SOLZAIMA

SOLUÇÕES DE AQUECIMENTO A BIOMASSA

Pellet Insert Water

English

Instruction Manual

Model

Atlantic 22 kW

Read these instructions carefully before installing, using and servicing the unit. The instruction manual is an integral part of the product.

Mod. 925-D

Thank you for purchasing a SOLZAIMA appliance. Please read this manual carefully and keep it for future reference.

* All our products fulfil the requirements of the Construction Products Directive (Directive 89/106/EEC) and have been approved with the CE conformity mark;

* The Pellet Burning Free Standing Fires are designed according to EN 14785:2008 Standards;

* SOLZAIMA disclaims any responsibility for damages to the unit if installed by non-qualified personnel;

* SOLZAIMA is not responsible for any damage to units not installed and used in compliance to the instructions included in this manual;

* All local regulations, including but not limited to national and European standards, must be observed when installing, operating and servicing the unit;

* Whenever you need assistance, you should contact the supplier or installer of your equipment. You should provide the serial number of your stove that is located on the nameplate on the back of the equipment and on the sticker, s glued to the plastic cover of this manual.

*The technical service must be performed by the unit Installer or Supplier, except on situations where the assessment performed by the installer or service engineer determines that SOLZAIMA should be contacted, if required.

* If you need more information about the electronics applied in the SOLZAIMA equipment you can scan the following QR Codes.

Columbus Electronics

Not applicable Columbus Electronics

Contacts for technical support:

www.solzaima.pt

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Address: Rua da Cova da Areia (E. M. 605), 695;

3750-071 Aguada de Cima

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Contents

Solzaima

Solzaima's vision has always been to provide the cleanest, renewable and more cost-effective energy possible. This is why for more than 40 years we've been dedicated to manufacturing biomass heating units and solutions.

As a result of the persistence and unconditional support from a network of partners, Solzaima is currently the leader in biomass heating units manufacturing, supported by its range of central heating units with back boilers, pellet boilers and free-standing fires.

We deliver biomass heating units to approximately 20.000 homes every year. This effectively demonstrates consumers' interest in more ecological and economic solutions.

Solzaima has been awarded Quality certification under ISO9001:2015 and Environmental certification under ISO14001:2015.

1. Package content

The packaging of the equipment has the following contents:

- Pellet Insert model Atlantic 22 kW;
- Insert chassis;
- Bottom cover;
- Access to the online instruction manual brochure;
- Power cable;
- Tool to open and close the door;
- Metal plugs with metal screws (5 units) of fixing the chassis to the floor and the wall;
- Screws DIN 912 M6x14 (2 units) and washers DIN 9021 M8 (2 units) to attach the lower body cover;
- Box with sliding door, consisting of an aluminum and glass frame; or box with sliding door, consisting of an aluminum and glass frame, left or right frame and sliding - NS≥01-28-00245;

To unpack the equipment, first remove the retractable bag that surrounds the package by carefully cutting it and then loosen the clamps that secure the box to the pallet and remove it by lifting it up. Remove the bag that surrounds the insert and the Styrofoam plates.

On the lower front, remove two screws that connect the body to the chassis, as shown in the image; position the equipment and place the previously removed screws. Remove the equipment from the pallet, in a protected ground area.

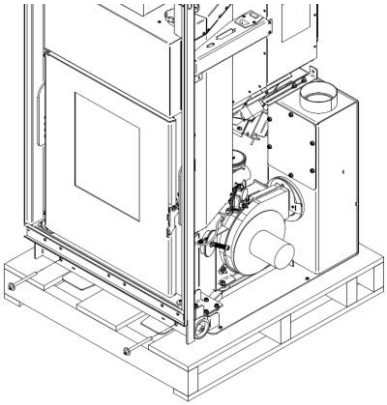


Figure 1 - Unpacking Insert

Finally, remove the four screws that fix the chassis to the wooden pallet. Protect the floor or take measures to avoid damaging the floor with the chassis, because it is made of metal and can easily damage the floor.

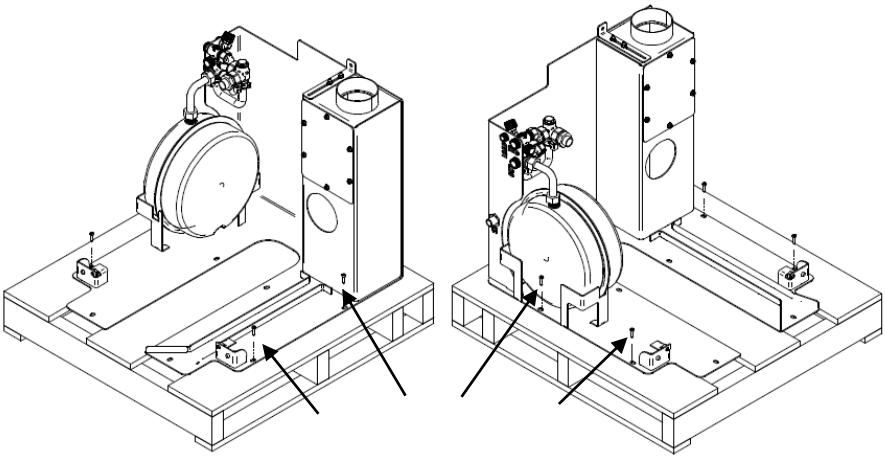


Figure 2 - Unpacking Insert

2. Safety precautions

Solzaima shall not liable for any damages to the unit caused by failure to comply with the specified precautions, warnings and operating procedures.

The units manufactured by Solzaima are easy to operate, special attention was given to their components to prevent accidental damages to users and installers.

The units must only be installed by an authorised engineer, who should supply the client with a relevant statement of conformity and who shall be liable for the final installation and consequent product good operating conditions.

This unit must be used according to its intended use as specified by the manufacturer. The manufacturer excludes all contractual or non-contractual obligations regarding damages to people, animals or property arising from the unit's misuse, faulty installation or servicing procedure.

After removing the packaging, verify the contents to check their integrity and completeness. If the contents of the package do not correspond to the items listed under 1, contact the sales representative from whom you purchased the unit.

The complete set of parts provided with the unit guarantees its operation and energy efficiency; these parts should only be replaced with original parts provided by an authorised technical assistance centre.

The unit must be subject to maintenance at least once a year by the installation engineer. This manual is provided with the product. Please keep it close to the unit.

2.1. For your safety, please remember:

- The pellet boiler is a biomass heating unit. Be sure to carefully read and understand the information contained in this book, before handling or operating the unit;
- Make sure the hydraulic circuit is correctly assembled and connected to the water supply system before turning on the pellet boiler;
- The boiler is not intended for use by children or persons with a physical, sensory or mental handicap, unexperienced or unaware of its proper use, unsupervised or not instructed concerning the use of the unit;

- Do not touch the boiler when barefoot or any part of your body is wet or humid;
- Do not tamper with any safety or adjustment features of the unit without the manufacturer's authorization;
- Do not cover or reduce the size of the aeration vents existing near the installation area;
- The pellet boiler needs air circulation for proper combustion, so possible air tightness of the location or any existing air extraction sources in the room may prevent the unit’s proper operation;
- The existence of aeration vents is a requisite for proper combustion;
- Do not leave the packing materials near children;
- During the unit's normal operation do not attempt to open the boiler's door;
- Avoid direct contact with parts of the unit that overheat during operation;
- Check the fume duct for blockages before turning on the unit after a long period of inactivity;
- This pellet boiler is intended for residential use in a protected environment. The unit might get turned off by any safety systems installed in the household. If this occurs, contact the technical assistance. Under no circumstances should you disarm the safety systems;
- The pellet boiler is a biomass heating unit equipped with a fume exhaustion system powered by an electric exhauster. The occurrence of any power failure during its use may prevent the fume exhaustion thus causing the room to be filled with smoke. For this reason, you should have a natural fume exhaustion system, like a chimney, installed;
- Solzaima offers you an optional safety system which allows the boiler unit to be connected to a UPS to allow that during any power failure the fume exhaustion system will still operate until complete exhaustion of all boiler fumes;
- If you intend to use the boiler unit unsupervised or while you are away from home, you should use the above safety system for total safety during any power failure;
- During operation, NEVER turn off the pellet boiler by unplugging the power cord from the wall socket. The fume exhaustion system on the pellet boiler is power-operated so disconnecting the power plug will prevent the exhaustion of combustion fumes;
- Before performing any maintenance or assistance to your unit, disconnect it from the power mains. Before performing any of these operations, allow the unit to cool down completely (if previously operating);
- Never touch the interior of the boiler when connected to the power mains;

- For this boiler, the maximum setting for the water temperature that can be specified by the user (water set-point temperature) is 85°C. If a temperature of 90ºC is reached, the boiler automatically turns off causing the corresponding alarm to go off.

3. Advice on action in the event of a fire in a chimney (including equipment)

- Try to put out the fire, without risking your life.
- If you cannot put out the fire within a minute, you should call the fire department.
- Close the doors and windows or partition where the fire has flared.
- Turn off the power and close the gas before leaving your home.
- Once outside, you must wait for the firemen and be ready to give them the following information: location of the fire, possible materials that are burning and what they can do to prevent fire progression.

4. Technical specifications

Features	Atlantic 22 kW	Units
Weight	201	kg
Height	1333	mm
Width	668	mm
Depth	752	mm
Fume discharge pipe diameter	100	mm
Reservoir capacity	45	kg
Maximum heating capacity	502	m³
Maximum overall thermal power (air/hydro)	18,8 / 3,3	kW
Minimum thermal power (air/hydro)	4,3 / 0,8	kW
Minimum fuel consumption	1,1	kg / h
Maximum fuel consumption	5,1	kg / h
Rated electrical current	134	W
Electric power at start-up (<10 min.)	434	W
Rated voltage	230	V
Rated frequency	50	Hz
Thermal yield at rated thermal power	89,2	%
Thermal yield at reduced thermal power	93,8	%
Combustion gas flow (max.)	18,8	g / s
Combustion gas flow (min.)	6,9	g / s
Max. gas temperature	153	ºC
Min. gas temperature	66	ºC
CO emissions at rated thermal power	0,020	%
CO emissions at reduced thermal power	0,024	%
Draught in the chimney	12	Pa
Boiler's water volume	22	l
Fume extractor noise emission	49,1	dB (A)

Table 1 - Technical specifications

The tests were performed using wood pellets with a heating capacity of 4,9 kWh/kg.

The above information was obtained during product homologation tests performed by independent laboratories accredited for pellet unit tests.

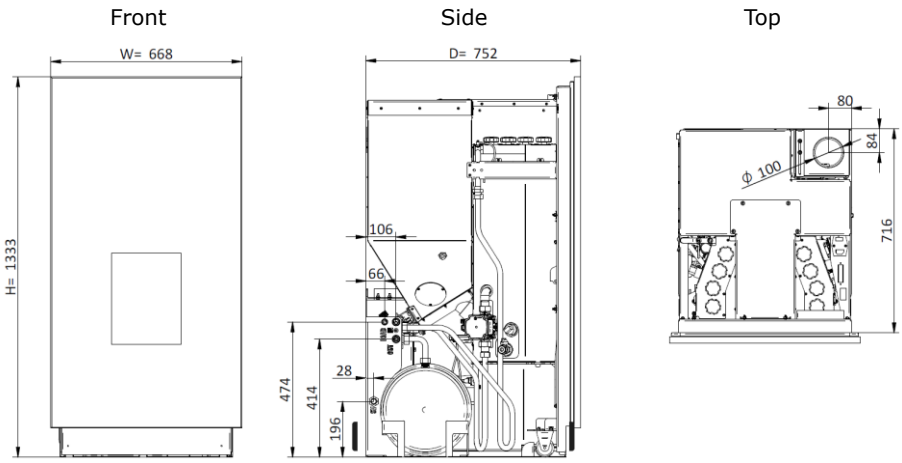


Figure 3 - Dimensions of the insert Atlantic 22kW

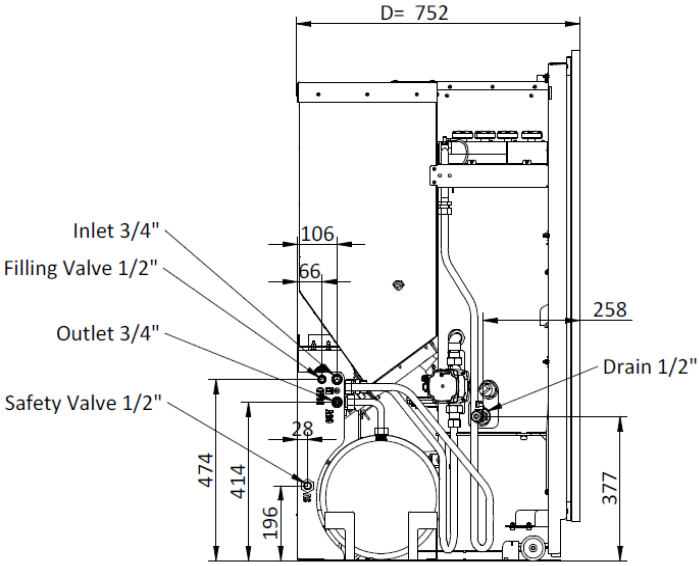


Figure 4 - Hydraulic connections of the insert Atlantic 22kW

5. Cabin construction and ventilation

The cabin where the insert is going to be installed must be properly ventilated, it must have grilles in the lower part to allow the entrance of air and also in the upper part to let the hot air out, with this disposition we will favor the convection and thus the passive circulation of the air inside the cabin.

The cabin must be insulated with 25 mm rock wool covered with aluminum and density 70 kg/m^3 or other insulation of equal or greater capacity that is capable of withstanding heat. The walls may be made of fireproof plasterboard or glazed brick.

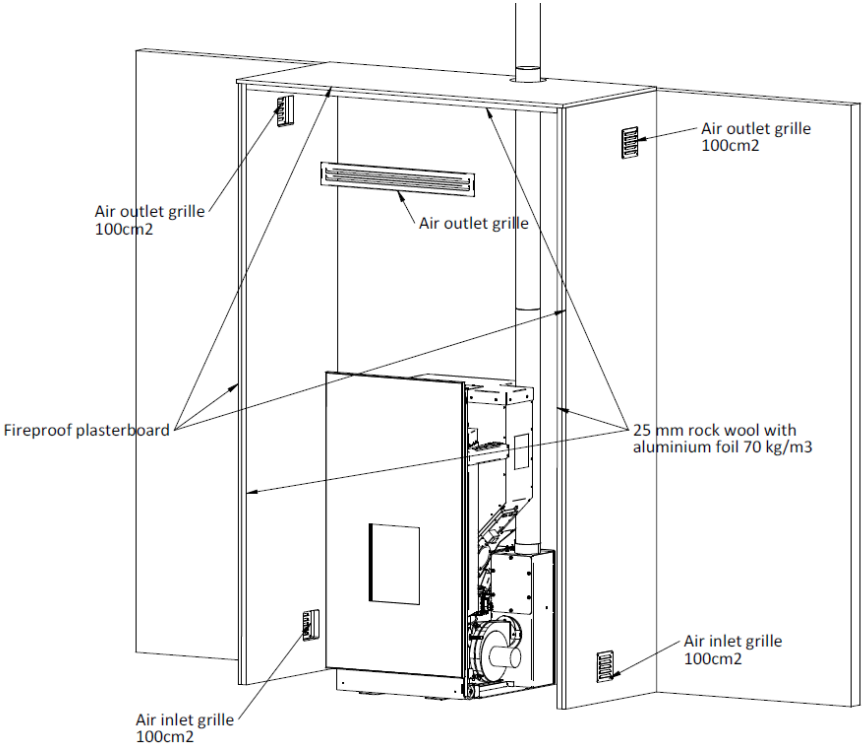


Figure 5 – Installation Atlantic 22kW

6. Installing the pellet insert

6.1. Pre-installation

Before you begin the installation, perform the following actions:

- Check immediately after receiving the equipment that the product is complete and in good condition. You should check for any defects before installing the equipment.
- It is essential that the floor where the chassis will be fixed is level and at the same level as the surface where the castors will run.

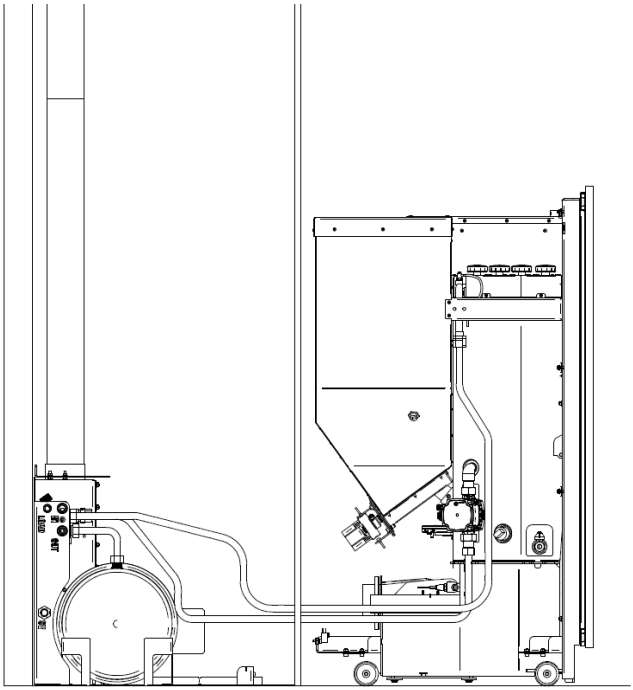


Figure 6 – Installation Atlantic 22kW

6.2. Minimum distances

The minimum distances from the pellet insert to flammable surfaces as shown in Figure 7.

At the top of the insert it is necessary to keep a minimum distance of 1 m from the ceiling of the room especially if they contain flammable material in their composition.

The base that supports the insert cannot be made of combustible material (e.g. carpet) and adequate protection must always be provided.

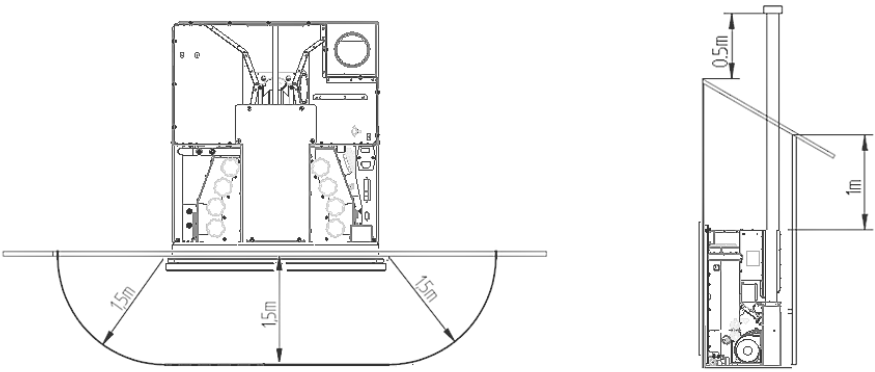


Figure 7 – Minimum distances of all surfaces

NOTICE! Keep combustible and flammable materials at a safe distance.

6.3. Dimensions of the fireproof plasterboard cabin

The equipment must be installed inside a slot with the following measurements: 635 +10/-5 mm wide, 1305 +5/-0 mm high and 720 mm minimum depth between the front wall and the rear wall.

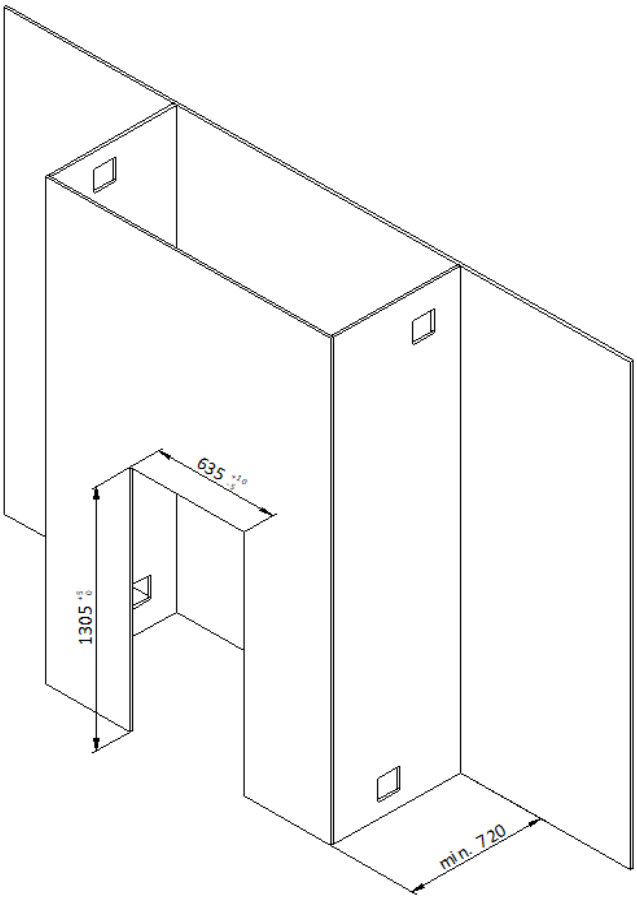


Figure 8 – Dimensions of the fireproof plasterboard cabin

6.4. Location and fixing of the chassis

The chassis must be fixed leaving 15,5 mm in relation to the front of the wall where the equipment will fit and centered in relation to the hole. Use the 8 plugs and screws supplied unless the floor is made of a special material that requires other plugs.

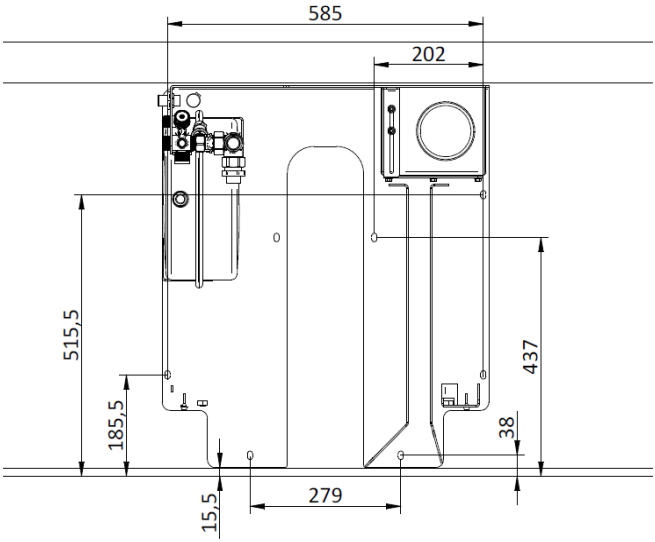


Figure 9 – Installation Atlantic 22kW

The chassis must be fixed to the rear wall to ensure that it always remains perpendicular to the base. First tighten A and then make sure that the box is at 90º the nuts B. Use the supplied plug and screw unless the wall is made of a material that requires another type of plug.

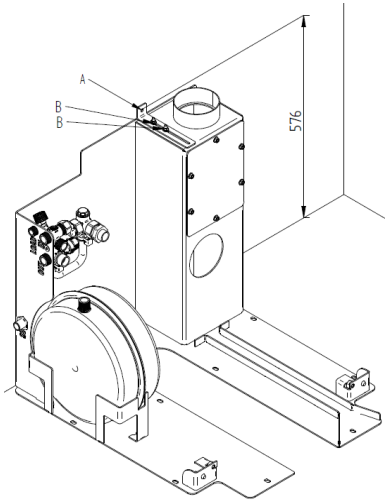


Figure 10 – Installation Atlantic 22kW

6.5. Connections

- Connect the 100 mm diameter pipe between the flue gas outlet and the flue outlet to the outside of the building (point 8 diagrams);
- If you use a pipe for the intake of the combustion air coming from outside, it must not be longer than 60 cm horizontally and must not have been altered (e.g. no bends);
- Install the hydraulic system (see point 8.3);
- As you may have noticed, the machine body is connected to the chassis with flexible hoses. These hoses must remain in the left side of the insert in the working position to ensure that they do not become strangled and that they can be easily pulled out when you want to remove the insert.
- Connect the 230 VAC power cable to a grounded electrical outlet, making sure it is long enough to remove the equipment easily.
- Make sure that when placing the equipment in its working position the electrical cable cannot come into contact with the box or the flue, we recommend that the socket is at the back of the front wall to avoid this problem.
- The machine has a chrono-thermostat on the control. Optionally, a conventional external programmer (not included) can be used to automatically define the operating periods of the machine.

6.6. Sliding door assembly

- Installing the door will be easier if there is space between the body and the wall, so you can see the joint between the guides. Make sure the guides are fully retracted.

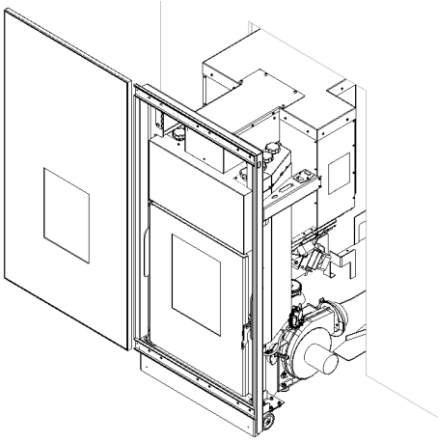
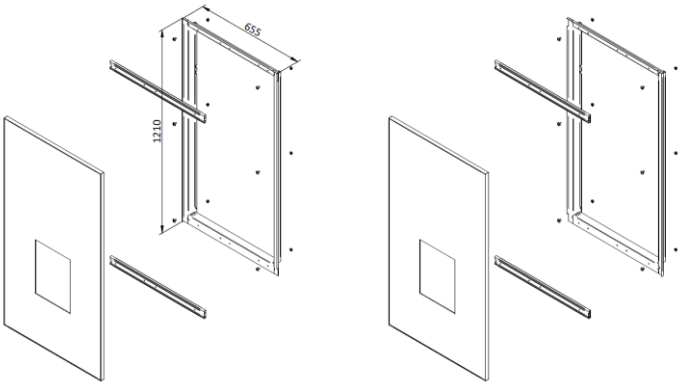


Figure 11 – Sliding door installation

- Match the parts that are attached to the door to the inside of the guides that are attached to the machine ring and slide carefully to the right. Before releasing the door completely, make sure that both the upper and lower guides have engaged properly, if not, return to the starting position and try again. In this equipment it is possible to apply a door with left frame or a door with right frame (NS≥01-28-00245).



a) b)

Figure 12 - a) Door with right opening frame, b) Door with left opening frame

- Check that the part of the guide that is on the door, slides on the inside of the guide that is on the frame. If for any reason you need to remove the door, the guides have a small plastic tab, which, when operated, allows the guide to be separated again into 2 parts.

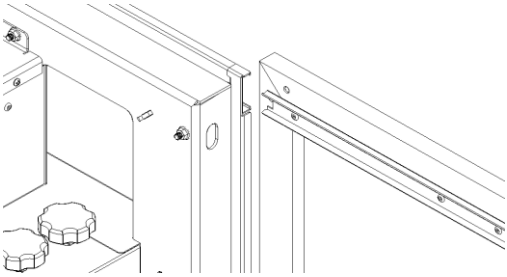


Figure 13 – Sliding door installation

6.7. Bottom cover assembly

After installing the insert, the bottom cover and the sliding door must be mounted.

- The bottom cover is fixed to the body using 2 screws DIN 912 M6x14 and 2 washers DIN 9081 M8.

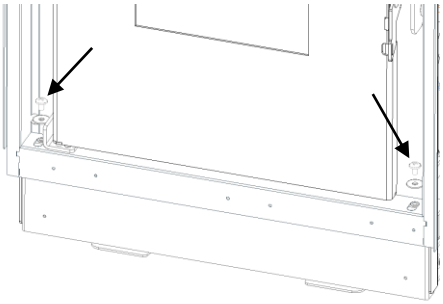


Figure 14 – Installation of the bottom cover

- This is to be able to adapt to different wall finishes. The cover also has a couple of holes to facilitate the possible fixing of a piece of plasterboard if the wall is made of that material and a skirting board if necessary. If you place something on this sheet you always have to respect 50 mm free at the top so that the piece can be put on and taken off easily.

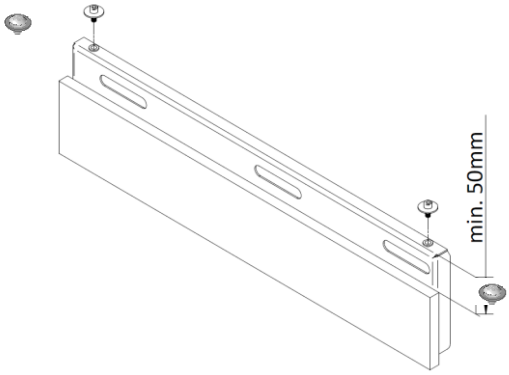


Figure 15 – Installation of the bottom cover

6.8. Installing the temperature probe

The pellet inserts have a probe to measure the ambient temperature. This probe is placed at the front of the silo for transport and installation, but for a correct reading of the ambient temperature, it must be installed outside the silo.

If you wish, you can fix it to the wall next to the machine from the outside, but always bearing in mind that you must have enough play to be able to remove the body of the equipment to do maintenance, or you must be able to remove it from the wall easily, so as not to damage the probe or its cable.

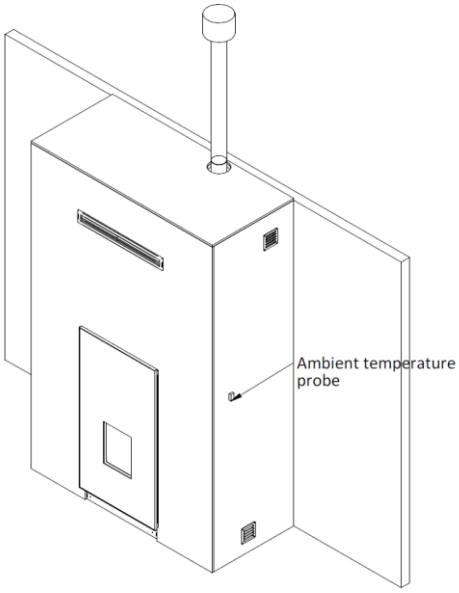


Figure 16 – Temperature probe

7. Installing the optional accessories

7.1. Installing the display outside the equipment

It is possible to install the display outside the insert. It's an option that allows the installation of the display where it is most practical, up to a maximum length of 30 m using a parallel cable with a 0,75 mm^2 section. In this way, the operation of the insert can be controlled without being close to the heat source, even from another division. This installation requires two additional components: the blind cover for the insert and the frame to attach the display to the wall. Sufficient cable length must be left so that the moving part of the equipment can be removed without causing strain on the cable and does not interfere with the movement of the equipment guides. Steps for assembly:

1. Once you have chosen the location where the display will be installed, you should make a hole in the wall with the help of the plate that will support the display on the back. Place it next on the wall, making sure it is levelled and with the help of a pencil mark the hole as shown in the figure.

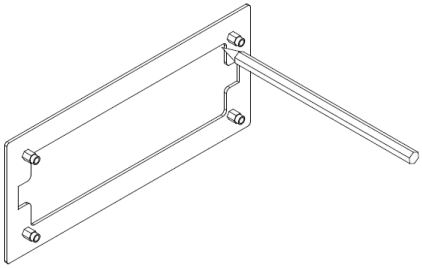


Figure 17 – Installation of the display outside the equipment

2. Place the outer support plate, making it coincide with the markings done previously as shown in the figure with the hole, mark the 4 holes where the screws pass.

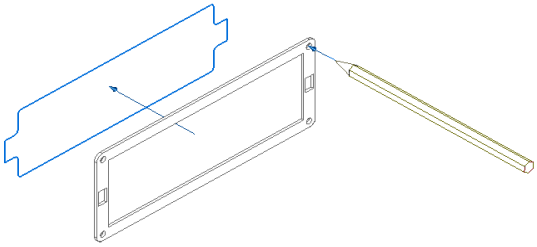


Figure 18 – Installation of the display outside the equipment

3. With the 5 holes open, the next step is to insert the rear support plate so that it is on the inside of the wall.

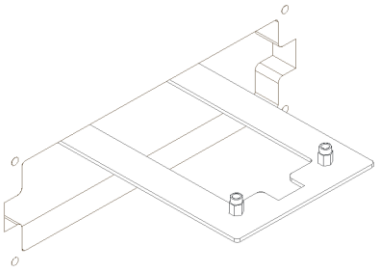


Figure 19 – Installation of the display outside the equipment

4. On the outside, place the support plate, making it coincide with the open holes, and insert the DIN 7991 4x30mm screws until they are completely threaded, thus bringing the two pieces together and the wall between them.

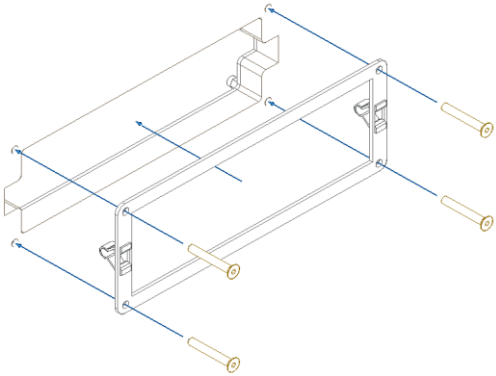


Figure 20 – Installation of the display outside the equipment

5. With all the support fixed to the wall, the display can be placed on the finishing frame, fixing the display from the front and the box from the rear. We have to connect the two wires of the display and must take into account that the length must be enough to be able to remove without creating any problem or tension or interference of the cable. Finally, the frame must be fitted with the display by attaching the bolts to the fixing springs.

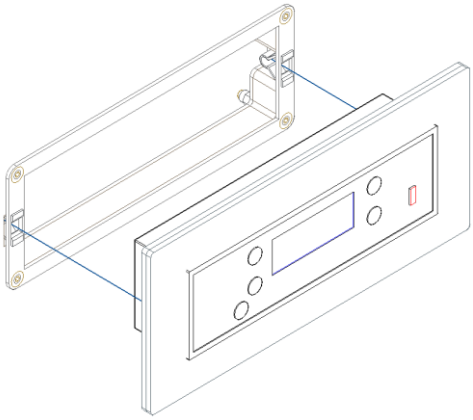


Figure 21 – Installation of the display outside the equipment

7.2. Installing the ventilation grille

The grille must be installed at the top of the wall where the equipment is installed to allow the exit of the hot air that accumulates inside the walls, and together with lower grilles allows a natural circulation that will cool the interior walls.

1. Once you have chosen the place where the grill will be placed, you should drill a hole in the wall with the help of the plate that will support the back. It should be placed on the wall making sure that it is level, with the help of a pencil mark the hole as shown in the figure.

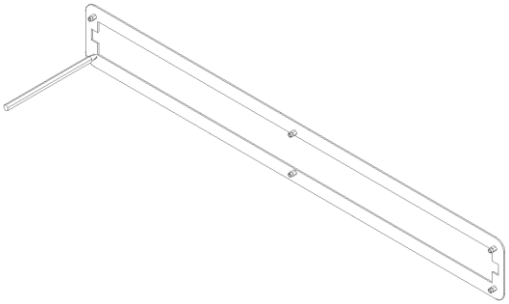


Figure 22 – Installation of the accessories

2. The outer support plate is placed making it coincide with the markings

done previously as showed in the figure then mark the 6 holes.

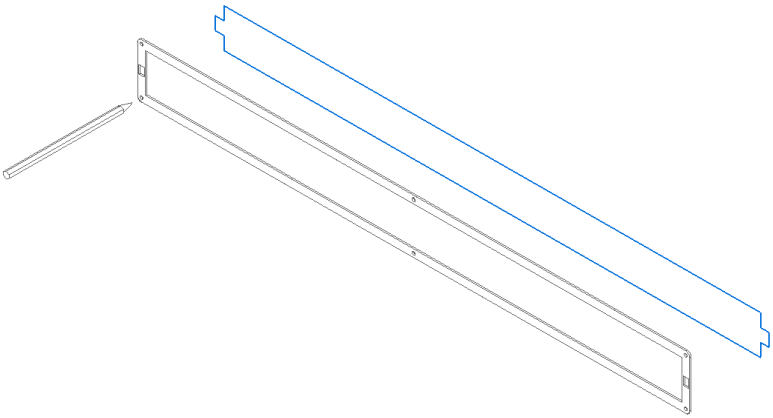


Figure 23 – Installation of the accessories

3. With the 7 holes open, the **next** step is to place the rear support plate to be fixed from inside the wall.

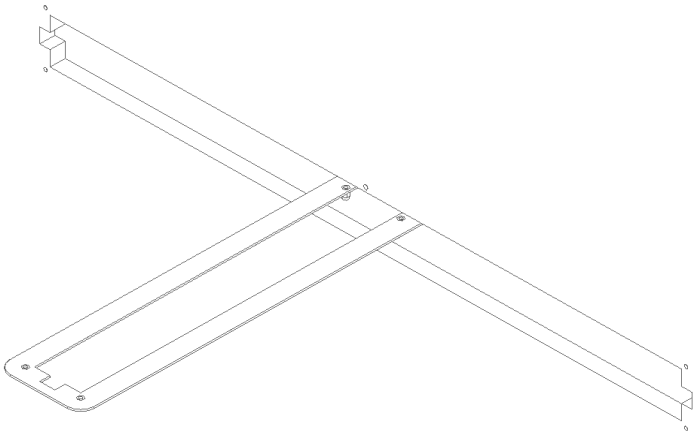


Figure 24 – Installation of the accessories

4. On the outside, place the front support plate to match the holes previously

opened, insert the screws 4x30 mm DIN 7991 until it is fully threaded, leaving the two pieces together and the wall between them.

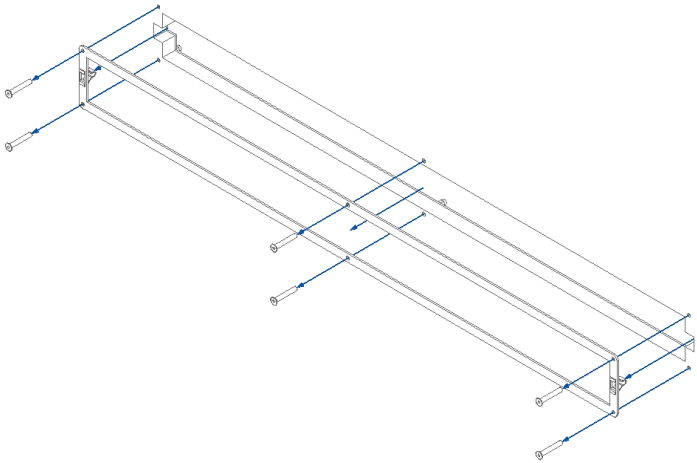


Figure 25 – Installation of the accessories

5. Finally, you can place the grate on the wall by fitting the bolts into the fixing springs as shown.

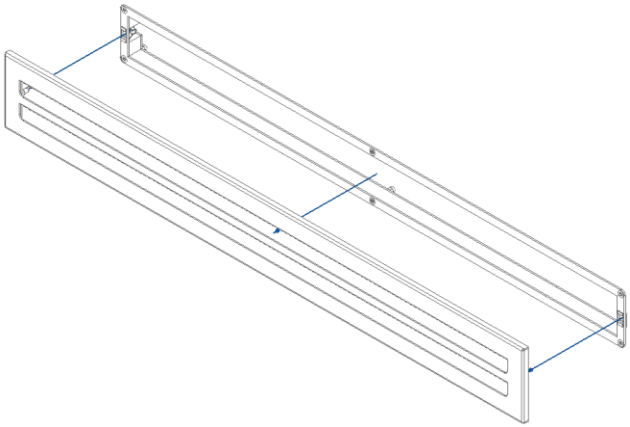


Figure 26 – Installation of the accessories

8. Installing ducts and smoke extraction systems

- The construction of the exhaust pipe must be suitable for the purpose in accordance with local requirements and in compliance with the regulations in force.
- Under nominal operating conditions, the drawdown of the combustion gases must give rise to a depression of 12 Pa, measured 1 meter above the chimney neck.
- The insert cannot share the chimney with other equipment.
- Tubes outside the site of use must be double insulated in stainless steel, with an internal diameter of 100 mm.
- **The exhaust pipe can generate condensation, in this case it is advisable to establish suitable condensate collection systems.**

8.1. Installing without a chimney

The installation of the pellet inserts when there is no chimney should be done by choosing one of the following options.

The flue (with a minimum internal diameter of 100 mm) at least 0,5 m above the roof.

Insulated double-walled stainless-steel tubes must be used, properly fixed, to prevent the creation of condensation.

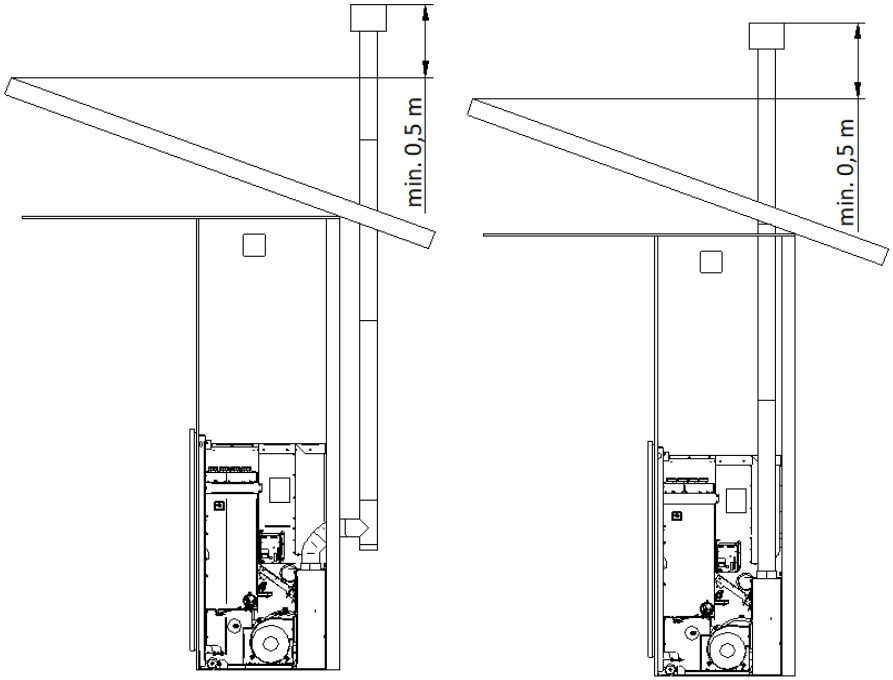


Figure 27 – Side view of the installation without chimney

In the following image, the basic requirements for the installation of the insertable chimney are represented.

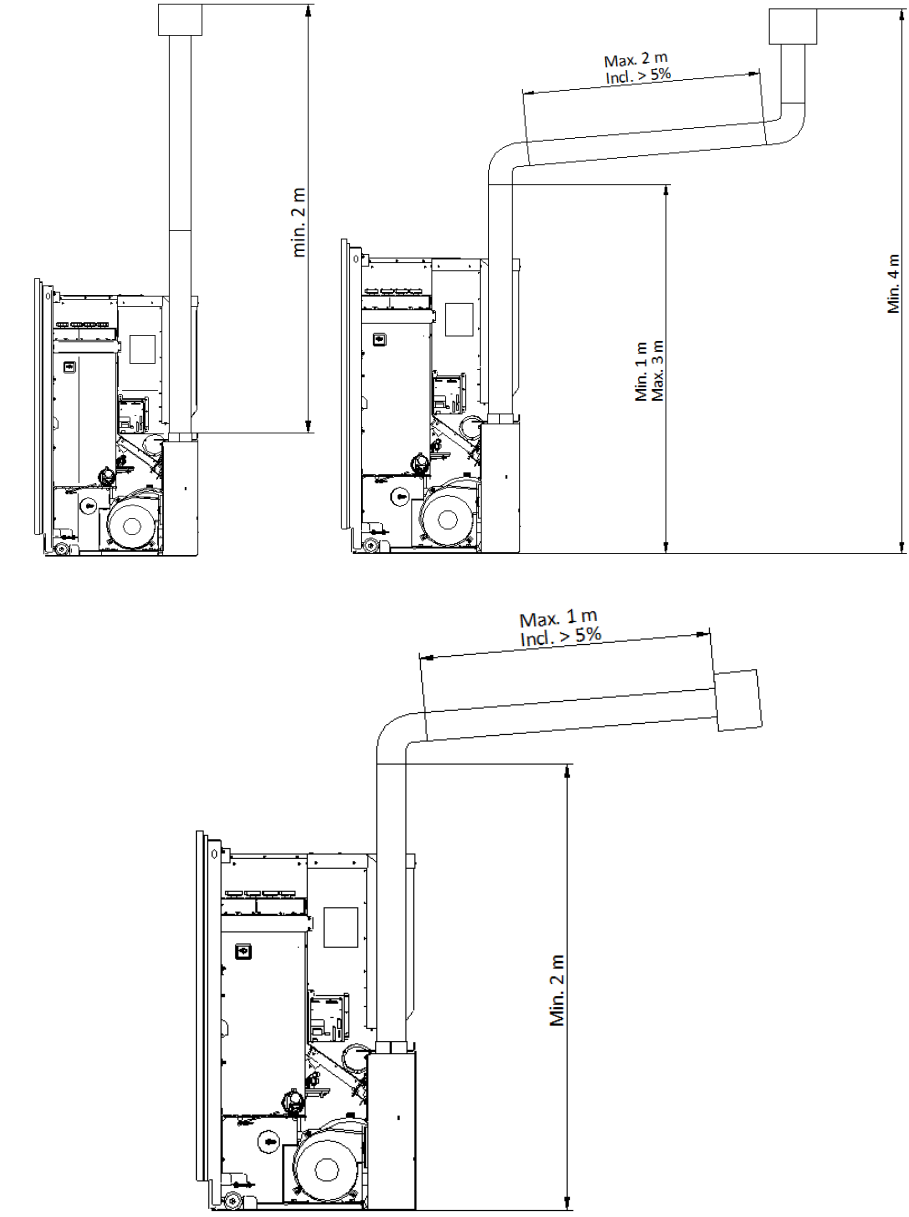


Figure 28 – Examples of installations

⚠ Failure to comply with these requirements may prevent the correct operation of the unit, resulting in warranty void. Be sure to follow all the instructions on the diagrams.

⚠ The insert operates with the combustion chamber in draught, which is why it is absolutely necessary that they include a fume exhaust duct to adequately extract combustion gases.

Fume duct material: The tubing must consist of 0,5 mm thick rigid stainless steel, with fitting bindings to attach the different sections and accessories.

Insulation: The fume ducts must be double-walled and insulated to make sure the fumes do not cool down going outwards, which could cause an inadequate circulation and condensation that may damage the unit.

Output "T-tube": Always attach to the output of the unit a "T-tube" with a damper.

Chimney Crown: A wind shield termination must be installed to avoid fume back flow.

Chimney draught: The Figures below show three standard diagrams, specifying adequate lengths and diameters. Any other type of installation must guarantee a draught of 12 Pa (0,12 mbar) measured when hot and at the maximum power.

Ventilation: To get the optimum operation from the unit **it is necessary that the installation location has an air inlet with a minimum section of 100 cm^2, preferably near the back panel of the unit**.

If the house is equipped with an air exhaust system (e.g. kitchen extractor fan), a top ventilation section must be installed, suitable to accommodate the different air exhaust systems existing in the household. The installation of the unit on locations near kitchen exhaust fans or fume extractors may prevent the unit from operating properly. It is recommended that the unit is disconnected when these extractors are working.

8.2. Installing with a chimney

The installation of the pellet insert brings the exhaust pipe (Ø 100 mm) directly into the chimney. If the chimney is too large, it is recommended to pipe the gas outlet with a pipe with a minimum internal diameter of 100 mm.

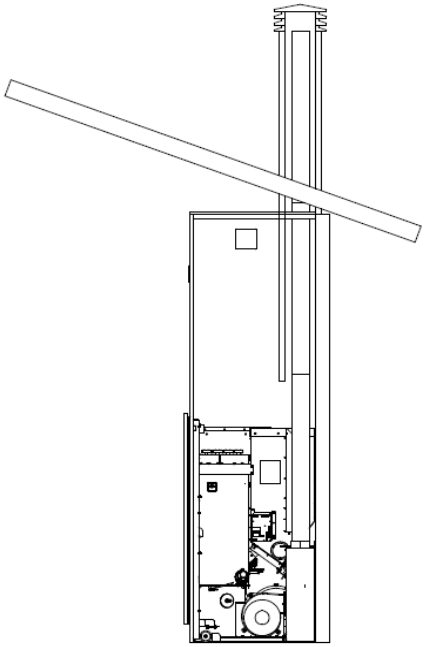


Figure 29 – Side view of the installation with chimney

When atmospheric conditions are so adverse that they cause a significant disturbance in the drawability of the insert gases (in particular very strong winds), it is advisable not to use the insert.

If the equipment is not used for an extended period of time, the user must ensure that there is no blockage in the chimney tubes prior to lighting.

8.3. Hydraulic installation

- Point 19 shows possible installation schemes in the context of a central heating system, with or without a system for heating domestic water;
- The return temperature regulation valve makes the water recirculate only inside the insert until it reaches a temperature of 55ºC, when this temperature is reached it opens allowing the hot water from the body to circulate through the installation, but always maintaining a mixture with hot water from the body to ensure a return temperature that does not create condensate. When the temperature of the water in the circuit has already reached the point where it returns to the boiler above 55°C, the valve opens completely and all the water flows into the system. If the insert loses heat, because it is switched off, or regulated, or for any other reason, the valve will re-mix the water to maintain the return temperature above the desired temperature whenever possible.

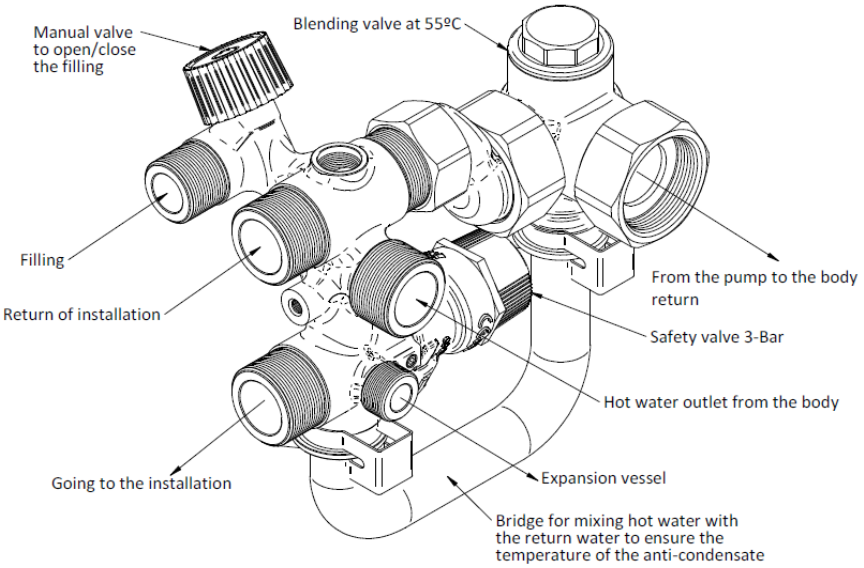


Figure 30 – Hydraulic kit connections

- The pellet insert has a built-in circulation pump, an expansion vessel with a volume of 10 liter, a 3 bar safety valve, a filling tap and a return temperature control valve (anti-condensation valve);
- The expansion vessel is 10 litters and is preloaded with 1 bar, this volume and pressure are selected to protect the machine, depending on the installation, it is necessary to add an expansion vessel to protect the system;
- The usual operating pressure is between 1 and 1,5 bar;
- To be able to empty the device, it has a socket on the left side, just behind the front. Connect a hose to carry the water to the nearest drain, and when you have finished, dismantle it again;
- The outlet of the safety valve (3 bar) is led and fixed on the plate where the inlets are made, connect it to a drainage outlet;
- The heat transport fluid must be water with an anti-corrosion product added, non-toxic and in the quantity recommended by the manufacturer. If there is a risk of freezing in the space where the pellet inserts or the fluid pipes are located, the installer must add an anti-freeze to the circulating fluid in the proportion recommended by the manufacturer, in order to prevent freezing at the minimum absolute temperature expected;
- Sockets for hydraulic connections;

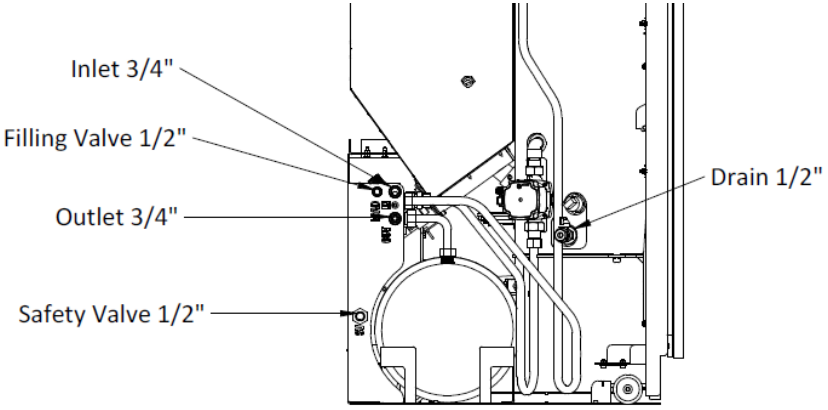


Figure 31 – Hydraulic connections

- It is very important to make the filling using the dedicated socket "LOAD", because as the insert has a valve to protect the return, the water cannot circulate in this direction until the right temperature is reached. Therefore, use the filling socket for proper filling;
- Select the operation mode according to your installation; direct to radiators / with buffer tank.

 IMPORTANT! The insert is programmed to work directly for radiators, in case you want to install the insert with a buffer tank or DHW, it is recommended to change the temperature of "OFF" of the circulation pump by placing the same temperature of the tank or 1°C above this temperature, you must disable in the "Hydro Menu" the modes "Modulating Pump" and "independent hydro" and change the display from "Auto" to "Manual" mode and select the power 5 (fire 5).
You must change the smoke temperatures ("T off" and "T on") in the "Activation" menu. To make these changes you need to access the "Technical Menu" on the display, please ask for the factory password.

9. Fuel

The only fuel that should be used for the operation of the insert is the pellet. No other fuel may be used.
Use only pellets certified by standard EN 14961-2 grade A1, with a **6 mm diameter** and a length **between 10-30 mm**.

The pellets may have a maximum humidity of 8% their weight. To guarantee a good combustion, the pellets must maintain these characteristics so they should be stored in a dry place.
The use of pellets other than those recommended may reduce the efficiency of the unit and cause deficient combustion.
You should always use certified pellets and must not forget to test a sample before buying large bulks.

The physical/chemical properties of the pellets (i.e., the caliber, friction, density and chemical composition) may vary within specific tolerances and according to each manufacturer. Please note that this may cause alterations to the combustion feed that would consequently cause the need to use different quantities of pellets.
The insert allows the quantity of pellets to be adjusted during start-up and at the different power ranges by +15%/-33% (section 11.2.7 of the manual – power and transition settings).

⚠ **WARNING!**
The unit CANNOT be used as an incinerator.

10. Using the pellet insert and recommendations

Before starting up the unit, please check the following:

- Make sure that the unit is properly connected to the power mains using the 230VAC power cable.

Figure 32 – Electric power plug

- Check that there are pellets in the tank.
- Make sure before each ignition that the burner is clean.
- Make sure the hydraulic circuit is mounted and connected to water.
- Make sure that the hydraulic circuit has been mounted correctly and is connected to the water.
- Make sure that the air circulation in the room where the installation is located is sufficient, otherwise the equipment will not work properly. For this reason, pay attention to whether there is other heating equipment in the room that consume air for their operation (e.g., gas equipment, braziers, extractors); simultaneous operation of these equipment is not recommended.

⚠ **The combustion chamber of the insert is made of steel sheet painted with high temperature ink, which releases fumes in the first burns due to the cure of the ink.**

11. Control panel

11.1. Display and control panel

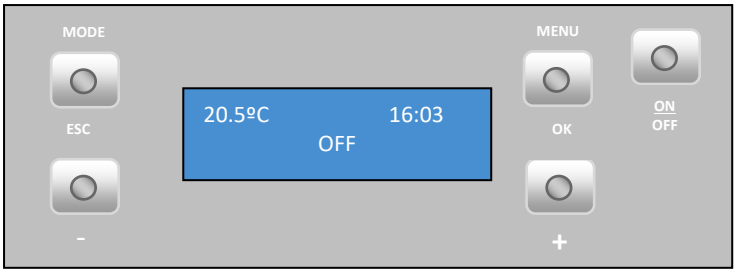


Figure 33 – Display and control panel

a) Key to toggle between manual and automatic mode and exit menus (esc).

b) Key to access menus and confirmation key (ok).

c) Key to start/stop the unit and reset error messages.

d) Key to scroll the menus to the left, to increase and reduce the fan flow and increase or reduce the set-point temperature.

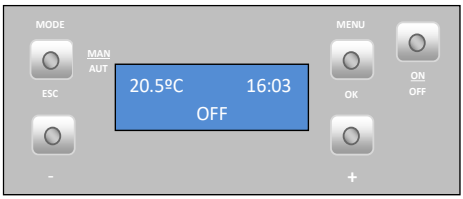
e) Key to scroll menus to the right to increase and reduce the unit's power.

Figure 34 – Control keys

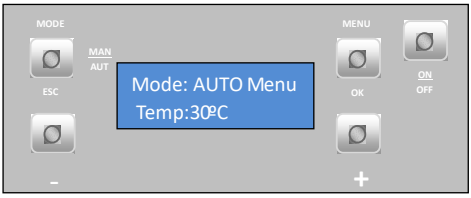
11.2. Display information summary

11.2.1. Menu

Menu showing boiler in power "off", the room temperature in ºC and Time.



Select operating mode: to select the operating mode, press the "mode" key to select manual mode "Manu" or automatic mode "Auto".



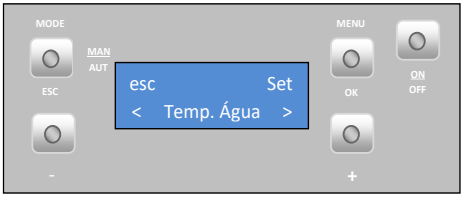
"Auto" mode: in this mode, the unit will be turned on at maximum power until reaching a temperature of 1ºC above the selected temperature (set point temperature). Upon reaching the set temperature, the unit toggles to the minimum operating power.

The set-point temperature can be set between 5 and 40ºC by pressing the "-" and "+" key.

"Manu" mode: in this mode the machine will work on the selected power with the "-" key, which can vary from 1 (minimum machine power) to 5 (maximum power).

11.2.2. Water temperature

Press the Menu key twice to set the water temperature; the "Temp. Água" (Water Temp.) appears on the display. Press Set to display the "T. Aquecimento" (Heating Temperature) menu.



- Heating temperature

To set the desired heating temperature press "set". The display starts to flash. Press the "+" or "-" key to select the desired temperature and then "ok" to confirm. Press the "esc" key and then the "+" key to go to the "Data" (Date) menu.

Note: in the equipment the water temperature can be regulated by the user (water set-point temperature) between 50 and 80ºC.

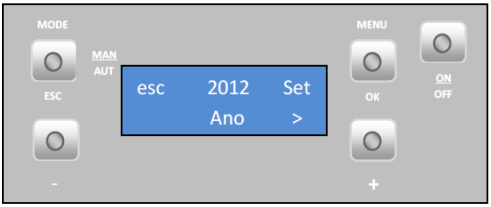
- Bathroom temperature **(this mode is disabled)**

11.2.3. Date

To set the **Date**: press the Menu key twice, press "+" once and "Data" (Date) appears, press "set", the menu appears:

- Year

To set the **Ano (Year)** press "set", the display starts to flash, press the "+" or "-" key to select the desired year and then "ok" to confirm; to move to the next menu press the "+" key and the Mês (Month) menu appears.

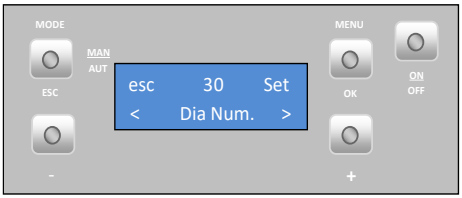


- Month

To set the **Mês (Month)** press "set", the display starts to flash, press the "+" or "-" key to select the desired month and then "ok" to confirm. Press the "+" key to go to the "Dia do Mês" (Day of the month) menu.

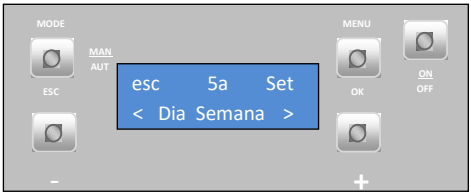
- Day of the month

To set the **Day of the Month** press "set", the display starts to flash, press the "+" or "-" key to select the desired day and then "ok" to confirm. Press the "+" key to go to the "Dia" (Day) menu.



- Day

To set the **day of the week** press "set", the display starts to flash, press the "+" or "-" key to select the desired day and then "ok" to confirm. Press the "+" key to go to the "Hora" (Hour) menu.

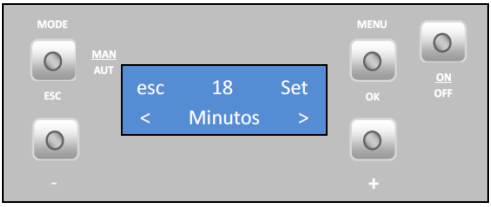


- Time

To set the **time** press "set", the display starts to flash, press the "+" or "-" key to select the desired time and then "ok" to confirm. Press the "+" key to go to the "Minutos" (Minutes) menu.

- Minutes

To set the **minutes** press "set", the display starts to flash, press the "+" or "-" key to select the desired minutes and then "ok" to confirm. Press the "esc" key to exit. Press the "+" key to move to the next menu and the Crono (Timer) menu appears.



11.2.4. Timer

The unit is equipped with a timer that allows the unit to be turned on or off at a specified time.

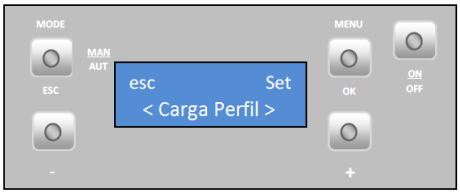
- Activation

To **enable the timer** press "set". The "habilitação" (activation) menu is displayed. The timer may only be activated after setting the configurations, as shown in the following paragraph.

The programs can be defined in two different ways, by the "profile load" menu or by the daily programmer P1 to P6 **(we can only have one option active, they do not work simultaneously).**
Press the "+" key to move to the "Load Profile" menu.

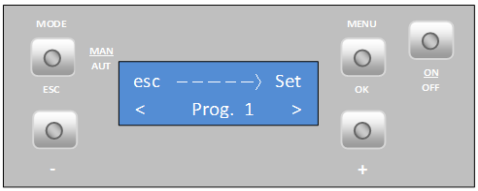
There are 10 weekly programmes available on the Timer (see item 17 in the annexes). The selected programme runs from Monday to Friday and from Saturday to Sunday. Press "set"; the display starts to flash. Press the "+" or "-" key to select

the desired programme and then press “ok” to confirm. Press the "+" key to go to menu "Reiniciado" (Reset).

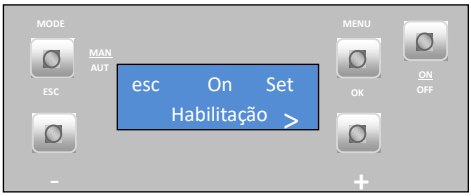


In this menu you can delete all defined programs. To do this, press "set" and the message "Confirm?" appears. Press "ok" again to confirm the order for deleting the programs, or "esc" to exit and then press the "+" key to proceed to the daily programmer.

The unit's **programmer** lets you choose from 6 different programmes for each day of the week.



To set up **programmes “P1” to “P6”**, select the desired programme using the “-” and “+” keys, and press “set” to select. The "P1 Habilitação" (P1 Activation) menu appears **(can only be enabled after the time schedule)**.
Press the "+" key to move to the "H. Inicio" menu.

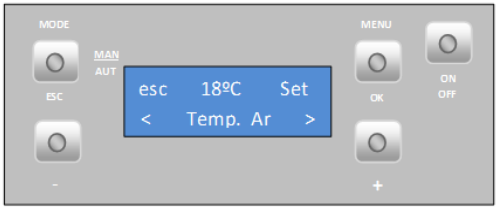


To set the **starting time** for Programme P1, press "set". The display starts to flash. Press the "+" or "-" key to select the time and then press "ok" to confirm. Press the "+" key to go to the "P1 A. Stop" menu.

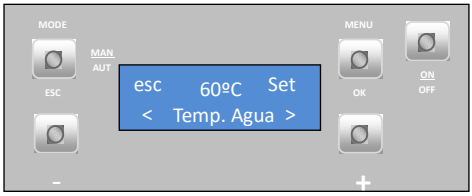
To set the **stopping time** for Programme P1, press "set". The display starts to flash. Press the "+" or "-" key to select the time and then press "ok" to confirm. Press the "+" key to go to the "P1 Temp. (P1 Air Temp.) menu.

Important: Each program can **only** be configured within the **same** day.

To set the **set point temperature** for Programme P1, press "Set". The display starts to flash. Press the "+" or "-" key to select the desired temperature, followed by "Ok" to confirm. Press the "+" key to go to the "P1 Temp. Água" (P1 Water Temp.) menu.

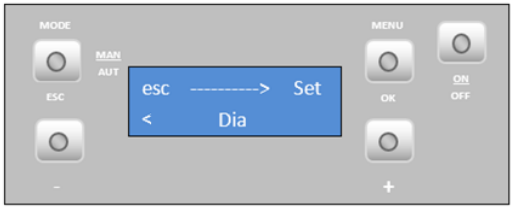


To select the **set point water temperature** in program P1, press "set" and start flashing, press "+" or "-" to select the desired temperature, press "ok" to confirm value. Press the "+" key to move to the "Fire" menu.



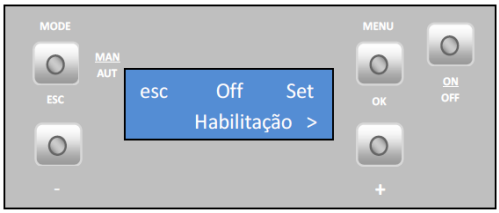
To set the **operating power level** (1 to 5) of Programme P1, press "Set". The display starts to flash. Press the "+" or "-" key to select the desired power level (1 to 5), and then "Ok" to confirm. Press the "+" key to go to the "P1 Dia" (P1 Day) menu.

To select the **days of the week** that you want P1 Programme to run, press "set" and then select the day of the week using the "-" and "+" keys. Press "set". The display starts to flash. Select "On" or "Off" using the "-" and "+" keys. Press "ok" to confirm the selection. Press the "esc" key to go to the "P1 Dia" (P1 Day) menu. Press "esc" twice and then "+" to access the "Configurações" (Configuration) menu.



Press "set" again and when flashing, press the "+" or "-" keys to select "On" or "Off". Press "ok" to confirm your choice.
Repeat the above steps for programmes P2 to P6.

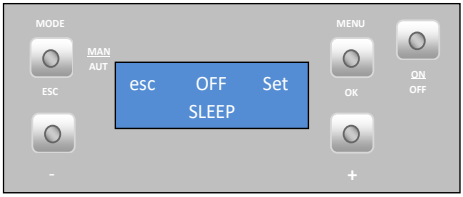
To **activate Timer mode**, press "esc" once and then "-" until you find the "Activation" menu, press the "set" key and it starts flashing, press the "+" or "-" key to select "On" or "Off", press "ok" to confirm your choice. Press the "esc" key once and then press the "+" key once to move to the "Sleep" menu.



Note:
- Once the programmes are set, remember to enable them on the "Habilitações" (Activation) menu.
- There can only be one enabled profile in the Timer, either weekly or daily (they do not operate simultaneously).
- When the Timer is enabled, the following message "Timer prog" can be checked on the display.

11.2.5. Sleep (this menu is displayed only while the unit is operating)

The "Sleep" menu allows you to setup the time you want the boiler to turn off.



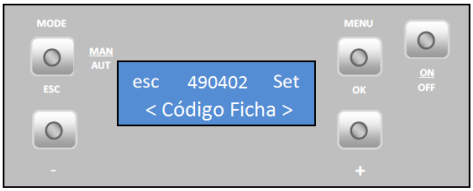
Press "set". The display starts to flash. Select the desired time using the "-" and "+" keys. After choosing the time, press "ok" to confirm. Press "esc" to return to the menu and then "+" to go to the configuration menu.

11.2.6. Info

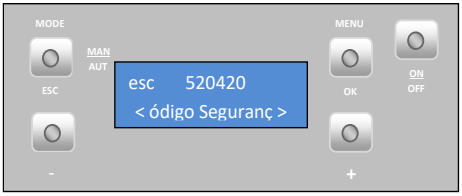
In this menu the user can view some information about the equipment.

Pressing "set" displays the "Código Ficha" (File Code) Menu.

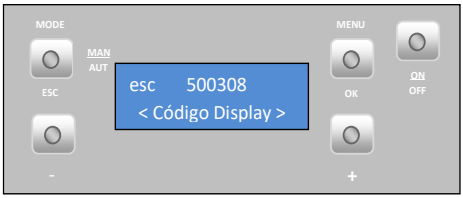
Software code / Motherboard firmware. Press the "+" key to scroll to the "Código de Segurança" (Security Code) menu.



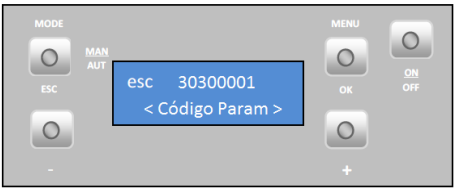
Software code / Security firmware. Press the "+" key to scroll to the "Código Display" (Display Code) menu.



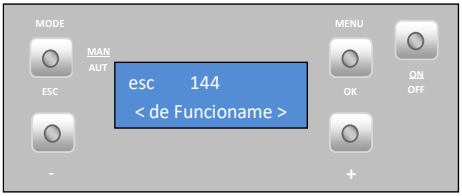
Software code / Display firmware. Press the "+" key to scroll to the "Código de Parâmetros" (Parameter Code) menu.



Parameter code. Press the "+" key to scroll to the "Horas de Trabalho" (Operation hours) menu.

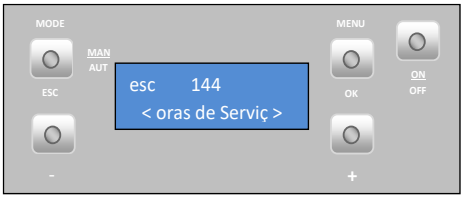


This menu shows the unit's current operating hours.



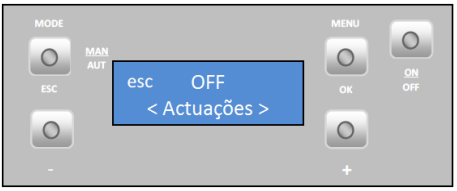
This menu shows the number of operating hours the unit has registered since its last servicing.

The number of hours at which the next servicing should take place.

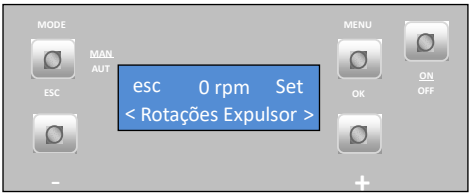


Very Important: When the machine is close to service hours it is recommended to call an accredited technician to perform its maintenance.

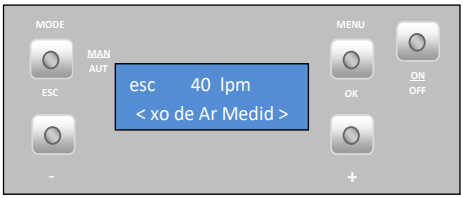
This menu shows the phase/status of the equipment.



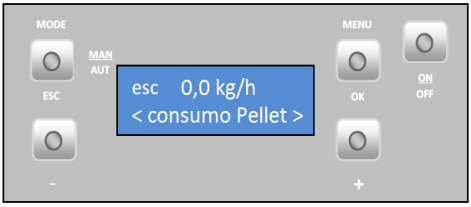
Operating speed (revolutions per minute) of the smoke extractor.



Air flow measured by air sensor.



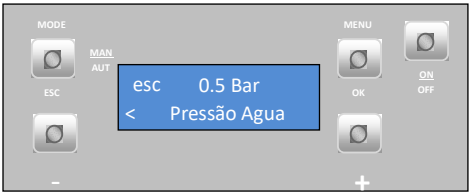
Theoretical pellet consumption.



Fume temperature.

Worm drive rotation "On" time.

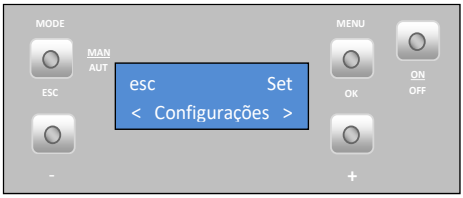
Water pressure in the equipment.



Press the "esc" key once and then "+" to go to the "settings" menu.

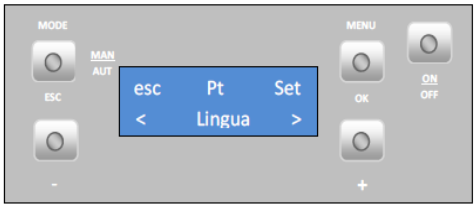
11.2.7. Settings Menu

To modify the unit's **settings**, press "Set". The "Língua" ("Language") menu should then appear, allowing the user to choose a set language.



- Language

To select the **language**, press "set". Using the "+" or "-" keys, select the language (**Pt** – Portuguese; **Nl** – Dutch; **Gr** – Greek; **Tr –** Turkish; **It** – Italian; **En** – English; **Fr** – French; **Es** – Spanish; **De** – German). Press "ok" to confirm. Press the "+" key scroll go to the "Eco" menu.



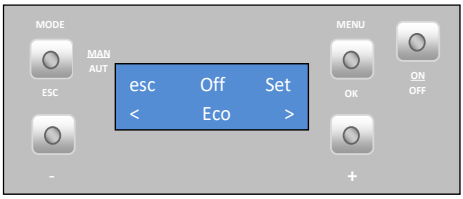
- Eco mode

When the "ECO" mode is enabled at the same time as the Thermostat feature, the unit will operate at maximum power until the thermostat opens contact (NO). The unit then will operate at minimum power for a preset period of time (Shutdown delay time: factory setting: 20 minutes). Once the preset time is elapsed, the unit shuts down. At the start of the Shutdown phase, another timer for a different preset period of time is triggered (Start-up delay time: factory setting: 20 minutes), that will make the unit enter the activation phase, when the thermostat closes contact (NC)

Start-up delay time (Delay time On): The delay time that elapses between the moment the thermostat closes (NC) until the unit is activated.

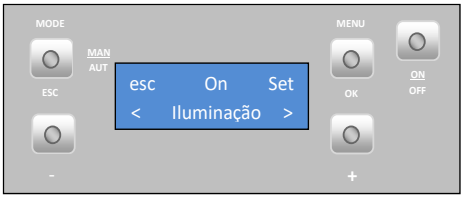
Shutdown delay time (Delay time Off): The delay time that elapses between the moment the thermostat opens (OC) until the unit starts to shutdown.

Note: When using the feature for the first time, you must press the On/Off button in the display. To enable the eco mode, press “set”. The display starts to flash. To activate the eco mode, press "set". The display starts to flash. Select "On" or "Off" using the "-" and "+" keys. Press "set" to confirm the selection. Press "esc" to return to the previous menu and then press "+" to go to the "Iluminação" (Lighting) menu



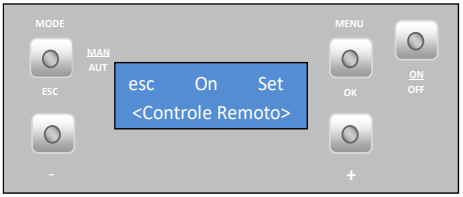
- Lighting

To select **lit screen**, press “set”. The display starts to flash. Press the "+" or "-" key to select the time for the screen to light up, or select "On" to keep the light permanently on. Press “ok” to confirm. Press the "+" key to go to the "Controlo remoto" (Remote control) menu.



- Remote control **(não aplicável)**

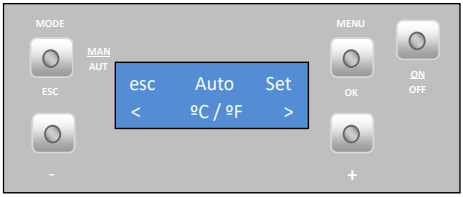
This feature enables and disables the remote control, when the user wants to operate the unit's thermostat remotely. Press "Set" and use the "+" and "-" keys to select the "On" or "Off" mode. Press "Ok" to confirm. Press the “+” key to go to the “Unidade de temperatura” (Temperature units) menu.



Note: Some TV remote controls share the same frequency as the unit's remote control, possibly influencing the unit's operation. If this is the case, it is recommended to disable the remote-control feature.

- Temperature unit (ºC / ºF)

To select **ºC / ºF**, press "set". The display starts to flash. Press the "+" or "-" key to select "ºC", "ºF" or "Auto", and then "ok" to confirm. Press the "+" key to go to the "Combustion recipe" menu.



- Combustion recipe

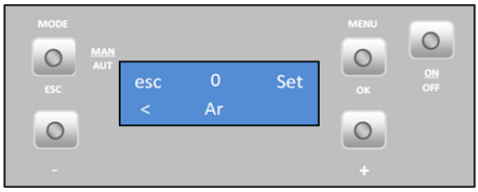
Press "set" to display the "Combustão receita" (Combustion recipe) menu.

- *Pellet*

This feature allows the user to increase or decrease by 25% the **pellet quantity during the start-up and power process**. Press "set". The display starts to flash. Press "+" or "-" to increase or decrease (between -10 to +10), as required. Each unit must be multiplied by 2,5 to obtain the correct percentage. Press "ok" to confirm. Press the "+" key to go to the "Ar" (Air) menu.

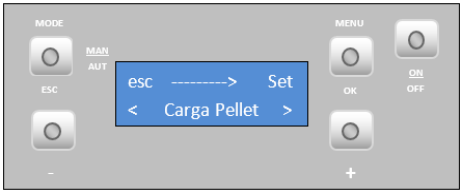
- Air

This feature allows the user to increase or decrease by 25% the **rotation speed of the fume extractor during the start-up and power process**. Press "set". The display starts to flash. Press the "+" or "-" key to increase or decrease (from -10 to +10), as required. Each unit must be multiplied by 2.5 to obtain the correct percentage. Press "ok" to confirm. Press "esc" to return to the "Receita de pellets" (Pellet recipe) menu and then press "+" to go to the "Carga pellet" (Pellet loading) menu.



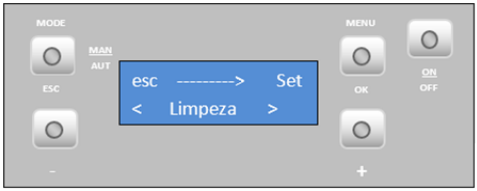
- Pellet loading (this function only appears with the machine in Off)

This feature allows you to enable the **worm drive** to fill the channel when it is empty to keep the unit running. Press "set"; the "ok" option appears. Press "ok" to activate the drive; the message "habilitada" (enabled) is displayed. Press "esc" to stop. Press the "+" key to go to the "Limpeza" (Cleaning) menu.



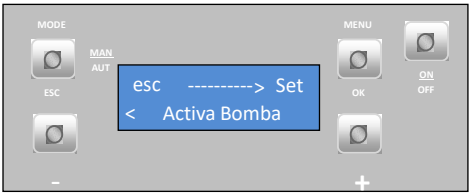
- Cleaning (this function only appears with the machine in Off)

This feature allows you to **clean** the burning basket manually. Press "set"; the "ok" option appears. Press "ok" to start the cleaning procedure; the "Habilitada" (Enabled) message is displayed. Press the "esc" key and then "+" once to switch to the "Active Pump" menu.



- Active Pump (esta função só aparece com a máquina em Off)

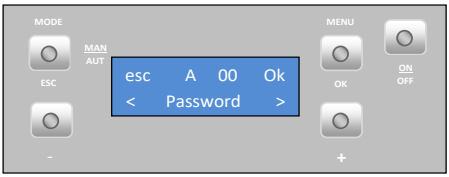
This function allows the **water pump** to be driven manually. Press "set" and the message "enabled" appears.



11.2.8. Technical Menu

This function allows you to adjust the different variables of the equipment, press "set" and the "password" menu appears to enter the technical menu.

Press Ok and select the desired letter with the "+" and "-" keys, press Ok to confirm and "00" will begin flashing, with the "+" and "-" keys select the desired number, confirm Ok and enter the "General settings" menu.



Note: the password is only given to authorized technical personnel.

12.Alarm / Failure / Recommendation List

Alarm	Code		Cause and Troubleshooting
Ignition failure	A01	Maximum time 900s	- The worm drive channel is empty - restart the unit - Resistance burnt – replace the resistance - The burning basket has been incorrectly installed - Locked worm - unlock - Smoke temperature ñ exceeded the value defined in the captivation
No flame or insufficient quantity of pellets	A02	Temperature under: - 40 °	- Pellet reservoir is empty
Pellet drum temperature is too high	A03	110 °C	- The fan is not working – call for assistance - Faulty thermostat - call for assistance - Faulty ventilation of the unit
Fume temperature is too high	A04	Over 260 °C	- The fan is not working or is working at a low speed - increase level to the maximum (if the problem persists, call for assistance) - Insufficient extraction - Excess pellets - Faulty smoke sensor
Pressure regulator alarm	A05	Door open, draught too low or extractor fault for 60 sec	- Close the door and clear the error message on the faulty pressure switch - Obstruction of the exhaust pipe or faulty extractor
Air mass probe	A06	40 Ipm delta for 3600 sec	- Piping with insufficient draft or obstructed tubing
The door is open	A07	Door open for 60 seconds	- Close the door - clear the error message
Fume extractor is faulty	A08	Connection failure	- Faulty air mass sensor
Fume probe failure	A09	Connection failure	- Check connection
Pellet resistance error	A10	Connection failure	- Check that the fan is not blocked
Worm drive error	A11	Connection failure	- Check connection
Pellet level alarm	A15		- Check connection
Water pressure outside operating range	A16		- Faulty resistance
Excess water temperature	A18		- Check connection

Table 2 - List of alarms

Important notice: when triggered, all the alarms above cause the machine to shutdown. The alarm must be reset and the unit restarted. To reset the unit, press the "On/Off" button for 10 seconds until the alarm sounds.

- Failures

Failures
"Service" (Maintenance)
Air probe failure
Low pellet level
The door is open
Air temperature probe failure
Water temperature probe failure
Water pressure sensor fault
Water pressure close to out of operating range

Table 3 - List of failures

⚠ Important notice: A "***service***" warning on the display (maintenance due) indicates that the unit has exceeded 2100 operating hours. In this case, the client must perform the unit's maintenance procedure (following the instruction on the Technical Manual). Once this procedure is completed the hour meter may be reset, to clear the waning message. This message does not impact the normal operation of the unit. It is simply a warning.

⚠ Important notice: The errors can be reset only when the error information is flashing on the display. To reset the error, press the" Mode" button once while displaying the error.

⚠ **WARNING!**

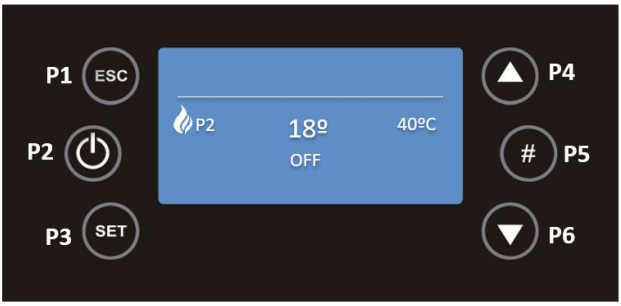
In case of an emergency, turn off the unit by following the normal shutdown procedure.

⚠ **WARNING!**

THE UNIT BECOMES HOT DURING OPERATION SO CARE MUST BE TAKEN ESPECIALLY WHEN HANDLING THE DOOR GLASS AND DOOR HANDLE.

13. Columbus Electronics

Solzaima inserts may be equipped with Columbus electronics, the Columbus display is as shown below. To confirm if your equipment is equipped with these electronics, you should check the equipment's serial number and consult Table 4.

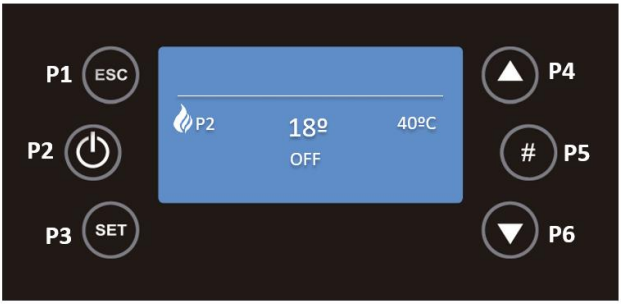


Columbus Electronics	Equipment Serial Number
Atlantic	≥ 01-28-00355

Table 4 - Serial Number with Columbus Electronics

13.1. Display

When the unit is connected to electricity, the display indicates the "OFF" status of the insertable, and can also indicate chrono activation, system errors, selected combustion power, selected ventilation power, current room temperature, and selected room temperature set-point.



In the Input Menu by pressing the key:

- "P1" it is possible to exit the menu/submenu;
- "P2" it is possible to turn on the equipment, or, turn off the equipment. The same button allows the reset of errors in case of blockage by pressing 3

seconds continuously, it also allows the activation of Crono in the corresponding submenu;

- "P3" it is possible to access the user menu 1, by pressing 3 seconds on the same button we can access the user menu 2 and it also allows saving changes;
- "P4" it is possible to enter the Combustion Power menu;
- "P5" it is possible to enter the Information menu and also activate an hourly interval of the Chrono;
- "P6" is possible to enter the Room Thermostat menu;
- "P3" + "P5" for 3 seconds it is possible to enter the secondary information menu present in the service menu where it is possible to check a set of variables.

Led	Meaning
D S FS	• When this LED is active it means that the Chrono is in Daily Mode ON, Weekly Mode ON, or Weekend Mode ON.
R_1 R_2	• When this LED is active, it indicates which fans are running, local and remote.
	• When this LED is active, it means that the requested room temperature has already been reached.

THE INSERTABLE MUST ALWAYS BE DEACTIVATED BY THE SAME METHOD THAT IT WAS ACTIVATED. DURING THE ACTIVATION PROCESS THE EQUIPMENT MUST NEVER BE DISCONNECTED.

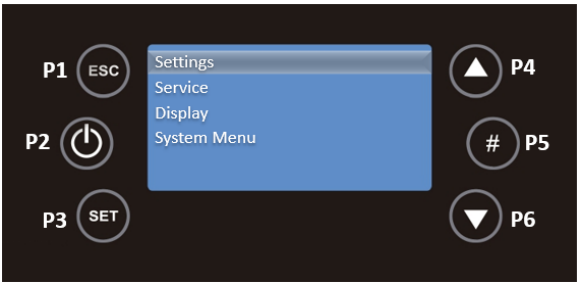
13.2. Settings Menu

13.2.1. Language

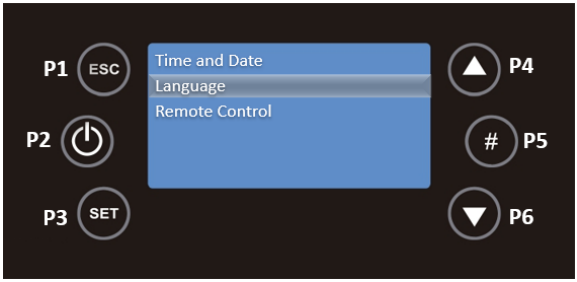
By pressing the P3 key for 3 seconds, you will then see the Settings, Service, Keypad and System Menu menus.

THE LATTER IS AN EXCLUSIVE MENU FOR THE TECHNICAL SERVICE AND REQUIRES A PASSWORD TO ACCESS IT.

With the P4 and P6 keys you must select the desired menu and then press P3 to validate the choice, in this case the Settings menu.



Select the Language submenu with the P6 key and to validate the entry in this submenu the P3 key.



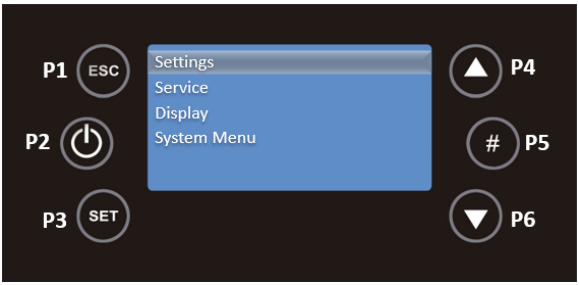
Within this submenu, with P4 and P6 select the desired language and press the P3 key again to validate.

To exit the Language menu you must press the P1 key.

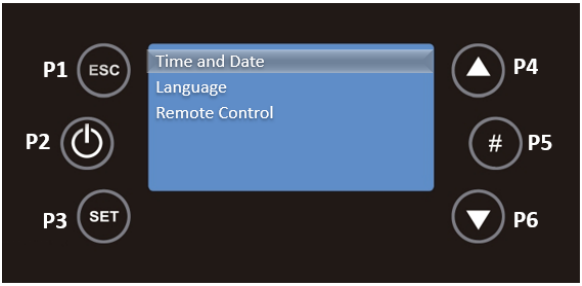
13.2.2. Date and Time

- **Time**

In the main screen, by pressing the P3 key for 3 seconds, you can access the Settings menu, and press P3 again to enter this menu.



With the P3 key, select Date and Time.



Now in the Date and Time menu, select Time, with the P4 and P6 keys, and press the P3 key, the time will appear in editable mode, flashing, with P4 and P6 select the correct time and press P3 to validate.

The same must be done for Minutes, with P6 select Minutes and press P3, the minutes will appear in editable mode, flashing, with P4 and P6 select the correct minutes and press P3 to validate.

- **Date**

In the same menu, select Day with the P4 and P6 keys and press P3, the day will appear in editable mode, flashing, with P4 and P6 select the correct day and press P3 to validate.

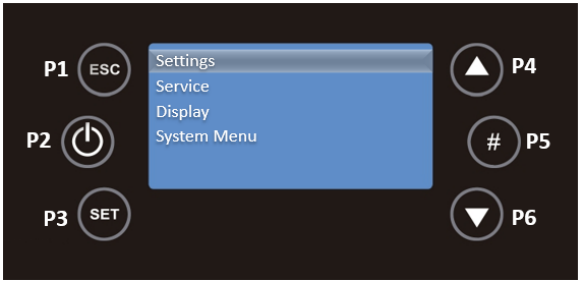
To edit the Month, you must use the P4 and P6 keys to select this field and then P3, the month will appear in editable mode, with P4 and P6 select the desired month and press P3 again to validate.

The Year follows the same procedure, press the P4 and P6 keys to move to the Year, use the P3 key to edit this field, the year will appear in editable mode. With P4 and P6 select the desired year and press P3 to validate.

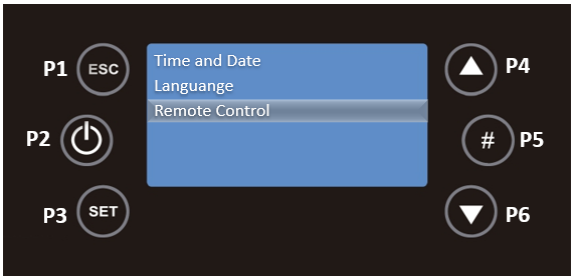
THE DAY OF THE WEEK (SUNDAY TO SATURDAY) CHANGES ACCORDING TO THE SELECTED DAY OF THE WEEK.

13.2.3. Remote Control

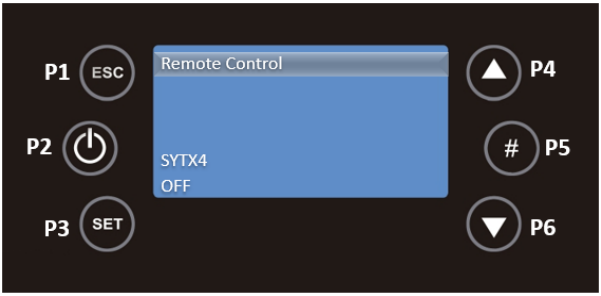
In the main screen, by pressing the P3 key for 3 seconds, you can access the Settings menu, and press P3 again to enter this menu.



With the P6 key select the Remote Control submenu and to validate the entry in this submenu the P3 key.

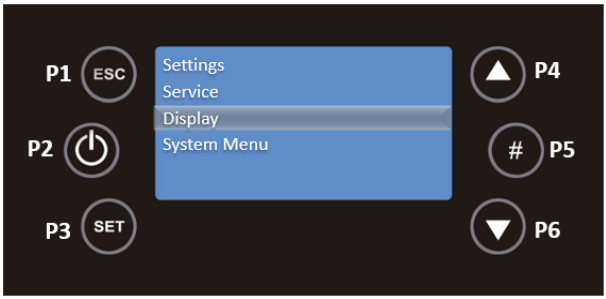


With the P4 and P6 keys you can activate or deactivate the Remote Control, pressing P3 to validate the action.

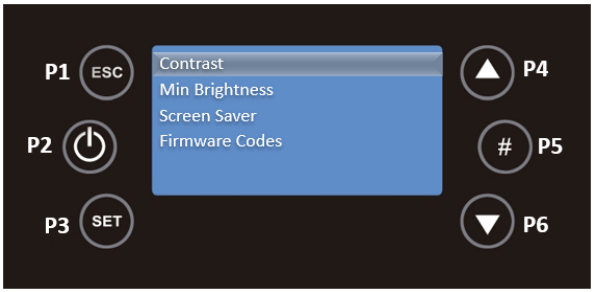


13.3. Display Menu

By pressing the P3 key for 3 seconds, you will see the menus Settings, Service, Keypad and System Menu. With the P4 and P6 keys you must select the desired menu and then press P3, to validate the choice, in this case the Keyboard menu.

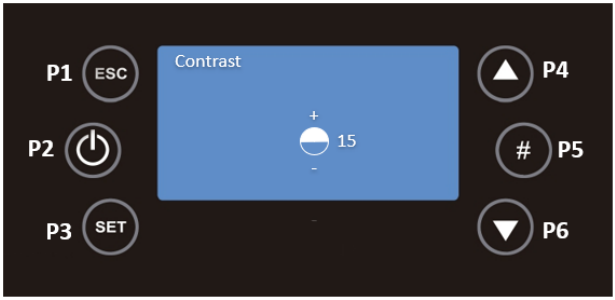


In this menu there are the functions Contrast, Min Brightness, Screen Saver and Firmware Codes.



13.3.1. Contrast

By pressing the P3 key to validate the choice of this function, with the P4 and P6 keys you can set the contrast between 0 and 30 for your screen. To return to the Keypad menu, press P1.

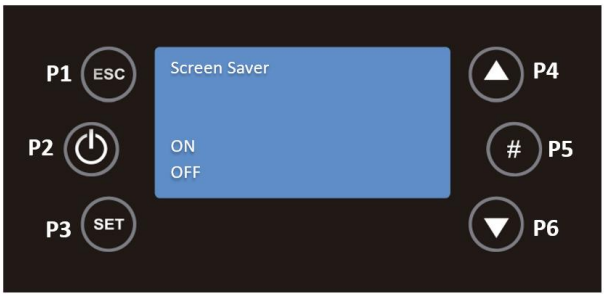


13.3.2. Min Brightness

In the Keypad menu with P4 and P6 select the Min Brightness function by pressing on the P3 key. With the keys P4 and P6 you can set the brightness between 0 and 20 for your display. To return to the Keypad menu, press P1.

13.3.3. Screen Saver

In the Keypad menu with P4 and P6 select the Screen Saver function by pressing on the P3 key. In this function you can activate or deactivate the screen lock. To return to the Keypad menu, press P1.



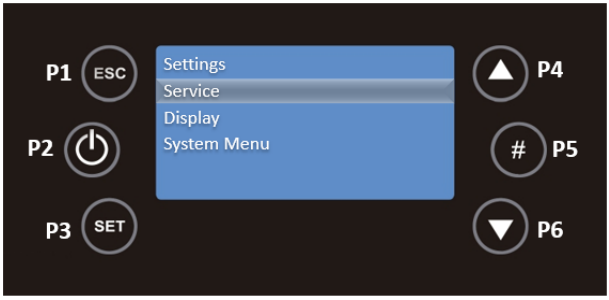
13.3.4. Firmware Codes

In the Keypad menu with P4 and P6 select the Firmware codes function by pressing on the P3 key. This function, for reference only, allows you to see the communication address of the control board, the board type and firmware version.

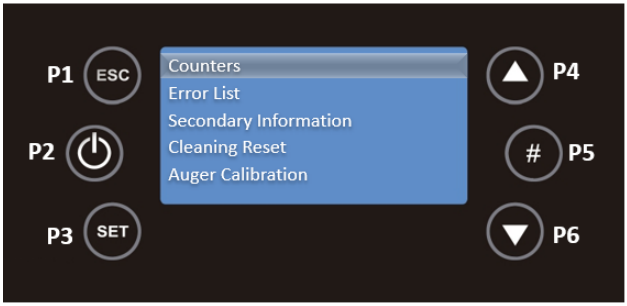
To return to the Keypad menu, press P1. Pressing this key twice brings up the menus Settings, Keypad, Service and System Menu.

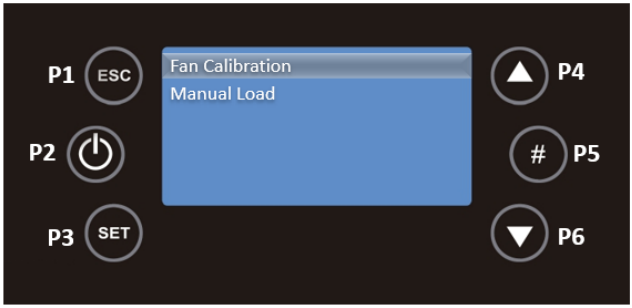
13.4. Service Menu

By pressing the P3 key for 3 seconds, you will see the menus Settings, Service, Keypad and System Menu. With the P4 and P6 keys you must select the desired menu and then press P3, to validate the choice, in this case the Service menu.



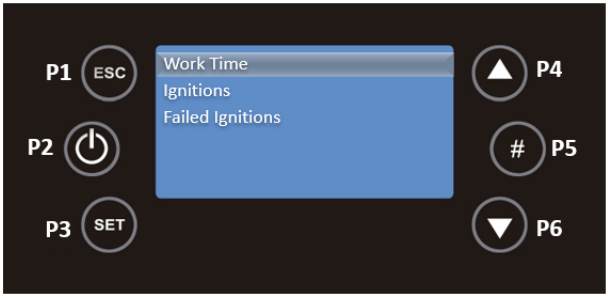
In this menu you have the following functions.



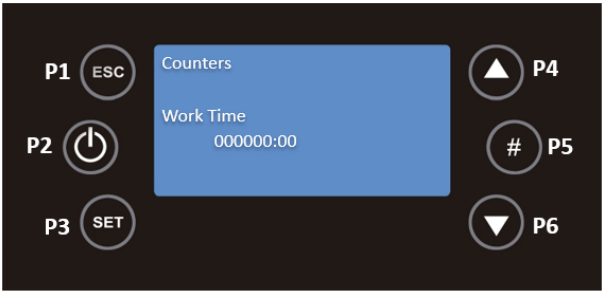


13.4.1. Counters

Select Counters, with the P3 key, to validate the entry in this submenu. This function allows you to query the working hours, the number of ignitions and the number of failed ignitions.

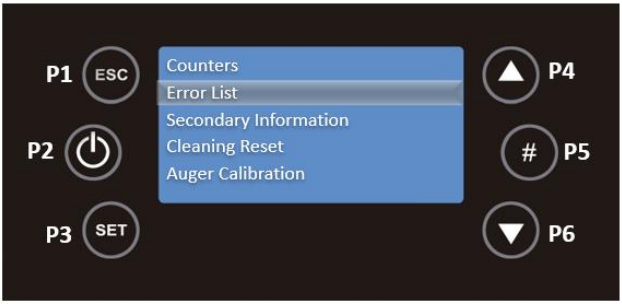


With the P4 and P6 keys, select the submenu you wish to consult and press P3 to validate. To return to the Service menu, press P1.



13.4.2. Error List

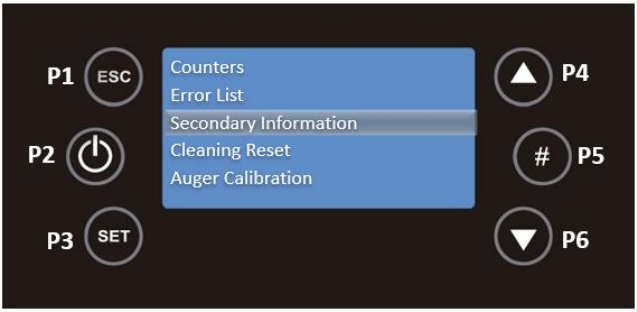
In the Service menu with P4 and P6 select the submenu Error List, pressing the P3 key to validate.



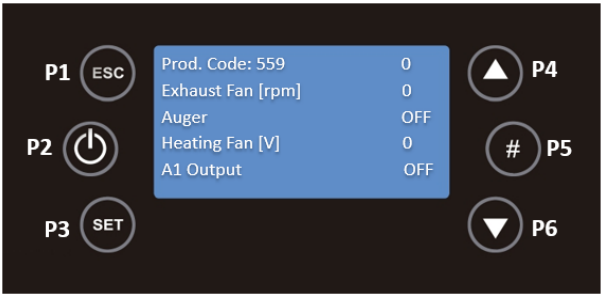
This submenu shows the last 10 errors that occurred, on each line the error code and the date and time when it occurred are shown. To return to the Service menu, press P1.

13.4.3. Secondary Information

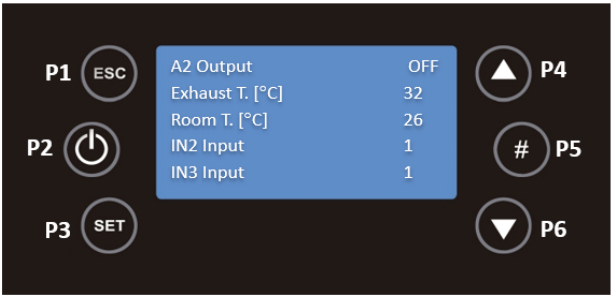
In the Service menu, select the Secondary Information submenu with P4 and P6, and then press the P3 key.



In this function you can query the product code, the status of the fume extractor, the worm, the ambient fan, and the status of the outputs.

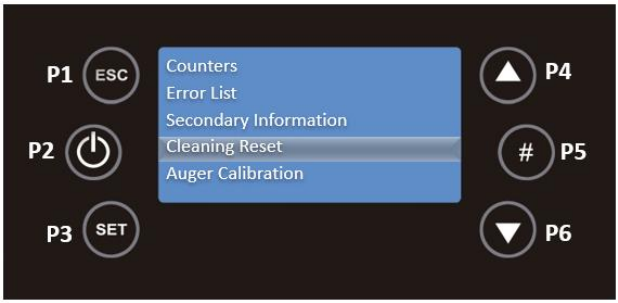


It is possible to query the fume temperature, room temperature and the state of the inputs. Whether the state of the input is open (0) or closed (1).



13.4.4. Cleaning Reset

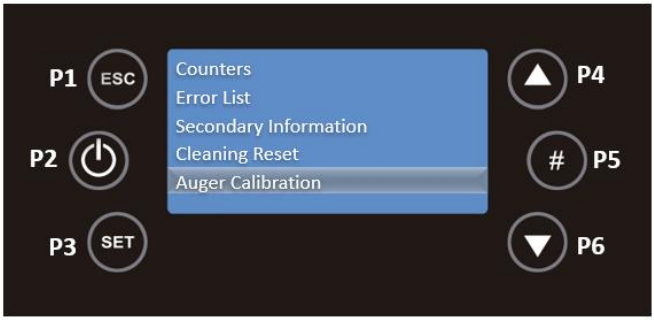
In the Service menu with P4 and P6 select the Reset Cleaning function by pressing on the P3 key.



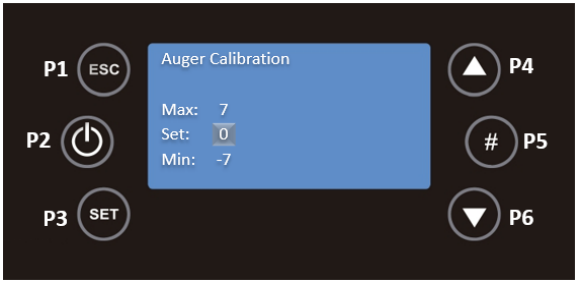
In this function you can turn this function on or off. To return to the Service menu, press P1.

13.4.5. Auger Calibration

In the Service menu with P4 and P6 select the Cochlea Calibration submenu, pressing the P3 key to validate.

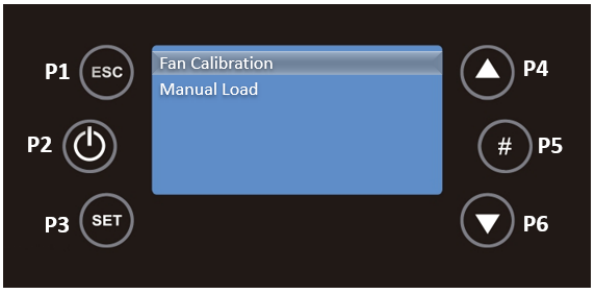


In this submenu with the keys P4 and P6 you can adjust the number of pellets to be fed, between -7 (-14%) and 7 (+14%). To return to the Service menu press P1.

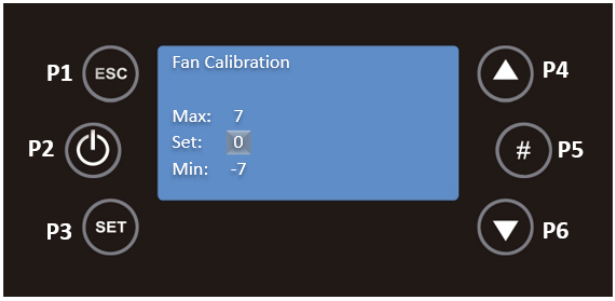


13.4.6. Fan Calibration

In the Service menu with P4 and P6 select the submenu Fan Calibration by pressing on the P3 key.

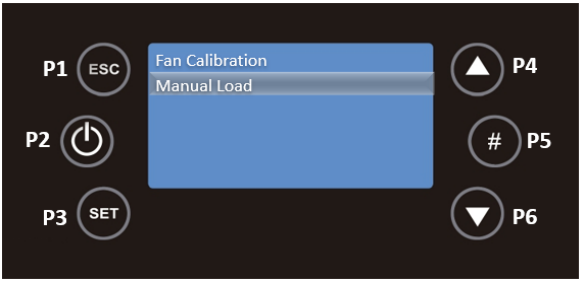


In this submenu with the keys P4 and P6 you can adjust the fan speed, between -7 (-21%) and 7 (+21%). To return to the Service menu press P1.

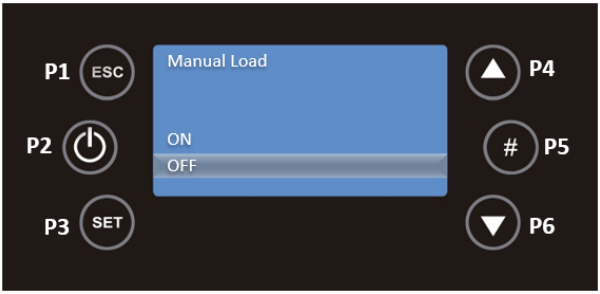


13.4.7. Manual Load

Select Manual Load, using the P3 key, to validate the entry in this submenu.



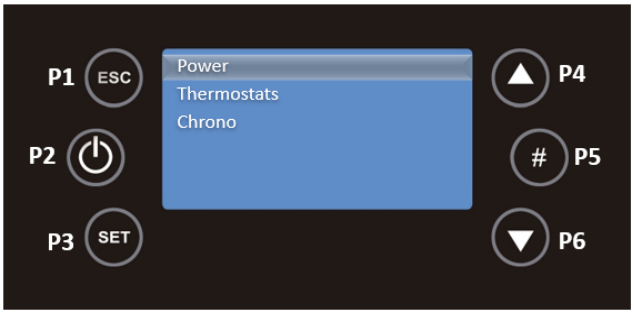
This function activates manual pellet loading.



By pressing the P1 key twice, you will return to the main menus, Settings, Display, Service, and System Menu.

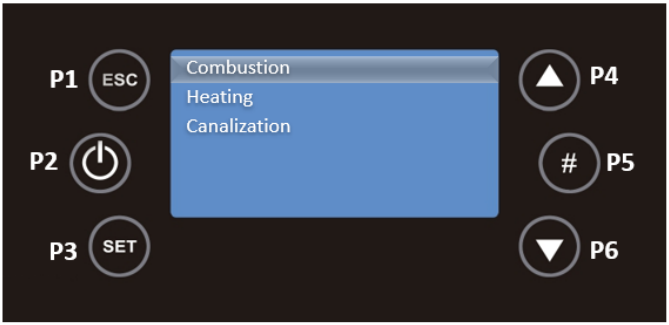
13.5. Power Menu

Pressing the P3 key accesses the following menus, Power, Thermostats and Chrono. With the P4 and P6 keys you must select the desired menu and then press P3 to validate the choice, in this case the Power menu.

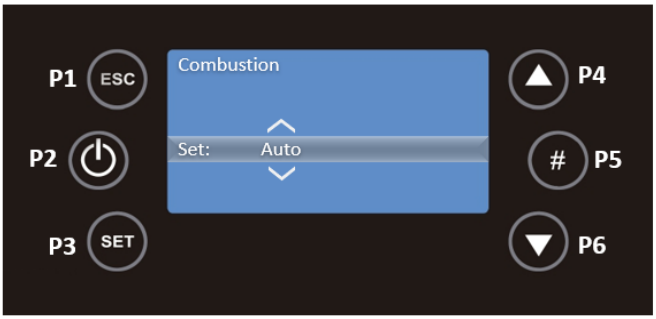


13.5.1. Combustion

Select Combustion with the P3 key, to validate the entry in this submenu.



With the P4 and P6 keys you can modify the system's combustion power. It can be set in automatic or manual mode: in the first case, the system will choose the combustion power; in the second case, the user selects the power from 0 to 5.



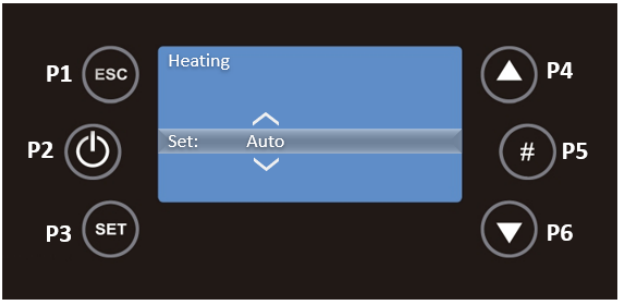
Press the P3 key to save your changes and use P1 to go back.

13.5.2. Heating

With P4 and P6 you must select Heating and then press P3 to validate access to this submenu.

With the P4 and P6 keys you can modify the combustion power of the system. This submenu allows modifying the ventilation power of the system. It can be set in

automatic or manual mode: in the second case, the user selects the power from 0 to 5.

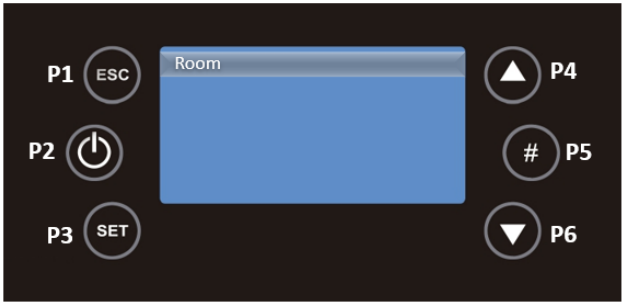


Press the P3 key to save your changes and use P1 to go back.

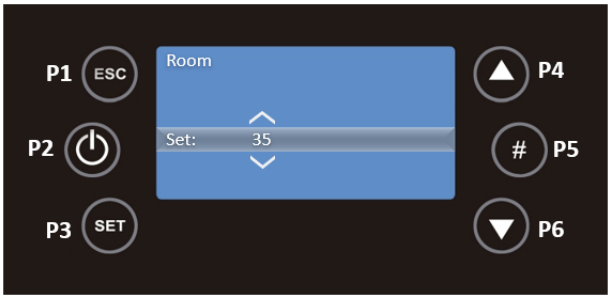
13.6. Thermostats Menu

Press the P3 key to access the Thermostats menu, using the P6 key, and then press P3 to validate the choice of this menu.

In this menu, select the submenu Environment, using the P3 key.



You can set the target comfort temperature between 10 and 40°C with the P4 and P6 keys.

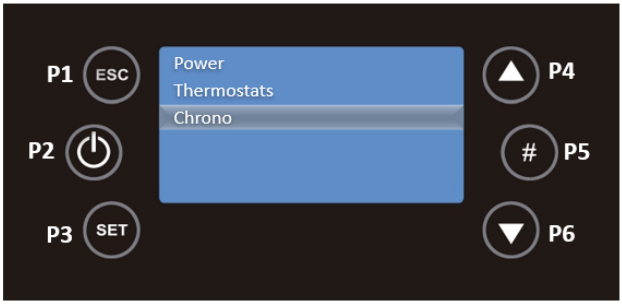


Press the P3 key to save your changes and use P1 to go back.

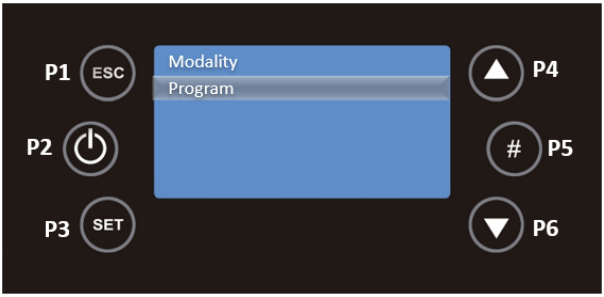
13.7. Chrono Menu

The equipment has a time scheduler that is used to automatically turn the insertable on and off. It can be daily (you can select the day of the week you want and set up to 3 different times for the respective day), weekly (you can select up to 3 times during a day, the same program will be applied every day of the week) and weekend (you can select 3 times during the day for weekdays and weekends).

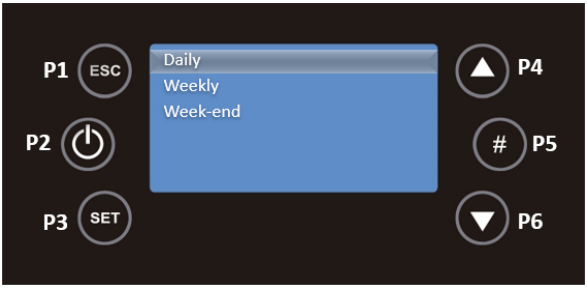
In the main screen, pressing the P3 key accesses the menus, Power, Thermostats and Chrono. With the P4 and P6 keys you must select the Chrono menu and then press P3, to validate your choice.



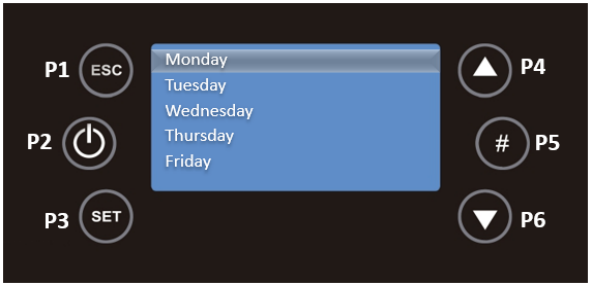
Then you must enter the Program submenu, using the P6 key to select and P3 to validate the choice.

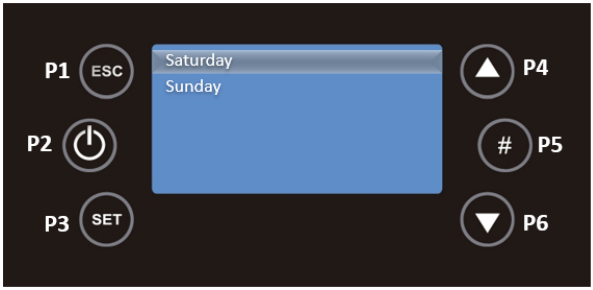


Then with the P4 and P6 keys you must select Daily, Weekly or Weekend. You must press P3 to validate the choice.



For the Daily program you must, with the P4 and P6 keys, select the day of the week, in this case the program for Monday, and then press P3 to validate the choice.



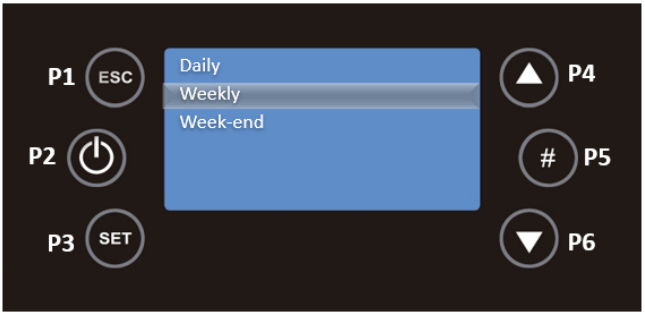


You should press P3 and this field will be in editable mode, flashing. Press P4 and P6 to select the desired time and then use the P3 key to save. You must repeat this process for the time at which the equipment should shut down, with the P4 and P6 keys. Finally, you must captivate the interval with the P5 key, and a check mark will appear on the right side of the interval.

In the image above the system will turn on at 20:30 on Monday and turn off at 06:30 on Tuesday. When programs are developed around midnight with the intention of starting operation the day before and ending operation the next day it will be pertinent:

- End the last program on the previous day by 23:59;
- Start the first program the next day by 00:00.

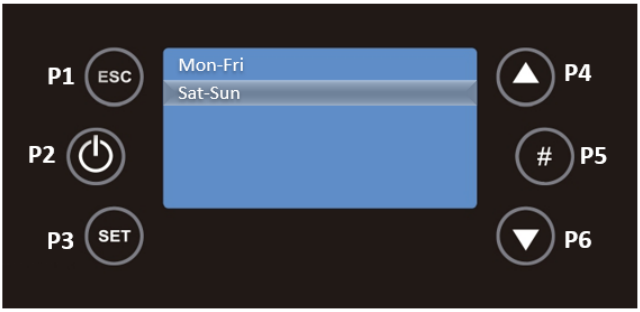
For the Weekly program, the programs are the same for every day of the week, from Monday to Sunday. You must, with the P4 and P6 keys, select Weekly, in the Program submenu, and press P3 to validate the choice.



You should press P3 and this field will be in editable mode, flashing. Press P4 and P6 to select the desired time and then use the P3 key to save. You must repeat this process for the time at which the equipment should shut down, with the P4 and P6 keys. Finally, you must captivate the interval with the P5 key, and a check mark will appear on the right side of the interval.

For the Weekend program, you must, with the P4 and P6 keys, select Weekend and press P3 to validate your choice.

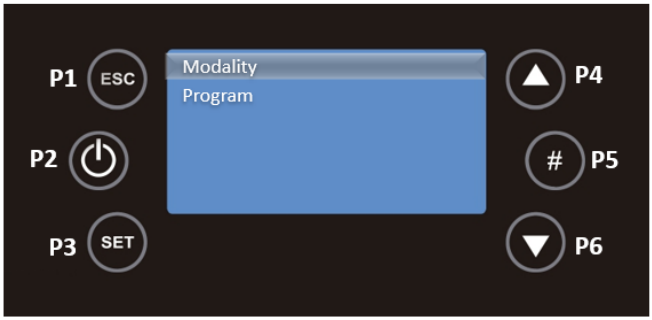
For this mode you must choose between the Monday to Friday and Saturday to Sunday time slots by pressing the P3 key.



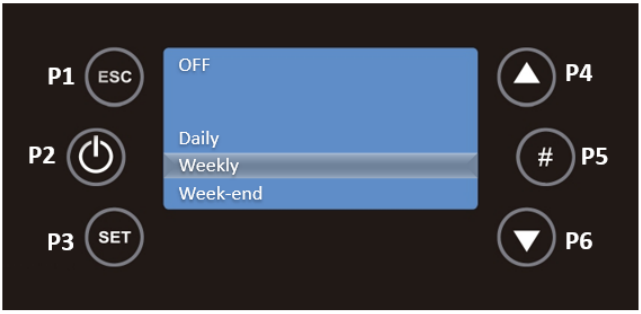
You should press P3 and this field will be in editable mode, flashing. Press P4 and P6 to select the desired time and then use the P3 key to save. You must repeat this process for the time at which the equipment is to turn off, with the P4 and P6 keys. Finally, you must activate the interval with the P5 key, and a check mark will appear on the right side of the interval.

AFTER DEFINING THE PROGRAMS IT IS NECESSARY TO DEFINE WHICH MODE YOU WANT TO ACTIVATE.

In the main screen, press the P3 key to access the menus, Power, Thermostats and Chrono. With the P4 and P6 keys you must select the Chrono menu and then press P3, to validate the choice.



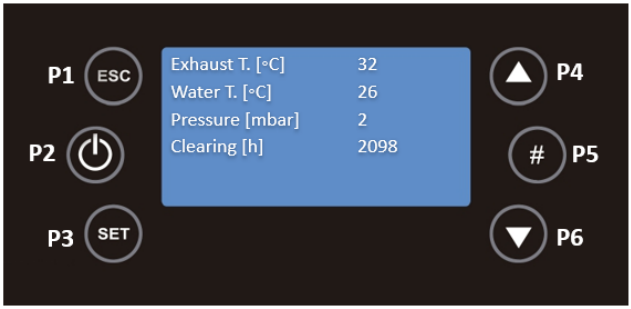
By selecting Mode with the P3 key you can select which chrono mode you want. Use the P4 and P6 keys to select between Daily, Weekly, or Weekend, use the P2 key to activate/deactivate the choice, and P3 to save the changes.



The main screen after activating the mode gets Led D, S or FS active in the upper right corner.

13.8. User Info

In this menu the user can view some information about the equipment, such as measured values and aspects concerning the electronics. In the initial menu, press the P5 key once, and the menu will appear.



With the P4 and P6 keys you can scroll through the different variables. The values displayed are the values measured On-Line.

The following table is explicit to the meaning of each of the variables.

T. Smoke [°C]	Read in degrees Celsius (°C) it tells you the exhaust temperature monitored by the thermocouple.
Water Temperature [°C]	Read in degrees Celsius (°C) it tells you the water temperature.
Extractor [rpm]	Read in revolutions per minute, it tells you the rotation speed of the extractor.
Auger Motor [s]	Read in seconds, this tells you the time within a 4-second period that the worm motor is active and feeding pellets to the burner.
Service [h]	Read in hours informs the number of hours missing to report anomalies due to lack of maintenance. These must be calibrated by the technical service during maintenance. The maintenance period must respect the kilos of burned pellets
Working Time [h]	Read in hours tells you the number of hours in On, modeling, and security.
Ignitions [nr]	Read in number of occurrences tells you how many ignitions have been performed since they were fired.
Artic. Code	Product Code.

14. List Alarms / malfunctions / recommendations

All alarms cause the machine to shut down with information about the error and activation of the alarm led. It will be necessary to reset the alarm and restart. To reset the machine, press the "On/Off" button for 3 to 4 seconds until you hear a beep, accompanied by the message "Reset alarms in progress";
If the reset is successful, there will be new information - Reset alarms successful
In the Off state if for any reason the smoke temperature rises above 85ºC (Th01) the stove enters the off mode.

Alarm	Code	Cause and Resolution	
Excess temperature in the pellet tank	Er01	110 °C, even when the equipment is off	- Room fan not working - call for service - Thermostat defective - call for service - Machine with defective ventilation
Smoke pressure switch alarm	Er02	Door open, no depression or extractor failure for 180 s Only visible if puller is set to on	- Close the door and remove the faulty pressure switch error - Faulty exhaust pipe obstruction or extractor
Exhausted flame or lack of pellets	Er03	Fume temperature below: 55°C (Th03)	- Empty pellet tank; - Broken thermocouple; - Clogged pellet channel
Excess temperature fumes	Er05	More than 300 °C	- Room fan does not work or is at a low power level - increase the level to maximum (if the problem persists call for service) - Insufficient draft - Excessive dosage of pellets - Defective smoke probe
Fume extractor error	Er07	No rpm signals. Allows unlocking and working by voltage in a provisional way P25=0	- Check connection - Check that the fan is not blocked - After fault correction it is necessary to reselect operation mode P25=2
Fume extractor encoder error	Er08	Encoder shows signal, but failed regulation. Allows unlocking and working by voltage temporarily P25=0	- Exhaust pipe obstruction or extractor defective - After fault correction it is necessary to reselect operating mode P25=2

Ignition failure	Er12	Maximum time:900 s and Fume temperature less than 50ºC	- Empty worm channel - restart - Burned out heating element - replace heating element - Firing basket incorrectly placed - Fume temperature did not exceed the value set at switch-on
Power supply voltage cut-off	Er15	Power cut for time longer than 50 min	- Check supply voltage with the electric power supplier; - Check simultaneous use of electrical appliances - In case of a short power failure (<10s) the insert continues to work normally; - If the system was ON and the power supply failure occurs for more than 10s and less than 50 min the insertable develops an ignition after blackout
Faulty communication with LCD control	Er16		- Check connection between board and display
Pressure differential sensor damaged	Er39	The combustion regulation is interrupted and the stove will work with the factory default values entering standby until Tsmoke < 85ºC (Th28)	- Check connection between plate and pressure differential sensor; - Check pressure differential reading - Check possible clogging in the measurement taps, or throttling of the same
Minimum / reference value for the differential sensor not reached during the Checkup phase	Er41	Value of 70 not reached (FL20) Regulation is stopped and the greenhouse will go into extinction	- Check connection between plate and pressure differential sensor; - Check possible clogging in the measurement taps, or throttling of the same
Maximum/reference value for differential sensor reached	Er42	Regulation is disrupted and the greenhouse will go extinct	- Check connection between plate and pressure differential sensor; - Check possible clogging in the measurement taps, or throttling of the same
Maximum value / reference for the differential sensor reached	Service	Maximum 2100 hr Hours (T66) planned for maintenance achieved	- Contact your installer or repairer for occasional preventive maintenance of the equipment.

15. Start-up

After loading the pellets into the deposit (see chapter 13), press and hold the ON/OFF button for 3s, to start the equipment. During the lighting phase, the display will show the message **"Ativação" (Activation) until this phase is completed**.

The *pellets* are fed through the supply channel to the burning basket (combustion chamber), where they will be ignited using a heat resistor. This process may take 5 to 10 minutes, depending on whether the worm screw used to push through the pellets has been previously filled with fuel or is empty. Once the ignition phase is completed, the message "On" appears on the display. The heating power can be adjusted at any time by pressing the power selection button for approximately 1 second. You can select from the five pre-set power levels that are available. The selected power is indicated on the display. The initial power status at each start-up will correspond to the power level set before the last stop.

⚠ **Important notice: Before starting up the unit, please check to determine if the deflector plate is in place.**

15.1. Stop

The stop sequence of the unit is started by pressing the ON/OFF button for 3 sec. The display will show **"Desativação"** (Disabling) until full completion of this phase. The extractor will operate until the fume temperature of 64ºC is reached, to guarantee that all the material has been burnt.

15.2. Turning Off the Unit

The unit should only be disconnected after its full stop. Make sure the **"Off"** shows on the display before disconnecting the unit. If necessary, disconnect the power cable from the mains.

16. Replenishment of pellet

1 - Open the sliding door by moving to the left, open the pellet loading drawer and pull.

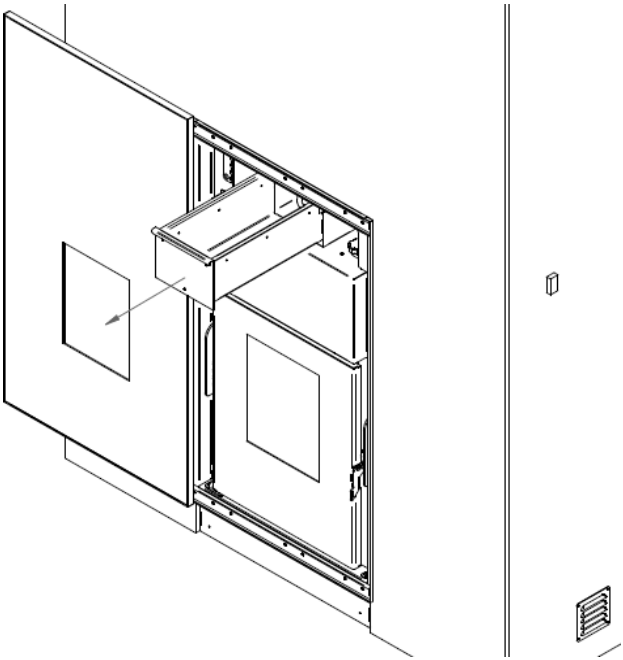


Figure 35 – Replenishment of pellet

2 - Remove the tool and fill the drawer with pellets. With the tool, push the pellets into the drawer until they fall into the tank. Repeat this process until the pellets fill

the tank at drawer level. Place the tool in the drawer and then close, the size and design of the tool does not drop it into the tank. Close the sliding door by sliding to the right.

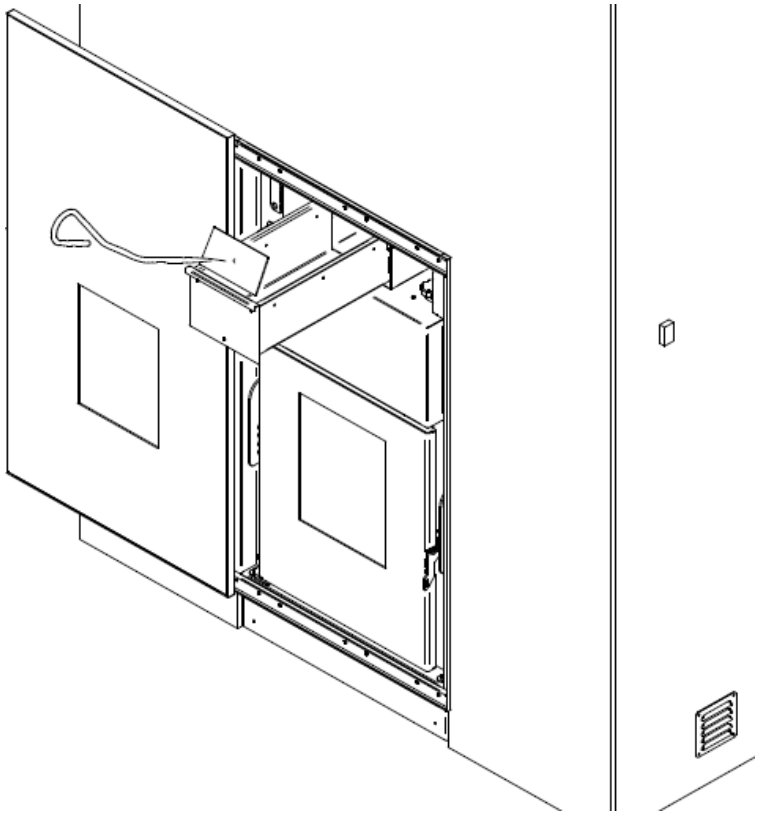


Figure 36 – Replenishment of pellet

17. WI-FI and remote control (optional not included)

17.1. Types of control

The pellet inserts are provided from factory with a display and control panel. Alternatively, you can operate the insert using a generic remote-control unit (programmable thermostat). Note: Usually, the remote control is supplied with a user's manual. To use the remote control, you must install an interface.

Figure 37 – Examples of external commands (not included)

17.2. Installing the WI-FI module

The insert is designed so that control can be added to it with a phone or tablet via a WI-FI module. The installation consists of connecting a cable to the electronic board directly and fixing the connector on the right support arm, in the hole designed for this purpose. The WI-FI module will be connected to the already fixed connector. For more details on the installation and operation of the WI-FI module, please visit the following link: *www.welcome.solzaima.com*

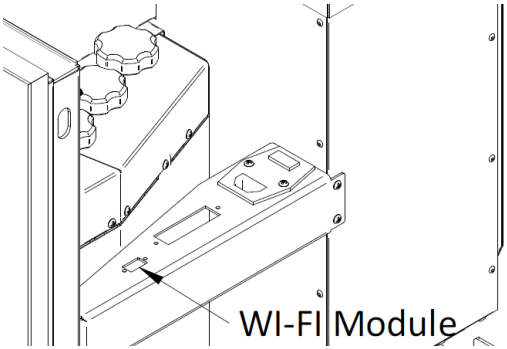


Figure 38 – Interface location on the machine

17.3. Installing the external control

To use an external command, it is required to connect it to the interface board, which is located next to the space for the WI-FI module on the right-hand bracket.

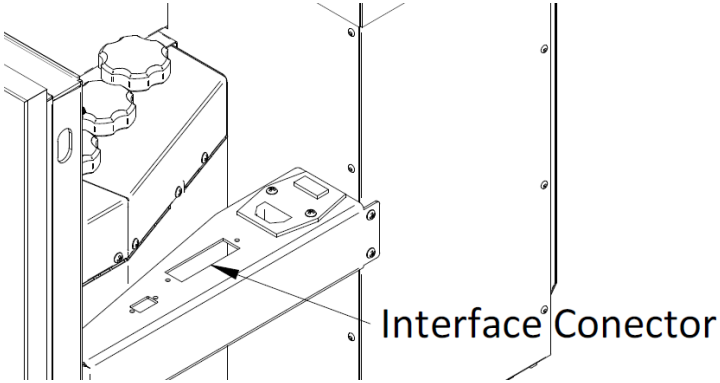


Figure 39 – Interface location

The interface board has 4 different inputs, JA and JB are connections that are used to establish contact directly with the electronic board, for example to access the software from a computer or make updates and JC, are the ones we would use for external control.

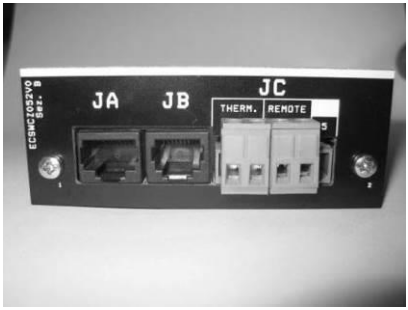


Figure 40 – Interface

This board has two inputs on JC "remote" and "therm". When working with the "Remote" contact, the insert will be activated when it receives (NC contact closed) and will stop (NO contact open).

When working on the "thermostat" contact, this only varies the power of the machine between the minimum power (open NO contact) and maximum power (closed NC contact).

Note: The external control, as standard, comes with a manual.

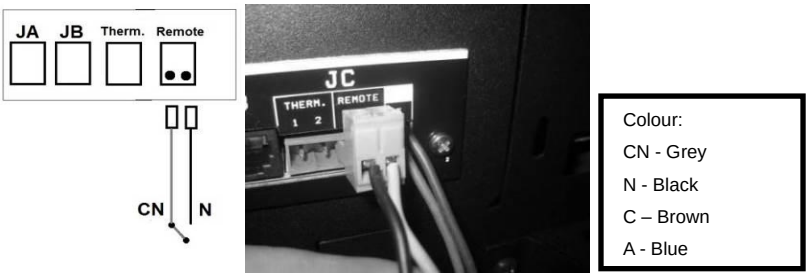


Figure 41 – Connecting the remote control

In the case of the wired remote control it is necessary to connect the black and grey cables in the receiver as shown in the following image.

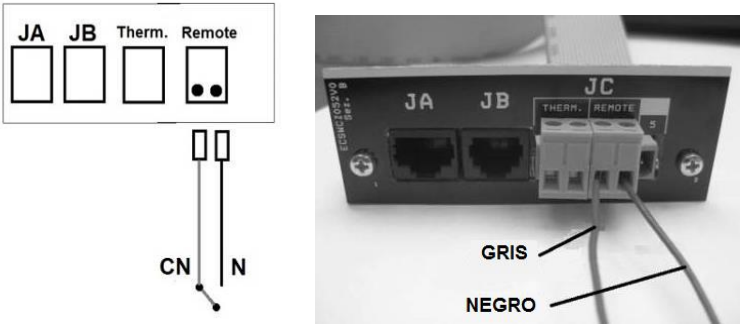


Figure 42 – Wired external control connections

18. Maintenance

Solzaima pellet inserts require rigorous maintenance just like any machine of this type. The main care to be taken is to regularly clean the ashes in the pellet burning area. To do this, it is practical to use an ash vacuum cleaner. Cleaning should be carried out after each burning of approximately 60 kg of pellets.

Note: Before performing any cleaning, it is imperative that the insert is off and sufficiently cold in order to avoid accidents.

18.1. Cleaning the turbulators

- Move the outside door to the left to access the inside of the equipment, at the top you will see 8 plastic roulettes, 4 on each side of the pellet loading drawer. Spin each one a couple of turns and then pull them up while spinning them. Repeat this movement on all the roulettes as many times as necessary until you notice that the movement is free from any friction with dirt.

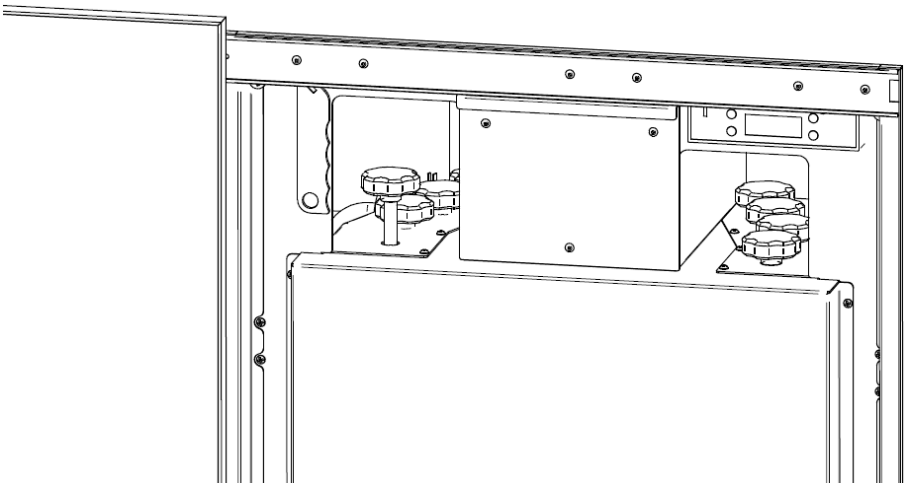


Figure 43 – Cleaning the turbulators

18.2. Cleaning the inside of the chamber

- Open the internal door using the tool located on the top left of the front. Insert the tool into the door latch (as shown in the following figure) and pull up.

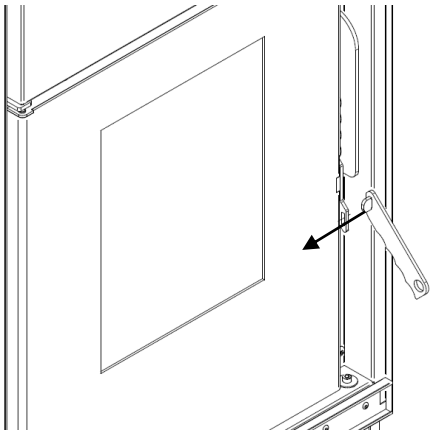


Figure 44 – Opening the inside door

- After opening it is recommended to put the tool in place. Clean the inside of the combustion chamber using a steel brush, clean all surfaces of both walls and the ceiling of the chamber. Making the dirt fall off.

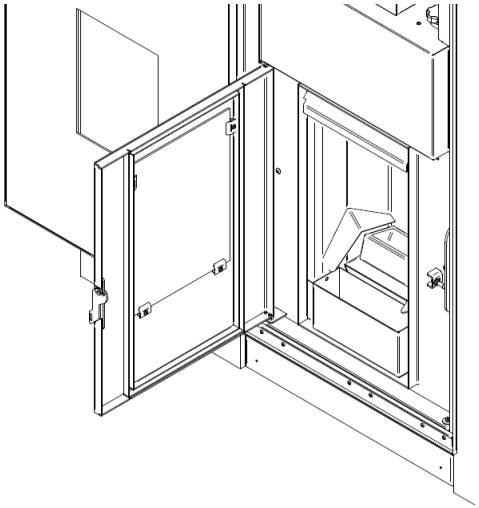


Figure 45 – Cleaning the chamber

- Then remove the burner to clean more easily. Pull the burner up and remove from the machine, then rub with a steel brush and vacuum.

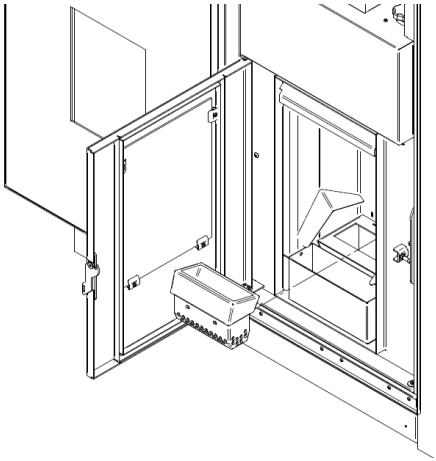


Figure 46 – Cleaning the burner

- Then remove the ash drawer and vacuum.

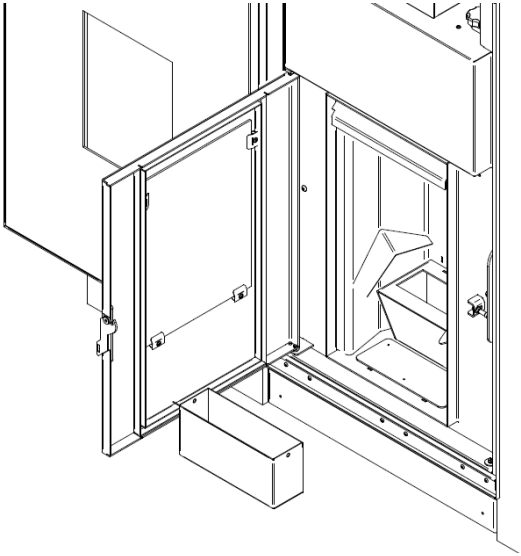


Figure 47 – Cleaning the ash drawer

- It is also necessary to clean the inside of the salamander by simply removing the trapdoor from underneath the ash drawer and vacuuming the ash lodged in the compartment.

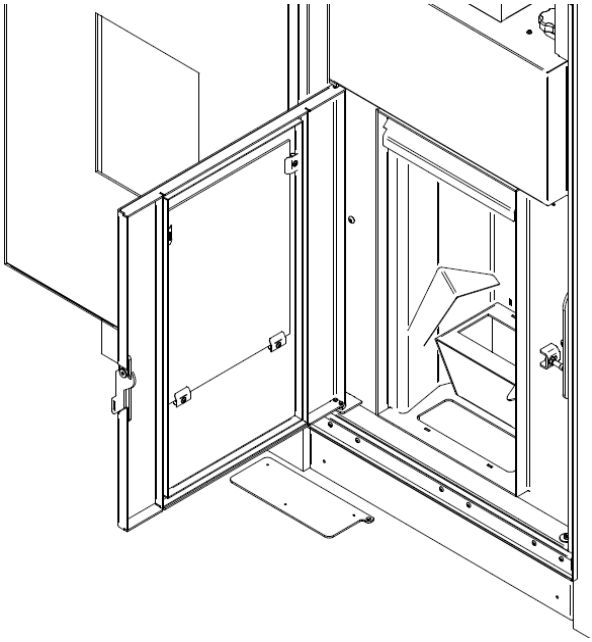


Figure 48 – Cleaning the inside of the insertable

- After cleaning, place all parts in the reverse order they were removed, with special care when placing the trapdoor, as it is very important to be fully seated and flat, to ensure that the air does not pass. It is also important to ensure that the burner is flat and properly fitted so that air cannot escape between the burner and the plate.

- Finally, close the door. Put the tool back in place and close the sliding door by sliding to the right.

18.3. Additional cleaning

For each 600-800 kg of pellets consumed, additional cleaning should be performed. This type of cleaning is to be done with the equipment extracted from the wall to have access to all the elements.

- To extract the equipment, it must be cooled and disconnected from the electrical current.

- Open the outside door to the left, remove the screws securing the bottom cover with an Allen key Nº 5 and the screws securing the body to the chassis using an Allen key Nº 6.

- Then grab the handles which are at half height (as shown in the following figure), and remove the equipment from the wall with some care, since the body is hydraulically and electrically connected.

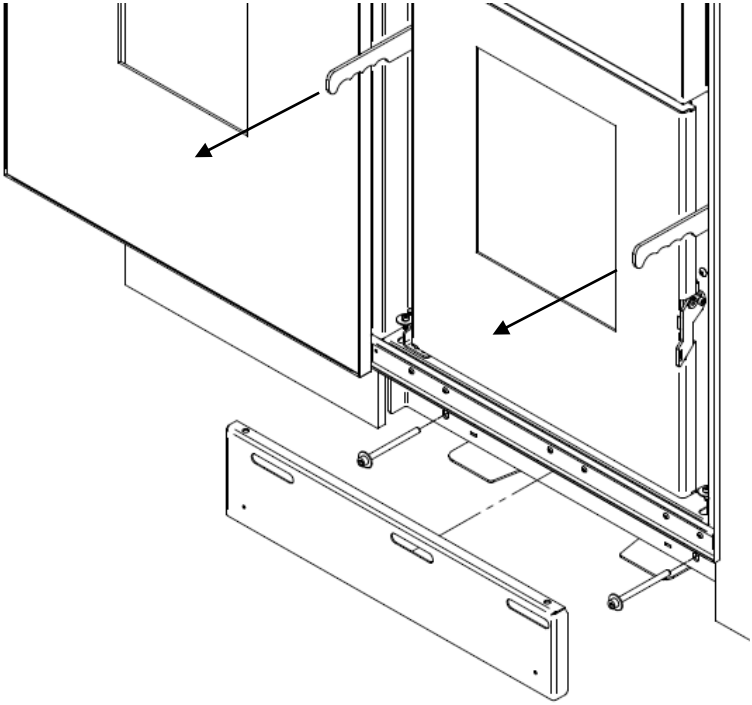


Figure 49 – Removing the equipment from the cabin

- With the equipment extracted, remove the 8 plastic handles from the heat exchangers, remove the 10 screws (5 on each side) on top of the galvanized sheet covering the turbulators and the 4 screws (2 on each side) that connect the turbulator covers with the galvanized sheet covering of the body.

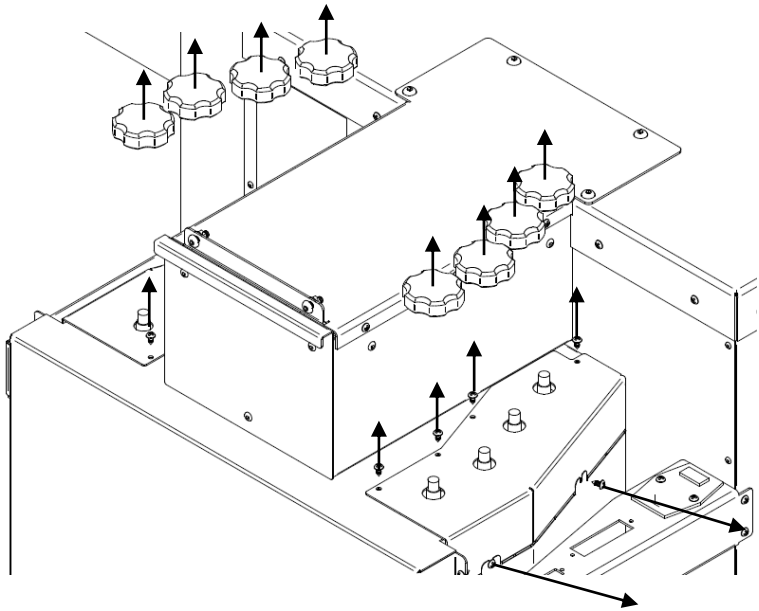


Figure 50 – Removing the turbulator cover

- Remove the turbulator covers, as well as the rock wool plates.

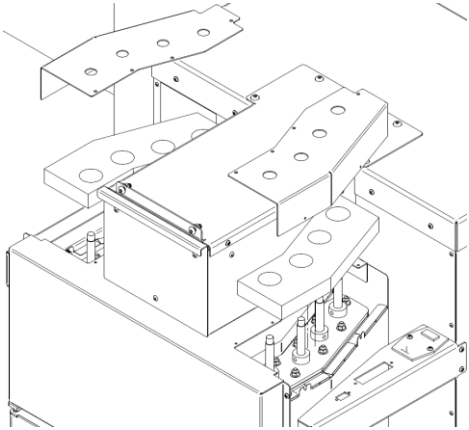


Figure 51 – Removing the turbulator cover

- Remove the 8 M6 nuts to release the plate, according to the following figure.

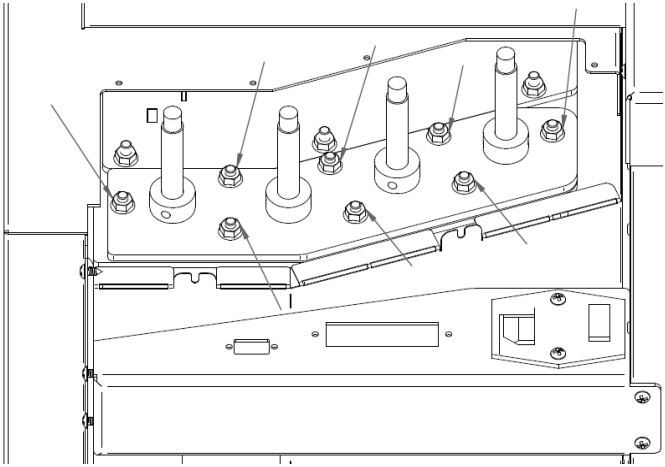


Figure 52 – Removing the turbulator cover

- Place two previously removed plastic handles to facilitate extraction of the entire body from the turbulators.

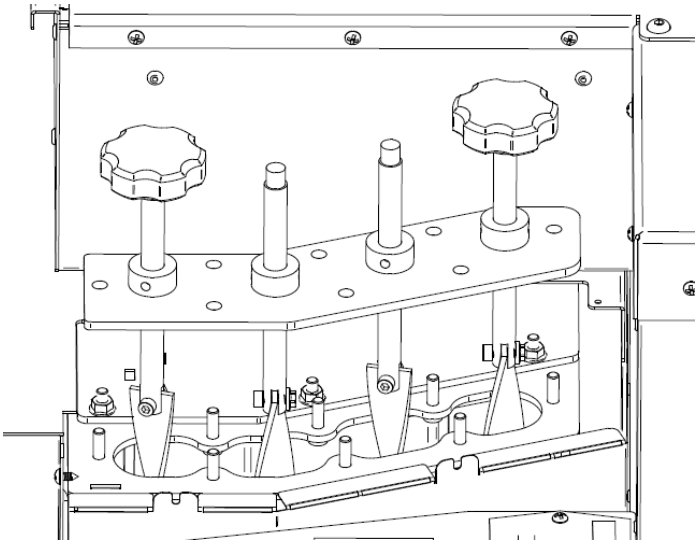


Figure 53 – Removing the turbulator cover

- Clean the turbulators using a steel brush.

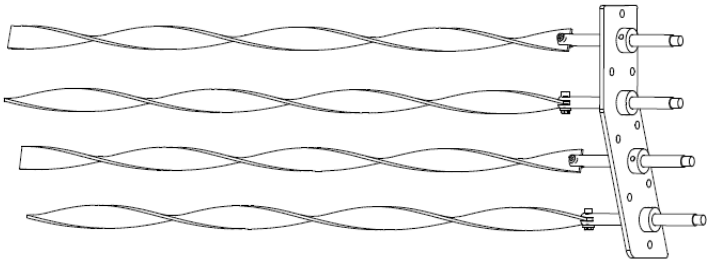


Figure 54 – Cleaning the turbulators

- Clean the inside of the pipes, using a round steel brush and a vacuum cleaner to clean all the internal parts of the machine that are in sight.

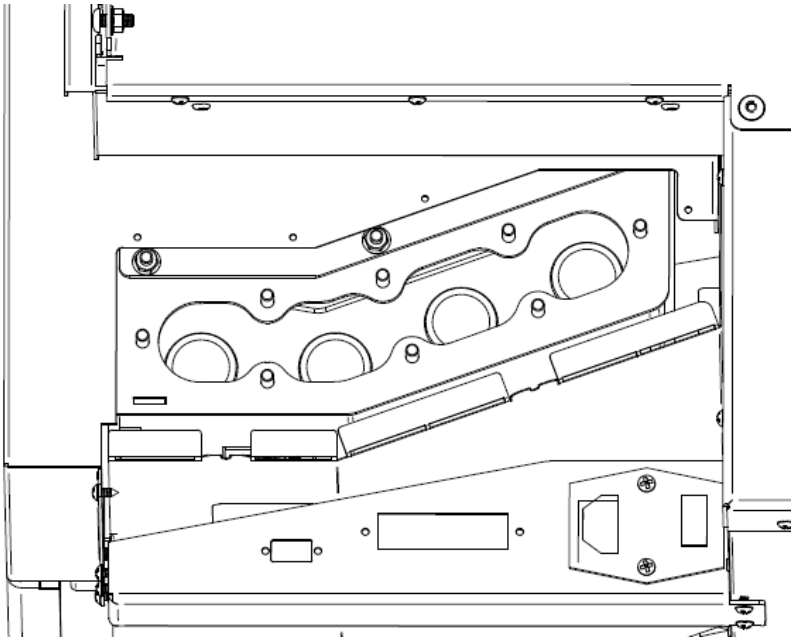


Figure 55 – Cleaning the turbulators

- Put the whole set of turbulators in the reverse order of disassembly and repeat the same cleaning for the other symmetrical set.

- Then clean the smoke box completely, for this it is necessary to dismantle the smoke extractor which is located at the bottom right. The fixing position of the extractor is very important because it has to be completely parallel to the smoke box, so that when the body and chassis are connected, the joint at the extractor outlet is fully supported by the smoke box, preventing any leakage of smoke that may exist.

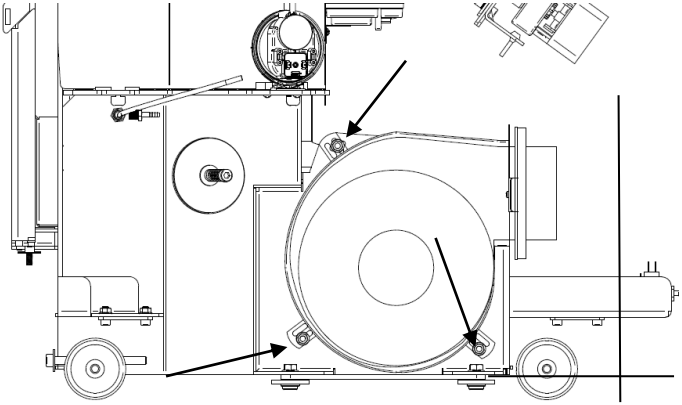


Figure 56 – Extractor attachment nuts

- The easiest way to ensure the same position of the extractor after cleaning is to make some marks that indicate the position of the supports in relation to the body. The extractor is connected to the body by three M6 nuts. To remove the upper nut, it is necessary to keep the screw that is screwed with the help of an Allen key nº 5, the other two are not necessary as the screws are welded inside the box.

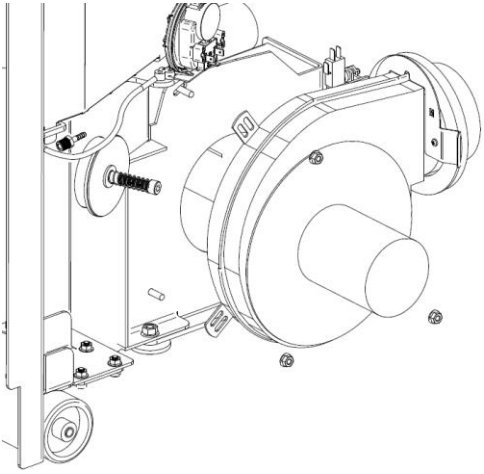


Figure 57 – Extractor attachment nuts

- With the extractor removed from the smoke box, clean the inside of the box. First scrape with a steel brush and then with a vacuum cleaner remove all dirt.

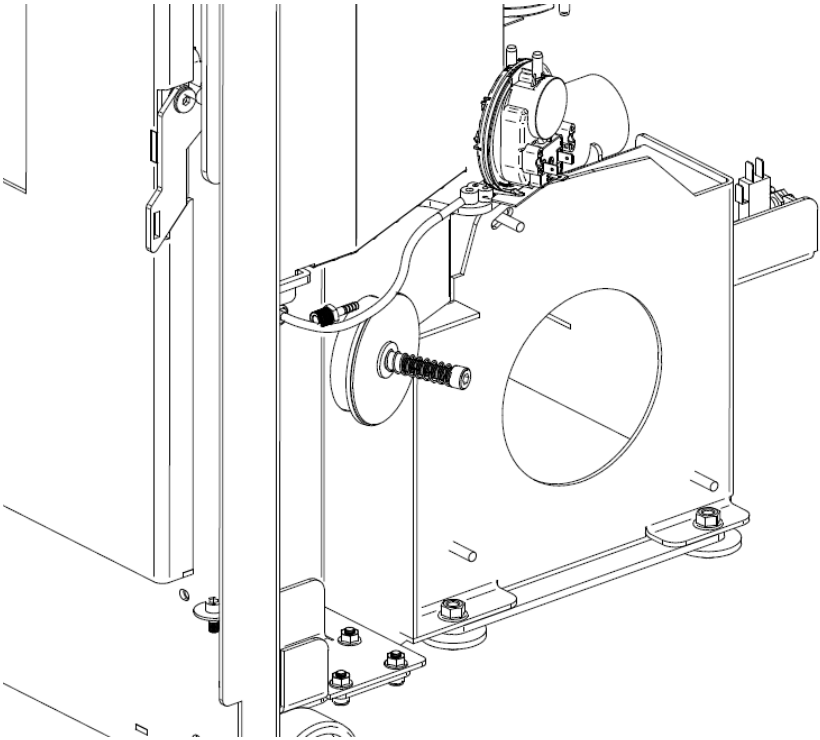


Figure 58 – Extractor attachment nuts

- After the cleaning process, put the extractor back in the correct position, with the help of the marks made previously.

- Cleaning the chassis smoke box. With the machine body outside the cabin, you have access to the chassis which is fixed to the floor and the wall inside it. On the right-hand side of the chassis you will find the chassis smoke box. This box has a cover fastened with 6 M6 nuts and a round hole where the smoke extractor enters, when the body is inserted. Remove the nuts and you can remove the cover. Removing the cover reveals a large opening that allows you to clean the inside of the smoke box. If necessary, you can also remove the plates inside by removing the screws and nuts. First scrape all the interior surfaces with a steel brush, inserting it through the two openings it has and then, using a vacuum cleaner, remove all the dirt.

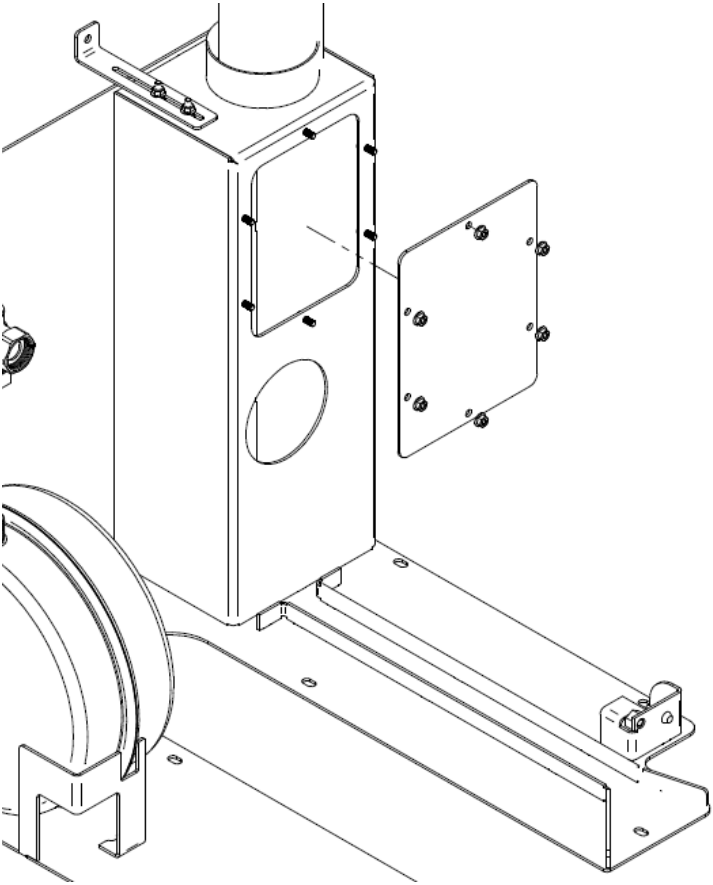


Figure 59 – Cleaning the smoke box of the chassis

-Finish by replacing the cover and fastening it with the 6 M6 nuts, to prevent any smoke escapes.

18.4. Cleaning the glass

Allow the unit to cool down completely before cleaning the glass. For cleaning, use a specific product following the instructions of the label. Avoid contact between the product and rope gasket and painted metal parts of the unit, as this may cause oxidation. The rope gasket is fixed with glue so any contact with water or any other liquids must be avoided.

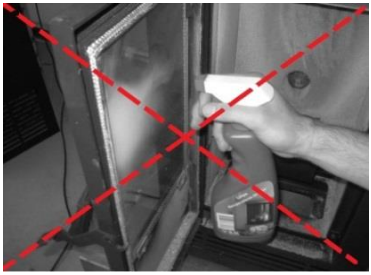


Figure 60 – Incorrect cleaning of the glass

a) b)

Figure 61 – Cleaning the glass: a) Applying liquid to the cloth; b) Cleaning the glass with the cloth

WARNING! the periodicity of maintenance tasks is dependent on the quality of the pellets.

Note: See label with warnings and maintenance tasks in chapter 18.

19. Maintenance Plan and Log

To ensure the proper operation of the unit, maintenance operations must be performed, as described in Chapter 15 of this Instruction Manual or in the Maintenance and Cleaning Guide. There are specific maintenance tasks that must be performed by authorized technicians only. Please contact the person responsible for installing the unit. To make sure the warranty remains valid, the maintenance operations performed on this unit must comply with the frequency requirement specified in the manual, and the service technician must fill and sign the maintenance log.

Client data:

Name:	
Address:	
Telephone:	
Model:	
Serial number:	

Company/SAT:
Technical:
Dates:
Service hours of boiler:
Quantity of pellets burned:

Task	Check	Obs.
Clean burner		
Clean smoke circuit and turbulators		
Vacuum pellet tank sawdust		
Check pressure of the expansion vessel		
Check safety valve 3 bar		
Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

Signature/stamp

Company/SAT:
Technical:
Dates:
Service hours of boiler:
Quantity of pellets burned:

Task	Check	Obs.
Clean burner		
Clean smoke circuit and turbulators		
Vacuum pellet tank sawdust		
Check pressure of the expansion vessel		
Check safety valve 3 bar		
Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

Signature/stamp

Company/SAT: ____________
Technical: ____________
Dates: ____________
Service hours of boiler: ____________
Quantity of pellets burned: ____________

Task	Check	Obs.
Clean burner		
Clean smoke circuit and turbulators		
Vacuum pellet tank sawdust		
Check pressure of the expansion vessel		
Check safety valve 3 bar		
Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

Signature/stamp

Company/SAT: ____________
Technical: ____________
Dates: ____________
Service hours of boiler: ____________
Quantity of pellets burned: ____________

Task	Check	Obs.
Clean burner		
Clean smoke circuit and turbulators		
Vacuum pellet tank sawdust		
Check pressure of the expansion vessel		
Check safety valve 3 bar		
Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

Signature/stamp

Company/SAT: ____________
Technical: ____________
Dates: ____________
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Task	Check	Obs.
Clean burner		
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Check and clean the inspection T		
Clean chimney		
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Check engine cap pellet hopper		

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Technical: ____________
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Task	Check	Obs.
Clean burner		
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Check and clean the inspection T		
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Task	Check	Obs.
Clean burner		
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Quantity of pellets burned: ____________

Task	Check	Obs.
Clean burner		
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Service hours of boiler: ____________
Quantity of pellets burned: ____________

Task	Check	Obs.
Clean burner		
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Task	Check	Obs.
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Service hours of boiler: ____________
Quantity of pellets burned: ____________

Task	Check	Obs.
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Company/SAT: ____________________
Technical: ____________________
Dates: ____________________
Service hours of boiler: ____________________
Quantity of pellets burned: ____________________

Task	Check	Obs.
Clean burner		
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Vacuum pellet tank sawdust		
Check pressure of the expansion vessel		
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Check the fluid on the hydraulic circuit		
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Check engine cap pellet hopper		

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Technical: ____________________
Dates: ____________________
Service hours of boiler: ____________________
Quantity of pellets burned: ____________________

Task	Check	Obs.
Clean burner		
Clean smoke circuit and turbulators		
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Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

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Dates: ____________________
Service hours of boiler: ____________________
Quantity of pellets burned: ____________________

Task	Check	Obs.
Clean burner		
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Quantity of pellets burned: ____________________

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Clean burner		
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Dates: ____________________
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Clean burner		
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Check pressure of the expansion vessel		
Check safety valve 3 bar		
Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

Signature/stamp

Company/SAT: ____________________
Technical: ____________________
Dates: ____________________
Service hours of boiler: ____________________
Quantity of pellets burned: ____________________

Task	Check	Obs.
Clean burner		
Clean smoke circuit and turbulators		
Vacuum pellet tank sawdust		
Check pressure of the expansion vessel		
Check safety valve 3 bar		
Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

Signature/stamp

Company/SAT: ____________________
Technical: ____________________
Dates: ____________________
Service hours of boiler: ____________________
Quantity of pellets burned: ____________________

Task	Check	Obs.
Clean burner		
Clean smoke circuit and turbulators		
Vacuum pellet tank sawdust		
Check pressure of the expansion vessel		
Check safety valve 3 bar		
Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

Signature/stamp

Company/SAT: ____________________
Technical: ____________________
Dates: ____________________
Service hours of boiler: ____________________
Quantity of pellets burned: ____________________

Task	Check	Obs.
Clean burner		
Clean smoke circuit and turbulators		
Vacuum pellet tank sawdust		
Check pressure of the expansion vessel		
Check safety valve 3 bar		
Check the fluid on the hydraulic circuit		
Clean the smoke extractor		
Check and clean the inspection T		
Clean chimney		
check the tightening of the screws		
Check engine cap pellet hopper		

Signature/stamp

20. Maintenance Guide Label

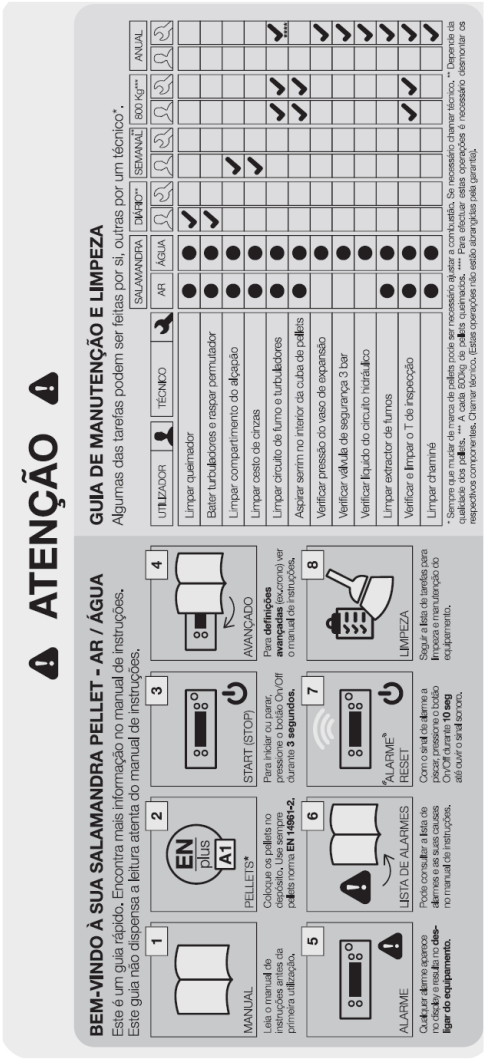


Figure 62 – Maintenance guide label

Note: The safety warnings sticker label is attached from factory to the unit's pellet lid, in the Portuguese language. Attached to the manual you will find other language versions of the sticker labels (Spanish, English, French and Italian). If necessary, remove the Portuguese language label and replace it with the label in your country's language.

21. Installation Diagrams

Simple connection only the central heating radiators

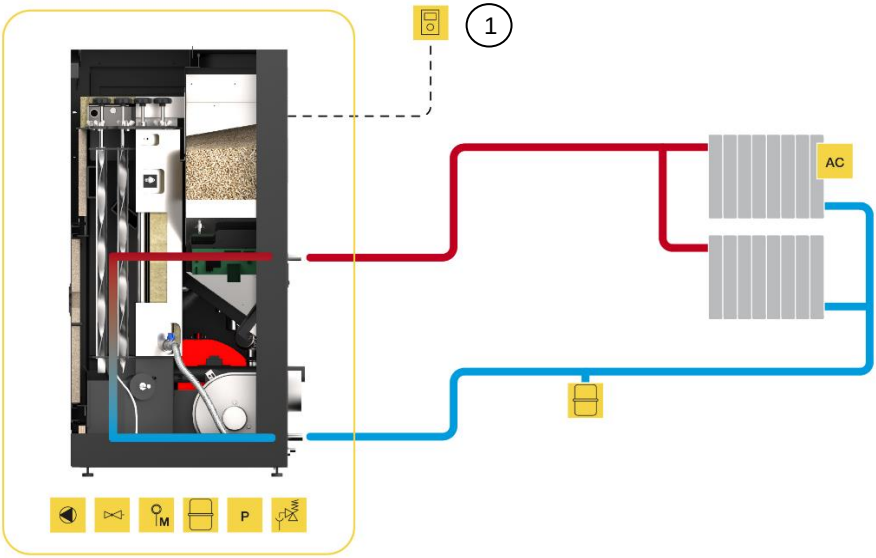


Figure 63 – Simple connection only the central heating radiators

Notes:

- The chrono-thermostat should have 1 to 2 °C of hysteresis. (1)
- Hydro independent "On" (water temperature-controlled regulation)
- Modulating pump "On"
- Water sensing inhibition "On"
- Alternative hydro shutdown "On"
- Pump "On" = 50 °C
- Pump "Off" = 50 °C

We can set / change according to the customer's discretion to another temperature.

Connection to central heating radiators and sanitary water combined with solar panel

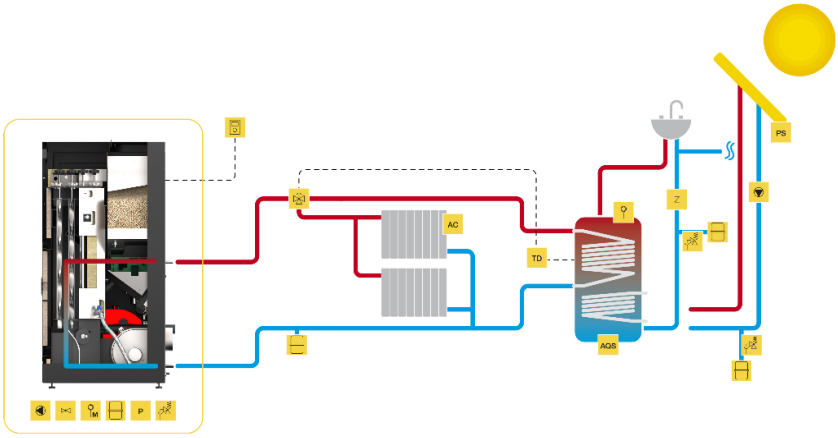


Figure 64 – Connection to central heating radiators and sanitary water combined with solar panel

Example: electrical connection of a thermostat (ambient air monitoring) of a differential thermostat connected to the deposit and three-way valve to a relay box

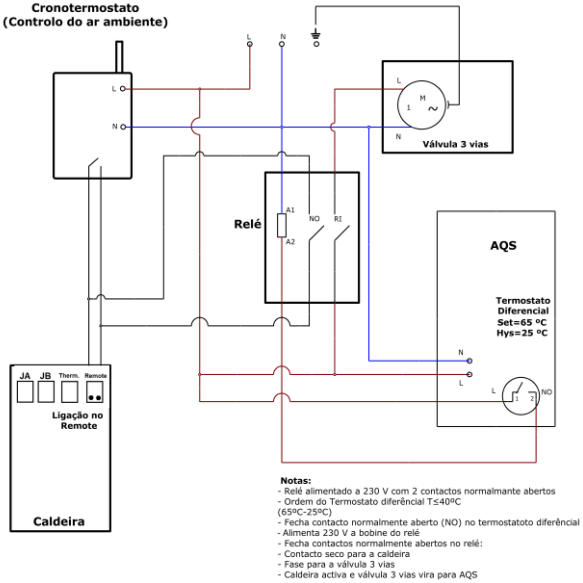


Figure 65 – Electrical connection of a thermostat (ambient air monitoring) of a differential thermostat connected to the deposit and three-way valve to a relay box

Connection to central heating radiators with another boiler support and sanitary water combined with solar panel

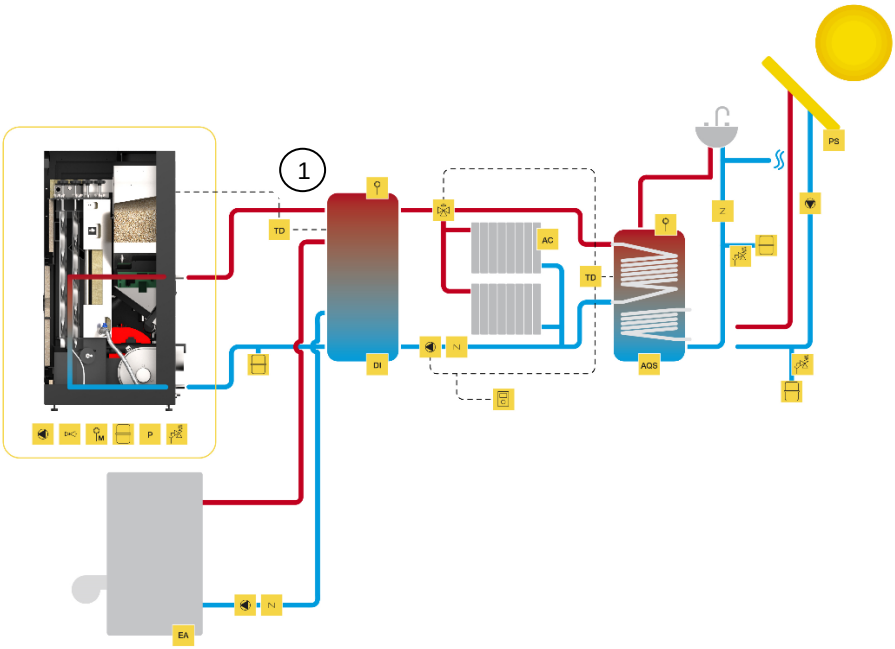


Figure 66 – Connection to central heating radiators with another boiler support and sanitary water combined with solar panel

Notes:

- The chrono-thermostat should have 15 to 25 °C of hysteresis. (1)
- Hydro independent "Off" (water temperature-controlled regulation), put the boiler in "manual" mode and power level to "5"
- Modulating pump "On"
- Water sensing inhibition "On"
- Alternative hydro shutdown "On"
- Pump "On" = 50 °C
- Pump "Off" = same or thermostat temperature 1°C below the temperature differential thermostat

When using the generator with differential thermostat the machine must be connected in the CONNECTION "Remote".

Calculation deposits of inertia: the boilers for pellets is recommended that the buffer tank has 20l/kW.

NOTE: For Columbus electronics when connecting the stove to the inertia tank it is necessary to change the following parameters:

P77=04

A01=04

(if necessary contact technical support)

Connecting underfloor heating in conjunction with another boiler support and sanitary water combined with solar panel

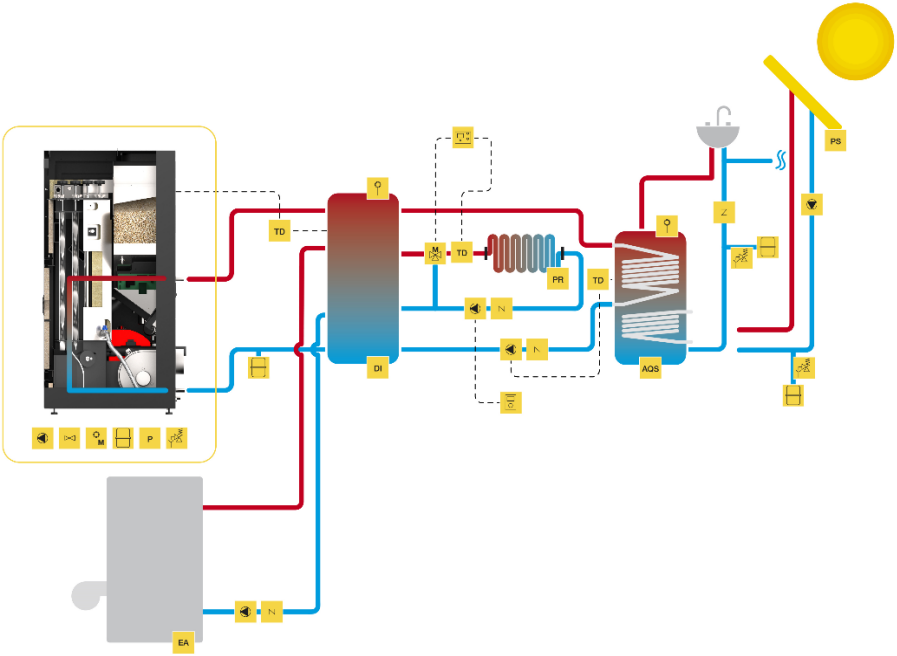


Figure 67 – Connecting underfloor heating in conjunction with another boiler support and sanitary water combined with solar panel

Symbology

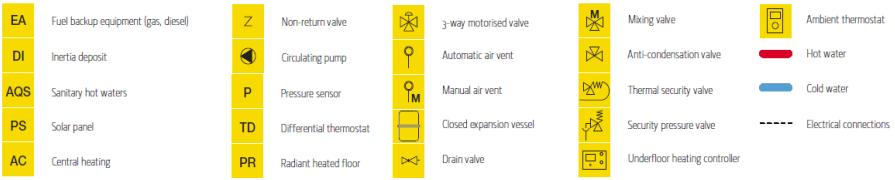


Figure 68 – Symbology

22. Electrical Diagram of the Fire Unit

22.1. Electrical diagram - Not applicable to Columbus electronics

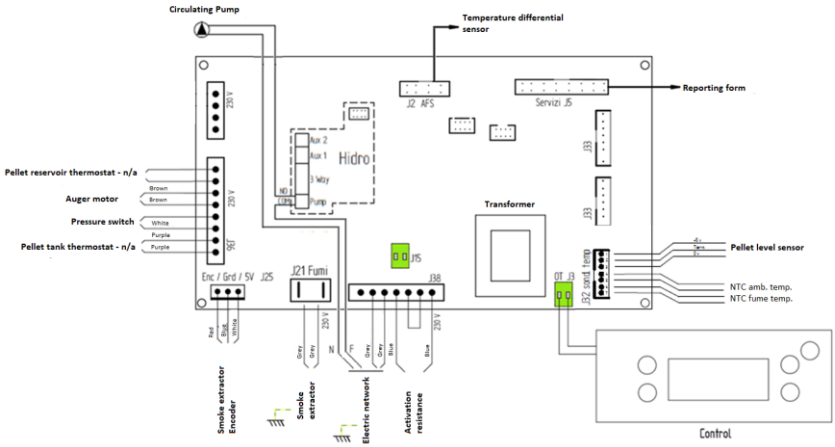


Figure 69 – Electrical diagram

22.2. Electrical diagram - Applicable to Columbus electronics

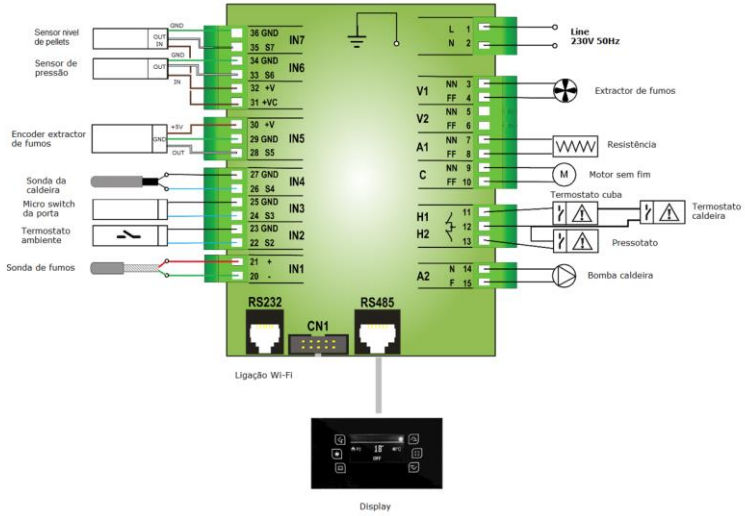


Figure 70 – Electrical diagram – Columbus Electronics

23. Pump UPM3 with Hybrid 15-70 130 mm

Performance graph for the circulating pump

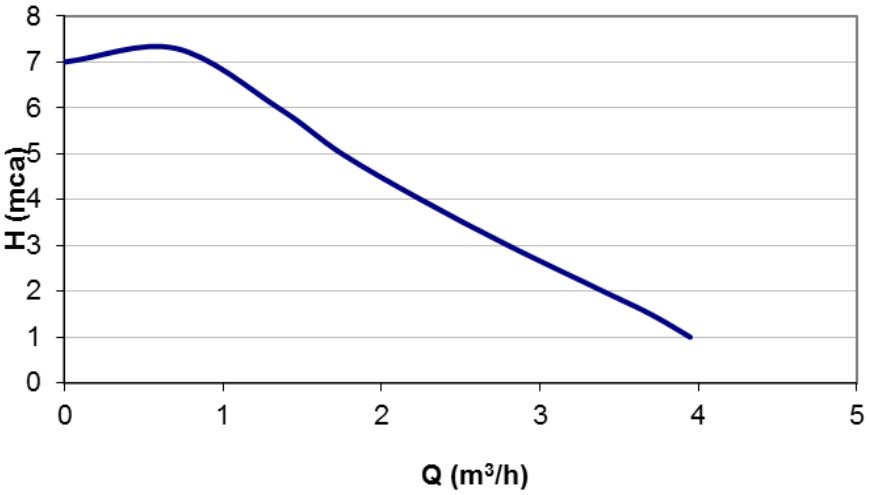


Figure 71 – Circulating pump performance graph

User interface

The user interface was designed with a single button, a red/green LED and four yellow LEDs

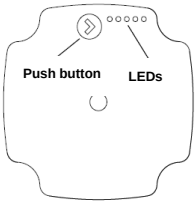


Figure 72 – User interface

When the pump is operating, the LED 1 is green. 4 yellow LEDs indicate the current performance of the pump, as shown in the following table.

Active LED	Performance (%)
LED Green	0 (Standby)
LED Green + 1 LED Yellow	0 - 25
LED Green + 2 LED Yellow	25 - 50
LED Green + 3 LED Yellow	50 - 75
LED Green + 4 LED Yellow	75 - 100

Table 5 - Performance of the pump

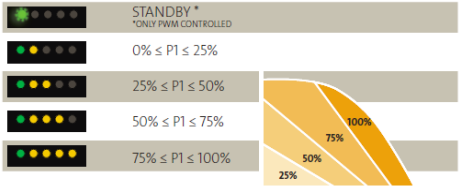


Figure 73 – Performance of the pump

Note: the pump is configured as standard at full capacity (75-100%).

Changing the setting of the pump

Can be chosen between the view of the performance of pump and the view of settings, just press the button once.

If you need to change the pump performance, you must press the button for 2 seconds (see Figure 72), after this action the LEDs start blinking, then you must press the button until the desired setting (see Table 5), after 10 seconds the display automatically switches to the view of performance with alteration saved.

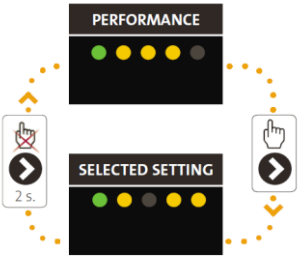


Figure 74 – Pump settings

Maximum manometric height (m)	Configuration
2-4	
3-5	
4-6	
5-7	

Table 6 - Pump settings

Alarms

If the pump detects one or more errors, the LED 1 changes from green to red when the alarm is activated the yellow LED indicates the type of alarm (see Table 6), if we have several alarms at the same time, the yellow LED indicates the alarm with higher priority, the priority sequence is defined on table as follows:

Display	Priority	Alarm	Action
LED 1 red + LED 5 yellow 	1	Rotor is blocked	Wait or deblock the shaft
LED 1 red + LED 4 yellow 	2	Supply voltage too low	Control the supply voltage
LED 1 red + LED 3 yellow 	3	Electrical error	Control the supply voltage or replace the pump

Table 7 - Alarms

24. End of life of a pellet insert

Approximately 90% of the materials used to manufacture these units are recyclable, contributing towards a reduced environmental impact and a more sustainable planet. End-of-life units should be processed by licensed waste operators. We recommend contacting your local council to ensure the unit is collected and handled pursuant to any legal requirements.

25. Sustainability

Solzaima designs and manufactures biomass solutions and biomass-fueled equipment as a primary energy source. This is our contribution for the sustainability of our planet – an economically viable and environmentally-friendly alternative, following environmental best management practices to ensure an efficient carbon cycle management.

Solzaima makes all efforts to learn and to know the national forest park while efficiently responding to energy demands, taking permanent care to maintain its biodiversity and natural wealth that are essential for the quality of life on our Planet.

SOLZAIMA is a member of the Portuguese **Sociedade Ponto Verde**, which manages packaging waste from products that the company places on the market, so you can take the packaging waste from your unit, such as plastic and cardboard, to your nearest recycling point.

SOLZAIMA is a member of **Amb3E**, the entity responsible for collecting waste electrical and electronic equipment (WEEE). Thus, end-of-life units with forced ventilation systems should be transported to an appropriate WEEE-processing location. When you disassemble your equipment, you can take its electrical components to your nearest WEEE collection point.

26. Warranty

26.1. Model specific conditions

This model requires that the unit is subject to start-up for the warranty to be to activated. The start-up service can only be performed by technical services authorized by the manufacturer. This is mandatory before the unit reaches 100 service hours. The final user is responsible for any expenses related to the start-up service.

26.2. Warranty General Conditions

1. Social name and address of the producer and Object

Solzaima, S.A.
Rua dos Outarelos, 111
3750-362 Belazaima do Chão

This document does not substantiate the provision by Solzaima S.A. of a voluntary warranty on it's produced and marketed products (from now on mentioned as "Product (s)"), but rather a guide, intended to be enlightening for the effective activation of the legal warranty that benefits consumers (from now on mentioned as "Warranty"). This document does not affect the legal rights of warranty, emerging from the purchase agreement whose purpose is the Product(s).

2. Product identification on which rests the warranty

The activation of the warranty presupposes prior and correct identification of the product object towards Solzaima, SA, being promoted by providing the Product ´s packing data indicated in the purchase invoice or in the product characteristics plate (model and serial number).

3. Product warranty terms

3.1 Solzaima, S.A., responds to the Buyer, for the lack of conformity of the Product with the respective contract of sale, within the following periods:

3.1.1 A period of 24 months from the date of delivery of the good, in the case of domestic use of the product, save the provisions of the following number regarding the intensive use;

3.1.2 A term of 6 months from the date of delivery of the goods, in the case of professional, or industrial, or intensive use of the products - Solzaima

means by professional, industrial or intensive use of all products installed in industrial spaces, commercial, or whose use exceeds 1500 hours per calendar year;

3.2 A functional test of the product must be performed before finishing the installation (plaster, masonry, coatings, paintings, among others);

3.3 No equipment can be replaced after the 1st Burn without the express authorization of the producer;

3.4 Any product must be repaired on the site of installation without causing serious inconvenience to the parties, save, if this proves impossible, or disproportionate;

3.5 In order to exercise its rights, and provided that the term indicated in 3.1 is not exceeded, the Buyer must report in writing to Solzaima, S.A., the lack of conformity of the Product within a maximum period of:

3.5.1 60 (sixty) days after the date on which it has detected it in the case of domestic use of the product;

3.5.2 Thirty (30) days from the date of its detection, in the case of professional use of the Product.

3.6 In the pellet range equipment's, the commissioning service is required to activate the warranty. It must be registered up to 3 months after the date of invoice, or, 100 hours of work of the product (whichever occurs first);

3.7 During the Warranty period referred to in paragraph 3.1 (and for this to remain valid), repairs to the Product must be performed exclusively by the Official Technical Services of the Brand. All services provided under this Guarantee will be performed Monday through Friday within the working time and calendar legally established in each region.

3.8 All requests for assistance must be submitted to the Solzaima, S.A. Customer support service, by means of a proper form present on the Website www.solzaima.co.uk, or, e-mail: support.cliente@solzaima.pt. At the time of the technical assistance to the Product, the Buyer must present, as proof of the Product Warranty, the purchase invoice of the same or another document demonstrating its acquisition. In any case, the document proving the acquisition of the Product must

contain the identification of the Product (as mentioned in point 2 above) and its date of acquisition. Alternatively, and in order to validate the Product Warranty, the PSR - document certifying the commissioning of the machine (when applicable)).

3.9 The Product will have to be installed by a qualified professional for the purpose, in accordance with the regulations in force in each geographical area, for the installation of these Products and complying with all the regulations in force, especially regarding chimneys, as well as other applicable regulations for aspects such as water supply, electricity and / or other related to the equipment or sector and as described in the instruction manual.

A product installation that does not conform to the manufacturer's specifications and / or does not comply with the legal regulations on this subject will not give rise to the application of this Warranty. Whenever a product is installed outdoors, it must be protected against weather effects such as rain and wind. In these cases, it may be necessary to protect the appliance by means of a cabinet, or a properly ventilated protective case Appliances should not be installed in places that contain chemicals in their atmosphere, in saline or high humidity environments, as mixing them with air may produce rapid corrosion in the combustion chamber. In this type of environment, it is especially recommended that the appliance be protected with anti-corrosion products for this purpose, especially during times of operation. As a suggestion it is indicated the application of graphite greases indicated for high temperatures with function of lubrication and anti-corrosion protection.

3.10 In equipment belonging to the pellet family, in addition to the daily and weekly maintenance contained in the instruction manual, it is also obligatory to carry out the cleaning inside and in the respective chimney for the evacuation of fumes. These tasks should be carried out every 600-800 kg of pellets consumed, in the case of stoves (air and water) and compact boilers, and every 2000-3000 kg of pellets consumed in the case of automatic boilers. In the event that these quantities are not consumed, at least one systematic preventive maintenance must be carried out annually.

3.11 It is the Buyer's responsibility to ensure that periodic maintenance is carried out, as indicated in the instruction and handling manuals accompanying the Product. Whenever requested, it must be proved by submitting the technical report of the entity responsible for it, or alternatively by registering them in the instruction

manual in the dedicated section.

3.12 In order to avoid damage to the equipment caused by overpressure, safety elements such as pressure relief valves and / or thermal discharge valves, if applicable, as well as an expansion vessel fitted to the installation, shall be ensured at the time of installation and its correct functioning must be ensured. It should be noted that: the valves referenced must have a value equal to or less than the pressure supported by the equipment; there shall be no cut-off valve between the equipment and its safety valve; provision should be made for a systematic preventive maintenance plan to attest to the correct functioning of the said safety features; irrespective of the type of appliance, all safety valves shall be channeled to drained sewage to prevent damage to the dwelling by water discharges. Product Warranty does not include damages caused by non-channeling of water discharged by said valve.

3.13 In order to avoid damage to the equipment and attached pipes by galvanic corrosion, it is advisable to use dielectric separators in the connection of the equipment to metal pipes whose characteristics of the materials applied to this type of corrosion. Product Warranty does not include damages caused by non-use of such dielectric separators.

3.14 The water or thermofluid used in the heating system (hydro stoves, boilers, central heating stoves, among others) must comply with the legal requirements in force, as well as guarantee the following physical and chemical characteristics: absence of solid particles in suspension; low level of conductivity; residual hardness of 5 to 7 degrees; neutral pH, close to 7; low concentration of chlorides and iron; and absence of air inlets by depression or others. In case the installation enhances automatic water make-up, it should consider upstream a preventive treatment system composed of filtration, decalcification and preventive dosing of polyphosphates (scale and corrosion), as well as a degassing step, if necessary. If in any circumstance any of these indicators show values that are not recommended, the Warranty will cease to have effect. It is also compulsory to place a non-return valve between the automatic filling valve and the mains water supply, and that said supply always has constant pressure, even with a lack of electricity, not depending on lift pumps, autoclaves, or others.

3.15 Except as expressly provided by law, a warranty intervention does not

renew the warranty period of the Product. The rights arising from the Warranty are not transferable to the purchaser of the Product.

3.16 The equipment must be installed in accessible places and without risk to the technician. The means necessary for access to them shall be made available by the Buyer, and the Buyer shall be responsible for any charges arising therefrom.

3.17 The Warranty is valid for the Products and equipment sold by Solzaima SA solely and exclusively within the geographical and territorial zone of the country where the Product was sold by Solzaima.

4. Circumstances that exclude the application of the Warranty

Excluded from the Warranty, being the total cost of the repair borne by the Buyer, the following cases:

4.1. Products with more than 2000 operating hours;

4.2. Refurbished and resold products.

4.3. Maintenance operations, Product settings, commissioning, cleaning, elimination of errors or anomalies that are not related to deficiencies of equipment components and replacement of the batteries

4.4. Components in direct contact with fire such as: vermiculite supports, deflector or protective plates, vermiculite, sealing lanyards, burners, ash drawers, wood chips, smoke registers, ash grates, whose wear is directly related to the conditions of use. Degradation of the paint, as well as corrosion due to degradation of the paint, due to overloading of fuel, use of an open drawer or excessive drainage of the installation chimney (the chimney must respect the drawing recommended in the Product Technical Data Sheet). Glass breakage due to improper handling or other reason not related to Product deficiency. In the pellet family, the ignitors are aware part, so they are only guaranteed for 6 months, or 1000 ignitions (whichever comes first);

4.5. Wear considered components, such as bearings and bushes;

4.6. Deficiencies of components external to the Product that may affect its correct functioning, as well as material or other damages (e.g. tiles, roofing,

waterproofing, pipes, or personal injury) caused by improper use of materials in the installation or by non-execution of the product installation in accordance with the rules for the installation, applicable regulations or rules of good art, in particular when the application of suitable piping to the temperature in use, expansion vessels, non-return valves, safety valves , anti-condensation valves, among others;

4.7. Products whose operation has been affected by failures or deficiencies of external components or by poor sizing;

4.8. Defects caused by the use of accessories or replacement components other than those determined by Solzaima, S.A.;

4.9. Defects arising from non-compliance with the installation, use and operation instructions or applications not conforming to the intended use of the Product, or from abnormal climatic factors, unusual operating conditions, overload or maintenance or cleaning performed improperly;

4.10. The Products that have been modified or manipulated by people outside the Official Technical Services of the brand and consequently without the explicit authorization of Solzaima, SA.;

4.11. Damage caused by external agents (rodents, birds, spiders, etc.), atmospheric and / or geological phenomena (earthquakes, storms, frost, hailstorms, thunderstorms, etc.), humid or saline aggressive environments such as proximity of the sea or river, as well as those derived from excessive water pressure, inadequate power supply (voltage with variations greater than 10%, with a nominal value of 230V, or, neutral voltage greater than 5V, or absence of earth protection); pressure or supply of inadequate circuits, acts of vandalism, urban confrontation and armed conflict of any kind, as well as derivatives;

4.12. Failure to use the fuel recommended by the manufacturer is a condition of exclusion from the Warranty.;
Explanatory note: In the case of pellet appliances the used fuel must be certified by EN 14961-2 grade A1. Also, before buying large quantity you should test the fuel to see how it behaves. In wood equipment, this moisture content must be of less than 20%.

4.13. The appearance of condensation, either by poor installation or by the use of non-virgin fuels (such as pallets or wood impregnated with paints or varnishes, salt or other components), which may contribute to the accelerated degradation of equipment and especially to your combustion chamber;

4.14. All Products, Components or damaged components in transportation or installation;

4.15. Cleaning operations carried out on the appliance or its components due to condensation, fuel quality, bad settings or other circumstances of the installation location. Also excluded from the Warranty are interventions for the decalcification of the Product (the removal of limestone or other materials deposited inside the apparatus and produced by the quality of the water supply). Also excluded from this warranty are air bleeding interventions of the circuit or unblocking of circulating pumps.

4.16. The installation of the equipment supplied by Solzaima, S.A. should contemplate the possibility of their easy removal, as well as points of access to the mechanical, hydraulic and electronic components of the equipment and the installation. When the installation does not allow immediate and safe access to the equipment, the additional cost of access and security will always be borne by the Buyer. The cost of disassembling and assembling boxes of plasterboard or masonry walls, insulation or other elements such as chimneys and hydraulic connections that prevent free access to the Product (if the Product is installed inside a carton of plasterboard, masonry or other dedicated space must comply with the dimensions and characteristics indicated in the instruction manual and use accompanying the appliance).

4.17. Interventions of information or clarification at home about the use of its heating system, programming and / or reprogramming of control and regulating elements, such as thermostats, regulators, programmers, etc.;

4.18. Interventions for the adjustment of fuel recipes in pellet devices, cleaning, detection of water leaks in pipes external to the apparatus, damage caused due to the need to clean the gas evacuation machinery or flues;

4.19. Urgency interventions not included in the provision of Warranty ie, weekend and holiday interventions because they are special interventions not

included in the Guarantee coverage and which therefore have an additional cost, will be carried out exclusively on request expressed by the Buyer and upon the availability of the Producer.

5. Warranty Inclusion

Solzaima, S.A. will correct without any charge to the Buyer the defects covered by the Warranty through the repair of the Product. The replaced Products or Components shall become the property of Solzaima, S.A.

6. Responsibility of Solzaima, S.A

Notwithstanding legally established, Solzaima, S.A., liability in respect of warranty is limited to that established in the present warranty conditions.

7. Cost of Services performed outside the scope of the warranty

The interventions carried out outside the scope of the warranty are subject to the application of the current tariff.

8. Warranty Services performed out of scope Warranty

The interventions carried out outside the scope of the Warranty and carried out by the official technical assistance service of Solzaima have a 6-month guarantee.

9. Warranty Spare Parts provided by Solzaima

As Peças fornecidas pela Solzaima, no âmbito da venda comercial de spare parts, isto é, não incorporados nos equipamentos não dispõem de garantia.

10. Replaced Parts under the of Scope Technical Service

From the moment they are removed from the equipment, the Parts used are considered as waste. Solzaima as a producer of waste in the scope of its activity is obliged by the legislation in force to deliver them to a licensed entity that performs the proper waste management operations under the law and therefore is prevented from giving them another destination, whatever. Therefore, the customer will be able to see the used parts resulting from the assistance, but cannot keep them in their possession.

11. Administrative expenses

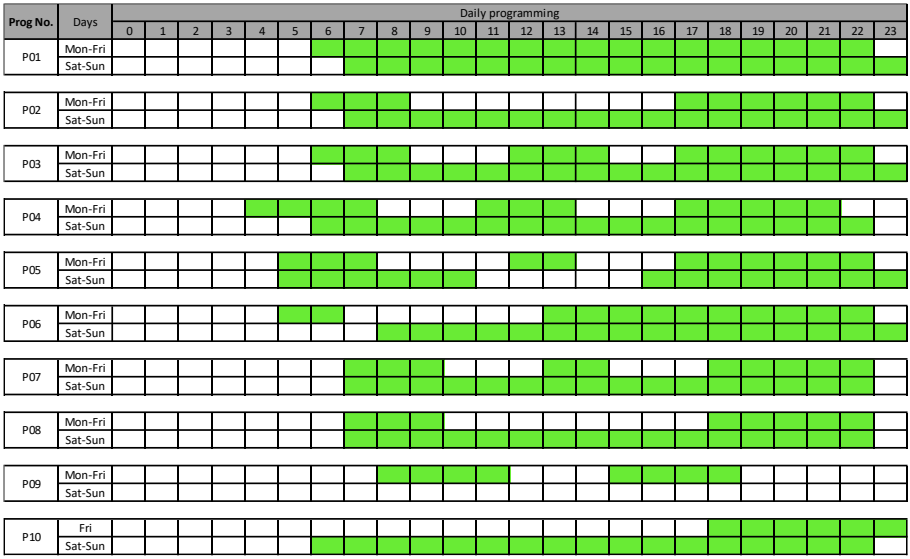
In the case of invoices for services rendered, they are not processed in any stipulated period with default interest at the maximum legal rate in force.

12. Competent court

For the resolution of any dispute arising from the purchase and sale agreement having as object the products covered by the warranty, the contracting parties attribute exclusive jurisdiction to the courts of the district of Águeda, with express waiver of any other.

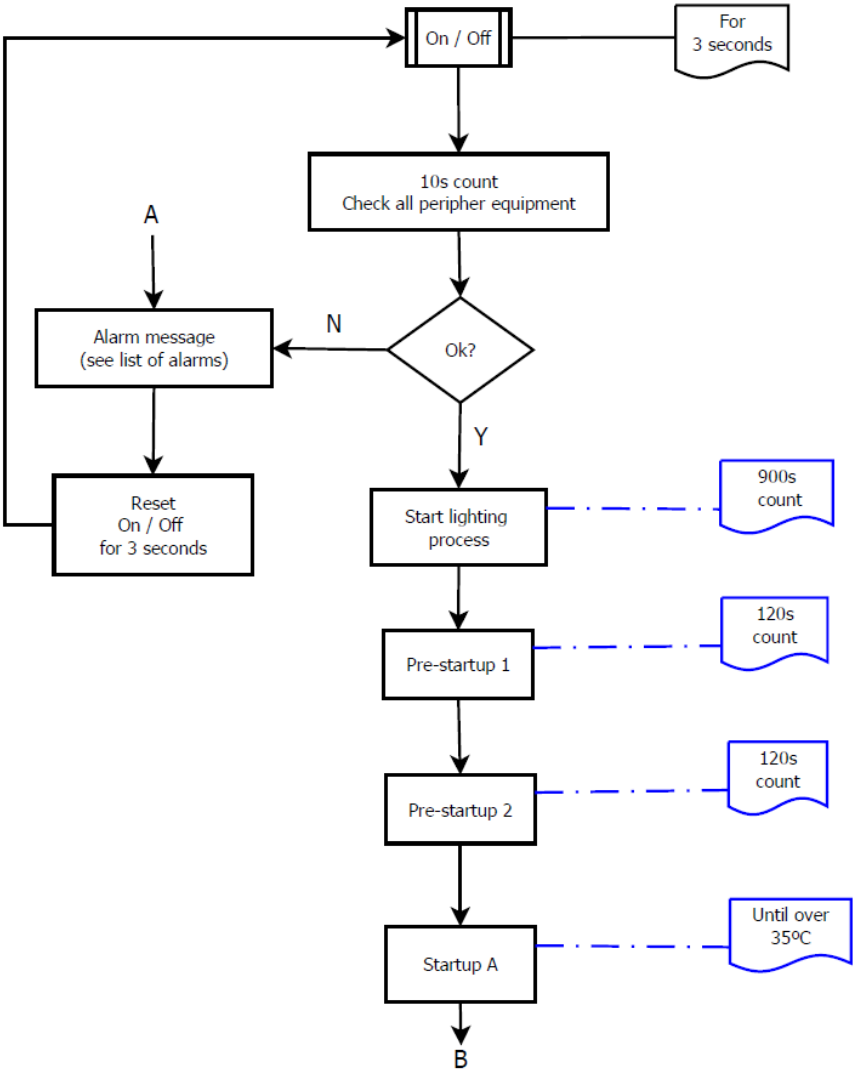
27. Annexes

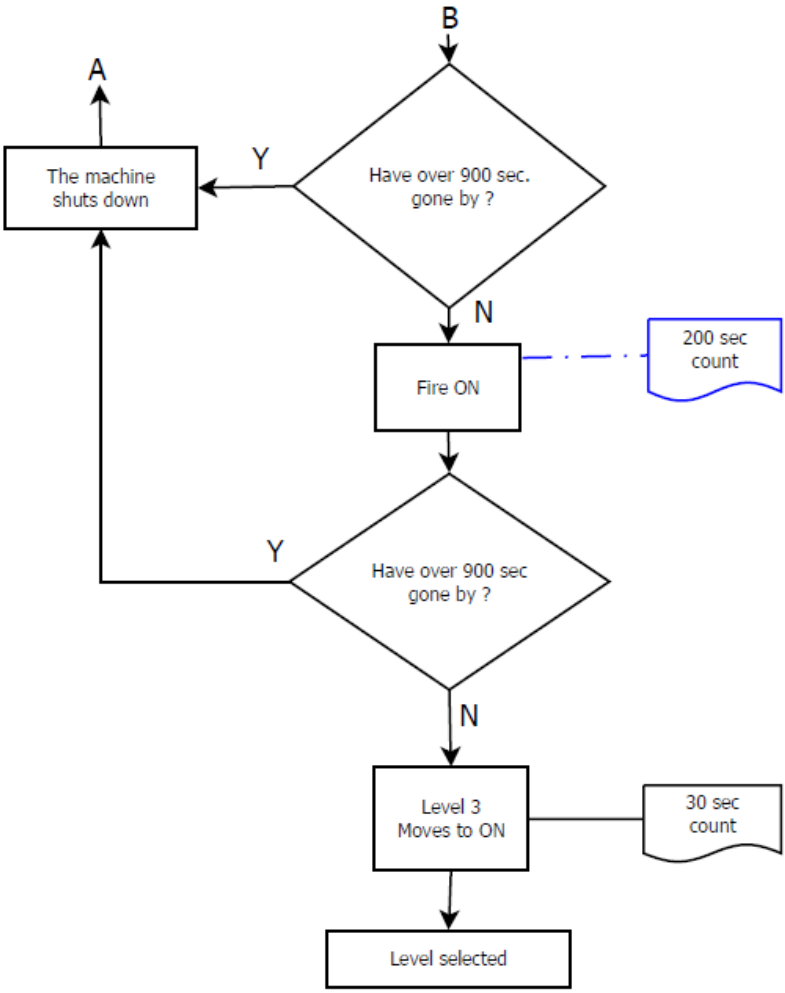
27.1. Timer weekly programming (Not applicable to Columbus Electronics)



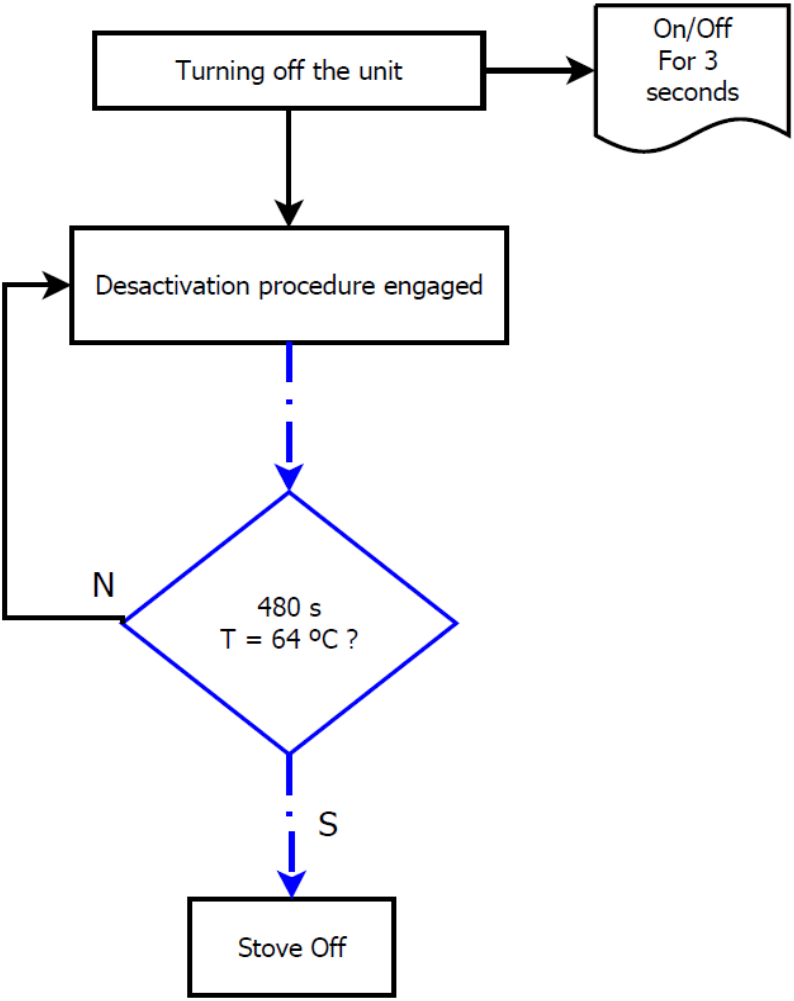
27.2. Flow chart

- **Flow chart 1 - Lighting**




B
A
The machine shuts down
Y
Have over 900 sec. gone by ?
N
200 sec count
Fire ON
Y
Have over 900 sec gone by ?
N
Level 3 Moves to ON
30 sec count
Level selected

- **Flow chart 2 - Disabling**



Note: The circulator pumps off below 40 °C water temperature.

28. Declaration of Performance

DECLARAÇÃO DE DESEMPENHO | DECLARACIÓN PRESTACIONES | DECLARATION OF PERFORMANCE | DÉCLARATION DE PERFORMANCE | DICHIARAZIONE DELLE PRESTAZIONI

Nº DD-042

1. Código de identificação único do produto-tipo | Código de identificación único del tipo de producto | Unique identification code of the product type | Le code d'identification unique du type de produit | Codice unico di identificazione del tipo di prodotto

ATLANTIC 22 KW – EAN 05600990452916

2. Número do tipo, lote ou série do produto | Número de tipo, lote o serie del producto | Number of type, batch or serial product | Nombre de type, de lot ou de série du produit | Numero di tipo, di lotto, di serie del prodotto

3. Utilização prevista | Uso previsto | Intended use | Utilisation prévue|Destinazione d'uso

AQUECIMENTO DE EDIFÍCIOS DE HABITAÇÃO COM POSSIBILIDADE DE FORNECIMENTO DE ÁGUA QUENTE| CALEFACCIÓN DE EDIFICIOS RESIDENCIALES COM POSIBILIDAD DE SUMINISTRO DE AGUA CALIENTE | HEATING OF RESIDENTIAL BUILDINGS WITH POSSIBILITY OF HOT WATER SUPPLY | CHAUFFAGE DE BATIMENTS RESIDENTIELS AVEC LA POSSIBILITÉ DE L'APPROVISIONNEMENT EN EAU CHAUDE | RISCALDAMENTO DEGLI EDIFICI RESIDENZIALI CON POSSIBILITÀ DI ACQUA CALDA

4. Nome, designação comercial registada e endereço de contacto do fabricante **|** Nombre, marca registrada y la dirección de contacto de lo fabricante **|** Name, registered trade name and contact address of the manufacturer **|** Nom, marque déposée et l'adresse de contact du fabricant **|** Nome, denominazione commerciale registrata e Indirizzo del costruttore

SOLZAIMA, SA
RUA DOS OUTARELOS, Nº111
3750-362 BELAZAIMA DO CHÃO – ÁGUEDA – PORTUGAL

5. Sistema de avaliação e verificação da regularidade do desempenho do produto **|** Sistema de evaluación y verificación de constancia de las prestaciones del prodoto **|** System of assessment and verification of constancy of the product **|** Système d'évaluation et de vérification de la Constance des performances du produit **|** Sistema di valutazione e verifica della costanza della prestazione del prodotto

SISTEMA 3

6. Norma Harmonizada **|** Estandár armonizado **|** Harmonized standard **|** Norme harmoisée **|** Standard armonizatta

EN 14785

7. Nome e número de identificação do organismo notificado **|** Nombre y número de identificación del organismo notificado **|** Name and identification number of the notified body **|** Nom et numéro d'identification de l'organisme notifié **|** Nome e numero di identificazione dell'organismo notificato

TÜV RHEINLAND INDUSTRIE SERVICE GMBH - TÜV Rheinland Group
NB: 2456

8. Relatório de ensaio **|** Informe de la prueba **|** Test report **|** Rapport d'essai **|** Rapporto di prova

K15032015T1

9. Desempenho declarado | Desempeño declarado | Declared performance | Performance déclarée | Dichiarazione di prestazione

Características essenciais | Características esenciales | Essencial characteristics | Caractéristiques essentielles | Caratteristiche essenziali	**Desempenho | Desempeño | Performance | Prestazione**	**Especificações técnicas harmonizadas | Especificaciones técnicas armonizadas | Harmonized technical specifications | Spécifications techniques harmonisées | Specifiche tecniche armonizzate**
Segurança contra incêndio | Seguridad contra incêndios | Fire safety | Sécurité incendie | Sicurezza antincendio	**OK.** De acordo com relatório de ensaio | De acuerdo com informe de la prueba | According to the test report | Selons le rapport d'essai | Secondo i rapporto di prova **K15032015T1**	De acordo com os requisitos | De acuerdo con los requisitos | According to the requirements | Selons les exigences | Secondo i requisiti 4.2, 4.3, 4.7, 4.8, 4.10, 4.11, 5.1, 5.3, 5.4, 5.5, 5.8 (EN14785)
Emissão de produtos da combustão | La emisión de produtos de combustión | Emission of combustion products | Emission des produits de combustion | Emissione dei prodotti di combustione	**OK.** Caudal térmico nominal | Caudal térmico nominale | Nominal heat output | Le débit calorifique nominal | Nominal heat output | Flusso termico nominale –**CO:0,0195%**	Caudal térmico nominal|Caudal térmico nominale|Nominal heat output|Le débit calorifique nominal|Nominal heat output | Flusso termico nominale –**CO<0,04%**
	OK. Caudal térmico reduzido | Flujo térmico reducido | Reduced thermal flow | Flux thermique réduit | Flusso termico ridotto –**CO: 0,024%**	Caudal térmico reduzido | Flujo térmico reducido | Reduced thermal flow | Flux thermique réduit | Flusso termico ridotto –**CO<0,06%**
Libertação de substâncias perigosas | Emisión de sustâncias peligrosas | Release of dangerous substances | Dégagement de substances | Rilascio di sostanze pericolose	**OK.** De acordo com relatório de ensaio | De acuerdo com informe de la prueba | According to the test report | Selons le rapport d'essai | Secondo i rapporto di prova **K15032015T1**	De acordo com o Anexo ZA.1 (EN14785) | De acuerdo con lo Anexo ZA.1 (EN14785) | According to the Annex ZA.1 (EN14785) | Selons le Annexe ZA.1 (EN14785) | Secondo l'allegato ZA.1 (EN14785)
Temperatura de superfície | Temperatura de la superfície | Surface temperature | La température de surface | Temperatura superficiale	**OK.** De acordo com relatório de ensaio | De acuerdo com informe de la prueba | According to the test report | Selons le rapport d'essai | Secondo i rapporto di prova **K15032015T1**	De acordo com os requisitos | De acuerdo con los requisitos | According to the requirements | Selons les exigences | Secondo i requisiti 4.2, 4.13, 5.1, 5.2, 5.4, 5.5 (EN14785)
Segurança eléctrica | Seguridad eléctrica | Electrical safety | Sécurité électrique | sicurezza elettrica	**OK.** De acordo com relatório de ensaio | De acuerdo com informe de la prueba | According to the test report | Selons le rapport d'essai | Secondo i rapporto di prova **K15032015T1**	De acordo com os requisitos | De acuerdo con los requisitos | According to the requirements | Selons les exigences | Secondo i requisiti 5.9 (EN14785)
Aptidão para ser limpo | Capacidad para ser limpiado | Ability to be cleaned | Possibilité d'être nettoyé | Capacità di essere puliti	**OK.** De acordo com relatório de ensaio | De acuerdo com informe de la prueba | According to the test report | Selons le rapport d'essai | Secondo i rapporto di prova **K15032015T1**	De acordo com os requisitos | De acuerdo con los requisitos | According to the requirements | Selons les exigences | Secondo i requisiti 4.5, 4.6, 4.10, 4.12 (EN14785)
Pressão máxima de serviço | Presión máxima de trabajo | Maximum working pressure | Pression de service maximale | Pressione massima di esercizio	**OK.** **2,8 bar**	De acordo com os requisitos | De acuerdo con los requisitos | According to the requirements | Selons les exigences | Secondo i requisiti 4.2, 5.6,5.7 (EN14785)
Temperatura dos gases de combustão | Temperatura de los gases de combustión | Temperature of the flue gas | Température du gaz de fumée | Temperatura dato fumi	**OK.** **153ºC**	De acordo com os requisitos | De acuerdo con los requisitos | According to the requirements | Selons les exigences | Secondo i requisiti 6.2 (EN14785)
Resistência mecânica | Resistencia mecânica | Mechanical strength | résistance | Resistenza meccanico	**OK.** De acordo com relatório de ensaio | De acuerdo com informe de la prueba | According to the test report | Selons le rapport d'essai | Secondo i rapporto di prova **K15032015T1** A cada 10 m de conduta de fumos deve ser colocado um suporte de carga | cada 10 m de la salida de humos se debe colocar un soporte de carga | every 10 m of the flue should	De acordo com os requisitos | De acuerdo con los requisitos | According to the requirements | Selons les exigences | Secondo i requisiti 4.2, 4.3(EN14785)

	be placed a load support **|** tous les 10 m de conduit de fumée doit être placé un support de charge **|** ogni 10 m della canna fumaria deve essere posto un supporto di carico	
Potência térmica **|** Potencia térmica **|** Thermic output **|** Puissance thérmique **|** Potenza termico	**OK.** **23 kW**	De acordo com os requisitos **|** De acuerdo con los requisitos **|** According to the requirements **|** Selons les exigences **|** Secondo i requisiti 6.1, 6.4 – 6.10 (EN14785)
Rendimento energético **|** Eficiencia energética **|** Energy efficiency **|** L'efficacité énergétique **|** Efficienza energetica	**OK.** **89,2%**	**≥ 75%** para potência térmica nominal **|** de potencia térmica nominal **|** for rated termal input **|** Pour puissance thermique nominale **|** di potenza termica nominale
	OK. **93,8%**	**≥ 70%** para potência térmica reduzida **|** la reducción térmica **|** to reduced termal **|** à la réduction thermique **|** di potenza térmica ridotto
Durabilidade **|** Durabilidad **|** Durability **|** Durabilité **|** Durabilità	**OK.** De acordo com relatório de ensaio **|** De acuerdo com informe de la prueba **|** According to the test report **|** Selons le rapport d'essai **|** Secondo i rapporto di prova **K15032015T1**	De acordo com os requisitos **|** De acuerdo con los requisitos **|** According to the requirements **|** Selons les exigences **|** Secondo i requisiti 4.2 (EN14785)

10. Distância mínima a materiais combustíveis (laterais/frente/topo/posterior) | Distancia mínima a materiales combustibles (laterales/frente/topo/trasero) | Minimum distance to combustible materials (side/front/top/back) | Distance minimale aux matériaux combustibles (côte/avanta/haut/arrière) | Distanza mínima da materiali combustibili (lato/anteriore/top/posteriore)

(1000 mm / 1500 mm / 1000 mm / 1000 mm)

11. O desempenho do produto declarado nos pontos 1 e 2 é conforme com o desempenho declarado no ponto 9. A presente declaração de desempenho é emitida sob exclusiva responsabilidade do fabricante identificado no ponto 4. **|** El funcionamento del producto se indica en los puntos 1 y 2 es compatible con las prestaciones declaradas en el punto 9. La presente declaración se expide bajo la exclusiva responsabilidade del fabricante identificado en lo punto 4. **|** Performance of the product stated in points 1 and 2 is consistent with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. **|** Les performances du produit indiqué dans les points 1 et 2 est compatible avec les performances declares au point 9. Cette declaration de performance est établie sous la seule responsabilité du fabricant identifié dans le point 4. **|** Le prestazioni dei prodotti indicati ai punti 1 e 2 è conforme alla prestazione dichiarata al punto 9. Questa dichiarazione di prestazione è rilasciata sotto l'esclusiva responsabilità del fabbricante di cui al punto 4

Nome e cargo | Nombre y cargo | Name and title | Nom et titre | Nome e titol Belazaima do Chão, 28/06/2018
Nuno Sequeira (Director Geral | CEO)