



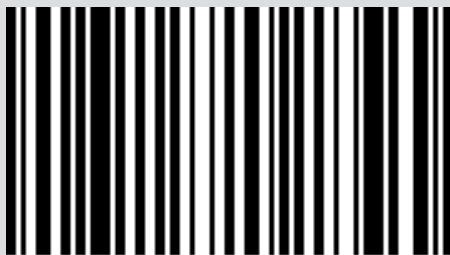
PELLET BOILER

PERFORMA 15Q EASYCLEAN H1
PERFORMA 20Q EASYCLEAN H1
PERFORMA 25Q EASYCLEAN H1
PERFORMA 30Q EASYCLEAN H1

PART 1 - REGULATIONS AND ASSEMBLY

Instructions in English

RED
HEATING



8902101800

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INTRODUCTION

Dear Customer,

Our boilers are designed and built in compliance with the European regulation EN 303-5 (manual or automatic loading solid fuel boilers). They also meet the essential requirements of directive 2006/95/EC (Low Voltage) and directive 2004/108/EC (Electromagnetic Compatibility).

To get the best performance out of your boiler, we suggest you read the instructions in this manual carefully before starting it up for the first time.

This installation guide forms an integral part of the product: ensure that the manual is always supplied with the device, even if it changes owner. If the manual is lost, you can request another copy from the local Technical Dept. or download it directly from the company website. All local regulations, including those referring to national and European standards, must be observed when installing the appliance.

In Italy, for the installation of systems with biomass below 35KW, refer to ministerial decree D.M. 37/08, and the qualified installation technician with the appropriate requisites must issue a certificate of compliance for the system installed.

REVISIONS TO THE PUBLICATION

The contents of this manual is strictly technical and under the ownership of RED.





No part of this manual may be translated into other languages, adapted or reproduced, even in part, in other mechanical or electronic forms, photocopies, recordings or other, without the prior written authorisation from RED.

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.

CARE OF THE MANUAL AND HOW TO CONSULT IT

- Take care of this manual and keep it in an easily and rapidly accessible place.
- Should the manual be misplaced or ruined, request a copy from your Retailer or directly from the Manufacturer, specifying the product identification data. You can also download it directly from the company website.
- The "**bold text**" requires particular attention.
- "*Italic text*" is used to call your attention to other paragraphs in the manual or for any additional clarifications.
- "NOTE" provides the reader with additional information.

SYMBOLS USED IN THE MANUAL

	ATTENTION: Read the relative message with care because failure to observe the information provided could result in serious damage to the product and danger to the persons who use it.
	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 change settings.
	MANUAL carefully read this manual or the relative instructions.

SAFETY PRECAUTIONS

- **Installation, electrical connection, operating test and maintenance must only be carried out by authorised and qualified personnel.**
- **Install the product in accordance with all local and national legislation and regulations in force in the region or state.**
- **A bad use or unproper maintainance of the product can bring to a serious risk of explosion in the combustion chamber.**
- Only use the fuel recommended by the manufacturer. The product must not be used as an incinerator. It is strictly forbidden to use liquid fuel.
- Do not put any fuel other than wood pellets in the tank.
- 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.
- **This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance shall not be carried out by children without supervision.**
- The user, or whoever is operating the product, must read and fully understand the contents of this installation guide before performing any operation. Errors or incorrect settings can cause hazardous conditions and/or poor operation.
- Do not climb on or lean on the product.
- Do not put linen on the product to dry. Any drying racks or the like 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 relieves the company from any civil and criminal liability.
- Many of the surfaces of the product get very hot (door, handle, glass, smoke

1-WARNINGS AND WARRANTY CONDITIONS

outlet pipes, etc.). **Avoid coming into contact with these parts, without adequate protective clothing or suitable implements, such as gloves with thermal protection** or “cold handle” operating systems.

- **It is forbidden to operate the product with the door open or the glass broken.**
- The product must be powered by an electrical system that is equipped with an effective earthing device.
- Switch the product off in the event of a fault or malfunction.
- Accumulated unburned pellets in the burner after each “failed start-up” must be removed before lighting again. Check that the burner is clean and positioned properly before lighting again.
- **Shut the boiler down in the event of a breakdown or bad running and contact the specialised technician immediately.**
- **Pellets must not be fed manually into the burner – this wrong behaviour can generate an abnormal amount of unburned gas, with a risk of explosion in the chamber.**
- **Accumulated unburnt pellets in the burner after a failed ignitions must be removed before lighting.**
- Failure to clean and maintain the brazier can result in improper running and explosions within the boiler. Make sure you remove and clear the holes in the brazier and any loose encrustations every time you empty the ash from the boiler or every time you have a failed ignition. Make sure that the holes in the brazier are never reduced in size as this will affect the safe performance of the boiler if not maintained.
- Do not wash the product with water. Water could get inside the unit and damage the electrical insulation and cause electric shocks.
- If there is a fire in the flue, extinguish the boiler, disconnect it from the power supply and never open the door. Then contact the competent authorities.
- Do not light the boiler with flammable materials if the ignition system breaks down.
- Do not stand for a long time in front of the product in operation. Do not overheat the room you are in and where the product is installed. This could cause injuries and health problems.

1-WARNINGS AND WARRANTY CONDITIONS

- Install the product in a location that does not present a fire hazard and is equipped with power and air supplies and smoke outlets.
- In the event of fire in the chimney, turn off the device, disconnect it from the mains electricity and do not open the hatch. Then contact the competent authorities.
- The product and the cladding must be stored in a dry place and must not be exposed to weathering.
- 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 materials.
- In the event of a malfunction of the ignition system, do not force it to light by using 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).
- Live electrical parts: only power the product once it has been fully assembled.
- Disconnect the product from the 230V power supply before performing any maintenance operation.
- **IF ANY SMOKE SPILLAGE IS SEEN WITHIN THE ROOM OR THE APPLIANCE SUFFERS FROM AN EXPLOSIVE IGNITION PLEASE TURN OFF THE APPLIANCE, VENTILATE THE ROOM AND CONTACT THE INSTALLER/SERVICE TECHNICIAN IMMEDIATELY.**

1-WARNINGS AND WARRANTY CONDITIONS

INFORMATION

- If there are any issues, contact the retailer or a qualified technician authorised by RED. In the event of a repair, request the use of original spare parts.
- Only use types of fuel recommended by RED (for Italy, pellets with a 6 mm diameter and pellets with a 6-8 mm diameter for other European countries), which must only be loaded with an automatic feed system.
- Periodically check and clean the smoke outlet duct (connection to the flue).
- Accumulated unburnt pellets in the burner after a series of failed ignitions must be removed before lighting it again.
- The pellet boiler is not a cooking appliance.
- Always keep the cover of the fuel tank closed.
- Keep this instruction manual, which will be an integral part of the boiler for the whole of its service life. If the boiler is sold or transferred to another user, ensure the manual is also handed over.
- If lost, contact RED or the authorised dealer to request a copy.

INTENDED USE

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

WARRANTY CONDITIONS

The firm covers the product, **with the exception of the parts prone to normal wear** that are listed below, for a period of **2 (two) years** from the date of purchase as proved 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;

Furthermore, in order for the guarantee to be valid, the device must be installed and calibrated by qualified personnel, and where necessary, the user must be issued with a declaration of conformity and correct functioning of the product.

We recommend performing a functional test of the product before completion with the relative finishes, if applicable (claddings, painting of walls, etc.).

Installations that do not meet the current standards, improper use and lack of maintenance as expected by the manufacturer, void the product warranty.

The warranty is valid on the condition that the instructions and warnings contained in the user 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 warranty period, and the original expiry date remains unchanged.

The warranty covers the replacement or free repair **of parts recognised as being faulty at source due to manufacturing defects**. In the event of a fault, to benefit from the warranty, the customer must keep the warranty certificate and provide it with the document given at the time of purchase to the Service Centre.

1-WARNINGS AND WARRANTY CONDITIONS

EXCLUSIONS

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

- Damage caused during transportation and/or handling
- 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 guide provided with the appliance)
- incorrect sizing with regard 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 caused by the user continuing to operate the appliance even after the fault has been noticed
- in presence of a boiler, any corrosion, incrustations or breakages 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 system affecting the appliance
- damage caused by tampering with the appliance, atmospheric agents, natural disasters, vandalism, electrical discharges, fires, faults in the electric and/or hydraulic system.
- Failure to have the annual boiler maintenance performed by an authorised technician or qualified personnel will result in the loss of the warranty.

Also excluded from this warranty are:

- parts subject to normal wear such as gaskets, glass, claddings and cast iron grilles, painted, chrome-plated or gilded parts, handles and electric cables, bulbs, indicator lights, knobs, all parts which can be removed from the firebox.
- Variations in colour of the painted or ceramic/serpentine parts and crazed 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 defects and consequent damages must be agreed upon with the Service 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 as 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 warranty 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 provision specified in the manual, especially warnings regarding installation, use and maintenance of the appliance.

1-WARNINGS AND WARRANTY CONDITIONS

SPARE PARTS

In the event of a malfunction, consult the retailer who will forward the call to the Technical Assistance Department.

Only use original spare parts. The retailer or service centre can provide all necessary information regarding spare parts. We do not recommend waiting for the parts to get worn out before having them replaced. It is important to perform regular maintenance.



The company declines all liability if the product and any other accessory is used improperly or modified without authorisation.

All parts must be replaced with original spare parts.

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.

1-WARNINGS AND WARRANTY CONDITIONS

RULES FOR INSTALLATION

The product is a boiler that uses wood pellets.

Below is a list of the European regulations regarding the installation of the product:

EN 303-5:2012: Solid fuel boilers, with manual or automatic loading, nominal thermal power of 500 kW - Terminology, requisites, tests and marking.

EN 12828 Heating systems design.

Electrical systems with rated voltage not exceeding 1000 V AC and 1500 V DC.

EN 1443 General chimney regulation

EN 1856-1 metal smoke ducts

EN 1856-2 metal smoke extraction channels

EN 1457 chimneys - Interior terracotta / ceramic flues

EN 13384-1 Chimneys - Thermal and dynamic fluid calculation methods - Part 1: Chimneys connected to a single appliance

Below are some applicable regulations for Italy:

UNI 10683:2012 Heat generators fuelled by wood or other solid bio-fuels - Test, installation, control and maintenance (for thermochemical power at the firebox lower than 35kW)

UNI/TS 11278 general technical regulation for the choice of smoke duct/flue

UNI 10847:2000 Smoke extractor systems for liquid and solid fuelled generators - Maintenance and control - Guidelines and procedures

UNI 8065 water treatment in civil plants.

UNI 9182 Hot and cold (sanitary) air supply and distribution systems.

Installation must be carried out with reference to the diagram of the heating system prepared in accordance with the standards and local recommendations in force:

In any case, respect:

For the heating system

Local requirements concerning the chimney connection.

Local requirements for fire-fighting standards.

For electrical parts - **EN 60335 "Safety of electrical household appliances and similar**

Part 1 - General requirements

Part 2 - Special regulations for appliances with gas, gas oil and solid fuel burners with electrical connections.

2-INSTALLATION



The instructions in this chapter refer explicitly to the Italian installation regulation UNI 10683. In any case, always observe the regulations in force in the country of installation.

PELLETS

Wood pellets are manufactured by hot-extruding compressed sawdust which is produced during the working of natural dried wood. 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 3 to 40 mm. A good quality pellet has a density of between 600 and 750 or more kg/metres cubed and a moisture content that accounts for 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.

While 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 around 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.



BAG OF PELLETS 15 kg

Good quality pellets guarantee good combustion, thereby decreasing harmful emissions into the atmosphere.



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

The main quality certifications for pellets currently available on the European market guarantee that the fuel complies with class A1/A2 according to ISO 17225-2 (ex EN 14961). These certifications include, for example, **ENplus, DINplus, Ö-Norm M7135**, and in particular, guarantee the following characteristics:

- calorific value: 4.6 ÷ 5.3 kWh/kg.
- Water content: ≤ 10% of the weight.
- Percentage of ash: max 1.2% of the weight (A1 less than 0.7%).
- Diameter: 6±1/8±1 mm.
- Length: 3÷40 mm.
- Content: 100% untreated wood without the addition of binding agents (max 5% bark).
- Packaging: in sacks made from ecologically compatible or biologically decomposing material.



The company strongly recommends using certified fuel for its products (ENplus, DINplus, Ö-Norm M7135). Poor quality pellets or others that do not comply with the characteristics specified previously may compromise the operation of your product and can therefore make the guarantee and product liability invalid.

2-INSTALLATION

PRECAUTIONS REGARDING INSTALLATION



IMPORTANT!

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

The product must be installed in a suitable place that allows easy access for it to be opened regularly and for routine maintenance to be performed.

The installation area must be:

- suitable to enable the appliance to operate correctly.
- Equipped with an adequate smoke expulsion system.
- Equipped with adequate ventilation from outside.
- Equipped with 230V 50 Hz power supply with an EC compliant earthing system.



IMPORTANT!

The product must be connected to a chimney that expels the smoke at the highest point of the building.

The chimney must be of suitable dimensions, caulked, and fitted with a condensation collector for collecting the water vapour that can form due to the high performance of the appliance and the consequently low temperatures of the outgoing fumes.

The chimney must comply with regulations in force.

The holes of the external air inlet and the smoke outlet pipe must be drilled before positioning the product.

THE OPERATING AREA

The boiler must be installed indoors in an area well protected from atmospheric elements.

The surface on which it stands and/or support points must have sufficient load bearing capacity to support the total weight of the appliance, its accessories and covers.

To ensure the appliance works well, we recommend installing the boiler detached from any walls or furniture, and with good air circulation to allow effective ventilation for the appliance. The product should be located in an area that allows sufficient space for normal use and maintenance operations.

The volume of the room should be no less than 15 m³.

It is essential that an adequate outdoor air intake is provided that supplies the air for combustion needed for the product to function correctly.

These air inlets must be arranged so that it is impossible for them to be obstructed.

Protect the inlets with grilles, metal mesh, etc., without reducing the net cross-section.



Remember that the ventilation grilles always have the useful cross-section in cm² indicated on one side. When choosing the grille and size of the inlet, check that the useful cross-section of the grille is larger or equal to the section required for product operation.

The flow of air between the outside and the room of installation may be direct, through an inlet in an external wall of the building; or indirect, through the intake of air from rooms adjoining and connecting permanently with the room of installation. Adjoining areas may not include sleeping areas, garages or general areas that present a fire hazard.

For air ducts, up to 3m increase the cross-section by approximately 5%, while for ducts that run for longer increase it by 15%.



IMPORTANT!

The air flow can also be drawn from an adjoining room to that of the room where the product is installed, provided the air can flow freely through permanent openings to the outside; avoid connection to sleeping areas and rooms that present a fire hazard in general.

2-INSTALLATION

POSITIONING AND RESTRICTIONS

In the case of simultaneous installation with other heating appliances, provide appropriate air inlets for each one (according to the instructions of each product).



Installation of the product is not permitted:

- **in rooms where there are liquid fuel appliances with continuous or intermittent operation that draw the combustion air from the room they are installed in;**
- **in rooms where there are B-type gas heating appliances, with or without domestic hot water production and interconnecting rooms;**
- **in rooms in which the decrease in pressure during use, as measured between the pressure outside and the pressure in the room, is greater than 4 Pa.**

The product may not be installed in rooms used as sleeping areas, bathrooms, garages or in rooms that present a fire hazard in general.

BOILER ROOM

Check that the room meets the requirements and provisions of the standards in force. There must also be a flow of at least enough air in the room for normal combustion. Vents must be installed in the walls of the room that meet the following requirements:

- Increase the cross-section by at least 6 cm² for each 1 kW (859.64kcal/h) The minimum cross-section of the opening must not, however, measure less than 100 cm². The cross-section can be calculated using the following relations:

$$S = K * Q \geq 100 \text{ cm}^2$$

Where "S" is in cm², "Q" in kW, "K" = 6 cm²/kW

- The opening must be located at the base of an external wall, preferably opposite the one with the outlet for combusted gases.



Heat-sensitive or flammable objects cannot be stored near the product; keep such objects at a minimum distance of 80 cm from the outermost point of the product.

CONNECTION OF THE SMOKE EXHAUST DUCT

When making the hole for the passage of the smoke discharge pipe, it is necessary to take into account the possible presence of flammable materials. If the hole has to be in a wall made of wood or other thermolabile material, **THE INSTALLER MUST** first set up the relative wall fitting (diameter 13 cm minimum) and insulate the pipe of the product passes with appropriate insulating material (1.3 - 5 cm thick with minimum heat conductivity of 0.07 W/m²K).

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 in negative pressure.

2-INSTALLATION

FOREWORD

The Chimney Flue chapter has been drawn up with reference to the provisions of European Standards (EN13384 - EN1443 - EN1856 - EN1457).

The chapter provides indications for installing an efficient and correct flue but is under no circumstances to substitute the regulations in force, which the qualified technician must be in possession of. Check with local authorities whether there are any restrictive regulations in force regarding the intake of air for combustion, the smoke extraction system, the flue or the chimneypot.

The company declines all liability relating to the poor functioning of the boiler if this is due to the use of an insufficiently sized flue in violation of the Standards in force.

FLUE

Have the efficiency of the flue checked by an authorised technician.

The flue or chimney is vital to the correct functioning of a forced draft solid fuel heating appliance, given that boilers with high performance have cooler fumes with consequently weaker draft and the possible formation of condensation.

It is therefore essential that the flue meets all construction standards and is always maintained in perfect condition.

A flue that serves a pellet/wood fuelled appliance must be at least category T400 (or greater if the appliance requires so) and resistant to soot fires. Smoke must be extracted through a single flue made of insulated steel (A) or an existing flue that complies with the intended use (B).

A simple air shaft made of cement must be suitably lined. In either case, ensure to include an inspection cap (AT) or inspection door (AP) and a suitable device for collecting condensation - FIG.1.

It is prohibited to connect more than one wood/pellet (*) or any other type of appliance (vent cowl...) to the same flue.

(*) unless there are national derogations (for instance in Germany), which under suitable conditions allow for the installation of several appliances in the same fireplace. In any case, strictly follow the product/installation requirements of the relative regulations/legislation in force in that country

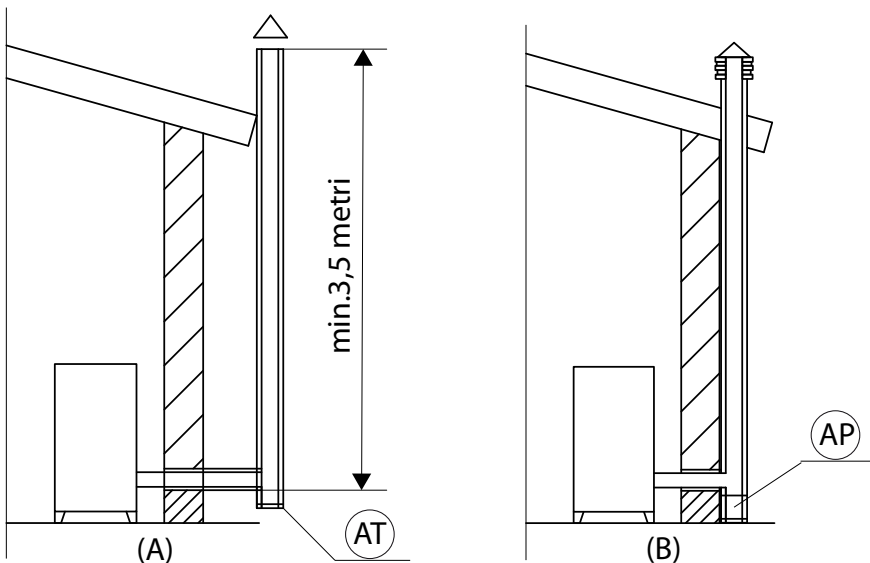


FIGURE 1 - FLUE

2-INSTALLATION

TECHNICAL CHARACTERISTICS

Flues serving a pellet/wood fuelled appliance must meet the following requirements:

- made of materials that are sufficiently resistant to mechanical stress, heat, the action of the products of combustion and their vapours.
- made of materials that are impermeable to fumes, condensation, be thermally insulated and resistant to normal mechanical stress over time
- go in a vertical direction and deviate no more than 45° from the vertical axis and be free of choke points
- be suited to the specific operating conditions of the product and have CE marking (EN1856-1, EN1443).
- Be of the correct size to suit the draft/smoke extraction requirements necessary for the product to work properly (EN13384-1)
- Be suitably caulked externally to avoid condensation and reduce the cooling of the smoke.
- Be at least category T400 (or greater if the appliance requires) and resistant to soot fires.

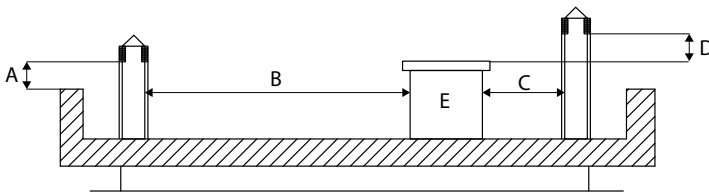
We recommend in particular to check on the data tags of the flue (in accordance with EN1856-1, EN1443) the safety distances that must be respected in presence of passing combustible materials and the type of insulating material to be used. These indications must be followed rigorously to avoid serious harm to personnel and surrounding infrastructure.

The chimney opening must be in the same room as the appliance, or at most in the adjoining room, and have a soot and condensation collection chamber beneath the opening, and be accessible via a sealed metal hatch.

Smoke must be extracted through a single flue (see fig. 3) with insulated steel tubes (A) or through an existing flue that complies with the intended use (B). A simple air shaft in cement must be suitably lined. In either case, ensure to include an inspection cap (AT) and/or inspection door (AP) and a suitable device for collecting condensation - FIG.1.

It is prohibited to connect more than one wood/pellet or any other type of appliance (vent cowling...) to the same flue.

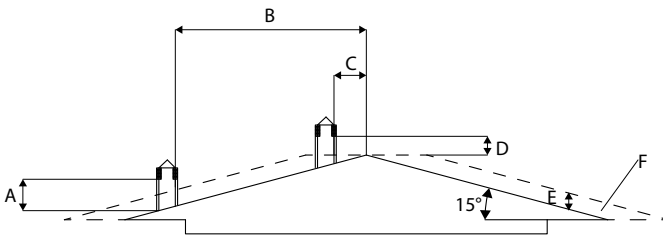
FLAT ROOF



- A = 0.50 metres
- B = DISTANCE > 2 metres
- C = DISTANCE < 2 metres
- D = 0.50 metres
- E = TECHNICAL VOLUME

FIGURE 2

ROOF AT 15°

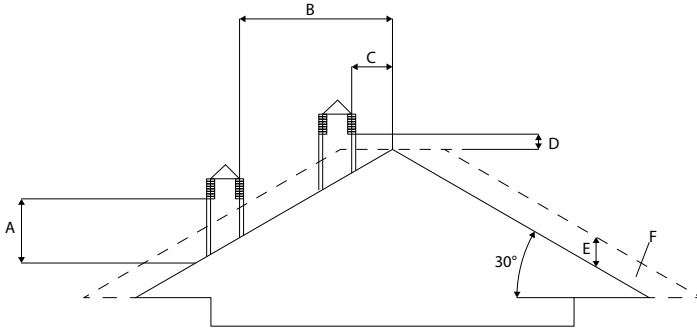


- A = MIN. 1.00 metres
- B = DISTANCE > 1.85 metres
- C = DISTANCE < 1.85 metres
- D = 0.50 metres ABOVE HIGHEST POINT
- E = 0.50 metres
- F = REFLUX AREA

FIGURE 3

2-INSTALLATION

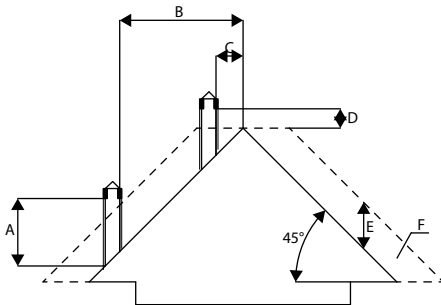
ROOF AT 30°



- A = MIN. 1.30 metres
- B = DISTANCE > 1.50 metres
- C = DISTANCE < 1.50 metres
- D = 0.50 metres ABOVE HIGHEST POINT
- E = 0.80 metres
- F = REFLUX AREA

FIGURE 4

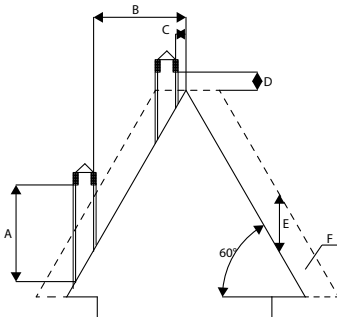
ROOF AT 45°



- A = MIN. 2.00 metres
- B = DISTANCE > 1.30 metres
- C = DISTANCE < 1.30 metres
- D = 0.50 metres ABOVE HIGHEST POINT
- E = 1.50 metres
- F = REFLUX AREA

FIGURE 5

ROOF AT 60°



- A = MIN. 2.60 metres
- B = DISTANCE > 1.20 metres
- C = DISTANCE < 1.20 metres
- D = 0.50 metres ABOVE HIGHEST POINT
- E = 2.10 metres
- F = REFLUX AREA

FIGURE 6

2-INSTALLATION

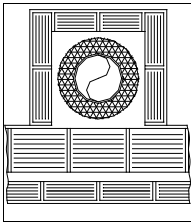
SIZING

The draught of a flue depends on its height. Check the draught with the values indicated in the technical characteristics. The minimum height of the chimney is 3.5 metres.

The interior cross-section of the flue can be round (best), square or rectangular (the ratio between the internal sides must be ≤ 1.5) with the sides joined with a minimum radius of 20 mm. The dimension of the cross-section must be a **minimum $\varnothing 150\text{mm}$** .

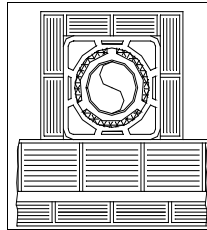
The cross-sections/lengths of the chimneys shown in the technical data tables are indications for correct installation. Any alternative configurations must be correctly sized in accordance with the general method of calculation of UNI EN13384-1 or other proven efficiency methods.

Below is a list of some flues available on the market:



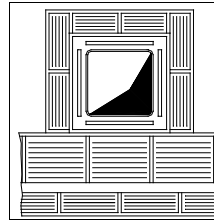
AISI 316 steel chimney with double chamber insulated with ceramic fibre or equivalent resistant up to 400°C.

EXCELLENT



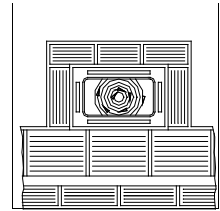
Refractory chimney with double insulated chamber and external lightweight concrete cladding with cellular material such as clay.

GOOD



Traditional square-section clay chimney with insulating empty inserts.

POOR



Avoid products with an internal rectangular section where the larger side is 1.5 times the smaller side (e.g. 20x40 or 15x30).

VERY POOR

2-INSTALLATION

MAINTENANCE

The flue must always be kept clean, since the deposit of soot or unburned oils reduces the cross-section reducing the draft and thus compromising the efficient operation of the boiler and, if large build-ups accumulate, they can catch fire. The flue and chimney pot must be cleaned and checked by a qualified chimney sweep at least once a year. Once the inspection/maintenance has been performed, request a written report that the system is safe. Failure to perform cleaning jeopardises the system's safety.

CHIMNEYPOT

The chimneypot is a crucial element for the heating appliance to work properly: we recommend a wind proof chimneypot (A), see Figure 7. The area of the opening for smoke extraction must be at least double the cross-section of the flue/lined system, and arranged so that smoke extraction is ensured even in strong wind. The chimney must prevent rain, snow or animals from entering the chimney. The height of outflow into the atmosphere must be beyond the reflux area due to the shape of the roof or any obstacles near the outlet (see Figures 2-3-4-5-6).

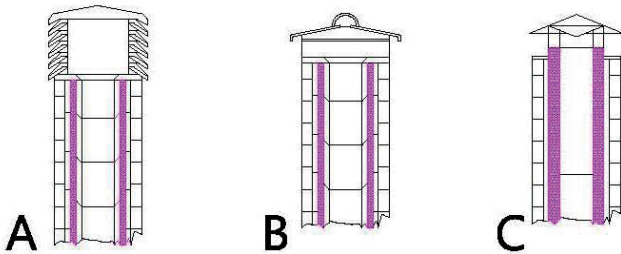
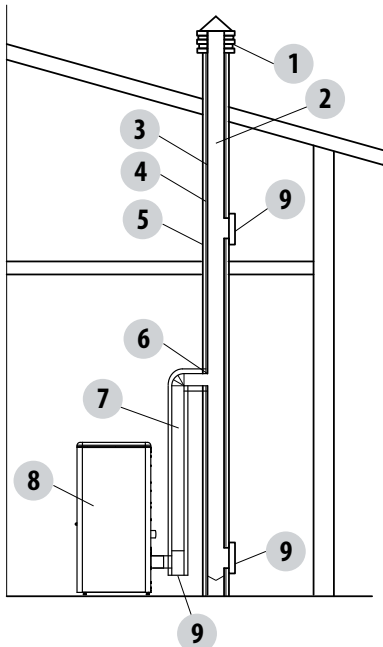


FIGURE 7

CHIMNEY COMPONENTS



- LEGEND:
- (1) CHIMNEYPOT
 - (2) REFLUX CHANNEL
 - (3) SMOKE DUCT
 - (4) THERMAL INSULATION
 - (5) OUTSIDE WALL
 - (6) CHIMNEY FITTING
 - (7) SMOKE DUCT
 - (8) HEAT GENERATOR
 - (9) INSPECTION ACCESS PANEL

FIGURE 8

2-INSTALLATION

CONNECTION TO THE FLUE

The connection between the flue and the appliance must be via a smoke duct that complies with EN 1856-2. The connecting section must extend no more than 4 m horizontally, with a minimum slope of 3% and with a maximum of 3 90° bends (accessible for inspection - do not count the T fitting at the appliance outlet).

The diameter of the smoke duct must be equal to or greater than that of the outlet of the appliance (Ø 100 mm).

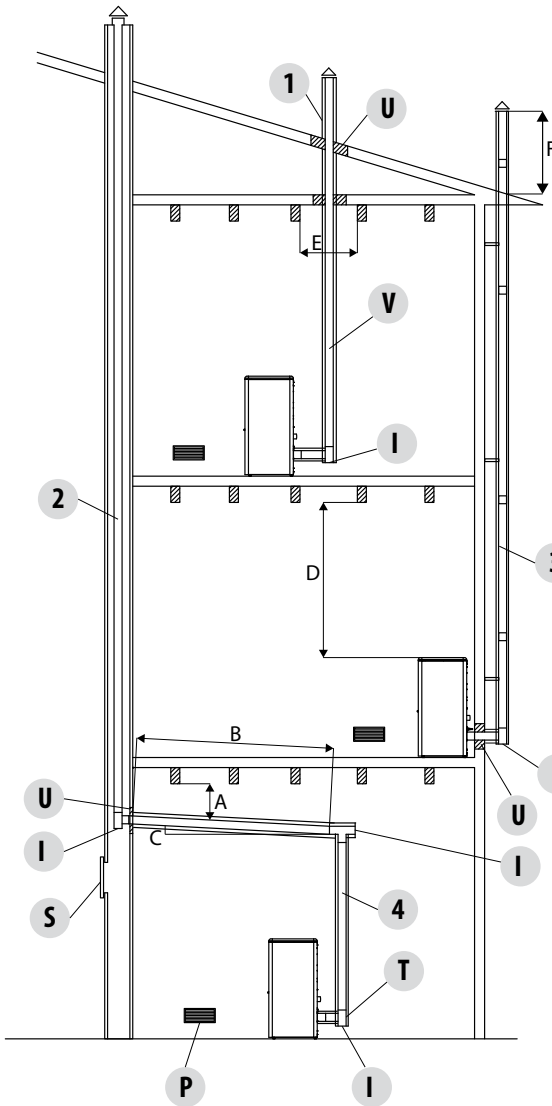
TYPE OF SYSTEM	SMOKE DUCT
Minimum vertical length	1.5 metres
Maximum length (with 1 accessible 90° bend)	6.5 metres
Maximum length (with 3 accessible 90° bends)	4.5 metres
Maximum number of accessible 90° bends	3
Horizontal sections (minimum slope 3%)	4 metres

Use smoke ducts with a diameter 100 mm and silicone gaskets or similar gaskets that can withstand the high operating temperatures of the appliance (min. T200 class P1). **The use of flexible metal hoses made of fibre cement or aluminium is forbidden. For direction changes, we always recommend the use of a T fitting** with an inspection cap ensuring easy access to clean the pipes. Always ensure that the inspection cap is put back in place and sealed hermetically with the relevant seal intact after cleaning. It is prohibited to connect more than one appliance to the same smoke duct, or the discharge from hoods above it. It is forbidden to extract the combustion products directly through the wall, whether into indoor spaces or outdoors. The smoke duct must be at a minimum distance of 400 mm from flammable or heat-sensitive structures.

We especially recommend to check the data tags of the flue for the safety distances that must be observed in presence of combustible materials and the type of insulating material to be used. These indications must be followed rigorously to avoid serious harm to personnel and surrounding infrastructure.

2-INSTALLATION

EXAMPLES OF CORRECT INSTALLATION



1. Installation of \varnothing 150 mm flue with hole for the passage of the pipe increased by: minimum 100mm around the pipe if next to non flammable parts such as cement, brick, etc.; or minimum 300mm around the pipe (or as required by rating plate) if next to flammable parts such as wood etc. In both cases, install suitable insulation between the flue and the ceiling.

Always check and respect the data tags on the flue, in particular the minimum safety distances from combustible materials.

The previous rules also apply for holes made in walls.

2. Old flue, minimum tube \varnothing 150mm with the inclusion of an external access door for chimney cleaning.

3. External flue made of insulated stainless steel pipes, i.e. with double walls minimum \varnothing 150mm: all securely mounted to the wall. With windproof chimney pot. See fig. 7 type A.

4. Ducting system using T fittings that allow easy access for cleaning without having to remove the pipes

FIGURE 11

U = INSULATING

V = ANY REDUCTION FROM 100 TO 80 MM

I = INSPECTION CAP

S = INSPECTION ACCESS PANEL

P = AIR INLET

T = T JOINT WITH INSPECTION CAP

A = MINIMUM 40 MM

B = MAXIMUM 4 M

C = MINIMUM 3°

D = MINIMUM 400 MM

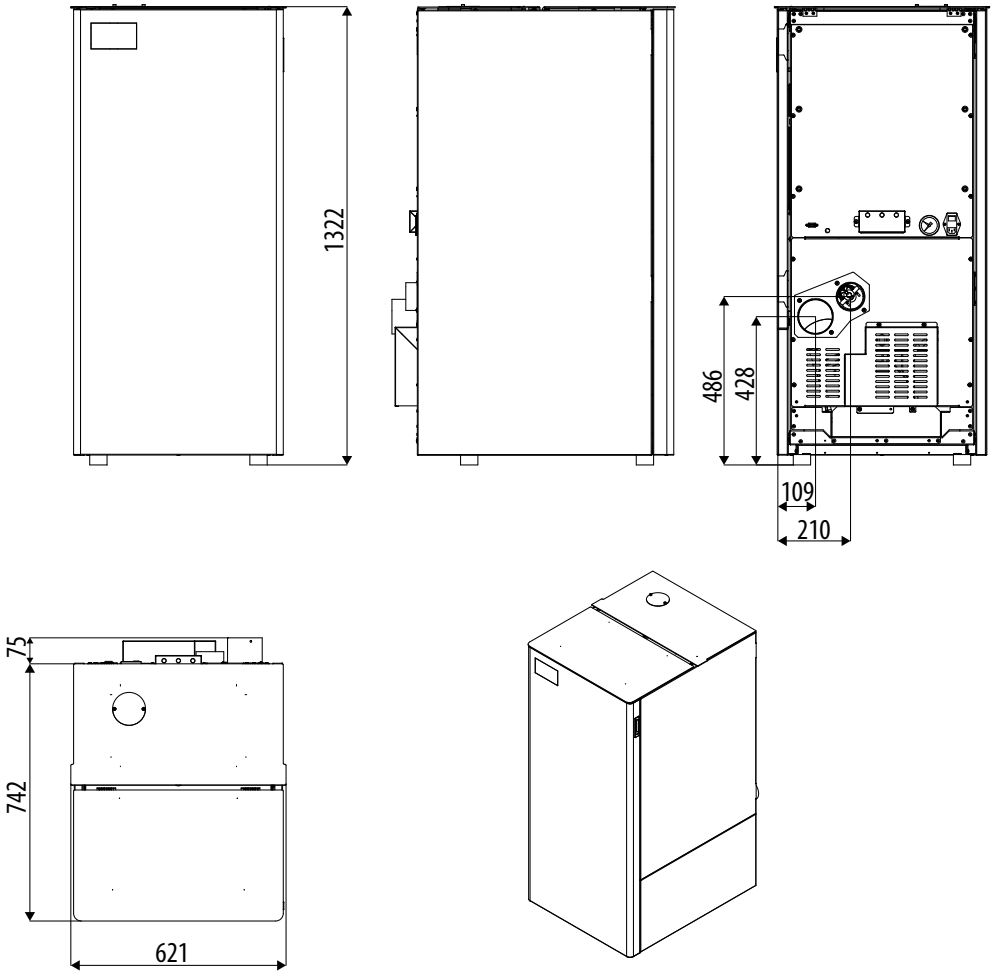
E = HOLE DIAMETER

F = SEE FIG.2-3-4-5-6

3-DRAWINGS AND TECHNICAL FEATURES

DRAWINGS AND CHARACTERISTICS

PERFORMA 15/20Q EASYCLEAN H1 / PERFORMA 25/30Q EASYCLEAN H1 BOILER DIMENSIONS



3-DRAWINGS AND TECHNICAL FEATURES

TECHNICAL CHARACTERISTICS	PERFORMA 15 EASY CLEAN H1	PERFORMA 20 EASY CLEAN H1
Energy Efficiency Class	A+	A+
Product class (EN 303-5/2012)	5	5
Rated thermal capacity of the firebox	15.1 kW (12986 kcal/h)	21.0 kW (18060 kcal/h)
Nominal output power:	14.4 kW (12384 kcal/h)	19.9 kW (17114 kcal/h)
Minimum output power	4.2 kW (3612 kcal/h)	4.2 kW (3612 kcal/h)
Efficiency at Max	95.5%	95.0%
Efficiency at Min	90.2%	90.2%
Temperature of exhaust smoke at Max	61°C	72°C
Temperature of exhaust smoke at Min	49°C	49°C
Max configurable temperature	80°C	80°C
Max operating temperature	85°C	85°C
Particles/OGC/Nox (10%O ₂)	13,2-1-145 mg/Nm ³	12,8-1-149 mg/Nm ³
CO at 10% O ₂ at Min and at Max	0.032 - 0.011%	0.032 - 0.010%
CO ₂ at Min and at Max	6.3 - 11.2%	6.3 - 11.5%
Recommended draught at Max power	0.10 mbar - 10 Pa	0.10 mbar - 10 Pa
Recommended draught at Min power	0.06 mbar - 6 Pa	0.06 mbar - 6 Pa
Smoke mass	9.3 g/sec	12.4 g/sec
Tank capacity	100 litres -65 kg	100 litres -65 kg
Type of pellet fuel	Pellet diameter 6 mm and size 3/40 mm	Pellet diameter 6 mm and size 3/40 mm
Pellet hourly consumption	Min ~ 1.0 kg/h* - Max ~ 3.2 kg/h*	Min ~ 1.0 kg/h* - Max ~ 4.5 kg/h*
Autonomy	Min H ~ 65 h - Max. H ~ 20 h	Min H ~ 65 h - Max. H ~ 15 h
Ash pan volume (brazier)	8 litres	8 litres
Lower ash collection compartment volume (smoke circulation)	12 litres	12 litres
Cleaning frequency (data related to tests performed with class A2 pellets)	2 weeks	2 weeks
Heatable volume m ³	310/40 - 354/35 - 413/30**	428/40 - 489/35 - 570/30**
Moisture content	38 litres	38 litres
Max operating temperature	3 bar - 300 kPa	3 bar - 300 kPa
Combustion air inlet	Ø 80 mm	Ø 80 mm
Smoke outlet	Ø 100 mm	Ø 100 mm
Air inlet	100 cm ²	100 cm ²
Rated electrical power (EN 60335-1)	79 W (Max 430 W)	82 W (Max 430 W)
Supply voltage and frequency	230 Volt / 50 Hz	230 Volt / 50 Hz
Net weight	265 kg	265 kg
Weight with packaging	280 kg	280 kg

* Data that may vary depending on the type of pellets used.

** Volume that can be heated, according to the power requirement in m³ (respectively 40-35-30 Kcal/h per m³)

3-DRAWINGS AND TECHNICAL FEATURES

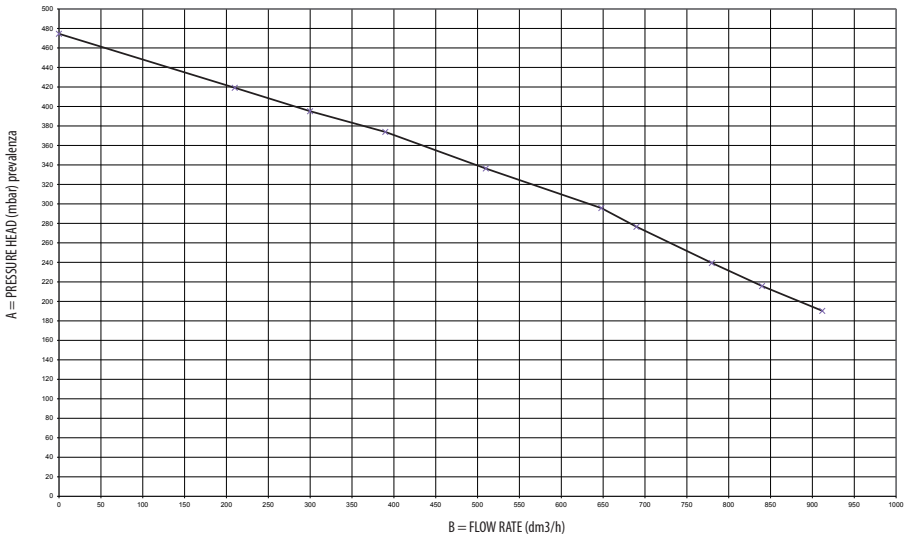
TECHNICAL CHARACTERISTICS	PERFORMA 25 EASY CLEAN H1	PERFORMA 30 EASY CLEAN H1
Energy Efficiency Class	A+	A+
Product class (EN 303-5/2012)	5	5
Rated thermal capacity of the firebox	25.3 kW (21758 kcal/h)	30.3 kW (26058 kcal/h)
Nominal output power:	24.0 kW (20640 kcal/h)	28.6 kW (24596 kcal/h)
Minimum output power	4.2 kW (3612 kcal/h)	4.2 kW (3612 kcal/h)
Efficiency at Max	94.7%	94.3%
Efficiency at Min	90.2%	90.2%
Temperature of exhaust smoke at Max	80°C	88°C
Temperature of exhaust smoke at Min	49°C	49°C
Max configurable temperature	80°C	80°C
Max operating temperature	85°C	85°C
Particles/OGC/Nox (10%O ₂)	12,5-1-152 mg/Nm ³	12,2-1-155 mg/Nm ³
CO at 10% O ₂ at Min and at Max	0.032 - 0.009%	0.032 - 0.008%
CO ₂ at Min and at Max	6.3 - 11.7%	6.3 - 11.9%
Recommended draught at Max power	0.10 mbar - 10 Pa	0.10 mbar - 10 Pa
Recommended draught at Min power	0.06 mbar - 6 Pa	0.06 mbar - 6 Pa
Smoke mass	14.6 g/sec	17.2 g/sec
Tank capacity	100 litres -65 kg	100 litres -65 kg
Type of pellet fuel	Pellet diameter 6 mm and size 3/40 mm	Pellet diameter 6 mm and size 3/40 mm
Pellet hourly consumption	Min ~ 1.0 kg/h* - Max ~ 5.4 kg/h*	Min ~ 1.0 kg/h* - Max ~ 6.4 kg/h*
Autonomy	Min H ~ 65 h - Max. H ~ 12 h	Min H ~ 65 h - Max. H ~ 10 h
Ash pan volume (brazier)	8 litres	8 litres
Lower ash collection compartment volume (smoke circulation)	12 litres	12 litres
Cleaning frequency (data related to tests performed with class A2 pellets)	2 weeks	2 weeks
Heatable volume m ³	516/40 - 590/35 - 688/30**	615/40 - 703/35 - 820/30**
Moisture content	38 litres	38 litres
Max operating temperature	3 bar - 300 kPa	3 bar - 300 kPa
Combustion air inlet	Ø 80 mm	Ø 80 mm
Smoke outlet	Ø 100 mm	Ø 100 mm
Air inlet	100 cm ²	100 cm ²
Rated electrical power (EN 60335-1)	84 W (Max 430 W)	86 W (Max 430 W)
Supply voltage and frequency	230 Volt / 50 Hz	230 Volt / 50 Hz
Net weight	265 kg	265 kg
Weight with packaging	280 kg	280 kg

* Data that may vary depending on the type of pellets used.

** Volume that can be heated, according to the power requirement in m³ (respectively 40-35-30 Kcal/h per m³)

3-DRAWINGS AND TECHNICAL FEATURES

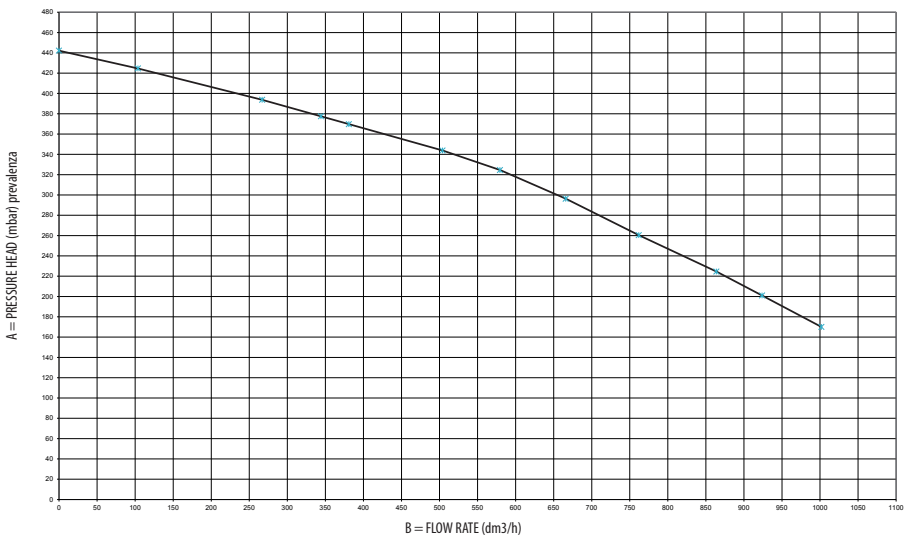
RESIDUAL HEAD WITH DHW KIT CHART



A = RESIDUAL HEAD (mbar)

B = FLOW (dm³/h)

RESIDUAL HEAD WITHOUT DHW KIT CHART



4-INSTALLATION AND ASSEMBLY

PREPARATION AND UNPACKING

The Performa Easy Clean boiler is delivered complete with all its electrical, mechanical and hydraulic components (excluding the circulator kit and trolley kit-OPTIONAL) and having been tested in the factory:

The boiler is delivered in a single package. The trolley packages - optional accessory (cart with wheels to facilitate emptying and shifting the ashes) and the selected hydraulic kit - optional accessory - are then added.

Remove the cardboard, remove the S-brackets that secure the boiler to the pallet as well as the "x" and "y" screws. There are two S-fixing brackets, one at the front and one at the back.

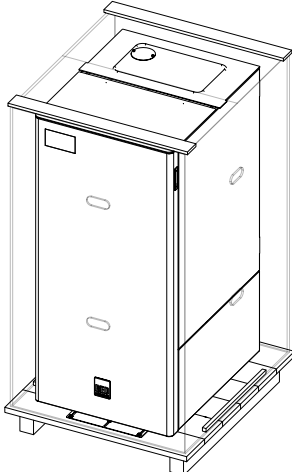


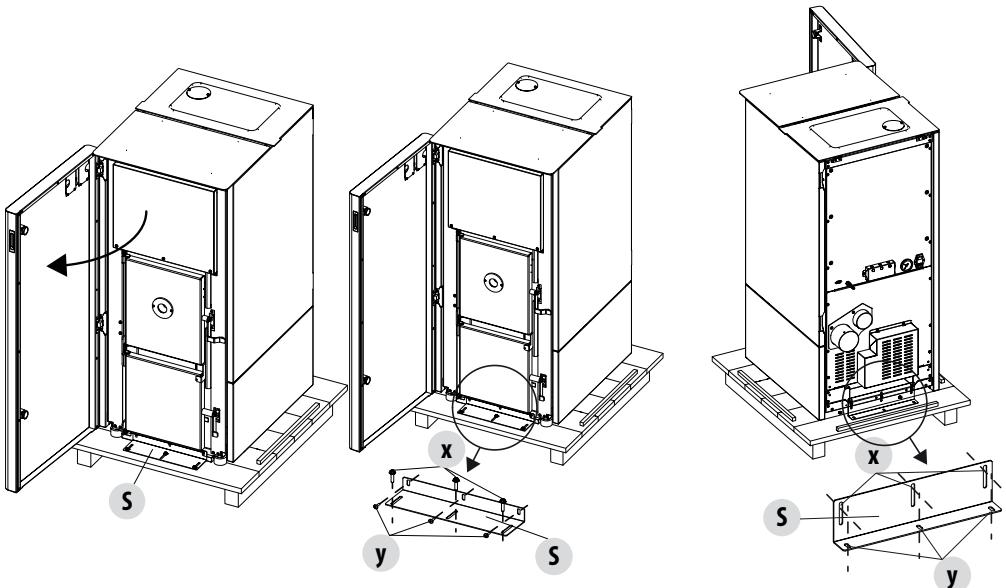
FIGURE 1 - PACKAGING

Install the boiler in the area set aside for it, making sure it conforms to the requirements. The boiler body or unit must always be kept in a vertical position when moved, and only ever moved using suitable lifting trolleys.

The packaging materials are neither toxic nor harmful, and therefore no particular disposal measures are required.

After removing all the packaging, check that the boiler is complete and not damaged. If in doubt, contact the retailer.

FIGURE 2 - REMOVING THE PACKAGE BRACKETS



4-INSTALLATION AND ASSEMBLY

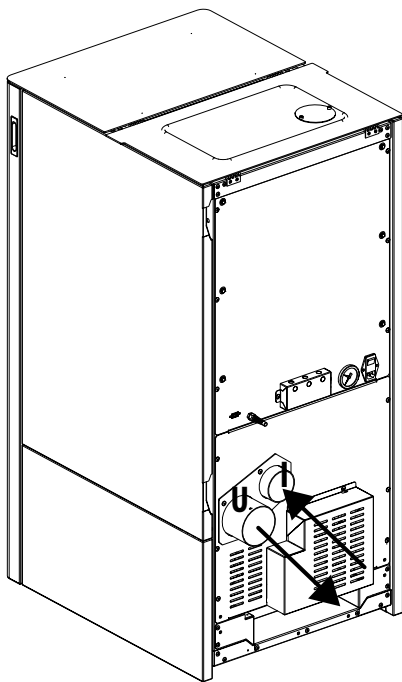
The end user is responsible for product storage, disposal or possible recycling in compliance with the relative applicable laws in force. Position the product and proceed with connecting it to the chimney.

If the product must be connected to an exhaust pipe that goes through the rear wall (to enter the chimney), make sure not to force it in.



Attention!!

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



U = SMOKE OUTLET DIAMETER 100 MM

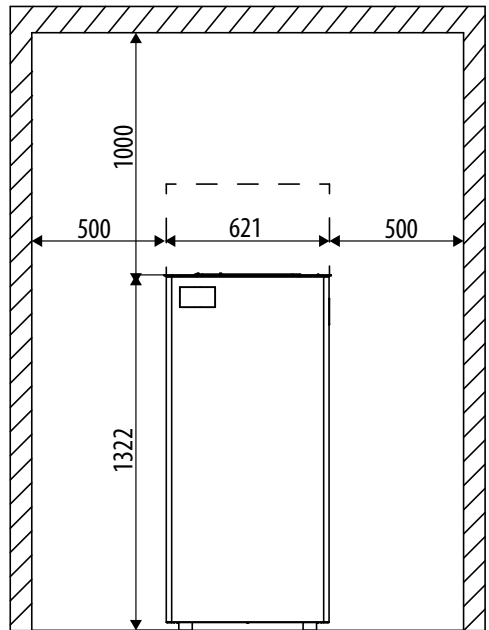
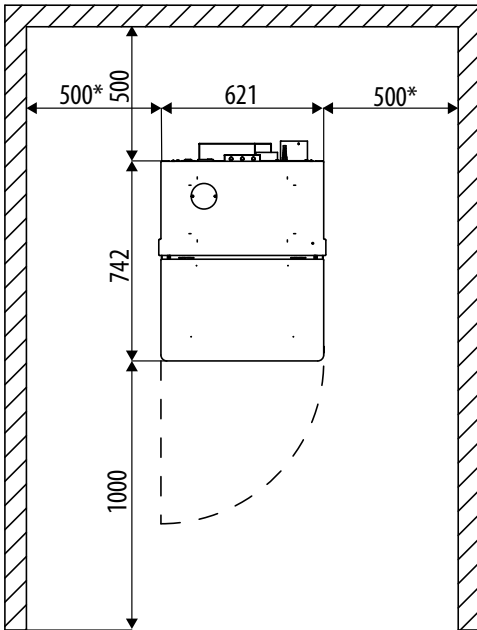
I = COMBUSTION AIR INLET DIAMETER 80 MM

4-INSTALLATION AND ASSEMBLY

REQUIREMENTS FOR INSTALLATION OF THE PLANT - POSITIONING

The most important thing to do before installation of the boiler is to set aside a suitable area that meets the minimum requirements for installation.

- the minimum clearance in front of the product for the purpose of cleaning, maintenance, etc. must be **1000 mm**;
- the minimum permissible distance between the back of the product and a wall must be **500 mm**;
- the minimum distance between the top of the product and a wall (ceiling) must be **1000 mm** to ensure easy access to the heat exchanger for cleaning and maintenance (e.g. for removing ash and possible installation of the pellet suction kit);
- the minimum clearance between the product and the wall (side) must be **500 mm** (* **750 mm if the trolley is included**).



* 750 mm IF THE TROLLEY IS INCLUDED

5-REMOVING THE AESTHETICS

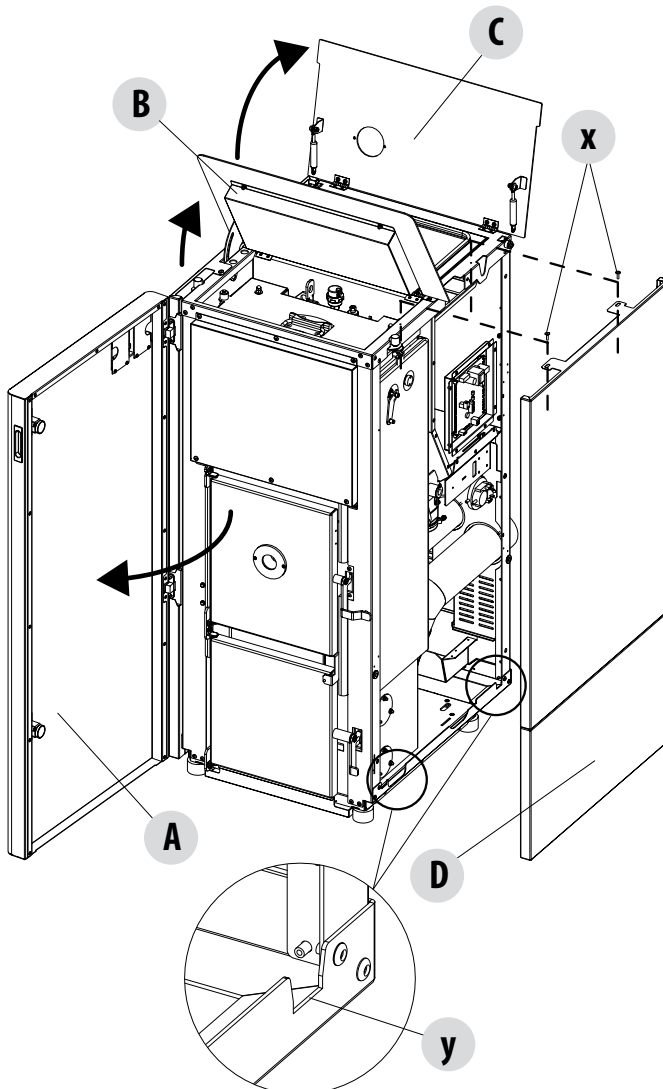


Live electrical parts: only power the product once it has been fully assembled.

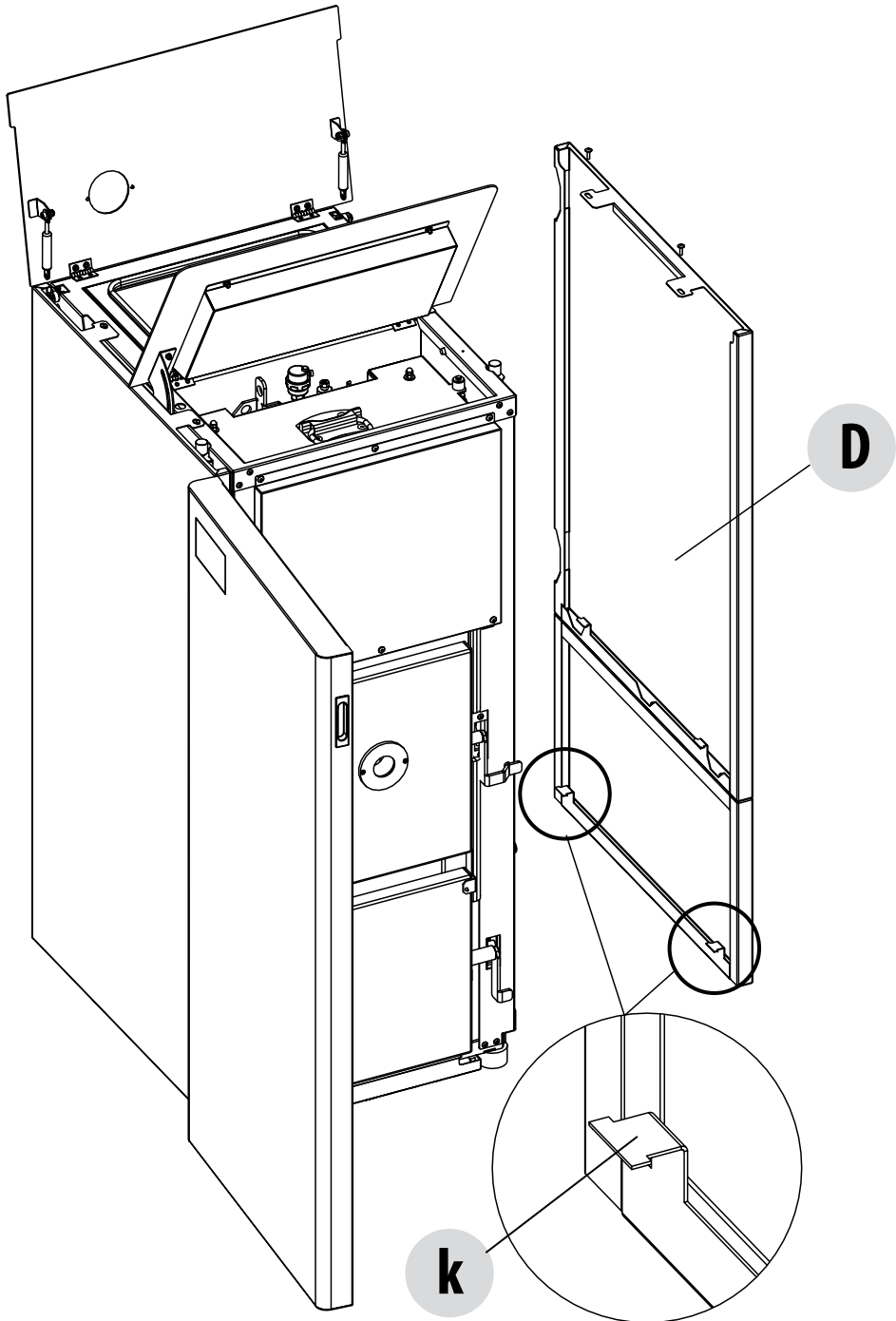
If any work is carried out on some components of the boiler or if you are just cleaning it, you need to remove the side panels.

To remove the right panel "D" proceed as follows:

- lift the tank cover "C"
- lift the front cover "B"
- open the decorative door "A"
- remove the two top screws "x" that secure the panel "D" to the boiler
- lift the panel "D" and let the joints "k" come out of the holes "y" on the structure of the boiler (see image on the following page)



5-REMOVING THE AESTHETICS



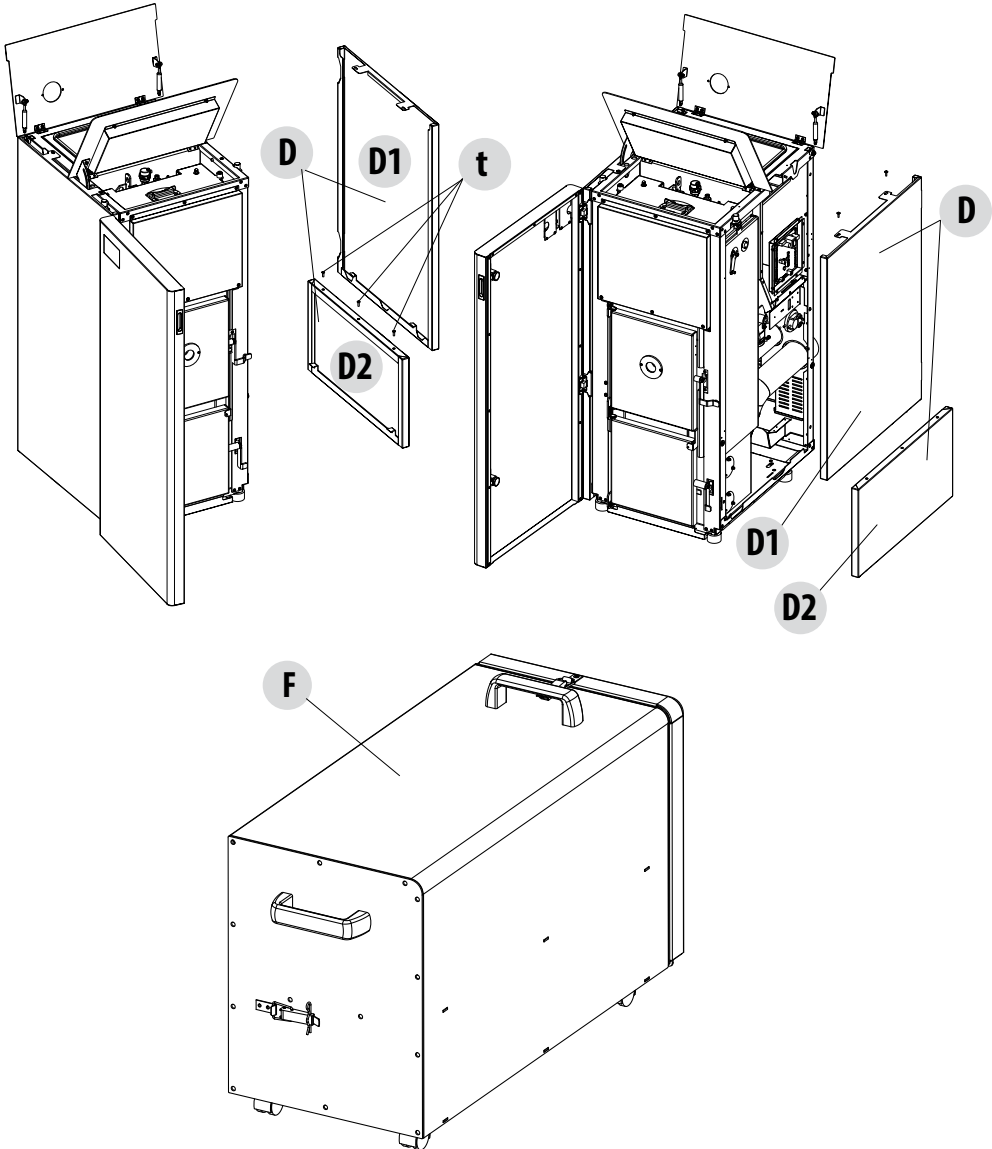
5-REMOVING THE AESTHETICS

REMOVING THE SIDE PANEL TO INSERT THE TROLLEY (OPTIONAL TROLLEY - ACCESSORY)

The right side panel "D" consists of two parts - "D1" and "D2". The parts "D1" and "D2" can be separated to allow the trolley "F" to be assembled. Separate the two parts by removing the three screws "t" and proceed as described in the instructions of the kit trolley "F".

Trolley "F" is an accessory used to prolong the cleaning intervals of the boiler. This type of cleaning and emptying of the boiler allows the ashes to be emptied after about three months instead of every week, as per the standard version.

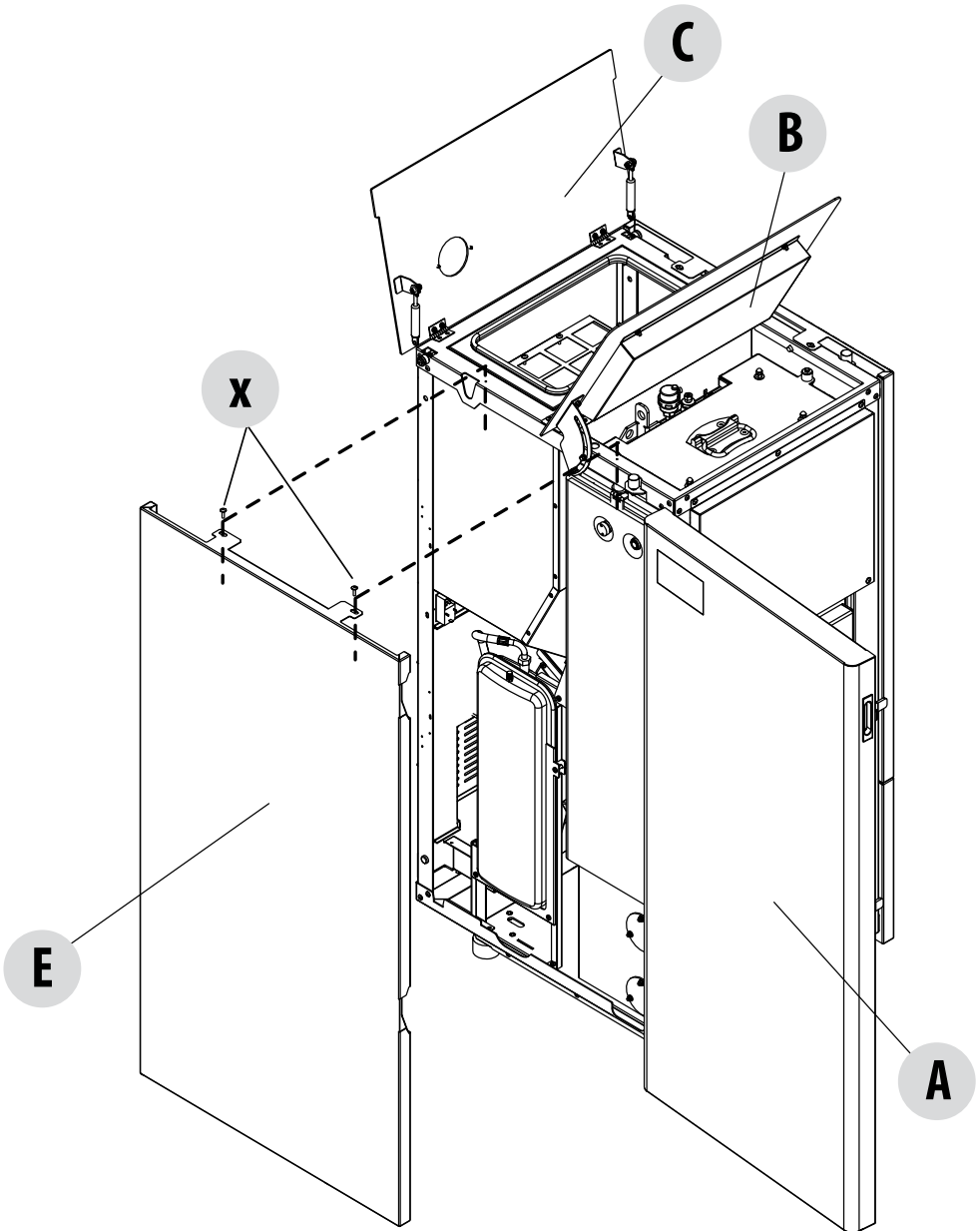
To better adapt to the spaces and requirements, trolley "F" can be installed on the right or left of the boiler. The decorative panels "D" and "E" are reversible.



5-REMOVING THE AESTHETICS

REMOVING THE LEFT SIDE PANEL

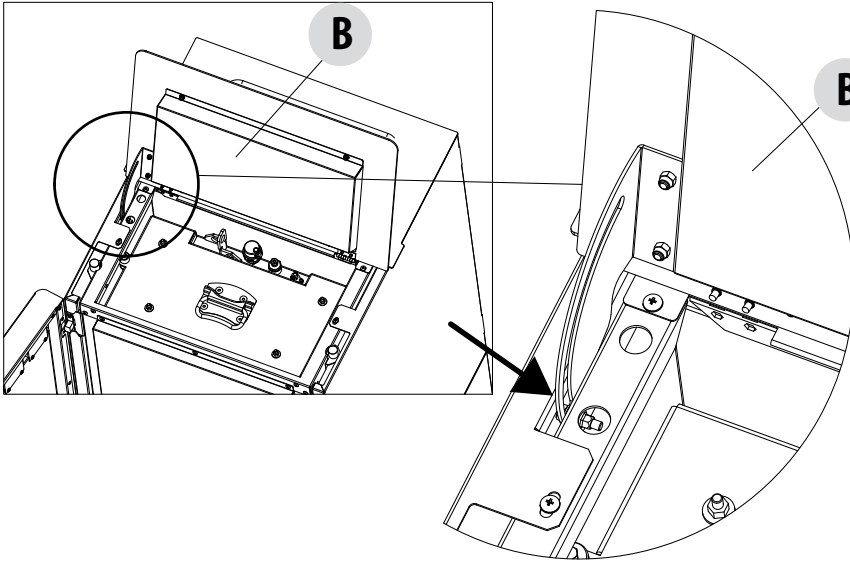
Remove the left side panel "E" by following the instructions for the right side panel. Unlike panel "D", panel "E" is whole.



5-REMOVING THE AESTHETICS

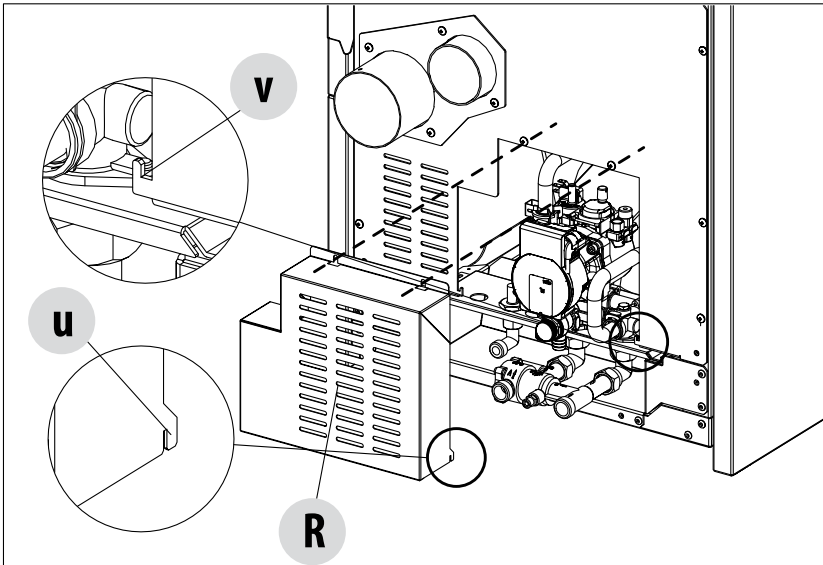
FRONT DOOR

The front door "B" is provided with a limit switch for its opening, so as to prevent the pellet from falling on the door.



REAR COVER FOR THE HYDRAULIC KIT

The back of the boiler has a removable cover to insert the selected hydraulic kit. Remove cover "R" by loosening the two upper screws and lifting the cover so as to release the joint "u" of the cover from the "v" joint of the boiler.



6-HYDRAULIC CONNECTION

HYDRAULIC CONNECTION



IMPORTANT:
The connections depend on the type of System Configuration.

IMPORTANT!

If installing the boiler involves another pre-existing system complete with heating equipment (gas boiler, methane boiler, fuel oil boiler, etc.), it is strongly recommended that you contact a qualified operator who subsequently will be responsible for the compliance of the system with the applicable laws in force.
The Company will not be held responsible for damage to persons or things in the event of failed or incorrect operation if the aforementioned warnings are not complied with.



IMPORTANT!!!

CLEAN THE ENTIRE SYSTEM BEFORE CONNECTING THE BOILER, IN ORDER TO REMOVE ALL RESIDUE AND DEPOSITS.
Upstream from the boiler, always install shutters 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 boiler using hoses so that the boiler is not too strictly connected to the system, and to allow slight movements.

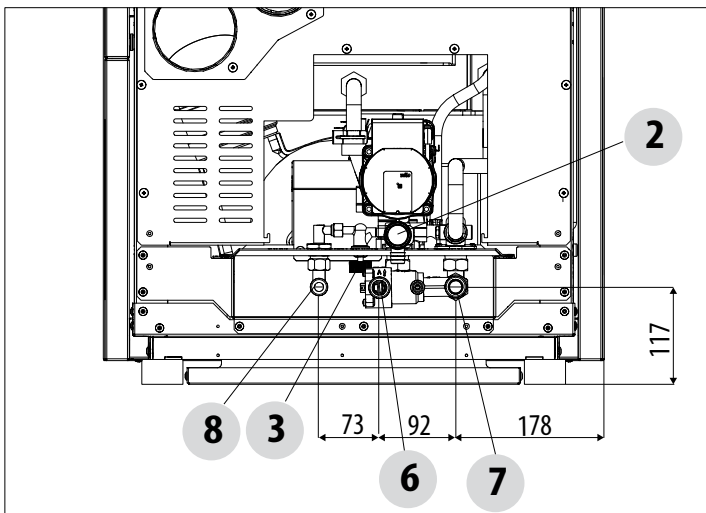


IMPORTANT!

The connection of the stove to the plumbing system must be carried out **ONLY** by specialized personnel who are capable of carrying out installation properly, in compliance with current standards in the country of installation.
The manufacturer will not be held responsible for damage to persons or things in the event of failed operation if the aforementioned warning is not complied with.

HYDRAULIC KIT FOR HEATING (COD.40A18013)

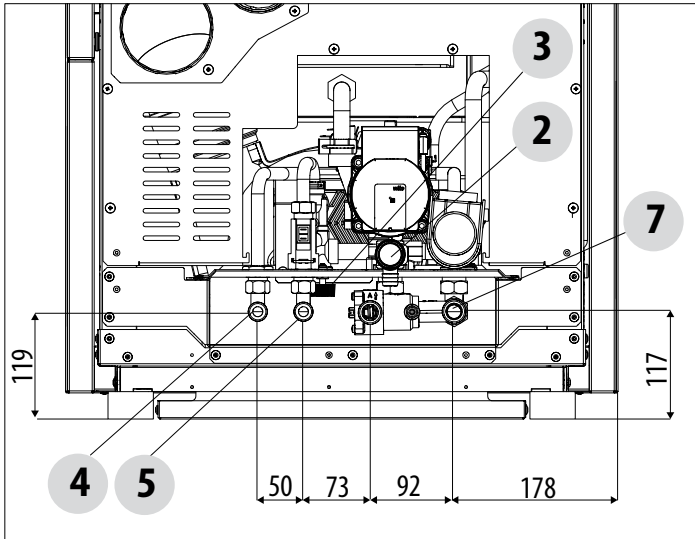
2 - SAFETY VALVE	7 - HEATING DELIVERY
6 - HEATING RETURN	8 - SYSTEM FILLING WATER INLET



6-HYDRAULIC CONNECTION

HYDRAULIC KIT FOR DHW PRODUCTION (COD.40A18014) only for PERFORMA 25/30Q EASYCLEAN H1 version

2 - SAFETY VALVE	5 - DOMESTIC WATER INLET
3 - FILLING TAP	6 - HEATING RETURN
4 - DOMESTIC WATER OUTLET	7 - HEATING DELIVERY



6-HYDRAULIC CONNECTION

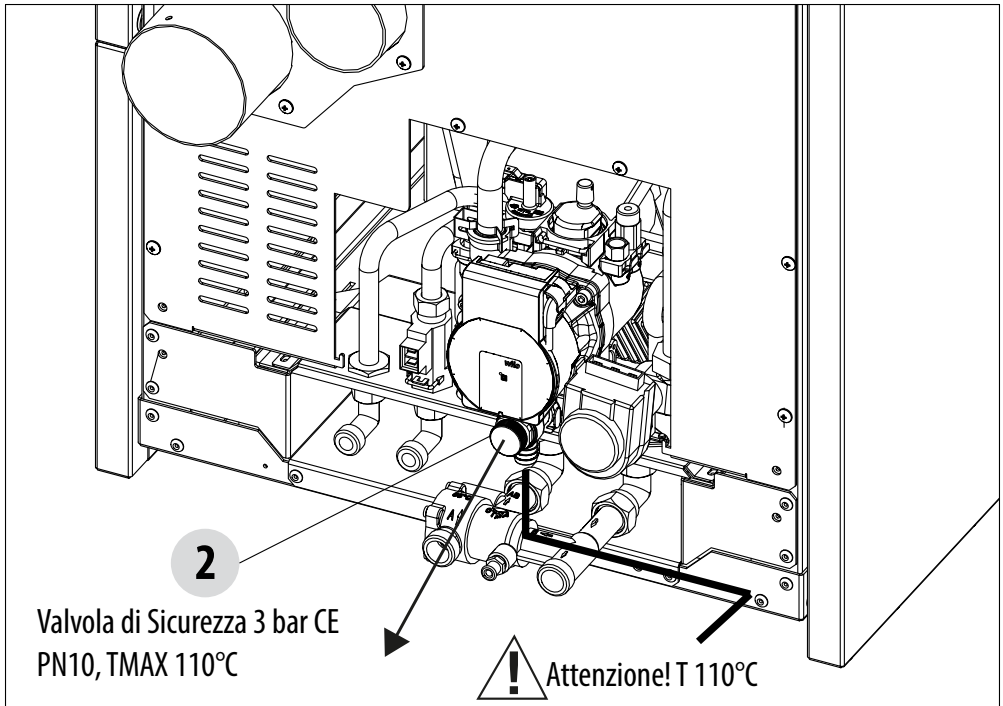
SAFETY VALVE 3 bar

The boiler is protected against overpressures by a safety valve "2" fitted on the selected hydraulic kit. The safety valve drain must be connected to a rubber pipe that can withstand a temperature of 110°C (not supplied) and that reaches the outside via an anti-odour syphon. This drain is provided in order to prevent overpressures if the safety valve is opened.

The product is defined as quick release since it has passed the tests stipulated in EN 303-5 Chap. 5.14.



Attention! The manufacturer of the appliance is not liable for any flooding caused by the safety valve being triggered if it has not been joined properly to the outside of the product and to a proper collection and evacuation system.



6-HYDRAULIC CONNECTION

CLEANING THE SYSTEM

Install suitable shutters to cut off the tubes from the heating system.

In order to protect the heating system from damage caused by corrosion, incrustation or deposit build-up, it is important to clean the appliance before installation, using suitable products, in compliance with Standard UNI 8065 (water treatment of thermal plants for civil use).

The use of FERNOX PROTECTOR F1 (available at our authorised centres) product is recommended, this provides long-term protection of heating systems against corrosion and calcium build-up. It prevents the corrosion of the metal parts of the appliance, i.e. the ferrous metals, copper and copper and aluminium alloys. It also reduces the noise produced by the boiler. Refer to the instructions on the product. Cleaning should be performed by a qualified technician.

We also recommend the use of FERNOX CLEANER F3 and LEAK SEALER F4, available from our authorised distribution centres.

FERNOX F3 is a neutral product for rapid and efficient cleaning of heating appliances. It has been designed to eliminate residues, oily deposits and incrustations from existing appliances of all ages. It can help restore the heating efficiency of the boiler and reduce the noise it generates.

FERNOX F4 is intended to be used with all heating appliances to seal micro fractures that cause small and inaccessible leaks.



Attention: Failure to clean the thermal system or to use an adequate inhibitor will invalidate the warranty of the appliance and of the other accessories like the pump and valves.

FILLING THE SYSTEM

Fill the system slowly to allow air bubbles to pass through the vent holes of the heating system. For closed circuit heating systems, the filling pressure of the system at cold and the pre-inflation pressure of the expansion tank must be the same.

- In **open** vessel heating systems, direct contact between circulating liquid and air is allowed. During the heating season, the user must check the circulating water level in the expansion tank regularly. The water level in the circulation system must be kept constant. Practical experience shows that a regular check of the water level must be made every 14 days to maintain a relatively constant level. When necessary, the water level must be topped up when the boiler has cooled to room temperature. This is to avoid and damage being caused to the steel body of the boiler due to thermal stress.
- In systems with an open vessel, the water pressure in the boiler must not be less than 0.3 bar when the system is cool.
- The water used for filling the heating system must be decontaminated and not contain air.



Attention!

Do not mix heating water with incorrect concentrations of anti-freeze or anti-corrosion substances! This could damage the gaskets and cause noise during operation.

The manufacturer denies any liability for harm caused to persons, animals or objects caused by failure to observe these precautions.

After making all the hydraulic connections, pressure-test the seals by filling the boiler.

This must be done with care by doing the following:

- open the air vent valves of the radiators, boiler and system;
- gradually open the filling tap of the system, making sure that any automatic air vent valves in the system work correctly;
- close the vent valves of the radiators as soon as water comes out;
- use the pressure gauge inserted in the system to check that the pressure reaches a value of approximately 1 bar (this only applies to closed vessel systems - refer to any existing local regulations or standards allowing for its installation); for open vessel systems, the water is topped up automatically through the vessel.
- close the filling tap of the system and then open the vent valves of the radiators again to purge any air;
- check the seal of all the connections;

6-HYDRAULIC CONNECTION

- after starting up the boiler for the first time and bringing the system up to temperature, stop the pumps and repeat the air purging procedure;
- let the system cool down and, if necessary, bring the water pressure back to 1 bar (this only applies to closed vessel systems - refer to any existing local regulations or standards allowing for its installation); for open vessel systems, the water is topped up automatically through the vessel itself;



NOTE

In systems with a closed vessel, where possible, the water pressure in the heating system must not be lower than 1 bar when the system is at room temperature; if this is not the case, use the tap to fill the system. This operation must be performed when the system is cool.

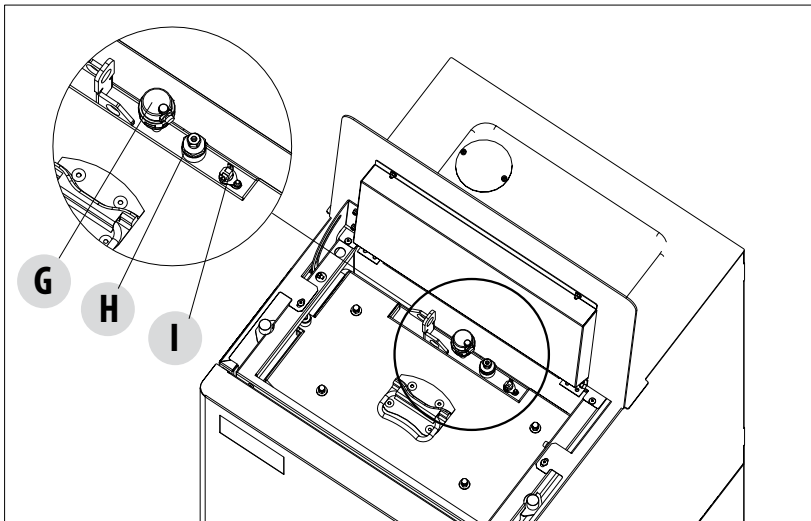
The pressure gauge on the system enables you to read the pressure in the circuit.

During this operation, any air in the system is released from the automatic vent "G" at the top of the body of the boiler. The valve is underneath the front panel, just lift the cover.

To ensure the valve vents, loosen the side cap (see figure)

The filling pressure of the system **WHEN COLD** must be 1 bar.

Upon completion of this operation, **always** close the filling tap.



RELIEF VALVE "G"

G = RELIEF VALVE
H = PROBE
I = H₂O SAFETY THERMOSTAT

6-HYDRAULIC CONNECTION

PRESSURE GAUGE

The gauge of the boiler "m" is one of the key tools, which is used to check that appliance is operating smoothly. The pressure gauge of the boiler is used to measure the pressure, i.e. the difference between the internal pressure and the atmospheric pressure. Generally, the ideal pressure for a boiler is between 1.5 and 2 bar, above or below which malfunctions occur in the heating system or in the supply of domestic hot water. The pressure adjustments are made through the vent valve "G" at the top of the boiler (see instructions on the previous page).

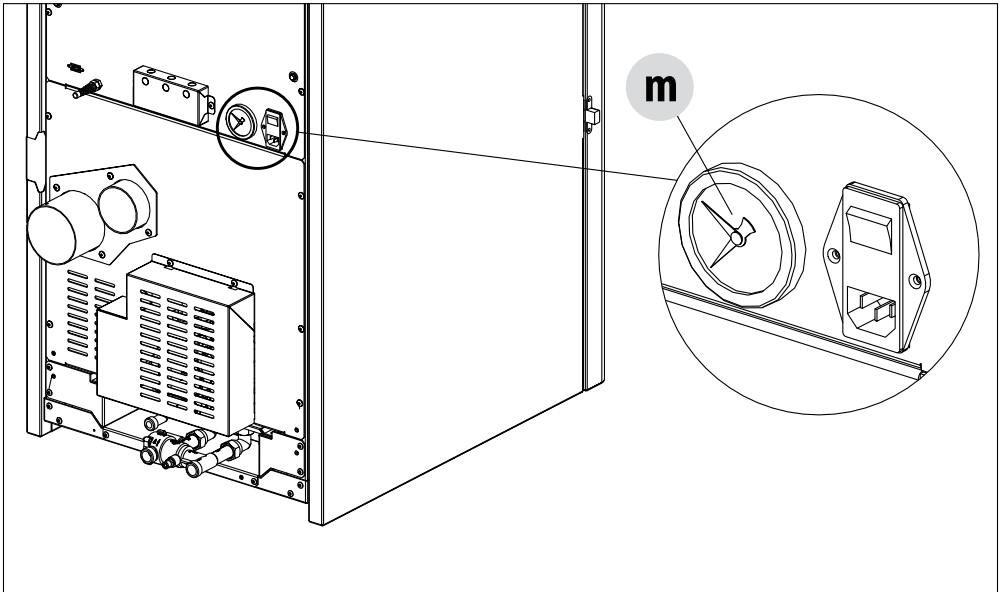
Low boiler pressure

When the pressure of the boiler is too low, and therefore it is indicated on the pressure gauge as below 1.5 bar, the heating does not work well, hot water does not arrive or the boiler is blocked. The main reasons that lower the pressure are:

- Temperature too low, which causes the condensation to form
- Air in the pipes
- A fault in the 3-way valve

High boiler pressure

If the pressure is high, that is the boiler pressure gauge marks more than 2 bar, the energy efficiency of the boiler decreased, which means that the consumption increases.



7-ELECTRICAL CONNECTION

GENERAL PRECAUTIONS

The electrical safety of the system is guaranteed only when this is connected correctly to an efficient earthing system installed in accordance with the safety standards in force: the pipes of the gas, water and heating systems do not constitute a suitable earth system. It is necessary to ensure this essential safety requirement; if in doubt, have a qualified technician test the electrical system with care because the manufacturer of the boiler does not assume responsibility for damage caused by the absence of an earthing system.

A qualified technician should check that the electrical system is compatible with the max consumption of the system, checking in particular that the cross-section of the cables of the system is compatible with the power consumption of the loads.

The use of any component that requires electrical energy requires compliance with certain essential rules like:

- do not touch the appliance with wet and/or damp parts of the body and/or when barefoot;
- do not pull on the electrical cables;
- do not expose the appliance to the elements (rain, sun, etc.);
- do not allow children or inexperienced persons to use the appliance.

Connection to 230V power supply.

The installation of additional electrical components of the boiler requires electrical connection to a **230V - 50Hz** power supply: This connection must be made in a workmanlike manner in compliance with the standards in force in the country of installation.



Danger!

Electrical installation must be entrusted to a single qualified technician.

Before making the connections or carrying out any work on the electrical parts, always turn off the power supply and make sure it cannot be turned on again accidentally.

Remember that it is necessary to install a bipolar switch in the boiler's electrical power circuit with a distance of 3mm between the main contacts. The switches must be easily accessible to allow quick and safe maintenance.

The power cable must be replaced only by an authorised technician. Failure to observe the above could compromise the safety of the unit.

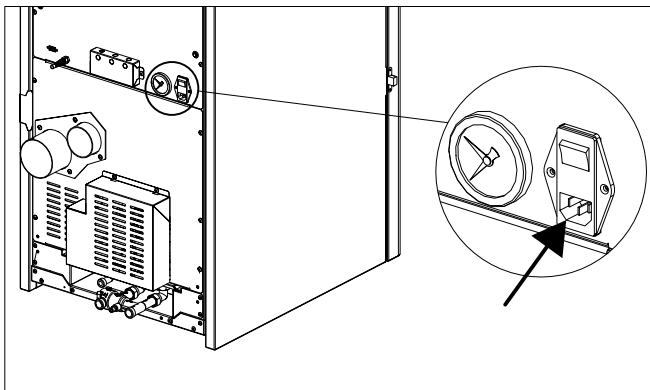
ELECTRICAL CONNECTION

First connect the power cable to the back of the boiler and then to a wall socket.

The main switch at the rear must only be activated to switch the boiler on; otherwise, it is advisable to keep it off.



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



ELECTRICAL CONNECTION

8-FIRST START-UP

BEFORE START-UP

GENERAL PRECAUTIONS

Remove all parts that may burn from the brazier and the product's tank (manual, various adhesive labels or any polystyrene).



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



CANCEL THE FAILED IGNITION ALARM. REMOVE THE PELLETS LEFT IN THE BRAZIER AND REPEAT THE START-UP.

If after repeated attempts, the flame fails to ignite, despite a regular flow of pellets in the brazier, verify that the brazier is assembled correctly and must be **clean without any ash incrustations**. 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.



Do not touch the boiler during the first lighting, as it is during this phase that the paint sets; if you touch the paint, you may expose the steel surface.

If necessary, touch up the paint with the aerosol spray in the original colour (see "Accessories for pellet boilers").



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.



ATTENTION!

Please ensure the brazier is clear of ALL pellets and ash build up following any failed ignitions. Failure to clear out the brazier prior to resetting may result in further failed ignitions or in certain conditions an explosive ignition.

Do not stand close to the boiler and ventilate the room as described. The smoke and smell of paint will disappear after about an hour of operation, however, they are not harmful in any case.

The boiler will be subject to expansion and contraction during the stages of lighting and cooling down, and may therefore make slight creaking noises.

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 does not reach high temperatures straight away, but to increase the temperature gradually using low power at first.



DO NOT EXPECT HEATING EFFICIENCY IMMEDIATELY!!!

ATTENTION!

If during operation or initial ignition you encounter combustion smoke spillage in to the room from the appliance or the flue then please switch off the appliance, ventilate the room and contact the installation / service technician immediately.

8-FIRST START-UP

OPENING/CLOSING



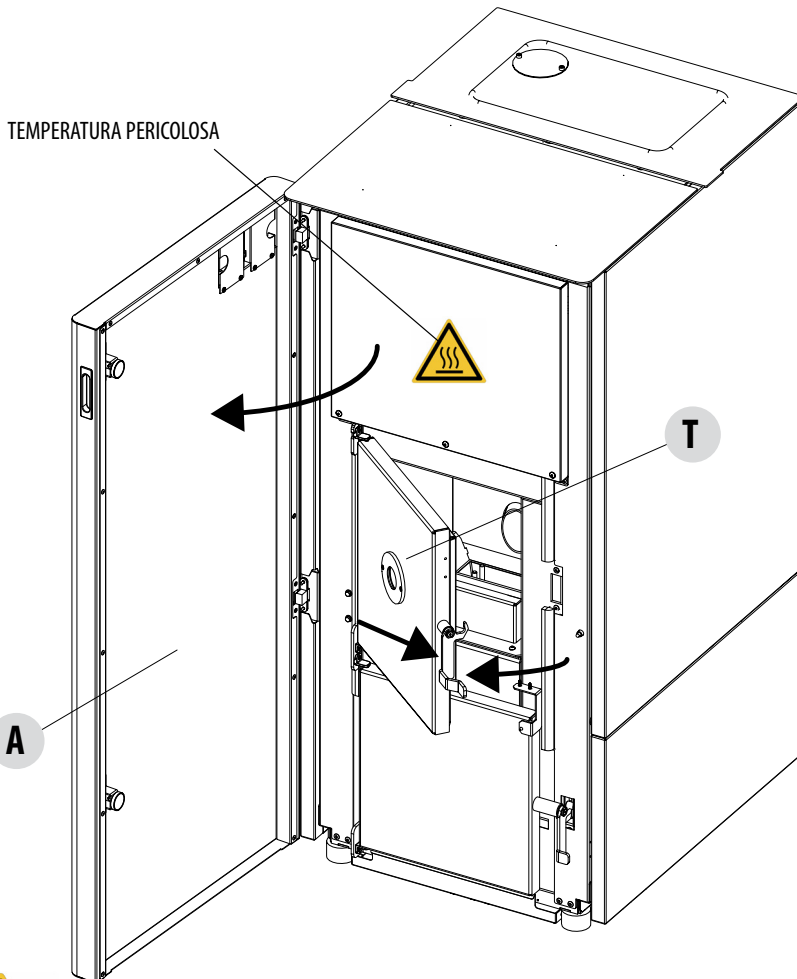
ATTENTION!

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

The firebox door and the lower door for cleaning the ash must only be opened with the boiler coil and off.

If the doors are opened while the boiler is running, a system will trigger the alarm and the boiler will go off.

Open the outer door "A" by grasping the handle at the top right and pull towards you. Open the internal door "T" by lifting and pulling the handle towards yourself. In the event one needs to open the door with the boiler in operation, one must use suitable thermal protection clothing (for example leather gloves).



Attention! Hot parts, use the supplied glove

8-FIRST START-UP

LOADING THE PELLETS

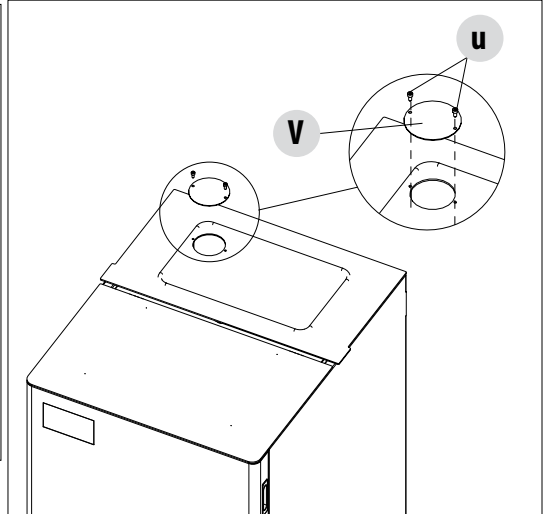
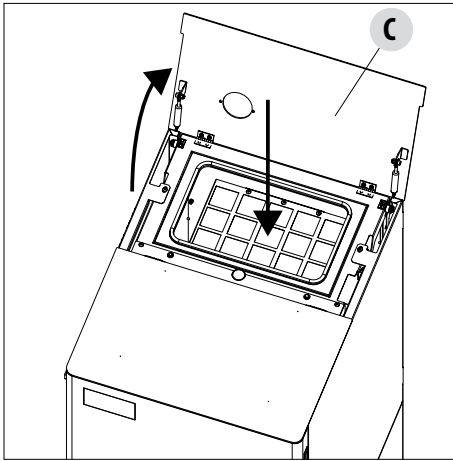
The pellets can be loaded either manually or automatically. The empty tank can contain up to 100 litres or 65 kg of pellets.

Manual Loading:

- Open the top door "C" of the boiler directly and pour in the pellets.

Automatic loading (with remote tank of 200/400 or 300 kg - optional - see accessories):

- Remove the round "V" plate from the door by removing the two "u" screws and disconnecting the insulation and inserting the tank pipe. Next, load with the optional tank.



Never remove the protective grate from inside the tank. When loading pellets, keep the bag from coming into contact with hot surfaces.



We point out the installation of the pneumatic extractor/external feed screw (optional) to move the pellets make the combustible tank lose its airtight features in environments where this is required. Installation of these accessories could change performance of the boiler respect to that declared by the manufacturer.

8-FIRST START-UP

SAFETY

PROCEDURE TO FOLLOW IF ANY SMOKE SPILLAGE IS SEEN WITHIN THE ROOM OR THE APPLIANCE SUFFERS FROM AN EXPLOSIVE IGNITION PLEASE TURN OFF THE APPLIANCE, VENTILATE THE ROOM AND CONTACT THE INSTALLER/SERVICE ENGINEER IMMEDIATELY.

User Training

In ALL cases the installation and commissioning engineer MUST carry out a thorough handover of the appliance to the homeowner / end user. The following elements should be covered to the satisfaction of the end user. Failure to do this may result in unsafe use of the appliance:

- Explanation of the appliance and how it works
- Necessity to maintain ventilation to the appliance and the issues that may arise otherwise
- Fuel useage and supply
- How to light the appliance safely
- What to do in the event of failed ignitions
- What to do in the event of alarms (in particular those generated when the appliance runs out of fuel)
- How to maintain the appliance correctly and the importance of carrying out these tasks each month
- It is good practise to agree a date for the first annual service
- Explain the importance of the CO alarm in accordance with approved document J of the building regs (ONLY FOR UK)
- Explain the need for the flue draft stabiliser and its position within the flue system (ONLY FOR UK)
- Discuss the use of secondary heating systems if applicable
- Explain how the remote control or room stats operate and their optimal positioning
- Explain the need for the appliance data plate in accordance with approved document J of the building regulations (ONLY FOR UK)
- The commissioning process and paperwork should also be explained to the homeowner. A copy of the base settings on the commissioning paperwork should also be left with the appliance (ONLY FOR UK).



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