PELLET STOVE

6-8-10 KW

USER AND INSTALLATION MANUAL

THANK YOU FOR CHOOSING!

On behalf of TERMAT we thank you for trusting us, and have chosen a TERMAT Air stove. Now you have a heat source of biomass with a compact design and easy installation.

- Please read this manual carefully because it will furnish important instructions regarding the safe installation, use and maintenance.
- Installation of Air TERMAT stoves must be carried out by qualified personnel, following the manufacturer's instructions and in accordance with current standards.
- Improper installation can cause damage, so the importance of this document which is part of the product.
- The manufacturer is not responsible for the misuse of it.

STOVES

6/8/10 KW

INDEX

1. CARE OF THE MANUAL AND HOW TO CONSULT IT

Take care of this manual and keep it in an easily accessible place.

Should the manual be misplaced or ruined, request a copy from your installer or directly from the manufacturer giving the identification details of the product.

The proper functioning of the stove depends on largely that the user know its operation and he know all times what has to do. For this reason, the manual includes an index on pages 6 and 7 in order to the user can find easily the sections to resolve some questions and doubts that may arise.

When we read or check this manual, we will note:

"Bold text" requires particular attention.

In some cases, it can be used capital letters or increase the font size to draw attention to some paragraphs.

Text in *"italics"* is used to draw your attention to other paragraphs in this manual or any additional explanation.

In some cases, even it could be combined two or more of indicated resources above. This would be the case when we refer to the reading of other chapters to supplement or consult some information:

*Example: (check paragraph "**4- FUEL**")*

SYMBOLOGY

SYMBOL	MEANING	INFORMATION DISPLAYED
	**ATTENTION!**	**It is used to provide information that obliges or prohibits to do something, and whose failure can have serious consequences.**
	**INFORMATION**	It is used to provide useful information to the user, which can help to improve the functioning of the stove, and / or understand better certain situations and know what to do.

2. IMPORTANT INSTRUCTIONS

Installation and use of the product should be in accordance with the manufacturer's instructions, obeying European, national and local regulations where the product is installed.

This instruction manual has been prepared by the manufacturer and it is an essential part of the product. Should the stove be sold or transferred, it should always be accompanied by the manual as it contains information that is necessary for the buyer and all persons involved in the installation, maintenance and use of the product.

Carefully read and understand the instructions and technical information contained in this manual before proceeding with the installation, use and maintenance of the product. Familiarization of the instructions in this manual ensures the safety of people and a longer life performance of the product.

In case of problems or misunderstandings of the instructions, contact the installer.

The manufacturer disclaims any liability for damage caused by failure to read the rules and instructions for installation, use and maintenance listed in the book of instructions, unauthorized product modification or use of non-original spares.

Installation, electrical connection, maintenance and repairs must be performed only by a qualified, authorized person and with a proper knowledge of the product. Before the installation, check the flatness of the floor where the product will be installed. The installation must be carried out following the instructions of chapter **"5 – INSTALLATION"**, many of which are manufacture advices and others are taken from the current local standards at the time of writing the manual, so if there would be any modification of the standard, or the stove is installed in a place that is subject to different rules, it will be necessary to adapt the installation of the stove to these standards.

Use of appropriate gloves is advised when handling coated parts to avoid leaving traces that are difficult to remove in the first cleaning. The assembly of the stove should be carried by at least two people.

Connect the stove to the mains only after connecting the chimney.

Never use liquid fuels to start the stove.

Provide sufficient ventilation during the installation. In case of malfunction, the fuel supply will be interrupted. Restart the product only after having the cause of the problem solved. Stop using the product in case of failure or malfunction. Do not lift the grating which lies inside the fuel hopper. Any accumulation of unburned fuel in the burner resulting from misfire must be removed before ignition.
While the stove is working, it is recommended not to touch the hottest parts like handle, door, chimney exhaust and glass. Due to the heat of the glass door, pay attention to keep anyone not involved in the installation away from the stove. Inform persons in the vicinity of the stove of the necessary precautions while the product and possible products are working.

Do not place non heat-resistant objects on the stove or within the prescribed minimum safety radius of the stove (check chapter **"5.3.1- MINIMUN SAFETY DISTANCES"**).

Do not open the door during operation, or start the stove if the glass is broken.

For terms, limits and exclusions refer to the warranty certificate supplied with the product. The manufacturer may make changes deemed appropriate to the stove documentation without notice, to pursue a policy of constant development and constant renewal of the product.

DIRECTIVES AND STANDARDS

All our products are manufactured according to the following directives and standards:

2004/108/CE y 2014/30/UE	EN 60335-1; EN 60335-2-102;
2006/95/CE	EN 61000-3-2; EN 61000-3-3;
Regulation UE nº 305/2011	EN 50366; EN 55014-1; 55014-2
	EN 14785

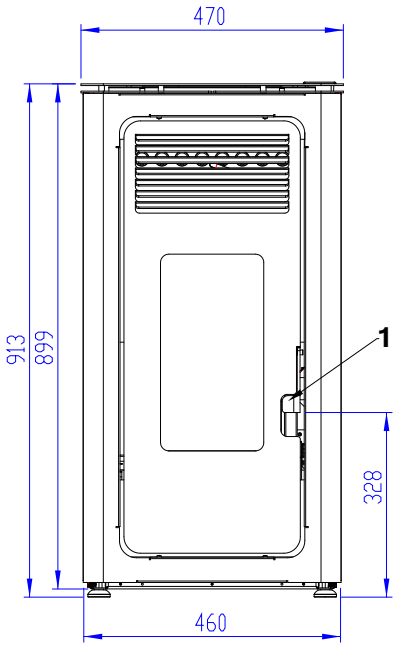
3. TECHNICAL DATA

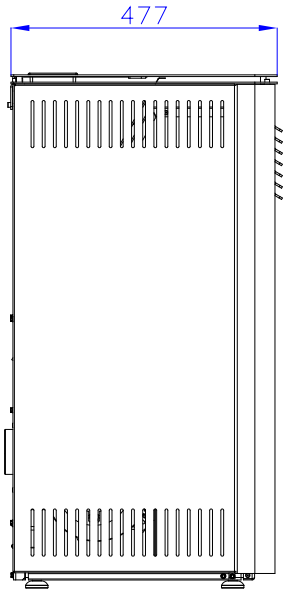
The technical label indicates data and performance of the appliance.

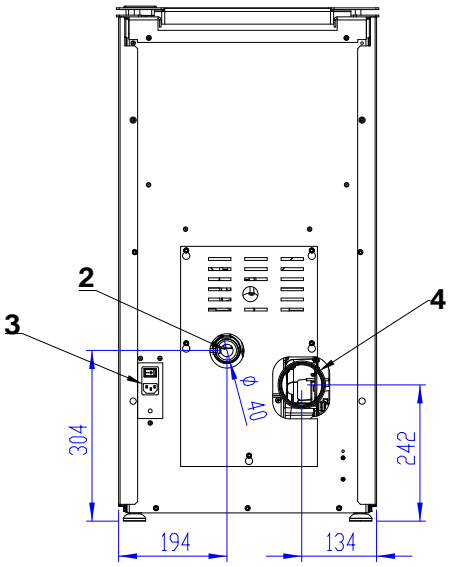
The handling, removal or lack of technical label hinders any installation and maintenance, since it is not possible to identify the product. In case of damage, request a duplicate of it to the service center. Given the importance of the label, we recommend installing the stove respecting the distances so that it is always visible.

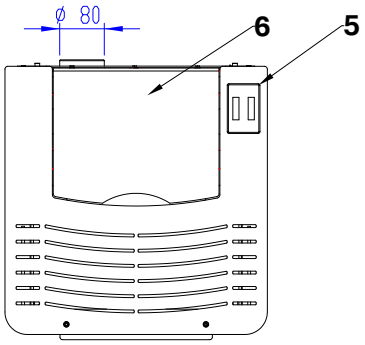
MODELO		TERMAT 6 kW	TERMAT 8 kW	TERMAT 10 kW
Nominal thermal output min./max.	kW	3,5 - 6,9	3,5 - 8,1	3,5 - 9,4
Efficiency at nominal/reduced thermal output	%	89 - 94%	89 - 94%	89 -95%
CO emissions at 13 O_2 at nominal thermal output	% vol.	0,0094	0,0124	0,0154
	mg/m³N	117	155	193
CO emissions at 13 O_2 at reduced thermal output	% vol.	0,0118	0,0271	0,0424
	mg/m³N	148	266,5	385
Average fumes temperature at nominal thermal output	°C	157	169	180
Consumption hourly	kg/h	0,8 - 1,6	0,8 - 1,9	0,8 - 2,1
Tank capacity	kg	19		
Electric consumption for nominal thermal output	W	68	74	81
Electric consumption for reduced thermal output	W	57	60	63
Electric consumption in standby	W	3	2,5	2
Flue duct	Ø	80mm		
Weight	kg	77	79	81
Dimensions	LxPxH	470x477x913		

DIMENSIONS AND COMPONENTS MODELS TERMAT 6-8-10 kW









COMPONENTS	
1	Door handle
2	ø40 Air intake
3	Electrical outlet
4	ø80 Flue duct
5	Control panel
6	Hopper lid

4. FUEL

The stove has been just designed to burn WOOD PELLETS which meet the requirements set by DIN plus / ENplus A1 certification.

Wood pellet is a fuel made from compacted sawdust extracted from the remains of the production and processing of dried natural wood; the compactness of the product is guaranteed over time by a natural substance contained in the wood: the lignin. The typical form resembling small cylinders is achieved by wire drawing.

4.1 CERTIFIED PELLET

On the market there are various types of pellet with quality and features that change depending on the kind of production and type of wood materials used, but in this case the stove has been designed to exclusively operate with DIN plus / ENplus A1 pellet, which guarantees the good performance of the stove.

DINplus is a voluntary brand issued by a third body that certifies the pellet produced and marketed respects the requirements of the Austrian standard Önorm M 7135, one of the most demanding standards in the market. Whereas, ENplus is a voluntary brand issued by a third body that certifies the pellet produced and marketed respects the requirements of the standard EN 14961-2.

The requirements of dimensions and other properties required by these standards are shown in the following table:

Pellet dimensions according to EN 14961-2 and ÖNORM M 7135			
Requirement	**Unit**	**DINplus**	**ENplus A1**
Diameter *	mm	4 ≤ D < 10	D06 : 6 ± 1
			D08: 8 ± 1
Length *	mm	≤ 5 x D	3,15 ≤ L ≤ 40
Net calorific value	MJ/kg (w.b)	Q ≥ 18 (MJ/kg in d.b)	16,5 ≤ Q ≤ 19
Moisture	% (w.b)	≤ 10	
Ash	% (d.b)	≤ 0,5	≤ 0,7

*** For stoves is only allowed:**

Maximum diameter: 6 mm
Maximum length: 30 mm

Other diameters and lengths are valid for use in boilers.

4.2 WHAT DO YOU HAVE TO KNOW ABOUT THE PELLET

A certified pellet under any of the two previous standards (DIN plus / EN plus A1) would be the best guarantee for the proper functioning of the stove, but still, there are pellets that meet and even exceed the requirements widely, and others are at the limit the certification allows, so the stove will behave differently with a fuel and other.

Also keep in mind that throughout the heating season, consumption of pellet shoots up, especially in cold winters, and fuel reserves can run out of pellet, so producers have to produce more with a wood than may not be like it was in early winter, and even though you buy the pellet of the same brand and quality than the previous pellet, it does not have the same characteristics.

Storage and handling of the pellet by the user, is also very important, because if it is not done properly, we can vary the calorific characteristics (increase of moisture) and physical characteristics (increasing the proportion of sawdust) of the fuel.

- When a new batch of fuel is begun it is advisable to control the operation of the stove **(***check paragraph.*
- Fuel must be stored in a dry place and special attention must be paid to the handling of the sacks in order to avoid grinding them and form sawdust.

If the fuel does not come properly marked, the corresponding certificate should be required.

Facing a not identified pellet, or if we consider for various reasons that it could changed its characteristics, we can make use of the following tips to know if the fuel is suitable or not for its use:

AVOID the use of pellets with different dimensions to those indicated.
AVOID the use of pellet too hard or too soft.
AVOID the use of pellet which show granules of not typical colours of wood, or excessively dark.
AVOID the use of fuel containing powder of mixed sawdust, resins or chemical, additional or binder substances.
AVOID the use of wet fuel.

The choice of unsuitable fuel causes:

- Accumulation of fuel in the burner.
- Bad combustion.
- Burner and gas flue duct dirtying.
- Increase in fuel consumption.
- Decrease in performance.
- Does not guarantee the normal operation of the stove.
- Glass dirt.
- Production of unburned granules.
- Need for more cleaning and maintenance of the stove.

The presence of moisture in the fuel increases the volume of the capsules and breaks them causing:

- Malfunctions of the load system.
- Accumulation of fuel in the burner.
- Bad combustion.

The use of fuel not according to the manufacturer's instructions can damage the stove and compromise its performance, resulting in the invalidation of the warranty and in the end of the liability of the manufacturer on the product.

4.3 USER SETTINGS DEPENDING ON THE PELLET THAT HAS BEEN USED

As we have already explained in the previous section is clear that when the fuel that we use in the stove is changed, this behavior may be different, and although the electronic board have a system which adjusts the changes in conditions to achieve always a good combustion, it is advisable to observe the behavior of the stove every time you start a new batch of fuel.

The characteristic that has more influence in the way the pellet is burned is the percentage of ash left when is burned. Normally, a higher percentage will need more air to make the combustion, even it could be necessary to reduce the fuel quantity, if the pellet requires more time than usual to be burnt completely.

It could also be the opposite case, although it is less usual, that provided fuel to burns faster than normal.

In both cases the user has, within what we call "USER MENU 1", two functions which readjust the stove to burn in the best way possible the pellet that is being used at every time (*see paragraphs* "***6.1.6- PELLET LOAD CALIBRATION***" and "***6.1.7- COMBUSTION FAN CALIBRATION***").

To establish some criteria to help the user to choose how to use these settings, we can apply the following criteria:

- If the stove is not able to remain switched on continuously for 8-12 hours because the pellet accumulates in the burner, this is because the air supplied by the fan is not enough for the amount of pellets that we are loading.

  In this case, we can do two things:

  - Increasing the amount of supplied air with **positive steps** of the **fan** (*check **6.1.7***).
  - Decreasing the fuel load with **negative steps** in **pellet** calibration (*check **6.1.6***).

- If during operation of the stove fuel burns so fast that there is almost never flame in the burner (even it can appears the "***Er03***" alarm), it is because the air supplied by the extractor is excessive for the amount of pellets that are loading.

  In this case, we can do two things:

  - Decreasing the amount of supplied air with **negative steps** of the **fan** (*check **6.1.7***).
  - Increasing the fuel load with **positive steps** in **pellet calibration** (*check **6.1.6***).

- Before changing the fan and pellet calibration, it is necessary to make sure everything is correct: installation, maintenance and cleaning, etc. For this we can check the chapter ***8- ALARMS, MENSSAGES AND PROBLEMS***".
- It is preferable to change first the fan calibration, so the pellet load also modify the output of the stove.

5. INSTALLATION

The installation of TERMAT Air Stoves must be only carried out by qualified staff, following the manufacturer's instructions and in accordance with all standards and regulations that are applicable. Otherwise, the manufacturer is not liable for any accident.

5.1 CHOICE OF LOCATION

It is forbidden to install the stove outside (exposed to the atmospheric agents) or in wet areas, as well as in bedrooms, locations with bath or shower and in places where there is another heating unit if they do not have the suitable dimensions and devoid of an adequate airflow.

When we choose the location of the stove, we will try that the route until the flue gas duct connection were as short as possible, and flue gas can be discharged easily (check paragraph "***5.4- DUCT OR CHIMMEY***").

Since in both, the stove and in the flue gas ducts it can be reached high temperatures, you have to follow certain rules and safety recommendations to prevent possible fires and dangerous situations, so to make the installation check paragraph "***5.3- DOMESTIC FIRE PREVENTION***".

To ensure the air supply for the combustion in the stove, and keep a suitable ambient conditions, it has to keep in mind everything with reference to ventilation which is explained in paragraph "***5.5- AIR INTAKE AND VENTILATION.***"

We must also have a suitable power point near the stove (check paragraph "***5.6- ELECTRIC CONNECTION***"), so that the installation has finished, the power cord that comes with the stove can be connected and disconnected easily.

To make easier the loading of the pellet and the access to the control panel, as well as the maintenance or any intervention in the stove, it will be necessary to leave a minimum distances above and around it. A reference to follow might be the ones described in paragraph "***5.3.1 MINIMUM SAFETY DISTANCES***", although at least on the right side of stove, it would be convenient to leave a minimum distance of 400 mm. in order to access to the rear side of the stove.

Installation and use of the product should be in accordance with the manufacturer's instructions, obeying European, national and local regulations where the product is installed.

5.2 UNPACKING

Unpack the product carefully so it does not get damaged or scratched. Remove from the tank of the stove the accessory bag (it contains the legs of the stove, the power cord, the remote control, for the models which take it and the instructions manual) and from the combustion chamber possible pieces of polystyrene or cardboard used to block the removable parts, etc.

Also keep out of reach of children parts of the packaging (plastic bags, polystyrene, etc.) that could be potentially dangerous and dispose according to the existing laws.

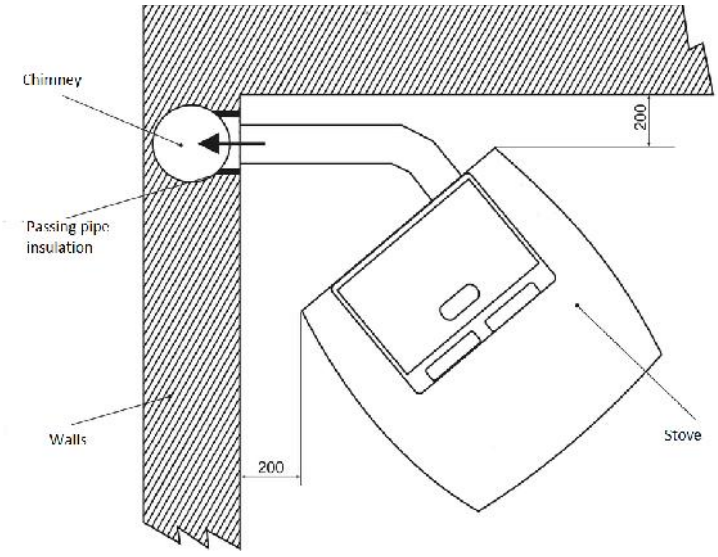
5.3 DOMESTIC FIRE PREVENTION

- The installation and use of the stove must comply with the manufacturer's instructions and technical and safety standards that correspond it. Otherwise, the manufacturer is not liable for any accident.
- For the installation of the stove it must be taken in account the paragraph: "***5.3.1- MINIMUM SAFETY DISTANCES".***
- If the floor is made of combustible material, the stove must be placed on a platform of fireproof material in the way indicated in paragraph: ***5.3.2- "FLOOR PROTECTION".***
- When a chimney crosses a wall or ceiling it is necessary to take on specific measures, which we can see in paragraph: ***5.3.3- "MEASURES TO BE TAKEN ON TO CROSS WALLS AND CEILINGS***".
- When installing the flue duct or chimney, it must be taken into account several technical standards and regulations, which are necessary for a proper operation of the stove and play an important role to prevent possible fires "***5.4.1- GENERAL NOTES".***
- It is recommended to keep out of the heat source area (at least at 1.5 meters) all flammable or combustible items such as wooden beams, furniture, curtains, flammable liquids, etc. In the event that there are flammable or heat sensitive coatings in the surrounding space, a protective layer of insulating and not combustible material must be placed.
- It is necessary to carry out periodic cleanings of the stove and flue ducts, as soot and other combustion residues accumulated, could eventually ignite.
- If the flue should catch fire, be equipped with a suitable systems for suffocating the flames or request help from the fire service.

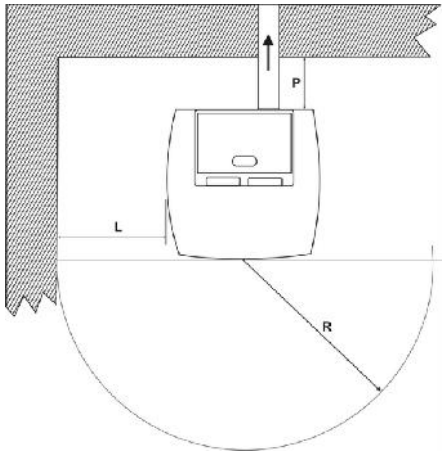
5.3.1- MINIMUM SAFETY DISTANCES

The following figures show the minimum safety distance that must always be guaranteed.

INSTALLATION IN ANGLE (mm)

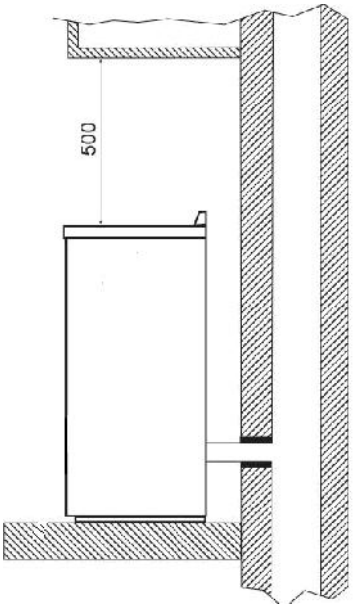


WALL INSTALLATION (mm)

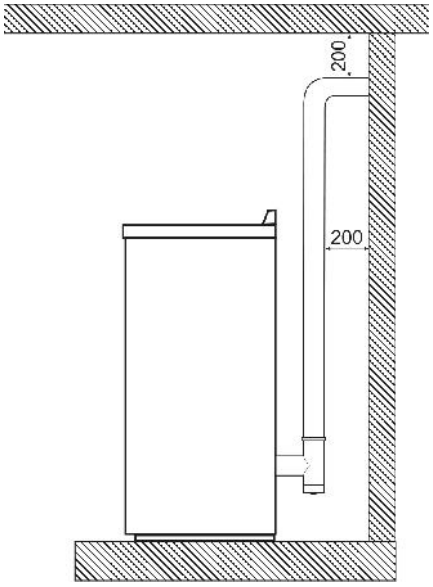


Distancias de seguridad de material inflamable	mm
minimum distance air from flammable posterior wall	P = 200
minimum distance air from flammable side wall	L = 200
front distance of flammable material	R = 1500

DISTANCE FROM FALSE CEILINGS OR FLAMMABLE CEILINGS (mm)



DISTANCE FROM THE FLUE DUCT OF FLAMMABLE WALLS INSTALLATION (mm)



5.3.2- FLOOR PROTECTION

In case of heat sensitive or flammable floors is necessary to use a baseboard or floor protection which separate the stove from the floor.

We will use for this a fire resistant material such us a Steel sheet, marble or tiles. Whatever type of protection is chosen, it must be able to withstand without deforming or breaking the weight of the stove.

The thickness will not be never less than 2 mm, and it must protrude at least 300 mm from the front, and at least 150 mm from the sides and the rear side of the stove (see fig. 5.1 and 5.2).

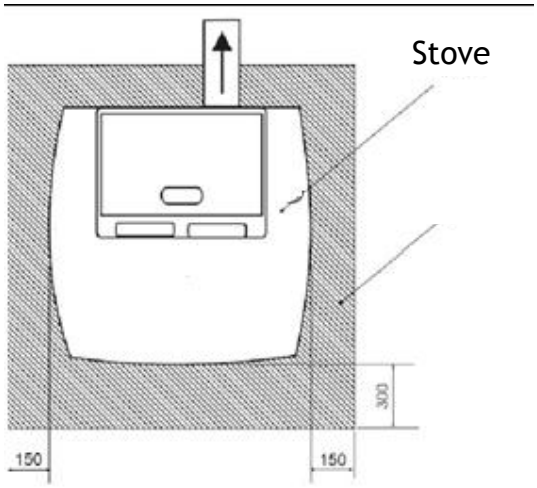


Fig. 5.1

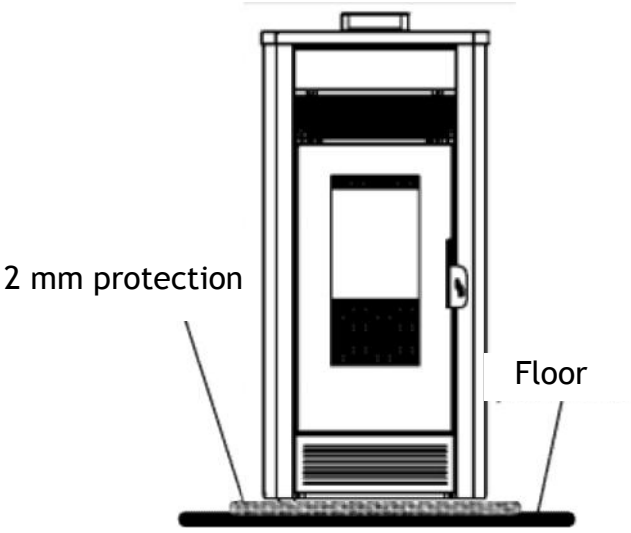


Fig. 5.2

5.3.3- MEASURES TO BE TAKEN ON TO CROSS WALLS AND CEILINGS

To expel the gas duct outside, the flue duct has to cross some walls of the place where is installed, even sometimes, it must pass through more than a stay up to the ridge.

The size of the holes to practice depends on the duct diameter and the enclosure material to pass through. Once the duct has been installed, the space between the hole and the duct must be with mineral-based insulating barrier (rock wool, ceramic fiber), with a nominal density greater than 80 kg/m^3.

Minimum holes to practice and insulation thickness table:

		Diameter flue duct pipe [mm]	
	Insulation thickness [mm]	Ø80 Up to 24 kW	Ø 100 From 28 kW
		Diameter holes to be done [mm]	
Wall in flammable wood or with flammable parts	100	280	300
Wall or ceiling in cement	50	180	200
Wall or ceiling in brick	30	140	160

5.4 DUCT OR CHIMNEY

To expel outside the flue gas produced during the combustion in the stove, we need to connect it to a flue duct or chimney.

5.4.1- GENERAL NOTES

For the installation of the chimney, it must be taken into account the following points:

Each stove must have its own duct or chimney, in which it cannot been connected any other fireplace, stove, boiler or any kind of extractor (*fig. 5.3*).

The chimney route will be as short as possible and it always will search the maximum vertical direction. The diameter will be chosen according to the guidelines of paragraph **"5.4.2- CHOICE AND CALCULATION OF THE DUCT".**

The inner section should be uniform, preferably circular: square or rectangular sections must have rounded edges with a radius of at least 20 mm; regular bends without discontinuities, deviations from the axis no greater than 45° (Fig. 5.4).

It is forbidden the installation of dampers or valves that could block the passage of flue gas.
Avoiding horizontal sections of chimney because this leads to fouling problems and it requires the cleaning of these sections more frequently. In case of being unavoidable, it will give a minimal upward inclination in the direction of gas flow, and a "T" will be installed in the changes of direction to clean the ducts without disassembly it (*see Fig. 5.5*).

To install the duct certain distances and safety regulations must be observed (see paragraph "***5.3- DOMESTIC FIRE PREVENTION***").

The flue duct must always finish its route upright, and shall have on top a device called cowl (see paragraph "***5.4.5- FLUE DUCT ENDING***").

Always carry out the unloading installation so that periodic cleaning is assured without having to dismantle any part. It is advisable that the flue is equipped with a solid material collection chamber and possible condensations beneath the mouth of the duct to be easily opened and inspected from the door hermetically (*see Fig. 5.5*).

The draw of the smoke is forced thanks to an extractor that keeps the combustion chamber in depression and all the discharge pipes under a slight pressure. It is required to verify that this extractor is installed correctly and completely tight and firm, both for performance and safety.

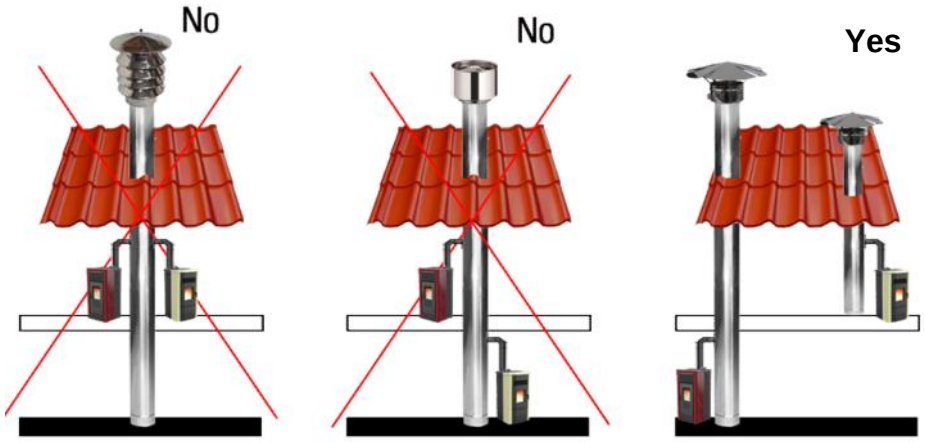


Fig. 5.3

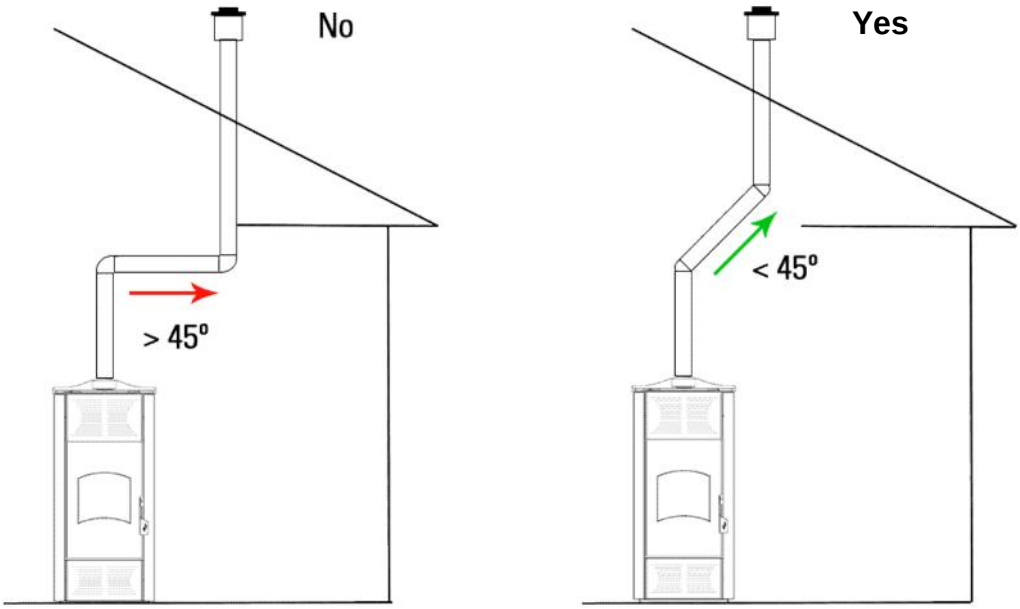


Fig. 5.4

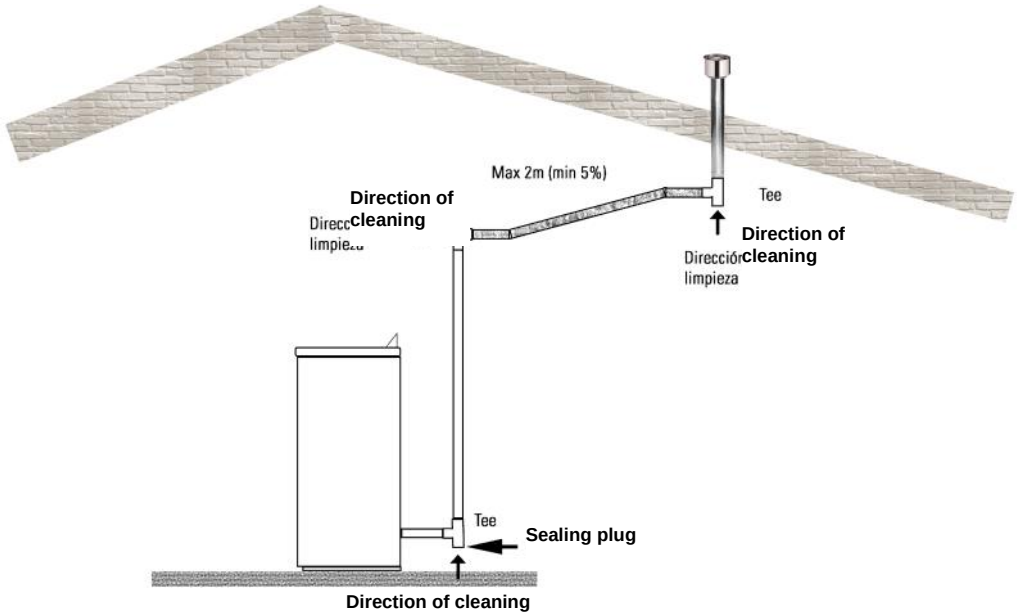


Fig. 5.5

5.4.2- CHOICE AND CALCULATION OF THE DUCT

For the chimney route, it must be taken into account the following advices:

Pipes of painted aluminum-clad steel (minimum thickness of 1.5 mm), stainless steel (AISI 316) or enameled steel (minimum thickness of 0.5 mm) can be used.
Hoses are admitted if they meet the specifications set by law (stainless steel with a smooth inner wall) and male-female connectors must have a minimum length of 50 mm.

To carry out the flue duct, the ducts to be used may have a nominal diameter between 80 mm and 150 mm, to choose according to the needs and characteristics of the stove and installation.

- In the following table are shown the limitations for the duct diameters more used, considering that the maximum and minimum lengths are counted from the "T" output of the stove, and it is from there where it should be increased the diameter of the duct if it is necessary *(see fig. 5.6):*

LIMITATIONS	WITH Ø 80 mm PIPE	WITH DOUBLE-WALLED Ø 100 mm PIPE
Minimum length (mandatory in vertical)	1.5 m	2m
Maximum lenght (with two 90° bends)	4.5 m	8m
For installations more than 1200m above the sea	1.100 m	-
Length of horizontal sections with minimum 5% gradient	2 m	2 m

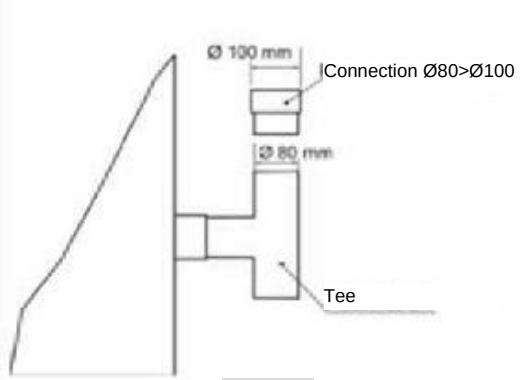


Fig. 5.6

The maximum length allowed for each diameter has been calculated for ducts installed vertically, with a maximum of 2 curves of 90º and practically without horizontal section (only for through the wall if it were necessary).

If the chimney route was different, it would have to calculate the **"equivalent load loss"** of the installation, using the table below.

KIND OF ROUTE OR ACCESSORY	LENGTH TO SUBTRACT OF TOTAL ALLOWED	
90º Bend	1	meter
45º Bend	0.5	meters
Horizontal section	1	meter
Diagonal section	0.5	meters
"T" Accessory	1	meter

The "***Equivalent load loss***" of an installation, is the result of the sum of total meters to install (which includes the losses of the two bends and the "T" connection), plus the additional losses resulting from the application of the above table.

The sum of these losses should be less, or at most equal to the maximum allowable length which is indicated in the table of limitations. If it were not so, we must increase the diameter of the duct to install:

Equivalent load loss á Maximum allowable length

5.4.3- USE OF A TRADITIONAL TYPE CHIMNEY

If you wish to use an existing chimney it is strongly recommended that you have it checked by a professional chimneysweep to ensure that it is completely airtight. The reason for this is that the smoke, because it is slightly pressurized, can infiltrate any cracks in the flue and escape into living spaces.

If upon inspection you find that the chimney is not completely sound, it is recommended that you insert piping made of new material.

If the existing chimney is wide enough, we recommend a pipe with a maximum diameter of 150 mm; it is also recommended that you insulate the chimney flue. Fig. 5.7 and 5.8 represent the solutions to be adopted if you want to use an existing chimney.

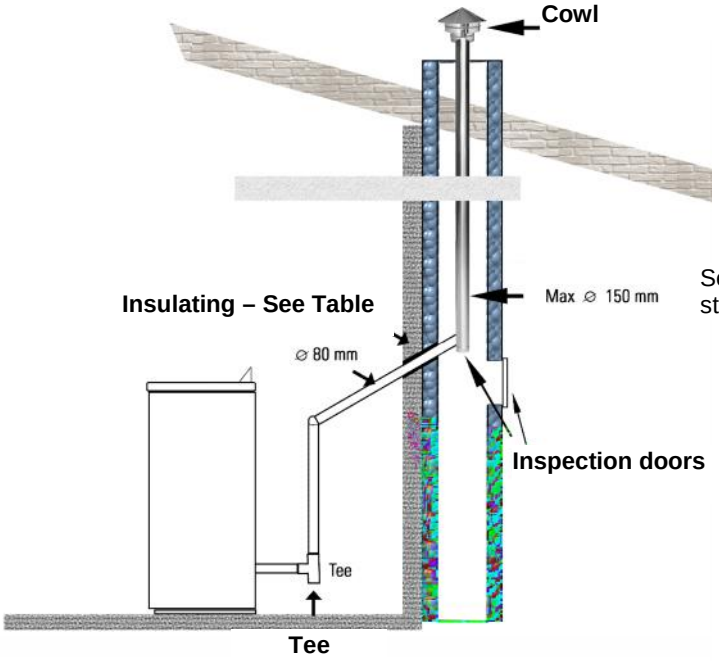


Fig. 5.7

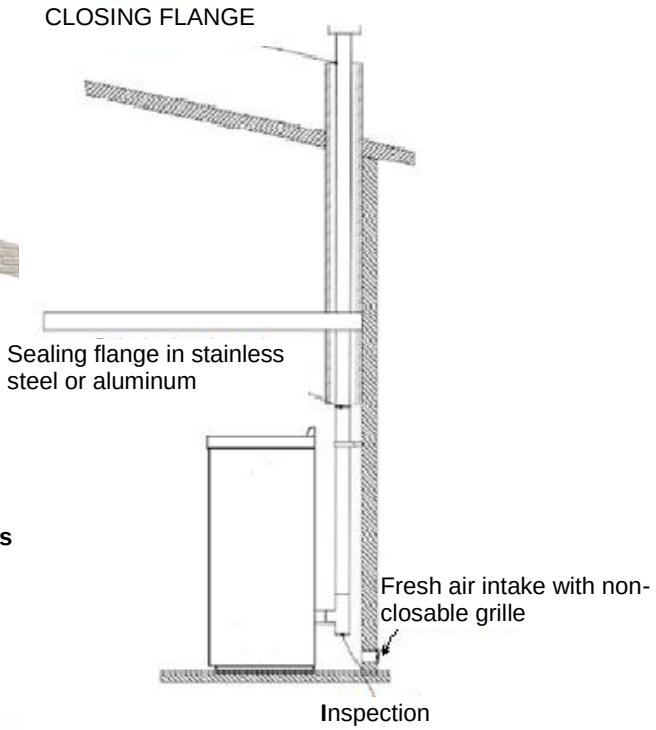


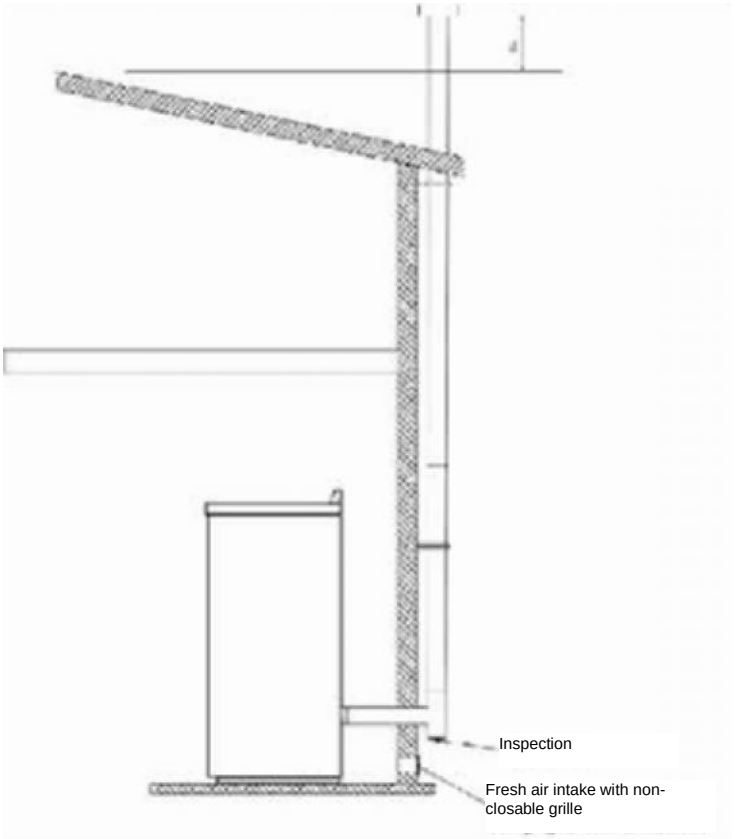
Fig. 5.8

5.4.4- USE OF EXTERNAL CHIMNEY

An external flue can be used provided it complies with the following requirements:

- Use only insulated double-walled stainless steel pipes fixed to the building.
- There must be an inspection opening at the base of the flue to permit periodic checks and maintenance.
- The chimney must rise up to the ridge, ensuring the compliance with the rest of requirements outlined in paragraph ***5.4- DUCT OR CHIMNEY".***

Installation example of stove with external chimney →



5.4.5- FLUE DUCT ENDING

The flue duct must always finish its route upright, and shall have on top a device called chimney cowl.

The cowl should meet the following requirements:

- To have a useful internal section equivalent to the flue pipe.
- To have a useful outlet section of not less than twice of the flue pipe section.
- It must prevent the penetration of rain, snow or foreign matter.
- The cowl must be installed to ensure the adequate dispersion and dilution of the combustion products outside the reflux area. For this we will use a cowl windproof type and it will surpass the ridge height *(see fig. 5.9).*
- With buildings and other adjoining obstacles, we will consider the distances and measurements indicated by the corresponding Standard.
- It is forbidden the installation of caps or horizontal deflectors (widely used in gas boilers, *see Fig. 5.10*) as terminal in chimneys due to that they can lead to pressurize the stove and taking place combustion problems.

For a proper operation of the stove, the discharge capacity of the fumes should be kept within certain parameters under any weather conditions, so it is very important to choose well the place where we will put the cowl and kind of cowl to use.

Never cover the chimney with nets for avoiding the entrance of birds or similar.

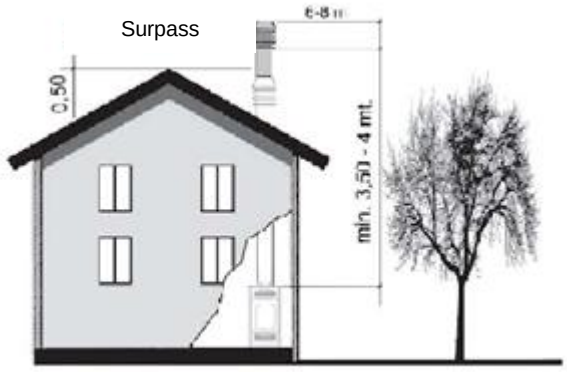


Fig. 5.9

Fig. 5.10

5.5 VENTILATION AND FRESH AIR INTAKE

- In the room where the stove is installed, we must make sure that at all times we will have the necessary air to guarantee a good combustion (about 45 m^3/kg of pellet), as well as an optimal environmental conditions of habitability inside the room.
- Make sure the room where the stove is installed has adequate ventilation, and if not, install an air supply duct from the outside (at least it will have a minimum section of 100 cm^2).
- The fresh air intake must be communicated directly with the environment of the installation of the stove, placed so that it avoids to get obstructed, and it is protected with a permanent grid or another suitable guard provided it does not reduce the minimum section.
- The air flow can also be obtained from an adjacent room to the place of the installation, provided this air flows freely through permanent apertures that cannot be closed, and communicate with the outside.

- The adjacent room must not be used as a garage, store for combustible materials or for activities with a risk of fire.
- Two stoves, fireplace and a stove, an oven and a wood stove, etc. should never be used in the same environment since the draw of one may damage the other.
- Collective type ventilation ducts cannot be used either as they could cause a vacuum in the environment of installation, even if installed in adjoining or communicating rooms.
- The combustion air intake cannot be connected to any air distribution duct or to the air intake placed in the wall. If this is done, we will use Ø 80 duct and a maximum of 1.5 meters (to subtract from the maximum length of the flue duct).
- When we place the air intake (or intakes) it is necessary to respect certain distances to avoid problems:

Air intake must be placed at least:		
1.5 m	Under	Doors, windows, flue duct, cameras, etc.
1.5 m	Horizontally far from	
0.3 m	Above	
1.5 m	Far from	Flue duct

5.6 ELECTRICAL CONNECTION

We need to have an outlet of 230 v - 50 Hz with earth connection, capable of supporting at least 490 W of power during the ignition, and with its own circuit breaker.

The system must be suitable for the electrical power of the stove.

The stove is supplied with a power cable that needs to be connected to a 230V 50Hz outlet.

The connection of the outlet to the back of the stove is shown in the figure.

Ensure that the main switch of the stove is at 0, and then connect the power cord first behind the stove and then into an electrical outlet on the wall. The main switch located on the back wall will be activated only when the stove is lit; otherwise, it is advisable to remove the cable from the stove.

Maximum electrical absorption while ignition (6 min)	490 Wat
Electrical absorption (Wat)	120 Wat
Voltage and supply frequency	230 V / 50Hz

By law, the installation requires an earth connection and residual-current circuit breaker (RCCB). Make sure the power cord, in its definitive position, does not make contact with hot parts.

The outlet must be single-phase, neutral and with earth connection.
If the voltage is not sinusoidal (such as generators or other equipment), some errors of the stove could taken place.

6. INSTRUCTIONS OF THE CONTROL PANEL

The control panel consists in 4 push-buttons and 2 displays of four digits each one, they also include seven LEDS which provide information. The layout is as follows:

The display on top shows only a piece of information, whereas the display below may provide us several pieces of information sometimes. In order to know what they displays are saying in every moment, we have sorted them as it is shown in the image and depending on the screen they can show:

- **Display D1:** Time, operating conditions, failures, menu, sub-menu and parameter values.
- **Display D2:** Power and parameter codes (only if the stove is working)
- **Display D4:** Room temperature and parameter values.

The push-buttons have different functions depending on the screen we are in, and depending on whether the keystroke is short (Clic) or long (long keystroke):

PUSH-BUTTON	FUNCTION	
	Clic	LONG KEYSTROKE
(P1)	Information / Menu exit	On / Off / Alarm reset
(P2)	Thermostat modification (+) / Value increase	Pellet load calibration
(P3)	Output combustion modification / Data storage	Pellet manual load
(P4)	Thermostat modification (-) / Value decrease	Combustion fan calibration

Para saber qué tenemos activado en cada momento, utilizamos los leds que se iluminan junto al símbolo o la letra correspondiente:

WHEN THE LED LIGHTS UP			
L1			Room fan is on
L2			Load auger is spinning
L3			Ignition resistor is heating
L4			Room temperature reached
L5		**G**	Daily programming is activated
L6		**S**	Weekly programming is activated
L7		**W**	Weekend programming is activated

IF IN THE DISPLAYS YOU CANNOT SEE THE PARAMETERS WE HAVE INDICATED OR THE PUSH-BUTTONS DO NOT PROVIDE ACCESS TO THE INDICATED FUNCTIONS IN THIS MANUAL, IT COULD BE POSSIBLE THAT DURING THE HANDLING OF THE PANEL CONTROL THE KEYBOARD CONFIGURATION HAS BEEN CHANGED.

The keyboard configuration is changed by pressing at the same time for a long time the buttons and , it will be correctly configured when it appears in the display on top"110"

6.1 USER MENU 1

We call "USER MENU 1" to all the options the user can access from the "Main display" (the one that is displayed without pressing any button).

All buttons have a double function. One function is activated with a **"clic"** (short keystroke) and the other one is activated with a **long keystroke**.

6.1.1- INFORMATION

With every **"clic"** of the button , we see in the display that is below the abbreviation of the name of parameter and in the display on top their value.

The parameters to visualise in order of appearance are:

- **tF**: Fumes temperature (ºC).
- **tA**: Room temperature (ºC).
- **FL**: Air primary speed.
- **UF**: Combustion fan speed (rpm)
- **Co**: ON auger time (sec).
- **St***: Remaining time for Extraordinary Maintenance (h).
- **St2***: Remaining time for Ordinary Maintenance (h).
- **FC**: Code and revision firmware FYSYI01000033.X.Y.
- **494**: Manufacturer code item: 0Y.0X.

Parameters deactivated from factory, to activate them by request of the user contact the Technical Assistance Service in your area.

If we stop pushing the button for 5 seconds, the system returns to the main screen.

6.1.2- ERROR RESET, TURN ON AND TURN OFF THE STOVE

If we push **for some seconds** the button , we will change the state in which the stove is at that moment. The states of the stove can be:

CURRENT STOVE STATE BEFORE PUSHING	**STOVE STATE AFTER PUSHING** (long keystroke)
OFF *(alarm activated)*	OFF *(No alarm activated)*
OFF *(No alarm activated)*	IGNITION
IGNITION, NORMAL, MODULATION or STAND-BY	SHUTDOWN *("OFF")*
SHUTDOWN *("OFF")*	"REC" *(Ignition recovery)*
"REC" *(Ignition recovery)*	SHUTDOWN *("OFF")*

6.1.3- ADJUSTMENT OF THE POWER FUNCTIONING

The stove has 6 range powers functioning, being 1 the lowest and 6 the highest. The user chooses from 1 to 6 by a short keystroke **"clic"** of the button (P3).

Besides the option to choose among the 6 powers, the panel control offers to us an automatic functioning mode "A" in which the stove decides the more suitable power functioning in every moment modulating dependent on room temperature and the temperature selected by the user. In this way, we get a faster heating, more constant temperature and less fuel consumption.

To choose the power, push the button (P3) and the display that is below will start to flicker.

With every **"clic"** of the button the power will increase more and more and, eventually, the automatic option will appear. If we push the button again, the power starts again from power 1.

When we quit pushing, the value that appears in the display stops flickering and becomes as the new power of functioning.

When the stove is stopped the functioning power does not appear, but if we push the button (P3) **("clic")**, it appears the power that is selected and it can be changed.

6.1.4- PELLET MANUAL LOAD

This function allows us, before turning on the stove, start up the load auger to fill it of pellet.

To do that we will push the button (P3) **for some seconds** and the load auger will be activated constantly. While in the display that is below it appears **"LoAd"**, the display on top indicates the time that it has been working. We will interrupt the load when the pellet falls off steadily in the burner, for which you just have to push any button. Due to security reasons, the load will be interrupted automatically after 300 seconds.

After having carried out this operation, before proceed to turn on the stove it is necessary to empty the burner and go back to place it correctly. If the pellet accumulates too much while turning on the stove, it could produce an explosion.

- This function will only be activated when the stove is stopped.
- It is necessary to carry out this operation before the first time we turn on the stove as well as in case the stove runs out of pellet.

6.1.5- ADJUSTMENT OF THE ROOM THERMOSTAT AND

The user has the option to choose the room temperature desired in a range from 10º C to 40º C.

During the functioning, the stove compares the parameter value with the temperature that the room thermostat of the rear side detects. While the room thermostat is below the room temperature, the stove works in the selected power (or in automatic mode), and when it reaches that temperature changes into modulation **"mod".**

If while we are in modulation, we exceed in more than 2º C the selected temperature, the stove will turn off to change into **"stand-by"**. The stove will turn on again when the room temperature is lower than the selected by the user.

To modify the parameter value of the room temperature is enough a short keystroke **"clic"** in the button or (P2 or P4). In the display that is below we will see the temperature that was selected flickering **"th"**, which can be increased or decreased by pushing the buttons or .

After 5 seconds, the new value is saved and the display returns to the main screen.

6.1.6- PELLET LOAD CALIBRATION ⊕ (DEACTIVATED FROM FACTORY)

The pellet combustion and the general performance of the stove depends on the type of pellet it is used and on the configuration of the flue duct. If anyone of them is really different from the standards with which the stove was adjusted in factory, it may be necessary to readjust the load of pellet to adapt it to the current conditions.

If the user observes the stove performance, the user will know if it is advisable decrease or increase the pellet load as explained in ***"4.3- USER SETTINGS DEPENDING ON THE PELLET THAT HAS BEEN USED"***.

Pellet load calibration is carried out by steps, 7 positives and 7 negatives which increase or decrease respectively (proportionally) the percentage of load with regard to factory settings (the percentage is with a step adjusted to "0").

To access the pellet load calibration a **long keystroke** of the push-button ⊕ (P2) has to be made until we see "Pell" in the display that is below, also we will see at the same time in the display on top the current value of the step. To modify it we have to push a **long keystroke** again of the push-button ⊕ until we hear an acoustic signal. After this, with short keystrokes of the push-buttons ⊕ or ⊖ (P2 and P4) the step value will flicker and then, it can be increased or decreased.

After 5 seconds, the new value is saved and the display returns to the main screen.

The values with negative sign are the negative steps (decrease of the load), whereas the ones that have no sign are positive steps (increase of the load).

The stove has a control system which adjusts automatically the loading of pellet, so this user adjustment will not appear, or if it appears must remain at "0" in order not to interfere with the electronic board adjustment.

6.1.7- COMBUSTION FAN CALIBRATION ⊖ (DEACTIVATED FROM FACTORY)

The pellet combustion and the general performance of the stove depends on the type of pellet it is used and on the configuration of the flue duct. If anyone of them is really different from the standards with which the stove was adjusted in factory, it may be necessary to readjust the load of pellet to adapt it to the current conditions.

If the user observes the stove performance, the user will know if it is advisable decrease or increase the pellet load as explained in ***"4.3- USER SETTINGS DEPENDING ON THE PELLET THAT HAS BEEN USED"***.

Fan calibration is carried out by steps, 7 positives and 7 negatives which increase or decrease respectively (proportionally) the speed of the fan with regard to factory settings (they come with a step adjusted to "0").

To access the speed of fan calibration a **long keystroke** of the push-button ⊖ (P4) has to be made until we see "Vent" in the display that is below, also we will see at the same time in the display on top the current value of the step. To modify it we have to push a **long keystroke** again of the push-button ⊖ until we hear an acoustic signal. After this, with short keystrokes of the push-buttons ⊕ or ⊖ (P2 and P4) the step value will flicker and then, it can be increased or decreased.

After 5 seconds, the new value is saved and the display returns to the main screen.

The values with negative sign are the negative steps (decrease of the speed), whereas the ones that have no sign are positive steps (increase of the speed).

The stove has a control system which adjusts automatically the combustion fan speed, so this user adjustment will not appear, or if it appears must remain at "0" in order not to interfere with the electronic board adjustment.

6.2 USER MENU 2

We call “USER MENU 2” to a number of functions that the user can access from a submenu by a **long keystroke** “Main screen” by the push-buttons and (**P3 and P4**).

The functions that the submenu offer are:

- **rAir**: Room fan adjustment (Not active in this model).
- **Cron**: Stopwatch for programming the ON/OFF schedules of the stove.
- **oroL**: Clock.
- **TELE**: Remote Control.
- **rCLr**: Cleaning Reset.
- **TPAr**: Technical Menu.

By pushing the buttons and simultaneously this way, in the display on top it appears the first function of the user menu 2 “rAir”, and with the push-buttons and (P2 and P4) it can move through the different functions.

To access any of the functions push the button (P3), and to exit the main screen push (P1).

After 40 seconds without pushing any button, the display returns to the main screen.

In the following sections there is a detailed description of every function of “User Menu 2”.

6.2.1- ROOM FAN ADJUSMENT (rAir)

This function allows to modify the room fan power. It has 7 positives and 7 negatives steps which increase or decrease respectively (proportionally) the speed of the room fan with regard to factory settings (they come with a step adjusted to “0”). The modification of the room fan power affects all the working powers of the stove (from 1 to 6 and automatic mode).

When we enter to “rAir” by pushing the button , in the display in top D1 it appears the selected step of room fan power (in this case it will appear the value “0” which has been adjusted in factory). To modify it you need to push again the button (P3) and the option will start to flicker, by the buttons y (P2 and P4) choose the option desired (from 1 to -7), by pushing the button (P3) it will stop flickering and it will be saved. By pushing the button (P1) successively we will return to the main screen.

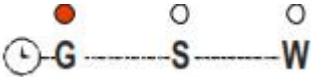
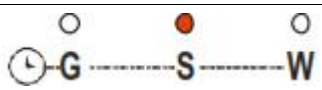
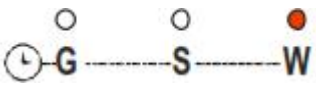
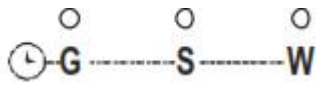
6.2.2- SCHEDULE PROGRAMMING (CRON)

This function allows the schedule programming of ignition / shutdown the stove.

It is formed by two sections, one is for choosing the programming modality that we want to activate (MoDE), and the other one is for the schedule programming of every modality (ProG).

With the push-buttons and (P2 and P4) both alternate in the screen. It will activate the one that is seen when you push .

- MoDE: It allows deactivate crono function or choose within 3 options:

Modality	LED
Gior: Daily programming	
SEtt: Weekly programming	
FiSE: Weekend programming	
OFF: The stove does not work under no programming	

When we enter to “MoDE” by pushing the button (P3), in the display on top D1 it appears the option we had selected. To modify it you need to push again the button (P3) and the option will start to flicker, by the buttons y (P2 and P4) choose the option desired, by pushing the button (P3) it will stop flickering and it will be saved. By pushing the button (P1) successively we will return to the main screen.

If you push (P1) without having confirmed the option, or if we do not confirm it and the display returns to the main screen, the option we had selected will be kept.

- ProG: It allows to do the programming of the 3 modalities that the control panel offers, and it can be programmed even 3 time zones (3 ignitions and 3 shutdowns) every day:

Daily (**Gior**): Every day of the week must be programmed independently.

Semanal (**SEtt**): A single programming that affects to every day of the week must be programmed.

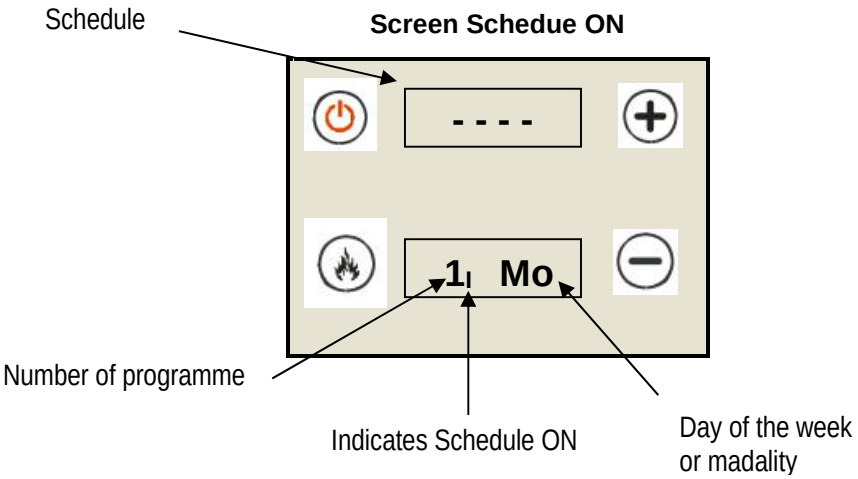
Fin de Semana (**FiSE**): 2 programmings must be made, one for Monday to Friday and another one for the weekend (Saturday and Sunday).

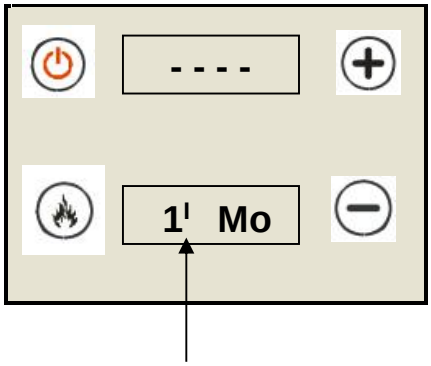
Displays	Screen
Daily modality: the day of the week	**Mo: Monday** **Tu: Tuesday** **UE: Wednesday** **tH: Thursday** **Fr: Friday** **SA: Sataurday** **Su: Sunday**
Weekly modality: Monday - Sunday	**MS**
Weekend modality: Monday - Friday Saturday - Sunday	**MF** **SS**
For the schedule of **ON** the segment turns on below in the **display D2**	**- - - -** **1ı Mo**
For the schedule of **OFF** the segment turns on in the upper side of the **display D2**	**- - - -** **1ˡ Mo**

For every programming you have to configure the schedule of **ON** and the schedule of **OFF**:

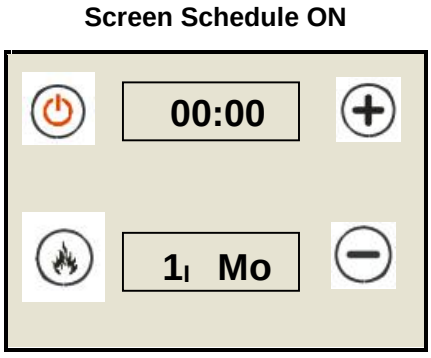
1) Once we are in the section **“ProG”** by pushing the buttons and (**P2 and P4**), choose the modality you desire to set up and push the button (**P3**).

2) By pushing the buttons and (**P2 and P4**) choose one of the 3 programmings that are available. In the **display on top D1** is where the hours and minutes are set up, and in the display that is below appears the number of programme, the segment appers below if it is ignition schedule (ON) and on top if is shutdown schedule (OFF), and the selected modality



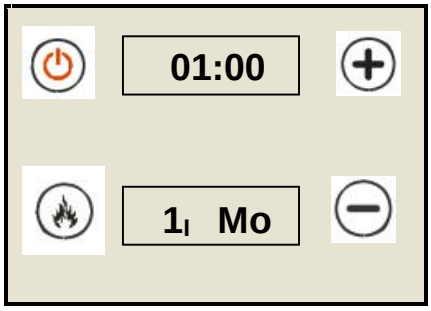


1) Push the button (**P1**) for some seconds and in the display on top will appear the hours and minutes (00:00):



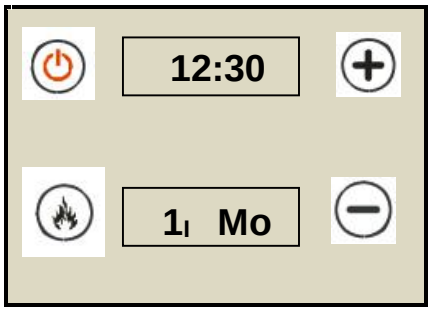
2) To adjust the schedule of ignition push the button (**P3**) to enter, and the modification and the selected value (hours and minutes) will start to flicker. Push the button (**P3**) to switch from hours to minutes and vice versa, and with the buttons and (**P2 and P4**) change the value.

Screen schedule ON



3) Once you have set up the hour of ignition, push the button (**P3**) to save the configured value.

Screen Schedule ON



4) Choose with the button (**P2)** the schedule of OFF and repeat the procedure that has been explained from the section 4.

For the rest of the days of the week, repeat the procedure that has been explained from the section 2.

In case you choose the modality Weekly of Weekend, the procedure to follow is the same.

For every time zone of programming, the minutes can be modified with intervals of 15 minutes (e.g. 20:00, 20:15, 20:45). From 23:45 to 23:59, the adjustment has to be made minute by minute (see example below):

Example of programming between 2 days:

To keep the stove on over the course of 2 days, that is, over the course from Monday to Tuesday, configure for the programming band of Monday the schedule OFF at 23:59 and for the programming band of the next day of the week, Tuesday in this case, the schedule of ON at 00:00.

Crono programming Monday			
ON	**22:00** **1I Mo**	**23:59** **1I Mo**	OFF
Crono programming Tuesday			
ON	**00:00** **1I Tu**	**07:00** **1I Tu**	OFF

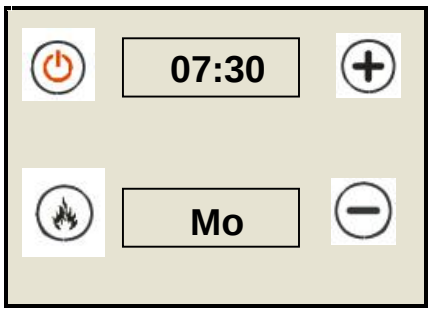
6.2.3- TIME AND DATE OF THE WEEK (oroL)

Function to set day and time. This configuration is required in order to do the programming of the ignitions and shutdowns of the stove.

When pushing the button (P3) we see the hours and minutes in the display on top, and the day of the week in the display that is below. If we push (P3) we enter in modification, and the time digits start to flicker. Modify the value with the buttons and (P2 and P4), and when you confirm by pushing (P3) the minutes will start to flicker. Once you have modified the value push (P3) again, and the day of the week will start to flicker. After having chosen the day of the week and confirmed it pushing the button (P3), the new values will be saved.

To exit push ESC (P1) or wait for a few seconds. If before you choose and confirm you push ESC (P1), the data will not be saved.

Display



6.2.4- REMOTE CONTROL

This function is destined to activate/deactivate the remote control working.
This menu is disabled (OFF) from factory settings, but in case you purchase a remote control it will be necessary to activate this function (ON).

6.2.5- CLEANING RESET (rCLr) (DEACTIVATED FROM FACTORY)

Function to reset the hours meter when it appears the message “Ordinary maintenance” after the stove has been working 300 hours.

This message notifies the user that a deep cleaning of the stove must be done.

Once the cleaning is done, enter to the function “rCLr” by pushing the button (P3) from User menu 2, in the display on top we see “RES” when pushing (P3) and the word “SURE” appears flickering. If we push (P3) again, the meter resets and the message disappears.

To return to the main menu push ESC (P1) repeatedly.

To activate this function by request of the user contact the Technical Assistance Service in your area.

6.2.6- TECHNICAL MENU (TPAr)

This menu is to enter to the SAT parameters that are reserved to the Technical Assistance Service.

The access is protected by a password.

7. USE AND WORKING OF THE STOVE

7.1 ADVICE AND WARNING

- Do not use the stove as incinerator or in any manner other than the one that has been designed to.
- Use only the kind of pellet that the manufacturer allows (see chapter *"**4- FUEL**"*).
- Before turning on the stove, make sure that there is nothing inside, sticked on the stove or next to it, there is no inflammable material or combustible material.
- The external surfaces of the stove, in particular the glass, reach high temperatures to the touch when it is working. Proper precautions should be taken to avoid burns.
- Do not make any unauthorised modification in the device.
- Use only original spare parts recommended by the manufacturer.
- Whenever you have any doubt, consult and read carefully this manual. Do not handle the control panel until you are sure that you know how the procedure works, the effect that the working of the stove has, and how to revert it in case it is necessary.
- Pay attention to the messages and alarms that the stove shows through the screen, write down even that alarms and when they happened. This information is very useful for the user to start up again the stove as well as it would make easier the work of the Technical Service.
- Before turning on the stove you must verify there is nothing that clogs the air intake tube, the burner is fitted properly and clean, the ashtray in its proper place and the front door which provides access to the combustion chamber is fully closed. This door will only be opened when the stove is stopped and cold.
- It is forbidden to remove the protection grille that is in the hopper.
- Do not touch the stove with wet hands, as it is an electrical device. Switch the stove off before touch it.
- A bad handling of the stove or an inadequate maintenance (that do not follow the procedure explained in this manual), can cause serious damage to people, animals… In that case, the manufacturer will be exempt from criminal or civil liability.

The stove experiences changes of expansion and contraction during the phases of heating and cooling, so it is completely normal to hear some pops caused in the steel body. This, in any case, can be considered a defect.

7.2 PELLET LOAD

Pellet load must be made in the upper side of the stove. Put the pellet in the hopper.

After a long inactivity, you need to remove the rests of pellet from the tank as they could have absorbed dampness, changing their original characteristics and not being suitable for their use.

Do not ever remove the protection grille that is inside of the hopper. During the pellet load, avoid that the pellet bag comes into contact with the hot surfaces. Put in the hooper only the type of pellet that adapts to the specifications mentioned before.

7.3FIRST POWER-UP

1) Make sure the stove is connected to the electricity grid correctly.

2) Turn on the stove from the general switch, which is located in the upper side of the stove next to the plug for the electrical outlet.

3) In the display on top appears the time and in the display that is below the room temperature:

Hour

Room Temperature

4) In the moment of turning on the stove it can appear a message of error. It is possible the error that has appeared is the error "**Er11**", to indicate that time and date are not updated. In any case, check the section ***"8- PROBLEMS, MESSAGES AND ALARMS"*** to know how to act, as while it appear some error on the screen we could not initiate the stove.

5) Before the first power-up of the stove, it is necessary to fill the auger of fuel by the user function "Pellet manual load". To do that, follow the instructions indicated in the section 6.1.3 and interrupt the load when the pellet starts falling into the burner continuously. Empty the burner and and then, put it again in the same position to turn on the stove.

6) To turn on the stove, push the button for some seconds until you hear a whistle, and it will appear on the lower right side the working power that has been selected (see the section 6.1.2).

Screen during the start-up

Stove state

Working power

Room temperature

At this moment, the control panel carries out a check-up of the stove **"Chec"** in order to make verification. If during the check-up, the control panel detects any defect, the stove will not start-up and it will appear a message of error. If everything is correct, the stove will power-up.

In the first power-up it is important that the temperature of the stove increases gradually, so during the first 12 hours of working do not reach the power 3.

During the first power-up, fume can be seen expelled by the stove in the room, but actually they are vapours from the varnish of the stove, and after some hours it disappears. It is advisable keep the room aired during this time.

7.4 STATES OF WORKING

7.4.1- STOVE STOPPED

State in which the stove is when it is connected to the main switch or after having switched it off.
In the display on top appears the time and in the display that is below the room temperature.

Stopped Stove

Time

Room temperature

7.4.2- IGNITION

When the stove is stopped or in standby and its working is required, the stove switches to ignition state.

This stage is subdivided in these 6 steps below: check “CHEC”, preheating “ON 1”, preload “ON 2”, fixed phase “ON 3”, variable phase “ON 4”, and stabilisation “ON 5”.

7.4.3- STOVE IS ON (NORMAL WORKING)

State of working of the stove when the electronic board detects that is already burning. During this stage, the user can modify manually the power of working and the stove modulates the working power in function of the selected temperature for the room thermostat; or the user can choose the automatic mode.

In the display on top it appears the time, and in the display that is below the working power and room temperature:

Screen during normal working

Time

Working power

Room temperature

7.4.4- MODULATION (“MOD”)

State that appears during the normal working if it has been reached the room temperature of the selected parameter or to adjust the fumes temperature, so the stove works at minimum power.

When the stove is in modulation, in the display on top it appears the Word “Mod” flickering.

7.4.5- PERIODIC CLEANING BURNER (“PCLr”)

During the normal working of the stove, the stove does the periodic cleaning of the burner automatically from time to time.

When the periodic cleaning is carried out, in the display on top appears the message “PCLr” flickering.

7.4.6- STANDBY

Working state of the stove that appears once the stove has changed to modulation and room temperature is still increasing. Firstly, the stove switches off and remains in standby until the room temperature decreases below the selected temperature, and then the stove will turn on automatically.

7.4.7- IGNITION RECOVERY (“REC”)

During this state the off cycle is carried out while in the display on top appears the Word “REC” flickering. Once the off cycle has finished, it turns on automatically.

The stove starts an “Ignition recovery” in these cases:

- If when the stove is on, a power cut in the mains has been produced and when the electric power has been re-established, the stove was still hot.
- If when the stove is switching off, the user pushes the button ON/OFF to turn on the stove again.

7.4.8- SWITCH OFF (“OFF”)

This stage can start by different reasons:

- If we force a switch off with the push-button ON/OFF.
- When the stove enters in standby mode.
- When it appears any message of error.
- When the stove is in ignition recovery.

During this stage in the display on top appears the Word **“OFF”**.

7.5 CHANGE DISPLAY POSITION

TERMAT suggests that this operation must be carried out by the Official Technical Service during the start-up of the stove.

In the case of not having enough space on the side of the stove where the display is placed (see **Fig. 7.1**), it is possible to change its orientation to access it from the opposite side (see **Fig. 7.2**).

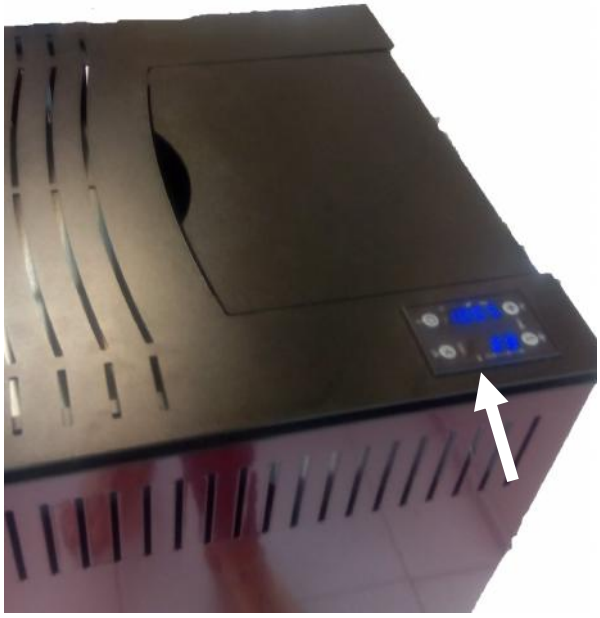


Fig. 7.1

Fig. 7.2

To carry out this operation, follow the following steps:

1) Take the top of the stove apart (upper part). For this it is necessary to remove the 2 screws located in the upper front part of the top (see **Fig. 7.3**) and the other 2 screws located in the upper rear part of the stove (see **Fig. 7.4**) with an Allen key.

Fig. 7.3

Fig. 7.4

2) Remove the top carefully by tilting to one side as the flat cable of the display is connected and it could break (see **Fig. 7.5**).

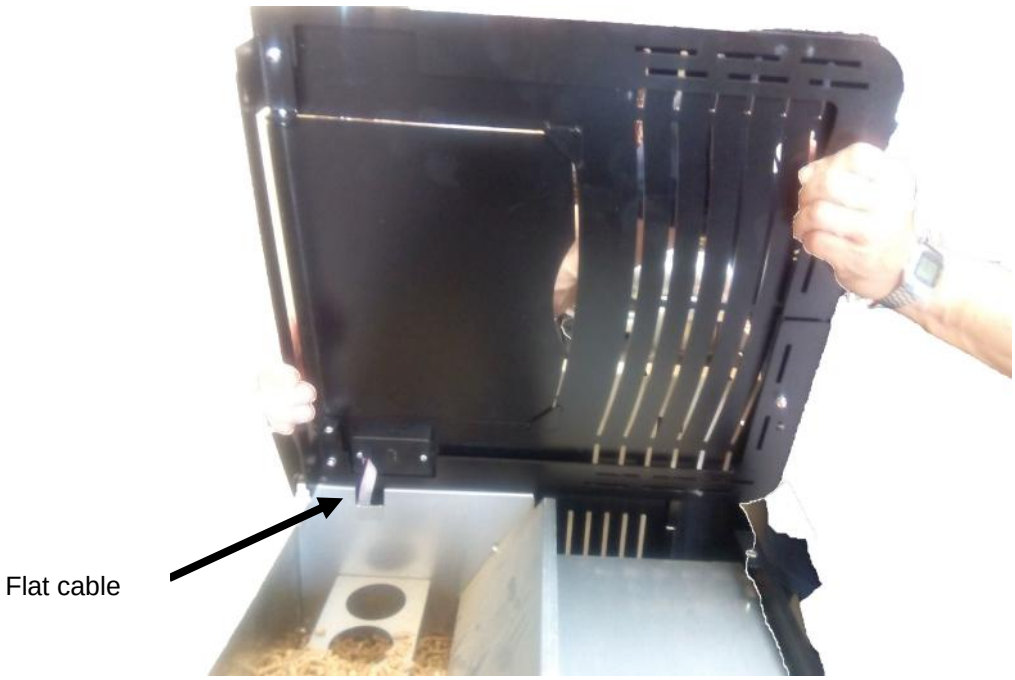


Fig. 7.5

3) Disconnect the flat cable carefully from the display (see **Fig. 7.6**).

Fig. 7.6

4) Next, remove the two screws that fix the display to the top (see **Fig. 7.7**), remove the display and casing where it is placed, and turn both 180º to be able to view the display from the opposite side. Once placed in the correct position, re-fix with the two screws to the top (see **Fig. 7.8**).

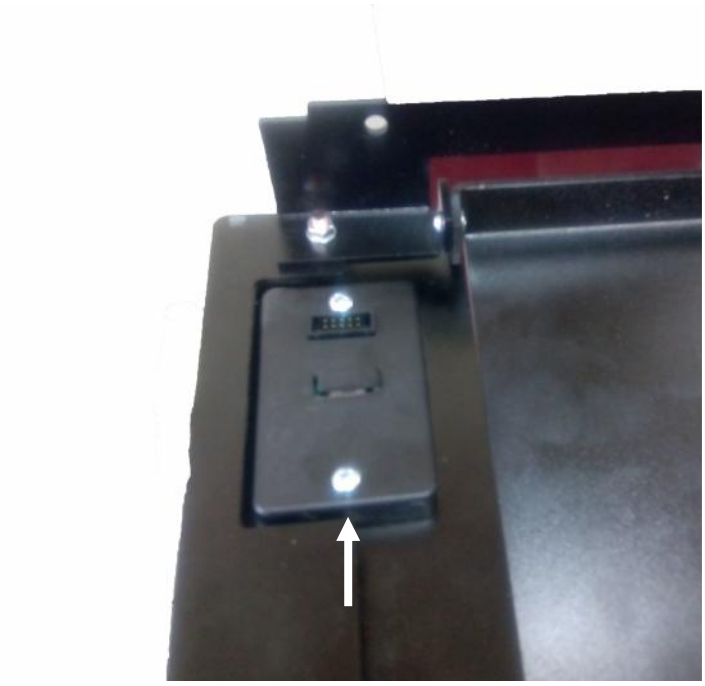


Fig. 7.7

Fig. 7.8

5) Once the orientation of the display has been changed, perform the previous steps in reverse order, paying special attention to flat cable is not pinched or bent when placing the top.

8. PROBLEMS, MESSAGES AND ALARMS

The stove informs the user of certain situations and problems that make difficult its normal working by the alarms and messages that appear in the display.

The electronic circuit (through the different devices and probes that are connected to it) receives the information about different magnitudes giving the corresponding message or alarm when the parameters are out of the range.

This does not mean that it is an internal problem of the stove, but sometimes the electronic board reports problems in the installation, in the pellet, lack of cleanliness, etc.

Read this chapter carefully, as it will not only help you to interpret the messages or alarms that it could appear, it also informs you about possible causes and possible solutions to take.

The appearance of messages and alarms is part of the normal working of the stove, as they inform the user of certain situations.
The messages will only be attributable to the stove when they are produced as a consequence of the malfunction of any defective component of the stove.

8.1 PROBLEMS

Here you have some advices just to make sure that everything is correct before turning on the stove, and power up the stove with the best guarantees:

- Check that the installation has been carried out according to the prevailing rules and following the advices of the manufacturer (see the chapter **"*5. INSTALATION*"**).
- Use only the proper pellet (see chapter **"*4. FUEL*"**), as short and as uniform as possible, keeping a minimum level of load at half in the hopper.
- If the pellet has been in the hopper for a long time, it can catch air humidity so it is advisable to empty the hopper and put the pellet again. If, for some reasons, you use the pellet with humidity, it would be an excess of smoke during the ignition state.
- Perform the maintenance as the manufacturer says in chapter **"9. CLEANING AND MAINTENANCE",** do not forget to clean the brazier every 8 or 12 hours maximum (depending on the pellet that has been used) and then, place it correctly.

A malfunctioning of the stove comes with a message or alarm, even though it not always happens. The list of possible cases provided below can be checked before warning the Technical Assistance Service (TAS):

- When we turn on the stove, the differential of the house is set off. In this case, the first step would be trying to connect the stove to another plug and, if the problem persists it may be a problem of humidity in any of the components so we should make sure that the stove receives neither air humidity nor humidity through the chimney. After that, wait several hours before trying it again.
- The screen does not turn on. Check the voltage in the plug, see if the rear switch is on, maybe the rear fuse is burnt out…

In days of strong wind or adverse weather conditions, it is possible that the stove combustion is not good due to the influence in the draught of the chimney. **The manufacturer does not assume any responsibility for the malfunctioning of the stove under adverse weather conditions.**

8.2 MESSAGES

MESSAGE	MESSAGE MEANING	ACTION TO PERFORM
Sond	Display of the state of the room thermostats or airflow sensor. The message appears during the state of "Check Up", and indicates that the temperature or airflow detected by one or more probes are not between the minimum and maximum allowed values.	Check the state and connection of the probes. Inform the TAS if it is not solved.
Hi	Indicates that the room temperature is more than 50 ºC. The room thermostat may be in a short.	Check the state and connection of the room thermostat. Inform the TAS if it is not solved.
CLr	Ordinary maintenance: message that appears after 300 hours of the stove working in order to a routine maintenance is carried out by the user. Function deactivated from factory, to activate it contact the Technical Assistance Service in your area.	See chapter "***9-CLEANING AND MAINTENANCE***".
Serv	Extraordinary maintenance: message that appears after 1500 hours of the stove working in order to an exceptional maintenance is carried out by the Technical Assistance Service. Function deactivated from factory, to activate it contact the Technical Assistance Service in your area.	It is necessary to carry out a general cleaning of the device and of the smoke outlet installation. Contact with the Technical Assistance Service of the area or authorized professional. See chapter "***9-CLEANING AND MAINTENANCE"***
PCLr	Periodic self-cleaning of the burner that the electronic board carries out while the stove is working.	No action is required. After the time of the cleanliness has elapsed, the message will disappear.

8.3 ALARMS

The control panel has some systems that control: the ignition, pellet, working power, room temperature, fume temperature, the proper working of the fan, the proper outlet of pellet combustion gases, etc.

The alarms are used by the control panel to inform us that there is something that blocks the normal working of the stove:

ALARM CODE	DESCRIPTION	POSSIBLE CAUSE	SOLUTION
Er01	Activation of the security thermostat	• Security Klixon and/or cable are damaged •The temperature in the hopper has increased a lot	*Call the Technical Assistance Service.*
Er02	Activation of the safety air pressure switch	The chimney is very dirty or blocked.	*Check and clean the chimney.*
		Chimney has a lot of pressure loss: excessive length, excessive horizontal section, insufficient diameter, incorrect finish or with net, too much bends, etc.	*Check and correct the installation.*
		Setback of the fumes caused by air action.	*Check the position of the flue duct and make sure the cowl is suitable.*
		The last case may be a problem of the air pressure switch or of its connection with the control panel.	*If you have checked and corrected every previous step, and the alarm keeps appearing, call the Technical Assistance Service.*
Er03	Shut down for a low fumes temperature	•There is little pellet in the hopper •A "cave" in the hopper has been produced and the pellet do not arrive to the load auger •The load auger has been blocked or/and the load motor does not spin	•*Reset the error.* •*Make sure that the pellet arrives to the auger (undo the "cave"), put pellet in the hopper if necessary, and fill up the auger (see chapter 6.1.3).* •*If after several attempts of filling up the auger, it does not fall pellet into the burner, call the Technical Assistance Service.*
Er05	Shut down for a high fumes temperature	There is a high temperature in the room	*Check the selected room temperature and that the room thermostat is placed in a proper place in order to detect the temperature of the room.*
		Room fan does not work or it works very slowly.	*In case that this alarm appears often, or in case you do not get to reset it, call the Technical Assistance Service.*
		The fumes probe is missing or has been damaged. In this case, it would appear "Hi" in the fumes temperature information "tF", and the room thermostat is working to the maximum.	
Er07	The electronic board does not receive any signal from the speed controller of the extractor (combustion fan)	It may appear sometimes because of fluctuations in the electric network.	•*Reset the error and turn it on again.* • *In case that this alarm appears often, or in case you do not get to reset it, call the Technical Assistance Service.*
		The fumes fan and/or any of its connections are damaged.	

ALARM CODE	DESCRIPTION	POSSIBLE CAUSE	SOLUTION
Er08	The speed of the extractor cannot be adjusted properly	It may appear sometimes because of fluctuations in the electric main.	•*Reset the error and turn it on again.* •*Make sure it is connected to a suitable supply.* • *In case that this alarm appears often, or in case you do not get to reset it, call the Technical Assistance Service.*
		The voltage main is not good or is taken from a non-sinusoidal AC generator	
		Fumes fan and/or any of its connections are damaged	
Er11	Update DATE and TIME	It can appear the first time the stove is connected to the network or after several days of being unplugged.	Update time and day of the week. (See chapter 6.2.3).
Er12	Error in the ignition	**IF THE BURNER IS ALMOST EMPTY** •There is little pellet in the hopper •. A "cave" in the hopper has been formed, and the pellet does not get to load auger. • The load auger is blocked and/or the load motor does not turn.	•*Reset the error* •*Make sure that the pellet arrives to the auger, put pellet in the hopper if necessary, and fill up the auger (see chapter 6.1.3).* •*If after several attempts of filling up the auger, it does not fall pellet into the burner, call the Technical Assistance Service.*
		IF THE BURNER IS FULL OF PELLET (NOT BURNED) •The burner is dirty. •Wet pellet or bad quality pellet • Ignition resistance and/or the connection cable are damaged.	•*Empty and clean the burner, reset the alarm and try another start-up.* •*Check the conditions and quality of pellet* • *If it does not start up after 2 or 3 attempts, call the Technical Assistance Service.*
Er15	Electric supply cut	There has been an electric supply cut for a long period while the stove was working, or while the ignition.	• *Reset the error and start up again.* • *In case that this alarm appears often, or in case you do not get to reset it, call the Technical Assistance Service.*
Er17	Regulation of air flow not achieved during operation	It could appear if at some point of the stove or the flue pipe, we have an excessive load loss, or if the stove has been operating for several hours (more than 8 hours).	•*Check if something makes difficult the air inlet to the stove.* •*Clean the burner.* •*Clean the smoke passages of the stove and the flue duct.* •*In case that this alarm appears often, or in case you do not get to reset it, call the Technical Assistance Service.*
		There is an uncontrolled air intake that reduces the air that reaches the burner.	•*Make sure the door is properly closed.* •*Check the door and glass gaskets.* •*Clean the burner.* •*In case that this alarm appears often, or in case you do not get to reset it, call the Technical Assistance Service.*
Er39	Flow meter sensor damaged	It may appear when the stove is turning off if during the working the flow sensor breaks down.	*If the problem keeps on appearing, when starting up the stove it will appear the error "Er41".*

CÓDIGO ALARMA	DESCRIPCIÓN	POSIBLE CAUSA	SOLUCIÓN
Er41	The minimum airflow has not been reached during the "Check Up"	•We may have a problem in the flue duct. • The air inlet is blocked totally or partially, or it has been canalized and it has lot of load loss • Dirty burner • The stove takes air of an inlet unplanned: the door is open or not closed properly; the hopper and/or load auger has no pellet, etc. • The interior fumes passages of the stove are very dirty • The extractor has lost power •Problems with the flow sensor or its connection (appears the message "Sond")	•*Check all the possibilities that appears in the error "Er02".* •*Check the stove and the installation* •*Check the stove cleanliness and flue duct (see chapter 9)* •*In case that this alarm appears often, or in case you do not get to reset it, call the Technical Assistance Service.*
Er42	Excessive airflow during the "Check Up"	•It may appear if we had an excessive draught in the chimney, or if we are forcing the air inlet for the pellet.	•*Check and correct the installation.* •*In case that this alarm appears often, or in case you do not get to reset it, inform the Technical Assistance Service.*
		•The pressure switch is damaged, and in this case, it may appear with the message "Sond".	*Inform the Technical Assistance Service*

With the help of this alarms table, the user should be able to identify the cause of the alarm.

Once the cause has been detected and corrected, to turn on the stove again it is necessary to reset that alarm.

RESET OF THE ALARMS:

- **When an alarm is produced, the stove starts turning off.**
- **The alarm cannot be reset until the stove is completely off.**
- **Once the stove is off you have to wait until in the display on top appears "Alt" and push for some seconds the button ⏻ to reset the alarm that is active.**
- **Once the alarm has been reset, it is advisable to turn off the stove for some seconds pushing the back switch.**

If after have followed every single step of how to reset the alarms and you do not get to reset the stove, or if every time you try to start again the stove the alarm keeps appearing, inform the Technical Service.

9. CLEANING AND MAINTENANCE

For a proper functioning of the stove it is essential to carry out certain maintenance tasks, which often depend primarily on the operating hours and the fuel quality. Some of them must be carried out daily, whereas others just make them once a season.

The user is responsible for carrying out the cleaning and maintenance tasks, some of these tasks have to be carried out directly by the user and others contacting a qualified staff or authorized TAS.

When the message “CLr” is displayed on the screen (Ordinary Maintenance), the user must carry out or make sure that the maintenance tasks marked with an asterisk **(*)** have been carried out recently, check paragraph **“9.1- MAINTENANCE TABLE**”.

When the message “Serv” is displayed on the screen (Extraordinary Maintenance), the user should contact a qualified staff or authorized TAS in order to carry out, if it has not been performed recently, the maintenance tasks marked with **(**)**, check paragraph “**9.1- MAINTENANCE TABLE**”.

Both, “CLr” and “Serv” messages come disabled from factory. To activate them contact the Technical Assistance Service in your area.

A LACK OF CLEANING CAN JEOPARDIZE SAFETY AND A PROPER OPERATION OF THE STOVE.

9.1 MAINTENANCE TABLE

Then a set of maintenance operations and the frequency recommended for this stove model are described. Keep in mind that the frequency indicated for the maintenance operations and ash collection is the usual when good quality pellets made from pine wood are burned, depending on the fuel used it may be necessary to carry out more often these operations.

OPERATION WHO MUST CARRY OUT	FRECUENCY					
	8-12H	D	2-3D	M-(*)	2S-(*)	S- (**)
BRAZIER CLEANING USER (*check paragraph **9.3***)	X					
HEAT EXCHANGER CLEANING USER (*check paragraph **9.4***)		X				
ASH PAN CLEANING USER (*check paragraph **9.2***)			X			
GLASS DOOR CLEANING USER (*check paragraph **9.8***)			X			
“T” CONNECTION CLEANING USER (*check paragraph **9.7***)				X		
COMBUSTION CHAMBER CLEANING PROFFESIONAL OR AUTHORIZED TAS (*check paragraph **9.5***)						X
FUEL HOPPER CLEANING USER (*check paragraph **9.9***)					X	
SMOKE CHAMBER CLEANING PROFFESIONAL OR AUTHORIZED TAS (*check paragraph **9.6***)						X
CHIMNEY CLEANING (UNLOAD INSTALLATION) PROFFESIONAL OR AUTHORIZED TAS (*check paragraph **9.7***)						X
ANNUAL INSPECTION PROFFESIONAL OR AUTHORIZED TAS (*check paragraph **9.10***)						X

8-12H: Every 8-12 hours of operation.

D: Every day.

2-3D: Every 2-3 days.

M-(*): Once a month or when the message of ordinary maintenance "**CLr**" appear on the screen, which it happen more frequently.

2S-(*): Twice a season (year) or when the message of ordinary maintenance "**CLr**" appear on the screen, which it happen more frequently.

S- (**): Once a season (year) or when the message of extraordinary maintenance "**Serv**" appear on the screen, which it happen more frequently.

- **For this type of cleaning is necessary a vacuum cleaner for ashes.**
- **It is advisable to begin the season with the stove and chimney totally clean.**

- **All cleaning and maintenance operations ONLY must be made with the fire off and when the stove is cold, and until then the door must be closed.**
- **Before carrying out any cleaning or maintenance, preventively ensure that the stove is unplugged from the mains intervening in the general switch placed behind the stove or disconnecting the power cable that feeds it.**

9.2 DISPOSAL OF ASHES

The ash pan is placed surrounding the brazier, which must be emptied regularly to prevent the overflow of ashes (see Fig. 9.1).

To take out the ash pan, pull it outwards carefully (see Fig. 9.2).

Ashes must be placed in a metal container with a tight-fitting lid. Until the ashes are completely extinguished, the closed container must be placed over a non-flammable base or land and far away from flammable materials.

Once the ash pan is empty, replace it in the same position.

Fig. 9.1

Fig. 9.2

9.3 BRAZIER CLEANING (BURNER)

Due to the fuel quality, some incrustations can be formed and they will hinder the good performance of the stove, so they must be removed. Lift the brazier of the support where it is placed, and clean any deposits that could have formed, with particular attention to clogged holes using a pointed tool if it is necessary.

With an ash vacuum, vacuum the ash accumulated inside the chamber, remove the brazier and control that the holes in it are clear. It is also necessary to clean the brazier support vacuuming the existing ash.

Normally, you need to do this cleaning every 8-12 hours of operation of the stove, but with a pellet whose quality or ash content is not optimal, it may need done more often.

Before switching on the stove, check that the brazier is put back towards the pipe of the ignition resistor.

9. HEAT EXCHANGER CLEANING

It is a very simple operation and it does not require any tool, but it ensures that we have a good heat exchange from the stove to the ambient air.

It is done when the stove is cold, and it would be desirable to do before every start, or at least once a day.

To perform this cleaning, open the door, we have on the front of the stove one knob (see **Fig. 9.3**). Moving them backwards and forwards, we move a grill that cleans the heat exchanger, removing the combustion waste and ensuring a maximum performance.

Fig. 9.3

9.5 COMBUSTION CHAMBER CLEANING

Usually once a year (preferably at the beginning of the season), the extraordinary cleaning of the combustion chamber must be performed to allow a correct operation of the stove. The frequency of this operation depends on the type of fuel used and the frequency of use. To perform this cleaning it is advisable to contact a Technical Assistance Center.

The stove has a flame retainer in the upper part of the combustion chamber, to access it and clean it, manually disengage the top of the stove (see **Fig. 9.4**).

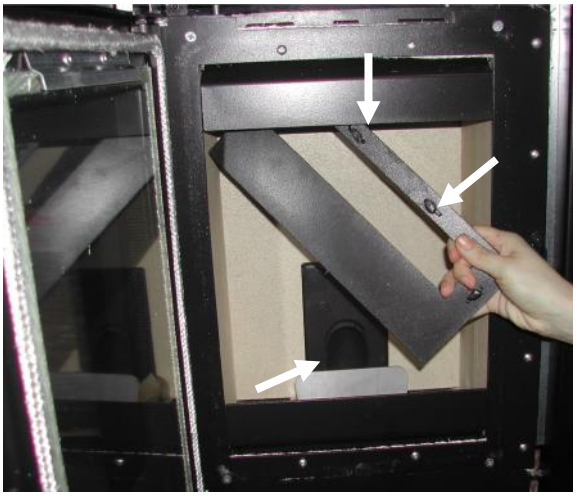


Fig. 9.4

The parts showed by the arrows in Figure 9.4 are interior parts of the combustion chamber which leaving factory painted to avoid rusting during storage. Once the stove is working this painting begins to spoil due to high temperatures. To remove evenly rub with a steel wool.

9.6 SMOKE CHAMBER CLEANING

Usually once a year (preferably at the beginning of the season), the extraordinary cleaning of the smoke chamber must be performed to allow a correct operation of the stove. The frequency of this operation depends on the type of fuel used and the frequency of use. To perform this cleaning it is advisable to contact a Technical Assistance Center.

9.7 UNLOAD INSTALLATION CLEANING (CHIMNEY)

It is recommended to proceed with this maintenance in the extraordinary cleaning phase. Removing the “T” plug connector and cleaning all the duct. It is necessary that at least the first time this is carried out by qualified staff.

It is also recommended to clean the “T” plug at least monthly.

9.8 GLASS DOOR CLEANING

Periodically clean the glass door of the stove with a degreaser product (non-corrosive or abrasive). If the glass is still hot, before cleaning, leave the stove door open the necessary time to cool it. Do not use materials that may damage or scratch the glass.

Do not spray the product for the glass cleaning on painted parts of the stove or joints of the fire door (fiberglass cord).

If the glass breaks during the cleaning operations by accident, avoid turning on the stove and replace the glass only with an original spare. For replacement, contact a Technical Assistance Center.

9.9 FUEL HOPPER CLEANING

The sawdust detached of the pellet when we load it and during the operation of the stove, it stays stored in the bottom of the hopper.

If this sawdust accumulate in excess could cause problems in the operation of the stove, so it is necessary to remove it periodically.

So we must let spent all pellet in the hopper or speed up almost to the end, and with a vacuum cleaner from the top door which give access to the hopper, remove all particles accumulated at the bottom.

Never remove the protection grille which is inside the hopper.

9.10 ANNUAL INSPECTION

We call "Annual Inspection" to an extraordinary maintenance, in which a complete and thorough cleaning of the stove is made, as well as a checking of the operation of all devices of the stove and the state of wear elements.

It should also clean the chimney (unload installation) to ensure a proper functioning of stove-chimney as a whole, and perform the necessary adjustments.

The frequency with it must be performed is indicated in the maintenance table of paragraph 9.1.

The Annual Inspection can only carried out for qualified staff or an authorized TAS.

The Annual Inspection is essential to ensure a proper functioning of the stove, if it is not carried out, the problems that occur during the functioning of the stove, will not be covered under warranty.

10. START-UP AND WEAR PARTS

Once the equipment have been installed, it is obligatory to start up the equipment by an Official Technical Assistance Service of the manufacturer or authorized personnel by the same. The start-up of the equipment is mandatory and is not included in the price of the same. If the start-up of the equipment is not carried out, the guarantee will be canceled.

The following parts are susceptible of wear due to handling, when carrying out maintenance operations, premature aging due to lack of maintenance of equipment, or simply due to wear and tear due to the use of the own equipment, which are considered wear and tear pieces:

- Resistor.
- Brazier.
- Cleaning auger and bearings (depending on model).
- Vermiculite or cast iron parts of combustion chamber (depending on model).
- Glass fiber braid of combustion chamber and gaskets.

These wear parts are not covered by the warranty, even if the change of these occurs before the end of the period of validity of the warranty.

11. OPTIONAL ACCESORIES

11.1 LASIAN WI-FI MODULE

The "Lasian Wi-Fi Module" device connects the stove to the internet via Wi-Fi, allowing the user to manage the stove remotely. The management is done through the App "Lasian Wi-Fi Control", free and available in Google Play for Android and App Store for IOS.

Through this application it is possible to turn on, turn off and unlock the stove, make time schedules, modify temperature setpoint, consult a history of hours of operation, reception of alarms via email or push-up notifications.

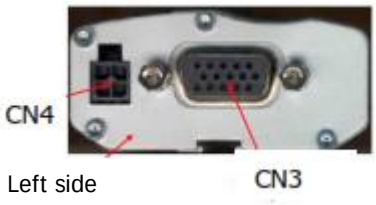
For further information, consult the manual supplied with the "Lasian Wi-Fi Module" device.

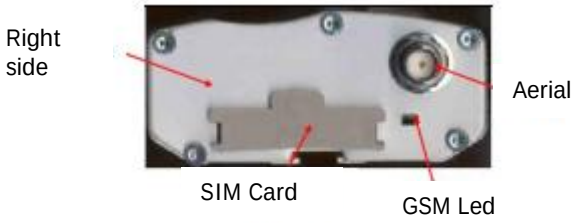
11.2 GSM MODEM REMOTE CONTROL

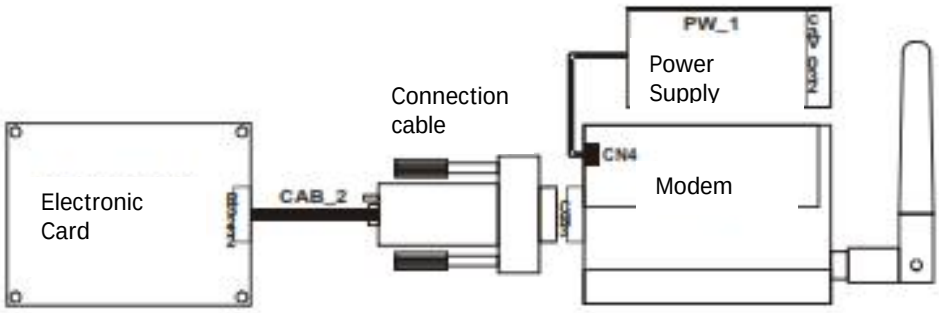
You can communicate with the stove by sent SMS from the mobile to perform operations such us on, off, request about the status of the stove and receive information on locking conditions of the same.

Connect the Modem with RS232 card port using the supplied cables and connectors; it is also necessary to feed the mains voltage through the corresponding feeder.

- Use a SIM card from any mobile operator that can access the GSM data traffic.
- Disable the PIN request of the SIM.
- The operations of connection and disconnection of the SIM Modem MUST be performed with the Modem OFF (no power).







Two leds define the state of the modem:

GSM Led	Led Activity	Modem State
ON	Fixed led ON	The modem is on and ready, but not yet registered on the network or SIM card remains active the PIN request or the aerial is not connected (possible fault of coverage).
	Led flickers every 2 seconds	Modem is on and ready to make or receive calls.
	Led flickers every second	Modem is on and communicating (voice, data or fax).
OFF	Led off	Modem is not powered or in reset mode.

The user can send an SMS to the number corresponding to the SIM Modem with any of the following keywords of control (indifferently written in capital letters or lower case letters):

Start	The word turns on the stove (ON) if it was not already on. The Modem sends a message to the number from which received the order, indicating the state where the stove is and whether it has generated an error code.
Stop	The word turns off the stove (OFF) if it was not already off. The Modem sends a message to the number from which received the order, indicating the state where the stove is and whether it has generated an error code.
Status	The word asks for the State of the stove. The Modem sends a message to the number from which received the order, indicating the state where the stove is and whether it has generated an error code.
Learn	Through this word the system Learns the number to which it has to send an SMS in case of Lock. In case there is a lock condition, the modem automatically sends a message with the state of the stove and the error occurred to the number it has just learned.
Reset	It allows to unlock the system.

12. ENVIRONMENT AND RECYCLING

At the end of the life of the product, this must be put in charge of a collection center for electrical and electronic equipment, or it must be returned to the distributor at the moment of purchasing of a new equivalent equipment for its recycling or disposal. For more detailed information about the available collection systems, go to the collection facilities of local authorities or distributors in which the purchase was made.

Regarding the packaging, all materials used in it are ecofriendly with the environment and recyclable.

DECLARATION OF PERFORMANCE Nº DOP_06

1. Appliance name and identification code:

Residential space heating appliance fired by wood pellet
Stove model: Termat 6 kW

2. Name and contact address of the manufacturer:

LASIAN Tecnología del calor S.L
Pol. Industrial Las Norias, Parcela Nº 7, 50450 Muel (Zaragoza), Spain

3. Intended use:

Residental heating with possible supply of hot water

4. System of assessment and verification of performance: 3

5. Notified body:

CEIS, Centro de ensayos, innovación y servicios, Nº 1/LE989
Initial Type Test (safety and performance)
Assessment system 3
Test Report CEE-0166/18-1Rv1 with date 27/08/2018

6. Declared performance:

Harmonized technical specification	**EN 14785:2007**
Essential characteristics	**Performance**
Fire Safety	A1
Emission of combustion products	0,01 % CO to 13% O_2 at nominal heat output 0,01 % CO to 13% O_2 at reduced heat output
Emission of hazardous substances	Pass
Surface temperature	Pass
Electrical safety	Pass
Cleanability	Pass
Maximun operating pressure (only applicable for appliances with hot water supply)	NPD
Flue gas temperature at nominal heat output	157 ºC
Mechanical resistance (to carry a chimney/flue)	Pass
Thermal output	Room heating at nominal output = 6,9 kW Room heating at reduced output = 3,5 kW
Energy efficiency	89 % at nominal heat output 94 % at reduced heat output
Durability	NPD

The performance of the product identified in points 1 is in conformity with the declared performance in point 6.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 2.

Signed for and on behalf of the manufacturer by:

Place and date of issue:

Muel, 27th August 2018

LASIAN Tecnología del Calor, S.L.
Tecnología del Calor, S.L.
Polígono Industrial Las Norias
50450 Muel (Zaragoza)
Teléfono: 976 140 600

D. Santiago Andrés Blasco
DIRECTOR GENERAL

DECLARATION OF PERFORMANCE Nº DOP_08

1. Appliance name and identification code:

Residential space heating appliance fired by wood pellet
Stove model: Termat 8 kW

2. Name and contact address of the manufacturer:

LASIAN Tecnología del calor S.L
Pol. Industrial Las Norias, Parcela Nº 7, 50450 Muel (Zaragoza), Spain

3. Intended use:

Residental heating with possible supply of hot water

4. System of assessment and verification of performance: 3

5. Notified body:

CEIS, Centro de ensayos, innovación y servicios, Nº 1/LE989
Initial Type Test (safety and performance)
Assessment system 3
Test Report CEE-0166/18-1Rv1 with date 27/08/2018

6. Declared performance:

Harmonized technical specification	**EN 14785:2007**
Essential characteristics	**Performance**
Fire Safety	A1
Emission of combustion products	0,01 % CO to 13% O_2 at nominal heat output 0,02 % CO to 13% O_2 at reduced heat output
Emission of hazardous substances	Pass
Surface temperature	Pass
Electrical safety	Pass
Cleanability	Pass
Maximun operating pressure (only applicable for appliances with hot water supply)	NPD
Flue gas temperature at nominal heat output	169 ºC
Mechanical resistance (to carry a chimney/flue)	Pass
Thermal output	Room heating at nominal output = 8,1 kW Room heating at reduced output = 3,5 kW
Energy efficiency	89 % at nominal heat output 94 % at reduced heat output
Durability	NPD

The performance of the product identified in points 1 is in conformity with the declared performance in point 6.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 2.

Signed for and on behalf of the manufacturer by:

Place and date of issue:

Muel, 27th August 2018

LASIAN Tecnología del Calor, S.L.
Tecnología del Calor, S.L.
Polígono Industrial Las Norias, parcela 7
50450 Muel (Zaragoza)
Teléfono: 976 140 600
D. Santiago Andrés Blasco
DIRECTOR GENERAL

DECLARATION OF PERFORMANCE Nº DOP_10

1. Appliance name and identification code:

Residential space heating appliance fired by wood pellet
Stove model: Termat 10 kW

2. Name and contact address of the manufacturer:

LASIAN Tecnología del calor S.L
Pol. Industrial Las Norias, Parcela Nº 7, 50450 Muel (Zaragoza), Spain

3. Intended use:

Residental heating with possible supply of hot water

4. System of assessment and verification of performance: 3

5. Notified body:

CEIS, Centro de ensayos, innovación y servicios, Nº 1/LE989
Initial Type Test (safety and performance)
Assessment system 3
Test Report CEE-0037/18-1 with date 11/04/2018

6. Declared performance:

Harmonized technical specification	**EN 14785:2007**
Essential characteristics	**Performance**
Fire Safety	A1
Emission of combustion products	0,01 % CO to 13% O_2 at nominal heat output 0,04 % CO to 13% O_2 at reduced heat output
Emission of hazardous substances	Pass
Surface temperature	Pass
Electrical safety	Pass
Cleanability	Pass
Maximun operating pressure (only applicable for appliances with hot water supply)	NPD
Flue gas temperature at nominal heat output	180 ºC
Mechanical resistance (to carry a chimney/flue)	Pass
Thermal output	Room heating at nominal output = 9,4 kW Room heating at reduced output = 3,5 kW
Energy efficiency	89 % at nominal heat output 95 % at reduced heat output
Durability	NPD

The performance of the product identified in points 1 is in conformity with the declared performance in point 6.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 2.

Signed for and on behalf of the manufacturer by:

Place and date of issue:

Muel, 11th April 2018

LASIAN Tecnología del Calor, S.L.
Tecnología del Calor, S.L.
Polígono Industrial Las Norias
50450 Muel (Zaragoza)
Teléfono: 976 140 600
D. Santiago Andrés Blasco
DIRECTOR GENERAL

TAS INTERVENTIONS

DATE	WORKING HOURS	INTERVENTION	TAS SIGNATURE	USER SIGNATURE

The manufacturer assumes no responsibility for damages caused to persons or things from accidents that are not exclusively from the stove itself as an individual unit and for manufacturing defects.

NOTE: The manufacturer reserves the right to make product changes without notice, always maintaining the technical and essential service characteristics to fulfill the purpose for which the stove is intended.

Separate this product from other types of waste and
recycle it correctly to promote the sustainable reuse of material resources.

Technical Service: