



SOLUÇÕES DE AQUECIMENTO A BIOMASSA

Wood Boiler

Instruction Manual

English

Models

Wood Boiler SZM IW 24, 34 and 44 kW

Read the instructions carefully before proceeding with the installation, use and maintenance of equipment.

The instruction manual is an integral part of the product.

Thank you for purchasing a SOLZAIMA equipment.

Please read this manual carefully and keep it for future reference.

* All products meet the requirements of the Regulations for Construction Products (EU Reg 305/2011.), Being approved with the CE mark of conformity;

* The wood boiler was built according to the standard EN 303-5: 2012;

* SOLZAIMA shall not be liable for any damage to the equipment when It is installed by unqualified personnel;

* SOLZAIMA is not responsible for any damage to the equipment, if the installation and use rules indicated in this manual are not respected;

* All local regulations, including so-called national and European standards, must be respected in the installation, operation and maintenance of the equipment;

* Whenever you need assistance, contact the supplier or installer of your equipment. You must provide the serial number of your boiler located on the name plate on the back of the equipment and the label attached to the plastic cover of this manual;

* Technical assistance should be performed by your installer or your provider, except in special cases after evaluation by the installer or technician responsible for assistance, which will contact the SOLZAIMA if deemed necessary.

Contacts for technical support:

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Solzaima

Solzaima's vision has always been to provide a clean, renewable and more cost-effective energy. This is why we've been dedicating ourselves for more than 39 years to the manufacture of biomass heating equipment and solutions.

As a result of the persistence and unconditional support from our partner network, Solzaima is today a leading player in the production of biomass heating solutions, best illustrated by our backboiler fires for central heating.

We provide annually more than 20.000 homes with biomass heating solutions. The consumer's increasing awareness towards ecological and more cost-effective heating solutions accounts for this market's dramatic growth.

Solzaima has an ISO 9001 quality certification and an ISO 14001 environmental certification.

1. Package Content

The package of this unit contains:

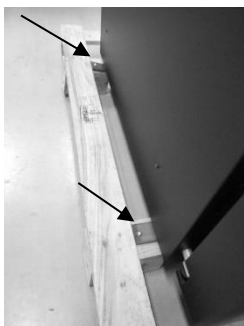
- Wood boiler SZM IW 24, 34 or 44 kW;
- Access to the online instruction booklet;
- Power cable;
- Fireplace poker

2. Unpacking the Unit

To proceed with unpacking the equipment, first, you must remove the surrounding structure, remove the bag and retractable screen that involve boiler (Fig. 1a), then remove the four screws which secure the feet of the pallet boiler (Fig. 1b and 1c), then remove the screws of the pallet (Fig. 1d, 1e and 1f).



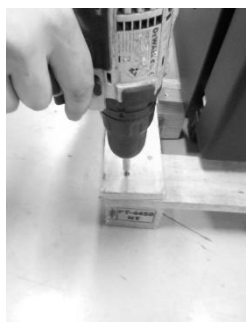
a)



b)



c)



d)



e)



f)

Figure 1 – Wood Boiler Unpacking

3. Safety Warnings

Solzaima will not assume any responsibility if the precautions, warnings and norms of operation of the equipment are not respected. The equipment manufactured by Solzaima is simple to operate and special attention has been paid to its components in order to protect the user and the installer from possible accidents.

The installation should be performed only by authorized personnel, who must deliver to the purchaser a declaration of compliance of the installation, which will be fully responsible for final installation, and consequently the proper functioning of the product.

This equipment is intended for the use for which it was expressly designed. Excluded are all contractual or non-contractual responsibility of the manufacturer to cause injury to persons, animals or objects, due to installation errors, maintenance or improper use. After you have removed the packaging to the Boiler, make sure the contents are intact and complete. If the contents of the package do not match the Point 1, contact the dealer from whom you purchased the equipment.

All the components that constitute the equipment, guarantee its operability and energy efficiency, and should be replaced by original parts by an authorized service center.

The maintenance of the device must be performed at least once a year and for this you should contact you're a specialist.

This manual is an integral part of the product. Make sure that it's always near the unit.

No fans should be used to draw the air out of the installation compartment;

The use of this equipment, along with other heating appliances requiring air supply, may require additional air inlets, and the installer must assess the situation according to global air requirements.

4. For your safety we remember that:

- The boiler is a biomass heating equipment and must always be handled after reading the entire manual;
- Ensure that the hydraulic circuit has been correctly installed and is connected to the water before turning on the wood boiler.
- the boiler should not be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or have been given the proper instructions.
- Do not touch the boiler if you are barefoot and any parts of your body are wet or humid;
- It is forbidden to modify the safety devices or parameters without the permission of the manufacturer;
- It is prohibited to cover or reduce the size of the ventilation openings of the installation site;
- The wood boiler is a device that needs air to achieve proper combustion, so the eventual sealing of the location where the equipment is located or the existence of other sources of air inlet may prevent proper functioning of the equipment;
- The air vents are indispensable for a suitable combustion;
- Do not leave the packaging material at hand of children;
- During normal operation the door must be closed, the door of the boiler can only be opened for refueling;
- Avoid direct contact with parts of the apparatus, they tend to overheat during operation;
- After a long period of non-use, check for any obstructions in the flue before starting the machine;
- The wood burning boiler has been designed to operate inside the dwellings in a protected environment. Safety systems may be used to shut off the boiler. If this happens, contact the after-sales service and never in any situation disarm the safety systems;
- The wood-fired boiler is a biomass heating equipment with extraction of fumes by an electric extractor. Power failure during use may result in non-exhaustion of the fumes and consequent entry into the dwelling. For this reason a chimney with good natural extraction is advisable;

- In operation, you should NEVER disconnect the mains plug from your wood burning boiler. The fume extractor in the boiler is electrically powered, which may result in non-extraction of combustion fumes;
- To perform maintenance on your equipment you must disconnect it from the mains. To do so, the equipment must be completely cooled (if it has been in operation);
- Never touch the inside of the boiler without disconnecting the electrical network;
- In the boiler, the maximum water temperature that can be set by the user (Set-point temperature of water) is 80 ° C. If this temperature is reached, the boiler switches off automatically and the respective alarm is triggered.
- The boiler is fitted with a 3 bar safety valve, a 97 ° C thermal discharge valve, pressure sensor and water temperature sensor;

The boiler has a microswitch in the front, this safety system allows the boiler to operate, and whenever the user opens the upper door, the contact of the microswitch opens and the smoke extractor starts to work at maximum rotations (2600 rpm) , when the door is closed, the contact of the microswitch closes again and the smoke extractor starts to work at the respective rotations of the power level.



Figure 2 - Microswitch placed on the front of the boiler

5. Technical features

The wood-fired boiler is a water heating device for use in central heating installations and for domestic use. This requires a pre-installation of central heating and an accumulator with heat exchanger (if you wish to heat sanitary water).

SMZ IW wood-fired boilers are inverted-flame boilers, based on the principle of wood gasification (Fig. 3a). The combustion chamber is divided into two (Fig. 3b), in the upper chamber where the fuel is placed and where the drying and subsequent release of the gases contained in the wood (volatiles) takes place, the generated gas passes to the lower chamber through the refractory and in combustion, in this zone we can reach temperatures above 1000 °C. This allows an almost complete combustion of the firewood and a reduced environmental impact with low pollutant emissions and harmful substances, which allows reduced fuel consumption with an efficiency between the 85 And 95%.

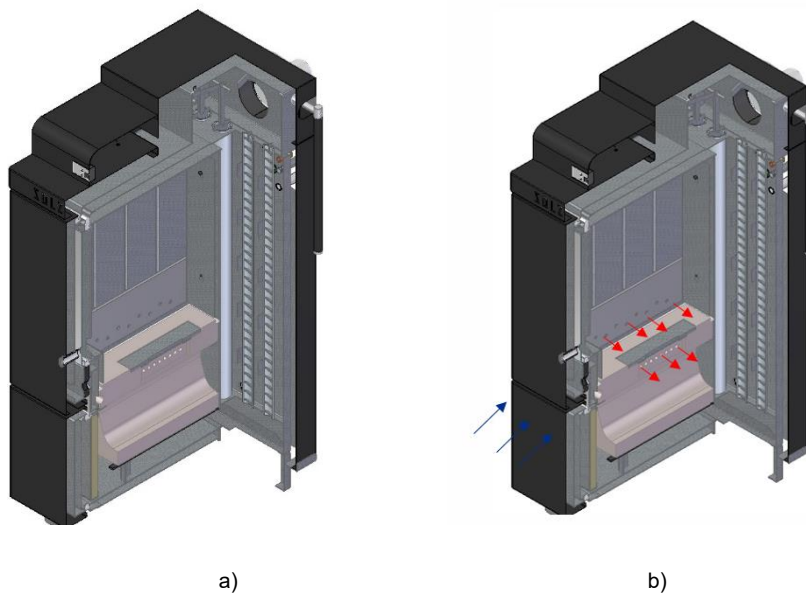


Figure 3 - Boiler sections

Characteristics	IW 24 kW boiler	IW 34 kW boiler	IW 44 kW boiler	Units
Weight	383	423	503	kg
Height	1520	1520	1740	mm
Width	560	630	630	mm
Depth	1070	1100	1130	mm
Diameter of the smoke discharge pipe	100	150	150	mm
Maximum load capacity	30	35	47	kg
Sound Level Max.	54	54	54	dBA
Maximum volume of heating ¹	568	773	1022	m ³
Total maximum heating capacity (water)	25	35	45	kW
Maximum wood length	475	475	475	mm
Fuel consumption ²	6.8	9.5	12.1	kg / h
Nominal Power consumption / Standby	48-3.5	97-3.5	97-3.5	W
Rated voltage	230	230	230	V
Nominal frequency	50	50	50	Hz
Thermal efficiency at rated thermal power	85	85.2	85.9	%
Class	4	4	4	-
CO emissions with 10% O ₂	0.095	0.095	0.087	%
Temperature Max. Of gas	115	145	160	°C
Maximum Operating Pressure	3	3	3	Bar
Depression in chimney	20	25	25	Pa
Water Flow	73	90	125	L

Table 1 - Specifications

¹Approximate value for a medium degree of insulation (120 w / m²) and a room-high of 2.5 m. This value is subject to calculation depending on the type of insulation and the area where the dwelling is built.

² Consumption values for a fuel with 15% humidity and a calorific value of 4.2 kWh / kg.

Tests carried out using beech wood with a calorific value of 4.2 kWh / kg. The above data was obtained in product type approval tests in independent and accredited laboratories to test biomass combustion equipments.

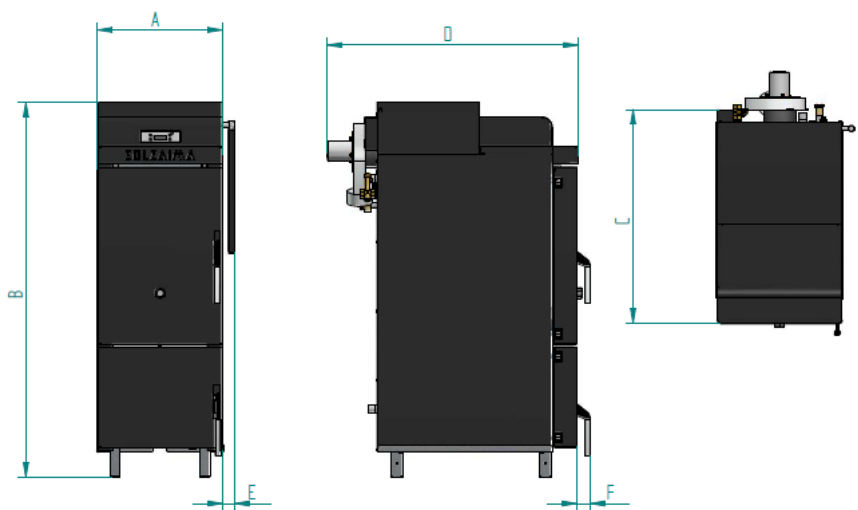
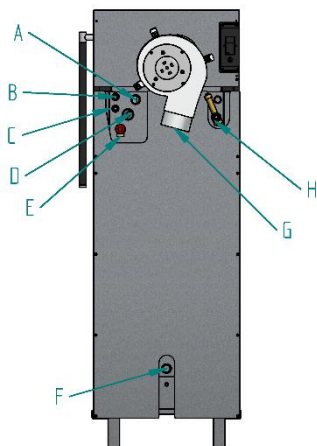


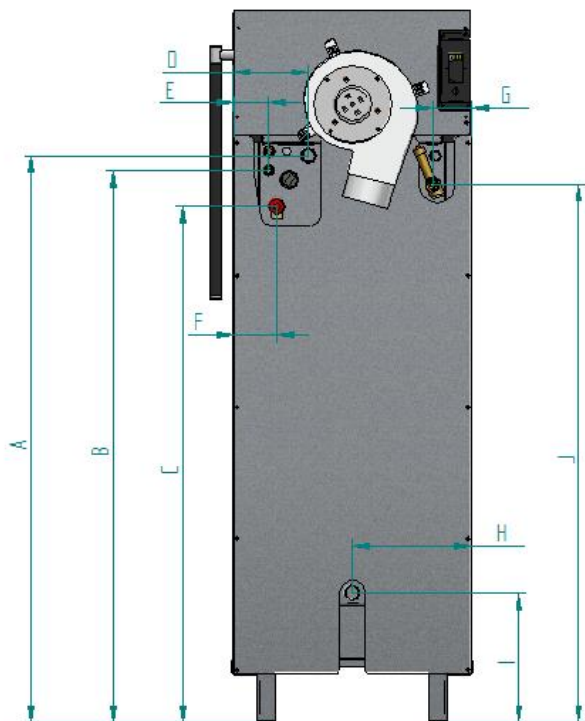
Figure 4 - Dimensions

Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
IW 24	505	1520	860	1070	50	55
IW 34	580	1520	860	1100	50	55
IW 44	580	1740	910	1130	50	55



a)

	A	B	C	D	E	F	G	H
Model	IN	Temp probe. Water	OUT Anti-packing	Pressure sensor	Safety valve H-1/2 "	Return	Smoke outlet (mm)	IN Anti-packing
IW 24	M 1 "	NTC	1/2 "	0-4 bar	1/2 "- 3 Bar	M 1 "	100	3/4 "
IW 34	M 1 "1/2	NTC	1/2 "	0-4 bar	1/2 "- 3 Bar	M 1 "1/2	150	3/4 "
IW 44	M 1 "1/2	NTC	1/2 "	0-4 bar	1/2 "- 3 Bar	M 1 "1/2	150	3/4 "



b)

Model	A	B	C	D	E	F	G	H	I	J
IW 24	1208	1175	1105	145	75	93	82	255	276	1147
IW 34	1208	1175	1105	146	76	93	86	290	276	1147
IW 44	1425	1394	1333	121	76	93	82	290	293	1367

Figure 5 – Distances and electrical connections of the wood boiler.

6. Wood boiler installation

Before starting the installation, perform the following actions:

- Check immediately after receipt if the delivered product is complete and in good condition. Any defects should be noted before installing the appliance.
- Remove the user manual and hand it to the customer.

- Connecting conduit 100 or 150 mm in diameter (depending on the boiler model) between the flue gas outlet port and a flue gas exhaust duct to the outside of the building (ex. chimney).
- Do the hydraulic installation (see section 15).
- Turn on the 230V AC power cord to a power socket with earth.
- It is recommended to install an anti-condensation valve to avoid condensation inside the combustion chamber (see section 15).

7. Installation requirements

The minimum distances from the wood boiler to flammable surfaces are shown in figure 6.

At the top of wood boiler it is necessary to maintain a minimum distance of 150 cm from the ceiling of the room especially if they contain flammable material in their composition.

The base on which the boiler is supported must not be of combustible material, so adequate protection must always be provided.

⚠ Note: Because the gas temperature in the boiler is relatively low, to avoid condensation inside the combustion chamber and in the chimney, the use of a double wall insulated flue is recommended.

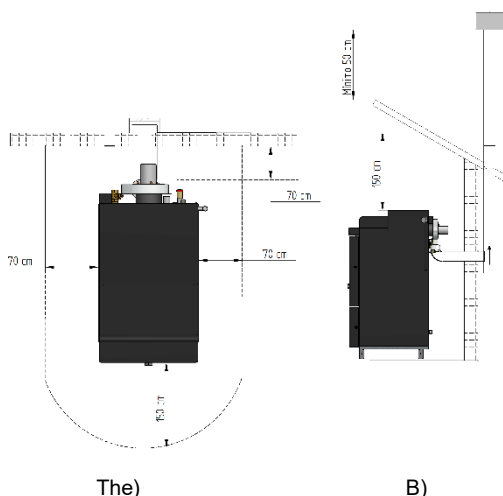
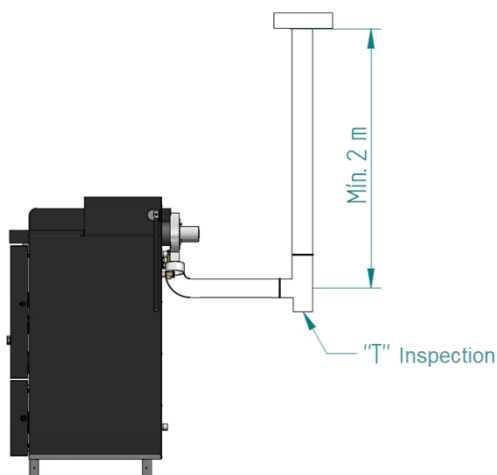


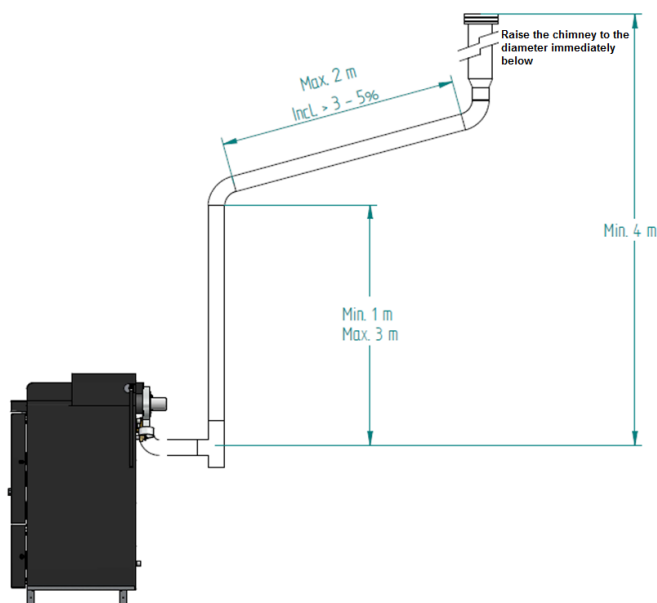
Figure 6 - Minimum distances to all surfaces: a) top view of the installation of equipment; b) side view of the installation device

In figures 7 and 8, the basic requirements for the installation of the boiler flue are shown. Provide a T for the periodic inspections and the annual maintenance, as exemplified in the figures. Double-walled insulated stainless steel pipes should be used properly to avoid condensation.

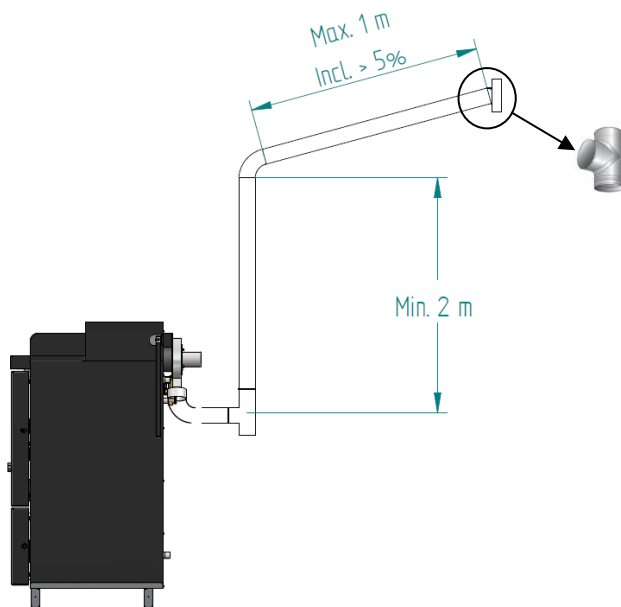


a)

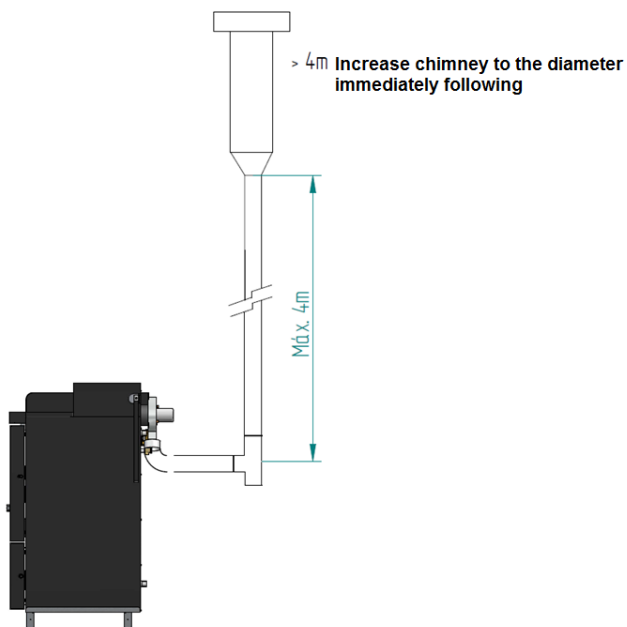
Figure 7 - Side view of the installation, with the inspection point.



b)



c)



d)



NOTICE!

Keep combustible and flammable materials at a safe distance.

Installation of pipes and fume exhaust systems:

- The construction of the gas exhaust pipe must be suitable for the purpose in accordance with local requirements and respecting the regulations.



- **Important!** An inspection T must be inserted at the outlet of the exhaust pipe of the wood-fired boiler with an airtight cover to permit regular inspection or discharge of heavy dust and condensate.

- The exhaust duct must be mounted in such a way that cleaning and maintenance is ensured by insertion of the inspection points.



- **Important! Under normal operating conditions, the drawdown of the combustion gases must lead to a depression depending on the boiler of 20 to 25 Pa, measured 1,5 m above the boiler outlet.**

- The wood boiler can not share the chimney with other equipment.

- The chimneys installed outside the house must be double-walled in stainless steel, with an internal diameter of 150 mm in the case of boilers IW44 and IW34 and 100 mm in diameter for the IW24 boiler.

- **The exhaust pipe can generate condensation, in this case it is advisable to establish suitable condensate collection systems and the use of double wall pipe.**



Failure to meet these requirements undermine the proper functioning of the boiler. Comply with the instructions given in the diagrams.



The boilers work with the combustion chamber in depression, so it is absolutely necessary to have a flue pipe that extracts the flue gases properly.

Fume duct material: The pipes to be installed must be rigid, of stainless steel and have a minimum thickness of 0,5 mm, with joints for the union between the different sections and accessories.

Isolation: Smoke ducts must be double wall insulated to ensure that the fumes do not cool during the course to the exterior, which would lead to improper drainage and condensation that could damage the appliance.

"T" output: Always use an inspection "T" on the boiler outlet.

Chimney crown: you should always install a chimney crown to prevent the return of fumes.

Depression in chimney: Any other type of installation must ensure a depression of 20 to 25 Pa (0.20 to 0.25 mbar) measured at hot and at maximum power.

8. Hydraulic installation

- * You can find in chapter 15 (installation diagrams) possible connection schemes in the context of a central heating installation, with or without domestic water heating;
- * The wood boiler comes with a 3-bar safety valve, a 97 ° C thermal discharge valve (connected to the mains water), a pressure sensor and a temperature sensor;
- * Operating pressure is between 1 and 1.2 bar;
- * A suitable expansion vessel must be installed for the installation;
- * For emptying the appliance, a ½ "tap should be placed on the bottom of the boiler with connection to the drain; The outlet of the safety valve and the thermal discharge valve must also be connected to the sewer;
- * The heat transfer fluid must be water with the addition of an anti-corrosion product, non-toxic and in the amount recommended by the manufacturer; If there is a risk of freezing in the space where the wood-fired boiler is located or in the fluid lines, the installer must add to the circulating medium an antifreeze in the proportion recommended by the manufacturer to avoid freezing at the absolute minimum temperature expected.
- * On the back of the boiler is a plug to connect the circulating pump of the hydraulic circuit (Fig. 9).

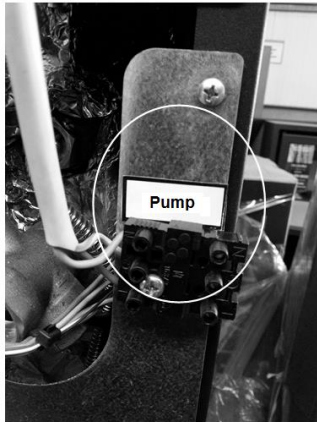


Figure 9 - Plug for connecting circulating pump

Calculation for the minimum volume of the buffer tank

Calculation for the minimum volume of the buffer tank according to the European standard EN 303-5: 2012 apply the following formula:

$$VSP = 15 * TB * QN * (1 - 0.3 QH / Qmin)$$

where:

VSP = minimum volume buffer tank (l)

TB = combustion time (h)

QN = rated power (kW)

QH = needed for installation (kW)

Qmin = minimum boiler output (kW)

Example of calculation of the buffer tank:

Combustion Duration: 2 hours (the time required for combustion of the fuel charge)

Nominal boiler power: 42 kW

Minimum boiler power: 30 kW

Thermal load of the building: 40 kW

Minimum volume required = $15 * 2 * 42 * (1 - 0.3 * 40 / 30) \approx 752 \text{ l}$

Method of calculating the volume expansion vessel

The volume of an enclosed membrane expansion vessel (diaphragm) for a heating installation is calculated using the following formula:

$$V = \frac{e \cdot C}{1 - \frac{P_i}{P_f}}$$

where:

V = volume of the vessel (l);

e = coefficient of expansion of the water. Calculated based on the difference between the maximum temperature of the water in the installation and the maximum cold working. **In practice, for heating, it assumes the conventional value of 0.035;**

C = the total water content of the system (l);

P_i = initial absolute pressure (bar) at an elevation that is installed on the vessel, represented by the hydrostatic pressure + 0.3 bar + atmospheric pressure (1 bar). In practice it is the preload pressure of the vessel increased from 1 bar;

P_f = final absolute pressure (bar) represented by the maximum system pressure plus atmospheric pressure (1 bar). In practice it is the regulation of increased safety valve of 1 bar.

T (°C)	coef. "e"
0	0,00013
10	0,00025
15	0,00085
20	0,00180
25	0,00289
30	0,00425
35	0,00582

T (°C)	coef. "e"
40	0,00782
45	0,00984
50	0,01207
55	0,01447
60	0,01704
65	0,01979
70	0,02269

T (°C)	coef. "e"
75	0,02575
80	0,02898
85	0,03236
90	0,03590
95	0,03958
100	0,04342

Table 2 - Water Expansion Ratios

Scale an expansion vessel for a heating system with the following characteristics:

C = water content = 600 l

Phyd = hydrostatic pressure at the installation site = 1 bar

Pseg = set pressure of the safety valve = 3 bar

Solution:

Applying the formula above, where:

$e = 0.035$ conventional value

$P_i = P_{hid} + 0,3 + P_{atm} = 1 + 0.3 + 1 = 2.3 \text{ bar}$

$P_f = P_{seg} + P_{atm} = 3 + 1 = 4 \text{ bar}$

therefore: $V = (0.035 \cdot 600) \div [1 - (2,3 \div 4)] \approx 49.41 \text{ l}$

We have to check in a manufacturer's catalog of expansion vessels and therefore choose a vessel with a capacity equal to or greater than the calculated value.

9. Fuel

Please note: all regulations and standards have to be met in the installation of this equipment.

* Only dry wood should be used in this type of equipment. It can not be used as an incinerator and other materials such as coal, wood with paints, varnishes, thinners, liquid fuels, glues and plastics should be excluded. Also avoid burning common combustible materials like cardboard and straw.

*** Wood should have a low (less than 20%) moisture content to provide efficient combustion, avoid creosote deposition in the flue and glass and minimize oxidation of the equipment;**

*** The following Table 3 (next page) with some types of wood that can be used in these equipment;**

Common name	Scientific name	Distribution (Total: 18 districts)	Comments	Characteristics				
				Smoke	Heat	Firing	Speed combustion	Toughness
Pine tree	Pinus	Bragança, Castelo Branco, Coimbra, Guarda, Leiria, Viana do Castelo, Vila Real and Viseu	predominant tree	Little	Strong	Easy	Fast	Soft
Cork (+)	Quercus suber	Évora, Faro, Portalegre, Santarém and Setúbal	predominant tree	Little	Very strong	Easy	Medium	Hard
Eucalyptus	Eucalyptus	Aveiro, Porto and Lisbon	predominant tree	Much	Medium	Difficult	Slow	Hard
Holm (+)	Quercus ilex	Beja and Évora	predominant tree	Little	Very strong	Difficult	Slow	Hard
Olive tree	Olea	The entire country except alpine areas	less prevalent tree than previous	Little	Very strong	Difficult	Slow	Hard
Oak	Quercus	<i>Nationwide ranging subspecies</i>	less prevalent tree than previous	Little	Strong	Difficult	Slow	Hard
Freixo	Fraxinus	<i>river zones (Low Vouga)</i>	Distributed throughout the country in smaller numbers	Medium	Strong	Difficult	Slow	Hard
Birch / Birch	Birch	<i>Highlands (Serra da Estrela)</i>	Distributed throughout the country in smaller numbers	Little	Very strong	Easy	Fast	Soft
Beech	Fagus	<i>Regions of cold weather and high humidity (North Portugal - Serra do Geres)</i>	Distributed throughout the country in smaller numbers	Little	Strong	Difficult	Slow	Hard
Elm	Ulmus	<i>The entire country except alpine areas (wetlands)</i>	Distributed throughout the country in smaller numbers	Medium	Strong	Difficult	Slow	Hard
Board / False - Maple	Acer	<i>Minho, Beira Litoral and Serra de Sintra</i>	Distributed throughout the country in smaller numbers	Little	Medium	Medium	Slow	Soft
Poplar	Populus	<i>Throughout the country with predominance in Center</i>	Distributed throughout the country in smaller numbers	Little	Strong	Easy	Fast	Soft
Chestnut	Castanea	<i>North and center of Portugal and saws</i>	Distributed throughout the country in smaller numbers	Medium	Strong	Difficult	Slow	Hard

(+):Greater supply by loggers

Table 3 - List of firewood type that can be used in a SOLZAIMA equipment, their geographical distribution and Calorific Value / reactions.

NOTICE!

The unit may NOT be used as an incinerator.

10. First Use

Recommendations for using wood-fired boiler


- * Ask the installer to start the equipment, having verified the operability of the installation;
- * In the first use of the wood-fired boiler the paint is cured, which can lead to the production of additional fumes. If this is the case, you should aerate the room by opening the windows and doors.

Before starting the appliance, check the following points:

- Ensure that the boiler is properly connected to the mains via 230VAC power cable.



Figure 10 - Electrical connection plug .

 The combustion chamber of the boiler and the doors are built in iron painted with high temperature paint, releasing fumes in the first burns due to the cure of the paint.

Ensure that the hydraulic circuit has been correctly mounted and is connected to the water;

It must be checked whether there is sufficient air circulation in the room where the installation is made, otherwise the equipment does not work properly. For this reason you should be aware if there are other heating devices consuming air for their operation (Eg: gas equipment, diesel oil boilers, etc.) working at the same time.

11. Command and display

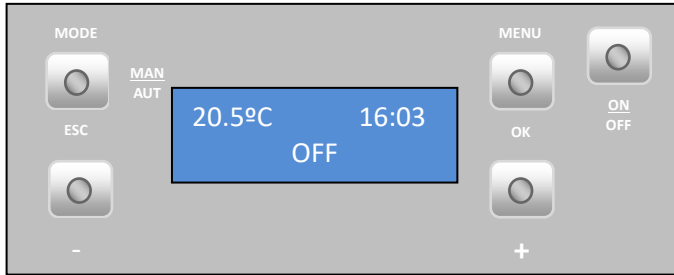


Figure 11 - Command and display



a) Key to switch from manual mode, automatic and exit menus (esc).



b) Access to menus and key confirmation key (ok).



c) Key to Start / Stop the unit and to reset the errors



d) Key to move to the left to menus for increasing and decreasing flow fan setting and increasing or decreasing the temperature set point



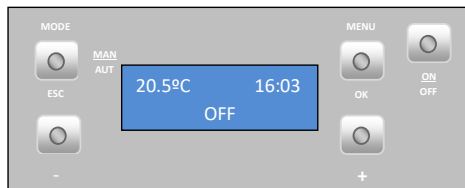
e) Key to advance menus to the right and to increase and decrease power of the salamander.

Figure 12 - Command Keys

12. Display summary

Menu

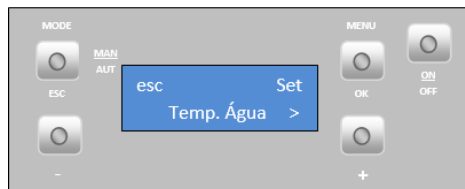
Menu indicating Boiler "off" room temperature in °C and Time.



Mode "MANU": In this mode the machine will turn on at full power and stay there until you reach a temperature 2 ° C below the set temperature (set point temperature heating). When it reaches this temperature it starts to operate at minimum power.

Water temperature

To set the water temperature press the Menu button twice and "Temp. Água " appears, press Set, menu" T. Heating" appears.

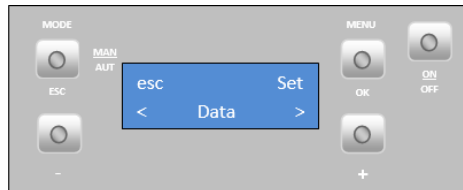


To set the desired heating temperature, pressing "SET" flashes; press the "+" or "-" key to select the desired value, press "ok" to confirm value. Press the "esc" key to move out.



Date

Set **Date and time**: press the Menu button twice and "Data" appears, press "set" "Year" menu appears.



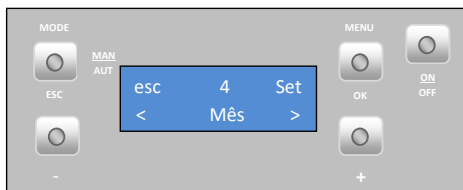
Year

To set the **year** press "set". The display starts to flash. Press the "+" or "-" key to select the desired year and then "ok" to confirm. Press "esc" to return to the "Data" (Date) menu, then press "+" to scroll to the next menu. The "Mês" (Month) menu is displayed.



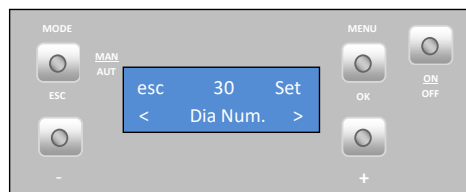
Month

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



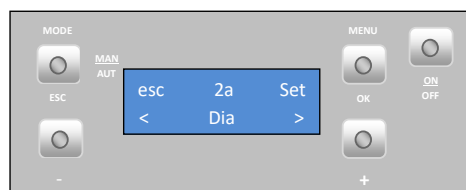
Day of the month

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



Week day

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



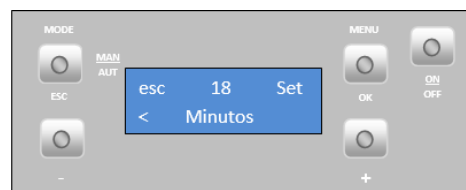
Hour

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



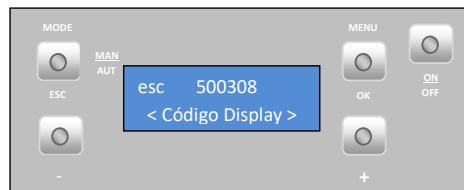
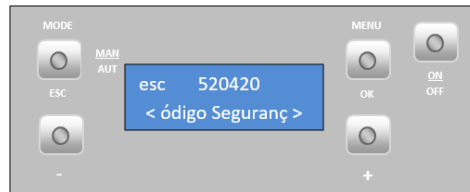
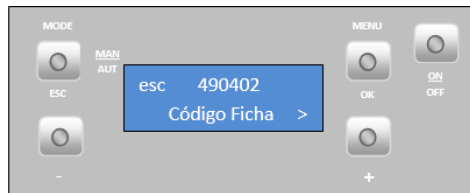
Minutes

To set the **minutes** press "set". The display starts to flash. Press the "+" or "-" key to select the desired minutes and then "ok" to confirm. Press the "Esc" key to exit.

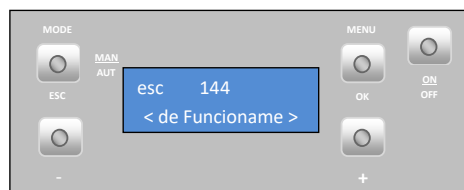


Info

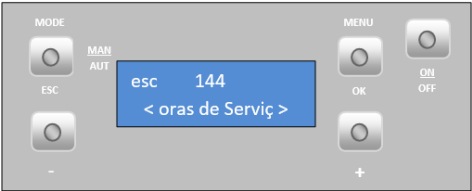
In this menu the user can view some information about the Boiler. Clicking on the "set" appears in the menu "Data Code". Security code / software code / display code / code parameters. Pressing the button "+" goes the next menu "Hours Run".



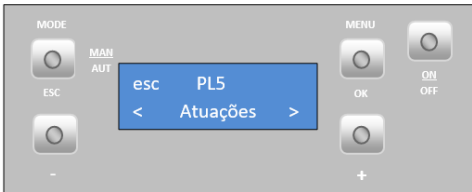
This menu indicates how many working hours on the boiler.



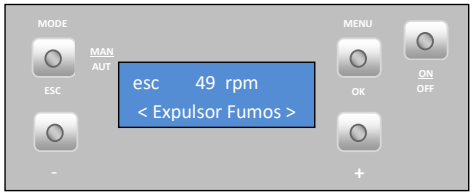
This menu indicates how many hours of labor has the boiler after the last servicing.



This menu indicates the status of the boiler.



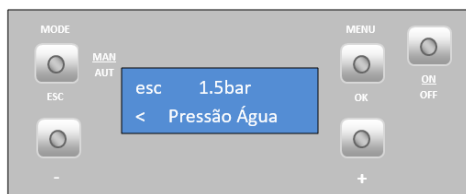
Speed (rpm) of operation of the extractor 1.



Smoke Temperature



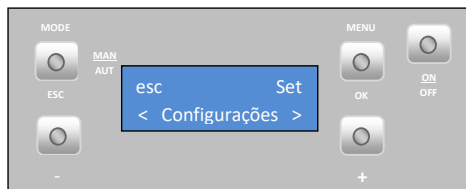
Pressure in the hydraulic circuit



Menu settings

To change the settings on the Boiler press "set"

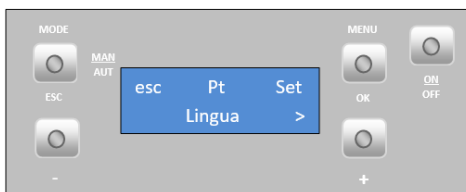
"Language" menu to select the language



Language

To select the language, press "set" and the "+" key or "-" select the desired language (Pt - Portuguese; Nl - Dutch; Gr - Greek; Tr - Turkish; It - Italian, En - English; fr - French; Es - Spanish; De - German). Press "ok" to confirm.

Press the "+" to move to the menu "Iluminação" key.

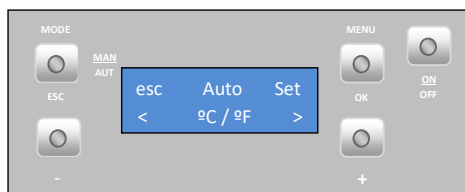


Lighting

To select the highlighted screen, press "set" and it starts blinking. Press the "+" Or "-" key to select the time you want the screen illumination on; Or choose the "On" option to keep the light on. Press "ok" to confirm value. Press the "+" key to switch to the tones" menu.

Temperature unit (°C / °F)

To select °C / °F, press "set" and it flashes, press the "+" or "-" key to select "°C", "°F" or "Auto", press "ok" to confirm the choice.



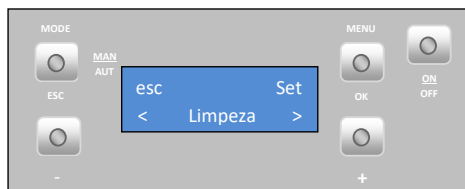
Combustion recipe

Press "set" and the "Air" menu appears. In cases of over-drawing or insufficient drawing, this function allows you to increase or decrease in 25% the rotation speed of the extractor.



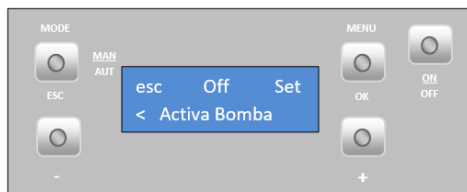
Cleaning

This function allows you to clean the smoke pipes through the extractor by hand. Press "set" and the message "ok" appears. Press "ok" to start cleaning and the "enabled" message appears. When you want to stop, press "ok". (Only works with the boiler in OFF state)



Activate pump

This function allows the pump to be activated manually. Press "set" and the message "ok" appears. Press "ok" to start and the "enabled" message appears. When you want to stop, press "ok". (Only works with the boiler in OFF state).



Press the "+" key to move to the "Technical Menu" menu. The technical menu is not available for the final consumer and concerns only the factory settings that under no circumstances should be changed.

13. Start

To start the wood burning boiler it is necessary to press the start / stop button for 3s. The display should indicate "acendimento", keeping it until the lighting is complete. Open the top door, to open this door you must use the top handle and rotate the safety catch (Fig. 13a and 13b), put some small wood to facilitate the start of the fire and create a good bed of coals faster (Fig. 13c), to assist the ignition is advisable to place one or two firelighters (Fig 13d). When we observe that the fire is gaining strength, we can put a load of wood in the boiler and close the top door. After completion of the phase of ignition, the display will show the "On" message.



a)



b)



c)



d)

Figure 13 - Top door opening and placement of fuel for ignition.

14. Maintenance and Cleaning

The main care is to clean the ash inside the boiler and the flue pipes. To access the entire combustion chamber, open the upper and lower boiler doors (Fig. 14a, 14b, 14c and 14d).

In relation to the smoke pipes, it is necessary to remove the top cover and the smoke extractor. This area must be vacuumed with an ash aspirator. Using a steel pipe cleaner the inside of the smoke pipes must be cleaned and the ashes must be collected in the lower chamber of the boiler..



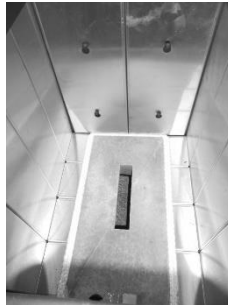
a)



b)



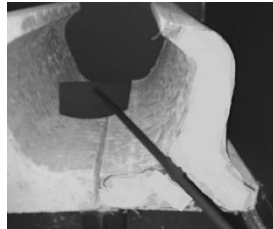
c)



d)



e)



f)


Figure 14 - Upper and lower combustion chamber

Notice: However, before any cleaning operation is imperative that the boiler be turned off and sufficiently cold to prevent accidents.

15. List Alarms / faults / recommendations

Alarm	Code		Cause and Resolution
Excessive smoke temperature	A04	More than 230 ° C	- Drawing insufficient - Probe reading error
Error in the hood	A08	Connection Error	- Check the connection enoder
Error smoke sensor	A09	Connection Error	- Checking probe
Water pressure outside the operating range	A16		- Check connection - Check pressure circito - Putting pressure within the range (0.5 to 2.9 bar)
Excess water temperature (thermostat)	A18		- Check connection - Checking the water temperature in the boiler


Table 4 - alarm list


 Important note: all alarms originate the shutdown of the machine. You will need to "reset" the alarm and restart. To "reset" the alarm of the machine you must press the "On / Off" button for 10 seconds until you hear a beep.

- Anomalies

Anomalies
Maintenance "Service"
Water temperature sensor defective
Water pressure not to scale

Table 5 - list of anomalies

 Important note: The maintenance anomaly ("service" message on the display) means that the boiler has more than 2,000 hours of service. The customer must maintain the equipment and only then restart the time counter to eliminate the fault message. This anomaly does not influence the normal operation of the equipment, it is only a warning.

 Important note: the anomalies do not cause the shutdown of the machine.

NOTICE!

To disconnect the device, in case of an emergency, the device must be shutdown normally.



NOTICE!

THE EQUIPMENT WILL BE HOT DURING OPERATION, SO CARE SHOULD BE TAKEN, ESPECIALLY IN GLASS DOOR AND DOOR OPENING HANDLE.

16. Installation schemes

- * The minimum temperature of the circulating pump connection is 60 ° C, to avoid condensation phenomena on the boiler;
- * The pump must be installed to the return circuit where the temperature is lower;
- * An expansion vessel should be placed in the installation and the safety valves should be 3 bar (suitable for use up to 90 ° C).
- * It is recommended to install an anti-condensate valve.
- * If there is a risk of freezing in the space where the boiler is located or in the fluid conducts, the installer must add to the circulating fluid an antifreeze in the proportion recommended by the manufacturer to avoid freezing at the absolute minimum temperature expected.
- * Never turn on the boiler without the hydraulic circuit being full of fluid and in full operation.
- * It is essential to be able to access various components of your hydraulic system over the life of your equipment in order to be able to perform their regular maintenance and intervene or replace the components that are necessary over time.

Installation scheme for central heating, AQS and solar panel with pellet boiler support

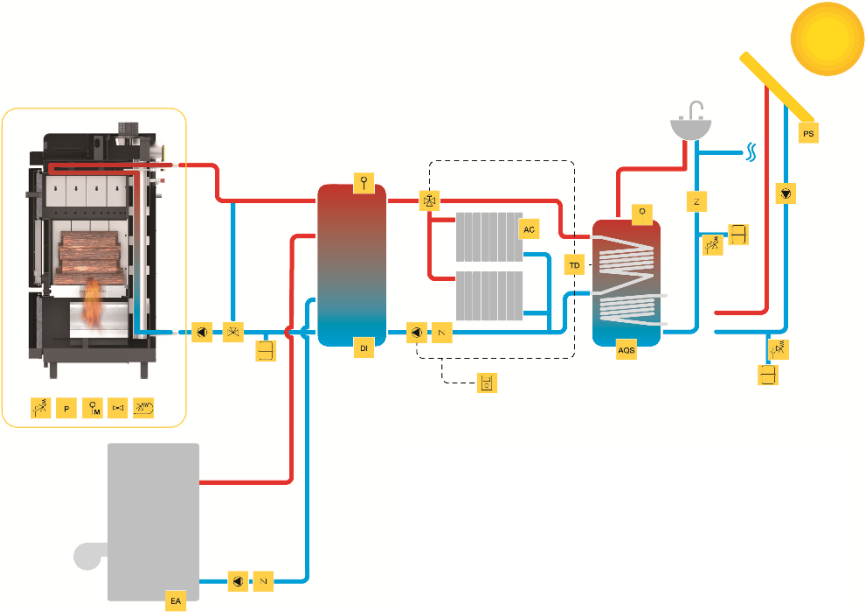


Figure 17 - Installation scheme for central heating, AQS and solar panel with pellet boiler support.

- Installation diagram for central heating, domestic hot water, underfloor heating boiler and solar panel support

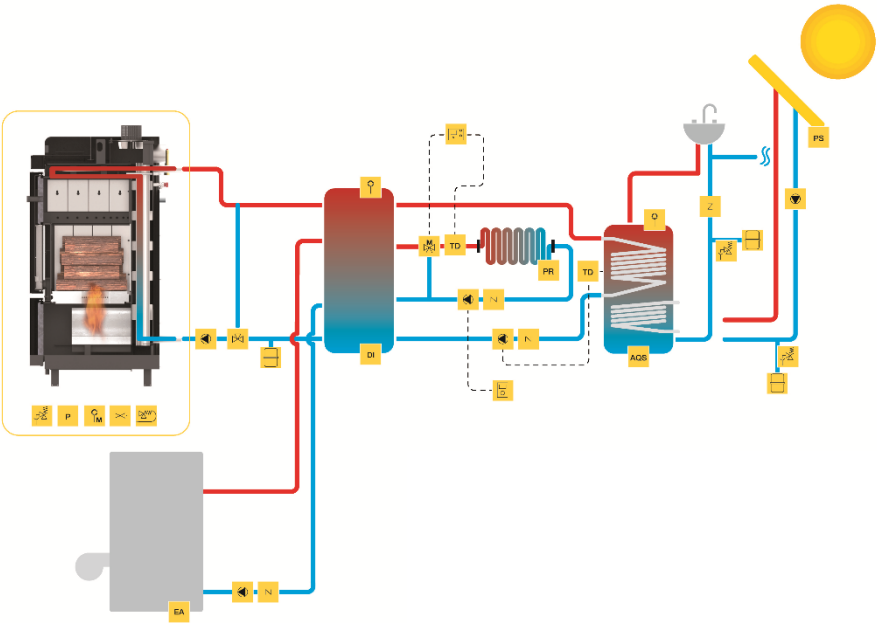


Figure 18 - Installation diagram for central heating and domestic water heating Accumulator

Symbology

EA	Fuel backup equipment (gas, diesel)	Z	Non-return valve	3-way motorised valve	M	Mixing valve	⊞	Ambient thermostat
DI	Inertia deposit	⌚	Circulating pump	Automatic air vent	⊞	Anti-condensation valve	—	Hot water
AQS	Sanitary hot waters	P	Pressure sensor	Manual air vent	⊞	Thermal security valve	—	Cold water
PS	Solar panel	TD	Differential thermostat	Closed expansion vessel	⊞	Security pressure valve	---	Electrical connections
AC	Central heating	PR	Radiant heated floor	Drain valve	⊞	Underfloor heating controller		

Figure 19 - Symbology

17. Electric Scheme Wood boiler

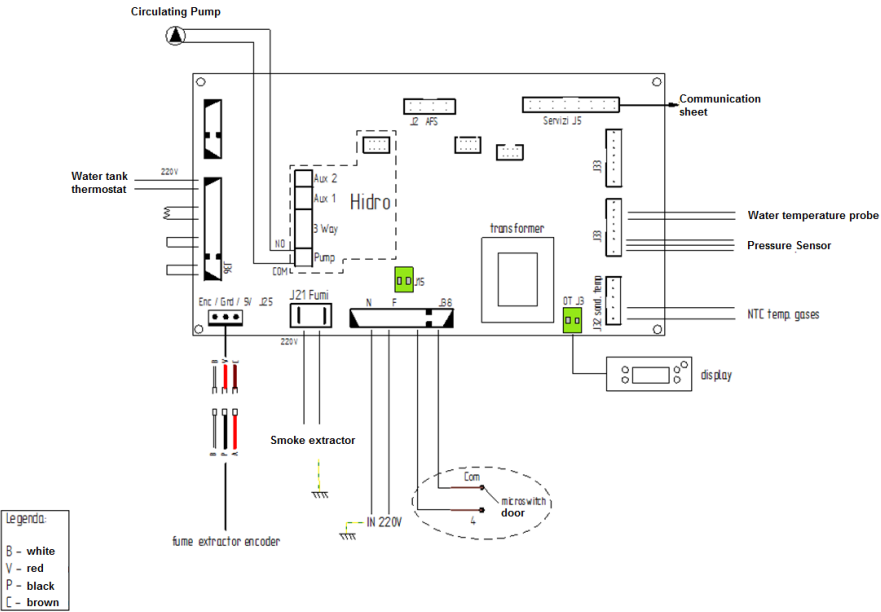


Figure 20 - Scheme electrical circuit board

18. End of life of a Wood boiler

About 90% of the materials used in the manufacture of the equipment are recyclable, thus contributing to reduced environmental impacts and contributing to the sustainable development of the planet. The equipment at end of life should be sent to a licensed waste operators, so you are advised to contact your local council to proceed with the correct collection.

19. Sustainability

The Solzaima designs and projecting equipment and solutions "moved" biomass as a primary energy source. It is our contribution to the sustainability of the planet - an economically viable and environmentally friendly alternative, safeguarding good environmental management practices in order to ensure an efficient carbon cycle management.

Solzaima seeks to know and study the national forest park, responding effectively to the energy requirements always careful to safeguard biodiversity and natural wealth, essential to the quality of life of the planet.

The SOLZAIMA is adherent to Sociedade Ponto Verde, which manages packaging waste of products the company puts on the market, so you can place the packaging waste of your equipment, such as plastic and cardboard at the nearest collection point to your home .

The SOLZAIMA is adherent to Amb3E, which is responsible for the collection of electrical and electronic waste (WEEE); so the equipment with forced ventilation, end of life, must have an appropriate referral regarding WEEE. To dismantle its equipment may place the electrical components in the nearest WEEE collection point of your home.

20. Warranty

1. Company name of the Manufacturer

SOLZAIMA S.A.

www.solzaima.pt

apoio.cliente@solzaima.pt

Address: Rua dos Outarelos; nº 111;

3750-362 Belazaima do Chão

Águeda - Portugal

This document does not constitute the provision by SOLZAIMA a voluntary guarantee on the products they produced and marketed (the "Product (s)"), but rather a guide, which is intended enlightening for the effective activation of the legal guarantee that benefit consumers about the products (the "Guarantee"). Of course, this document does not affect the legal rights of warranty emerging Buyer purchase and sale agreement having as object the Products.

2. Product Identification on which rests the guarantee

The drive Assurance presupposes prior and correct identification of the product object of the same with the SOLZAIMA being promoted by indicating the constant Product packing data or the respective purchase invoice, whether the product rating plate (model and number of series).

3. Warranty conditions of Products

3.1 SOLZAIMA accountable to the Purchaser, the lack of product's conformity with their purchase and sale agreement, the following deadlines:

3.1.1 A period of 24 months from the date of delivery of the goods, in case of domestic use of the product;

3.1.2 A period of 6 months from the date of delivery of the good, in the case of business use of the Product.

3.2 To exercise their rights, provided that the period specified in the preceding paragraph does not show exceeded, the Buyer shall report in writing to SOLZAIMA the lack of the Product within a maximum of:

3.2.1 sixty (60) days from the date on which has detected in the case of domestic use of the product;

3.2.2 thirty (30) days from the date on which has detected in the case of

business use of the Product.

3.3 During the warranty period referred to in paragraph 3.1 above (and for it to remain valid), repairs the Product must only be carried out by Technical Services Officers Mark. All services provided under this warranty, will be held from Monday to Friday on schedule and work schedule legally established in each region.

3.4 All requests for assistance must be submitted to the service in support of the SOLZAIMA Customer via e-mail: apoio.cliente@solzaima.en. Upon completion of the technical assistance to the Product, the Purchaser shall submit, as proof of Product Warranty, the purchase invoice of the same statement or other document of purchase. In any case, the proof of purchase of the product shall include the name of the same (as referred to in 2 above) and your date of purchase. Alternatively, and in order to validate the product warranty may be used PSR - proof machine start-up (if applicable).

3.5 The product must be installed by a qualified to do so professional, according to the regulations in force in each geographical area, for installation of these products and complying with all regulations in force, in particular concerning chimneys and other regulations applicable to aspects such as water supply, electricity and / or other related equipment or sector and as described in the instruction manual. A product installation not in accordance with the manufacturer's specifications and / or does not comply with the legal regulations on the matter, will not give rise to the application of this guarantee. Whenever a product is installed outdoors, it must be protected from weather effects including rain and winds. In these cases,

3.6 It should be installed devices in environments containing chemicals in its atmosphere, or saline environments with high humidity, because the mixture thereof with air may produce combustion chamber at a rapid corrosion. In this type of environment it is particularly recommended that the unit is protected with anti-corrosion products for the purpose, especially among working age. As a suggestion indicates the application graphited greases suitable for high temperature lubrication function and anti-corrosion protection.

3.7 In the equipment belonging to the family pellets, in addition to the daily and weekly maintenance listed in the instruction manual is also mandatory to cleaning, inside and respective fume extraction chimney. These tasks must be performed every 600-800 kg of pellets consumed in the case of heaters (air and water) and compact boilers, and each kg of pellets consumed 2000-3000 in the case of automatic boilers. Wood boilers in these tasks must be performed every 5000-5500 kg in the 24 kW boiler, every 7000-

7500 kg in the case of the boiler of 34 kW and 44kW. If these values are not achieved, it must be at least perform an annual preventive maintenance. In case, these quantities are not consumed must be made at least a systematic preventive maintenance on an annual basis.

3.8 It is the responsibility of the Buyer to ensure that regular maintenance is carried out, as indicated in the manuals and handling instructions accompanying the product. Whenever requested it must be proven by the presentation of the technical report of the entity responsible for the same, or alternatively by recording them in the instruction manual in the section.

3.9 To prevent damage to the equipment driven by excess pressure shall be provided, upon installation, safety elements such as pressure relief valves or pressure temperature, if applicable, as well as expansion vessel adjusted at installation, and be assured of their proper operation. Note that: the referenced valves should have a value equal to or less than the pressure supported by the equipment; there may not be any cut-off valve between the product and the respective safety valve; there should be a systematic preventive maintenance plan to certify the correct functioning of these security features; regardless of the type of apparatus, all the safety valves must be channeled to drain siphon, to avoid damaging the housing for discharge of water.

3:10 To avoid equipment damage and piping attached by galvanic corrosion, it is recommended to use separators (cuffs) in the dielectric device whose connection to metal tubes characteristics of the materials applied potentiate this type of corrosion. The Product Warranty does not include damage caused by non-use of such dielectric spacers.

3.11 The water or thermal fluid used in the heating system (Hydro stoves, boilers, fireplaces central heating, etc.) must comply with the legal requirements and ensure the following physicochemical characteristics: absence of suspended solids; low conductivity; Residual hardness of 5 to 7 French degrees; neutral pH close to 7; low concentration chlorides and iron; and no air inlets or for depression others. If the installation enhances a make-up automatic water it must consider the amount preventive treatment system comprising filtration, softening and preventive dosage of polyphosphates (fouling and corrosion) as well as a degassing step, where this appears necessary .

3:12 Except as expressly provided by law, an intervention in warranty does not renew the product's warranty period. The rights of warranty are not transferable to the

purchaser of the product.

3.13 The equipment must be installed in accessible and without risk to the technical sites. The means necessary for access to them will be made available by the Buyer, leaving it to this any charges arising therefrom.

3.14 The warranty is valid for the products and equipment sold by SOLZAIMA solely and exclusively within the geographical and territorial area of the country where the sale of the product by SOLZAIMA was made.

4. Circumstances that exclude the application of the guarantee

They are excluded from the guarantee, leaving the total cost of the reparation payable by the consumer the following cases:

4.1. maintenance, tuning the product, start-ups, cleaning, elimination of errors or anomalies that are not related to deficiencies of components of equipment and replacement of batteries;

4.2. Components in direct contact with fire such as vermiculite supports, baffles or protection, vermiculite, sealing cords, burners, ash drawers, trim wood, smoke records, gray grilles, whose wear is directly related to the conditions of use.

Paint degradation as well as degradation by corrosion appearance of this, due to excess fuel loading, open drawer excessive use or installation drawing of the chimney. In pellets Family equipment the firing resistors are a wear part, whereby they only have 6 months warranty. The glass breakage by improper handling, or otherwise not related to deficiency of the product;

4.3. considered wear components such as bearings and bearings;

4.4. Deficiencies of components external to the product that might affect the correct functioning as well as property damage, or other (eg. Tiles, roofs, waterproof covers, pipes, or personal injury) for the improper use of materials in the installation, noncompliance installation according to product installation standards, applicable regulations, or rules of good art, in particular, application of appropriate tubing to the temperature-use application of expansion tanks, non-return valves, safety valves, non-condensing valves, among others;

4.5. Products whose operation has been affected by faults or deficiencies of external components, or by poor sizing;

4.6. Defects caused by use of accessories or replacement components than those determined by SOLZAIMA;

4.7. Defects arising from failure to follow instructions for installation, use and operation,

or non-compliant applications with the use it is intended for the product, or even abnormal climatic factors of foreign operating conditions, overload or a maintenance or cleaning improperly performed;

4.8. Products that have been modified, or manipulated by personnel not appointed Technical Officials of the brand and therefore without explicit authorization from SOLZAIMA;

4.9. Damage caused by external agents (rodents, birds, spiders, etc.), atmospheric phenomena and / or geological (earthquakes, storms, frost, hail, lightning, rain, etc.), wet harsh environments, or saline (example: proximity of the sea or river), as well as those derived from excessive water pressure, inadequate power supply (voltage with variations exceeding 10%, from the nominal value of 230V), pressure, or supply of inadequate circuits, acts vandalism urban confrontations and armed conflicts of any kind as well as derivatives;

4.10. Failure to use fuel recommended by the manufacturer's warranty exclusion condition;

Explanatory note:If the equipment to the fuel pellets must be certified by EN 14961-2 grade A1. Also, before buying lots should test the fuel to see how it behaves.

In this burning equipment must have a moisture content below 20%.

4.11. The onset of condensation, or by faulty installation or the use of fuels other than virgin wood (such as pallets or impregnated wood paints, or varnishes, salt, or other components) which may contribute to the degradation accelerated equipment especially its combustion chamber;

4.12. All products, accessories, or damaged components in transportation, or at the facility;

4.13. Cleaning operations performed to the device, or the same components, caused by condensation, fuel quality, bad adjustment or other circumstances of where it is installed. Also excludes the provision for warranty interventions to decalcification of the Product (the removal of limestone, or other materials deposited inside the device and produced by the quality of the water supply). Similarly, they are excluded from the provision of the security circuit air bleed interventions, or release circulator pumps.

4.14. The installation of the equipment supplied by SOLZAIMA should consider the possibility of easy removal thereof, as well as points of access to mechanical, hydraulic and electronic equipment and installation. When the installation does not allow

immediate and secure access to equipment, the additional costs of access and security measures will always be the responsibility of the Purchaser. The cost of dismantling and assembling boxes of plasterboard walls 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 crate of plasterboard, masonry or other dedicated space must follow the dimensions and characteristics shown in the manual and operating instructions accompanying the product).

4.15. Interventions information or clarification by an address on the use of their heating system programming and / or reprogramming of regulatory and control elements, such as thermostats, regulators, promoters etc.;

4.16. fuel adjustment spoke pellets apparatus, cleaning, detecting water leaks in piping external to the unit, damage produced due to the need for cleaning of the machinery, or the gas exhaust chimney;

4.17. emergency interventions not included in the provision of collateral ie, get-week interventions and holidays because it is special interventions not included in the warranty coverage and therefore have an additional cost, according to tariff in force carried out will only at the express request of the consumer, subject to availability of dial, case, it does not overlap with other scheduled services.

5. Inclusion Assurance

SOLZAIMA correct at no charge to the consumer, the defects covered by the warranty by repairing the Product. Products, or replaced components will become the property of SOLZAIMA.

6. Responsibility SOLZAIMA

Notwithstanding the results of the legally established, the liability of SOLZAIMA concerning warranty is limited to the requirements of these warranty conditions.

7. Tariff Services carried out under warranty

Interventions outside the scope of the warranty is subject to the application of the tariff in force;

8. Administrative Expenses

In the case of invoices for services developed which payment is not made within the time specified will accrue interest at the maximum legal rate.

9. 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 Aveiro, with express waiver of any other.

21. Performance statements

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

Nº DD-038

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

SZM IW 44 K

W – EAN 05600990443228

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

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

AQUECIMENTO DE EDIFÍCIOS DE HABITAÇÃO | CALEFACCIÓN DE EDIFICIOS RESIDENCIALES | HEATING OF RESIDENTIAL BUILDINGS | CHAUFFAGE DE BATIMENTS RESIDENTIELS | RISCALDAMENTO DEGLI EDIFICI RESIDENZIALI

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

SOLZAIMA, SA

RUA DOS OUTARELOS, Nº111

3750-362 BELAZAIMA DO CHÃO – ÁGUEDA – PORTUGAL

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

SISTEMA 3

6. Norma Harmonizada | Estandár armonizado | Harmonized standard | Norme harmonisée | Standard armonizzata

EN 303-5:2012

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

TÜV RHEINLAND INDUSTRIE SERVICE GMBH - TÜV Rheinland Group

NB: 2456

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

K16182015T1

K16182015T2

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

Características essenciais Características esenciales Essencial characteristics Caractéristiques essentielles Caratteristiche essenziali	Desempenho Desempeño Performance Prestazione	Especificações técnicas harmonizadas Especificaciones técnicas armonizadas Harmonized technical specifications Spécifications techniques harmonisées Specifiche tecniche armonizzate
	Maximum load	Maximum load
Potência nominal entrada Potencia de entrada nominal Nominal heat input Puissance d'entrée nominale Potenza d'ingresso nominale	52,28 kW	---
Potência nominal saída Potencia de salida nominal Nominal heat output Puissance de sortie nominale Potenza nominale	45,01 kW	---
Eficiência das caldeiras (método directo) Rendimiento de la caldera (método directo) Boiler efficiency (direct method) L'efficacité de la chaudière (méthode directe) Efficienza della caldaia (metodo diretto) Classe eficiência Clase de eficiencia Efficiency class Classe d'efficacité Classe di efficienza	85,93 % Class 4	class 5 $\eta_K \geq 87 + \log Q$ class 4 $\eta_K \geq 80 + 2 \times \log Q$ class 3 $\eta_K \geq 67 + 6 \times \log Q$ According EN 303-5
Temperatura gases combustão Temperatura de humos Flue gas temperature température de gaz de combustion Temperatura fumi	160,4°C	---
Temperatura ambiente Temperatura de la habitación Room temperature La température ambiante Temperatura	25 °C	15 - 30 °C

ambiente		
O ₂ - concentração O ₂ - concentración O ₂ - concentration O ₂ - concentration O ₂ - concentrazione	6,16 % vol	---
CO – emissão (10% O ₂) CO emisión (10% O ₂) CO – emission (10% O ₂) CO émission(10% O ₂) CO emissione (10% O ₂) Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	1087,1 mg/m³ Class 4	≤ 1200 mg/m ³ According EN 303-5
OGC – emissão (CxHy) (10% O ₂) OGC emisión (CxHy) (10% O ₂) OGC – emission (CxHy) (10% O ₂) OGC émission (CxHy) (10% O ₂) CO emissione (CxHy) (10% O ₂) Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	18 mg/m³ Class 5	≤ 30 mg/m ³ According EN 303-5
Emissão poeira(10% O ₂) Emisión de polvo(10% O ₂) Dust-emission (10% O ₂) Émissions de poussières(10% O ₂) Emissione di poleveri(10% O ₂) Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	32,6 mg/m³ Class 5	≤ 40 mg/m ³ According EN 303-5

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

Nome e cargo | Nombre y cargo | Name and title | Nom et titre | Nome e titolo
Belazaima do Chão, 18/03/2015
Nuno Sequeira (Director Geral | CEO

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

Nº DD-039

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

SZM IW 34 kW – EAN 05600990442566

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

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

AQUECIMENTO DE EDIFÍCIOS DE HABITAÇÃO | CALEFACCIÓN DE EDIFICIOS RESIDENCIALES
| HEATING OF RESIDENTIAL BUILDINGS | CHAUFFAGE DE BATIMENTS RESIDENTIELS
| RISCALDAMENTO DEGLI EDIFICI RESIDENZIALI

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

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

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

SISTEMA 3

6. Norma Harmonizada | Estandár armonizado | Harmonized standard | Norme harmonisée | Standard armonizzata

EN 303-5:2012

7. Nome e número de identificação do organismo notificado | Nombre y número de identificación del organismo notificado | Name and identification number of the notified

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

K16182015T1
K16182015T2

[illegible]

concentration O ₂ - concentrazione		
CO – emissão (10% O ₂) CO emisión (10% O ₂) CO – emission (10% O ₂) CO émission(10% O ₂) CO emissione (10% O ₂) Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	1191,6 mg/m³ Class 4	$\leq 1200 \text{ mg/m}^3$ According EN 303-5
OGC – emissão (CxHy) (10% O ₂) OGC emisión (CxHy) (10% O ₂) OGC – emission (CxHy) (10% O ₂) OGC émission (CxHy) (10% O ₂) CO emissione (CxHy) (10% O ₂) Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	23,8 mg/m³ Class 5	$\leq 30 \text{ mg/m}^3$ According EN 303-5
Emissão poeira(10% O ₂) Emisión de polvo(10% O ₂) Dust-emission (10% O ₂) Émissions de poussières(10% O ₂) Emissione di poleveri(10% O ₂) Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	32 mg/m³ Class 5	$\leq 40 \text{ mg/m}^3$ According EN 303-5

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

Nome e cargo | Nombre y cargo | Name and title | Nom et titre | Nome e titolo
Belazaima do Chão, 18/03/2015
Nuno Sequeira (Director Geral | CEO

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

Nº DD-040

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

SZM IW 24 kW – EAN 05600990442559

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

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

AQUECIMENTO DE EDIFÍCIOS DE HABITAÇÃO | CALEFACCIÓN DE EDIFICIOS RESIDENCIALES
| HEATING OF RESIDENTIAL BUILDINGS | CHAUFFAGE DE BATIMENTS RESIDENTIELS
| RISCALDAMENTO DEGLI EDIFICI RESIDENZIALI

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

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

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

SISTEMA 3

6. Norma Harmonizada | Estandár armonizado | Harmonized standard | Norme harmonisée | Standard armonizzata

EN 303-5:2012

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

TÜV RHEINLAND INDUSTRIE SERVICE GMBH - TÜV Rheinland Group

NB: 2456

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

K16182015T1

K16182015T2

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

Características essenciais Características esenciales Essencial characteristics Caractéristiques essentielles Caratteristiche essenziali	Desempenho Desempeño Performance Prestazione	Especificações técnicas harmonizadas Especificaciones técnicas armonizadas Harmonized technical specifications Spécifications techniques harmonisées Specifiche tecniche armonizzate
	Maximum load	Maximum load
Potência nominal entrada Potencia de entrada nominal Nominal heat input Puissance d'entrée nominale Potenza d'ingresso nominale	29,51 kW	---
Potência nominal saída Potencia de salida nominal Nominal heat output Puissance de sortie nominale Potenza nominale	25,03 kW	---
Eficiência das caldeiras (método directo) Rendimiento de la caldera (método directo) Boiler efficiency (direct method) L'efficacité de la chaudière (méthode directe) Efficienza della caldaia (metodo diretto) Classe eficiência Clase de eficiencia Efficiency class Classe d'efficacité Classe di efficienza	85,07 % Class 4	class 5 $\eta_K \geq 87 + \log Q$ class 4 $\eta_K \geq 80 + 2 \times \log Q$ class 3 $\eta_K \geq 67 + 6 \times \log Q$ According EN 303-5
Temperatura gases combustão Temperatura de humos Flue gas temperature température de gaz de combustion Temperatura fumi	115,4°C	---
Temperatura ambiente Temperatura de la habitación Room temperature La température ambiante Temperatura ambiente	25 °C	15 - 30 °C

O ₂ - concentração O ₂ - concentración O ₂ - concentration O ₂ - concentration O ₂ - concentrazione	7,63 % vol	---
CO – emissão (10% O ₂) CO emisión (10% O ₂) CO – emission (10% O ₂) CO émission(10% O ₂) CO emissione (10% O ₂) Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	1191,6 mg/m³ Class 4	≤ 1200 mg/m ³ According EN 303-5
OGC – emissão (CxHy) (10% O ₂) OGC emisión (CxHy) (10% O ₂) OGC – emission (CxHy) (10% O ₂) OGC émission (CxHy) (10% O ₂) CO emissione (CxHy) (10% O ₂) Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	19,6 mg/m³ Class 5	≤ 30 mg/m ³ According EN 303-5
Emissão poeira(10% O ₂) Emisión de polvo(10% O ₂) Dust-emission (10% O ₂) Émissions de poussières(10% O ₂) Emissione di poleveri(10% O ₂)	33,4 mg/m³	≤ 40 mg/m ³ According EN 303-5
Classe de emissão Clase de emisiones Emission class Émission Classe di emissione	Class 5	

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

Nome e cargo | Nombre y cargo | Name and title | Nom et titre | Nome e titolo
Belazaima do Chão, 18/03/2015
Nuno Sequeira (Director Geral | CEO

