

# LUMINOUS INFRA-RED GAS HEATERS



## MANUAL FOR INSTALLATION, RUNNING AND MAINTENANCE



Version  
**“DELUX”**

**Models:**  
**4P, 6P, 8P (Delux on-off)**  
**4PB, 6PB, 8PB (Delux two-stage)**

## Sommario

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## GENERAL INSTRUCTIONS FOR INSTALLER, USER AND MAINTENANCE PERSONNEL

**Thank you for your preference and trust granted!** SIABS is pleased to have You among his Customers; our appliances are designed and manufactured to the most modern and rational processing systems and we do think that their use will be fully satisfactory.

To keep appliances perfectly working and safe, time passing, we invite you to **read and follow the instructions** of this handbook and **commit all installation and maintenance (ordinary and extraordinary) operations only to skilled personnel**, with specific technical skills in the field of components of heating, preferably to SIABS authorized Service Centre.

### FOR THE INSTALLER:

- **read carefully the warnings** in the manual **before performing any operation** as they provide important information concerning the safety of installation, use and the necessary maintenance operations to be performed
- this manual is integral and essential part of the product and **must be delivered to the user; retain it carefully for further consultations**
- **in case of non-compliance with the following instructions, the warranty covering the product(s) will be null and void**
- **BEFORE THE INSTALLATION**, verify that local gas distribution (type of gas and pressure) and appliance settings are compatible
- appliance must be **installed only in premises with adequate ventilation**
- installation should be done in **accordance with the Regulations in force** in the country of destination, to the state of art, following instructions by the Manufacturer
- **incorrect installation can cause damage** to people, animals and things; the Manufacturer doesn't accept any contractual and extra-contractual liability in tort and contract for damages caused by errors in installation and use
- use only original accessories and modification kits
- after you have removed all items from packing box, **make sure that all components have been included and their integrity**, in case of doubt not use the appliance and contact the Manufacturer; elements of packaging are potentially dangerous: therefore should not be left within the reach of children and must be disposed according to regulations in force
- before any cleaning or maintenance operation, **wait until the appliance is cold, disconnect it from the electricity supply and bring the fuel shut-off valve in the closed position**

### FOR THE USER AND OWNER OF THE PLANT:

- this manual is integral and essential part of the product and **must be delivered to the user; retain it carefully for further consultations**
- **in case of non-compliance with the following instructions, the warranty covering the product(s) will be null and void**
- use only original accessories and modification kits
- in case of failure and/or malfunction of the appliance, turn it off refraining from any attempt to repair or direct intervention; **contact SIABS authorized Service Centre**
- when you decide to stop using the appliance, for **DISPOSAL or RESALE**, you will have to render harmless all parties which can be a source of potential danger; **the technical manual is integral and essential part of the product: it must be preserved and accompany the appliance in case of property change, so that it can be consulted by the new user and / or maintenance staff**

## FOR YOUR SAFETY



**In case of gas smell:** DO NOT operate the heating plant, vent the ambient, DO NOT start apparatus or electric switches; contact the installer and gas supply company and follow scrupulously their instruction

**IMPORTANT:** appliances **MUST NOT be used in domestic environments.** This appliance will be devoted only to the use for which it was expressly provided, **all other uses will be considered improper and therefore dangerous.**

**IMPORTANT:** appliances **MUST NOT be used in ambient with flammable materials, liquids or vapours:** non-compliance with these requirements may be cause of death, injury to persons or damage to things.

## WARRANTY

SIABS guarantees its products, whether installed by authorized personnel, for a period of 24 months from the invoice date. The warranty does not cover the components supplied by third parties, these are subject to the conditions of the original warranty.

The guarantee is only the free supply on Ex-Works basis, of parts with manufacturing or workmanship defects.

The guarantee does not cover problems due to carelessness, incorrect setting, misuse of the appliance or fortuitous accidents, and not dependent on imperfection processing or defective materials, and those due to dismantling or changes without prior authorization from SIABS.

The correct functioning of the appliances depends on a proper installation and start-up. Failure to comply with these rules immediately involves the decay of the guarantee, and therefore of responsibility by the manufacturer.

## PLATE LABEL

On each unit you will find a plate with technical data: **do not remove!**

### Apparatus type A1, gas category II 2H3P

|  |          |  |                               |
|--|----------|--|-------------------------------|
| <b>SIABS</b>   |          | This appliance must be installed in accordance with the rules in force. It shall be used in a space ventilated in accordance with the requirements of EN 13410. Consult the instruction before installation and use of this appliance. |                               |
| Phone +39-02-90384081 - ITALY<br>www.siabs.com                     |          |  |                               |
| Model  | 6 PB     | PIN code   | 0694BS0965                    |
| Version  | DELUX    | Country of destination   | GB                            |
| Gas category   | II 2H3P  | Year of production   | ???                           |
|  |          | 0694   |                               |
| Before making any operation, turn off GAS and disconnect the POWER |          |  |                               |
| HEATER CATEGORY  | : A1     | Gas type   | G20                           |
| Tension  | 230 Volt | Nominal heat input Hs MAX / MIN  | 9.6 / 7.2 kW                  |
| Frequency  | 50 Hz    | Nominal heat input Hi MAX / MIN  | 8.6 / 6.9 kW                  |
| Absorbed power   | 24 Watt  | Gas consumption MAX / MIN  | 0.91 / 0.69 m <sup>3</sup> /h |
| Protection rate  | IP20     | MAX feeding pressure   | 50.0 mbar                     |
| Nozzle diameter  | 2.45 mm  | Supply pressure  | 20.0 mbar                     |
| NOx category   | 4        | Nozzle pressure MAX / MIN  | 14.0 / 7.5 mbar               |
| DO NOT USE IN DOMESTIC AMBIENT                                     |          |  |                               |

**Plate label** (example: appliance 4PB, version DeLUX, two-stages, G20 natural gas)

Essential features of the appliance are given on the packing label, outside on the packing box.

|  |                |                           |  |                      |  |
|--|----------------|---------------------------|--|----------------------|--|
| dal 1952   |                | <b>SIABS</b> <sup>®</sup> |  | 0476                 |  |
| bruciatori & calore radiante   |                |                           |  |                      |  |
| <a href="http://www.siabs.com">www.siabs.com</a>   |                | -  +39_02_90384081        |  |                      |  |
| Gas category   | II 2H3P        |                           |  | <b>GAS TYPE</b>      |  |
| Country of destination   | United Kingdom |                           |  | <b>G20 - 20 mbar</b> |  |
| Radiant heater : 6 PB  |                |                           |  |                      |  |
| Version : DeLUX  |                |                           |  |                      |  |
| Note : INOX  |                |                           |  |                      |  |
| This appliance must be installed in accordance with the rules in force. It shall be used in a space ventilated in accordance with the requirements of EN 13410. Consult the instruction before installation and use of this appliance. |                |                           |  |                      |  |

## TECHNICAL DATA

| Model                               | Version             | 4PB                            | 6PB  | 8PB  | 4P     | 6P   | 8P   |
|-------------------------------------|---------------------|--------------------------------|------|------|--------|------|------|
|                                     |                     | TWO-STAGE                      |      |      | ON-OFF |      |      |
| Ceramic plates                      | nr.                 | 4                              | 6    | 8    | 4      | 6    | 8    |
| Electric feeding                    |                     | 230 Volt - singlephase - 50 Hz |      |      |        |      |      |
| MAX pressure feeding                | (mbar)              | 50,0                           |      |      |        |      |      |
| Gas group                           | nr.                 | 1                              |      |      |        |      |      |
| Gas connection                      |                     | 1 x 1/2"                       |      |      |        |      |      |
| Absorbed power                      | (Watt)              | 24                             |      |      |        |      |      |
| NOx class                           |                     | 4,0                            |      |      |        |      |      |
| Weight                              | (kg)                | 11                             | 14   | 17   | 11     | 14   | 17   |
| Length (overall)                    | (mm)                | 693                            | 877  | 1061 | 693    | 877  | 1061 |
| Width                               | (mm)                | 230                            | 230  | 230  | 230    | 230  | 230  |
| Height                              | (mm)                | 210                            | 210  | 210  | 210    | 210  | 210  |
| <b>GAS G20</b>                      |                     |                                |      |      |        |      |      |
| Heat input MAX (Hs)                 | (kW)                | 7,2                            | 9,6  | 16,1 | 7,2    | 9,6  | 16,1 |
| Heat input MAX (Hi)                 | (kW)                | 6,5                            | 8,6  | 14,5 | 6,5    | 8,6  | 14,5 |
| Heat input MIN (Hs)                 | (kW)                | 5,4                            | 7,2  | 12,1 | -      | -    | -    |
| Heat input MIN (Hi)                 | (kW)                | 4,9                            | 6,5  | 10,9 | -      | -    | -    |
| GAS supply pressure                 | (mbar)              | 20,0                           | 20,0 | 20,0 | 20,0   | 20,0 | 20,0 |
| NOZZLE pressure MAX                 | (mbar)              | 15,5                           | 14,0 | 14,0 | 15,5   | 14,0 | 14,0 |
| NOZZLE pressure MIN                 | (mbar)              | 8,5                            | 7,5  | 8,0  | -      | -    | -    |
| Gas consumption MAX                 | (m <sup>3</sup> /h) | 0,69                           | 0,91 | 1,53 | 0,69   | 0,91 | 1,53 |
| Gas consumption MIN                 | (m <sup>3</sup> /h) | 0,52                           | 0,69 | 1,15 | -      | -    | -    |
| Nozzle diameter                     | (mm)                | 2,10                           | 2,45 | 3,10 | 2,10   | 2,45 | 3,10 |
| <b>GAS G25</b>                      |                     |                                |      |      |        |      |      |
| Heat input MAX (Hs)                 | (kW)                | 7,2                            | 9,6  | 16,1 | 7,2    | 9,6  | 16,1 |
| Heat input MAX (Hi)                 | (kW)                | 6,5                            | 8,6  | 14,5 | 6,5    | 8,6  | 14,5 |
| Heat input MIN (Hs)                 | (kW)                | 5,4                            | 7,2  | 12,1 | -      | -    | -    |
| Heat input MIN (Hi)                 | (kW)                | 4,9                            | 6,5  | 10,9 | -      | -    | -    |
| GAS supply pressure                 | (mbar)              | 25,0                           | 25,0 | 20,0 | 25,0   | 25,0 | 20,0 |
| NOZZLE pressure MAX                 | (mbar)              | 13,7                           | 14,0 | 14,5 | 13,7   | 14,0 | 14,5 |
| NOZZLE pressure MIN                 | (mbar)              | 8,3                            | 7,5  | 8,5  | -      | -    | -    |
| Gas consumption MAX                 | (m <sup>3</sup> /h) | 0,80                           | 1,06 | 1,78 | 0,80   | 1,06 | 1,78 |
| Gas consumption MIN                 | (m <sup>3</sup> /h) | 0,60                           | 0,80 | 1,34 | -      | -    | -    |
| Nozzle diameter                     | (mm)                | 2,30                           | 2,70 | 3,40 | 2,30   | 2,70 | 3,40 |
| Diameter diaphragm, gas G20 and G25 | (mm)                | 2,90                           | 3,30 |      | 2,90   | 3,30 |      |
| <b>GAS G30</b>                      |                     |                                |      |      |        |      |      |
| Heat input MAX (Hs)                 | (kW)                | 7,0                            | 9,3  | 13,5 | 7,0    | 9,3  | 13,5 |
| Heat input MAX (Hi)                 | (kW)                | 6,5                            | 8,6  | 12,5 | 6,5    | 8,6  | 12,5 |
| Heat input MIN (Hs)                 | (kW)                | 5,3                            | 7,0  | 10,2 | -      | -    | -    |
| Heat input MIN (Hi)                 | (kW)                | 4,9                            | 6,5  | 9,4  | -      | -    | -    |
| GAS supply pressure                 | (mbar)              | 30,0                           | 30,0 | 30,0 | 30,0   | 30,0 | 30,0 |
| NOZZLE pressure MAX                 | (mbar)              | 28,2                           | 28,0 | 28,0 | 28,2   | 28,0 | 28,0 |
| NOZZLE pressure MIN                 | (mbar)              | 16,5                           | 16,0 | 15,5 | -      | -    | 15,5 |
| Gas consumption MAX                 | (kg/h)              | 0,51                           | 0,68 | 0,99 | 0,51   | 0,68 | 0,99 |
| Gas consumption MIN                 | (kg/h)              | 0,39                           | 0,51 | 0,74 | -      | -    | -    |
| Nozzle diameter                     | (mm)                | 1,30                           | 1,50 | 1,80 | 1,30   | 1,50 | 1,80 |
| <b>GAS G31</b>                      |                     |                                |      |      |        |      |      |
| Heat input MAX (Hs)                 | (kW)                | 7,0                            | 9,3  | 13,5 | 7,0    | 9,3  | 13,5 |
| Heat input MAX (Hi)                 | (kW)                | 6,5                            | 8,6  | 12,5 | 6,5    | 8,6  | 12,5 |
| Heat input MIN (Hs)                 | (kW)                | 5,3                            | 7,0  | 10,2 | -      | -    | -    |
| Heat input MIN (Hi)                 | (kW)                | 4,9                            | 6,5  | 9,4  | -      | -    | -    |
| GAS supply pressure                 | (mbar)              | 37,0                           | 37,0 | 37,0 | 37,0   | 37,0 | 37,0 |
| NOZZLE pressure MAX                 | (mbar)              | 36,2                           | 35,7 | 35,7 | -      | -    | -    |
| NOZZLE pressure MIN                 | (mbar)              | 22,0                           | 20,0 | 20,0 | 22,0   | 20,0 | 20,0 |
| Gas consumption MAX                 | (kg/h)              | 0,50                           | 0,67 | 0,97 | 0,50   | 0,67 | 0,97 |
| Gas consumption MIN                 | (kg/h)              | 0,38                           | 0,50 | 0,73 | -      | -    | -    |
| Nozzle diameter                     | (mm)                | 1,30                           | 1,50 | 1,80 | 1,30   | 1,50 | 1,80 |

# INSTALLATION

## Ventilation of the ambient



**Appliances must be installed in well-ventilated and manned ambient, in compliance with current legislation**

The unit leaves the combustion products into the environment in which it is used (appliance type A1). It is therefore necessary to **ensure ventilation and air changes of the premises in which the appliance is installed**, realizing appropriate air outlet openings on the perimeter walls of the same, or creating a system of mechanical ventilation. To ensure a sufficient air change, the flow of air needed can be calculated using the following equation (UNI EN 13410):

$$V_{\text{tot}} = \Sigma Q_{\text{nb}} \times L$$

- $V_{\text{tot}}$  air change flow rate in  $\text{m}^3/\text{h}$
- $\Sigma Q_{\text{nb}}$  total heating power installed in the premises in kW
- $L$  air change coefficient (must be  $\geq 10 \text{ m}^3/\text{h} / \text{kW}$ )

### IMPORTANT:

air change coefficient "L" to be used **MUST NOT be lower than 10  $\text{m}^3/\text{h}$  for each kW of installed power**

For **NO reason** the appliance(s) can be installed:

- in rooms smaller than  $12 \text{ m}^3$
- in ambient used as residential ambient
- where wind speed is higher than  $2 \text{ m/s}$



## Positioning

The appliances can be installed on walls, or hanging at ceiling with chains. On request, we can provide **brackets** to fix the **heaters on the wall** (picture 1) with different angled positions, **or** for **suspension at ceiling** (picture 2); S hooks and chains are excluded.



picture 1 – Installation at wall **DeLUX**



picture 2 – Installation with chains **DeLUX**

The brackets provided by SIABS allow an angle of installation variable once mounted on a wall or pillar, in order to get a better heat distribution (picture 3)



picture 3 – different angles : 5° , 15° , 30° , 45°

### IMPORTANT!

- at each side of the burner 2 hooks are provided with M8 inserts, for fixing to a wall or at ceiling by means of appropriate brackets (not supplied, available on request); **do not create other anchor points on the carpentry of the heater and in particular on the body burner, but use only those designed by the factory**
- **we recommend SIABS original brackets** for installation of the radiant heaters
- for fixing brackets on a wall or pillars **assess the consistency of walls and the load applied, in order to choose the correct anchors to be used**; in any case provide blocks with M8 screw minimum diameter (e.g. anchor Fischer TA - M in steel, with M8 screw)

**IMPORTANT:** appliances must be installed **in horizontal position**, contact us in case of different inclination. In any case, the system of fixing / suspension must allow thermal expansion of appliance (some millimetres depending on the model).

## Handling

During extraction of the appliances from package and for all operations of handling till final place of installation, gas valves / flame controls of injection group must **NOT** be used as lifting points.

Appliances must be taken at the installation point / height inside its package or using M8 inserts: **all other parts of the appliances are NOT designed to withstand its weight.**

NB – The unit is delivered with a protective film; **we recommend you remove it after finishing the installation, at the end of the works.**

### Minimum height of installation (for people comfort)

Indicative heights for the installation of appliances are as follows:

| MODEL | HEIGHT of INSTALLATION (mt) |
|-------|-----------------------------|
| 4P    | 2,5                         |
| 6P    | 3,0                         |
| 8P    | 3,5                         |

Height "MIN" means the minimum height at which the appliance should be installed so that people who are in radiated zone, **are not subject to excessive heat.**

Quotes relate to appliances **installed in horizontal position**; for appliances with angled position (15 ÷ 60 °), the minimum height can be reduced roughly between a 5 % (15 ° angle) and a 20 % (60 ° angle).

Quotes relate to installation with **ambient temperature of 10 ÷ 12 °C**; in case of ambient with higher or lower temperatures the minimum height of installation must be reviewed; consider a reduction of 5 % (for temperatures lower of approx. 5 ° C) or increase of 5 % (for temperatures higher of approx. 5 ° C).

Above MINIMUM **heights of installation are indicative**, consult us each case to select the most advisable unit and the best height of installation (mostly for limit values), and for doubts about MAXIMUM height of installation.

## Minimum distances from flammable surfaces

**IMPORTANT:** flammable materials inside the radiation could begin to burn and cause fires.



**SURFACES CLOSE to APPLIANCES MUST BE DONE IN MATERIAL of CLASS 'A0' with respect TO FIRE RESPONSE (NOT COMBUSTIBLE and NOT FLAMMABLE) and with DEGREE of RESISTANCE TO FIRE EQUAL or MORE THAN "REI 90"**

Minimum distances of installation must be respected between the heating surface of the appliances and the adjacent walls, **inside the area of radiation and outside**, if they are not protected against radiation or are flammable materials; in case below minimum distances can not be met, consider to mount screens for the heat.

Pay special attention also in cases of installing appliances above crane ways, to prevent damage to motor and electric cables!

The **MINIMUM** distances are as follows:

| MODEL | MINIMUM distance (mt) between heater and ... |       |       |       |
|-------|--|-------|-------|-------|
|       | ceiling                                      | floor | front | sides |
| 4P    | 1,0  | 2,0   | 1,0   | 1,0   |
| 6P    | 1,0  | 2,5   | 1,0   | 1,0   |
| 8P    | 1,5  | 3,0   | 1,0   | 1,0   |

**NOTE – contact us in case of different distances or special cases**

## Connection to gas supply

**IMPORTANT:** hydraulic connection of the appliances to the gas distribution net must be made according to information given in this technical book exclusively by professionally qualified staff.

The appliances are supplied according to the type of gas chosen, and then before making the connection to the power network of gas, **make sure that the gas used and pressure of gas circuit correspond to what is shown on the data plate label** of the unit. **Before connection to the gas pipeline, make sure that the pipes are properly cleaned and produced in accordance with regulations in force in the country of installation.**

**NOTICE:** provide a **fuel interception tap** close to the appliance, and with easily accessible position; make the **connection between the appliance and the gas network using an approved steel flexible pipe.**

**IMPORTANT: "GAS supply pressure", defined as the dynamic pressure of the circuit, or part of the circuit downstream of the pressure reducer, with all the appliances running, and must be detected in this condition. With lower pressure difficulties in start-up may occur.**

Once the connection is made, **in compliance with the rules in force in the country of installation, a)** verify the sealing of hydraulic pipes and gas connection to the unit, **b)** check that the pressure is correct, **c)** make sure that the apparatus functions in the conditions for which it was prepared.

**ELECTRONIC start-up APPLIANCES:** gas connection is 1/2"; appliances are equipped with a multifunctional group comprising: double seat valve fitted with pressure stabilizer and integrated flame control. **The stabilizer accepts a maximum inlet pressure of 50 mbar** and the valve is equipped with a pressure intakes, to measure and control incoming and outgoing pressures.

**MANUAL start-up APPLIANCES:** gas connection is 3/8"; appliances are equipped with tap valve, pressure stabilizer with **maximum inlet pressure of 100 mbar** and pressure intake at nozzle.

**IMPORTANT:** all appliances are **supplied already tested and set** to the properly operating pressure; **DO NOT remove seal on the pressure regulator (R): expiring of guarantee!**



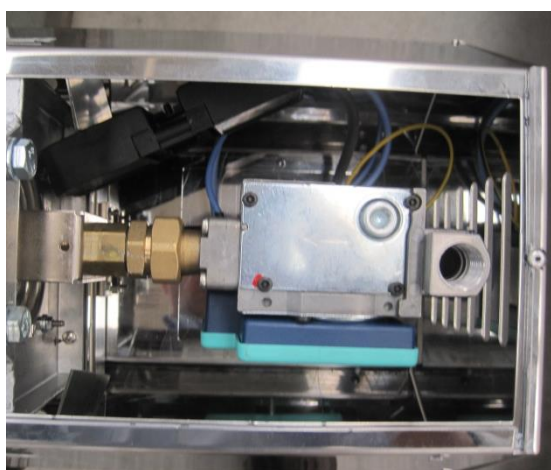
Feeding gas pipeline **must be kept at a distance of at least 1 m from the zone of discharge of the combustion products** and **must not be exposed to direct irradiation of appliances**

## Connection to electric feeding

**IMPORTANT:** the **electrical connection of the equipment shall be made in accordance with the directions given in this technical book** exclusively by professionally qualified personnel. **The installation must be carried out in accordance with regulations in the country of installation.**


The appliance must be fed with 230 Volt / Single Phase / 50 Hz feeding. The control flame mounted on gas valve has a plug/socket connection with security hook (picture 3). Mount a bipolar switch upstream of the heater for switch-on and switch-off, so you can isolate it from electric supply. Use this manual for the size of the power supply line, or refer to the data given in the plate label of the heater. In any case, use a cable with minimum section 3x1.5mm<sup>2</sup> (ON-OFF version) or 4x1.5mm<sup>2</sup> (TWO-STAGE version).

The wiring diagrams are shown on page 13 (ON-OFF version) and page 16 (TWO-STAGE version) of this manual.



Picture 3 – Connector for electric connection

For the electrical connection unlock the plug and unscrew its case; connect a cable according to the indications given on the terminal plug, namely:

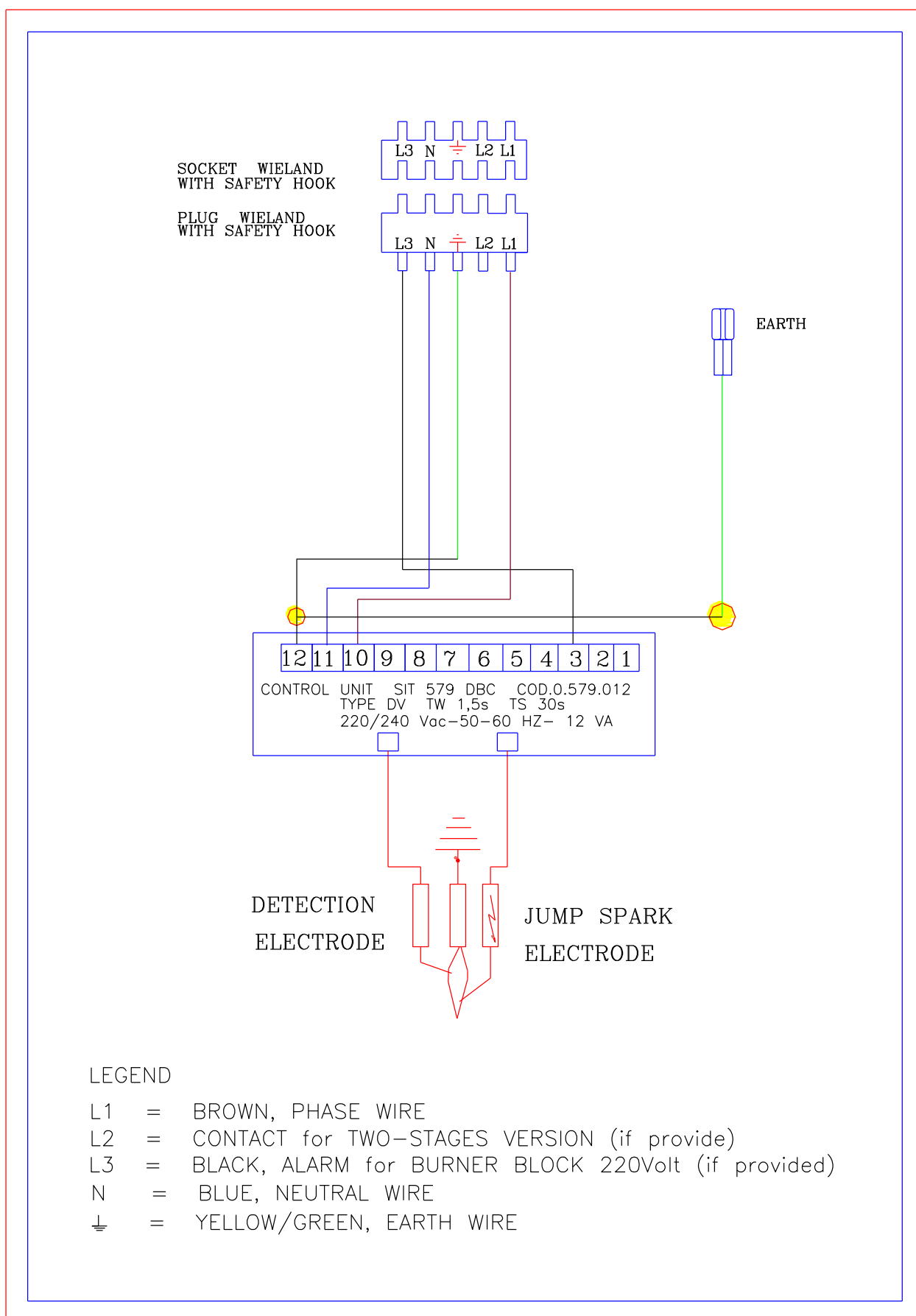
- L1** phase wire
- N** neutral wire
-  earth wire
- L2** modulator command for two-stages gas valve (if provided)
- L3** signal for burner block (if provided)

**IMPORTANT:**

it is **essential** for the smooth functioning of the appliances, to **respect the Phase / Neutral polarity**, with that indicated on the power connector.

**IMPORTANT:** for safety of the user, and smooth functioning of the appliances, heater must be equipped with **efficient plant grounding**, executed according to existing regulations in the Country of installation. Under no circumstances you can use the gas connection pipeline as grounding of equipment.

### Wiring diagram, "SIT" control unit ON-OFF



## Note for “sit” two-stage gas valve

### IMPORTANT:

- for this version, a specific switch for pressure modulator feeding must be placed in the main electric switchboard
  1. modulator fed: HIGH pressure running
  2. modulator NOT fed: LOW pressure running
- start-up of the appliance **must always take place** with the modulator fed (HIGH pressure running)
- you will find the data (heat input, pressure and gas flow rate) referring to the appliances with TWO-STAGE version, in the tables at page 6 of this manual.

**N.B.** – **MINIMUM heating capacity = feed L1 + N**  
– **MAXIMUM heating capacity = feed L1 + L2 + N**

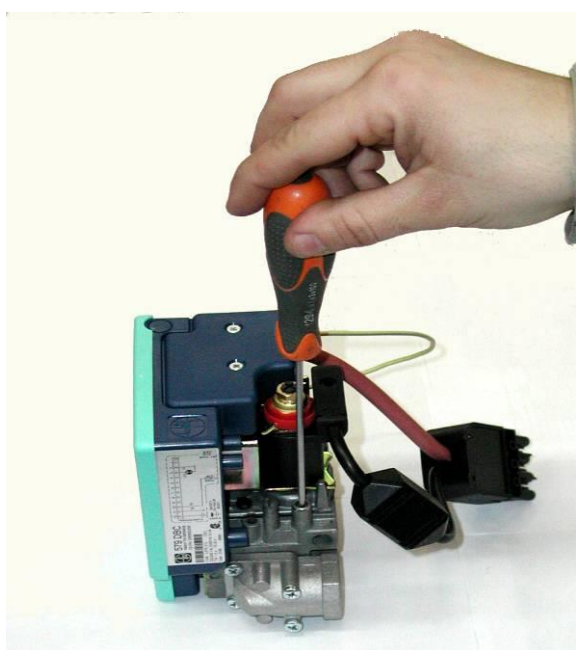
You will find the data (heat input, pressure and gas flow rate) referring to the appliances with TWO-STAGE version, in the tables at page 6 of this manual.

The TWO-STAGE version allows:

- save on gas consumption
- better comfort condition for people
- lower number of start-up / switch-off of the heater
- power reserve for particularly cold winters

## Setting of the pressure

Unscrew the screw of the **PO** pressure intake of the gas valve before the nozzle (pictures 1.A and 1.B), and connect a water column manometer. Feed the modulator and take out the yellow tap of the pressure regulator. Act, as shown in picture 2, on the CH10 screw for setting of the maximum pressure, till you get the required pressure (**turn clockwise to increase and counter clockwise to decrease**). Take out tension at the pressure modulator, and with a screw-driver act on the inner screw for minimum setting (picture 3) till you get the required pressure (**turn clockwise to increase and counter clockwise to decrease**).



Picture 1.A



Picture 1.B

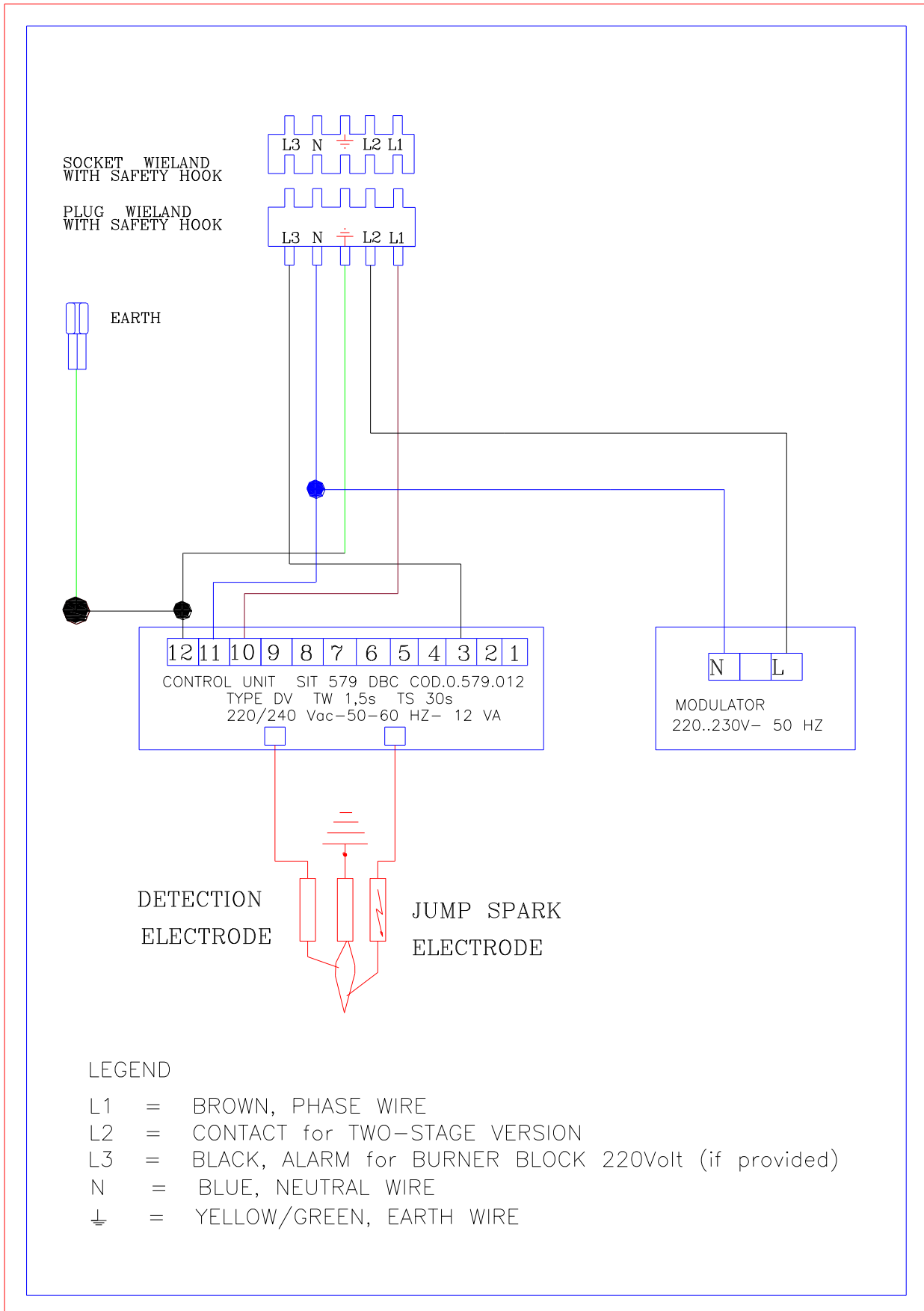




Picture 2

Picture 3

### Wiring diagram, "SIT" control unit TWO-STAGE



## PUT IN OPERATION AND FIRST START-UP

When you first start the appliances is important to **make some preliminary checks** to ensure its proper running; operations listed below are considered essential:

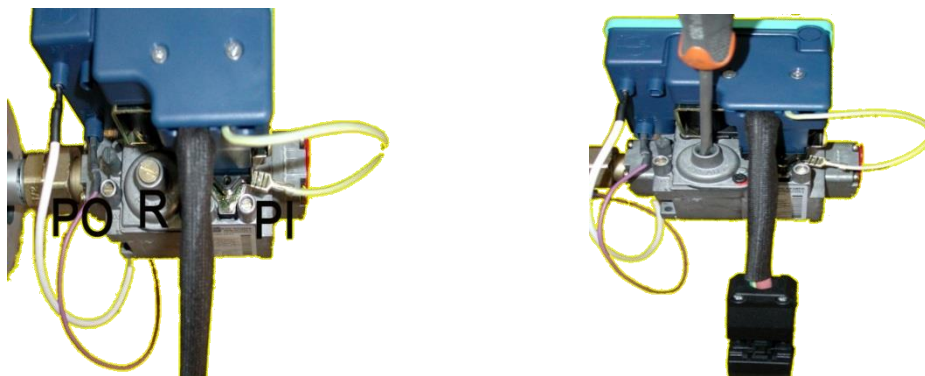
- make sure there are no losses in the gas line and that is properly sized
- **check that the pressure and type of gas used comply with the data on the plate of the characteristics of the appliance**
- check that the power electric line has been correctly sized, which has been respected phase - neutral polarity and that the cable grounding is connected
- make sure the mechanical installation (supports) of the appliance have been properly carried out and that the connections bolts are tight
- use only steel materials, since heat is transferred from appliances to supports

### Appliances with ELECTRONIC start-up

Start-up sequence includes the following phases:

- giving tension to the appliances, ignition electrode begins sparking, and the gas valve opens
- the sparking electrode ends after 30 seconds
- in the case has not been detected the presence of flame, control flame goes into block after 30 seconds; for re-start it is necessary to remove tension for a period of not less than 20 seconds: after that period of time, the start-up sequence can be repeated; if the heater continues going into block, refer to the section 'Maintenance' of this manual
- switch-off of the heater is done by taking out power supply to control unit

**IMPORTANT:** in case of failure at time of first start-up, **pressure settings have to be checked, acting on PO and PI pressure intakes**



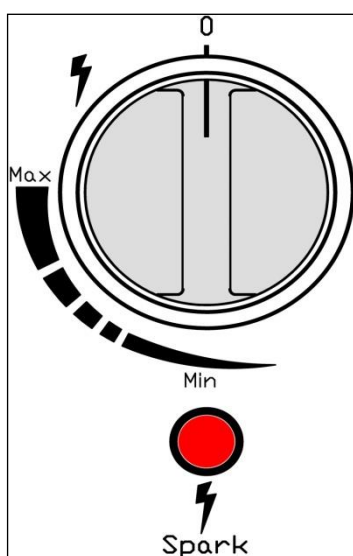
**Only in case of maintenance**, following instruction of qualified SIABS personnel, pressure settings can be modified using the following procedure:

- remove the cap of pressure regulator (R)
- unscrew the screw of intake pressure, upstream at the nozzle (PO) and connect a suitable gauge, to check correct pressure during setting
- remove the cap of pressure regulator (R) and act, as shown in pictures (**turn clockwise to increase and counter clockwise to decrease**), on the screw of adjustment till match up to the pressure gauge reading with that stated on plate on the characteristics
- the new and correct nozzle pressure should be checked at intake pressure PO
- disconnect the pressure gauge and close the screw of intake pressure (PO)
- reassemble the cap of the regulator R and place a new suitable seal

## Appliances with MANUAL start-up

The start-up sequence comprises the following steps:

- press and turn counter-clockwise the gas valve / knob, **till maximum position**
- holding the knob in position, **press the red start-up button** located under the knob, **until start-up of the burner** (Picture 11)
- with burner on, **leave the ignition red button while pushing and keeping in place and knob for 10 ÷ 20 seconds**
- leave the knob and **verify that the burner is on**, repeat the operation if the pilot device goes out



**NOTE – to switch off**, turn the knob to **position 0 = ZERO** (Picture 11).

**POSSIBILITY of ADJUST POWER:** all SIABS heaters, offer the possibility to adjust the heating power (max-min-med) reducing it by approx. 20%, in case you want to enjoy a different level of comfort or fit it to different external temperatures; turn the knob towards MIN or MAX as on the plate until you get the require comfort level.

**N.B. – BATTERIES for appliances with MANUAL start-up**

- model **AA**, they are inside the piezo starter

## MAINTENANCE

### Ordinary maintenance

An appropriate use of the appliances, plus their proper and regular maintenance are essential to ensure better performance and longer working life.



**Before making any maintenance, make sure that both the gas and the power supply have been excluded, and that the apparatus is cold.** For all routine and / or extraordinary maintenance, contact only professionally qualified staff, or rather a Technical Assistance Centre authorized by SIABS

**At least once a year before the season of use**, it is strongly advisable to perform an intervention for control / inspection and cleaning:

- visual inspection of radiant surface (if any cracked ceramic plate)
- cleaning of radiant surface with compressed air with NO HUMIDITY at LOW PRESSURE from inside
- nozzle cleaning
- electrodes cleaning, correct position and efficiency sparking
- check of keeping all the electrical connections
- search for possible losses on the gas circuit and gas valve
- check of gas pressure at nozzle
- general control of all components of the appliance
- control of openings and ventilation systems (natural and/or mechanical)
- control of alarm signals, if any

If the appliances are installed in dusty environments is advisable to clean more frequently the burners blowing compressed air at low pressure, working from holes in the flange / venturi pipe. In case the appliance is running, shut it down and wait, before you blow, that it is cold.

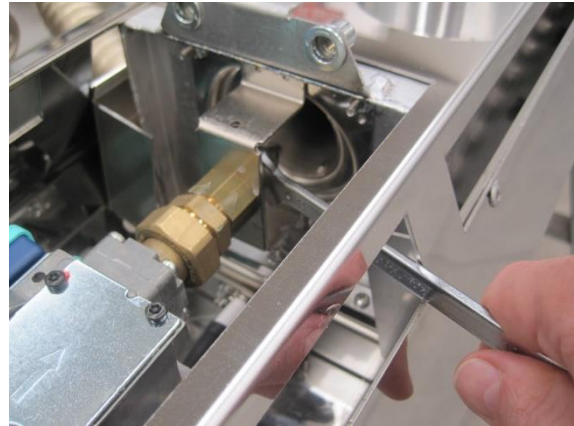
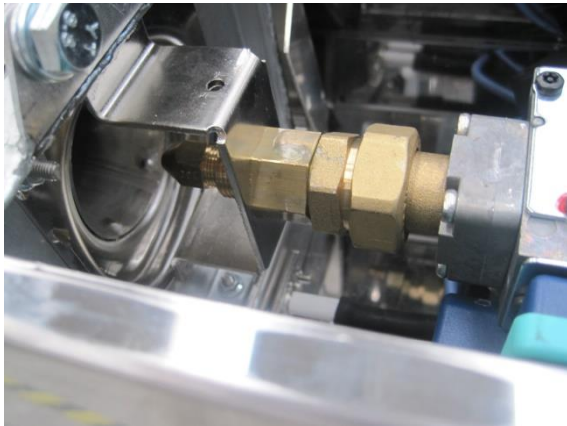
### Nozzle replacement

In case you need to change the type of gas for which the appliance was prepared, you should contact SIABS to get the specific transformation kit, specifying the model of appliance, serial number and the new gas. The operations must be performed by qualified personnel and in compliance with the regulations.

**IMPORTANT:** If you change the **nozzle** to move to a different type of gas (f.e.: from LPG G30 to G20 natural gas) **it is COMPULSORY to change the PRESSURE STABILIZER – only for manual start-up version – and the plate label with technical data**, placing a new label with the new data, **repeat checks listed at page 17** “PUT IN OPERATION and FIRST START-UP”, afterwards put seal again after operation.

Act as follows:

- unscrew and take out the gas nozzle using a CH13 spanner
- screw properly new gas nozzle

**N.B. – appliances running with G31 / G30 gases**

- some models require a special plate to be mounted on flange (reduction of air intake)
- dismount the plate (if mounted) in case of change from G31 / G30 gas to G20 gas
- mount the plate (if supplied) in case of change from G20 gas to G31 / G30 gas

## TROUBLE SHOOTING

### Appliances with ELECTRONIC start-up

| TROUBLE  | POSSIBLE CAUSE   | SOLUTION  |
|--|--|---|
| <b>A</b> the heater turns on, the ignition electrode continues to sparkle then goes to block | <b>A1</b> Phase and Neutral with wrong connection<br><b>A2</b> The flame detection electrode is too far from the plates surface<br><b>A3</b> The control unit is defective   | <b>A1</b> Check Phase / Neutral polarity and eart connection<br><b>A2</b> Verify that the flame detection electrode is approx. 4 mm from the radiant surface<br><b>A3</b> Replace the control unit  |
| <b>B</b> the heater turns on partially   | <b>B1</b> Insufficient gas flow<br><b>B2</b> Inlet gas pressure of the burner is too low<br><b>B3</b> Dirty nozzle   | <b>B1</b> Check that gas supply has sufficient flow rate compared to gas consumption of the heater<br><b>B2</b> Check that the gas pressure corresponds to that shown on the plate label<br><b>B3</b> Clean nozzle with compressed air (NO mechanical device)                             |
| <b>C</b> the burner does flash-back  | <b>C1</b> Inlet gas pressure of the burner is too high<br><b>C2</b> Burner or ceramic plates are dirty<br><b>C3</b> Ceramic plates are cracked   | <b>C1</b> Check that the gas pressure corresponds to that shown on the plate label<br><b>C2</b> After burner is cold, blow air at low pressure on the ceramic plates surface, from inside<br><b>C3</b> Replace the ceramic plates   |
| <b>D</b> the heater doesn't turn because no gas is getting                                   | <b>D1</b> Interruption in the elctric plant<br><b>D2</b> No tension<br><b>D3</b> Solenoid valve is live, but coils are not energized   | <b>D1</b> Verify voltage at connector of power supply<br><b>D2</b> Replace the control unit<br><b>D3</b> Replace the gas valve  |
| <b>E</b> the ignition electrode doesn't sparkle, and burner goes to block                    | <b>E1</b> The electrode doesn't spark because of wrong distance between its tip and earth<br><b>E2</b> Power interruption<br><b>E3</b> The spark of the ignition electrode starts close to the ceramic protection, due to its breakcage, or between cable and mass | <b>E1</b> Adjust distance (closer or further) between tip of ignition electrode and mass : should be 3 ÷ 4 mm<br><b>E2</b> Check contacts connection of electrodes and control unit<br><b>E3</b> Replace the whole ignition and detection device or just the cable, or just the electrode |
| <b>F</b> the gas valve turns on, but the heater doesn't turn and goes to block               | <b>F1</b> Air in the gas pipe<br><b>F2</b> No gas  | <b>F1</b> Repeat the ignition cycle several times, waiting a time of approx. 20 sec between an ignition and the other<br><b>F2</b> Verify that all devices of fuel interception, on gas pipeline, do not prevent passage  |

## Appliances with MANUAL start-up

| Trouble  | Possible cause  | Solution   |
|--|---|--|
| <b>A</b> Continues to sparkle, the burner does not start                       | <b>A1</b> Lack of gas<br><b>A2</b> Gas valve blocked<br><b>A3</b> Fault with thermocouple<br><b>A4</b> Anti tilt sensor blocked   | <b>A1</b> Check opening of gas valve, placed on gas bottle, check the gas reducer<br><b>A2</b> Blow with air at low pressure the valve group<br><b>A3</b> Replace thermocouple<br><b>A4</b> Replace anti tilt sensor |
| <b>B</b> The burner turns on, then it turns off as soon as you release the tap | <b>B1</b> Fault with thermocouple   | <b>B1</b> Replace thermocouple   |
| <b>C</b> No spark at burner ignition   | <b>C1</b> Spark electrode damaged<br><b>C2</b> Spark cable not connected  | <b>C1</b> Replace spark electrode<br><b>C2</b> Reconnect with faston the spark cable   |
| <b>D</b> Lack of flame   | <b>D1</b> Bad LPG gasification<br><b>D2</b> Thermocouple broken<br><b>D3</b> Gas circuit blocked<br><b>D4</b> Leaks in gas circuit<br><b>D5</b> Battery of start down<br><b>D6</b> Replace pressure regulator | <b>D1</b> Replace gas bottle<br><b>D2</b> Replace thermocouple<br><b>D3</b> Clean gas circuit<br><b>D4</b> Fix possible leak<br><b>D5</b> Replace battery<br><b>D6</b> Replace regulator                             |

## SERIAL NUMBER (BARS CODE)

It is advisable to communicate us the **serial number** of the appliance(s) (label with bars code) for all operation of regular or extraordinary maintenance, and for orders of spare-parts.



On the appliance



Outside, on packing box



## SUGGESTED SPARE-PARTS LIST

| Description   | Code        | Quantity |
|---|-------------|----------|
| . Ceramic plates  | 2.011101145 | _____    |
| . ECOlogic insulating mat (white fibre) – specify model                         | 2.000.02    | _____    |
| . nozzle – specify model  | 2.000.05    | _____    |
| . kit for gas conversion = nozzle + plate label (page 5)                        | _____       | _____    |
| . start-up device (electrodes set)  | 2.08312538  | _____    |
| <b>Models with ELECTRONIC start-up</b>  |             |          |
| . SIT gas valve SIGMA 840 for models ON-OFF                                     | 2.0.840.041 | _____    |
| . SIT gas valve SIGMA 843 for models TWO-STAGES                                 | 2.0.843.008 | _____    |
| . SIT flame control 579 DBC   | 2.0.579.012 | _____    |
| . wiring (from flame control to electrodes)                                     | _____       | _____    |
| . wiring (from flame control to plug)   | _____       | _____    |
| <b>Models with MANUAL start-up</b>  |             |          |
| . gas tap   | 2.7989-B/1  | _____    |
| . black knob  | 2.3001      | _____    |
| . start-up button   | 2.202623    | _____    |
| . thermo-couple   | 2.0.290.003 | _____    |
| <b>N.B. – specify appliance(s) model and gas type when ordering spare-parts</b> |             |          |

## DECOMMISSIONING AND DISPOSAL

**INFORMATION TO USERS** "Implementation of Directives 2002/95/EC, 2002/96/EC and 2003/108/EC, relating to the use of hazardous substances in electrical and electronic equipment, as well as waste disposal"

The product at the end of its useful life **must be separated from other waste**. You should therefore **give the equipment at end of its working life to appropriate separate collection centres of electric and electronic waste**, or return it to the dealer when purchasing a new device to be equivalent in terms of one to one.

The proper differentiated collection to deliver the decommissioned apparatus to recycling, treatment and environmentally compatible disposal, helps to avoid possible negative effects on environmental and health, and promote the recycling of materials making up the equipment.

Illegal disposal of the product by the holder imply the application of administrative penalties according to law.



**N.B. – Do not dispose of the product in mixed waste**

## CE CERTIFICATE

Numero / Number KIP-066847/01 Sostituisce / Replaces  
 Emesso / Issued 22/02/2012 Scopo / Scope Directive 2009/142/EC  
 Rapporto / Report 300965  
 NIP / PIN 0694BS0965

**CERTIFICATO DI ESAME CE DI TIPO**  
**EC TYPE EXAMINATION CERTIFICATE**

**Kiwa dichiara che i prodotti**  
*Kiwa hereby declares that the products*

**diffusori termici a gas ad irraggiamento luminoso, tipo**  
*non-domestic overhead luminous radiant heaters, type*

Marchio / trade mark: **SIABS**

Modelli / models:

|          |          |        |         |           |
|----------|----------|--------|---------|-----------|
| 16P      | 10+10PSB | 12PR   | 10PB    | 8PM       |
| 16+16P   | 12+12PSB | 12P    | 12PRB   | M4D/08    |
| 16PB     | 16+16PSB | 10+10P | 12PB    | M6D/08    |
| 16+16PDB | 4P       | 12+12P | 10+10PB | 3TG/08    |
| 10+10PS  | 6P       | 4PB    | 12+12PB | ST8/08    |
| 12+12PS  | 8P       | 6PB    | 4PM     | UFO EB/08 |
| 16+16PS  | 10P      | 8PB    | 6PM     | UFO M/08  |

costruit da /  
*made by*  
 di / in **SIABS S.r.l.**  
 Casorezzo (MI), Italia

soddisfano i requisiti riportati nella  
*meets the essential requirements as described in the*  
**Direttiva Apparecchi a Gas 2009/142/CE**  
*Directive on appliances burning gaseous fuels 2009/142/EC*

I suddetti prodotti sono stati approvati per  
*Mentioned products have been approved for*

Tipi di apparecchi / appliance type : **A<sub>1</sub>**

Paesi e categorie apparecchi / Countries and appliance categories  
 AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,  
 IE, IS, IT, LT, LU, LV, MK, MT, NO, NL, PL, PT, RO, SE, SI, SK, TR

|                  |         |               |           |                  |     |         |
|------------------|---------|---------------|-----------|------------------|-----|---------|
| I <sub>2H</sub>  | G2C     | 20 mbar       |           | I <sub>3P</sub>  | G31 | 30 mbar |
| I <sub>2H</sub>  | G2C     | 25 mbar       | (HU only) | I <sub>3P</sub>  | G31 | 37 mbar |
| I <sub>2C</sub>  | G2C     | 20 mbar       |           | I <sub>3P</sub>  | G31 | 50 mbar |
| I <sub>2E+</sub> | G2C/G25 | 20/25 mbar    |           | I <sub>3B</sub>  | G30 | 30 mbar |
| I <sub>2L</sub>  | G25     | 20 mbar       | (DE only) | I <sub>3B</sub>  | G30 | 50 mbar |
| I <sub>2L</sub>  | G25     | 25 mbar       | (NL only) | I <sub>3BP</sub> | G30 | 30 mbar |
| I <sub>3+</sub>  | G3C/G31 | 28-30/37 mbar |           | I <sub>3BP</sub> | G30 | 50 mbar |

Le famiglie di gas e gruppi di gas sopra indicati possono essere combinati per ottenere le categorie II e III secondo la norma EN437:2009.  
*The above gas families and gas groups can be combined to obtain categories II and III according the standard EN437:2009.*

Kiwa  
  
 Ing. Emanuele Ferrari  
 Director Product Certification



**Kiwa Italia S.p.a.**  
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 20129 Milano  
 Sede Amministrativa e operativa:  
 Via Trevisi, 32/34  
 31020 Sar Venderiano (TV)  
 www.kiwa.com  
**GASTEC**

Certificato

**DATE and STAMP**

**OPERATION / NOTES**

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**DATE and STAMP**

**OPERATION / NOTES**

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**OPERATION / NOTES**

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Continuous development to improve the product could cause changes of above without notice.