



FOGO MONTANHA
RECUPERADORES DE CALOR

INSTRUCTION MANUAL

English

**INSERT TYPE
WOOD BURNING STOVES**

E601 | E701 | E801 | E901

E609 | E609H | E709 | E809

| E909

**Thank you for purchasing a FOGO MONTANHA appliance.
Please read this manual carefully and retain it for future reference.**

- * All products here detailed meet the requirements of the EU Construction Products Regulation (No. 305/2011) and bear the EC conformity marking;
- * FOGO MONTANHA disclaims any responsibility for damage to the unit when installed by non-qualified personnel;
- * FOGO MONTANHA disclaims any responsibility for damage to units not installed and operated in compliance with 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;
- * Technical support is normally provided by FOGO MONTANHA, except in special cases to be determined by the installer or support technician;

THE STOVE CAN REACH HIGH TEMPERATURES

INFLAMABLE MATERIALS MUST BE PLACED AT LEAST 1 METRE AWAY FROM THE STOVE AT ALL TIMES

KEEP YOUNG CHILDREN AWAY FROM THE STOVE

READ THESE INSTRUCTIONS CAREFULLY BEFORE USE

DECLARATION OF CE-CONFORMITY

We, the manufacturers of the appliance, hereby declare under our sole responsibility that the products described below conform to essential safety requirements. This declaration will be rendered invalid if any changes are made to the appliance without our written consent.

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Classification	Solid-fuel appliance: Insert
Applied Standards and Directives	EN 16510-2-1:2022
Test Institute	Centro de Ensayos, Innovación y Servicios Cr. Villaviciosa de Odón a Móstoles (M-856) Km. 1,5 Móstoles – 28935



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1. Introduction

Thank you for buying a FOGO MONTANHA stove. To get the best ecological performance and highest output from this appliance please follow these installation and operating instructions.

The guarantee will cease to apply if the stove is damaged as a result of a failure to follow the installation and operating instructions.

The appliance must not be modified without the manufacturer's written permission. Only original spare parts made by the manufacturer should be used to repair this appliance. Prevailing laws and local architectural and fire prevention regulations must be followed.

2. Technical Characteristics

Models		E601	E701	E801	E901
Efficiency nominal	%	80	80	80	80
Nominal consumption of firewood	kg/h	2,4	2,8	3,1	3,5
Maximum heated volume	m ³	182	214	241	270
Nominal heat output	kW	8	9,4	10,6	11,9
CO emission (13% O ₂)	Vol.%	0,1	0,1	0,1	0,1
CO ₂ emission	Vol.%	9,3	9,5	9,8	10,0
Particle's emissions (13% O ₂)	mg/Nm ³	40	40	40	40
OCG emissions (13% O ₂)	mg/Nm ³	80	80	80	80
NOx emissions (13% O ₂)	mg/Nm ³	200	200	200	200
Flue gas temperature	°C	267	287	306	326
Diameter of chimney	mm	150	180	200	200
Front safety distance	cm	150	150	150	150
Weight	kg	83	101	116	122
Fuel		firewood	firewood	firewood	firewood
Maximum fuel humidity	%	20	20	20	20
Recommended length of firewood	mm	300	400	500	500
Maximum length of firewood	mm	450	550	650	750
Dimensions:					
Height	mm	546	546	546	546
Width	mm	590	690	790	890
Depth	mm	465	465	465	465

Table 1 - Technical Characteristics models E601, E701, E801 and E901

Models		E609	E609H	E709	E809	E909
Efficiency nominal	%	80	80	80	80	80
Nominal consumption of firewood	kg/hora	2,5	2,5	2,9	3,3	3,7
Maximum heated volume	m ³	168	168	195	223	250
Nominal heat output	kW	7,4	7,4	8,6	9,8	11,0
CO emission (13% O ₂)	Vol.%	0,1	0,1	0,1	0,1	0,1
CO ₂ emission	Vol.%	9,98	9,98	10,5	10,9	11,4
Particle's emissions (13% O ₂)	mg/Nm ³	40	40	40	40	40
OCG emissions (13% O ₂)	mg/Nm ³	80	80	80	80	80
NOx emissions (13% O ₂)	mg/Nm ³	200	200	200	200	200
Flue gas temperature	°C	300	300	316	331	346
Diameter of chimney	mm	150	150	180	200	200
Front safety distance	cm	150	150	150	150	150
Weight	kg	94	94	105	115	137
Fuel		firewood	firewood	firewood	firewood	firewood
Maximum fuel humidity	%	20	20	20	20	20
Recommended length of firewood	mm	300	300	400	500	500
Maximum length of firewood	mm	450	450	550	650	750
Dimensions:						
Height	mm	496	700	564	636	706
Width	mm	590	590	690	790	890
Depth	mm	465	465	465	465	465

Table 2 - Technical Characteristics models E609, E609H, E709, E809 and E909

3. Wood

The stove burns only wood. The best results are obtained using dry wood. Logs cut to size, stored and ventilated undercover for at least one year and preferably two, are best as they:

- Produce considerably more heat than wet or green wood.
- Produce much less smoke and deposit less tar on the stove, chimney and glass panel than wet or green wood.
- Only dry wood prevents emissions of hazardous substances when burning.

A stove full of wood will generate more heat over a longer period of time. Logs should not be too large and, generally speaking, the harder the wood the better. Never use waste, chippings, wood shavings and sawdust, tree bark or waste from chipboard, laminated wood or surface-treated wood. Do not cut the firewood too small. Very thin pieces of wood burn very quickly and are only suitable for lighting the stove. Allow large pieces with the normal dimension of about 25 cm to burn naturally. Large logs must be chopped small.

Note: The stove is not a waste incinerator. The environment legislation expressly forbids the burning of waste in household fires. Not only is it environmentally unfriendly to use a solid fuel stove incorrectly to burn household waste, chemically treated wood waste or waste paper, or to use it as a private waste incineration plant, but it is also in breach of the emission laws and liable to punishment. The appliance is not suitable for burning liquid fuels.

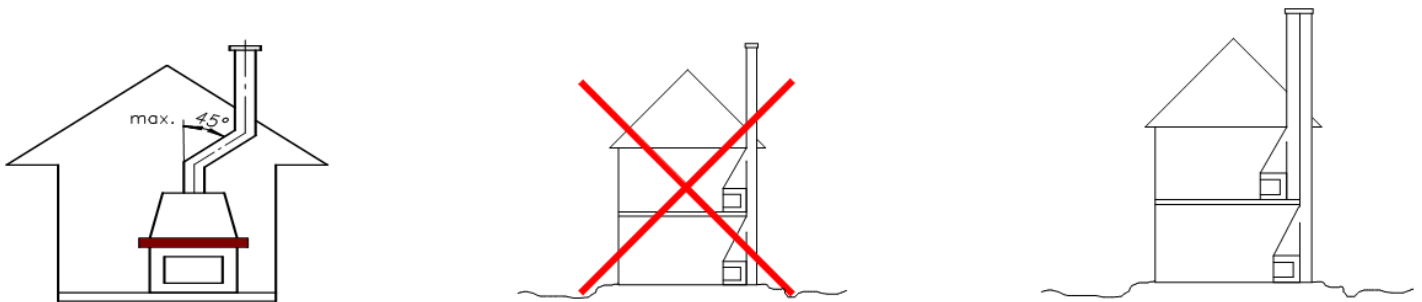
Besides creating high and unchecked air pollution, harmful combustion products and combustion residues it also has a negative effect on the working and operating life of the stove and flue. This results in all kinds of defects and rapid wear, which may require expensive repair and even replacement of the stove. The burning of unsuitable fuels can lead to a house fire of a type not covered by your fire insurance.

4. Installation

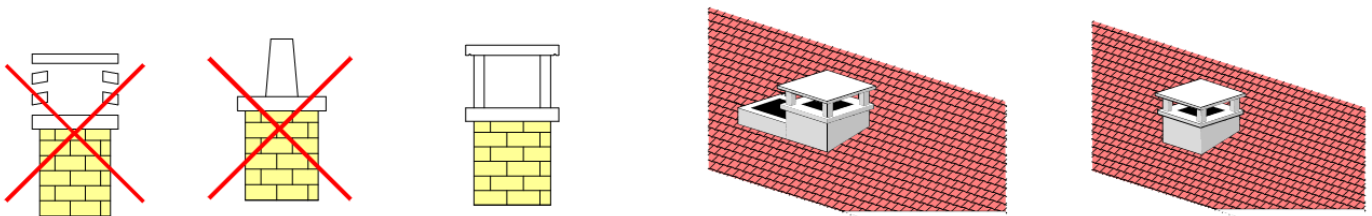
4.1. Your flue and chimney

For your stove to work properly the chimney must also work properly. Check out the following points whilst bearing in mind that this is for informational purposes only and is not binding for us in any manner whatsoever. It is an unfortunate fact that there are numerous factors that can play decisive roles in the correct functioning of a chimney.

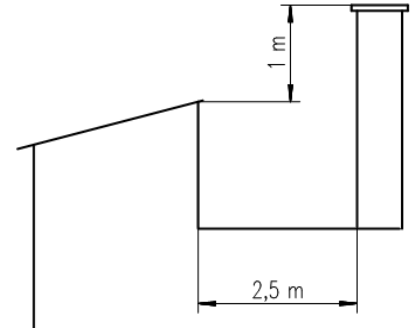
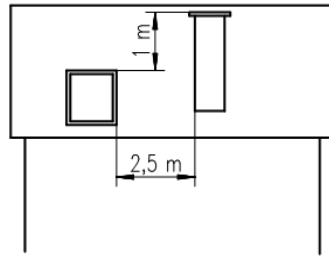
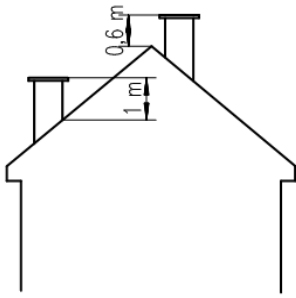
- Thoroughly clean your chimney prior to installation. If it has not been used for a long time, ask a specialist to inspect it.
- The chimney should be of sufficient height to guarantee a minimum draught of 8-20 Pascal. It is only possible to measure the chimney draught while the appliance is working. If the draught is insufficient raise the chimney and/or insulate it. If the flue draught is too great you will need to install a draught regulator.
- The flue should, ideally, be vertical and not change direction at any more than 45° from vertical.
- The flue should not join into another. It should be separate throughout its entire length and have its own, separate, chimney pot.



- The flue should be free of obstructions, of the same size throughout and preferably round. The size should be that specified for the stove to function correctly (see catalogue).



- If the top of the chimney is within 60cm of the ridge of the roof, or closer, it should project at least 60cm above the ridge. Elsewhere on the roof, not close to the ridge, the chimney should be at least 1 metre above the roof, measured from the upper side.



- The chimney should not be close to tall trees, walls or buildings as these could cause draughts.
- The chimney must be well insulated. The internal face of the flue must be free from cracks and fissures and lined with fire cement or other, suitable, refractory material. If not, then a suitable liner must be installed throughout its entire length.

4.2. Chimney installation

European standards must be followed. Due to the technical nature of these standards, they are mostly intended for

professional installers. The following lists the relevant European standards.

EN 12446: 2016 - Chimneys - Components - Concrete outer wall elements.

EN 1443: 2019 - Chimneys - General Requirements.

EN1856-1: 2016 - Chimneys - Requirements for metal chimneys - Part 1: Products for system chimneys.

EN1856-2: 2010 - Chimneys - Requirements for metal chimneys - Part 2: Metal liners and connecting flue pipes.

EN13384-1: 2019 - Chimneys - Thermal and fluid dynamic calculation methods - Part 1.

EN1857: 2013 - Chimneys - Components - Flue liners.

EN1457: 2014 and Clay/ceramic flue liners - Requirements and test methods.

EN 1806: 2008- Chimneys - Clay/ceramic flue blocks for single wall chimneys - Requirements and test methods.

EN13069: 2008 - Chimneys - Clay/ceramic outer walls for system chimneys - Requirements and test methods.

EN 13063: 2010 - System chimneys with clay/ceramic flue liners - Part 1: Requirements and test methods for soot Resistance.

Note: The liner must be safely and securely connected to the outlet pipe of the stove. And your chimney or liner must be swept at least once each heating season and in accordance with local regulations.

4.3. Your fireplace

If cement mortar has been used on the inside or outside of the fireplace during construction or installation then a period of at least 7 days should be allowed before operation to prevent the cement cracking when drying out. The stove will smoke slightly when first lit. These are fumes from the high

temperature paint curing and baking hard. The house should be well ventilated during the curing period, which will last approximately twenty minutes. During this period the paintwork of the stove should not be touched. Only an appliance fitted by an accredited installer guarantees compliance with architectural and fire prevention regulations. These rules must be followed to ensure the correct and safe operation of the stove. The flue is extremely important when fitting the stove. Be sure to consult authorised specialists about the connection to ensure compliance with local building regulations. Bear in mind the following:

- The appliance door must be closed when in use and also when not in use.
- There must be an adequate supply of fresh air when the appliance is in use.

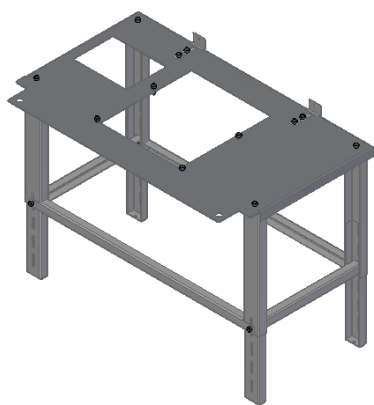
Fire safety measures relating to combustible or temperature sensitive floor surfaces:

- A fire resistant, non-combustible covering must be fitted under and around the stove. This must be at least 15cm thick.
- No combustible materials should be stored underneath the appliance (e.g., firewood).
- The safety distances from combustible or temperature sensitive objects, given in the table of technical characteristics, must be adhered to.

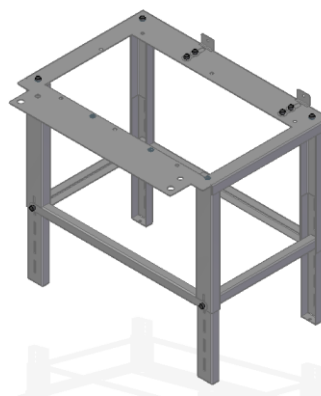
4.4. Auxiliary table installation (PA1090G051 or PA1090G049)

To perform a greenfield installation, two height-adjustable auxiliary tables are available to facilitate the work of installing the equipment. A larger table (item PA1090G051) for fitting sizes E901/E801/E909/E809 and a smaller table (item PA1090G049) for fitting sizes E701/E601/E709/E609/E609H.

The table is adjustable in height and has 2 components to regulate the depth in order to fix it to the back wall, it also has holes in the bottom of the legs to facilitate the fixation to the floor, Figure 1.



PA1090G051 - Auxiliary table for equipment Models:
E901/E801/E909/E809





PA1090G049 - Auxiliary table for equipment Models:
E701/E601/E709/E609/E609H

Figure 1 - Installation of auxiliary table

It is very important that the table is level, both in depth and width, this will facilitate the extraction of the equipment on the guides increasing their life time. To level the table, it is necessary to adjust the adjustable legs in height, although the floor is uneven.

Fixing to the wall and the floor will depend on the material they are made of. Fixing must be very firm, because the insert has a considerable weight, for this reason, the following configurations are recommended according to the material where the table will be fixed:






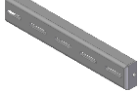
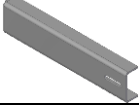
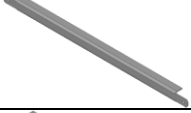

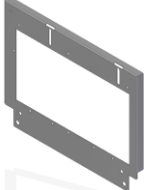
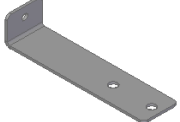
Material	Type of attachment	Image
Massif (slab, stone...)	PFG Shield anchors with screw M8x60 Metallic	
Solid and non-solid (brick)	Brass Bushing + Screw Din 7991 10.9 M6x25	

You must select the type of configuration that best suits the needs of the installation and use the appropriate tools and safety measures for installation. To assemble the components of the table you will need a 6 mm umbrako wrench.

The components that make up the table **PA1090G051** are as follows:

Component drawing	Quantity	Description
	14	Screw DIN 912 M8x20mm
	4	Washers DIN 9021 M8
	2	Screw DIN 933 5.6 M8x16
	6	Brass Nylon 8x40
	6	Screw AGL CE 5x40 Z/B
	4	Leg Extension
	4	Table leg
	2	Long locking
	2	Short lock
	1	Table for equipment Models: E901/E801/E909/E809
	2	Fixing brackets

The components that make up the table **PA1090G049** are as follows:

Component drawing	Quantity	Description
	21	Screw DIN 912 M8x20mm
	4	Washers DIN 9021 M8
	2	Screw DIN 933 5.6 M8x16
	6	Bucha Nylon 8x40
	6	Parafuso AGL CE 5x40 Z/B
	4	Leg Extension
	4	Table leg
	2	Long locking
	2	Short lock
	1	Equipment table Models: E701/E601/E709/E609/E609H
	2	Fixing brackets

1. Protect the surface on which you are going to work. Join the four legs of the table with four DIN 912 M8x20mm screws as shown in Figure 2, it should be hand-tightened only, to make the rest of the assembly easier to perform.

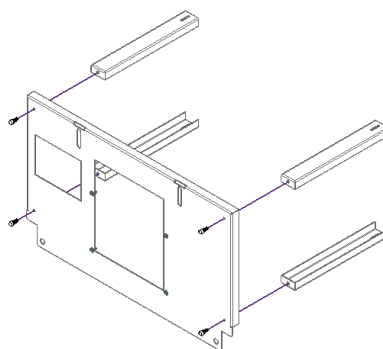


Figure 2 - Auxiliary table assembly

2. Place one of the short interlocks from the inside of one of the leg extensions and insert between the two leg extensions on one side, as can be seen in the picture below. Place one of the long locks from the outside and secure the assembly with a DIN 912 M8x20mm screw. Do not tighten the screw with force, to facilitate the rest of the assembly of the assembly. The leg extension has 5 holes, you must select which to apply, as well as, the total height of the table, as shown in Figure 3.

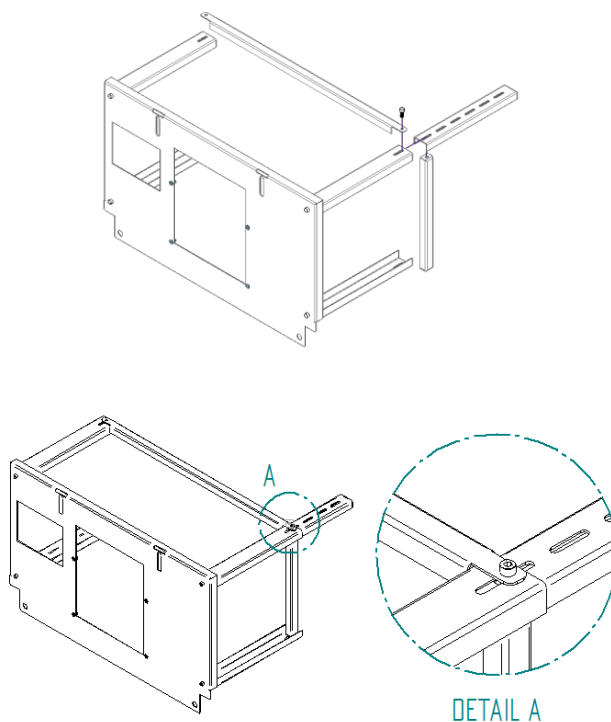


Figure 3 - Auxiliary table assembly

3. The process should be repeated for the other three legs, Figure 4.

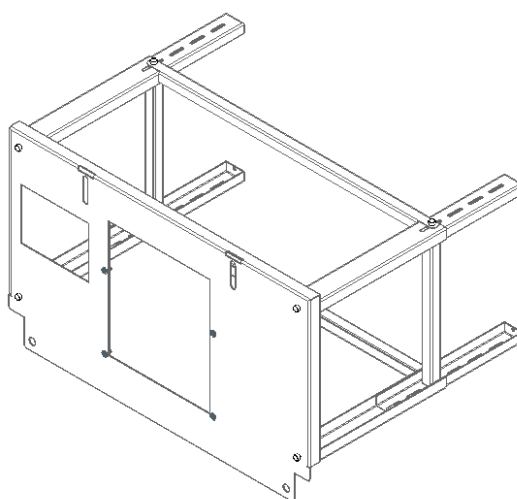


Figure 4 - Auxiliary table assembly

4. Place the two squares through the opening in the table and place a screw and washer in each. Do not tighten the screws completely, just enough to allow the squares to move, Figure 5.

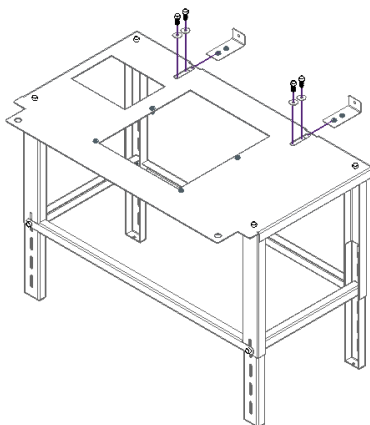


Figure 5 - Auxiliary table assembly

5. Place the auxiliary table in its final position, remember that the table must face the front wall, as shown in Figure 6. Next, mark the four holes for the legs on the floor, then drill the hole, and use the necessary means to fix it as previously indicated. Finally, fix the table to the floor.

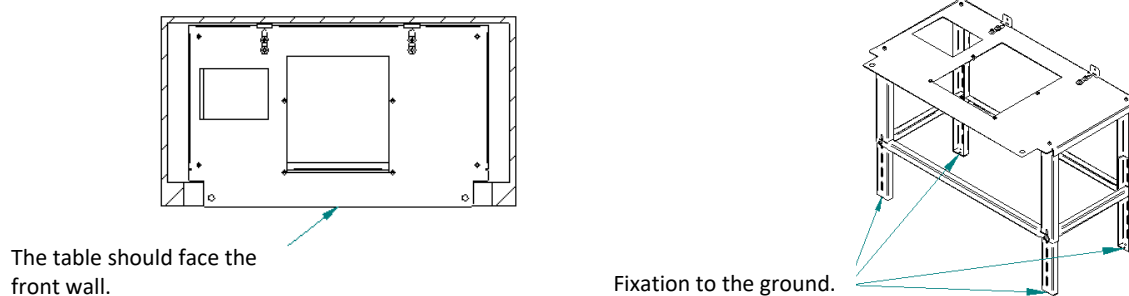


Figure 6 - Auxiliary table assembly

6. The table must be levelled as accurately as possible with the aid of a level. Tighten all screws with a 6 mm umbrako wrench. Move the brackets on the back wall and mark the holes. Remove the brackets, if necessary, remove the screws and remove the assembly to facilitate the task of drilling holes in the wall. Once done is placed the necessary components for fixing, put the brackets in place. Check that the table is level and the face of the front wall, tighten the screws that hold the brackets to the table with a 6mm umbrako wrench.

Before finalizing the installation, check that the table is level, and correct it if necessary.

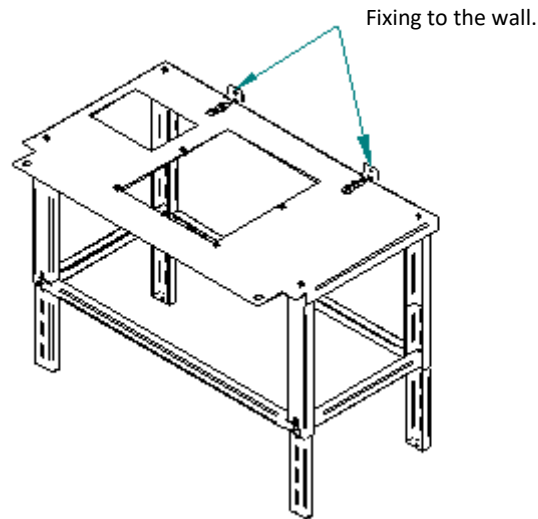
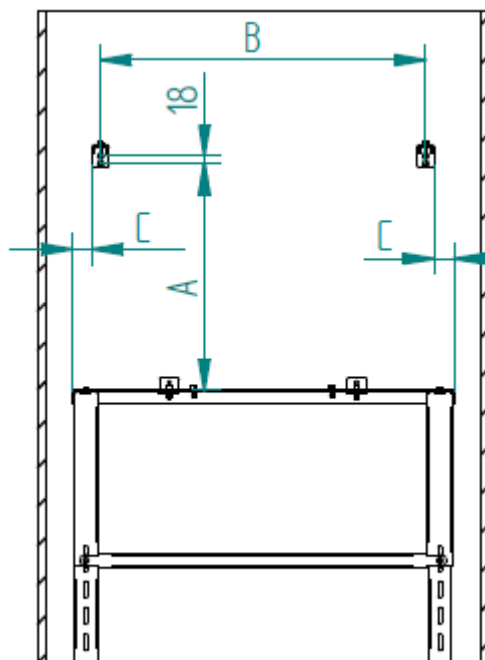


Figure 7 - Auxiliary table assembly

7. After fixing the table to the floor and wall, you should drill the holes for FIP bushing M8x60 Ø10mm Chemical, for the upper supports "PA1090G053", according to the indicated measures, see Figure 8.



Equipment	A (mm)	B (mm)	C (mm)
E901	520	841	2
E801	520	741	48
E701	520	641	2
E601	520	541	48
E909	680	841	2
E809	610	741	48
E709	538	639	0
E609	470	539	49

Figure 8 - Mounting the upper brackets

8. To apply the upper supports, before attaching them to the wall, you should attach them outside according to the measure shown in Figure 9. The measure "Y" is the distance that the support will have to the wall fixing, this measure should be taken at the place to be installed in order to later tighten the fixing set.

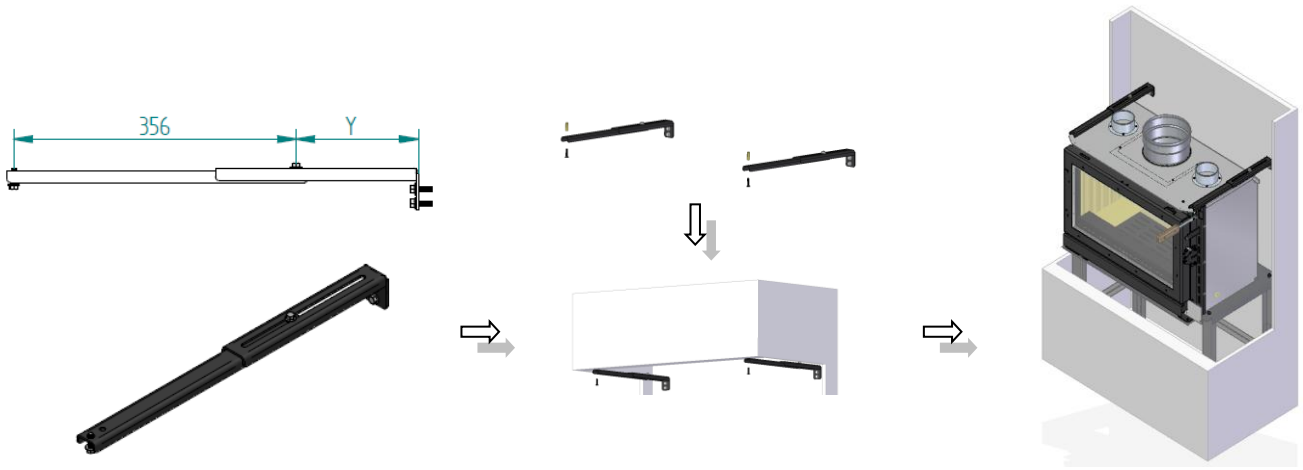


Figure 9 - Mounting the upper brackets - PA1090G053

9. You should note that when you put the equipment in place you should remove the door by lifting it upwards in order to remove the door from the supports, Figure 10. If your equipment is a door made of sheet metal, it is advisable to also remove the lower panel by loosening the side screws as shown in Figure 11. If it is a glass door unit there is no lower panel.

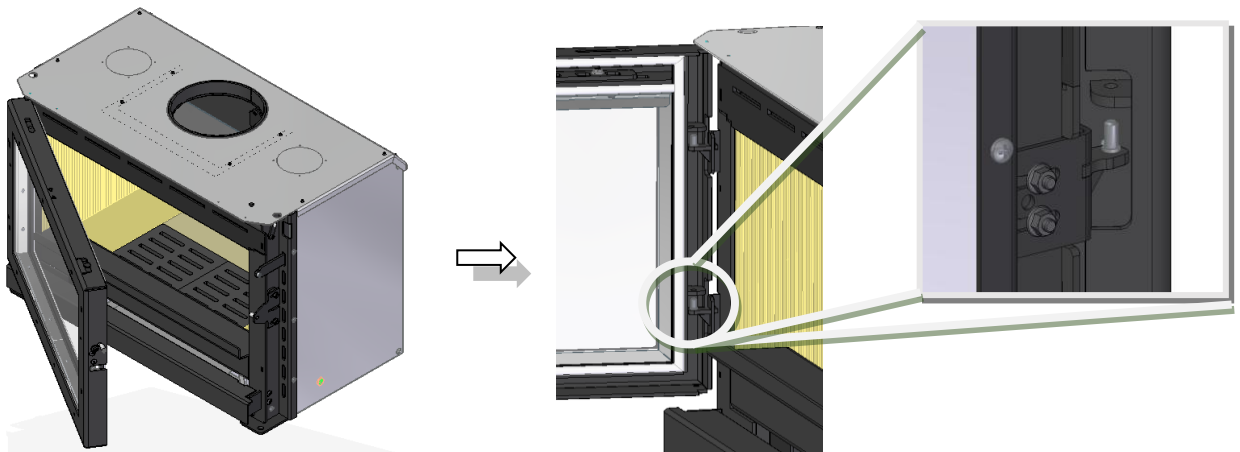


Figure 10 - Disengaging the door from the supports

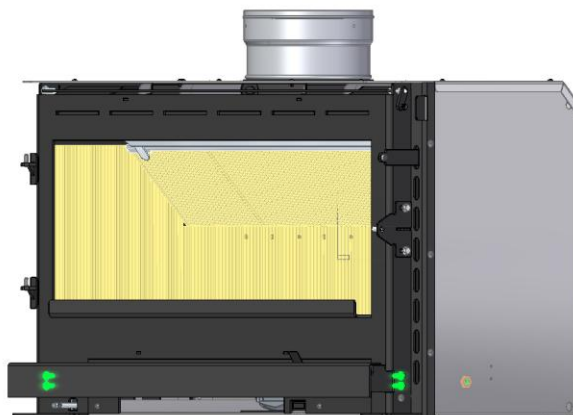


Figure 11 - Removing the lower flap

10. You can then insert the equipment into place, as shown in Figure 12.

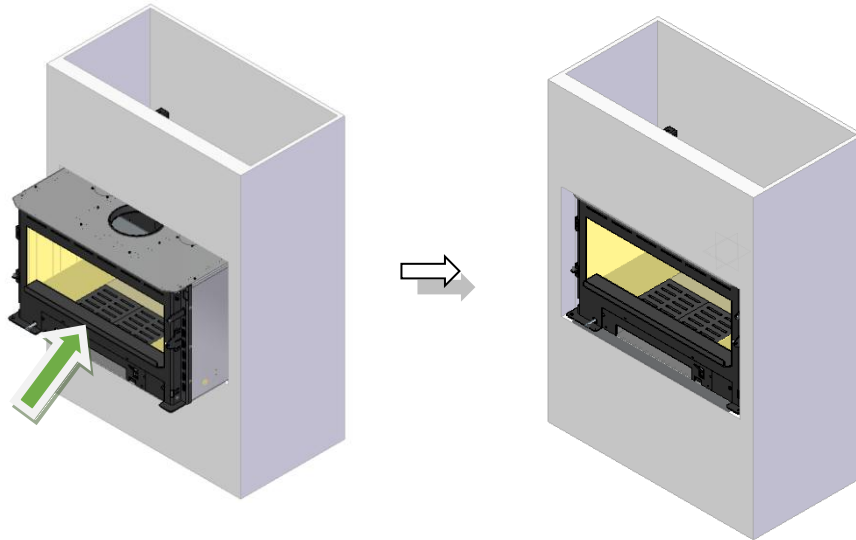


Figure 12 - Placing the equipment on site

11. After placing the unit in place, it should have a distance of 40 mm from the face of the plasterboard or masonry to the front face of the unit, so that when you install the frame, it will be well installed, see Figure 13.

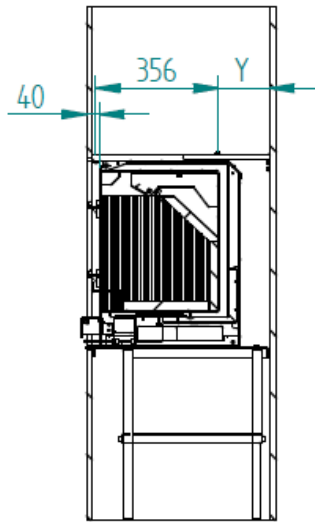
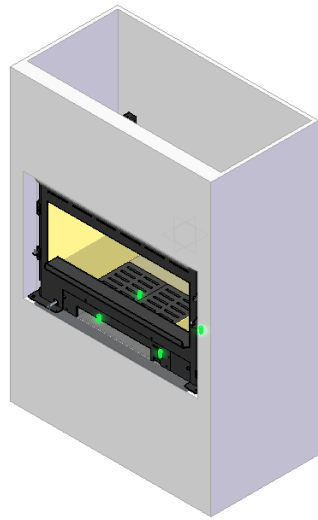


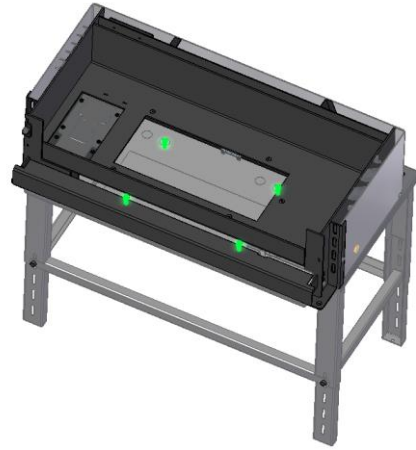
Figure 13 - Distance of the equipment from the plasterboard or masonry face

12. The next step is to fix the equipment to the table, which can be accessed in two ways, Figure 14.

- (a) From the front area of the equipment at the bottom, if you find it difficult to access from the front, you can still remove the lower front panel by loosening the side screws.
- (b) From the inside of the equipment, but from the inside you will have to remove the following components (ash tray + ash drawer + vermiculite + false bottom + box) to gain access to the area where you will screw the equipment to the table.



(a) Access from the front of the equipment



(b) Access from inside the equipment

Figure 14 - Fixing the equipment to the table using Din 933 5.6 M8x16 screws

13. You should then fix the equipment to the upper supports as shown in Figure 15.

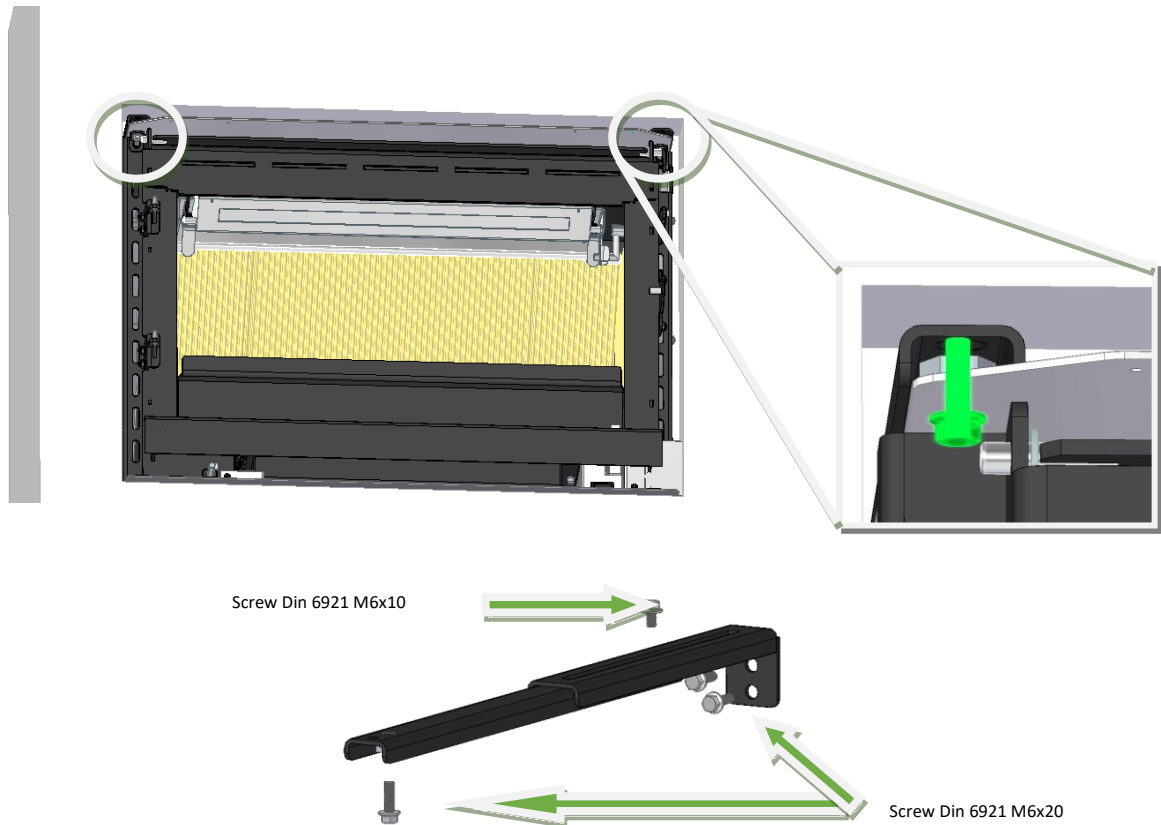


Figure 15 - Fixing the equipment to the top mounting brackets using hexagon socket screws Din 6921 M6x20 and M6x10

14. Finally, you can place the door and frame on the unit, the frame should have a clearance of at least 2 mm in relation to the plasterboard or masonry, see Figure 16.

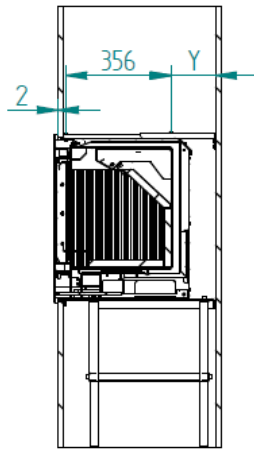


Figure 16 - Minimum distance between frame and face of plasterboard or masonry

15. If you intend to place the unit into masonry, you should use the brass bushes and countersunk head screws that come with the unit fixing kit (PA1090G053). You should take the correct measurements for drilling the holes in the masonry and fix the unit in the following locations as shown in Figure 17.

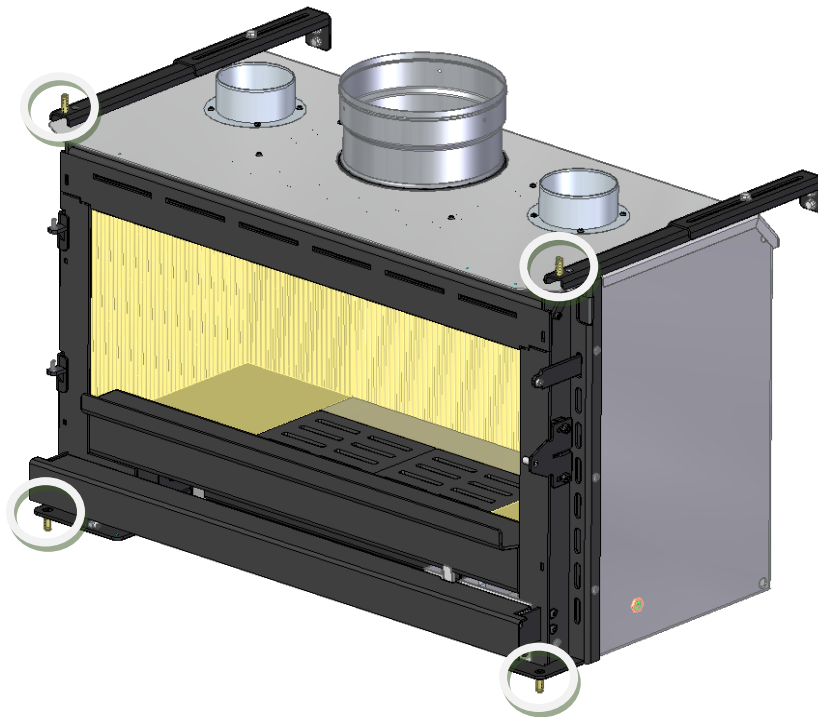


Figure 17 - Fixing the equipment to masonry

5. Combustion Air

Contrary to a normal fireplace the stove uses very little combustion air. In most houses entry of fresh air through gaps in doors and windows is sufficient to provide this air. However, in houses that are well insulated this may not be sufficient. If so, a ventilation grille should be set into an outside wall near the stove to provide additional combustion air. The combustion air consumption of your particular stove can be found in the technical characteristics. Take account of other heating appliances or air outlet installations in the same area or on the same combustion air connection. If needs be the total combustion air consumption for the room(s) should be calculated. If 15 minutes after lighting the fire there is still a backdraught of flue gases due to weather conditions (e.g., fog, storm) stop lighting the fire until the weather improves.

Note: be sure to take account of extractors which might be connected in the vicinity of the stove. These create negative pressure, which can lead to disruptions in the supply of combustion air. Any escape of combustion gas is potentially lethal and can damage the health of the people living in your home.

6. Using the insert

Run your stove in slowly. Your first fires should be made with a small amount of wood and a gentle flame, allowing the stresses in the metal to dissipate and the entire installation to dry out. Even after running in your stove, never make intense, prolonged fires. Little extra heat output is achieved and you risk damaging your stove.

7. Schematic drawing

- A.** Cold air inlet
- B.** Hot air outlet
- C.** Combustion air control "Primary air"
- D.** Door catch
- E.** Fan flap
- F.** Fan switch (under the flap, on the right)
- G.** Secondary hot air outlet handle "Smoke flap"

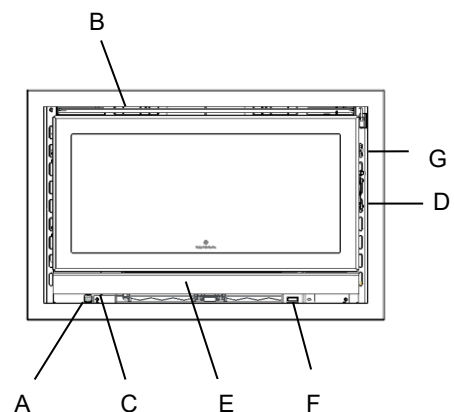
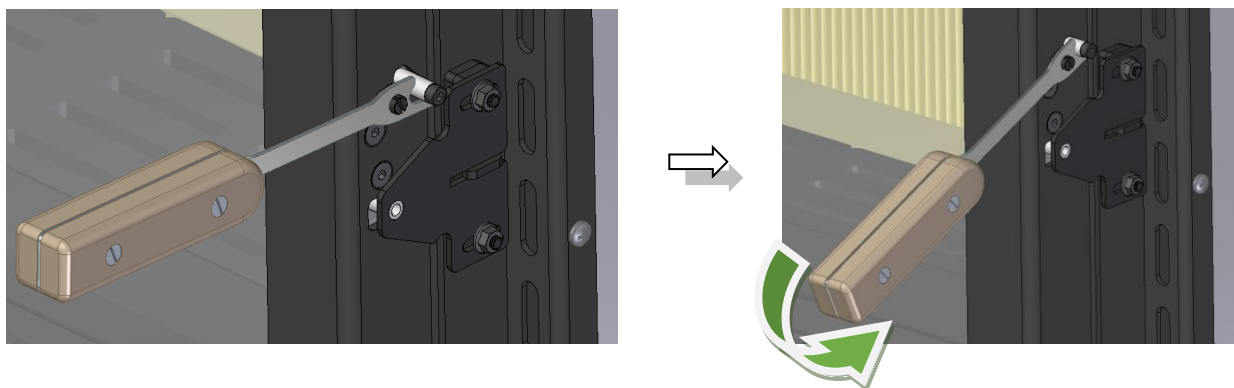


Figure 18 - Component schematic

8. Opening and closing the door

Whenever you have to open the door of the equipment you should proceed as follows:

1. Open the "Primary Air" combustion air control (**C**).
2. Open the "Fume hood" hot air outlet knob (**G**).
3. Insert the key that comes with the equipment according to the following images:
 - a) Place the key in the correct position, see Figure 19-a.
 - b) Door opening movement, see Figure 19-b.



a) **Figure 19 - a) Correct position of the key, b) Door opening movement** b)

4. When you close the door, you must partially close the "Smoke flap" (G) hot air outlet and close the "Primary Air" (C) combustion air control.

9. Combustion principle

The stove is designed so that full of wood, with a slow flame, it will burn at maximum efficiency for several hours. The

stove can be made to burn overnight, very slowly, with little or no flame. This is not advisable because this incomplete combustion creates extra smoke, which, upon condensation, deposits tar on the stove, chimney and glass panel. An accumulation of such tar deposits is not only unsightly but also requires regular chimney cleaning to prevent chimney fires. If you are burning wet or green wood then the Combustion Air Control should be left open enough to ensure the creation of a slow, gentle flame.

9.1. Radiant heat

This is given from the hot embers and stainless steel and vermiculite back panels. The radiant heat is transmitted through the glass panel into the room and heats the immediate area in front of the stove.

9.2. Convection heat

Cool air enters via the cold air inlet, (A). It then passes along the base of the stove up the back and over the top before being expelled from the primary hot air outlet, (B). This convection air reaches the farthest corners of the room.

10. Controls

10.1. Combustion air inlet (A)

The cold air intake is made under the unit, so the unit will get cold air from the room where it is installed, see Figure 20.

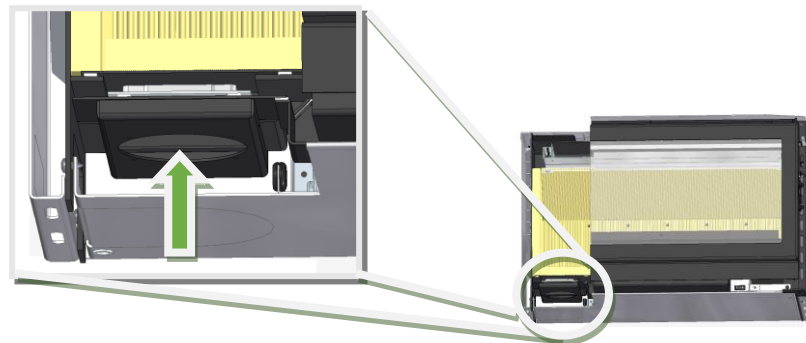


Figure 20 - Cold air intake underneath the equipment

The equipment also comes with a covered cold air intake on the back, if you want to install it to the outside air, you will have to break the micro-junctions of the covers and make the connection to one of the air intakes options, from the back or the bottom, if you choose the back, you will have to change the cover, passing it to the bottom, see Figure 21.

Note: If the installation is connected to outside air, an adapter must be purchased according to the air inlet diameter of the unit.

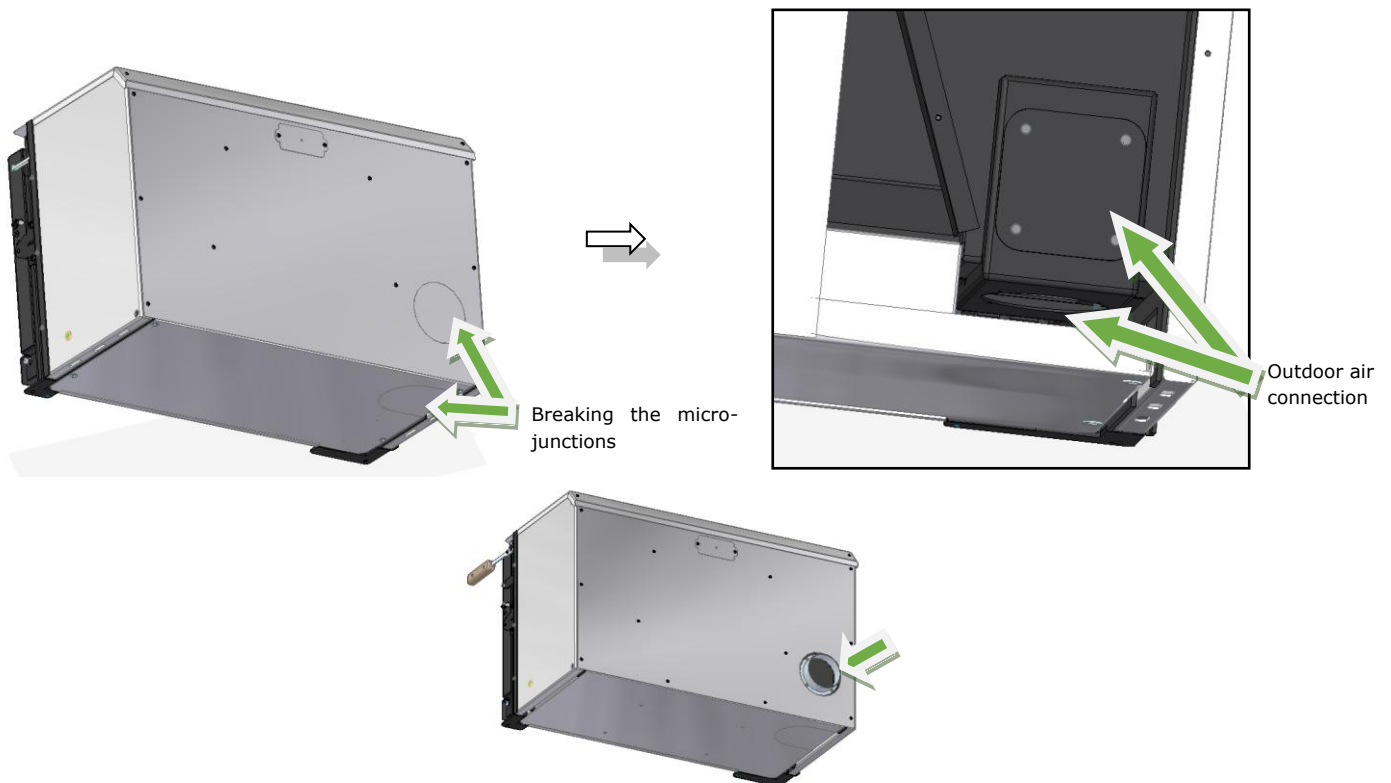


Figure 21 - Connection options to the "Outside air intake kit" equipment

If you want to make an outdoor installation, you must purchase the Outdoor air intake kit.

- For air inlet kit Ø80mm - PA1090G035 (For E601 and E609 models only).
- For air inlet kit Ø100mm - PA1090G057.

To make this connection, you must use a flexible hose from the air intake kit of the unit to the outside of the house.

10.2. Hot air outlet (B)

This control mechanism operates either fully open or fully closed. If the mechanism is fully open, it allows the projection of hot air into the room, heating it, if it is fully closed, it prevents the projection of hot air into the room, in this closed mode, if there are secondary air vents installed, it will allow other rooms in the house to be heated, the mechanism in closed mode will allow heat to be channelled more efficiently through the secondary air vents to other rooms, see Figure 22 and Figure 23.

Warning: *If you have secondary hot air vents installed, at least one (usually the one in the largest room) must be permanently open. If, by accident, all the grilles and the cover inside the stove are closed, then the heat will short-circuit and, within some time, burn out the fan. The fan is sure to short-circuit when there is a significant and sudden increase in noise.*

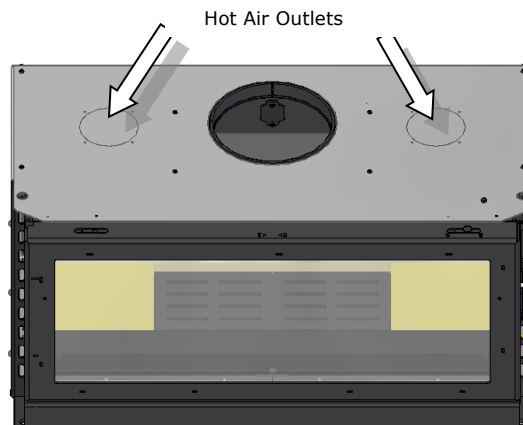


Figure 22 - Hot air outlets



Figure 23 - a) Fan warm air control mechanism Open, b) Fan warm air control mechanism Closed

NOTE:

If you intend to use the fan convection hot air regulator, before installing the unit, you must tighten the locking screw, to allow the flap operation to be unlocked, see Figure 24.

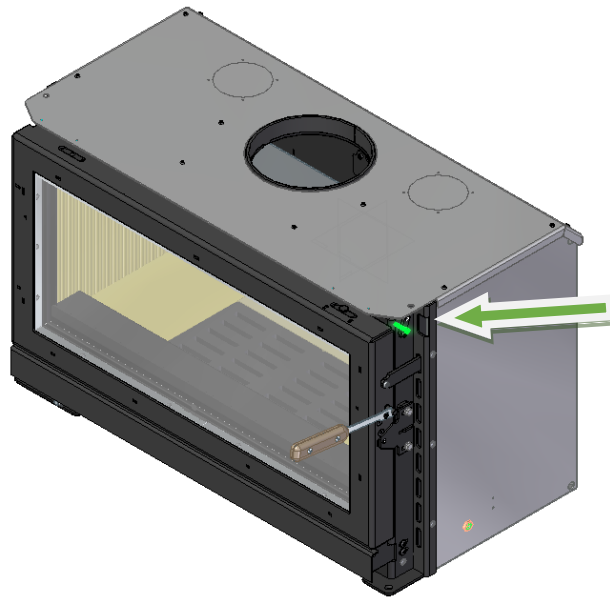


Figure 24 - Fan convection hot air flap locking screw

10.3. Combustion air control "Primary Air" (C)

This controls the amount of combustion air "Primary Air" entering the stove, thus controlling the heat output. It is located in the lower left corner of the door.

- To open - Pull the regulator with the key that comes in the equipment, for greater yield and greater consumption of firewood, see Figure 25-a.
- To close - Push the regulator for lower efficiency and low wood consumption.

This also creates a high velocity wash effect of the preheated air over the entire inner surface of the glass panel, helping to keep the glass cleaner for longer, see Figure 25-b.

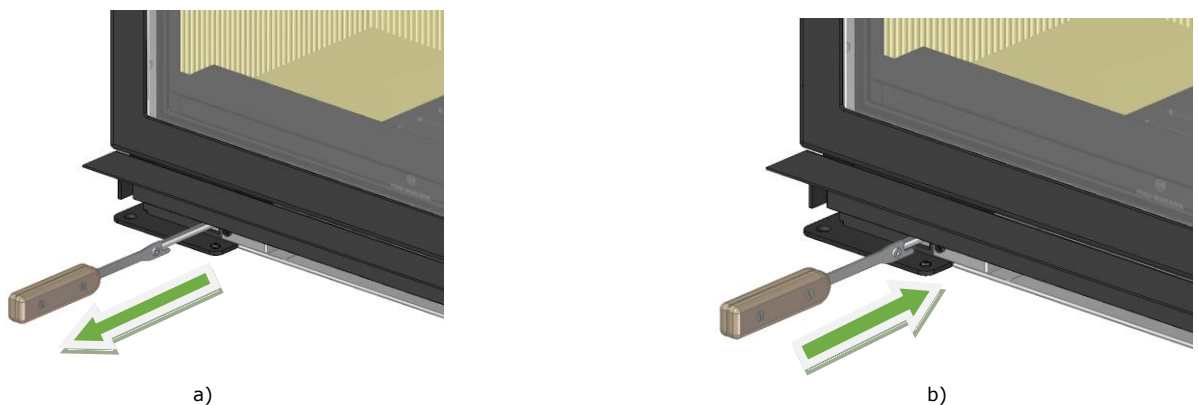


Figure 25 - a) Open Primary Air, b) Close Primary Air

10.4. Door catch (D)

The door closing is automatic, that is, with the key inserted in the right place, the door is pushed so that it closes when it reaches the bearing, as shown in the following image, see Figure 26.

Over time, due to the number of times the door has been opened and closed, the door sealing cord will lose its elastic recovery properties and the door bearing and hinges will need to be adjusted, see Figure 27.

With this adjustment, the door seals correctly again, with no gap, avoiding the passage of air from the outside into the combustion chamber and the escape of smoke to the outside of the unit.

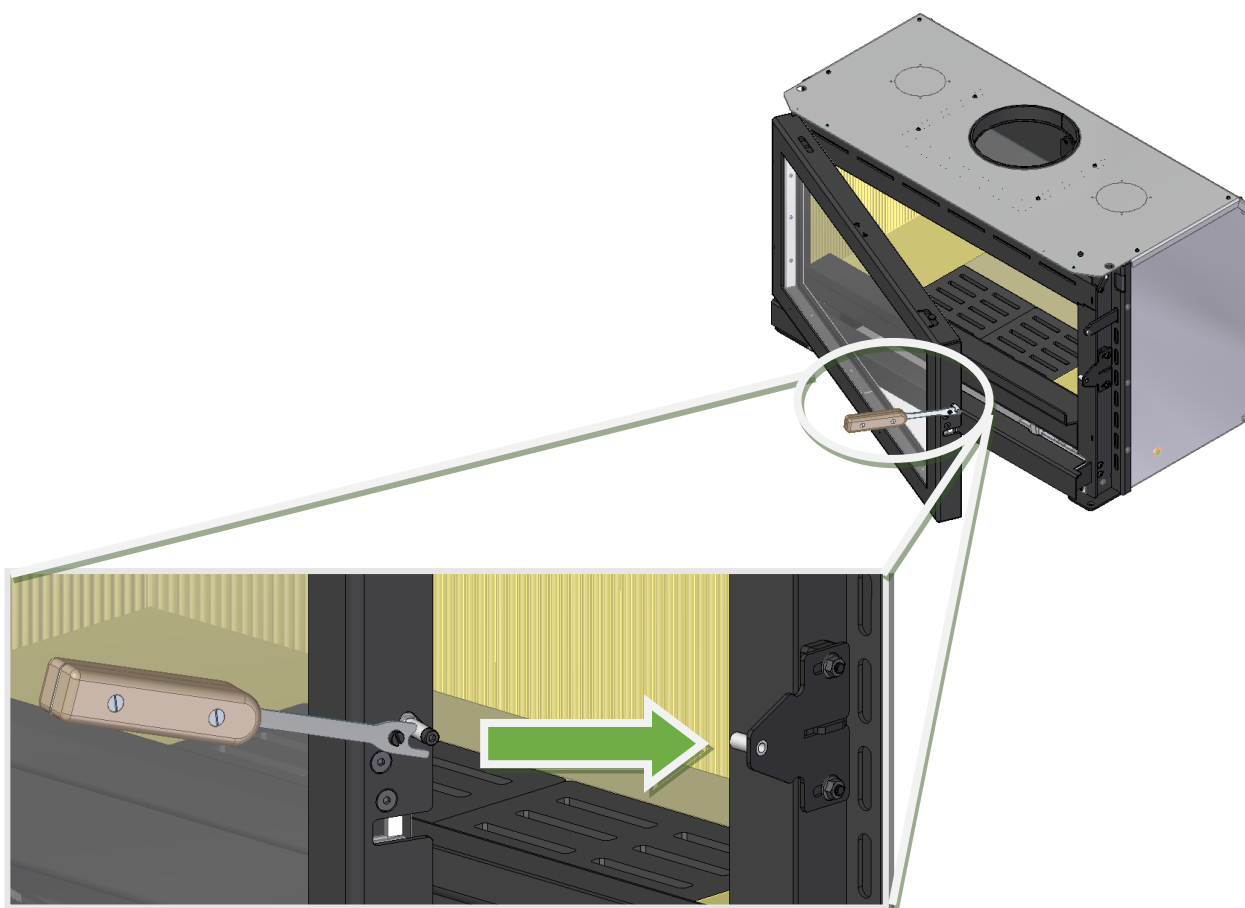


Figure 26 – Door catch

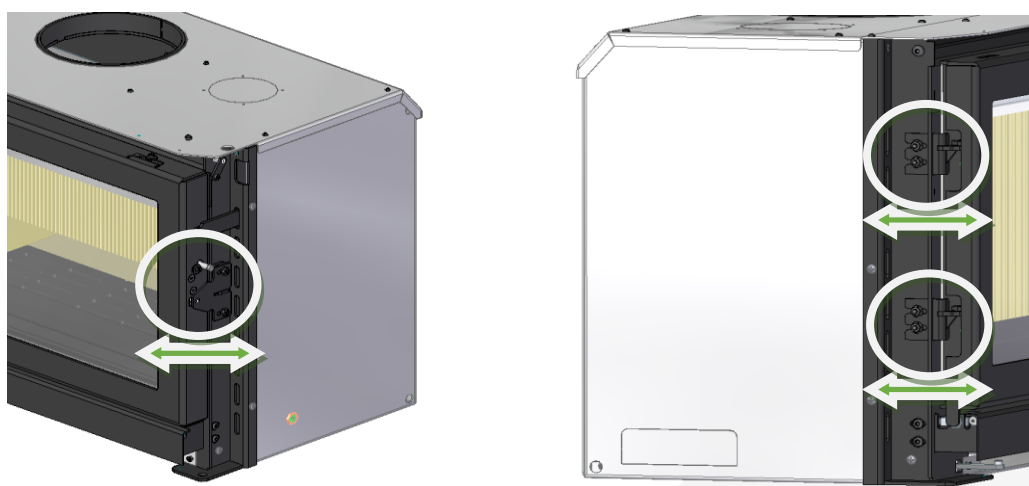


Figure 27 – Adjustable door bearing and hinges

10.5. Fan flap (E)

The main function of the flap is access to the fan switch. But if you leave the flap raised at a 45° angle, the airflow through the stove intensifies, see Figure 28.

If you want to remove the fan casing, you have to take off this tab and remove the air gap that is screwed to the combustion chamber, see Figure 29.

Note: The glass door models do not have this flap, it only exists on models with plate door.

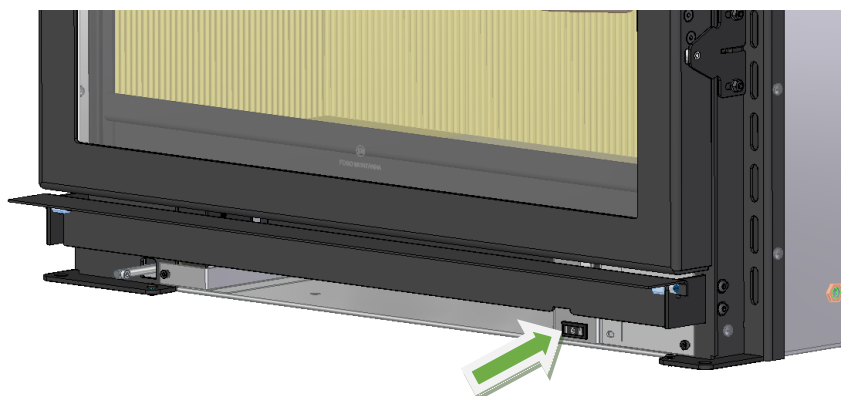


Figure 28 – Access to fan switch

10.6. Fan control switch (F)

The switch has three settings:

I ON – T50 Thermostat control, fan at low speed. The fan turns on and off automatically, depending on the temperature of the stove and fan.

O OFF/ON – T100 Thermostat control, fan at low speed. The fan turns on and off automatically, depending on the temperature of the stove and fan.

II ON – Manual, fan on high speed.

When firing up the stove from cold switch the fan to **II "ON"** - high speed, to heat the room as quickly as possible and to force combustion air into the stove. Once the room has reached desired temperature switch to **I "ON"** – thermostat control. The fan will then connect and disconnect subject to the temperature of the fan and of the stove.

Note: The T50 thermostat when it reaches 50 °C approximately, will turn on the fan, if it is in the I "ON" position, below 50 °C, the fan is off. The thermostat is a means of controlling the fan through the temperature of the equipment and not the room. The T100 thermostat when it reaches 100 °C, approximately, will turn on the fan, if it is in the position "O", below 100 °C, the fan is off.

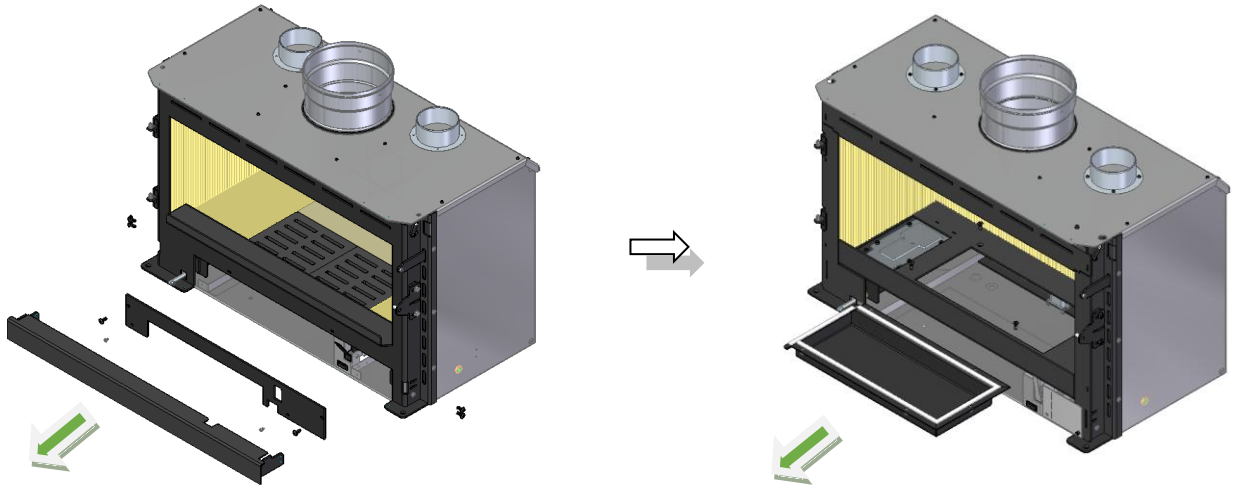


Figure 29 – To remove the fan box, you need to remove the ash box

10.7. Secondary hot air outlet handle “Smoke flap” (G)

It controls the passage/exit of smoke when opening the door, that is, when the appliance is in operation and you want to refill it with more firewood, before opening the door, pull the handle towards you. This will allow a greater and easier passage of smoke through the chimney neck, avoiding the return of smoke from the unit into the surrounding room, see Figure 30 and Figure 31.

If you leave this regulator open during firing, the operation of the equipment, you will notice a more accelerated combustion.

Note: To open and close this knob, you must use the key that comes with the equipment.

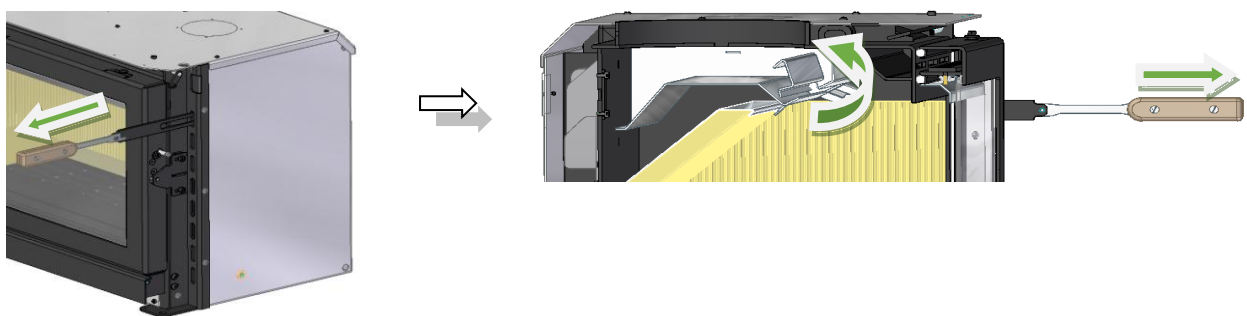


Figure 30 – Opening of the smoke flap

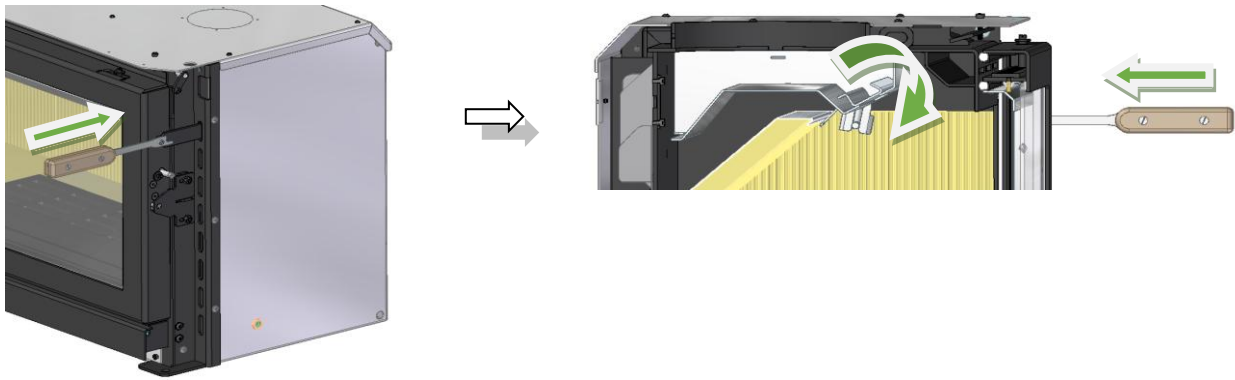


Figure 31 – Smoke flap closure

11. Lighting

1. Fully open the door of the unit;
2. Place pine cones (preferably) or firelighters on the ash rack at the base of the combustion chamber;
3. Place firewood of small dimension, stacked horizontally;
4. Open the primary combustion air intake control, leave the door ajar to make lighting quicker and open the smoke flap, see Figure 30;
5. The ignition period ends when the equipment structure has reached a stationary temperature. You should then close the door and adjust the combustion air inlet so that it burns slowly (without primary air), as shown in Figure 25;
6. If, with the door ajar and the smoke flap open, smoke comes out of it, it is a sign that the chimney draught is deficient or that the wood has a high percentage of humidity;
7. To obtain a good relation of equipment performance versus firewood consumption, it is necessary that the door regulator is in the position indicated in the following table, see Figure 32.

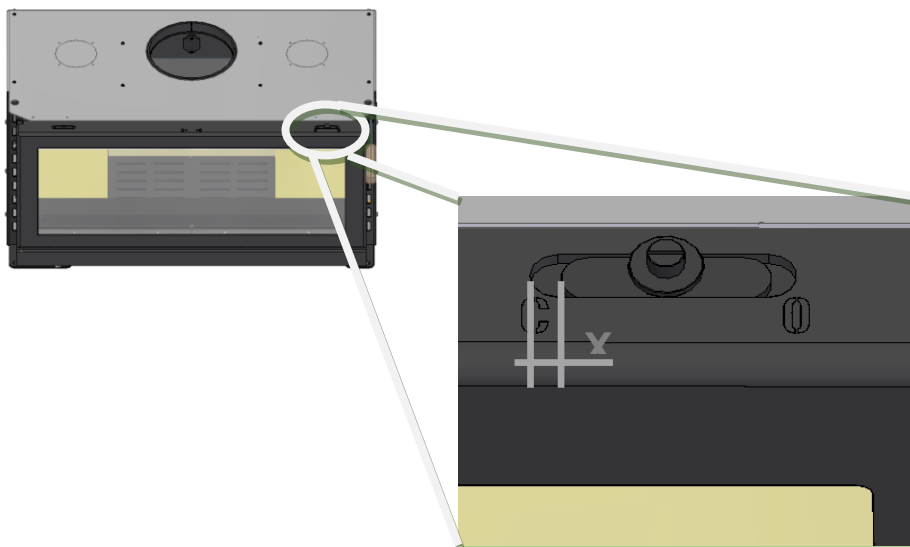


Figure 32 – Secondary air regulation in the door

Model	Distance X
E901	3 mm

E801	8 mm
E701	7 mm
E601	3 mm
E909	5 mm
E809	8 mm
E709	7 mm
E609	5 mm

Table 3 - Distance from the optimum firing point

In hot and to add more wood:

1. Fully open the combustion air control, "Primary air".
2. Opening the hot air outlet handle, "Smoke flap".
3. Open the door slowly.
4. With the poker arrange the coals evenly on the bottom of the ash tray and the vermiculite sheets.
5. Put small, new wood on the coals, then larger wood.
6. Close the door and let it burn until the stove is very hot and the embers are glowing.
7. Close the hot air outlet handle, "Smoke flap".
8. Close combustion air control, "Primary air".
9. Choose the position to be used at the door.

Note: Do not carry firewood above vermiculite walls.

* Check that there is sufficient air circulation in the room where the installation is to be carried out, otherwise the equipment will not work properly. For this reason, check if there are other heating appliances which consume air for their operation (e.g., gas appliances, fireplaces, etc.). We do not recommend operating these appliances at the same time;

* The door should only be opened during refuelling. The normal conditions of use of the equipment imply that the door should be kept closed;

* When atmospheric conditions are so adverse as to cause strong disturbance to the stove's smoke extraction (in particular very strong winds), it is advisable not to use the stove;

* It is recommended to use firewood with a length between 26 and 30 cm. In this way it is possible to place the firewood longitudinally or transversally to the base of the combustion chamber.

12. Controlling the unit

There are three possible regulations:

A. Very high radiant and convection heating - Very high wood consumption. Open the "Primary-Air" combustion air control fully until it burns well. This position should only be used to light the stove. Once the stove is warm, choose another position, B or C.

B. High radiant and convection heating - Low wood consumption with minimum pollution and maximum efficiency. Gradually close the "Air-Primary" combustion air control to create a slow, gentle flame. In this position a stove full of wood will burn all night with high convection heating.

C. Medium radiant and convection heating - Very low wood consumption. Close the "Air-Primary" combustion air control until you have a near zero flame. The stove will burn throughout the night, but the glass will probably get dirty as the stove is not operating at its maximum efficiency.

The position you choose depends on the amount and type of heat you want, as well as how long you want the wood to last. Remember, the more open the "Air-Primary" combustion air control is, the greater the radiant heat output, but no improvement in convection heat output and much greater wood consumption.

Note: For maximum efficiency and heating, choose position B.

13. Cleaning

Cleaning is best performed when the stove is cool.

13.1. Glass

The preheated air glass cleaning system is operated by the regulator on the top of the door, see Figure 35, the vermiculite insulation will help keep the glass clean during most operating conditions. However, if the glass becomes dirty:

1. Open the door.
2. Apply spray or gel type glass cleaner onto a clean cloth or kitchen paper. Apply to the inside surface of the glass (be careful as most glass cleaners are extremely caustic and can damage the painted surface).
3. Leave to soak.
4. Wipe off tar deposits using a slightly damp cloth. Polish with a dry cloth or paper.

DO NOT USE ABRASIVE CLEANERS

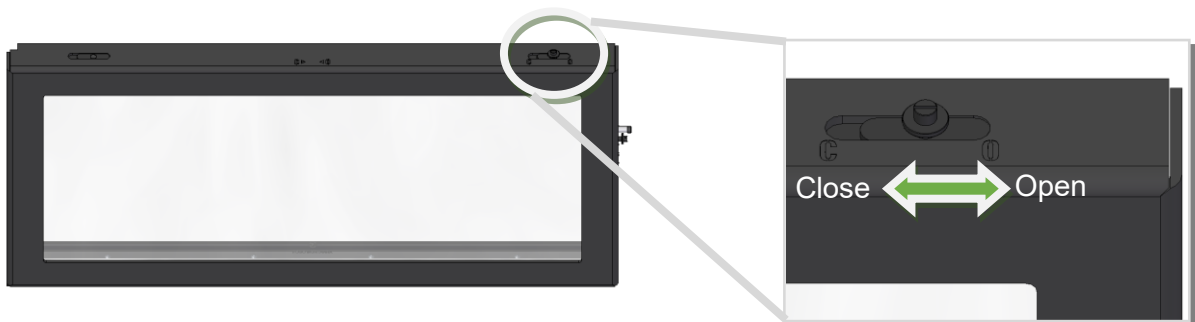


Figure 33 – pre-heated air regulator, glass cleaning

13.2. Ash cleaning

The stove has a removable ash drawer. The ash should be cleaned daily by removing the ash drawer and emptying it or by vacuuming the drawer, see Figure 34.

1. Open the door.
2. Remove the ash tray.
3. Remove all the embers into the drawer.

4. Add all the ash into the ash drawer.
5. Remove the drawer and empty or vacuum it.
6. Spread the coals over the vermiculite base.
7. Place new firewood on the coals.

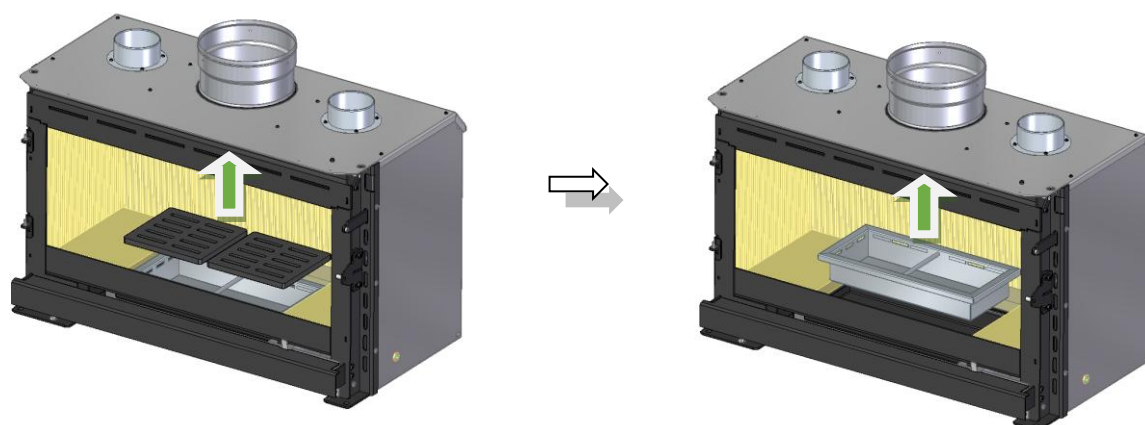


Figure 34 – Removing the ash drawer

Note: Leave 1-2 cm of ash on the vermiculite base. The ash insulates the hot embers and protects the vermiculite. Place firelighters on top of the ash and not directly on top of the vermiculite.

Painted surfaces

Wipe off ash deposits on the paint by using a soft haired brush, cotton cloth, or the suction brush attachment of a vacuum cleaner. Do not wash the stove.

Cold air inlet

Periodically, lift the flap and wipe off any ash deposits that may have accumulated there with a dry cloth. Take great care not to touch any electrical connections.

14. Maintenance

14.1. Painted surfaces

Repaint the stove using only heat resistant paint. Only repaint the stove when it is completely cold. Before spraying be sure to cover all parts of the stove that do not need to be sprayed (window and fireplace for example), and to de-grease any parts to be re-sprayed. Follow carefully the instructions written on the spray can.

14.2. Chimney cleaning

It is important to have your chimney cleaned once a year. To do this the smoke damper must be removed from the appliance. To remove the smoke damper, follow the instructions below with care

1. Open the door and remove the smoke deflector (A). To do this, place your hands on the baffle and move the baffle upwards, or turn the support tabs to the side, then move the bottom of the baffle towards you and remove the baffle, see Figure 35 and Figure 36.

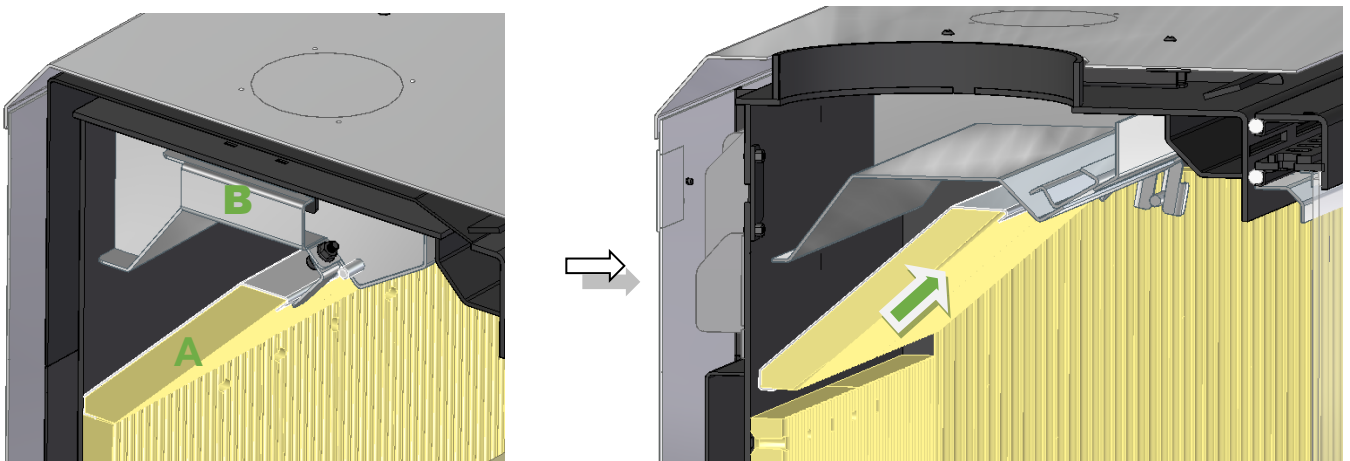


Figure 35 – Removing the smoke deflector

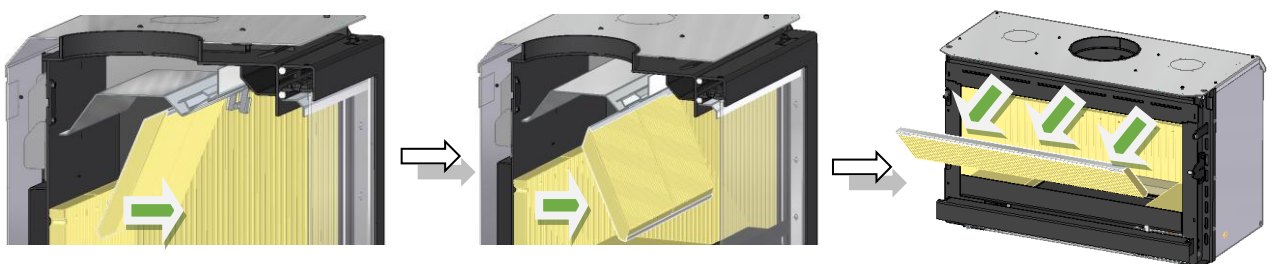


Figure 36 – Removing the smoke deflector

2. Remove the smoke channel (B) by pushing it towards the top of the stove (1). Then move the smoke channel forward (2), it is loose and remove it by moving it downwards (3), Figure 37.

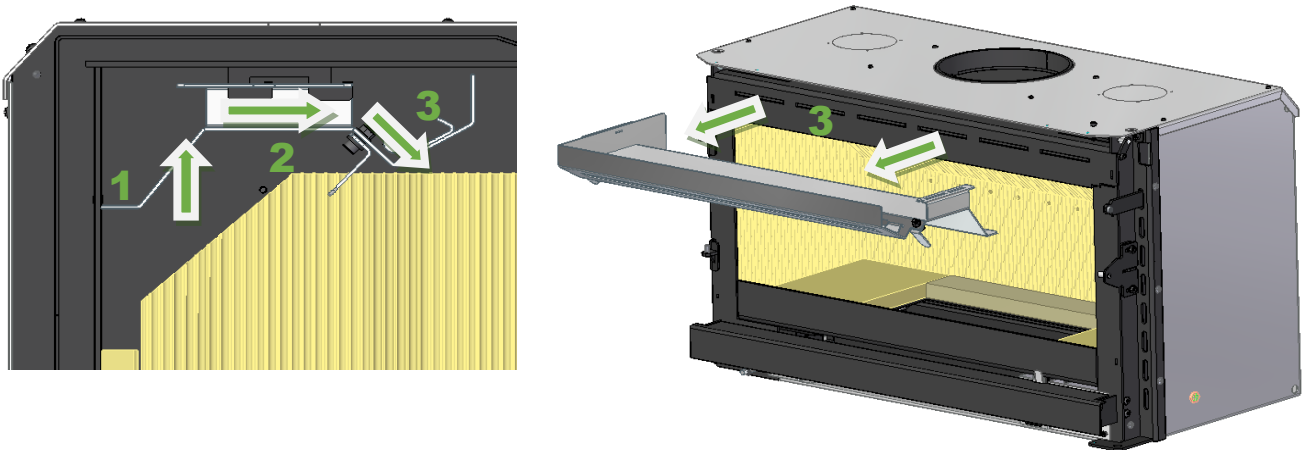


Figure 37 – Removing the smoke circuit

3. To reinstall the smoke circuit, repeat all the procedures in reverse order. Note that the damper shaft (C) is placed in the groove in the smoke channel (B). To check that the smoke channel is installed correctly, pull the damper and check that the damper flap (D) moves, see Figure 38.

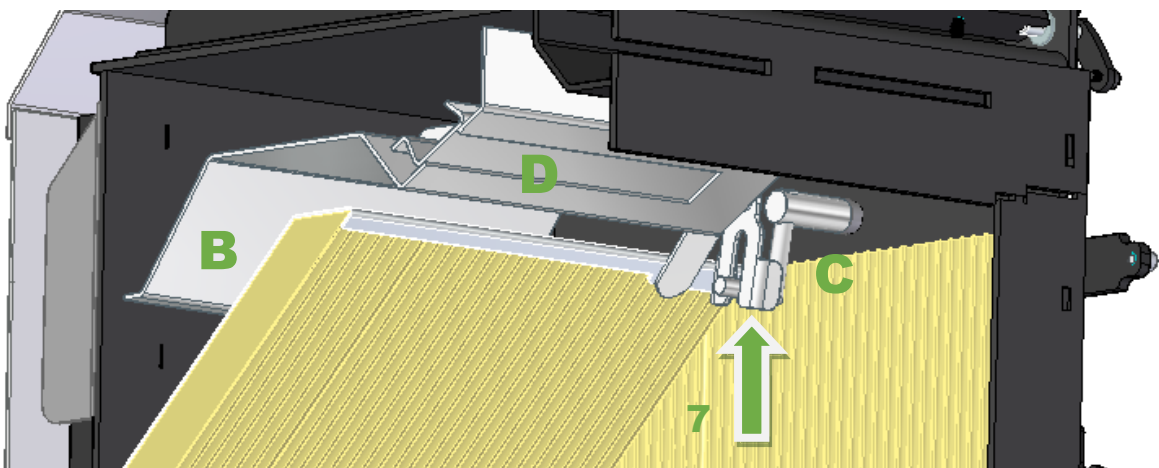


Figure 38 – Fitting of the smoke circuit system

Removal of insulating material (vermiculite)

When cleaning the chimney, it may be necessary to remove the vermiculite insulation material. This can only be done after removing the smoke deflector and the smoke circuit.

Very important: Take extra care when removing this material as it is fragile.

Before removing the insulating material “vermiculite”, remove the ash tray and ash drawer.

1. Remove the ash deflector by shifting upwards, see Figure 39.

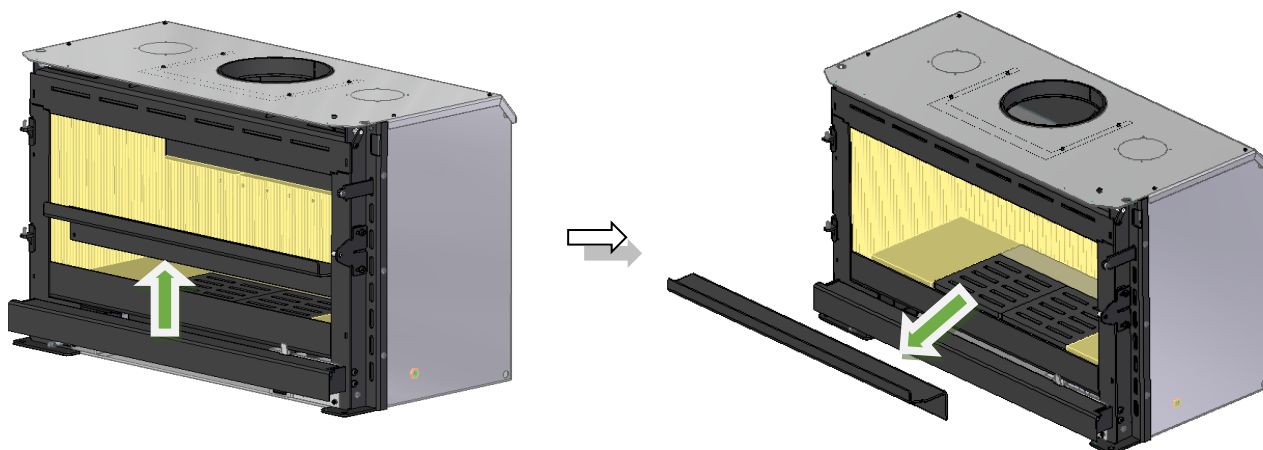


Figure 39 – Removing the ash deflector

2. Remove the 3 pieces of vermiculite from the bottom by moving upwards and removing from the equipment, Figure 40.

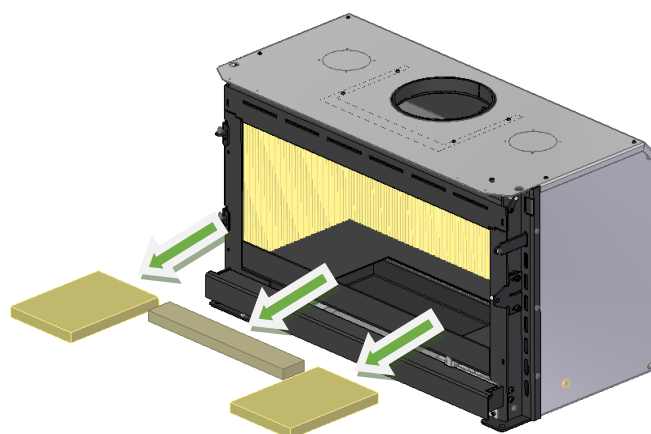


Figure 40 – Removing the vermiculite bottom

3. Remove the 2 pieces from the sides, moving towards the centre of the equipment and back towards the outside of the equipment, Figure 41.

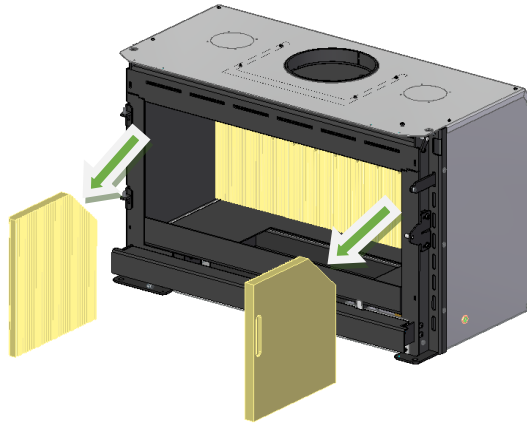


Figure 41 – Removing the vermiculite sides of the equipment

4. Remove the 3 pieces from the back by moving to the front of the unit and rear to the outside of the unit, Figure 42.

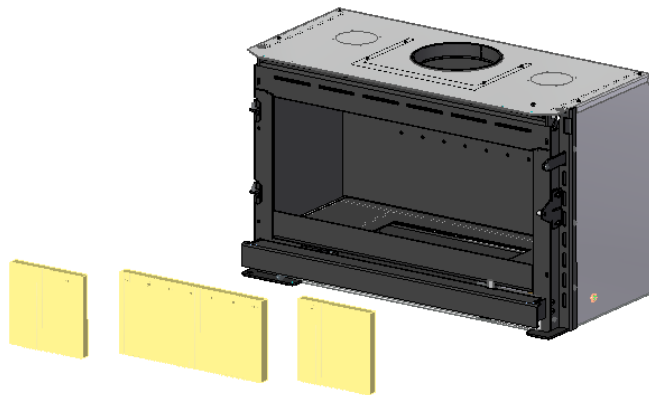


Figure 42 – Removing the vermiculite back parts from the equipment

NOTE:

If a piece of equipment has 20 mm thick vermiculite "insulating material", it is not an anomaly. In case you want to replace these 20 mm thick vermiculite (back, sides and deflector) you should request it normally and you will be sent compatible 25 mm thick vermiculite. With these, it is not necessary to apply the metal frames on the back, sides and deflector.

14.3. Broken glass

The glass panel is heat resistant and very tough. However, it can be broken through lack of care. By applying the following tips, you will prevent any damage.

- Never leave wood sticking out in front of the stove. Otherwise, when closing the door, the protruding wood could pierce the glass.
- When filling the stove with wood never do so in a dangerous manner i.e., that the wood can fall forward and break the glass.
- When cleaning the glass do not apply excessive pressure.

14.4. Replacing broken glass

Order a glass replacement kit for your specific stove model and size from your nearest dealer. The model specification

can be found on your guarantee card.

1. Remove broken glass from door.
2. Unscrew all the screws of the stainless-steel guide rails.
3. Take the replacement glass and hold the bottom of the glass against the door pads on the bottom of the door and the glass will then click into place.
4. Tip the glass down so that it is all resting on the cord.
5. Sometimes it is necessary to replace the glass ribbon of 10x2mm that surrounds the entire glass. This glass ribbon as well as the door string can be ordered from our distributors.
6. The glass tape and the steel mesh door cord prevent air leaking through the glass from inside the stove. It should therefore be well fitted, the ends/splicing should be tight.

15. Electrical schema

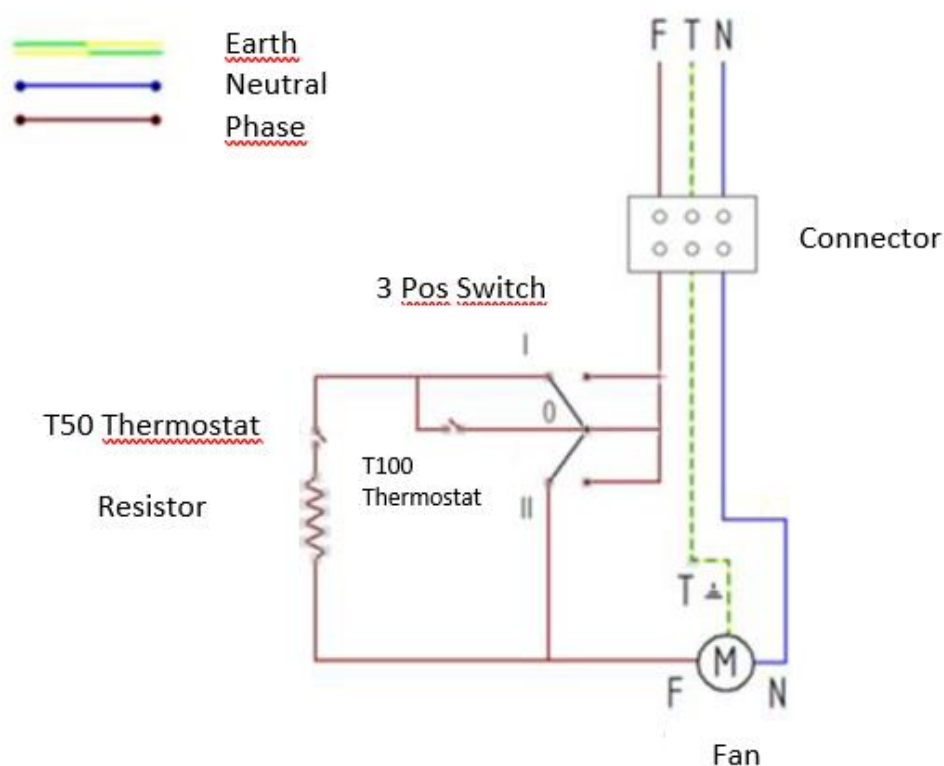


Figure 43 – Electrical schema

16. Troubleshooting

Apparent malfunctions are often caused by incorrect operation. If you think something has gone wrong with your stove, check out the points below. If the trouble is not remedied after checking these points, then contact your installer.

Problem	Possible causes	Correction
The stove gives off a lot of smoke.	1. Damp or green firewood. 2. Chimney needs cleaning.	1. Burn drier firewood. 2. Clean the chimney.
The stove takes a long time to heat up.	1. Damp or green firewood. 2. Chimney needs cleaning.	1. Burn drier firewood. 2. Clean the chimney.

The fire is not sustained during the night.	<ol style="list-style-type: none"> 1. Insufficient firewood in the stove. 2. Too soft firewood e.g., pine. 3. Door incorrectly adjusted. 	<ol style="list-style-type: none"> 1. Fill the stove with firewood. 2. Use heavier firewood. 3. Replacing the fibreglass rope.
Fire goes out.	<ol style="list-style-type: none"> 1. Damp or green firewood. 2. The stove has not been heated sufficiently. 	<ol style="list-style-type: none"> 1. Burn dry wood or open the combustion air control further. 2. Heat the stove thoroughly before closing the combustion air control.
Glass gets dirty	<ol style="list-style-type: none"> 1. There is no soft flame. 2. Damp or green firewood. 	<ol style="list-style-type: none"> 1. Open the combustion air control further. 2. Burn drier firewood.

17. Ventilation Kit

For the E901, E801, E701, and E601 units, the ventilation kit is included in the unit.

For the E909, E809, E709, E609, and E609H units, the ventilation kit is not included with the unit, but must be purchased separately at the time of purchase.

17.1. Assembling and disassembling the ventilation kit "E901, E8001, E701 and E601"

On the E901, E801, E701, E601 units, the ventilation kit can only be removed as follows:

a. Remove the bottom flap by loosening the side screws and then remove the bottom front cover by also loosening the screws, see Figure 38.

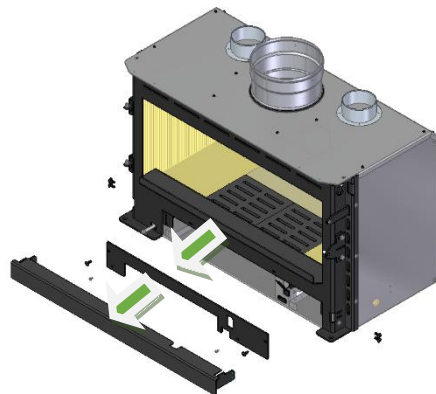


Figure 44– Removing the lower flap and lower cover

b. Then remove the ash deflector, ash pan and ash drawer, see Figure 39.

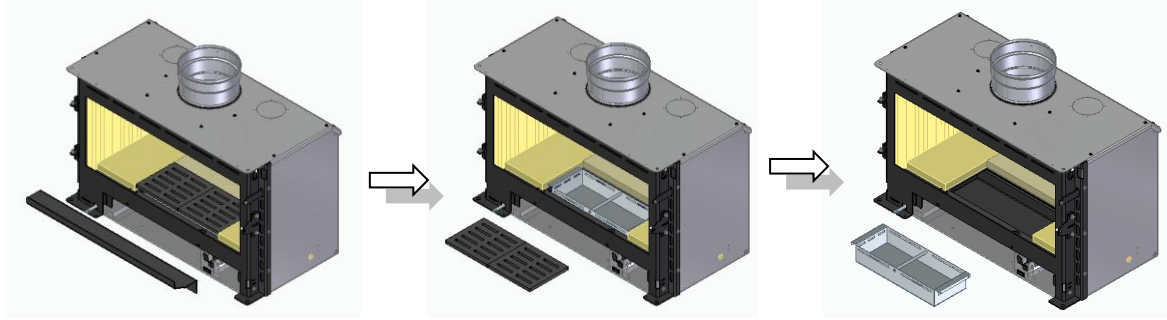


Figure 45 – Accessory Removal

c. Remove the vermiculite from the bottom of the interior of the combustion chamber and then unscrew the bottom screws that secure the box, the box, once unscrewed, comes out from under the equipment, see Figure 40.

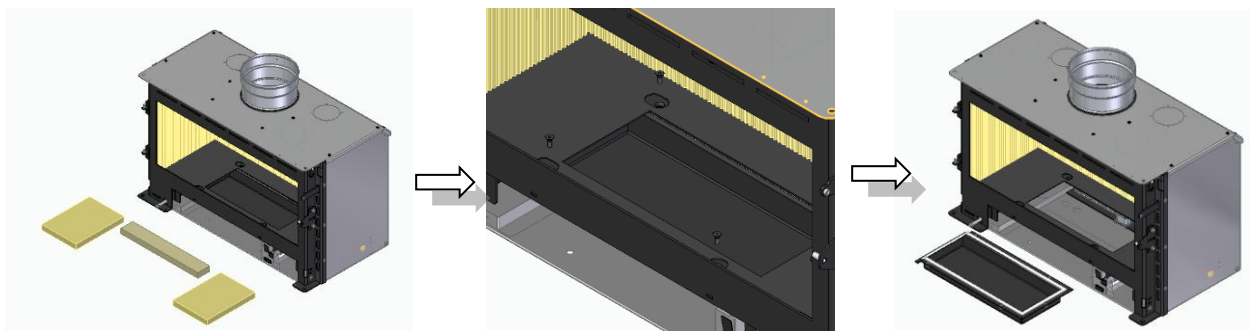


Figure 46 – Removal of vermiculite from the bottom and drawer

d. After all these parts are removed, the ventilation kit can be removed from the equipment, see Figure 41. To reassemble it, you will have to proceed with the inverse assembly process.

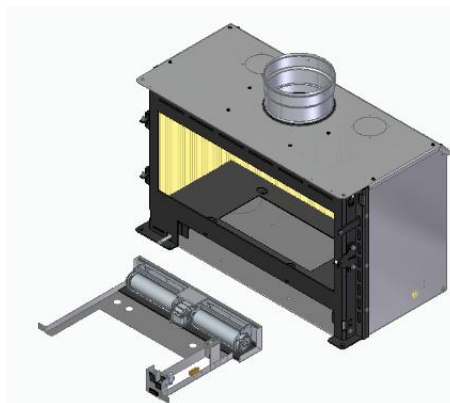


Figure 47 – Ventilation Kit Removal

17.2. Assembling and disassembling the ventilation kit “E909 and E809”

a. On these models of equipment, the ventilation kit is placed underneath the equipment. To attach the optional ventilation kit, you must first break the micro-joints on the bottom with a hammer, in order to attach the fan and the ventilation kit accessories, see Figure 48.

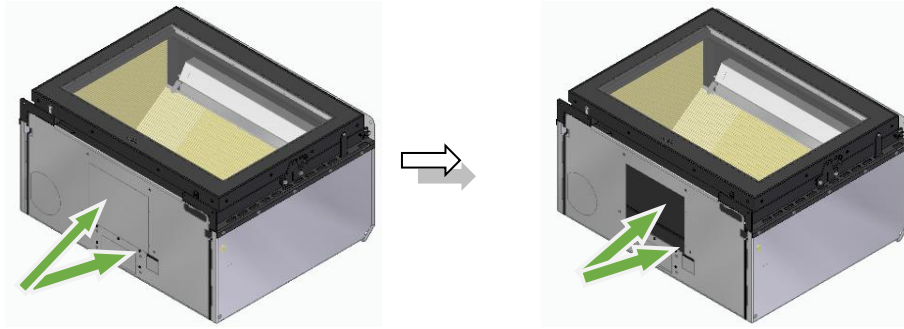


Figure 48 – Ventilation Kit Removal

b. Fixing the ventilation kit underneath the equipment, on the bottom, as shown in the picture, see Figure 49.

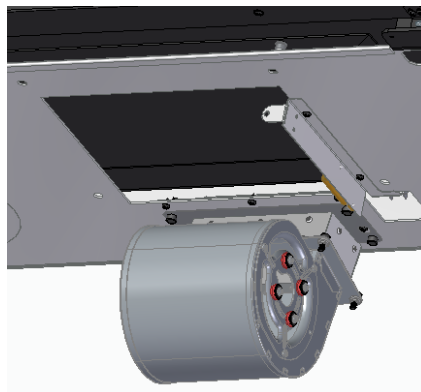


Figure 49 – Fixing the ventilation kit in the E909 and E809 units

c. Finally, you must put the micro-switch and the On-Off button in place, as shown in Figure 50.

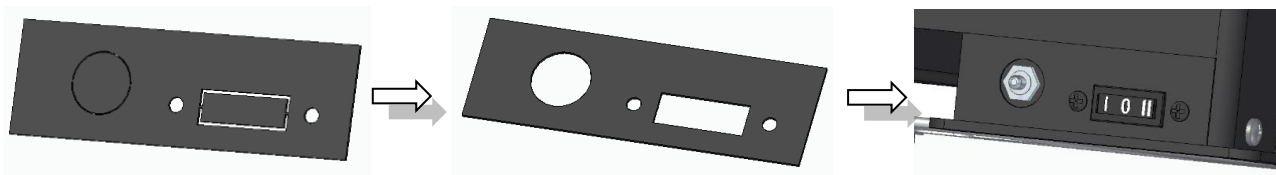


Figure 50– Micro-switch attachment and On-Off button

d. After placing the components in the equipment, Figure 50, you must adjust the switch that is under the door, so that the door after closing the switch activates the micro-switch, see Figure 51.



Figure 51 – Door handle adjustment, micro-switch actuation

17.3. Assembling and disassembling the ventilation kit “E709, E609 and

E609H''

a. On these models of equipment, the ventilation kit is placed underneath the equipment. To attach the optional ventilation kit, you must first break the micro-joints on the bottom with a hammer, in order to attach the fan and the ventilation kit accessories, see Figure 52.

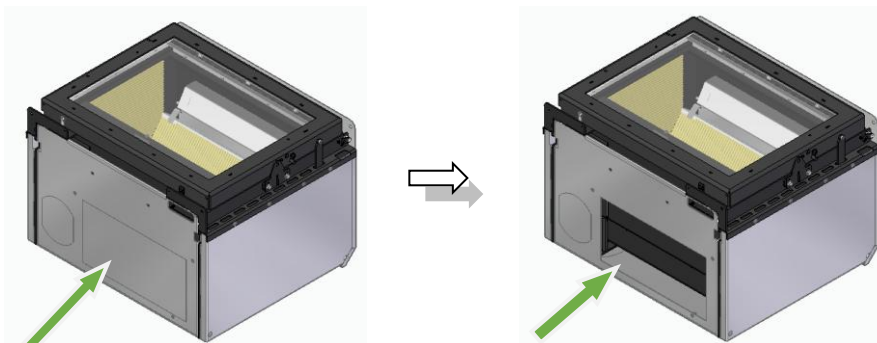


Figure 52 – Removal of the bottom micro-joints

b. Fixing the ventilation kit underneath the equipment, on the bottom, as shown in the picture, see Figure 53.

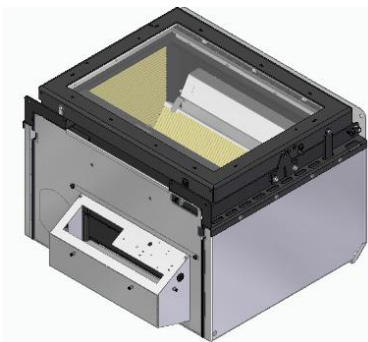


Figure 53 – Removal of the bottom micro-joints

c. Finally, you must put the micro-switch and the On-Off button in place, as shown in Figure 54.

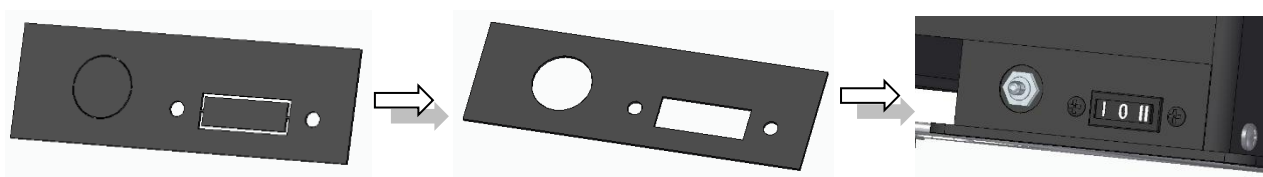
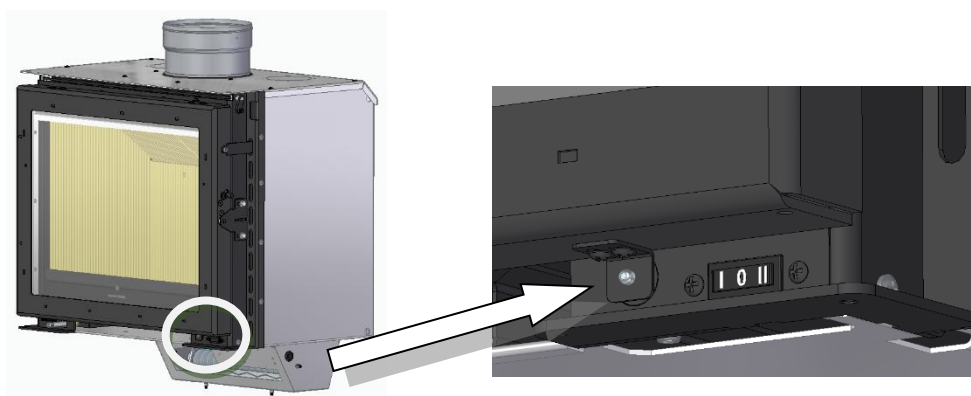


Figure 54 – Micro-switch attachment and On-Off button

d. After placing the components in the equipment, you must adjust the switch that is under the door, so that the door after closing the switch activates the micro-switch, see Figure 55.



18. Optional GLA 820 + Damper



Icon	Description	Cod	Min	Set	Max	Un
54	S1 – Smoke temperature probe	–	–	–	–	°C
②	S2 – Ambient Temperature Probe	b01	5	20	50	°C
✂	ON – Ventilation activated Blink – Security status of the ventilator	–	–	–	–	–
Ⓐ	Activated Air Damper	PE01	0	100	100	%
🔥	Active combustion - automatic modulation 0: Manual / 1: With smoke and room probe (if P01=1)	P20	Manual	Auto	Auto	-
👤	MANUAL modulation	Manual	Manual	Manual	Prop	-
🔑	Modulation AUTOMATIC	Auto				
📶	PROPORTIONAL modulation	Prop				

To enter the main menu click the **K2** key for 3 seconds

- The **K2** key allows you to scroll through various parameters signaled by the icon.
- Press the **K3** and **K4** keys to change the parameter value.
- Press the **K2** key to save the value or wait 10 seconds.

Press the **K1** key to exit without saving.

18.1. ON/OFF

To turn the controller on/off, you must long press the **K1** key


- OFF mode appears on the screen ...
- When the controller is on, the following messages appear:
 - Product code **F006**
 - Product review **r 0**.

18.2. Operationalization modalities

You can choose between 3 operationalization modalities:

- **Manual:** the symbol will appear 

The stove fan will operate at the speed chosen by the user, regardless of the temperature of the smoke probe (**S1**).

- **Automatic:** the symbol will appear 

The stove fan will operate at the speed chosen by the user if the temperature of the smoke probe (S1) is higher than 100°C, "function **F06**".

- **PROPORTIONAL:** The symbol will appear 

The stove fan will work at the speed selected by the controller, depending on the temperature of the smoke probe (**S1**), the temperature range is from 100°C "**F06**" to 200°C "**F06+F50**".

18.3. Safety function

If the temperature detected by the smoke probe (**S1**), exceeds the "safety temperature" value, 250°C "function **F03**" and the fan is turned off, in the Manual mode, the system will start operating in the PROPORTIONAL mode with a 10 second delay.

18.4. Alarm function

If the temperature measured by the smoke probe (**S1**) exceeds the safety alarm value:

- A visual and audible warning will be issued (the temperature will appear in the Display)
- **SILENCE** function: The audible signal can be turned off for 5 minutes by pressing any key. If the controller continues in alarm condition a signal will be heard again.

The system starts operating in PROPORTIONAL mode with 10 seconds of delay.

18.5. Fan safety function



This function is activated if the temperature detected by the smoke temperature probe (S1) exceeds 550°C "fan safety temperature", the fan is switched off in order to avoid damage.

18.6. Standby function

In case the device is switched off and if the temperature at the smoke temperature probe (S1) exceeds the value of 100°C "thermostat safety temperature F06", the device will switch on automatically.

18.7. Probe screen

The screen immediately shows the value read by the smoke temperature probe (**S1**).

- With a simple click on the **K2** key, you will have access to the probes, the values menu and it will appear:
 - Temperature of the AMBIENT probe : the led will flash
 - The percentage value of damper closing: the led  will flash
- Through **K2** it is possible to navigate to the existing probes.
- You can close the display by pressing K1 or automatically after 10 seconds.

18.8. Damper configuration with servomotor

With parameter **P20** it is possible to select the damper regulation mode.

- P20=0 (MANUAL): Manual Regulation

In this case the damper position is set manually by parameter **PE01**

- P20=1 (AUTO): Led  ON

The damper position and its closing percentage is calculated according to the check of the smoke and ambient temperature. Priority is given to the calculation that determines the highest damper closing percentage; in case the room temperature probe (S2) is active with parameter **P01=1**

Fume temperature logic

If the temperature of the smoke probe (**S1**) > 50 >> the damper is positioned open

If the temperature of the smoke probe (**S1**) = 250-50 >> the damper is positioned at 50% closing.

If the temperature of the smoke probe (**S1**) > 250-50 >> the system is in modulation mode and the damper is positioned between 50% and 100% closed.

If the temperature of the smoke probe (**S1**) > 250 >> the system is in safety mode and the damper is positioned closed.

In case of **P12=1** the manual start is activated: the end of combustion is determined from the exhaustion temperature:

- If the temperature at the fume probe (**S1**) < 50 the damper is positioned closed

By pressing the **K3** key for three seconds, the ignition phase of the salamander/reheater starts: the damper is positioned in open position "**PF20**" and the display shows **ON** flashing.

If the thermostat exhaust temperature drops to the temperature of 50°C "**F01**", after the time of 10 min. "**t06**", the system will go to the end of combustion and the damper is positioned in the closed position "**PF10**".

During the 10 min time "**t06**" an audible signal will be activated.


Room temperature logic

If the temperature of the room probe (**S2**) = **b01-b90** >> the damper is positioned at 50% closing.

If the temperature of the room probe (**S2**) > **b01-b90** >> the system is in a modulating state and the damper is positioned between 50% and 100% closing.

If the temperature of the room probe (**S2**) > **b01** >> the system is in safety mode and the damper is positioned closed.

18.9. Input configuration of the room probe temperature (S2)

If the Room Temperature is higher than the one that was set "b01" or the room thermostat contact is set to OPEN (the led  will flash)

- The stove fan is turned off "**OFF**"
- The damper is closed to the safety position: 100% if **P01=1**; 100% if **P01=0**

18.10. Activating the heating fan

This function allows you to activate the heating fan at maximum speed for a certain programmable time of 2 sec "**t08**".

This function is activated whenever the fan starts from OFF mode. Once this time has elapsed, the fan will stabilize at the programmed speed. To deactivate this function, you should set "**t08=0**" seconds

18.11. Errors and anomalies

- If the value read by the smoke temperature probe (S1) is below the sensor's minimum range, the message **LO**
- If the value read by the smoke temperature probe (S1) is above the sensor's maximum range, the message **Hi**

19. Electrical Schematic Diagram

19.1. Electrical diagram for tangential ventilation

Used in equipment – E901, E801, E701, E601, E709, E609 and E609H

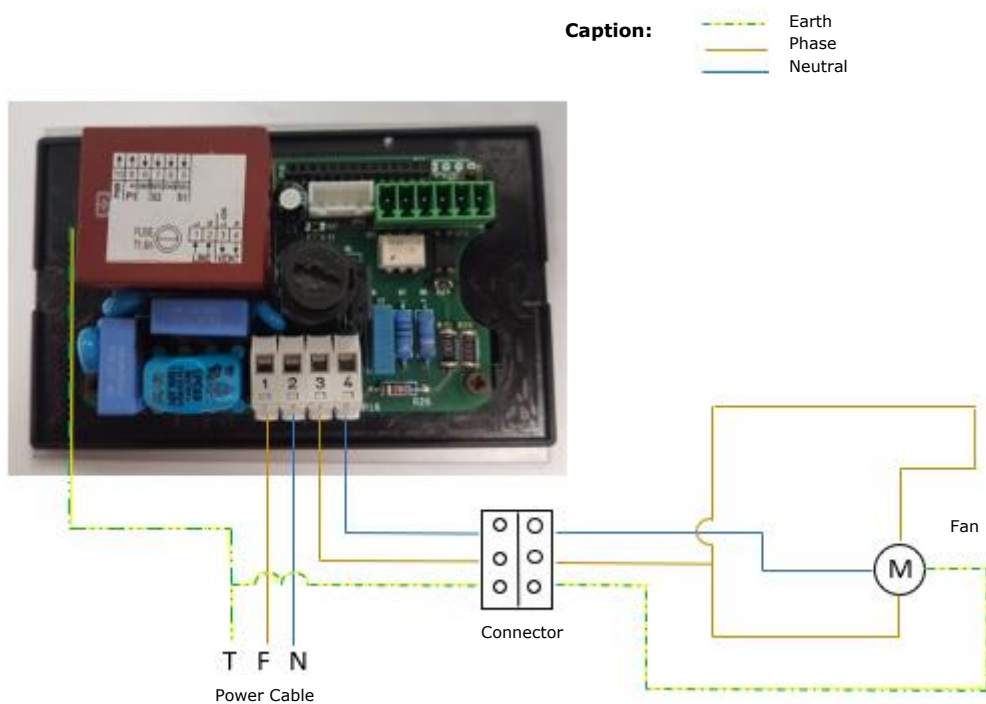


Figure 56 – Electrical schematic for tangential ventilation

19.2. Electrical diagram for centrifugal ventilation

Used in equipment – E909 e E809

Caption:

- Earth
- Phase
- Neutral

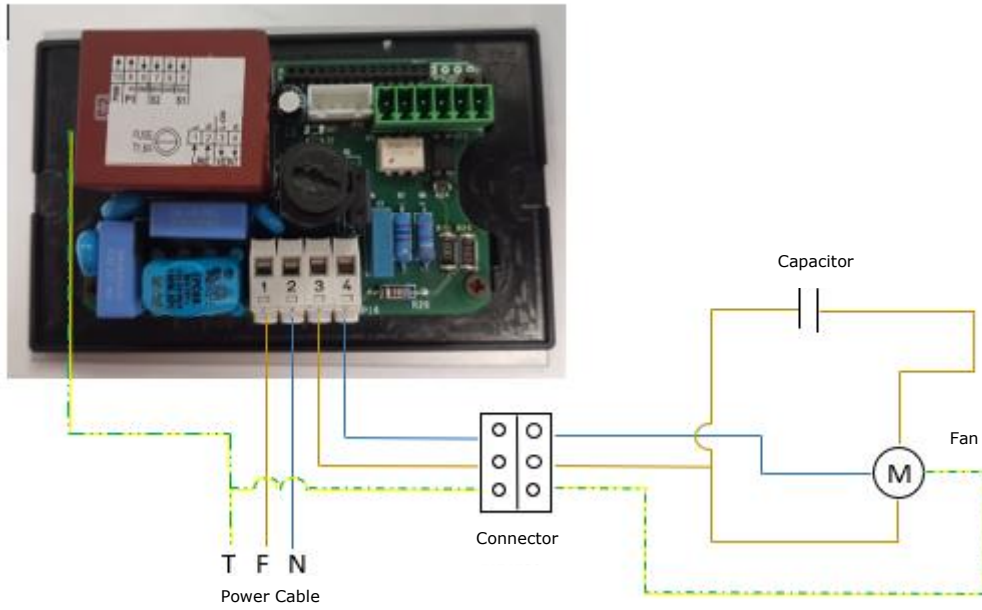


Figure 57 – Electrical schematic for centrifugal ventilation

19.3. Electrical connections

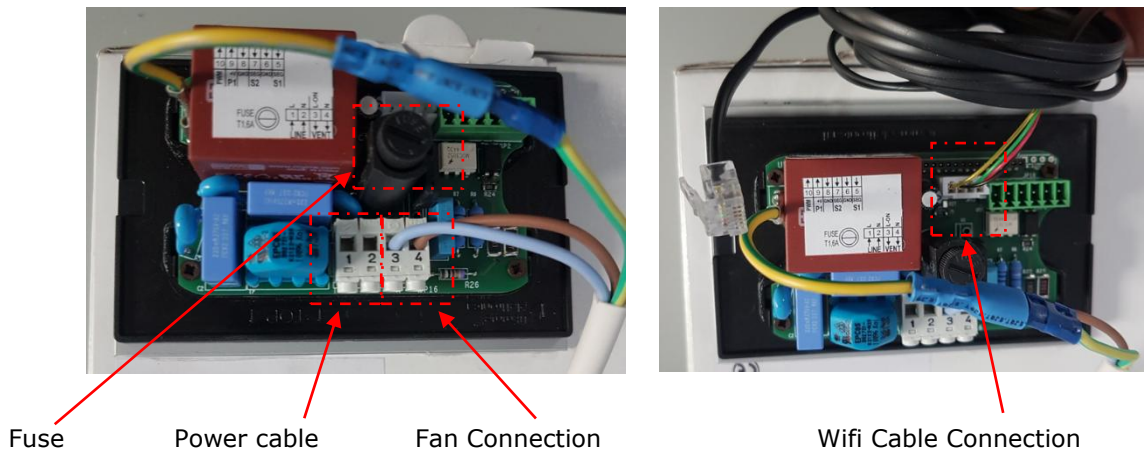
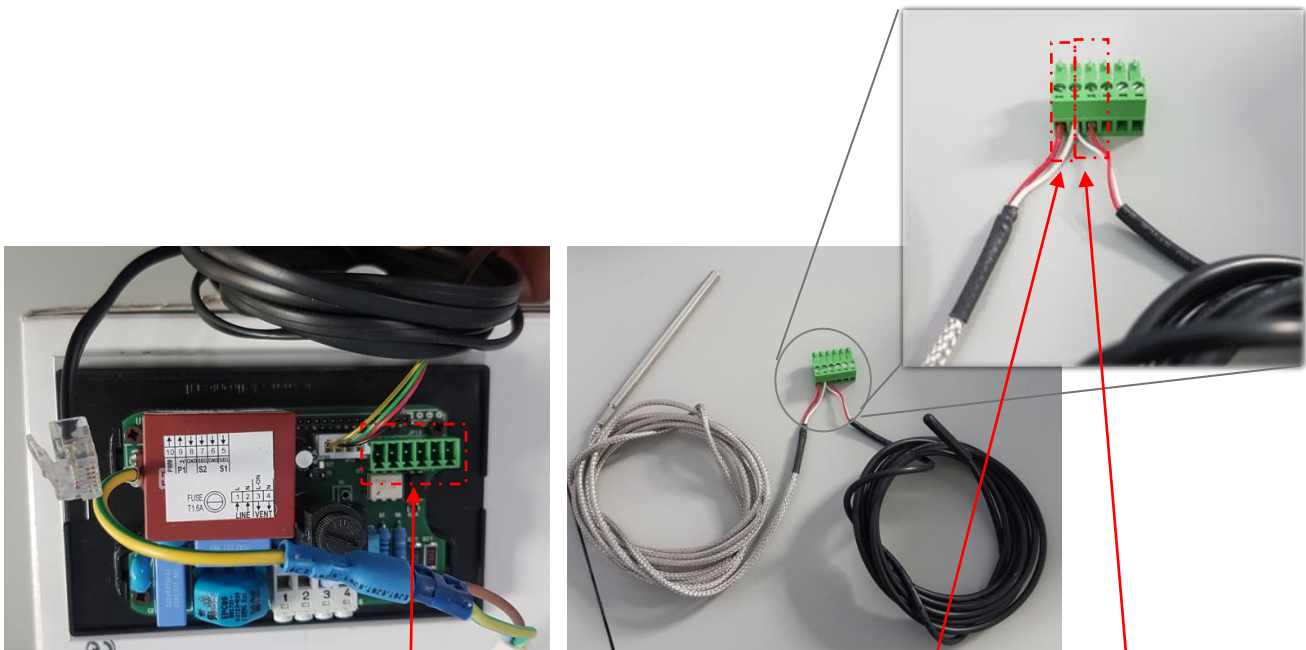


Figure 58 – Component Connection Schematic

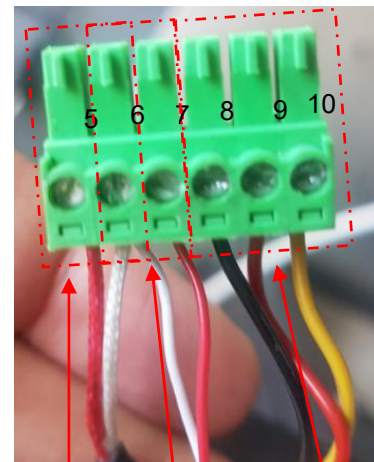
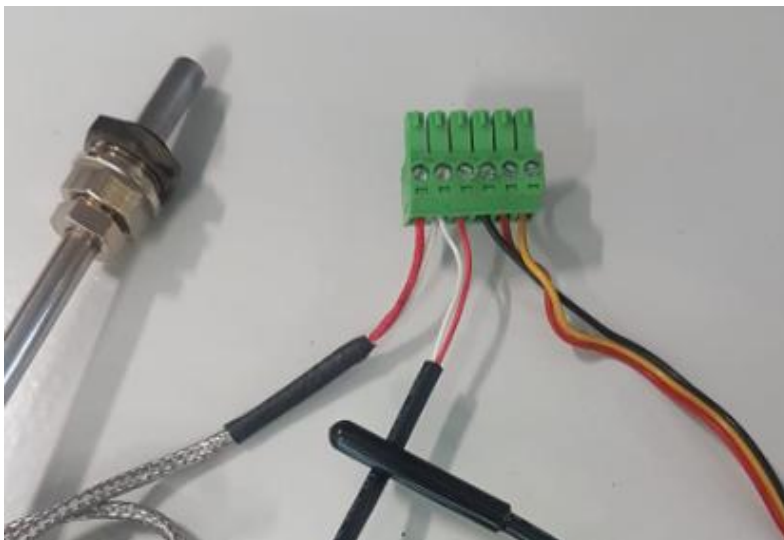


Connection plug smoke probe
+ room probe + Damper

Smoke probe
connection

Ambient probe
connection

Figure 59 – Component Connection Schematic



Smoke
probe

Ambient
probe

Damper
Connection

	Links	Device
Inputs	1 - 2	Power Supply
	5 - 6	Smoke probe (S1)
	6 - 7	Ambient probe (S2) Room thermostat
Fusível Outputs	3 - 4	Fan
	8 - Preto 9 - Vermelho 10 - Terra	Damper

20. Operation Mode with GLA 820 + Damper

20.1. Ignition phase

In the firing phase, we must take into account that the primary air damper, the smoke flap damper and the door glass cleaning damper must be fully open.

To start the firing, you must press K3 for 3 seconds until "ON" is flashing. The GLA will start an automatic control according to the increasing smoke and room temperature.

During this phase, you should keep the door slightly open "leaning in". When the unit has a consistent flame, close the door and leave the unit running.

The firing phase will end when 50 °C of smoke temperature is reached, the equipment will already be with a good burning.

20.2. Flame maintenance phase

When the equipment reaches 200°C of "smoke temperature", you should close the manual air-primary damper and leave the GLA controlling the Damper, during combustion.

Whenever necessary you should replace firewood. To do so, slightly open the door to decompress the combustion chamber, open the smoke damper, open the door and carefully feed the logs of firewood previously cut, arranging them parallel to the chamber. Close the door, when it presents a consistent flame close the door and the smoke damper.

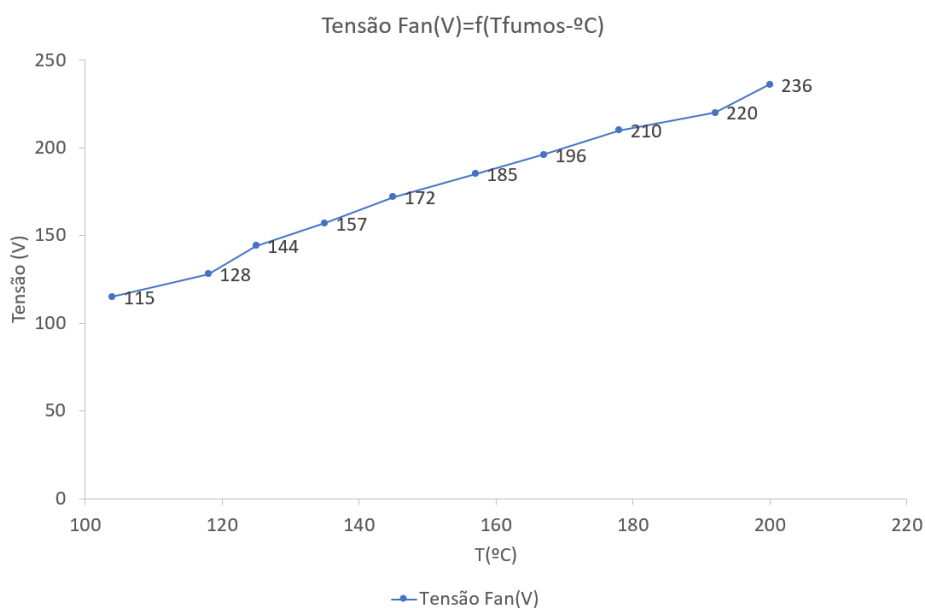
The GLA will manage the combustion according to the smoke temperatures it reads, by closing and opening the damper. With this we will have an optimized management of wood consumption versus ambient temperature.

21. GLA 820 + Damper Parameters

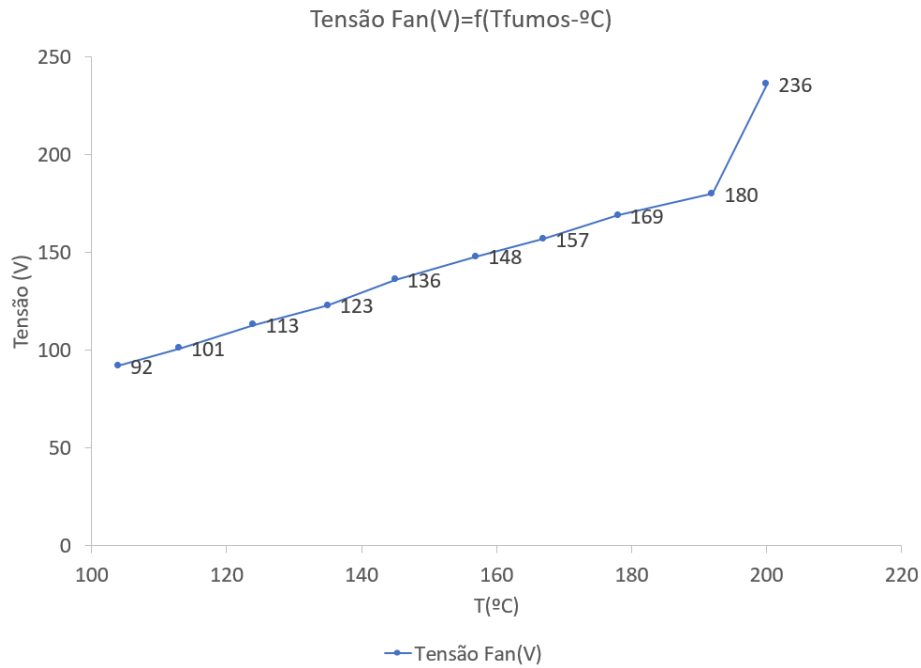
21.1. The fan speed as a function of the fume temperature

The ambient air fan will be activated when the equipment reaches 100°C fume temperature (S1).

As the temperature rises, the fan voltage will also increase, that is, the fan speed will increase. The fan will have 10 speed stages, as we can see in Graph 1 and Graph 2.



Graph 1 - Supply voltage of a tangential fan, as a function of fume temperature



Graph 2 - Supply voltage of a centrifugal fan as a function of fume temperature

The fan's supply voltage can vary according to the home's supply voltage, which is reflected in its operation.

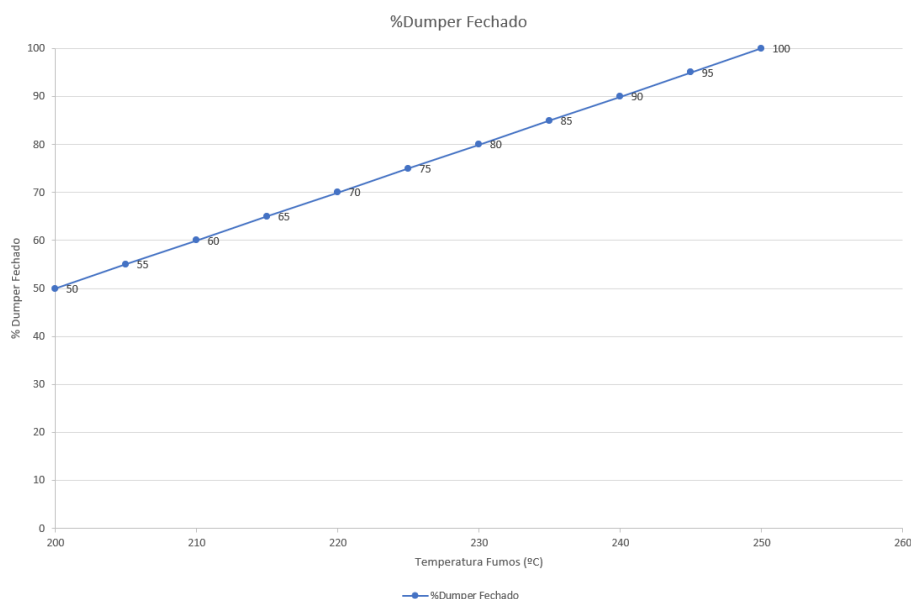
21.2. Damper opening and closing depending on smoke temperature

When the equipment is turned on, the Damper is fully open.

As the temperature of the equipment increases, the smoke probe reads these values, when it reaches the temperature of 200°C the Damper will close 50%.

When we exceed 200°C, at each 5°C interval, the Damper closes 5%.

When the 250°C of smoke temperature is reached, the Damper closes completely "100% closed", we can see this in the following graphs.



22. GLA 820 Parameters

Description	Cod	Set	Min	Max	U.M.
Final combustion exhaust thermostat	F01	50	0	600	°C
Safety thermostat, damper air	F03	250	0	600	°C
Exhaust thermostat alarm	F05	450	0	600	°C
Exhaust thermostat to activate the heating fan	F06	100	0	600	°C
Exhaust safety thermostat	F07	395	0	600	°C
Heating Fan Exhaust Safety Thermostat	F08	550	0	600	°C
Temperature delta for proportional management	F50	100	0	600	°C
Exhaust modulation temperature delta referred to F03	F90	50	0	300	°C
Final combustion exhaust thermostat hysteresis	IF01	1	1	50	°C
Hysteresis of the damper air safety thermostat	IF03	10	1	50	°C
Exhaust thermostat alarm hysteresis	IF05	10	1	50	°C
Hysteresis of the exhaust thermostat to activate the heating fan	IF06	5	1	50	°C
Combustion thermostat safety hysteresis	IF07	10	1	50	°C
Safety hysteresis of the heating fan exhaust thermostat	IF08	10	1	50	°C
Ambient temperature of delta modulation referring to b01	b90	5	0	20	°C
Room thermostat hysteresis	Ib01	1	0	20	°C
P01 Fan speed (minimum)	UA01	30	0	100	%
P09 Fan speed (ninth)	UA09	59	0	100	%
P10 Fan speed (maximum)	UA10	100	0	100	%
Delay time for damper air closing	t06	10	0	120	min
Audible Alarm Suspend Time	t07	5	1	60	min
Heating Fan Start Function Timer	t08	2	0	10	s

S2 Input configuration: 0: Off / 1: Room probe / 2: Room thermostat	P01	1	0	2	n
Activate heating fan safety	P03	0	0	1	n
Activate Exhaust Temperature Safety	P04	1	0	1	n
Activate exhaustion temperature alarm	P05	1	0	1	n
Maximum number of damper air regulation steps	P21	10	1	20	n
Air end position of the damper in the combustion	PF10	100	0	100	%
Air position of the damper in the combustion, with exhaust temperature regulation	PF20	0	0	100	%
Damper air position, in modulation with exhaust temperature regulation	PF30	50	0	100	%
Safety air damper position, with exhaust temperature regulation	PF40	100	0	100	%
Damper air position, in modulation with ambient temperature regulation	Pb30	50		100	%
Safety air damper position, with ambient temperature regulation	Pb40	100	0	100	%

Table 4 - GLA 820 Parameters

NOTE: If you modify UA01, UA09, UA10, the ventilator will immediately run at the speed at which you calibrated it, showing the effect of the calibration

23. End of Component Life

About 90% of the materials used in the manufacture of the equipment are recyclable, thus contributing to lower environmental impacts and contributing to the sustainable development of the planet.

Thus, end-of-life equipment should be forwarded to licensed waste operators, so it is advisable to contact your municipality for the correct collection.

24. Warranty

24.1. Model-specific conditions

The service of installation, configuration, or maintenance of the Wi-Fi Module is not included in its supply. The installation, configuration, or maintenance of the same, developed by Fogo Montanha follows the technical assistance price list.

24.2. General warranty conditions

1. Social name and address of the producer and Object

FOGO MONTANHA

www.fogo-montanha.com

apoio.cliente@fogo-montanha.com

Address: Rua dos Outarelos; nº 111;

3750-362 Belazaima do Chão

This document does not substantiate the provision by Fogo Montanha of a voluntary warranty on its 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 Fogo Montanha, 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 Fogo Montanha, 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 – Fogo Montanha 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 Fogo Montanha, 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 Fogo Montanha Customer support service, by means of a proper form present on the Website www.fogo-montanha.com, or, e-mail: support.cliente@fogo-montanha.com. 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 channelled to drained sewage to prevent damage to the dwelling by water discharges. Product Warranty does not include damages caused by non-channelling 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 Fogo Montanha solely and

exclusively within the geographical and territorial zone of the country where the Product was sold by Fogo Montanha.

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 Fogo Montanha;

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 Fogo Montanha;

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 Fogo Montanha 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 i.e., 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

Fogo Montanha 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 Fogo Montanha.

6. Responsibility of Fogo Montanha

Notwithstanding legally established, Fogo Montanha, 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 Fogo Montanha have a 6-month guarantee.

9. Warranty Spare Parts provided by Fogo Montanha

Parts supplied by Fogo Montanha in the context of the commercial sale of spare parts, i.e., not incorporated in the equipment, do not have a warranty.

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. Fogo Montanha 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.

25. Parameters listed on the specification plate and in the technical data sheet.

$P_{part} - P_{nom}$	Potência Parcial-Nominal / Potencia Partial-Nominal / Parcial-Nominal output power / Puissance Partielle-Nominale / Potenza Parziale-Nominale
$P_{Wpart} - P_{Wnom}$	Potência água Parcial-Nominal / Potencia agua Partial-Nominal / Water Parcial-Nominal output power / Puissance eau Partielle-Nominale / Potenza acqua Parziale-Nominale
$P_{SHpart} - P_{SHnom}$	Potência aquecimento espaço Parcial-Nominal / Potencia calefacción del espacio Partial-Nominal / Space heat output power Parcial-Nominal / Puissance de chauffage de l'espace Partielle-Nominale / Potenza di riscaldamento dello spazio Parziale-Nominale
$\eta_{part} - \eta_{nom}$	Eficiência Parcial-Nominal / Eficiencia Parcial-Nominal / Partial-Nominal efficiency / Efficacité Partiel-Nominal / Efficienza Parziale-Nominale
η_s	Eficiência Sazonal / Eficiencia Estacional / Seasonal Efficiency / Rendement Saisonnière / Efficienza Stagionale
$CO_{part} - CO_{nom}$ (13%O ₂)	Emissões CO(13%O₂) Parcial-Nominal / Emisiones CO(13%O ₂) Parcial-Nominal / Emissions CO(13%O ₂) Partial-Nominal / Émissions CO(13%O ₂) Partiel-Nominal / Emissioni CO(13%O ₂) Parziale-Nominale
$NO_{xpart} - NO_{xnom}$ (13%O ₂)	Emissões NOx(13%O₂) Parcial-Nominal / Emisiones NOx(13%O ₂) Parcial-Nominal / Emissions NOx(13%O ₂) Partial-Nominal / Émissions NOx(13%O ₂) Partiel-Nominal / Emissioni NOx(13%O ₂) Parziale-Nominale
$OGC_{part} - OGC_{nom}$ (13%O ₂)	Emissões OGC(13%O₂) Parcial-Nominal / Emisiones OGC(13%O ₂) Parcial-Nominal / Emissions OGC(13%O ₂) Partial-Nominal / Émissions OGC(13%O ₂) Partiel-Nominal / Emissioni OGC(13%O ₂) Parziale-Nominale
$PM_{part} - PM_{nom}$ (13%O ₂)	Emissões PM(13%O₂) Parcial-Nominal / Emisiones PM(13%O ₂) Parcial-Nominal / Emissions PM(13%O ₂) Partial-Nominal / Émissions PM(13%O ₂) Partiel-Nominal / Emissioni PM(13%O ₂) Parziale-Nominale
$T_{spart} - T_{snom}$	Temp. Fumos Parcial-Nominal / Temp. Humos Partial-Nominal / Smoke temp. Parcial-Nominal / Temp. Fumées Partiel-Nominal / Temp. Fumi Parziale-Nominale
T_{class}	Designação Chaminé segundo norma chaminés / Designación de chimeneas según normas de chimeneas / Chimney designation according to chimney standards / Désignation des cheminées selon les normes de cheminée / Designazione del camino secondo le norme sui camini

d_{out}	Diâmetro da chaminé / Diámetro de chimenea / Flue pipe / Diamètre de cheminée / Diametro del camino
$p_{part} - p_{nom}$	Tiragem recomendada Parcial-Nominal / Tiro recomendado Parcial-Nominal / Recommended draught Partial-Nominal. / Tirage conseillé Partiel-Nominal / Tiraggio consigliato Parziale-Nominale
$\phi_{f,g part} - \phi_{f,g nom}$	Caudal mássico Parcial-Nominal / Masa de humos Parcial-Nominal / Mass flow Partial-Nominal / Débit massique Partiel-Nominal / Flusso di massa Parziale-Nominale
E	Tensão / Tensión / Voltage / Tension / Tensione
f	Frequência / Frecuencia / Frequency / Fréquence / Frequenza
eI_{SB}	Potência elétrica Standby / Energía eléctrica Standby / Standby electric power / Puissance électrique Standby / Energia elettrica Standby
eI_{max}	Potência elétrica nominal / Energía eléctrica nominal / Nominal electric power / Puissance électrique nominal / Energia elettrica nominal
eI_{min}	Potência elétrica Pparcial / Energía eléctrica parcial / Partial electric power / Puissance électrique partiel / Energia elettrica parziale
W_{max}	Energia elétrica máxima / Energía eléctrica máxima / Nominal electric power / Puissance électrique nominal / Energia elettrica máximo
p_w	Pressão máx. / Pressione máx. / Pressure máx. / Pression máx. / Pressione máx.
d_R d_S d_P d_C d_F d_L d_B	Distância mínima a materiais combustíveis (trás - d_R/laterais-d_S/frente-d_P/topo-d_C/Frontal ao Pavimento-d_F/lateral frontal-d_L/pavimento-d_B) Distancia mínima a materiales combustibles (detrás/laterales/frente/topo/frente piso/lado fronta/pisol) Minimum distance to combustible materials (rear/side/front/top/front to floor/front side/bottom) Distance minimale aux matériaux combustibles (derrière/côté/avanta/haut/sol/face avant) Distanza minima da materiali combustibili (dietro/lato/anteriore/sotto/pavimento/lato anteriore)
s	Isolamento requerido / Aislamiento requerido / Isolation Required / Isolation requise / Isolamento Richiesto
V_h	A perda de ar em repouso, se especificada / Pérdida de aliento en reposo, si se especifica / Shortness of breath at rest, if specified / Essoufflement au repos, si spécifié / Mancanza di respiro a riposo, se specificato
L, H, W	Dimensões do equipamento / Dimensiones del equipo / Dimensions from the appliance / Dimensions de l'équipement / Dimensioni dell'attrezzatura
Le, He, We	Dimensões com embalagem / Dimensiones con embalaje / Dimensions with packing / Dimensions avec l'emballage / Dimensioni con imballaggio
m	Peso líquido / Peso neto / Net weight / Poids net / Peso netto



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