



# THERMOROSSI

*the first talking heater*

**INSTALLATION, USE AND MAINTENANCE GUIDE**

**ECOTHERM Slim - SlimQuadro**

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### “CE” DECLARATION OF CONFORMITY

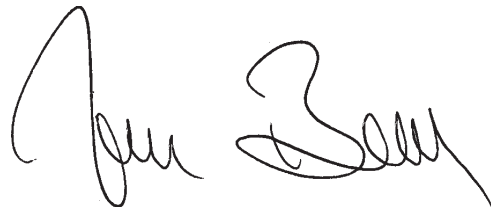
In accordance with the following directives:

European Directive	73/23/EEC and its amending directive	93/68/EEC
	89/336/EEC and its amending directives	93/68/EEC 92/31/EEC 93/97/EEC

Thermorossi S.p.A., Via Grumolo 4 - ARSIERO (VI), declares that the heaters of the ECOTHERM Slim SlimQuadro series have been designed and manufactured in compliance with the safety requirements of the standards for EC marking.  
This declaration refers to the entire range of the specified series.

ARSIERO, 28 October 2008

**THERMOROSSI S.p.A.**



# 1 INTRODUCTION

## 1 INTRODUCTION

### 1.1 GENERAL GUIDELINES

This installation, use and maintenance guide is an integral and essential part of the product and must be kept by the user. Before commencing with the installation, use and maintenance of the product, carefully read all the instructions contained in this booklet. At the time of installation of the appliance all local regulations, including those that refer to national and European regulations, must be observed. The Manufacturer recommends carrying out all the maintenance operations described in this manual.

This appliance must only be used as intended by the manufacturer. Any other use is considered incorrect and therefore hazardous; consequently, the user shall be totally liable for the product if used improperly. Installation, maintenance and repairs must be carried out by personnel with professional qualifications and in compliance with current regulatory standards and in accordance with the instructions of the manufacturer of the appliance. Use only original spare parts.

Incorrect installation or poor maintenance could injure or damage people, animals or things; in this case the manufacturer shall be relieved of all responsibility. Before commencing any cleaning or maintenance operation ensure that the appliance has been disconnected from the mains power supply by means of the main system switch or some other disconnecting device installed upstream from the appliance. The product must be installed in locations suitable for fire-fighting and furnished with all the services (power and outlets) which the appliance requires for a correct and safe operation. Any repairs or actions carried out on any systems, components or internal parts of the appliance, or on any of the accessories supplied with it, that are not specifically authorised by Thermorossi s.p.a, will automatically void the warranty and the manufacturer's responsibility, pursuant to D.P.R. 224 of 24/05/1988, art. 6/b . Use only original Thermorossi spare parts. If the appliance is sold or transferred to another user ensure that the guide is handed over with it. *Thermorossi S.p.A. maintains the author's rights on these service instructions. The information in this booklet may not be reproduced or given to third parties or used for competitive purposes without the appropriate authorization.*

### 1.2 SAFETY GUIDELINES



#### PERSONAL INJURY

This safety symbol identifies important messages throughout the manual. Read the information marked by this symbol carefully as non-observance of this message can cause serious injury to persons using the heater.



#### DAMAGE TO PROPERTY

This safety symbol identifies messages or instructions that are fundamental for the heater and system to function well. Failure to observe these symbols could result in serious damage to the heater and system.



#### INFORMATION

This symbol indicates important instructions for good functioning of the heater. If this information is not correctly observed, the performance of the heater will not be satisfactory.

### 1.3 STANDARDS AND RECOMMENDATIONS



**NORMATIVE REFERENCES** :national and international standards used as reference guides for the design, industrialization and production of the products:

- European directive 73/23/EEC  
- European directive 89/336/EEC

- European directive 93/68/EEC  
- Standard CEI 64-8 (IEC 364)

- Standard CEI EN 60204  
- Standard CEI 61/50

#### RECOMMENDATIONS

Before using the appliance, carefully read every section of this instruction manual as knowledge of the information and the regulations contained in it are essential for a correct use of the appliance.



The entire operation concerning the connection of the electric panel must be carried out by expert personnel; no responsibility will be accepted for damages, even to third parties, if the instructions for installation, use and maintenance of the appliance are not followed scrupulously. Modifications made to the appliance by the user or on his behalf, must be considered to be under his complete responsibility. The user is responsible for all the operations required for the installation and maintenance of the appliance before and during its use.

#### GENERAL WARNINGS



**Caution:** the appliance must be connected to a system provided with a PE conductor (in compliance with the specifications of 73/23/EEC, 93/98/EEC, concerning low voltage equipment).

Before installing the appliance check the efficiency of the earth circuit of the power supply system.

**Caution:** the power supply line must have a section which is suitable for the power of the equipment. The appliance must be powered with a voltage of 220/240 V and 50 Hz. Voltage variations which exceed 10% of the nominal value can cause poor functioning or damage the electrical device. Position the appliance so that the electric power plug is easily accessible. Voltage variations less than 10% of the nominal value can cause lighting and use problems. Apply a current regulator. Ensure that a suitable differential switch is installed upstream from the equipment.



Caution! Warning for Swiss users Refer to the local cantonal regulations imposed by the Fire Department (Mandatory signalling and safety distances ) and the Note concerning installation of heaters issued by the Association of Cantonal Fire Agencies (VKF - AEAI).

### 1.4 TRANSPORTATION AND STORAGE

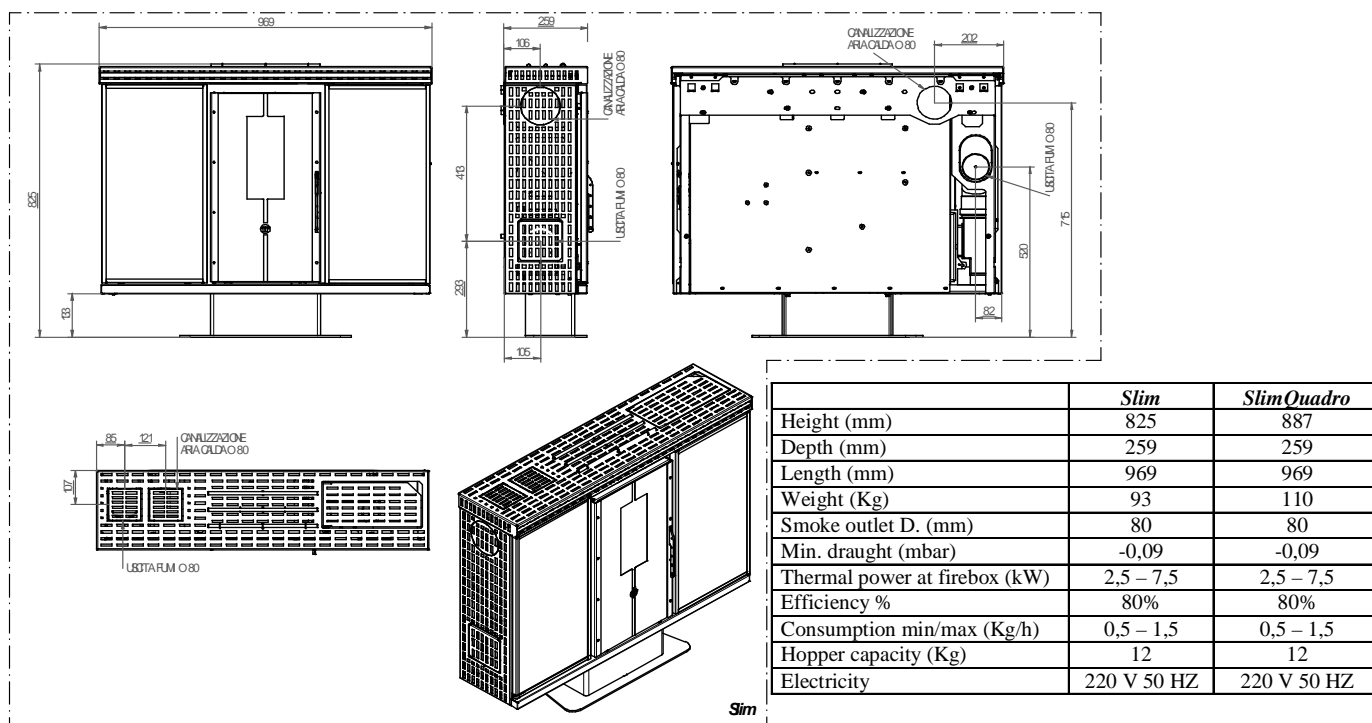
#### TRANSPORTATION AND HANDLING

The heater body must always be in a vertical position when handled and exclusively by means of trolleys. Take special care to protect the electric panel, the glass, the ceramics and all the fragile parts from mechanical impact which could damage them and their correct functioning.

#### STORAGE

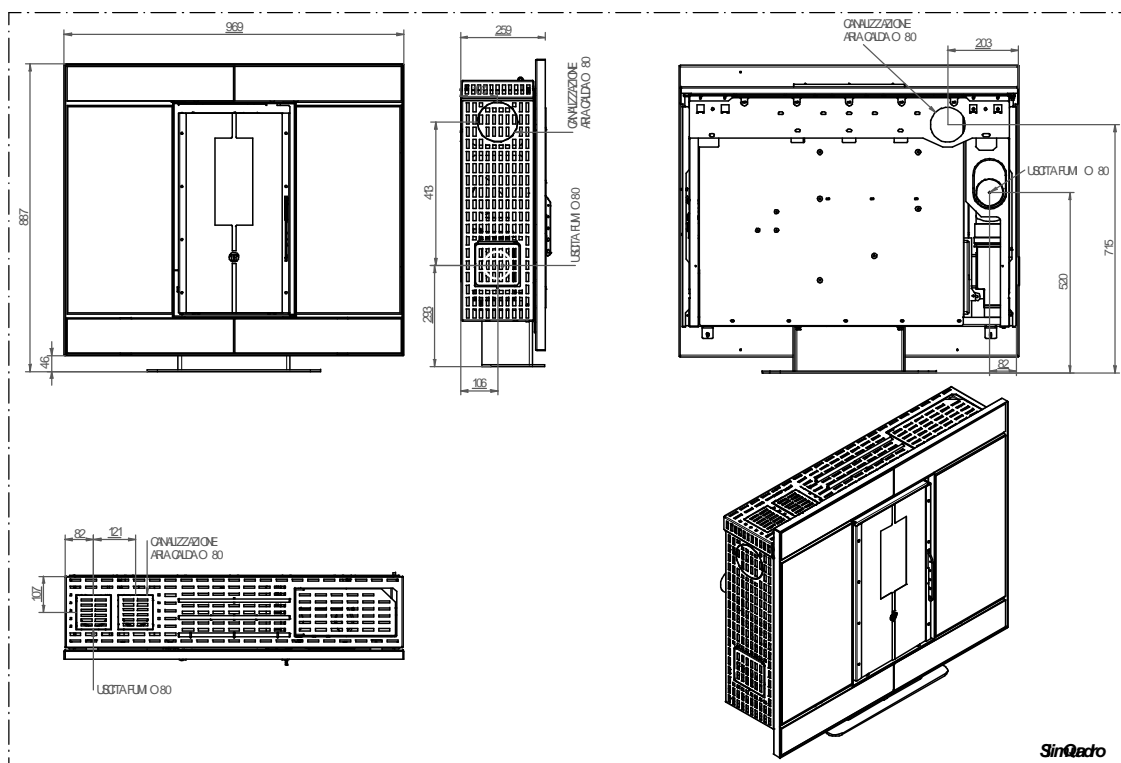
The heater must be stored in a humid-free environment and sheltered from the weather; do not place the heater directly on the floor. The Company denies all responsibility for damage caused to wood floors or floors made from any other material. It is inadvisable to store the heater for long periods of time.

## 2 TECHNICAL CHARACTERISTICS \*



**LEGENDA**  
 CANALIZZAZIONE ARIA CALDA  
 USCITA FUMI

**KEY**  
 HOT AIR CHANNELLING  
 SMOKE OUTLET



\* All the data are based on the appliance fuelled with Austrian standard ÖNORM M 7135 type-approved pellets.

### 3 GENERAL DESCRIPTION

#### 3.1 OPERATING TECHNOLOGY

•Your heater has been built to fully satisfy all your heating and practical requirements. Top-grade components and functions managed with microprocessor technology guarantee high reliability and optimal performance.

#### 3.2 PELLETS

•The appliance is fuelled by pellets, that is, cylinders of compressed sawdust; this will make it possible for you to enjoy to the full the heat of the flame

•The pellets are cylinders of compressed sawdust having a 6 mm diameter and a maximum length of 20 mm.

They have a maximum moisture content of 8%, a thermal value of 4000/4500 Kcal/Kg and a density of 620-630 Kg/m<sup>3</sup>. All data presented in the table of Technical Features (para.2) are taken using pellets certified according to O M 7135 standards, the consumption may vary depending on length.



The use of fuel which does not comply with the description given above immediately voids the heater warranty. Do not use the appliance as an incinerator, at the risk of voiding the warranty.

#### 3.3 THE FEEDBOX



The feedbox is situated in the top part of the heater. The maximum load capacity of the tank is approximately 12 Kg, but varies according to the specific weight of the pellets.

The manufacturer recommends emptying the hopper and vacuuming the screw feeder zone once a month and during the summer period.



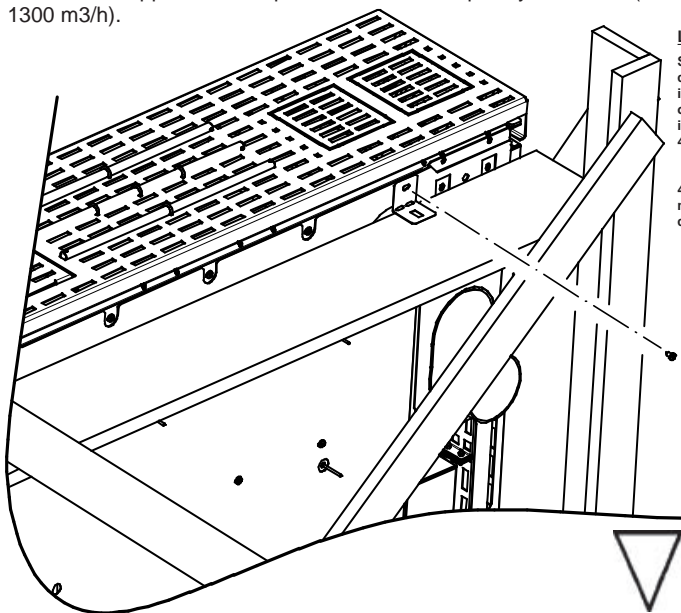
Take special care when loading the hopper as the screw feeder at its base is in motion.

### 4 INSTALLATION

#### 4.1 HEATER LOCATION



CAUTION : Always use trolleys to move the appliance and the appliance must always be in a vertical position. The casing is packaged separately. To unpack the Slim and SlimQuadro heaters, after having removed the wood cover, the 2 front uprights and planks, remove the product from the pallet by removing the screws at the base of the heater, undoing the two screws at the back (then screwing them back into the same holes) and shifting the heater from the pallet underneath. Carefully read and follow the general guidelines set out in paragraph 1.1. It is important to consider that the floor of the room in which the heater will be installed must be capable of supporting the weight of the heater together with the weight of the pellets in the hopper. CAUTION: The room in which the appliance will operate must be adequately ventilated (minimum air intake 1300 m<sup>3</sup>/h).



#### LEGENDA

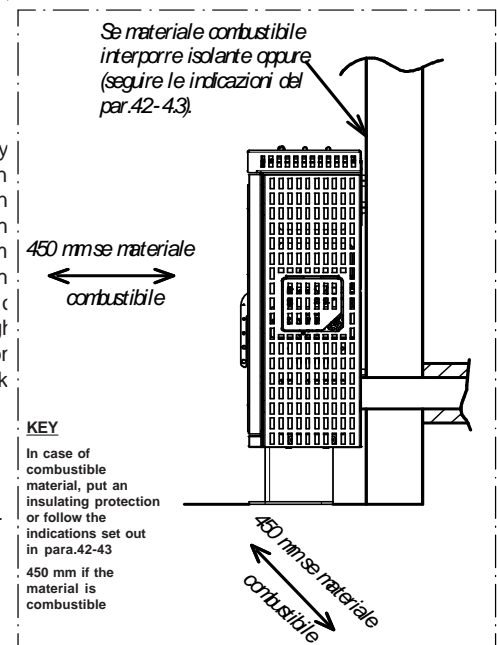
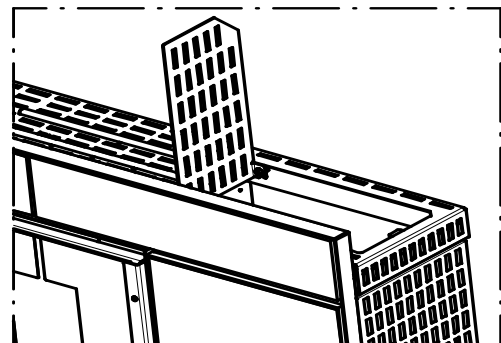
Se materiale combustibile interporre isolante oppure (seguire le indicazioni del par. 42-43)

450 mm se materiale combustibile

#### KEY

In case of combustible material, put an insulating protection or follow the indications set out in para.42-43

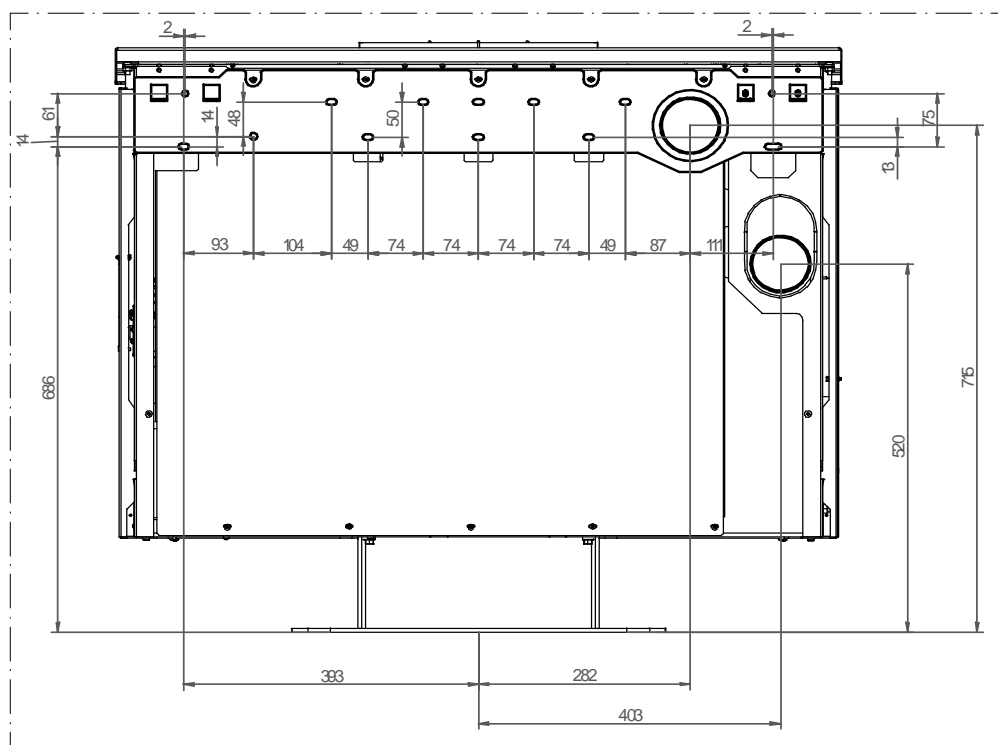
450 mm if the material is combustible



The appliance must be positioned at a minimum safe distance from walls and furnishings. This distance will have to be increased considerably if the objects surrounding the appliance are inflammable (matchboarding, furniture, curtains, picture frames, sofas, etc...).

The recommended minimum distances are illustrated in the drawing below on the right. Installation in the vicinity of heat-sensitive materials is only permitted if suitable insulating protection is provided for (ref. Uni 10683). The manufacturer highly recommends fastening the heater to the wall or the floor (see para.4.2, 4.3); this will prevent the heater from accidentally falling and damaging, possibly even seriously, to either things and/or persons.

#### 4.1.1 DRILLING TEMPLATE



#### 4.2.1 FASTENING THE SLIM HEATER TO THE WALL.

The heater can be fastened to the wall. Before doing so however make sure that the wall plaster and finish can resist an operating temperature of 80°C.

The heater can be fastened with or without the base: to remove the base (I) firstly remove the 4 screws (L) that fix it to the heater; see figure 1.

To fasten the heater to the wall follow the procedure illustrated in figures 3-4-5 for Slim:

- Firstly fasten the "heater support bracket" (A): if the support is a cored brick wall we recommend using at least 4 nylon anchor bolts 10x65 and 4 chipboard screws TSP+ 6X75 (if the support has different compactness and other characteristics then the number of bolts and screws will have to be increased to avoid dangerous detachment with subsequent damage to things and/or persons ).

- Remove the "cover" (B) by pulling it upwards.

- Remove the "left side panel" (C) by pulling it upwards.

- Remove the "front LH casing" (D) (follow the instructions in para. 4.4).

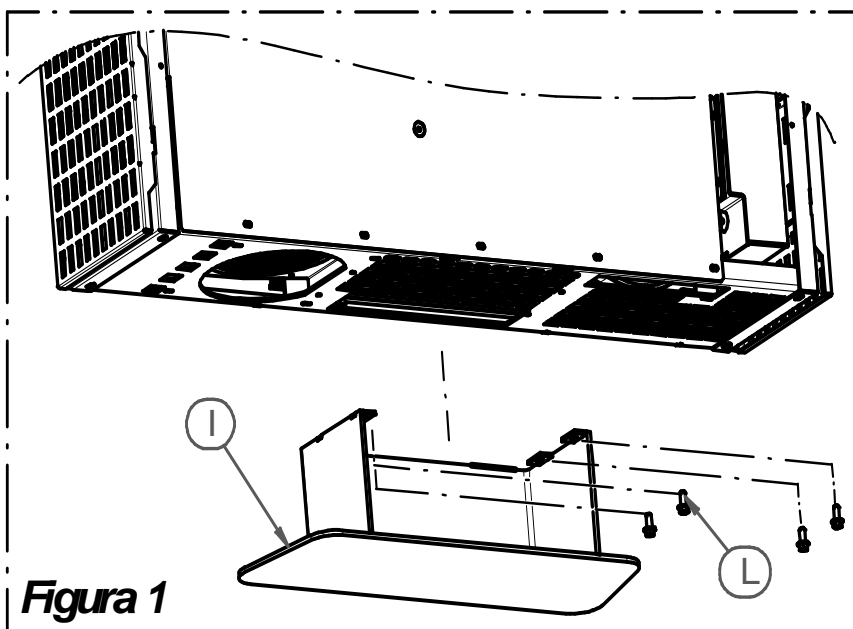
- Remove the "protection" (F) by undoing the 3 screws (F1) indicated in the figure.

- Fasten the "spacers" (G) to the heater with the screws (G1).

- Fasten the heater to the wall anchoring it to the "heater support bracket" (A)

- Fasten the "2 safety screws"(H).

- Re-assemble the following parts in sequence: the "protection" (F), the "casing" (D), the "left side panel" (C) and the "cover" (B).



**Figura 1**



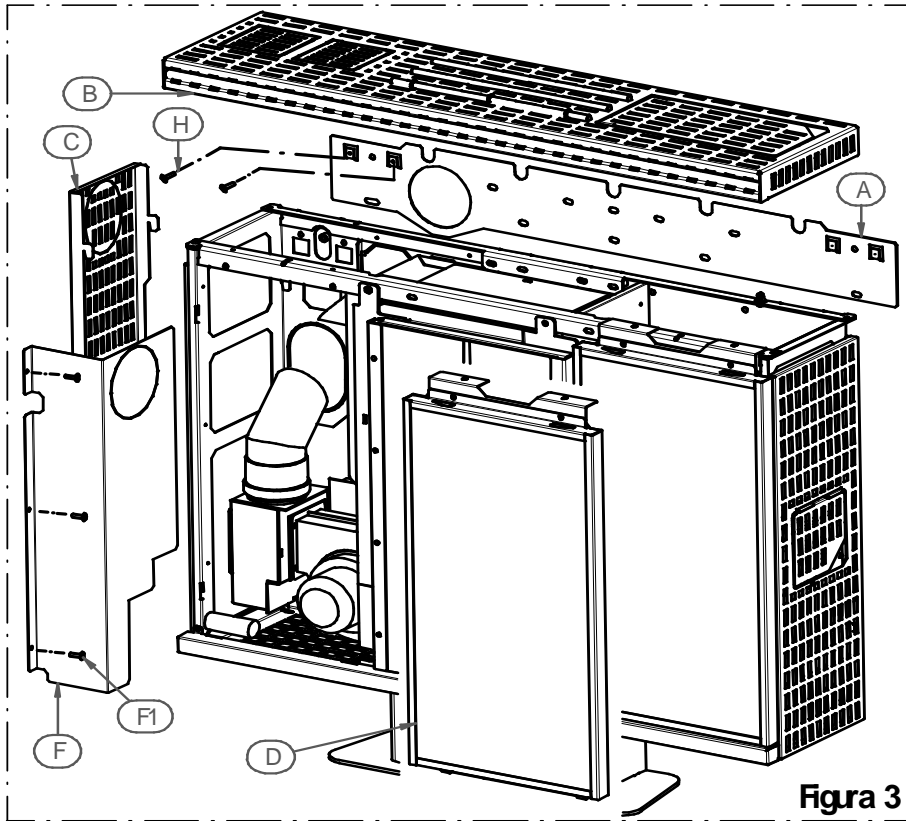


Figura 3

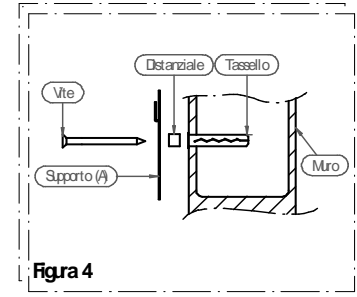


Figura 4

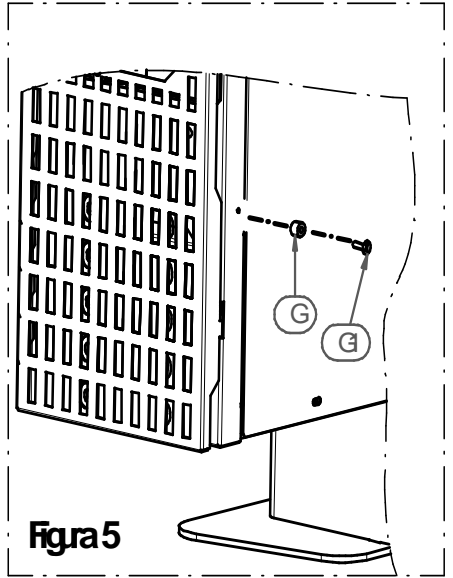


Figura 5

**4.2.2 FASTENING THE SLIMQUADRO HEATER TO THE WALL**

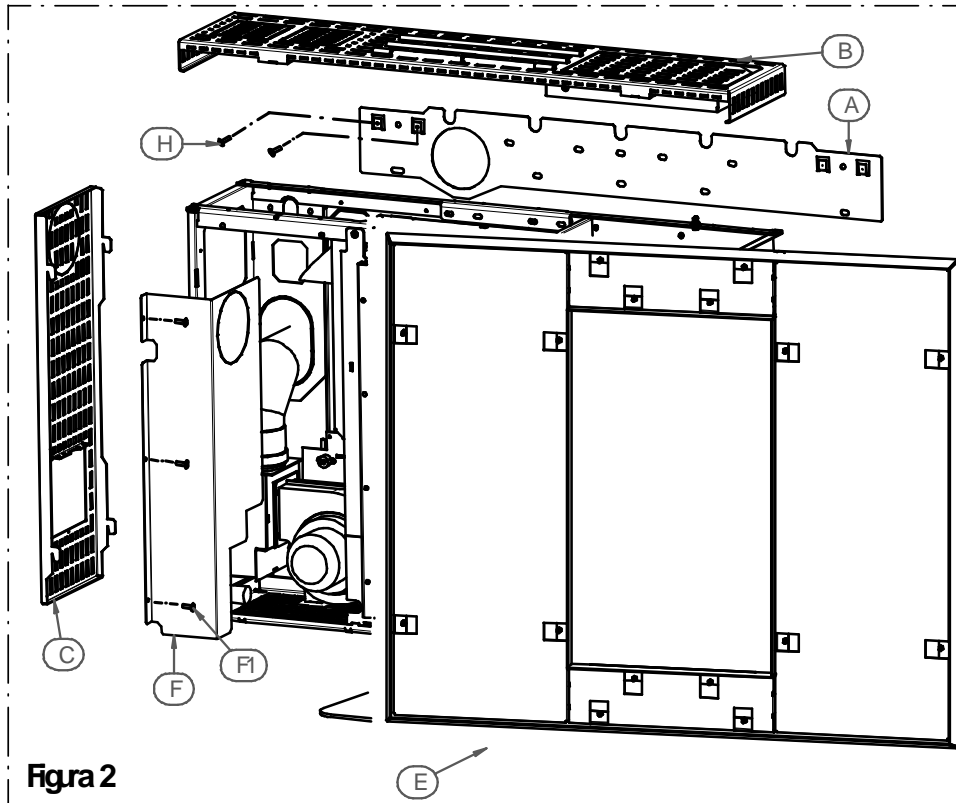


Figura 2

The heater can be fastened to the wall. Before doing so however make sure that the wall plaster and finish can resist an operating temperature of 80°C.

The heater can be fastened with or without the base: to remove the base (I) firstly remove the 4 screws (L) that fix it to the heater; see figure 1. To fasten the heater to the wall follow the procedure illustrated in figures 2-4-5 for SlimQuadro:

- Firstly fasten the "heater support bracket" (A): if the support is a cored brick wall we recommend using at least 4 nylon anchor bolts 10x65 and 4 chipboard screws TSP+ 6X75 (if the support has different compactness and other characteristics then the number of bolts and screws will have to be increased to avoid dangerous detachment with subsequent damage, possibly even serious, to things and/or persons ).

LEGENDA	KEY
Vite	Screw
Distanziale	Spacer
Tassello	Insert
Muro	Wall
Supporto	Support
Figura	Figure



- Remove the "cover" (B) by pulling it upwards.
- Remove the "left side panel" (C) by pulling it upwards.
- Remove the "tileable casing" (E) (for SlimQuadro follow the instructions in para.4.6).
- Remove the "protection" (F) by undoing the 3 screws (F1) indicated in the figure.
- Fasten the "spacers" (G) to the heater with the screws (G1).
- Fasten the heater to the wall anchoring it to the "heater support bracket" (A)
- Fasten the "2 safety screws"(H).
- Re-assemble the following parts in sequence: the "protection" (F), the "casing" (D), the "left side panel" (C) and the "cover" (B).

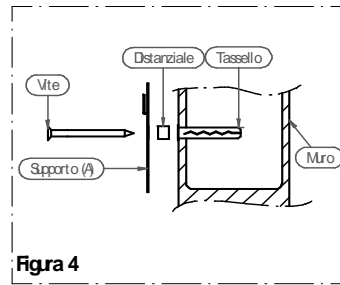


Figura 4

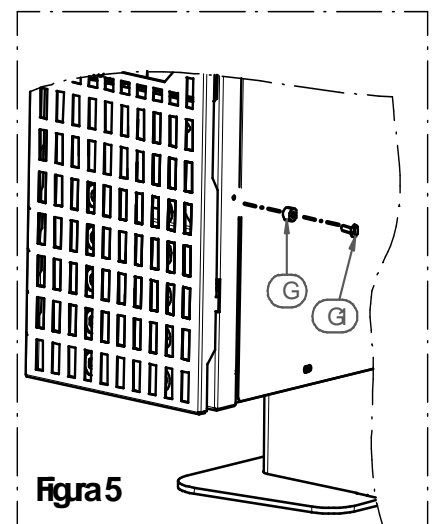


Figura 5

#### 4.3 FASTENING THE HEATER TO THE FLOOR

An alternative option is to fasten the heater to the floor ( this option is advisable when the wall plaster and/or finish is/are not capable of resisting the operating temperature of 80°C ), in this case follow the drawing on the right.

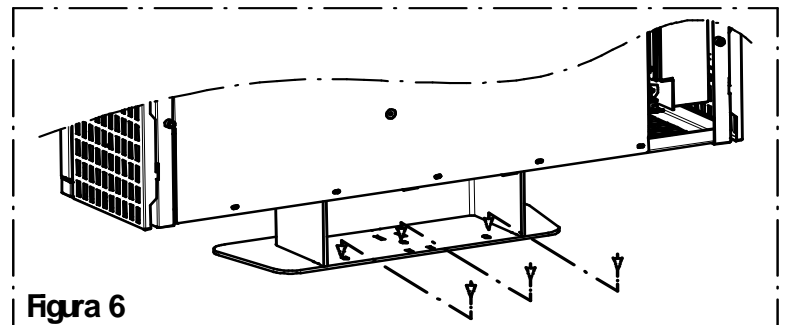


Figura 6

#### 4.4 INSTALLATION OF SLIM CASING

After positioning the heater, fastening it to the wall or floor, connecting it to the smoke channel and making the electric connections, the next step is to mount the casing as shown in the image ( "the ceramic (or glass) elements" are packaged separately):

- Remove the "cover" (B) by pulling it upwards (fig.7).
- Remove the 2 " front casings " (D) by undoing the 2 screws (D1) (fig.7) .
- Unpack the 2 "ceramic (or glass) elements" (M) (fig.8) and insert them in the "front casings" as illustrated in fig.8. To securely fasten the "ceramic (or 2 glass) elements" to the " front casings " (D) bend the 4 tabs indicated in ( Detail L ) and ( Detail N ).
- Next apply high temperature silicone with a resistance to 350°C (not supplied) in 4 points through the holes in part D.
- Next fasten the complete " front casings " , firstly inserting the bottom tabs then fastening the screws (D1) (fig.7).
- Next mount the "cover" (B).

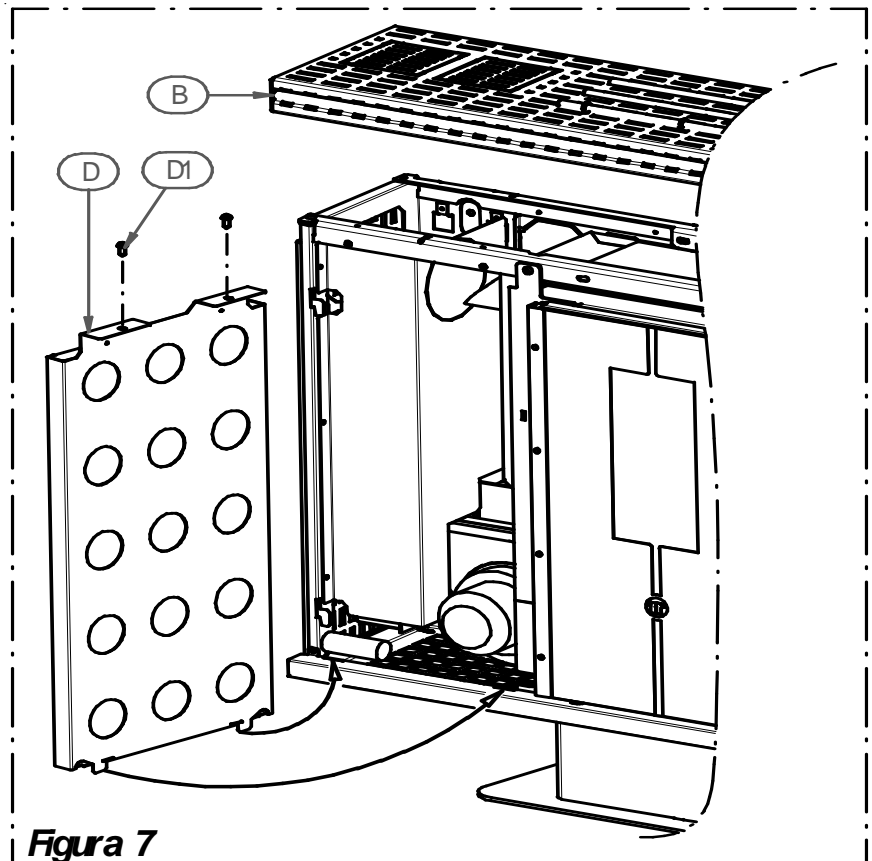


Figura 7



Tiny imperfections on the surface of the ceramic elements such as micro-pits, shivering, and shade variations.... are normal characteristics as are any possible imperfections on the glass surfaces such as micro-pits, slight shade differences....

Take particular care when handling the casings as they could easily break from accidental impact: this type of damage is not covered by the guarantee.

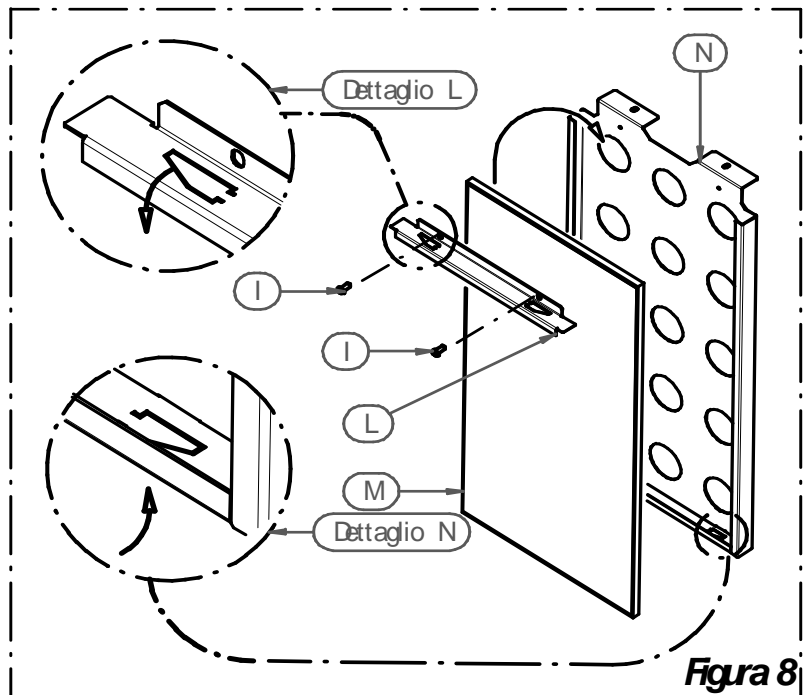


Figura 8

#### 4.5 INSTALLATION OF CASING ON SLIMQUADRO SUPPORT

The casing is packaged separately: follow the instructions given below to glue the ceramic (or glass) elements to the support.

- Clean the aluminized metal support thoroughly with a degreaser (do not leave any product residues, rinse with water if necessary).
  - Glue the ceramic (or glass) elements (previously unpacked and cleaned ) with high temperature silicone resistant to 350°C (not supplied) as indicated in the drawing below.
  - Position the ceramics in such a way that the gap is equal on all sides of the tiles.
  - Allow to set in a horizontal position for at least 48 hours at a temperature of minimum 10°C before handling the panel.
  - The next step is to grout the joints, if you wish, according to your personal taste. See the bottom of the page for grouting instructions.
- After positioning the heater, fastening it to the wall or floor, connecting it to the smoke channel and making the electric connections, the next step is to mount the casing as described in the following paragraph.

You can mount the casing to SlimQuadro according to your own personal taste (we recommend using 10 mm hardened glass or porcelain stoneware).

Follow the procedure set out below for glueing the casing to the supplied support :

- Clean the aluminized metal support thoroughly with a degreaser (do not leave any product residues, rinse with water if necessary).
- Glue the ceramics (previously cut to measure and cleaned) with generous amounts of high temperature silicone resistant to 350°C (see fig. 8A).
- Allow to set in a horizontal position for at least 48 hours at a temperature of minimum 10°C .
- Next, proceed to grout the joints, if you wish, according to your personal taste.

-If you decide to grout the joints protect the steel frame with "masking tape" (to prevent damaging the colour).

-Using "high temperature silicone for tile joints (180°C)" proceed to grout the tile joints.

-Clean and wait at least 48 hours (at a temperature of minimum 10°C ) before handling the panel.

After positioning the heater, fastening it to the wall or floor, connecting it to the smoke channel and making the electric connections, the next step is to mount the casing as described in the following paragraph.

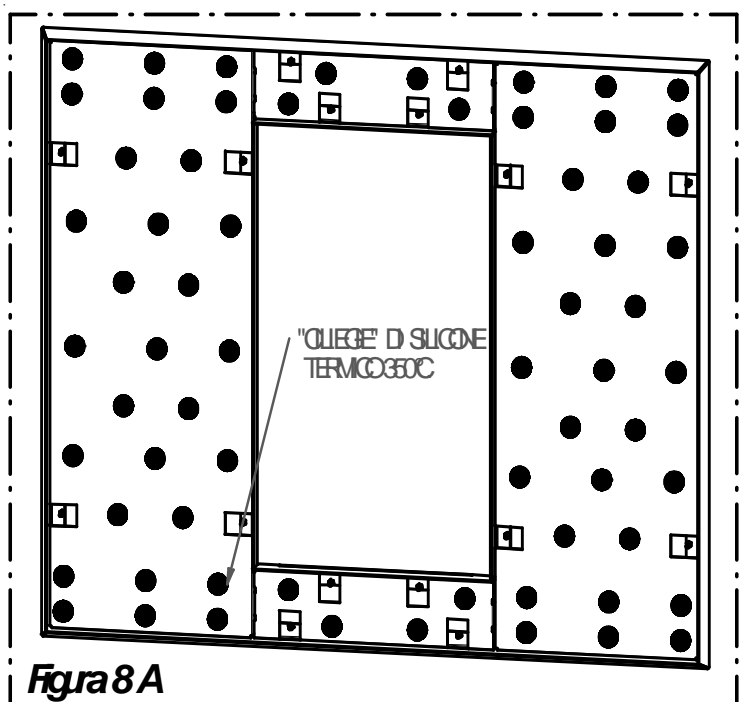


Figura 8A

#### LEGENDA

Figura  
Dettaglio  
"Ciliegie" di silicone termico 350°C


#### KEY


Figure  
Detail  
High temperature silicone points resistant to 350°C

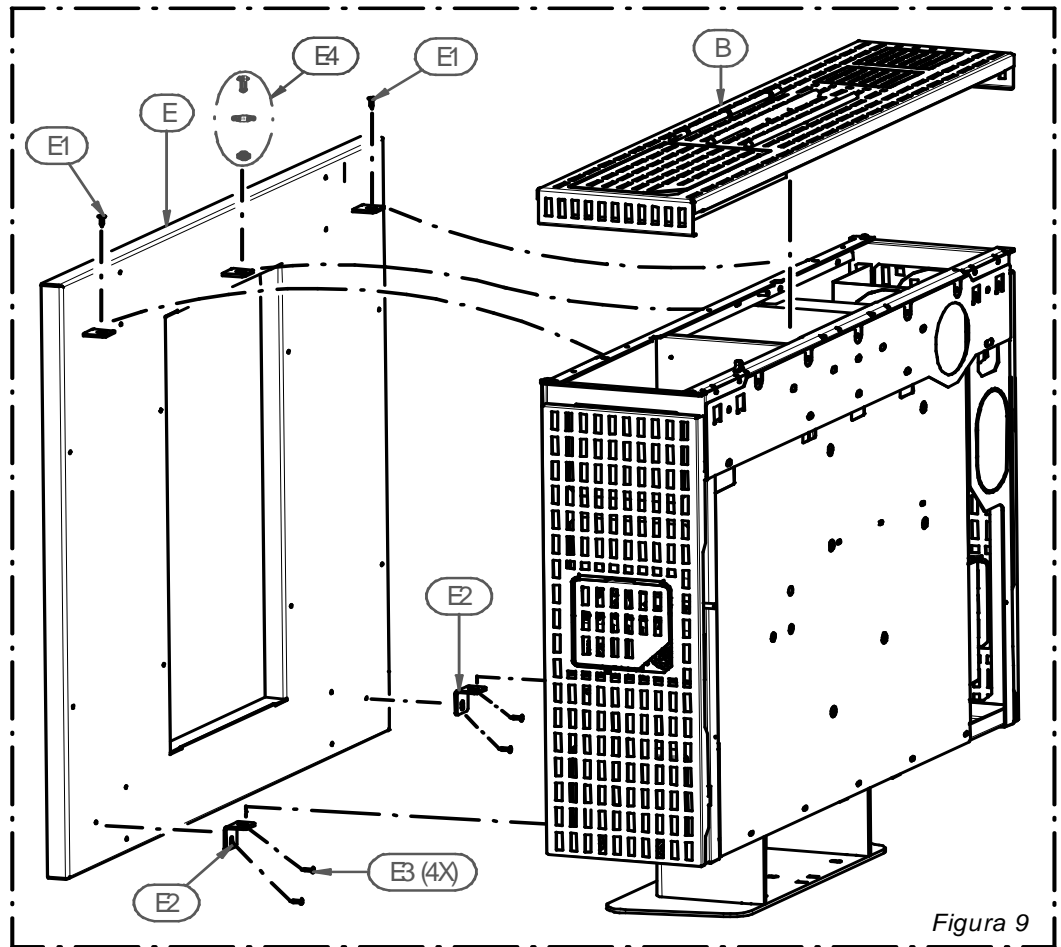
## 4.6 INSTALLATION OF SLIMQUADRO CASING

After positioning the heater, fastening it to the wall or floor, connecting it to the smoke channel and making the electric connections, the next step is to mount the casing as described in figure 9:

- Remove the "cover" (B) by pulling it upwards.
- Fasten the "casing" (E) to the heater with screws (E1) and (E4).
- Next fasten the brackets (E2) to the heater and to the "casing" (E) with the 4 screws (E3).
- Next mount the "cover" (B).

 Small imperfections on the surfaces of the ceramics such as: micro-pits, shivering, and shade variations.... are normal characteristics. Take particular care when handling the ceramics as they could easily break from accidental impact: this type of damage is not covered by the guarantee.





## 5 HANDHELD RADIO CONTROL

### 5.1 DESCRIPTION OF THE HANDHELD RADIO CONTROL AND THE SIDE HEATER PANEL

#### INTRODUCTION

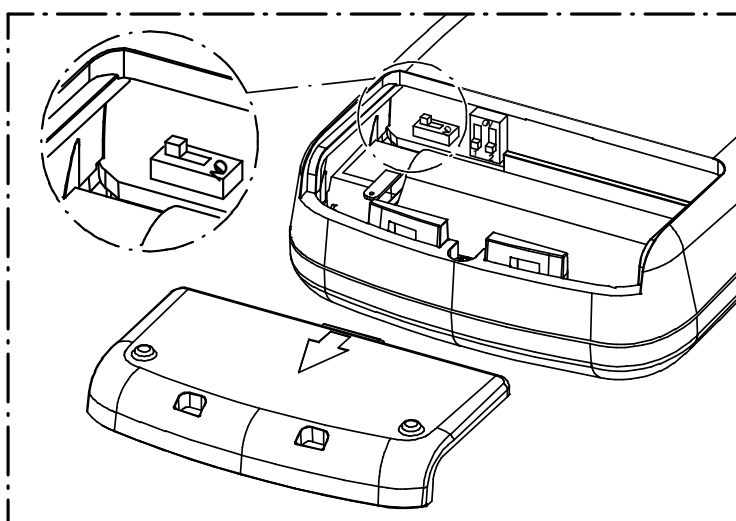
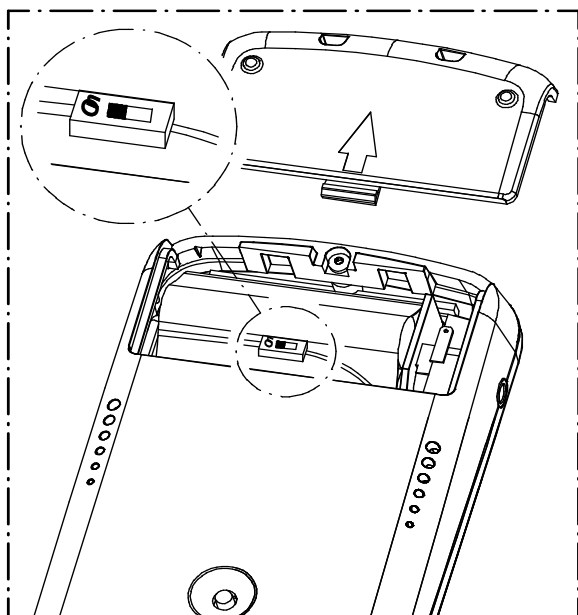
The handheld radio control is the control instrument for your heater that will permit you to manage Ecotherm and its functions. The radio control is a user-friendly way of interacting with the main heater settings and, when required, of accessing the various other control commands. In both cases the Manufacturer recommends you read the following pages carefully so that you will know how to make the best use of your heater. Keep in mind that radio wave transmissions can be affected by the surrounding environment: the presence of thick walls can reduce the transmission that normally extends to 6-7 metres.



The following operations must be carried out the first time the heater is started up :

- Turn the switch inside the battery compartment to ON (see drawing below)
- Connect the radio control by means of the battery charger supplied to the power line, ( it must be recharged for at least 5 days: see para. 8.3), as the rechargeable batteries could be partially or completely flat). The heater must be energised and the switch turned to position "1". At the end of the winter season it is mandatory to switch off the radio control completely, by means of the switch situated inside the battery compartment, in order to preserve the life of the batteries (see figures below: the switch could be located on the battery pack or on the board).





### 5.1.1 HANDHELD RADIO CONTROL

A description of the buttons and indicators on the radio control follows:

The radio control consists of a plastic shell on which is installed a backlit LCD display with control buttons, interface card and rechargeable batteries: the backlighting switches off temporarily during use in order to reduce energy consumption which consequently extends the duration of the charge. There are two main control pushbuttons marked with the ventilation symbol (2) and the symbol of the flame (1). The flame button (1) sets the heater power, there are a possible 5 power levels displayed by the 5 bars progressively coming on in sequence (7). You can select the AUTOMATIC mode displayed by the text word AUTO (see paragraph 5.9 ). The shutdown cycle appears on the display when all the power bars are off. The fan button (2) controls the ventilation of the heater. It is activated when the heater reaches a temperature over 42 °C. The fan can be set to any of 4 speed levels: when the heater is on the ventilation cannot be switched off . Therefore, in brief, the two buttons function as follows:

**(1) Insert on/off and flame adjustment button .** When you press this button the appliance (10) switches to ON/ RUNNING/ OFF. Press repeatedly to activate up to 5 bars (7) and the AUTO indicator is activated (8 automatic) .

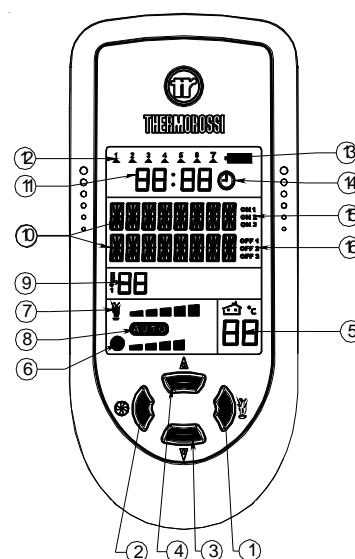
**(2) Ventilation setting button.** Press this button to set the desired level of ventilation: up to a maximum of 4 speeds are available, indicated by the lighting of the corresponding bar (6) .

### 5.1.2 ROOM TEMPERATURE THERMOSTAT OPERATION

When the AUTO function is activated the temperature value detected by the temperature sensor (5) installed in the radio control is updated at regular intervals. During the start up phase the temperature value is not updated. The temperature value transmitted to the heater does not change the instant there is a sudden change in the room temperature but it is updated regularly through the DATA ANALYSIS function. It is normal for the temperature sensor to detect temperatures which are slightly different to the real ones: these variations are caused by the environment in which the radio control is positioned and by the prolonged use of the display.

**(3) (4) Auxiliary buttons for temperature setting .**

Press button 3 to lower the temperature. Press button 4 to raise the temperature level set in the handheld radio control. As is explained below they are only functional if the AUTO cycle is selected. The set temperature appears in zone 9 of the display. The room temperature, however, appears in zone 5 of the display. In this operating cycle the ventilation and power self-regulate according to the set temperature and the temperature detected in the display. It is not possible to set the air flow discharging from the heater at any desired temperature because it is autonomously established by the heater according to the ambient temperature. If the AUTO function is not activated the temperature value set with buttons 3 and 4 is ignored.



### 5.1.3 INDICATORS OF THE HANDHELD RADIO CONTROL

(5) “Room temperature detected by the radio control’s temperature sensor” indicator

(6) “Ventilation level “ indicator

(7) “Combustion level ” indicator

(8) “AUTO”CYCLE ACTIVE indicator

(9) “ Room temperature setting” indicator: this is the room temperature that you wish to reach by means of buttons 3 and 4.

(9A) Text “4SP”: this text, meaning “4 speeds of the room fan”, is always present in all the operating phases.

(10) Display zone where the following appear: operating phases, programming, MENU ...<i>..

(11) Clock

(12) Day of the week

(13) Battery charge level

(14) “Chronothermostat enabled-disabled” indicator

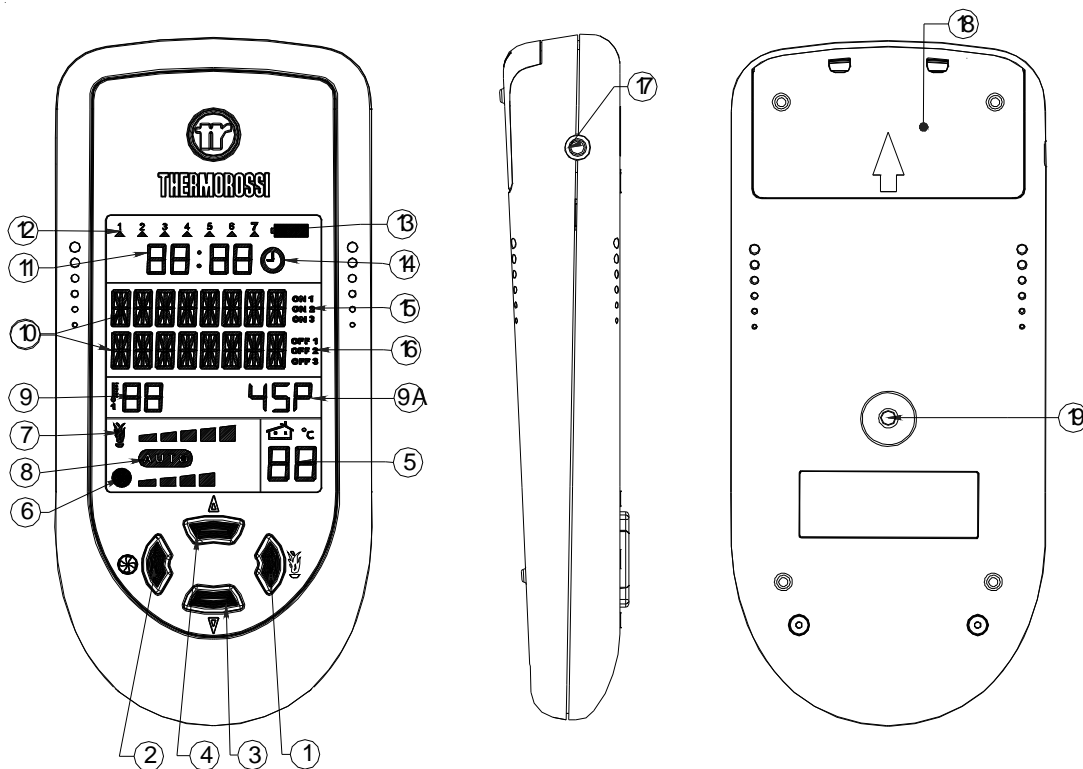
(15) (16) On-off indicators for the programming phase .

(17) Battery charger connection.

(18) “Code selector ” and “Battery compartment” cover

(19) “MENU” selection button To access the main menu press the button marked 19. Press button 19 repeatedly to scroll the adjustment, setting and programming windows (see para. 5.2 , 5.3 , 5.4 , 5.5 , 5.6 , 5.7) . This button can also carry out DATA ANALYSIS functions: fundamental control function for updating data.

After having carried out the DATA ANALYSIS all the data will be updated: it is normal for the temperature sensor to detect temperatures which are slightly different to the real ones: variations caused by the environment in which the radio control is positioned. To exit the main menu without having to scroll all the possible adjustments/ functions, simply press button (1) to return to the heater operating status.



### 5.1.4 SIDE PANEL OF THE HEATER

The back panel integrates the radio control.

A description of the functions of the buttons and LEDs on the side panel of the heater:

#### (20) Insert on/off and flame adjustment button

By pressing this button you can use the heater even without the handheld radio control. Press button (20) repeatedly to increase the combustion power, whereas the ventilation level is adjusted automatically according to the selected combustion power.

One or more acoustic signals correspond to each power step selected:

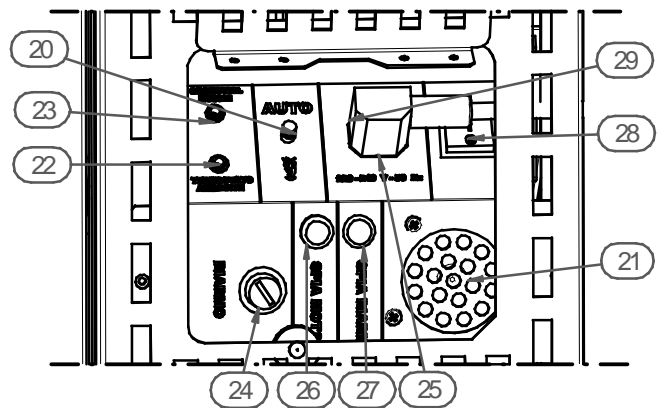
-1 power bar — 1 acoustic signal

-2 power bars— 2 acoustic signals

.....

-5 power bars— 5 acoustic signals

If you press once again the acoustic signals will not sound: this means that after 5 seconds the heater will set itself in OFF mode and consequently shut down. It is not possible to select the AUTO cycle.



**21 Loudspeaker for voice alarms/information:** the heater gives information on its status and any active alarms through this loudspeaker.

**22 Power outlet for additional room temperature connection.**(see para. 7.1)  
(additional room temperature thermostat not supplied )

**23 Power outlet for additional chronothermostat connection.**(see para. 7.2)  
(additional chronothermostat not supplied )

#### 24 Overtemperature thermostat button cap.

In the event of overtemperature this safety thermostat stops the loading of pellets. When it is activated LED 27 comes on. To restart the heater you need to wait until it cools down, then verify the cause for the overheating, remove the cause, unscrew the protective cap and press the button (24) .

**25 Electrical power outlet 220-240V 50Hz.**

**26 Loading motor test LED.** The light must come on when the pellet screw feeder starts .

**27 Reset thermostat tripped indicator light.** This LED comes on when the reset thermostat is activated.

**28 Main switch 0-1**

**29 General fuse 3.15 A.**

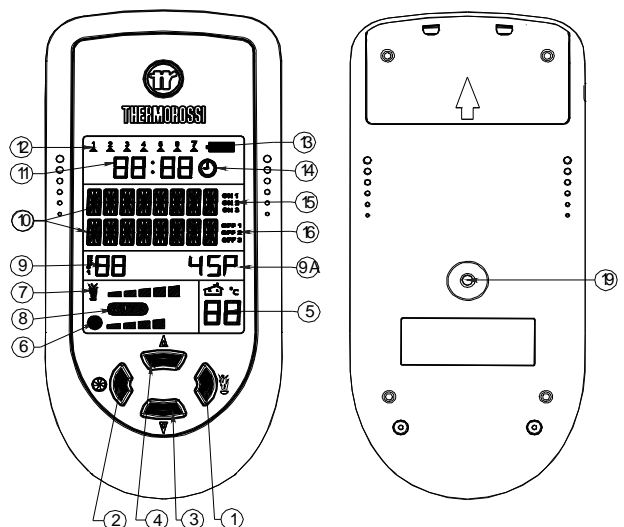
### 5.2 DAY AND TIME SETTING

The heater must be energised and the switch at the back turned to position "1"(see image in top right corner ).

To set the clock and the day of the week carry out the procedures described below. Press the button (19) on the back of the radio control repeatedly until the word **TIME** appears.

To set the day press the button (2) . The word **DAYS** will appear on the display, and the indicator (12) will start to blink. Press the button (3) and/or (4) to set the number that corresponds to the current day. The **1** symbol corresponds to Monday , the **2** symbol to Tuesday ..... and the symbol **7** to Sunday. To confirm the selection press the button (1). Next the

word **hour** will appear on the display, and the hour indicator (11) will start to blink. Press button (3) and/or (4) to set the current time. To confirm the selection press the button (1). Next the word **MINUTES** will appear on the display and the minute indicator (11) will start to blink. Press buttons (3) and/or (4) to set the current minutes . To confirm the selection press the button (1). The day and time setting is now completed : at this point the heater operating status will appear on the display.



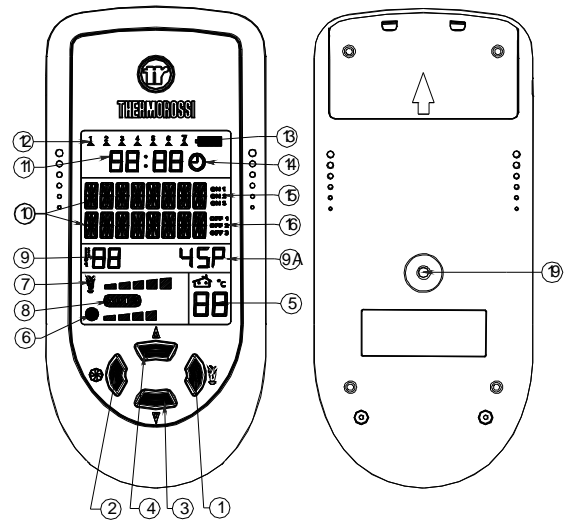


### 5.3 ON/OFF PROGRAMMING.

The heater must be powered and the switch on the side of the heater in position "1". The weekly programming can be executed with the help of the handheld radio control. It is possible to set up to 3 on-off cycles for each day from Monday to Sunday. To access the programming mode press the button (19) on the back of the radio control repeatedly until the word CRONO appears.

Press button (3) or (4) to enable/disable the program setting (symbol (14) present / absent) : this function is useful if you wish to disable the established weekly program setting. To program the heater you need to access the chronothermostat function by pressing the button (2):

the LED 1 (12) comes on (this indicates that Monday, the first day of the week, is being programmed). The text ON1 of the indicator (15) comes on and the word HOURS appears on the display. Press button (3) and/or (4) to enter the hour of the first cycle start time. To confirm the selection press the button (1). The word MINUTES will appear on the display. Press button (3) and/or (4) to enter the minutes of the first cycle start time. To confirm the selection press the button (1). Next the text OFF1 (indicator (16)) will appear on the display. Proceed using buttons (3), (4) and (1) as indicated above to set HOURS and MINUTES for the cycle end time. At this point the first on-off cycle for Monday has been entered. It is then possible to set the second on-off cycle for Monday (indicated by the texts ON2 and OFF2) and the third on-off cycle for Monday (indicated by the texts ON3 and OFF3). Now program the on-off cycles for the remaining days of the week up to and including Sunday.



When the programming mode is active (symbol present) the minimum operating value at cycle on (combustion power-ventilation speed) is the same minimum operating value that was set before the last cycle off.



If the second on-off cycle is not required simply set the ON2 time as 00:00 and the OFF2 time as 00:00. In the event of a programmed cycle on always ensure that the brazier is clean and seated correctly in its lodging: failure to keep the brazier clean can reduce the life of the spark plug.

### 5.4 VOICE INFORMATION VOLUME CONTROL

The heater must be powered and the switch on the side of the heater in position "1"

Your heater informs you on its operating status and on any problems that could arise by means of voice messages.

Select the volume level for the voice messages by carrying out the following procedure. When the insert is in the **POWER OFF, POWER ON or RUNNING** status simply press the button (19) until the word **VOLUME** appears on the display (10). Press button (2) and the word **SELECT** appears on the display: the introductory music plays. Press button (4) repeatedly and the + symbol appears (to increase the volume).

Press button (3) repeatedly and the - symbol appears (to lower the volume). To confirm the volume selection press the button (1). The heater then returns to its previous **POWER ON or RUNNING or POWER OFF** status.

### 5.5 OPERATING LEVEL SETTING

The heater must be powered and the switch on the side of the heater in position "1"

Your appliance is delivered with an excellent program installed that favours combustion yield; the program is called **Level 1**.

If you are using pellets with a higher than normal incidence of residues after combustion in the brazier, alternative levels may be selected:

If you are using pellets with a higher than normal incidence of residues after combustion in the brazier, alternative levels may be selected:

**Level 2** : this program increases the smoke suction unit speed acceleration.

**Level 3** : this program increases the suction unit speed to a greater degree than level 2.

**Level 0** : when using lightly-compressed pellets and/or flue outlets with very high vacuum, over 2 mm water column.

*The pellet consumption value is not affected by the operating level settings.*

Select the required level by acting as follows:

Press the (19) button on the back of the radio control repeatedly until the text indicating the preset heater level appears on the display (**Level 1 or Level 2 or Level 3 or Level 0**). Press the button (2) and the word **SELECT** appears on the display (10). To change the operating level hold down button (3) and press button (4).

By holding down button (3) and pressing button (4) repeatedly the level changes in the following sequence: **Level 2...Level 3...Level 0...Level 1...**, next press button (1) to confirm the selected level.



The level selection can be made with the heater **OFF** or **ON**. If the change is made while the insert is running the difference in the flame will be apparent. It is mandatory to pay particular care when selecting the most appropriate operating cycle for your installation. After the selection of the operating cycle a thorough cleaning of the brazier is mandatory.

### 5.6 LANGUAGE SELECTION

The heater must be powered and the switch on the side of the heater in position "1"

Press the MENU' button (19) repeatedly until the word **ITALIAN** appears on the display (10). To change the display language proceed as follows: Press button (2) and the **SELECT ITALIAN** text appears on the display. Press button (4) repeatedly to select German, English, French. Once you have selected the desired language press button (1): The handheld radio control carries out a data analysis, that is, an update of the new language.



## 5.7 DATA ANALYSIS

**DATA ANALYSIS** represents the function concerning update of data between the heater and the handheld radio control. The radio wave transmission is frequently used by numerous applications: the **DATA ANALYSIS** function is used to update the temperature, ventilation, power, temperature analysis, system status. The **DATA ANALYSIS** process can take from a minimum of 18 seconds to a maximum of 40 seconds. If the **DATA ANALYSIS** is not executed successfully, repeat the operation by pressing the button (19) for a few seconds then releasing it.

## 5.8 TRANSMISSION - RECEPTION ALARMS

If a problem arises with the communication between the handheld radio control and the heater the following messages could appear on the display:

- OUT OF RANGE** : the radio control is located at a distance that is greater than the radio control's radius of action.  
**NO CURRENT** : the heater has shut down and does not appear to be powered by electricity.  
**PRESS A BUTTON** : if the radius of action has been exceeded, to restore communication with the heater press one of the buttons on the radio control for approx. 2 seconds.

## 5.9 AUTOMATIC / MANUAL HEATER OPERATING MODE

### 5.9.1 DESCRIPTION OF THE AUTOMATIC OPERATING MODE CYCLE

In the automatic operating cycle the heater expresses its maximum flexibility of operation while optimising fuel consumption. During the **AUTO** cycle the heater self-regulates the combustion and ventilation according to the temperature (9) set by means of buttons (3) and (4). If for example the temperature (9) is set at 23°C the heater attempts to take the room temperature (5) detected by the handheld radio control to 23°C in the shortest possible time by modulating power and ventilation as the room temperature approaches set temperature (9). Once this temperature is reached the heater settles at the minimum operating value for combustion and ventilation. To select this function press the button (1) repeatedly until the word **AUTO** appears on the display (see image on the right). During the **POWER ON** phase, that takes 20 minutes, the heater ignores all the commands transmitted. After this time has elapsed the word **POWER ON** disappears on the display and the word **RUNNING** appears : during this phase the **AUTOMATIC** cycle is operational. The room fan is set in motion as soon as the heater body has exceeded the 42°C threshold. During all the operating stages the text "4SP" is always present on the display, as indicated on the right.



It is normal for the temperature sensor to detect temperatures which are slightly different to the real ones: variations caused by the environment in which the radio control is positioned.

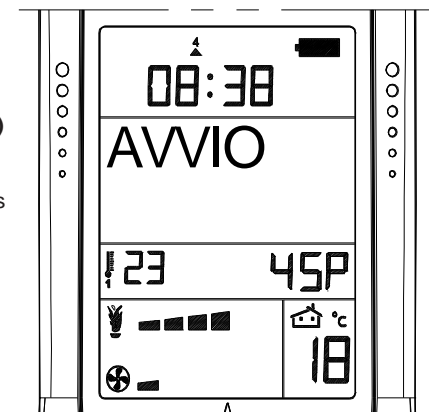
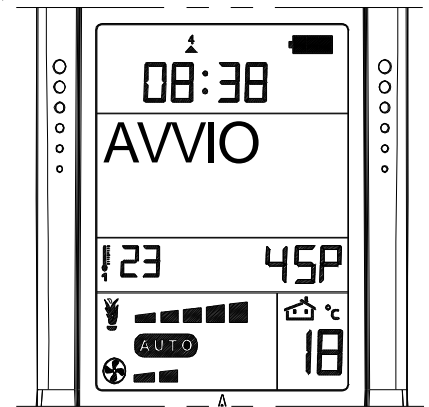
### 5.9.2 DESCRIPTION OF THE MANUAL OPERATING MODE CYCLE.

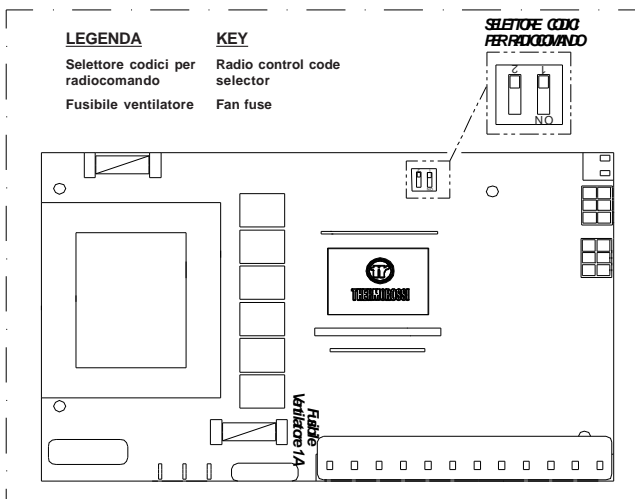
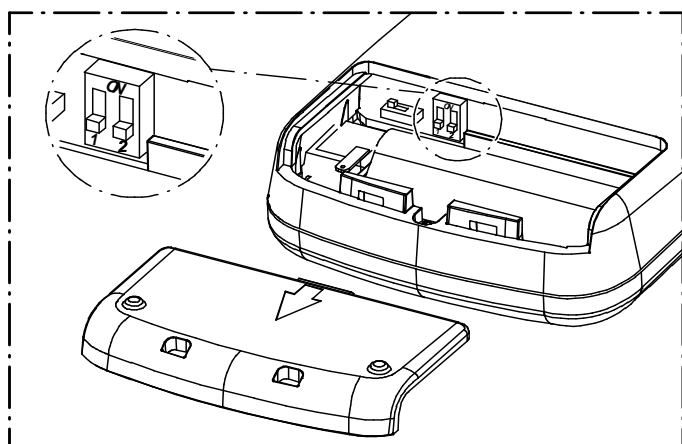
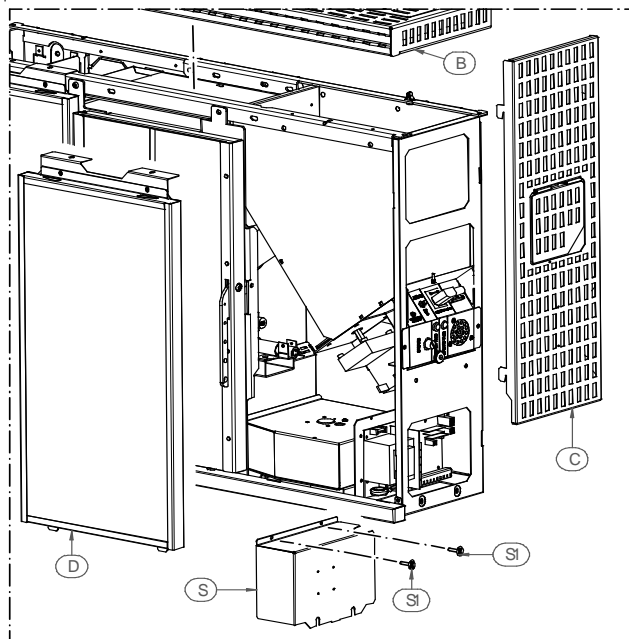
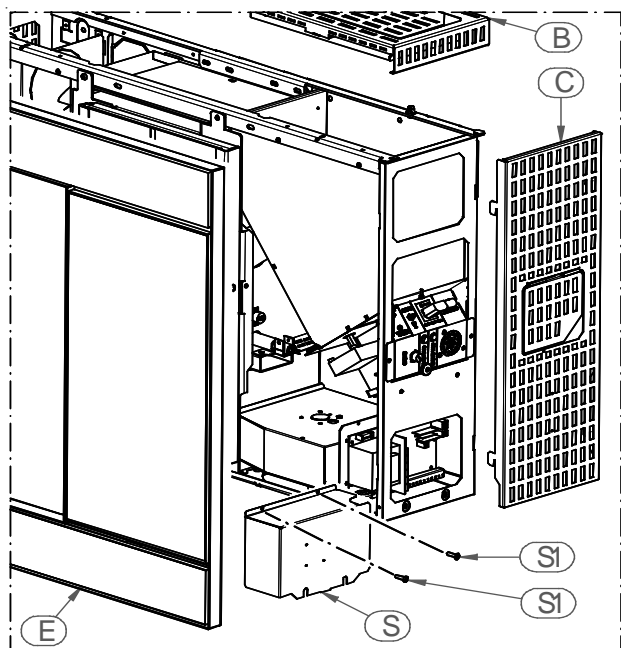
The manual cycle is indicated by the absence of the word **AUTO** on the display. The combustion and ventilation power can be controlled independently from each other by means of the buttons (1) and (2). During the **POWER ON** phase, that takes 20 minutes, the heater ignores all the commands transmitted to it. After this time has elapsed the word **POWER ON** disappears on the display and the word **RUNNING** appears : during this phase the **MANUAL** cycle is operational. The room fan starts operating as soon as the heater body exceeds the 42°C threshold. The combustion is regulated by 5 bars, the regulation of the ventilation is distributed on 4 steps. This function disables the room temperature thermostat. During all the operating stages the text "4SP" is always present on the display, as indicated on the right.

## 5.10 TRANSMISSION CODES SETTING

If several heaters are installed in close locations it may be necessary to set different transmission codes. The code changes must be made both in the mother board inserted in the heater (see figures) and in the handheld radio control (see figures). firstly position the switch 0-1 (located on the left side of the heater) on 0. To access the board in the Slim heater follow the instructions illustrated in the figures on the next page: remove the "cover" (B), remove the "side panel" (C), remove the "front casing" (D), undo the 2 screws (S1) and remove the "board cover" (S) by lifting it up and pulling it outwards.

To access the board in the SlimQuadro heater follow the instructions illustrated in the figures on the next page: remove the "cover" (B), remove the "side panel" (C), remove the "casing" (E), undo the 2 screws (S1) and remove the "board cover" (S) by lifting it up and pulling it outwards. As the codes must be identical you can use the numbers marked on the microswitches as reference. **Firstly set the new code on the mother board. Next set the new code on the radio control then** execute a forced **DATA UPDATE** by repeatedly pressing button (19) located on the back of the radio control until **DATA ANALYSIS** appears on the screen : once the text appears hold down the button (19) for 5 seconds then release it. This procedure executes a complete resetting of the transmission codes.





### 5.11 CARE AND MAINTENANCE OF THE HANDHELD RADIO CONTROL


Before beginning any maintenance operation ensure that the appliance is in the OFF phase and disconnect it from the electric power outlet. The handheld radio control has been designed and produced to the strictest standards and must be handled with great care.

If you observe the guidelines set out below, the radio control will provide a long trouble-free performance:

- Protect the radio control against humidity! Precipitation, humidity and liquids corrode the electronic circuits. If the radio control is wet, disconnect it immediately from a power source, remove the battery, open it and allow it to dry at room temperature.
- Do not use or store the radio control in dusty or dirty environments. The dust/dirt could damage the movable parts of the radio control.
- Do not store the radio control in very hot environments. High temperatures could shorten the life of the electronic devices, damage the batteries and deform or even melt plastic parts. -Do not store the radio control in cold environments. When it heats up (when it returns to normal operating temperature), humidity could form inside it and damage the electronic circuits.
- Do not drop the radio control, do not hit or bump it and do not shake it. Actions such as these could damage the internal circuits of the device.
- Do not use corrosive chemical substances, caustic solutions or detergents to clean the radio control.

All the above guidelines apply equally to the radio control, the battery, the battery charger, and all the accessories.


The parts subject to wear (such as batteries, keypads, lodging compartments, small compartment parts) are guaranteed for 6 months from the purchase date. The guarantee does not apply if the defect is caused by non-conforming use and/or if the instructions and guidelines described above are not observed to the letter. Non-conformities must be reported within two months of having identified them. Devices or parts returned for replacement become the property of Thermorossi.

 The presence of irregular black-blue lines on the display (also present when de-energised and battery flat or missing) indicate that the glass screen of the display is damaged following a fall or impact: in this case the breakage is not covered by the guarantee.

## 6 USE OF THE HEATER

### 6.1 5.1 SWITCHING ON THE HEATER

Before using the appliance check that all the movable parts are in place; also remove any labels and stickers from the glass to avoid having permanent traces remain on the surfaces.

Turn the switch installed on the back of the heater to position "1" (= ON). Make sure that the batteries of the handheld radio control are charged (the symbol  indicates that the batteries are charged). If the batteries are flat it is advisable to charge them for 12 hours with the battery charger supplied. Press button (1) to start the start up phase. Press button (1) repeatedly to set **AUTO** or manual operating mode, which will be activated at the end of the start up phase.

The electrical heater will start to overheat and after a few minutes the first lot of pellets will start dropping into the brazier. This occurs because the screw feeder has to fill up because it is completely empty. The first time the heater is started up the start up phase will have to be carried out twice for this very reason.



**CAUTION** : The start up phase (word **ON** appearing on the display) takes 20 minutes during which the heater ignores any commands transmitted to it. After this time has elapsed the word **RUNNING** appears on the display. The fan starts as soon as the heater body exceeds 42°C. When the machine is in the running phase the combustion can be adjusted manually or in **AUTO** mode.

### 6.2 ADJUSTING THE HEATER'S COMBUSTION

#### ADJUSTING THE COMBUSTION WITH THE INSERT IN AUTOMATIC MODE

When the heater is used in **AUTO** mode the heater self-adjusts the temperature (9) set in the handheld radio control. See paragraph 5.9.1.

#### ADJUSTING THE COMBUSTION WITH THE INSERT IN MANUAL MODE

The thermal value is adjusted by pressing button (1) on the handheld radio control (see para. 5.9.2). Act on this command to adjust the quantity of pellets fed to the firebox. Maximum combustion power is achieved when all 5 bars are lit.



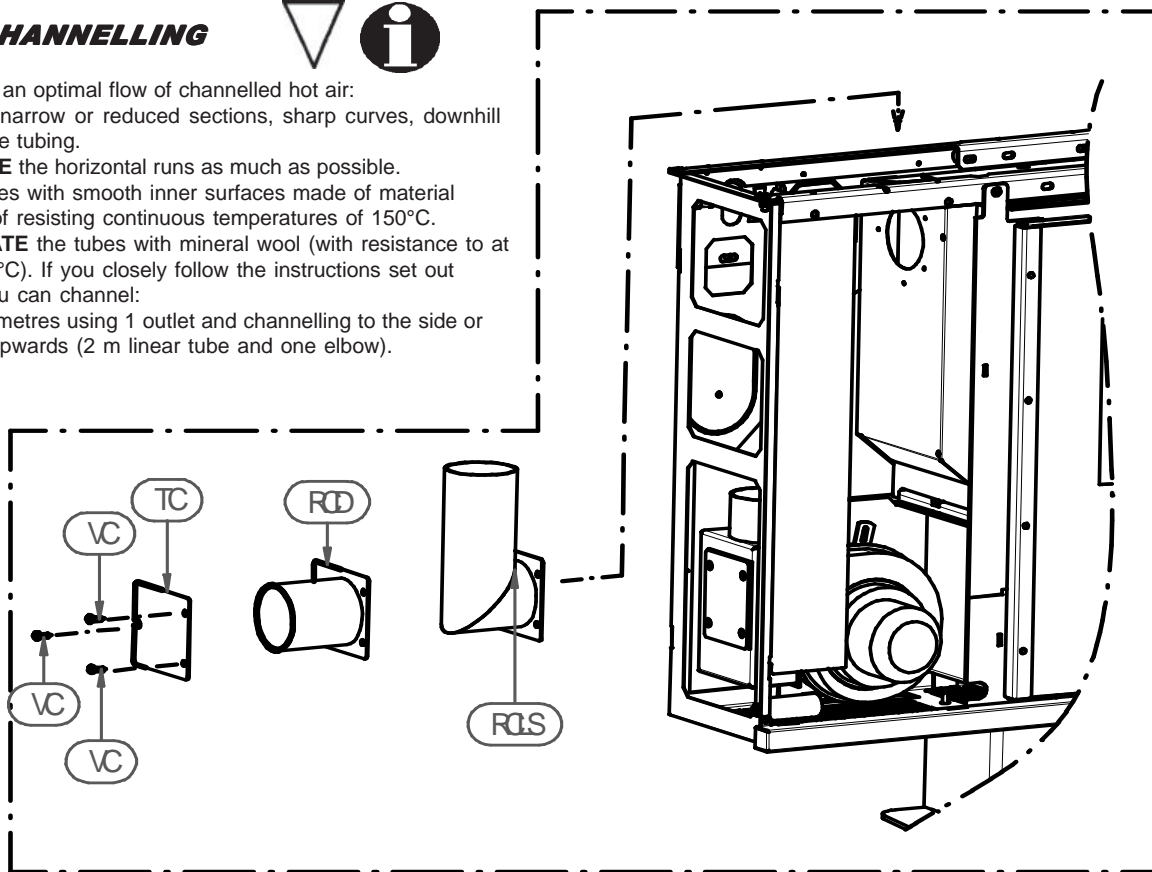
**Caution:** The fan starts as soon as the heater body exceeds 42°C. The fan setting is expressed visually by means of 6 different positions represented by 6 bars: press button (2) repeatedly to regulate it. It is normal for the hot air fanned towards the front to flow out from the left side.

### 6.3 CHANNELLING



To obtain an optimal flow of channelled hot air:

- **AVOID** narrow or reduced sections, sharp curves, downhill runs in the tubing.
- **REDUCE** the horizontal runs as much as possible.
- Use pipes with smooth inner surfaces made of material capable of resisting continuous temperatures of 150°C.
- **INSULATE** the tubes with mineral wool (with resistance to at least 150°C). If you closely follow the instructions set out above you can channel:
  - up to 2 metres using 1 outlet and channelling to the side or back or upwards (2 m linear tube and one elbow).



**IF YOU WISH TO CHANNEL** proceed as follows:- Remove the cover, the left side panel and the front casing (see para. 4.4 - 4.5).  
 - Prepare and mount the channel tube, connect it to the collar provided (RCD) if you wish to channel to the side with the limitations described above.  
 - Prepare and mount the channel tube, connect it to the collar provided (RCLS) if you wish to channel upwards or to the back with the limitations described above.  
**IF YOU DO NOT WISH TO CHANNEL**, then close the channelling hole with cover (TC) provided.

**IT IS NOT POSSIBLE TO CHANNEL ALL THE AIR TO THE SIDE OR FRONT :**  
 the proportion of the hot air channelled both to the side and to the front is fixed and depends on the level of ventilation set in the radio control. If you wish to choke the channelled air flow you need to fit an adjustable aluminium or plastic grill, resistant to 150°C, to the end of the channelling pipe.

**IT IS NOT POSSIBLE TO CHANNEL THE AIR TO THE LEFT AND AT THE SAME TIME PROVIDE A VERTICAL SMOKE OUTLET .**

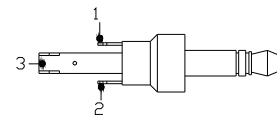
**7 ADDITIONAL ROOM TEMPERATURE THERMOSTAT / ADDITIONAL CHRONOTHERMOSTAT (NOT SUPPLIED)**

The handheld radio control ensures that your heater is provided with all the required programming and temperature adjustment functions:  
 Two connectors are located on the back of the heater near the electric power socket. They refer to two operating modes:

→ With the room temperature thermostat. → With the chronothermostat or mode

Procure a jack where the 2 wires are to be welded as illustrated in the diagram:

**Use only contacts 1 and 2, do not use contact 3 .**



Contacts 1-2 are defined as "CLEAN" contacts and they must never be fed with 220 V. If the board is energised with 220V or with voltages exceeding 6 V the control board will be permanently damaged and will not be covered by the GUARANTEE.

**7.1 OPERATING WITH THE ADDITIONAL ROOM TEMPERATURE THERMOSTAT (NOT SUPPLIED )**

It is possible to install an additional room temperature thermostat by connecting it to the back of the Ecotherm heater, by inserting a jack in the socket marked "THERMOSTAT" (see drw. para.5.1.4). This stereo jack is not supplied with the heater but is readily available in electrical or stereophonic equipment supply stores. The operating principle is as follows:

- When the room temperature reaches the set temperature (only during the RUNNING phase) the thermostat closes the contact and the heater shifts to the minimum room fan speed and minimum combustion power. By using the room temperature thermostat the heater does not shut down, therefore electrical energy consumption is kept to the minimum and the heater has a longer life.
- When the room temperature drops the thermostat opens the contact and the heater returns to its original position in terms of thermal power and ventilation.
- In this position it is not possible to start up the heater automatically or shut it down automatically.



**CAUTION:** N.C. (normally closed) contacts must be used for the connection to the additional room temperature thermostat. Contacts 1-2 of the chronothermostat mod. "Perry". In the AUTO cycle (see para.5.9.1) the action of the additional room temperature thermostat (not supplied) is ignored.

**7.2 OPERATING WITH THE ADDITIONAL CHRONOTHERMOSTAT (NOT SUPPLIED )**

It is possible to install, as an alternative to the room thermostat, a chronothermostat that must be connected by means of a jack to the side of the Ecotherm heater in the socket marked "CHRONOTHERMOSTAT" (see drw. para.5.1.4). Using this outlet when the chronothermostat contact closes the ON cycle starts, whereas when the contact opens the OFF cycle starts. The operating level at start up (combustion power - fan speed ) is the same as the level used before the last time the heater shut down. This operation can also occur by adjusting its room temperature. Once the desired temperature set on the chronothermostat is reached the contact opens and executes the shut down cycle. Similarly when the room temperature drops below the set temperature the contact closes and the ON cycle starts. If an unsuitable room temperature value is selected the heater will be subjected to continual ON-OFF cycles, consequently the increased number of start ups will result in greater consumption of electrical energy. The chronothermostat can be used to program temperatures, times and dates for the ON-OFF cycles. It is therefore possible to program a momentary shutting down of the heater according to the room temperature.

**CAUTION:** The manufacturer denies all responsibility for the life of the electrical heater if subjected to excessive start ups. The manufacturer recommends setting a suitable room temperature value in the chronothermostat in order to prevent this possibility.



**CAUTION:** Use N.O. (normally open) contacts for the connection to the chronothermostat. Contact 1-3 of the chronothermostat mod. "Perry".

**CAUTION:** In the event of connections to the chronothermostat Thermorossi shall not be held responsible for the insert not starting up, smoke leaks, breakage of the lighting component. In the event of a programmed cycle on always ensure that the brazier is clean and seated correctly in its lodging.

## 8 CLEANING AND MAINTENANCE

### 8.1 FOREWORD



Before beginning any maintenance operation ensure that the appliance is in the OFF phase and disconnect it from the electric power outlet.

Your pellet heater ECOTHERM is a solid fuel generator : it requires frequent controls and general cleaning operations. This will guarantee regular operation and optimal output at all times. If the product is unused for a prolonged period of time it is mandatory to inspect the smoke channel and outlet to ensure that there are no obstructions before use. It is necessary to accurately follow the directions given below: Otherwise severe damages may occur for the product, the installation, objects and the people who use the generator.

### 8.2 CLEANING AND MAINTAINING THE HEATER

• **EVERY DAY** remove the combustion residues from the brazier (figure 5).

*CAUTION: make sure, before every start up, that the brazier is clean and if necessary also thoroughly clean the burner with a suction unit. Take particular care to clean the area near the spark plug : this will guarantee the correct operation of the appliance .*

• **EVERY 2 DAYS** empty the ash pan "V" of all residual ash (figure 5).

• **EVERY WEEK** vacuum the residual ash from the compartment "V1" under the brazier (figure 6).

• **EVERY 2 WEEKS** clean the "Tee" at the heater outlet (figure 1) (if the heater is installed with a side smoke outlet the tube at the TEE outlet will have to be removed).

• **EVERY MONTH** inspect and clean the vents identified as "A1" , "A2". To access opening A2" (figure 2), open the door. To access opening "A1" (figure 3) remove the " cover " (B) (remove the cover by lifting upwards as indicated in para.4.2). Unscrew the screw on the air deviator blade and pull the blade out from its housing: now you can access the vent "A1".

• **ONCE-A-MONTH** clean the grate of the room fan, positioned as in figure 4..

• **EVERY MONTH** check that the smoke exhaust is free from fly ash deposits, particularly in the initial sections.

• **EVERY MONTH** vacuum the pellet ash deposited on the bottom of the tank (when the tank is empty).

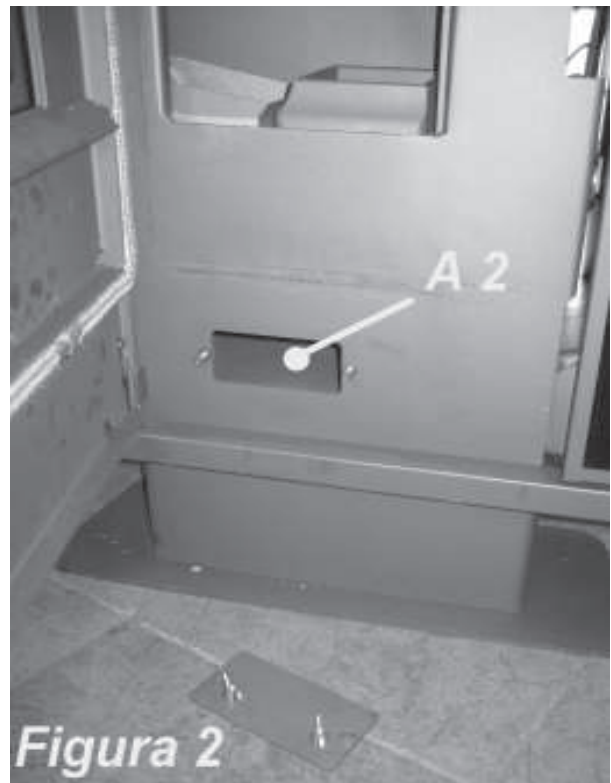
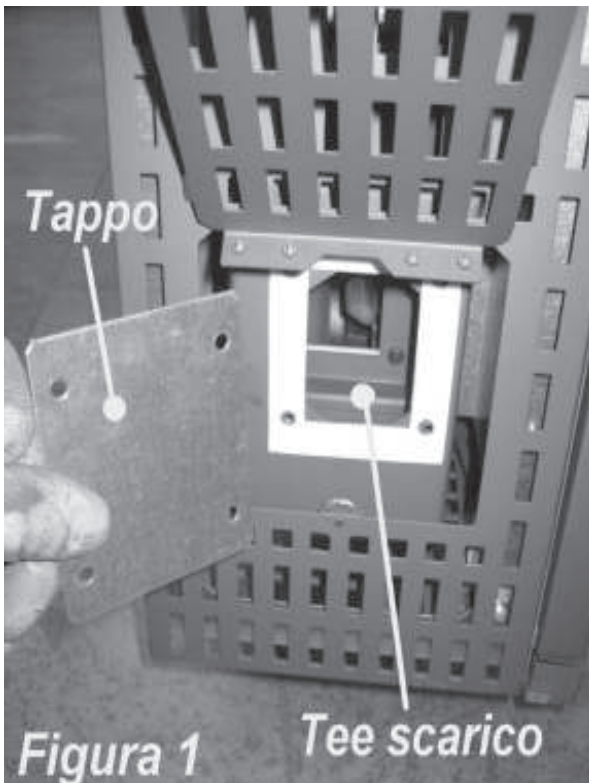
**AT THE END OF THE WINTER SEASON OR WHENEVER NECESSARY** we recommend thoroughly cleaning the Ecotherm firebox, using brushes and vacuum cleaner.

• **TWICE A YEAR** clean the smoke exhaust, including the flue outlet.



A vacuum device simplifies the cleaning procedure. Use a damp cloth or a scrunched up piece of newspaper, dampened and rolled in the ash, to wipe the glass until it is perfectly clean. Do not clean the glass while the heater is operating. Clean the ceramic panels when the heater is cold using plain water and a soft cloth.

**CAUTION:** A daily deposit of soot and combustion residues on the glass is quite normal. **It is normal for the ash to fall to the floor when the door is opened.**





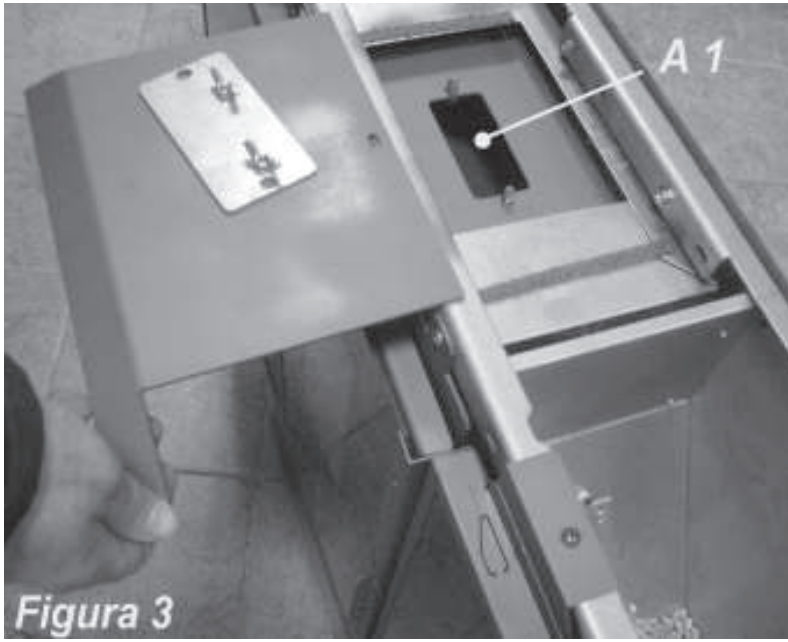


Figura 3

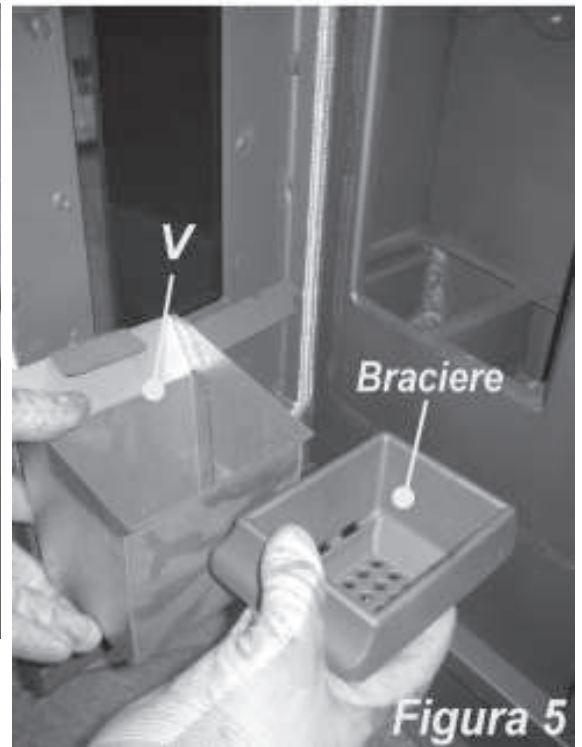


Figura 5

**LEGENDA**

Tappo	Plug
Tee scarico	Clean out Tee
Braciere	Brazier
Griglia di ventilazione	Fan grate
Figura	Figure

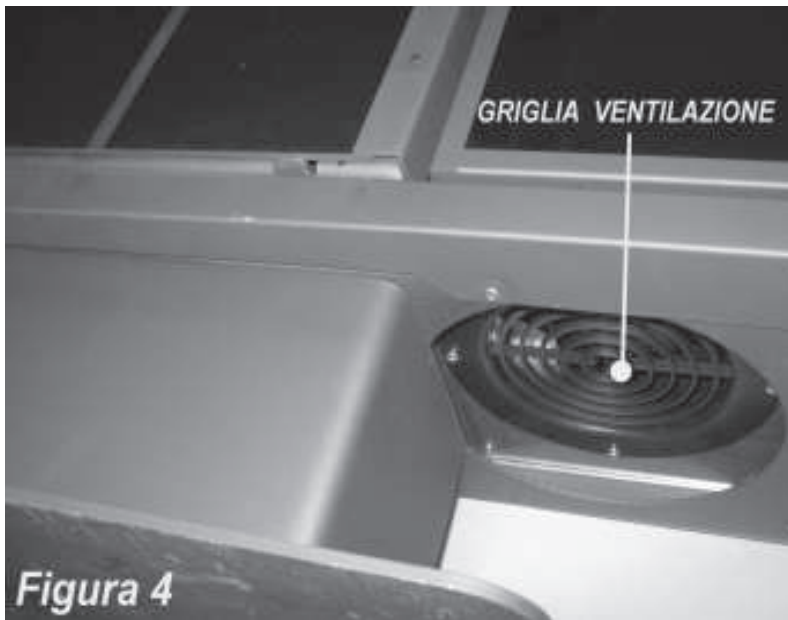


Figura 4



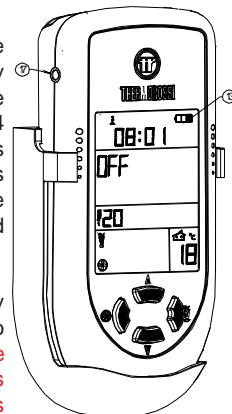
Figura 6

### 8.3 CHARGING THE BATTERY OF THE HANDHELD RADIO CONTROL

As soon as the symbol (13) on the display begins to blink, as shown in the drawing, the battery needs to be charged. While it is being charged and consequently while it is connected to the electrical power mains the symbol (13) blinks continuously even when the batteries of the radio control are completely charged. This operation is necessary as otherwise the communication between the heater and the radio control could be cut off. If the communication is cut off see paragraph 5.1.4 for an explanation on how to switch off the heater with the auxiliary control located at the side of the heater. If the batteries go flat the time will have to be reprogrammed whereas the insert programming and other settings are maintained as permanent data. The batteries of the handheld radio control require regular recharging in relation to the amount of use made of it. **The duration of the load varies according to the amount of use.** The batteries must be recharged using the supplied battery charger :

INPUT 100V-240V 50/60 Hz 0,3/A OUTPUT 5,5V 750 ma

The battery charger must be connected to a 220-240V 50Hz power mains. To obtain a total recharge of the batteries they must be charged for at least 5 days: lower charge times could reduce the duration and life of the batteries. Leave the radio control connected at all times, by means of the battery charger, to the power supply line. **It is completely normal during the battery recharge process for symbols and/or lines to appear haphazardly on the display. The optimal battery autonomy is achieved after several battery charge / discharge cycles.** If the radio control is not used for more than one week it is mandatory to switch it off completely in order to preserve the life of the batteries. Turn the switch located in the battery compartment (see para.5.1) to 1, that is, OFF. The batteries are guaranteed for 6 months.



Caution: Use only the battery charger provided by Thermorossi. The use of any other type of battery charger will invalidate the product warranty.

### 9 SMOKE DISCHARGE TUBE



Due to the frequent accidents caused by poor functioning of flue outlets installed in private dwellings, we have prepared the following paragraph to assist the installer in his inspection of the parts concerned with eliminating the gases produced by combustion.

The gases must be discharged in compliance with UNI 7129/92, UNI 10683 and EN 14785. These instructions set out in these standards must be followed to the letter: failure to observe them could cause serious damage to the product, the plant, things and persons using the generator.

#### LEGENDA

Tappo	Plug
Sportellino	Door
Collarino	Collar
Protezione lato fumi	Smoke side protection
Pannello rivestimento	Casing panel
Curva 90° 3 settori	90° elbow 3 sectors

#### KEY

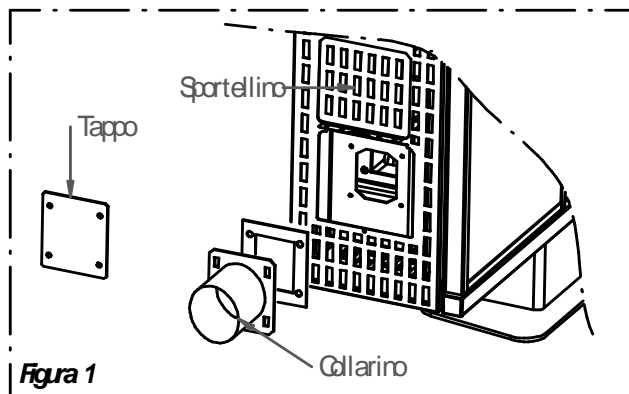


Figura 1

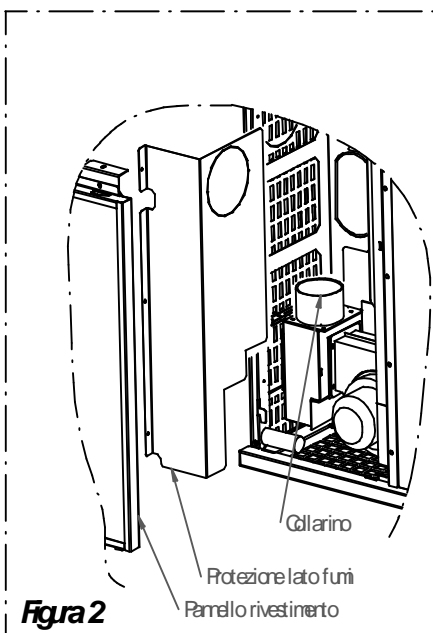


Figura 2

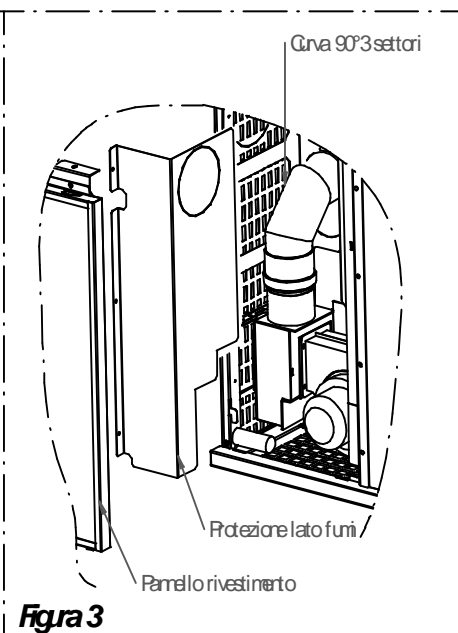


Figura 3

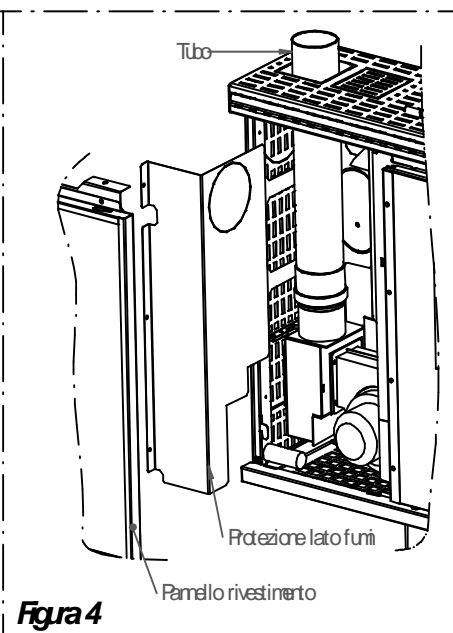


Figura 4



Figure 1: this type of installation is used when you wish to evacuate the gases to the side (LH) of the heater.

- Remove the collar (Figure 2) by undoing the 4 screws and replace it with the cover removed previously (Figure 1).
- Next fasten the collar to the heater with the 4 screws (Figure 1).
- Make sure that the gaskets are mounted correctly.
- Now connect the heater to a single flue system dedicated exclusively to the heater and built in compliance with the standards referred to in this chapter.

Figure 2: this type of installation is used when you wish to evacuate the gases to the back of the heater (use a 90° Tee with 3 sectors, not supplied). Connect the heater to a single dedicated flue system built in compliance with the standards referred to in this chapter .

Figure 3: this type of installation is used when you wish to evacuate the gases upwards (using a straight tube, not supplied). Connect the heater to a single flue system dedicated exclusively to the heater and built in compliance with the standards referred to in this chapter.

## 9.1 VENTILATION OF THE ROOMS

•The room where the heater is installed must have a good air flow to guarantee secondary air for the appliance for the combustion process and for ventilation of the room. The natural air flow occurs directly through permanent apertures to the outside made in the walls of the room, or by means of single or multiple ventilation ducting.

The ventilating air must come from outside and if possible, away from sources of pollution. Indirect ventilation is also allowed by taking in air from rooms adjacent the one where the insert eater is installed taking into account all the warnings and limitations specified below.

•The apertures in the walls must comply with the following requirements:

- have an unobstructed section of at least 6cm<sup>2</sup> for each Kw of installed thermal power, with a minimum limit of 100cm<sup>2</sup>;
- be made in such a way that the vent openings, both on the inside and outside of the wall, cannot be obstructed;
- be protected with grills or similar systems in order not to reduce the section described above;
- be situated at floor-level.

•The air flow can also be obtained from an adjacent room as long as:

- the adjacent room is equipped with direct ventilation in compliance with the points described above;
- in the room to be ventilated the installed appliances are only connected to one flue outlet;
- the adjacent room is not used as a bedroom or a common area of the building;
- the adjacent room is not a room with a fire hazard, such as storage sheds, garages, combustible material store rooms, etc...;
- the adjacent room does not become a vacuum compared to the room to be ventilated due to an opposite draught effect;
- the air flow from the adjacent room to the room to be ventilated is unobstructed through the permanent apertures having an overall net section of no less than that indicated above. These apertures can be obtained by enlarging the space between the door and the floor.



This chapter is not intended to replace UNI 7129/92, UNI 10683 and EN 14785 standards to which it refers. The qualified installer must in any case be fully aware of this standard and its amending versions.

## 9.2 SMOKE OUTLET

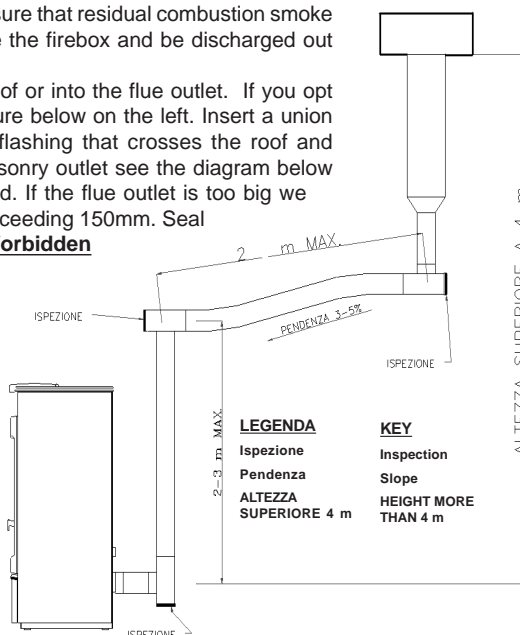
•The smoke exhaust shown in the following figures is the best solution to ensure the discharge of smoke even when the fan is not operational, such as for example if there is an electrical power failure. A minimum drop of 1.5 metres is required between the T terminal on the outside of the building and the outlet at the back of the appliance, to ensure that residual combustion smoke is discharged in the case described above (Otherwise the residues would stagnate inside the firebox and be discharged out to the free atmosphere).

The figures below illustrate the best solution for discharging the smoke out through the roof or into the flue outlet. If you opt to discharge the smoke out through the roof it is important to operate as shown in the figure below on the left. Insert a union tee with inspection cap, connecting brackets suitable for the height of the flue outlet, flashing that crosses the roof and chimney cap to protect against bad weather conditions. If you decide to use a classic masonry outlet see the diagram below on the right. A union tee with inspection cap and suitable supporting brackets are required. If the flue outlet is too big we recommend inserting a stainless steel or porcelain-coated steel tube with a diameter not exceeding 150mm. Seal

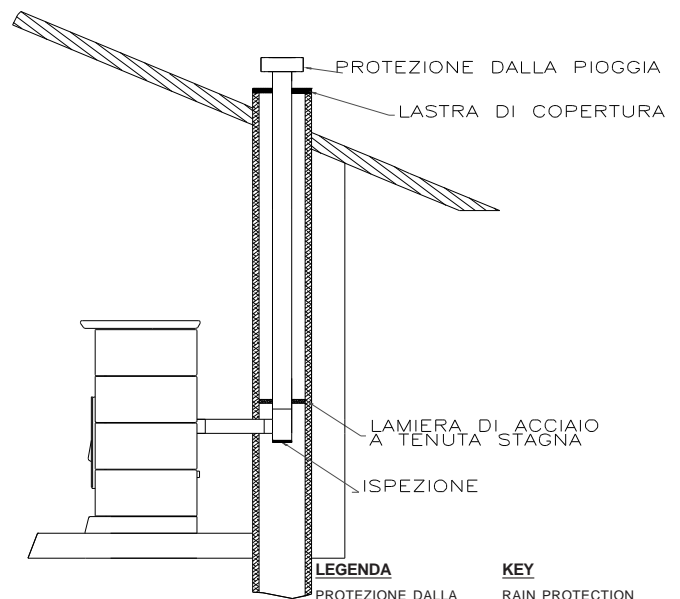
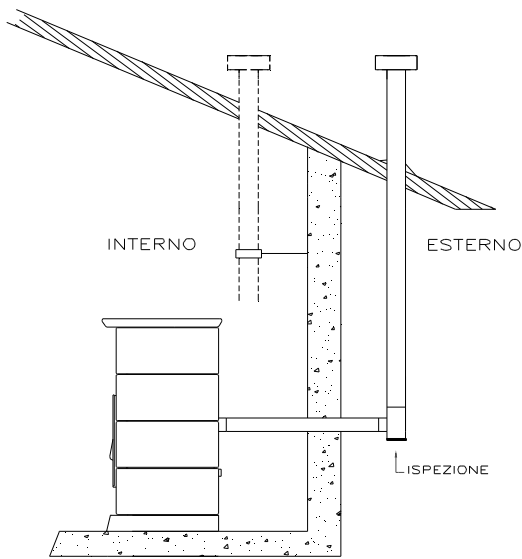
**to apply mesh to the end of the outlet tube , as it could cause the heater to malfunction**

If the smoke tube is installed in a fixed position it is advisable to provide inspection openings for clean-out purposes especially in the horizontal sections. See the diagram. These openings are essential to allow for the removal of ash and unburned products which tend to accumulate along the discharge path. **The appliance functions with the firebox in a vacuum, while the discharge of smoke to the flue outlet has a slight pressure, consequently it is imperative to ensure that the discharge system is hermetically sealed.** The smoke discharge tube must be made from suitable materials such as for example:

porcelain-coated steel tubes, and the various fittings sealed with red silicone (resistant to 350°C). The outer casing of the tube must be made with insulating material (mineral wool, ceramic fiber) or use pre-insulated tubing.



**It must be possible to inspect and remove all the smoke tube sections for clean-out purposes. The appliance must always and only be installed in a single flue outlet system dedicated exclusively to the appliance. If the appliance is connected to a flue system that is non-compliant with the standards the appliance could show signs of early damage due to an anomalous continual overheating of the heater itself : in this case the damaged parts will not be replaced under warranty.**



## 10 VOCAL ALARMS

The heater is programmed to communicate 4 fundamental alarms. The vocal alarm is transmitted 4 times in rapid succession. It is transmitted in the following languages: Italian, English, German, French. These situations are repeated two more times a few minutes apart. If, however, the alarm is zeroed it will not be communicated.

The alarms are :

- Pellets finished** + the same alarm in the other 3 languages
- Incorrect start up** + the same alarm in the other 3 languages
- General clean** + the same alarm in the other 3 languages
- Blocked smoke outlet** + the same alarm in the other 3 languages

In detail:

- Pellets finished** : is communicated when the temperature during the **RUNNING** mode drops below 42 °C. This indicates that the heater is switching off due to lack of pellets.
- Incorrect start up** : is communicated if after the start up phase the temperature does not rise above 42°C.
- General clean** : is indicated after the insert has operated for over 1800 hours.
- Blocked smoke outlet** : this occurs when the smoke outlet is partially blocked.

To reset the alarm press the radio control button .

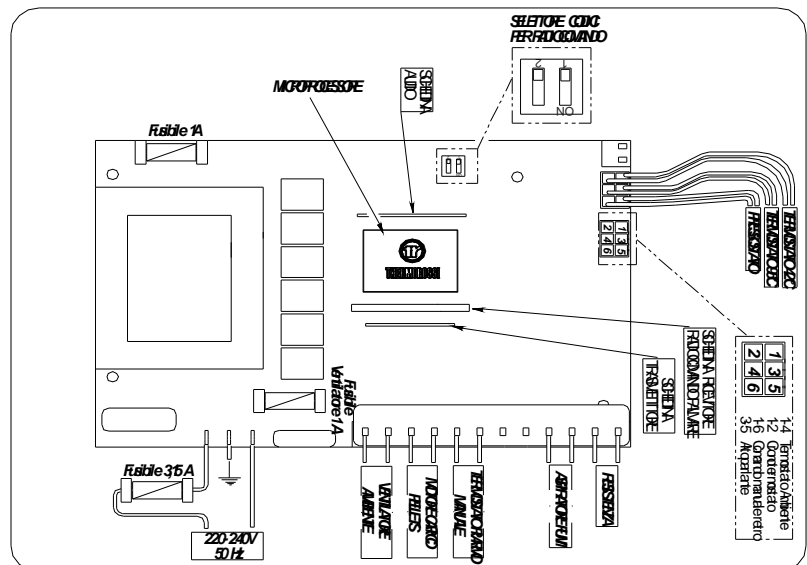
## 11 ELECTRICAL WIRING

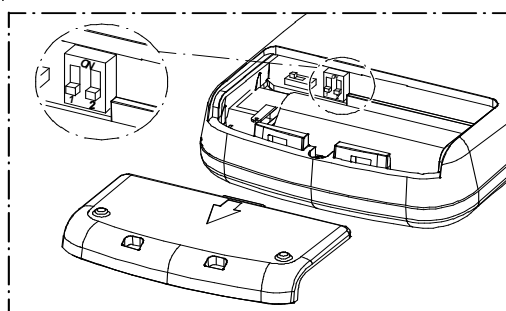
If another heater is installed in the vicinity of this heater then the code selector in both the power board and the handheld radio control will have to be reset; this is necessary to prevent interferences with the operation of the two heaters. The code set in out products is standard.

If you wish to alter the transmission code act on the selectors in the power board and the handheld radio control, making sure that they are set identically.(see para. 8.3).

### LEGENDA

PROTEZIONE DALLA PIOGGIA	RAIN PROTECTION
LASTRA DI COPERTURA	COVER SLAB
ESTERNO	EXTERNAL
ISPEZIONE	INSPECTION
LAMIERA D'ACCIAIO A TENUTA STAGNA	WATERTIGHT STEEL SHEET
SELETORE PER RADIOCOMANDO	CODE SELECTOR FOR HANDHELD RADIO CONTROL
Microprocessore	Microprocessor
Fusibile	Fuse
Fusibile ventilatore	Fan fuse
Termostato	Thermostat
Pressostato	Pressure switch
Termostato temperatura ambiente	Room temperature thermostat
Cronotermostato	Chronothermostat
Controllo manuale retro	Rear manual control
Altoparlante	Loudspeaker
Schedina ricevitore radiocomando palmare	Received board for handheld radio control.
Schedina trasmettitore	Transmitter board
Resistenza	Heater
Aspirafumi	Smoke suction unit
Termostato riarmo manuale	Manual reset thermostat
Motore carico pellet	Pellet feed motor
Ventilatore ambiente	Room fan





## 12 INFORMATION FOR THE SKILLED TECHNICIAN

### 12.1 MAIN COMPONENTS AND THEIR OPERATION

#### SMOKE PRESSURE SWITCH

This is a safety switch that stops the screw feeder motor whenever necessary. The main cause for the pressure switch tripping is a blocked flue outlet or smoke exhaust pipe. Note that it is strictly forbidden to apply any kind of mesh screen to the end of the pipe. When the holes of the mesh clog up they create a plug that trips the pressure switch which stops the pellet feeder.

#### SCREW FEEDER MOTOR

This motor is powered at regular on/off intervals controlled by a microprocessor. The operation of this motor is affected when:

- The motor's thermal cutout trips.
- Pellets finished.
- The manual reset thermostat trips at 125°C
- The pressure switch trips due to blocked smoke exhaust.
- The heater is switched off intentionally.

#### ROOM FAN

The fan starts automatically as soon as the 42°C thermostat closes the contact. The fan stops when the fuel hopper is empty or when the insert is switched off intentionally, two situations in which the thermostat's contact is opened.

#### SMOKE SUCTION UNIT

This is activated when the start up signal is given. In the first two minutes it «washes» the smoke discharge tube, that is, it functions at maximum working rate. Once this time has elapsed it self-adjusts to the optimal speed. The exhaust continues to operate for approximately one hour from the time the heater is switched off to allow for the evacuation of all the smoke and for safety purposes. It stops 30' after the thermostat at 42°C opens.

#### THERMOSTAT AT 42°C

Its function is critical for the following reasons: When the contact closes the heater powers up and the working cycle starts. Similarly, when the contact opens the smoke exhaust stops.

#### HOPPER SAFETY THERMOSTAT

This thermostat start operating as soon as the temperature in or near the pellet hopper approaches 85°C and sends an immediate signal to the room fan to operate at maximum power.

#### 125°C MANUAL RESET THERMOSTAT

When the temperature exceeds 125°C the pellet feed screw shut s down. A red light at the back of the appliance remains lit. Once the causes for the overtemperature have been identified and remedied the heater can be reactivated by unscrewing the plastic cover of the thermostat located at the back of the heater and pressing the button (the heater temperature must be below 117 °C ).

#### GLOW PLUG

It is activated in the START phase. Heats the air to 800°C, which assist the first combustion of the pellets present in the brazier.

### 12.2 USEFUL ADVICE FOR INSTALLATION AND OPERATION

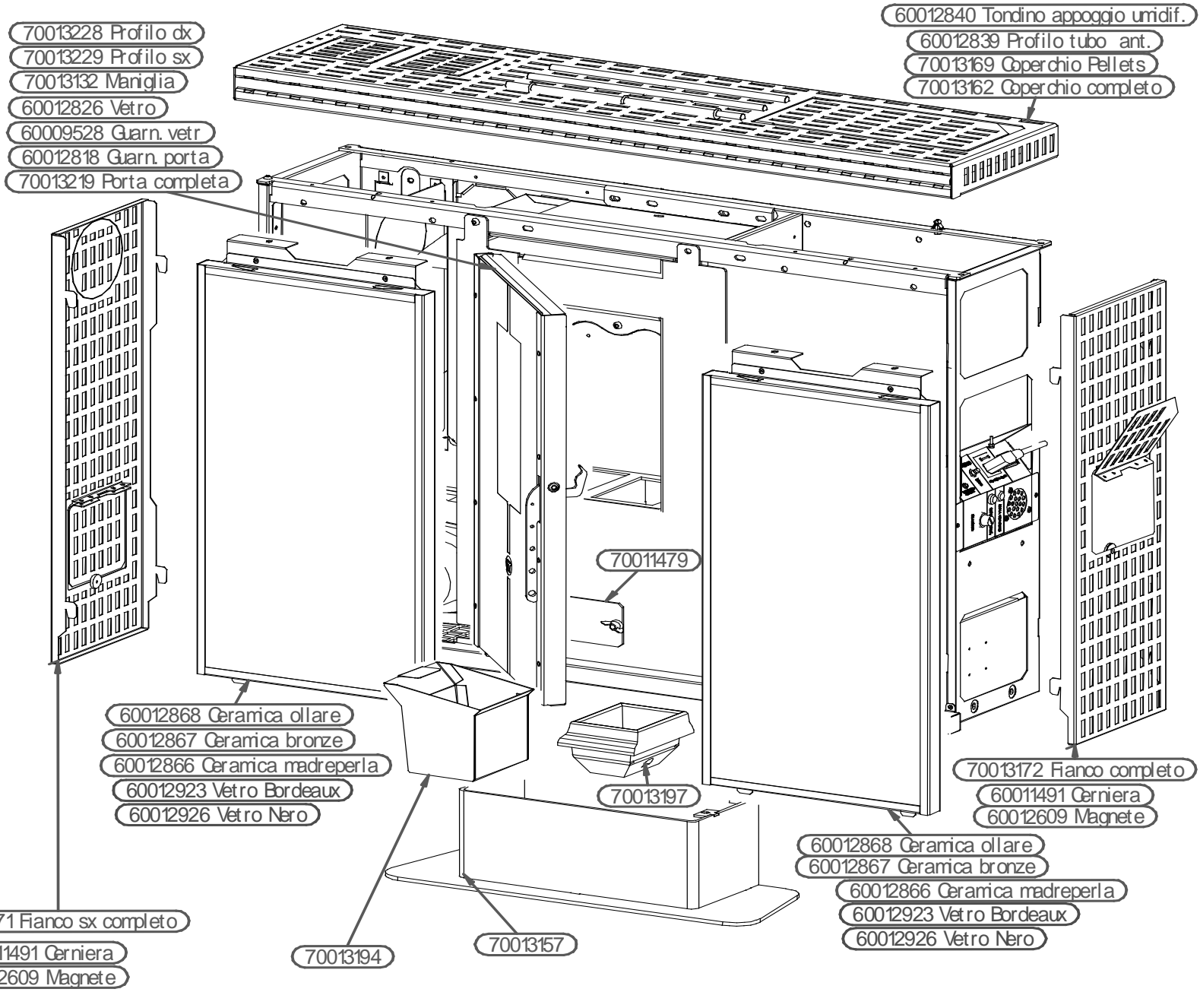
- 1 The appliance must never be deliberately disconnected from the electric power supply. Whenever the appliance is deliberately disconnected from the electric power supply smoke could be emitted into the room and be a hazard. Similarly never switch off the appliance by suddenly cutting off the electric power supply.
- 2 Do not install the appliance with horizontal wall outlets only: evacuation of the combustion products must be guaranteed in a natural manner.
- 3 Do not install the appliance with horizontal sections only: the wall could be exposed to high wind conditions and the appliance could shut down due to back draft.
- 4 Operate the appliance at maximum for 10 hours for a complete drying and baking of the silicates contained in the enamel which covers the body of the heater.
- 5 Do not install a grill or outlet terminal which could restrain the flow of the combustion gases: this could affect the dynamic gas to the point where it would not allow the pellets to burn correctly.
- 6 Read this instruction booklet.
- 7 Keep the appliance clean and check the burner as described in this manual.
- 8 Clean the smoke outlet regularly.
- 9 Use top quality pellets: by saving 20 cents a bag you heat up to 50% less.
- 10 Maximum useable lengths of smoke exhaust tubes:  
 Painted aluminized steel tubes (1.5 mm minimum thickness), Aisi 316 stainless steel tubes or 0.5 mm enamelled tubes may be used.
 

Minimum vertical length	4 m
Maximum vertical length	8 m
Length with min slope .5%	0.5 m
Maximum number of elbows at least 0.5 m apart	2

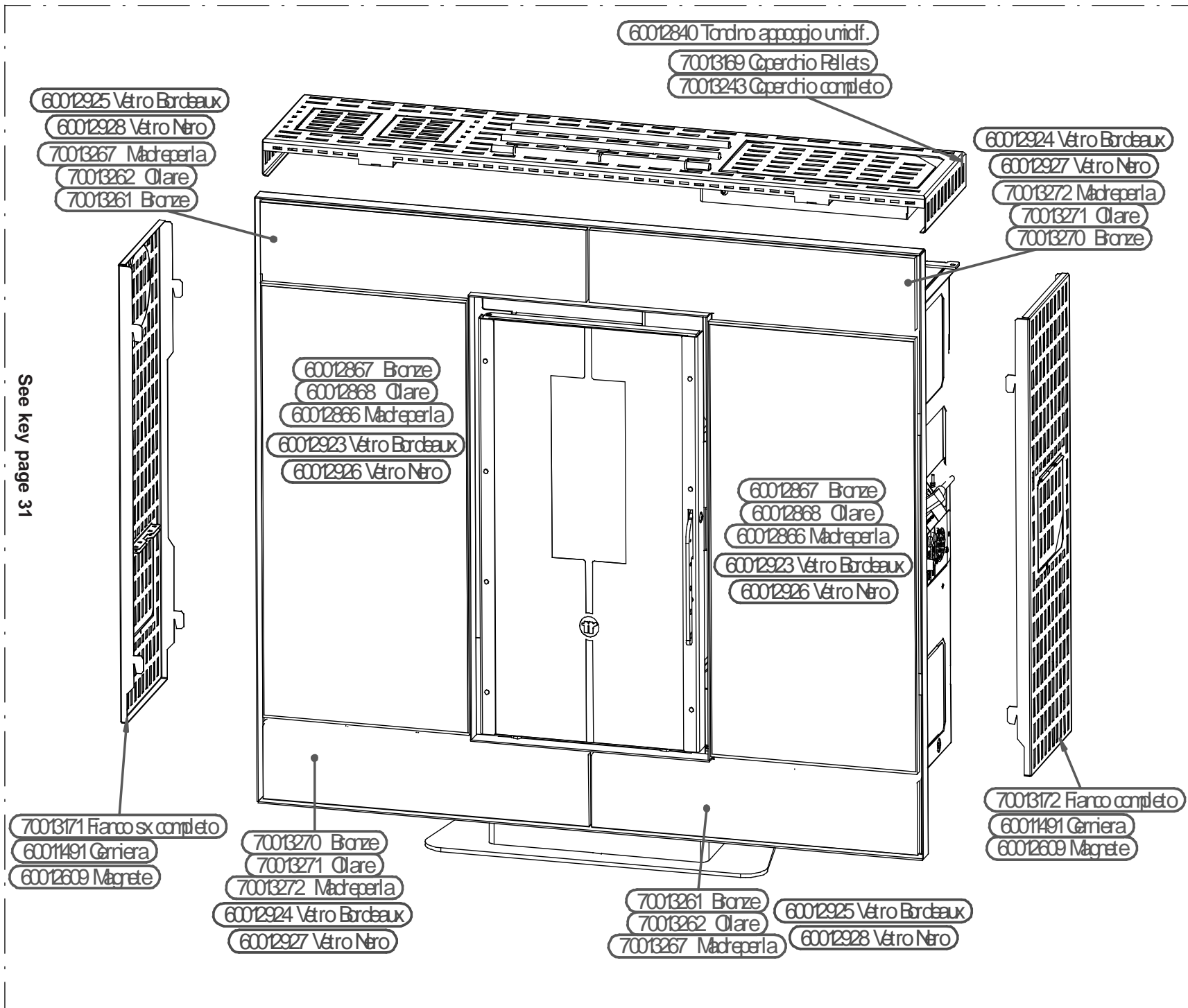
### 12.3 TROUBLESHOOTING CAUSE-SOLUTION

PROBLEM	CAUSE	SOLUTION
<b>PELLETS DO NOT DROP INTO THE BURNER</b>	PELLET TANK IS EMPTY	FILL UP THE TANK
	FOREIGN BODY SUCH AS NAIL, NYLON, PIECE OF WOOD ON THE FEEDER SCREW ON THE BOTTOM OF THE TANK	REMOVE THE FOREIGN BODY
	SMOKE EXHAUST NOT FREE, OR WITH TERMINAL THAT OBSTRUCTS THE PASSAGE OF SMOKE	CHECK THE SMOKE EXHAUST AS IT COULD BE DIRTY OR CLOGGED
	OUTLET TERMINAL CLOGGED BECAUSE A GRILL OR TERMINAL HAS BEEN INSERTED WHICH PREVENTS THE FREE PASSAGE OF SMOKE	REMOVE THE TERMINAL AND REPLACE IT WITH A MORE SUITABLE ONE.
	SUDDEN GUST OF WIND WHICH HAS MADE THE APPLIANCE GO INTO SAFETY MODE	SWITCH THE POWER SUPPLY TO THE HEATER OFF THEN BACK ON AGAIN
	THE PELLETS MOTOR DOES NOT WORK	REPLACE THE PELLETS SCREW MOTOR
	THE RESET THERMOSTAT TRIPS AND LOCKS THE GEARMOTOR	THE ROOM FAN IS BROKEN AND MUST BE REPLACED; THEN, PUT BACK INTO SERVICE THE RESET THERMOSTAT, WAIT UNTIL THE HEATER COOLS DOWN AND RESET THE THERMOSTAT (para. 12).  THE GRATE OF THE FAN IS VERY DIRTY AND MUST BE CLEANED (SEE PARA. 8.2), THEN SET THE THERMOSTAT BACK INTO SERVICE; WAIT FOR THE HEATER TO COOL DOWN AND RESET THE THERMOSTAT (SEE para 12).
<b>THE APPLIANCE ACCUMULATES PELLETS IN THE BRAZIER WHILE OPERATING</b>	SMOKE EXHAUST NOT FREE, OR WITH TERMINAL THAT OBSTRUCTS THE PASSAGE OF SMOKE	REMOVE THE TERMINAL AND REPLACE IT WITH A MORE SUITABLE ONE. CHECK THE SMOKE EXHAUST AS IT COULD BE DIRTY OR CLOGGED
	BURNER IS DIRTY	CLEAN THE BURNER ON A MORE FREQUENT BASIS
	PELLETS WITH DEPOSIT ABOVE PERMISSIBLE LIMITS	CLEAN THE BURNER MORE OFTEN. SET OPERATING PROGRAMS P2 OR P3
	THE BURNER IS NOT PROPERLY PLACED ON ITS SEAT	SET THE BURNER ON ITS SEAT PROPERLY
	THE BURNER STAYS LIFTED FROM ITS SEAT	SET THE BURNER ON ITS SEAT PROPERLY
<b>THE HEATER SMOKES</b>	INSPECTION CAPS "A1" AND/OR "A2" NOT CLOSED CORRECTLY / MISSING	CLOSE / APPLY INSPECTION CAPS
	OCCURS THE FIRST TIME THE HEATER IS SWITCHED ON AS THE SILICONE PAINT IS BEING BAKED	RUN THE HEATER AT FULL POWER FOR 1 HOUR TO COMPLETE THE BAKING.
	THE SMOKE EXHAUST IS NOT SEALED CORRECTLY	MAKE SURE THAT THE GASKETS HAVE BEEN FITTED TO THE SMOKE EXHAUST PIPES
	IF THE APPLIANCE STARTS TO SMOKE AFTER 25 MINUTES: DIRTY BURNER, VERY DELAYED START.	CLEAN THE BURNER
THE APPLIANCE SHUTS OFF 5 MINUTES AFTER THE END OF THE START UP CYCLE	IF THE APPLIANCE STARTS TO SMOKE AFTER 25 MINUTES: DELAYED START BECAUSE THE SCREW FEEDER IS EMPTY	FILL UP THE TANK
	DIRTY BURNER, VERY DELAYED START.	CLEAN THE BURNER
	THE 42°C THERMOSTAT IS FAULTY	REPLACE THE THERMOSTAT
<b>THE HEATER DOES NOT START UP</b>	THE SPARK PLUG IS BLOWN	REPLACE THE SPARK PLUG
<b>THE GLASS IS COVERED IN BLACK SOOT</b>	THE HEATER ACCUMULATES PELLETS IN THE BRAZIER	SEE POINT "PROBLEM-CAUSE-SOLUTION" "THE APPLIANCE ACCUMULATES PELLETS IN THE BRAZIER WHILE OPERATING"
	NO CAUSE	CLEAN THE GLASS MORE OFTEN
<b>ABSENCE OF FLOW OF VENTILATION AIR</b>	VENTILATION GRATE DIRTY	CLEAN THE VENTILATION GRATE FOLLOWING THE INSTRUCTIONS PRESENTED IN THIS MANUAL
<b>IT DOES NOT WARM UP</b>	THE HEATER OPERATES AT INTERVALS.	THE HEATER MUST OPERATE FOR MORE HOURS WITH MORE POWER
	THE ROOM IS TOO LARGE, THE WALLS ARE COLD	SEPARATE THE SPACES. .  THE HEATER SHOULD OPERATE FOR MORE HOURS AND WITH MORE POWER
	CEILINGS TOO HIGH OR PRESENCE OF STAIRS THAT DISPERSE THE HEAT ELSEWHERE.	SEPARATE THE SPACES.  THE HEATER SHOULD OPERATE FOR MORE HOURS AND WITH MORE POWER
<b>THE APPLIANCE IS OFF BUT THERE ARE UNBURNT PELLETS IN THE BRAZIER</b>	THE TANK IS EMPTY	EMPTY THE BURNER AND FILL UP THE TANK.
<b>THE HEATER CARRIES OUT RANDOM COMMANDS THAT HAVE NOT BEEN SET ON IT</b>	THERE IS ANOTHER THERMOROSI HEATER NEARBY	CHANGE THE CODE SELECTOR (SEE PARA. 5.10)

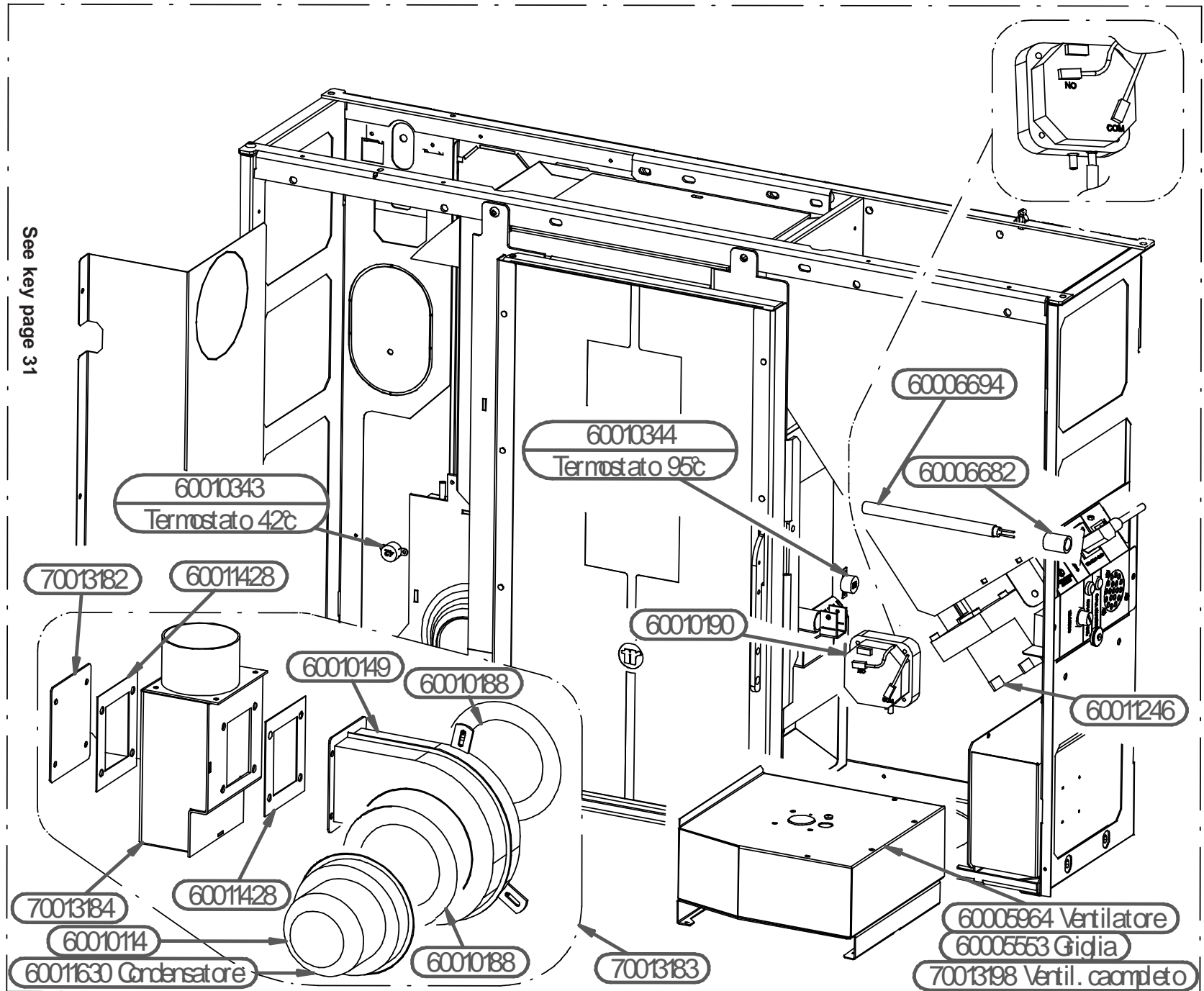
See key page 31



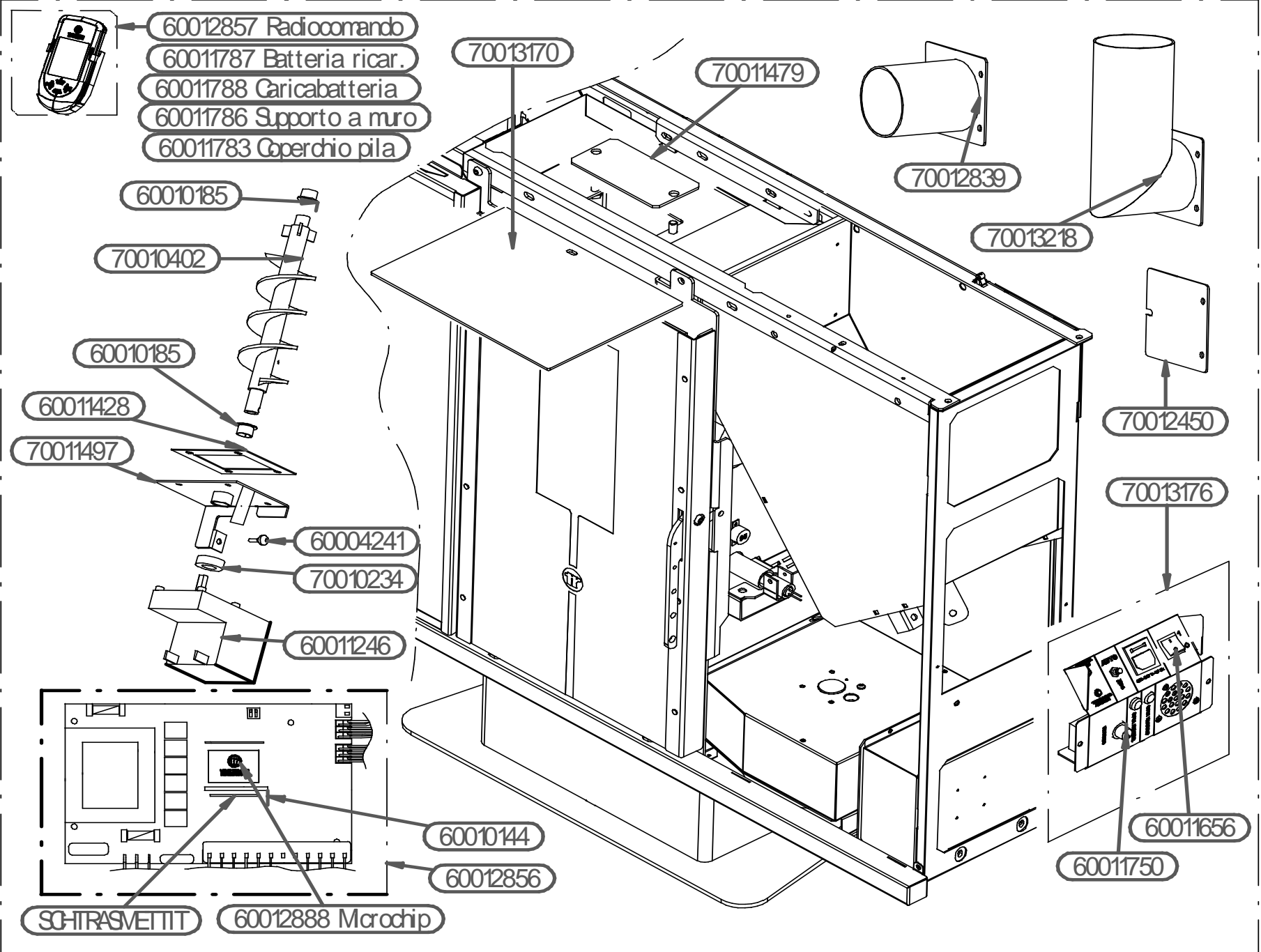
See key page 31











**LEGENDA PAG. 27**

Profilo dx  
Profilo sx  
Maniglia  
Vetro  
Guarnizione vetro  
Guarnizione porta  
Tondino supporto umidificatore  
Profilo tubo anteriore  
Coperchio pellets  
Coperchio completo  
Ceramica ollare  
Ceramica bronze  
ceramica madreperla  
Vetro Bourdeaux  
Vetro Nero  
Fianco completo  
Cerniera  
Magnete  
Fianco sx completo

**KEY Page 28**

Right profile  
Left profile  
Handle  
Glass  
Glass gasket  
Door gasket  
Humidifier support element  
Front tube profile  
Pellets cover  
Complete cover  
Soapstone tiles  
Bronze ceramics  
Mother of pearl tiles  
Maroon Glass  
Black glass  
Complete side panel  
Hinge  
Magnet  
Complete LH side panel

**LEGENDA PAG. 29**

Termostato 42°C / 95° C  
Condensatore  
Ventilatore  
Griglia  
Ventil. completo

**KEY Page 29**

Thermostat 42°C / 95° C  
Condenser  
Fan  
Grate  
Complete fan

**LEGENDA PAG. 30**

Radiocomando  
Batteria ricar.  
Caricabatteria  
Supporto a muro  
Coperchio pila  
Sch. Trasmettit.  
Microchip

**KEY Page 30**

Radio control  
Rechargeable battery  
Battery charger  
Wall mount  
Battery cover  
Transmitter board  
Microchip