

IDROFLEXA



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Dear Sir/Madam

Congratulations and thank you for choosing our product.

Please read this document carefully before you use this product in order to obtain the best performance in complete safety.

For further details or assistance, please contact the DEALER where you purchased the product or visit our website www.edilkamin.com. and click on DEALERS.

NOTE

- After having unpacked the boiler-stove, ensure that its contents are complete and intact (covering, remote control with display, "cold hand" handle, guarantee booklet, glove, specifications, spatula, dehumidifying salt, allen wrench).

In case of anomalies please contact the dealer where you purchased the product immediately.

You will need to present a copy of the warranty booklet and valid proof of purchase.

- Commissioning/ testing

Commissioning and testing must be performed by the DEALER. Failure to do so will void the warranty.

Commissioning, as specified in standard UNI 10683 Rev. 2005 (section "3.2") consists in a series inspections to be performed with the insert installed in order to ascertain the correct operation of the system and its compliance to applicable regulations.

- Incorrect installation, incorrect maintenance, or improper use of the product, shall relieve the manufacturer from any damage resulting from the use of this product.

- the proof of purchase tag, necessary for identifying the boiler-stove, is located:

- on the top of the package

- in the warranty booklet found inside the firebox

- on the ID plate affixed to the back side of the unit;

This documentation must be saved for identification together with the valid proof of purchase receipt. The data contained therein must be reported when requesting information and made available should servicing be required;

- All images are for illustration purposes only; actual products may vary.

SAFETY INFORMATION

THE BOILER-STOVE MUST NEVER BE MADE TO OPERATE WITHOUT WATER IN THE SYSTEM NOR AT A PRESSURE OF LESS THAN 1 BAR. IT CAN BE DAMAGED IF IT IS IGNITED WITH NO WATER IN THE SYSTEM.

- The boiler-stove is designed to heat water by means of automatic combustion of pellets (wood with 6 mm diameter) in the hearth.
- The only risks that may derive from using the boilerstove pertain to non-compliance with the installation regulations, direct contact with live electrical parts (internal), contact with the fire or hot parts, or foreign substances being put into the boiler-stove.
- Should components fail, the boiler-stove is equipped with safety devices to guarantee its automatic shutdown.
- These are activated without any intervention required.
- In order to function correctly, the boiler-stove must be installed in accordance with the instructions given herein.
- Whilst functioning, the door must never be opened. In fact, combustion is fully automatic and requires no manual intervention.
- Under no circumstances should any foreign substances be put into the hearth or the hopper.
- Do not use flammable products to clean the smoke channel (the flue section connecting the boiler-stove smoke outlet to the chimney flue).
- Hearth and hopper components must only be cleaned with a vacuum cleaner.
- The glass can be cleaned when COLD with a suitable product (e.g. GlassKamin) and a cloth. Do not clean when hot.
- Ensure that the boiler-stoves are installed and ignited by a qualified Edilkamin DEALER, in accordance with the instructions given herein.
- When the boiler-stove is in operation, the exhaust pipes and door become very hot (do not touch without wearing the thermal glove).
- Do not place anything, which is not heat resistant near the boiler-stove.
- NEVER use liquid fuel to ignite the boiler-stove or rekindle the embers.
- Do not obstruct the ventilation apertures in the room where the boiler-stove is installed, nor the air inlets of the boiler-stove itself.
- Do not wet the boiler-stove and do not go near electrical parts with wet hands.
- Do not use reducers on the smoke exhaust pipes.
- The boiler-stove must be installed in a room that is suitable for fire prevention and equipped with all that is required (power and air supply and outlets) for the boiler-stove to function correctly and safely.
- The boiler-stove must be kept in a room where the temperature is above 0 °C.
- Use appropriate anti-freeze additives for the water of the system.
- Ensure that the temperature of the return water is at least 45-50 °C.

ATTENTION:

• SHOULD IGNITION FAIL, DO NOT RE-IGNITE UNTIL YOU HAVE EMPTIED THE COMBUSTION CHAMBER.

• THE PELLET EMPTIED FROM THE COMBUSTION CHAMBER MUST NOT BE DEPOSITED INSIDE THE HOPPER.

DECLARATION OF CONFORMITY

The undersigned EDILKAMIN S.p.a. with head office headquarters at Via Vincenzo Monti 47 - 20123 Milan - Italy - VAT IT00192220192

Declares under its own responsibility as follows:

The wood pellet boiler-stoves specified below is in accordance with the 89/106/EEC (Construction Products)

WOOD PELLET BOLIER-STOVES, trademark EDILKAMIN, called IDROFLEXA

Year of manufacture: Ref. Data nameplate

Serial number: Ref. Data nameplate

The compliance with the 89/106/EEC directive is besides determined by the compliance with the European standard: **UNI EN 14785:2006**

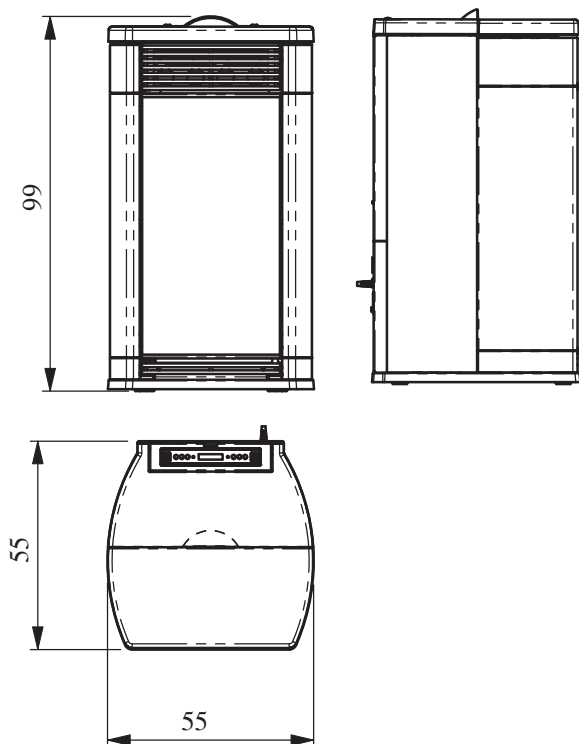
The wood pellet boiler-stove IDROFLEXA is in compliance with the requirements of the European directives:

2006/95/EEC - Low voltage directive

2004/108/EEC - Electromagnetic compatibility directive

EDILKAMIN S.p.a. will decline all responsibility of malfunctioning or damage to the equipment in case of unauthorized substitution, assembly or modifications of any sort on the said equipment on the part of non-EDILKAMIN personnel.

FEATURES

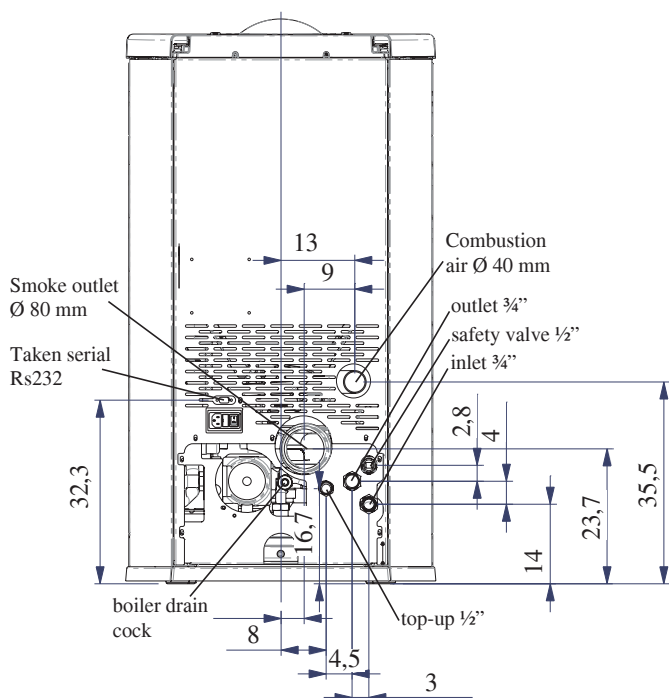


CARATTERISTICHE TERMOTECNICHE

Rated power	11,3	kW
Water heating power	9	kW
Approx. overall efficiency	90,2	%
Approx. water efficiency	86,1	%
CO emission (13% O ₂)	0,020	%
Max. pressure	2	bar
Operating pressure	1,5	bar
Smoke output temperature from test EN14785	140	°C
Minimum draught	12	Pa
Min./max. autonomy	10 / 16	ore
Fuel consumption min./max.	1,7 / 2,7	kg/h
Hopper capacity	27	kg
Heating capacity *	295	m ³
Weight including packing (steel/ceramic)	179/188	kg
Diameter of smoke extract duct male thread	80	mm
Air intake duct diameter (male)	40	mm

* The heatable room dimensions are calculated on the basis of pellets with an lhv of at least 4300 kcal/kg and home insulation in compliance with Italian law 10/91, and subsequent changes together with an expected heat output of 33 Kcal/m³ per hour.

* It is also important to consider the position of the boiler-stove in the room to be heated.



ELECTRICAL CHARACTERISTICS

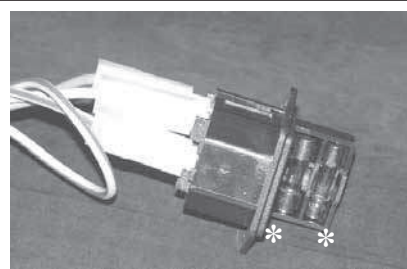
Power supply	230Vac +/- 10% 50 Hz	
On/off switch	yes	
Average power consumption	150	W
Power consumption during ignition	400	W
Remote control frequency	infrared	
Protection on mains power supply**	Fuse F4 AL, 250	
Protection on electronic circuit board	Fuse F4 AL, 250	

The data shown above is purely indicative.

EDILKAMIN s.p.a. reserves the right to make changes to these products to improve their performance with no prior warning.

FUSE

* two fuses are inserted on the socket behind the boiler-stove, fitted with a switch one is functional and the other is spare.



FEATURES

PRINCIPLE OF OPERATION

The fuel (pellets) is transferred from the storage hopper (A) to the combustion chamber (D) by means of a feed screw (B), which is driven by a gear motor (C). The pellets are ignited by the air that is heated by an electrical resistance (E) and drawn into the combustion chamber by a centrifugal fan (M). The fumes produced during the combustion process are extracted from the hearth by the same centrifugal fan (M) and expelled through the outlet (F) located on the lower part at the back of the boiler-stove.

The ash falls into the pan (I) where it gathers for emptying. The hearth is realised with an internal structure in aluminium/ cast iron and is closed frontally by two overlapping panes:

- external glass ceramic door
- an inner door made from ceramic glass which is in direct contact with the fire.

The pellet hopper is at the top of the boiler-stove. The hopper is filled through a lid found at the back of the top

The water in the boiler-stove is heated and sent to the heating system by the pump built into the boiler-stove.

The boiler-stove has a built-in closed expansion tank and over-pressure relief valve.

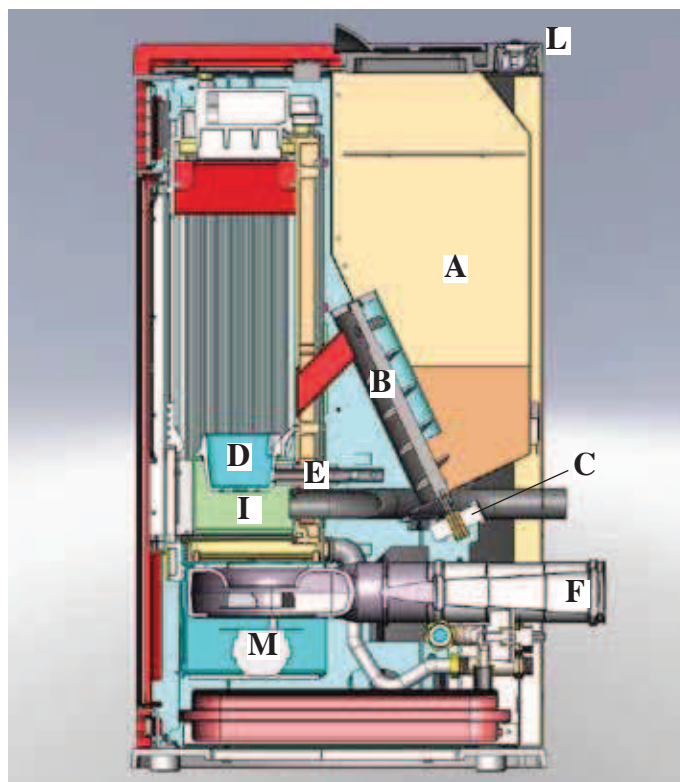
Fuel quantity, smoke extraction and combustion air supply and pump operation are all controlled by an electronic control board, which is equipped with **Galileo *** software to achieve high combustion efficiency and low emissions.

The synoptic panel (L) is installed on the top, through which all phases of operation can be displayed and controlled.

The main phases can be managed via the optionally supplied remote control.

The external covering is available in the following colours and materials:

- ceramic: opaque white, red
- plating: grey steel sides, grey ceramic top
- ollare stone



GALILEO is a combustion safety and control system which allows optimal performance in all conditions.

GALILEO guarantees optimal functions thanks to a sensor that measures the air flow contributing to combustion.

The surveying and consequent optimisation of the combustion parameters takes place in a continuous way, so as to correct any possible functioning anomalies in real time

The GALILEO system offers constant combustion, automatically regulating the draft based on the characteristics of the chimney flue (bends, length, shape, diameter, etc..) and environmental conditions (wind, humidity, atmospheric pressure, installations at high altitude, etc.). The standards for installation must be respected.

SAFETY AND DETECTION DEVICES

Smoke thermocouple

on the smoke outlet. It reads the smoke temperature. It regulates the ignition stage and shuts the boiler-stove down if the temperature is too high or too low.

Flow sensor

on the combustion air intake pipe. It detects whether the combustion air and outlet smoke are circulating correctly. It returns a voltage signal which may be read on the detector status display. In the event of anomaly (which may be attributed to incorrect smoke outlet or combustion air intake), it shuts the stove down.

Screw feeder safety thermostat

near the pellet hopper. It cuts off the power supply to the gearmotor if the temperature measured is too high.

Water temperature detector

It reads the water temperature in the boiler-stove and sends the circuit board information for pump management and boiler-stove power modulation. **If the temperature is too high, it starts a shutdown.**

Water overheating safety thermostat with manual reset

measures the temperature of the water inside the thermo-stove. If the temperature is too high, it cuts off the motor's electrical power supply. In the event that the thermostat has been operated, it must be re-activated by acting on the reset button behind the boiler-stove (see page. 21).

Overpressure valve

upon reaching the pressure stipulated on the plate, the system is triggered to discharge the water and consequently the water must be topped up.

WARNING!!!! remember to carry out the connection with the sewage system.

Manometer

Located under the ceramic top, it allows to read the water pressure of the stove with the thermal boiler-stove running, the recommended pressure is 1bar.

IF THE THERMAL boiler-stove BLOCKS, THE REASON WILL APPEAR ON THE DISPLAY AND THIS WILL BE SAVED.

COMPONENTS

Resistance

It sets off of the combustion of the pellets and it remains lit until the flame has been ignited.

Smoke extractor

“pushes” the smoke into the flue and draws out combustion air via a vacuum.

Gear motors

activates the feed screw, which allows the pellets to be transferred from the hopper to the combustion chamber.

Pump (circulator)

“pushes” water toward the heating system.

Closed expansion tank

“absorbs” the variations in the volume of water contained inside the thermo-stove due to the heating effect.

A heating technician must evaluate the need to add a second tank to the existing one, depending on total amount of water in the system.

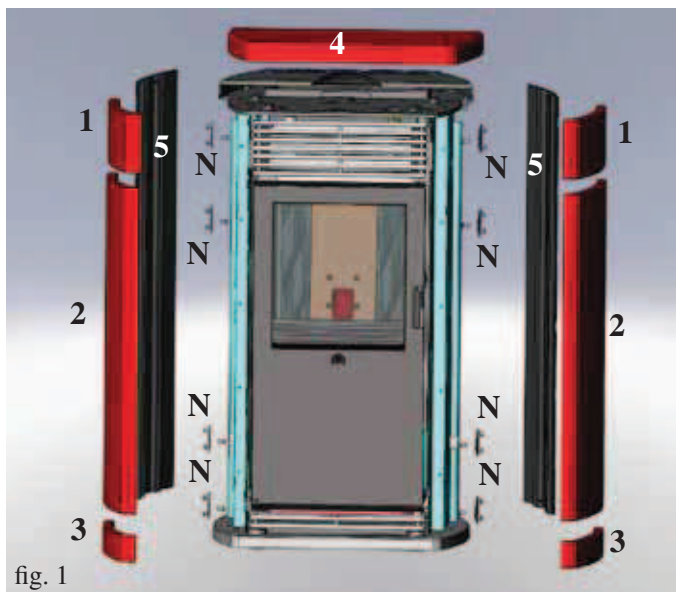
Venting valve:

positioned in the upper part, it allows for the “bleeding” of any air present during the loading of water inside the boiler-stove.

Drain tap

placed inside the lower part of the thermal boiler-stove. This is to be opened if the water inside the thermal boiler-stove must be emptied.

ASSEMBLY



COVERING

Parts list (see fig. 1)

- 6 ceramic side tiles (1-2-3)
- ceramic top (4)
- 2 aluminium rear sides (5)
- ceramic tile fastening kit

For assembly proceed as follows:

- Lift up the cast iron top, loosen the screws (V) and remove the two aluminium rear sides (5) unhooking them from the fixing pins (Z) located on the cast iron base fig. 2
- On the rear, apply the ceramic panels (1-2-3) and the plates (N) securing them in the holes provided using the screws supplied (fig. 3).

Due to production characteristics, the ceramic panels, made from castings, may be slightly different in height; To remedy any possible difference in height, use the rubber pads which do not affect the stove's aesthetics in any way.

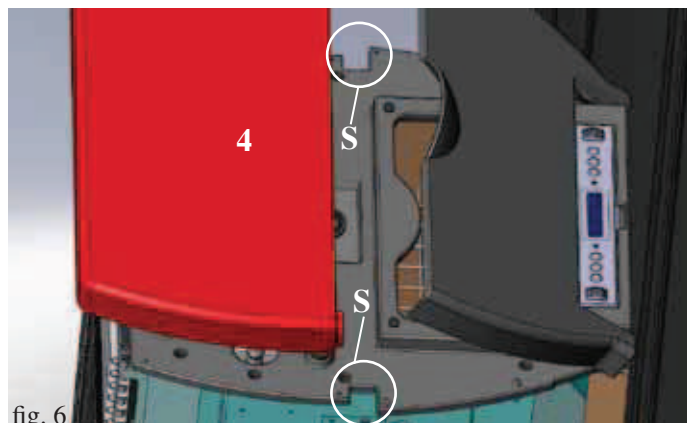
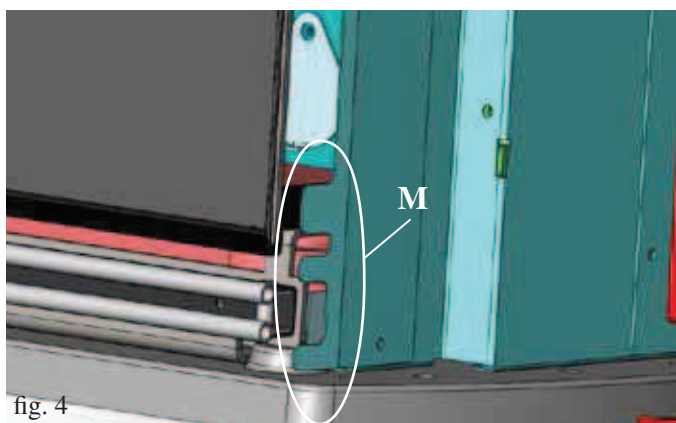
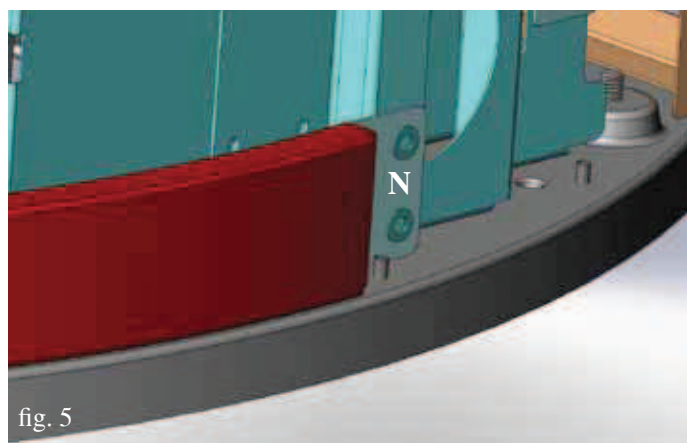
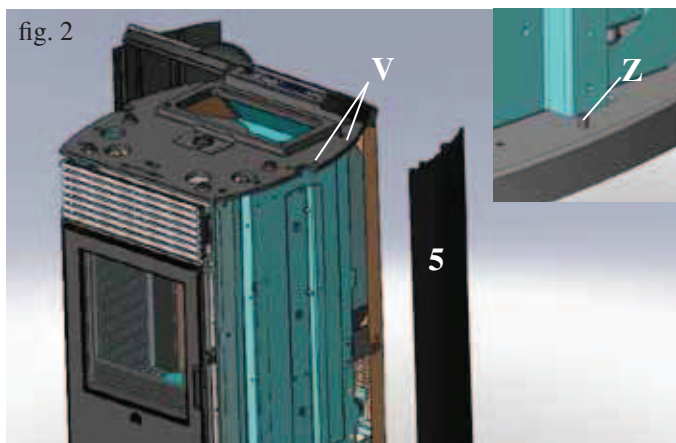
Place the rubber pads and the gasket between the cast iron base and the lower ceramic panel (3), while inserting only the rubber pads supplied between ceramic panels (3-2-1).

- Place each ceramic element up against the side, aligning the grooves (L at the end of the front edge) on the structure's vertical profile made of toothed sheet metal.

- Secure the ceramic panels with the plates applied to the stove's structure, inserting the screws and the washers supplied in the holes provided (fig. 5)
- Reassemble the two aluminium rear sides (5).

- Position the ceramic top (4) in the grooves.

Note: In the version with sheet metal covering, the stove is supplied already assembled, except the ceramic top which must be positioned in the special grooves (S-fig. 6).



INSTALLATION

ASSEMBLY AND INSTALLATION (Dealer)

Refer to local regulations in the country of use for anything that is not specifically covered in this manual. In Italy, refer to standard UNI 10683/2005 in addition to any Regional or Local Health Authority regulations.

If the boiler-stove is to be installed in a block of apartments, consult the block administration before installing.

VERIFY COMPATIBILITY WITH OTHER DEVICES

The boiler-stove must NOT be installed in the same room as extractors, type B heating appliances and other appliances that may affect its operation.

VERIFY THE POWER SUPPLY CONNECTION (the plug must be accessible)

The boiler-stove is supplied with a power cable that is to be connected to a 230V 50 Hz socket, preferably fitted with a magnetothermic switch. Voltage variations exceeding 10% can damage the boiler-stove (unless already installed, an appropriate differential switch must be fitted). The electrical system must comply with the law; particularly verify the efficiency of the earthing system. The power line must have a suitable cross-section for the boiler-stove's power. An inadequate earthing system can cause anomalies for which Edilkamin cannot be held liable.

FIRE SAFETY DISTANCES AND LOCATION

For correct operation the boiler-stove must be level. Check the load-bearing capacity of the floor. The boiler-stove must be installed in compliance with the following safety conditions:

- minimum safety distance at the sides and back from medium level flammable materials: 40 cm
- easily flammable materials must not be located less than 80 cm from the front of the boiler-stove
- if the boiler-stove is installed on a flammable floor, a sheet of heat insulating material must be placed between the boiler-stove and the floor, which protrudes by at least 20 cm at the sides and 40 cm at the front.

If it is impossible to comply with the distances given above, technical/building measures must be taken to avoid all fire risks. If the smoke outlet pipe is connected to walls made of wood or other flammable materials, it must be insulated with ceramic fibre or other materials with similar characteristics.

AIR INTAKE

The room where the stove is located must have an air intake with cross section of at least 80 cm² to ensure replenishment of the air consumed by combustion. Alternatively, the stove air may be taken directly from outside through a 4 cm steel extension of the pipe. In this case, there may be condensation problems and it is necessary to protect the air intake with a grille, which must have a free section of at least 12 cm².

The pipe must be less than 1 metre long and have no bends. It must end with section at 90° facing downwards or be fitted with a wind guard.

In any case all the way air intake duct must be a free section of at least 12 cm².

The external terminal of the air inlet channel must be protected with an anti-insect netting that does not reduce the 12 cm² through passage.

SMOKE OUTLET

The boiler-stove must have its own smoke outlet (the smoke cannot be discharged into a smoke flue used by other devices). The smoke is discharged through the 8 cm diameter outlet at the back of the boiler-stove.

A T-section with condensation trap and bleeder must be fitted at the beginning of the vertical section.

The smoke outlet must be connected to outside by means of suitable steel pipes EN 1856 certified.

The pipe must be hermetically sealed. The material used to seal and if necessary insulate the pipes, must be resistant to high temperatures (high temperature silicone or mastic).

The only horizontal section allowed may be up to 2 m long.

It may have up to two 90° bends. If the outlet is not fitted into a chimney flue, a vertical section and a wind guard are required (reference UNI 10683/2005).

The vertical duct can be internal or external. If the smoke channel is outside, it must be appropriately insulated. If the smoke channel is fitted inside a chimney flue, the latter must be suitable for solid fuel. If it is wider than 150 mm in diameter it must be improved by entering a pipe that has a suitable cross-section and is made of suitable material (e.g. 80 mm diameter steel).

All sections of the smoke duct must be accessible for inspection. The chimney pots and smoke ducts connected to the solid fuel appliances must be cleaned once a year (verify whether a specific legislation exists in your country). Failure to regularly inspect and clean the boiler-stove increases the probability of a fire occurring in the chimney pot. In that case, proceed as follows: Do not use water to extinguish the fire; Empty the pellet hopper; Contact specialist personnel before reigniting the boiler-stove. Possible installations are shown in figures 1 and 2

TYPICAL EXAMPLES

fig. 1

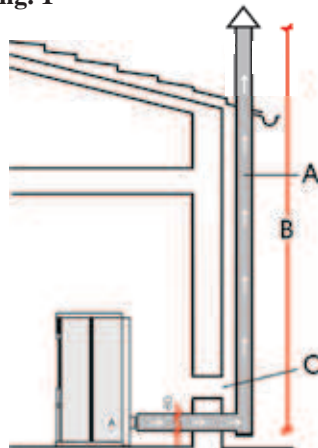
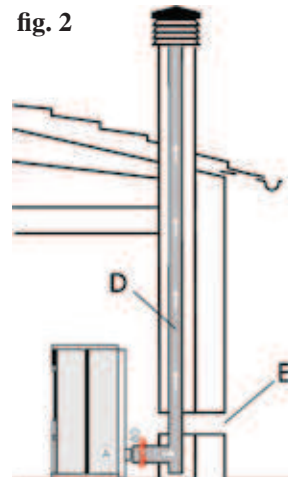


fig. 2



A: insulated steel flue

B: 1.5 m minimum height

C-E: air intake from inside room
(minimum internal section: 80 cm²)

D: steel flue, inside existing brick-built chimney.

CHIMNEY POT

The main characteristics are:

- an internal cross-section at the base, which is the same as that of the chimney flue
- an outlet cross-section which is no smaller than twice that of the chimney flue
- its position must be high enough to catch the wind and avoid downdraft areas in turbulent wind..

HYDRAULIC CONNECTIONS

(Reserved for DEALER)

THE THERMO-STOVE MUST NEVER BE MADE TO OPERATE WITHOUT WATER IN THE SYSTEM NOR AT A PRESSURE OF LESS THAN 1 BAR. IT CAN BE DAMAGED IF IT IS IGNITED WITH NO WATER IN THE SYSTEM.

The hydraulic connection must be performed by qualified personnel who can issue a declaration of conformity according to the Ministerial decree no. 37 ex L.46/90. Reference must however be made to the laws in force in the individual countries.

Practical NOTE

- 1) Consider appropriate solutions when connecting the supply, return and drains, which will facilitate moving the thermal boiler-stove in the future, if necessary.
- 2) To improve the functioning of the primary circuit (where there is a heat generator) must be separated from the secondary circuit (user). For example, through a plate heat exchanger that allows the exchange of energy in the form of heat without mixing the waters.

Water treatment

Foresees the addition of antifreeze, de-scaling and corrosion substances. In the event that the water used for filling and topping up has a hardness greater than 35° F, use a water softener. For suggestions please refer to regulation UNI 8065-1989 (Water Treatment In Heating Systems For Civil Use).

Note on return water temperature.

An appropriate system must be set up to guarantee that the return water temperature does not fall below 45-50 °C.

NOTE:

The installer must assess the possible need for an additional expansion tank, depending on the type of system being serviced

WARNING:

during the production of domestic the power to the radiators decreases temporarily.

ACCESSORIES:

In the diagrams referred to in the previous pages the use of accessories available from the Edilkamin catalogue has been assumed. Individual spare parts are also available (exchanger, valves, etc). For information, please contact your local dealer.

1. START UP (DEALER)

Make sure the plumbing system has been properly executed and is equipped with an expansion tank which is sufficient to guarantee safety. The presence of the tank built in to the boiler-stove does NOT guarantee adequate protection from thermal expansion experienced by the water inside the system.

Power on the boiler-stove electrically and run the test cold.

Carry out the filling of the system through the inlet valve (it is recommended that you maintain a pressure of approximately 1 bar).

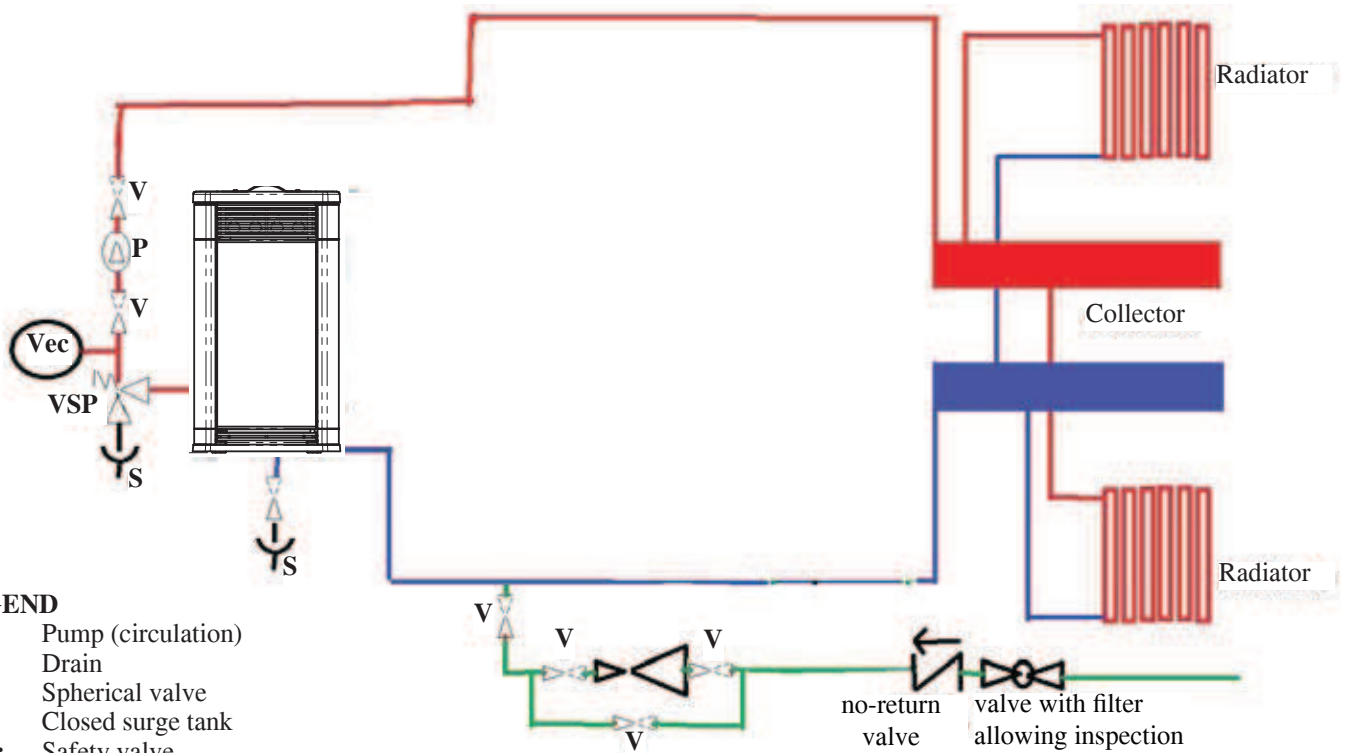
During the loading phase, "bleed" the pump and open the manual vent (see page 13)

This operation must also be performed subsequently on a periodic basis.

HYDRAULIC CONNECTIONS

System as the sole source of heating.

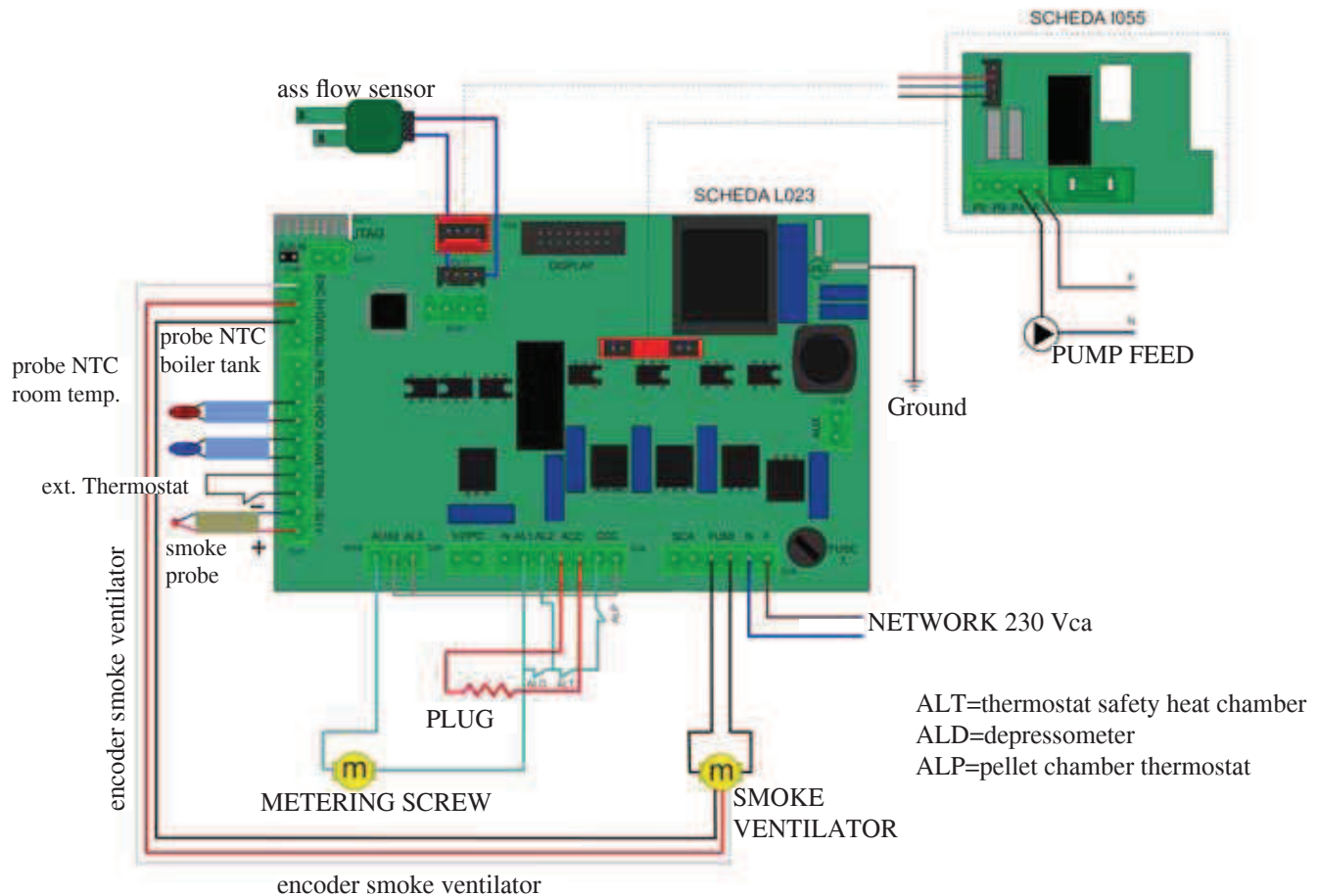
This layout is indicative only: your plumber will be responsible for the ultimate installation.



LEGEND

- P:** Pump (circulation)
- S:** Drain
- V:** Spherical valve
- Vec:** Closed surge tank
- VSP:** Safety valve
- VST:** Thermal discharge valve

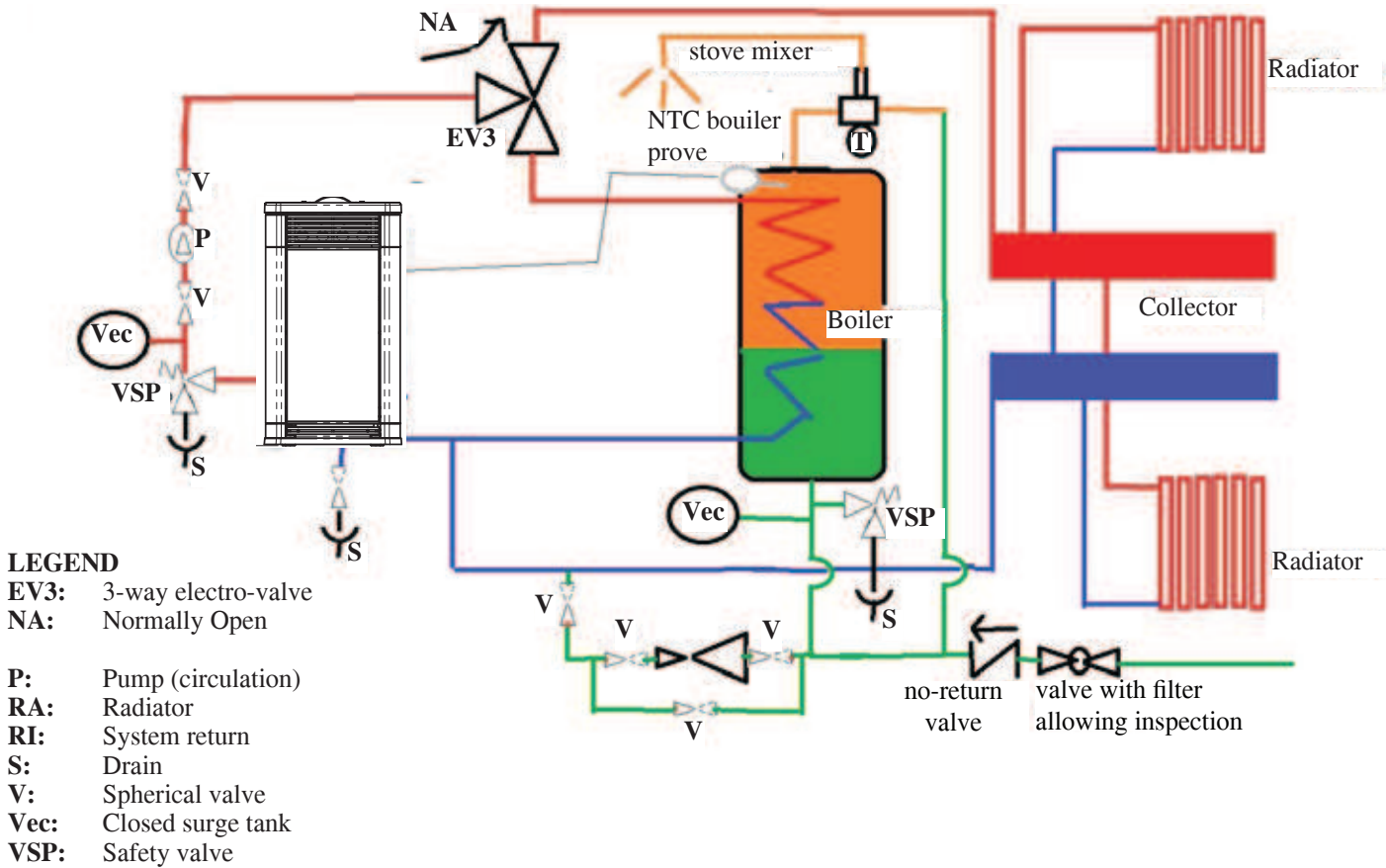
ELECTRICAL WIRING DIAGRAM ONLY HEATING



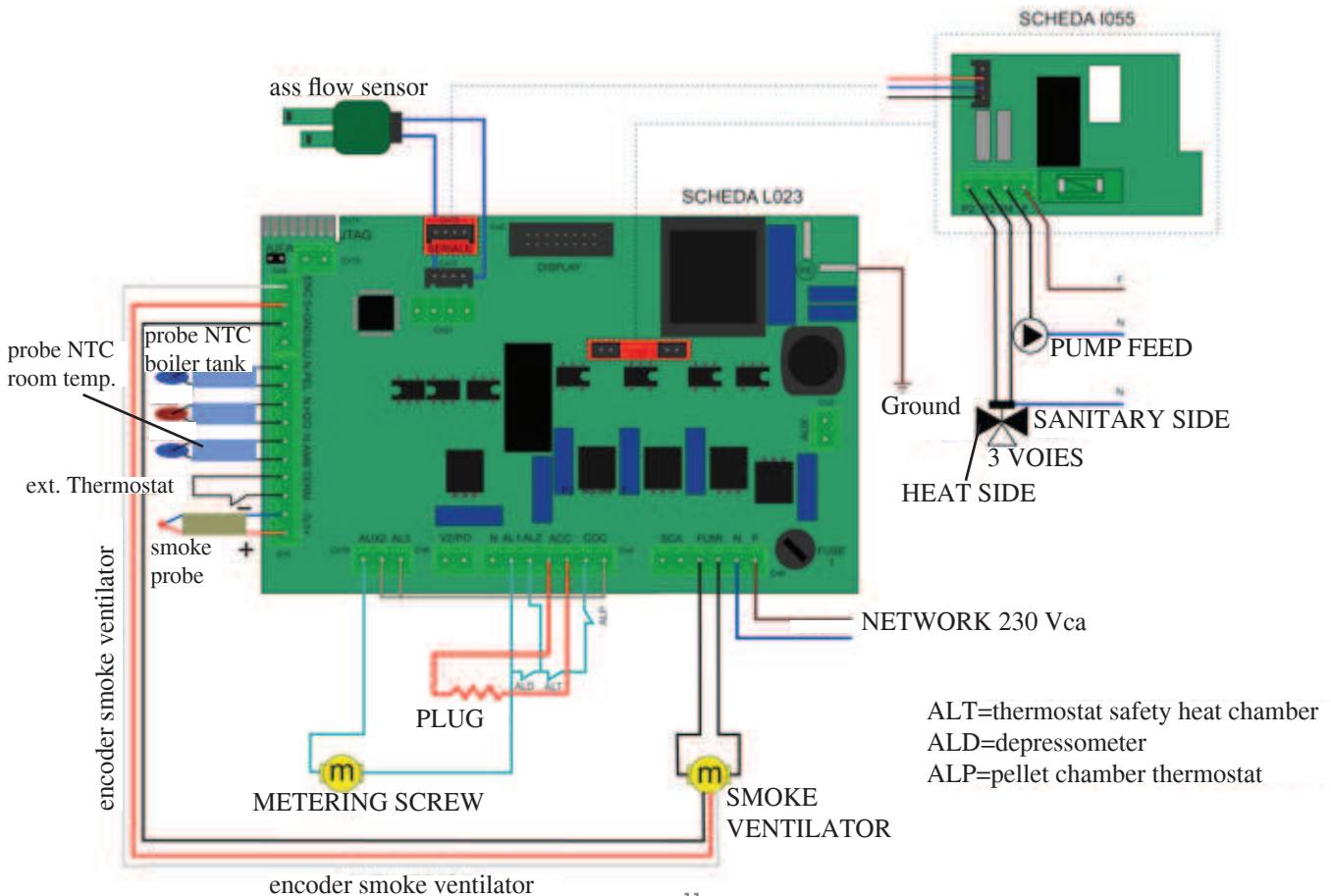
ALT=thermostat safety heat chamber
 ALD=depressometer
 ALP=pellet chamber thermostat

HYDRAULIC CONNECTIONS

System as the sole source of heating, producing household hot water with a boiler. (Buy the kit code 671080)
This layout is indicative only: your plumber will be responsible for the ultimate installation.



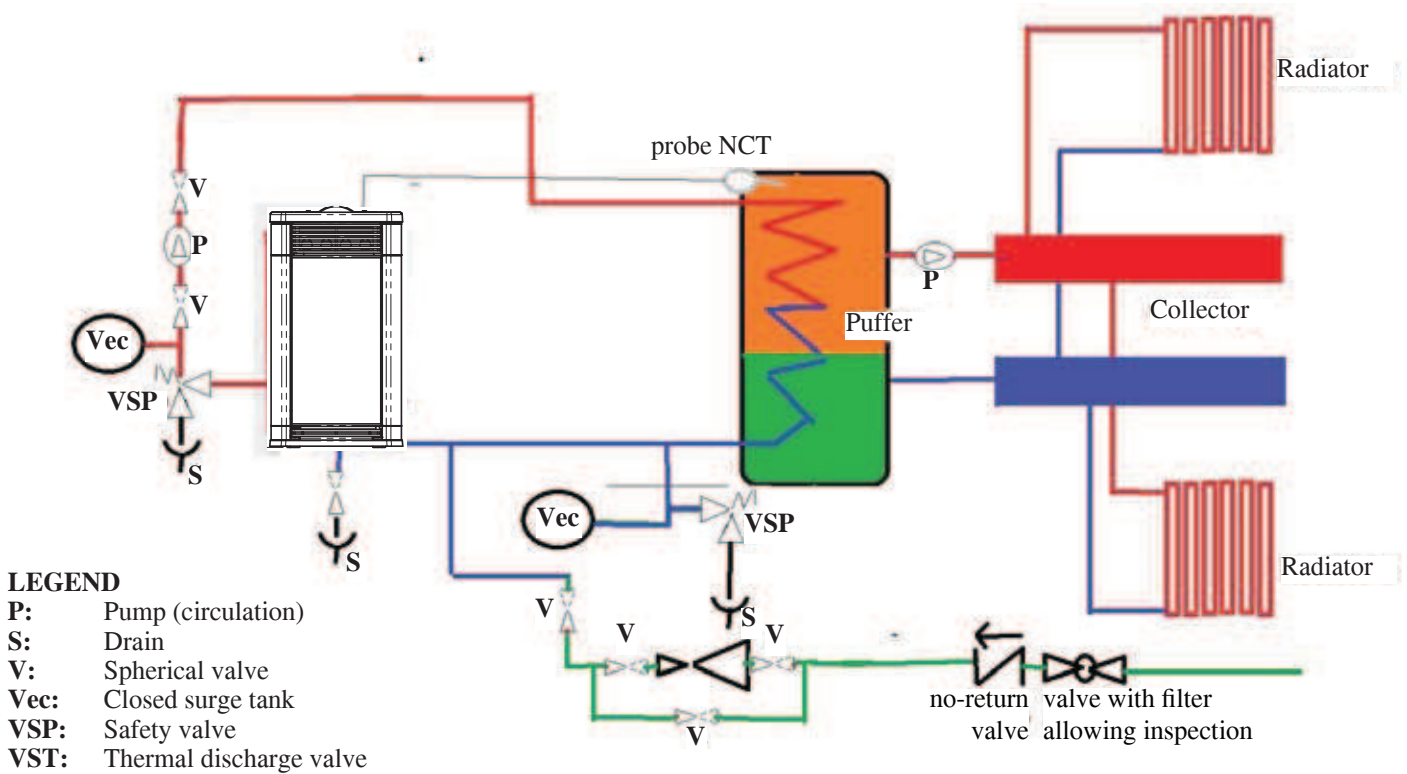
ELECTRICAL WIRING DIAGRAM + HEATING BOILER



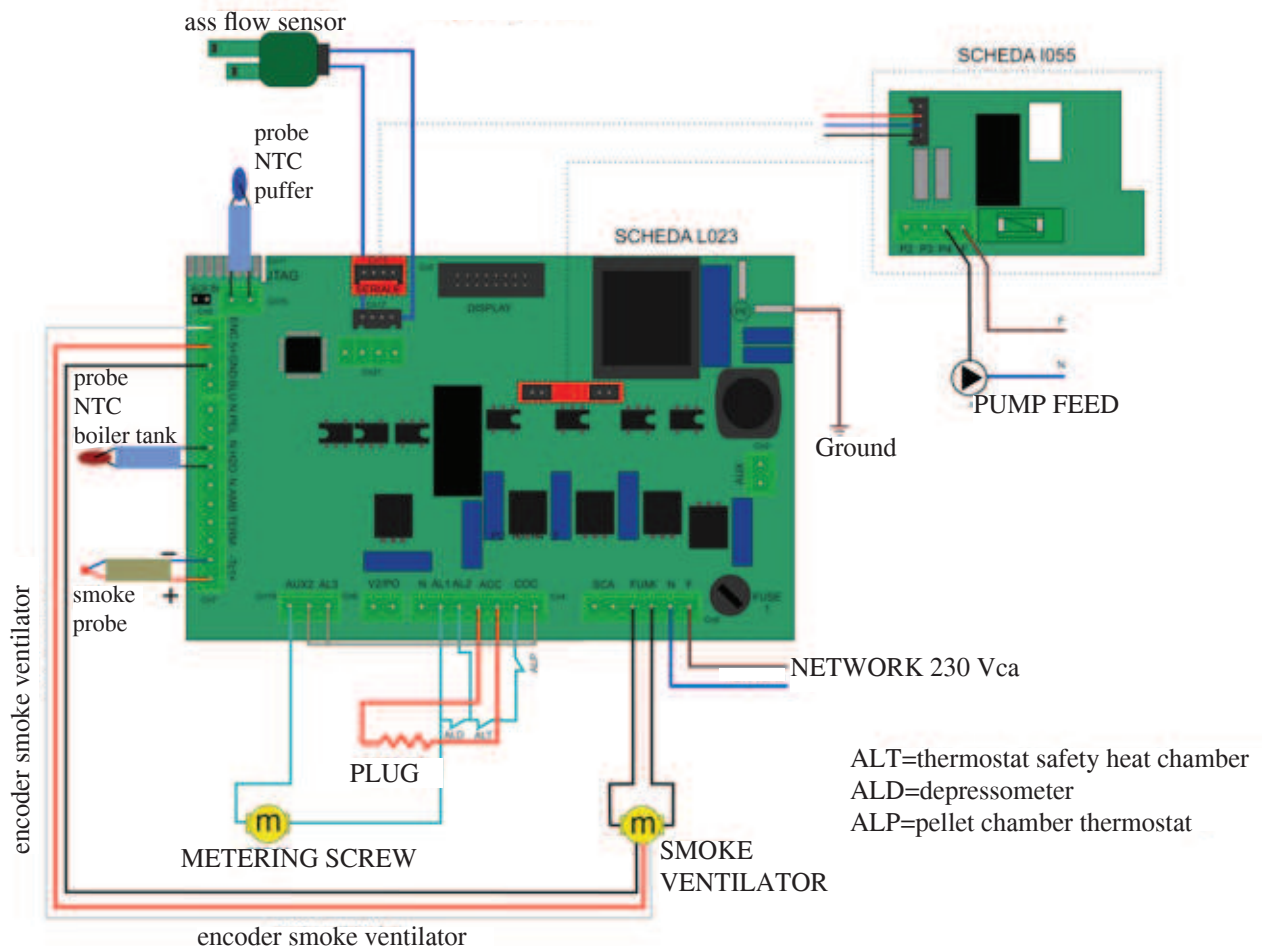
HYDRAULIC CONNECTIONS

System for heating combined with a puffer. (Buy the kit code 671130)

This layout is indicative only: your plumber will be responsible for the ultimate installation



ELECTRICAL WIRING DIAGRAM ONLY PUFFER



INSTRUCTIONS FOR USE

Before igniting.

You must consult the Edilkamin DEALER in your area when igniting the boiler-stove for the first time, in order for the boiler-stove to be calibrated according to the type of pellets and installation conditions, thereby validating the warranty.

There may be a slight smell of paint the first few times it is ignited, however, this will disappear quickly.

Before igniting you must check:

==> that installation is correct

==> the power supply

==> that the door closes properly to a perfect seal

==> that the combustion chamber is clean

==> that the display is on standby
(time and temperature)

External door regulation

Remove the bayonet-fixed upper grille and adjust the alignment of the external door with the ceramic or aluminium sides, using the screws V (fig. 1).

Filling the pellet hopper

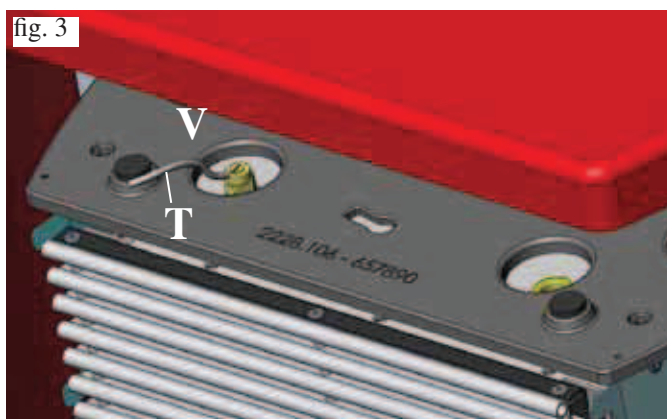
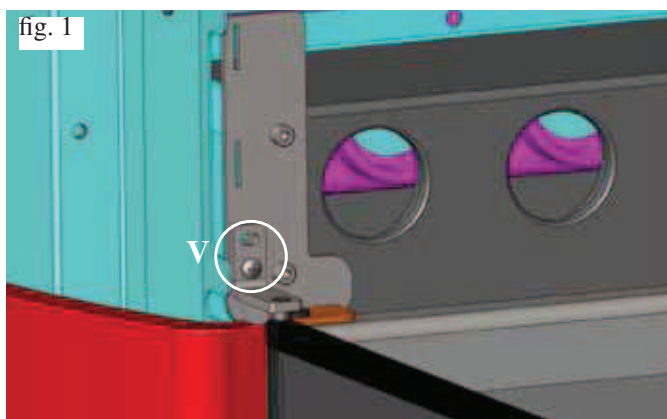
To access the hopper, lift up the cast iron top (fig. 2).

ATTENTION:

use the glove supplied when filling the boiler-stove whilst it is running and therefore is hot.

When the boiler-stove is ignited for the first time, open the valve (V) found below the top plate, so as to bleed off the air/water. (fig 3)

Insert the tube (T) supplied into the spout of the bleed valve and open the valve with a screwdriver until all the air is let out.



NOTE regarding the fuel.

IDROFLEXA is designed and programmed to burn wood pellets with 6 mm diameter. Pellets are a type of fuel in the form of little cylinders, made from compacted sawdust, compressed under high pressure with no adhesives or foreign materials. They are sold in bags of 15 kg.

For the boiler-stove to function properly, you MUST NOT burn anything else in it. Using other materials (including wood) will render the warranty null and void. Such use is detected by laboratory analyses.

Edilkamin has designed, tested and programmed their boiler-stoves to guarantee the best performance when pellets with the following characteristics are used:

diameter: 6 millimetres

maximum length: 40 mm

maximum moisture content: 8%

calorific value: at least 4300

If pellets with different characteristics are used, the boiler-stoves must be recalibrated – a similar procedure to that carried out by the

DEALER when the boiler-stove is ignited the first time.

Using unsuitable pellets may: decrease efficiency; cause malfunctions; stop the boiler-stove from functioning due to clogging, dirt on the glass, unburnt fuel, etc.

A simple, visual analysis of the pellets may be carried out:

Good quality: smooth, uniform length, not very dusty.

Poor quality: with longitudinal and transverse cracks, very dusty, various lengths and mixed with foreign matter.

INSTRUCTIONS FOR USE

OPERATION

The stove has two operational modes:

- MANUAL:

In the MANUAL operational mode, the stove works on the basis of the water temperature, read by the internal probe. According to the water temperature the stove autonomously modulates the working power so as to reach or maintain the temperature of the water that has been set.

To select the MANUAL operational mode push the left lever and set the desired room temperature (SET TEMP-ROOM) over 40° C, by means of rotating the knob itself or using the +/- keys. Confirmation is given with the ON/OFF keys.

To set the desired water temperature push the right lever and on the display the words "SET WATER TEMPERATURE" will appear.

To modify the set value, press and successively rotate the right side knob or use the +/- keys.

Confirmation is given with the ON/OFF keys.

- AUTOMATIC:

In the AUTOMATIC operational mode the stove works on the basis of room temperature, read from the probe located on the back right side.

According to the room, the stove autonomously modulates the work power so as to reach or maintain the temperature of the room that has been set.

To select the AUTOMATIC operational mode push the left knob and set the desired room temperature (SET TEMP-ROOM) UNDER 40° C, by means of rotating the knob itself or using the +/- keys. Confirmation is given with the ON/OFF keys.

Temperatures above 40° C will have the stove going to the MANUAL operational mode, working on the basis of the water temperature.

To set the desired room temperature push the left knob and on the display the words "SET TEMP-ROOM" will appear.

To modify the set value, press and successively rotate the right side knob or use the +/- keys.

Confirmation is given with the ON/OFF keys.

NOTE:

The default of the MANUAL/AUTOMATIC mode does not set out that the stove carries out the shutdown phase upon reaching the set temperature.

It is possible to have the STAND-BY function activated by the Technical Assistant who has carried out the 1st ignition and who evaluated the installation of the stove in the water plant.

When the STAND-BY function is active, the stove carries out the shutdown phase upon reaching the set temperature, to then carry out the ignition phase (such function could wear out the electrical resistance prematurely).

Panel On/Off button

Switches the stove on or off.

Within the menu, the On/Off button is used to return to the previous menu or to exit the current mode.

Panel +/- button

Increases or decreases the values that appear in the various operating modes.

Panel "reserve" button

Function to determine the amount of pellets remaining in the hopper. This function can be enabled or disabled through the user's menu, "reserve variation". If the "reserve" button is pressed, a default value of 15kg will be added.

The value can be modified, accessing the "reserve variation" user's menu; press the '+' or '-' buttons to increase or decrease this value by a minimum of 5 Kg up to a maximum of 15 Kg (if a value of 5 Kg is set, 5 Kg will be added every time the "reserve" button is pressed).

In case of an error, press the '-' to go back.

Panel button

Informs the user of the stove's status; if pressed within the menus it displays the previous menu/parameter.




LT knob

panel

RT knob

FILLING THE FEED SCREW (only if the stove has no pellets)

To load the feed screw, access the USER'S MENU, go to "INITIAL LOAD" and press the button. 

This should only be done with the stove off and completely cooled.

IGNITION

Automatic ignition

With the stove on stand-by (with the word "TURNED OFF" shown on the display), press the on/off button for 2 sec to start the ignition process; the word 'IGNITION PHASE-PRELOADING' (time during which the quantity of pellets necessary for ignition is loaded) is shown on the display followed by 'IGNITION PHASE' (time from which the glow plug is ignited and the flame is detected) and then 'IGNITION PHASE-WAIT FLAME' (time for which the stove awaits detection of the flame).

When the flame is detected, the electrical resistance switches off and the word "STABILIZATION" (time in which the stove monitors the increase in smoke temperature, which must increase by no more than 2 degrees per minute otherwise an alarm is triggered) appears on the display; once stabilization is complete and all the tests are positive, the word "WORK" appears on the display.

This procedure takes approximately 15 minutes.

Shutdown

By pressing the ON/OFF switch for 2 seconds while the stove is functioning, the shutdown procedure starts (circulator in operation, gear motor off, smoke extractor in operation) and the message 'STOVE IN SHUTDOWN MODE' is visualised, this procedure has a minimum duration of 15 minutes.

If the stove is blocked, see the alarms on page 14-15 or contact your local dealer or Authorised Service Centre (CAT).

USER'S MENU

A 'USER MENU' is present on the display, the functions of which can be explained by the Technical Assistance Centre that started from the 1st ignition.

INSTRUCTIONS FOR USE

SETTING THE TIME AND DATE

If the 'menu' button is pressed and the left knob is turned, "SET CLOCK" appears on the display.

If the 'menu' button is pressed again and the left knob is turned, the following data appear in sequence: Day of the week, time, minutes, day, month, and year which can be modified using the right knob.

With each click of the left knob, the value is confirmed.

Press the ON/OFF button or the knob itself to exit the programming menu.

DATE/TIME SETTING EXAMPLE:

Set clock Day Tuesday

Set clock Time 15:

Set clock Minutes :00

Set clock Day 7

Set clock Month 6



Set clock Year 11

TIMED THERMOSTAT FOR DAILY/WEEKLY PROGRAMMING

There are three possible programming modes (daily, weekly, and week-end), each of which is independent of the other and allows multiple combinations in order to meet different requirements (the times can be varied in increments of 10 minutes).

If the 'menu' button is pressed, "SET CHRONO" will appear on the display; if the 'menu' button is pressed again, or if the right knob is pressed 'SET CHRONO' is accessed and "ENABLE CHRONO" (by default it is set to OFF) appears on the display.

To view the 3 programming modes (daily, weekly, week-end) turn the right knob or use the buttons.  

To set the ignition/shutdown times, use the left knob or the buttons.  

To change the ignition/shutdown times use the right knob or the +/- buttons.

To exit the selected programming, use the ON/OFF button

Daily programming:

possibility of 2 ignitions/shutdowns throughout the day, repeated everyday.

Example: start1 10:00 stop1 12:00 start2 18:00 stop2 22:00

Weekly Programming

possibility of 4 ignitions/shutdowns throughout the day, choosing the days of the week as follows:

start1 06:00 stop1 08:00	start2 07:00 stop2 10:00	start3 19:00 stop3 22:00....
Monday on	Monday off	Monday on
Tuesday on	Tuesday off	Tuesday on
Wednesday off	Wednesday on	Wednesday on
Thursday on	Thursday off	Thursday on
Friday on	Friday off	Friday on
Saturday off	Saturday off	Saturday on
Sunday off	Sunday off	Sunday on

Week-end programming:

possibility of 2 ignitions/shutdowns during the week-end:

Example: start1 week-end 07:00

stop1 week-end 11:30

Example: start2 week-end 14:20

stop2 week-end 23:50

If the thermostat is active, an icon representing the clock will be visible next to the time.

ELECTRONIC EQUIPMENT

REMOTE CONTROL code 658830 - optional

SYMBOLS KEY

Note: depending on the production lots, two different symbols for the power button may be used ((X) - see fig. 1-2)



+	: button to increase the power/operating temperature
-	: button to decrease the power/operating temperature
A	: "AMBIENT" button; changes the desired ambient temperature (SET AMBIENT TEMP.)
P (fig. 1) M (fig. 2)	: "WATER TEMPERATURE" switch; varies the water temperature

- the remote control transmits by means of an infrared signal within a range of 4-5 metres.

The LED transmission signal must be in line with the receiving LED of the stove for the signal to be transmitted correctly. This must also be in a free-field environment, therefore, free of obstacles.

- The remote control works with 3V battery. Battery duration depends upon usage, however, the average duration is that of an entire season.

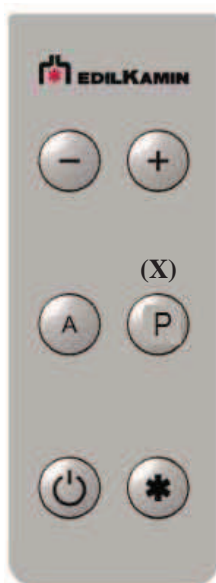
To replace the battery, remove the door, Y, where the battery is housed.

The discharged battery should be properly disposed of in accordance with current regulations in force.

- the remote control must be cleaned with a damp cloth and no detergents or liquids must be sprayed onto it. In any case, use neutral detergents which are free from aggressive substances.

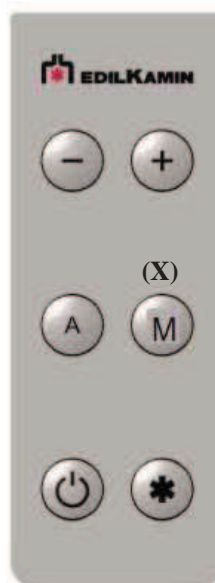
- handle the remote control with care. It could easily break if dropped, due to its size.

fig. 1



Y

fig. 2



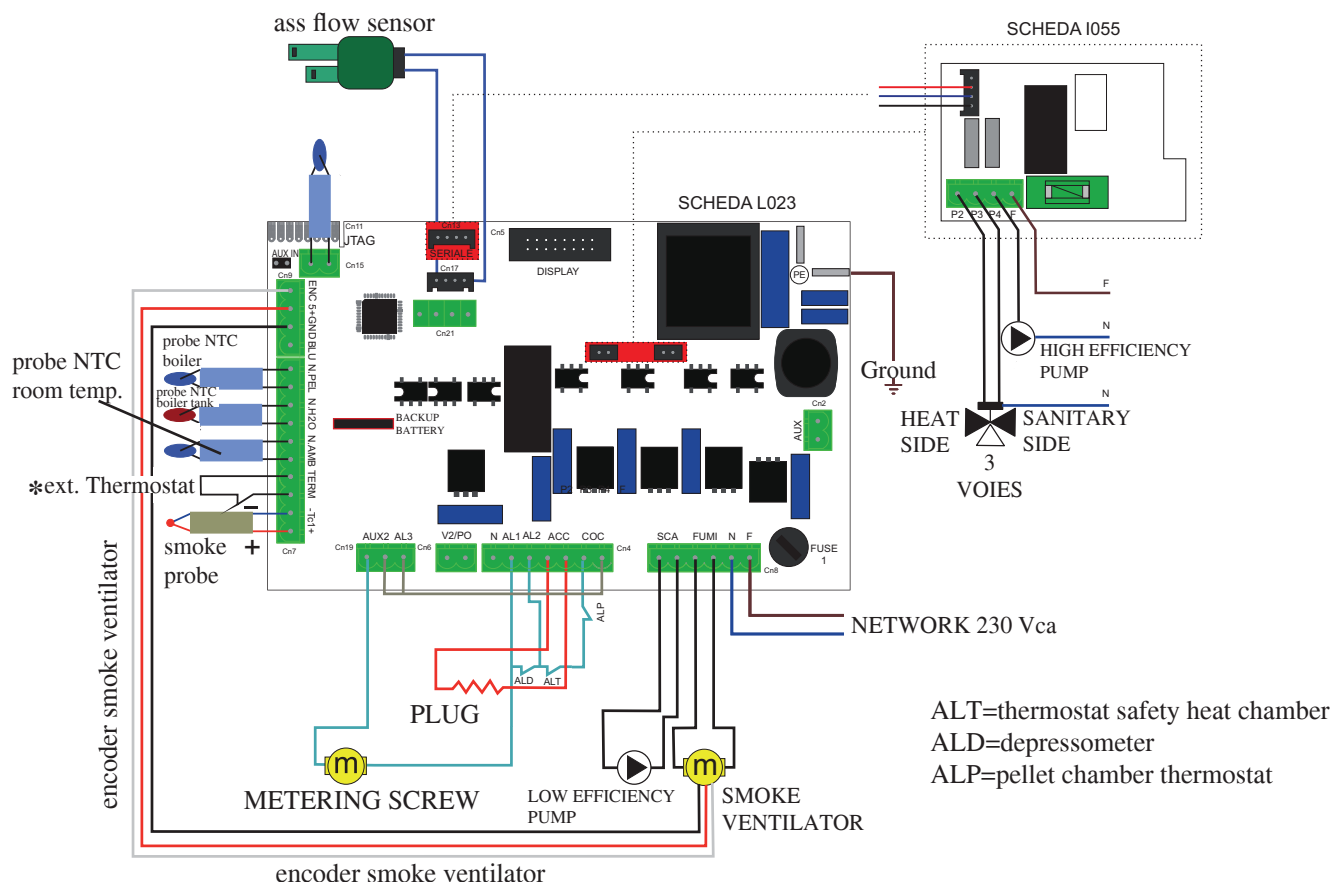
Y

NOTES:

- Operating temperature:	0-40 °C
- Storage temperature:	-10/+50°C
- Operating humidity is:	20-90% R.H with no condensation
- Degree of protection is:	IP 40
- Weight with battery inserted:	15 gr

ELECTRONIC EQUIPMENT

ELECTRONIC CIRCUIT BOARD



SAFETY DEVICES

THERMOCOUPLE:

placed at the smoke outlet to detect the temperature. Turns the stove on and off and controls its operation based on defined parameters.

AIR FLOW SENSOR:

placed in the air inlet channel. This intervenes if an anomaly is detected in the combustion air flow and causes insufficient circulation in the smoke ducts.

SAFETY THERMOSTAT:

trips when the temperature inside the stove is too high. It stops pellet loading, causing the stove to go out (see alarm A09 on pg. 21).

REMOTE IGNITION

On the circuit board, there is an input supplementary thermostat clean contact *) that can be used for remote ignitions via external thermostats. These devices must be installed by authorized CAT via an optional cable, code 640560.

BACKUP BATTERY

A backup battery is found on the control board (3-Volt CR 2032 battery).

For more detailed information, please contact the DEALER who has performed the first 1st ignition.

MAINTENANCE

Before performing any maintenance, disconnect the appliance from the mains.

FAILURE TO PERFORM REGULAR MAINTENANCE, at least on a **SEASONAL** basis, could lead to poor functionality. Any problems resulting from lack of maintenance will immediately void the warranty.

DAILY MAINTENANCE

Operations must be performed when the boiler-stove is off, cold and unplugged from the power supply

Cleaning should be carried out with the aid of a vacuum cleaner (see optional page. 23).

• THE CLEANING RODS (*) MUST BE AGITATED ONCE A DAY WITH THE GLOVE IN EQUIPMENT ALSO FREQUEN WHILE THE THERMO-STOVE IS IN FUNCTION) IN ORDER TO ALLOW FOR FUEL SAVINGS:

- Shake the cleaning bars located in the top front part, underneath the ceramic top (fig. 1).
- Open the door and remove and empty the ash pan (**) (fig. C).
- Remove the combustion chamber or use the spatula to scrape it and clean out any blocked holes on all sides.
- **DO NOT EMPTY THE RESIDUE OUT INTO THE PELLET HOPPER.**
- Remove the combustion chamber (1) and scrape with a spatula. Clean any obstructions in the apertures (fig. C).
- Suction the combustion chamber holder, clean the contact edges.
- Clean the glass, if necessary (when cold).

NEVER VACUUM HOT ASH, it can make the vacuum cleaner breakdown and puts the household rooms at risk of fire

ATTENTION !!!

After implementing a normal cleaning procedure, **INCORRECT** coupling of the upper and lower combustion chambers can compromise the stove's performance. Therefore, before igniting the stove, ensure that the combustion chambers are correctly coupled as shown in.



fig. 1

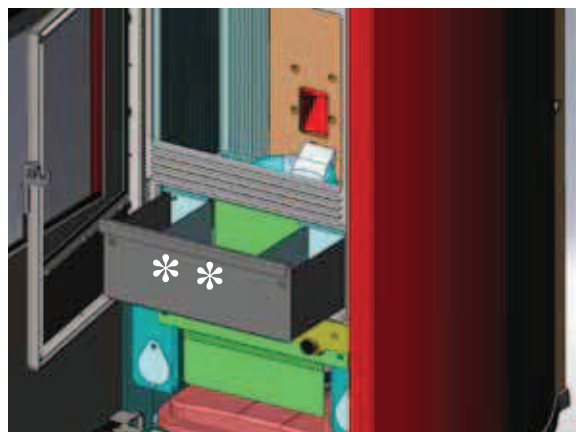


fig. 2

WEEKLY MAINTENANCE

- Involves cleaning the hearth (with a swab) once the ash pan has been removed (3 - fig. C).
- empty the pellet hopper and clean the base with the vacuum cleaner.
- Clean with the swabs (4 - fig. D), vacuum out the 3 pipes below (5 - fig. E)
- Clean out the combustion chamber and smoke extractor (6 - fig. E)



fig. 3



fig. 4

NOTE:

Upon reaching 2,500 hours of service of the stove, the display will show the writing 'SERVICE EXPIRATION'. The intervention of the Technical Assistance Centre (TAC) is necessary.

MAINTENANCE

Cleaning the smoke duct

• **With the boiler-stove off and cold, move the cleaning rods energetically (see page 18).**

Open the external pane, open the inspection hole of the left and right smoke pipes (fig. 5) and remove the residues (fig. 6).

The amount of residue will depend on the type of fuel and system.

Failure to carry out this cleaning procedure may cause the thermal boiler-stove to block.

ONCE THE PROCEDURE IS IMPLEMENTED, ENSURE THAT THE INSPECTION HATCH IS CLOSED PROPERLY.



fig. 5



fig. 6

SEASONAL MAINTENANCE (IMPLEMENTED BY THE DEALER)

Before performing any maintenance, disconnect the appliance from the mains.

The Dealer will provide you, on the occasion of the first start up, with the boiler-stove maintenance book, where the steps for seasonal

cleaning, outlined here below, are listed.

- Clean the thermal boiler-stove internally and externally
- Carefully clean the heat exchange tubes
- Carefully clean and remove dirt from the combustion chamber and the relative compartment
- Clean the motors, verify mechanical and clam loosening
- Clean smoke channel (replace seals on pipes) and smoke extraction fan chamber
- Check the expansion tank
- Check and clean the circulator
- Check the sensors
- Check and if necessary replace the clock battery on the control board
- Clean, inspect and scrape any residue from the ignition resistance compartment and if necessary, replace it
- Clean/check the Synoptic Panel
- Visually inspect the electrical wires, connections and power cable
- Clean the pellet hopper and check loosening of the feed screw - gear motor assembly
- Check and if necessary replace the door seal
- Functionality test: load the feed screw, ignite, let it run for 10 minutes and shutdown

If maintenance is not implemented, the warranty will be rendered null and void.

If the thermal boiler-stove is used very often, it is recommended to clean the smoke channel every 3 months.

REMEMBER TO VACUUM THE COMBUSTION CHAMBER BEFORE EACH IGNITION

Should ignition fail, DO NOT re-ignite until you have emptied the combustion chamber.

ATTENTION: DO NOT EMPTY THE RESIDUE OUT INTO THE PELLET HOPPER.

ADVICE FOR POTENTIAL PROBLEMS

In the event of a problem, the stove automatically carries out the shut-down procedure and shows the reason for shut-down on the display (see the various alarms below).

Never remove the plug during the shutdown phase caused by stoppage.

If stoppage occurs, to restart the stove, allow the shutdown process to take place (15 minutes with final beep) and then press the button.

Reignite the stove only once you have verified the cause of stoppage and RECLEANED/EMPTIED the combustion chamber.

POSSIBLE CAUSES OF STOPPAGE AND INSTRUCTIONS AND SOLUTIONS

A01 Stove does not ignite

(occurs when the smoke temperature during start-up does not exceed the minimum threshold)

- Combustion chamber dirty or too many pellets
- No more pellets
- Chimney flue obstructed
- Likely faulty electrical resistance

A02 water probe

(occurs when the stove no longer reads the probe)

- Broken water probe
- Disconnected water probe

A03 insufficient draught

(occurs when the flow of combustion air falls below the minimum allowable threshold)

- Chimney flue obstructed
- Door open
- Combustion chamber clogged
- Debimeter (air flow sensor) dirty
- Door gasket needs replacing

A05 hot smoke

(occurs when the smoke temperature exceeds the established safe temperature)

- Chimney flue obstructed
- Incorrect installation
- Stove clogged
- Pellet load high, check pellet adjustment (CAT)

A06 No pellets

(occurs when the pellet supply is exhausted; the display flashes following a “beep” sound)

- No pellets remaining in the hopper
- Gear motor not working
- Pellet inlet channel/feed screw obstructed
- Pellet load low, check pellet adjustment

A07 smoke sensor broken (occurs when the stove no longer reads the sensor)

- Thermocouple broken
- Thermocouple disconnected

A08 black out (not a defect of the stove)

(occurs if there has been an interruption in power lasting more than 5 seconds)

The stove has a “black out” function.

In the event of a power black out lasting less than 5 seconds, the stove will restart and return to the last function prior to shutdown.

If the black out time exceeds 5 seconds, the stove’s “black out” alarm is triggered, with the resulting cooling phase.

A list of the various possibilities is in the following page:

ADVICE FOR POTENTIAL PROBLEMS

Stove status before the black out	Interruption time less than PR “black out delay”	Interruption time greater than PR “black out delay”
OFF	OFF	OFF
PRELOAD	BLACK OUT	BLACK OUT
IGNITION	BLACK OUT	BLACK OUT
START	START	STANDY-BY THEN REIGNITION
OPERATION	OPERATION	STANDY-BY THEN REIGNITION
FINAL CLEANING	FINAL CLEANING	FINAL CLEANING
STAND-BY	STAND-BY	STAND-BY
ALLARM	ALLARM	ALLARM
ALARM MEMORY	ALARM MEMORY	ALARM MEMORY

A09 safety thermal

- Excessive pellet load in combustion chamber
- Stove/chimney flue dirty

A11 triac error

(occurs in the event of a board malfunction)

- Failure check carried out by technician
- replace the circuit board

A12 smoke extractor malfunction

(occurs when the circuit board does not read the smoke extractor revs; call CAT)

- Smoke extractor blocked
- Speed sensor not working
- Smoke extractor not working
- Smoke motor thermostat intervention
- No earth connection
- faulty circuit board

A13 hot water

(occurs when the water temperature into the boiler is over 90°C)

- Check the hydraulic circuit
- Check for air into the circuit
- Check circuit valves/taps
- Check stove cleaning
- Check exhaust outlet
- Seek Technical Assistance

FAQ

The answers are listed below in summary form, for further details see the other pages of this document.

1) What do I need to prepare in order to install the boiler-stoves?

Smoke outlet that is at least 80 mm in diameter.

An air inlet in the room that is at least 80 cm².

¾" G outlet and inlet fitting.

¾" G drains connection for overpressure valve.

¾" G load fitting.

A certified electrical connection with a thermal magnetothermic switch 230V +/- 10% 50 Hz.

(assess the division of primary and secondary circuits).

2) Can the boiler-stove work without water?

NO. Using the boiler-stove without water will damage it.

3) Do IDROFLEXA boiler-stoves emit hot air?

NO. Most of the heat is transferred to the water.

Emit a small amount in the installation environment in the form of radiation from the glass hearth. It is advisable in any case to use a radiator in the same room.

4) Can I connect the inlet and outlet of the boiler-stove directly to a radiator?

NO, just like other boilers, it must be connected to a collector from which the water is then distributed to the radiators.

5) Do boiler-stoves also supply hot sanitary water?

It is possible to produce hot sanitary water evaluating the power of the stove and the water plant.

6) Can I discharge the smoke from the boiler-stoves along the wall?

NO, a discharge which is conform with standards (UNI 10683/05) must reach the ridge of the roof, and in any case proper functioning requires a vertical stroke of at least 1.5 meters; avoiding that in case of power outage or wind, a slight amount of smoke forms in the installation environment.

7) Do I need an air inlet in the room where it is installed?

Yes, to replenish the air used by the boiler-stove for combustion. The smoke extractor draws the air from the room into the combustion chamber.

8) What settings are required on the boiler-stove display?

The desired water temperature or that of the room; the boiler-stove will then adjust the power accordingly to obtain or maintain this.

For small systems, a mode can be set that ignites and shuts down the boiler-stove accordingly, as the water temperature is reached. (contact DEALER for initial start up)

9) How often do I need to clean the combustion chamber?

Before you ignite the boiler-stove, every time, when it is off and cold. AFTER HAVING BRUSHED THE EXCHANGER PIPES and moved the smoke duct cleaning rods (see page 18).

10) Do I need to vacuum the pellet hopper?

Yes, at least once a month when the boiler-stove is not used for some time.

11) Can I burn other fuel apart from pellets?

NO. The boiler-stove has been designed to burn wood pellets that are 6 mm in diameter. Any other material can damage it.

CHECK LIST

To be integrated with a complete reading of the technical specifications

Positioning and installing

- Commissioned by a qualified DEALER who has issued the warranty and maintenance manual
- Room ventilation
- Only the boiler-stove outlet passes through the smoke channel/chimney flue
- The smoke channel has: a maximum of 2 curves, a maximum 2 horizontal metres
- Chimney pot that is high enough to avoid downdraft areas
- The discharge pipes are made of a suitable material (stainless steel is recommended)
- When using any flammable materials (e.g. wood), all precautions have been taken to prevent a fire hazard

Use

- Good quality, dry pellets are used
- The chimney pot and ash compartment are clean and well positioned
- The door is closed properly
- The combustion chamber is inserted properly into the relevant compartment

REMEMBER TO VACUUM THE COMBUSTION CHAMBER BEFORE EACH IGNITION
Should ignition fail, DO NOT re-ignite until you have emptied the combustion chamber.

OPTIONAL

REMOTE CONTROL (optional- code 658830)

CLEANING ACCESSORIES



GlassKamin
(code 155240)

Used for cleaning
the ceramic glass



Ash vacuum cleaner
without motor
(code 275400)

Used for cleaning
the hearth