



MOD : BVR-29/N

Production code : DRAGO D2

06/2026

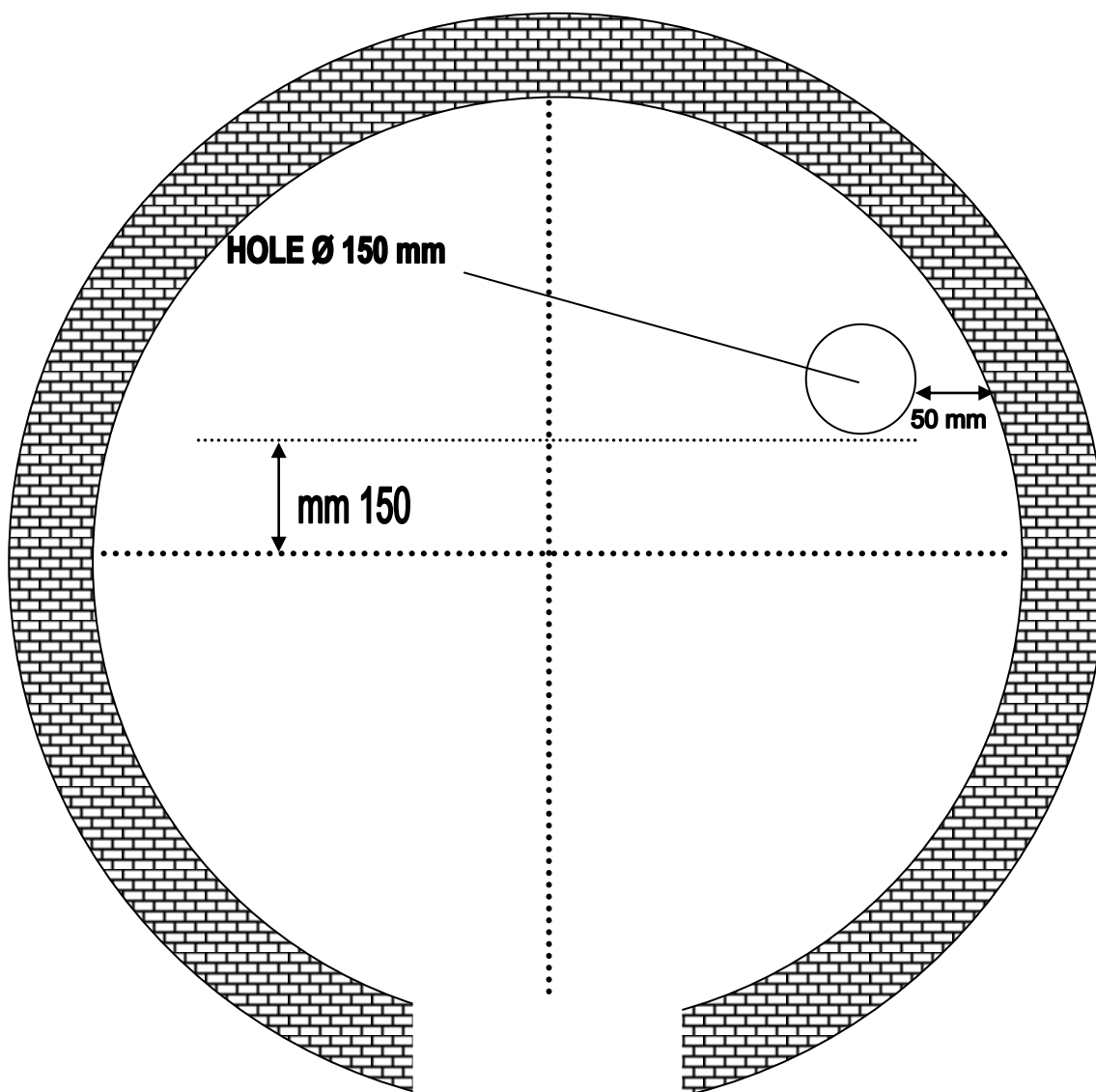
Installation and User Manual

BVR-29/N



DRAGO Burner Assembly Instructions

To transform a wood stove into a gas stove, the following operations must be performed:



- Indications of the position for the Drago burner inlet hole on the hotplate of the wood stove, viewed from above. The hole can be made either on the right or on the left.
- The methane gas must be delivered through a galvanized pipe Ø 1" or an equivalent copper pipe, next to the burner inlet hole, 5 cm from the ground.
Install the gas ON-OFF tap in a suitable position upstream.
- Install a 220V. 16A IEC interlocked socket (blue type) next to the oven, protected by an AUTOMATIC bipolar switch.
It is of vital importance to observe the phase-neutral connection.
- Remember to clean the flue to free it of any ash that might have been produced by the combustion of the wood.

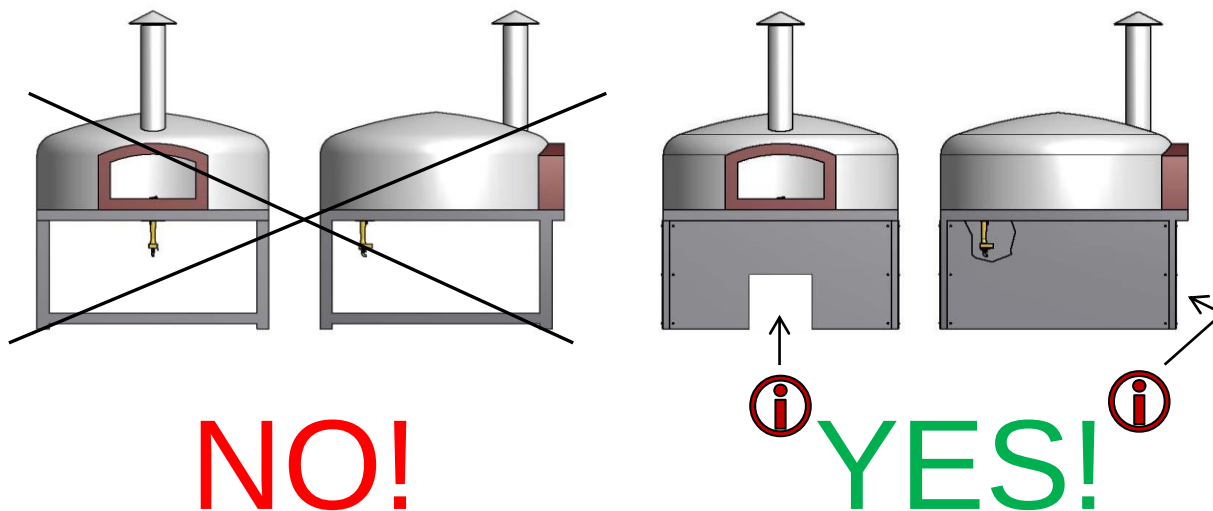
DRAGO BURNER FIXING FLANGE



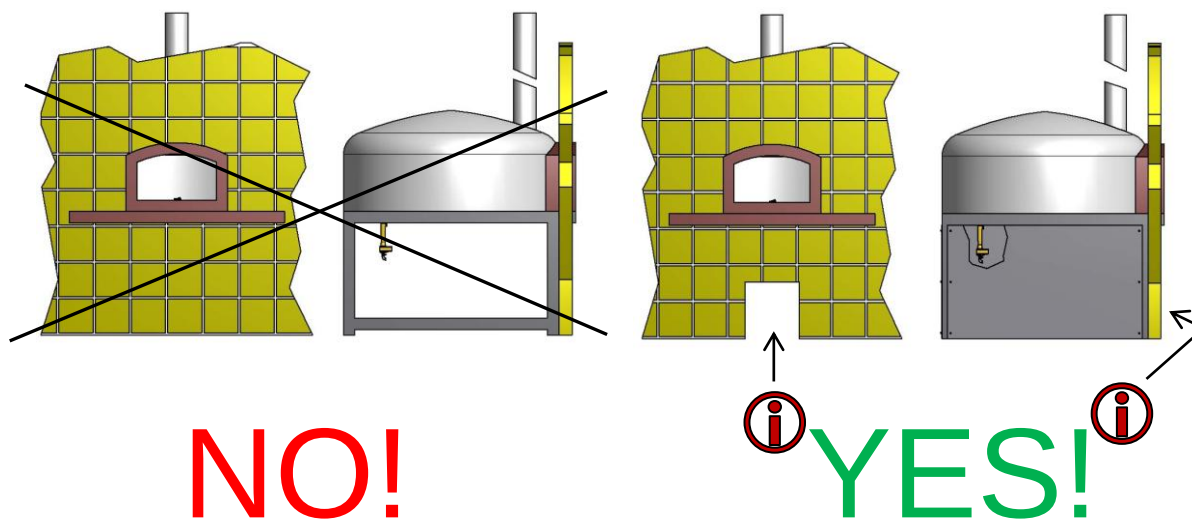
180 mm.

ASSEMBLY INSTRUCTIONS FOR DRAGO BURNER

OUTDOOR INSTALLATION



OUTDOOR INSTALLATION WITH OVEN CHAMBER ACCESS FROM INDOORS (INSIDE A ROOM)



IMPORTANT: For the burner to work properly, the external walls of the oven support frame should be **closed on all sides**. It is necessary to create **an air intake opening**, measuring at least 500 mm x 500 mm, located underneath the oven door/opening, as shown in the diagrams above. The reason for this is that the air must be taken from the same environment in which the oven chamber opens.

BURNER ID PLATE

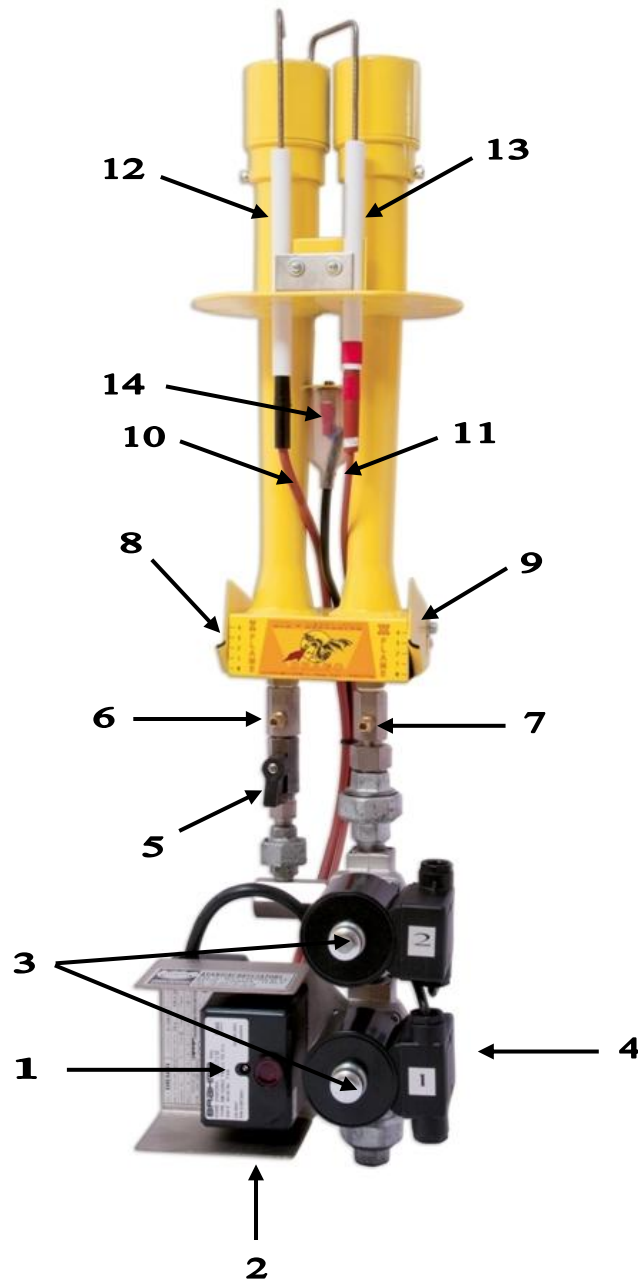
The ID plate shown below has been applied to the burner described in this manual.

MODELLO DRAGO		N. DI MATRICOLA		TIPO DI GAS	
ANNO DI COSTRUZIONE		POTENZA TERMICA DA 6		KW A 34 KW	
CATEGORIA ☐ I _{2E} ☐ I _{2E+} ☐ I ₃₊ ☒ II _{2H3+} ☐ II _{2H3B/P} ☐ II _{2E+3+} ☐ II _{2E3B/P}					
PAESI ☐ AT ☐ DE ☐ BE ☐ CH ☐ DK ☐ ES ☐ FI ☐ FR ☐ IE ☒ IT ☐ PT ☐ GB ☐ SE ☐					
PRESSIONE GAS DA mbar A mbar					
ALIMENTAZIONE ELETTRICA ~/220V 50-60Hz					
POTENZA ELETTRICA FINO A 100 W					

This plate must never be removed and must remain legible. In the event it is damaged, request a duplicate from **DIAMOND EUROPE**. The burner cannot be sold without this ID plate.

Modello:	<i>Model</i>
N. di matricola:	<i>Registration Number</i>
Tipo di gas:	<i>Type Of Gas</i>
Anno di costruzione:	<i>Year Of Manufacture</i>
Potenza termica:	<i>Thermic Power</i>
Categoria:	<i>Category</i>
Paesi:	<i>Countries</i>
Pressione gas:	<i>Gas Pressure</i>
Alimentazione elettrica:	<i>Electric Supply</i>
Potenza elettrica:	<i>Electric Power</i>

LIST OF PARTS FOR **DRAGO** BURNER



- 1) Control equipment
- 2) Multiple plug with 7 poles.
- 3) Fuel interception electro-valve.
- 4) Main pressure socket.
- 5) Regulation tap for 1st flame.
- 6) Pressure intake 1st flame.
- 7) Pressure intake 2nd flame.
- 8) Primary air regulator 1st flame.
- 9) Primary air regulator 2nd flame.
- 10) Flame ionization cable.
- 11) Flame ignition cable.
- 12) Flame ionization electrode.
- 13) Flame ignition electrode.
- 14) Automatic reset thermostat (110°C)

CORRECT POSITION OF THE ELECTRODES

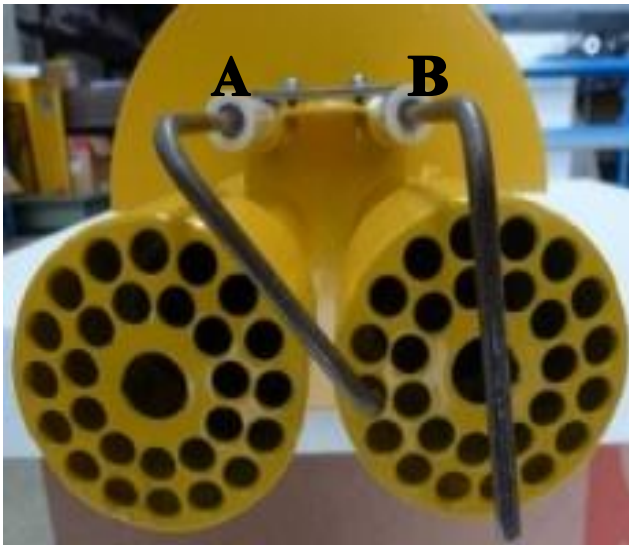


PHOTO 1

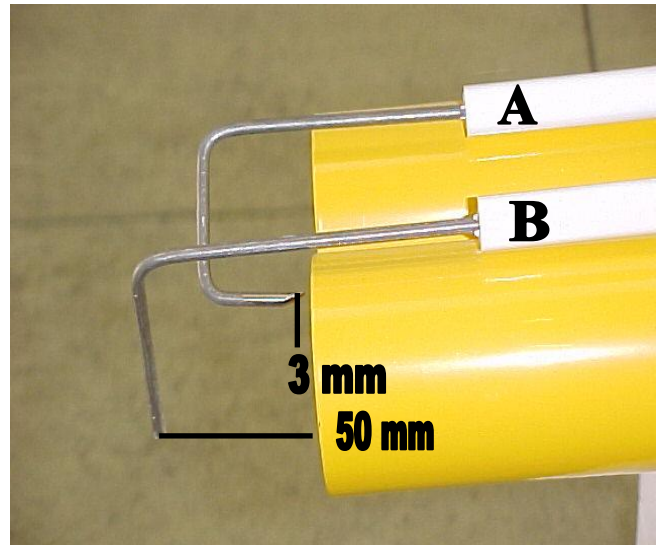


PHOTO 2

- A** Burner ignition electrode, the spark must unload in the centre of the four holes of the flame divider washer (see photo n. 1), the distance of the point of the electrode to the washer must be 3 mm (see photo n. 2).
- B** Burner flame detection electrode, the distance from the flame divider washer must be 50 mm (see photo n. 2).

Disposition of *DRAGO* standard nozzles using natural gas:

- Short flame nozzle hole $\varnothing$ 3,25.
- Long flame nozzle hole $\varnothing$ 4,00.

The pressure of the gas with the burner on must be 13 $\div$ 20 mbar.

Disposition of *DRAGO* standard nozzles using LPG:

- Short flame nozzle hole $\varnothing$ 2,50.
- Long flame nozzle hole $\varnothing$ 2,50.

The pressure of the gas with the burner on must be 30 $\div$ 35 mbar.

CHANGE GAS BURNER

(FROM NATURAL GAS TO GPL OR VICE VERSA)

In order to change the burner from natural gas to LPG, or vice versa, carry out the following operations:

1. Remove the piston pins of the start up and flame detection cable from the respective electrodes and remove the piston of the automatic reset thermostat (Photo 1 and 2).

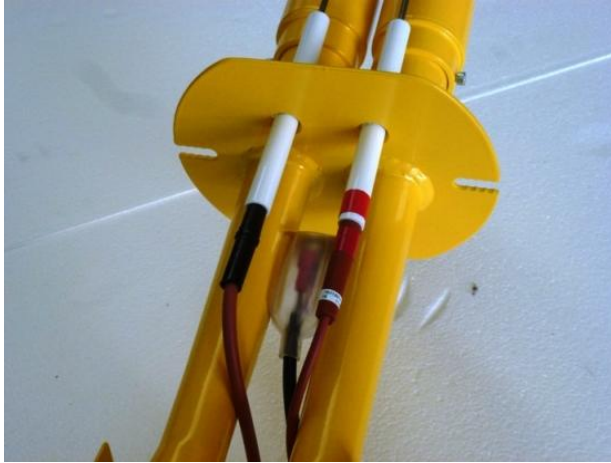


Photo 1



Photo 2

2. Unscrew the pipe unions. (Photo 3 and 4).

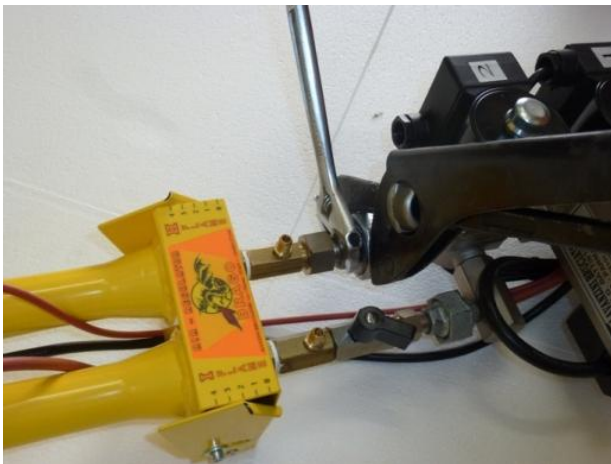


Photo 3



Photo 4

3. Remove the valve block from the burner. (Photo 5).
4. Unscrew the connections of the 1st flame. (Photo 6).



Photo 5



Photo 6

5. Unscrew the burner nozzle. (Photo 7)
6. Substitute the nozzle of the 1st flame. (Photo 8)



Photo 7



Photo 8

7. Carry out the same operation for the nozzle of the 2nd flame.

8. Replacement of the gas mixing head:

Loosen the screws with a size 4 Allen wrench and remove the flame trap replacing them with the relevant “natural gas” or “LPG” ones (see photos 9, 10 and 11).



Photo 9



Photo 10



Photo 11

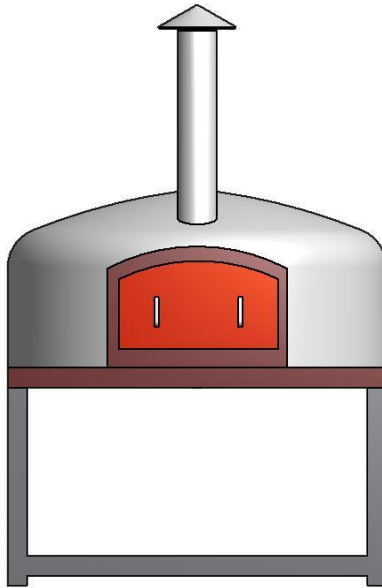
9. Screw all the parts again in the reverse sequence.

ASSEMBLY OF BURNER *DRAGO*

- By means of coring make a hole of Ø 150 mm from underneath the oven either on the right or left side, it is indifferent, at a distance of about 50 mm from the inside edge of the oven refractory and if possible decentralized about 150 mm towards the inside, as in the drawing attached.
- Make sure there is a border of about 40 mm in height inside the cooking top to shelter the burner entrance hole and prevent dirt falling inside and therefore, on the burner itself.
- Perforate and tap 8 MA. at 180 mm from the centre of the burner entrance hole (as in the drawing) and then screw n. 2 studs taking care to place the two 8 mm thick washers provided between the burner flange and the oven base in order to distance the burner and favour the entrance of the secondary air.
- From the accessories that can be requested it is also possible to order the simple burner fixing flange including studs of 8 MA or with steel tube of variable length to be inserted inside the oven top so that it comes out into the baking chamber for at least 30 mm.
- Make a hole of Ø 8 mm on the oven wall on the opposite side of the burner at about 100 mm above the cooking top, then insert the probe so that the end comes out inside the baking chamber for about 5 mm.
- Fix the external control panel DRAGO CONTROL if possible near the baking hatch and give power by inserting a main switch bipolar 220V. at 10A. with 2A fuse upstream.
- The burner must be connected to earth in accordance with the current laws.
- Do not exchange the phase with the neutral.
- The electric lines must be opportunely distanced from the hot parts of the oven.
- Fix the prewired 7 pole multiple plug to the burner block.
- Connect the fuel to the pipe union Ø ½” checking that the Ø of the pipes has been calculated with reference to the distance from the counter to the oven and that the accessories have been installed on the gas line as in accordance with the current regulations.
- In addition make sure that the chimney is perfectly clean, that the draught is correct and that there are the necessary exchanges of air inside the premises as foreseen by today's law for good combustion.

BURNER LIGHTING

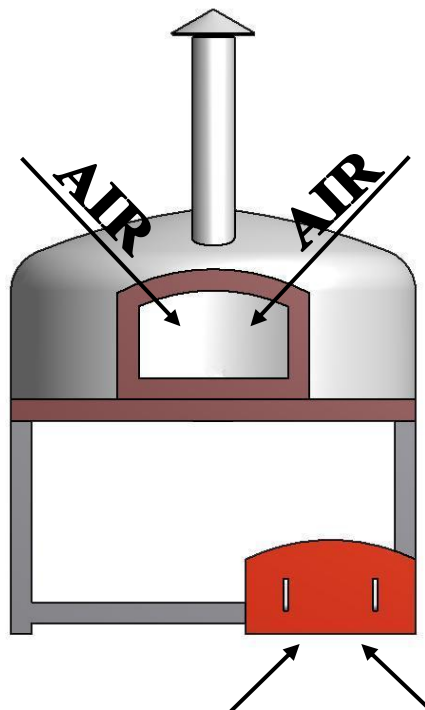
It is *important* that the oven door be OPEN both when turning the burner on and all the time is burner is running



IMPORTANT!!!

The door must be closed only *AFTER* the burner has been turned off

This because the open door creates the necessary draft for the chimney, and allows in the secondary air necessary for the burner.



IGNITION AND SETUP OF THE BURNER

- Check that all the gas taps are open, and if necessary allow the gas to escape from the tubing.
- Insert a pressure gauge on the main pressure socket of the burner and check for possible fuel leaks (by closing the gas inlet) and that the gas pressure is correct, both with the burner working and with the burner turned.
- Supply power to the burner and position the switch (or the thermostat) on 1st flame. Next, using the tap (as in photo 1) calibrate the required quantity of gas. Then, turn the primary air regulator of the 1st flame (as in photo 2) until you obtain a perfectly blue flame that is gentle and silent (the tip of the flame should be yellow to give light inside the oven).
- The 1st flame must be about 30 cm. tall and reach the center of the oven dome.

WARNING!: once the oven has reached the desired temperature (for example 250°C), it is necessary to check that when the burner is set on 1st flame, **the oven does not increase the temperature.**

If it does, turn the tap (photo 1) to decrease the flame until the temperature on the red display of the Drago Control remains stable and tends to drop so that the 2nd flame automatically turns on, to bring the oven back to the desired temperature.

This check is important to avoid burning the pizzas

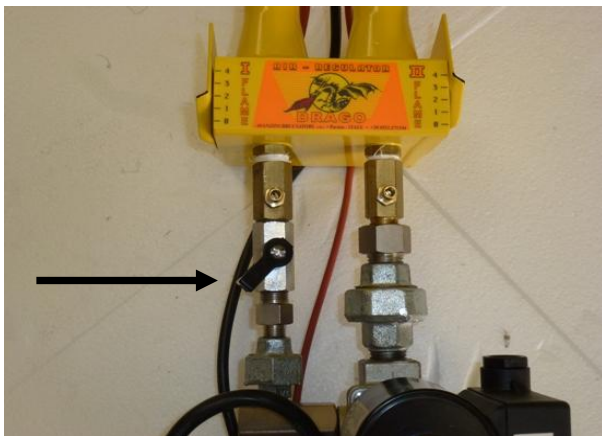


FOTO 1

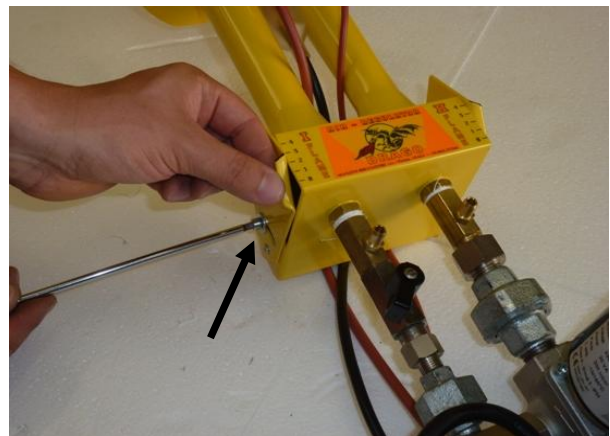


FOTO 2

- Position the Drago Control to make the 2nd flame turn itself on. To setup the flame, it is necessary to operate on the EV2 valve: unscrew the cap placed at the center of the solenoid valve and then, using a Ø 4 Allen wrench, turn (as in photo **3**) either clockwise (to decrease the quantity of gas) or anticlockwise (to increase the quantity of gas).
- When you have finished setting the calories per hour necessary for the oven, remember to screw the cap back on and then adjust the primary air on the 2nd flame torch (as in photo **4**).
- The calories per hour that are necessary for a correct operation of the oven are obtained when 1st flame and 2nd flame (burning together) reach the center of the oven dome. In general, when an oven (that has been turned off the day before) takes 60/80 minutes to reach the set temperature (the time range can vary depending on the oven measurements), we consider the burner to supply the correct amount of Kcal/h.

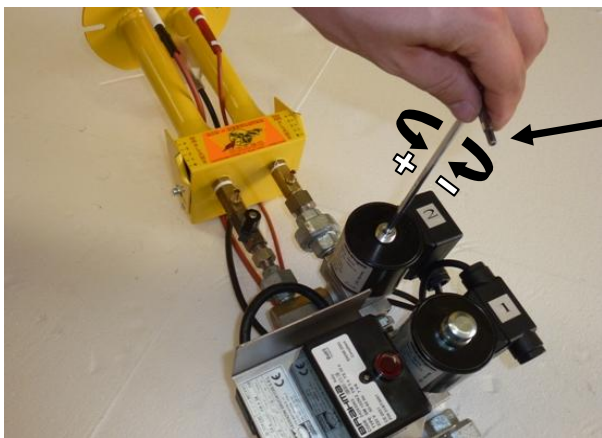


FOTO 3

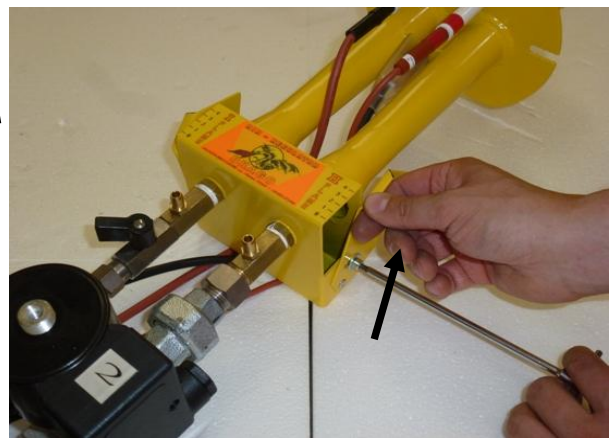


FOTO 4

LIST OF **DRAGO CONTROL** CONTROL PANEL FUNCTIONS



- 1) Mains switch.
- 2) 2nd Flame selector switch for manual use.
- 3) Push button to increase set temperature.
- 4) ON - OFF push button.
- 5) Push button to lower set temperature.
- 6) Led operating in 1st flame.
- 7) Led operating in 2nd flame.
- 8) Broken temperature probe led.
- 9) Burner blocked Led.
- 10) Unblock burner push button.
- 11) Push button for operating 2nd timed flame.
- 12) Red display internal oven temperature.
- 13) Green display set temperature.
- 14) Temperature detection probe.
- 15) Cable complete with 7-terminal plug for burner supply.
- 16) Cable complete with CEI 220V plug.
- 17) Wall fixing panel.

INSTRUCTIONS FOR USE OF THE DRAGO CONTROL (CONTROL PANEL)

- Give voltage to the Drago Control unit by inserting the blue plug provided into a socket CEI 220V. 16A. 50HZ.

The displays switch on: the red one shows the actual internal temperature of the oven, while the green one indicates the set temperature (if this is the first start up, 0°C appears on the display).

To start the burner, bring the green main switch (N. 1) to position **1**, the burner switches on and after a few seconds there will be a spark and the 1st flame together with the LED (N. 6) will fire up.

- During the first start up, the burner could block: this is signalled by the LED (N. 9) and to unblock it press the **RESET** push button (N. 10) with the green main switch on.

Make sure the position of selector (N. 2) is on **“A”** (automatic) to avoid the undesired start-up of the 2nd flame.

For the automatic ignition of the 2nd flame, press the  key (N. 3) for a few seconds and the green display will show the operating temperature you wish to set (usually 250°/270°C). This value will remain in the memory. When the LED (N. 7) lights up, it signals that the 2nd flame goes on.

The memorized temperature of the 2nd flame could, in certain situations, be too high. To position the burner on 1st flame, simply press  key (N. 4) and **OFF** will appear on the green display.

The 2nd flame will remain switched off until key  (N. 4) is pressed again .

- Keep in mind that the set temperature for the 2nd flame will be the operating temperature of the oven. This allows the burner to operate using the two flames: once the set temperature for the 2nd flame has been reached, the 2nd flame will switch off and only the 1st flame will remain switched on. In theory, the 1st flame should never switch off in order to guarantee light inside the oven.

This situation happens when the calories supplied by the burner in 1st flame are the same as the calories needed for the empty oven to maintain the set temperature of the 1st flame: in other words, the temperature must not increase but gradually and slowly tend to drop.

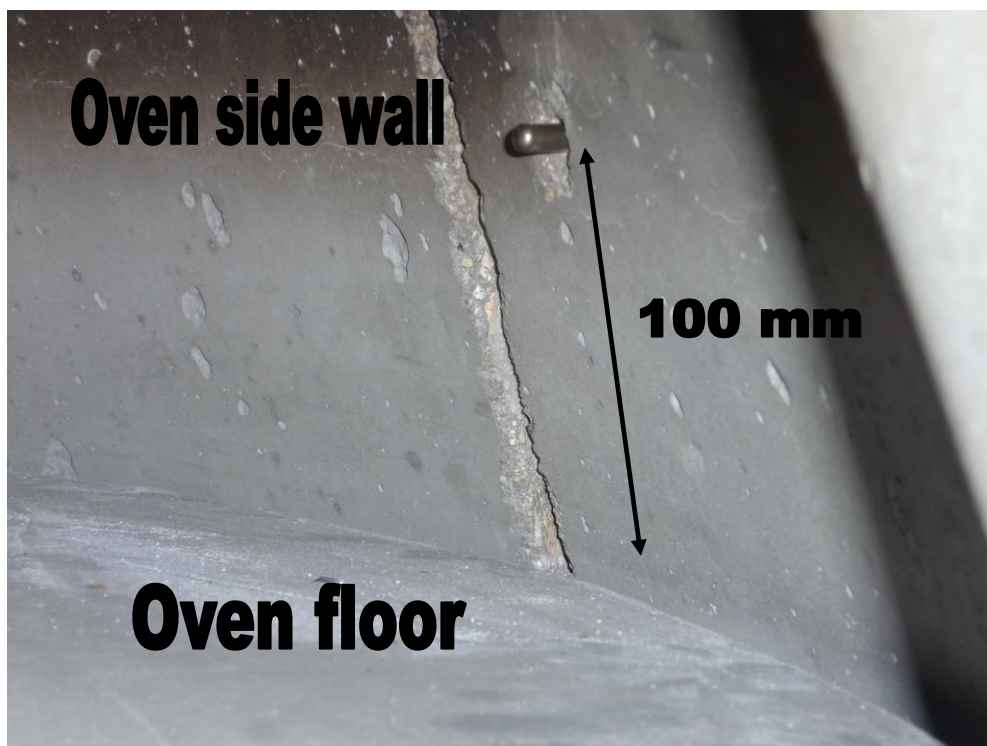
WARNING:

After the oven has reached the operating temperature (for example 250°C), check that when positioning the burner on 1st flame and blocking with the  switch the ignition of the 2nd flame, **the oven temperature does not increase**. If it does, it is necessary to modify the flame by acting on the tap of the 1st flame (see instructions for “Ignition and Setup of the burner”).

The factory setting for the temperature of the 1st flame is 400°C. Should the oven accidentally reach this temperature, the burner will switch off entirely.

To modify this memorized temperature limit, simultaneously press the 2 arrow   keys (N. 3, N. 5), the memorized temperature on the green display will flash, use arrow  or  to set a new memorized temperature. The maximum value which can be set is 500°C.

The temperature probe must be placed opposite the burner: it can be inserted through the oven floor or through the side wall, and must be about 10 cm. above the oven floor. The tip of the probe must protrude from the floor/wall no more than 3 mm. to avoid it becoming too sensitive to temperature variations (*see photo*).



INSTRUCTIONS FOR USING THE BOOSTER BUTTON:

- The Booster function allows the timed operation of the 2nd flame. It has the advantage of avoiding variations in the temperature set on the display, if maximum oven temperature needs to be reached quickly. By pressing the **Booster** button (No. 11) on the green display, “**t 2**” appears on the display; these are the minutes set in the factory. Then the countdown begins, starting with the 2nd flame, until it reaches zero with automatic switch-off.
- To interrupt the countdown, keep the **Booster** button (No. 11) pressed for a few seconds.
- If you want to memorise a different time from that set at the factory, you just need to press the **Booster** (No. 11) button and, as it flashes, the preset time can be varied with the  (No. 3) or  (No. 5) buttons until it reaches the required time, which will remain memorised.

N.B. If, during operation in Booster, the oven reaches the limit temperature set for the 1st flame, the burner will switch off completely.

In addition, it is possible to operate the 2nd flame manually, by acting on the selector switch (No. 2) and positioning it on “**M**”.

INSTRUCTIONS FOR **DRAGO CONTROL** CONTROL PANEL MANUAL OPERATION *(TEMPORARY ONLY)*:

In the case of electronic control panel breakdowns, the Drago burner can be used manually until the end of the evening.

1. Disconnect the control panel from the electricity supply by means of the mains switch located on the premises.
2. As shown in photo **N. 1** unscrew the 4 slot screws in order to open the control panel then unite two red connectors ,male and female (See photo **N. 2**).
3. Screw the cover back in place.
4. Reconnect the control panel to the mains by means of the mains switch on the premises.
5. Set the switch (No. 1) in position **I** to start the burner in 1st flame
6. Bring the selector switch (No. 2) into position **M** in order to operate the 2nd flame for the time required.

At the end of the evening, the switch (No. 1) must be set in position **“0”**“to turn off the burner completely.

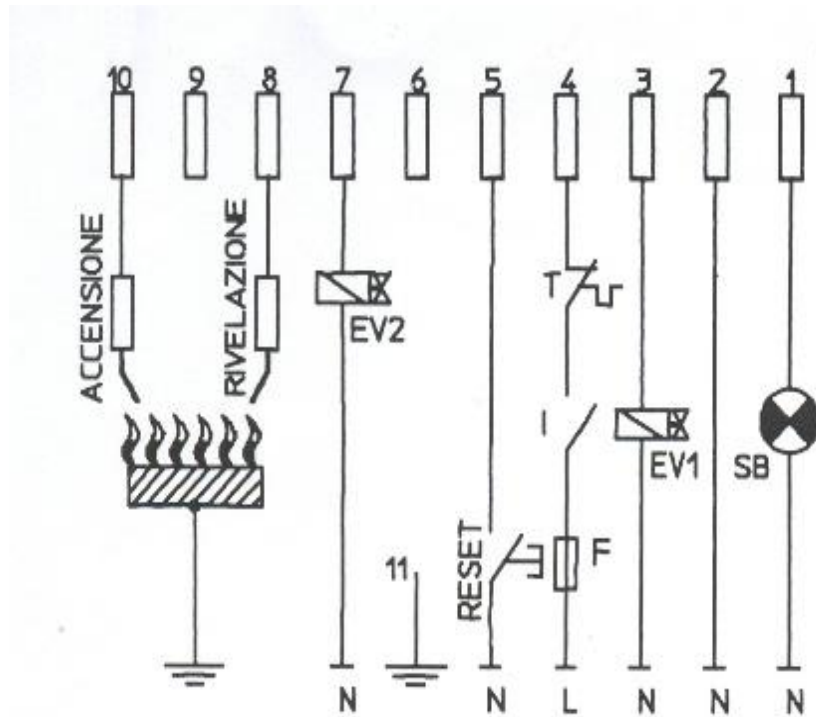


PHOTO 1



PHOTO 2

WIRING DIAGRAM



MULTI-POLE PLUG LEGEND

7-POLE PLUG	DESCRIPTION	WIRE N°
B ₄	2 ND FLAME CONTACT	6
S ₃		5
T ₂	STOPPAGE	4
T ₁	RESET BUTTON	3
N	NEUTRAL	2
⏏	EARTH	Yellow/Green
L ₁	PHASE	1

ELECTRICAL CONNECTION.

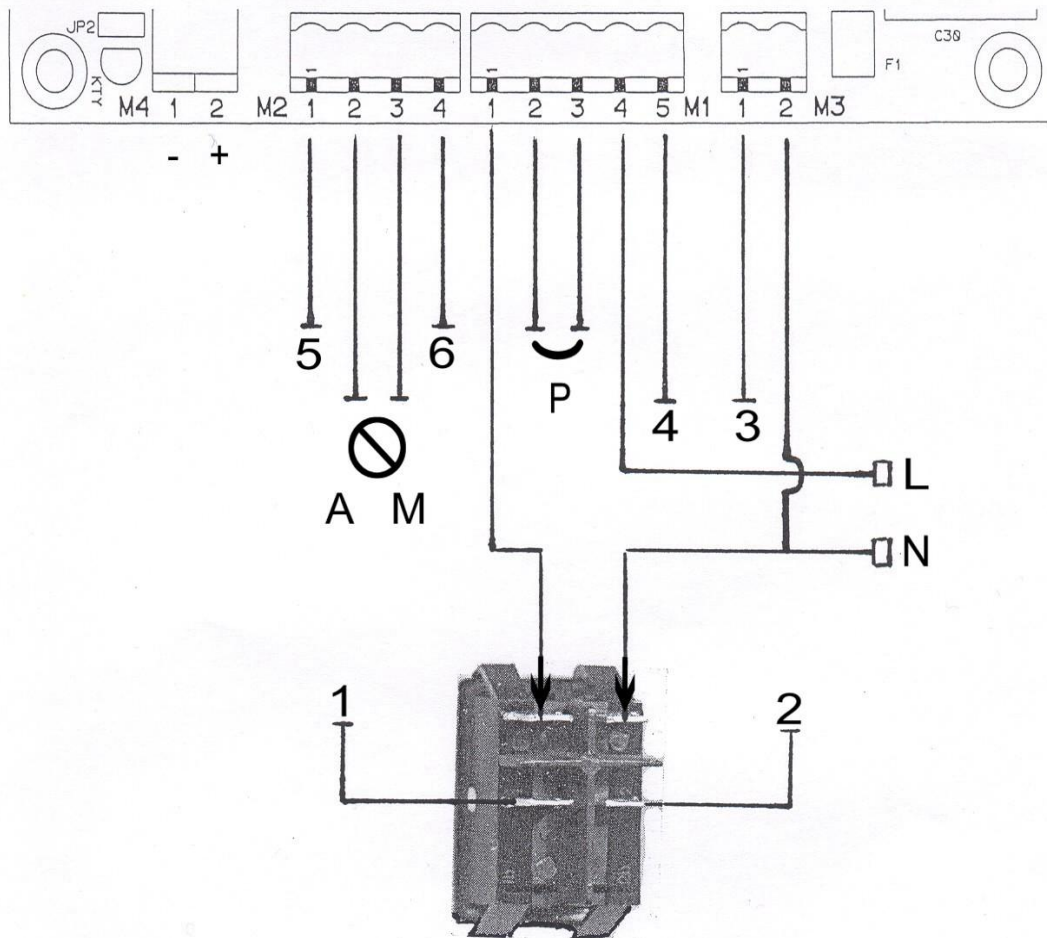
The power line must be interrupted by means of a 10A TWO-POLE MASTER SWITCH with 2 A fuse.

The cables for connection to the multiple plug of the burner must have a section of at least 1.5 mm and they must be insulated in compliance with the CEI 20-22 standard.

The burner must be earthed in accordance with the regulations in force.

Do not exchange the phase wire with the neutral wire. The electric lines must be placed at a suitable distance from the hot parts of the oven.

DIAGRAM OF CONTROL PANEL **DRAGO CONTROL**



L	= Phase.
N	= Neutral.
1	= Burner phase.
2	= Burner neutral.
3	= Reset.
4	= Block signal.
5	= EV phase of 2nd flame.
6	= EV return 2nd flame.
P	= Bridge for manual operation.
-	} Thermostat probe.
+	
	= Automatic selector – manual.