Instruction Manual

FOGO MONTANHA

Mod. 452-A

Contents

1 Important aspects

- Thank you for purchasing a Fogo Montanha Free Stand Fire unit.

- The manufacturer of Fogo Montanha Free Standing Fire units hereby represents that they are the sole responsible for the compliance of all manufactured models with the general safety requirements. Any changes made to the product without the previous written consent from the manufacturer will void the above statement.

- Please read these instructions carefully before installing, using and servicing the unit and keep them at hand for future reference.

- This instruction manual is provided with the product. Please keep it near the unit.
-
- All products comply with the EU's Construction Products Directive (EU Reg. No. 305/2011) and are approved for the EC compliance marking. This product has been manufactured according to the 14785:2008 EN standards.

- This product may only be installed by authorized people, who must provide the buyer a statement of compliance regarding the installation, taking full responsibility for the final installation and, consequently, for the proper operation of the unit. Fogo Montanha manufacturer disclaims all liability for any damages occurring to the equipment if installed by non-qualified people.

- All local regulations, including any applicable national and European standards, must be observed when installing, operating and servicing the unit.

- To get technical assistance, please contact the unit supplier or installation staff. You should have the unit serial number ready. This number can be found on the identification plate located on the top lid or on the label attached to the plastic cover of this manual.

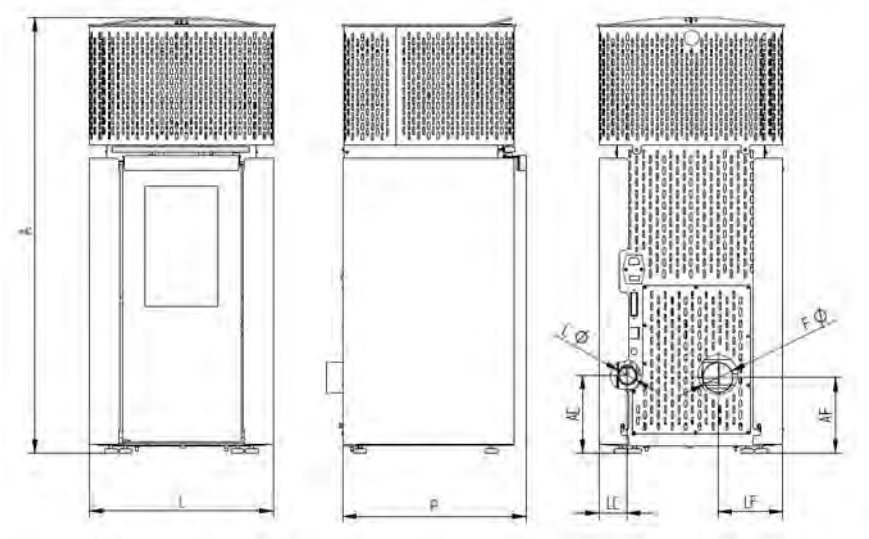
- Any technical assistance procedures must be performed by the unit provider or installer, except in special situations and after assessment by the installer or assistance engineer who may then decide to contact Fogo Montanha, if necessary.

- This unit must be used according to its intended purpose pursuant to the manufacturer's specification. All contractual and non-contractual responsibilities of the manufacturer are hereby excluded for damages caused to people, animals or property resulting from the misuse or faulty installation or servicing of the unit.

- All the components that make part of the unit’s assembly and that together guarantee its operation and energetic efficiency must only be replaced with original parts provided by an authorised technical assistance centre.

- The unit must be serviced at least once a year or every 600-800 kg of pellets consumed, by the installation engineer.

2 Features



Dimensions

- Height (H) = 1100 mm
- Width (W) =490 mm
- Depth (D) = 450 mm

Weight

- Weight = 118 kg

Fume exhaust

- Diameter (F) = 80 mm
- Height (AF) = 195 mm
- Width (LF) =170 mm

Combustion airflow intake

- Diameter (C) = 50 mm
- Height (AC) = 200 mm
- Width (LC) = 75 mm

Technical characteristics

- Thermal power (min – max.) = 5.2 - 9.6 KW
- Thermal performance (min – max.) = 88 – 90 %
- CO emissions 13% O2 (min – max.) = 0.02 – 0.03 %
- Gas temperature (min – max.) = 120 – 190 %
- Gas flow (min – max.) = 5 – 7 g/s
- Draught at the chimney = 12 Pa
- Maximum heating capacity (depends on the household insulation) = 50 – 220 m³
- Pellet consumption certified according to the EN14961-2 grade A1 (min – max.) = 1.2 – 2.3 kg/h
- Pellet reservoir = 20 kg
- Rated voltage = 230 Kv
- Rated frequency = 50 Hz
- Electric power at start up = 378 W
- Rated electric power = 122

3 Fuel

- To operate this unit do not use pellets other than those certified in compliance with the EN14961-2 standard, grade A1.

- We recommend that you use only pellets that are certified in compliance with the EN 14961-2 standard, grade A1.

Parameters	EN plus – A1	Units
Diameter	Between 5 and 7	mm
Length	3.15 ≤ W ≤ 30	mm
Density	≥ 600	kg/dm^3
Heating capacity	≥ 5.32	KWh/kg
Mechanical strength	≥ 97.5	% (mass)
Ash	≤ 0.5	% (mass)
Humidity	≤ 10	% (mass)
Sulphur percentage	< 0.05	% (mass)
Chlorine percentage	< 0.02	% (mass)
Nitrogen percentage	< 0.3	% (mass)
Copper	≤ 10	mg/kg
Chromium	≤ 10	mg/kg
Arsenic	≤ 1	mg/kg
Lead	≤ 10	mg/kg
Cadmium	≤ 0.5	mg/kg
Mercury	≤ 0.1	mg/kg
Nickel	≤ 10	mg/kg
Zinc	≤ 100	mg/kg

- The physical and chemical properties of the pellets (namely, calibre, friction, density and chemical composition) may vary within specific tolerance ranges and across manufacturers. Please note that this may cause changes to the feeding process and, consequently, the need for different doses (more or less pellet quantity).

- The unit allows for a ± 25% adjustment to the pellet dosage at start-up and at power levels.

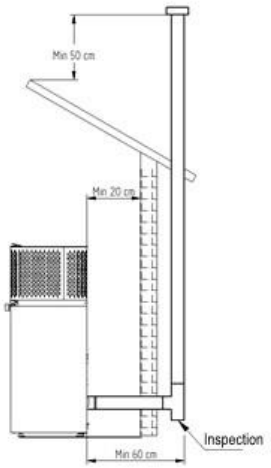
- The CE certification tests that were run used wood pellets l with a heating capacity of 5.4 kWh/kg.

4 Installing ducts and fume extraction systems

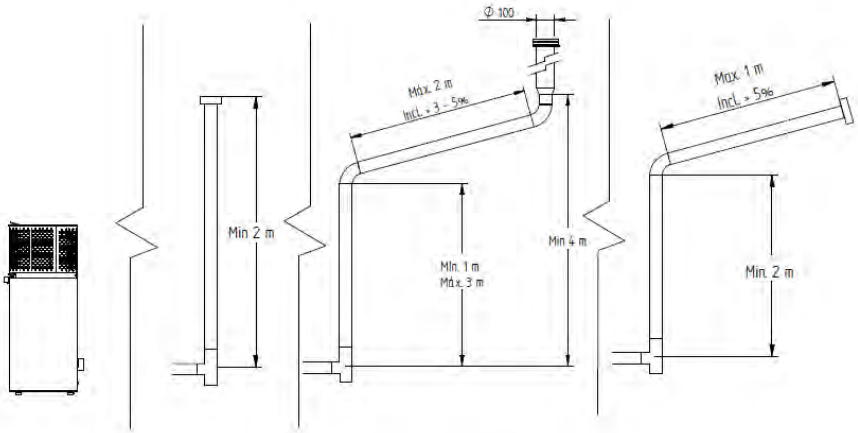
- The exhaust pipe must have been designed for and dedicated to this purpose, in compliance with local requirements and any applicable regulations.
- Important! An inspection-T with an airtight lid must be attached to the exit of the unit's exhaust pipe to allow for the regular inspection of the system or discharge of heavy dust and condensates.
- As shown, the exhaust duct should be assembled in a way that allows for the cleaning and servicing using the insert of the inspection points.
- Under normal operating conditions, the combustion gas exhaustion must create a draught of 12 Pa, one meter above the fume exit.
- The unit must not share the chimney with other equipment.
- The pipes installed outside the household must have double stainless steel insulation and an internal diameter of 80 mm.
- The fume exhaust pipe may generate condensation, so we recommend that the appropriate systems for collecting condensates are installed.

4.1 Installing without a chimney

- The installation of this unit without a chimney must be made by bringing the fume exhaust pipe directly out and over the top of the roof at approximately 0.5 m higher.
- Double-walled stainless steel insulated pipes must be used and properly attached to avoid condensation.
- A T-connection must be installed at the base of the pipe to allow for periodic inspections and annual maintenance, as illustrated in the following figure.



- The following figure shows some examples which illustrate the basic requirements for installing the unit's chimney



FAILURE TO COMPLY WITH THESE REQUIREMENTS MAY PREVENT THE CORRECT OPERATION OF THE UNIT (PLEASE OBSERVE ALL OF THE INSTRUCTIONS PRESENTED ON THE DIAGRAMS).

- The free standing fire TRAMA operates with the combustion chamber in draught. Therefore, it is absolutely necessary to have installed a fume exhaustion duct that can adequately extract the combustion gases.

- **Fume duct material**: The tubing to be used for this installation must consist of 0.5 mm thick rigid stainless steel, with fitting bindings attaching the different sections and accessories.

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

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

- **Swing type check valve:** Always install this system to avoid fumes backflow.

- **Draught in the chimney:** The figure below shows three standard diagrams, specifying the adequate lengths and diameters. Any other type of installation must guarantee a draught of 12 Pa (0.12 mbars) measured when hot and at the maximum power.

- **Ventilation:** For the optimal operation of the unit, the assembly site must have a air inlet installed with a minimum cross section of 100cm2, preferably at the back of the unit. The unit is equipped with a circular pipe (Ø 50 mm) that can connect to the exterior of the house.

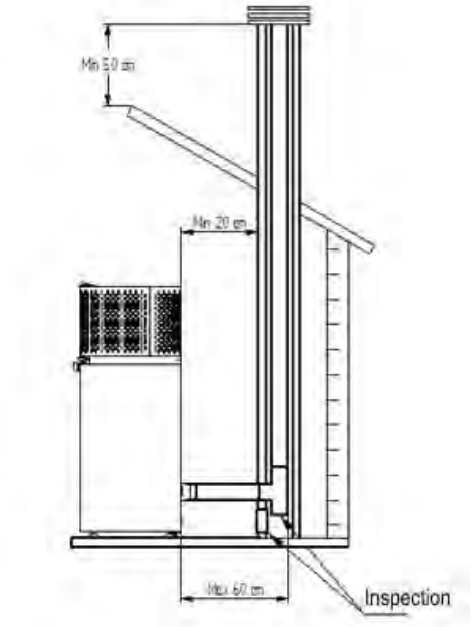
- If you use a tube to allow for the combustion airflow intake from the outside, this should not have more than 60cm long horizontally, and an internal diameter equal or greater than the unit's tube diameter. The connection path must be straight (without bends).

- If the house is equipped with a 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.

- Installing the unit in locations near kitchen exhaust fans or fume extractors may prevent the correct operation of the unit and, in certain situations, may cause the inversion of the chimney draught flow which will expel the fumes into the room where the unit is installed.

4.2 Installing with a chimney

- As shown in the following figure, the installation of the unit brings the exhaustion tube directly onto the chimney. If the chimney is too large, an 80 mm-wide pipe should be installed at the fume outlet.



- A T connection must be attached to the base of the tubing, to allow for periodic inspections and annual maintenance.

- We recommend that you do not use the unit in adverse weather conditions that may seriously impact the draught (particularly with very strong winds).

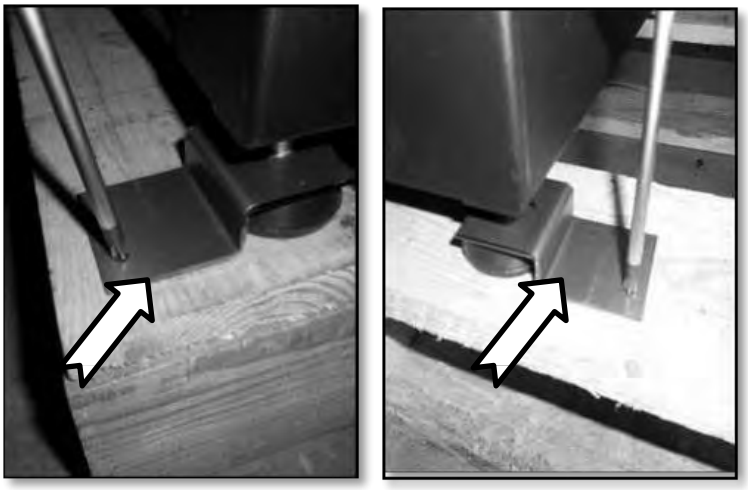
- Before lightening the fore, you must make sure that the chimney tubing is free from obstructions. Otherwise, the fume can be blown into the room where the unit is installed.

5 Package content

The unit is shipped with the following contents:

- Instruction Manual
- Power cable
- Infrared remote control
- Performance statement

- Before unpacking the unit, check if the package is in perfect conditions, and report to the installer or reseller if the package evidences signs of damage or defect.
- After unpacking the unit, please check if the contents are complete and undamaged. If not, please contact the reseller where the unit was purchased.
- During the unpacking process, please remove the parts that secure the unit to the pallet. Use a screwdriver to release the unit (please see the following pictures).



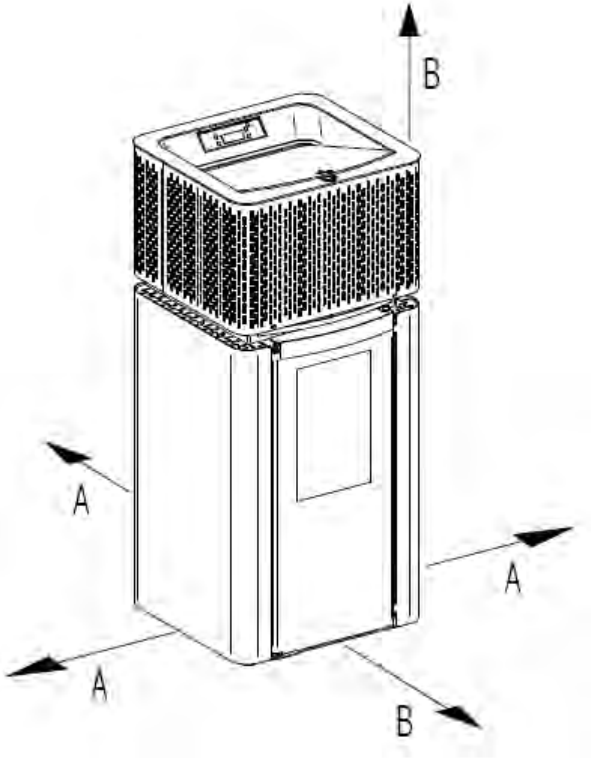
6 Safety

- In order to avoid the occurrence of problems when using the unit, it is important that you respect the minimum safety distances specified. Please see the next image.

  A> 20 cm.

  B> 150 cm.

- The unit should be assembled at a distance of 20cm from the rear wall to facilitate the maintenance procedures and to allow for a proper ventilation.



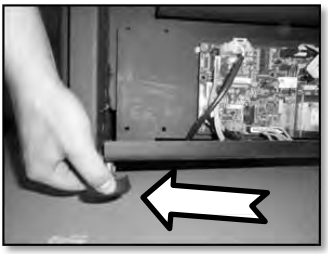
- Please maintain a distance of 150 cm between the ceiling and the top of the unit, especially if the ceiling is made of flammable materials.

- The unit’s supporting base must be made of glass, ceramic or steel laminate. If the room's floor is made of flammable materials (wood, carpet, etc) this may present a fire hazard.

- During the unit's operation, make sure you keep any combustible materials at a safe distance.

7 Installing the pellet burning free standing fire

- The unit is equipped with four adjustable height feet, allowing for simple adjustments of the unit when placed on uneven floors.



- Remove the instruction manual from the package and hand it over to the client.
- Connect an 80mm diameter pipe between the unit's combustion gases output and the fume extraction duct directed to the exterior of the building (e.g. through the chimney) – please check diagrams in section 4.
- Connect the 230V AC power cable to a grounded power socket.
- The side of the unit where the hot air outlet is located must be placed facing the area to be heated.

8 Filling the pellet reservoir

- Open the pellet reservoir's lid located in the top of the unit, as shown in the following figures.
- Empty the pellet bag into the reservoir
- Close the reservoir lid

9 Remote control and display panel

- The unit is equipped with a modern microprocessor that manages several functions which allow you to configure and programme the unit. You can access these functions using the unit's touch screen.

- The infrared remote control allows you to access some of the unit's functions remotely.

Device	Function
	• You can view and set the unit's parameters and functions.
	• You can use the infrared remote control to turn the unit on and off. You can also increase or decrease the ventilator's airflow and the unit's power level.

- Sections 16, 17, 18, 19, 20 and 21 of this manual provide a description of each function and its location.

- The following table describes the touch screen display and the operation of each menu item.

Button	Function
	• Turning the unit on and off. • Resetting errors.
	• Accessing the menus. • Function confirmation (OK).
	• Switching between manual/automatic modes. • Exiting the menus (ESC).
	• Scrolling the menus and functions up and down. • Increase and decrease the ventilator's airflow. • Increase or decrease the set- point temperature. • Increase or decrease the unit's power.
	

10 Humidifier

- This usage of this type of heating equipment may cause the air in the room to be very dry. To avoid this, this unit is equipped with a stainless steel container to be filled with water that will evaporate to help humidify the air in the room, as shown in the following pictures.

- The humidifier is located inside the unit, as other components, and it should be removed and positioned correctly in the appropriate place at the top of the unit.

11 Activation

- Before operating the unit, please make sure that the pellet feeder channel is filled with pellets. To do this, with the unit turned off enable the pellet feeder function (section 19.6). The unit will be ready for operation when the first pellets start to fall into the burner. Disable the function.

- To start operating the unit you need to press the start/stop key for 3 seconds. The display will show the message “activação” (activation) during the lighting phase until completion.

- The pellets travel through the pellet feeder channel onto the burning basket (combustion chamber), where they will be ignited by means of a heat resistor. This process may take between 5 to 10 minutes, depending on whether the worm screw has been previously loaded with pellets or not. Upon completion of the ignition phase, “On” should appear on the display.

- The heating power can be adjusted at any time by pressing the power selection button for approximately 1 second.

- You can choose between five pre-set power levels. The selected power is indicated on the display. The initial power setting at each start-up will correspond to the power level set during the last cycle operation.

- The unit will be hot during operation, so you should be careful when touching the glass, the door lock and the heat exchanger damper.

12 Disabling

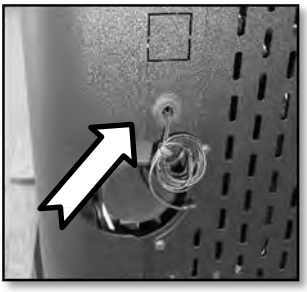
- The turn off sequence is performed by pressing the start/stop key for 3 seconds.
- Until completion of this phase the display will show the message “desactivação” (deactivation). The extractor will remain active until a fume temperature of 40°C is reached, to ensure that all the fuel is completely burned.

13 Recommendations on using this unit

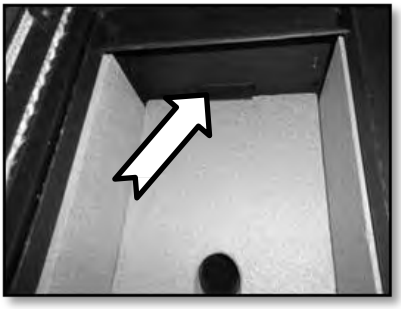
- Ensure that the unit is properly connected to the power mains using the 230V AC power cable.

- Check if the pellet reservoir is supplied with pellets. Inside the pellet reservoir is a safety grid to prevent users from reaching the worm screw.
- Always check if the burner is not obstructed before igniting the unit.
- **THE UNIT'S COMBUSTION CHAMBER IS MADE OF IRON PLATE COATED WITH HIGH TEMPERATURE RESISTANT PAINT, WHICH RELEASES FUMES DURING THE FIRST BURNING SESSIONS DUE TO THE CURING OF THE PAINT.**
- Please make sure the room where the unit is installed has adequate air circulation; otherwise, the unit will not work properly. For this reason, you should consider if there are other air-consuming heating appliances in the room (e.g. gas units, braziers, extractors, etc.) as these should not be used simultaneously with this unit.
- You should not turn the stove off and on intermittently, as this could damage the unit's electronic and electric components.
- Even though the unit is grounded, do not touch the unit with wet hands; the improper handling of the unit may cause an electric discharge. If you notice any electrical problems, please contact your person who performed the installation.
- The unit should only be disconnected after its full stop. Make sure that the display shows “Off” before disconnecting the unit. If necessary, unplug the power cable from the power socket.
- Never open the door when the unit is still connected to the power socket or during its operation. If you need to open the door, disconnect the unit and allow it to cool down completely.

- The free standing units have a probe to measure the room temperature. This probe is attached to the grid at the rear panel (as shown in the figure below). For a good reading of the room temperature, avoid the contact between the end of the probe and the unit chassis. If you want, you may secure the probe to the wall near the unit.

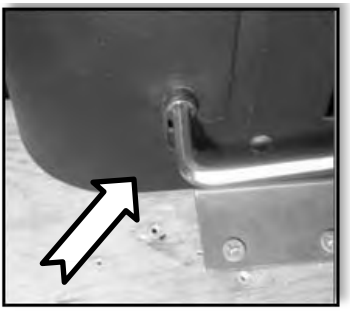


- Before starting up the unit, check to determine if the deflector plate is correctly positioned.

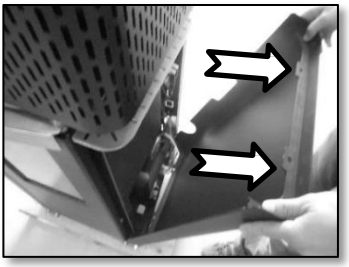


14 Removing the side covers (only when needed)

- Detach the screw located at the bottom of the unit's side cover. To do so, use a number 5 hexagonal wrench.



- Lift the cover and pull it backwards, detaching it from the upper and lower fixtures. Assemble the covers in the reverse order.

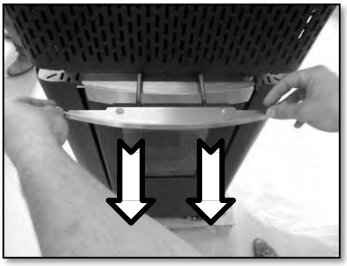


15 Cleaning and maintenance

- In order to achieve an optimal operating performance, it's essential to carry out a set of cleaning and maintenance procedures. To do so in a convenient way, use y a household vacuum cleaner.
- The cleaning operation should be carried out after each burn of approximately 30 kg. To prevent any accidents, the cleaning and maintenance operations must be performed with the disconnected from the power socket and after complete cool down.
- The deterioration of parts due to the lack of cleaning will void the warranty provided by Fogo Montanha.
- For cleaning and maintenance purposes, we recommend that you use
    - a household vacuum cleaner.
    - a 20-25 mm wide and 80 cm long twisted-wire
    - steel brush.

15.1 Heat exchanger

- This operation should be performed after the unit has completely cooled down to prevent accidents.



- Pull the cleaning damper from inside the unit, gently pulling it horizontally. We recommend that you pull the damper out with the door closed, so that the ashes in the exchanger fall inside the unit. This procedure should be done after the unit has been used.

15.2 Burning basket and ash pan grate

- Open the door to access the interior of the unit. Next, you should remove the grate but, before doing that, be sure you tilt it while still inside the unit to make sure that the accumulated ash falls onto the ash drawer.

- Then, remove the burning basket and clean it using a brush or a vacuum cleaner to clear the burning holes.

- Clean the basket's sitting area to free it from debris that may obstruct the combustions air flow.

15.3 Ash basket

- Remove the ash drawer and clean it by emptying the accumulated ashes into a bag and discard.

15.4 Hatch

- After every 60 to 80 hours of burning, we recommend that you clean the ashes accumulated in the lower chamber, next to the fume extractor.
- To access the lower chamber, remove the hatch underneath the drawer. Use the vacuum cleaner to clean the ashes.
- It is important to fit the hatch back into place in the unit, to prevent operation failures to occur.

15.5 Cleaning the glass

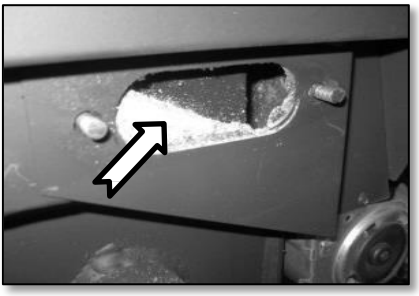
- The glass can only be cleaned after the complete cool down of the unit. Use an appropriate cleaning product by following the product's instructions for use and avoiding contact of the product with the rope gasket and the metallic painted parts, to avoid unwanted oxidation. The rope gasket is glued, so it should not be exposed to moisture from water or cleaning products.

15.6 Additional cleaning

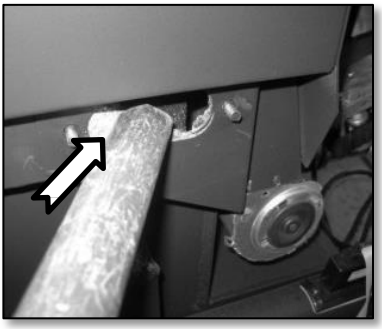
- **ADDITIONAL CLEANING SHOULD BE CARIED OUT FOR EVERY 600-800 KG OF PELLETS CONSUMED.**

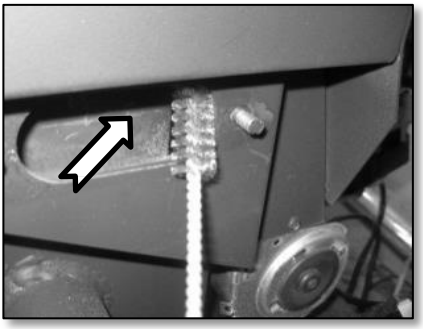
- Before cleaning, you need to remove the side covers, in order to access the side lids of the combustion chamber.

- To clean the interior of the unit, detach the wing nuts and remove the lid.

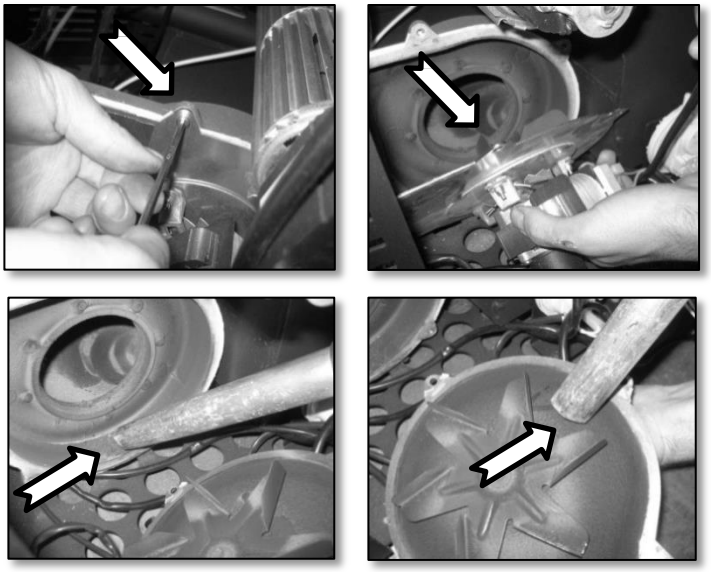


- Use the vacuum cleaner to remove the ashes. Using a twisted-wire steel brush, clean the fume ducts.





- If you notice that the fume extraction is not working properly, we recommend that you clean the extractor as shown in the following figures. This procedure should be carried out at least once a year.



- Remove or empty the pellet reservoir to avoid humidity to set in.

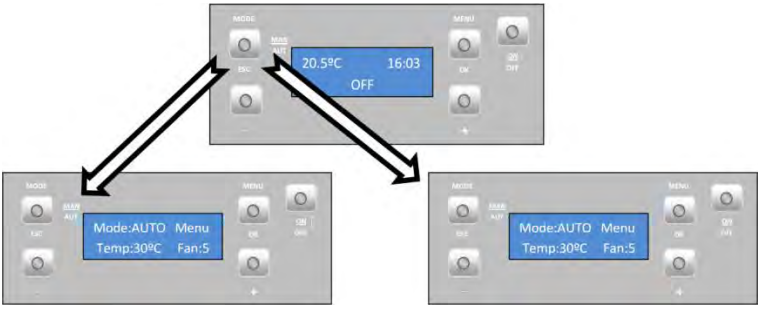
- Clean the unit's pellet feeder channel using the brush to remove the dirt in order to prevent it to accumulate at the end of the duct.

15.7 Performing an inspection after a long period of inactivity

- Check if both the gas output and the combustion airflow intake are not obstructed with foreign debris, like from bird nests, or some kind of infiltration.

16 Menu

- When connecting the unit to the power mains, the unit's display will show the "OFF" message, the room temperature information in ºC and the current time.
- In the start menu, press the “ESC” key to access the two operation modes available.
  - Automatic Mode.
  - Manual Mode.



- “AUTO” Mode: the unit turns on at its maximum power until it reaches a temperature of 1ºC above the selected temperature (set point temperature). After reaching the selected temperature, the unit switches to the minimum operating power.
- The set-point temperature can be set between 5 and 35 °C, by pressing the "-" key.
- The "+" key allows the user to set the fan speed between 1 and 5 or to automatic operation.
- “MANU” Mode: in this mode, the unit will operate at the speed selected using the "-" key, which can range between 1 (minimum operating power) and 5 (maximum operating power).

17 Date/Time

Date and Time menu	Procedure
Accessing the date and time menu 	• Press the Menu key twice to display the “Data e Hora” (Date and Time) menu. • Press “Set” to display the "Hora" (Time) menu.
Set the time 	• Press “Set” again. The display starts to flash. Press • the “+” or “-“ key to select the desired time. Press “Set” to display the "Minutos" (Minutes) • menu.
Set the minutes 	• Press “Set” again. The display starts to flash. Press • the “+” or “-“ key to select the desired time. Press “Set” to display the "dia" (day) menu. •
Set the day of the week 	• Press “Set” again and the display starts to flash. • Press the “+” or “-“ key to select the desired time. Press “Set”, to display the "dia num" (day number). •
Set the day of the month 	• Press “Set” again. The display starts to flash. Press • the “+” or “-“ to select the desired time Press “Set” to display the ”Mês” (Month) menu. •
Set the month 	• Press “Set” again. The display starts to flash. Press • the “+” or “-“ key to select the desired time. Press “Set” to display the "ano” (year) menu. •
Set the year 	• Press “Set” again. The display starts to flash. Press • the “+” or “-“ key to select the desired year. Press “esc” to return to the “Data e Hora” (Date • and Time) menu. Press “esc” again to return to • the home menu.

FOGO MONTANHA

18 Timer

The unit includes a timer that allows it to be turned on and off

Timer menu	Procedure
Accessing the timer menu 	• Press the Menu key twice to display the “Data e Hora” (Date • and Time) menu. Press the “+” key until the timer menu is • displayed. Press “Set” to display the ‘Habilitação (Activation) menu.
Activating the timer mode 	• Press “Set” again. The display starts to flash. • Press the “+” or “-“ to select “ON” or “OFF”. Press “ok”, to • confirm your selection. • Press the "+" key to go to menu "Reiniciado" (Reset).
Using the reset mode (1*) 	• Press “Set” again. The display starts to flash. A • confirmation prompt appears. • Press “ok” to confirm your selection (if desired). Press “esc” • to exit the menu. • Press the “+” key to go to menu “Prog. 1 … 6”.
Setting the parameters for Programme 	• Press “Set” again. The display starts to flash • Press the “+” or “-“ to select the desired programme. • Press “set” to confirm the selection • Press the “+” key to access the menu corresponding to the desired programme”.

- (1*) This menu allows you to delete any previously selected programme settings.
- (2*) You can set 6 different programmes which you can assign to any day of the week.
- Repeat the same procedure for the remaining programmes, if desired (Programmes P2 to P6).
- Note: After setting up the programmes, do not forget to activate them using the “Habilitação” (Activation) menu.
- Following are the instructions to set up a programme in the programmable thermostat.

Set up timer menu	Procedure
Accessing the P1 to P6 menu 	• Press the "+" or "-" key to select the desired programme. • Press "Set" to confirm the selected programme. The Prog. menu is displayed followed by 'Habilitação' (Activation).
Activating the programme 	• Press "Set" again. The display starts to flash. • Press the "+" or "-" key to select "On" or "Off". • Press "ok", to confirm your selection. • Press the "+" key to go to the 'H. Início' (Start time) for the selected P menu.
Activating the programme start time 	• Press "Set" again. The display starts to flash. • Press the "+" or "-" key to select the desired time. • Press "ok", to confirm your selection. • Press the "+" key to go to the P menu… H Stop.
Activating the programme stop time 	• Press "Set" again. The display starts to flash. • Press the "+" or "-" key to select the desired time. • Press "ok", to confirm your selection. • Press the "+" key to go to the P menu… Temp. Air (Air temp.)
Selecting set point room temperature (*) 	• Press "Set" again. The display starts to flash. • Press the "+" or "-" key to select the desired temperature. • Press "ok", to confirm your selection. • Press the "+"key **twice** to go to the P menu…Fire.
Activating the desired power for the programme (*) 	• Press "Set" again. The display starts to flash • Press the "+" or "-" key to select the desired power. • Press "ok", to confirm your selection. • Press the "+" key to go to the P menu… Dia (Day).
Activating the operating weekdays for the desired programme 	• Press "Set" again and the display starts to flash • Press the "+" or "-" key to select the desired day. • Press "On " or "Off" according to your option • Press "ok", to confirm your selection. • Press "esc" twice to exit the timer configuration.

(*)Warning: Between the set point room temperature function and the desired power function, there is a third option not applicable to this unit.

19 Settings menu

Configurações (Settings) menu	Procedure
Selecting the system language 	• Scroll down the main menu to locate the Configurações (Settings) menu. • Open the menu by pressing the “ok” key. • On this menu, press the “+” or “-” keys to scroll down the available functions. • Enter the desired function by pressing the “ok” key. • Each menu includes several options which you can access using the “+” or “-” keys, (see the option selections available for each item). • To exit, press “esc” • To return to the main menu, press the “esc” key twice.
Selecting the eco mode 	
Selecting the lighting mode 	
Selecting the lighting mode 	
Selecting the temperature unit 	
Selecting the pellet recipe 	
Selecting the thermostat menu 	
Selecting the pellet load 	
Selecting the cleaning menu 	

19.1 Language

- This function allows you to choose from the following languages available (Pt – Portuguese; Nl – Dutch; Gr – Greek; It – Italian; En – English; Fr – French; Es – Spanish; De – German).

19.2 Eco mode

- If the unit is equipped with a thermostat that operates exclusively based on temperature, the "eco mode" can be enabled to reduce the fuel consumption. In this mode, the unit operates at a user-defined set point temperature.

- The unit always runs at maximum operating power until it reaches a temperature of 1ºC above the set point temperature. Upon reaching this temperature, the unit starts operating at minimum operating power for a pre-set period of time (20 minutes). After this time has elapsed, the unit turns off. It remains off until it reaches 2º C below the set point temperature specified, for a pre-set period of time (20 minutes). Then, the unit turns back on, and a new operation cycle begins.

- This mode is only available in automatic mode.

19.3 Lighting

- This menu allows you to determine whether the display should be lit or not.

19.4 Tones

- Allows you to select the sound of the touch keys on the display when pressed.

19.5 Temperature unit (°C / °F)

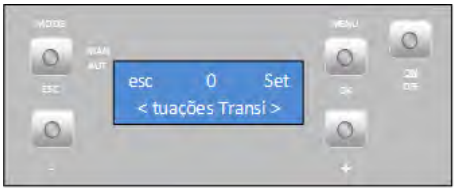
- You can select if you want the temperature measured in degrees Celsius (°C) or Fahrenheit (°F).

19.6 Pellet recipe

- The “receita de pellets” (Pellet recipe) menu allows the user to adjust the pellet dosage that goes into the unit's burner. Press "set" to display the "Actuações transitórias" (Temporary activations) menu.

19.6.1 Temporary activations

- You can increase or decrease by 25% the amount of pellets for the start-up process. Press “set”; the display starts to flash. Press the “+” or “-“ key to increase or decrease (ranging from -5 to +5), as desired. Each unit must be multiplied by 5 to obtain the correct percentage. Press “ok” to confirm. Press the “+” key to open the “Actuações de Potência” (Power activations) menu.



19.6.2 Power activations

- This menu allows you to increase or decrease by 25% the amount of pellets at each power level. Press “set”. The display starts to flash. Press "+" or "-" to increase or decrease de quantity (ranging from -5 to +5), as desired. Each unit must be multiplied by 5 to obtain the correct percentage. Press “ok” to confirm. Press “esc” to return to the “Receita de pellets” (Pellet recipe) menu.

19.7 Thermostat

- This function allows you to activate or deactivate the thermostat.

19.8 Loading the pellets

- This feature allows you to enable the worm drive to fill the channel when it is empty in order to keep the unit running. Press "Set"; the "ok" option appears. Press "ok" to activate the drive; the message "habilitada" (Activated) appears. Press "esc" to stop. This feature only appears when the unit is “Off”.

19.9 Cleaning

- This feature allows the user to clean the burning basket manually. Press “set”; the “ok” message appears. Press "ok" to start the cleaning procedure; the "Habilitada" (Activated) message appears. To stop, press "ok". Press the "+" key to open the "Técnico" (Technical) menu.

20 User Info

- This menu shows information about the unit, the measured values and electronic-related information.

User info	Procedure
Accessing the user info menu 	• Press the “+” or “-“ key to select the desired programme. Press “set” to open the selected option's menu. •
Factory display code 	• Press the “+” or “-“ key to view the desired option.
Duration of the unit operation (hours) 	
Fume extractor speed (rotations per minute) 	
Airflow as measured by the air mass probe 	
Fume temperature 	
Worm drive time (when “On”) 	
Ventilator power level. 	

21 Sleep

- The “Sleep” menu allows you to set the time at which the unit will be turned off
- The technical menu is not available for the end user and included only the factory settings which should never be changed.

Sleep function	Procedure
Go to the sleep menu 	• **Press the menu key until the “sleep” menu appears** • **Press “set” to activate the programme**
Activating the programme stop time 	• **Press “set” again. The display starts to flash** • **Press the “+” or “-“ key to select the desired time.** • **Press “ok” to confirm the selection.** • **Press “esc” twice to exit the “sleep” configuration.**

•

22 - Troubleshooting

Failure Es
• Service (2100 hours of operation)
• Air probe failure
• Low pellet level
• The door is open
• Air temperature probe failure

- **THE MAINTENANCE FAILURE MESSAGE (“SERVICE” MESSAGE ON THE DISPLAY) MEANS THAT THE UNIT’s OPERATION HOURS EXCEEDED OVER 2100 HOURS OF OPERATION. YOU SHOULD PERFORM THE UNIT'S MAINTENANCE FIRST AND THEN RESTART THE HOUR METER TO CLEAR THE FAILURE MESSAGE. THIS DOES NOT AFFECT THE NORMAL OPERATION. IT'S ONLY A WARNING.**
- **FAILURES DO NOT CAUSE THE UNIT TO SHUT DOWN.**
- In case of an emergency, shut down the unit following the standard procedure to switch the unit off. To do so, press the off button for a few seconds, until "off" is displayed.

23 List of alarms/failures/recommendations

• All alarms will cause the unit to shut down. After each alarm is cleared, you need to reset the alarm and restart the unit. To "restart" the unit press the "On/Off" button for 3 or 4 seconds until you hear a beep sound.

Alarm	Code		Troubleshooting
Ignition failure	**A01**	**Maximum time 2400 sec**	• **Worm drive** channel empty – restart the unit. • Burnt resistor – replace the resistor - Burning basket incorrectly placed.
No flame or insufficient quantity of pellets	**A02**	**Temperature under:** **- 104ºF (40°C) (air model)** **- 109.4ºF (43°C) (backboiler**	• **The pellet reservoir is empty**.
Excess heat in the pellet drum	**A03**	**110 °C**	• The ventilator **is not working – call for assistance**. • Faulty thermostat **– call for assistance**. • Unit **with faulty ventilation**.
Fume temperature above the limit	**A04**	**Over 230 °C (air version);** **Over 260 °C (backboiler model).**	• The ventilator **does not work or is at a low power level – increase the power level to maximum power (if the problem persists, call for assistance)**. • **Insufficient extraction**. • **Excess quantity of pellets**.
Pressostat alarm	**A05**	**Door open, no draught or extractor fault for 60 sec**	• Close the **door and clear the error message**. • Obstruction on the **exhaust pipe or faulty extractor**.
Airflow sensor	**A06**	**40 lpm delta for 3600 sec**	• Tubing **with insufficient extraction or obstructed** pipes.
The door is open	**A07**	**Door open for 60 seconds**	• Close the **door – clear the error message**.
Fume extractor failure	**A08**	**Connection failure**	• Check **connection**.
Fume probe failure	**A09**	**Connection failure**	• Check **connection**.
Pellet resistor failure	**A10**	**Connection failure**	• Check **connection**.
Worm drive failure	**A11**	**Connection failure**	• Check **connection**.
Pellet level sensor alarm	**A15**		• Check **connection**.

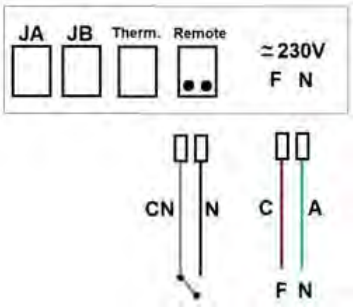
24 Installing and operating using a programmable thermostat - optional

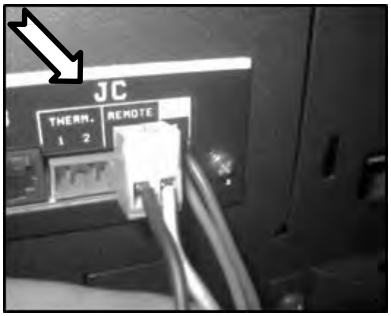
- The pellet burning free standing units are equipped with a built-in display. Alternatively, the units can be operated using a generic remote control (-a) (programmable thermostat). This device is not provided by Fogo Montanha. Note: the external remote should be supplied with an instructions manual. To use the remote control, you must install an interface (–b).

a)

b)

- For a wireless remote control, you need to connect two wires, as illustrated in the following figure:
- For the wired remote control, you need to connect the black and grey wires at the signal receiver
    - CN = grey wire
    - N = Black wire,
    - C = brown
    - A = Blue





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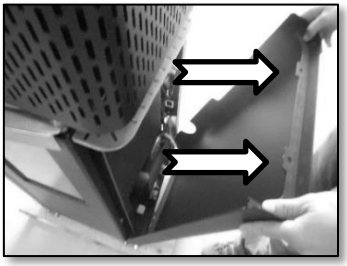
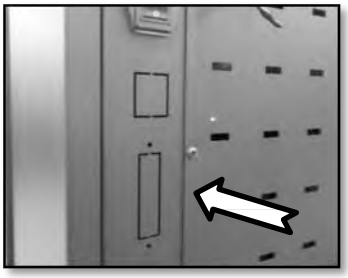
25 Instructions to install the remote control

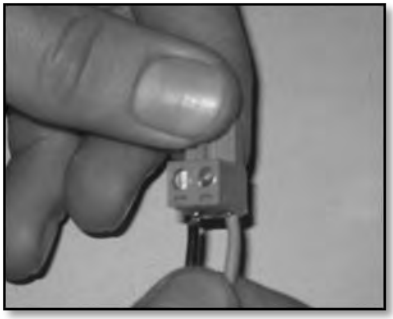
- Unplug the unit from the power mains. Remove the right cover of the unit and the plate with micro joints.

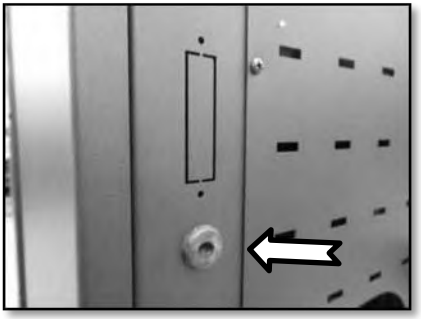
- Remove the unit's phase (F) and neutral (N) terminals.

- Rivet the terminals of the 220V wire that supplies power to the transmitter.


- Connect the wires on the ON/OFF contact connector (c); Direct the wires through the cable holder to the interior of the unit (d).

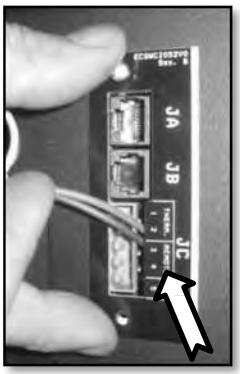


c)

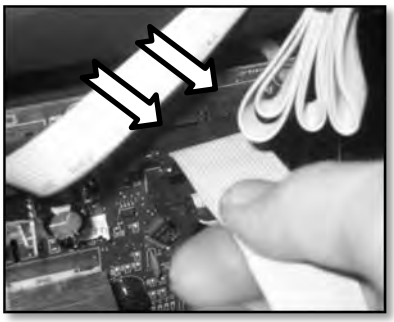


d)

- Assemble the interface at the appropriate location on the unit and plug the remote control plug (On/Off contact) to the socket labelled "remote".

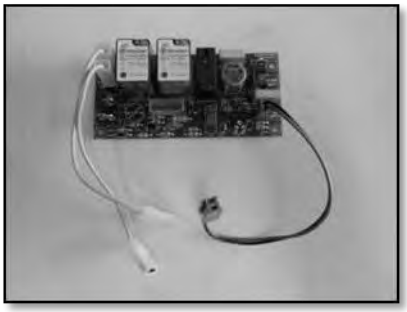


- Connect the interface cable to communication socket on the circuit board (Servizi 5J).

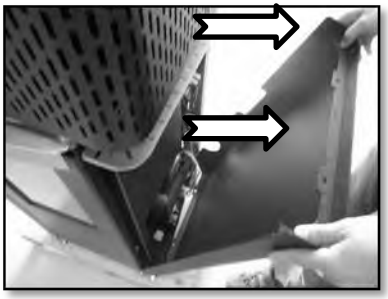


26 Optional safety installation – UPS connection kit

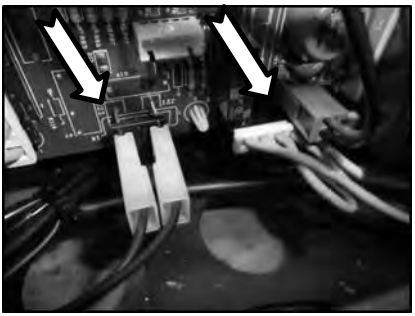
- To connect the kit to a UPS, proceed as shown in the following figures.



- First, disconnect the unit from the power mains and remove the side cover to access the circuit board.



- Then, assemble the UPS electronic module beside the unit's circuit board connecting the corresponding wires to the plate.



- Later on this procedure you should remove the micro-joints secured plate at the back of the unit and replace it the UPS.

- Finally, perform all the required electrical connections.

- Never connect the UPS electronic module when the power of the unit is turned on.

27 For your safety we remind you that you should:

- Make sure you fully read and understand this instruction manual before using the free standing fire as a biomass heating unit.
- The free standing fire is not intended for use by children or people physically and/or mentally disabled, or that are inexperienced or unfamiliar with using of the unit, except under the direct supervision or instruction of an adult.
- Do not touch the free standing fire when barefoot or if any part of your body is wet or humid.
- Do not tamper with the safety devices or adjustment features without the manufacturer's authorization.
- Do not cover or reduce the size of the vents on the unit.
- The free standing fire installation has clearance requirements for proper combustion. Rooms with air tight isolation or the existence of air extraction devices sources in the room may prevent the unit from working properly.

- A proper combustion requires the existence of ventilation holes.
- Do not leave the packing materials at the reach of children
- During normal operation, DO NOT open the door of the free standing fire unit;
- Some parts of the unit may overheat during normal operation, so avoid direct contact with parts such as the door handle and glass.
- Check for the existence of any obstructions in the fume duct before turning on the unit after a long period of inactivity.
- This pellet burning unit is designed for residential use in a protected environment. Safety systems may kick in, turning off the unit. If this occurs, contact the technical assistance. Under no circumstances you should attempt to interfere with the safety systems.
- The free standing fire is a biomass heating unit equipped with an electric fume extractor. The occurrence of any power failure during its use may prevent fume extraction causing the room to be filled with smoke. For this reason, it is mandatory that you have a natural fume extraction system, like a chimney.
- Fogo Montanha offers an optional safety device (additional circuit board) which enables you to connect your Free Standing Fire unit to a UPS system in order to allow extending the operation of the fume extractor until complete extraction of all fumes, thus avoiding fume extraction problems during a power failure.
- If you intend to use the Free Standing Fire unit while away from home or unattended, you should use the safety device specified above for total safety during any power failure.
- During operation, NEVER turn off the free standing fire unit by disconnecting the electric plug. The fume extractor on the free standing fire unit is a power device so disconnecting the power plug will prevent the extraction of the combustion fumes.
- Your unit must be disconnected from the power mains before it may be subject to any maintenance procedures. Before doing this, the unit must be totally cooled down (if previously operating).
- Never touch the interior of the unit without disconnecting it from the power mains.

28 Life cycle of a Free Standing Fire unit

- About 90% of the materials used in the manufacture of these units are recyclable, thus contributing towards a reduced environmental impact and a sustainable development of our planet. End-of-life units should be returned to an authorised waste recycling processing systems. We advise you to contact your local authorities for instructions.

29 Sustainability

- Fogo Montanha designs and manufactures biomass solutions and biomass-fuelled equipments as a primary energy source. This is our contribution for the sustainability of our planet – and cost-effective and environmentally-friendly alternative that applies the best practices in environmental management to ensure an efficient carbon cycle management.

- Fogo Montanha makes all efforts to learn and to know the national forest to efficiently satisfy energy demands, always concerned in maintaining its biodiversity and natural wealth essential to preserve the quality of life on our Planet.

- Fogo Montanha is a member of Sociedade Ponto Verde (the Portuguese Green Dot Scheme), which manages packaging waste of products marketed by the company . For this reason, you should take the packaging waste removed from your unit, such as plastic sheets and cardboards, to your nearest recycling point.

- Fogo Montanha is also a member of Amb3E, the entity responsible for collecting waste electrical and electronic equipment (WEEE); as such, end-of-life units with forced air ventilation systems should be shipped to the appropriate WEEE-processing location. The electrical components of your end-of-life equipment should be shipped to your nearest WEEE collection point.

30 Warranty

- All Fogo Montanha pellet burning units have a 2 (two) year warranty from the date the invoice was issued. In order for your warranty to remain valid, you must keep the invoice or proof of purchase throughout the warranty period.

- The electrical resistors have a 6 (six) month warranty.

- The warranty applies only to defects in materials or manufacture.

31 Exclusions:

- This warranty does not cover broken glass or vermiculite.

- The type of fuel used and the handling of the unit are beyond Fogo Montanha’s control; as such, parts in direct contact with the flame are not covered by this warranty;

- The rope gasket is not covered by the warranty.

- The installer shall take full responsibility for any problems and/or defects resulting from the installation process.

- Any costs incurred resulting from moves, transport, labour, packaging, disassembly and depreciation of the unit during operations under the warranty shall be the client's responsibility.

- Any malfunction caused by mechanical or electrical parts not supplied by FOGO MONTANHA not specified in the instruction manual for heating appliances is not covered by this warranty.

- The installation of the unit near medium / low voltage power lines, with surges above 230V±5%, may cause damage to the unit's electrical components. Therefore, we recommend that a main line voltage stabiliser be connected to the unit.

- In general, we recommend the use of a UPS or a surge protector to ensure the correct operation of all electrical components.

- The use of non certified pellets by the EN14961-2 standard, grade A1 implies the end of the manufacturer's warranty

32 Glossary

Ampere (A): IS unit of measurement of electric current.

bar: unit of pressure equal to exactly 100,000 Pa. This pressure is very close to standard atmospheric pressure.

cal (Calorie): equal to the amount of heat required to increase the temperature of one gram of water by one degree centigrade.

cm (centimetre): unit of measure.

CO (carbon monoxide): Lightly flammable, colourless, odourless and very dangerous gas, due to its toxicity.

CO2 (carbon dioxide): Gas needed by plants for photosynthesis on the one hand, and emitted into the atmosphere on the other, contributing to the greenhouse effect.

Combustion: a process for obtaining energy. Combustion is basically a chemical reaction that requires three items in order to take place: fuel, oxidiser and ignition temperature.

Oxidiser: chemical substance that feeds combustion (essentially oxygen) and is essential for it to take place.

Fuel: anything that can undergo combustion, in this case wood.

Creosote: chemical compound created by combustion. This compound is sometimes deposited on the glass and flue of an insert fire.

Circuit breaker: Electromechanical device that protects a given electrical appliance.

Energetic efficiency: capacity to generate large quantities of heat with the least amount of energy possible, causing the least environmental impact and reducing the energy budget.

CO Emissions: emission of carbon monoxide gas into the atmosphere.

CO Emissions (13% de O2): carbon monoxide content corrected for 13% of O2.

Differential switch: protects people and property against grounding failures, preventing electric shocks and fires.

kcal (Kilocalorie): multiple unit of measurement of calories. Equivalent to 1000 calories.

kW (kilowatt): unit of measurement equal to 1,000 watts.

mm (millimetres): unit of measurement.

mA (milliampere): unit of measurement of electric current.

Pa (Pascal): standard IS unit of pressure and tension. This unit is named after Blaise Pascal, eminent French mathematician, physicist and philosopher.

Heating capacity : also known as specific combustion heat. It represents the amount of heat released when a certain amount of fuel is completely burned. The heating capacity is expressed in calories (or kilocalories) per unit of weight of fuel.

Rated power: Electric power consumed from the energy source. Measured in watts.

Rated heating power: heating capacity, i.e. the transfer of heat from firewood to the appliance – measured for a standard load of firewood over a given period of time.

Power output: a manufacturer's recommendation from tests performed to the equipment using firewood loads within the reasonable minimum and maximum operating range. This power output range will show different firewood consumptions per hour.

Plumb: The vertical distance to measure the highest point of the installation.

Performance: expressed as a percentage of “useful energy” that can be extracted from a given system, taking into account the “total energy” of the used fuel.

Ignition temperature: temperature above which the fuel can enter into combustion.

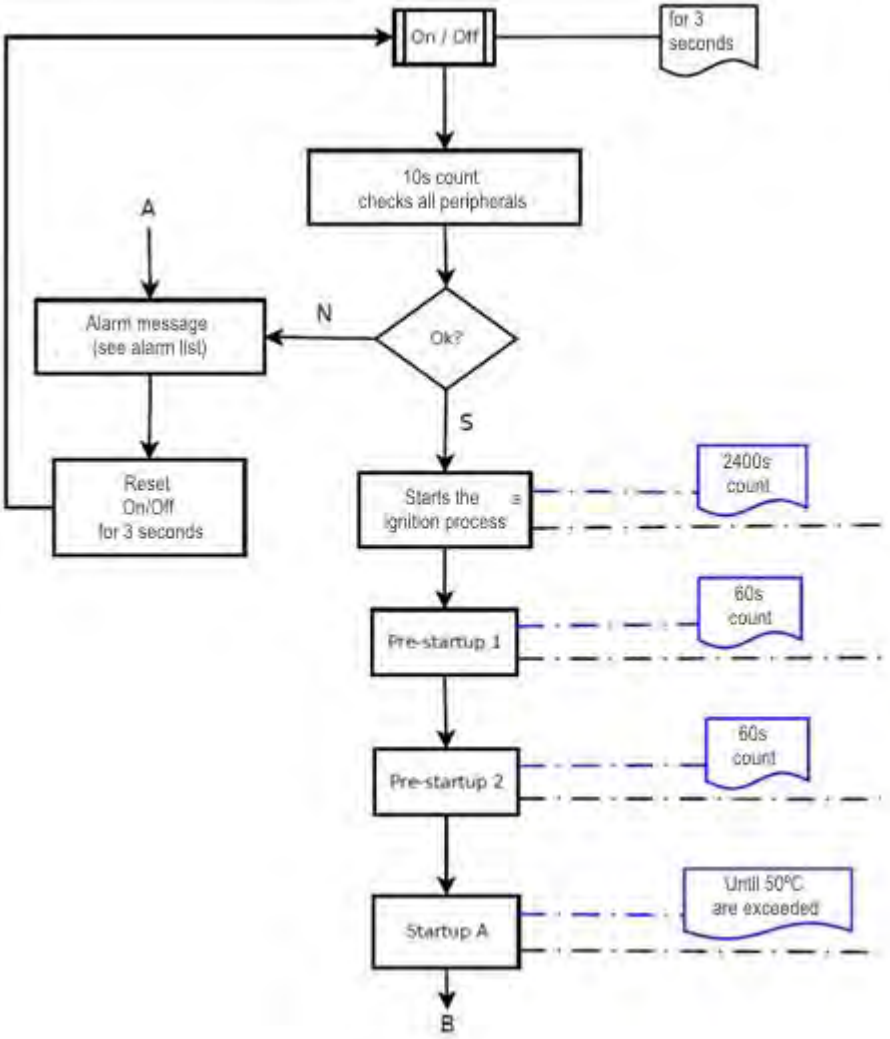
Thermo resistant: resistant to high temperatures and thermal shock.

Glass ceramics: highly resistant ceramic material produced from the controlled crystallisation of vitreous materials. Widely used in industrial applications.

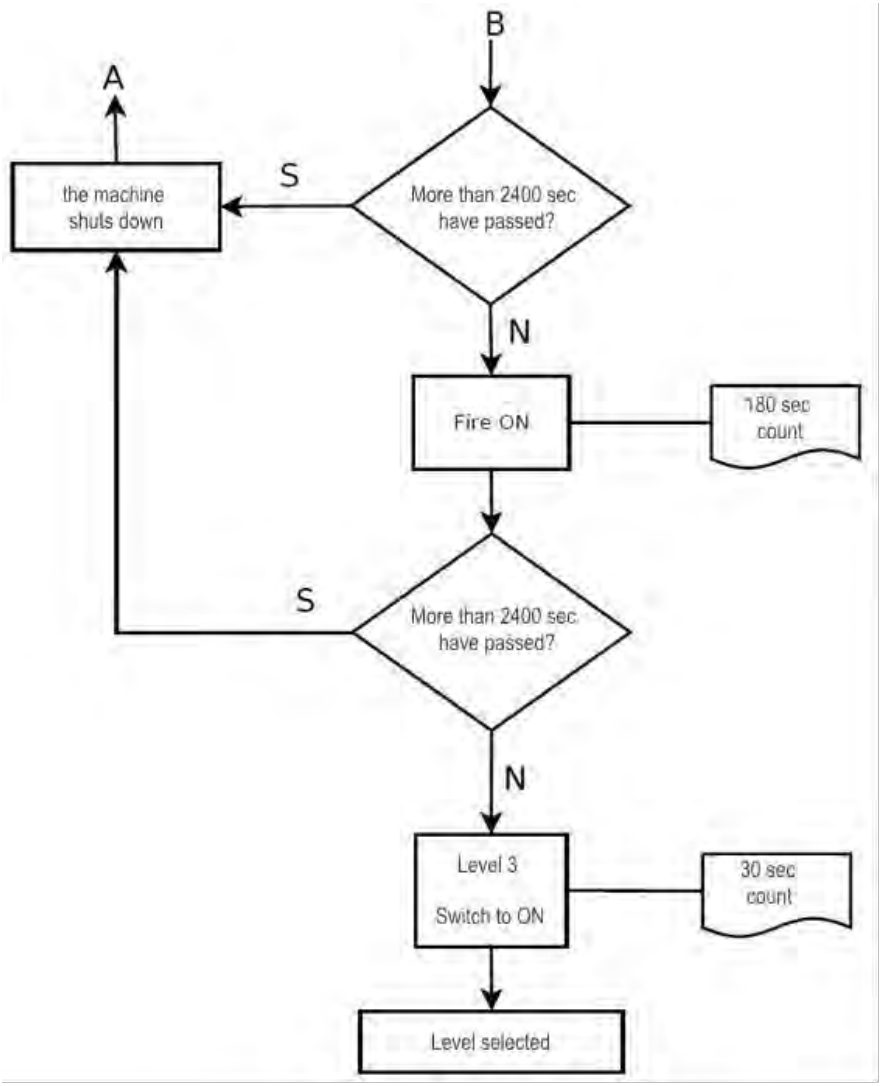
W (Watt): The unit used by the International System to measure power.

33 Annexes

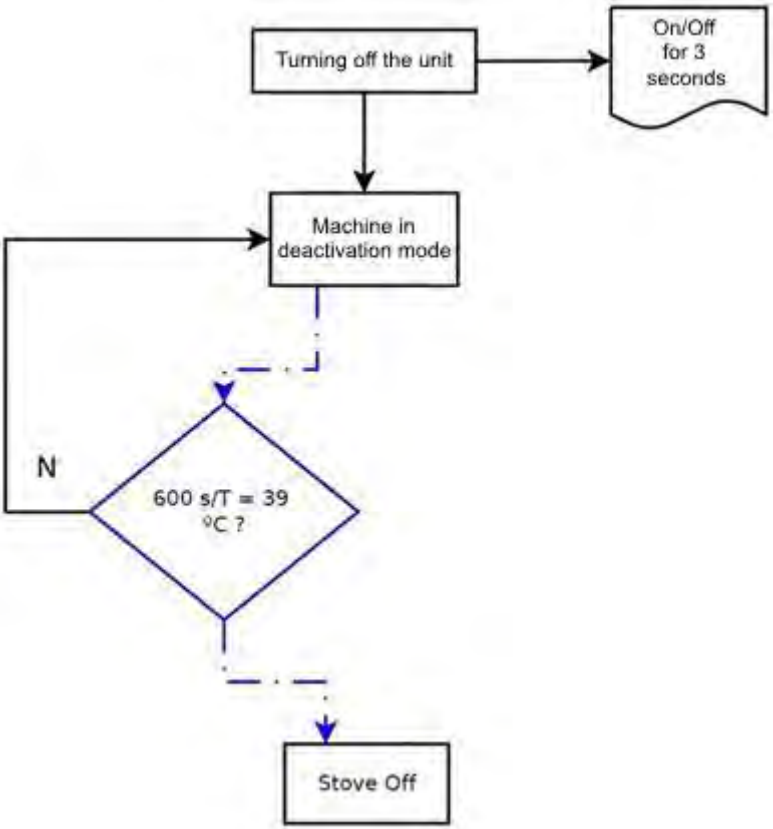
- Flow chart 1 – Normal activation (phase 1)



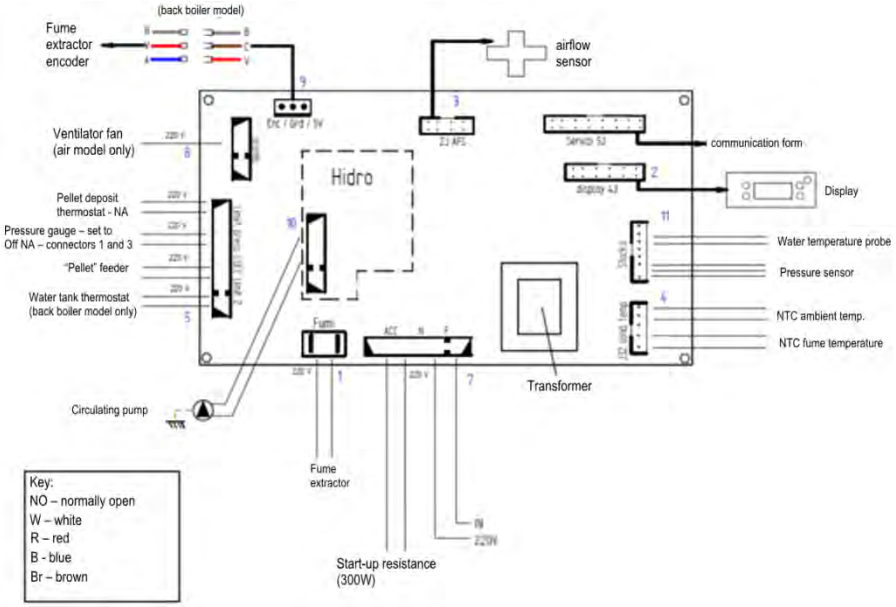
- Flow chart 1 – Normal activation (phase 2)



- Flow chart 2– Disconnect the unit



- Electrical diagram of the Free Standing Fire unit



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- Tel +351 234650650
- mail: info@fogo-montanha.com

Classification:

- Solid fuel units; Pellets

Standards applied:

- EN14785

Entity responsible for performing the tests:

- Ceis centro de ensaios, inovação e serviços
- NB 1722
- Madrid - Spain

Certifications:

- ISO9001 Certification
- ISO14001 Certification

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