond with that indicated in sub-section 1.8.2.

#### **2.2.5 OTHER CONNECTIONS**

The following connections must also be made, ensuring that each connection is carried out to the highest professional standards:

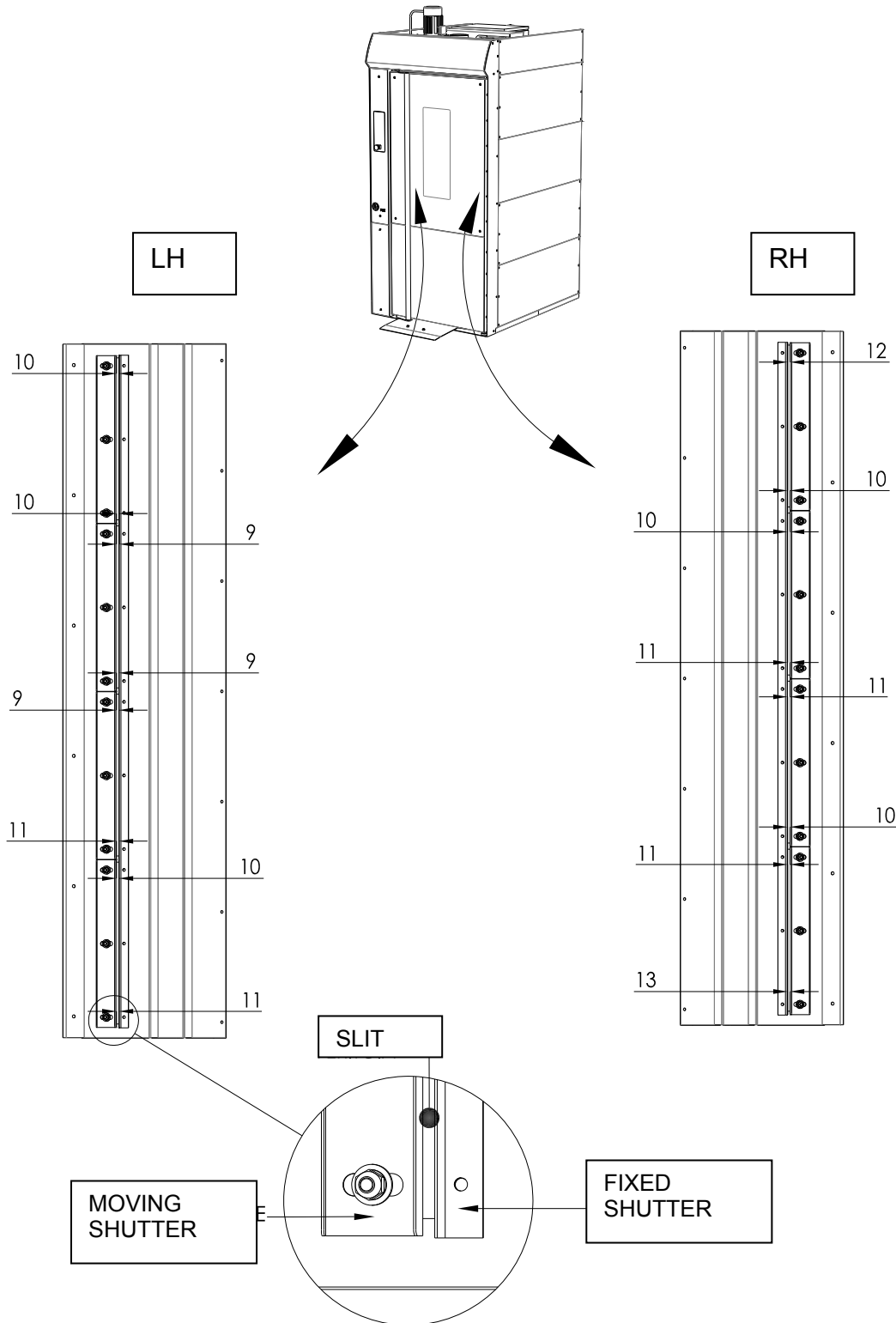
- ✓ water supply connection (see also sub-section 1.8.3).
- ✓ exhaust flue connection (see also sub-section 1.8.4)
- ✓ steam discharge connection (see also sub-section 1.8.5)





### 2.3 ADJUSTMENT OF AIR FLOW

Once the air flow regulation operation has been carried out, tests have to be run to verify uniformity of baking. To facilitate the baking regulation procedure, the following table illustrates what action can be taken to modify results.



The oven is factory-tested to reach a safety temperature not higher than 300 °C.

Use of the oven at temperatures higher than 300 °C must be legitimised and authorised by means of a document issued and signed by the manufacturer.

All temperatures are expressed in degrees centigrade.



## 2.4 FUNCTIONAL TESTING

### 2.4.1 ELECTRICAL INSULATION OF THE OVEN

Make sure that the electrical tests described in the sections dedicated to that topic have been performed and that the technician has completed and signed the test report form.

The warranty of the oven shall not be valid if the test report form has not been fully filled in and forwarded to the manufacturer.

Check the adjustment of the motor overload protection devices (which must not exceed the rated values indicated on each motor).

### 2.4.2 ELECTRIC CONNECTION

Reset the thermoregulator (pos. 1), close the oven door and then actuate the following switches in the order given:

Trolley rotation (pos. 18)

Extractor (pos. 5)

Check the correct rotation of all motors (they must rotate clockwise).

If any of the motors turn in the counter-clockwise direction, immediately disconnect the voltage supplied to the oven and invert two of the three phases.

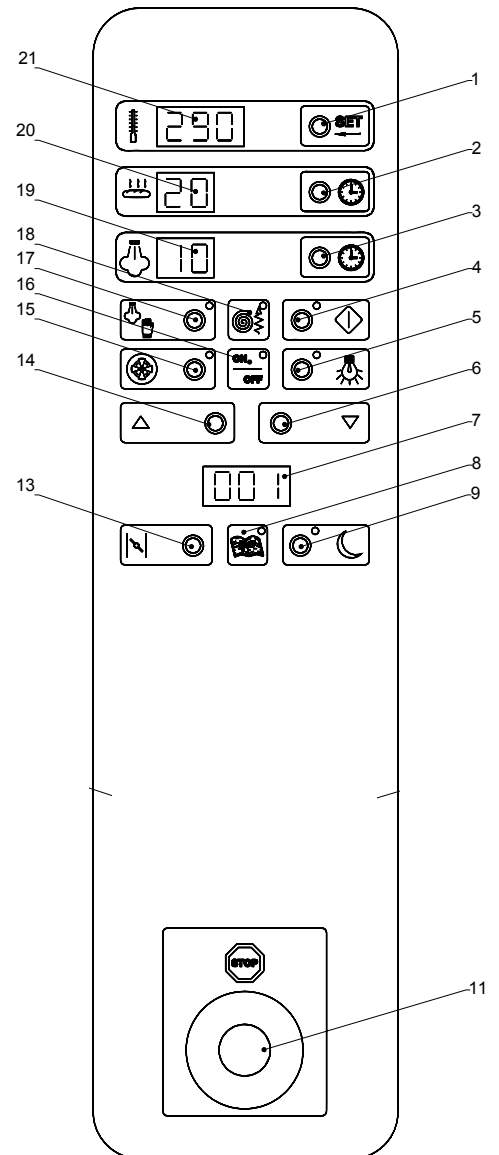
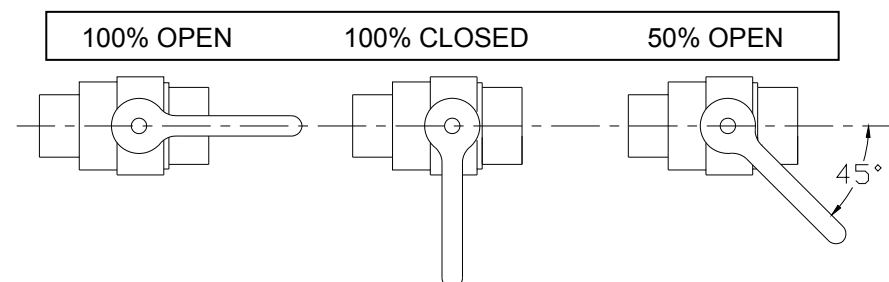
Make sure the corresponding pilot lights are illuminated.

Make sure the baking chamber light works by pressing the selector (pos. 5).

Make sure the acoustic warning signal works properly by pressing the baking timer selector (pos. 20; 2). setting a minimum time of 1 min.

Check the water circuit (see figures on page 16) while the steam generator unit is cold. Set a minimum time of 10 seconds on the steam timer (pos. 19). Press the Start Steam pushbutton (pos. 17) and make sure the water does not spill over the edges of the containers. If this occurs, adjust the opening of the ball valve, closing it to approximately 50% of its full range of aperture.

N.B. Adjust the ventilation pause after vaporisation parameter to 10 seconds. This value can be customised in accordance with working requirements.





## **2.5 PUTTING INTO OPERATION**

**Caution!** The oven must be tested and put into operation for the first time in the presence of technicians assigned by the manufacturers and a specialist authorised by the company which manufactured the burner.

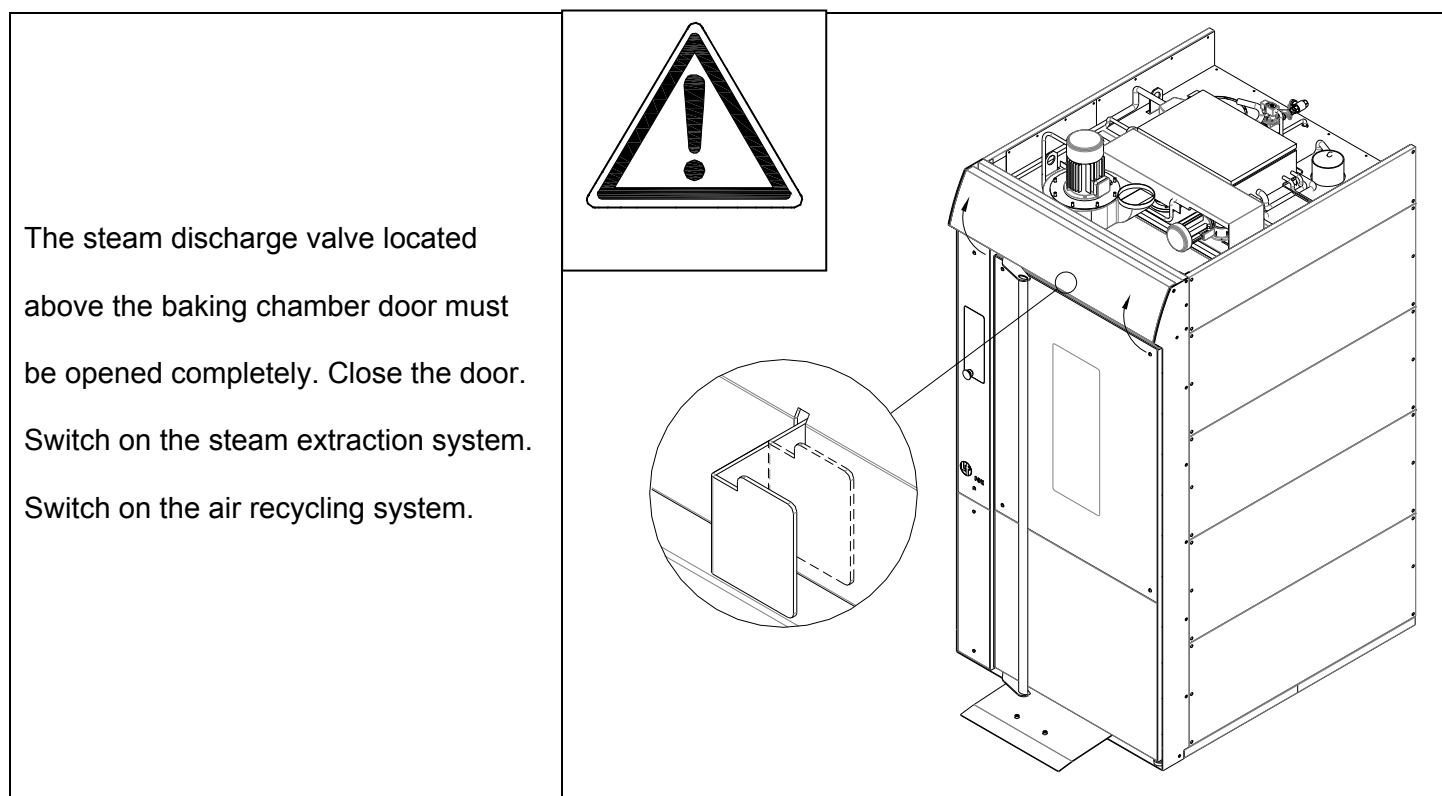
The following conditions must be checked before proceeding with start-up:

- ✓ that all protective wrapping film has been removed from the outer oven surfaces;
- ✓ that all connections have been carried out according to instructions given in this manual;
- ✓ that all regulations and safety rules, laws and current directives have been observed;
- ✓ that the water and gas connections are properly and securely sealed;
- ✓ that the fume exhaust section is not blocked and that evacuation of fumes can occur freely.

The oven may now be switched on.

### **2.5.1 HEATING THE OVEN**

In the case of ovens heated by combustion, the burner must be regulated and combustion must be controlled and checked by a qualified technician.



Adjust the thermoregulator to 50 °C, press the Start Cycle pushbutton and switch on the oven for the first time.

Check the pressure level in the combustion chamber. The value detected while the burner is functioning must be between -1 and -4 mbar.

Allow the oven to heat up gradually, in steps of 60 °C, and maintaining each temperature gain for 15 minutes until the temperature of 240 °C is reached. Maintain this final temperature for 30 minutes. This operation allows for the elimination of unpleasant odours and fumes produced during drying of the insulation materials and by residual traces of grease left on the sheet metal.

While the burner is operating, check the efficiency of the 'burner stall' warning light, interrupting the flow of fuel by means of the cut-off tap located close to the burner itself. To switch the burner back on, open the fuel line and restore normal operation by pressing the pushbutton located on the electronic apparatus of the burner unit.



### **2.5.1.1 GENERAL INFORMATION ON OPTIMISING COMBUSTION YIELD**

(for ovens with burners only)

In order to obtain a high level of combustion yield, any heat loss through the fume flue must be reduced.

Good combustion gives the following results:

- low fume volume
- low fume temperature

To evaluate the combustion yield and performance, proceed as follows:

- 1 – measure the temperature of the combustion air;
- 2 – measure the temperature of the fumes at the fume flue outlet;
- 3 – use appropriate instruments to measure the percentage of carbon dioxide (CO<sub>2</sub>) in the fumes.

It is important to remember that a high value of CO<sub>2</sub> indicates low fume volume and therefore optimum combustion conditions.

Good combustion requires:

- 1) a low value of air access;
- 2) a high percentage of carbon dioxide (CO<sub>2</sub>);
- 3) a low percentage of oxygen (O<sub>2</sub>);
- 4) low fume volume.

### **2.5.1.2 INSTRUCTIONS FOR THE CORRECT MEASUREMENT OF COMBUSTION**

(for ovens with burners only)

- 1) the test must be performed when the oven has reached full working temperature (the maximum value of working temperature);
- 2) the sensor used to detect combustion values must be positioned horizontally in a vertical section of the fume flue;
- 3) the test sample must be taken at a distance of approx. 25 cm (in the case of 50x70 rotary ovens) and 40 cm (in the case of 60x80 rotary ovens) below the fume flue outlet;
- 4) make a note of the exact temperature of the air close to the burner.



### **2.5.2 CHECKING FOR EFFECTIVE OPERATION OF THE THERMOREGULATOR**

Shut and fasten the oven door, close the manual steam discharge shutter (pg. 31). Set a temperature of 60 °C on the thermoregulator, switch on the fan and press the 'Start Cycle' button. The burner will start to operate. After a few minutes, once the preset temperature has been reached, it will then be switched off. Then set a temperature of 120 °C. If the burner starts, the thermoregulator can be considered efficient.

### **2.5.3 CHECKING THE SAFETY THERMOSTAT**

Adjust the safety thermostat to 200 °C.

Close and fasten the door and close the manual steam box shutter.

Set a temperature of 250 °C on the thermoregulator, actuate the fan switch and press the Start Cycle pushbutton. The burner will now start functioning.

The thermoregulator will detect the increase in temperature.

Wait a few more minutes and make sure the burner switches off before the thermoregulator has reached the set temperature.

If it switches off, the safety thermostat can be considered as being efficient.

Wait for the temperature to fall below the threshold level of the value set with the safety thermostat.

Switch off the oven and manually reset the safety thermostat by pressing the green pushbutton.

After having verified the efficiency of the safety thermostat, carry out correct regulation, adjusting the thermostat back to the 300 °C position, which is the value specifically set by the manufacturer.

### **2.5.4 CHECKING THE SAFETY FUNCTIONS OF THE OVEN DOOR**

Switch on and start the oven while empty (no bakery products must be inside it) as in the case of a normal production cycle and open the oven door carefully.

When the door is opened, trolley rotation and operation of the burner and the air recycling fan must cease immediately.

The opening of the door must also disable the solenoid valve which governs the introduction of water into the steam generator unit and start the steam extractor, even if the selector has been set in the 0 (zero) position.

Close the door.

Closing the door allows for recovery of the functions described above but will not re-start the oven-heating process.

A production cycle can be started only when the oven door is closed and fastened, and by pressing the Start pushbutton.

### **2.5.5 CHECKING TROLLEY REMOVAL**

Rotation of the trolley while the door is open must occur only when an operator is present, actuating and keeping the pushbutton pressed (pos. 3 in the figure on pg. 30) until it stops at the required position. The trolley is extracted manually.

### **2.5.6 TESTING THE BAKING PROCESS**

Set up a few trolleys with products ready to be baked and start a baking cycle.

Follow the instructions for the production cycle given in section 3.3.1.

At the end of the cycle make sure the products have been baked uniformly.

Make sure the bakery operator has received all the necessary information on the correct use of the oven.

Make sure the operator has read the contents of this manual.



## **Part 3: OVEN PRODUCTION CYCLE AND MAINTENANCE**

**Caution!** The oven heating time is approximately 30 minutes. The oven should therefore be switched on well before any baking operations have to start!

When the oven is in use, it must be monitored!

It is strictly forbidden to apply any electro-mechanical timing devices to the oven, which would be capable of switching on the oven at a preset time. Any such modification is considered “tampering with the equipment” and will result in the invalidity and expiry of the guarantee and of any liability on the part of the manufacturer.

Ovens with electronic control systems and certain ovens built with electro-mechanical panels are equipped with automatic timing mechanisms by the manufacturer and can be set to start operation at pre-established times. These ovens are fitted with an automatic exhaust flue closing valve (activated by the timer itself to ensure safety in the case of a failure to open) or have no exhaust flue valve and in such cases the fumes are always discharged freely. In the latter case, the user must select a time for automatic start-up when the personnel and operators are present at the workshop.

**The manufacturer declines all liability if the above regulations have not been observed!**

*For each of the phases indicated below, please refer to the instructions provided in this manual.*

### **3.1.1 PUTTING INTO OPERATION**

- Switch on the oven power lines (electricity, fuel, water);
- Make sure the oven door is closed and fastened;
- Make sure the temperature set with the thermoregulator corresponds with the required value;
- Actuate the air recycling fan selector;
- Press the Start Cycle pushbutton (heating will begin);
- Wait for approximately 30 minutes, thereby allowing the oven and the humidifier to reach the required temperature.

### **3.1.2 INSERTING THE TROLLEY**

- Open the manual steam discharge shutter;
- Set the timing for a humidifier cycle (if necessary);
- Open the oven door completely;
- Make sure the steam extractor starts operating;
- Push in the trolley to allow for correct and safe clamping in its seating;
- Close the door again and properly fasten the door handle;
- Actuate the trolley-rotation selector;
- Actuate the control (if necessary) to start humidification;
- Press the start cycle pushbutton. (The trolley rotates, heating is enabled and the baking cycle starts);
- Set and enable the baking process time.



### **3.1.3 REMOVING THE TROLLEY**

An acoustic alarm will warn the operator that the time set for baking has expired.

Make sure the products in the oven are in fact ready to be removed; if they are not fully baked, set a new time for completion of the baking process.

Start the removal procedure, following the sequence of events indicated below:

- Open the manual steam discharge shutter;
- Release and leave the oven door ajar for a few seconds, thus allowing residual warm air to be extracted (the trolley will stop turning);
- Using the hold-to-run pushbutton located on the electric switchboard, rotate the trolley until it reaches the removal position;
- Open the door completely and, wearing heat-resistant gloves, extract the trolley;
- Close the door;
- Prepare the oven (if necessary) for a new baking cycle, pressing the Start pushbutton.

### **3.1.4 SWITCHING OFF THE OVEN**

Reset the thermoregulator and deactivate (in the following order) the switches for: baking, rotation, steam extraction, internal illumination, and, after 20/25 minutes, the air recycling fan.

Deactivate the oven power lines (electricity, fuel, water).

## **3.2 USEFUL INFORMATION**

In particular, baking times may vary according to the nature of the product to be baked, its degree of homogeneity and its volume.

The user is advised to carefully monitor the first baking cycles and check results. It should be of course noted that producing the same products in the same manner and under the same conditions will always give the same results.

Heat requirements of products depend on their composition, the quantity of ingredients and the amount of water contained in them.

It is possible to bake different products simultaneously provided they require the same baking temperature. In such situations the different products may occupy any position on the trolley shelves as this is not a determining factor. This possibility allows for baking small quantities of products with very good results.

If bread is not sufficiently 'vaporised'; that is, if it has an opaque colour and rough texture at the end of baking, check to see whether it is moistened during vaporisation. If this occurs, the mixture will have to be modified. Bear in mind that in order to obtain good results, products must not be too moist before they are placed in the oven. In this regard, after removing the trolley from the leavening chamber it is important to allow the products to 'rest' for 1-2 minutes in the open air of the workshop so that they can dry off before being placed in the oven.

Operators should remember to reduce door opening times to a minimum.

The oven door should be left open only for as long as is strictly necessary to perform the loading and removal operations. When the oven door is left open for an excessive period of time, the temperature in the baking chamber will be considerably reduced, thus causing an unjustified waste of fuel or energy.

After a loading/removal operation, the temperature displayed on the thermoregulator will drop by approximately 30 °C. This difference in temperature will be recovered after an estimated maximum period of



8/10 minutes. This can be considered as a sufficiently brief period if we bear in mind the initial degree of heat exchange (product to be baked/hot air), which creates a considerable lowering of the temperature of circulating air.

### **3.3 DESCRIPTION OF MAINTENANCE OPERATIONS**

#### **3.3.1 CAUTIONARY NOTES**

This manual contains all of the necessary instructions and information allowing for proper and safe use of the oven.

It must be noted that the oven is designed for professional use and must therefore be operated by qualified personnel who are adequately trained in its use.

The oven must be monitored during operation.

**Caution!** The manufacturer shall not be deemed liable for any labour accident or mishap or any damage incurred caused by failure to observe the safety regulations and standards or any improper use of the oven on the part of the operator.

Certain operating anomalies can also be caused by erroneous use of the equipment so it is extremely important to train the oven operators very well before they start working with it. Should any problem arise, before contacting any technical assistance service please check whether the supply systems are open and fully functional (gas, electricity, water).

All maintenance work must be carried out exclusively by qualified technicians recognised by the manufacturer.

Observe the intervals established for maintenance procedures. Users are advised to stipulate a maintenance contract with a technical assistance service of their choice.

In the event of malfunctioning of the oven, switch off all of the power supply systems (gas, electricity and water) immediately.

Recurrent anomalies require the intervention of a technical assistance service. Do not improvise as maintenance specialists! Any intervention or operation performed by any non-qualified and non-authorized person shall be considered as improper action and shall result in the guarantee becoming immediately invalid.

The oven was designed and built for the purpose of baking bread and other bakery products.

The oven must not be used to heat or bake any substances other than those utilised in foodstuffs.

The oven must not be used to heat or bake any bakery or pastry products which may contain explosive ingredient mixtures or generate an explosive reaction.

It is strictly forbidden to tamper with or modify the safety systems or the electric circuits of the oven created and installed by the manufacturer.

#### **3.3.2 WEEKLY MAINTENANCE**

Weekly maintenance can be performed by the user. In any case, all safety regulations described in this manual must be fully observed.

##### **Switch off the mains power supply to the oven**

Use a vacuum cleaner with a rigid-bristle accessory attachment to remove dust accumulated on the motors, transmission gear and the control panel. A rigid-bristle brush can be used to clean parts that are difficult to access. In all other parts of the oven use a vacuum cleaner with a rigid attachment.

The front panelling of the oven must be cleaned with appropriate, non-abrasive products that can be easily found in the market. (Detergents for cleaning kitchenware in stainless steel).

Follow the same procedure for the internal parts of the baking chamber.

After cleaning, the surfaces must be rinsed well with water and dried with clean soft rags.





Never use detergents which contain chlorine.

**N.B. Do not clean any glass parts while they are still warm!**

### **3.3.3 MAINTENANCE TO BE PERFORMED EVERY 6 MONTHS**

To ensure the oven operates safely and in optimum conditions the cleaning and maintenance procedure described in this section of the manual must be followed regularly.

The following routine checks and procedures **must be carried out once every six months by a qualified technician:**

- ✓ Clean the filter and check the seal of the water injection solenoid valve;
- ✓ Clean the filling and draining sections of the humidifier;
- ✓ Clean the humidifier;
- ✓ Functional check-up of the hydraulic circuit (while the oven is not in operation);
- ✓ Check the trolley-movement drive unit;
- ✓ Apply grease to the movement assembly;
- ✓ Functional check-up of the thermoregulator;
- ✓ Check the efficiency of all oven functions;
- ✓ Check the efficiency of the safety devices;
- ✓ Clean the steam extractor volute casing and rotor;
- ✓ Clean the oven door seals.

The movement reducer **does not require** maintenance.

**Only professionally-qualified personnel and technicians must be allowed to carry out work on the electric system and circuitry of the oven, regardless of how 'simple' the required intervention may be.**

The user is advised to have the burner checked once every six months by a qualified technician.

General cleaning of the burner and check for proper adjustment.

Check combustion.

Check the pressure level in the combustion chamber.

### **3.3.4 REPLACING THE LIGHT BULB**

**Switch off the mains power supply to the oven.**

- Remove the glass panel of the oven door;
- Remove the housing;
- Remove the light bulb to be replaced and re-mount the dismantled parts, following the above instructions in reverse order.

## **3.4 TROUBLESHOOTING**

**Any action to be taken involving electric components must be carried out by qualified personnel with a good knowledge of the functions of the various parts of the electric circuitry and of precautions that have to be taken when handling them to avoid any risk of harm to the technician himself and to others.**



**- ANOMALIES AND THEIR PROBABLE CAUSES -**

<b>PROBLEM</b>	<b>CAUSES</b>	<b>SOLUTIONS</b>
The trolley does not stop to allow for removal.	The stroke-end positioning bracket has become loose.	Adjust the trolley stroke-end positioning bracket.
The air recycling fan does not start.	<ul style="list-style-type: none"> <li>-The motor circuit breaker in the control panel has been triggered.</li> <li>-The oven door handle stroke-end mechanism is faulty or is in the wrong position.</li> </ul>	<ul style="list-style-type: none"> <li>-Reset the circuit breaker</li> <li>-Check the oven door stroke-end mechanism.</li> </ul>
The burner does not start: (for ovens with burners only)	<ul style="list-style-type: none"> <li>-The air recycling fan does not start.</li> <li>-The fuel line is blocked.</li> <li>-The thermoregulator is not functioning.</li> <li>-The safety thermostat has reached the alarm level temperature.</li> <li>-The thermoregulator sensor is not functioning.</li> <li>-The burner has stalled.</li> </ul>	<ul style="list-style-type: none"> <li>-Reset the fan circuit breaker. If the problem continues, contact the technical assistance service.</li> <li>-Make sure there is fuel available and that it is delivered to the burner. If necessary, contact the burner technician.</li> <li>-Check and if necessary, replace the thermoregulator.</li> <li>-Wait for the oven to cool down to a temperature level below the alarm threshold and then reset the safety thermostat by pressing the green pushbutton.</li> <li>-Check for any damage or breakage along the shielded cable of the sensor and if necessary, replace the component completely.</li> <li>-Ascertain the causes and if necessary, restore normal operation of the burner by pressing the push button located on the burner unit apparatus.</li> </ul>
The steam extractor is not functioning.	The motor circuit breaker in the control panel has been triggered.	-Reset the circuit breaker.



<p>The steam extractor is not operating efficiently.</p>	<ul style="list-style-type: none"> <li>-The steam extractor is running in the counter-clockwise direction.</li> <li>-The extraction slots are obstructed.</li>   <li>-The discharge pipe is blocked.</li> </ul>	<ul style="list-style-type: none"> <li>-Invert one of the phases in the electric power line of the extractor.</li> <li>-Clean the extraction grid thoroughly.</li>   <li>-Check the discharge pipe and if necessary, clean it or replace it completely.</li> </ul>
<p>Insufficient humidification.</p>	<ul style="list-style-type: none"> <li>-Not enough water supplied to the humidifier.</li>   <li>-Water supply-line pressure is too low.</li>   <li>-The temperature in the baking chamber is too low.</li>   <li>-Frequent requirements for humidification.</li>   <li>-Solenoid valve is dirty.</li> </ul>	<ul style="list-style-type: none"> <li>-Increase the level of water introduced by adjusting the ball valve in the delivery tube.</li> <li>- Increase the pressure of the water supply line.</li>   <li>-Increase the temperature inside the baking chamber to a minimum value of approximately 220°C.</li> <li>-Wait for at least 15 minutes between one humidification phase and the next.</li> <li>-Check the inside of the solenoid valve and clean carefully.</li> </ul>
<p>Excessive loss of hot air from the edges of the oven door when closed.</p>	<ul style="list-style-type: none"> <li>-The door seals have become worn and faulty.</li> </ul>	<ul style="list-style-type: none"> <li>-Replace the worn seals.</li> </ul>
<p>Baking is not uniform.</p>	<ul style="list-style-type: none"> <li>-The air recycling fan is running in the counter-clockwise direction.</li> <li>-Incorrect orientation of the flow-adjustment shutters.</li> <li>-Insufficient thermal capacity of the burner/electrical resistors.</li> </ul>	<ul style="list-style-type: none"> <li>-Invert one of the phases in the electric power line of the fan.</li>   <li>-Refer to the manual section on air flow adjustment.</li> <li>-See the technical data of the oven.</li> </ul>
<p>When baking bread, loaves have an opaque colour and rough surface texture.</p>	<ul style="list-style-type: none"> <li>-Insufficient humidification.</li>   <li>-The bread is not moistened during the humidification process.</li> </ul>	<ul style="list-style-type: none"> <li>-Increase the duration of the water-introduction phase of the steam generator.</li> <li>-Modify parameters of the dough-mixing process.</li> </ul>

N.B. For problems not described in the above list, the user should contact a technical assistance service.



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### **3.5 REQUESTING ASSISTANCE:**

If the problem found cannot be solved after following the instructions in this section, classify the anomaly as relating to either

a) the burner or b) the oven.

#### **3.5.1 TECHNICAL ASSISTANCE FOR THE BURNER:** (for ovens with burners only)

If the problem can be related to improper functioning of the burner, refer to the manual or documents supplied with the same. If an answer cannot be found after this step, contact the assistance service of the firm which manufactured or supplied the burner.

Most manufacturers of burners have a sales office and a technical department which can provide assistance for any problems arising with the products they sell.

#### **3.5.2 TECHNICAL ASSISTANCE FOR THE OVEN:**

If the problem can be related to improper functioning of the oven, contact the authorised trader or sales agent from whom the oven was purchased. Authorised retailers are normally capable of providing information concerning most of the products which they sell and should be able to provide a consultancy service for problems arising in relation to the use of the oven.

Any action or intervention on the part of a technical assistance service should be arranged and planned in accordance with the seriousness of the problem encountered. Normally, in the case of ordinary maintenance, medium-term arrangements are planned with the technical staff.



### **3.6 NOTES ON SAFETY**

For user safety, the oven control panel is powered with low-level voltage (24 V). The only exception is the burner stalled indicator light.

The outer, external surfaces of the oven are shielded with high-density, insulation material so as to avoid wasteful dispersion of heat and the over-heating of nearby equipment, objects and adjacent walls.

Despite all precautions taken, the user must remember that there are parts of the oven such as the oven apertures and baking chamber door panels, which, during normal operation, become very hot. It is thus important for the operators to wear gloves and to take great care while working close to the oven so as to avoid the risk of accidental burns through contact with these parts.

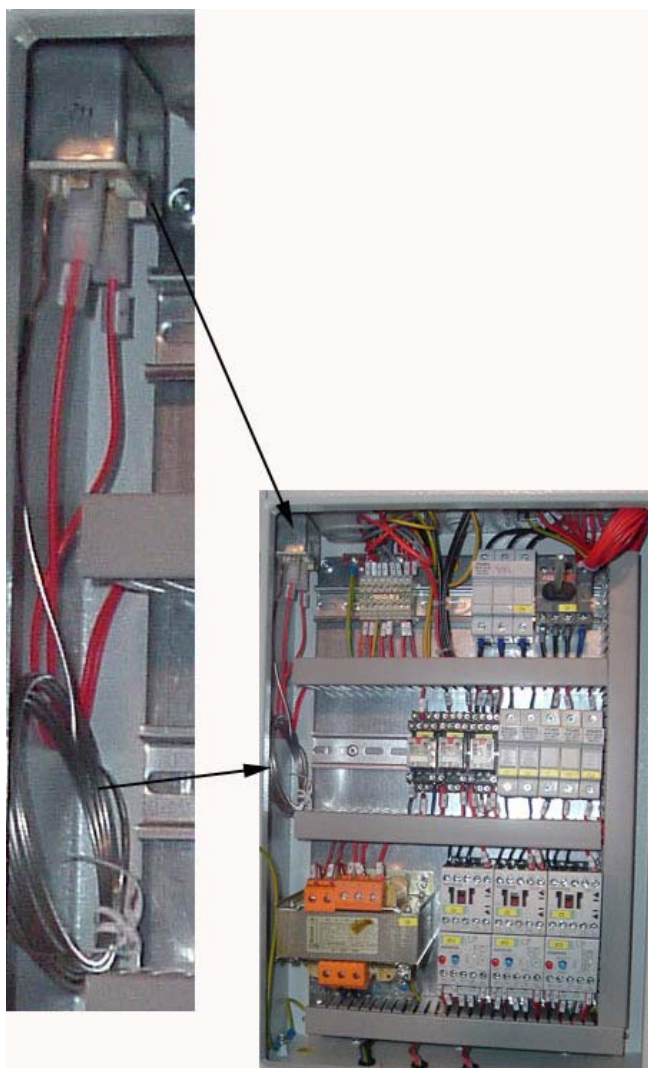
As the products to be baked come into contact with the baking surface racks, the latter are constructed only with materials suitable for use with foodstuffs (containing no asbestos). The entire environment where the baking process occurs is produced in material suitable for this purpose. No noxious vapours will be emitted or released.

#### **3.6.1 SAFETY DEVICES**

The oven is equipped with a manually-reset mechanical thermostat to ensure safety.

This preset maximum safety thermostat, located in the electric panel, will be triggered and will switch off the oven if the temperature goes above 300 °C (pos. 14).

If the safety thermostat is triggered, a technical assistance service must be called so that a technician can come to check the cause of the anomaly.





### **3.7 RESTRICTIONS AND OBLIGATIONS FOR THE PREVENTION OF LABOUR ACCIDENTS**

Carefully read the warnings provided in this chapter as they provide important information concerning safety.

- Make sure the ground leads have been properly connected;
- Use protective gloves when handling and moving hot trolleys and trays;
- Do not modify and/or tamper with the safety systems and electric circuits;
- Make sure the oven safety devices and systems are perfectly efficient at all times;
- Do not stand on or walk over the roof of the oven;
- It is forbidden to use the upper surface of the oven as a support and/or as storage space;
- Do not introduce into the oven any mixtures which may create or release explosive and/or flammable mixtures;
- It is forbidden to install accessories which do not conform to safety regulations;

Do not use the oven in an improper manner: its use must be limited to the purpose for which it was designed and built.

### **3.8 PRECAUTIONS IN CASES OF PROLONGED INACTIVITY**

In the event the oven is not used for a prolonged period of time (holidays, seasonal work etc) it must be cleaned thoroughly, eliminating all residual traces of foodstuffs and then carefully dried.

Leave the oven door open so that air can circulate freely inside the baking chamber.

Commonly-available protective agents may be used for the parts in steel.

Turn off the water supply system, isolate the oven from the gas supply system and, using the omnipolar switch, disconnect it from the electric circuit.

The room/environment where the oven is located must be sufficiently ventilated.

### **3.9 PRECAUTIONS IN THE EVENT OF MALFUNCTIONING**

If the oven functions improperly during operation, turn it off immediately and close or intercept all energy / power lines (electricity, gas and water).

Contact the technical assistance service or a qualified technician.

**The manufacturer declines all liability and warranty commitment for damages caused by failure to observe the instructions and regulations provided in this manual or in any case of non-compliant installation.**

**The same shall apply in the case of improper use of the oven on the part of the operator.**



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## **Part 4: SPARE PARTS AND TECHNICAL DRAWINGS**

### **4.1 CAUTIONARY NOTES**

Only use original parts when any components have to be replaced.

When placing an order for spare parts, please provide the oven model and serial number located on the 'CE' (European Conformity) plate.

Identify: section number, position, reference codes and description of the part to be replaced in this instruction manual.

Submit a description of the part ordered to the authorised dealer or to our assistance department and indicate how many pieces are required.

On receiving your order, we shall subsequently communicate to you the details concerning our processing of your order and shall request your authorisation to proceed with delivery.

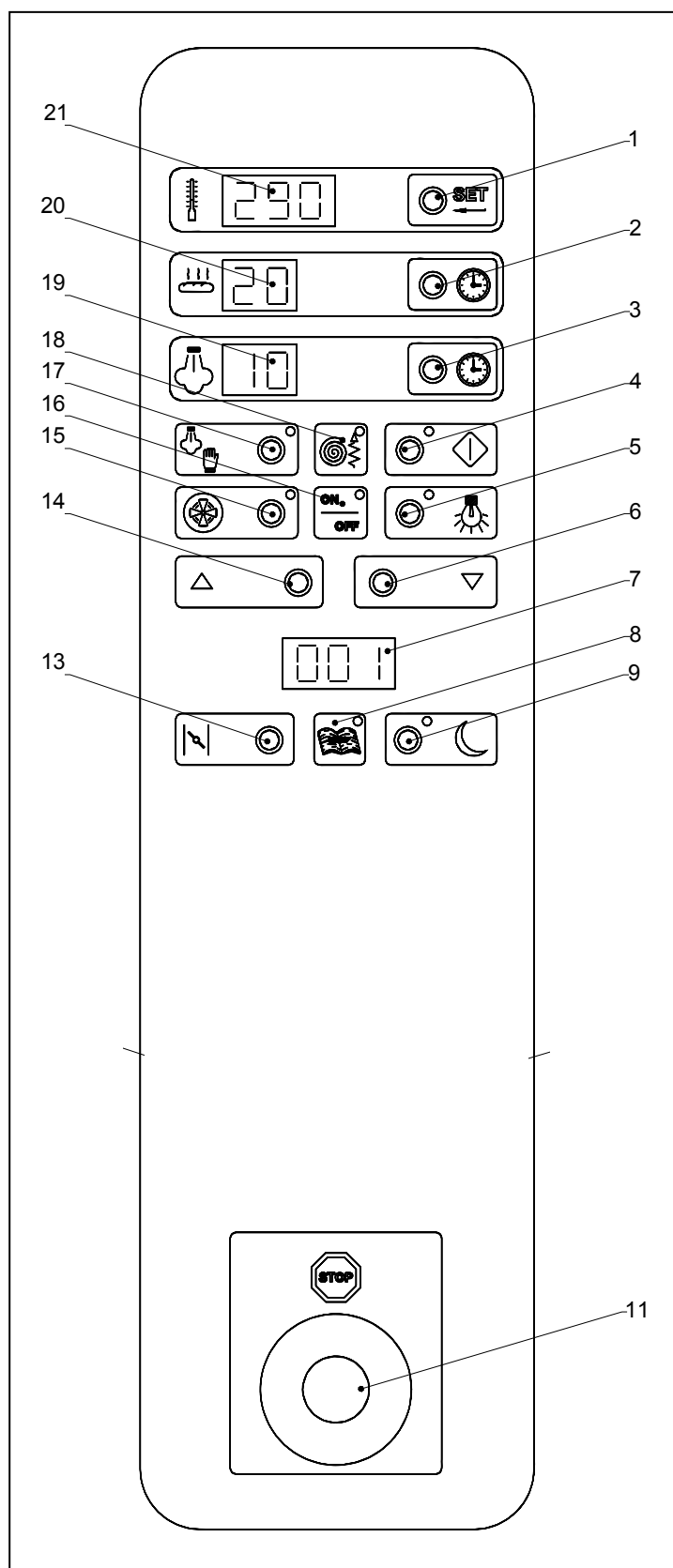
In the case of any components or topics not dealt with in the spare parts section of the manual, please contact our assistance department.





## 4.2 OVEN CONTROL PANEL

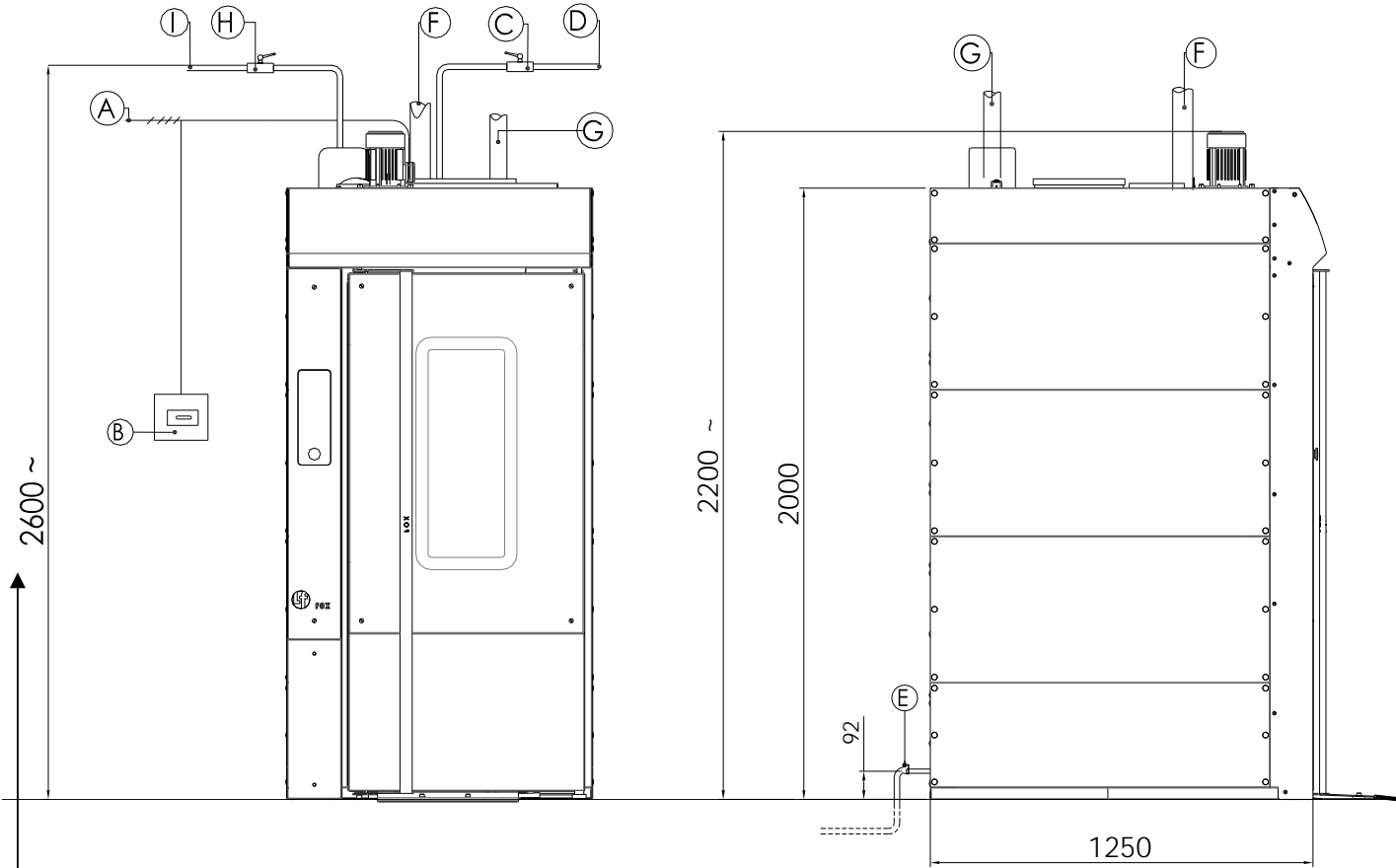
- 1 - Temperature setting button
- 2 - Baking time setting button
- 3 - Steam time setting button
- 4 - Start baking button
- 5 - Lights ON/OFF button
- 6 - DOWN button
- 7 - Program display
- 8 - Program button
- 9 - Programmed power-on button
- 11 - Emergency button
- 13 - Steam exhaust valve button
- 14 - UP button
- 15- Extractor ON/OFF button
- 16- Oven ON/OFF button
- 17 - Steam cycle START button
- 18 - Trolley rotation ON/OFF button
- 19 - Steam time display
- 20 - Baking time display
- 21 - Oven temperature display



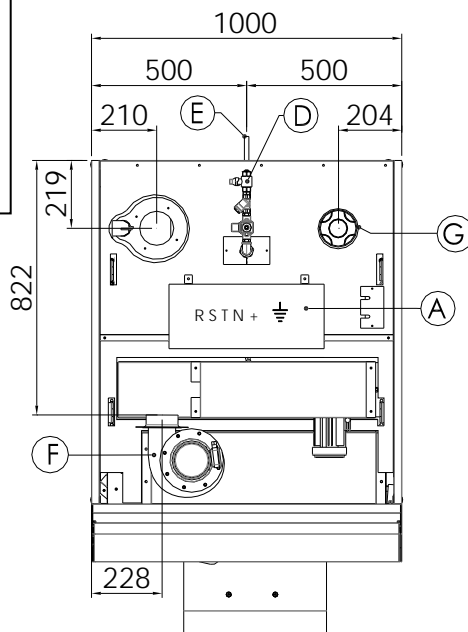


## 4.3 CONNECTIONS

### 4.3.1 Connecting the LFRC 15T 40x60 model rotary oven with gas burner

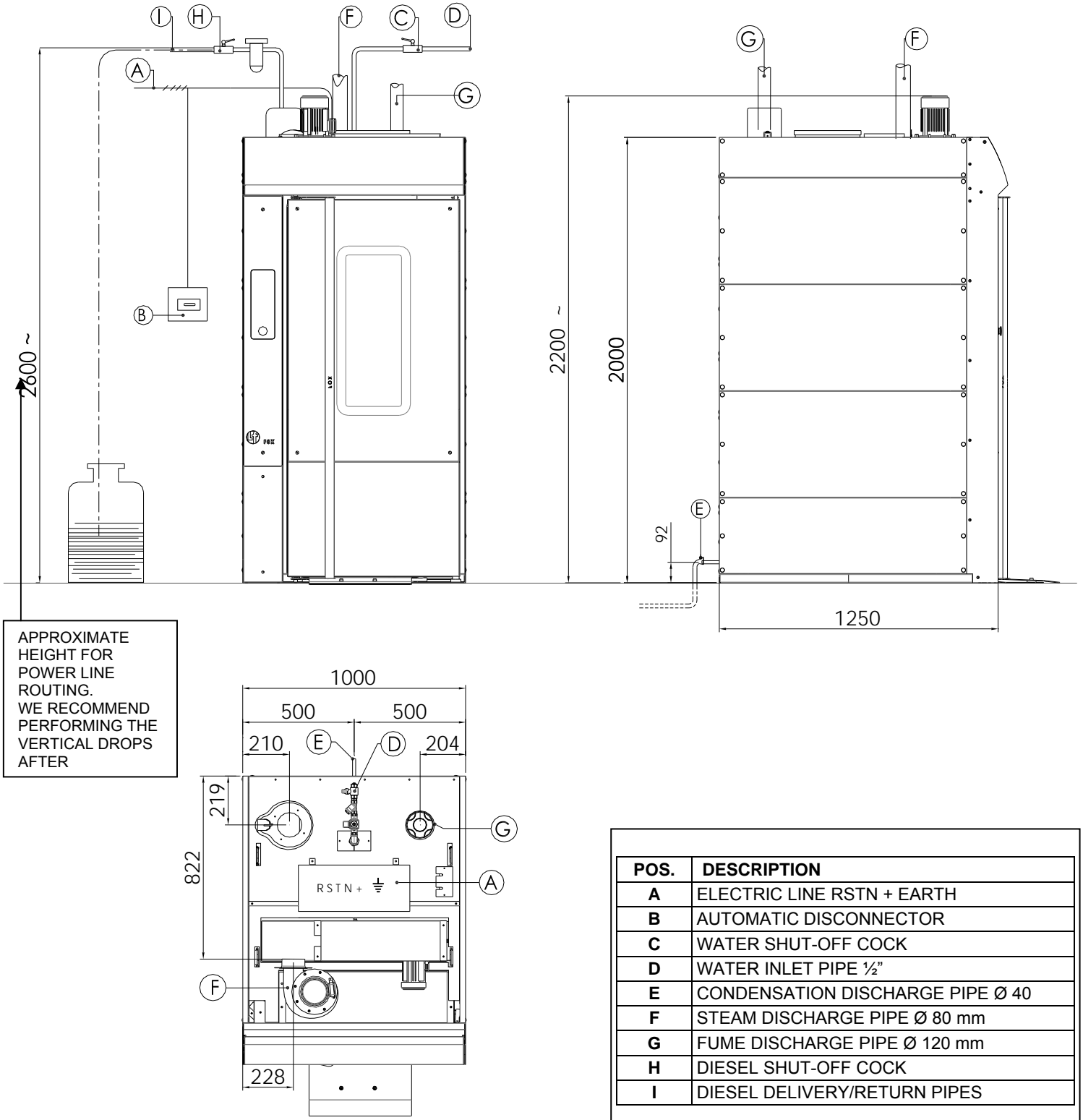


APPROXIMATE HEIGHT FOR POWER LINE ROUTING. WE RECOMMEND PERFORMING THE VERTICAL DROPS AFTER ASSEMBLING THE OVEN.

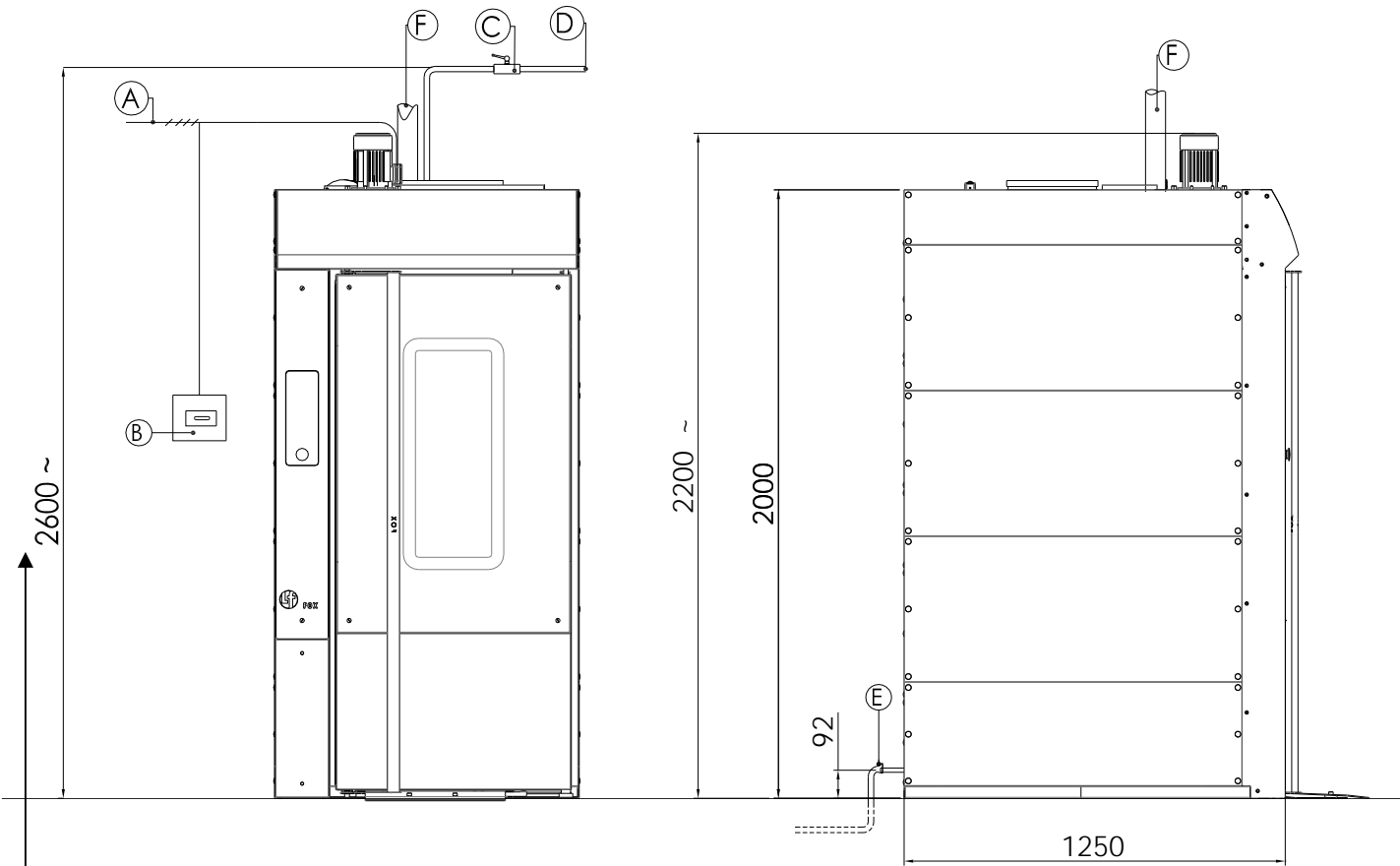


POS.	DESCRIPTION
A	ELECTRIC LINE RSTN + EARTH
B	AUTOMATIC DISCONNECTOR
C	WATER SHUT-OFF COCK
D	WATER INLET PIPE 1/2"
E	CONDENSATION DISCHARGE PIPE Ø 40
F	STEAM DISCHARGE PIPE Ø 80 mm
G	FUME DISCHARGE PIPE Ø 120 mm
H	GAS SHUT-OFF COCK
I	GAS ADDUCTION PIPE 1"

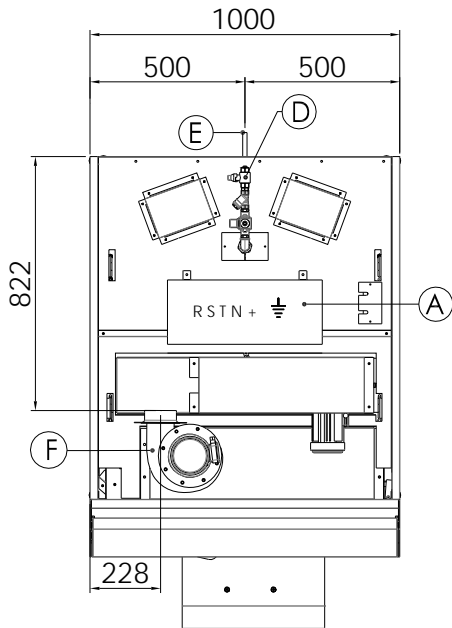
### 4.3.2 Connecting the LFRC 15T 40x60 model rotary oven with diesel burner



### 4.4.3 Connecting the LFRC 15T 40x60 model electric rotary oven



APPROXIMATE HEIGHT FOR POWER LINE ROUTING. WE RECOMMEND PERFORMING THE VERTICAL DROPS AFTER ASSEMBLING THE



POS.	DESCRIPTION
A	ELECTRIC LINE RSTN + EARTH
B	AUTOMATIC DISCONNECTOR
C	WATER SHUT-OFF COCK
D	WATER INLET PIPE 1/2"
E	CONDENSATION DISCHARGE PIPE Ø 40
F	STEAM DISCHARGE PIPE Ø 80 mm







**LOGIUDICE FORNI**  
technologies by tradition

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