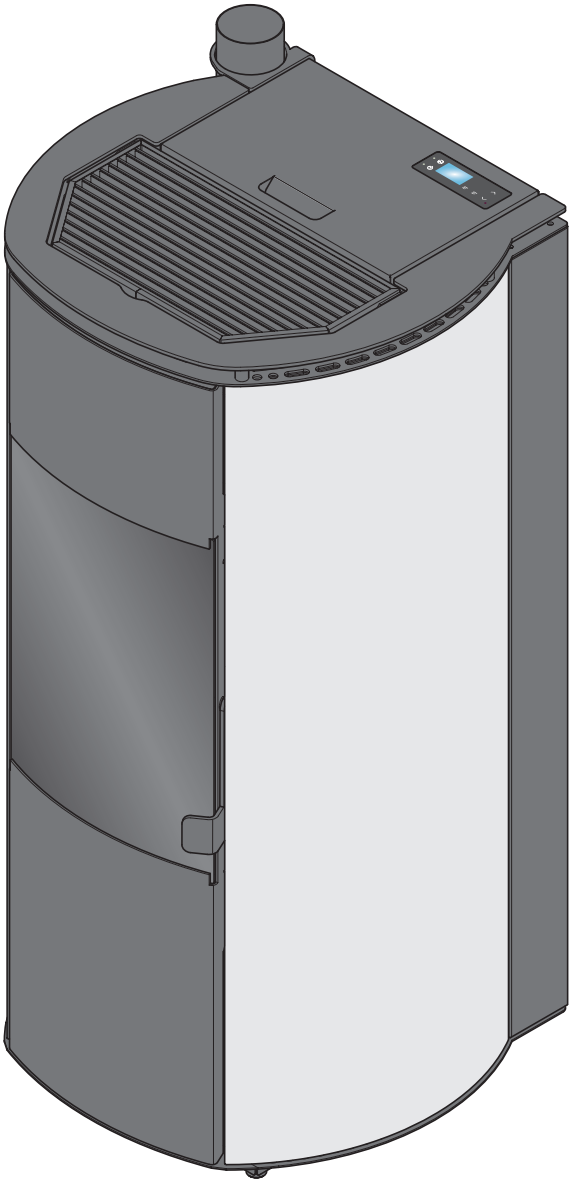
CSTHERMOS
STUFE A BIOMASSA

Air heaters



Instructions for models:

Andy - Arianna - Eco Cippatina - Firenze - Garda - Garda Étanche
Inserto Paris - Leire - Scrigno - Sirmione - Sirmione Étanche
Thema - Trieste - Trieste Étanche

Dear Customer,

We wish to thank you for choosing a **CSTHERMOS** stove and welcome you into our pellet/biomass/sized chip heating world.

We remind you that our products are manufactured wholly in Italy with superb quality materials and are accurately tested in compliance with the provisions of the safety regulations in force.

Great innovation and sophisticated design are added to this guarantee of quality and comfort.

These stove models can be fitted with a traditional type pellet boiler that would use only best quality wood pellets complying with the ISO EN 17225-2 reference standards and their updates, or with an innovative and patented biomass boiler capable of burning not only any kind of wood pellets (for instance consisting of bark and branches) but also biomass deriving from agricultural waste such as almond-walnut-hazelnut shells, olive pits, agripellets.

An automatic cleaning system is managed by an electronic board that keeps the burner always clean, obtaining great efficiency and reliability of use. The modulating operation varies according to the set ambient temperature and therefore allows optimal room heating. During the initial ignition phase (about 10 minutes), the burner automatically fills with fuel, while resistors, heating up, trigger the flame. Once the flame has been detected by the combustion fume detector, normal operation begins that, thanks to the microprocessor, allows changing the supply of fuel, obtaining therefore flame modulation.

The electronic board checks the temperature sensors, electrical motors and safety devices continuously and, in case of an anomaly, stops their operation and shows this on the display (see alarm code paragraph). The heating of the environment is guaranteed by an air flow that varies according to the operating power going through the combustion smoke pipes.

CE

CONTENTS

1 - SAFETY REGULATIONS

Safety regulations for the user

This manual is an integral part of the product: it is important to read it in all its parts before installing or using the equipment. Ensure it is always available, also in case of a move/sale/transfer to another owner, so that it can be consulted by the new user, installer or by any authorized staff.

Any use, cleaning or maintenance other than as stated in this booklet must be considered incorrect and may cause damage, injury or death, making the guarantee null and void and releasing the Manufacturer from any liability.

Extraordinary maintenance must be carried out **only by qualified personnel authorized by the Dealer or Manufacturer.**

This pictogram refers to a situation of immediate danger or a dangerous situation that might cause injury or death.

This pictogram shows that it is necessary to behave in such a way as not to endanger the safety of staff or cause damage to the equipment.

This pictogram hints at important technical information that must be taken into account by the installer or user of the equipment.

Danger of burns

Danger of electric shock

Danger of crushing your hands

Danger of asphyxia

Fire hazard

Danger of crushing your feet

Obligation to use protection gloves

Safety or equipment automatic adjustment devices must be modified only by the manufacturer or by an authorized service centre or supplier, during the whole life of the system.

If the equipment is not to be used for a long time, switch off the main power switch.

If the equipment does not work or you notice functional or structural changes, disconnect it from the power mains and contact **a service centre authorized by the Manufacturer or Dealer without attempting any DIY**. As to repairs, always ask for original spare parts to be used, in order to avoid problems and invalidating the warranty.

Any kind of tampering or replacement carried out by non-qualified personnel can be dangerous for the user and releases the Manufacturer from all civil and criminal liability.

Ensure the room where the unit is going to be installed is suitable and provided with air vents with minimum openings in compliance with the legislation of the country of destination and anyway sufficient to obtain perfect combustion.

When the unit is delivered, check it is intact because vibrations or impacts during transport might have loosened some components. Check the housing or the parts making up the equipment have not been damaged. If this is the case, inform the installer and/or our customer service.

Do not leave any flammable containers or substances next to the stove, comply with the safety distances mentioned in the manual.

Before connecting the equipment to the mains, always check the system data match those on the equipment plate.

Use only the fuel recommended by the Manufacturer. The product must not be used as an incinerator. It is absolutely forbidden to use liquid fuels.

Do not load the pellets into the burner manually.

The unit cannot be used by children or people with limited physical, sensory or mental capabilities or without the necessary knowledge and experience. Children must not play with the apparatus.

Non-compliance with these instructions can cause damages, injuries and even death and invalidates the warranty.

Since potentially dangerous, any packaging material must be kept out of the reach of children or animals and disposed of in compliance with local regulations.

Connect the earth cables of the equipment to the earth system of the building where it is installed.

The data plate supplies important technical information that is vital in case of a request for maintenance or repair of the equipment: please do not remove, damage or modify it.

Do not open the burner while it is running.

Do not operate the unit with the glass broken.

Do not disconnect it by unplugging it when there is a flame on in the burner.

Do not use the unit to cook food or heat drinks.

Do not use the product as a supporting structure or as a ladder.

To prevent fires, do not hang wet clothes on the unit to dry them, drying racks can be positioned at a safe distance.

Do not wash the product with water jets. Water may penetrate into the unit and cause electric shocks.

If the ignition system fails, it is absolutely forbidden to use flammable materials to light the flame.

Disconnect the electrical supply before any maintenance or cleaning.

To ensure the equipment is in perfect use and safety conditions, we recommend that it is maintained and checked by a Service Centre authorized by the Manufacturer or Dealer at least once a year.

Some small tongues of fire can appear on the sides of the burner, this **is normal** since the gases in contact with the hot parts are burnt off.

A minimum natural draught of 6-8 Pa in the flue pipe must always be guaranteed to prevent the sudden lack of voltage or adverse environmental conditions from letting smoke out into the room, making electrical components overheat (see UNI 10683 standard).

Any small noise (ticking) during operation is normal, as it is due just to the assembled parts settling.

Draught conditions unsuitable to the flue, excessive fuel humidity or high ash residue in the combustion chamber, can cause IGNITION FAILURES THAT MUST NOT BE CONSIDERED A FAULT IN THE PRODUCT.

In case of failed ignition, clean the crucible before trying to start the stove again.

The product warranty starts on the date when the equipment is switched on for the first time by an authorized engineer (dealer or CAT).

Further risks

The stove has been conceived, designed and built taking all the applicable Safety Regulations currently in force in the country of manufacture into account. Even if all possible precautions to comply with the Regulations currently in force have been taken, the following risks can still apply:

Risk of BURNS in accessing the inspection and cleaning doors with the flame still on or not completely cooled down.

Risk of ELECTRICAL SHOCK. For a correct electrical connection as well as safe protection, the thermo-stove must be connected to a thermal differential with a trigger threshold not exceeding 30 mA, in compliance with the regulations in force.

Risk of HAND INJURY during the opening and cleaning operations and/or maintenance of the supply auger, burner and ash drawer. We recommend suitable Personal Protection Equipment (PPE), such as gloves, is used. When disassembling some parts of the equipment and then reassembling them, pay attention to the risk of crushing your hands.

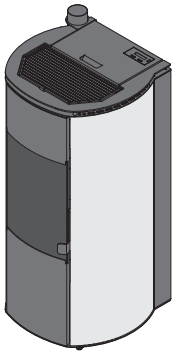
Risk of ASPHYXIA if there is no correct fume expulsion. We advise you to periodically inspect and keep the flue and fire outlets clean.

Risk of FIRE if flammable objects are placed on the surface of the unit or if solid or liquid flammable materials are positioned near it.

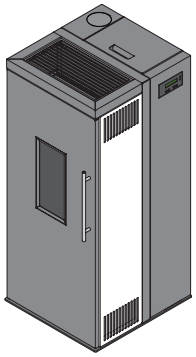
Draught conditions unsuitable to the flue, excessive fuel humidity or high ash residue in the combustion chamber, can cause ignition failures that must not be considered a fault in the product.

The company accepts no liability for any damages that may derive, either directly or indirectly, to people, animals or property due to the non-compliance with all the provisions listed in this manual and, in particular, concerning the warnings with regard to the installation, use and maintenance of the apparatus.

2 - STOVE MODELS DEALT WITH IN THIS MANUAL



Arianna 10/12



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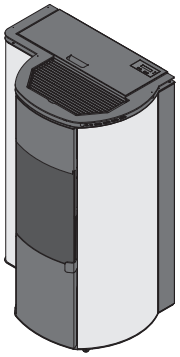
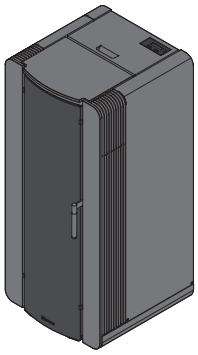
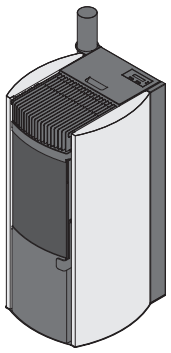


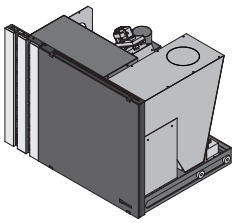
Eco Cippatina 10/12



Firenze 10/12



Garda 9
Garda Étanche 9



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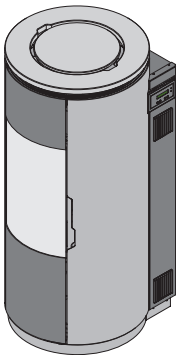

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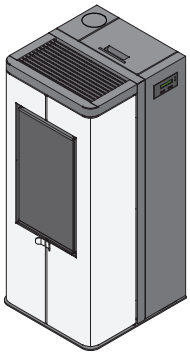
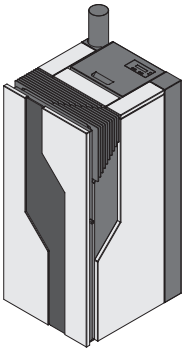


Scrigno



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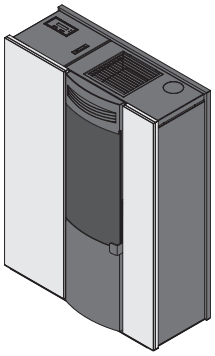
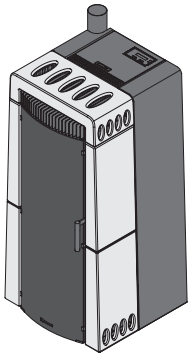
Sirmione Étanche 9



Thema 10/12



Trieste
Trieste Étanche 9

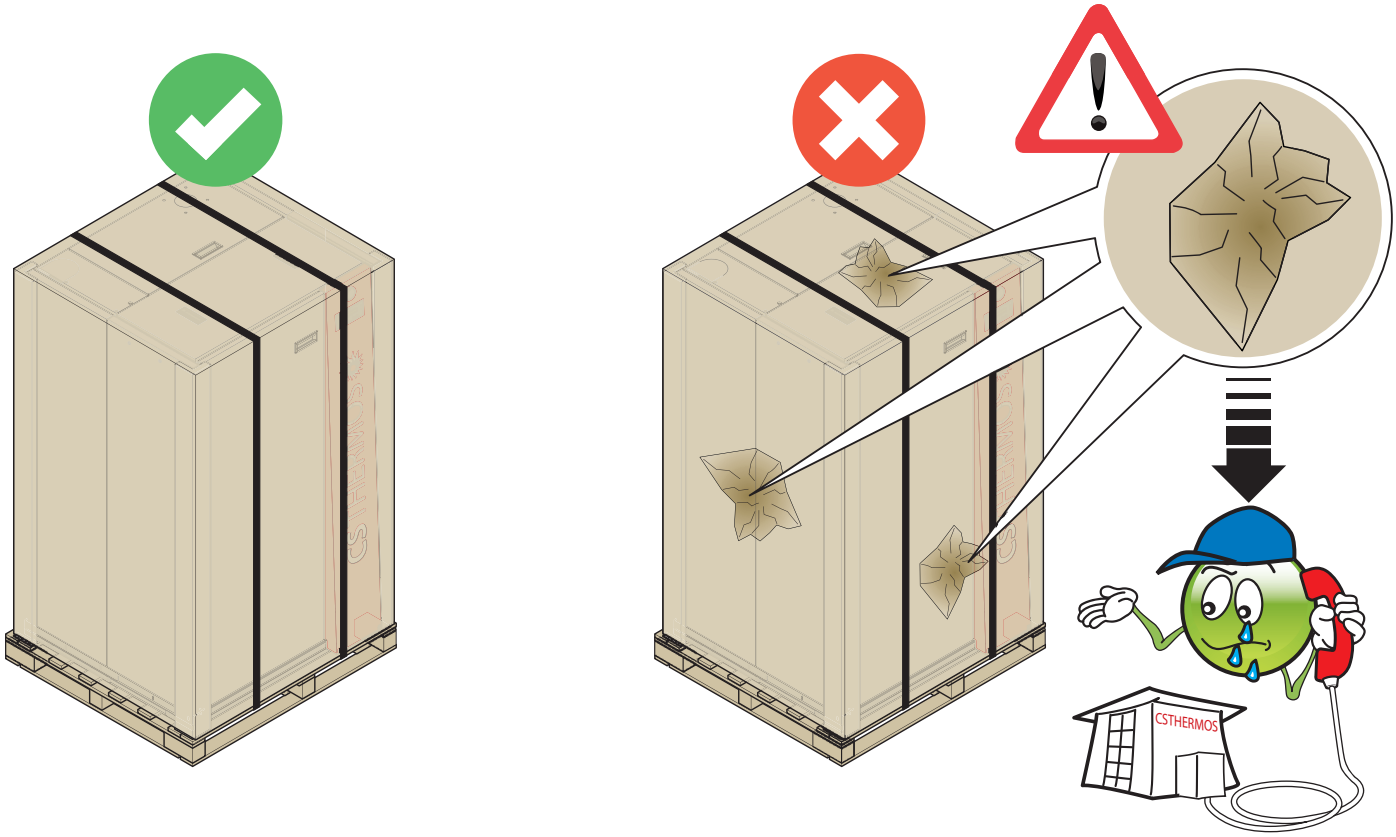
3 - RECEIVING THE EQUIPMENT

When you receive the equipment, check its packaging is intact. In case of visible damage or if some pieces are missing, do not install it, but contact the Manufacturer straight away.

If no anomaly is found, the product can be installed.

Handle the equipment following the Manufacturer's instructions shown on the packaging and in this manual. Use personal protection equipment all the time.

The means and method of transport must be chosen by the person responsible for handling, according to the equipment weight and size. Handling must guarantee the safety of the people directly involved in the installation.



4 - TRANSPORT AND HANDLING

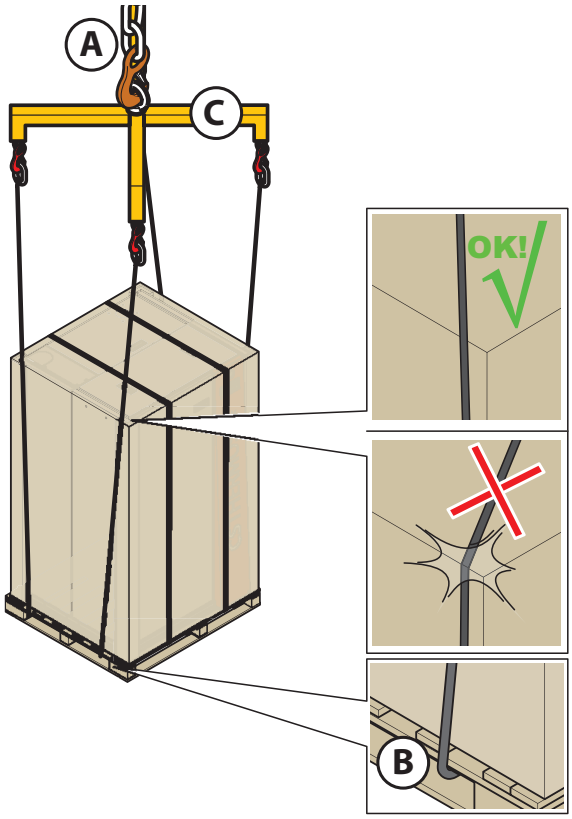
The apparatus must be lifted with a winch fitted with a hook (A) and handled with a transpallet or forklift truck of suitable capacity.

The area of movement must be free from objects or people not involved in the transport operation.

If the equipment is handled using a winch, it is necessary to use some spreader bars (C) between the lifting ropes, to prevent the unit from being damaged and ensure no excessive pressure is applied to the packaging or machine itself.

Lifting with a winch fitted with a hook

Use hooks of capacity and material suitable to the weight to be lifted. Ensure the safety lock (D) is in the correct position while lifting.



Do NOT move the equipment if the field of vision is poor or if there other other obstacles along the way (i.e. electrical cables, lintels, etc.). The range of action of the lifting equipment must be kept free from people when the loads are lifted.

Shifting must always be vertical. Use steel hooks, chains or cables in perfect condition, of a suitable material and capacity and without any joints or extensions (E). Carry out periodic checks to guarantee efficiency.

To anchor the unit, pass the ropes or chains through the pallet holes (B), paying attention it is kept perfectly level.

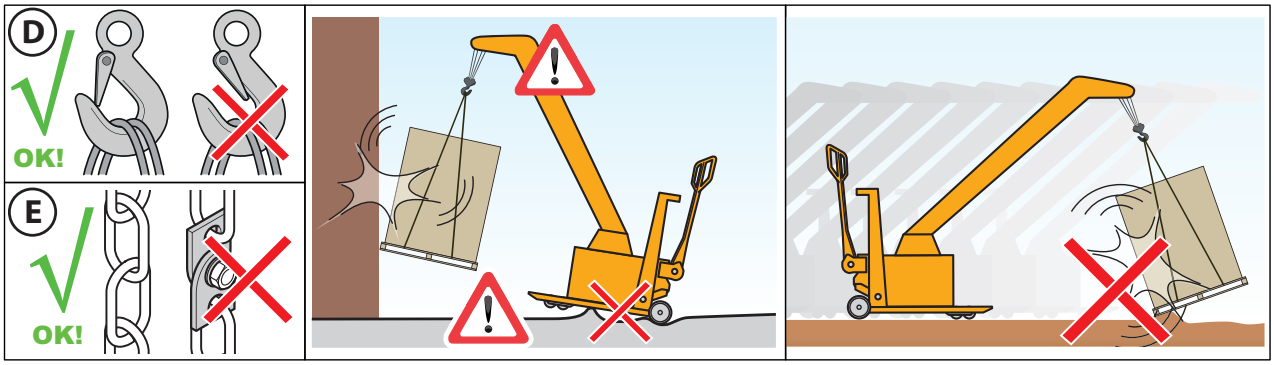
Check the flatness of the ground where the lifting equipment is standing, making sure it is stable and not prone to subsidence.

Do not move the lifting equipment during the operation.

Before starting lifting, check correct anchoring to the mentioned points and the centre of gravity, then slowly lift the packaged equipment to the minimum height required and move it carefully to avoid dangerous vibrations.

Take care of the control panel that must undergo no impacts or be exposed to the weather (rain, humidity): any damage may affect its operation.

Avoid sudden stops of the lifting or descending movement, in order to avoid dangerous oscillations.



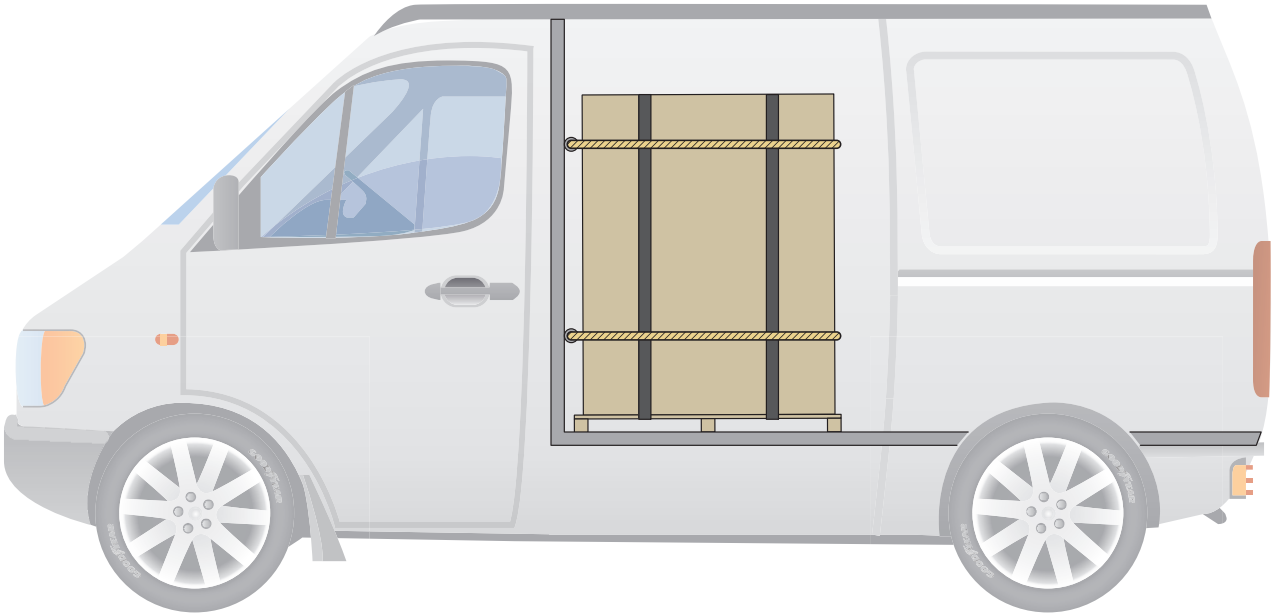
Lifting with a transpallet or forklift truck

If the transport is done using a transpallet, ensure it is adequate to the weight and size of the packaged equipment. Insert the forks into the points provided for handling (usually in the central position), to keep the centre of gravity of the load balanced. Move the equipment carefully, avoiding sudden movements.

If the transport is done with a forklift truck, ensure this is strong enough to withstand the weight of the equipment and that this can be moved safely, without any risk of it falling.

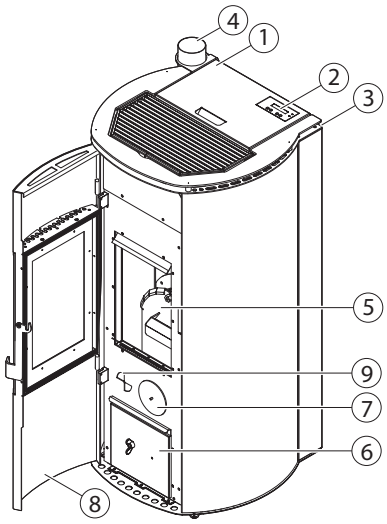
Transport with a van

If transport is done using a van, the apparatus must be fixed properly inside it, using ropes, so that it cannot move while handling.

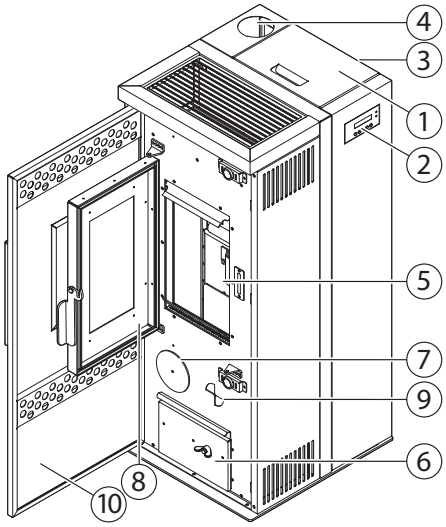


5 - DESCRIPTION OF THE PARTS

5.1 Andy, Arianna, Eco Cippatina, Firenze, Garda, Garda Étanche 9, Inserto Paris, Leire, Scrigno, Sirmione, Sirmione Étanche 9, Thema, Trieste, Trieste Étanche 9 stoves.



Arianna 10/12



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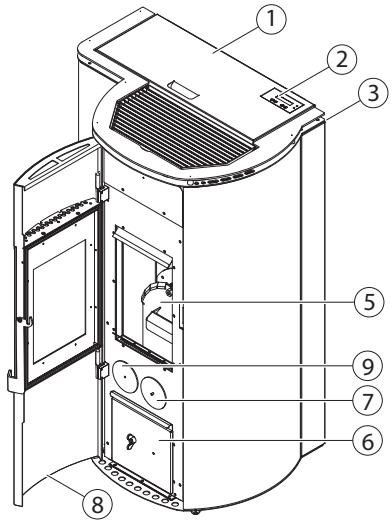
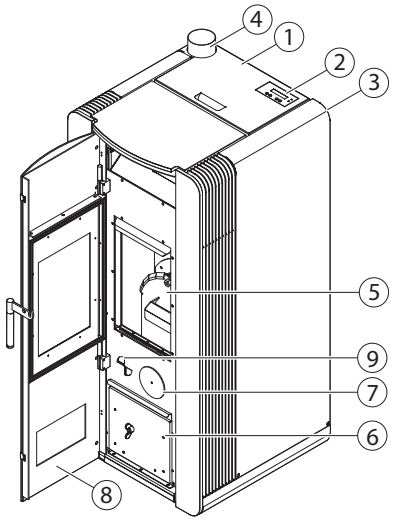
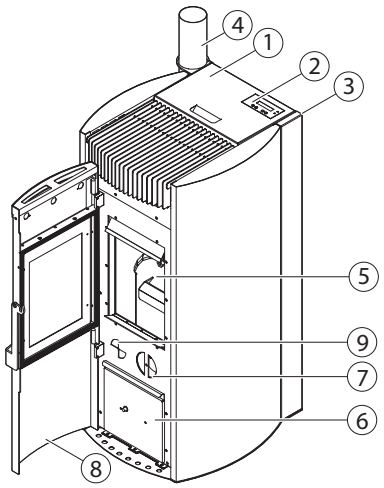


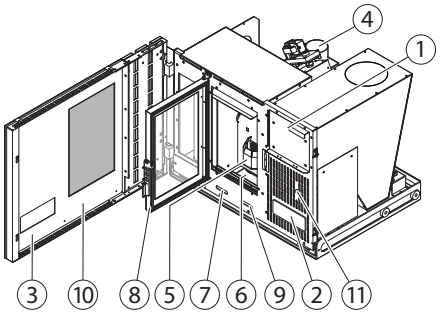
Eco Cippatina 10/12



Firenze 10/12



Garda 9 - Garda Étanche 9



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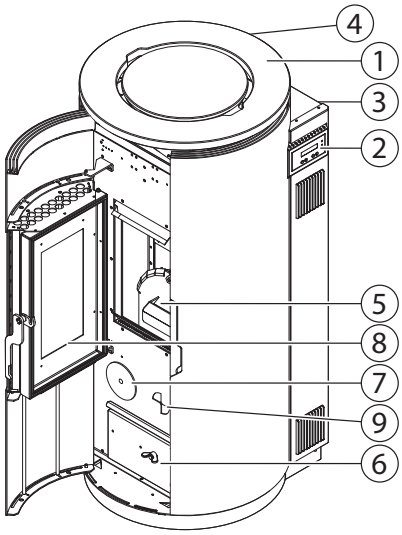

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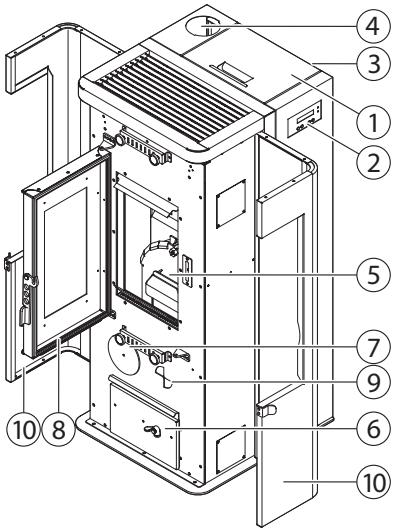
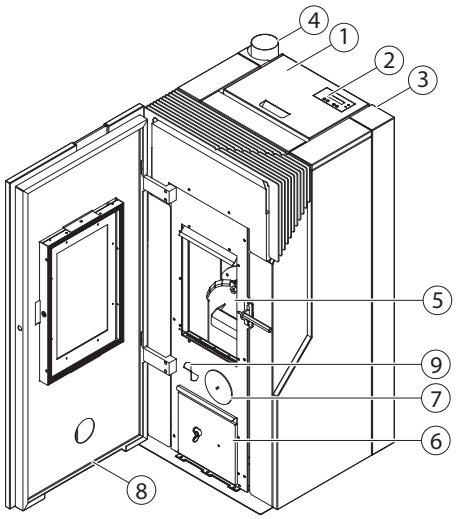
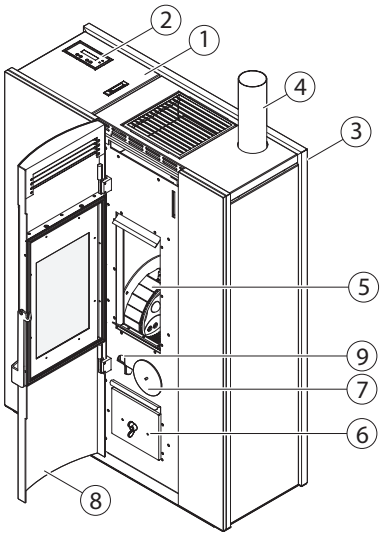


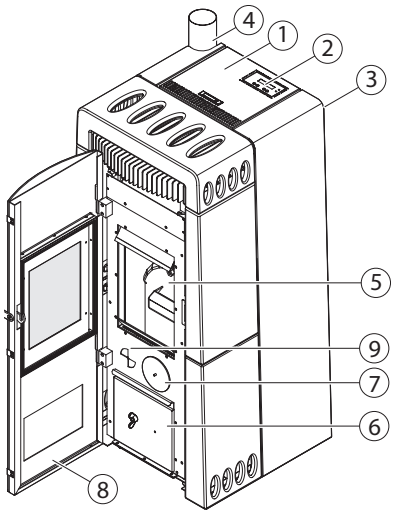
Scrigno



Sirmione 9/10/12
Sirmione Étanche 9



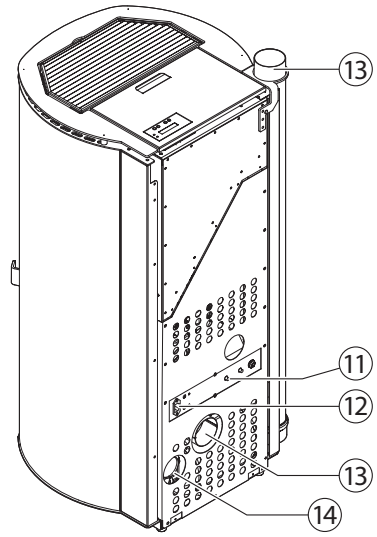
Thema 10/12



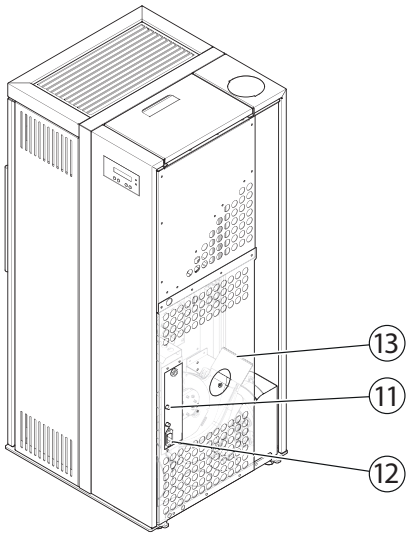
Trieste - Trieste Étanche 9

Description

1) Container lid
2) Display
3) Technical data label
4) Top discharge arrangement
5) Burner
6) Ash drawer
7) Explosion relief
8) Hearth door
9) Glass cleaning air adjuster
10) Front door



Arianna 10/12



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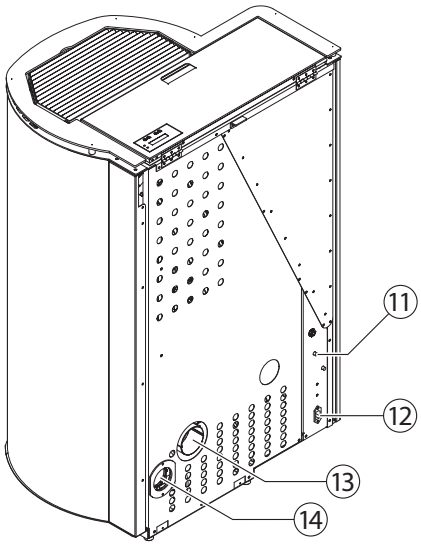
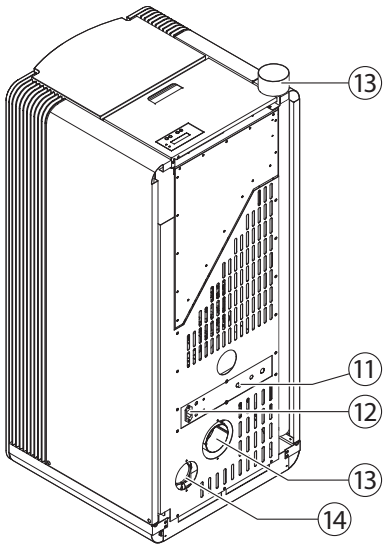
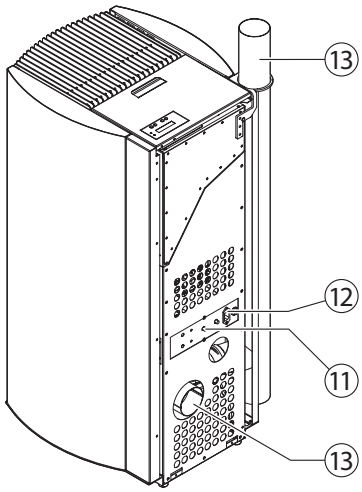


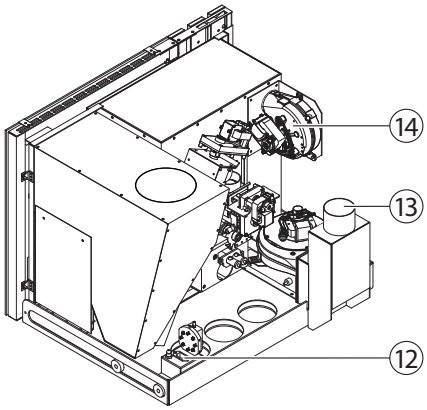
Eco Cippatina 10/12



Firenze 10/12



Garda 9 - Garda Étanche 9



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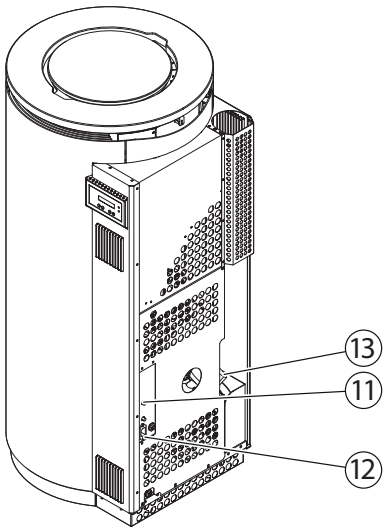

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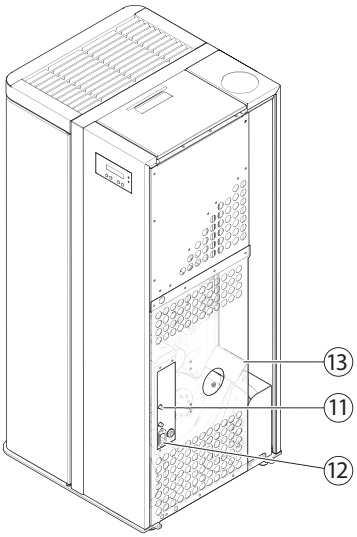
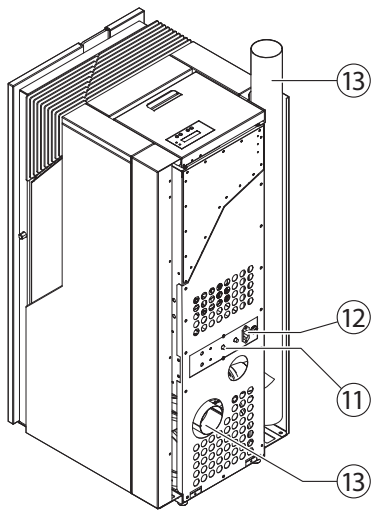
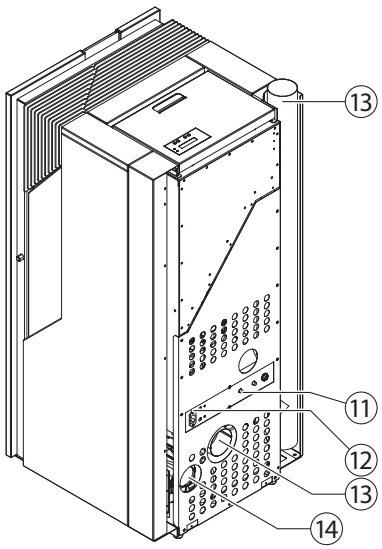


Scrigno



Sirmione 9 - Sirmione Étanche 9



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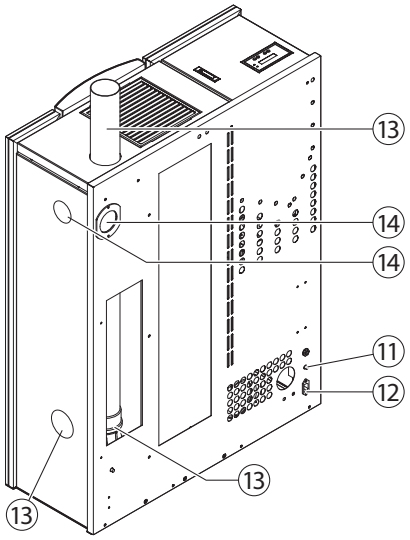
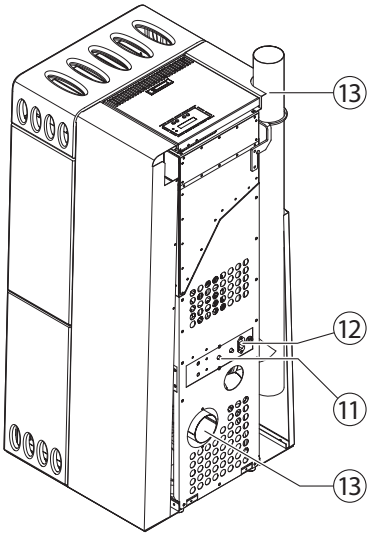


Thema 10/12

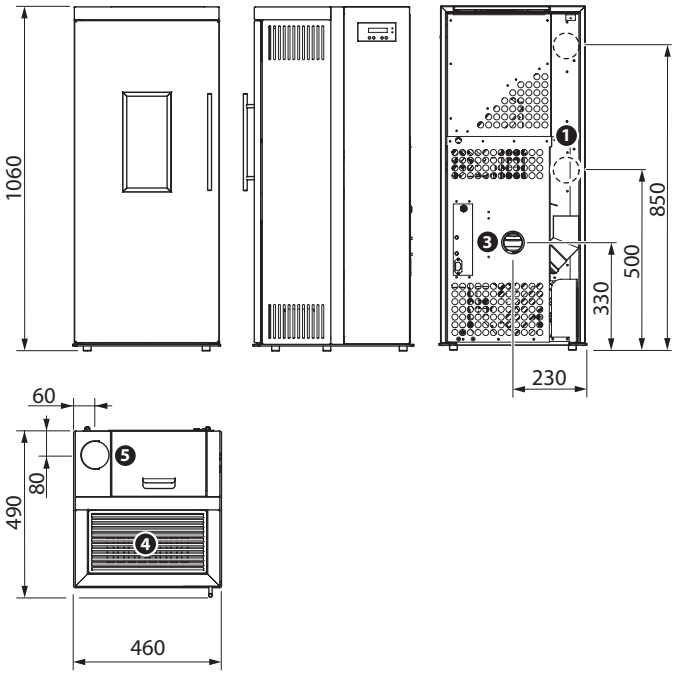


Trieste / Trieste Étanche 9

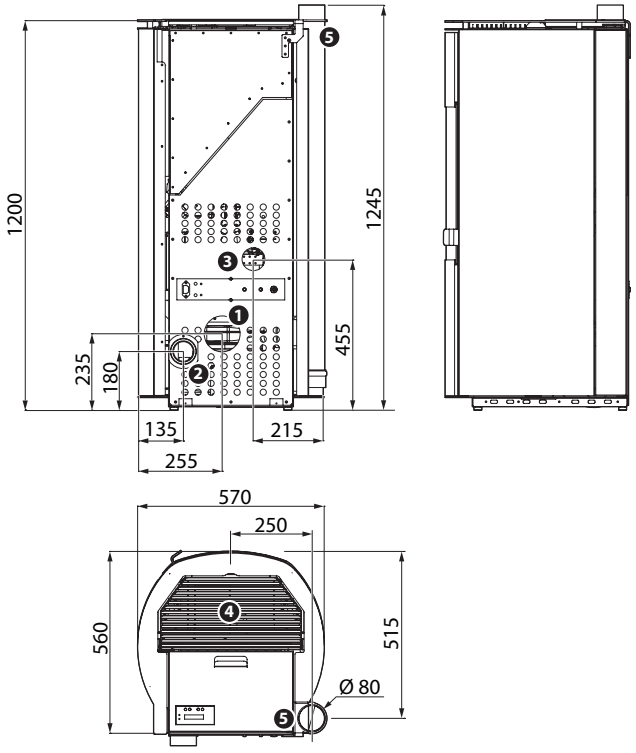
Description

11) Auger thermostat
12) Electrical outlet
13) Flue gas discharge
14) Duct arrangement

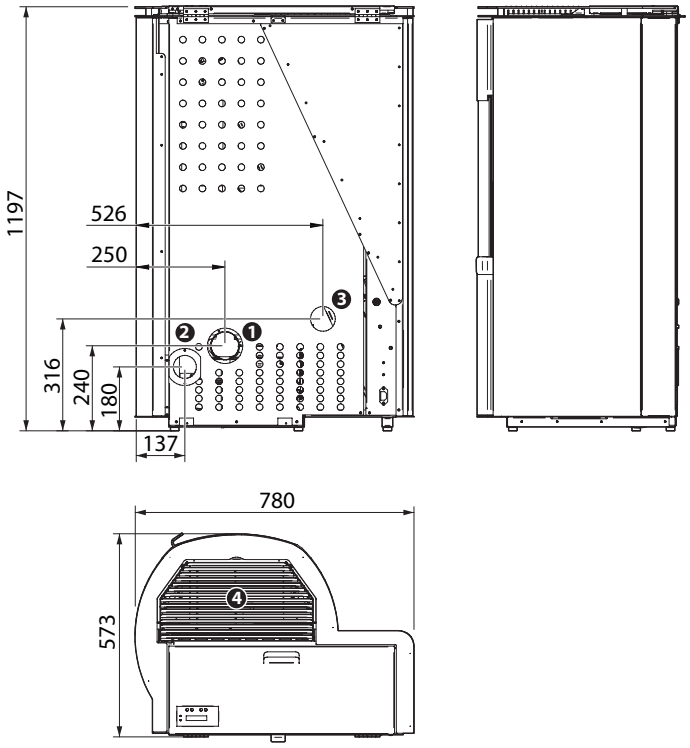
5.2 Stove dimensions



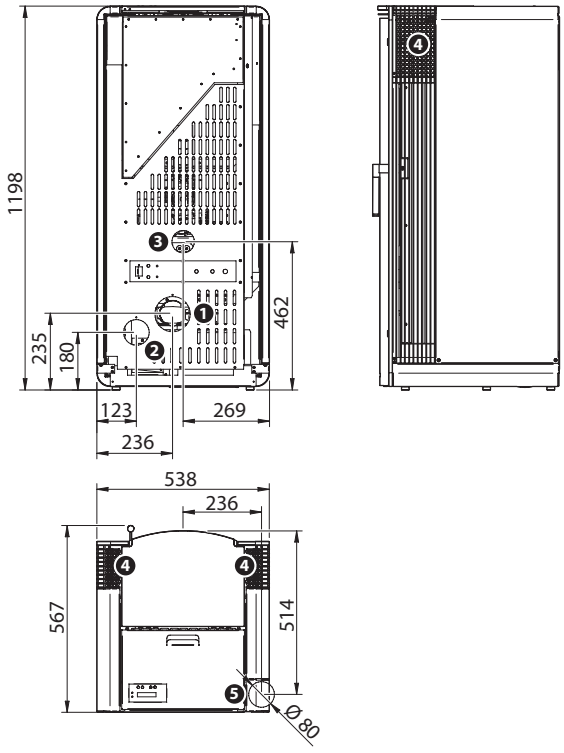
Andy



Arianna 10/12

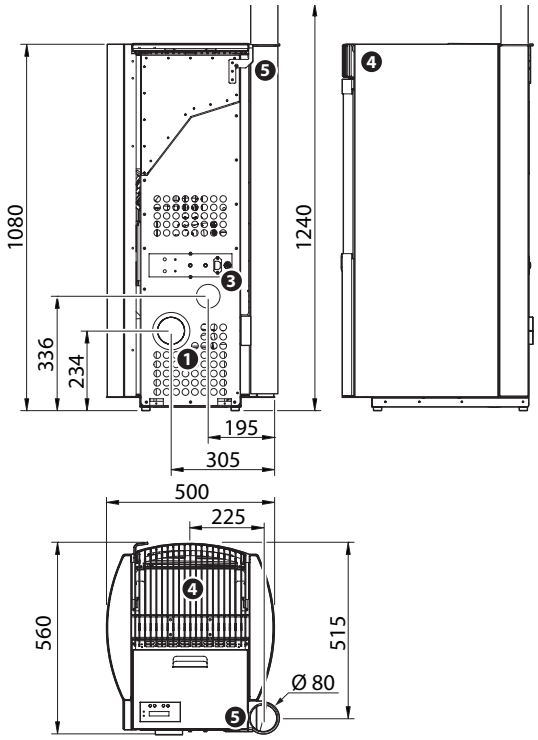


Eco Cippatina 10/12

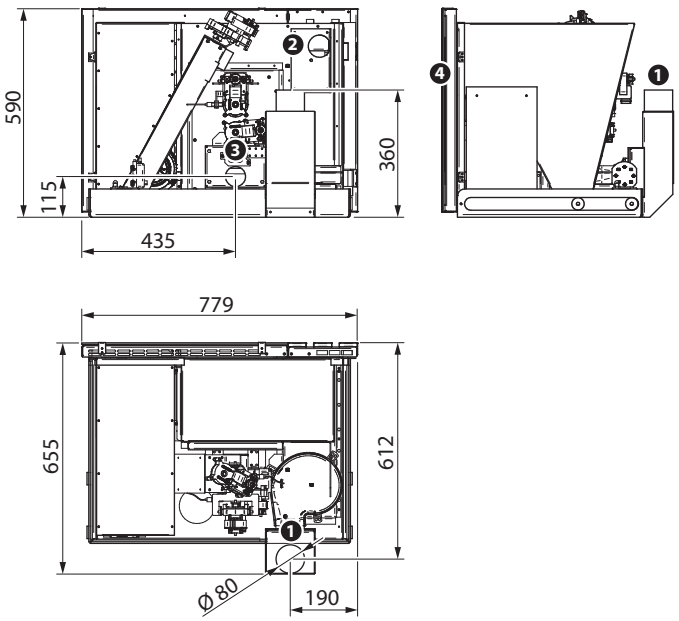


Firenze 10/12

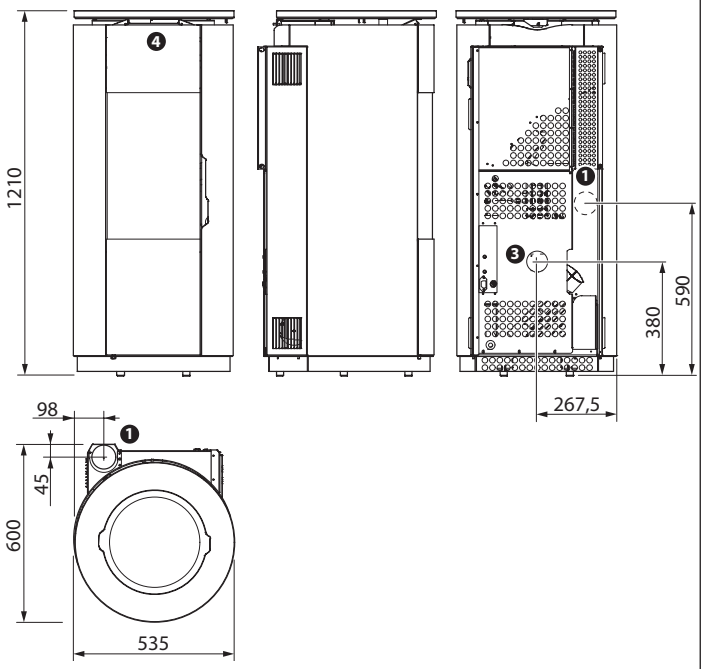
1. Flue gas discharge
2. Duct arrangement
3. External air intake
4. Hot air outlet
5. Upper fume discharge (OPTIONAL)
6. Side fume discharge (only Thema)



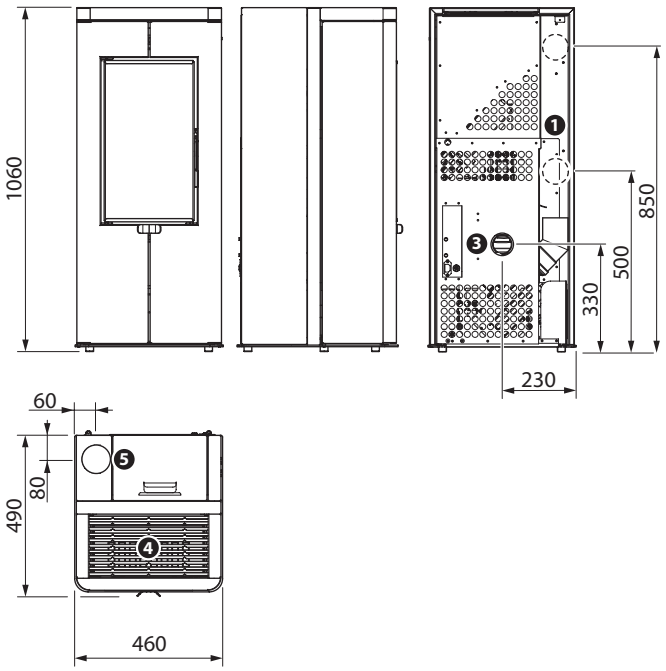
Garda 9 / Garda Étanche 9



Inserto Paris

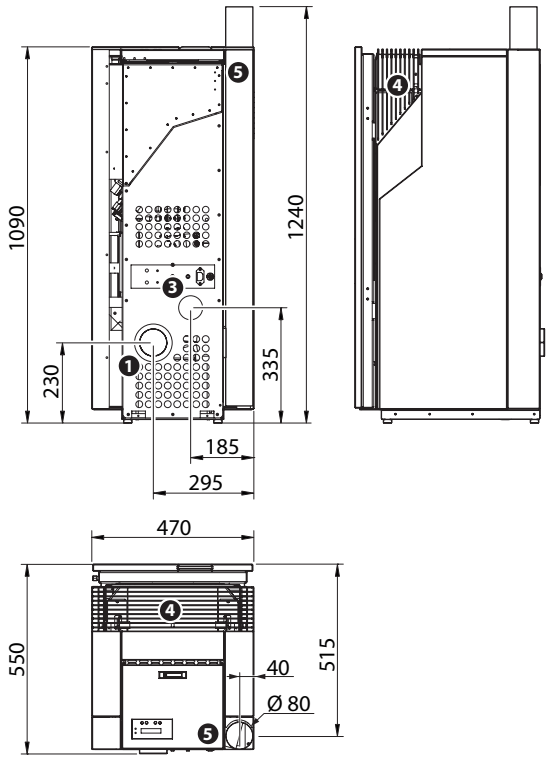


Leire

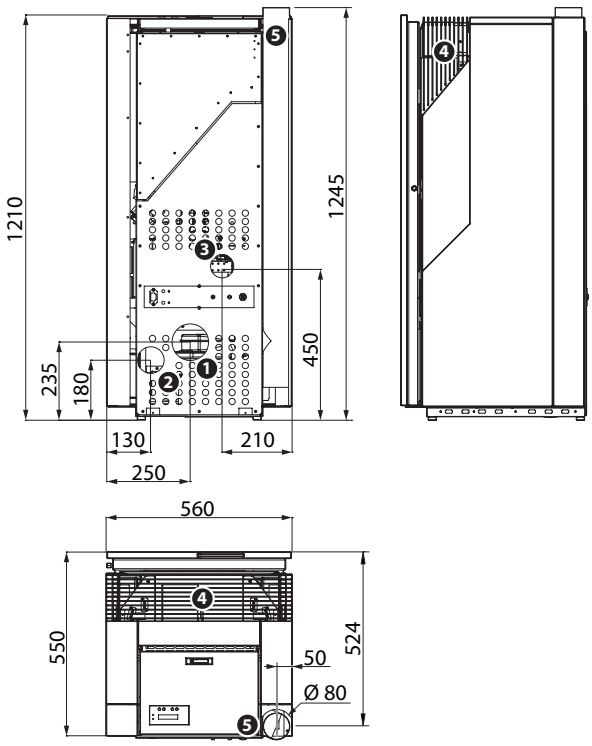


Scrigno

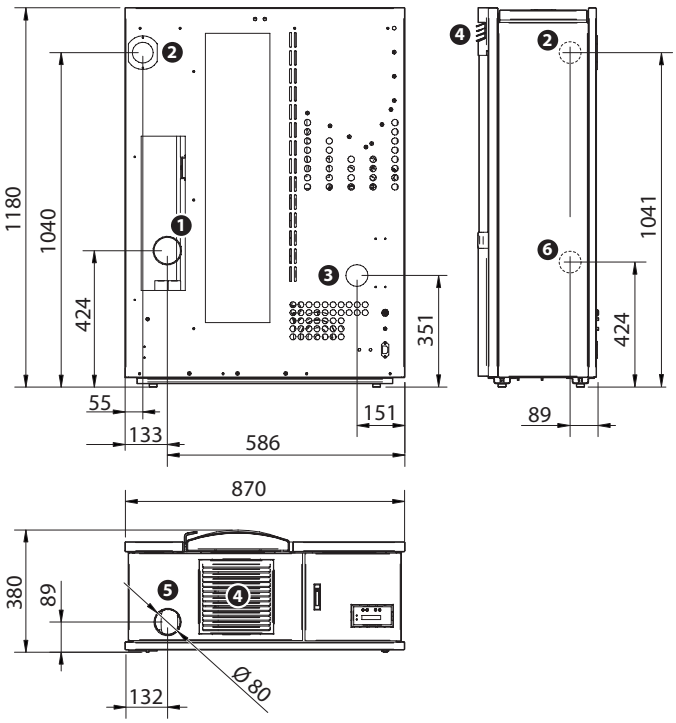
1. Flue gas discharge
2. Duct arrangement
3. External air intake
4. Hot air outlet
5. Upper fume discharge (OPTIONAL)
6. Side fume discharge (only Thema)



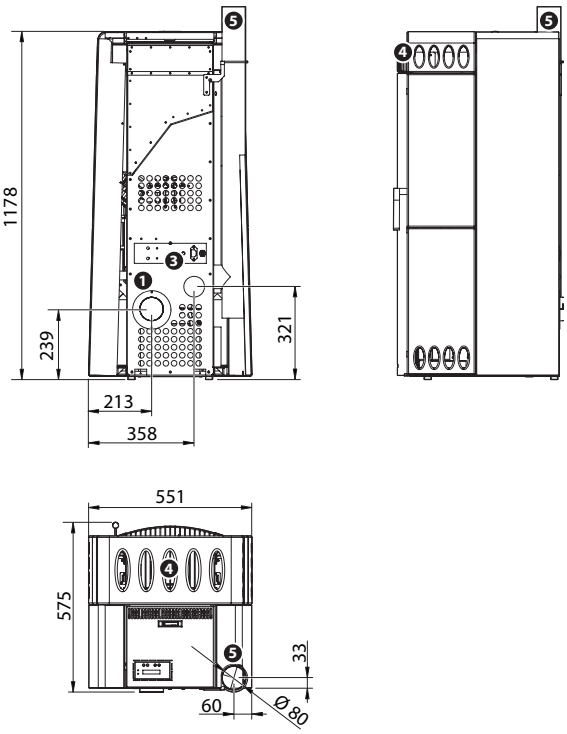
Sirmione 9 / Sirmione Étanche 9



Sirmione 10/12



Thema 10/12



Trieste / Trieste Étanche 9

1 Flue gas discharge
2 Duct arrangement
3 External air intake
4 Hot air outlet
5 Upper fume discharge (OPTIONAL)
6 Side fume discharge (only Thema)

5.3 Pellet container

All stove models are fitted with an internal container to load the pellets. Capacity varies according to the model. The container is always in the top part of the appliance and is protected by a hermetically sealed lid.

To load, lift the lid and let the pellets slide into the container.

Find below an example with a stove model, the system for the other stoves is exactly the same.

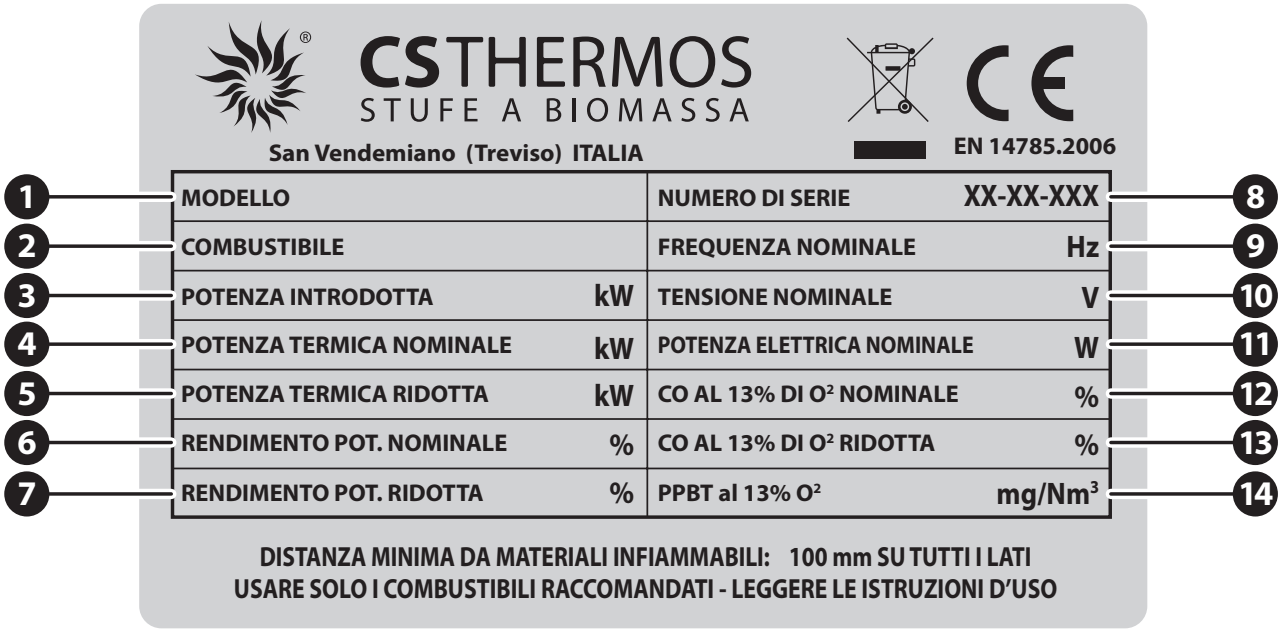
Warning Do not rest the pellet bag on the stove.

	Container capacity (kg)
Arianna 10/12	20
Andy	12
Eco Cippatina 10/12	28 Pellets / 14 Chips
Firenze	20
Garda 9	13
Garda Étanche 9	13
Inserto Paris	18
Leire	15
Scrigno	12
Sirmione 9	13
Sirmione Étanche 9	13
Sirmione 10/12	20
Thema 10/12	18
Trieste	14
Trieste Étanche 9	14

5.4 Stove serial plate

The plate with the data regarding the stove is located on its back. It supplies important technical information that is vital in case of a request for maintenance or repair of the equipment. Please do not remove, damage or modify it.

Find below an example of serial plate, the details regarding your stove can be found in the following chapter.



1 Indicates the stove model you have.

2 Indicates the type of fuel compatible with your stove.

3 Indicates the heat output at maximum power.

4 Indicates the thermal power actually delivered to the environment.

5 Indicates the heat output at minimum power.

6 Indicates how much heat generated by combustion can actually be released into the environment at maximum power.

7 Indicates how much heat generated by combustion can actually be released into the environment at minimum power.

8 Indicates the serial number of your boiler: period of the year - year of construction - construction specifications.

9 Indicates the frequency of the current used by the stove.

10 Indicates the electric operating voltage of the stove.

11 Indicates the power generated or absorbed during operation.

12 Indicates the value of carbon and oxygen emitted at maximum power.

13 Indicates the value of carbon and oxygen released at minimum power.

14 Indicates the value of the total particulate emitted at maximum power.

6 - STOVE TECHNICAL DATA

TECHNICAL DATA	UNITS OF MEASUREMENT	Arianna 12	Arianna 10	Andy	Eco Cippatina 12
Thermal power input (wood pellet fuel)	kW	13,1*	10,8*	8,9 *	13,1*
Rated thermal power (wood pellet fuel)	kW	11,9*	10,1*	8,0 *	11,9*
Reduced thermal power (wood pellet fuel)	kW	4,9*	4,9*	3,4	4,9*
Rated power output (wood pellet fuel)	%	90,8*	93,8*	90,7 *	90,8*
Reduced power output (wood pellet fuel)	%	93,8*	93,8*	94,5	93,8*
CO 13% RATED POWER	g/Nm^3	0,10	0,08	0,06	0,10
CO 13% REDUCED POWER	g/Nm^3	0,30	0,30	0,37	0,30
PP 13% O^2	mg/Nm^3	16,8	7,6	8,3	16,8
Fuel (wooden pellets EN ISO 17225-2)		Wooden pellets	Wooden pellets	Wooden pellets EN ISO 17225-2	Wooden pellets Sized chips
Consumption at maximum power (wood pellet fuel)	kg/h	max 2,7**	max 2,2**	máx 1,8 **	max 2,7**
Maximum autonomy with continuous operation at power 1 (wood pellet fuel)	h	max 25**	max 25**	max 16 **	Chips max 25** Pellets max 35**
Pellet container capacity	Kg	~20	~20	~12	Chips ~14 Pellets ~28
Heatable volume	m^3	80-350 max***	80-290 max***	80-230 max ***	80-350 max***
Smoke outlet diameter	mm	80	80	80	80
Smoke temperature	°C	max 210	max 210	max 210	max 210
Power supply	V	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz
Maximum absorption	A	3	3	3	3
Average absorption during operation	W	90	90	110	90
Absorption when igniting	W	max 620	max 620	max 620	max 620
Dimensions	mm	see relative chapter	see relative chapter	see relative chapter	see relative chapter
Net weight	Kg	~155	~155	~120	~155
Energy rating		A+	A++		A+
Environmental quality class (Min. Decree 186)	stelle	4	5	5	4

* The fire and rated power as well as the efficiency are measured in a lab test in optimal installation conditions.

** The data was recorded in a lab test in optimal conditions. Hourly consumption can vary according to the type of pellets used and the installation.

*** The heatable volume is subject to variation according to installation conditions, type of house insulation and external climatic conditions connected with the geographic location.

TECHNICAL DATA	UNITS OF MEASUREMENT	Eco Cippatina 10	Firenze 12	Firenze 10	Garda 9 Garda Étanche 9
Thermal power input (wood pellet fuel)	kW	10,8*	13,1*	10,8*	10,0*
Rated thermal power (wood pellet fuel)	kW	10,1*	11,9*	10,1*	9,2*
Reduced thermal power (wood pellet fuel)	kW	4,9*	4,9*	4,9*	4,2*
Rated power output (wood pellet fuel)	%	93,8*	90,8*	93,8*	91,7*
Reduced power output (wood pellet fuel)	%	93,8*	93,8*	93,8*	93,0*
CO 13% RATED POWER	g/Nm^3	0,08	0,10	0,08	0,12
CO 13% REDUCED POWER	g/Nm^3	0,30	0,30	0,30	0,44
PP 13% O^2	mg/Nm^3	7,6	16,8	7,6	8,9
Fuel (wooden pellets EN ISO 17225-2)		Wooden pellets Sized chips	Wooden pellets	Wooden pellets	Wooden pellets
Consumption at maximum power (wood pellet fuel)	kg/h	max 2,2**	max 2,7**	max 2,2**	max 2,0**
Maximum autonomy with continuous operation at power 1 (wood pellet fuel)	h	Chips max 25** Pellets max 35**	max 25**	max 25**	max 16**
Pellet container capacity	Kg	Chips ~14 Pellets ~28	~20	~20	~13
Heatable volume	m^3	80-290 max***	80-350 max***	80-290 max***	80-260 max***
Smoke outlet diameter	mm	80	80	80	80
Smoke temperature	°C	max 210	max 210	max 210	max 210
Power supply	V	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz
Maximum absorption	A	3	3	3	3
Average absorption during operation	W	90	90	90	80
Absorption when igniting	W	max 620	max 620	max 620	max 620
Dimensions	mm	see relative chapter	see relative chapter	see relative chapter	see relative chapter
Net weight	Kg	~175	~165	~165	~120
Energy rating		A++	A+	A++	A+
Environmental quality class (Min. Decree 186)	stelle	5	4	5	5

* The fire and rated power as well as the efficiency are measured in a lab test in optimal installation conditions.

** The data was recorded in a lab test in optimal conditions. Hourly consumption can vary according to the type of pellets used and the installation.

*** The heatable volume is subject to variation according to installation conditions, type of house insulation and external climatic conditions connected with the geographic location.

Inserto Paris	Leire	Scrigno	Sirmione 12	Sirmione 10	Sirmione 9 Sirmione Étanche 9	Thema 12	Thema 10	Trieste Trieste Étanche 9
10.7 *	8,9 *	8,9 *	13,1*	10,8*	10,0*	12,4*	10,5*	10,0*
10.0 *	8,0 *	8,0 *	11,9*	10,1*	9,2*	11,5*	9,8*	9,2*
5.1	3,4	3,4	4,9*	4,9*	4,2*	4,95*	4,95*	4,2*
92.9 *	90,7 *	90,7 *	90,8*	93,8*	91,7*	92,3*	94,1*	91,7*
95.1	94,5	94,5	93,8*	93,8*	93,0*	93,3*	93,3*	93,0*
0.12	0,06	0,06	0,10	0,08	0,12	0,09	0,12	0,12
0.30	0,37	0,37	0,30	0,30	0,44	0,32	0,32	0,44
14	8,3	8,3	16,8	7,6	8,9	12	11	8,9
Wooden pellets EN ISO 17225-2	Wooden pellets EN ISO 17225-2	Wooden pellets EN ISO 17225-2	Wooden pellets	Wooden pellets	Wooden pellets	Wooden pellets	Wooden pellets	Wooden pellets
2.2 max **	max 1,8 **	max 1,8 **	max 2,7**	max 2,2**	max 2,0**	max 2,57**	max 2,16**	max 2,0**
20 max **	max 20 **	max 20 **	max 25**	max 25**	max 16**	max 25**	max 25**	max 16**
~18	~15	~12	~20	~20	~13	~18	~18	~14
80-290 max ***	80-230 max ***	80-230 max ***	80-350 max ***	80-290 max ***	80-260 max ***	80-350 max ***	80-290 max ***	80-260 max ***
80	80	80	80	80	80	80	80	80
210 max	max 210	max 210	max 210	max 210	max 210	max 190	max 190	max 210
V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz	V230~ / 50Hz
3	3	3	3	3	3	3	3	3
90	110	110	90	90	80	90	90	80
620 max	max 620	max 620	max 620	max 620	max 620	max 620	max 620	max 620
see relative chapter	see relative chapter	see relative chapter	see relative chapter	see relative chapter	see relative chapter	see relative chapter	see relative chapter	see relative chapter
~122	~180	~180	~175	~175	~135	~175	~175	~120
A+			A+	A++	A+	A+	A++	A+
4	5	5	4	5	5	4	5	5

* The fire and rated power as well as the efficiency are measured in a lab test in optimal installation conditions.

** The data was recorded in a lab test in optimal conditions. Hourly consumption can vary according to the type of pellets used and the installation.

*** The heatable volume is subject to variation according to installation conditions, type of house insulation and external climatic conditions connected with the geographic location.

7 - FUELS

There are various qualities and types of wood pellets on the market, therefore, it is important to avoid poor quality pellets, which could contain glues, resins, or chemical substances capable of causing the formation of corrosive gases, the emission of pollutants into the atmosphere, early clogging of the flue gas outlet, decrease in appliance performance.

The reference standards have in fact established that products operating with solid fuels must be fed with good quality pellets, well compacted and not very floury. We recommend that you ask your reseller the appropriate type of pellet, compliant with the reference standards ISO EN 17225-2.

Stack the sacks of fuel at a distance of at least 1 meter from the appliance.

7.1 Fuel setting

Before turning on the appliance, select the type of fuel to use from the display menu, as described below:

- Select "fuel 1" to use class A1 and A2 certified wood pellets (ISO EN 17225-2).
- Select "fuel 2" to use class B certified wood pellets (ISO EN 17225-2) and certified biomass.
- The "combustible 3" list can be selected at the discretion of the installer for settings suitable for the use of biomass.

7.2 Essential characteristics of usable fuels

Minimum size of non-pelletated fuel:	**> 4 x 4 mm**
Maximum size of non-pelletated fuel:	**< 16 x 16 mm**
Maximum pellet size:	**< Ø=8 x L=16 mm**
Maximum humidity:	**< 12%**

CS THERMOS products can use the following **certified fuels**:

- **CERTIFIED WOOD PELLETS** belonging to class A1-A2-B according to the ISO EN 17225-2 standard.

  Maximum diameter 8mm x maximum length 16mm; maximum humidity <10%.

  Fuel menu to use: menu 1

- **P16A-M10 CERTIFIED CALIBRATED WOOD CHIPS** according to ISO EN 17225-4

  P16A = chip maximum size <16 mm

  M10 = chip maximum humidity <10%

  Fuel menu to use: menu 2

  The calibrated wood chips can only be used in the Eco Cippatina 10 - Eco Cippatina 12 air stove models and in the Lyra Cippatino Eco 23 - Lyra Cippatino Eco 27 water boilers.

Loading phase of the wood chips at the first ignition

Once the wood chips have been loaded into the tank, the technician must use the **COLD TEST** to activate the loading auger and the horizontal auger: it is necessary to run them for some time, until the fuel begins to fall into the crucible.

At this point, the duct is full: stop the two augers and remove the chips that have fallen into the crucible.

Now the stove is ready to be turned on.

CS THERMOS products can use the following self-produced and/or non-certified fuels:

- **CHOPPED ALMOND-WALNUT-HAZELNUT SHELLS** with a humidity lower than 12%.

  Minimum diameter 4 mm - maximum diameter 16 x 16 mm.

  Fuel menu to use: menu 2

- **OLIVE KERNEL** cleaned and dedusted, with a humidity lower than 12%.

  Minimum diameter 4 mm.

  Fuel menu to use: menu 2
- **AGRIPELLET** produced with agricultural waste, with a humidity lower than 12%.

  Maximum diameter 8mm x maximum length 16mm.

  Fuel menu to use: menu 2

  There are many different types of agri-pellets on the market, and this makes it mandatory for an authorized technician to calibrate the combustion parameters.

It is important to completely empty the tank before changing fuel types and menus.

Calibration by the authorized technician

The menu indicated for each type of fuel is a recommended starting menu which, at his discretion, the authorized technician can decide to confirm or modify according to the biomass used, since this, by its nature, is never uniform.

Mixed Agripellets

It is advisable to mix agripellet with certified wood pellets because they have similar shape and dimensions and, with the mixture, the negative effects of agripellet are reduced, i.e. the greater amount of ash and dirt it produces.

The mixture must have a percentage of wood pellets which can vary from 50% to 90%.

To obtain a correct mixture, it is advisable to weigh each fuel with a scale having an accuracy of 100g and to mix both fuels inside a single external container, and never inside the tank of the stove, in order to obtain correct homogeneity.

100% olive kernel

On the other hand, it is counterproductive to mix olive pits smaller than 4 mm with the pellet, with the aim of improving combustion. In fact, the pits tend to pass through the pellets and to position themselves on the bottom of the brazier-wheel and then to descend, totally or partially unburned, into the ash pan.

Complementary accessories for small biomasses

If olive pits or other fuels smaller than 4 mm are used, CS THERMOS provides accessories (counterwheel, brazier front panel) that can help burn these very small biomasses.

However, given the variety of types of self-produced fuels on the market, CS THERMOS cannot guarantee the successful operation of these additional accessories, which may not be decisive or sufficient to optimize the combustion of these specific biomasses.

Maintenance and cleaning

With the use of wood pellets or calibrated chips, cleaning and maintenance of the burner must be carried out at least once a week.

With the use of non-certified biomass, ordinary cleaning must be much more frequent, often daily, depending on the amount of combustion residue that the fuel will form in the burner.

On the other hand, as regards the frequency of cleaning of the other parts of the stove, and in particular of the flue gas outlet, the instructions given in the specific section of the manual must be followed.

Furthermore, it is essential to entrust the inspection and cleaning of the flue gas duct and chimney to a specialized technician, at least once a year.

The manufacturer assumes no responsibility for the use of **fuels with characteristics different from those indicated** and accepts no liability for the consequent malfunctioning of the appliance.

8 - INSTALLATION

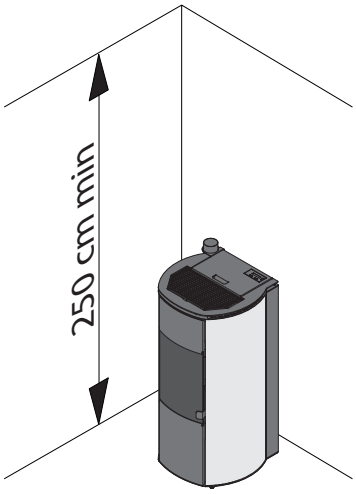
8.1 Pre-installation

Before installing the stove, check that everything has been prepared.

Find below a quick checklist, for the complete information always refer to the pre-installation card.

Check that:

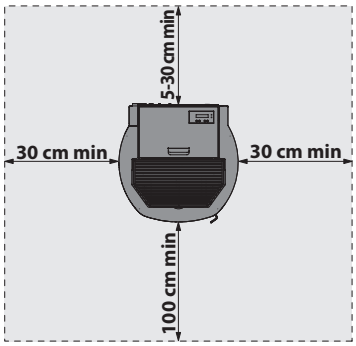
- the surface supporting the unit is level and cannot be affected by the heat;
- if the floor does not withstand the weight of the stove, a 4mm-thick metal sheet platform in the right size must be placed in between, with insulating material, to be applied on the floor, of mineral origin (rock wool) and with a rated density exceeding 80 kg/m3.
- if the stove is installed on a wooden floor, we recommend a precautionary insulation of the support base with a 2mm-thick metal sheet bigger than 50mm, all inside the unit.
- The fume outlet tube must exceed 80 mm in diameter.
- minimum dimensions have been complied with;
- In case of installation near flammable or combustible walls, keep a safety distance of at least 30cm on both sides and on the back. Avoid leaving any type of combustible or flammable material within 1 meter from the front of the unit.
- there is sufficient ventilation (250 cm^2 minimum);
- an appropriate flue pipe for the discharge of the fumes has been provided outside the installation area;
- a circuit breaker has been installed upstream that supplies the stove and is triggered as required;
- there is no flammable material around the installation area;



Indicative picture

As to positioning, the installer must comply with the minimum distances from the walls and surrounding material.

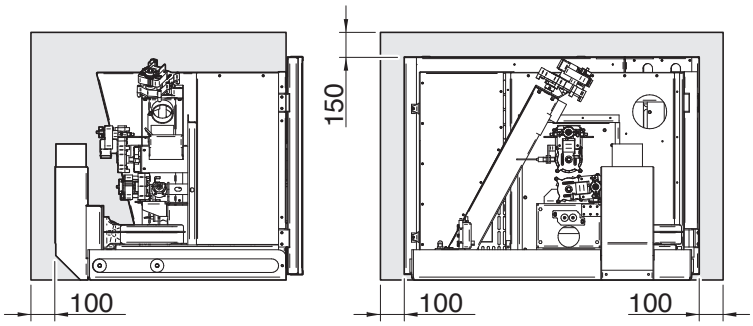
The surrounding spaces will also be used as easy access in case of maintenance (see figure).



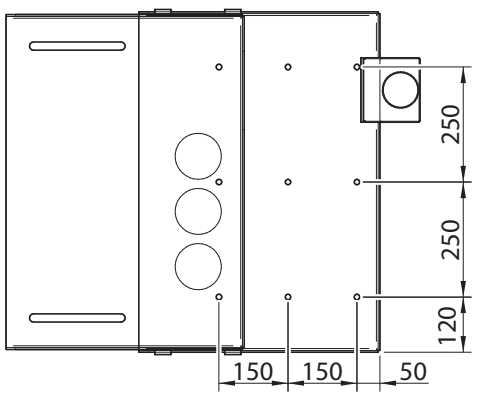
Indicative picture

Inserto Paris

For this model, in addition to following the pre-installation instructions described in point 8.1, it is necessary to pay attention to the minimum dimensions of the niche, indicated in the drawing, in which the appliance is to be inserted.



Furthermore, it is necessary to firmly fix the base of Inserto Paris to the support surface, using the most suitable system for the material this surface is made of. Anchoring the base is important to extract Inserto Paris safely.



8.2 Flue pipe

For the stove to work well, the flue must be made by a qualified engineer that must comply with the regulations in force (UNI EN 10683). If that is not the case, the company cannot be held responsible for any malfunctions.

To clarify things: chimney or flue is the vertical part of a duct that is characterized by its own draft (natural convection). On the other hand, the smoke duct is the horizontal ducting necessary to connect the unit to the flue.

This unit must discharge combustion products via a vertical flue having a minimum depression of 6-8 Pa, in order to guarantee fume expulsion even if there is no electrical power or the environmental conditions are adverse.

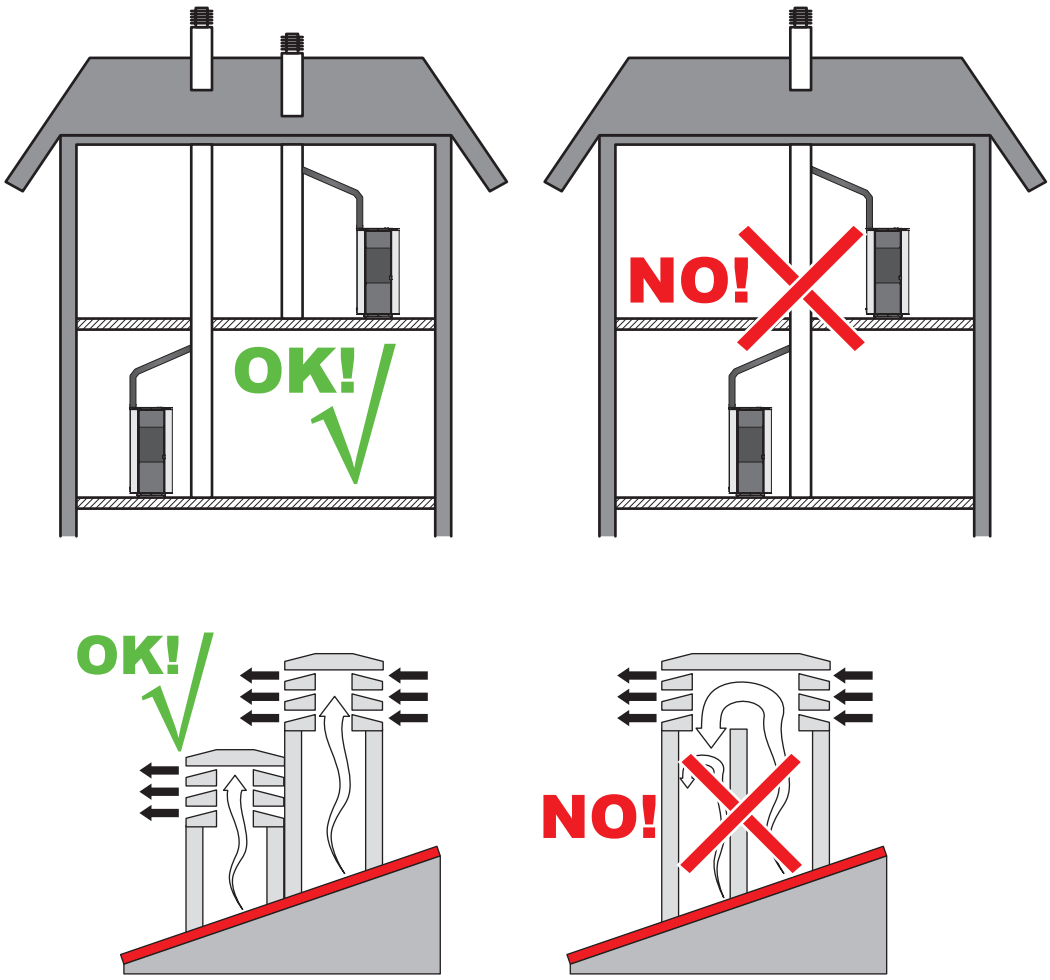
The section of flue that gets out of the roof or remains in contact with the outside must be covered in flat tiles, or anyway, be very well isolated.

Any buildings, plants and other obstacles exceeding the height of the roof must be at a minimum distance of 3m from the chimney.

We recommend the smoke duct is provided with a chamber collecting solid materials and condensate, located under the mouth of the fume channel, so that it can be opened easily and inspected via an airtight door.

For the flue, smooth pipes and fittings must be used and assembled with suitable gaskets, to guarantee the tightness of the seal and prevent combustion gases from escaping in case of a malfunction. No corrugated hoses must be used.

IT IS ABSOLUTELY FORBIDDEN TO INSTALL THE UNIT IN A COLLECTIVE FLUE!



In particular, as to flues/smoke ducts, we wish to remind you of the following:

MATERIALS:

- They must withstand mechanical stress;
- They must withstand any acid condensation that may form from the combustion products

  (the use of STAINLESS STEEL 316 is recommended);
- They must be waterproof;
- They must obviously withstand the heat.
- The pipes that can be used are rigid in painted steel (minimum thickness 1.5mm) or stainless steel (minimum thickness 0.5mm). The male/female coupling collars must overlap by at least 40mm.
- The tube diameter depends on the type of system. The stove has been designed for pipes with an 80mm diameter maximum, as shown in the table; in some cases a 100mm diameter is recommended. If pipes with a 100mm diameter must be used, connect them to the stove with a "T" coupling with an 80mm diameter and a fitting ø 80 - ø 100.

FLUE PIPE	DIAMETER	ASSESSMENT
Pipe shorter than 5m	80 mm	Correct
Pipe longer than 5m	100mm (minimum)	Mandatory
Installations located over 1200 m above sea level	100mm (minimum)	Recommended

PATTERN AND SECTIONS:

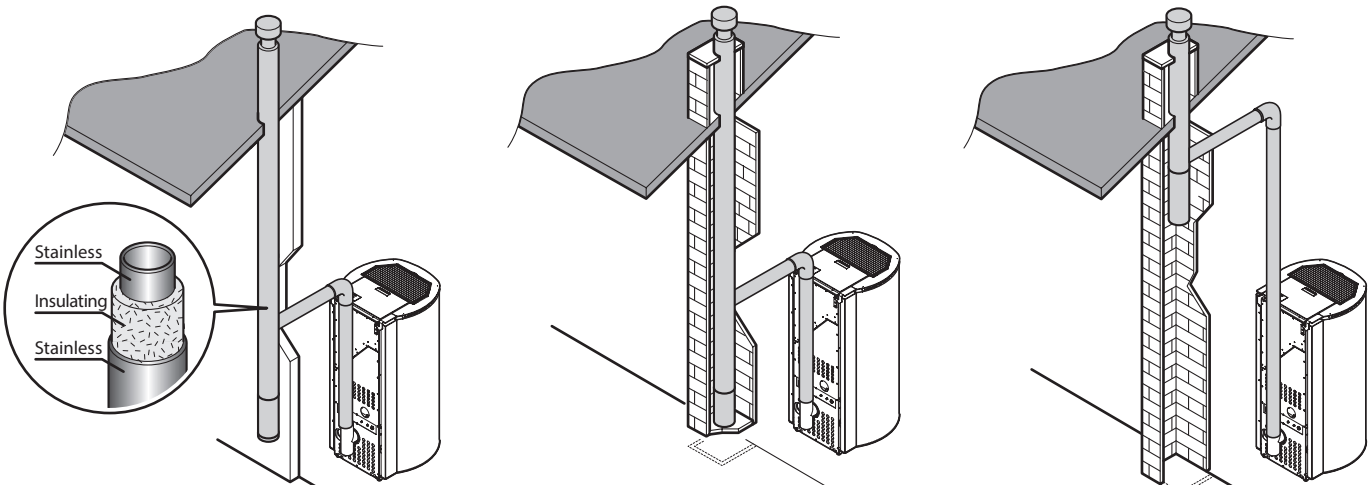
- They must be as vertical as possible, with a constant section and a smooth internal surface to prevent the accumulation of head losses that would affect the draft required to discharge the smoke.
- The lower part of the flue must be provided with a collection "T" with lid (steel flue) or with an inspection door (masonry flue), so that any condensation or soot can be collected.
- Smoke ducts connecting the unit to the flue must be as short as possible (2 - 3 metres maximum) and with two 90° turns maximum. It is important for them to have a 3-5° positive slope towards the flue to ensure the smoke goes out.
- Calculate a loss of head of 1 metre for each 90° turn.
- Calculate a loss of head of 0.5 metre for each 45° turn.
- To connect the flue and smoke duct, "T" junctions with inspection plugs must be used, to make cleaning easier.
- It is forbidden to install gates or valves that can prevent the fumes from going out.
- If, for construction reasons, there is a horizontal section as an internal smoke duct, it is mandatory that this does not exceed 2 linear meters in length.

CHIMNEY:

- In order to prevent any stove malfunction, the chimney must comply with these installation rules:
- It must be the same section and internal shape as the flue and an outlet section no less than twice the section of the flue.
- It must be a windproof chimney, to guarantee the expulsion of the smoke with winds coming from any direction and angle.

- It must prevent rain, snow and foreign bodies from getting in.
- It must not be close to other buildings, but have a free outlet that ensures combustion gases are dispersed into the atmosphere and above all, if the outlet is on a roof, its height must exceed the reflux area.

The pictures below are just an example.



INSULATION:

- Flue in stainless steel: if the flue is placed externally, it must be adequately insulated along its entire length, to ensure good draught and avoid condensation.
  If the chimney is built along the outside wall, heat-insulated double-wall tubes or single-wall tubes with an adequate layer of rock-wool or ceramic fibre insulation are normally used. All chimneys must be provided with a condensation collecting plug located in the bottom part of the structure. Inside the building, simple wall tubes can be used, but have the flue sections passing through the roof space or unheated areas well insulated.
- Flue in uninsulated pre-existing masonry: in order to prevent condensation that may be visible outside the flue as humidity patches, we recommend it is ducted in a stainless steel tube.
- In case of passage through lofts, an insulating sleeve with a thickness of at least 10 cm must be interposed.

ASSEMBLY:

- It must be possible to access all parts of the flue, so that it can be cleaned at regular intervals;
- All sections must be sealed;
- The whole structure must be able to absorb thermal expansion;
- In case of excessive draught, regulators can be fitted, on condition they do not affect the unit normal operation and guarantee minimum draught. Integration must anyway be carried out by specialized personnel.
- **WARNING: Since the regulations on the installation of pellet stoves are changed continuously, ask your installer for any upgrades.**

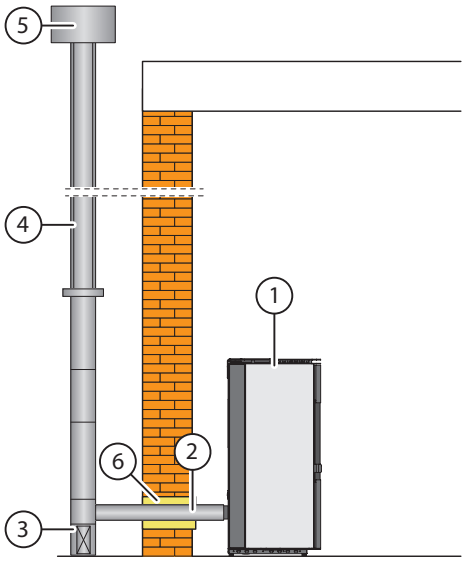
OTHER USEFUL SUGGESTIONS:

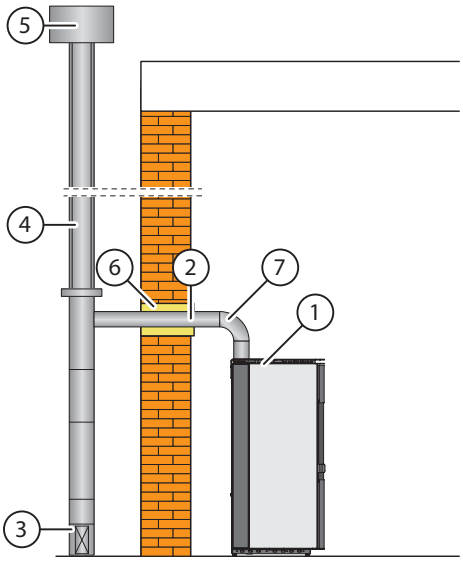
- No other heating equipment must be connected to the chimney;
- The flue must be kept at a safe distance from flammable objects;

- The flue must have the same section as the smoke discharge pipe of the stove, or bigger;
- No other pipe must be located in the flue.

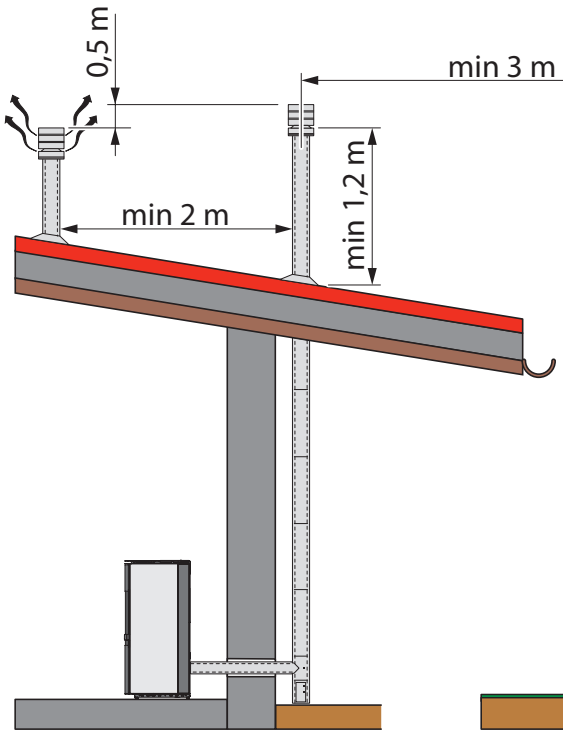
In pellet stoves, smoke extraction is guaranteed by a fan keeping the combustion chamber pressurized, combined with a state-of-the-art chimney that must allow smoke evacuation using the natural draught. For this reason we recommend you contact a specialized engineer to build the flue. The costs for any modification in programming carried out by the service centres, due to the incorrect installation of the flue, will be debited to the user. If malfunctions persist and are due to the flue, the manufacturer will carry out no interventions under warranty.

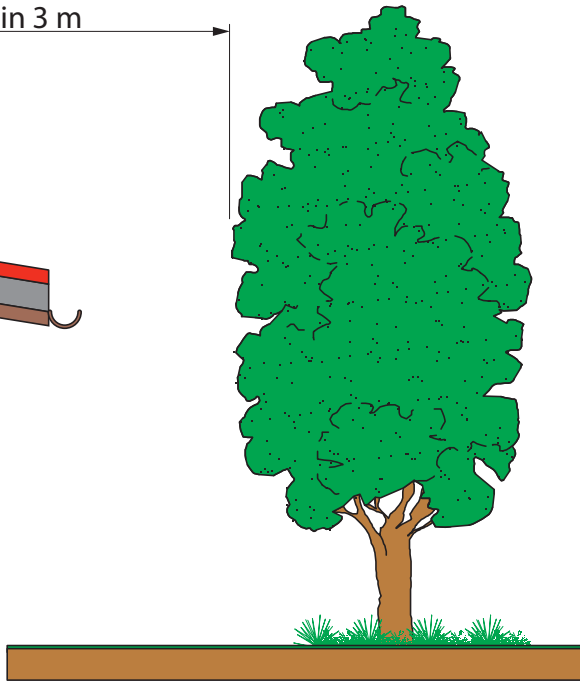
Find below some examples of flues:

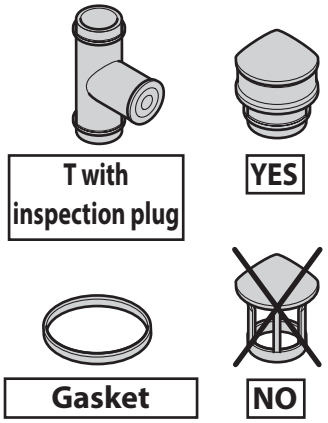




1) Stove
2) Smoke channel
3) Flue ash collection element
4) Double-walled steel flue
5) Chimney
6) Sealed passage
7) Elbow







8.3 Electrical arrangement

All the units are fitted with an electrical supply cable: if this has to be replaced (i.e. if damaged), contact an authorized Technical Service Centre.

Before connecting the unit, make sure that:

- the electrical system is fitted with a 6A thermo-magnetic circuit breaker
- the system characteristics meet the details on the data plate applied to the unit (electrical power, rated voltage, etc.)
- the system is fitted with an efficient ground connection, in compliance with the legal regulations in force (grounding is compulsory by law)
- at no point should the supply cable reach an overtemperature of 50°C in comparison with the ambient temperature. If direct connection to the network is required, an omnipolar switch must be used, with a 3mm minimum opening between contacts, sized for the load stated on the plate and compliant with the regulations in force; the yellow/green earth wire must not be interrupted by the switch. The omnipolar switch must be easily reachable once the unit is installed.

If the unit is not used for a long time, disconnect the supply.

The Manufacturer accepts no responsibility if the above, as well as the usual safety regulations, are not complied with.

8.4 Unpacking

We recommend you unpack the equipment only after transporting it to the place where it must be installed and only at the time of installation. This operation must be done using all the possible personal protection equipment used to protect people (gloves, safety shoes, etc.).

Do not leave the packaging unattended: it is potentially harmful to children and animals (choking hazard).

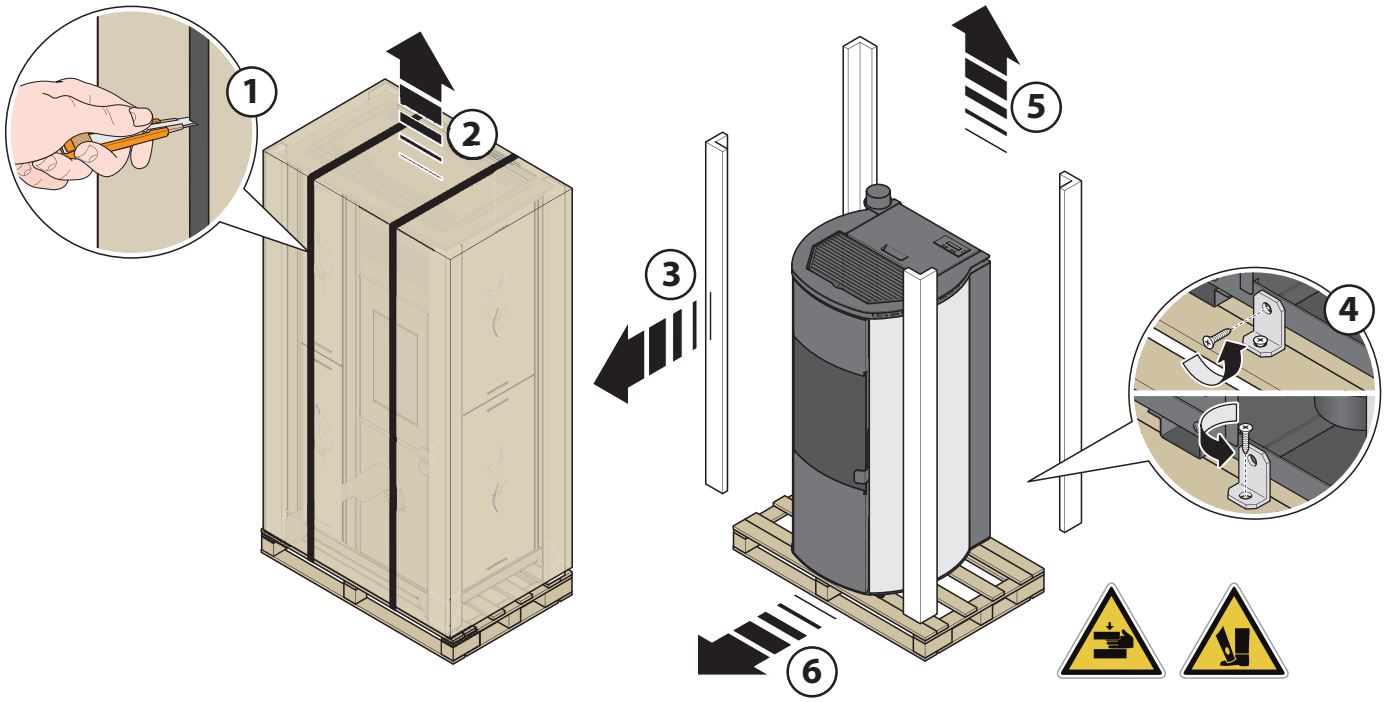
Some packaging material can be kept for future use (wooden crates, pallets, etc.), while the material that cannot be reused (polystyrene, straps, etc.) must be disposed of in compliance with the regulations in force in the country of installation: this will protect the environment!

After unpacking, check what you have received: all deliveries are accompanied by transport documents containing the list and description of the items delivered. Check all the components are present and undamaged, contact the Manufacturer in case of any problems.

While waiting for installation, components and documents must be kept in an area with the following characteristics:

- it must be dedicated only to the storage of components;
- be covered and protected from the elements (prepare a closed area, if possible), with a temperature no lower than 0°C;
- be accessible only to the operators assembling the equipment;
- have a stable floor, capable of supporting the equipment (check the load coefficient);
- be free from any other components, above all if potentially explosive/flammable/toxic.

If you cannot proceed with the installation straight away, check periodically that the above storage conditions are guaranteed.



Indicative picture

8.5 Setting up the stove

After unpacking the stove, position it in the room where it will be used.

In moving the stove, pay attention not to damage its external parts.

Please pay attention to the distances mentioned above.

In positioning the stove, make sure there are no objects underneath it that might affect its correct positioning.

Pay attention that your hands or feet are not trapped when you place the stove on the floor. Use protective gloves.

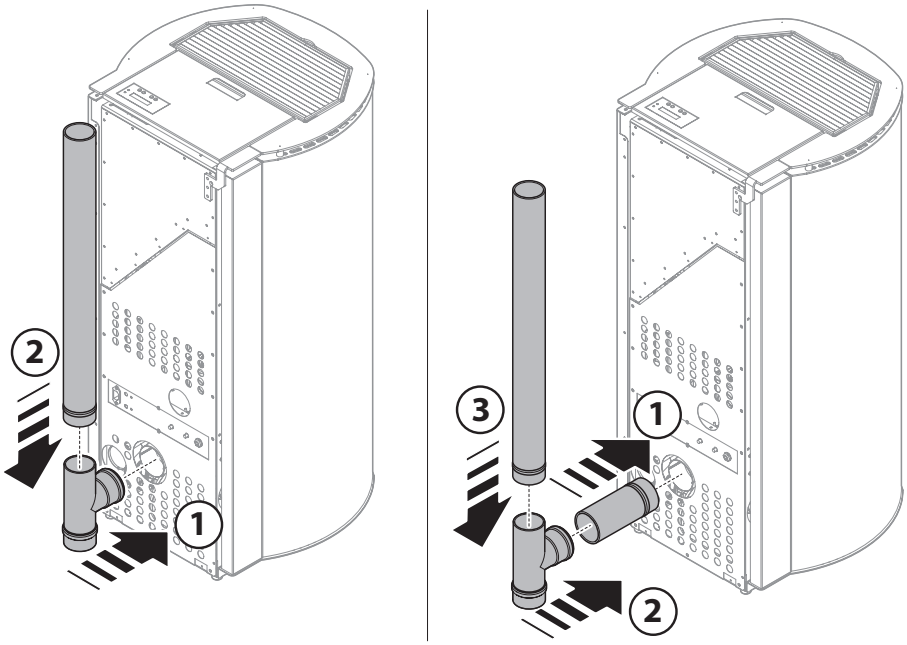
Indicative picture

8.6 Connecting the flue through the stove rear outlet

The stove can be connected to the previously installed flue pipe only horizontally, on the back. A "T" piece, or an extension followed by a "T" piece, can be connected directly.

Please use pipes suitable to discharge pressurized fumes and fitted with seals (UNI EN 1856-1 and 1856-2).

The assembly is shown with one model of stove, the procedure for the other models is the same.



8.7 Connecting the flue on the side of the stove

The stove can be connected to the previously installed flue by rotating the fume motor towards the side of the stove as shown in the following images. A "T" can be connected directly to which a tube will be attached vertically.

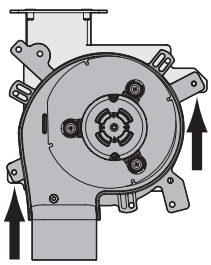
In order to support the tube in some models, it will be enough to use the existing pre-cut piece, for others it will be necessary to use the appropriate support bracket supplied.

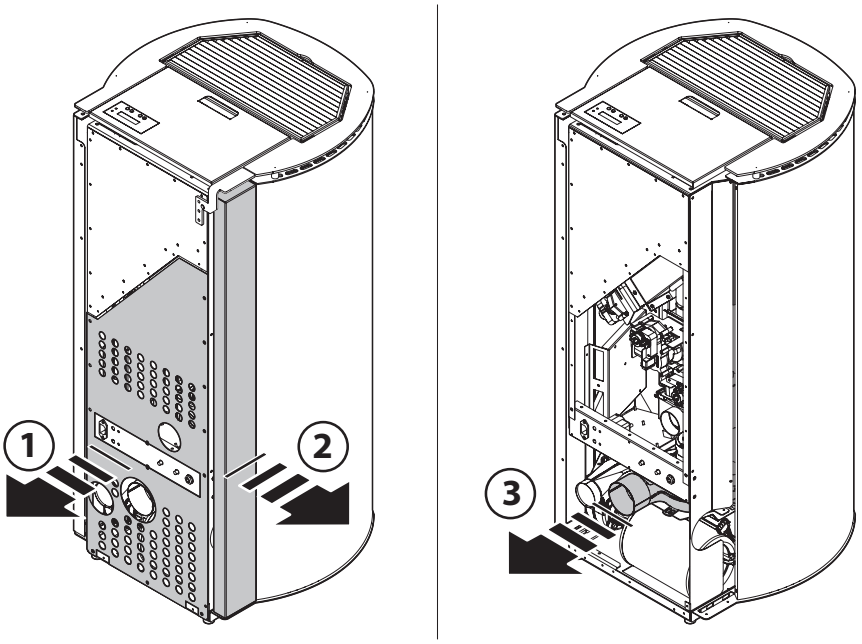
Please use pipes suitable to discharge pressurized fumes and fitted with seals (UNI EN 1856-1 and 1856-2).

The assembly is shown with one model of stove, the procedure for the other models is the same.

Dismantle the rear panel and left back side (1-2).

Unscrew the 2 fixing screws of the fume motor (3).

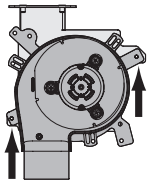




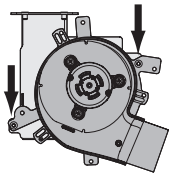
Rotate the fume motor for the side outlet according to the stove model, unscrewing the 2 screws (4).

NB: pay attention to the position of the fixings, as shown in the figure.

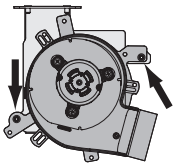
Standard outlet

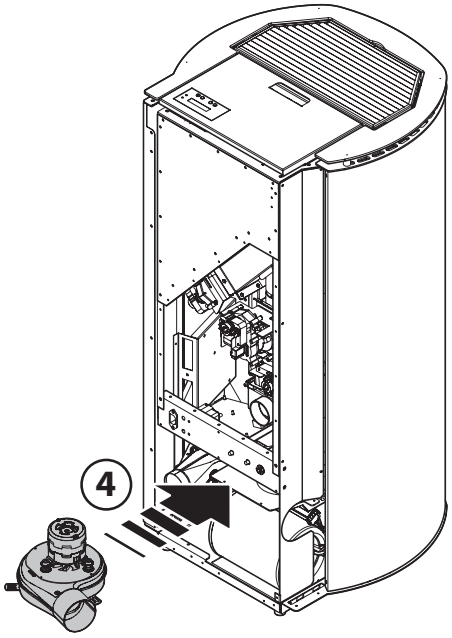


Side outlet:
- Sirmione 10/12



Side outlet:
- Arianna 10/12
- Firenze 10/12
- Garda 9
- Garda Étanche 9
- Sirmione 9
- Sirmione Étanche 9
- Trieste
- Trieste Étanche 9

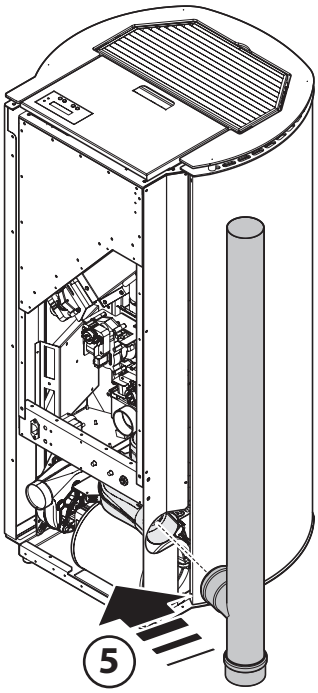


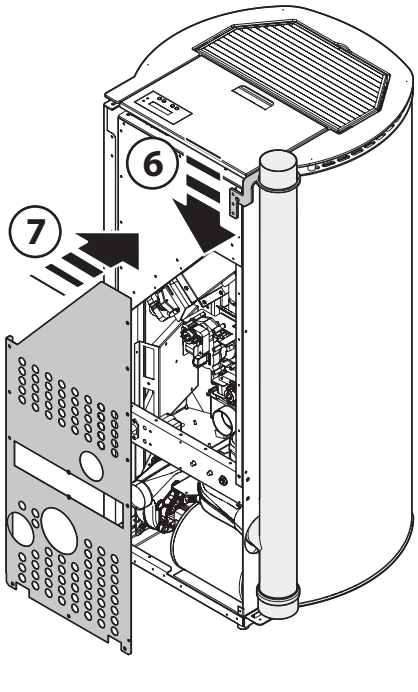


Insert the flue gas exhaust pipe (5) and then mount the supplied pipe passage bracket (6).

Reposition the stove back

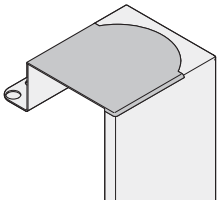
Models
Arianna - Garda - Garda Étanche 9





Models
Sirmione - Sirmione Étanche 9

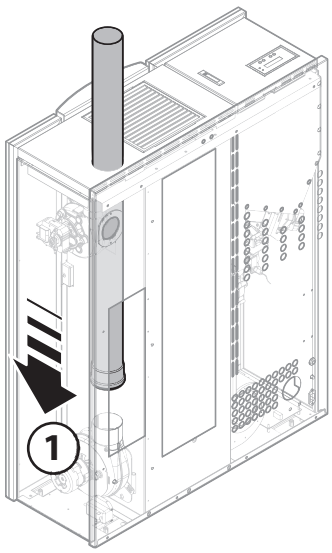
The figure on the side shows the sides with the pieces to be cut for the tube. The side has to be taken apart, the part of the pre-cut piece has to be removed, the tube fixed and the side replaced.



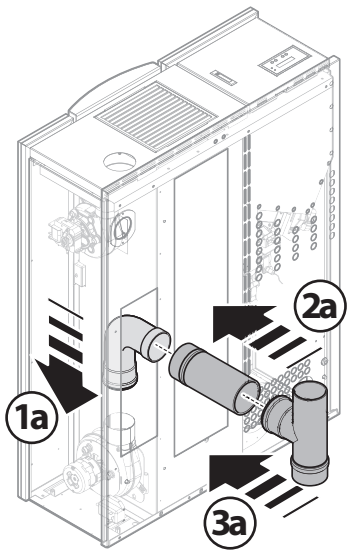
8.8 Connection of the flue of the Thema and Inserto Paris models

The Thema stove can be connected to the previously installed flue in two ways: via the back opening or the top one.

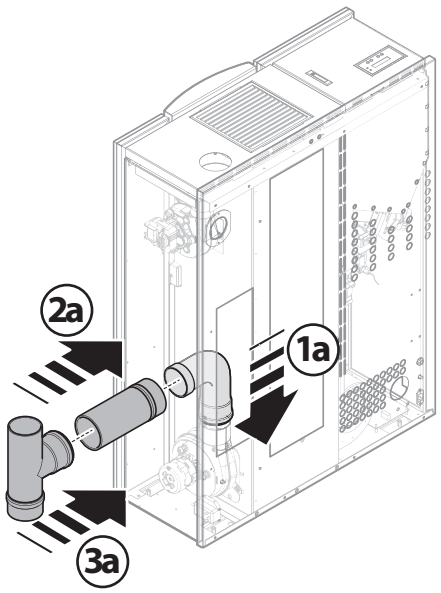
Please use pipes suitable to discharge pressurized fumes and fitted with seals (UNI EN 1856-1 and 1856-2).



Top opening

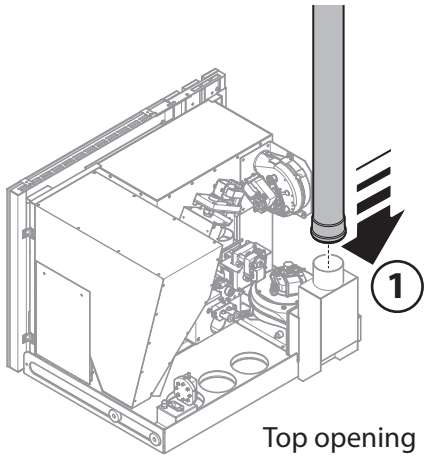


Back opening



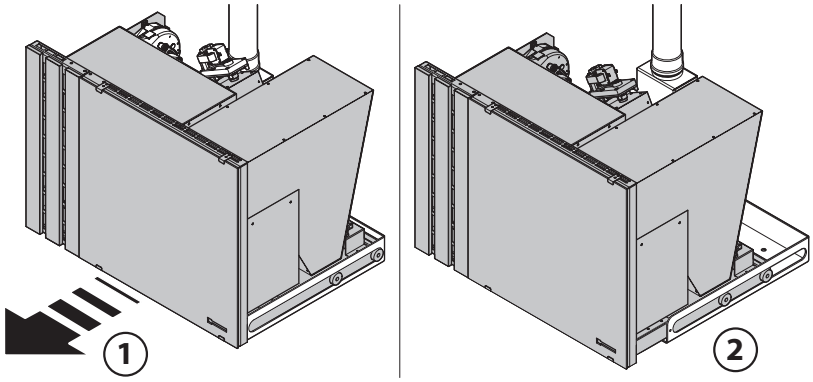
Side exit

Inserto Paris is supplied from the factory with an arrangement for bayonet connection to the flue (upper smoke outlet only).



Top opening

Inserto Paris is equipped with a slide that allows it to be pulled out halfway through the depth. By unscrewing the two lateral screws it is possible to extract it completely.



8.9 Combustion air inlet

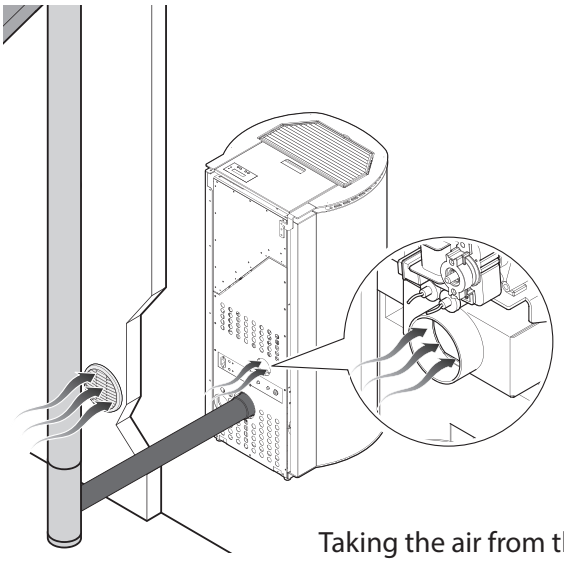
Combustion air can be taken from the room, if sufficiently ventilated, or from the outside, if not: this way optimal combustion is guaranteed, avoiding opening an air intake in the room. In both cases, refer to the regulations about installation in force (UNI 10683 and UNI7129), to avoid health risks for those who spend time in the room where the equipment is installed.

The combustion air inlet in the stove has a diameter of 60 mm.

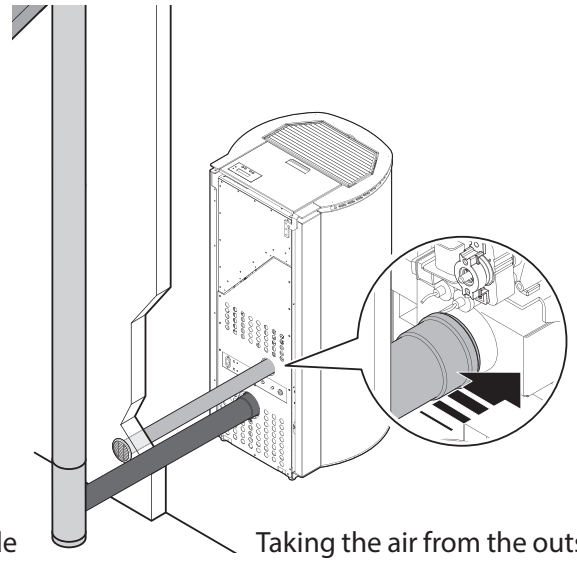
The air intake tube must have a maximum length of 3 linear metres.

Do not use hoses and install a grille at the start of the air intake (on the outside), to prevent foreign bodies from entering and affecting the correct operation of the unit.

The assembly is shown with one model of stove, the procedure for the other models is the same.



Taking the air from the inside

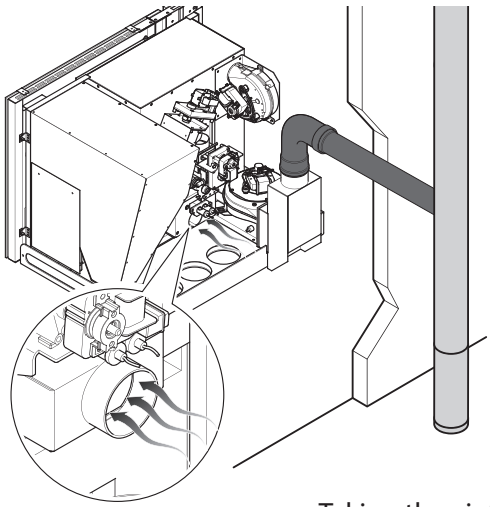


Taking the air from the outside

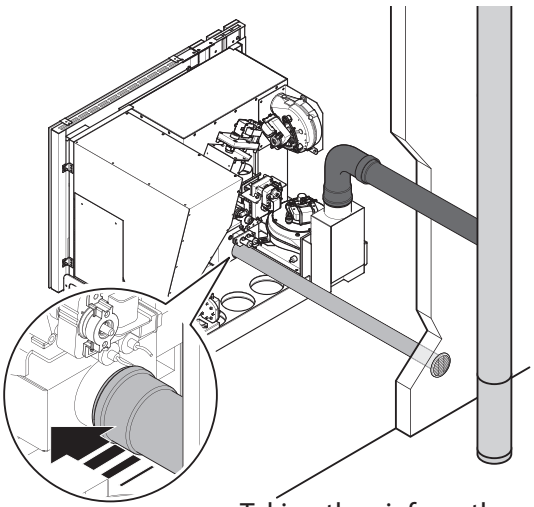
8.9.1 Combustion air intake for Inserto Paris

The niche in which the appliance is inserted must have a minimum air intake of 25x25 cm, whether the combustion air is taken from the outside (therefore through a hole in a wall facing outside), or taken from the internal room where Inserto Paris is located. In the latter case, the internal room must be sufficiently large to ensure a sufficient quantity of air to allow good combustion (min. 40m^3/h of air).

For the air intake from the outside it is advisable to use a telescopic and fireproof tube in order to facilitate extraction using guides.



Taking the air from the inside

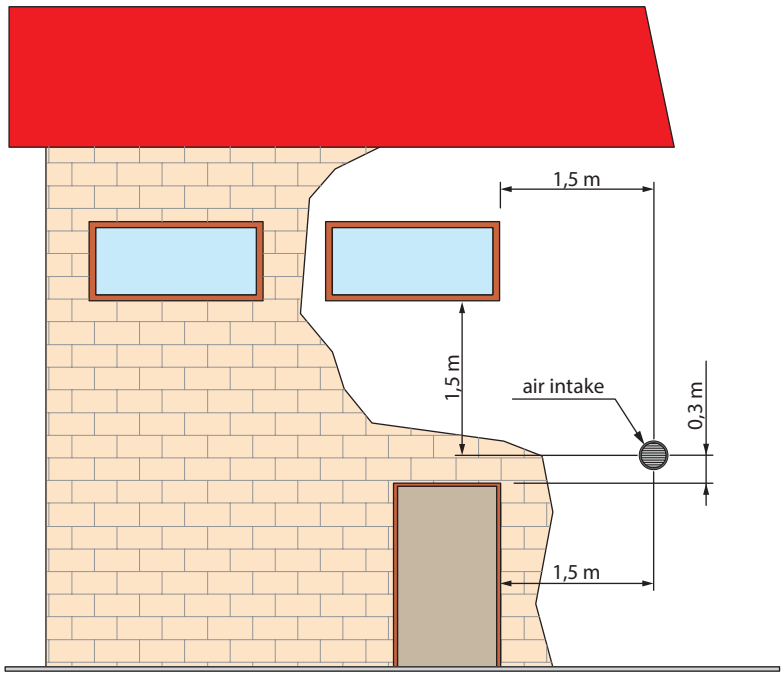


Taking the air from the outside

8.10 Minimum distance to position the air inlet

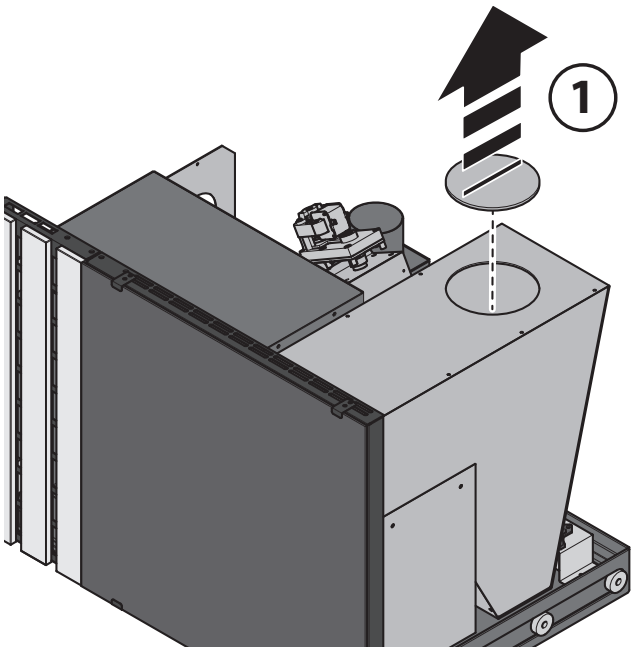
To position the air intake correctly and safely, see the drawing on the side, where the minimum distances from any other opening are shown.

It is important to take into account any wall discharges from other units or cooking extractor hoods.



8.11 External fuel load for Inserto Paris

It is possible to load the pellets from outside the niche in which the appliance is inserted: for this purpose, an opening must be created in the niche and a chute which connects to the upper part of the Inserto Paris tank, where the metal is pre-cut at the factory.



8.12 Air ducting in Arianna 10/12, Eco Cippatina 10/12, Firenze 10/12, Sirmione 10/12 models

Before starting work on the burner, disconnect the stove from the mains and turn the circuit breaker on the main panel to OFF.

The ducting kit must be installed by qualified engineers.

In the above models, it is possible to direct hot air to the back of the stove installing the appropriate kit.

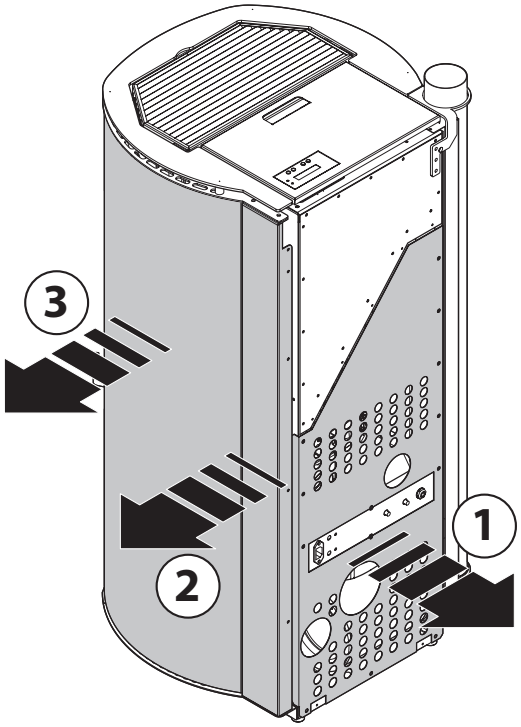
For the installation, proceed as described:

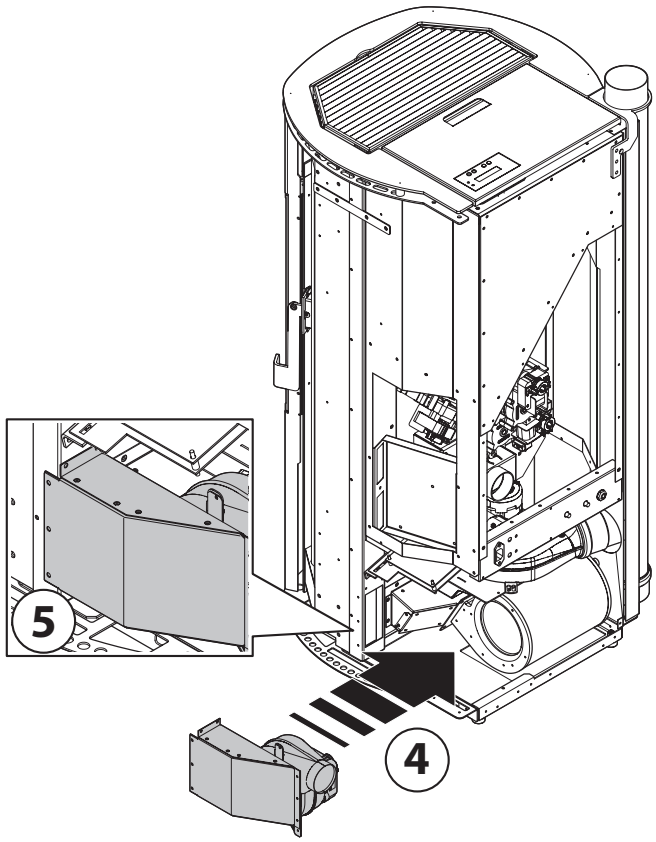
- Remove the back of the stove (1), the small side (2) and the large side (3).
- Insert the ventilation kit (4), matching it to the anchor holes (5) and fasten it with the screws.
- Make the electrical connection on the motherboard (6) and activate the channelling function via the software menu.
- Close the sides (7) - (8) and the back of the stove (9).
- Install the Ø80mm reducer (10).

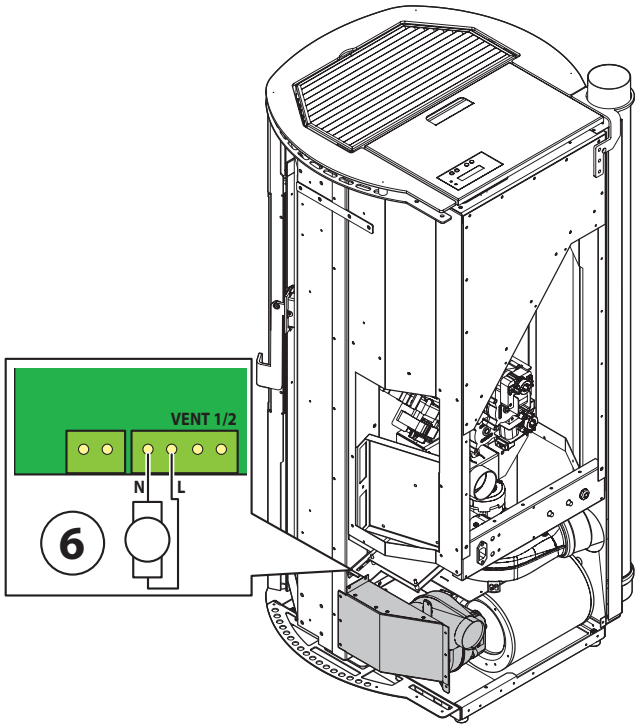
To guarantee the ducting is working, the length of the piping must NOT exceed 6 metres with two 90° elbows and the useful diameter must be between 60 and 80mm. Shorten the linear length by 1m for each further 90° elbow. Moreover the inside of the pipe must be smooth and consisting of a material withstanding at least 130°C.

If flammable walls are crossed, insulate the piping with insulating material with a thickness of at least 4 cm.

During the installation, pay attention not to damage the electrical cable.



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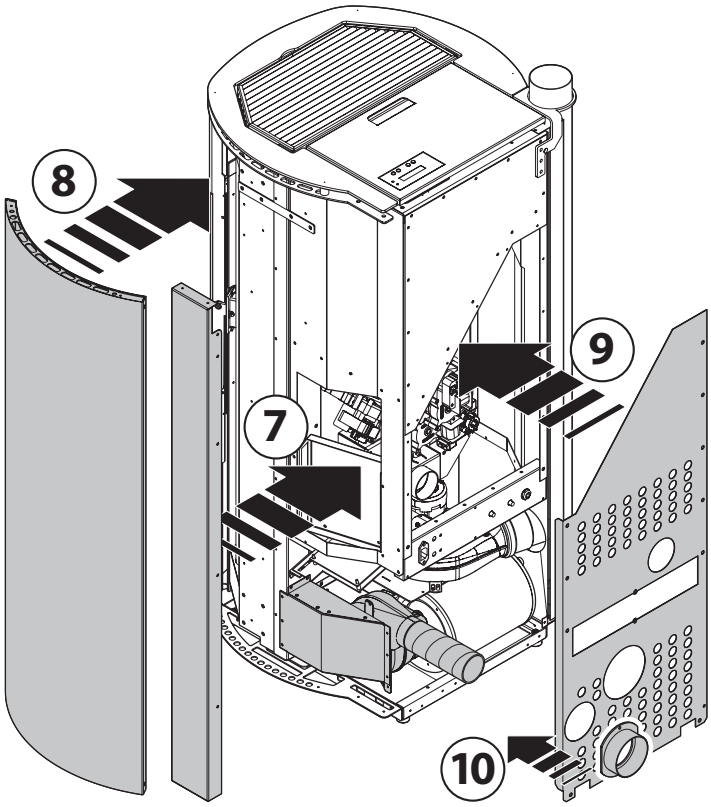
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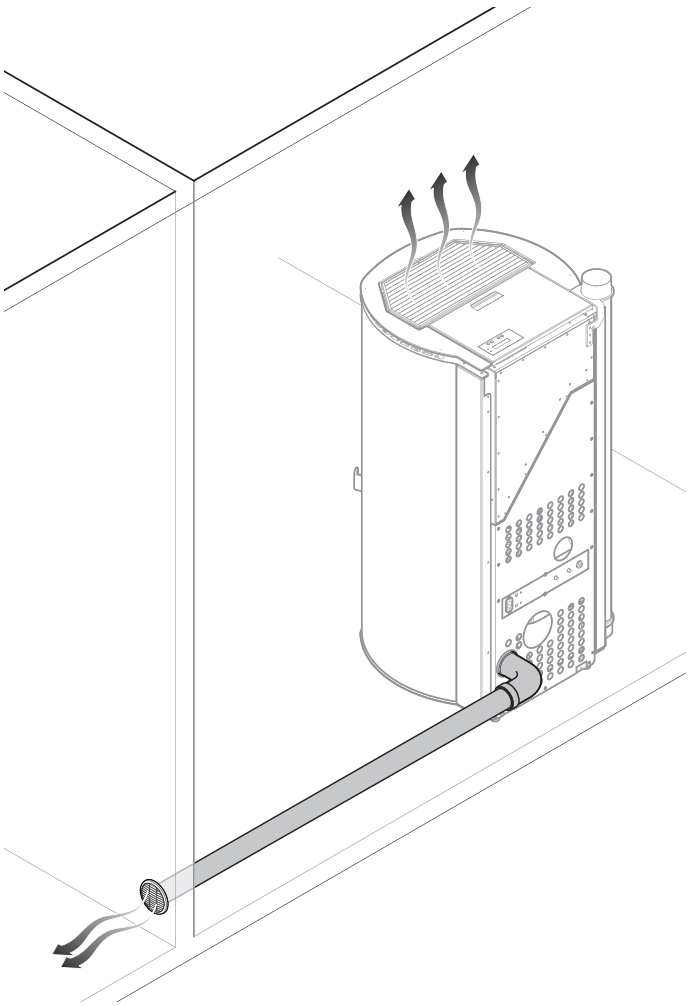
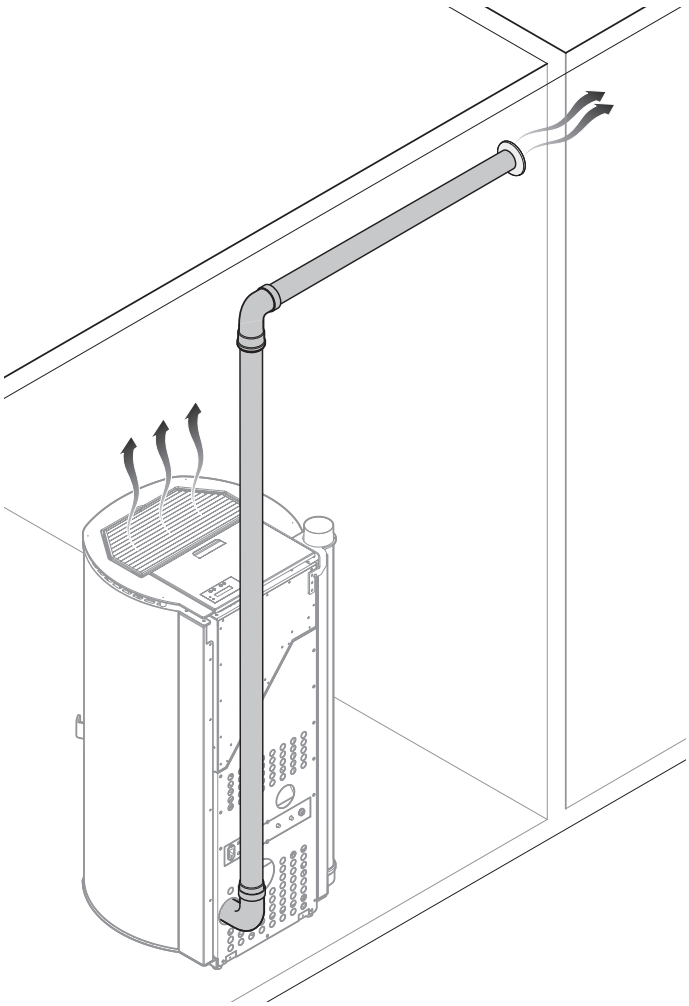
10





8.13 Air ducting in Thema model

Before starting work on the burner, disconnect the stove from the mains and turn the circuit breaker on the main panel to OFF.

The ducting kit must be installed by qualified engineers.

In the prearranged models it is possible to direct the hot air to the rear or side of the stove by installing the appropriate kit.

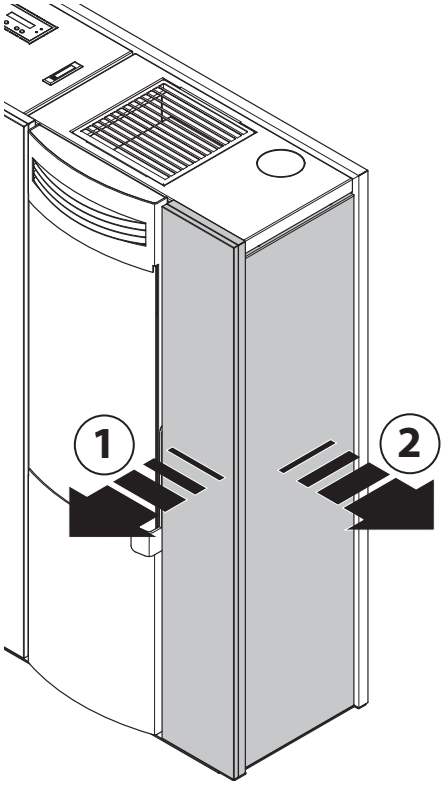
For the installation, proceed as described:

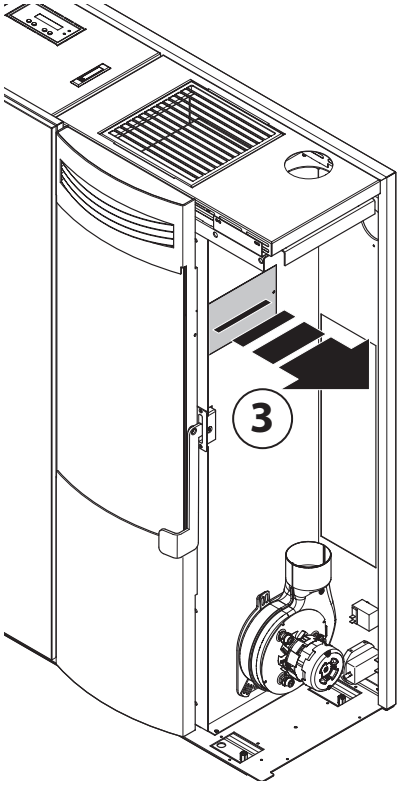
- Remove the front panel of the stove (1), the side (2) and the small panel (3).
- Insert a curve in the ventilation kit (4), insert it by making it coincide with the anchoring holes (5) and fix it with the screws.
- Make the electrical connection on the motherboard (6), insert another bend (7) and activate the ducting function via the software menu.
- Close the panels (8) - (9).
- Install the Ø80mm reducer (10).

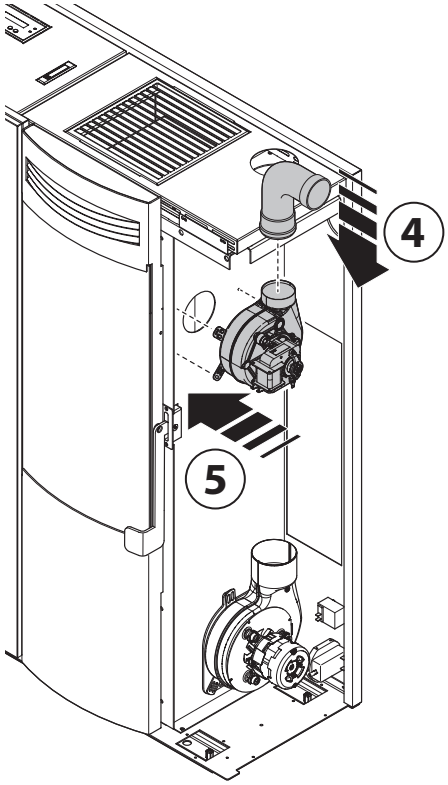
To guarantee the ducting is working, the length of the piping must NOT exceed 6 metres with two 90° elbows and the useful diameter must be between 60 and 80mm. Shorten the linear length by 1m for each further 90° elbow. Moreover the inside of the pipe must be smooth and consisting of a material withstanding at least 130°C.

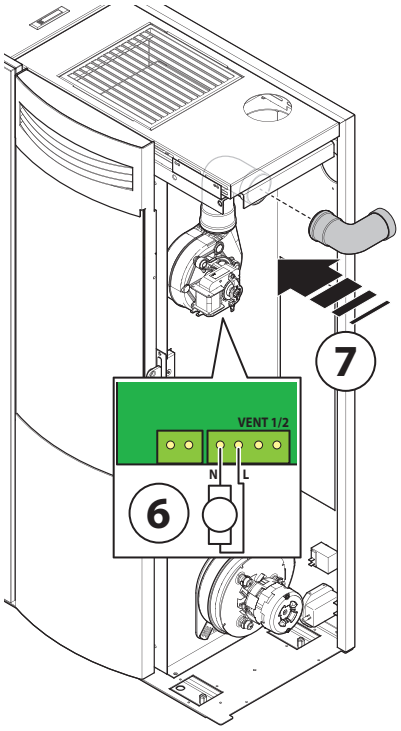
If flammable walls are crossed, insulate the piping with insulating material with a thickness of at least 4 cm.

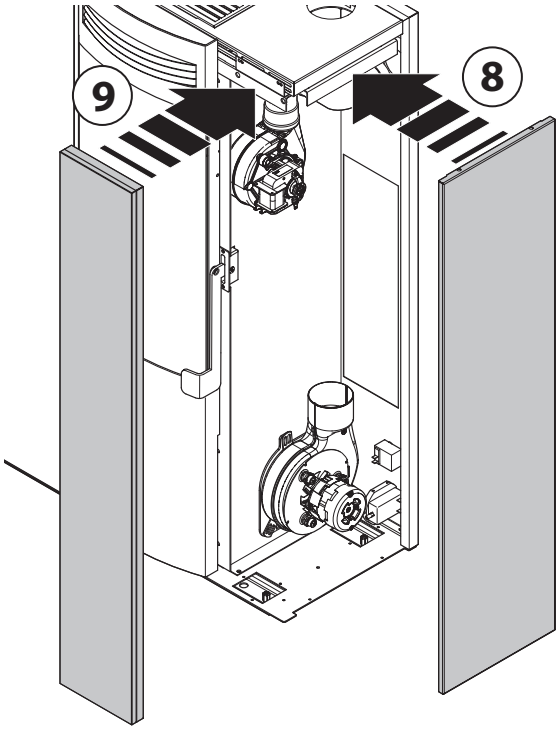
During the installation, pay attention not to damage the electrical cable.

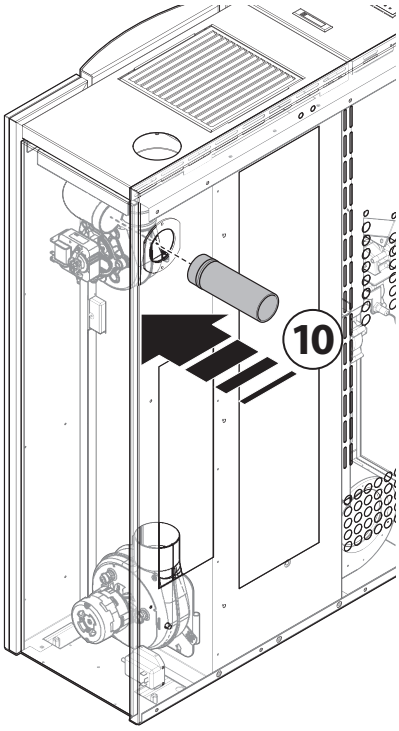




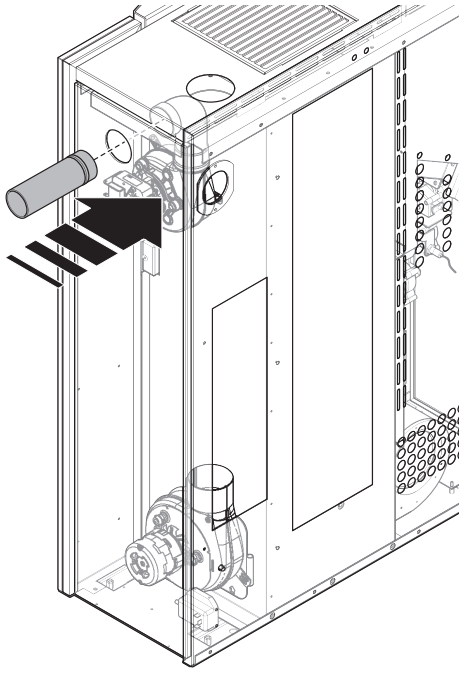


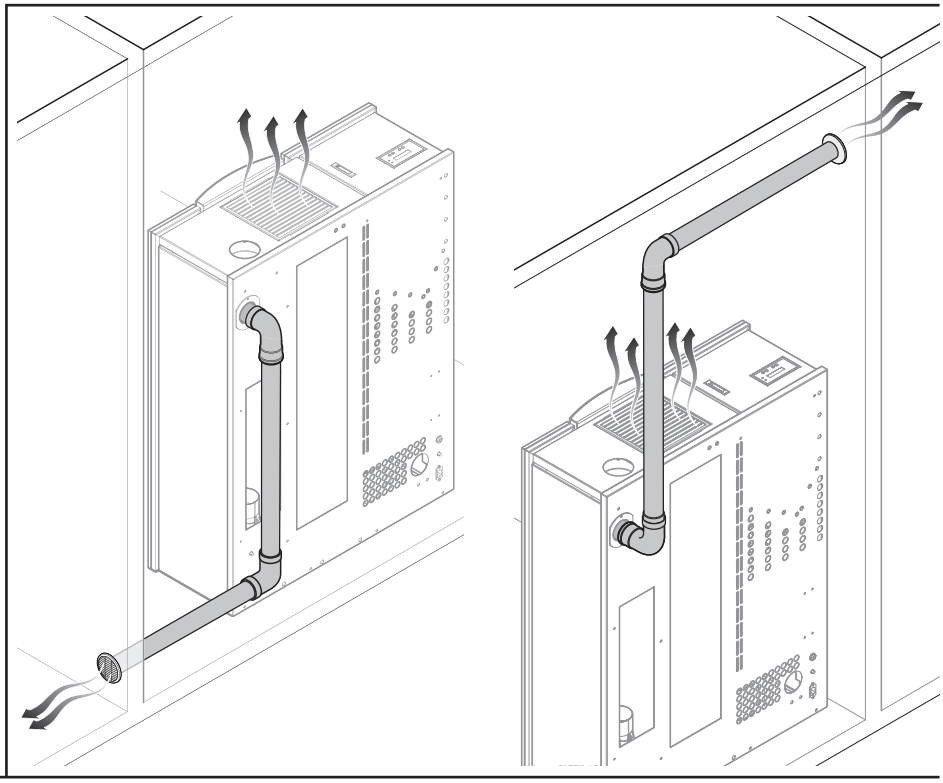




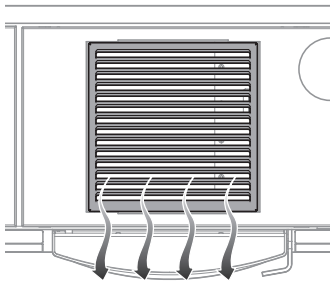


Side ducting

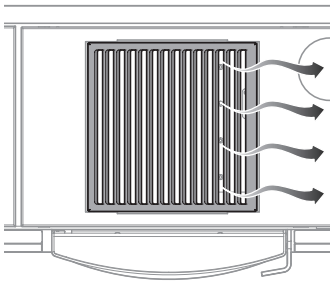




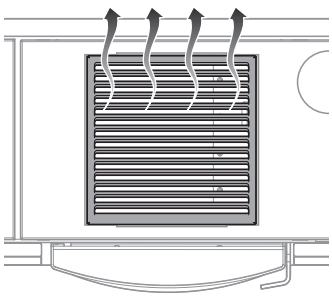
Front air outlet



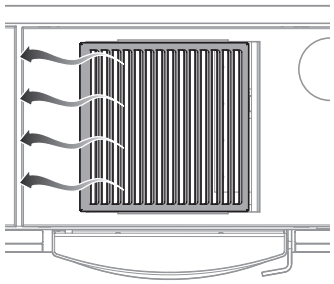
RH air outlet



Back air outlet



LH air outlet



8.14 Air ducting in the Inserto Paris model

Before starting work on the burner, disconnect the stove from the mains and turn the circuit breaker on the main panel to OFF.

The ducting kit must be installed by qualified engineers.

In prearranged models it is possible to direct the hot air towards the back or side of the stove by installing the appropriate kit.

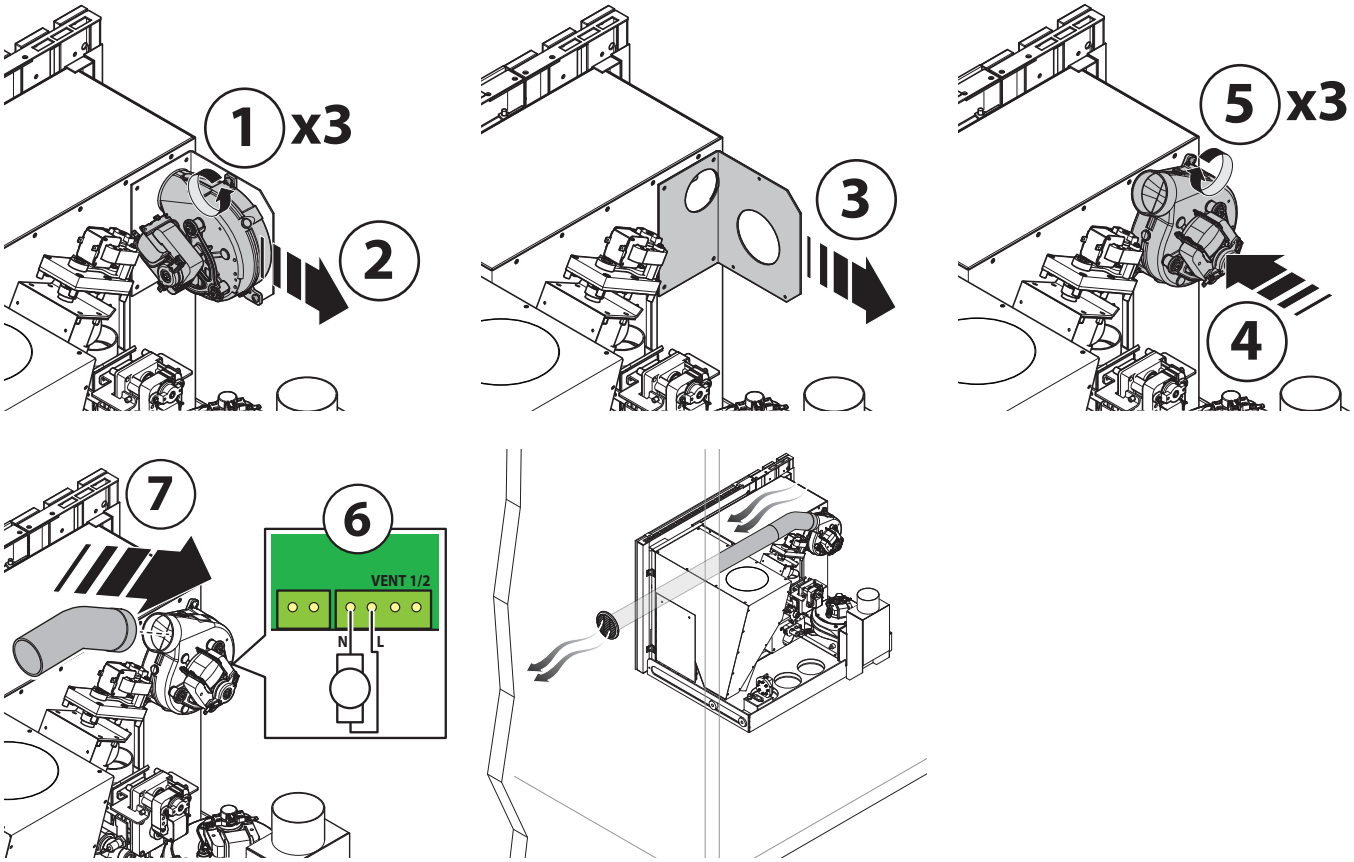
To install it, proceed as described:

- Undo the screws of the Inserto Paris channel motor (1), slide it out (2), remove the support plate (3).
- Reposition it as shown in the figure (4) and fix with the screws (5).
- Make the electrical connection on the motherboard (6) and insert a bend (7).
- Activate the channelling function via the software menu.

To guarantee the ducting is working, the length of the piping must NOT exceed 6 metres with two 90° elbows and the useful diameter must be between 60 and 80 mm. Shorten the linear length by 1 m for each further 90° elbow. Moreover, the inside of the pipe must be smooth and consisting of a material withstanding at least 130°C.

If flammable walls are crossed, insulate the piping with insulating material with a thickness of at least 4 cm.

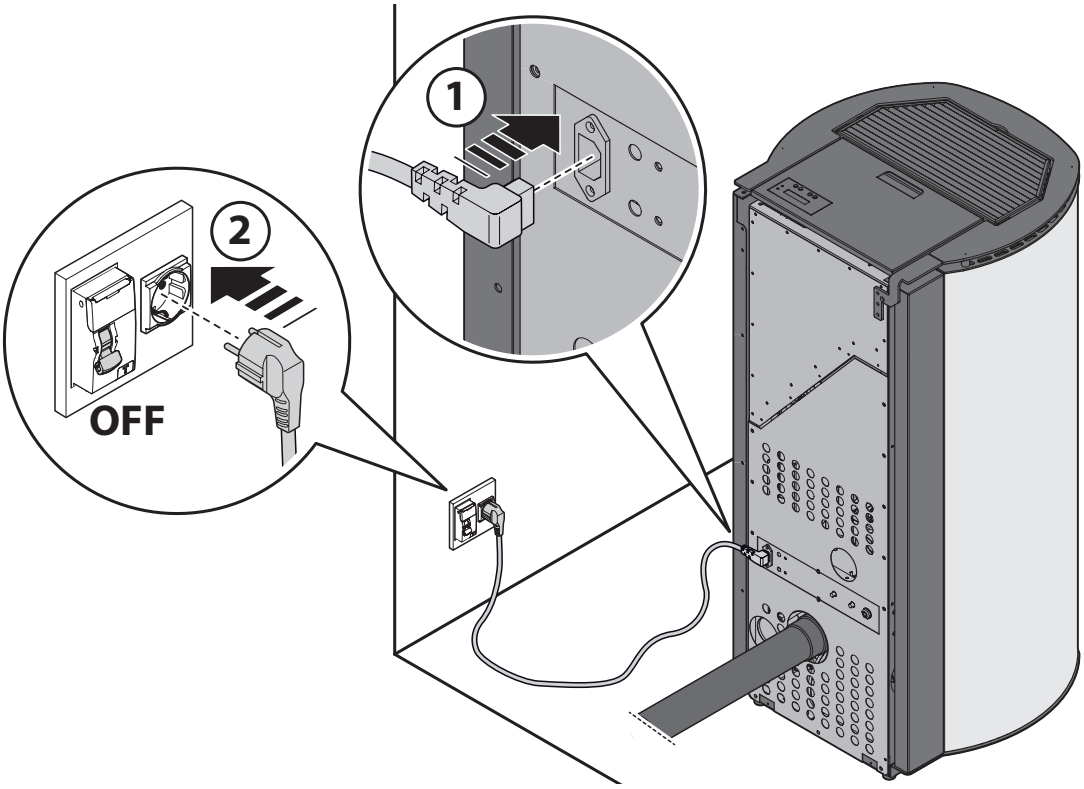
During the installation, be careful not to damage the electrical wiring.



8.15 Electrical connections

On the back of the stove there is a socket for the electrical connection. To get power, just connect the cable supplied to the unit as well as to a wall schuko socket.

Before connecting it, make sure the circuit breaker is OFF.

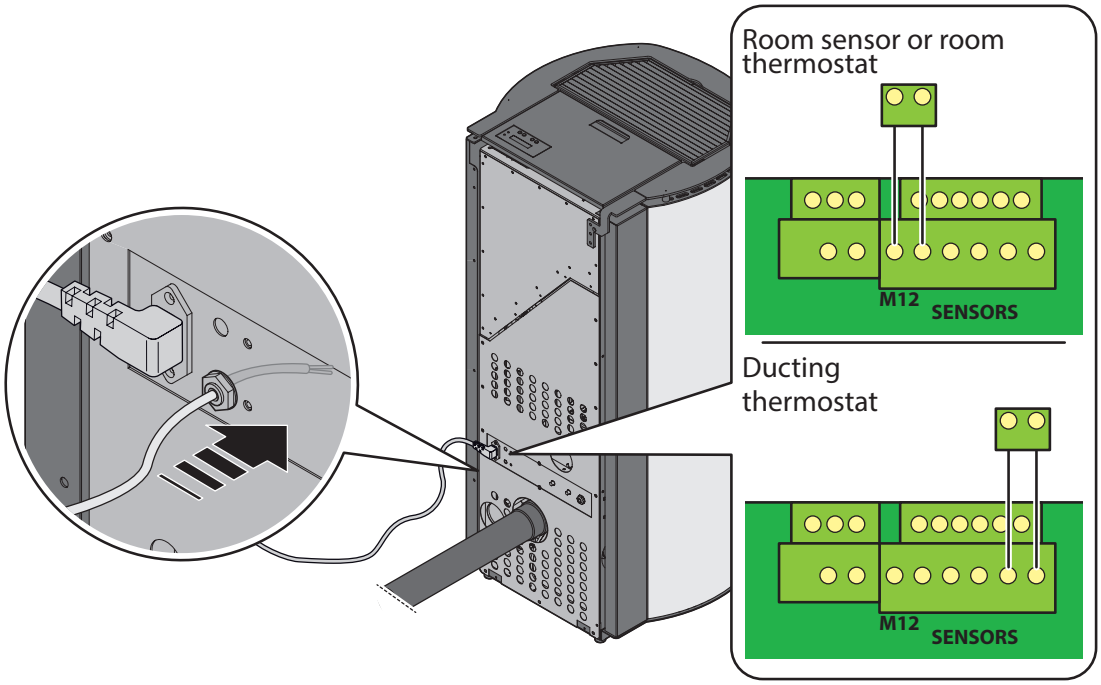


CONNECTION OF THE ROOM THERMOSTAT AND DUCTING THERMOSTAT (OPTIONS)

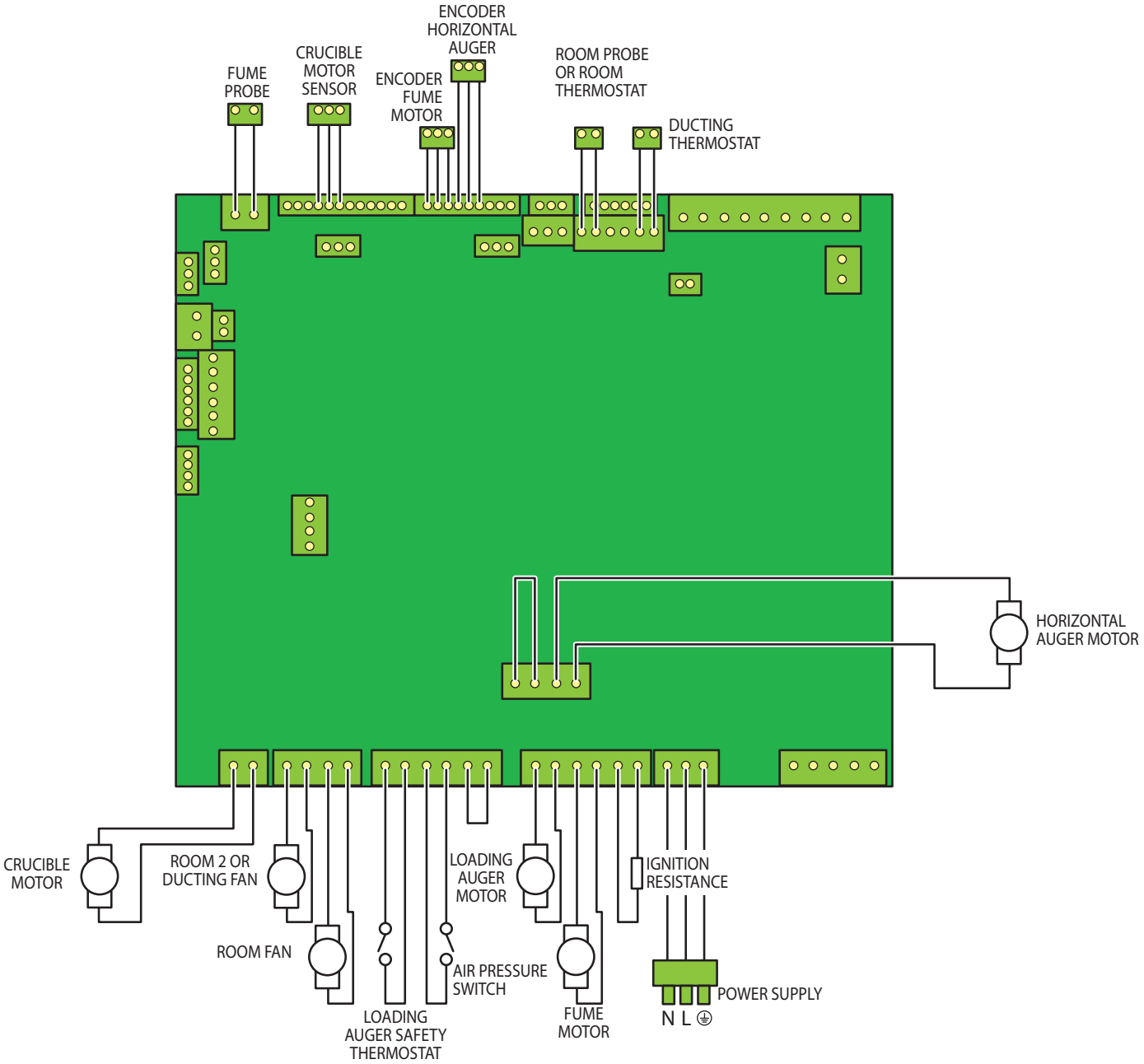
It is possible to connect a room thermostat (option) that detects the temperature in the area where it is installed and that enables and disables the operation of the stove.

The room thermostat must have a minimum activation ΔT of 1°C.

To install the thermostat, use the cable gland on the back of the stove and connect IT to the electrical board.



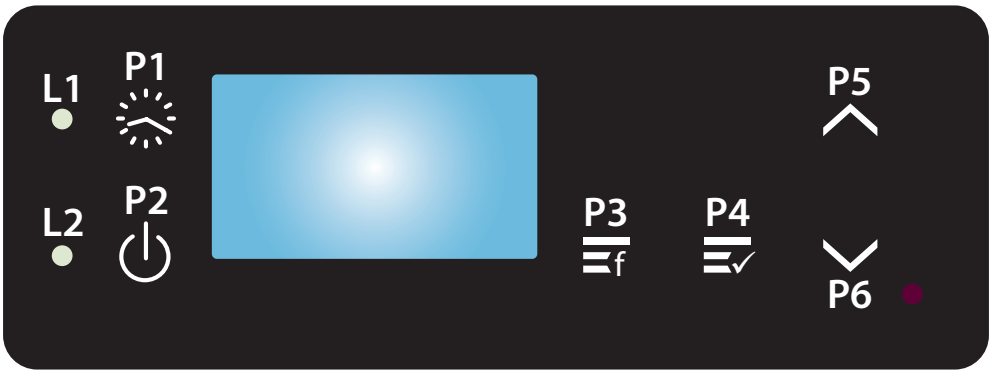
8.16 Electronic board



Take care with the connection of the room thermostat that will need to be with a "clean contact", to avoid damaging the electronic board.

9 - USE

9.1 DISPLAY



DISPLAY KEYPAD DESCRIPTION

P1 Access to the weekly programmer

P2 Start/stop (the key must be pressed for about 1 second)

P3 Option key (to be used only by the technician)

P4 Menu - confirmation

P5 Increase value

P6 Decrease value

MEANING OF THE LED LIGHTS

L1 Status of the weekly program.

Off = MANUAL *(stove managed manually)*

On = TIMER *(timed programming activated)*

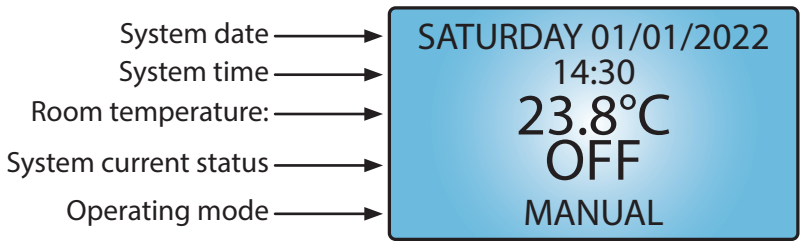
L2 State of the stove

Switched off = OFF

Steady on = ON / STANDBY

Flashing on = in the shutdown phase

STANDARD DISPLAY SCREEN

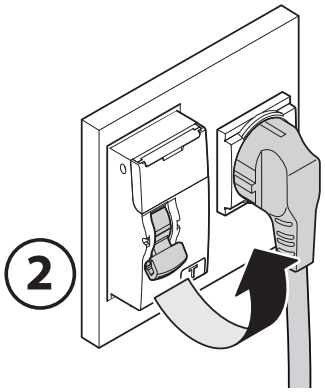


9.2 Commissioning

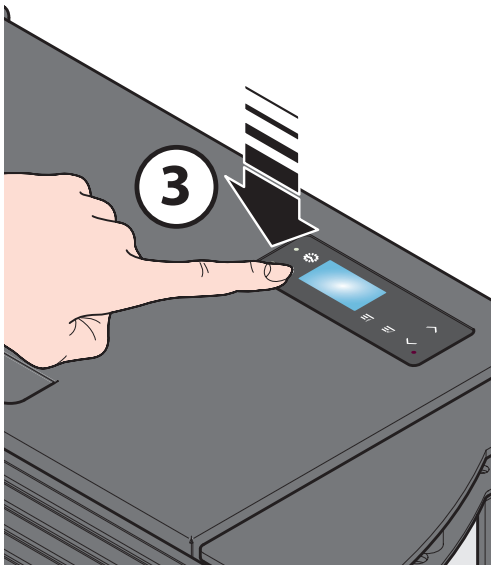
Once the installation has been completed and all the above has been checked, the system can be started for the first time. Only a CSTHERMOS authorized engineer can do this, also informing the customer on the operations to carry out to make the stove work correctly.

1 Fill the stove container with pellets.

2 Turn the thermal circuit breaker ON.



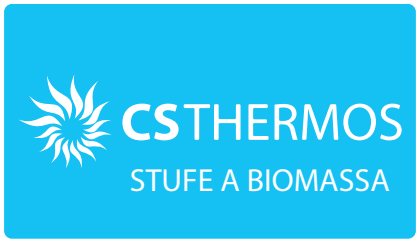
4 Switch the stove ON using the button on the control panel.



9.3 Display screens

SYSTEM INFO

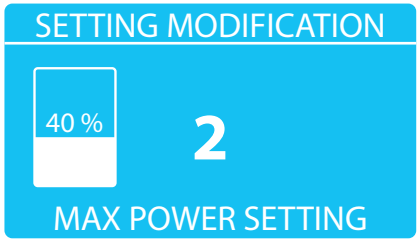
Pressing the **P1** and **P2** keys simultaneously displays the system information screen.

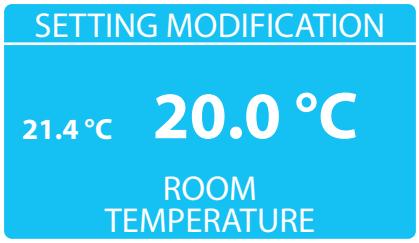


- **APF code.**
- **Board firmware version** (example 162.11.09.09 H).
- **Board bootloader version** (example [19]).
- **Display firmware version** (example 1840119A).
- **Display bootloader version** (example 1330417B).

SETTINGS

With a short press of **P4** or **P5/P6** you access this first level; with successive pressures of **P4** you pass from one setting to another (allowing you to modify them with **P5/P6**).

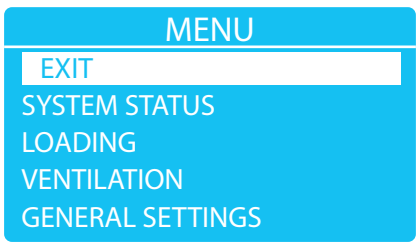




- **MAX POWER SETTING** (visible if the weekly programmer is not enabled)
  - o 1 - 6 levels, you set the maximum power that can be reached in manual operation (without automatic programming).
- **ROOM TEMPERATURE** (visible if the weekly programmer is not enabled)
  - o 5 - 40°C, the desired room temperature is set for manual operation (without automatic programming).

USER MENU

Press the **P4** key for about 1 second to access this screen.

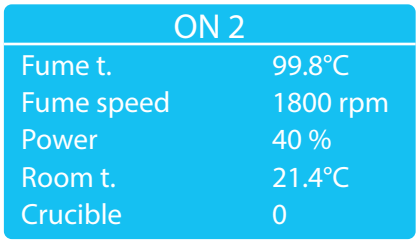


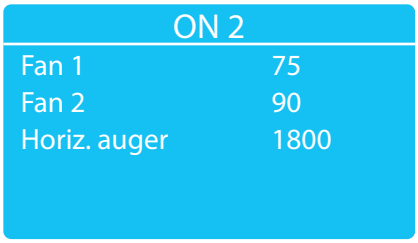
Using the **P5/P6** keys it is possible to scroll through the various items, to select one press the **P4** key.

Let's see them in the order of appearance.

System status

Use the **P5/P6** keys to scroll through the pages. To exit, press the **P4** key.

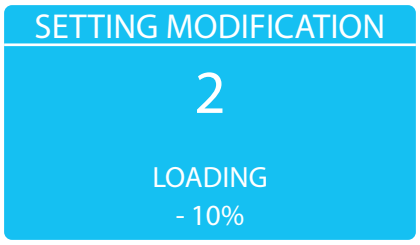




Loading

Allows you to vary the amount of fuel fall.

It is divided into 3 levels of increase and 3 levels of decrease (-) each equal to 10% of the normal setting of the loading auger. This variation remains in the memory all the time and is associated to all six operating powers at the same time.



SETTING	DESCRIPTION	NOTE
0	-30%	correction of the value in the status table equal to -30%
1	-20%	correction of the value in the status table equal to -20%
2	-10%	correction of the value in the status table equal to -10%
3	0%	no correction
4	10%	correction of the value in the status table equal to +10%
5	20%	correction of the value in the status table equal to +20%
6	30%	correction of the value in the status table equal to +30%

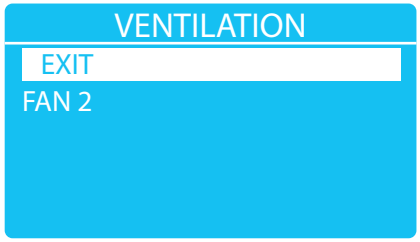
Press **P2** to exit without saving and go back to the main screen.

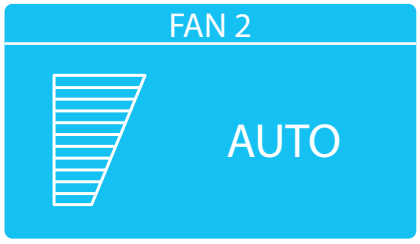
Ducting ventilation

With this setting it is possible, during operation, to change the speed of the ducting air with respect to the flame power. The modification range is from 0 to 4, or automatic mode.

The display of the ducted fan (**FAN 2**) will be active only if the **DUCTING** submenu is enabled.

Press **P2** to exit without saving and go back to the main screen.

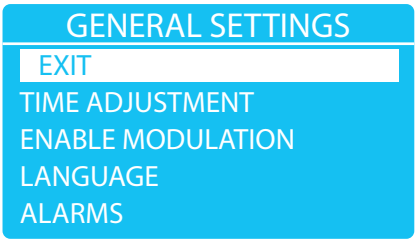


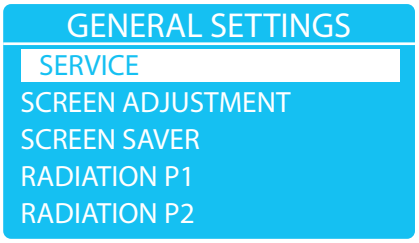


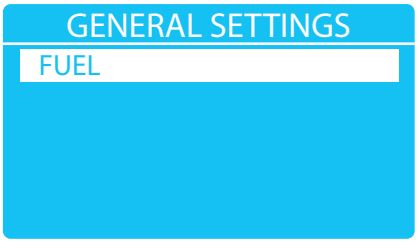
GENERAL SETTINGS

Using the **P5/P6** keys it is possible to scroll through the various items, to select one press the **P4** key.

Let's see them in the order of appearance.

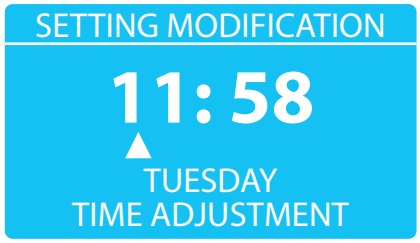


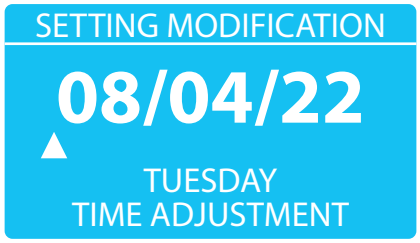




Time adjustment

Scroll the fields with the **P4** key, with **P5/P6** modify the values, confirm and exit with a prolonged pressure of the **P4** key (menu). Press **P2** to exit without saving and go back to the main screen.





Enable modulation

With modulation enabled (standard), when the required room temperature is reached, the stove stays on at minimum power.

On the contrary, with the modulation disabled, if the room temperature exceeds the required set point by 1°C, the stove switches off, and then switches on again when the room temperature reaches -2°C compared to the set temperature (Δ-2°C).

Use the **P5/P6** keys to modify the setting, confirm and exit with **P4**. Press **P2** to exit without saving and go back to the main screen.

Radio probe (on the radio remote control only)

It allows the temperature probe inside the radio remote control to be used as the main room probe, excluding the standard probe mounted on the stove. In case of no radio connection with the stove (remote control faulty, low battery, excessive distance), the standard probe is automatically restored.

Use the **P5/P6** keys to modify the setting, confirm and exit with **P4**. Press **P2** to exit without saving and go back to the main screen.

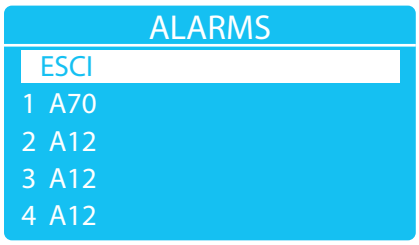
Language

It allows the choice of the dialogue language among those present in the system. Use the **P5/P6** keys to modify the setting, confirm and exit with **P4**.

Press **P2** to exit without saving and go back to the main screen.

Alarms

Alarm events are displayed in temporal sequence with a maximum of **128 events** with the **FIFO** technique (when space is exhausted, the last stored alarm pushes the oldest one out).

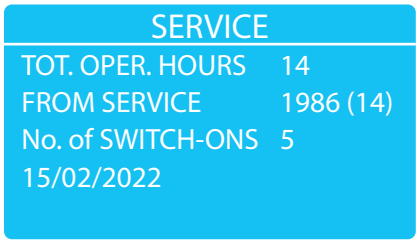


By highlighting any event with the **P5/P6** keys and confirming with **P4**, the page containing the relative details is displayed, for example:

Interpretation: **ALARM "A70"** triggered **on 08/04/2020 at 10:42** after about **2** minutes from the start of the "**On at power 3**" status.

Service

Summary page on the use of the stove.

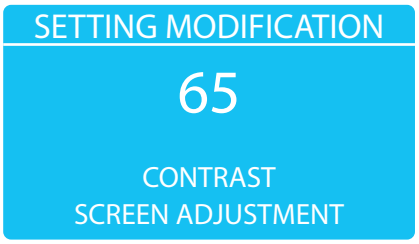


Where:

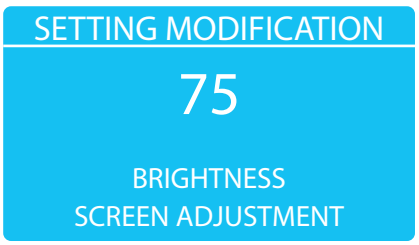
- **OPER. HOURS**, stove total operating hours
- **FROM SERVICE**, total hours before the "**CALL SERVICE**" message in the main screen. In brackets the hours already elapsed.
- **SWITCH-ONS**, total number of switch-ons.
- **15/02/22**, stove installation date, useful for the warranty period (it is written after recording 100 hours of total activity, 00/00/00 is displayed before this event).

Screen adjustment

Scroll the possible options with the **P4** key. **CONTRAST ADJUSTMENT**: modify using the **P5** and **P6** keys.



BRIGHTNESS ADJUSTMENT: modify using the **P5** and **P6** keys.

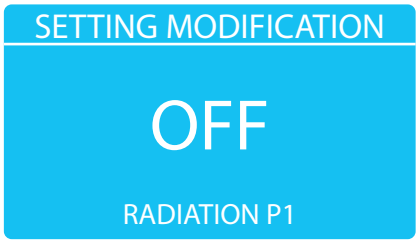


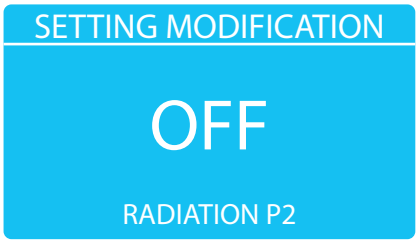
Screen saver: with the screen saver function active (standard), the display switches off automatically after 15 seconds. With the screen saver function deactivated, the display is always on.

Use the **P5/P6** keys to modify the setting, confirm and exit with **P4**. Press **P2** to exit without saving and go back to the main screen.

Radiation P1 - Radiation P2

Through these two menus the user can enable or disable the activation of the fan for air heating in **power 1** and/or **2**. By enabling the "**radiation**" option, the fan will be turned off in its relative power.

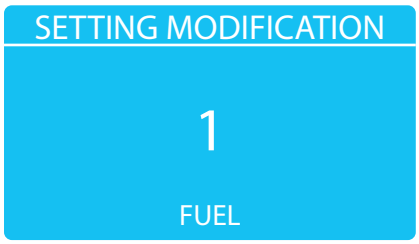




Use the **P5** and **P6** keys to modify the setting, confirm and exit with **P4**. Press **P2** to exit without saving and go back to the main screen.

Fuel

The type of fuel to use for the stove operation is selected.



Use the **P5/P6** keys to modify the setting, confirm and exit with **P4**. Press **P2** to exit without saving and go back to the main screen.

SETTING	FUEL
1	Select "fuel 1" to use class A1 and A2 (ISO EN 17225-2) certified wood pellets.
2	Select "fuel 2" to use class B (ISO EN17225-2) certified wood pellets.
3	The "fuel 3" list is at the technician's/dealer's discretion for settings suitable to be used with biomass.

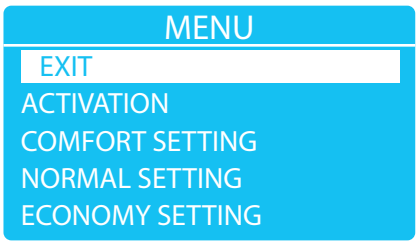
AUTOMATIC SWITCH-ON PROGRAMMING

This menu is used to **set the times of the automatic operating programming and the desired temperature/power**.

For automatic switch-ons to be effective, after activating the desired program, the system must also be switched on manually by pressing the **ON/OFF** button. Once this has been done, the programmer will be given consent to command the set switch-ons.

Access to the weekly programmer menu

Press the **P1** key to access the weekly programmer menu.

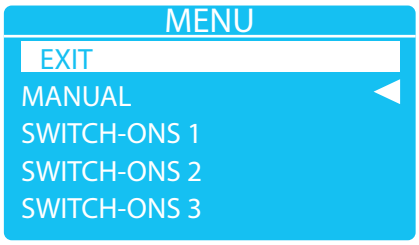


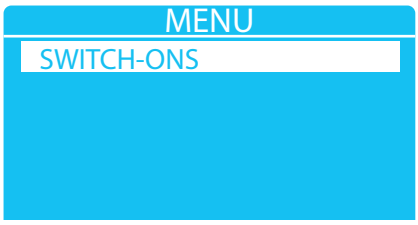
You can have **3** types of settings within the day. For each type of setting what power you want to start and what temperature you want to reach is shown. The settings of each setting can be changed. By default, the **3** settings are in decreasing order:

- COMFORT
- NORMAL
- ECONOMY

Selecting a program

Scroll with the **P5** and **P6** keys to select the desired program, confirm with **P4**.





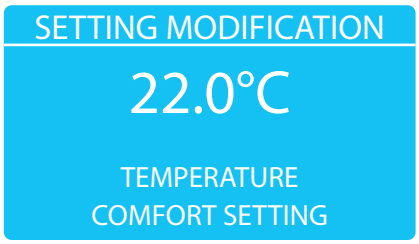
The "◀" indicator highlights the active selection:

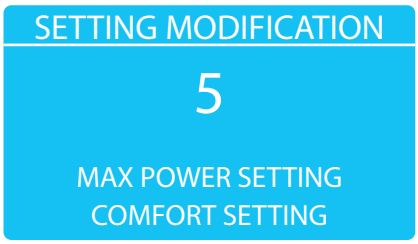
- **MANUAL** indicates that the weekly programmer is deactivated
- **SWITCH-ONS 1/2/3/4** represent the **4** programs that can be enabled, each one can have different time bands. A typical use could be
  - o Switch-ons 1 for daily use during the autumn working period
  - o Switch-ons 2 for daily use during the winter working period
  - o Switch-ons 3 for when the user is at home on vacation
  - o Switch-ons 4 for when the user is away from home, for example setting only "antifreeze" temperatures

By selecting one of the 4 **SWITCH-ONS 1/2/3/4** programs, "**TIMER**" will appear on the main screen. Otherwise, the wording "**MANUAL**" will appear.

Setting the temperature/power

Select the menu items to set the maximum temperatures and powers for the **COMFORT**, **NORMAL**, **ECONOMY** ranges, confirm with **P4**. For the **COMFORT** range, set the maximum temperature and power level.

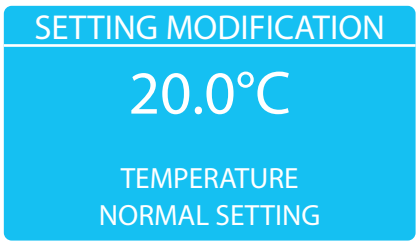


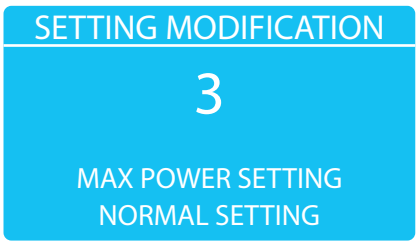


Use the **P4** key to switch from temperature to manual power and vice versa, use **P5/P6** to modify the values.

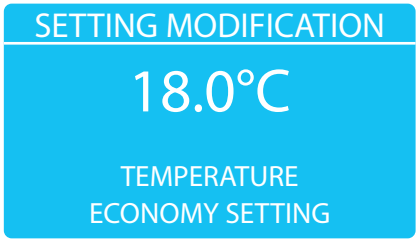
Press **P4** for at least one second to confirm the changes and exit.

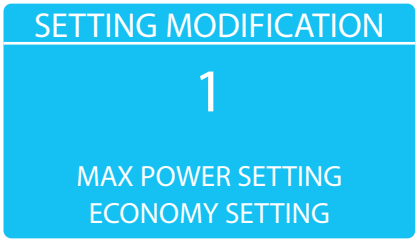
Similarly, set the maximum temperature and power level for the **NORMAL** range.





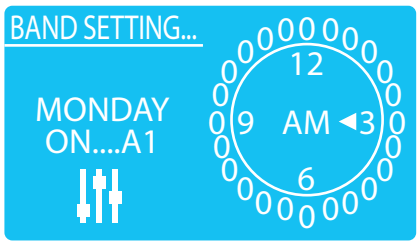
Similarly, set the maximum temperature and power level for the **ECONOMY** range.





Press **P2** to exit without saving and go back to the main screen.

Time band setting



Once the program has been selected, access the "**TIME BANDS**" function to set the actual weekly program. Use **P5** and **P6** to scroll through the following options.

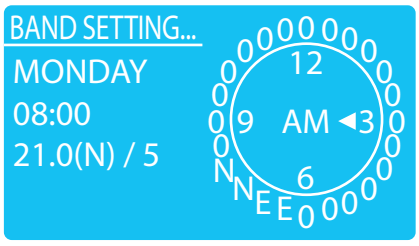
Briefly act on **P4** to scroll through the options in a circular way. Select the correct day, program and action to be implemented. Use **P4** for a long time to confirm the action.

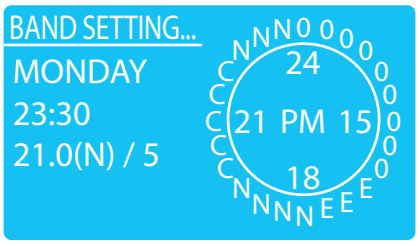
ICON	MEANING	POSSIBLE ACTIONS
	Allows modification of the time band settings	Use **P4** to cycle through the day of the week and the program. Confirm the selection pressing and holding**P4**.
	Copies the program	
	Pastes to new destination	
	Saves and exits	
	Clears the day	
	Exits without saving	

Programming example

You want to set that on **Monday** of the "**Switch-ons 1**" program, the system switches on:

- from 06:30 to 07:00 in ECONOMY
- from 07:00 to 08:00 in NORMAL
- from 16:30 to 18:00 in ECONOMY
- from 18:00 to 20:00 in NORMAL
- from 20:00 to 22:30 in COMFORT
- from 22:30 to 23:30 in NORMAL





Act as indicated:

- Act briefly on **P4**, scroll through the day in a circular way and select **MONDAY**.
- Move to the program by pressing **P4** and select **SWITCH_ONS 1**.
- Confirm acting on **P4** for a long time. This gives access to the band submenu.
- Use **P5/P6** to move through the day.
- Press **P4** to select the correct indicator as per the table below.
- Once programming is complete, press **P4** for a long time to confirm and exit.

The indicator symbol identifies the band

	INDICATOR	MEANING	
0	—	Nothing	Stove off
E	▬	Low	Stove active in ECONOMY band
N	▬	Medium	Stove active in NORMAL band
C	▬	High	Stove active in COMFORT band

After setting all the times of all the days of the week, with subsequent presses on **P4** move to the icon on the left and, with **P5** and **P6** the following operations are possible

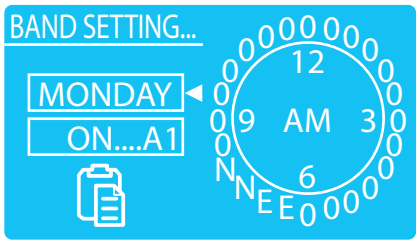
Exit without saving (press **P4** for a long time):

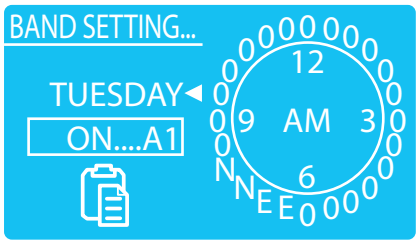
Save and exit (press **P4** for a long time):

Delete the selected day related to the selected program (press **P4** for a long time)

Copy the selected day to another:

- After poressing **P4** for a long time, the "paste" icon and the choice of destination are displayed (day and program)





- Note that the destination, as it is different from the origin, is not highlighted by the rectangle.
- To save, press on the selected destination for a long time.

"Child safety" padlock

Using this menu, the keys on the display are locked so as to make any improper use ineffective.

To activate the padlock, from the initial screen press the **P5/P6** keys simultaneously and then press **P1**.

To deactivate it, repeat the same procedure.

9.4 Operation phases

DISPLAY MESSAGE	MEANING
Cleaning	Pre-ventilation phase and check of safety devices with crucible cleaning before fuel loading.
Loading	Switching-on phase with fuel loading into the burner and simultaneous power ON to resistors.
Pause	Flame wait pause
Flame wait	Waiting phase within which time ignition must take place
Flame stabil.	Stabilisation phase after flame ignition with fuel intermediate loading.
ON	Burner normal operation phase with power variation from 1 to 6.
Switching-off	Timed switching-off phase associated to fuel interruption with crucible cleaning and waiting for the flame to go off totally.
OFF	OFF state until heat is requested again.
Stand by	Switching-off due to the heating temperature being reached.

In case of an alarm, it is necessary to wait for the end of the switching-off phase.

Never disconnect the electrical plug during operation or while the stove is switching off.

Unplug the plug only when the display shows the message "OFF".

9.5 Operation in natural convection mode

If required, when installing the stove, the authorized technician can deactivate the ventilation function ONLY in powers 1 and 2, to use the stove in the utmost silence.

Ventilation must not be absolutely excluded in powers from 3 to 6. This operation can cause the stove to overheat and cause subsequent malfunctions. If this indication is not complied with, the manufacturer accepts no responsibility for any damage and reserves the right to immediately terminate the warranty.

The natural convection mode cannot be activated in the following models: Thema, Inserto Paris, Leire, Scrigno, Andy.

9.6 Alarm code list

For your safety, do not tamper with or modify any component of the equipment: the manufacturer does not guarantee its correct operation, which can be very dangerous. In case of malfunction, problems or if a safety device is triggered, please call authorized personnel. Anyway, all operations must be carried out with the burner off and cooled down and with the power disconnected.

No.	DISPLAY	MEANING
A10	**Fume motor**	Fume extractor fault (does not work or does not comply with the expected speed) or encoder sensor fault (not connected or faulty)
A11	**Horiz. auger**	Horizontal auger failure (does not work or stop when it is supposed to) or encoder sensor failure (not connected or faulty)
A12	**Crucible**	Crucible failure (does not work or stop at the expected quarter turn) or position sensor failure (not connected or faulty)
A30	**Fume probe**	Fume thermocouple failure
A40	**Circuit breaker**	Signal from the manual reset safety thermostat
A50	**Pressure switch**	Safety pressure switch signal
A60	**Blackout**	Power failure (> 10 seconds)
A69	**No flame**	The fume probe has not received any temperature increase. The signal may indicate a probable malfunction of the resistors. Other causes may be: damp pellets, loading motor not working, pellets not reaching the brazier.
A70	**Failed SWITCH-ON**	Failed "Awaiting flame" phase
A71	**Flame exting.**	Flame extinguishing during operation
A72	**Fumes overheating**	Combustion fumes overheating (> 280°C)
A73	**Cont.Loading**	Loading auger gearmotor failure
A74	**Sch overheating**	PCB overtemperature (> 75°C)

In alarm, the system shows the above index and name on the display and also starts a system safety procedure, that is:

- with high fume temperature, the smoke extractor switches to "extinguishing speed" to extinguish the flame;
- with the fume temperature below the "start temperature", the smoke extractor switches to "cooling speed".
    - o After a further two minutes, the smoke extractor switches off completely.

Unlocking from an alarm condition occurs by sending a shutdown command to the system, or by pressing the ON/OFF button or from the user interface.

In the event of an alarm with fume temperature lower than the "start temperature", the system goes directly to the "Off" phase, or a complete flame extinguishing procedure is also carried out.

To reset the stove operation, keep button ⏻ pressed for 5 seconds.

10 - CLEANING

During maintenance, use personal protection equipment all the time (i.e. gloves).

For the stove to work perfectly, we recommend it undergoes thorough cleaning at least once a week when using wood pellets.

If biomass is used (olive pits, shells, agripellets), cleaning must be carried out every 1 to 3 days according to the quantity of residue left in the burner.

The Manufacturer accepts no responsibility for the use of FUELS OTHER THAN AS STATED or the possible malfunction of the unit.

10.1 Cleaning the outside

To clean the outside, use:

- soft cloths
- neutral products, suitable for painted or plastic surfaces.

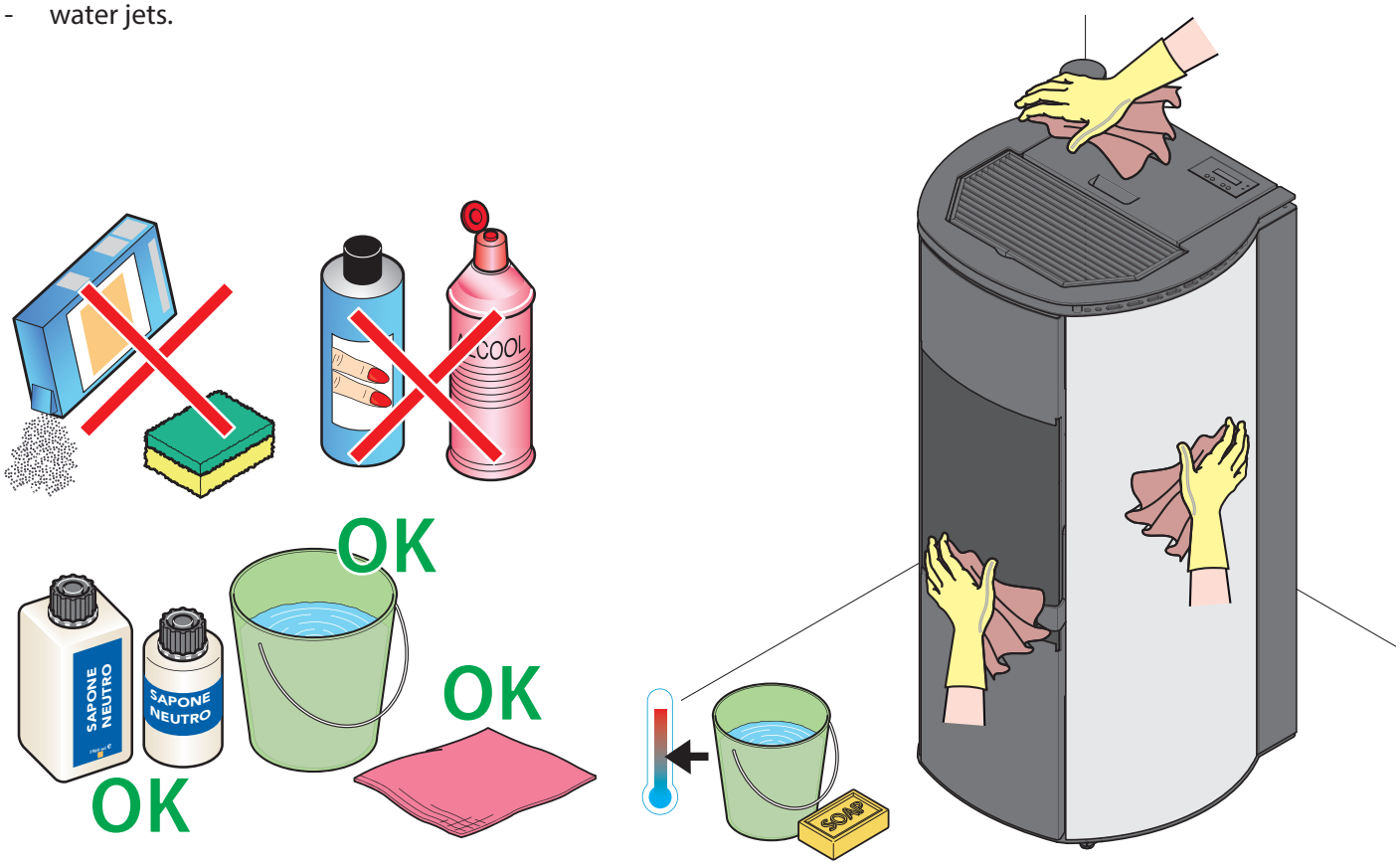
Follow the instructions for use stated on the product label.

To clean the decorative stone parts, use suitable dedicated detergents, following the instructions for use on the product label.

Always finish by drying it perfectly, possibly with a soft dry cloth.

Do not use:

- powder or abrasive detergents;
- aggressive or corrosive detergents (i.e. hydrochloric/muriatic/sulphuric acid). Warning! Do not use these substances even to clean the floor around the equipment;
- sharp or abrasive tools (i.e. abrasive sponges, scrapers, steel brushes, etc.)
- water jets.



10.2 Cleaning the biomass burner

Before starting any operation on the burner, wait for it cool down (about 3 hours).

Clean the burner every 1 to 7 days according to the type of fuel used.

Before starting work on the burner, disconnect the stove from the mains and turn the circuit breaker on the main panel to OFF.

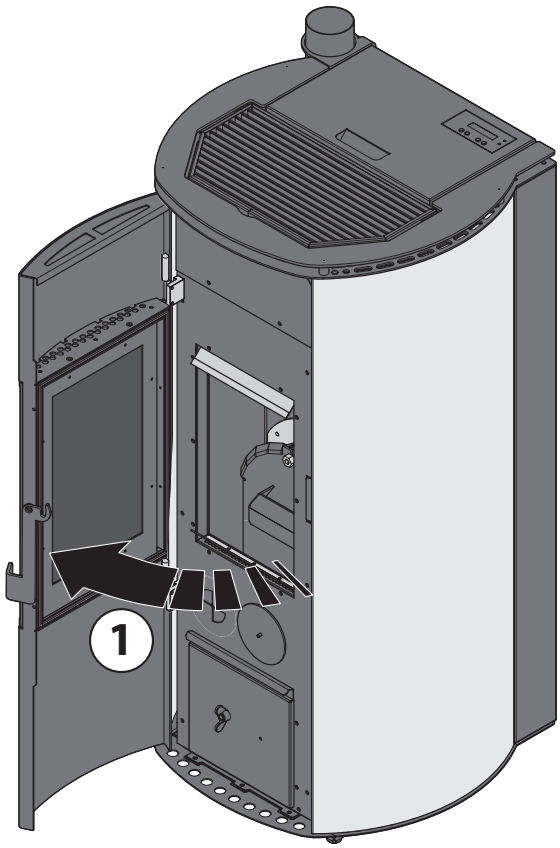
If the burner block or ash collection drawer are opened before they cool down, there might be a risk of burns.

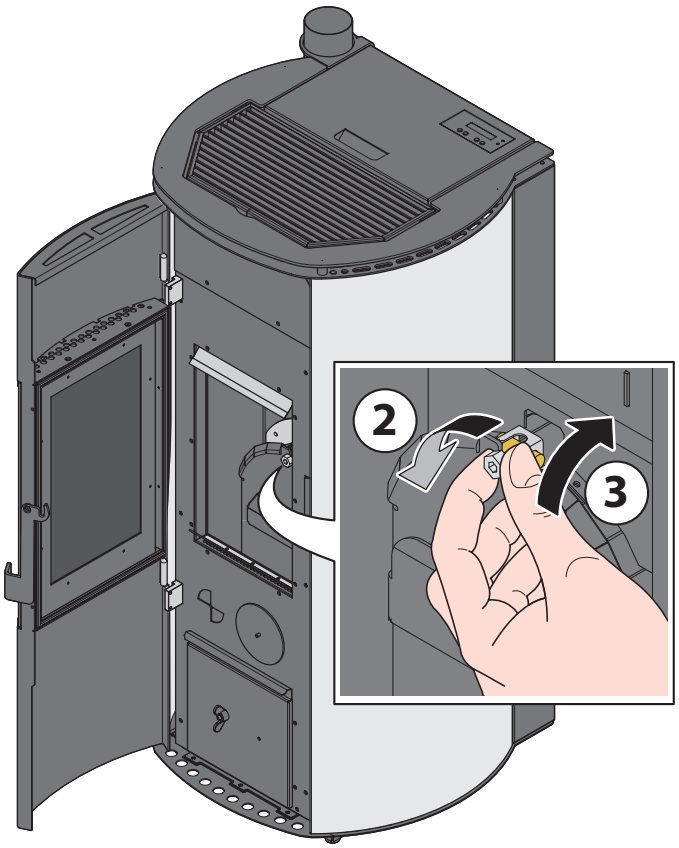
To clean the burner, use:

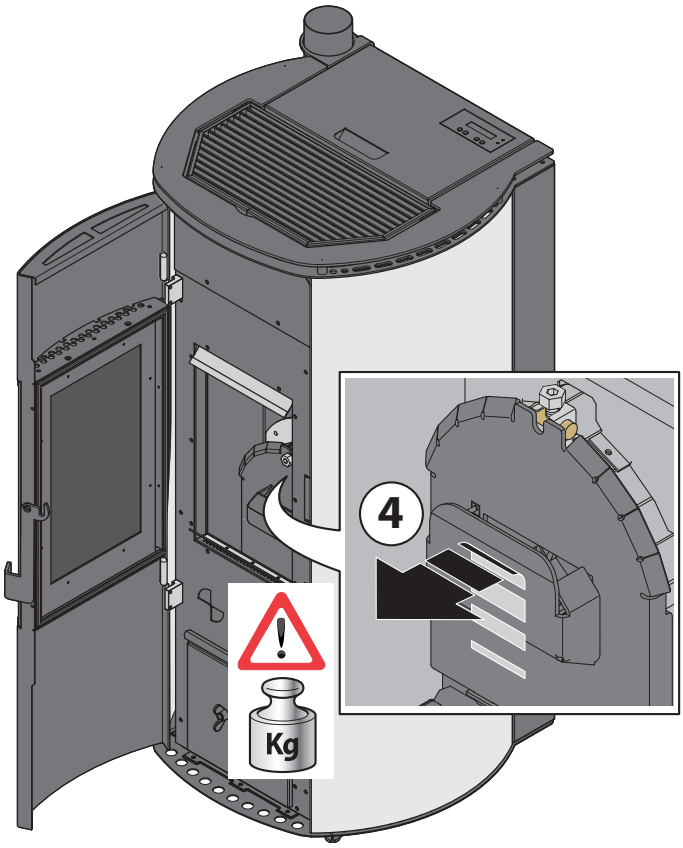
- steel brush
- ash aspirator
- scraper (to remove the more obstinate residue)

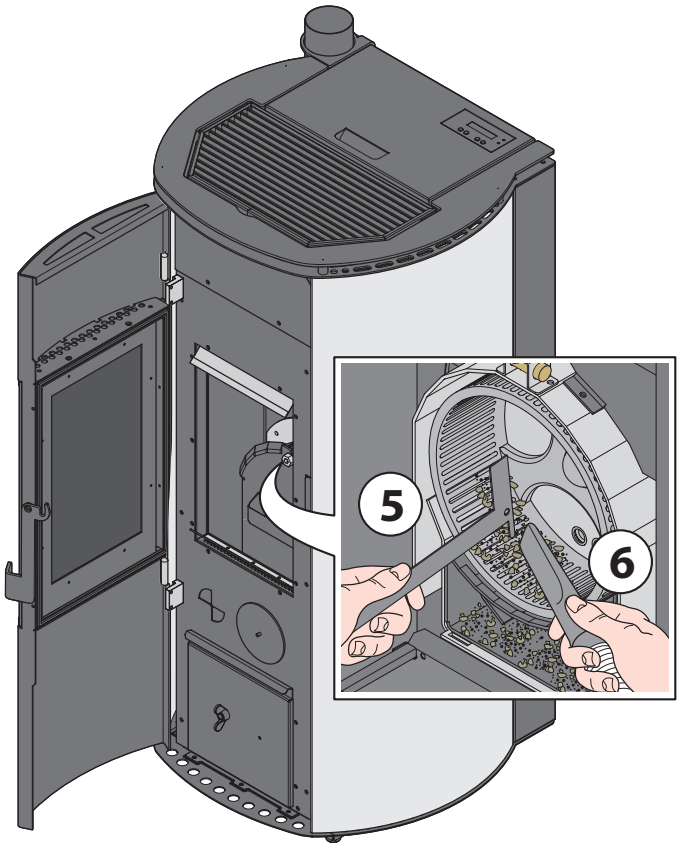
Do not use:

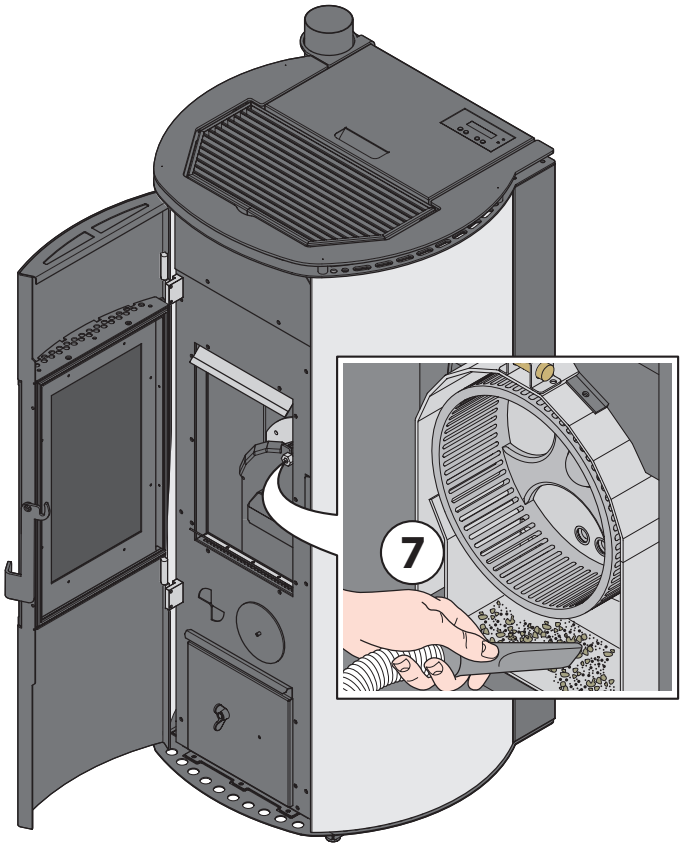
- aggressive or corrosive detergents (i.e. hydrochloric/muriatic/sulphuric acid).
- water jets.







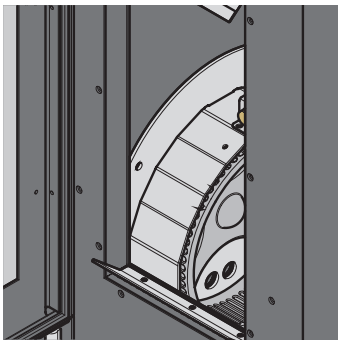




Unburnt residue inside the crucible can be vacuumed but can also be made to fall onto the bottom with a scraper, from where they will then go into the ash collection drawer. Once cleaning is complete, the burner lid can be refitted and closed, carrying out the same operations in reverse order.

After every cleaning, check the wear of the hearth door seal.

Check every time that the holes on the burner basket are totally clear from any combustion residue, this to make sure there is always sufficient air to cool the system down and for correct combustion.



In the Thema model the burner is located laterally.

10.3 Cleaning the Andy model pellet burner

Before starting any operation on the burner, wait for it to cool down (about 3 hours).

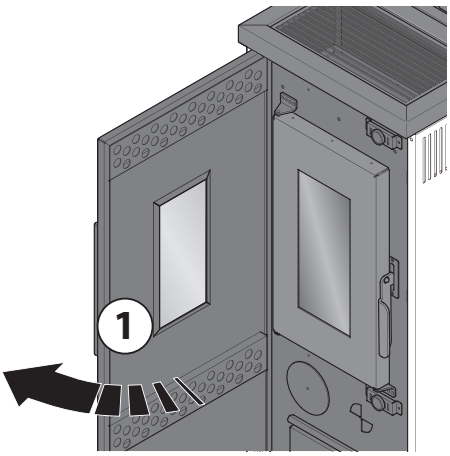
Clean the burner at least once a week.

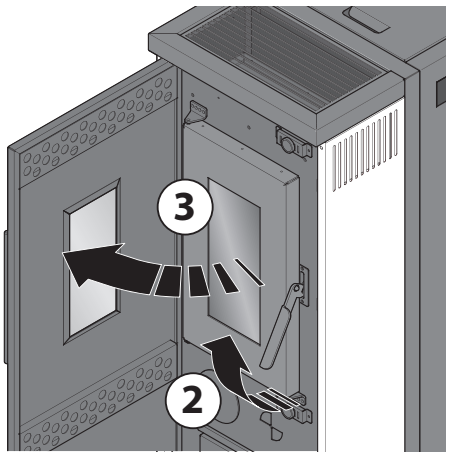
Before starting work on the burner, disconnect the stove from the mains and turn the circuit breaker on the main panel to OFF.

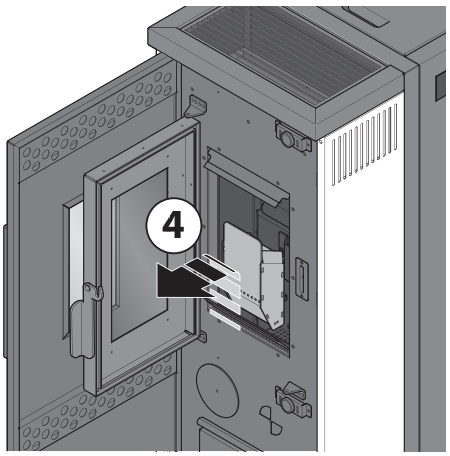
If the burner block or ash collection drawer are opened before they cool down, there might be a risk of burns.

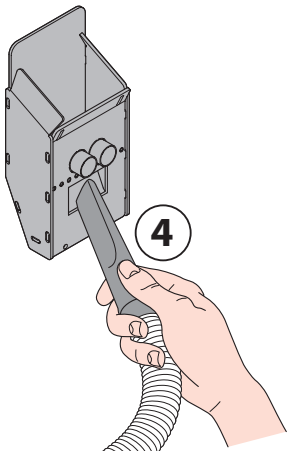
To clean the burner use an ash aspirator

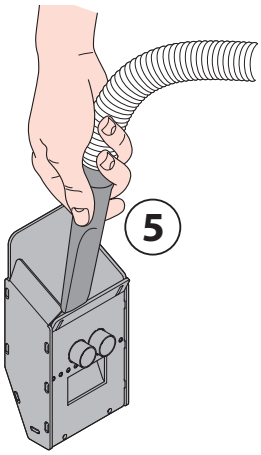
Do not use: aggressive or corrosive detergents (e.g. hydrochloric/muriatic/sulphuric acid) or water jets.











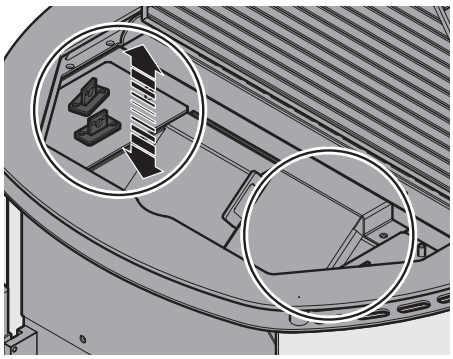
10.4 Cleaning the combustion chamber

Before starting work on the burner, disconnect the stove from the mains and turn the circuit breaker on the main panel to OFF.

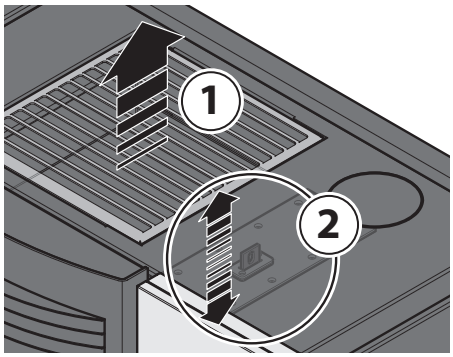
Cleaning by turbulators must be performed at least once a week, as described below:

- Raise or remove any covers.
- Raise and lower the turbulators repeatedly so that the dirt falls to the bottom of the stove using the special tool to be hooked to the handle (Arianna - Sirmione - Sirmione Étanche 9 models). For the Garda - Garda Étanche 9 models, move the 2 side decorations.
- Remove the ash tray.
- Clean the bottom using an ash vacuum cleaner.

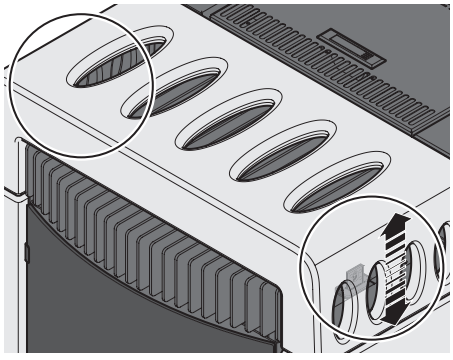
When cleaning is completed, refit all the previously removed components correctly.



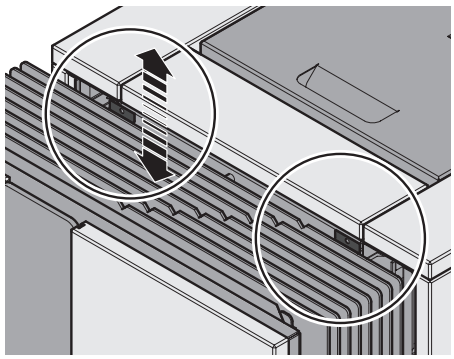
Arianna 10/12



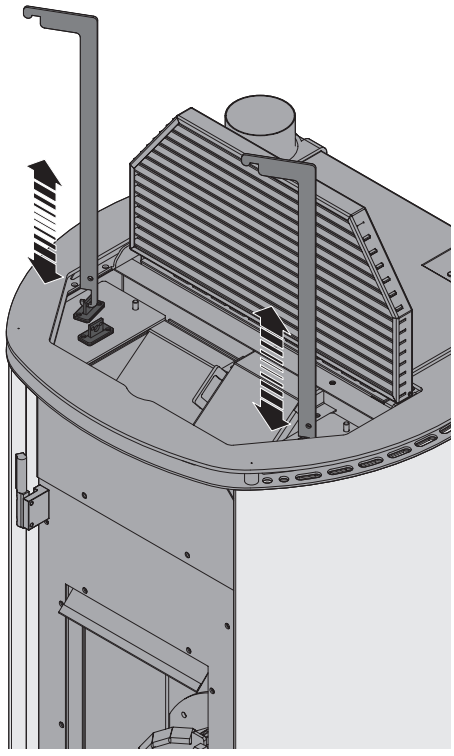
Thema 10/12

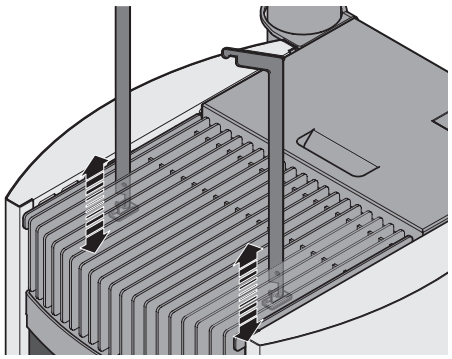


Trieste / Trieste Étanche 9

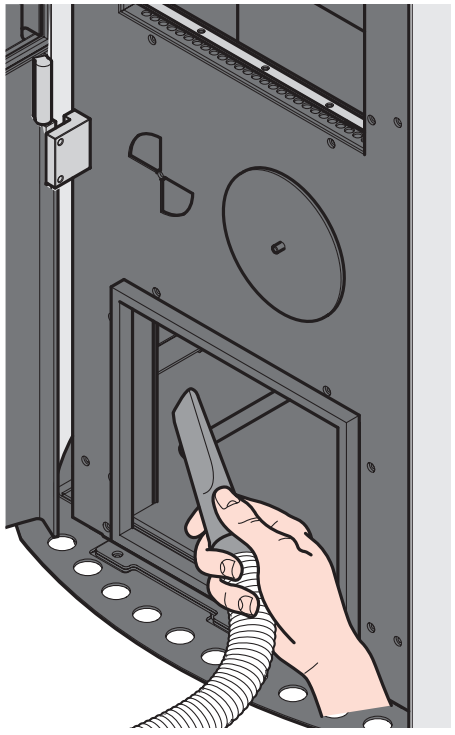


Sirmione 9/10/12 / Sirmione Étanche 9

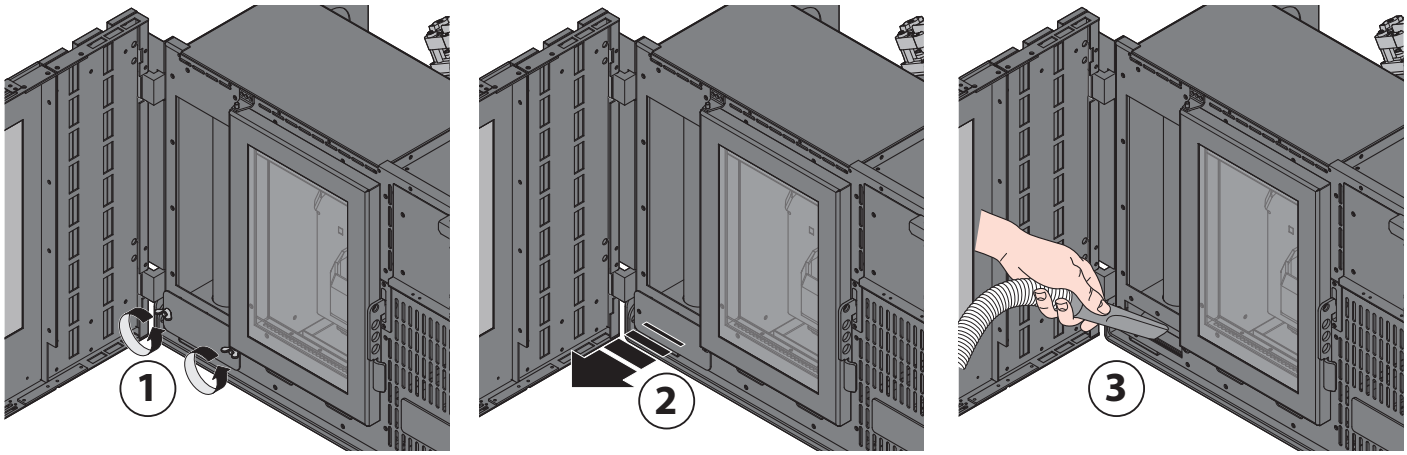




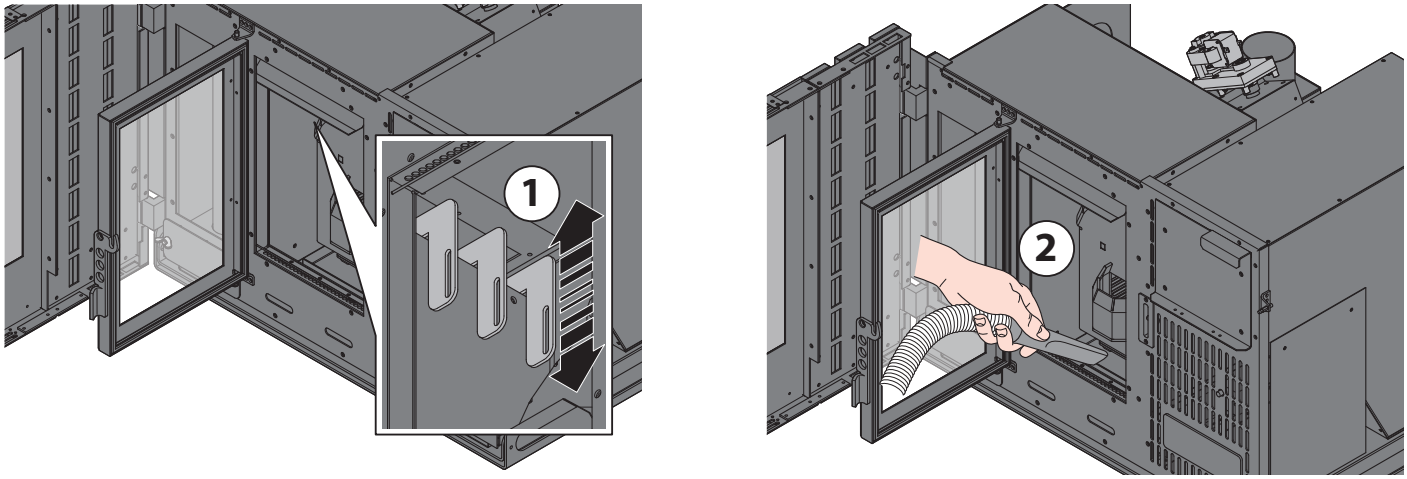
Garda 9 / Garda Étanche 9



In the Inserto Paris model, cleaning must be done on the inspection drawer by unscrewing the appropriate screws.



In the Inserto Paris model the turbulators are located inside the combustion chamber, on the left side.



10.5 Cleaning the combustion chamber for the Scrigno, Leire and Andy models

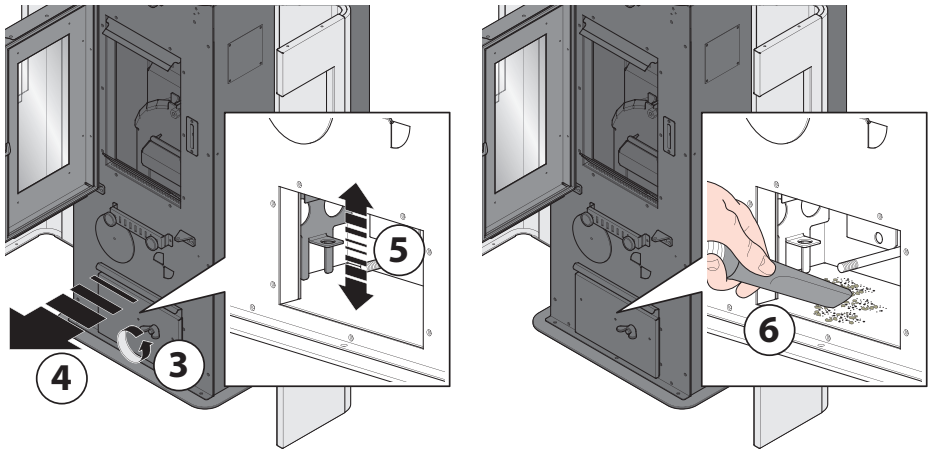
Before starting work on the burner, disconnect the stove from the mains and turn the circuit breaker on the main panel to OFF.

Clean the combustion chamber at least once a week as described below:

Remove the ash drawer and repeatedly move from the bottom upwards for some cycles the two scrapers on the sides of the boiler.

Suck up all the combustion residue inside the gaps and on the bottom of the boiler, using the vacuum cleaner.

Clean the ash drawer as shown in the relative paragraph.



When completed, refit the previously removed pieces, paying attention to close the ash drawer correctly.

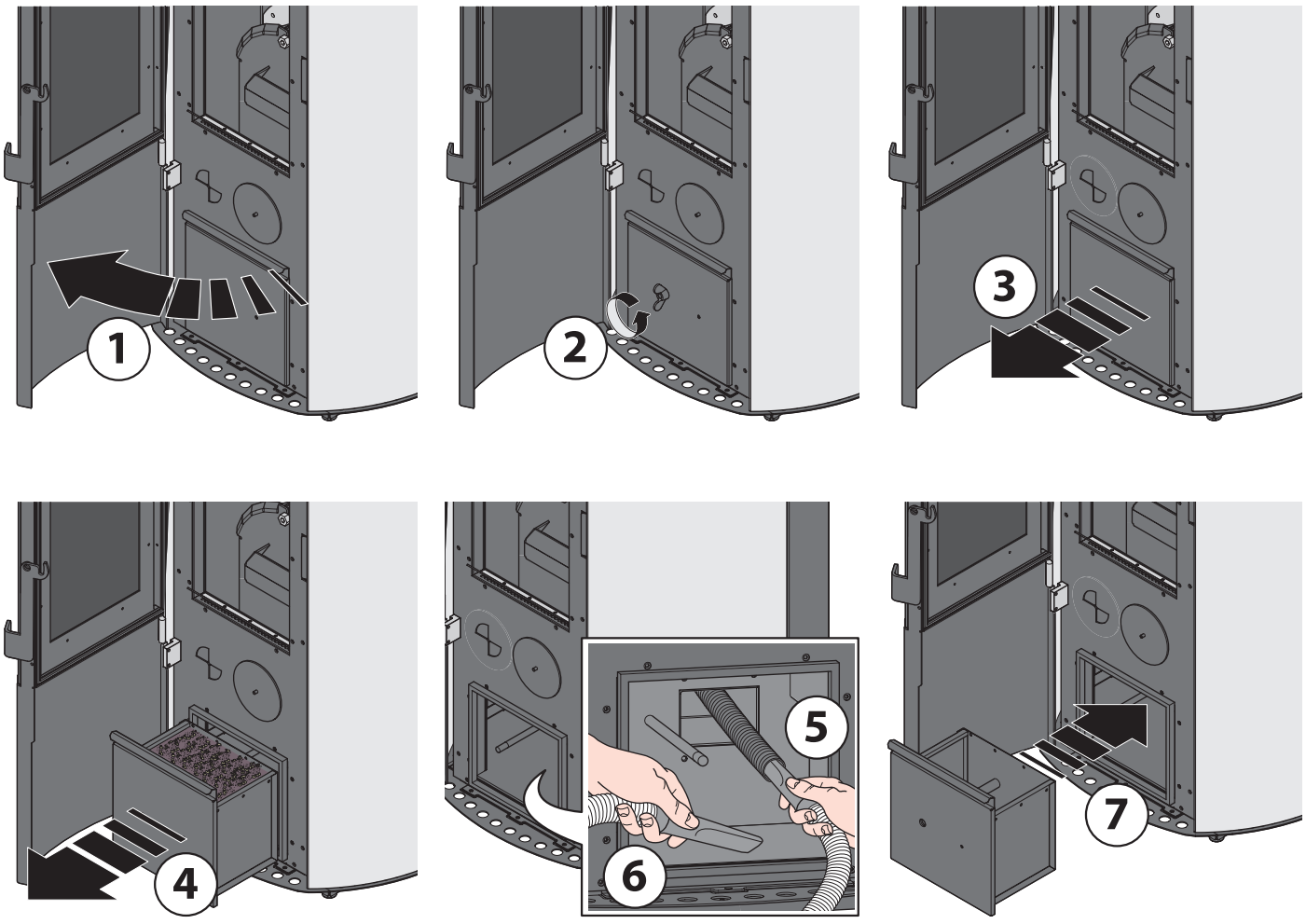
10.6 Emptying and cleaning the ash collector

Checking the ash collector must be carried out at least once a week.

Take care because there may be some incandescent pieces among the residues. If they come into contact with flammable material, they may cause a fire.

To open and empty the ash collection drawer, follow the procedure below.

The pictures are based on one stove model but the procedure is the same for the other models too.



The ash must be disposed of in compliance with the regulations in force in the country, inside a dedicated bin with a lid made out of fire-resistant material.

Once the ash container has been emptied, clean it with soft cloths and neutral products suitable for painted or plastic surfaces.

10.7 Cleaning and maintenance of other parts

By the user
Clean any dust deposited on the bottom of the fuel loading container every two months.
Check the whole stove is in good condition.
Check the burner combustion chamber is undamaged.
Check all seals are in good condition and are not showing any wear.
Check that the glass on the hearth door is not damaged (i.e. chipped).
If necessary, clean the "T" at the base of the fume duct and the pipe horizontal section, if any, at least once a month
Inspect the combustion air inlet on the back of the stove at least once a month. Remove any dirt as required

Maintenance company CS THERMOS (annual cleaning)
Check all mechanical elements are working correctly.
Check and clean the flue.
Check and clean the pellet unloading duct.
Check sleeves, gaskets and electrical cables are undamaged.
Check and clean the fume fan and its relative seat.
Check and lubricate the bushings of the fuel loading auger and of the burner.
Check and clean the heating fan as required.

For any other operation not mentioned in this list, please refer only to the CS THERMOS service centre.

If, while cleaning, the user notices any anomalies, contact CS THERMOS service centre straight away and do not use the equipment for any reason.

11 - DISPOSAL

ADVICE TO DISPOSE OF THE PRODUCT CORRECTLY

Waste of electrical and electronic equipment (WEEE) pursuant to Decree-Law 49/2014 implementing Directive 2012/19/EU.

At the end of its useful life, the product must not be disposed of together with urban waste but must be delivered to the appropriate collection centres or to the dealers that offer this service.

Disposing of the equipment separately allows avoiding possible negative consequences for health and the environment deriving from its inadequate disposal and promotes the recycling of the materials it is made of.

To stress the need for disposing of the equipment separately, the product bears the mark of the mobile waste container crossed out.

Maximum care has been paid to guarantee the accuracy of this manual.

The Manufacturer reserves the right to modify the equipment or the documentation at any time, without notice.

Therefore there might be small differences between this manual and the product you have received: we apologize in advance for any inconvenience.

The total or partial reproduction of this manual without the Manufacturer's consent is prohibited. Measurements are purely indicative and not binding.

The original language of this manual is Italian: the Manufacturer is not responsible for any mistakes in translation/interpretation.

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CS THERMOS SRL - Società Uninominale
Via Padania 35 - Z.I.
31020 San Vendemiano
Treviso - Italy
TV Companies' Register - Tax code / VAT No. 03892500269
Fully paid-up share capital €100,000.00
Tel. +39 0438 62717
Fax +39 0438 453799
Email: info@csthermos.it

Authorized dealer

code 6118251 iss. 05-2023