NON ELECTRIC PELLET STOVE

Manual

Read carefully and entirely the following instructions before installation, maintenance and using the product.
These operating instructions are supplied with the product.

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1. GENERAL WARNINGS

The installation of a stove must be done according to the local, national or European regulations.

Our liability is limited to the supply of the equipment. The installation must be done according to the procedures expected for this kind of equipment, according to the indications included in this manual and the rules of the profession. The installation must be performed by authorized personnel who must provide the buyer a declaration of conformity of the installation where he will assume full responsibility for the final installation and, therefore, the proper operation of the installed product. Our company will not assume any liability in the case of failure complying with these precautions.

The manufacturer will not assume any liability for damages caused to third parties due to improper installation or misuse of the stove.Our company will not be responsible for the modifications made to the original product without prior written permission as well as for the use of non-genuine spare parts or pieces.

Maintenance of the stove must be performed at least once a year by an Authorized Technical Service. For more security you should consider:

- The door of the machine must be closed during its operation, except during the start-up process(4-7 minutes).
- It is forbidden to modify the safety or regulating devices without the permission of the manufacturer.
- Avoid direct contact with any parts of the product that tend to reach high temperatures during its operation.

2. UNPACKING

Unpack the stove, taking care not to damage or scratch it, remove any polystyrene or plastic accessories used to protect the removable parts of the stove.

Also, remember not to leave any part of the packaging(plastic bags, polystyrene, etc.) inside the stove. Be sure to remove the paint can from the inside of the stove and that no packaging material is left near of children, because it could be a potential source of danger and should be disposed of in accordance with applicable laws.

3. GENERAL DESCRIPTION

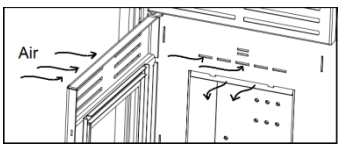
The equipment consists of several elements of steel sheets welded, with different thickness. It also have a door with vitro ceramic glass (resistant up to 750℃) and ceramic cord for the air lightness in the combustion chamber. Heating is produced by:

a. Convection:because the air passes through the double hood, the stove gives off heat.
b. Radiation: through the vitro ceramic glass and the body the heat is irradiated towards the environment.

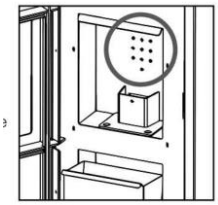
The models have some settings for a perfect combustion control:

Primary air inlet the primary air is necessary for the combustion process.
The primary air inlet is at the side of the stove(50mm of diameter).
Thanks to the primary air, fire is also keep alive.

Secondary air inlet this inlet favour that the unturned carbon in the primary combustion can suffer a post-combustion, increasing the efficiency and assuring the cleaning of the glass. This air inlet is located on the stove door.



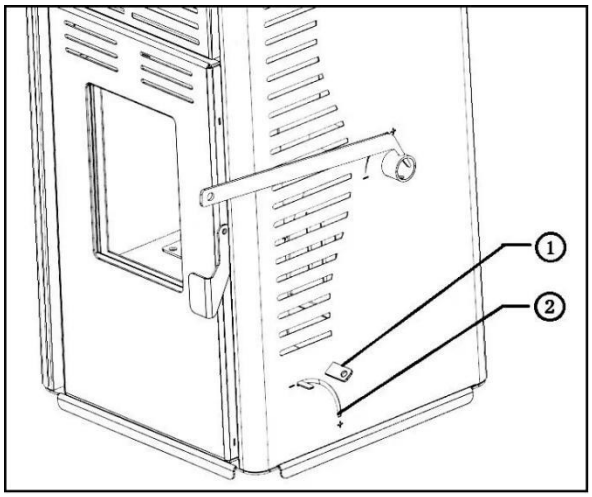
Double combustion This model of stove has double combustion. With this system we get a second preheated first combustion that achieves a high performance efficiency, a great fuel saving and reductions in pollutant emissions.



The inlet air preheating is not adjustable by any drive. The air is supplied through the holes in the rear wall of the combustion chamber.

The baffle plate is a fundamental part for the proper operation of the stove. the stove must not be used without the baffle plate. This would invalidate the warranty.

Adjustment of the chimney draught, it is located at the bottom of the stove, just below the switch lever. Its movement is inward and outward. The inwards movement means more draught(maximum power) and more fuel consumption, however, the outwards movements means less draught of the stove and less power(minimum power).



4. FUELS

WARNING!
The use of a low quality pellet or any other fuel in disagreement with the specifications mentioned below implies the cancellation of the warranty and the responsibility bounded to the product.

Only wood pellets certified by these standards or certifications should be used:

Standards:
- Ö-Norm M 7135 | Din 51731 | EN-14962-2 (all repealed and included in ISO-17225-2)
- ISO-17225-2

Quality certifications:
- DIN+
- ENplus: On the web site (www.pelletenplus.es) you can check all manufacturers and distributors with certificate.

It is strongly recommended that the pellet is certified with quality certifications because this is the only way to guarantee the constant quality of the pellet.

Here recommends the use of pellets with 6mm diameter, a maximum longer of 3.5cm and with a humidity percentage lower than 8%.It is high recommended that the pellet is certified in a quality certification as it is the only way to guarantee a constant quality of the pellet.

The choice of inappropriate pellets causes:

- Obstruction of the ash pan and smoke ducts,
- Increase in fuel consumption,
- Decreased stove efficiency,
- It does not guarantee normal operation of the stove,
- Dirt in the glass,
- Production of unturned granules and heavy ashes.

The presence of humidity in the pellets increases the volume of the capsules and causes a malfunction of the charging system and incorrect combustion.

If you see spongy, hard residual pellets, during stove cleaning(in any case, ash-free) replace the used pellets, they may come from poor sawdust waste that cannot be used in this type of stove. Insisting could cause fires or heavy smoke production in the chimney.

Among others, it is not allowed to use coal, barks and panels, damp firewood or with paint or plastic materials. In these cases, the warranty of the stove shall terminate. It is forbidden to use waste and it would damage the equipment.

Only fire-starters maybe used for ignition.

- **PELLET STORAGE**

To ensure a trouble-free combustion it is necessary to keep the pellet in a dry environment, special attention must be paid to the handling of the bags in order to avoid crushing them with the consequent formation of sawdust.

- **PELLET SUPPLY**

Do not allow the fuel bag to come in contact with hot surfaces of the stove.
In order to supply the stove, lift the upper cover of the stove(top) and move the pellet loading lever to closed position. Push down on the pellet tank cover until it allows you to open the locking handle, lift the tank cover and empty the pellet bag directly, taking care to prevent it from overflowing. Pellet loading can also be done with the stove in operation. In this case, after refueling by repeating the previous steps, the pellet loading lever must be opened to allow the supply of fuel in the burner or brazier and allow the operation of the stove.

WARNING:In case of refueling when the stove is on, refueling must be carried out quickly and it must be ensured that the pellet is not completely exhausted and that the flame is always present in the brazier or burner; if the flame is extinguished, a thick white smoke may form as the new pellet falls, which may cause gasification in the combustion chamber. This gasification can cause the combustion chamber to explode even **through the stove is equipped with a safety system (explosion-proof system) to minimize the consequences.**

IMPORTANT: The stove should not be used with the tank cover open. This poses a serious safety risk.

5. INSTALLATION AND SAFETY INSTRUCTIONS

The way of installing the stove will affect the safety and the proper operation. For this reason, it is recommendable that the installation is carried out by people who are qualified and informed about the compliance with installation and safety norms. **If a stove is not properly installed it may cause serious damage.**

Before the installation, follow the next verification:

- Make sure that the floor can sustain the weight of the equipment and make a proper isolation in that case that it is made of flammable material (wood) or a material that can affected by a thermal snock (plastic cast, for example).
- If the equipment is installed on a floor which is not completely refractory or inflammable such as parquet, carpet, etc, it is necessary to replace this part or introduce a fire-resistant base so that it protrudes out the fireplace 30cm. Example of materials include steel flooring, glass base or any other type of fire-resistant material.
- Make sure that there is proper ventilation in the place where it is installed(air intake) (see section 6.4)
- Avoid the installation in places where there are collective ventilation pipes, hoods with or without extractor, B type gas equipment, heat pumps or equipment that can cause that the draw of the stove is not good if they are used at the same time.
- Make sure that the smoke duct and the pipes used for the chimney are suitable for the operation of the stove.
- In order to prevent smoke leakage, the combustion chamber should be kept closed, except for the first 4-7 minutes for ignition and during cleaning operations which will be carried out when the stove is switched off.

We recommend that you call your installer in order to check both the chimney as well as the air flow for the combustion.

This product can be installed near the walls as long as they comply the following requirement:

- The fitter must assure that the wall is completely made of brick masonry, thermospray block, concrete, bricks, etc, and that it is coated by materials that can support high temperature. Therefore, for any other type of material(drywall, wood, non-ceramic glass, etc), the fitter must provide sufficient insulation or keep a minimum safety distance to the wall of 80-100 cm.
- Keep any flammable or heat sensitive materials (furniture, curtains, and clothing) at a minimum distance of about 100 cm, including the area in front of the loading door. Measurements below the minimum distances should not be used.

5.1 SAFETY MEASURES

During the installation of the equipment, there are risks to be taken into account, so you should follow the next safety measures:

a. Do not place flammable objects above.
b. Do not place the stove near combustible walls.
c. The stove should only be used when the ash pan is inserted.
d. It is recommended to install carbon monoxide detector(CO) in the room where the equipment is installed.
e. Use the glove included or opening and closing the door as well as manipulating the controls as these can be very hot.
f. Solid combustion residues (ashes) should be collected in an airtight container and resistant to fire.
g. The appliance should never be turned on in the presence of emission of gases or vapour (e.g., linoleum glue, gasoline, etc.)
h. Do not place nearby flammable materials.
i. Pay utmost attention to the presence of children near the stove to prevent them from burning.

WARNING!!
It is noted that both the stove and the glass get very hot and should not be touched.

5.2 INTERVENTION IN CASE OF EMERGENCY

If there is fire in the stove or the flue:

a) Close the loading door.
b) Close primary and secondary air intake
c) Put the fire out by using carbon dioxide extinguishers (CO2 powder).
d) Request for the immediate intervention of the fire-fighters.

DO NOT PUT THE FIRE OFF WITH WATER.

WARNING:
The manufacturer declines any responsibility for the malfunction of an installation not subject to the requirements of these instructions or the use of additional products not appropriate.

6. STOVE INSTALLATION

6.1 CHIMNEY

The chimney is of basic importance in the proper functioning of the stove and primarily has two functions:

- Evacuate the smoke and the gas safely out of the house.
- Provide sufficient draft to the stove in order to keep the fire.

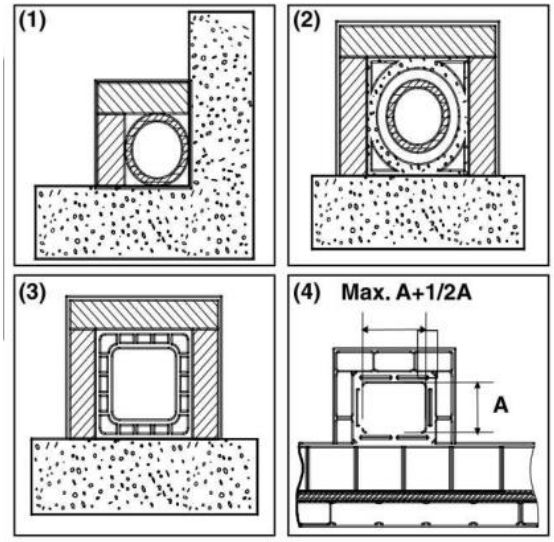
Therefore, it is essential that it is made perfectly and that it is subjected to maintenance operations in order to keep it in good condition (many of the claims due to malfunctioning reasons refer exclusively to a bad draft). The chimney can be made of masonry or metallic pipe compound.
It is necessary to comply with the following requirements for the proper operation of the stove:

- The interior section must be perfectly circular.
- It must be thermally insulated along its entire length in order to prevent condensation(the smoke is liquefied by heat shock) and even more if the installation is outside the house.
- If we use metallic pipe for the installation outside the house, it is compulsory to use thermal insulated pipe. It consist of two concentric pipes and, between them, there is a thermal insulator. Moreover, we will avoid condensation problems.
- It should not have bottlenecks (enlargements or reductions) and it must be vertical with deviations not higher that 45º
- It is PROHIBITED the installation of horizontal or descending sections.
- If it has been used before, it must be clean.
- The smoke discharge must always be on the roof. Direct discharge to walls or enclosed spaces, even in clear skies, is prohibited.
- All components must be made of material with reaction to fire class A1, in particular, the use of extendable flexible metal pipes is not permitted.
- Respect the technical data in the operating instructions.

**For the fitter

The optimum draft for the stoves vary between 12+/-2 Pa (1.0-1.4 mm water column). We recommend checking the technical information of the product.

A lower value causes a bad combustion causing carbolic deposits and excessive smoke generation, having leaks and, even worse, an increase of the temperature that could damage the structural components of the stove, while a higher value leads to a too rapid combustion with the heat dispersion through the flue.
Materials that are prohibited for the chimney and, therefore, damage the proper functioning of the equipment are: fibre cement, galvanized steel (at least in the first few meters) and rough and porous interior surfaces. Drawing shows some examples of solution.



(1) Stainless steel AISI 316 chimney with double insulated chamber and material resistant up to 400°C. **Efficiency 100% optimum.**

(2) Traditional clay chimney with square section and holes. **Efficiency 80% optimum.**

(3) Chimney with refractory material and double insulated chamber and exterior coating made of lightweight concrete. **Efficiency 100% optimum.**

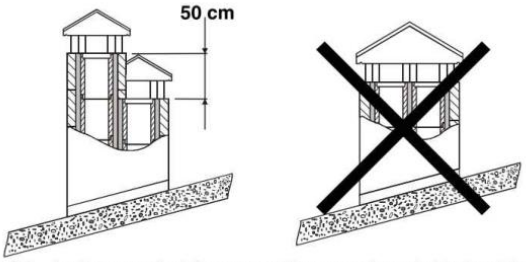
(4) Avoid chimneys with rectangular interior section different to the one of the drawing. **Efficiency 40% poor.** Not recommended

All stoves that send smoke to the exterior should have their own chimney.

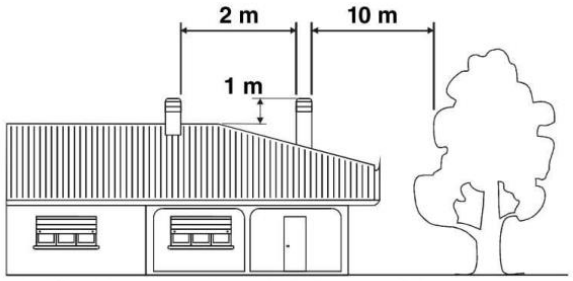
Never use the same chimney for several equipment at the same time.

The minimum diameter must be 4dm2 (for example, 20×20cm) for stoves with a diameter below 200 mm or 6.25 dm2 (for example, 25×25 cm) for equipment with a diameter higher than 200 mm.

A big section of the chimney (for example, diameter of the pipe superior to the one recommended) may results in a volume too large to be heated and, therefore, it can cause difficulties for the proper operation of the equipment. In order to avoid this problem, it is necessary to enclose the chimney in its entire length. However, a small section (for example, diameter of the pipe inferior to the one recommended) may cause a reduction of the draught.



(1) In the case that there are chimneys placed side by side, one of them must exceed to the other at least 50 cm in order to avoid pressure movements among them



(1) The chimney can't have obstacles around 10 m towards walls or trees. Otherwise, raise it at least 1 m above the obstacle.
The chimney must exceed the top of the roof at least 1 m.

The flue must be away from flammable or combustible materials through an appropriate insulation or an air chamber. In the case that they pass through flammable materials compounds, they should be eliminated.
Inside, it is forbidden that there are pipes of installations or air abduction channels. It is also prohibited to do mobile or fixed openings for connecting other different equipment.
If we use material pipes inside a masonry duct, it is essential that they are well insulated and with appropriate materials (insulating fibre coatings) in order to avoid the deterioration of the masonry or the interior coating.

6.2 CONNECTION OF THE STOVE TO THE CHIMNEY

The connection to the stove for the smoke evacuation must be done with rigid aluminized steel pipe or stainless steel pipes. **It is forbidden the use of flexible metallic pipes or fibre cement pipes because they damage the safety of the connection because they are subject to jerks and breaks, which causes smoke looses.**

The chimney must fixed hermetical to the smoke outlet of the stove. **It should be rectilinear and with a material that supports high temperature (minimum 400℃).** It can have a maximum inclination of 45º whereby excessive deposit of condensation produced in the initial stages of ignition and /or excessive soot formation is avoided. Moreover, it avoids the slowing down of the smoke when it comes out. The lack of sealing of the connection may cause the malfunction of the equipment.
The internal diameter of the connection pipe should correspond to the external diameter of the chimney of the equipment. This service is assured by the pipes complying with DIN 1298.

6.3 CHIMNEY COWL

The chimney draught also depends on the chimney cowl.
The chimney cowl should assure the smoke discharge even during windy days, having into account that it must exceed the top of the roof.
The chimney cowl must comply with the following requirement;

- It must have the same interior section of the stove.
- It must have an usable exit section that is two times the one of the interior of the chimney.
- It must be constructed so that the rain, snow or any other object do not enter inside.
- It must be easily accessible in order to do servicing and cleaning tasks.

If the chimney cowl is metallic, due to its own design adapted to the diameter of the pipe, the smoke discharge is assured. There are different models of metallic chimney cowl, fixed, anti-return, and rotary or extractor.

6.4 OUTSIDE AIR INTAKE

For the proper operation of the stove, it is essential that there is air enough for the combustion and re/oxygenation of the environment where it is installed. In the case of houses built under the requirements of "energy efficiency" with a great degree of air tightness, it is possible that the air intake is not guaranteed, the fitter must assure compliance with the Technical Building Code.

This means that the air must be able to move for the combustion through some openings connected to the exterior, even when doors and windows are closed. Moreover, it must comply with the following requirements:

- It must be placed in so that it cannot be obstructed.
- It must be connected to the environment where the equipment is installed and it must be protected by a grate.
- The minimum area of the outlet should not be less than 100 cm2. Check regulations on this issue.
- When the air flow comes through openings that are connected to the exterior of adjacent environment, it is important to avoid air intakes in connection with garages, kitchens, toilets, etc.

7. STARTUP (FIRST IGNITIONS)

In order to ignite the fire, we recommend using small wood strips with paper or other means such as fire starters. It is forbidden to use liquid substances such as alcohol, gasoline, petroleum or similar products.

WARNING!! At the beginning, it is possible that you note smoke or smell which are typically produced when metals are subject to high temperatures or when the paint is still fresh.
Never ignite the equipment when there are combustible gases in the environment.

In order to do a proper start-up of the products treated with paints used at high temperatures, it is important to consider the following conditions:

- The materials of the products are not homogenous due to the fact that there are cast-iron parts and steel parts.
- The temperature of the product's body is not uniform: among different zones there are variable temperatures between 300℃ and 500℃.
- During its lifetime, the product is subject to ignitions stoppages even in the same day, as well as intensive use or not use depending on the season.
- The equipment, at the beginning, must be subject to different start-up cycles so that all materials and the paint can complete different elastic expansions.

Therefore, it is important to adopt these measures during the ignition phase:

1. Assure that there is a good air refill in the place where the equipment is installed.

2. During the 4-5 first ignitions, do not load excessively the combustion chamber and keep the stove fit during at least 6-10 hours continuously.
3. During the first ignitions, you should not place any object on the equipment and, in particular, on lacquered surfaces. Lacquered surfaces should not be touched while the equipment is heated.

8. IGNITION AND NORMAL OPERATION

Once the pellet tank is loaded, the stove is ready to ignite.

Open the pellet loading lever fully and place it in the standby position to allow fuel to fall into the burner and allowing it to fill completely; it is now possible to open the stove door and place a solid lighter or fire starter on the pellet in the burner and light the flame with the help of a match or lighter; you should leave the stove door open for 4-7 minutes(this depends on the temperature of the house and the fireplace). Close the door only when the flame will reach a minimum height of about 10-12 cm. At this point, the stove will be on.

CAUTION: It is PROHIBITED to pour pellet directly with the hand on the burner, filling the burner should be done only by actuating the loading lever. It is IMPORTANT to always check the cleaning status of the burner before starting to prevent malfunction. Aspirate the ash deposited on the burner with the help of a vacuum cleaner and make sure that all the holes in the burner are clean.
WARNING: Always do this with the stove off and cold to avoid burns.

In order to keep the fire alive, just keep the pellet loading lever open and in the standby position.

The chimney draught affects the intensity of the combustion and therefore the heating performance of your machine. Act on the chimney draught regulator to maintain an optimum combustion(see chapter 3).

Due to safety reasons, the door of tank must remain closed when the fireplace is being used. You should only open the door for loading the fuel.

It is possible that depending on the quality of the fuel used as well as the hours of continuous operation of the stove, it requires that the ashes of the burner be removed to achieve a correct combustion, for this you can use the accessory(hook), taking special care not to suffer burns.

8.1 SWITCHING-OFF THE STOVE

When the pellet loading lever is closed, the pellet fall will stop in the direction of the burner, combustion will continue for approximately 10-20 minutes, after this, the stove will be switched off.

9. SERVICING AND CARE

The stove, the chimney and, in general, the whole installation, must be cleaned completely at least once a year or when necessary.

WARNING!! Maintenance and servicing operations must be done when the stove is clold.

9.1 CLEANING THE CHINMEY

When the wood pellet is burnt slowly, it produces tars and other organic vapour that combined with the humidity they create the creosote (soot). An excessive accumulation of soot may cause problems in the smoke outlet and even the smoke duct may suffer a fire. A chimney sweep should perform this task and, at the same time, examine the smoke duct. During the cleaning tasks, it is necessary to remove the smoke baffle plate in order to make easier the fall of the soot.

9.2 CLEANING THE GLASS

IMPORTANT:
Clean the glass only when it is cold in order to avoid its explosion.

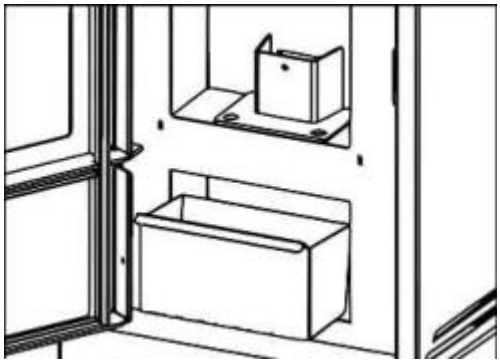
You can use specific products such as vitro ceramic-cleaning products. Do not use aggressive or abrasive products that stain the glass.

BREAKAGE OF GLASSES: the glasses, as they are vitro ceramic, resist until 750°C and they are not subject to thermal shocks. The breakage can only be mechanical shocks (crashes or violent closing of the door, etc.) Therefore, its replacement is not included in the warranty.

9.3 CLEANING THE ASH

All stoves have an ash pan for the ash collection.
We recommend that you periodically empty the drawer(at least once a day), to prevent combustion residues getting into the burner or brazier.

The ashes must be placed in a metal container with a sealed cover until the ash is completely extinguished, the closed container must be placed on a non-combustible base or grounded and away from combustible materials.

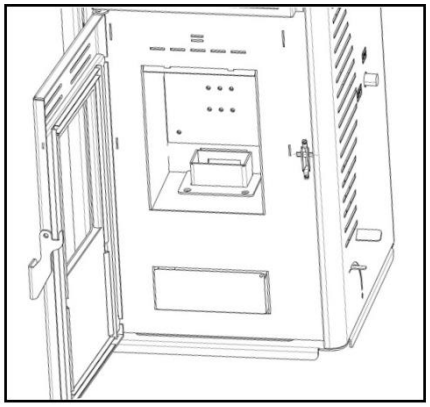


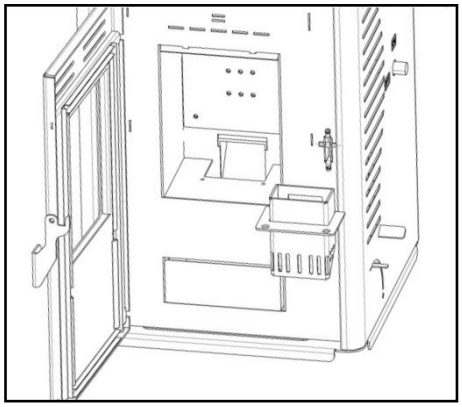
ATTENTION: the ash keeps the embers alive for a long time!

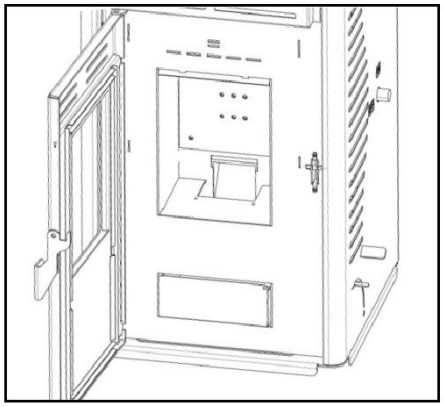
9.4 CLEANING THE BURNER

When the flame becomes red or weak, accompanied by black smoke, it may mean that there are ash deposits or scale deposits that do not allow the stove to function properly and that it must be removed.

Remove the burner each day by simply lifting it out of its seat; then clean it of ashes and any scale that may form, paying special attention to releasing any blocked holes with the tool.







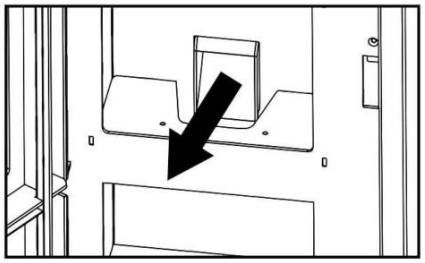
The operation is necessary especially if you use granules of different quality. The frequency of this operation is determined by the frequency of use and the choice of fuel.

WARNING: Before turning on the heater, check that the burner is inserted correctly.

9.5 CLEANING OF THE COMBUSTION CHAMBER

Weekly cleaning of the combustion chamber by removing the ash accumulated in the combustion chamber with a vacuum cleaner.

9.6 CLEANING THE PELLET SUPPLY DUCT



With the help of a scraper or the cold hands accessory, clean the duct on which the pellet descends to the burner of any scale that may slow or block the fall of the pellet.

We recommend carrying out this operation every 7-10 days to maintain the proper operation.

9.7 EXTERNAL CLEANING

Do not clean the external surface of the stove with water or abrasive products because they may damage the stove. Use a feather duster or a rag a bit wet.

10. SEASONAL STOPPAGES

After cleaning the chimney and the stove by removing the ash and other residues, close all doors and regulators. It is recommended to clean the chimney at least once a year. Meanwhile, check the joints because if they are not in good condition(they do not adjust to the door), they do not guarantee the proper operation of the stove ! For this reason, it would be necessary to change them.

The cleaning and operation of all mechanisms or moving parts must be checked.

If there is humidity in the place where the stove is installed, put absorbent salts inside the equipment. Protect the internal parts with neutral vaseline in order to keep the appearance along the time.

11. TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE REASON	SOLUTION	
The stove gives off smoke	Inappropriate use of the use	Check the primary air inlet	
	Smoke duct is cold	Preheat the stove	
	Smoke duct is obstructed	Check the duct and the connector to see if it is obstructed or has excessive soot	PROFES
	Smoke duct is oversized	Install an appropriate diameter	PROFES
	Smoke duct is tight	Install an appropriate diameter	PROFES
	The draw is not enough	Add length to the chimney	PROFES
	Smoke duct with infiltration	Seal connections between sections	PROFES
	More than one equipment connected to the duct	Disconnect the rest of equipment and seal the entrances	PROFES
Air returns	Combustion range too low. Lack of draw	Use the stove with an appropriate range. Increase the primary air intake	
	Excessive ash accumulation	Empty the ash pan frequently	
	The smoke duct does not protrude the top of the roof	Add length to the chimney	PROFES
Combustion out of control	The door is not sealed properly or is open	Close the door or change the sealing cords	PROFES
	Excessive draw	Check the installation or install a draft-divert valve	PROFES
	Refractory sealing plaster is damaged	Check the joints and use refractory putty	PROFES
	Smoke duct is oversized	Install an appropriate diameter	PROFES
	Strong winds	Install an appropriate chimney cowl	PROFES
	Poor quality fuel	Use quality fuel	
Insufficient heat	Lack of primary air	Increase the primary air intake	
	Smoke duct with air infiltration	Use an insulated system of chimney	
	Masonry exterior of the chimney is cold	Insulate thermally the chimney	PROFES
	Heat loss in the house	Seal windows, openings, etc	

Table **the note PROFES means that the task must be done by a professional.