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PELLET THERMOSTOVE

INSTALLATION, USE AND MAINTENANCE MANUAL

AQUOS 15 - AQUOS 22 - AQUOS 22 H2O

IBIS 11 - IBIS 15 - IBIS 22 - IBIS 22 H2O

IDRON 11 - IDRON 15 - IDRON 22 - IDRON 22 H2O

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1 INTRODUCTION

1.1 DEAR CUSTOMER

Thank you for having chosen our product.
To allow for optimal operation and for you to enjoy the warmth and sense of wellbeing that the fire can convey in your home, we advise you to read this manual carefully before starting up the product for the first time.

1.2 REVISIONS TO THE PUBLICATION

The content of this manual is strictly technical and property of CADEL srl.
No part of this manual can be translated into another language and/or altered and/or reproduced, even partially, in another form, by mechanical or electronic means, photocopied, recorded or similar, without prior written approval from CADEL srl.
The company reserves the right to make changes to the product at any time without prior notice. The proprietary company reserves its rights according to the law.

1.3 CARE OF THE MANUAL AND HOW TO CONSULT IT

- Take care of this manual and keep it in an easily accessible place.
- Should the manual be misplaced or ruined, request a copy from your retailer or directly from the authorised Technical Assistance Department.

1.4 SYMBOLS USED IN THE MANUAL

	ATTENTION: carefully read and understand the relative message because failure to comply with what is written can cause serious damage to the product and put the user's safety at risk.
	INFORMATION: failure to comply with these provisions will compromise the use of the product.
	OPERATING SEQUENCES: sequence of buttons to be pressed to access the menus or make adjustments.
	MANUAL carefully read this manual or the relative instructions.

2 WARNINGS

- Installation, electrical connection, functional verification and maintenance must only be performed by qualified or authorised personnel.
- Install the product in accordance with all the local and national laws and Standards applicable in the relative place, region or country.
- This product is not intended for use by persons (including children) with reduced physical, sensory or mental
- capabilities, or lack of experience and knowledge, unless they are supervised or trained on how to use the product by a person responsible for their safety.
- Only use fuel recommended by the company. The product must not be used as an incinerator. It is strictly forbidden to use liquid fuel.
- The instructions provided in this manual must always be complied with to ensure the product and any electronic appliances connected to it are used correctly and accidents are prevented.
- The user, or whoever is operating the product, must read and fully understand the contents of this installation and use guide before performing any operation. Errors or incorrect settings can cause hazardous conditions

and/or poor operation.
- Do not use the product as a ladder or supporting structure.
- Do not place laundry on the product to dry. Any clothes horses or similar objects must be kept at a safe distance from the product.
- Fire hazard.
- All liability for improper use of the product is entirely borne by the user and relieves the Manufacturer from any civil and criminal liability.
- Any type of tampering or unauthorised replacement with non-original spare parts could be hazardous for the operator's safety and relieve the company from any civil and criminal liability.
- Most of the surfaces of the product are very hot (door, handle, glass, smoke outlet pipes, etc.). Avoid contact with these parts unless adequate protective clothing is worn or appropriate means are used, such as heat protective gloves or cold handle type operating systems.
- It is forbidden to operate the product with the door open or the glass broken.
- The product must be powered by a system that is equipped with an effective earth system.
- Switch the product off in the event of a fault or malfunctioning.
- Accumulated unburned pellets in the burner after each "failed start-up" must be removed before starting up again.
- Do not wash the product with water. The water could get inside the unit and damage the electrical insulation and cause electric shocks.
- Do not stand in front of the product for a long time. Do not overheat the room where the product is installed. This could cause injuries and health problems.
- Do not put any fuel other than wood pellets in the hopper.
- Install the product in rooms that are adequately protected against fire and equipped with all the utilities such as supplies (air and electricity) and smoke outlets.
- If a fire breaks out inside the chimney, switch the appliance off, disconnect it from the mains and do not open the door. Then contact the competent authorities.
- The product and the ceramic/serpentine cladding must be stored in a place where there is no humidity and must not be exposed to the elements.
- It is recommended not to remove the feet that support the product in order to guarantee adequate insulation, especially if the flooring is made of flammable material.
- If the ignition system is faulty, do not force ignition with flammable materials.
- Special maintenance must only be performed by authorised and qualified personnel.
- Assess the static conditions of the surface on which the weight of the product will rest and provide suitable insulation if it is made of flammable material (e.g. wood, fitted carpet or plastic).

2.1 INFORMATION:

Please contact the retailer or qualified personnel authorised by the company to resolve a problem.
- only fuel stipulated by the company must be used.
- Check and clean the smoke outlet pipes regularly (connection with the product).
- The product is not a cooking appliance.
- Always keep the cover of the fuel hopper closed.
- Keep this instruction manual in a safe place as it must accompany the product throughout its working life. If it is sold or transferred to another user, always make sure that the manual accompanies the product.
- According to (EU) No. 305/2011 regulation, the " Declaration of Performance" is available online at the web sites www.cadelsrl.com / www.free-point.it.

2.2 INTENDED USE

The product only works with wood pellets and must be installed indoors.

2.3 INTERVENTION REQUEST

The company declines all liability if the product and any other accessory is used incorrectly or altered without authorisation.
All parts must be replaced with original spare parts.

The request must be sent to the retailer who will forward it to the Technical Assistance Service.

2.4 SPARE PARTS

Only use original spare parts. The retailer or service centre can provide all the useful information regarding spare parts.
It is recommended not to wait for the parts to be worn before having them replaced. It is important to perform regular maintenance.

3 WARNINGS FOR THE CORRECT DISPOSAL OF THE PRODUCT

The owner is the sole party responsible for demolishing and disposing of the product. This must be performed in compliance with laws related to safety and environmental protection in force in his/her country.
At the end of its working life, the product must not be disposed of as urban waste.
It must be taken to a special differentiated waste collection centre set up by the local authorities or to a retailer that provides this service.
Separating and recycling prevents potential negative effects on the environment and health (often caused by inappropriately disposing of product parts). It also allows materials to be recovered in order to obtain significant savings in energy and resources.

4 WARRANTY CONDITIONS

The company guarantees the product, **with the exception of elements subject to normal wear** listed below, for a period of **2 (two) years** from the date of purchase attested by:

- a document to serve as proof of purchase (invoice and/or receipt) that shows the name of the vendor and the date on which the purchase was made;
- forwarding of the completed certificate of guarantee within 8 days of purchase.

Furthermore, the product must be installed and started by specialised personnel who must, where provided, issue a declaration of conformity of the plant and of the proper functioning of the product, for the warranty to be valid and effective.
We recommend testing the product before completion with the relative finishes (claddings, painting of walls, etc.).
Installations not meeting the current standards, improper use and lack of maintenance as expected by the manufacturer, void the product warranty.
The guarantee is valid on the condition that the instructions and warnings contained in the use and maintenance manual are observed, and therefore the product is used correctly.
The replacement of the entire system or the repair of one of its components does not extend the guarantee period, and the original expiry date remains unchanged.
The guarantee covers the replacement or free repair **of parts recognised as being faulty at source due to manufacturing defects**.
To benefit from the guarantee, in the event of a fault, the customer must have the guarantee certificate and present it with the proof of purchase document to the Technical Assistance Office.

The guarantee does not cover malfunctions and/or damage to the appliance that arise due to the following causes:

- Damage caused during transportation or relocation.
- All parts that develop faults due to negligence or improper use, incorrect maintenance, installation that does not comply with the manufacturer's instructions (always refer to the installation and use manual provided with the appliance).
- Incorrect dimensioning with regards to the use or faults in the installation or failure to adopt the necessary devices to guarantee proper execution.
- Improper overheating of the equipment, use of fuels not conforming to the types and quantities indicated in the instructions provided.
- Further damage caused by incorrect user interventions in an attempt to fix the initial fault.
- Worsening of the damage due to the continued use of the equipment by the user, once the defect has been noticed.
- In the presence of a boiler, any corrosions, incrustations or breaks caused by water flow, condensation, hardness or acidity of the water, improperly performed descaling treatments, lack of water, mud or limescale deposits.
- Inefficiency of chimneys, flues or parts of the plant affecting the equipment.
- Damage caused by tampering with the appliance, atmospheric agents, natural disasters, vandalism, electrical discharges, fires, faults in the electric and/or hydraulic system.

Also excluded from this guarantee are:

- Parts subject to normal wear such as gaskets, glass, claddings and cast iron grids, painted, chrome-plated or gilded parts, handles and electric cables, bulbs, indicator lights, knobs, all parts which can be removed from

the hearth.
- Variations in colour of the painted or ceramic/serpentine parts and craquelure ceramics as they are natural characteristics of the material and product use.
- Masonry work.
- Plant parts (if present) not supplied by the manufacturer.

Any technical interventions on the product to eliminate the above-said defects and consequent damages must be agreed upon with the Technical Assistance Centre, who reserves the right to accept the relative appointment or not. However, said interventions will not be carried out under warranty but as technical assistance to be granted at part of any eventual and specific agreed conditions and in accordance with the fee in force for the work to be carried out.
The user will also be charged for any costs incurred to remedy the incorrect technical interventions, tampering or damage to the appliance, not attributable to original faults.
Save for the legal or regulatory limits, the guarantee does not cover the containment of atmospheric and acoustic pollution.

The company declines all liability for any damage which may be caused, directly or indirectly, to persons, animals or objects as a consequence of non compliance with any prescription specified in the manual, especially warnings regarding installation, use and maintenance of the appliance.

5 INSTALLATION INSTRUCTIONS

The requirements in this chapter refer to the regulations of the Italian installation Standard UNI 10683. In any case, always comply with the regulations in force in the country of installation

5.1 PELLETS

Wood pellets are manufactured by hot-extruding compressed sawdust which is produced during the processing of natural dried wood (without paints). The compactness of the material is guaranteed by the lignin contained in the wood itself and allows pellets to be produced without glue or binders.
The market offers different types of pellets with characteristics that vary according to the wood mixtures used. The diameter varies between 6 and 8 mm, with a standard length ranging from 5 to 30 mm. Good quality pellets have a density that varies between 600 and over 750 kg/m3, with a moisture content that ranges from 5% to 8% of its weight.
Pellets have technical advantages besides being an ecological fuel, as the wood residue is used completely, thereby achieving cleaner combustion than that of fossil fuels.
Good-quality wood has a calorific value of 4.4 kW/kg (15% moisture, after about 18 months of seasoning), whereas that of pellets is 4.9 kW/kg. To ensure good combustion, the pellets must be stored in a dry place and protected from dirt. Pellets are usually supplied in 15 kg bags, therefore, storing them is very convenient.
Good quality pellets guarantee good combustion, thereby decreasing harmful emissions into the atmosphere.

Fig. 1 - Pellet's bag

The poorer the quality of the fuel, the more often the internal parts of the brazier and combustion chamber must be cleaned.

DINplus, Ö-Norm M7135 and Pellet gold are examples of the major quality certifications of pellets in the European market and guarantee that the following are complied with:
- calorific value: 4.9 kWh/kg.
- Water content: max 10% of the weight.
- Percentage of ash: max 0.5% of the weight.
- Diameter: 5 – 6 mm.
- Length: max 30 mm.

- Content: 100% untreated wood with no added binding agents (max percentage of bark: 5%).
- Packaging: in bags made from environmentally friendly or biologically decomposable material.

The company strongly recommends using certified fuel for its products (DINplus, Ö-Norm M7135 or Pellet Gold).
Poor quality pellets or others that do not comply with that specified previously compromises the operation of your product and can therefore render the warranty and product liability null and void.

5.2 PRECAUTIONS REGARDING INSTALLATION

IMPORTANT!
Product installation and assembly must be carried out by qualified personnel.

The product must be installed in a suitable place for it to be regularly opened and routine maintenance to be performed.
The site must be:

- compliant for proper operation.
- Equipped with an adequate smoke expulsion system.
- Equipped with ventilation intake from outside.
- Equipped with 230V 50 Hz power supply with an EC compliant earth system.

The product must be connected to a chimney or an internal or external vertical duct that complies with the regulations in force. The product must be positioned in such a way that the electrical socket is accessible.

IMPORTANT!
The product must be connected to a chimney or a vertical duct that can expel the smoke at the highest point of the building.
In any case smoke derives from combustion of types of wood and if it comes in contact with or close to walls, these can become dirty. Moreover, utmost attention is required as they are almost invisible but very hot and can cause burns. The holes of the external air inlet and the smoke outlet pipe must be drilled before positioning the product.

5.3 THE OPERATING ENVIRONMENT

In the case of presence of other heating appliances, appropriate air inlets must provide appropriate air flow for the proper running of each appliance.
In case that in the place where the appliance is installed, other extraction funs (for example exhaust fans) are present and running, disease can be caused because of the lack of combustion air.

The installation of the product is not allowed in bedrooms, bathrooms or in rooms where it has already been installed another heating appliance without independent air inlet (fireplace, stove, etc.).
It is forbidden to install the product in places with explosive athmosfere.
The floor where the appliance is installed must be properly dimensioned in order to bear its weight.
The ambient ventilation can be adjusted towards the rear wall only in case of the presence of a proper duction insulated from hot air flow.

5.4 MINIMUM DISTANCES

If the walls are not flammable place the stove at a minimum rear distance of at least 10 cm. In case of flammable walls keep the stove at a minimum rear distance (A) of 5 cm, lateral (B) of 10 cm, minimum distance from the pipe to the wall (E) 50 and front distance of 100 cm.
In case of presence of object considered flammable such as pieces of furniture, curtains and sofas the distance from the stove must considerably be increased,

If the floor is made of wood, it is recommended to place a floor protection in accordance with the Standards in force in the country of installation.

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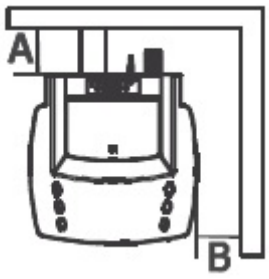


Fig. 2 - Distances to follow

TYPE	NON-FLAMMABLE WALLS	FLAMMABLE WALLS
AQUOS 15-22-22 H2O	A = 5 cm / B = 5 cm	A = 10 cm / B = 10 cm
IBIS 11-15-22-22 H2O	A = 5 cm / B = 5 cm	A = 10 cm / B = 10 cm
IDRON 11-15-22-22 H2O	A = 5 cm / B = 5 cm	A = 10 cm / B = 10 cm

5.5 CONNECTION OF THE FUME EXHAUST PIPE

When making the hole for the passage of the smoke discharge pipe, one must take into account the possible presence of flammable materials. If the hole must be made through a wooden wall or thermolabile material, the INSTALLER MUST first of all use the appropriate wall fitting (minimum diameter 13 cm) and suitably insulate the pipe of the product that passes through it using adequate insulating materials (1.3 - 5 cm thick with minimum thermal conductivity 0.07 W/m°K).
The same minimum distance must be applied if the pipe of the product must pass through vertical or horizontal sections near the thermolabile wall.
It is recommended to use an insulated double-wall pipe in external sections in order to prevent condensation from forming.
The combustion chamber works with depression. The fume pipe for fume exhaust will be in depression when conncted to an efficient chimney flow.

Always use pipes and fittings with appropriate seals that guarantee tightness.

It must be possible to inspect all sections of the flue duct and they must be removable for periodic internal cleaning (T-fitting with inspection hole).

Position the product considering all the above requirements and instructions.

IMPORTANT!
All 90° angles (max. 3) in the smoke exhaust duct must be preferably fitted with the relative T-fittings with inspection hole.
TO THE CONNECTION WITH THE CHIMNEY FLUE THERE CANNOT BE USED MORE THAN 2-3 mt (WITH INCLINATION BELOW 3%) OF HORIZONTAL PIPE AND THERE MUST NOT BE USED MORE THAN 3 CURVES WITH ANGLE \x3e 90°. IT IS FURTHER ADVISABLE NOT TO EXCEED THE LENGHT OF 6 METERS WITH THE Ø 80 mm PIPE.

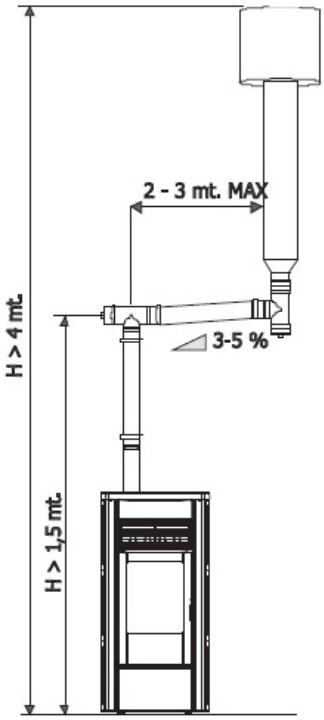
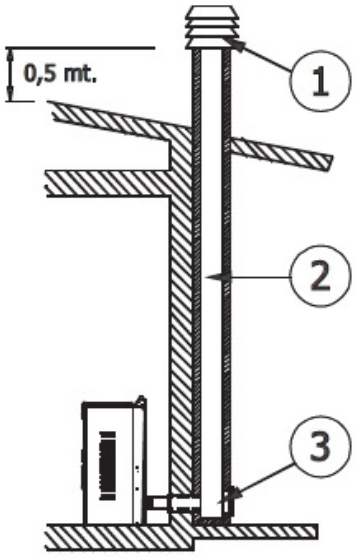
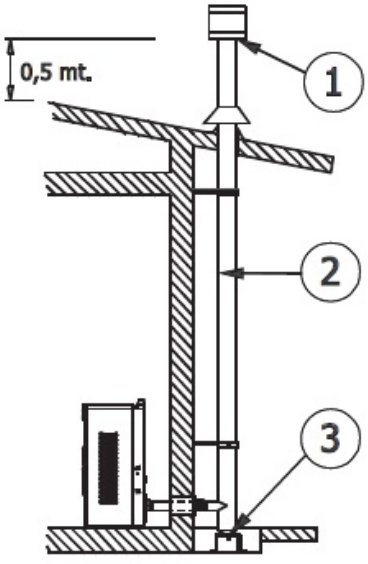
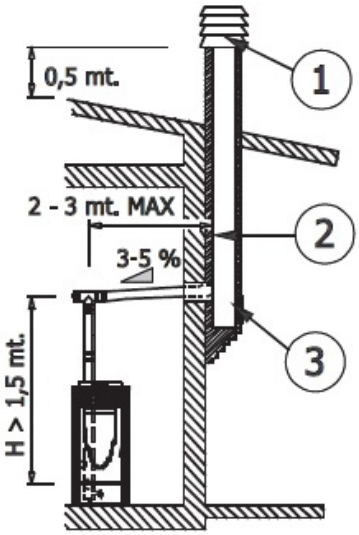


Fig. 3 - Pellet stove installation example

5.6 CONNECTIONS

CONNECTION TO THE FLUE PIPE	CONNECTION TO AN EXTERNAL DUCT WITH AN INSULATED OR DOUBLE-WALL PIPE	CONNECTION TO THE FLUE PIPE
The internal dimensions of the chimney pipe must not exceed 20x20 cm or 20 cm in diameter; in the event of bigger sizes or bad chimney conditions (e.g. cracks, poor insulation, etc.), it is advisable to fit a stainless steel pipe of suitable diameter throughout the length of the chimney right to the top.	The minimum internal dimensions of the external duct must be 10x10 cm or 10 cm in diameter and must not exceed 20x20 cm or 20 cm in diameter. Only stainless steel insulated (double-wall) pipes must be used, which are smooth on the inside and fixed to the wall. Flexible stainless steel pipes must not be used.	The connection between the product and the flue or the smoke duct must not have an inclination below 3% in the horizontal sections, which must have a maximum overall length of 2/3 m. The vertical section between one T-fitting and another (angle) must not be less than 1.5 m.
		

LEGEND	
1	Windproof
2	Flue
3	Inspection

Use adequate instruments to verify that there is a minimum draught of 5 Pa.
Set-up an inspection hole at the bottom of the chimney to perform periodic checks and cleaning, which must be done annually.
The connection to the chimney must be sealed and the fittings and pipes recommended by us must be used (CE marked in accordance with EN1856-2 with the minimum requisites: T200 and P1).
You must ensure that a windproof chimneypot is installed in accordance with the regulations in force.
This type of connection guarantees smoke expulsion even in the event of a temporary power cut.

5.7 OPERATING PROBLEMS RELATED TO DRAUGHT DEFECTS IN THE CHIMNEY

Among all the weather and geographical conditions that affect chimney operation (rain, fog, snow, altitude a.s.l., exposure to sunlight, orientation to the cardinal points, etc.), the wind is certainly the most determinant. In fact, besides the thermal depression caused by the difference in temperature between inside and outside the chimney, there is another type of depression (or overpressure): dynamic pressure caused by the wind. An updraft always increases depression and therefore the draught. A horizontal wind increases depression provided the chimneypot has been installed properly. A downdraft always decreases depression, at times inverting it.

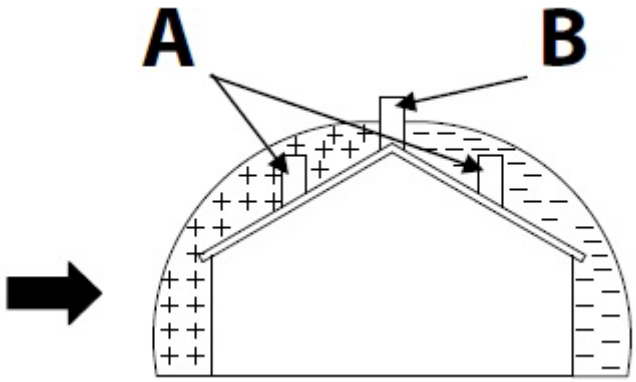


Fig. 4 - Example of depression

LEGEND	
A	Less favourable points
B	Most favourable position

Besides the direction and force of the wind, the position of the chimney and the chimneypot with respect to the roof of the building and the surrounding landscape is also important.
The wind also affects chimney operation indirectly by creating overpressure and depression zones within the building as well as outside. An internal overpressure can be created in rooms that are directly exposed to the wind (2), which can enhance the draught in stoves and fireplaces, however, it can be counteracted by the external overpressure if the chimneypot is situated on the side exposed to the wind (1). On the other hand, a dynamic depression can be created in rooms that are opposite the wind direction (3), which competes with the natural thermal depression generated by the chimney, however, this can be compensated for (sometimes) by placing the smoke duct opposite the wind direction (4).

IMPORTANT!
The operation of the pellet product is significantly affected by the chimney layout and position.
Hazardous conditions can only be resolved by qualified personnel setting the product appropriately.

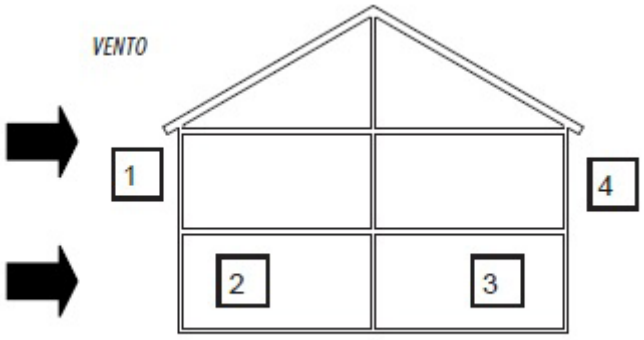


Fig. 5 - Wind influence

6 TECHNICAL DRAWINGS AND CHARACTERISTICS

6.1 DIMENSIONS

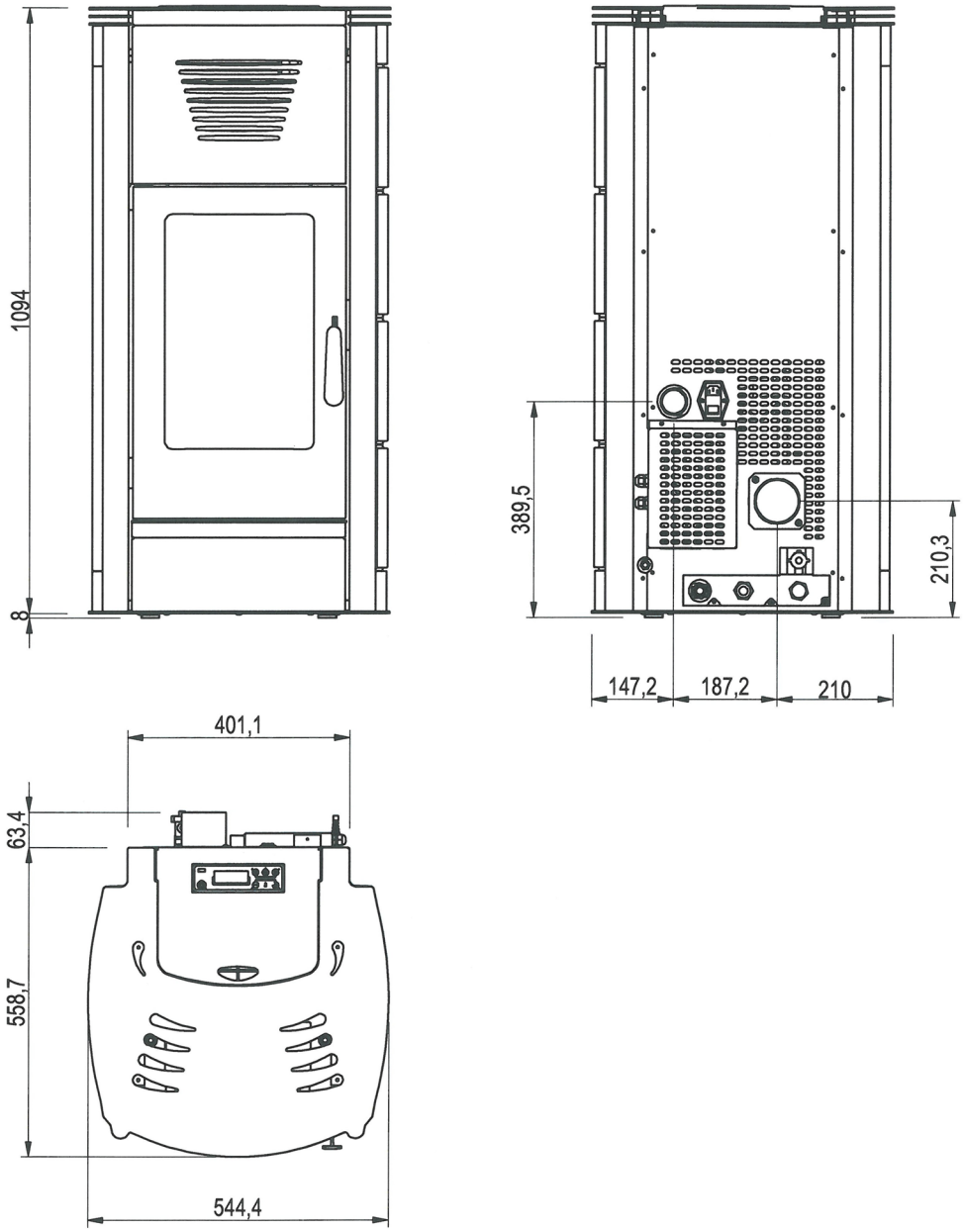


Fig. 6 - Aquos 15 - Aquos 22 - Aquos 22 H2O dimensions

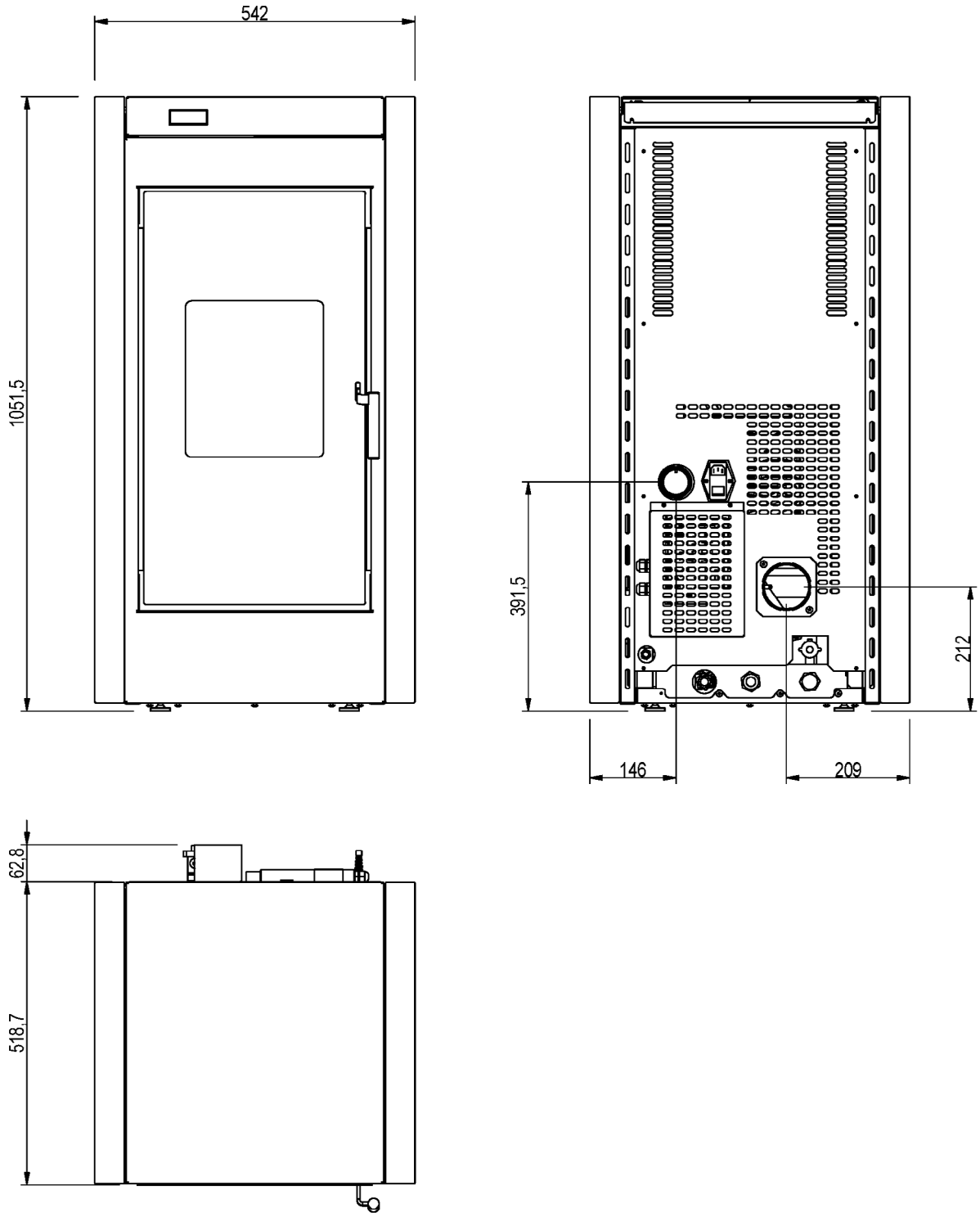


Fig. 7 - Ibis 11 dimensions

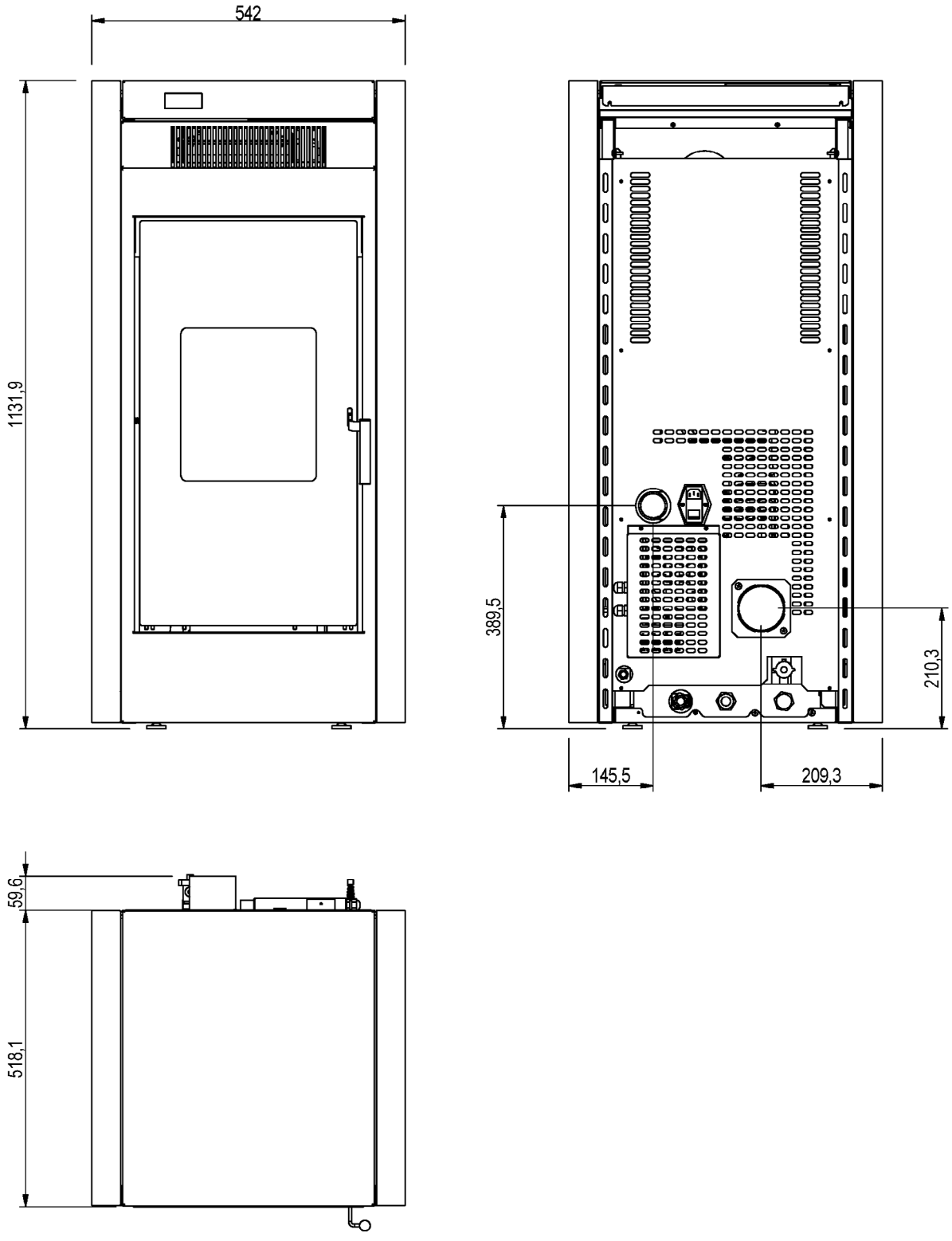


Fig. 8 - Ibis 15 - Ibis 22 - Ibis 22 H2O dimensions

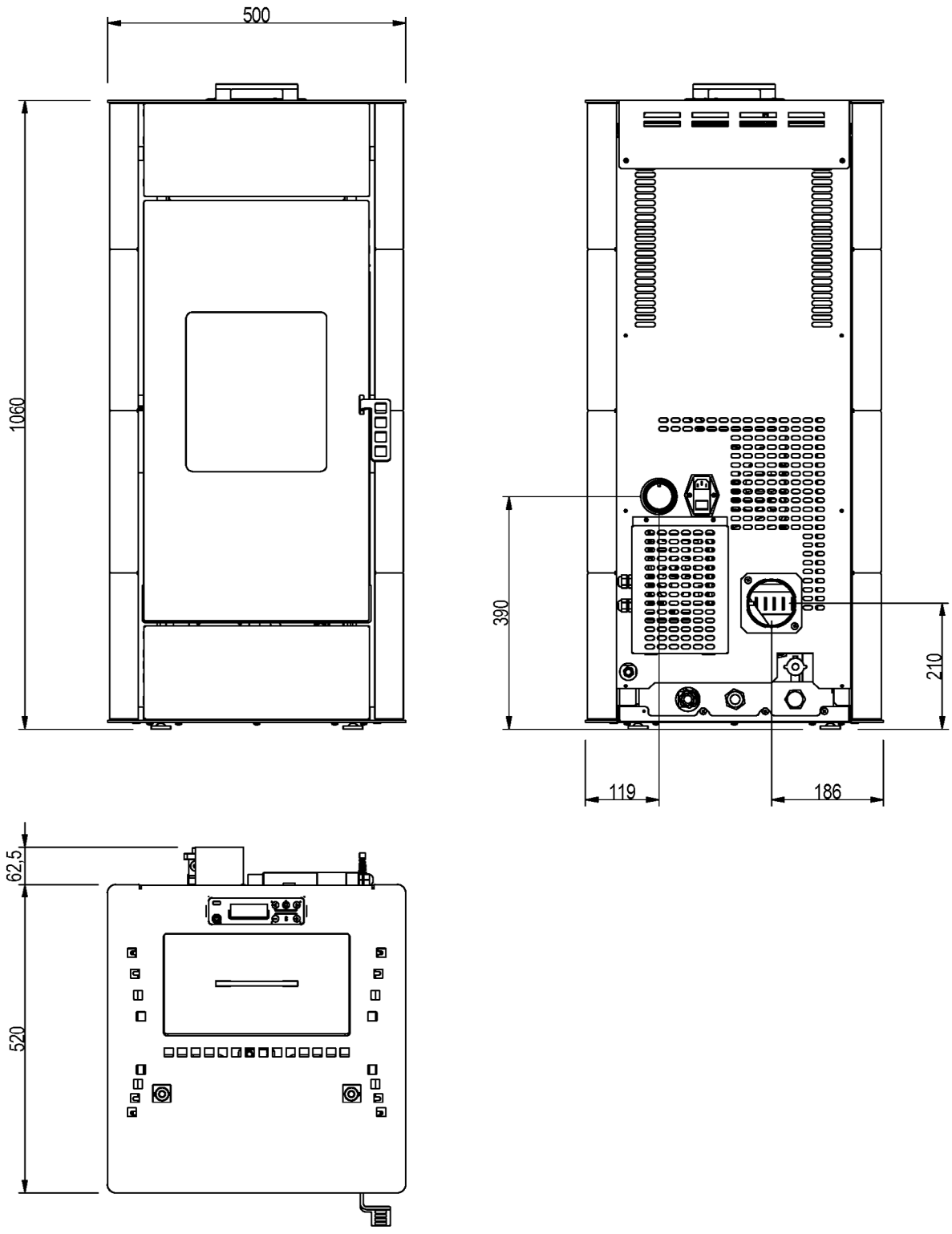


Fig. 9 - Idron 11 dimensions

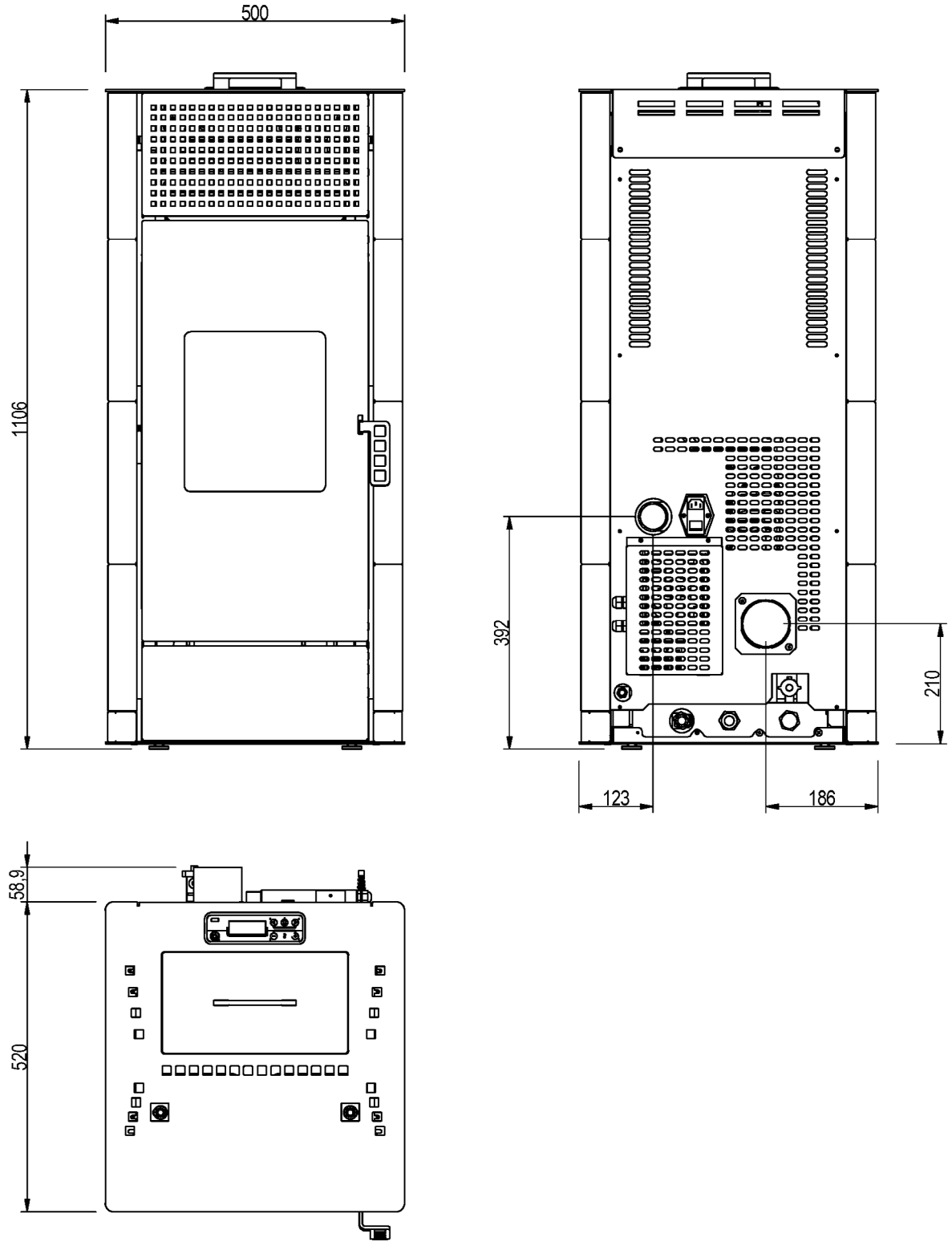


Fig. 10 - Idron 15 - Idron 22 - Idron 22 H2O dimensions

TECHNICAL CHARACTERISTICS	AQUOS 15	AQUOS 22	
(Max) total thermal power:	15,4 kW (13244 Kcal/h) / 13 kW (11180 Kcal/h)	21 kW (18060 Kcal/h) / 17 kW (14620 Kcal/h)	
(Max) total thermal power:	4,4 kW (3784 Kcal/H) / 3 kW (2580 Kcal/h)	4,4 kW (3784 Kcal/h) / 3 kW (2580 Kcal/h)	
(Max) Introduced power:	16,6 kW	22,6 kW	
Efficiency at Max	92,1 %	92,5 %	
Efficiency at Min	95,0 %	95 %	
Temperature of exhaust smoke at Max	145 °C	160 °C	
Temperature of exhaust smoke at Min	71 °C	71 °C	
Particulate/OGC/Nox (13% O_2)	1,5 mg/Nm^3 - 0,32 mg/Nm^3 - 123 mg/Nm^3 (13% O_2)	1,7 mg/Nm^3 - 0,15 mg/Nm^3 - 132 mg/Nm^3 (13% O_2)	
CO at 13% O_2 at Min and at Max	0,040 - 0,011 %	0,040 - 0,012 %	
CO_2 at Min and at Max	7,03% - 11%	7,0 % - 12,5 %	
Recommended draught at Max power	0,10 mbar - 10 Pa	0,10 mbar - 10 Pa	
Recommended draught at Min power	0,05 mbar - 5 Pa	0,05 mbar - 5 Pa	
Mass of smoke at Min and at Max	4,5 - 10,4 g/sec	4,5 - 12,6 g/sec	
Hopper capacity	44 litri	44 litri	
Type of pellet fuel	Pellet d.6-8 x 5-30 mm	Pellet d.6-8 x 5-30 mm	
Pellet hourly consumption *	Min ~ 0,9 kg/h - Max ~ 3,4 kg/h	Min ~ 0,9 kg/h - Max ~ 4,9 kg/h	
Autonomy *	Min ~ 32 h - Max ~ 9 h	Min ~ 28 h - Max ~ 5 h	
Heatable volume m^3 **	332/40 - 379/35 - 443/30	452/40 - 516/35 - 602/30	
Combustion air inlet	External diameter 50 mm	External diameter 50 mm	
Smoke outlet	External diameter 80 mm	External diameter 80 mm	
Nominal electrical power	Max 420 W - Med 120 W	Max 420 W - Med 120 W	
Supply voltage and frequency	230 Volt / 50 Hz	230 Volt / 50 Hz	
Net weight	156 - 166 kg	157 - 167 kg / 160 - 170 kg	
Weight with packaging	166 - 176 kg	167 - 177 kg / 170 - 180 kg	

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TECHNICAL CHARACTERISTICS	IBIS 11	IBIS 15	IBIS 22 - IBIS 22 H2O
(Max) total thermal power:	11,6 kW (9976 kcal/h) / 10 kW (8600 kcal/h)	15,4 kW (13244 Kcal/h) / 13 kW (11180 Kcal/h)	21 kW (18060 Kcal/h) / 17 kW (14620 Kcal/h)
(Max) total thermal power:	3,6 kW (3096 kcal/h) / 2,5 kW (2150 kcal/h)	4,4 kW (3784 Kcal/H) / 3 kW (2580 Kcal/h)	4,4 kW (3784 Kcal/h) / 3 kW (2580 Kcal/h)
(Max) Introduced power:	12,6 kW	16,6 kW	22,6 kW
Efficiency at Max	91,5 %	92,1 %	92,5 %
Efficiency at Min	96 %	95,0 %	95 %
Temperature of exhaust smoke at Max	140 °C	145 °C	160 °C
Temperature of exhaust smoke at Min	70 °C	71 °C	71 °C
Particulate/OGC/Nox (13% O_2)	11 mg/Nm^3 - 2,5 mg/Nm^3 - 181 mg/Nm^3 (13% O_2)	1,5 mg/Nm^3 - 0,32 mg/Nm^3 - 123 mg/Nm^3 (13% O_2)	1,7 mg/Nm^3 - 0,15 mg/Nm^3 - 132 mg/Nm^3 (13% O_2)
CO at 13% O_2 at Min and at Max	0,034 - 0,011 %	0,040 - 0,011 %	0,040 - 0,012 %
CO_2 at Min and at Max	6,7% – 8,7%	7,03% - 11%	7,0 % - 12,5 %
Recommended draught at Max power	0,10 mbar – 10 Pa	0,10 mbar - 10 Pa	0,10 mbar - 10 Pa
Recommended draught at Min power	0,05 mbar – 5 Pa	0,05 mbar - 5 Pa	0,05 mbar - 5 Pa
Mass of smoke at Min and at Max	3,6 – 11,0 g/sec	4,5 - 10,4 g/sec	4,5 - 12,6 g/sec
Hopper capacity	37 litri	44 litri	44 litri
Type of pellet fuel	Pellet d.6-8 x 5-30 mm	Pellet d.6-8 x 5-30 mm	Pellet d.6-8 x 5-30 mm
Pellet hourly consumption *	Min ~ 0,8 kg/h - Max. ~ 2,5 kg/h	Min ~ 0,9 kg/h - Max ~ 3,4 kg/h	Min ~ 0,9 kg/h - Max ~ 4,9 kg/h
Autonomy *	Min ~ 36 h - Max. ~ 10 h	Min ~ 32 h - Max ~ 9 h	Min ~ 28 h - Max ~ 5 h
Heatable volume m^3 **	249/40 – 285/35 – 333/30	332/40 - 379/35 - 443/30	452/40 - 516/35 - 602/30
Combustion air inlet	External diameter 50 mm	External diameter 50 mm	External diameter 50 mm
Smoke outlet	External diameter 80 mm	External diameter 80 mm	External diameter 80 mm
Nominal electrical power	Max 420 W - Med 120 W	Max 420 W - Med 120 W	Max 420 W - Med 120 W
Supply voltage and frequency	230 Volt / 50 Hz	230 Volt / 50 Hz	230 Volt / 50 Hz
Net weight	144 kg	149 kg	150 / 153 kg
Weight with packaging	154 kg	159 kg	160 / 163 kg

TECHNICAL CHARACTERISTICS	IDRON 11	IDRON 15	IDRON 22 - IDRON 22 H2O
(Max) total thermal power:	11,6 kW (9976 kcal/h) / 10 kW (8600 kcal/h)	15,4 kW (13244 Kcal/h) / 13 kW (11180 Kcal/h)	21 kW (18060 Kcal/h) / 17 kW (14620 Kcal/h)
(Max) total thermal power:	3,6 kW (3096 kcal/h) / 2,5 kW (2150 kcal/h)	4,4 kW (3784 Kcal/H) / 3 kW (2580 Kcal/h)	4,4 kW (3784 Kcal/h) / 3 kW (2580 Kcal/h)
(Max) Introduced power:	12,6 kW	16,6 kW	22,6 kW
Efficiency at Max	91,5 %	92,1 %	92,5 %
Efficiency at Min	96 %	95,0 %	95 %
Temperature of exhaust smoke at Max	140 °C	145 °C	160 °C
Temperature of exhaust smoke at Min	70 °C	71 °C	71 °C
Particulate/OGC/Nox (13% O_2)	11 mg/Nm³ - 2,5 mg/Nm³ - 181 mg/Nm³ (13% O_2)	1,5 mg/Nm³ - 0,32 mg/Nm³ - 123 mg/Nm³ (13% O_2)	1,7 mg/Nm³ - 0,15 mg/Nm³ - 132 mg/Nm³ (13% O_2)
CO at 13% O_2 at Min and at Max	0,034 - 0,011 %	0,040 - 0,011 %	0,040 - 0,012 %
CO_2 at Min and at Max	6,7% – 8,7%	7,03% - 11%	7,0 % - 12,5 %
Recommended draught at Max power	0,10 mbar – 10 Pa	0,10 mbar - 10 Pa	0,10 mbar - 10 Pa
Recommended draught at Min power	0,05 mbar – 5 Pa	0,05 mbar - 5 Pa	0,05 mbar - 5 Pa
Mass of smoke at Min and at Max	3,6 – 11,0 g/sec	4,5 - 10,4 g/sec	4,5 - 12,6 g/sec
Hopper capacity	37 litri	44 litri	44 litri
Type of pellet fuel	Pellet d.6-8 x 5-30 mm	Pellet d.6-8 x 5-30 mm	Pellet d.6-8 x 5-30 mm
Pellet hourly consumption *	Min ~ 0,8 kg/h - Max. ~ 2,5 kg/h	Min ~ 0,9 kg/h - Max ~ 3,4 kg/h	Min ~ 0,9 kg/h - Max ~ 4,9 kg/h
Autonomy *	Min ~ 36 h - Max. ~ 10 h	Min ~ 32 h - Max ~ 9 h	Min ~ 28 h - Max ~ 5 h
Heatable volume m³ **	249/40 – 285/35 – 333/30	332/40 - 379/35 - 443/30	452/40 - 516/35 - 602/30
Combustion air inlet	External diameter 50 mm	External diameter 50 mm	External diameter 50 mm
Smoke outlet	External diameter 80 mm	External diameter 80 mm	External diameter 80 mm
Nominal electrical power	Max 420 W - Med 120 W	Max 420 W - Med 120 W	Max 420 W - Med 120 W
Supply voltage and frequency	230 Volt / 50 Hz	230 Volt / 50 Hz	230 Volt / 50 Hz
Net weight	130 kg	134 kg	135 / 138 kg
Weight with packaging	140 kg	144 kg	145 / 148 kg

** Data that may vary depending on the type of pellets used*
***Heatable volume based on the requested power per m³ (respectively 40-35-30 Kcal/h per m³)*
Tested according to EN 14785 in accordance with Directive 89/106/EEC (Construction Products).

7 INSTALLATION AND ASSEMBLY

7.1 PREPARATION AND UNPACKING

The AQUOS / IBIS / IDRON stoves with steel sides come in 1 pack:
- It contains the stove and also the steel sides with the profiles (**Fig. 11 page 20**)

The AQUOS stoves with ceramics come in 2 packs:
- One contains the stove.

- One contains the ceramics (**Fig. 12 page 20**). In this case there will be a single pack for the structure (the box with the ceramics will be placed on top of the pack with the structure).

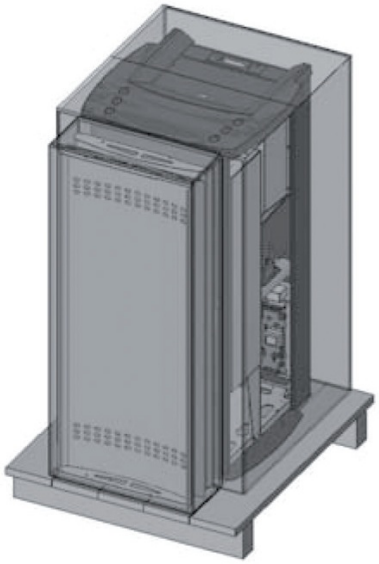

Fig. 11 - Example of stove + steel sides packaging

Fig. 12 - Example of ceramics packaging

Open the pack, remove the four screws that secure the base of the stove to the pallet, two to the right and two to the left (see **Fig. 13 page 20**) and position the stove in the selected place, ensuring that it complies with the above instructions.

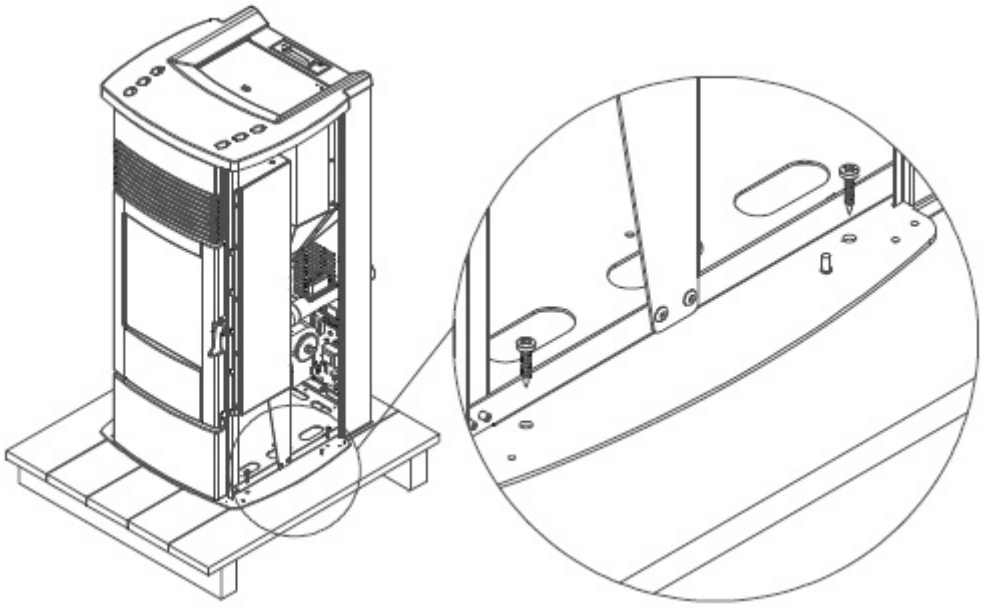

Fig. 13 - Removal of packaging screws

The stove body or unit must always be kept in a vertical position when handled and moved by using carts only. Pay particular attention to the door and its glass, protecting them from mechanical knocks that would compromise their integrity. Always handle the product with care. If possible, unpack the stove near the chosen place of installation.
The packaging materials are neither toxic nor harmful, and therefore no particular disposal measures are required. Therefore, the end user is responsible for product storage, disposal or possible recycling in compliance with the relative applicable laws.
Do not store the stove unit or its cladding without their packaging.
Position the stove without its cladding and connect it to the flue pipe. Use the four adjustable feet (J) to get the stove correctly levelled so that the smoke outlet (S) is lined up with the connecting pipe (H). Once the connection operations are complete, assemble the cladding (ceramics or steel sides).
If the stove needs to be connected to a discharge pipe which goes through the rear wall (to then connect to the flue), take utmost care not to force the joint.

If the stove smoke outlet is forced or used improperly to lift it or position it, the operation of the stove can be damaged irreparably.

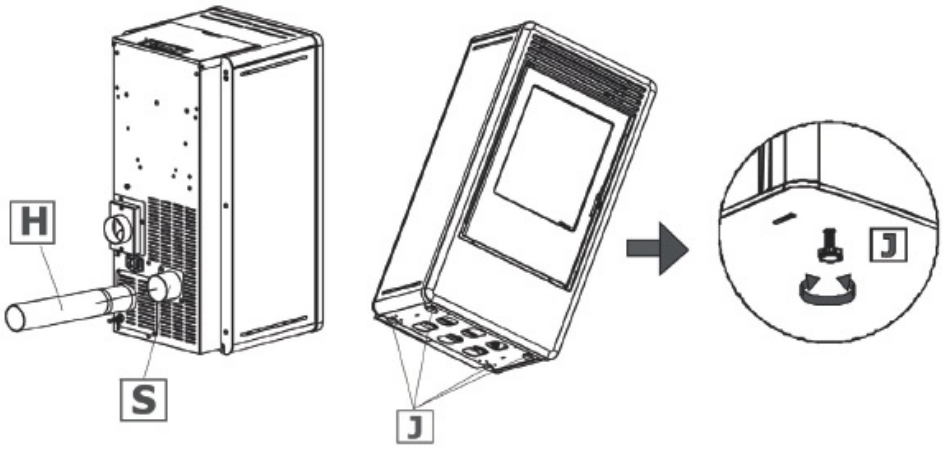

Fig. 14 - 1. Turn the feet clockwise to lower the stove - 2. Turn the feet counterclockwise to raise the stove

7.2 CERAMIC AND METAL SIDES INSERTION (AQUOS)

Remove, on the upper part, the metal top (A).
Take the ceramic sides (B) or the metal side (B1) from the box and insert them onto the profile (C) in correspondence of the guide, from the top downwards.
Repeat the same operation for both sides.
Reposition the metal top.

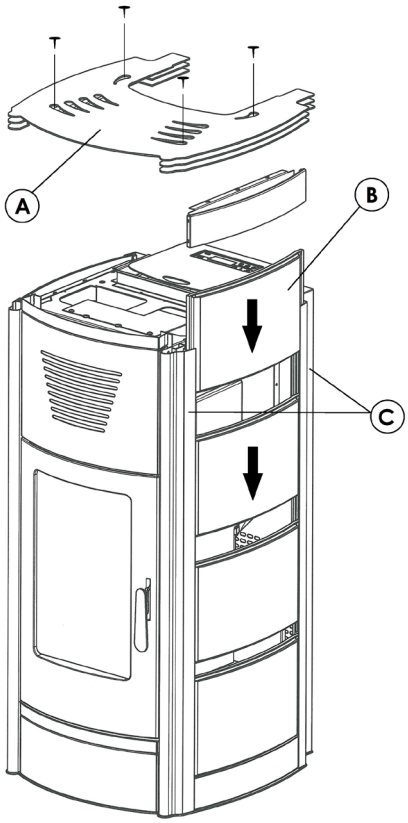

Fig. 15 - Sides insertion

We recommend using small velcro felt disks, to be applied to the ends of the ceramics to prevent contact between them.
We recommend inserting the ceramics when installation of the stove is complete.

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7.3 METAL SIDES INSERTION (IDRON)

Remove, on the upper part, the metal top (A).
Take the side panel (B) and fix it to the stove: slide the side hole into the screw fixed on the stove (C).
Repeat the same operation for both sides.
Reposition the metal top (A).

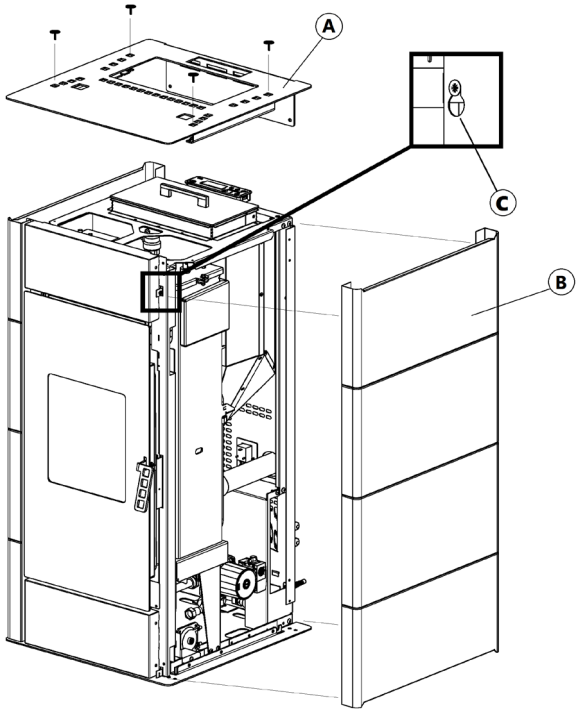

Fig. 16 - Metal sides insertion

7.4 METAL FRAME INSERTION (IBIS)

Remove the metal sides (A).
Place the frame (B) and fix it trough the screws on its 4 inner points (see detail C).
Repeat the same operation for both sides.
Reposition the metal sides (A).

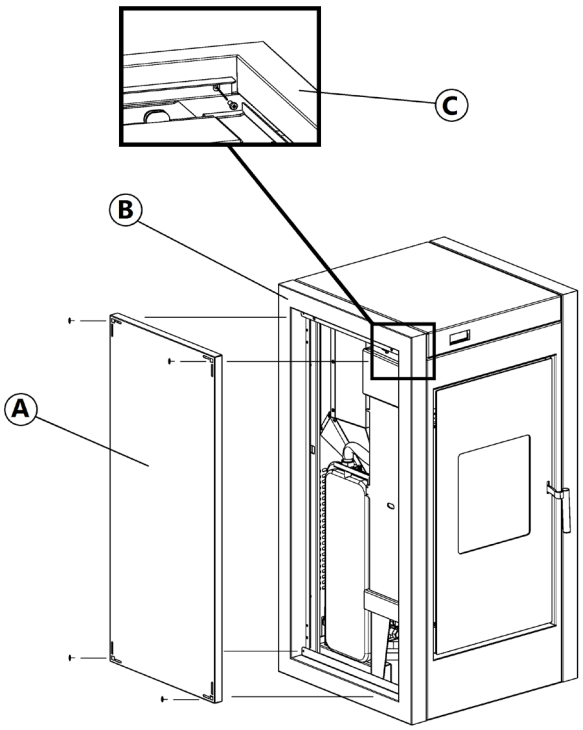

Fig. 17 - Metal sides insertion

8 PLUMBING CONNECTION

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8.1 PLUMBING SYSTEM CONNECTION

IMPORTANT!
If installation of the product involves interaction with another, pre-existing system complete with heating
equipment (gas boiler, methane boiler, diesel boiler, etc.), contact qualified personnel, who subsequently will be responsible for conformity of the system in compliance with the applicable law in force.
The Company declines all responsibility for damage to persons or things in the event of failed or incorrect operation, if the aforementioned warnings are not complied with.

8.2 CONNECTION DIAGRAM STOVE (AQUOS 15 - 22 / IBIS 15 - 22 / IDRON 15 -22)

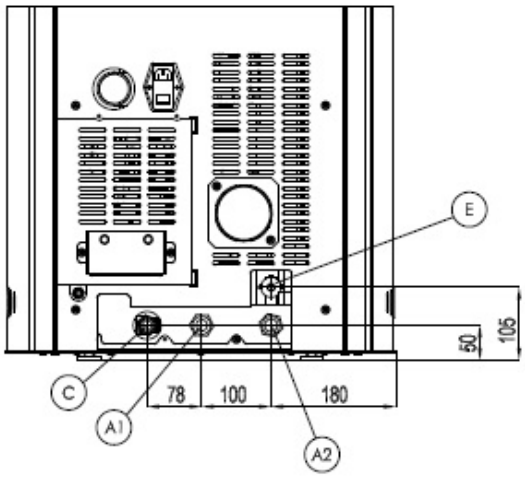

Fig. 18 - Plumbing connection

LEGEND	
A1	*3/4"M heating water delivery*
A2	*3/4"M heating water return 3/4"M*
C	*3 bar 1/2" M safety valve*
E	*3/4"M system draining and emptying*

8.3 CONNECTION DIAGRAM FOR HYDRO STOVE EQUIPPED WITH KIT FOR DOMESTIC HOT WATER

PRODUCTION (AQUOS 22 H2O / IBIS 22 H2O / IDRON 22 H2O)

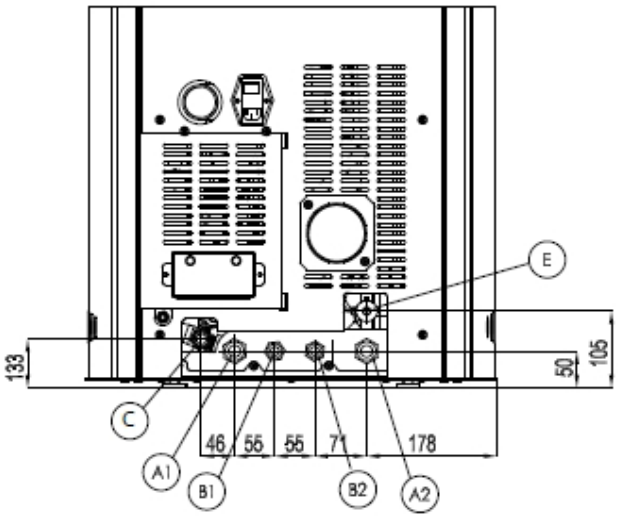

Fig. 19 - Plumbing connection

LEGEND

A1	*3/4"M heating water delivery*
A2	*3/4"M heating water return 3/4"M*
C	*3 bar 1/2" M safety valve*
E	*1/2"F system emptying*
B1	*Domestic hot water delivery*
B2	*Domestic hot water return*

8.4 CONNECTION DIAGRAM FOR HYDRO STOVE (IBIS 11 / IDRON 11)

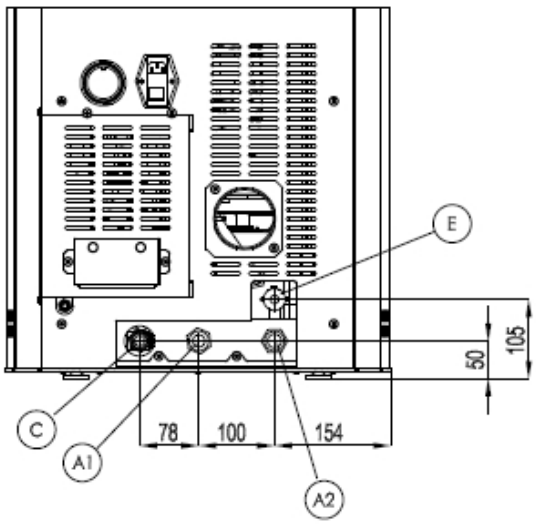

Fig. 20 - Plumbing connection

LEGEND

A1	*3/4"M heating water delivery*
A2	*3/4"M heating water return 3/4"M*
C	*3 bar 1/2" M safety valve*
E	*3/4"M system draining and emptying*

8.5 SYSTEM CONNECTIONS

Make the connections to the corresponding fittings shown in the diagram on the previous page. Make sure the pipes are not placed under tension or undersized.

IT IS STRONGLY RECOMMENDED TO WASH THE ENTIRE SYSTEM BEFORE CONNECTING THE STOVE IN ORDER TO GET RID OF RESIDUES AND DEPOSITS.
Upstream from the stove, always install gate valves so as to disconnect it from the plumbing system should it be necessary to move it, or when it requires routine and/or special maintenance. Connect the stove using hoses so that the stove is not connected too tightly to the system, and to allow slight movements.

The pressure discharge valve (C) must always be connected to a water drain pipe. The pipe must be adequate to support the water's high temperature and pressure.

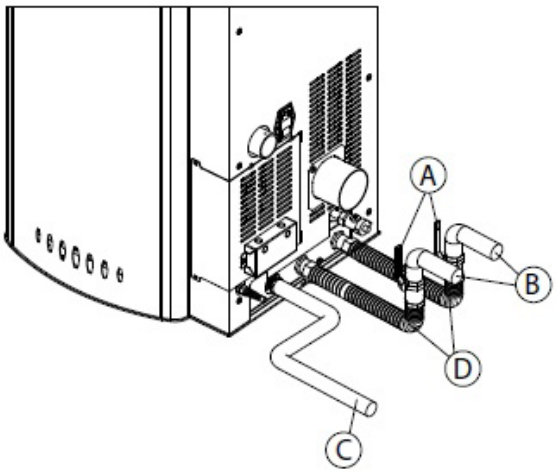

Fig. 21 - Plumbing connection

LEGEND

A	*Tap*
B	*Domestic system*
C	*Pressure discharge*
D	*Hoses*

8.6 SYSTEM FILLING

To fill the system, the stove can be equipped with an end piece (optional) with a check valve (D), for manual filling of the heating system (if the optional is not installed, the filling tap on the main boiler will be used). During this operation, any air in the system is released from the automatic vent valve located under the top.
To allow the valve to vent, it is recommended to loosen the grey cap by one turn and leave the red cap locked (see figure). The filling pressure of the system WHEN COLD must be 1 bar. If during operation the system pressure drops (due to evaporation of gases dissolved in the water) to values lower than the minimum ones indicated above, the user must use the filling tap to bring the pressure back up to its initial pressure.
For proper operation of the stove WHEN HOT, the pressure in the boiler must be 1.5 bar.
To monitor system pressure, the end piece (optional) is equipped with a pressure gauge (M).
Upon completion of this filling operation, always close the tap.

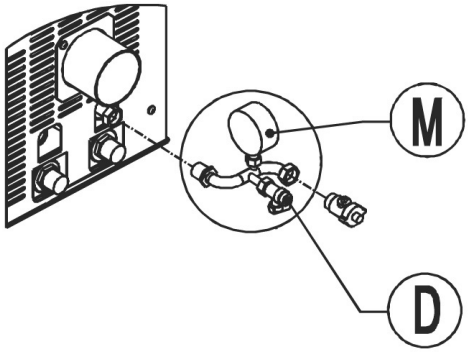

Fig. 22 - End piece with a filling tap (D) and pressure gauge (M) (Accessory)

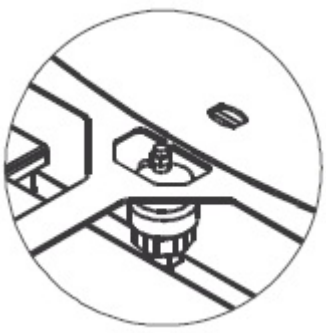

Fig. 23 - Vent valve under the top

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8.7 DOMESTIC HOT WATER PRODUCTION KIT (AQUOS 22 H2O / IBIS 22 H2O / IDRON 22 H2O STOVES ONLY)

The AQUOS 22 H2O, IBIS 22 H2O and IDRON 22 H2O stoves are equipped with a complete kit for the production of domestic water made up of:

- Plate heat exchanger
- A 3-way diverter valve
- Flow switch
- Pipes and fittings for connection

The kit comes preassembled by the manufacturer and it is designed to heat domestic water directly from the home water supply system.
When hot water is required and the tap is turned, the internal water flow switch will send a signal to the diverter valve to channel the hot water contained in the boiler to the plate heat exchanger. The temperature of the domestic water highly depends on the temperature of the water inside the heating system. This can be calculated to a good degree of accuracy by taking 10°-15°C away from the value shown on the stove control panel (which is the temperature of the water in the boiler).
If hot domestic water is needed while the stove is 'Switch-Off' or in 'ECOSTOP off' mode, the stove will automatically and immediately begin the start-up process to heat the water inside the boiler, and then the domestic hot water.
To ensure that the plate heat exchanger continues to work properly over time, one must be aware of the system water hardness to prevent deposits from forming.

If the water in your home is very hard, you are advised to install a softening system upstream. You are advised to service the plate exchanger annually to eliminate limescale and mineral salts sediments or to replace the heating plates with new ones. These spare parts are supplied by the manufacturer.

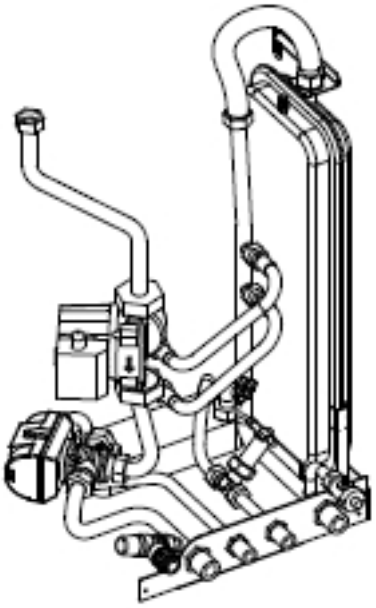

Fig. 24 - Domestic water production kit

8.8 WATER CHARACTERISTICS

The characteristics of the water used to fill the system are very important to prevent the build-up of mineral salts and the formation of incrustations along the pipes, in the boiler and in the heat exchangers.
Therefore, please ASK YOUR PLUMBER FOR HIS ADVICE CONCERNING:

Hardness of water circulating in the system, to prevent problems of incrustation and limescale, especially in the domestic water heat exchanger. (\x3e 25° French).
Installation of a water softener (if water hardness exceeds 25° French).
Filling the system with treated water (demineralised).
Possibly providing an anti-condensation circuit.
Installation of hydraulic shock absorbers to prevent water hammering along the fittings and pipes.

If you have very extensive systems (with a large amount of water) or which require frequent refilling, the installation of water softening systems.

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It should be remembered that incrustations drastically reduce performance due to their extremely low thermal conductivity.

9 ELECTRICAL CONNECTIONS

9.1 GENERAL PRECAUTIONS

Electrical safety of the system is ensured only when it is properly connected to an efficient earthing system made in compliance with the safety standards in force: gas, water or heating systems pipes are not suitable as earth connections.
One must check this essential safety requirement; if in doubt, request an accurate inspection of the electrical system to be carried out by qualified personnel, because the boiler manufacturer is not responsible for any damage caused by failure to earth the system.
Have professionally qualified personnel check the electrical system is suitable for the maximum power absorbed by the heating system, ensuring in particular that the diameter of cables is appropriate for the power absorbed by the loads.
The use of any component that is powered by electricity entails compliance with some basic rules such as:

- do not touch the appliance with wet and/or damp body parts and/or bare feet;
- do not pull the electric cables;
- do not leave the appliance exposed to weathering (rain, sun, etc.);
- do not allow the appliance to be used by children or inexperienced persons.

230V electrical power supply connection
Installation of the boiler accessory electrical components requires electrical connection to a 230 V – 50 Hz mains: This connection must be state of the art according to the CEI standards in force.

Hazard!
Electrical installation must be carried out by a qualified technician only.
Before performing connections or any operation on the electrical parts, always disconnect the power supply and make sure it cannot be accidentally reconnected.
Please note that the boiler electrical power line must be fitted with a bipolar switch with a contact gap greater than 3 mm, easy to access, in order to make any maintenance operations quick and safe.

The power cable must be replaced by authorised technical personnel. Failure to comply with the provisions listed above may compromise the safety of the appliance.

9.2 ELECTRICAL CONNECTION

First connect the power cable to the side of the boiler and then to a wall socket.
The main switch at the side must only be activated to switch the boiler on; otherwise, it is advisable to keep it switched off.

It is recommended to disconnect the boiler power cable when the boiler is not used.

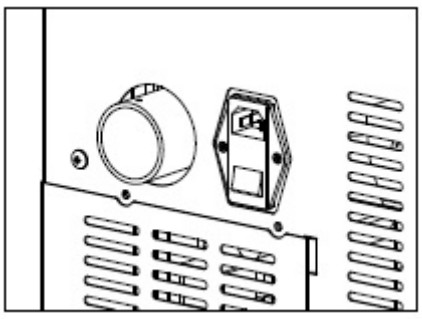

Fig. 25 - Electrical connection of the stove

10 INITIAL START-UP

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10.1 GENERAL PRECAUTIONS

Remove all components that could burn from the brazier and glass (manual, various adhesive labels and any polystyrene).
Check that the brazier is positioned correctly and rests properly on the base.

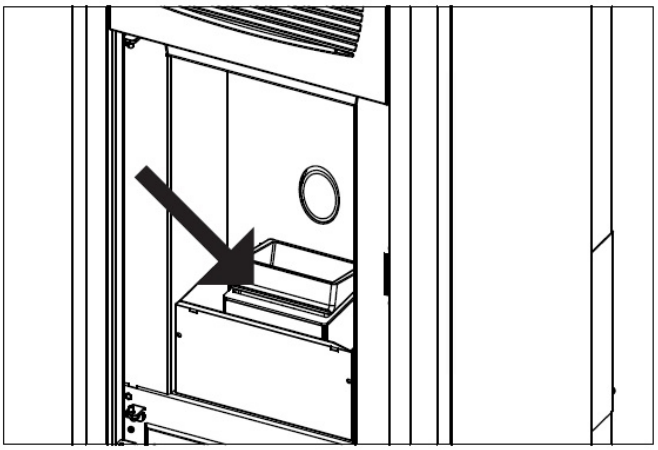

Fig. 26 - Check the brazier

After a long period of inactivity, remove any pellets left in the hopper (using a vacuum cleaner with a long pipe), as they could have absorbed moisture, thereby altering their original characteristics and no longer being suitable for combustion.

The first start-up may not be successful as the feed screw is empty and does not always manage to load the required amount of pellets in the brazier in time for the fire to be regularly ignited.

CANCEL THE FAILED START-UP ALARM STATUS BY PRESSING AND HOLDING KEY 1 (ESC). REMOVE THE PELLETS FROM THE BRAZIER AND REPEAT START-UP.

If a flame does not ignite after a number of failed start-ups, even though the pellet supply is correct, make sure the brazier is set in place correctly, which must be interlocked in its seat and free from any ash deposits. If no anomaly is found during this inspection, there may be a problem with the product components or installation may not be correct.

REMOVE THE PELLETS FROM THE BRAZIER AND CONTACT AN AUTHORISED TECHNICIAN.

Avoid touching the boiler during the initial start-up, as the paint in this stage hardens; by touching the paint, the steel surface may be exposed.

It is good practice to guarantee effective ventilation in the room during the initial start-up, as the boiler will emit some smoke and smell of paint.

Do not stand close to the product and air the room. The smoke and smell of paint will disappear after about an hour of operation, however, remember they are not harmful in any case.
The boiler will be subject to expansion and contraction during the start-up and cooling phases, therefore slight creaking noises may be heard.
This is absolutely normal as the structure is made of laminated steel and must not be considered a defect.
It is extremely important to make sure the boiler is not immediately overheated and the temperature is increased gradually, initially using low power.
This will prevent damaging the ceramic or serpentine tiles, the welds and the steel structure.

DO NOT EXPECT HEATING EFFICIENCY IMMEDIATELY!!!

EN

10.2 OPENING/CLOSING THE DOOR

ATTENTION!
The door must be closed properly for the boiler to work correctly.

Use suitable protective clothing (such as gloves) to open the boiler door.

10.3 SETTINGS TO BE CARRIED OUT BEFORE THE INITIAL START-UP

Once the power cable is connected in the rear part of the stove, turn the switch, also placed at the rear, to position (I). To switch the stove on or off press key 1 on the control panel.

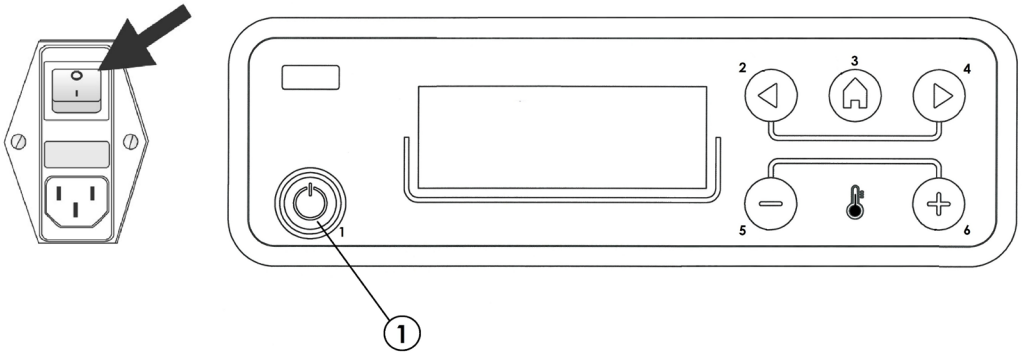

Fig. 27 - Key and display

10.4 LOADING THE PELLETS

Fuel is loaded from the upper part of the stove by opening the door. Pour the pellets into the hopper.
To ease the procedure carry out the operation in two steps:
Pour half of the contents into the hopper and wait for the fuel to settle on the bottom.
Then complete the operation by pouring in the rest.

Never remove the protection grille from within the hopper. When loading prevent the pellet bag from coming into contact with hot surfaces.
No other type of fuel other then pellets, in compliance with above-mentioned specifications, is to be inserted into the hopper.
Store the back-up fuel at a suitable safety distance.
Do not pour the pellets directly onto the brazier but only into the hopper.
Most of the stove surfaces are very hot (door, handle, glass, smoke outlet pipes, hopper door, etc.). It is therefore recommended to avoid coming into contact with these parts without adequate protective clothing.

11 MENU ITEMS

11.1 CONTROL PANEL DISPLAY

Menu items.

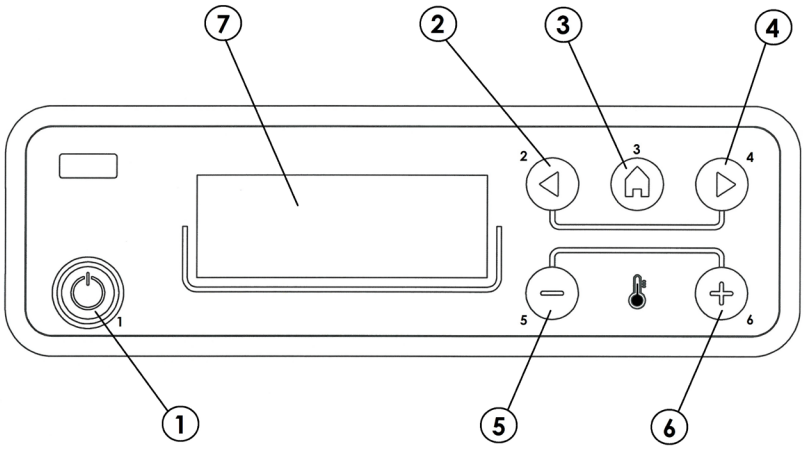

Fig. 28 - Display

LEGEND	
1	*Boiler lighting/shutdown*
2	*Scrolling of programming menu to decrease.*
3	*Menu*
4	*Scrolling of programming menu to increase.*
5	*Decrease set temperature/programming functions.*
6	*Increase set temperature/programming functions.*
7	*Display.*

11.2 MAIN MENU

It is accessed by pressing key 3 (menu). The items that are accessed are:
- Date and Time
- Timer
- Sleep (only with the stove on)
- Settings
- Info

Date and time setting
To set the date and time act as follows:
- Press the "menu" button.
- Select "Date and Time".
- Select by pressing "menu"
- Scroll with the arrows and select the variables to be modified one at a time: Day, Hours, Minutes, Day number, Month, Year.
- Select "menu" to confirm.
- Modify with the + - keys.
- Finally press "menu" to confirm and "esc" to exit.

Timer setting (see relative chapter)
Sleep setting (see relative chapter)

11.3 SETTINGS MENU

The SETTINGS menu allows to act on the boiler operating mode:
A. Language.
B. Cleaning (displayed only when the boiler is switched off).
C. Feed screw loading (displayed only when the boiler is switched off).
D. Tones.
E. External thermostat (activation).
F. Auto Eco (activation).
G. Eco-Shutdown T (default 10 minutes).
H. Pump on T (default 50°C).
I. Auxiliary boiler (default deactivated).
J. Pellet recipe.
K. Smoke rpm % ventilation.
L. Maximum power (1-5 - default 5).

M. Components test (displayed only when the boiler is switched off)
N. "Chimney sweep" function (activated only when the boiler is switched on, for field emissions test).
O. System configuration.
P. Season.
Q. Technical menu.
NOTE: Some of the items listed above cannot be activated in certain "system configurations".

a - Language
To select the language act as follows:
- Press the "menu" button.
- Scroll to "Settings" using the arrows
- Press "menu" to confirm.
- Scroll to "language" using the arrows.
- Press "menu" to confirm.
- With the + - keys select the language of interest (IT/EN/DE/FR/ES/NL/PL/DA)
- Press "menu" to confirm and "esc" to exit.

b - Cleaning
To select "Cleaning" (only when the boiler is switched off) act as follows:
- Press the "menu" button.
- Scroll to "Settings" using the arrows
- Press "menu" to confirm.
- Scroll to "Cleaning" using the arrows.
- Press "menu" to confirm.
- Select "On" with the + - keys.
- Press "menu" to confirm and "esc" to exit.

c - Feed screw loading
To select "Feed screw loading" (only when the boiler is switched off) act as follows:
- Press the "menu" button.
- Scroll to "Settings" using the arrows
- Press "menu" to confirm.
- Scroll to "Feed screw loading" using the arrows.
- Press "menu" to confirm.
- Select "Enable" with the + - keys.
- Press "menu" to confirm and "esc" to exit.

d - Tones
This function is disabled by default, so to enable act as follows:
- Press the "menu" button.
- Scroll to "Settings" using the arrows
- Press "menu" to confirm.
- Scroll to "tones" using the arrows.
- Press "menu" to confirm.
- Select "On" with the + - keys.
- Press "menu" to confirm and "esc" to exit.

e - External thermostat (see relative chapter)

f - Auto-Eco activation
To select the Auto-Eco function act as follows:
- Press the "menu" button.
- Scroll to "Settings" using the arrows
- Press "menu" to confirm.
- Scroll to "Auto-Eco" using the arrows.
- Press "menu" to confirm.
- Select "On" with the + - keys.
- Press "menu" to confirm and "esc" to exit.

g - Eco Shutdown t
To select the Eco - shutdown t function act as follows:
- Press the "menu" button.
- Scroll to "Settings" using the arrows
- Press "menu" to confirm.
- Scroll to "Eco - shutdown t" using the arrows.

- Press “menu” to confirm.
- Enter the minutes with the + - keys.
- Press “menu” to confirm and “esc” to exit.

h - Pump On T

To select the Pump On T function act as follows:

- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to “Pump On T” using the arrows.
- Press “menu” to confirm.
- Modify the °C with the + - keys.
- Press “menu” to confirm and “esc” to exit

i - Auxiliary boiler

One must install an additional module (optional) to enable start-up of an auxiliary boiler in the event the boiler is switched off or in alarm conditions. By default this function is deactivated, if needed activate it to access the settings menu.

l - Pellet Recipe

To change the recipe act as follows:

- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to “Pellet recipe” using the arrows.
- Press “menu” to confirm.
- Modify the % with the + - keys.
- Press “menu” to confirm and “esc” to exit

m - Smoke rpm % ventilation

To change the parameter act as follows:

- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to “Smoke rpm variation” using the arrows.
- Press “menu” to confirm.
- Modify the % with the + - keys.
- Press “menu” to confirm and “esc” to exit

n - Maximum power

To change the power act as follows:

- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to “Maximum power” using the arrows.
- Press “menu” to confirm.
- Change the power from 01 to 05 with the + - keys
- Press “menu” to confirm and “esc” to exit

o - Components test

To activate the “Components test” function (only when the boiler is switched off) act as follows:

- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to “Components test” using the arrows.
- Press “menu” to confirm.
- Select the test to be performed with the + - keys
- Press “menu” to confirm and “esc” to exit

p - Chimney sweep function

To activate the “Chimney sweep” function act as follows:

- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to the “Chimney sweep” function using the arrows.

- Press “menu” to confirm.
- Select “On” with the + - keys (Off by default)
- Press “menu” to confirm and “esc” to exit

q - System configuration

To change the system configuration act as follows:
- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to “System configuration” using the arrows.
- Press “menu” to confirm.
- Change the configuration from 01 to 05 with the + - keys
- Press “menu” to confirm and “esc” to exit.

r - Season

To change the function act as follows:
- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to “Season” using the arrows.
- Press “menu” to confirm.
- Select “Summer” or “Winter” with the + - keys.
- Press “menu” to confirm and “esc” to exit.

s - Technical menu

To access the technical menu one must contact an assistance centre as one needs a password to enter.
To intervene on the “technical menu” act as follows:
- Press the “menu” button.
- Scroll to “Settings” using the arrows
- Press “menu” to confirm.
- Scroll to “Technical menu” using the arrows.
- Press “menu” to confirm.
- Select “Product Type”, “Service”, “Parameters”, “DHW Parameters”, “Meters memories”, “Enable fan” and “Puffer data” with the + - keys.
- Press “menu” to confirm and “esc” to exit

11.4 ADJUSTMENTS MENU

To access the adjustments menu act as follows:
- Press the + - keys
- Scroll with the <> arrows and select “Set Room T” or “Set Water T” or “Exchanger Speed”
- Press “menu” to access the selected option.
- Modify with the + - keys.
- Press “menu” to confirm and “esc” to exit.

Important!
The stoves come in different types, some have a fan and some have domestic hot water (DHW).
Therefore within the stove functions one must bear in mind the features of the purchased product.

12 PRELIMINARY NOTIONS

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12.1 SYSTEM CONFIGURATIONS DEPENDING ON THE MODEL

Upon installation, the product must be set according to the type of system, selecting the appropriate parameter in the "SETTINGS" menu.
The possible configurations are 5, as described below:

CONFIGURATION	DESCRIPTION
1	Room temperature management via the boiler probe or by enabling the external room thermostat.
2	2.1 Room temperature management via the boiler probe or by enabling the external room thermostat; instantaneous DHW production with plate heat exchanger.
	2.2 Room temperature management via the boiler probe or by enabling the external room thermostat; instantaneous hot domestic water production for boiler or storage tank with thermostat (optional).
3	Room temperature management via boiler probe or enabling the external room thermostat; boiler hot domestic water production with ntc probe (10 kΩ ß3435).
4	External Puffer management controlled by thermostat.
5	External Puffer management controlled by ntc probe (10 kΩ ß3435).

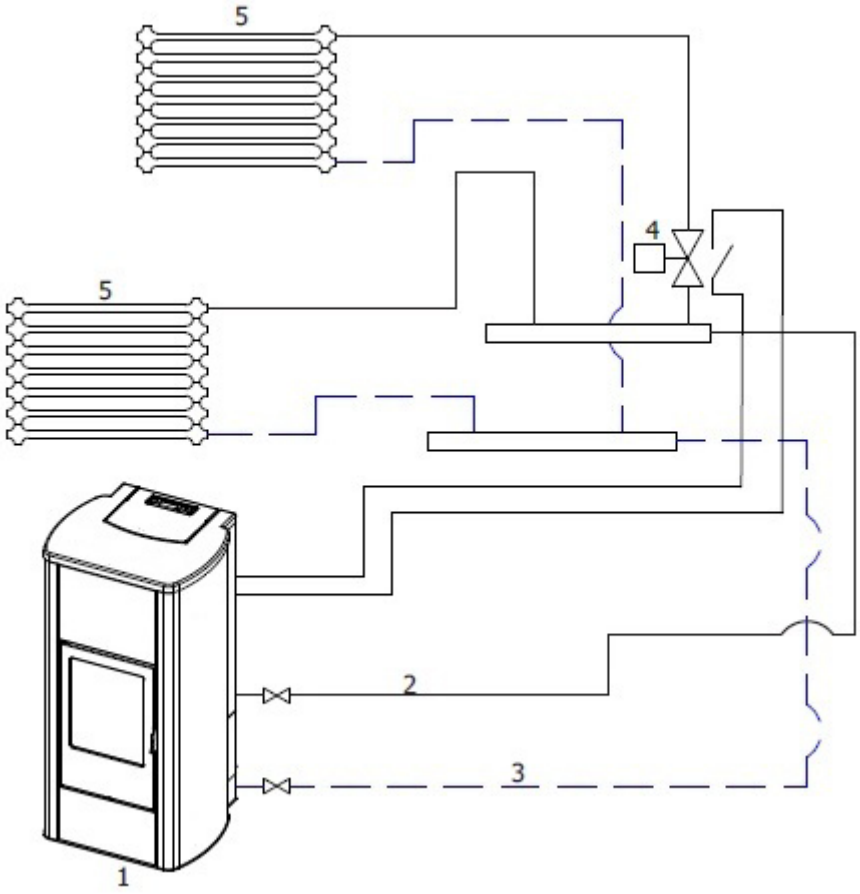

Fig. 29 - Configuration 1 (factory setting for heating version only)

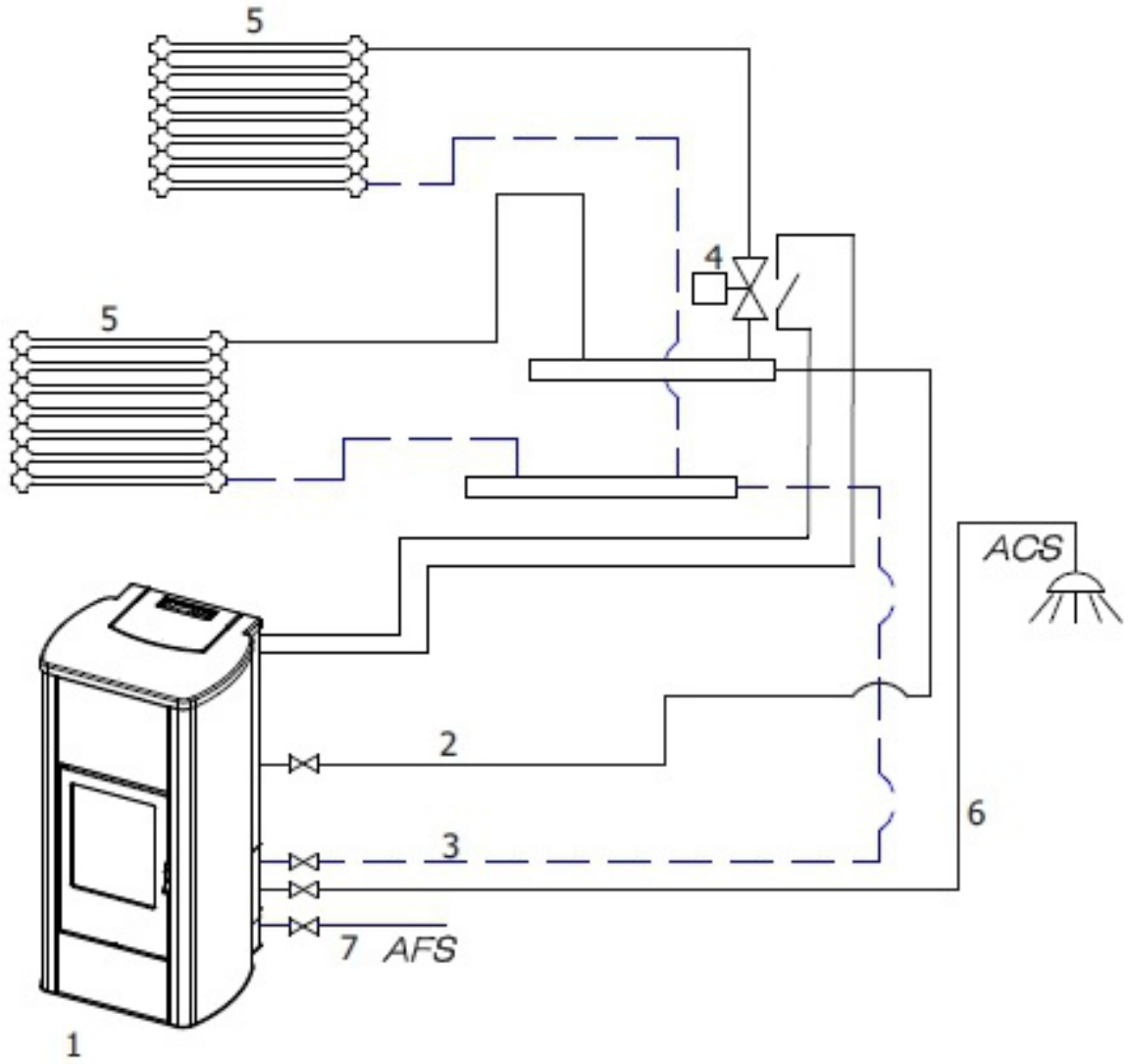

Fig. 30 - Configuration 2.1 (factory setting for version with domestic hot water - DHW)

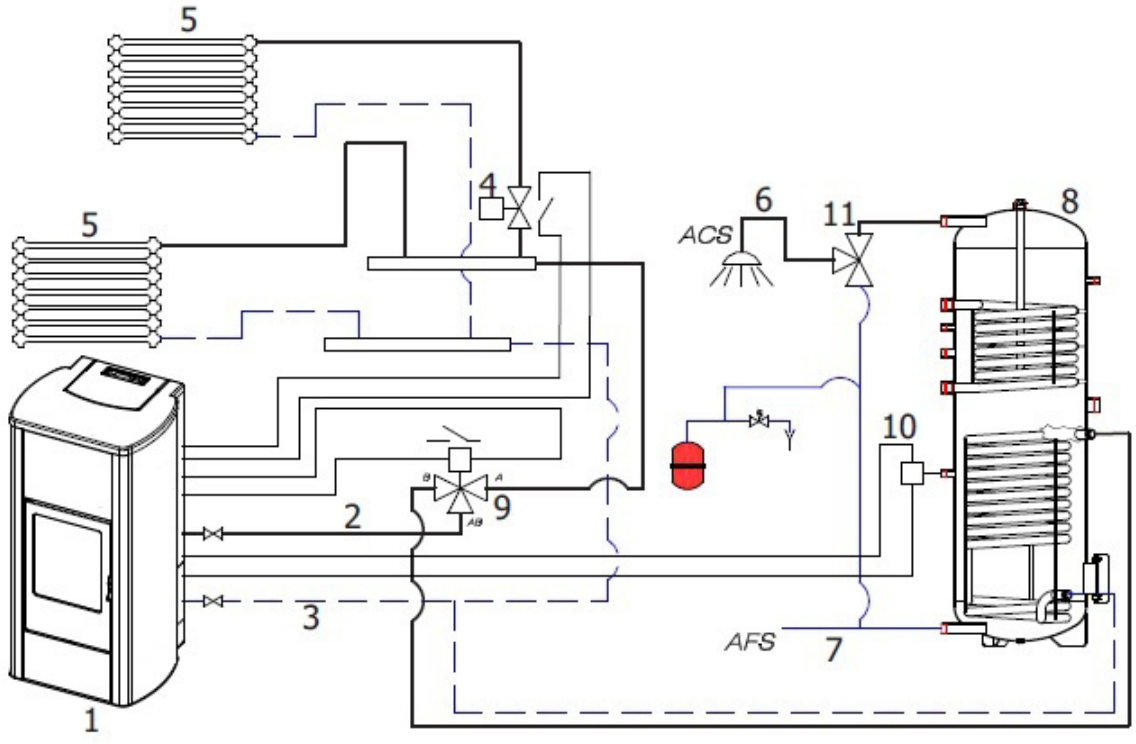

Fig. 31 - Configuration 2.2

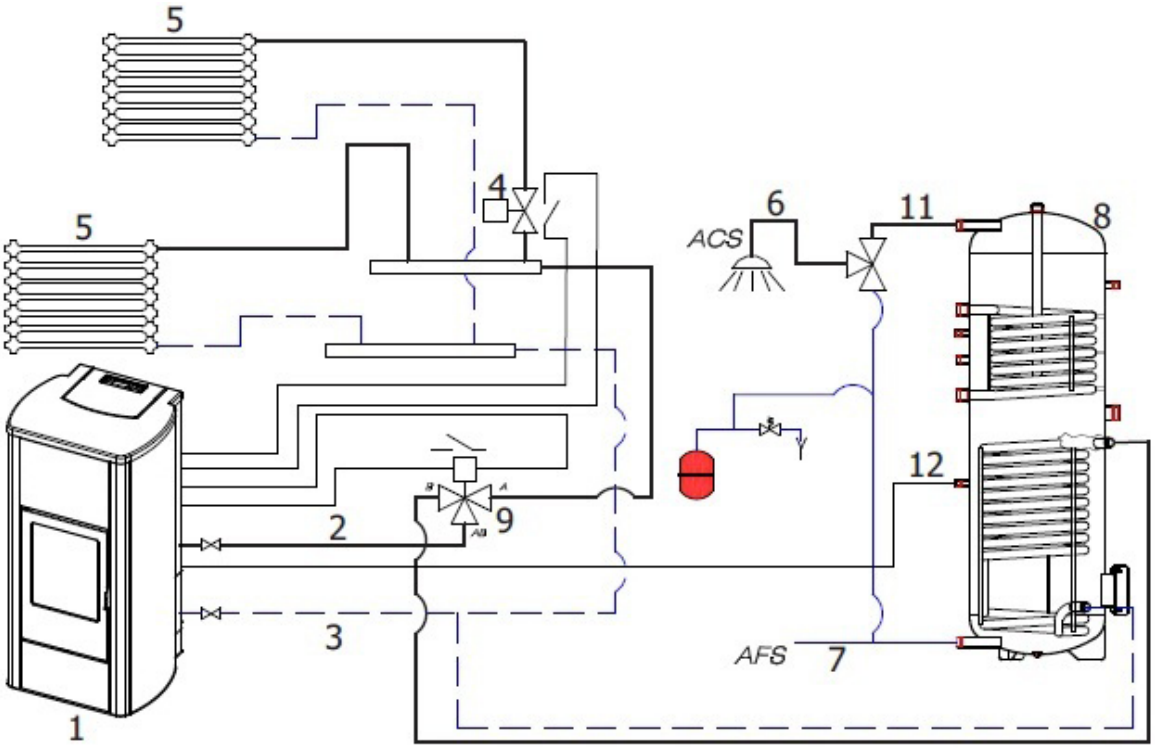

Fig. 32 - Configuration 3

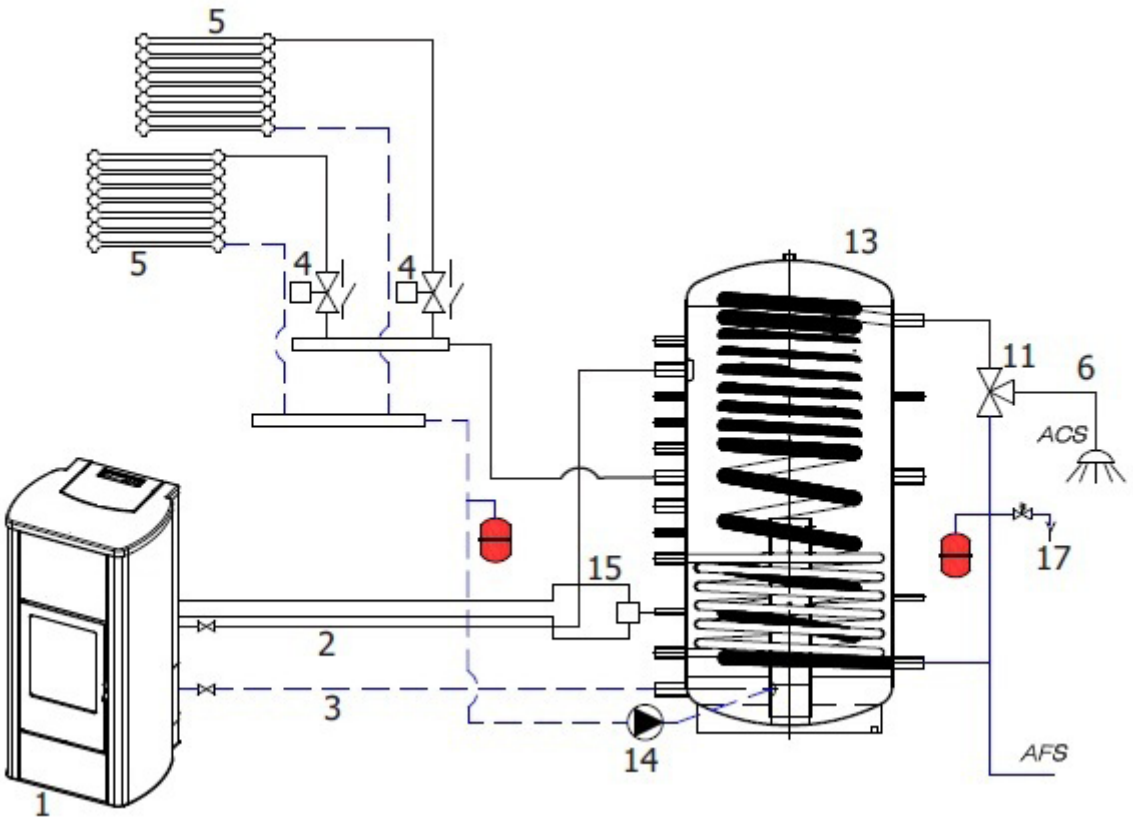

Fig. 33 - Configuration 4

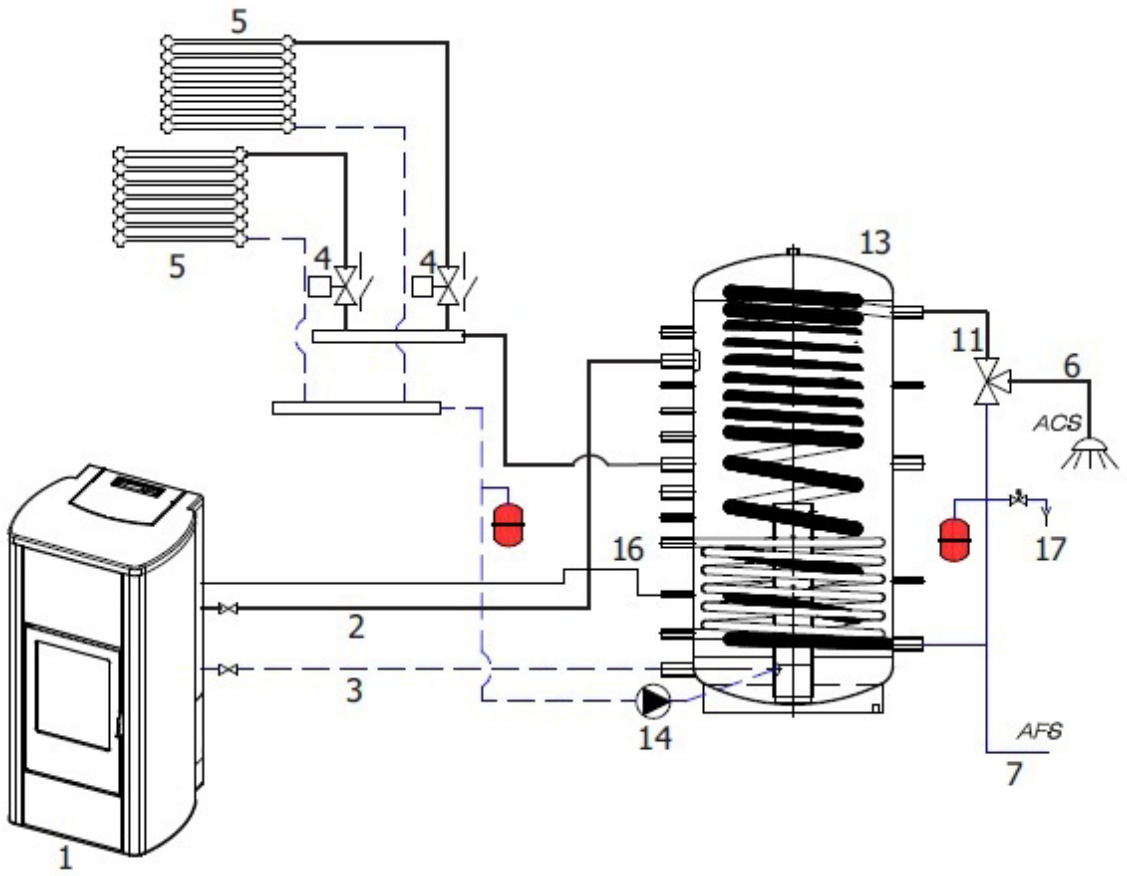

Fig. 34 - Configuration 5

LEGEND	
1	Stove
2	Heating delivery
3	Heating return
4	Zone valves
5	Heating bodies
6	Hot domestic water
7	Cold domestic water
8	Domestic water boiler
9	Diverter valve
10	Boiler thermostat
11	Thermostatic mixing valve
12	Domestic water 10 kΩ β3434 NTC probe
13	Heating puffer
14	Heating system circulator
15	Puffer thermostat
16	Puffer 10 kΩ β3434 NTC probe
17	Safety valve

13 OPERATION

13.1 OPERATING MODE

The operating mode for hydro boilers is AUTOMATIC only (manual mode is not envisioned). Flame modulation is managed according to the "System configuration" of the room probe placed on the rear of the appliance (see drawing), by the external thermostat, by the boiler water temperature or by the NTC probes.

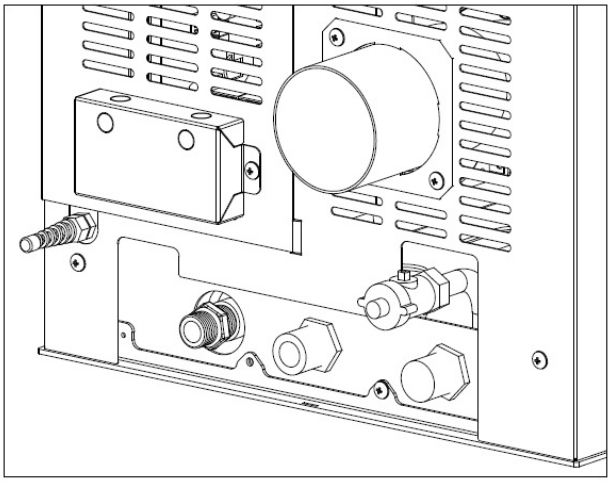

Fig. 35 - Operating mode

13.2 EXTERNAL THERMOSTAT CONNECTION (E)

EXTERNAL THERMOSTAT (not included with the boiler, to be provided by the user).
The temperature of the boiler can also be controlled by an external room thermostat. It is located in a central position of the room where the boiler is installed. It provides a closer match between the heating temperature requested of the boiler and what it actually provides.

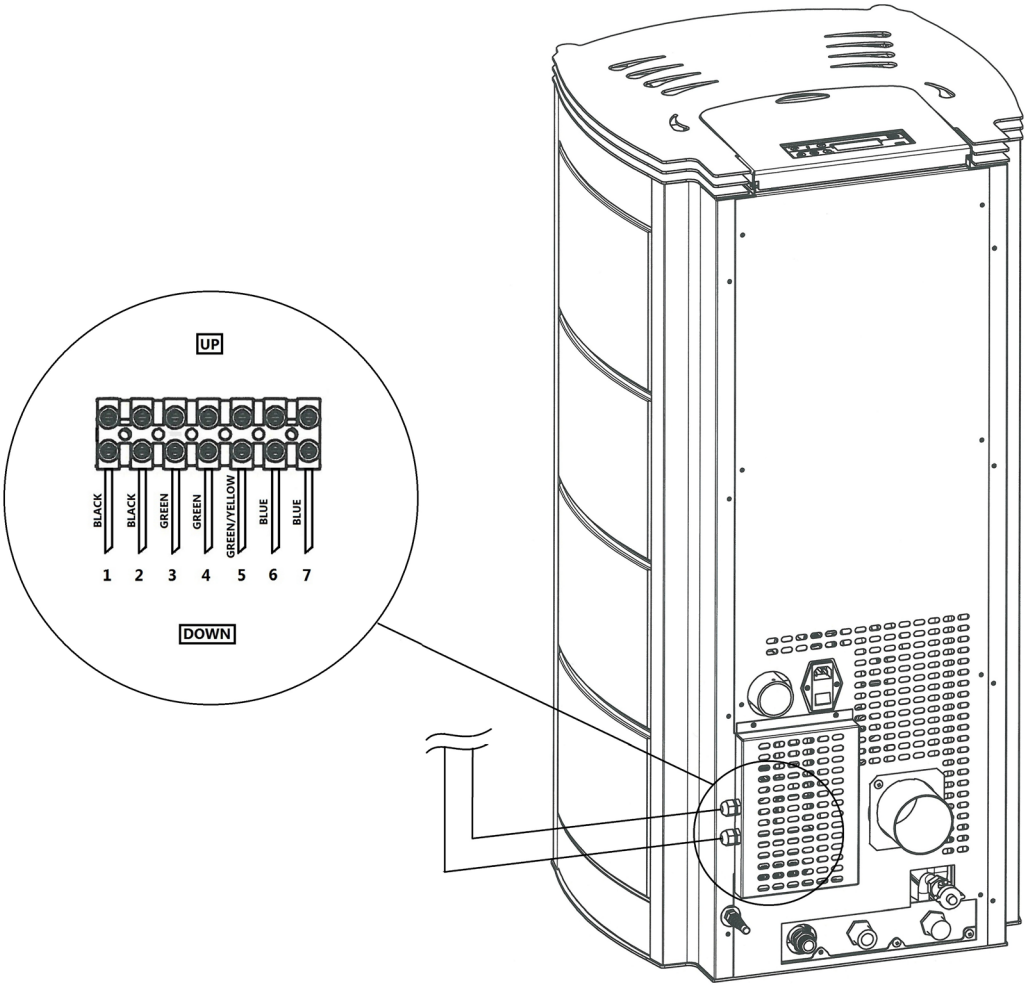

Fig. 36 - Electrical thermostat connection

LEGEND

POS. 1-2	*External thermostat*
POS. 3-4	*Puffer/boiler probe*
POS. 5	*Earthing*
POS. 6-7	*Additional boiler*

Connect the cables from the external thermostat to points 1-2 of the terminal block on the boiler.
Once the thermostat has been connected one must enable it.
In order to do this, proceed as follows:

- Press the "menu" button.
- Scroll to "Settings" using the arrows.
- Select by pressing "menu".
- Scroll once again to "External thermostat" using the arrows.
- Select by pressing "menu".
- Press the - + buttons.
- Select "On" to activate the external thermostat.
- Press the "menu" button to confirm.
- Press the "esc" button to exit.

13.3 START-UP

Press key 1 (esc) to begin start-up, the control panel displays ON with a flashing flame. When the flame stops flashing the boiler has reached the "power output" operating mode.
The room temperature set by default is 20°C, if one wishes to change it act as instructed in the adjustments menu; act likewise to set the heating water temperature and the room fan speed (if envisaged). To activate external thermostat if any see the relative section.

13.4 POWER OUTPUT

Once the start-up stage is complete the control panel will display ON with a fixed flame at level 3. The subsequent flame modulation at lower or higher powers is managed autonomously and upon reaching the temperatures set in the "System configuration".

13.5 PROGRAMMED MODE (TIMER) - MAIN MENU

Setting the current day and time is essential for the proper operation of the timer.

There are six TIMER programmes, for each one the user can decide the start-up and shutdown time as well as the day of the week in which it is active.
When one or more programmes are active, the panel alternately displays the boiler status and TIMER "n" whereby "n" is the number relating to the activated timer programmes, separated from each other with a dash
Example:
TIMER 1 Timer programme 1 active.
TIMER 1-4 Timer programmes 1 and 4 active.
TIMER 1-2-3-4-5-6 Timer programmes all active.
EXAMPLE OF PROGRAMMING
With boiler on or off:
access the MENU,
scroll to TIMER with the <> arrows,
press the "Menu" key
the system proposes "P1" (Press the <> keys for the subsequent timers P2,P3, P4, P5, P6)
to activate "P1" press the "Menu" key
press + - and select "ON"
confirm with the "Menu" key
At this point it will propose 00:00 as starting time, with key + - adjust the starting time and press the "menu" key to confirm.
The next step proposes a shutdown time of 10 minutes above that set for start-up: press the + key and adjust the shutdown time, confirm with the "menu" key.
Subsequently the system proposes the days of the week in which to activate or deactivate the previously set timer. With the - or + key highlight with the white background the day in which one wishes to activate the timer and confirm with the "menu" key. If no day of the week is confirmed as active, in turn the timer programme will not appear active in the status screen.
Continue to program the following days or press "ESC" to exit. Repeat the procedure to program the other timers.

EN

13.6 PROGRAMMING EXAMPLES:

P1			P2		
on	off	day	on	off	day
08:00	12:00	mon	11:00	14:00	mon
Boiler on from 08:00 to 14:00					
on	off	day	on	off	day
08:00	11:00	mon	11:00	14:00	mon
Boiler on from 08:00 to 14:00					
on	off	day	on	off	day
17:00	24:00	mon	00:00	06:00	tue
Boiler on from 17:00 on monday to 06:00 on tuesday					

13.7 NOTES FOR TIMER OPERATION

- Start-up with the timer always takes place with the last temperature and ventilation settings (or with default 20°C and V3 settings in the event they have never been changed).
- Start-up time ranges from 00:00 a 23:50
- If the shutdown time is not already memorised, it proposes a start-up time in + 10 minutes.
- A timer programme switches the boiler off at 24:00 of one day and another programme switches it on at 00:00 of the next day: the boiler stays on.
- A programme proposes a start-up and shutdown in times included within another timer programme: if the boiler is already on, start will not have any effect, while OFF will switch it off.
- In the boiler on and timer active condition, press the OFF key and the boiler will switch off, it will switch on automatically at the next time set on the timer.
- In the boiler off and timer active condition, press the ON key and the boiler will switch on, it will switch off at the time set on the active timer.

13.8 AUTO ECO MODE (SEE SECTION F-G SETTINGS MENU PAGE 30)

To activate the "Auto Eco" mode and adjust the time refer **SETTINGS MENU page 30**.
The possibility to adjust the "ECO shutdown t" comes from the need to ensure proper operation in the various rooms the boiler can be installed in and prevent continuous shutdowns and start-ups in the event the temperature is subject to sudden changes (air currents, poorly insulated rooms, etc.).
The ECO shutdown procedure is activated automatically when all the power demand devices involved in the "system configuration" are satisfied: room probe/external thermostat, flow switch, puffer thermostat/ntc (10 kΩ ß3435) or boiler thermostat/ntc (10 kΩ ß3435). If all devices present are satisfied the "ECO shutdown t" time decrease starts (by default 10 minutes, it can be changed within the "Settings menu"). During this stage the panel displays ON with a small flame and alternately Chrono (of active) - Eco active. The minutes indicating the countdown for the Eco Stop are shown at the top of the display. The flame goes into P1 and stays there until the programmed "Eco shutdown t" time has elapsed and if the conditions are still satisfied, it goes into the shutdown stage. The ECO switch off countdown resets if one of the devices boosts power again.
When switch off starts the panel displays: Off - Eco Active - small flashing flame.
Once the boiler has reached the off condition, the panel displays OFF-ECO with the extinguished flame symbol.
To restart from ECO the following conditions must be satisfied simultaneously:

- Power demand
- After 5 minutes from the beginning of shutdown.
- TH2O < TSetH2O.
- If the domestic hot water (DHW) demands power - if envisaged - the first 5' are ignored and the boiler restarts as needed.

NOTE: In configuration 4 - 5 the Auto Eco mode is enabled automatically. Even when one sets the "summer" function in configuration 2 - 3 it is enabled automatically. In the cases where it is designed to be active, it is not possible to deactivate the mode.

13.9 SLEEP FUNCTION (MAIN MENU)

The sleep function is activated only when the boiler is switched on and allows to quickly set a time at which the product must switch off.
To set the Sleep function act as follows:

- Enter MENU
- Scroll to SLEEP with the <> arrows
- Press Menu
- With the + - keys adjust the desired shutdown time.

The panel proposes a shutdown time of 10 minutes from the current time, adjustable with key 4 until the next day (I can therefore delay the shutdown for up to a maximum of 23 hours and 50 minutes).
If the SLEEP function is active with the TIMER active the first has priority over the latter, therefore the boiler will not switch off at the time set on the timer but instead by the time established by the sleep function, even if later than the time set on the timer.

13.10 AUXILIARY BOILER (SEE SECTION I SETTINGS MENU PAGE 30)

One must install an additional module (optional) to enable start-up of an auxiliary boiler in the event the stove is switched off or in alarm conditions. By default this function is deactivated, if needed activate it to access the settings menu.

13.11 PELLETS RECIPE (SEE SECTION J SETTINGS MENU PAGE 30)

This function is for adapting the stove to the pellets that are being used. In fact, as there are several types of pellets on the market, boiler operation is extremely variable depending on the fuel quality. In the event the pellets tend to clog the brazier due to an excessive load of fuel or in the event the flame is always high even at low powers and, vice versa if the flame is low one can decrease/increase the amount of pellets in the brazier:
The available values are:
-3 = Decrease by 30% compared to factory settings.
-2 = Decrease by 20% compared to factory settings.
-1 = Decrease by 10% compared to factory settings.
0 = No variation.
1 = Increase by 5% compared to factory settings.
2 = Increase by 10% compared to factory settings.
3 = Increase by 15% compared to factory settings.

13.12 SMOKE RPM VARIATION (SEE SECTION K SETTINGS MENU PAGE 30)

If the installation presents difficulties for smoke evacuation (no draught or no pressure in the duct), the smoke and ash expulsion speed can be increased. This change resolves all the potential problems related to pellets clogging in the brazier and deposits forming at the bottom of the brazier itself caused by poor quality fuel or fuel that produces a lot of ashes. The values available are from -30% to +50% with variations of 10 percentage points at a time. The variation in negative can be used in case the flame is too low.

13.13 PUMP ON T (EXPERIENCED USERS ONLY) - SEE SECTION H SETTINGS MENU PAGE 30

This menu item allows to adjust the pump activation temperature.

13.14 MAXIMUM POWER (EXPERIENCED USERS ONLY) - SEE SECTION L SETTINGS MENU PAGE 30

It allows to set the maximum flame limit at which the boiler can operate to reach the set temperature target.

13.15 CHIMNEY SWEEP FUNCTION (FOR MAINTENANCE TECHNICIANS ONLY) - SEE SECTION N SETTINGS MENU PAGE 30

This function can be activated only when the boiler is on and with power output and heating operation power with parameters P5, with fan (if present) in V5. Any loading/smoke ventilation percentage corrections must be taken into account. This status lasts 20 minutes, the countdown is displayed on the panel. During this interval the thermostat/puffer/room set point/H20 set point are not taken into account, only the safety shutdown at 85°C remains active. At any time the technician can interrupt this stage by quickly pressing the on/off key.

13.16 SEASON FUNCTION (SEE SECTION P SETTINGS MENU PAGE 30)

In configurations 2 and 3, by enabling the "summer" function, the deviation of the 3-way valve to the heating system is inhibited in order to prevent the radiators from heating up, therefore the flow is always directed towards the domestic hot water (DHW) - if envisaged.
By activating the "summer" option one automatically enables the auto-eco function (it cannot be deactivated). The room probe/external thermostat are not taken into account.

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13.17 FEED SCREW (SEE SECTION D SETTINGS MENU PAGE 30)

Allows to fill the pellets loading system. It can only be activated with the boiler switched off, it displays an 180" countdown after which the feed screw stops automatically, as when exiting the menu.

13.18 COMPONENTS TEST (SEE SECTION M SETTINGS MENU PAGE 30)

It can only be carried out with the boiler switched off, it allows to select the components to be tested:

- Spark plug: it is turned on for a fixed time of 1 minute during which the panel displays the countdown seconds.
- Feed screw: it is powered for a fixed time of 1 minute during which the panel displays the countdown seconds.
- Extractor: it is activated at 2500 rpm for a fixed time of 1 minute during which the panel displays the countdown seconds.
- Exchanger: it allows to carry out the test in V5 for a fixed time of 1 minute during which the panel displays the countdown seconds.
- Pump: it is activated for a fixed time of 10 seconds during which the panel displays the countdown.
- 3 way: the 3 way valve is activated for a fixed time of 1 minute during which the panel displays the countdown seconds.

14 SAFETY DEVICES AND ALARMS

14.1 SAFETY DEVICES

The product is supplied with the following safety devices

14.2 PRESSURE SWITCH

Monitors pressure in the smoke duct. It is designed to shut down the pellets feed screw in the event of an obstructed flue or significant back-pressure. (wind)

14.3 SMOKE TEMPERATURE PROBE

Detects the temperature of the smoke, thereby enabling start-up or stopping the product when the temperature drops below the preset value.

14.4 CONTACT THERMOSTAT IN THE FUEL HOPPER

If the temperature exceeds the preset safety level, it immediately shuts down boiler operation.

14.5 CONTACT THERMOSTAT IN THE BOILER

If the temperature exceeds the preset safety level, it immediately shuts down boiler operation.

14.6 WATER TEMPERATURE PROBE

If the water temperature approaches the shutdown temperature (85°C) the probe makes the boiler perform the "OFF Stand-by" automatic shutdown.

14.7 ELECTRICAL SAFETY

The product is protected against sudden current surges by a main fuse in the power supply panel on the rear part of the product. Other fuses that protect the electronic boards are found on the latter.

14.8 SMOKE FAN

If the fan stops, the electronic board promptly shuts off the pellets supply and an alarm message is displayed.

14.9 GEAR MOTOR

If the gear motor stops, the boiler will continue to run until the flame goes out due to lack of fuel and until a minimum level of cooling is reached.

14.10 TEMPORARY POWER CUT

If the power cut lasts less than 10" the boiler returns to its previous operating status; if it lasts more it carries out a cooling/restart cycle.

14.11 FAILED START-UP

If during ignition no flame develops, the boiler will go into alarm condition.

14.12 ANTIFREEZE FUNCTION

If the probe in the boiler detects a water temperature of less than 5°C, the circulation pump is automatically activated to prevent the system from freezing.

14.13 PUMP ANTI-SEIZURE FUNCTION

If the pump is not used for prolonged periods, it is activated periodically for a few seconds to prevent it from seizing up.

TAMPERING WITH THE SAFETY DEVICES IS PROHIBITED
If the product is NOT used as described in this instruction manual, the manufacturer declines all liability for any damage caused to persons and property. The manufacturer furthermore refuses to accept responsibility for damage to persons and property arising from the failure to observe all the rules contained in the manual and in particular:
• All the necessary measures and/or precautions must be adopted when performing maintenance, cleaning and repairs.
• Do not tamper with the safety devices.
• Do not remove the safety devices.
• Connect the product to an efficient smoke expulsion system.
• Verify that the room in which the appliance will be installed is adequately ventilated.
The product can be started-up and the automatic function of the probe restored only after having eliminated the cause that triggered the safety system. This manual will help you understand which anomaly has occurred, and explain how to intervene according to the alarm message displayed on the appliance.

14.14 ALARM ALERTS

Whenever an operating condition other than that designed for the regular operation of the boiler occurs, there is an alarm condition.
The control panel gives information on the reason of the alarm in progress. A sound signal is not envisioned for alarms A01-A02 only so to PANEL ALERTnot disturb the user in the event of pellets running out in the hopper during the night.

PANEL ALERT	TYPE OF PROBLEM	SOLUTION
A01	The fire does not ignite.	Check whether the brazier is clean / level of pellets in the hopper.
A02	The fire goes off abnormally.	Check the level of pellets in the hopper.
A03 Thermostat alarms	The temperature of the pellets hopper or the water temperature exceed the envisioned safety threshold.	Wait for the cooling stage to end, cancel the alarm and restart the boiler setting the fuel loading at minimum (SETTINGS menu - Pellets recipe). If the alarm persists, contact the service centre. Check if the room fan works properly (if present).
A04	Smoke overheating.	The set smoke threshold has been exceeded. Reduce pellets loading (SETTINGS menu - Pellets recipe).
A05 Pressure switches alarm	Smoke pressure switch intervention or water pressure insufficient.	Verify chimney obstruction / door opening or hydraulic system pressure.
A08	Abnormal smoke fan operation.	If the alarm persists, contact the service centre.
A09	Smoke probe faulty.	If the alarm persists, contact the service centre.
A19	Water probe faulty.	Water probe disconnected / interrupted / defective / not recognised.
A20	Puffer probe alarm.	Puffer probe disconnected / interrupted / defective / not recognised.
SERVICE	Routine maintenance alert (it does not block the system).	When this flashing message appears upon start-up, it means that the preset operating hours have elapsed before maintenance. Contact the service centre.

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14.15 ALARM RESET

To reset the alarm one must press and hold key 1 (ESC) for a few seconds. The boiler performs a check to determine if the cause of the alarm persists or not.
In the first case the alarm will still be displayed, in the second case it will go onto OFF.
If the alarm persists, contact the service centre.

14.16 NORMAL SHUTDOWN (ON THE PANEL: OFF WITH FLASHING FLAME)

If the shutdown key is pressed or if there is an alarm signal, the boiler goes into the thermal shutdown phase which entails the automatic execution of the following stages:

- It stops pellets loading
- The room fan (if provided) maintains the set speed until the smoke T reaches 100°C, then it automatically sets itself at the minimum speed until it reaches the shutdown temperature
- The smoke fan sets itself at maximum speed and maintains it for a fixed time of 10 minutes, at the end of which if the smoke T has fallen below the shutdown threshold it switches off permanently, otherwise it sets itself at the minimum speed until it reaches such threshold before switching off.
- If the boiler was shutdown regularly but, due to thermal inertia the smoke temperature exceeds the threshold again, the shutdown stage restarts at the minimum speed until the temperature goes down.

14.17 BLACKOUT WITH THE BOILER ON

In the event of a power cut (BLACKOUT) the boiler behaves as follows:

- Blackout below 10": it returns to its operation in progress;
- In the event of a power cut that lasts over 10" with the boiler on or in the start-up stage, when the boiler is powered again it goes back to the previous operating condition with the following procedure:

1) It cools down activating the smoke extractor at minimum power for 10' and goes onto the next point;
1) It takes the boiler back to the operating condition before the blackout.
During stage 1 the panel displays ON BLACK OUT.
During stage 2 the panel displays Start-up.
If during stage 1 the boiler receives commands from the panel and thus carried out manually by the user, then the boiler stops executing the blackout recovery status and proceeds to restart or shutdown as requested by the command.

14.18 BLACKOUT ABOVE 10" WITH BOILER IN SHUTDOWN STAGE

In the event there is a power cut that lasts MORE THAN 10" with the boiler in the shutdown stage, when the boiler is powered again it restarts in shutdown mode even if the smoke temperature has fallen under 45°C in the meanwhile. This last stage can be skipped by pressing key 1 (esc) (it goes into start-up) and by pressing it again (it recognises that the boiler is switched off).

15 MAINTENANCE AND CLEANING

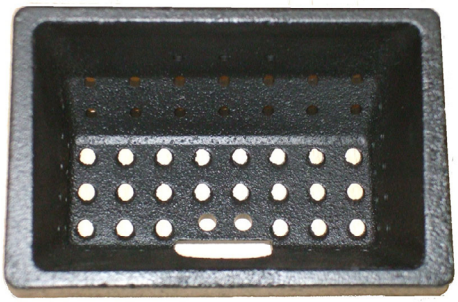

Fig. 37 - Example of a clean brazier

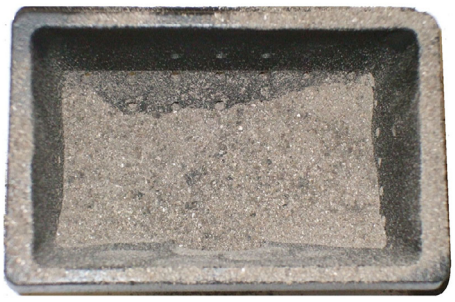

Fig. 38 - Example of a dirty brazier

ATTENTION!
All the cleaning operations of all parts must be performed with a completely cold product and the plug disconnected.
The product requires little maintenance if used with certified high quality pellets.

15.1 DAILY OR WEEKLY CLEANING PERFORMED BY THE USER

15.2 BEFORE EACH START-UP

Clean the ash and any deposits in the brazier that could clog the air passage holes.
If the pellets in the hopper finish, unburned pellets may accumulate in the brazier. Always empty the residue in the brazier before startingup.

REMEMBER THAT ONLY A CORRECTLY POSITIONED AND CLEAN BRAZIER CAN GUARANTEE START-UP AND OPTIMAL OPERATION OF YOUR PELLET PRODUCT.

For the brazier to be cleaned properly, remove it from its housing completely and thoroughly clean all the holes and the grate on the bottom.
If good quality pellets are used, you will normally only need to use a brush to restore the optimal operating conditions of the component.

15.3 CLEANING THE GLASS

It is recommended to clean the ceramic glass with a dry brush, or if it is very dirty, spray a little specific detergent and clean with a cloth.

ATTENTION!
Do not use abrasive products and do not spray the glass spray cleaner on the painted parts or the door gaskets (ceramic fibre cord).

15.4 CLEAN THE EXCHANGER AND THE UNDERGRATE SPACE EVERY 2/3 DAYS.

Cleaning the exchanger and the undergrate space is a simple operation but very important for always maintaining performance as declared.
Therefore we recommend cleaning the internal exchanger every 2-3 days, performing these simple operations in sequence:

- Activate the “CLEANING” function – when the stove is switched of press - menu “3”, select“Settings”, with the <> arrows “2-4” select “Cleaning”, confirm with “Menu” “3”, activate cleaning “ON” by pressing the +- keys “5-6”. This procedure activates the smoke extraction fan on maximum power to expel the soot that is dislodged when the exchanger is cleaned.
- Clean the pipe unit – Using the hook provided, shake the rods located under the top (A to **Fig. 39 page 46** and **Fig. 40 page 46**) vigorously 5-6 times. This operation removes the soot that has deposited on the exchanger smoke ducts during normal stove operation.
- Clean the smoke conveyor compartment see **Fig. 39 page 46** for AQUOS 15-22-22 H2O / IBIS 15-22-22 H2O / IDRON 15-22-22 H2O models - Stoves are fitted with a removable ash pan “C” designed to collect any soot and ash build-up.
- Clean the smoke conveyor compartment see **Fig. 40 page 46** for IBIS 11 / IDRON 11 models - Open the door, insert the hook onto the rod of the scraper B, shake it vigorously 5-6 times along the entire length. Remove the hook and reposition the rod B fully in its seat. This will help the fan expel any soot build-up which may have fallen during the previous pipe unit cleaning process. (After shaking the rods A, always shake the scraper B too).
- Disable the “CLEANING” function - this function is automatically disabled after two minutes. If one needs to stop this function in advance press the “Esc” key.

If these cleaning operations are not performed every 2-3 days, the stove could go into alarm conditions due to ash clogging after several hours of operation.

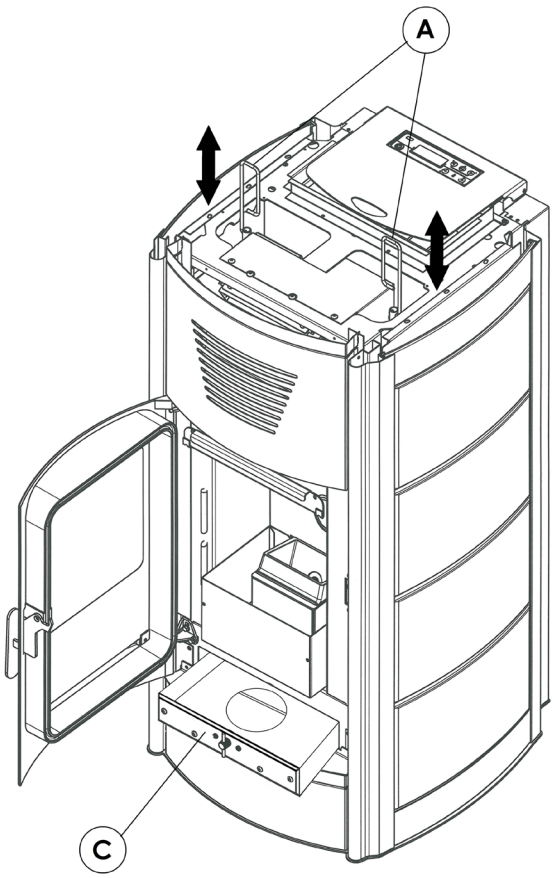

Fig. 39 - Cleaning the internal pipe unit using scrapers (Aquos 15-22-22 H2O / Ibis 15-22-22 H2O / Idron 15-22-22 H2O)

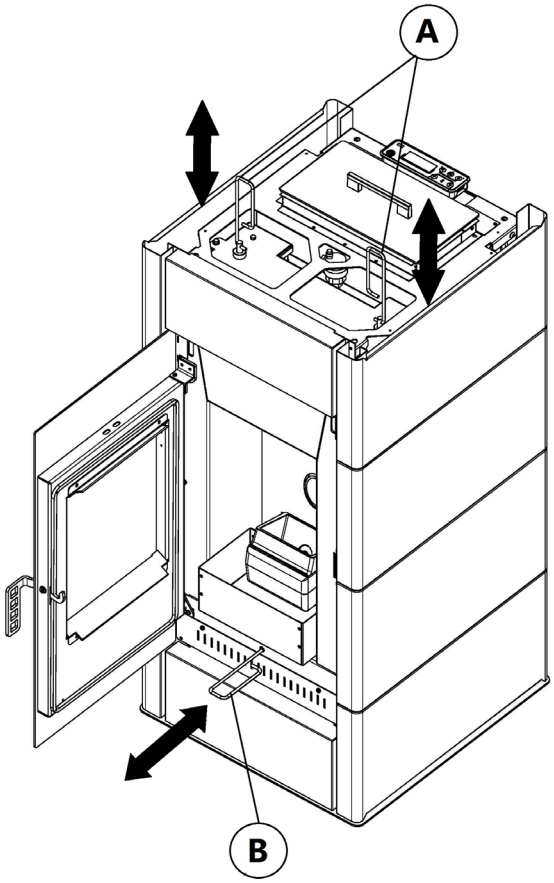

Fig. 40 - Cleaning the lower drawer (Ibis 11 / Idron 11)

15.5 PERIODIC CLEANING PERFORMED BY A QUALIFIED TECHNICIAN

15.6 CLEANING THE HEAT EXCHANGER

Half-way through the winter season, but especially at the end of it, the compartment through which the exhaust smoke passes will need to be cleaned. This cleaning process is mandatory in order to facilitate the general removal of all combustion residue, before it becomes very difficult to remove it due to the humidity compacting it over time.

ATTENTION: For your safety, the frequency with which the exhaust smoke system is cleaned depends on the intensity of use of the stove.

15.7 CLEANING THE EXCHANGER AND PIPE UNIT (AQUOS 15-22-22 H2O / IBIS 15-22-22 H2O / IDRON 15-22-22 H2O)

15.8 CLEANING THE UPPER COMPARTMENT

When the stove is cold, remove the top, remove the ceramics/sides, by loosening the relative fastening screws before removing the drivers “B” and then remove the boiler cover “C” At this point, remove the four turbulators “D” and using a rigid rod or a bottle brush, clean the internal pipe unit and the turbulators, removing all of the accumulated ash.
Check the cover gasket and replace it if necessary.

ATTENTION: It is advisable to carry out the cleaning of the upper exchanger at the end of the season and possibly by an authorised technician in order to replace the gasket that is below plug “C”. (**Fig. 41 page 47**).

15.9 CLEANING THE LOWER COMPARTMENT

Remove the ash drawer "G", empty it and using the nozzle of a vacuum cleaner remove any ash and soot that may have built up under the drawer "G". Remove the brazier "F" and clean it every 2/3 days.
Remove the drawer "E", empty it and using the nozzle of a vacuum cleaner remove any ash that may have built up in the housing of the drawer "E".

ATTENTION: It is advisable to clean the lower compartment "E" once a week and in any case according to the fuel consumption.

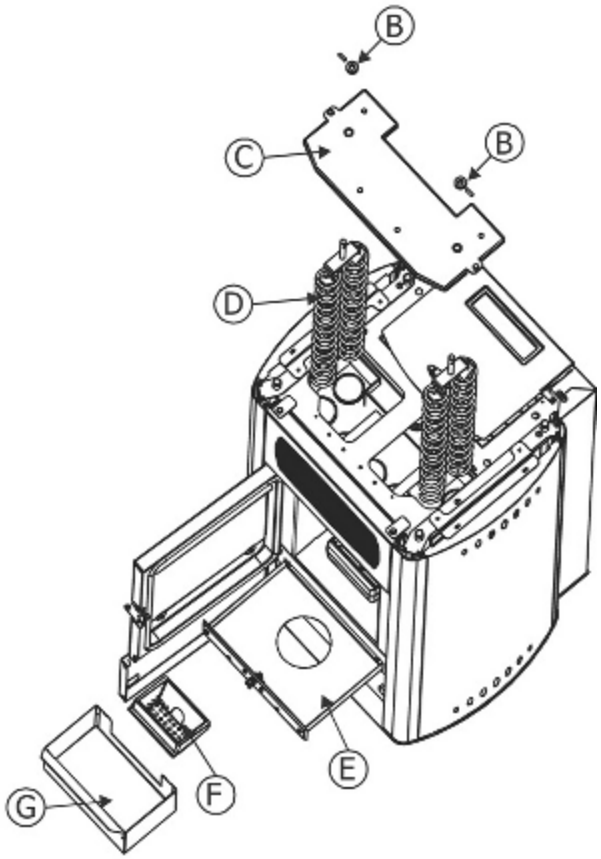

Fig. 41 - Cleaning the pipe unit, turbulators and lower compartment (Aquos 15-22-22 H2O / Ibis 15-22-22 H2O / Idron 15-22-22 H2O)

15.10 CLEANING THE EXCHANGER AND PIPE UNIT (IBIS 11 / IDRON 11)

15.11 CLEANING THE UPPER COMPARTMENT

When the stove is cold, remove the top, remove the ceramics/sides, by loosening the relative fastening screws before removing the drivers "B" and then remove the boiler cover "C" At this point, remove the four turbulators "D" and using a rigid rod or a bottle brush, clean the internal pipe unit and the turbulators, removing all of the accumulated ash.
Check the cover gasket and replace it if necessary.

ATTENTION: It is advisable to carry out the cleaning of the upper exchanger at the end of the season and possibly by an authorised technician in order to replace the gasket that is below plug "C". (**Fig. 42 page 48**).

15.12 CLEANING THE LOWER COMPARTMENT

Remove the ash drawer "G", empty it and using the nozzle of a vacuum cleaner remove any ash and soot that may have built up under the drawer "G". Remove the brazier "F" and clean it every 2/3 days.
Loosen the screws and remove the plug "E" and using the nozzle of a vacuum cleaner, remove any ash and soot that may have built up in the exchanger "H".

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ATTENTION: It is advisable to clean the lower compartment "E" once a week and in any case according to the fuel consumption.

Check the seal of the ceramic fibre gasket on the plug and replace it if necessary. Check the seal of the door gasket and replace it if necessary.
At the end of the season one must clean the compartment under the brazier and the inside of the heat exchanger. This general cleaning should be carried out at the end of the season in order to facilitate the general removal of all combustion residues, without waiting too long, because with time and humidity these residues can become compacted.

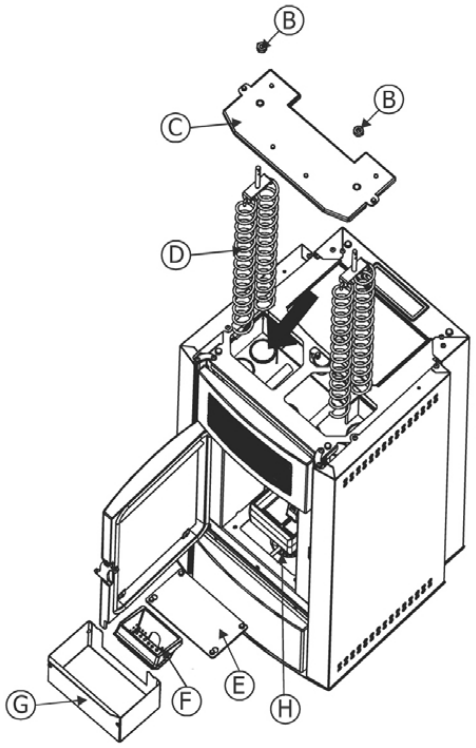

Fig. 42 - Cleaning the pipe unit, turbulators and lower compartment (Ibis 11 / Idron 11)

15.13 CLEANING THE SMOKE DUCT AND GENERAL CHECKS:

Clean the smoke exhaust, especially around the T-fittings, curves and any horizontal sections. For information on cleaning the flue, contact a chimney sweeper.
Check the seal of the ceramic fibre gaskets on the door of the stove. If necessary, order new replacement gaskets from the retailer or contact an authorized service centre to carry out this task.

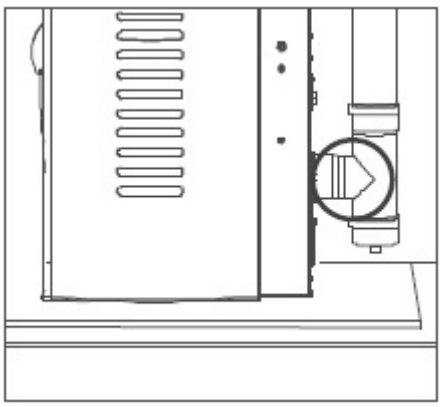

Fig. 43 - T-fitting

ATTENTION:
The frequency with which the smoke exhaust must be cleaned depends on the use of the stove and the type of installation.
We recommend contacting an authorised service centre for end-of-season maintenance and cleaning as the abovementioned operations will be performed together with a general inspection of the components.

15.14 END-OF-SEASON SHUTDOWN

At the end of each season, before switching the product off, it is recommended to remove all the pellets from the hopper with a vacuum cleaner that has a long pipe.
The appliance must be disconnected from the mains when it is not used. It is recommended to remove the power cable for additional safety, especially in the presence of children.
The service fuse may have to be replaced if the control panel display does not go on when the product is next switched on by pressing the main switch on its side.
There is a fuse compartment on the side of the product, under the power socket. After having disconnected the plug from the socket, use a screwdriver to open the cover of the fuse compartment and if necessary, replace them (3.15 A delayed).

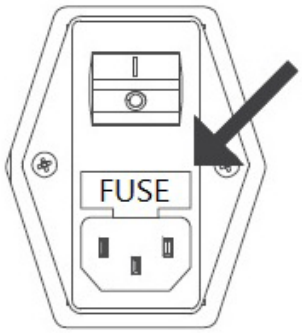

Fig. 44 - Fuse compartment

16 PROBLEMS/CAUSES/SOLUTIONS

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16.1 CHECKING THE INTERNAL COMPONENTS

ATTENTION!
The internal electromechanical components must only be checked by qualified personnel whose technical expertise includes combustion and electricity.

It is recommended to perform this routine maintenance annually (with a scheduled service contract), which focuses on a visual and functional verification of the internal components. The following is a summary of the necessary checks and/or maintenance for the product to work correctly.

PARTS/INTERVAL	EVERY DAY	EVERY WEEK	15 DAYS	60-90 DAYS	EVERY SEASON
Clean the brazier *	X				
Clean the ash collection compartment with a vacuum cleaner *		X			
Clean the ash pan	X				
Clean the glass	X				
Clean the turbulators			X		
Clean the lower ash pan			X		
Clean the "T" exhaust fittings (outside the stove)				X	
Clean the exchangers and remove ash and incrustations					X
Clean the smoke fitting					X
Circulation pump inspection					X
Hydraulic leaks inspection					X
Door gasket inspection					X
Start-up spark plug inspection					X

** WITH POOR QUALITY PELLETS CLEANING FREQUENCY MUST BE INCREASED.*

ATTENTION:
All repairs must only be carried out by a specialised technician, with the product switched off and the plug disconnected.
If the product is NOT used as described in this instruction manual, the manufacturer declines all liability for any damage caused to persons and property.

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
Pellets are not being fed into the combustion chamber.	The pellet hopper is empty	Fill the hopper with pellets.
	Sawdust has blocked the feed screw	Empty the hopper and remove the sawdust from the feed screw by hand.
	Faulty gear motor	Replace the gear motor.
	Faulty electronic board	Replace the circuit board.

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The fire goes out or the appliance stops automatically.	The pellet hopper is empty	Fill the hopper with pellets.
	The pellets are not fed	See the previous anomaly.
	The pellet temperature safety probe has been triggered	Let the product cool down, restore the thermostat until the problem is resolved and switch the product back on. If the problem persists contact Technical Assistance.
	The door is not closed properly or the gaskets are worn	Close the door and replace the gaskets with original ones.
	Unsuitable pellets	Change the type of pellets with those recommended by the manufacturer.
	Low pellet supply	Have the fuel flow checked following the booklet instructions.
	The combustion chamber is dirty	Clean the combustion chamber, following the booklet instructions.
	Clogged outlet	Clean the smoke duct.
	Faulty smoke extraction motor	Check the motor and replace it, if necessary.
	Pressure switch faulty or defective	Replace the pressure switch.
The product works for a few minutes and then switches off.	Start-up phase is not completed	Repeat start-up.
	Temporary power cut	Wait for the automatic restart.
	Clogged smoke duct	Clean the smoke duct.
	Faulty or malfunctioning temperature probes	Check and replace the probes.
	Faulty spark plug	Check the spark plug and replace it, if necessary.
Pellets accumulate in the brazier, the glass of the door gets dirty and the flame is weak.	Insufficient combustion air.	Clean the brazier and check that all the holes are clear. Perform a general cleaning of the combustion chamber and the smoke duct. Check that the air inlet is not obstructed.
	Damp or unsuitable pellets.	Change the type of pellets.
	Faulty smoke evacuation motor.	Check the motor and replace it, if necessary.
The smoke evacuation motor does not work.	No electrical supply to the stove.	Check the mains voltage and the protection fuse.
	The motor is faulty.	Check the motor and capacitor and replace them, if necessary.
	Defective motherboard.	Replace the electronic board.
	Control panel broken.	Replace the control panel.
The convection air fan never stops. (IF PROVIDED)	Faulty or malfunctioning temperature control probe.	Check the probe and replace it, if necessary.
	Faulty fan.	Check the operation of the motor and replace if necessary.
	Silencer card of fan defective.	Replace silencer card.

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
In the automatic position the stove always runs at full power.	Thermostat is set to minimum.	Set the thermostat temperature again.
	The room thermostat is in the maximum position.	Set the thermostat temperature again.
	Faulty temperature probe.	Check the probe and replace it, if necessary.
	Faulty or malfunctioning control panel.	Check the panel and replace it, if necessary.
The product does not start.	No power supply.	Check that the plug is inserted and the main switch is in the "I" position.
	Pellet temperature probe triggered.	Check recipe parameters.
	Blown fuse.	Replace the fuse.
	Pressure switch broken (lockout indicated).	Water pressure low in stove.
	Water temperature probe triggered.	Contact the service centre.
	Clogged smoke exhaust or smoke duct.	Clean the smoke exhaust and/or the smoke duct.
No increase in temperature with stove in operation.	Incorrect combustion adjustment.	Check recipe.
	Boiler/system dirty.	Check and clean the boiler.
	Insufficient stove power.	Check that the stove is properly sized for the requirements of the system.
	Poor pellets quality.	Use of manufacturer pellets.
Condensation in boiler.	Incorrect temperature setting.	Set the stove to a higher temperature.
	Insufficient fuel consumption.	Check recipe.
Radiators cold in winter.	Room thermostat (local or remote) set too low. If remote thermostat, check if it is defective.	Set it at a higher temperature or replace it (if remote).
	Circulator does not run because blocked.	Free up the circulator by removing the plug and turning the shaft with a screwdriver.
	Circulator does not run.	Check the electrical connections of the circulator; replace if necessary.
	Radiators have air in them.	Bleed the radiators.
High temperature variability of domestic water.	Water flow rate too low.	Increase the water flow rate (minimum 3 litres per minute).
Little domestic hot water is provided.	Insufficient mains water pressure.	Check the calibration of the pressure reducer valve.
	Tap or mixer clogged with limescale.	Install an autoclave.
	Water unit clogged.	Check and clean.
		Clean or replace the plate heat exchanger.
Hot water is not provided.	Circulator (pump) blocked.	Free the circulator (pump).

NOTE

NOTE

NOTE

PELLET STOVES · WOOD STOVES · WOOD COOKING STOVES
THERMOSTOVES · PELLET FIREPLACE INSERTS

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