

Inca 100 calefactora basic

Instruction Book





Lacunza congratulates you on your choice.

Certified under ISO 9001, Lacunza guarantees the quality of its appliances and undertakes to meet the needs of its customers.

Confident of the know-how afforded by more than 50 years' experience, Lacunza uses advanced technologies in the design and manufacture of its entire range of appliances. This document will help you install and use your appliance in optimum conditions for your comfort and safety.

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1. PRESENTATION OF THE APPLIANCE

For optimum operation of the appliance, we advise you to read this manual carefully before switching on the appliance for the first time. In case of problems or concerns, we urge you to contact your dealer, who will cooperate with you.

In order to improve the product, the manufacturer reserves the right to make changes without notice by updating this document.

This appliance is designed to burn wood in absolutely safe conditions.

WARNING: Faulty installation may have serious consequences.

Installation and all necessary regular maintenance operations must be performed by an authorized installer in full accordance with the specifications set out in the legislation applicable in each country and this instruction book.

1.1. General characteristics

	Unit	Inca 100 calefactora Basic
Nominal Heat Output (N.H.O.) to water	kW	23.5
Nominal Heat Output (N.H.O.) to atmosphere	kW	9
Efficiency at N.H.O.	%	76
CO emission at 13% O ₂ at N.H.O.	%	0.27
Gas mass flow at N.H.O.	g/s	20
Gas temperature downstream of flue socket at N.H.O.	°C	291
Optimum flue draught	Pa	17
Wood consumption (beech) at N.H.O.	Kg/h	10.4
Maximum admissible water service temperature	°C	90
Maximum service pressure of the back boiler	bar	1,5
Nominal working pressure of the back boiler	bar	1,2
Back boiler capacity	L	72
Dimensions of the firebox		
Width	mm	858
Depth	mm	540
Useful height	mm	500
Dimensions of the logs	cm	50
Volume heated (45w/m ³) at N.H.O.	m ³	777
Log load frequency	h	1
Weight	kg	9.8
Flue socket diameter	mm	340

Note: The values indicated in the above table are based on tests performed in accordance with UNE-EN 13229, with logs with no more than 18% humidity and pressure conditions as indicated in each case.

Warning: this appliance is designed and prepared to work with the types of fuel, degree of humidity of the fuel, fuel loads, fuel load frequencies, flue draught and system of installation indicated in this Instruction Book. Failure to respect these conditions may lead to problems with the appliance (deterioration, shorter useful life, etc.) which are not covered by the Lacunza warranty.

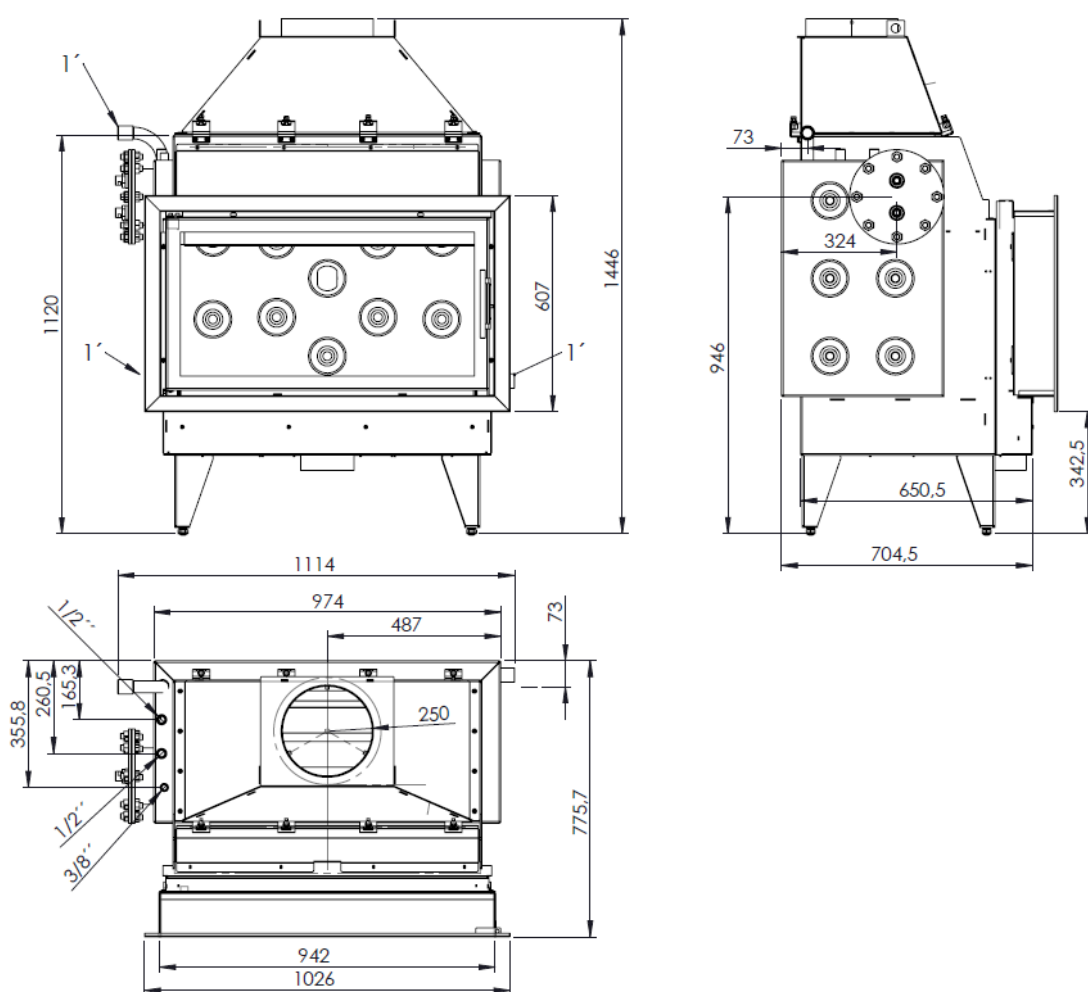


Figure No.1 - Dimensions of the Inca 100 Calefactora BASIC appliance in mm

2. INSTRUCTIONS FOR THE INSTALLER

2.1. Warning to installers

All local and national regulations, including all those referring to national and European standards, must be observed when installing the appliance.

Installation of the appliance must be performed by an authorised installer.

An incorrectly installed appliance may lead to serious incidents (fires, creation of harmful gases, deterioration of nearby fixtures, etc.).

Lacunza's liability is limited to the supply of the material and does not include installation of the appliance.

2.2. Room for installation

2.2.1. Ventilation of the room

The appliance needs to consume oxygen (air) in order to work properly. Ensure a suitable air supply in the room in which the appliance is fitted. This quantity of oxygen is additional to the oxygen that we need in order to breathe (air renewal).

In order to ensure the high quality of the air you breathe and to avoid potential accidents resulting from high concentrations of the gases produced by combustion (mainly carbon dioxide and carbon monoxide), it is absolutely crucial to ensure the suitable renewal of the air in the room in which the appliance is fitted.

the room must always have at least two permanent grilles or openings to the exterior in order to renew the air (one for intake and the other for extraction).

For the installation of its appliances, Lacunza recommends an additional section for these openings. One of these two grilles must be situated high up in the room (at less than 30 cm from the ceiling)

and the other one low down (at less than 30 cm from the floor). Both grilles must open outdoors in order to renew the air in the room with fresh air.

The minimum section that each of these grilles must have depends on the nominal output of the appliance in accordance with the following table:

Output of the appliance (kW)	Minimum additional section of each of the grilles (cm ²)
$P \leq 10\text{kW}$	70
$10 < P \leq 15$	90
$15 < P \leq 20$	120
$20 < P \leq 25$	150
$25 < P \leq 30$	180
$30 < P \leq 35$	210
$P > 35$	240

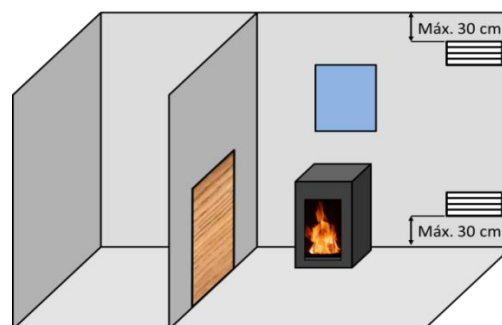


Figure No.2 - Guideline indications for ventilation grilles

In the case of appliances on which it is possible to pipe combustion air in from outdoors, the specifications described in the Table above are not necessary.

The appliance must always be used with the door(s) closed.

In rooms equipped with Controlled Mechanical Ventilation, the system extracts and renews the ambient air; in such cases, the room is at slightly low pressure and it is necessary to install a

non-closable outside-air inlet with a section of at least 90 cm².

2.2.2. Location of the appliance in the room

Choose a location in the room which favours good hot-air distribution by convection and radiation.

The appliance comes with wheels to help move it into position. In order to move it, it is necessary to make sure that the support legs are raised by turning them with the aid of a spanner. Once in position, lower the legs until the appliance is at the desired height.

2.3. Installation of the appliance

2.3.1. Floor

Make sure that the base can withstand the total constructed weight of the appliance and its casing.

When the floor surface (base) is combustible, fit suitable insulation.

2.3.2. Safety distances

Be sure to respect the appliance installation distances from **combustible materials**. Looking at the appliance head-on:

	Distance to combustible materials (mm)
From the right-hand side	150
From the left-hand side	150
From the rear	450
From the front	1000

Bear in mind that it may even be necessary to protect non-combustible material in order to prevent breakage, deformation, etc., as a result of overheating if the non-combustible material is not designed to withstand high temperatures.

2.3.3. Checks before lighting for the first time

- Make sure that the glass/es is/are not broken or damaged.
- Make sure that the flueway is not obstructed with packing or loose parts.
- Make sure that the airtight joints on the flue circuit are in perfect condition.
- Make sure that the doors close properly.
- Make sure that all moving parts are fitted in place.
- Check that the two deflectors are fitted properly.

2.3.4. Height adjustment and levelling the appliance

The appliance must be perfectly level, horizontally and vertically, both at the front and on the sides (use a spirit level).

The appliance has adjustable legs with which to adjust its height.

2.3.5. Casing

Make sure that the material around the appliance is not flammable or likely to deteriorate as a result of heat (wallpaper, carpet, plastic-based casing, Silestone, etc.).

The image below gives an example of how the appliance can be encased properly:

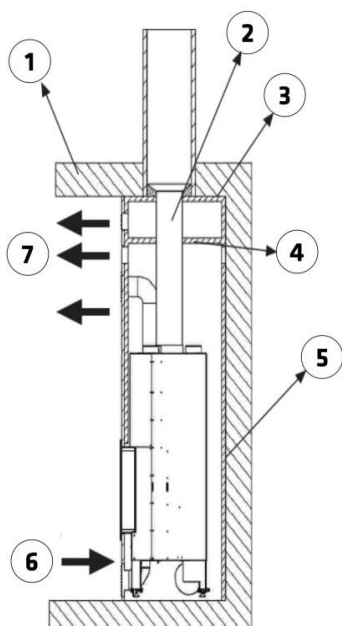


Figure No.3 - Interior diagram of the casing

Key to casing diagram:

- 1 Ceiling
- 2 Flue
- 3 Incombustible material (Inner hood insulation)
- 4 Insulating deflector made of incombustible material
- 5 Wall
- 6 Fresh-air inlet (1,000 cm²)
- 7 Hot-air outlet (1,000 cm²)

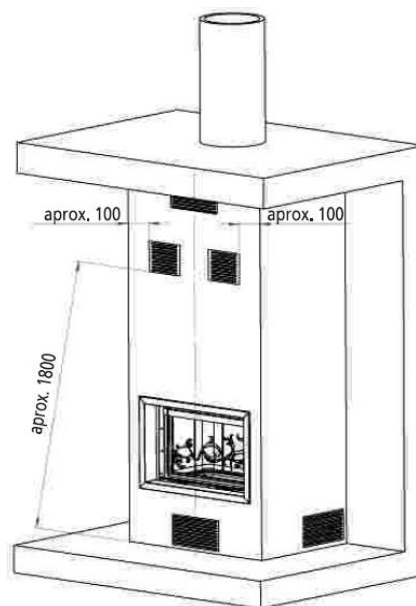


Figure No.4 - Exterior diagram of the casing

In order to enable suitable air circulation and correct operation, the casing must have a fresh-air inlet with a minimum section of 1,000cm² beneath the level of the actual appliance and a hot-air outlet measuring at least 1,000cm² above it (just before the insulating deflector inside the casing). These inlet and outlet sections must ensure air renewal in such a way as to avoid damage to parts inside the hood due to excess temperature.

This specification must be observed regardless of the type of installation chosen (with or without forced ventilation, combustion air from indoors or outdoors, directed hot-air outlets with or without pipes, etc.). A further hot-air ventilation grille is also recommended between the insulating deflector on the hood and the ceiling.

Warning: on appliances on which it is possible to pipe air to the firebox, the hood requires a further air inlet at the bottom, in addition to the 1,000cm² inlet, if the air supply comes from the room in which the appliance is fitted.

The installer must fit the necessary inspection accesses (trap doors, hatches,

etc.) so that everything inside the hood that may need maintenance work or replacement can be accessed at any time, e.g. counterweight system, hydraulic components, heating circuit safety components.

2.3.6. Connection to the flue

The appliance must be connected to the chimney flue using special piping designed to resist the products of combustion (e.g. stainless steel, enamelled steel, etc.).

To connect the flue to the socket flange, insert the piping inside the flange and seal the joint with fire sealant or fire cement to make it completely airtight.

The installer must ensure that the pipe connected to the appliance is well secured and there is no chance of it coming free from its housing (e.g. as a result of dilatation due to temperature, etc.).

2.3.7. Piping air to the firebox

On this model, it is possible to pipe air to the appliance for combustion straight from outdoors. We recommend that, if possible, air be drawn from outdoors for combustion via a non-closable pipe with a diameter of 120mm leading to the nozzle on the bottom-front of the appliance. This is the best option because it means that draughts are not created in and oxygen is not consumed from the room in which the appliance is fitted. A further advantage is that there is no danger of downdraught which may hinder the correct updraught of the appliance when an extractor or mechanical ventilation appliance is used in

the same room as the central-heating appliance or in another one alongside it.

If this is not possible, ensure that the appliance receives air for combustion via the relevant grille at the bottom of the hood (in addition to the hood ventilation grilles).

2.3.7.1. Combustion-air intake and hot-air output installation options

Different installation systems need to be borne in mind depending on the source of combustion air (air from outdoors or from inside the room in which the appliance is fitted) and the hot-air output system (air output by natural convection or by forced convection involving a fan) to ensure that ITACA-INCA appliances work properly. There now follows a description and image of each of these options:

Key to combustion-air intake and hot-air output installation option diagrams:

- 1 Hot-air output grille
- 2 Combustion-air intake grille
- 3 piping
- 4 Combustion-air intake nozzle
- 5 Combustion-air intake from outdoors

OPTION A: Combustion-air intake from inside the room.

With this option, it is not necessary to lead incoming combustion air through piping from the grille on the casing (2) to the combustion-air intake nozzle (4).

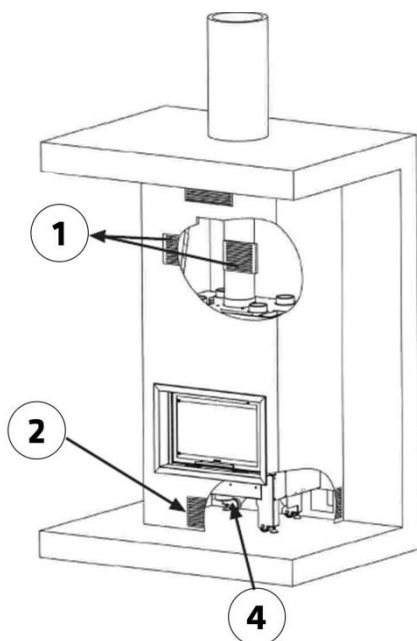


Figure No.5 - Image showing Option A

OPTION B: Combustion-air intake from outside the room.

With this option, the combustion-air intake is led from outside the room in which the appliance is fitted (other room or outdoors) to the combustion-air intake nozzle via piping with a diameter of 150mm.

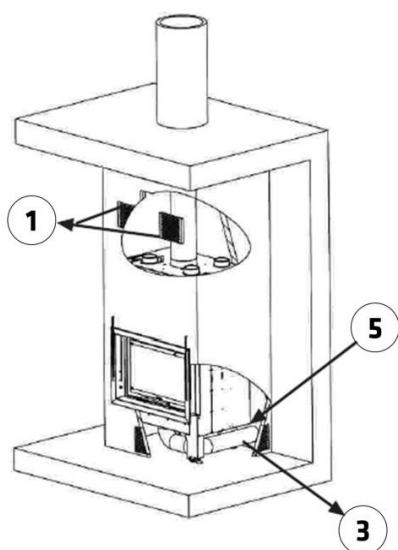


Figure No.6 - Image showing Option B

2.3.8. Plus Option. Fitting firebox refractory bricks

If you have chosen an appliance with the Plus option, the firebox is lined with refractory bricks.

Warning! Be particularly careful when loading logs in the firebox because the refractory bricks may crack or break if struck. Lacunza accepts no liability for damage caused to the refractory bricks inside the firebox as a result of incorrect loading.

If you have not chosen the Plus option, then you can order it as an accessory whenever you like. The Plus kit comes with instructions for assembly inside the firebox. The advantages of the Plus option include:

- More attractive firebox
- Better combustion (greater efficiency and lower emissions)
- Condensation problems due to low smoke temperatures minimised
- Cleaner glass
- Enhanced updraught
- Longer back-boiler life

High temperatures are needed in the firebox in order to keep the refractory bricks clean. Otherwise, they will blacken with use.

2.3.9. Exterior Frame. Removal and assembly

If you need to remove the exterior frame from the appliance (casing, transportation, etc.), proceed as follows:

- Unscrew the 4 M6 screws that secure the sides of the frame.
- Remove the frame from its housing, being careful not to damage the enamel.



Figure No.7 - Removing the frame

- Perform the removal process in reverse order to refit the frame

2.4. Chimney flue

The chimney flue must comply with present standards on the installation of chimneys.

In rooms equipped with Controlled Mechanical Ventilation, the ventilation outlet must never be connected to the flue.

The appliance must always have its own chimney flue, never sharing a chimney flue with another appliance.

2.4.1. Type of flue

The flue must be made of special material designed to resist the products of combustion (e.g. stainless steel, enamelled steel, etc.).

Central-heating appliances (with back boiler) require a double-sleeve flue, insulated throughout the installation, even inside the building. This prevents the gases from cooling down too much and, consequently, prevents downdraughts, condensation and low top surface and oven temperatures on kitchen stoves.

If the chimney is constructed, then it is necessary to pipe and insulate it to ensure correct updraught.

The diameter of the pipe must be the same as the diameter of the flue socket on

the appliance over its entire length in order to ensure correct operation.

The flue must prevent the entry of rainwater.

The flue must be clean and airtight over its entire length.

The flue must be at least 6m tall and the chimney cap must not hinder the free release of gases.

If the flue tends to suffer from downdraught, then it is necessary to fit an effective anti-downdraught cowl, a static cowl or a smoke extraction fan, or reshape the chimney.

Never make 90° bends, due to the great loss of draught they cause, and reduce 45° bends down to an absolute minimum. Each 45° bend is equivalent to a 0.5m reduction in flue length. Horizontal flue sections should not be installed because they cut updraught a great deal.

If the flue draws at more than 25Pa on 17Pa appliances, then an effective damper must be fitted on the flueway. This damper must be visible and accessible.

The chimney flue must not rest on the appliance.

Bear in mind that high temperatures may be reached in the flue, meaning that it is essential that insulation be enhanced in sections in which combustible material is present (wooden beams, furniture, etc.). It may even be necessary to protect non-combustible material in order to prevent breakage, deformation, etc., as a result of overheating if the material is not designed to withstand high temperatures.

It must be possible to clean the entire flue, no sections being left inaccessible for cleaning purposes.

2.4.2. Chimney crown

The upper end of the chimney must clear the roof, the roof ridge or any obstacle located on the roof by at least 1m.

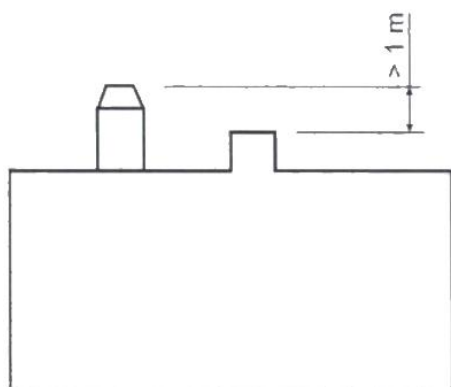
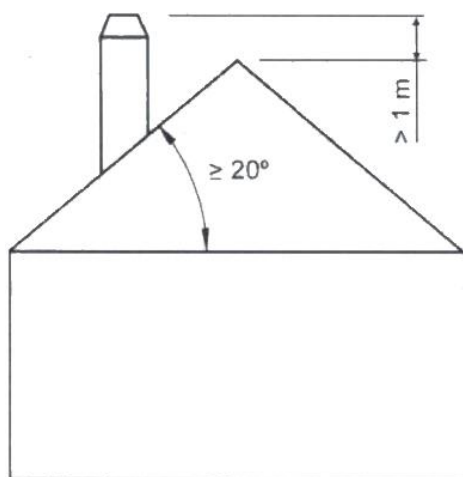
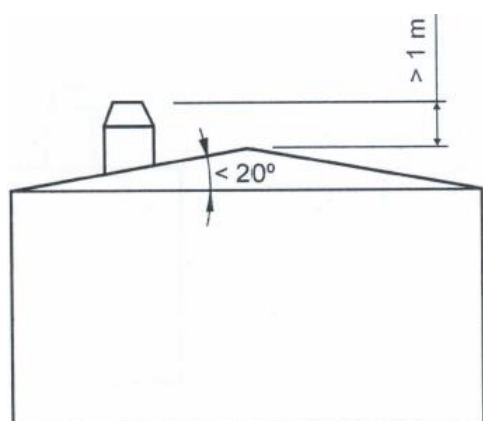


Figure No.8 - Distances between chimney crown and roof ridge

The chimney crown must clear the highest point of any neighbouring building or obstacle located within a 10m radius of the chimney outlet by more than 1m.

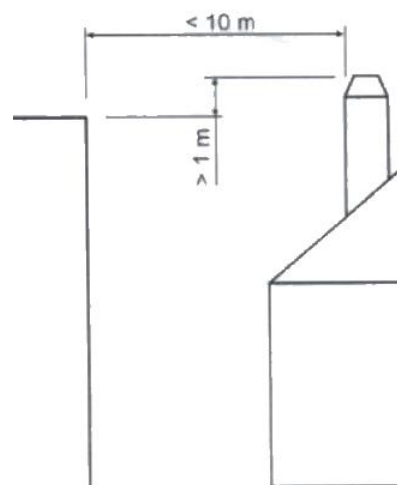


Figure No.9 - Distances between the chimney crown and objects within a 10m radius

The chimney crown must clear any neighbouring building or obstacle located within a radius of 10m to 20m from the chimney outlet.

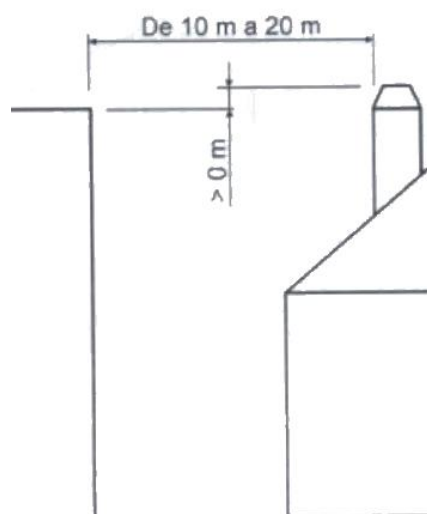


Figure No.10 - Distances between the chimney crown and objects within a radius of between 10 and 20m

2.5. Water system

IMPORTANT!

Lacunza Kalor Group accepts no liability for damage arising from incorrect connection or connections made by unqualified persons. The connection of the appliance to the heating circuit and the installation of the system must only be performed by professionals duly qualified to do so.

The water system must be connected and the boiler checked for perfect watertightness, including with the fire lit, before encasing central-heating fireplaces. The water system must be fitted with suitable safety components to prevent potential accidents when a central-heating fireplace is in use. If the installation instructions are not observed, the product warranty is rendered null and Lacunza Kalor Group is excluded from all liability regarding personal injury or damage.

In view of the above, Lacunza Kalor Group accepts no liability for any possible breakage of the casing if the previous obligatory operation checks have not been performed.

2.5.1. Obligatory parts

All water systems involving a Lacunza central-heating appliance must have:

2.5.1.1. Expansion tank

The expansion tank may be open or closed. In either case, the expansion tank must be capable of accommodating the increase in water volume caused by heating. Lacunza recommends systems with closed expansion tanks because then the central-heating fluid does not come into contact with the atmosphere and oxidation problems are greatly reduced.

2.5.1.2. Temperature relief valve

Regardless of the expansion tank employed, the system must include a temperature relief valve set to 97°C. The

probe that works the valve must be fitted at the hottest point on the system, i.e. at the point where the hot water leaves the heating appliance. Follow the indications provided in the valve manual. This valve has been individually tested by the manufacturer, who guarantees its watertightness on fitting. If, once activated, it leaks water, this is due to excess water temperature which has deformed the seal or impurities which have embedded themselves in it. These eventualities are not covered by the warranty on the valve

2.5.1.3. Pressure relief valve

When closed expansion tanks are employed, a pressure relief valve set to 3 bar must be fitted to prevent the pressure from exceeding this mark. Follow the indications provided in the valve manual.

2.5.1.4. Automatic fill system

The automatic fill system must be set to 1.2 bar when closed expansion tanks are in use and operate using a ballcock/float mechanism that releases water from the mains supply when the water level falls beneath the relevant height if an open expansion tank is chosen.

The automatic fill system must be fitted in such a way that it can be triggered at any point in time and can never be closed manually.

2.5.1.5. Circulation pump

A circulation pump must be fitted to make the water flow through the entire water system. We recommend that it be installed on the back-boiler return.

2.5.1.6. Pump on/off thermostat

The circulation pump must be operated by a thermostat that turns the pump on when the water in the central-heating appliance reaches 50°C and turns it off when it falls beneath this temperature. The thermostat must be fitted at the point

at which the hot water leaves the appliance.

2.5.1.7. Anti-condensation system

The heating circuit must include an anti-condensation system that ensures that the return water re-enters the central-heating appliance at a temperature above 55°C.

2.5.1.8. Automatic purge valves

As many purge valves as necessary should be fitted at the highest points of the system and areas in which air is likely to accumulate.

2.5.1.9. Circuit drain valve

The system must have a valve with which to drain the circuit at its lowest point.

2.5.1.10. Excess heat discharge

The circuit must have a means by which to discharge excess heat from the back boiler, such as a heat leak radiator, a heat discharge valve, etc.

2.5.1.11. Safety coil

A heat safety device offered as an option on a large part of the Lacunza central-heating appliance range. The arrow on the heat discharge valve that comes included must point towards the appliance and be connected to either of the two male couplings on the coil. The mains water supply is connected directly to this safety valve provided mains pressure is less than or equal to 5bar; if it is higher, then a pressure regulator must be fitted to reduce the pressure to 5bar. The other male coupling on the coil must be connected to the drainage outlet with metal piping. The probe that controls the opening of the heat safety valve must be housed in the bushing nearest to the hot-water output on the appliance. A filter must be fitted prior to the heat discharge valve to prevent

impurities from not allowing the valve to close properly.

Lacunza recommends the installation of safety coils on all central-heating appliances that cater for the possibility. Some of their advantages include:

- New water is not released into the water system when coils are activated, meaning that impurities-limescale cannot enter either.
- The overheated water in the back boiler is cooled down by means of the “bain-marie” system.
- The water system cannot be left empty as a result of discharge failure.
- Located at the most efficient position guaranteed (coil+discharge valve).

The manufacturer's instructions must be followed for each of the parts described above.

We recommend that a filter be installed at the mains water input to prevent impurities and foreign bodies from entering the water circuit.

Several connection kits for Lacunza central-heating appliances, which include most of these parts, can be purchased from the Lacunza catalogue to make it easier to install and maintain your appliance.

2.5.2. Relationship between the output of the central-heating appliance and radiator output

It is of the utmost importance that the nominal heat output to water generated by the appliance is proportional to the heat output of the radiators that the appliance runs. Otherwise, one of two things may occur:

The nominal output of the appliance is much higher than the output of the radiators

The entire water system can be heated using less fuel than the nominal load, but the minimum required flue temperature will not be reached, possibly leading to downdraughts, condensation. If, on the other hand, the appliance is fuelled using the nominal load, the system will be unable to accommodate all the output generated, causing safety valves to trip.

The nominal output of the appliance is much lower than the output of the radiators.

The appliance is always forced to work at the upper end of its capacity and is never able to heat the system, leading to low appliance temperature and poor combustion, bringing subsequent smoke and condensation problems.

By way of example, one standard 60cm-wide radiator column/unit has a heat output capacity $\Delta T 50^{\circ}\text{C}$ of 143W/unit, meaning that a system involving 100 x 60cm-wide units has a total output of 14.3 kW.

In the example above, possible heat loss resulting from poor insulation of circuit-water pipes is not taken into account, it being supposed that said pipes are properly insulated. If your system does not have insulated pipes, then this factor should be taken into account in the calculation.

2.5.3. KIT COMBI and BASIC. Combined central-heating appliance + gas/heating-oil boiler installation

There is a Lacunza system available for Lacunza central-heating appliances to be installed as part of water systems in combination with gas/heating-oil boilers which includes most of the parts needed in order to make the connection and

automate and run the two systems independently.

2.5.4. Checking the watertightness of the system

The watertightness of the back boiler has been tested in the factory at a pressure of 3.5 bar. Never connect the appliance to the circuit to test the watertightness of the water system and if you do connect it, never perform tests at pressures of more than 3 bar. Lacunza cannot be held liable for the consequences of doing so.

Use the appliance for 15 days before encasing it to ensure there are no leaks on the heating appliance connections.

2.5.5. Connecting the back boiler to the central-heating circuit

Working water pressure: 1.2 bar.

Cold water must always enter the appliance (return) at the bottom and hot water must always leave the appliance to feed the heating circuit (output) at the top.

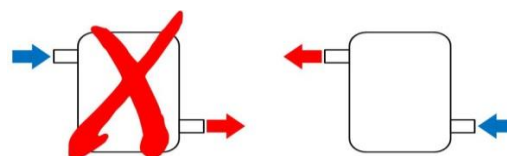


Figure No.11 - Wrong connection (left) and Right connection (right)

If it is possible to make each connection on either side of the appliance, then they should always be made diagonally to one another; otherwise, the heat output transferred to the water is reduced.

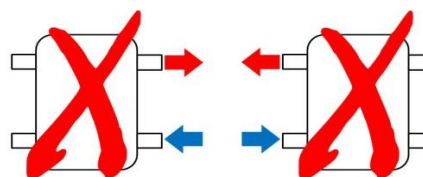


Figure No.12 - Wrong connections (less heat output to water)

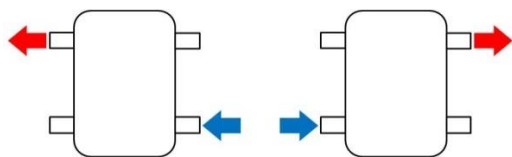


Figure No.13 - Right connections

In addition to the back-boiler outgoing-return connectors, the appliance has three further connectors on the left-hand side of the back boiler.

- Connection (1): 1/2" female connector for the thermostatic valve and safety heat discharge valve sensor that Lacunza supplies as an accessory.
- Connection (2): 1/2" female connector for the sheath of the thermostatic immersion sensor that Lacunza supplies in its COMBI and BASIC KIT accessories. This sensor controls the start-stop of the circulation pump in the heating circuit.
- Connection (3): 3/8" female connector for the appliance's standard automatic purger. Not supplied with the BASIC version.

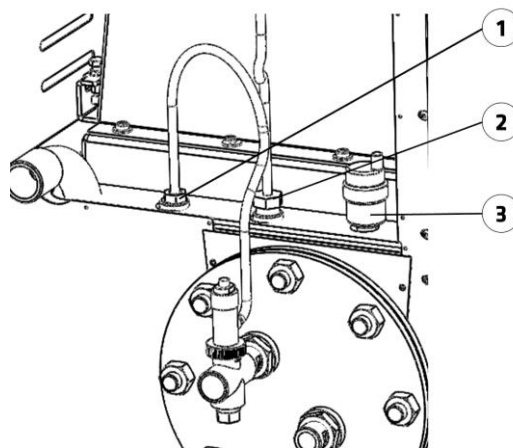


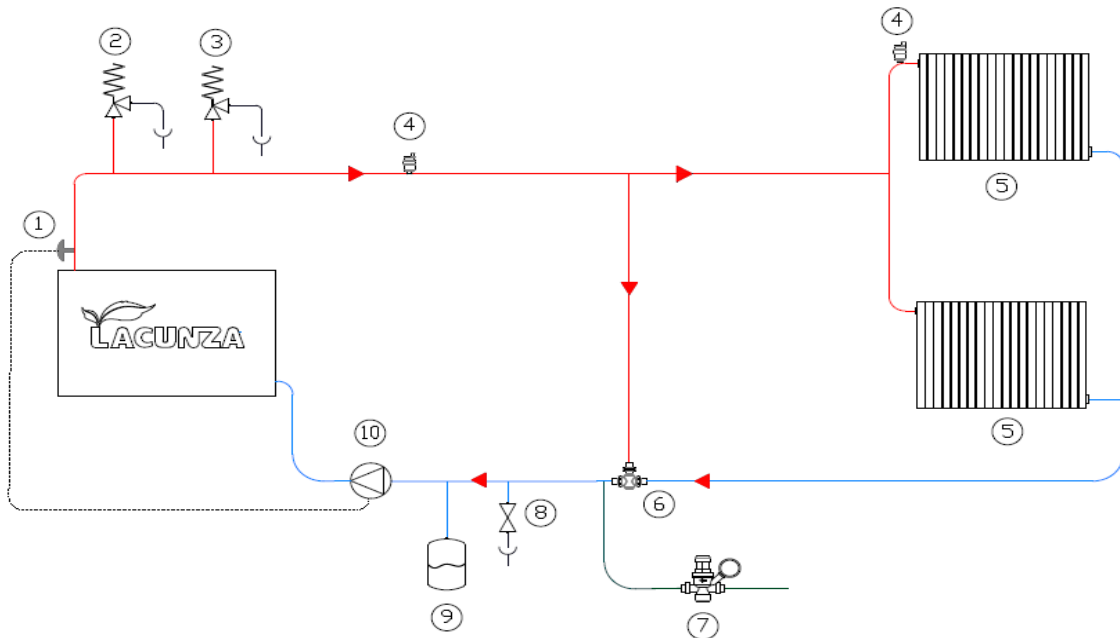
Figure No.14 - Connectors on the back boiler

2.5.6. Electrolytic corrosion

We recommend that electrolytic connectors be fitted at the point where the piping connects to the back boiler on all water systems involving non-steel, metal piping.

2.5.7. Guideline water system diagrams

Diagram 1

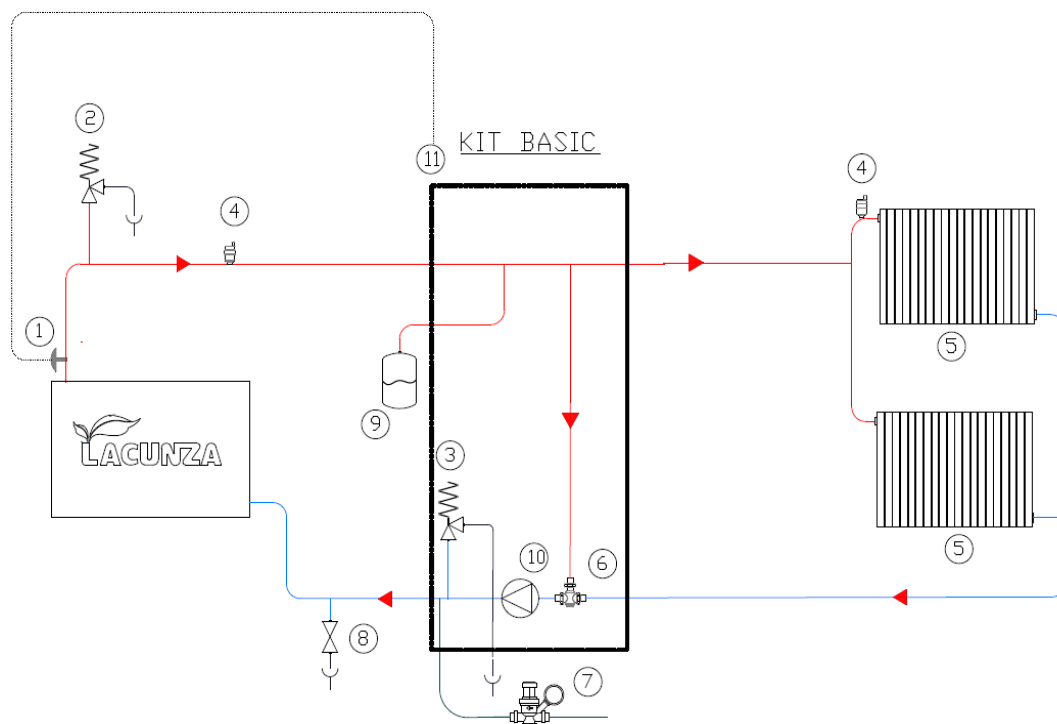


When the water in the back boiler reaches 50°C, the thermostat (1) trips the circulation pump (10) on until the temperature of the water falls beneath 50°C.

Until the temperature of the water returning from the radiators (5) exceeds 55°C, the anti-condensation valve (6) mixes water leaving the back boiler with water returning from the radiators so that its temperature exceeds 55°C, thereby minimising condensation problems arising as a result of the water system. When the temperature of the water returning from the radiators passes 55°C, the anti-condensation valve opens all the hot-water flow to the radiators.

In the event of overheating or excess pressure, the safety systems (the 97°C heat discharge safety valve (2), 3-bar pressure safety valve (3) and the automatic fill system (7)) come into action to render the system safe.

Diagram 2



When the water in the back boiler reaches 45°C, the thermostat (1) sends a signal to the automatic regulator (11) and the regulator activates the circulation pump (11) until the temperature of the water falls beneath 43°C.

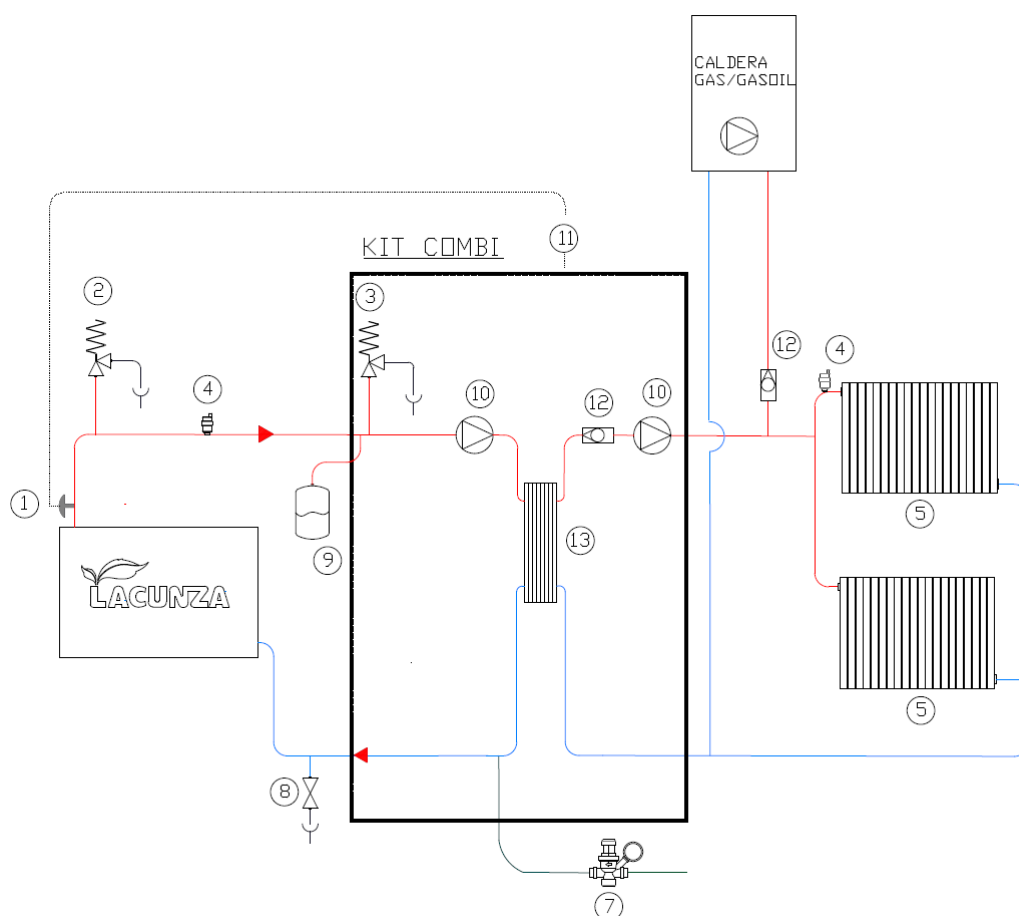
Until the temperature of the water returning from the radiators (5) exceeds 55°C, the anti-condensation valve (6) mixes water leaving the back boiler with water returning from the radiators so that its temperature exceeds 55°C, thereby minimising condensation problems arising as a result of the water system. When the temperature of the water returning from the radiators passes 55°C, the anti-condensation valve opens all the hot-water flow to the radiators.

In the event of overheating or excess pressure, the safety systems (the 97°C heat discharge safety valve (2), 3-bar pressure safety valve (3) and the automatic fill system (7)) come into action to render the system safe.

In this case, the parts inside the rectangle come supplied in the Basic kit. The kit also has an anti-ice protection system and an anti-blockage system to protect the water system when not in use in the summer.



Diagram 3



When the water in the back boiler reaches 45°C, the thermostat (1) sends a signal to the automatic regulator (11), which activates the back boiler circulation pump (10), causing the water to circulate without exchanging heat with the radiator circuit via the plate heat exchanger (13) until the temperature of the water reaches 55°C, at which point the regulator activates the radiator circuit pump, causing heat to be exchanged in the plate heat exchanger and releasing hot water to the radiators.

When the temperature of the water in the back boiler drops below 53°C, the radiator pump stops, and the back boiler pump stops when the temperature falls beneath 43°C.

While the radiators are being heated by the wood-burning appliance, the Combi kit electronic regulator stops the gas/heating-oil boiler from starting up even though the thermostat says that it should in order not to waste boiler fuel. When the water from the wood-burning central-heating appliance drops beneath 48°C, the automatic regulator lets the gas/heating-oil boiler heat the radiators again.

In the event of overheating or excess pressure, the safety systems (the 97°C heat discharge safety valve (2), 3-bar pressure safety valve (3) and the automatic fill system (7)) come into action to render the system safe.

In this case, the parts inside the rectangle come supplied in the Combi kit. The kit also has an anti-ice protection system and an anti-blockage system to protect the water system when not in use in the summer.

Key to water system diagrams:

- 1 50°C pump start thermostat
- 2 97°C heat discharge safety valve
- 3 3-bar pressure discharge safety valve
- 4 Automatic purge valve
- 5 Radiators / heat emitters
- 6 55°C anti-condensation valve
- 7 Automatic fill system
- 8 Drainage outlet
- 9 Closed expansion tank
- 10 Circulation pump
- 11 Automatic regulator
- 12 One-way valve
- 13 Plate heat exchanger

*Note: the heat discharge valve is capable of withstanding a maximum fluid temperature of 110°C.

3. INSTRUCTIONS OF USE

The manufacturer accepts no liability whatsoever for damage caused to parts as a result of the improper use of non-recommended fuels, modifications made to the appliance or how it is installed.
Only use original replacement parts.

All local and national regulations, including those referring to national and European standards, must be observed when using the appliance.

Heat is diffused by radiation and convection via the front and exterior of the appliance.

In the case of central-heating appliances (with back boiler), a large proportion of the heat generated is also diffused by conduction from the appliance to the radiant fluid, i.e. the heating-circuit water.

3.1. Fuel

This appliance must not be used as an incinerator. Do not use non-recommended fuels.

- Use dry logs (max. 16% humidity), cut at least 2 years ago, clean of resin and stored in a sheltered, ventilated place.
- Use hard woods with high calorie values and good ember production.
- Large logs should be cut to useable lengths before being stored. The logs should have a maximum diameter of 150mm.
- Finely-chopped wood produces greater heat output, but also burns more quickly.

Optimum fuels:

- Beech.

Other fuels:

- Oak, chestnut, ash, maple, birch, elm, etc.

- Pine and eucalyptus logs are low density and produce very long flames, and may cause the parts of the appliance to wear out more quickly than normal.

- Resinous wood may mean that the appliance and the flue need to be cleaned more often.

Non-permitted fuels:

- All types of coal and liquid fuel.
- "Green wood". Green or damp wood reduces the performance of the appliance and leads to soot and tar build-up on the inner walls of the flue, obstructing it.
- "Recovered wood". The burning of treated woods (railway sleepers, telegraph posts, plywood, fibreboard, pallets, etc.) quickly blocks the system (soot and tar build-up), harms the environment (pollution, smells) and may lead to deformation of the firebox due to overheating.
- All materials which are not wood (plastic, spray cans, etc.).

Green and reprocessed wood may cause chimney fires.

The graph below shows how the humidity of firewood affects its heat output:

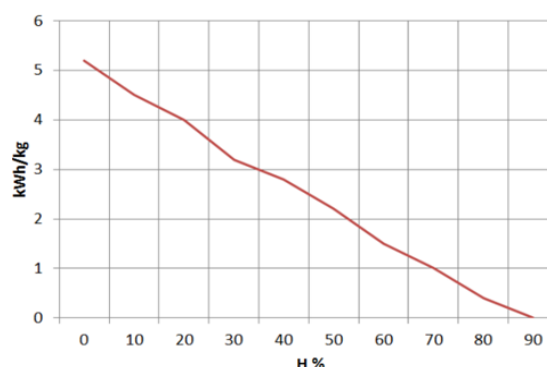


Figure No.15 - Relationship between firewood humidity and heat output.

3.2. Description of the parts of the appliance

3.2.1. Operating components

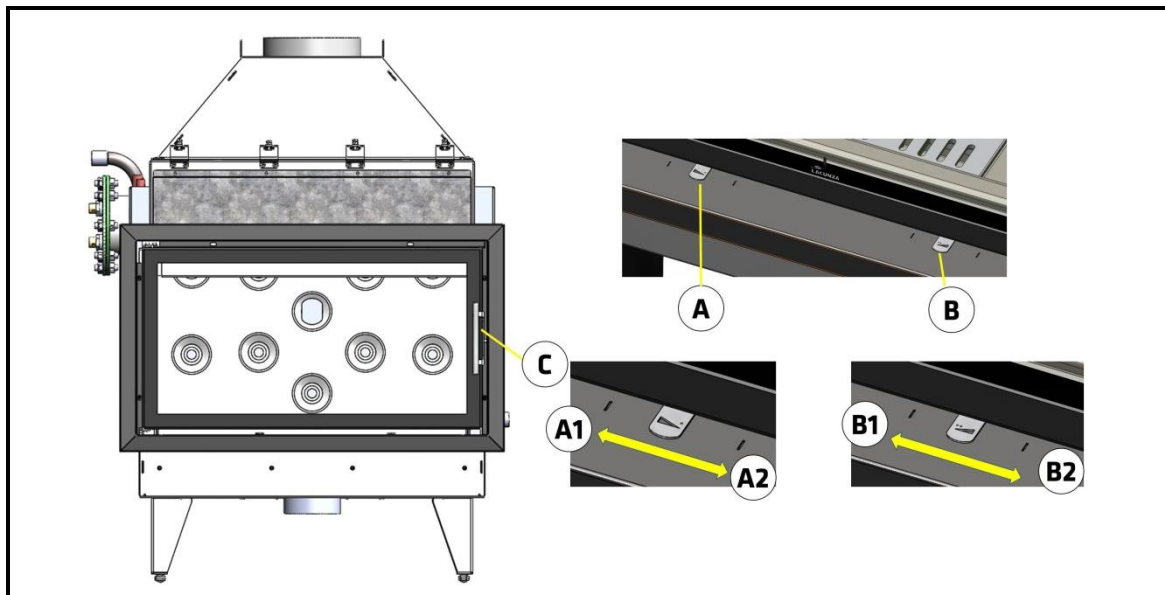


Figure No.16 - Operating components on the appliance

- A: Primary air intake
 - A1 open (move towards the + symbol).
 - A2 closed (move towards the - symbol)
- B: Secondary air intake
 - B1 open (move towards the + symbol).
 - B2 closed (move towards the - symbol).
- C: Firebox door handle

3.3. Lighting

Use of the appliance in warm weather (warm days, early hours of the afternoon on sunny days) may lead to lighting and updraught problems.

Certain weather conditions, such as fog, ice, humidity entering the flue, etc., may hinder sufficient updraught in the flue and lead to suffocation.

Proceed as follows in order to light the appliance satisfactorily:

- Open the firebox door(s) and open all the firebox air-intake inlets to the full.
- Place paper or a firelighter and some wood chips in the firebox.
- Light the paper or firelighter.
- Leave the door slightly ajar, the width of two or three fingers, for about 15 minutes until the glass warms up.
- The first time the appliance is lit, the fire should be gentle to allow the parts of the appliance to dilate and dry.

Important: The first time it is lit up, the appliance may give off smoke and strange smells. This is not a cause for concern. Open an outdoor window to ventilate the room during the first few hours of operation.

If you notice water around the appliance, this is produced by the condensation of the moisture in the wood on lighting the fire. This condensation will no longer appear when the appliance has been lit three or four times and has adapted to its flue. If it does not disappear, then check the flue draught (length and diameter of the flue, flue insulation, airtightness) and the humidity of the wood used.

3.4. Loading fuel

In order to load firewood, open the firebox door gently, preventing the sudden entry of air to the firebox so that smoke does not enter the room that the appliance is installed in.

Perform this operation with the glove to prevent burns to the hands.

The maximum load height is 2 logs with diameters of approx. 10 cm.

The minimum interval between loads for nominal heat output is 60 minutes.

Always load with the nominal amount (see table in section 1.1).

For minimum burning (e.g. at night), use thicker logs.

When the firebox is loaded, close the door.

3.5. Operation

The appliance should be operated with the door(s) closed and the direct draught rod closed.

For safety reasons, never close all the appliance's combustion-air intakes.

Primary-air intake

By opening this inlet, air enters the firebox via the firebox grille.

Secondary-air intake

By opening this inlet, air enters the firebox via the top of the firebox door.

IMPORTANT: Keeping the secondary-air intake open helps keep the door glass cleaner for longer.

In order to obtain maximum output, open all the air intakes to the firebox and in order to obtain minimum output, tend

towards closing them. For normal use, we recommend you close the Primary Intake and leave the Secondary open.

3.6. Removing ash

Following sustained use of the appliance, it is necessary to remove the ash from the firebox. Remove the ashpit box when cold or using something to prevent yourself from getting burned (glove).

Never throw hot embers into the rubbish.

Access the ashpit by opening the door on the appliance.

To extract it, lift the cast-iron grille up on its hinges from the front and rest it against the back of the firebox. The grille is quite heavy, so we recommend that you follow these steps in order to lift it more easily:

- Insert the hook supplied by Lacunza in the opening on the grille shown in the photo



Figure No.17 - Insert hook

- When you have inserted the hook, use it to lift the grille with one hand just enough to support it from underneath with the other hand.



Figure No.18 - Lift grille

- Then use both hands to support the base of the grille and push it up.



Figure No.19 - Lift grille with both hands

- Rest the grille gently against the back of the firebox. If the firebox is fitted with refractory bricks, be particularly careful not to strike them hard with the grille; they may break.



Figure No.20 - Rest grille against the back of the firebox

- Extract the ashpit.



Figure No.21 - Extract ashpit

Warning! It is very important to put the ashpit back in its housing at the bottom of the firebox after emptying it of ashes and before lighting the fire again! Do this by following the extraction process in reverse order.

3.7. Deflectors.

3.7.1. Inca 100 calefactora BASIC boiler

This model has 2 static stainless-steel deflectors which can be dismantled. The lower one is slightly tilted, the rear resting on two tabs and the front on the central pipe of the back boiler. The upper deflector is horizontal and rests on 2 tabs at the back and 2 at the front.

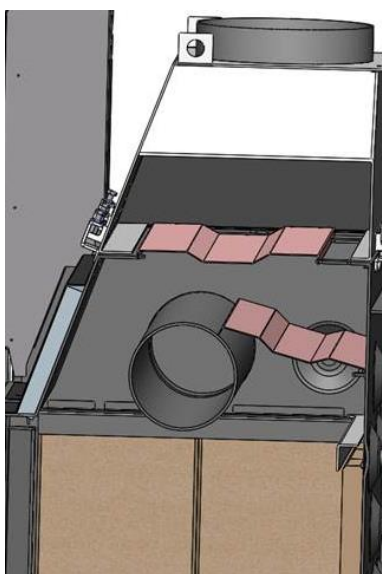


Figure No.22 - Position of the deflectors on BASIC Itaca central-heating appliance

• Removing the deflectors:

First remove the lower deflector by lifting the front and lowering it once it is clear of the tabs that keep it in position.

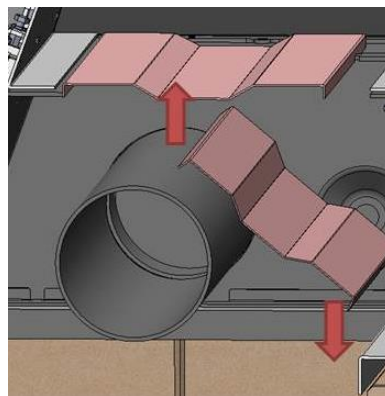


Figure No.23 - Removing lower deflector

Then remove the upper deflector in the same way, first lifting the deflector off the tabs that keep it in position and then tilting and lowering it.

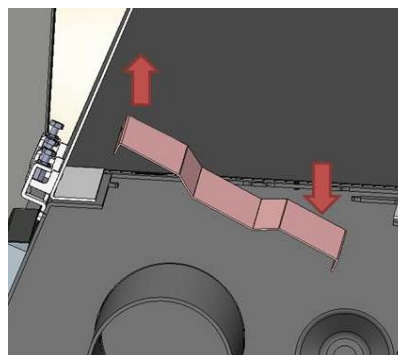


Figure No.24 - Removing upper deflector

3.8. Opening the door



Figure No.25 - Opening the door

4. MAINTENANCE AND IMPORTANT ADVICE

4.1. Maintenance of the appliance

The appliance, the flue connector piping and the flue must be cleaned regularly, particularly following long periods without use.

4.1.1. Firebox

Clean the firebox area of ash, etc.

On central-heating appliances, clean the walls of soot (creosote) in order to enhance performance.

4.1.2. Inside the appliance

The inside of the firebox can also be accessed from the bottom by extracting-pushing up the cast-iron grille and removing the ashpit. Clean the area of ash through the hollow left after removal (use a vacuum cleaner if necessary). The cast-iron base can also be extracted if necessary.

Clean the firebox area of ash. Clean the deflectors, where soot may build up.

Clean-scrape the soot (creosote) from the walls of the back boiler to enhance its performance.

4.1.3. Flue socket

The flue socket area must be kept clean at all times for the appliance to work properly.

It must be cleaned as often as required. How often it is cleaned depends on how much the appliance is used and the type of fuel employed.

4.1.4. Painted sheet-steel-cast-iron parts.

These parts should be cleaned with a brush or dry cloth. Do not dampen the parts: the steel could rust and the paint

could blister and chip. Be particularly careful when cleaning the glass: the liquids used must not dampen the painted steel.

4.1.5. Firebox glass

Keep the secondary-air intake open to keep the door glass cleaner for longer. However, the glass may get dirty the longer the appliance is used. Special degreasing products designed for the purpose should be used to clean it.

Clean when the glass is cold and taking care not to apply the glass cleaner directly onto the glass as it could come into contact with the door-seal cord and damage it.

4.2. Maintenance of the chimney flue

VERY IMPORTANT: In order to avoid incidents (chimney fires, etc.), it is necessary to perform maintenance and cleaning operations on a regular basis; if the appliance is used often, then the chimney and the flue connector piping must be swept several times a year.

In the event of fire in the chimney, close the flue draught, close doors and windows, remove embers from the firebox, block the connection hole with damp cloths and call the fire brigade.

4.3. Important advice

Lacunza recommends that only Lacunza-authorized replacement parts be used.

Lacunza accepts no liability for any modification to the product which it has not authorised.



This appliance is a heat-producing appliance and contact may lead to burns.

This appliance may remain HOT for a period of time after it has gone out. **MAKE SURE THAT SMALL CHILDREN DO NOT GO NEAR IT.**

5. TROUBLESHOOTING



This symbol means that a qualified professional should be called to perform the operation.

Problem	Probable causes		Solution
The fire does not light properly The fire does not stay alight	Green or damp wood		Use hard woods, cut at least 2 years ago and stored in a sheltered, ventilated place
	The logs are too large		Use crumpled paper or firelighters and dry wood chips to light the fire. Use split logs to keep the fire going
	Poor-quality wood		Use hard woods which produce heat and embers (chestnut, ash, maple, birch, elm, beech, etc.)
	Insufficient primary air		Open the primary- and secondary-air intakes completely, or even open the door slightly. Open the outdoor-air inlet grille
	Insufficient updraught		Check that the draught is not blocked. De-soot if necessary. Check that the flue is in perfect condition (airtight, insulated, dry, etc.)
The fire flames up too much	Excessive primary air		Close the primary- and secondary-air intakes partially or totally
	Excessive updraught		Install a draught damper
Smoke given off on lighting	Poor-quality wood		Do not continually burn chips, carpentry scraps (plywood, pallets, etc.)
	Cold flue		Heat up the flue by burning a piece of paper in the firebox.
Smoke during burning	The room is at low pressure		In rooms with Controlled Mechanical Ventilation, leave an outdoor window ajar until the fire is fully alight.
	Too little wood loaded		Load as recommended. Loads notably smaller than those recommended lead to low smoke temperature and downdraught.
	Insufficient updraught		Check the condition of the flue and insulation. Check that the piping is not blocked. Clean mechanically if necessary
	Wind enters the flue		Install an anti-downdraught system (Cowl) at the top of the chimney
Does not warm up enough	The room is at low pressure		In rooms with Controlled Mechanical Ventilation, there must be an outdoor-air inlet
	Poor-quality wood		Only use the recommended fuel
Safety valves do not close 100%	Impurities in seal joint		Run cold water through the valve several times to clean it of impurities. Fit filters to prevent impurities from entering.
	Deformation of seal joint		Fit a new valve
Water condenses (after the appliance has been lit more than 3 or 4 times)	Too little wood loaded		Load as recommended. Loads notably smaller than those recommended lead to low smoke temperature and condensation.
	Green or damp wood		Use hard woods, cut at least 2 years ago and stored in a sheltered, ventilated place.
	Condition of the flue		Lengthen the flue (5-6 metres minimum). Insulate the flue properly. Check the airtightness of the flue/appliance.
	Water circuit		Failure or lack of mixing valve anti-condensation system. Output of the water system not in proportion to the heating appliance. The circulation pump must be activated when the water temperature is over 55°C

6. DECLARATION OF PERFORMANCE



CH-C-005

DECLARACIÓN DE PRESTACIONES Conforme al R. E. Productos Construcción (UE) N° 305/2011
DÉCLARATION DE PERFORMANCE Selon le Règlement (UE) N° 305/2011
DICHIARAZIONE DI PRESTAZIONE In base al Regolamento (UE) N° 305/2011
DECLARATION OF PERFORMANCE According to Regulation (UE) N° 305/2011
DECLARAÇÃO DE PRESTAÇÕES Em base com o Regulamento (UE) N° 305/2011

1. Nombre y/o código de identificación única del producto:
 Nom-code d'identification unique du produit
 Nome-codice identificativo unico del prodotto
 Unique identifier nome-code for product
 Nome-código de identificação único do produto
 - Marca, marque, marca, mark, marca: Lacunza
 - Tipo, type, tipo, type, tipo: Chimenea calefactora, Appareil insérable, Apparecchio a incasso, Insertable appliance, Aparelho encastrável Modelo, modèle, modello, model, modelo: **INCA 100 BASIC CALEFACTORA, INCA 100 BASIC CALEFACTORA PLUS**
2. Uso o usos previstos del producto: Chimenea de carga manual, para quemar combustibles sólidos (indicado en instrucciones), cuya función es calentar el espacio en el que está instalada y proporcionar también agua caliente sanitaria y/o calefacción central.
 Utilisation prévue du produit: Appareil insérable qui se charge manuellement, conçu pour brûler des combustibles solides (indiqués dans le Manuel d'Instructions), dont la fonction est de chauffer l'espace où il est installé (et de fournir de l'eau chaude sanitaire et/ou le chauffage central).
 Usi previsti del prodotto: Apparecchio a incasso a carico manuale, per bruciare combustibili solidi (indicati nelle istruzioni), la cui funzione è riscaldare lo spazio in cui è installato (e fornire anche acqua calda sanitaria e/o riscaldamento centrale).
 Extended uses of the product: Insertable appliance to be loaded by hand and designed to burn solid fuels (indicated in instructions), whose function is to heat the space in which it is installed (and also provide hot water and/or central heating).
 Utilização prevista do produto: Aparelho encastrável de carga manual, para queimar combustíveis sólidos (indicado nas instruções), cuja função é aquecer o espaço no qual está instalado (e proporcionar também água quente sanitária e/ou aquecimento central).
3. Nombre y dirección del fabricante:
 Nom et adresse du fabricant:
 Nome e indirizzo del fabbricante:
 Name and adress of the manufacturer:
 Nome e endereço do fabricante:

LACUNZA KALOR GROUP S.A.L.
 Pol. Ind. Ibarrea s/n 31800 Alsasua (Navarra) (España)
 Teléfono: (0034) 948563511
 Fax: (0034) 948563505
 Email: comercial@lacunza.net
4. Sistema de evaluación y verificación de la constancia de las prestaciones: 3
 Système d'évaluation et contrôle de la constance de performance: 3
 Sistema di valutazione e verifica della costanza della prestazione: 3
 Assessment and verification system for constancy of performance: 3
 Sistema de avaliação e verificação da regularidade do desempenho: 3
5. Organismo Notificado, Laboratoire notifié, Laboratorio notificato, Laboratory notified, Laboratório notificado:
 CEIS N° NB1722 Centro de ensayos, innovación y servicios
 Cr. Villaviciosa de Odón a Mostoles (M-856)
 Km 1.5 Mostoles 28935
 Por el sistema, Selon le system, In base al system, Based on system, Em base ao system : 3
 Documento emitido (fecha), Numéro du rapport d'essai (date), Numero rapporto di prova (data), Test report number (date), Número relação de prova (data): LEE/054/10-R1 (10-02-2011)

6. Prestaciones declaradas, Performance déclarée, Prestazioni dichiarate, Services declare, Desempenhos declarados:

Especificaciones técnicas armonizadas, Spécifications techniques armoniques, Specifica tecnica armonizzata, Harmonised technical specifications, Especifica técnica harmonizada EN13229:2001/A1:2002/A2:2004/AC:2006/AC:2007		
Características esenciales, Caractéristiques essentielles, Caratteristiche essenziali, Essential features, Características essenciais	Prestaciones, Performance, Prestazione, Services, Desempenho	
Reacción al fuego, Resistance au feu, Resistenza al fuoco, Resistance to fire, Resistência ao fogo	Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Distancia mínima de seguridad a materiales combustibles, Distance minimum aux matériaux combustibles, Distanza minima da materiali combustibili, Minimum distance from combustible material, Distância mínimo de materiais combustíveis	Izquierda, gauche, sinistra, left, esquerda: Derecha, droite, diritto, right, direito: Trasera, arrière, retro, back, traseira: Delantera, avant, fronte, front, frente: Encimera, dessus, sopra, above, acima:	150mm 150mm 450mm 1000mm 750mm
Temperatura humos a potencia térmica nominal, Température des fumées, Temperatura fumi, Fumo temperatura, Temperatura dos gases de combustão	291 °C	
Emisión de productos de combustión, Emission des produits de combustion, Emissione prodotti combustione, Combustión productos emissions, Emissões de produtos de combustão	Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Concentración media CO al 13% O2, Concentration moyenne CO al 13% O2, CO concentrazione media di O2%, Average concentration CO to O2%, CO concentração média de O2%	0.27 %	
Desprendimiento de sustancias peligrosas, Rejet de substances dangereuses, Rilascio di sostanze pericolose, Release of hazardous substances, Lançamento de substâncias perigosas	Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Temperatura superficial, Température de surface, Temperatura superficiale, Surface temperatura, Temperatura superficial	Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Seguridad eléctrica, Sécurité électrique, Sicurezza elettrica, Electrical safety, Segurança elétrica	-	
Presión máxima de servicio (agua), Pression maximale de service, Máxima pressione di esercizio, Maximum operating pressure, Máxima pressão de exercício	2.1 Bar	
Resistencia mecánica (para soportar una chimenea/un conducto de humos), Résistance mécanique (pour soutenir la cheminée), Resistenza mecánica (per supportare il camino), Mechanical strength (to support the fireplace), Resistência mecânica (para suportar a chaminé)	Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Potencia térmica ambiente, Puissance rendue au milieu, Potenza resa all'ambiente, Power output to the environment, Potência libertada no ambiente	9 kW	
Potencia térmica agua, Puissance rendue à l'eau, Potenza ceduta all'acqua, Power transferred to water, Potência cedida à água	23.5 kW	
Rendimiento energético, Rendement, Rendimento, Efficiency, Atuação	76.7 %	

Las prestaciones del producto identificado en el punto 1 son conformes con las prestaciones declaradas en el punto 6.

La performance du produit cité au point 1 est conforme à la performance declare au point 6.

La prestazione del prodotto di cui al punti 1 è conforme alla prestazione dichiarata di cui al punto 6.

The performance of the product referred to in point 1 is consistent with the declared performance in point 6.

As declarações do produto identificado no ponto 1, estão conformes com as prestações declaradas no ponto 6.

La presente declaración de prestaciones se emite bajo la única responsabilidad del fabricante, indicado en el punto 3.

Cette déclaration de performance est délivrée sous la responsabilité exclusive du fabricant cité au point 3.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.

This declaration of performance is issued under the manufacturer's sole responsibility referred to in point 3.

É emitida a presente declaração de desempenho sob a responsabilidade exclusiva do fabricante referido no ponto 3.


José Julián Garciandia Pellejero
 Director Gerente
 LACUNZA
 LACUNZA Group S.A.L.
 CIF A-31606932
 Polígono Industrial Ibañeta s/n
 31800 Alsasua (Navarra) Spain

Alsasua 01-07-2013



7. CE MARK

		LACUNZA KALOR GROUP S.A.L. Pol. Ind. Ibarrea s/n 31800 Alsasua (Navarra) (Spain)	
11		Número, Nombre, Numero, Number, Número : CH-C-005	
Marca, marque, marca, mark, marca: Lacunza Tipo, type, tipo, type, tipo: Chimenea Calefactora, Appareil insérable, Apparecchio a incasso, Insertable appliance, Aparelho encastrável Modelo, modèle, modello, model, modelo: Inca 100 Basic Calefactora, Inca 100 Basic Calefactora Plus		Organismo notificado, Laboratoire notifié, Laboratorio notificato, Laboratory notified, Laboratório notificado: CEIS N° NB1722	
Chimenea de carga manual, para quemar combustibles sólidos (indicado en instrucciones), cuya función es calentar el espacio en el que está instalado y proporcionar también agua caliente sanitaria y/o calefacción central. Appareil insérable qui se charge manuellement, conçu pour brûler des combustibles solides (indiqués dans le Manuel d'Instructions), dont la fonction est de chauffer l'espace où il est installé (et de fournir de l'eau chaude sanitaire et/ou le chauffage central). Apparecchio a incasso a carico manuale, per bruciare combustibili solidi (indicati nelle istruzioni), la cui funzione è riscaldare lo spazio in cui è installato (e fornire anche acqua calda sanitaria e/o riscaldamento centrale). Insertable appliance to be loaded by hand and designed to burn solid fuels (indicated in instructions), whose function is to heat the space in which it is installed (and also provide hot water and/or central heating). Aparelho encastrável de carga manual, para queimar combustíveis sólidos (indicado nas instruções), cuja função é aquecer o espaço no qual está instalado (e proporcionar também água quente sanitária e/ou aquecimento central).			
EN13229:2001/A1:2002/A2:2004/AC:2006/AC:2007			
Características esenciales, Caractéristiques essentielles, Caratteristiche essenziali, Essential features, Características essenciais		Prestaciones, Performance, Prestazione, Services, Desempenho	
Reacción al fuego, Resistance au feu, Resistenza al fuoco, Resistance to fire, Resistência ao fogo		Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Distancia mínima de seguridad a materiales combustibles, Distance minimum aux matériaux combustibles, Distanza minima da materiali combustibili, Minimum distance from combustible material, Distância mínimo de materiais combustíveis		Izquierda, gauche, sinistra, left, esquerda: 150mm Derecha, droite, diritto, right, direito: 150mm Trasera, arrière, retro, back, traseira: 450mm Delantera, avant, fronte, front, frente: 1000mm Encimera, dessus, sopra, above, acima: 750mm	
Temperatura humos a potencia térmica nominal, Température des fumées, Temperatura fumi, Fume temperatura, Temperatura dos gases de combustão		291 °C	
Emisión productos combustión, Émission des produits de combustion, Emisión prodotti combustione, Combustión productos emissions, Emissões de produtos de combustão		Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Concentración media CO al 13% O2, Concentration moyenne CO al 13% O2, CO concentrazione media di O2%, Average concentration CO to O2%, CO concentração média de O2%		0.27 %	
Desprendimiento de sustancias peligrosas, Rejet de substances dangereuses, Rilascio di sostanze pericolose, Release of hazardous substances, Lançamento de substâncias perigosas		Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Temperatura superficial, Température de surface, Temperatura superficiale, Surface temperatura, Temperatura superficial		Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Seguridad eléctrica, Sécurité électrique, Sicurezza elettrica, Electrical safety, Segurança elétrica		-	
Presión máxima de servicio (agua), Pression maximale de service, Máxima pressione di esercizio, Maximun operating pressure, Máxima pressão de exercício		2,1 Bar	
Resistencia mecánica (para soportar una chimenea/un conducto de humos), Résistance mécanique (pour soutenir la cheminée), Resistenza mecánica (per supportare il camino), Mechanical strength (to support the fireplace), Resistência mecânica (para suportar a chaminé)		Cumple, Conforme, Conforme, Compliant, Em Conformidade	
Potencia térmica ambiente, Puissance rendue au milieu, Potenza resa all'ambiente, Power output to the environment, Potência libertada ao ambiente		9 kW	
Potencia térmica agua, Puissance rendue à l'eau, Potenza ceduta all'acqua, Power transferred to water, Potência cedida à água		23.5 kW	
Rendimiento energético, Rendement, Rendimento, Efficiency, Atuação		76.7 %	

LACUNZA KALOR GROUP S.A.L

Pol. Ind. Ibarrea s/n

31800 Alsasua (Navarra) Spain

Tel.: (00 34) 948 56 35 11

Fax.: (00 34) 948 56 35 05

e-mail: comercial@lacunza.net

Website: www.lacunza.net

EDITION: 0

