

## INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE

GAS PIZZA OVEN



MODEL

SQUARE	ROUND	PENTAGONAL	GRANVOLTA	SPHERICAL
100	100	100	100	100
120	120	120	120	120
130	130	130	130	130
140	140	140	140	140
150	150	150	150	150
170	170	170	170	170

CATEGORY: II2H3+

TYPE OF INSTALLATION: A1 – B11BS



***Forni Ceky***

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# I INTRODUCTION AND DESCRIPTION OF THE EQUIPMENT

The oven is supplied together with a warranty certificate, the expiration date being specified in the accompanying document. The warranty form must be filled out and returned to the manufacturer on time. Otherwise, the warranty of the equipment will be cancelled. Any attempt to disassemble, modify or, in general, tamper with any part of the equipment will make the warranty null.

The incorrect use of the oven, as well as any attempt to disassemble and modify it, can cause accidents and, therefore, Forni Ceky declines any liability for damages to persons or property arising from such tampering. Should any anomaly be detected, contact the nearest authorised service centre and, in particular, for any assembly and installation operation or moving of the equipment, contact the manufacturer directly. The manufacturer shall be relieved of any liability in the following cases:


- Improper use of the equipment by persons not properly trained.
- The installations are not in accordance with the current regulations in the country of use and are performed by unauthorised personnel.
- Improper or lack of scheduled routine maintenance.
- Use of non-original or not approved spare parts.
- Total or partial non-compliance with the instructions.
- Failure to send the warranty certificate.

## 1.1 General instructions

- Please read this booklet carefully. It provides information for safe use and maintenance. The purpose of this manual is to make employees aware of the requirements and the basic criteria to ensure their safety and lengthen the lifespan of the oven. This manual should be read by all personnel authorised to operate the oven, before its commissioning.
- This instructions manual must be kept together with the equipment for future reference. In case of sale or transfer of the equipment, make sure that the manual always accompanies it so that the new owner can read about its operation and the relevant warnings. It should be stored in a protected and dry place, which can be easily accessed for consultation. In case of deterioration or loss, ask for a copy directly to the manufacturer. If in doubt, go to your nearest service centre or directly to Forni Ceky.
- The instructions in this booklet refer only to the gas oven, category I12H3+.
- This equipment is intended for baking pizzas. Do not use it for other purposes. Any other use is considered improper.
- Maintenance, fitting for another type of gas, commissioning and testing should be performed only by qualified personnel.
- After each replacement of a component, make sure to reseal it with paint in order to prevent tampering.
- It is recommended to sign a maintenance agreement.
- For any repairs, contact an authorised service centre and ask for original spare parts.
- The device is intended for collective use and it must be used by trained personnel.
- The manufacturer is not liable for any damage resulting from the non-compliance with the instructions for use and maintenance or the inappropriate use of the device.
- These instructions are only valid for the countries whose initials are shown on the device.

## 1.2 Nameplate and additional plate

Below are the nameplate and the additional plate. The nameplate (Fig. 1) is placed near the control panel of the oven, in a visible position. The additional plate (Fig. 2) is to be placed in a visible position on the equipment and in the documentation that accompanies the packaging. The data relates to the country of destination and the type of gas for which the oven is designed.



**Forni Ceky**

25030 Lograto  
Brescia - Italy  
Via Industriale, 21/23

PREDISPOSTO A:

CE

0051-14

CERTIFICATO CE DI TIPO N. 51AT1340

**MOD:**     QUADRATO     140  
 GRANVOLTA     ROTONDO     150  
 CUPOLA     PENTAGONALE


**S/N:**

**Qn: 28.5kW - Type: A<sub>1</sub> - B<sub>11BS</sub>**

G20 =	3.01 m <sup>3</sup> /h
G25 =	3.50 m <sup>3</sup> /h
G30 =	2.25 kg/h
G31 =	2.21 kg/h

IT-ES-GB-PT-IE	II2H3+	G20-G30/G31	20 ; 28-30/37	mbar
DE	II2ELL3B/P	G20-G25-G30/G31	20 ; 20 ; 50/50	mbar
GR	II2H3+	G20-G30/G31	20 ; 30/37	mbar
LU	I2E	G20	20	mbar
AT-CH	II2H3B/P	G20-G30/G31	20 ; 50/50	mbar
DK-SE-FI			20 ; 30/30	mbar
BE-FR	II2E+3+	G20/G25-G30/G31	20/25 ; 28/37	mbar
NL	II2L3B/P	G25-G30/G31	25 ; 30/30	mbar
NO	I3B/P	G30/G31	30/30	mbar

FCA004



**Forni Ceky**

25030 Lograto  
Brescia - Italy  
Via Industriale, 21/23

PREDISPOSTO A:

CE

0051-14

CERTIFICATO CE DI TIPO N. 51AT1340

**MOD:**     QUADRATO     100  
 GRANVOLTA     ROTONDO     120  
 CUPOLA     PENTAGONALE     130

**S/N:**

**Qn: 27kW - Type: A<sub>1</sub> - B<sub>11BS</sub>**

G20 =	2.86 m <sup>3</sup> /h
G25 =	3.32 m <sup>3</sup> /h
G30 =	2.12 kg/h
G31 =	2.10 kg/h

IT-ES-GB-PT-IE	II2H3+	G20-G30/G31	20 ; 28-30/37	mbar
DE	II2ELL3B/P	G20-G25-G30/G31	20 ; 20 ; 50/50	mbar
GR	II2H3+	G20-G30/G31	20 ; 30/37	mbar
LU	I2E	G20	20	mbar
AT-CH	II2H3B/P	G20-G30/G31	20 ; 50/50	mbar
DK-SE-FI			20 ; 30/30	mbar
BE-FR	II2E+3+	G20/G25-G30/G31	20/25 ; 28/37	mbar
NL	II2L3B/P	G25-G30/G31	25 ; 30/30	mbar
NO	I3B/P	G30/G31	30/30	mbar

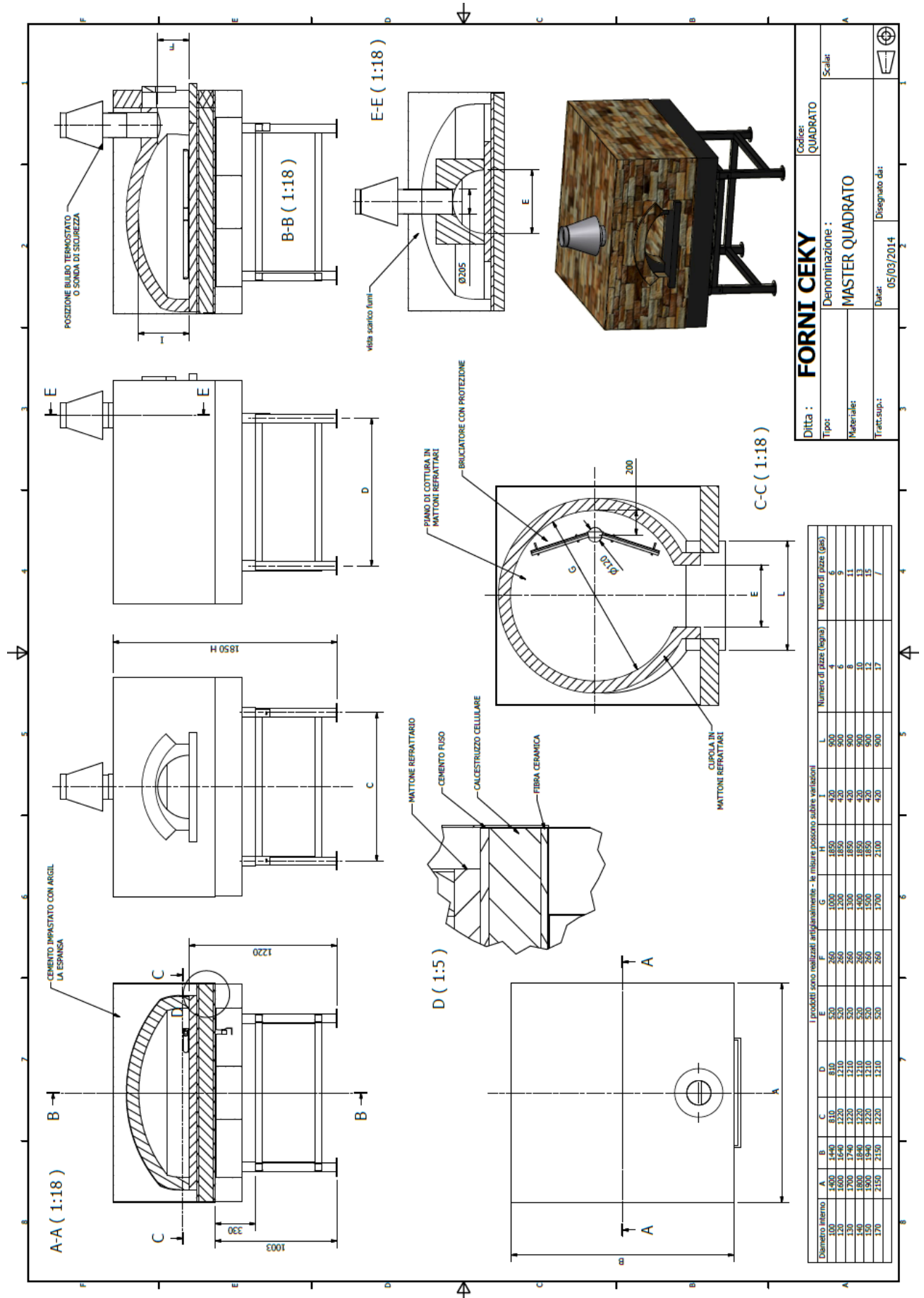
FCA004

Figure 1

<b>E</b>	THIS DEVICE MUST BE INSTALLED IN COMPLIANCE WITH THE APPLICABLE REGULATIONS AND USED ONLY IN VENTILATED AREAS. READ THE INSTRUCTIONS BEFORE INSTALLATION	DESIGNED FOR GAS	
	<b>N</b>	AND USE OF THIS DEVICE.	II <sub>2H3+</sub>
			G30/G31    28-30/37 mbar <input type="checkbox"/>

Figure 2

# 1.3 Drawings



**Ditta:** **FORNI CEKY**      Codice: **QUADRATO**

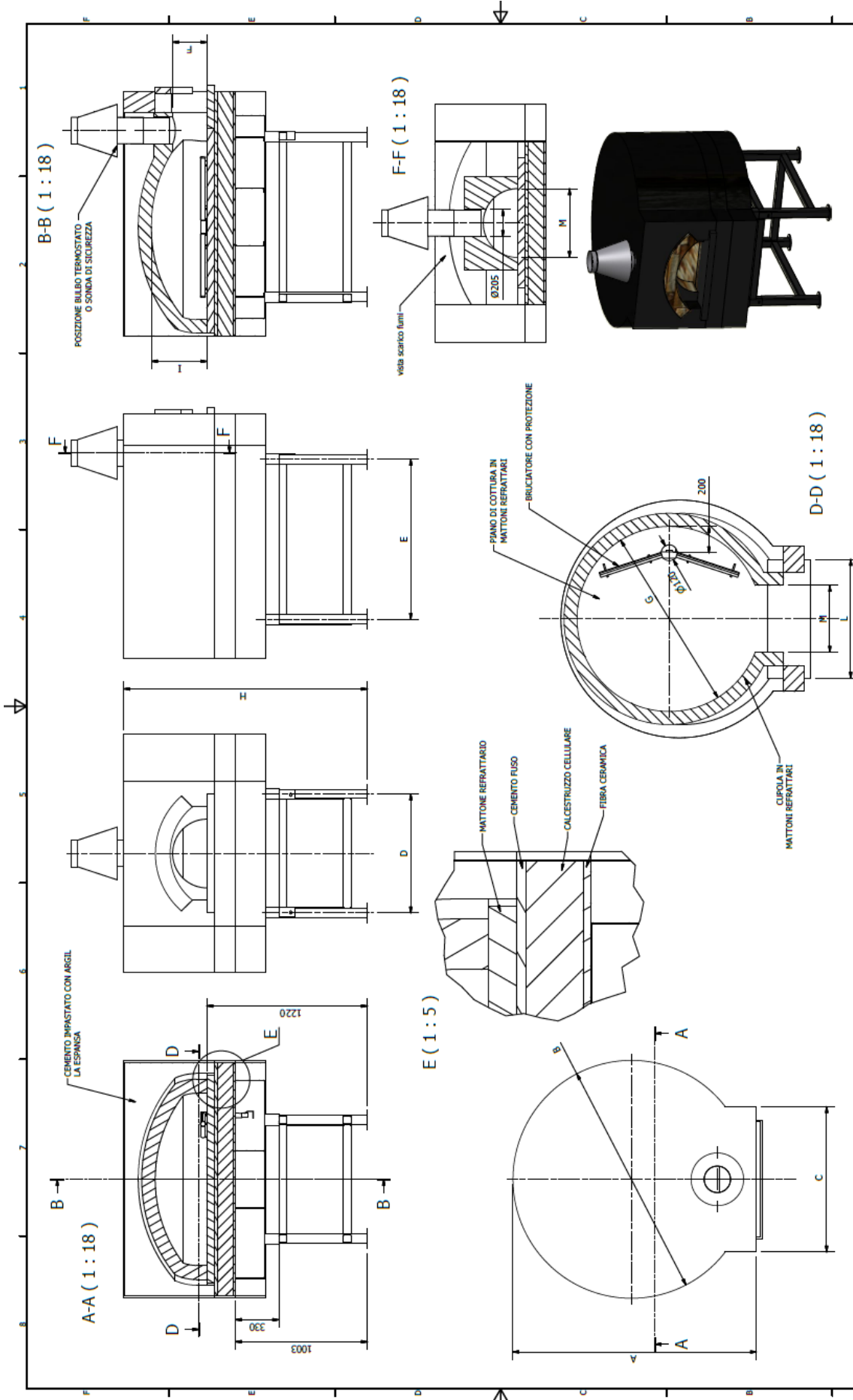
**Tipor:**      Denominazione: **MASTER QUADRATO**      Scarlar

**Materiale:**      **MASTER QUADRATO**

**Tratt.sup.:**      Data: **05/03/2014**      Disegnato da:

I prodotti sono realizzati artigianalmente - le misure possono subire variazioni

Diámetro interno	A	B	C	D	E	F	G	H	I	L	Numero di pizze (legna)	Numero di pizze (gas)
100	1400	1440	810	810	520	260	1000	1850	420	900	4	6
120	1600	1640	1220	1210	520	260	1200	1850	420	900	6	9
140	1800	1840	1640	1630	520	260	1400	1850	420	900	8	11
160	1800	1840	1640	1630	520	260	1400	1850	420	900	10	13
180	1900	1940	1720	1710	520	260	1500	1850	420	900	12	15
170	2150	2150	1220	1210	520	260	1700	2100	420	900	17	7

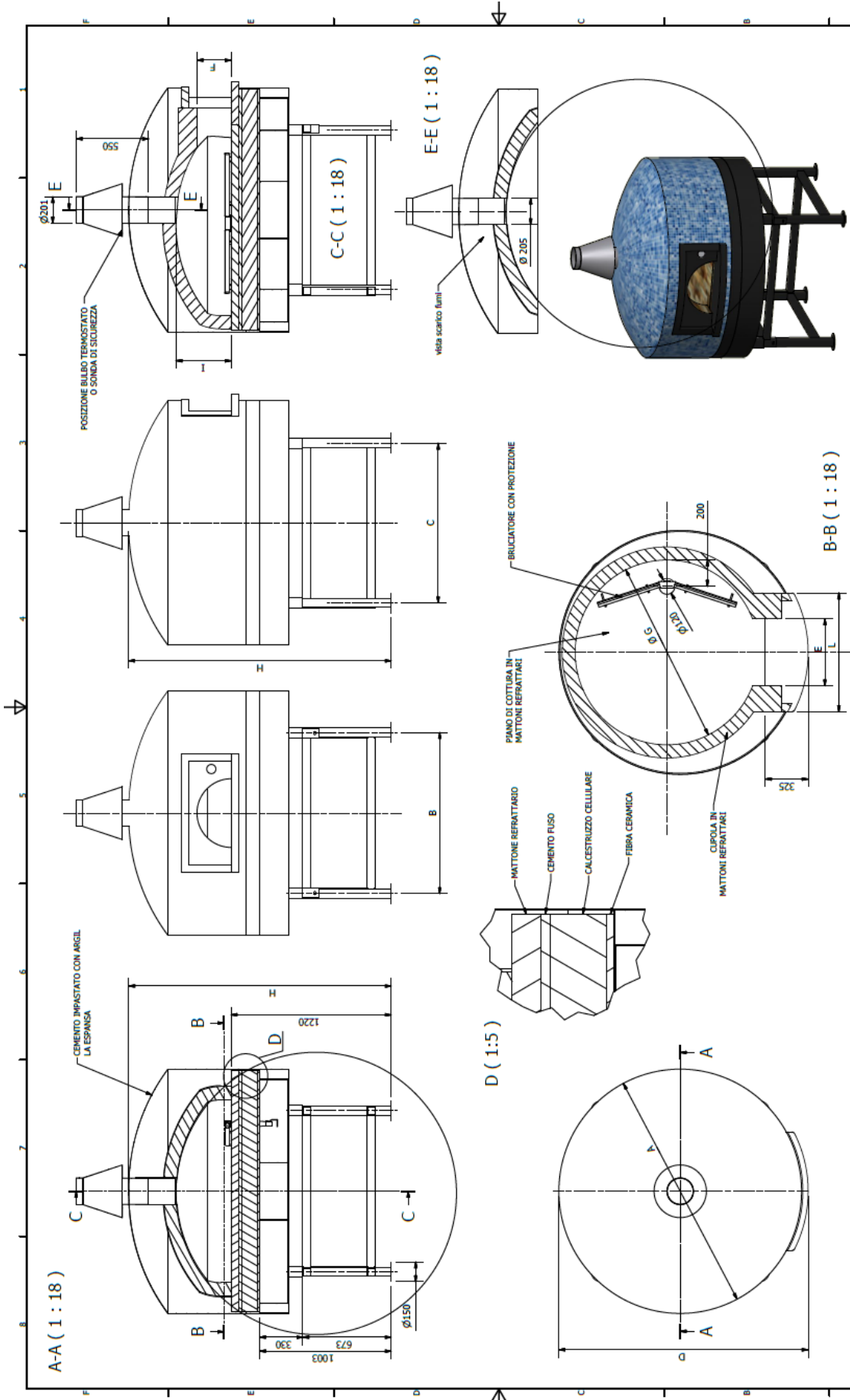


**Ditta :** FORNI CEKY  
**Tip:** ROTONDO  
**Denominazione :** MASTER ROTONDO  
**Materiale:**  
**Tratt.sup.:**  
**Data:** 06/03/2014  
**Disegnato da:**  
**Codice:** ROTONDO

I prodotti sono realizzati artigianalmente - le misure possono subire variazioni

Diámetro interno	A	B	C	D	E	F	G	H	L	M	Numero di pezzi (legna)	Numero di pezzi (gas)
120	1450	1600	1100	810	850	260	1200	1850	450	570	6	9
130	1650	1800	1300	910	950	260	1300	1850	450	600	6	9
140	1750	1900	1400	1010	1050	260	1300	1850	450	630	8	11
150	1850	2000	1500	1110	1150	260	1400	1850	450	660	10	13
160	1950	2100	1600	1210	1250	260	1500	1850	450	690	12	15
170	2050	2200	1700	1310	1350	260	1600	2100	450	720	14	17





**Ditta :** **FORNI CEKY** Codice: GRANVOLTA

**Tipo:** Scala:

**Denominazione :** **MASTER GRANVOLTA**

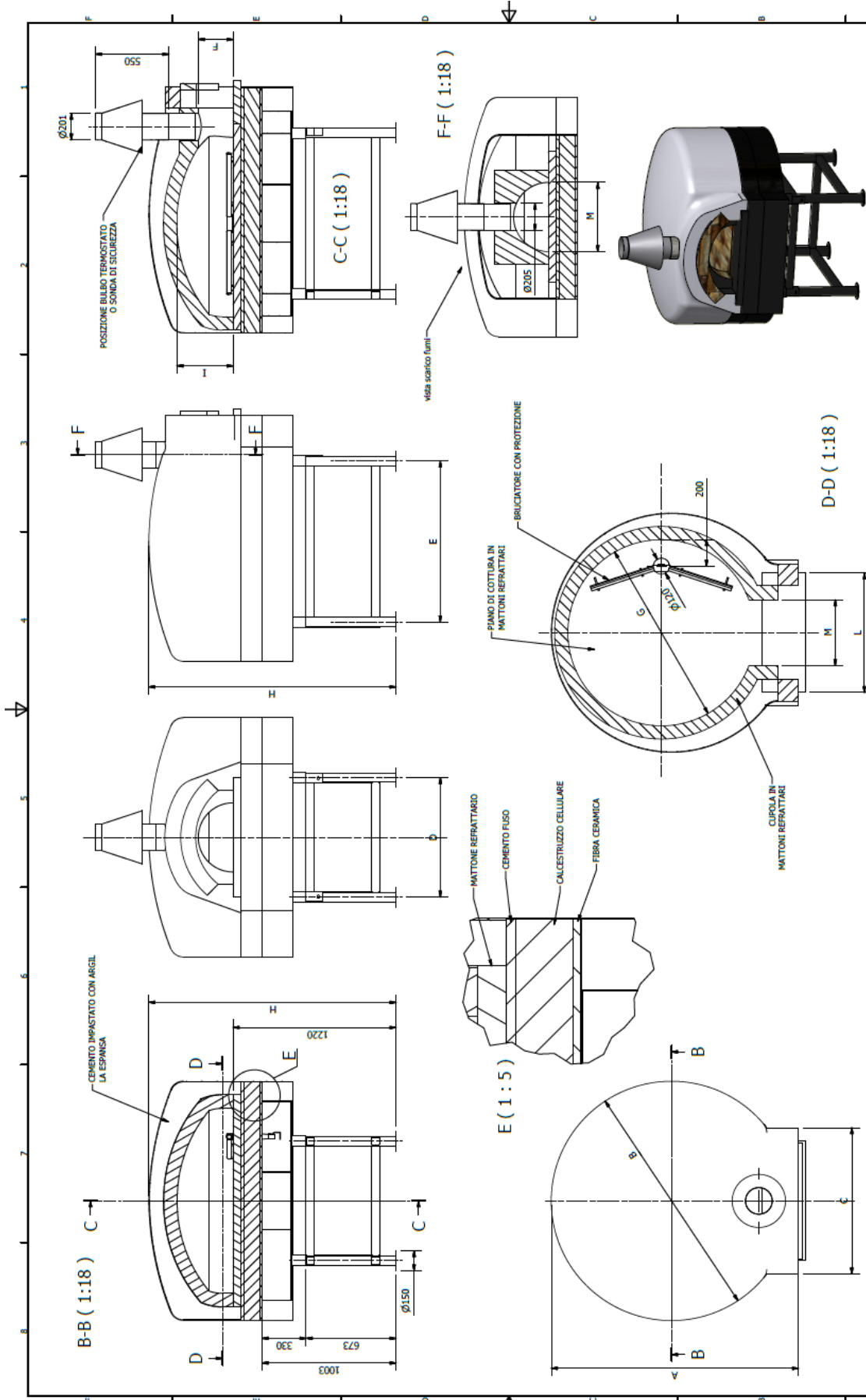
**Materiale:**

**Data:** 22/02/2014 Disegnato da:

I prodotti sono realizzati artigianalmente - le misure possono subire variazioni

Diametro interno	A	B	C	D	E	F	G	H	L	Numero di pizze (legna)	Numero di pizze (gas)
100	1450	610	1500	1000	500	250	1000	1500	400	4	6
110	1550	650	1600	1100	550	275	1100	1650	450	5	7
130	1750	720	1710	1300	620	300	1300	2000	500	8	11
140	1850	760	1810	1400	670	325	1400	2150	550	10	13
150	1950	800	1910	1500	720	350	1500	2300	600	12	15
170	2150	870	2020	1700	800	390	1700	2600	700	17	21





**Ditta:** **FORNI CEKY** Codice: SFERA

Tip: Denominazione: **MASTER SFERA** Scarlat

Materiale: **MASTER SFERA**

Tratt.zupp: Data: 03/03/2014 Disegnato da:

I prodotti sono realizzati artigianalmente - le misure possono subire variazioni

Numero di pizze (ogni)	N	M	L	G	H	F	E	D	C	B	A
4	520	520	900	420	1850	260	810	810	980	1400	1450
6	520	520	900	420	1850	260	810	810	1100	1600	1650
8	520	520	900	420	1850	260	810	810	1100	1600	1650
11	520	520	900	420	1850	260	810	810	1100	1600	1650
12	520	520	900	420	1850	260	810	810	1100	1600	1650
15	520	520	900	420	1850	260	810	810	1100	1600	1650
17	520	520	900	420	1850	260	810	810	1100	1600	1650

#### 1.4 Technical data

Models	Square Round Pentagonal Granvolta Spherical			
	CB 12B – models 100 120 130		CB 14B – models 140 150	
Rated thermal input	27 kW		28.5 kW	
Gas connection ISO 7-1	¾"		¾"	
Category	II 2H3+		II 2H3+	
Type of fabrication	A1 – B11BS		A1 – B11BS	
Factory setting	G20 20mbar			
Connection pressure	G30/G31: 30/37 G20: 20			
Total gas consumption calculated with the Hi calorific value lower than 15C° and 1013 mbar	G30 (Kg/h) 2.12	G20 (m³/h) 2.86	G30 (Kg/h) 2.25	G20 (m3/h) 3.02
Rated power supply	220÷240 VAC @ 50/60 Hz			
Absorbed power: 2 VA	Absorbed power: 2 VA			
Internal fuse: 2A FAST type	Internal fuse: 2A FAST type			
Operating temperature: -20 , +60 °C	Operating temperature: -20 , +60 °C			
Humidity: 95% maximum at +40 °C	Humidity: 95% maximum at +40 °C			
Protection degree: IP00	Protection degree: IP00			
Adjustment range: 100 , 500 °C	Adjustment range: 100 , 500 °C			
Measuring range: 0 , 550 °C	Measuring range: 0 , 550 °C			
Outputs: - lighting lamp:	max. 0.5 A cos j <sup>3</sup> 0.4			
Maximum cable length: 1 m	Maximum cable length: 1 m			

#### CB 12

Gas	Device inlet pressure	MAX heat input	Nozzle diameter	Pilot nozzle diameter	Primary air adjustment bushing (distance H)
Initials	mbar	kW	1/100 mm	1/100mm	mm
G20	20	27	400	40	10
G30	29	27	260	21	20

#### CB 14

Gas	Device inlet pressure	MAX heat input	Nozzle diameter	Pilot nozzle diameter	Primary air adjustment bushing (distance H)
Initials	mbar	kW	1/100 mm	1/100mm	mm
G20	20	28.5	420	40	10
G30	29	28.5	265	21	41

## II GENERAL INSTRUCTIONS

### 2.1 Place of installation

The user must ensure that the installation complies with local regulations. The equipment must be installed only by qualified personnel and authorised by the manufacturer, which must follow the safety rules in force at the place of installation. Each routine maintenance operation (for example, checking the gas feeding tubing) and extraordinary maintenance (any adjustment to another gas feeding tube) must be performed only by qualified personnel. The gas oven is of B11BS type and, therefore, equipped with a draught diverter to ensure a correct and safe evacuation of the products of combustion. Check periodically its conditions and, if necessary, replace defective parts with original ones.

The device must be installed in a well ventilated room; if possible, underneath an extractor hood that can ensure the complete evacuation of combustion gases, or connected directly to the flue. For the sections of the ventilation openings, refer to UNI-CIG7722-7723-8723 and the Ministerial Decree of 12/04/1996.

Make sure that the air flow necessary for combustion is ensured by a minimum area of  $0.5 \text{ m}^2$  (lower part of the oven) and a proper air recirculation in the upper part through a minimum ventilation of a square meter.

The oven must be positioned so as not to affect the accessibility during maintenance interventions. After installation, rigorously check the ventilation surfaces above. The air flow needed for combustion is  $54 \text{ m}^3/\text{h}$  for models with an internal diameter of 100-120-130. The air flow required for models 140-150 is  $57 \text{ m}^3/\text{h}$ . The minimum distances to be maintained between the device and the adjacent walls are of 2 cm on each side.

### 2.2 Gas connection

The connection to the gas mains must be made according to UNI-CIG 8723. For all other European countries, first refer to the agency that supplies gas. For the overall spaces required as in the connection data, see the above tables.

Connection to the gas supply must be made using rigid or flexible tubing made exclusively of metal, with proportionate sections. Between the gas mains and each device place a shut-off valve in a position such as to allow an easy handling and closing when the equipment is not operating. If using a safety hose made of metal, make sure that it does not go near hot spots and that it is freely connected. After having installed the oven, test the connections for leaks using the leak detector spray or other foaming substances, and make sure they do not cause corrosion. The joints of the copper tubing shall be made by means of mechanical couplings without seals.

## III COMMISSIONING

The commissioning of the equipment should be performed only by qualified personnel. Before commissioning, make sure that the gas characteristics, such as the category and the type of gas installed correspond to the family and the group of gases. Otherwise, see paragraph 'Transformation or adjustment to other types of gas'.

### 3.1 Installation specifications

- The ignition devices are safety devices. Their tampering cancels any warranty and liability.
- The system is designed to remain at operating speed for less than 24h (system for non-permanent operation). Achieving this limit causes a regulation shut-down to enable the device to check its efficiency.
- Connect and disconnect the device only when there is no voltage.

### 3.2 Electrical installation

- Observe the applicable national and European standards (e.g. EN60335-1/EN 50165) on electrical safety;
- The gas models with detection electrode may be provided with a device for recognising polarity. Failure to respect this phase-neutral polarity causes a non-volatile lockout at the end of the safety time;
- Before commissioning, check the cables. Wrong cable connections can damage the device and compromise the safety of the system;

- Make sure there is a good connection between the ground terminal of the device, the metal frame of the burner and the grounding of the electrical system;
- Avoid putting the detection cable together with the power or ignition cables;
- Use a cable and a detection electrode, which are heat resistant, well insulated to ground and protected against condensation or water in general;
- Use an ignition cable as short and straight as possible and keep it away from other conductors in order to minimise the emission of interference (maximum length of less than 2m and insulation voltage > 25 kV). In case of phase-neutral mains with earthed neutral or phase-phase mains (with earthed star-shaped centre) the device will operate the same by means of a built-in resistor. In case of "partial" short circuits or dispersions between phase and earth, the voltage on the detection electrode can be reduced until causing the lockout of the device due to lack of flame signal.

### 3.3 Checks at commissioning

Check the device at its first commissioning, after each revision and when the system has been idle for a long time. Before any ignition, make sure the combustion chamber is free from gas, and then check the following:

- If the start attempt is made without gas supply, make sure there is no lockout at the end of the safety time;
- By interrupting the gas flow with the device at operating speed, within 1s the gas supply to the valves is interrupted and, after a cycle repetition (or more cycle repetitions up to a maximum of 10, depending on the settings), the device makes a lockout;
- The timing and the cycle are consistent with those reported for the type of device used;
- The level of the flame signal is high enough (see Fig.4 for the measuring method to be used);
- The ignition electrodes are adjusted permanently for an air discharge distance between 2 and 4 mm;
- The intervention of limiters or safety devices causes the lock or safety stop of the device, in accordance with the type of application and procedures provided.

### 3.4 Check of the supply pressure

Before commissioning the device, it is necessary to check, on the characteristics plate and the additional plate, if the device is designed for the type of gas and the category of gas present on site. The supply pressure is measured by means of the equipment in operation using a pressure meter for liquids such as a "U" pressure gauge (minimum resolution 0.1 mbar). To perform this check, connect the "M" manometer to the "P" inlet pressure outlet of the gas valve, after having reached it and removed the plug of the "P" outlet. (Fig. 4). Measure the supply pressure. If it is not included within the range of values indicated in the following table, under no circumstances will the commissioning of the device be possible. The gas supplier must be informed.

Figure 3

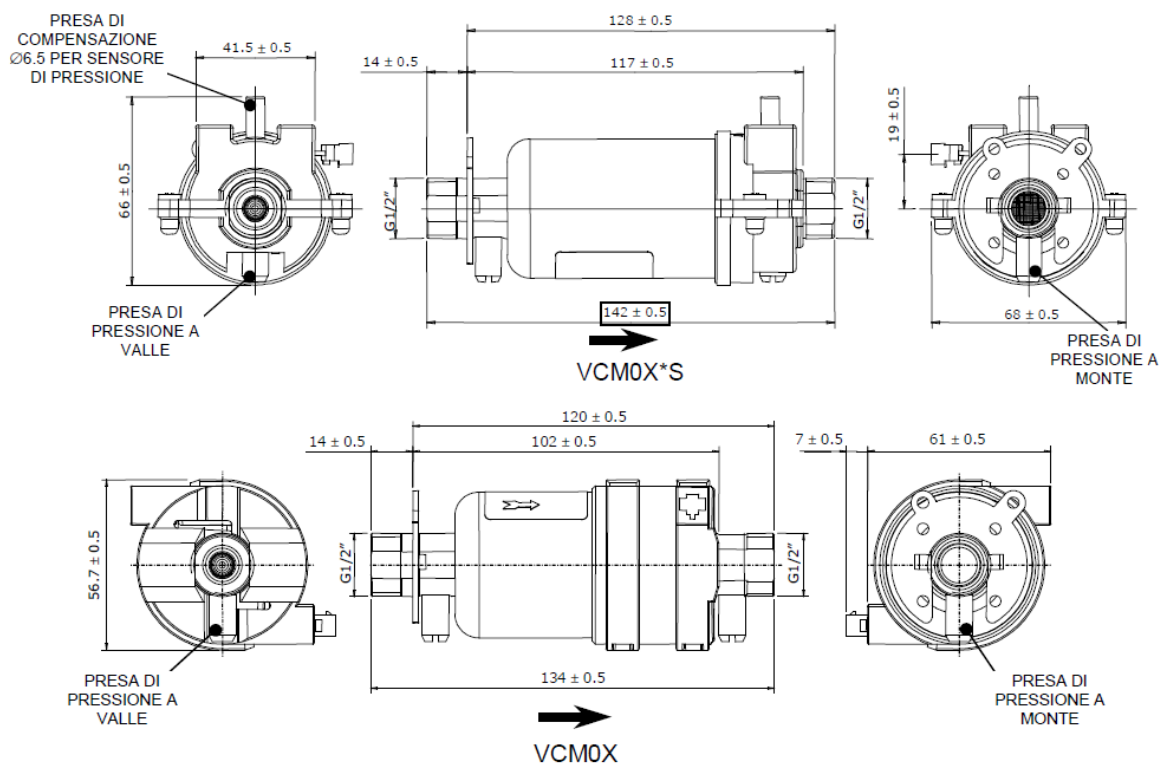
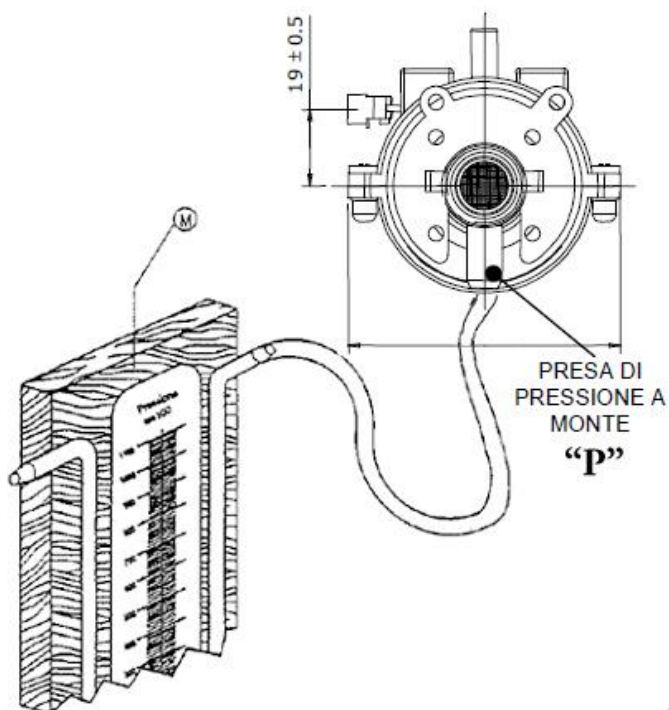


Figure 4

Type of gas	Gas pressure (mbar)		
	Normal	Minimum	Maximum
Methane gas H G20	20	17	25
GPL gas G30/G31	28-30/37	20/25	35/45

After having measured the supply pressure, disconnect the hose, remove the "M" pressure gauge and tighten the seal screw. Then, reset the control panel of the oven.

### 3.5 Transformation or adjustment to another type of gas

This adjustment must be performed by qualified personnel. For the adjustment to another type of gas, refer to the technical data (table of nozzles and primary air regulation) by replacing the nozzles of the main burner and pilot burner. After these operations, it is essential to apply a new nameplate containing the data relating to the new gas installed.

#### 3.5.1 Replacing the nozzles

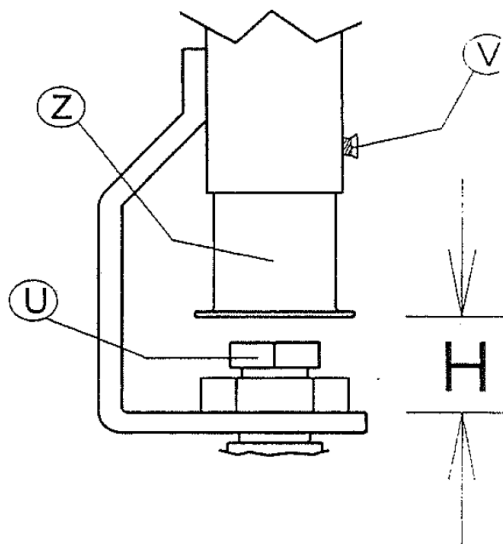


**WARNING:** Perform this operation only after having closed the gas shut-off valve upstream of the device.

### Main burner of the oven

Perform, in order, the following operations:

- Loosen the V screw.
- Shift the Z bushing.
- Remove and replace the U nozzle with the nozzle provided for the new type of gas.
- Adjust the Z bushing to the distance corresponding to the new installation (see data table: adjustment of primary air bushing) and tighten the V screw.



**WARNING!** After each operation of adjustment to the new gas, seal the device.

#### 3.5.2 Check and regulation of the primary air (only for B11BS models)

The primary air is considered accurately regulated when it is guaranteed, with a certain confidence, that the flame does not go out when the burner is cold and there is no backfire when the burner is hot.



**ATTENTION!** IT IS ABSOLUTELY FORBIDDEN TO PUT THE FLUE GAS THERMOSTAT OUT OF SERVICE, WHICH IS POSITIONED IN THE FUME HOOD.

In case of malfunction of the flue gas thermostat, it must be replaced only with original parts, at the same temperature for intervention.

### 3.5.3 Adjusting the minimum

The valve is equipped with an automatic detection function of the minimum, which calculates the correct setting for the minimum pressure sufficient to maintain the burner supplied. This function can be turned off and the minimum can be adjusted manually. To make adjustments for both the automatic mode and for the manual one, refer to Section 4.4 in the Table on Page 19. The adjustments for the minimum in the manual mode are determined by the "L1 First level of modulation". However, the pressure must be detected by the installer and in no case should it be less than the values below:

- **G30/G31:** 8.0 mbar
- **G20:** 4.0 mbar

## IV INSTRUCTIONS FOR USE

### ATTENTION!

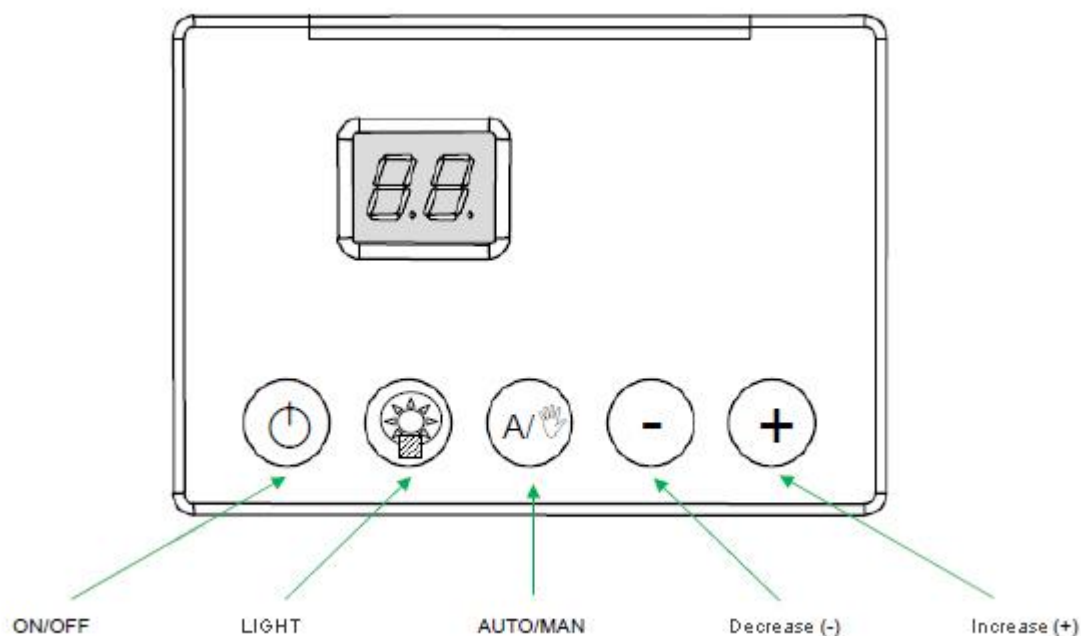
THE DEVICE IS INTENDED FOR COLLECTIVE USE AND IT MUST BE USED BY TRAINED PERSONNEL.

ALL ROUTINE MAINTENANCE AND REPAIR OPERATIONS CAN BE PERFORMED ONLY BY QUALIFIED INSTALLERS.

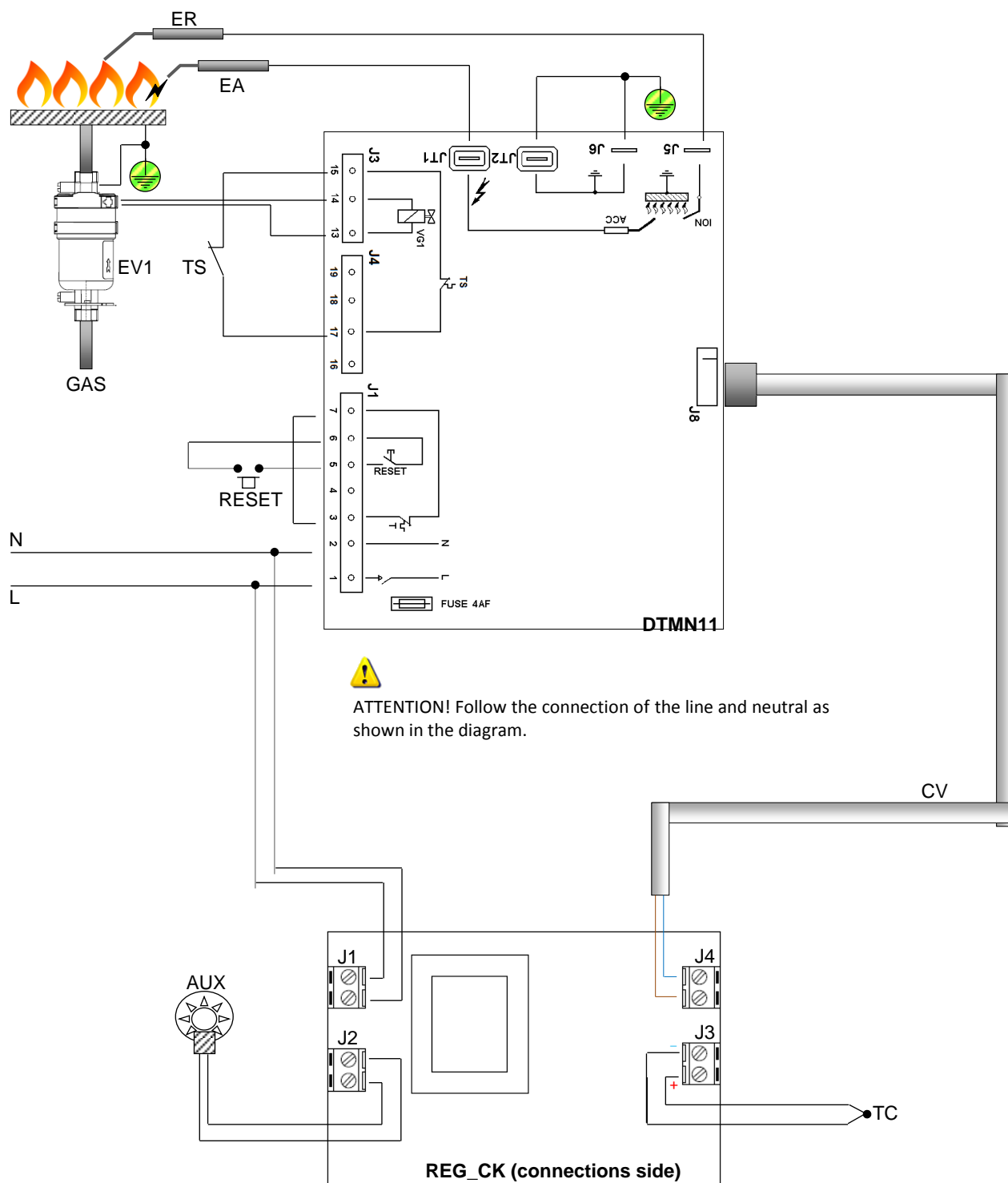
ALL INSTALLATION, IMPLEMENTATION AND MAINTENANCE OPERATIONS, IN PARTICULAR GAS CONNECTION AND COMMISSIONING, MUST BE PERFORMED ONLY BY INSTALLERS AUTHORISED BY THE MANUFACTURER, IN COMPLIANCE WITH THE APPLICABLE NATIONAL STANDARDS.

WE RECOMMEND PERIODIC CHECKS OF THE DEVICE, PERFORMED BY A QUALIFIED TECHNICIAN IN ORDER TO KEEP PERFECT EFFICIENCY. FOR THIS PURPOSE, IT IS HIGHLY RECOMMENDED TO SIGN A MAINTENANCE AGREEMENT.

### 4.1 Layout of the device



## 4.2 Connection diagram



### Legend

REG_CK	Thermoregulation device	LIGHT	Oven light
DTMN11	Flame ignition and control device	ER	Detection electrode
EV1	BRAHMA gas valve, type VCMxx	EA	Ignition electrodes
TC	Thermocouple / Temperature sensor	CV	Communication cable DTMN11 ↔ REG_CK
RESET	Flame control release button	TS	Safety thermostat

### WARNING!

Before starting the oven, make sure there is nothing that blocks the air flow to the burner and that the exhaust duct of the combustion products is not clogged and works efficiently.



### 4.3 Operation and first ignition

The device can work in two different modes, which will be described below.

#### **AUTOMATIC MODE**

This operational mode allows bringing the temperature of the oven to the set point using the "-" and "+" buttons. The REG\_CK device will constantly detect the oven temperature by means of the thermocouple and will communicate to the ignition/flame control device the power level to be implemented on the gas valve in order to reach the set point in a controlled manner.

The automatic control is handled by a PI controller (Proportional-Integral), whose parameters can be changed using the appropriate menu (See section "*Changing the operating parameters*").

#### **MANUAL MODE**

This mode allows implementing the manual heating of the oven by selecting the power of the flame between 5 possible levels, using the "-" and "+" buttons.

The levels can be changed only by accessing the appropriate menu (See section "*Changing the operating parameters*") in order to avoid the use of power levels that are inappropriate for the oven.

### 4.4 Changing the operating parameters

Changing the operating parameters can only take place during the operation of the system (not in standby). The standard parameters are already pre-set and can be changed by the user or installer using the guidelines below.

To enter the edit menu, it is necessary to press the "LIGHT" button for at least 5 seconds during the operation of the device and then release it. The parameters can be changed using the decrease (-) and increase (+) buttons, while you can search the menu using the "AUTO/MAN" button.

If there is no change/confirmation of the parameters, after a time-out of about 5 minutes, the program will exit the menu without saving the data. The parameters are saved only at the end of the procedure for changing them.

Below is the menu of the parameter change, depending on the mode of operation.



The parameters that are changed via the interface are only temperature control parameters and have nothing to do with the safety parameters, which are pre-set and cannot be changed in any way by the user or installer.

Each numeric value associated to the adjustments listed below is related to an arbitrary scale of which minimum and maximum are listed herein. The numerical values are not the expression of measuring units such as mbar or other.

## AUTOMATIC mode

Display	Parameter / Description						
	<p><b>1) "tC" – Control time</b> The "tC" parameter represents the execution time of the system's PI controller, expressed in seconds.</p> <table border="1"> <tr> <td>DEFAULT value [s]:</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Minimum value [s]:</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Maximum value [s]:</td> <td style="text-align: center;">30</td> </tr> </table> <p>Press the "AUTO/MAN" button to go to the next parameter.</p>	DEFAULT value [s]:	1	Minimum value [s]:	1	Maximum value [s]:	30
DEFAULT value [s]:	1						
Minimum value [s]:	1						
Maximum value [s]:	30						
	<p><b>2) "cP" – Proportional constant</b> The "cP" parameter represents the proportional constant of the system's PI controller.</p> <table border="1"> <tr> <td>DEFAULT value [/]:</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Minimum value [/]:</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Maximum value [/]:</td> <td style="text-align: center;">10</td> </tr> </table> <p>Press the "AUTO/MAN" button to go to the next parameter.</p>	DEFAULT value [/]:	5	Minimum value [/]:	1	Maximum value [/]:	10
DEFAULT value [/]:	5						
Minimum value [/]:	1						
Maximum value [/]:	10						
	<p><b>3) "ci" – Integral constant</b> The "ci" parameter represents the integral constant of the system's PI controller.</p> <table border="1"> <tr> <td>DEFAULT value [/]:</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Minimum value [/]:</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Maximum value [/]:</td> <td style="text-align: center;">10</td> </tr> </table> <p>Press the "AUTO/MAN" button to go to the next parameter.</p>	DEFAULT value [/]:	1	Minimum value [/]:	1	Maximum value [/]:	10
DEFAULT value [/]:	1						
Minimum value [/]:	1						
Maximum value [/]:	10						
	<p><b>4) "ti" – Integral time</b> The "ti" parameter represents the execution time of the integral calculation expressed in number of cycles of the PI controller; therefore, it is closely related to parameter no. 1.</p> <table border="1"> <tr> <td>DEFAULT value [/]:</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Minimum value [/]:</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Maximum value [/]:</td> <td style="text-align: center;">60</td> </tr> </table> <p>Example: if "tC = 2 [s]" and "ti = 3" the integral calculation will be made every: 2x3 = 6s. Press the "AUTO/MAN" button to go to the next parameter.</p>	DEFAULT value [/]:	2	Minimum value [/]:	1	Maximum value [/]:	60
DEFAULT value [/]:	2						
Minimum value [/]:	1						
Maximum value [/]:	60						
	<p><b>5) "MA" – Automatic minimum</b> The "MA" parameter represents the minimum value of power that the device can use during automatic operation. It will intervene in reaching or exceeding the set point temperature.</p> <table border="1"> <tr> <td>DEFAULT value [/]:</td> <td style="text-align: center;">16</td> </tr> <tr> <td>Minimum value [/]:</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Maximum value [/]:</td> <td style="text-align: center;">49</td> </tr> </table>	DEFAULT value [/]:	16	Minimum value [/]:	4	Maximum value [/]:	49
DEFAULT value [/]:	16						
Minimum value [/]:	4						
Maximum value [/]:	49						

Press the "AUTO/MAN" button to end the change process and save the set parameters.

To change the following data, switch to manual mode and press the "lamp" button for 5 seconds to access the settings listed below

<u>MANUAL mode</u>							
<i>Display</i>	<i>Parameter / Description</i>						
	<p><b>1) "L1" – First level of modulation</b> The "L1" parameter represents the value of the first level of modulation that can be used in manual mode.</p> <table border="1"> <tr> <td>DEFAULT value [s]:</td> <td>16</td> </tr> <tr> <td>Minimum value [s]:</td> <td>min_step_auto</td> </tr> <tr> <td>Maximum value [s]:</td> <td>50</td> </tr> </table> <p>Press the "AUTO/MAN" button to go to the next parameter.</p>	DEFAULT value [s]:	16	Minimum value [s]:	min_step_auto	Maximum value [s]:	50
DEFAULT value [s]:	16						
Minimum value [s]:	min_step_auto						
Maximum value [s]:	50						
	<p><b>2) "L2" – Second level of modulation</b> The "L2" parameter represents the value of the second level of modulation that can be used in manual mode.</p> <table border="1"> <tr> <td>DEFAULT value [s]:</td> <td>17</td> </tr> <tr> <td>Minimum value [s]:</td> <td>min_step_auto</td> </tr> <tr> <td>Maximum value [s]:</td> <td>50</td> </tr> </table> <p>Press the "AUTO/MAN" button to go to the next parameter.</p>	DEFAULT value [s]:	17	Minimum value [s]:	min_step_auto	Maximum value [s]:	50
DEFAULT value [s]:	17						
Minimum value [s]:	min_step_auto						
Maximum value [s]:	50						
	<p><b>3) "L3" – Third level of modulation</b> The "L3" parameter represents the value of the third level of modulation that can be used in manual mode.</p> <table border="1"> <tr> <td>DEFAULT value [s]:</td> <td>18</td> </tr> <tr> <td>Minimum value [s]:</td> <td>min_step_auto</td> </tr> <tr> <td>Maximum value [s]:</td> <td>50</td> </tr> </table> <p>Press the "AUTO/MAN" button to go to the next parameter.</p>	DEFAULT value [s]:	18	Minimum value [s]:	min_step_auto	Maximum value [s]:	50
DEFAULT value [s]:	18						
Minimum value [s]:	min_step_auto						
Maximum value [s]:	50						
	<p><b>4) "L4" – Fourth level of modulation</b> The "L4" parameter represents the value of the fourth level of modulation that can be used in manual mode.</p> <table border="1"> <tr> <td>DEFAULT value [s]:</td> <td>20</td> </tr> <tr> <td>Minimum value [s]:</td> <td>min_step_auto</td> </tr> <tr> <td>Maximum value [s]:</td> <td>50</td> </tr> </table> <p>Press the "AUTO/MAN" button to go to the next parameter.</p>	DEFAULT value [s]:	20	Minimum value [s]:	min_step_auto	Maximum value [s]:	50
DEFAULT value [s]:	20						
Minimum value [s]:	min_step_auto						
Maximum value [s]:	50						
	<p><b>5) "L5" – Fifth level of modulation</b> The "L5" parameter represents the value of the fifth level of modulation that can be used in manual</p>						

	<p>mode.</p> <table border="1" data-bbox="405 174 906 360"> <tr> <td>DEFAULT value [s]:</td> <td>50</td> </tr> <tr> <td>Minimum value [s]:</td> <td>min_step_auto</td> </tr> <tr> <td>Maximum value [s]:</td> <td>50</td> </tr> </table> <p>Press the "AUTO/MAN" button to end the change process and save the set parameters.</p>	DEFAULT value [s]:	50	Minimum value [s]:	min_step_auto	Maximum value [s]:	50
DEFAULT value [s]:	50						
Minimum value [s]:	min_step_auto						
Maximum value [s]:	50						
	<p><b>6) "MM" – Manual minimum</b></p> <p>The "MM" parameter represents the minimum value that can be used in regulating the 5 levels of power described above.</p> <table border="1" data-bbox="405 551 906 736"> <tr> <td>DEFAULT value [l]:</td> <td>16</td> </tr> <tr> <td>Minimum value [l]:</td> <td>4</td> </tr> <tr> <td>Maximum value [l]:</td> <td>49</td> </tr> </table> <p>Press the "AUTO/MAN" button to end the change process and save the set parameters.</p>	DEFAULT value [l]:	16	Minimum value [l]:	4	Maximum value [l]:	49
DEFAULT value [l]:	16						
Minimum value [l]:	4						
Maximum value [l]:	49						

## 4.5 First start

The factory settings of the device include, at first ignition, the stand-by and use of the manual mode with automatic detection of the minimum in order to allow the measurement at first start.

Below it is the description of the procedure to be followed at the first start of the burner to detect the value of the minimum (min\_step\_auto), used for the temperature control of the oven:

- 1) Press the "ON/OFF" button to start the burner (manual mode and level L1, factory settings);
- 2) Wait until it reaches the operating speed (end of the ignition phase) and remains in that position for a few seconds;
- 3) Press the "ON/OFF" button to turn off the command. The burner will stay on while the output power will be slowly decreased to detect the minimum value of modulation. At the end of the procedure, the system will return in stand-by mode and will save the measure "min\_step\_auto" value.



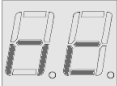






### IMPORTANT NOTE

If the function of the automatic calculation of the minimum (MM = 1) is activated, it is performed whenever the heat command is turned off from the "ON/OFF" button. For this reason, the burner may turn off for 50 seconds after cancelling the heat command.

At the end of the minimum calculation procedure, the automatic mode can be used, with the set-up of the 5 levels of modulation provided for the manual operation (their value can be adjusted to the minimum level of modulation calculated) or correcting the minimum value if it is lower than the one really used for the application.

## 4.6 Anomalies

Below are the possible displays in case of anomalies/locks of the safety device.

Display	Description
	<p><b>NC – Not Connected</b></p> <p>The REG_CK regulating device is not connected to the flame ignition and control device. Check the connection between the two devices (“CV” cable, see section “<i>Connection diagram</i>”).</p>
	<p><b>OT – Over Temperature</b></p> <p>Exceeding the intervention temperature at automatic reset (550 °C). The system will automatically restore the heat command when the temperature measured by the probe is lower than 520 °C.</p>
	<p><b>E2</b></p> <p>Lock due to failure to start the burner after reported ignition attempts. Check the detection electrode and its connection to the ignition/flame control device.</p>
	<p><b>E9 – EC – ED - EE</b></p> <p>Internal fault of the ignition/flame control device. Call for assistance.</p>
	<p><b>En</b></p> <p>Anomaly of the internal reference sensor. Call for assistance.</p>
	<p><b>Et</b></p> <p>Anomaly of the outside temperature sensor (thermocouple).</p> <p>If, after 30 minutes of operation of the burner the temperature is equal to that of the ambient (about 20°C), the system switches to OFF state displaying the anomaly, which can be restored only by disconnecting and connecting the electrical power to the system (electrical reset).</p>
	<p><b>EA</b></p> <p>Anomaly due to failure of starting the ignition cycle.</p>

## V CLEANING AND MAINTENANCE

The equipment must be cleaned in order to ensure a proper and long lasting life-span, besides perfect hygiene. To clean the device, follow the operations and warnings below:

- Ensure that the upstream gas supply valve is closed and that all burners are turned off;
- Let the equipment cool.
- Clean the steel parts with warm water and products that do not contain chlorine (bleach, hydrochloric acid, etc.);
- Clean the hob by removing any deposits.

- The venturi of the burner must be cleaned with soap and water or non-abrasive detergents;
- Never wash the equipment with direct high pressure jet of water.



**Warning! If the ignition and control devices show any handling difficulties, contact the manufacturer immediately and it will provide for maintenance.**

It is necessary to have the equipment checked at least once a year. For this reason, it is recommended to sign a service agreement that provides at least one inspection every year.

It is necessary to check that the holes in the main burner are always clean and in perfect condition.

- Pay particular attention to the periodic cleaning of the funnel, in accordance with current regulations.
- The oven is equipped with a flue gas thermostat which, in case of anomalies in the evacuation of the combustion products, will promptly interrupt the flow of gas to the burner.
- In case of intervention lock of the thermostat, press the button for manual reset of the thermostat.
- If the flue gas thermostat intervenes repeatedly, make sure the exhaust pipe of combustion products has no obstructions and contact the service centre.



**Warning! Do not tamper with the device detecting the correct flue gas exhaust. Failure or improper exhaust of combustion products can cause acute poisoning with Carbon Monoxide (CO).**



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