Dear Customer,

Thank you for having chosen one of our products. We would like to remind you that pellet boiler are the most innovative heating solution generated by the most advanced technology, characterised by high-quality manufacturing as well as a simple and elegant design. Ideal for any type of room, these products contribute to comfort thanks to the cosy heat that only flames can radiate.

The boilers, functioning exclusively with wooden pellets of 6 mm in maximum diameter, are equipped with a heat exchanger with vertical tubes. Pellet boilers are fitted with a timer-thermostat that ensures an autonomous management of the Boiler as it can be programmed to turn on and off up to 4 times per week. Pellet boilers take the heat to the radiators in the heating system, with a thermal power that is adjusted according to the space to be heated: just set the heating system water temperature manually. Recommended temperature: between 60° and 70°.

Pellet boilers have been equipped with highly advanced automatic devices and control and safety systems that ensure efficient and practical operation.

The first two or three times your pellet boiler is started, fumes emitted by the varnish may cause unpleasant smells due to hardening. Therefore, it is advisable to air the room properly, and avoid staying long in front of the pellet boiler.

Installation is prohibited in bedrooms or in rooms with running hot.

ATTENTION: This warning sign indicates that the message to which it refers should be carefully read and understood, because failure to comply with what these notices say can cause serious damage to the Boiler and put the user's safety at risk.

INFORMATION: This symbol is used to highlight information which is important for proper boiler operation. Failure to comply with these provision will compromise use of the boiler and its operation will not be satisfactory.

Installation should be carried out by qualified personnel, who will be fully responsible for installing the product and ensuring its proper operation. The Manufacturer shall not be responsible in case of installation by unqualified personnel or without complying with the general warnings and installation instructions.

This instruction booklet is an integral part of the product: make sure that it always accompanies the appliance, even in case of transfer to another owner or in the case of transfer to another place. In the event of damage or loss, request a copy from the area technician. Prior to first ignition must receive adequate instructions from the installer.

Before using, installing or servicing the product, read the indications contained in this manual carefully.

Prior to first ignition must receive adequate instructions from the installer.

This pellet boiler should only be used for the intended use it has been designed for. Therefore, the user shall be responsible for any damage to people, animals or things resulting from misuse of the product.

The entire range of products is manufactured in accordance with the directives and standards:
2014/30 UE (regulation EMCD), 2006/42/CE, 2014/35 UE (Low Voltage Directive), 2011/65/EU; EN 61000-6-2; EN 61000-6-3; EN 60335-1; EN 60335-2-102; EN 62233; EN 50581; EN 303-5-2012

Regulations

After unpacking the unit, check all the parts are in good conditions and that no item is missing. Otherwise, contact the dealer from which you purchased your pellet boiler.

Before installation, it's better doing an accurate wash of all the system pipes in order to remove any residues that could compromise the correct working of the boiler.
If you do not use the boiler for a long time it's recommended to carry out the following operations:
- unplug the power supply
- close the water taps of both the heating system and the sanitary system
- if there is a risk of frost, empty the heating and sanitary system.

The pellet boiler extraordinary maintenance should be carried out at least once a year. This operation should be scheduled in advance with the Technical Assistance Service and shall be at the Client's expense.

For safety reasons, it is advisable to remember that:

- during normal operation of the product the hearth door must always be closed
- always keep the fuel tank lid
- the pellet boiler should not be used by children or handicapped people not being assisted
- do not touch the pellet boiler with wet parts of the body and/or bar feet
- avoid direct contact with appliance parts during normal operation tend to overheat
- the handle for the cleaning of the boiler should be used only when the boiler is cold
- it is forbidden to modify the safety or adjustment devices without the manifacture's authorisation or indication
- do not pull, disconnect or twist the electric cables coming out of the boiler even when it is disconnected from the mains
- it is recommended to place the power cord in a way that does not come into contact with hot parts of the
- the mains plug must be accessible after installation
- avoid covering or reducing the combustion air duct, which is essential for correct combustion
- keep all the packing elements out of the reach of children or handicapped people not being assisted
- for any problem contact your dealer or qualified and authorized personnel, and in case of repair require original spare parts
- periodically check and clean the flue gas exhaust ducts
- the accumulation of unburnt pellets in the burner after any misfires must be removed before proceeding with a new ignition
- do not use flammable liquids to the ignition
- during the filling does not bring the bag of pellets in contact with the product
- check that the electrical system is adequate
- all the local and national laws and European Standards must be met when installing the unit
- the unit cannot be used as an incinerator. Do not use fuels other than pellets
- keep the pellet and flammable materials at a suitable distance

In the event of a fire, disconnect the power supply, use an extinguisher and call the fire fighters if necessary. After that contact the Authorised Assistance Centre.

Responsibility

With the delivery of the present manual, we decline all responsibility, both civil and penal, for accidents deriving from the partial or total lack of observance of the instructions contained herein.
We decline every responsibility derived from improper use of the Boiler, from incorrect use by the user, from unauthorized modifications and/or repairs, from the use of replacement parts that are not original for this model.
The manufacturer declines every civil or penal, direct or indirect responsibility due to:

- Installation by unqualified or untrained personnel;
- Modifications and repairs not authorized by the manufacturer;
- Use of non-original replacement parts;
- Exceptional events.
- Lack of maintenance;
- Failure to observe the instructions contained in the manual;
- Use in non-conformity with the safety directives;
- Installation in non-conformity with the norms in force in the country;

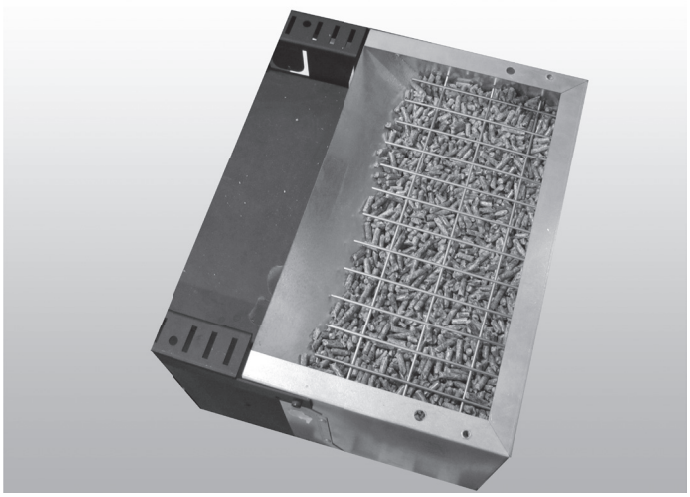
• Use only wood pellets;
• Keep / store the pellets in a cool dry place;
• Never pour pellets directly on the hearth;
• The boiler must only be fed with quality 6 mm diameter pellets, A1 certified according to the UNI EN ISO 17225-2 regulations;
• Before making the electrical connection of the boiler the discharge tubes must be connected with the flue;
• The protective grill placed inside the pellet container must never be removed;
• The environment where the Boiler is installed must have a sufficient exchange of air;
• It is forbidden to operate the boiler with the door open or the glass broken;
• Do not use the boiler as an incinerator; the boiler should be used only for the intended purpose;
• Any other use is considered improper and therefore dangerous. Do not put in the hopper other than wood pellets;
• When the boiler is operating, the surfaces, glass, handle and tubes become very hot: during operation do not touch these parts without adequate protection;
• Keep the fuel and other inflammable materials off the boiler. Flammable materials.

Charge pellet

Fuel is loaded from the upper part of the Boiler by opening a door. Pour the pellets in the hopper; This is easier if performed in two steps:
• Pour half of the contents of the bag into the hopper and wait for the fuel to settle on the bottom.
• Then pour in the second half;
• Keep the cover closed , after loading the pellets , the lid of the fuel tank;

The Boiler is a product by heating, presents the external surfaces particularly hot. For this reason, we recommend extreme caution when operating in particular:
• Do not touch the Boiler body and the various components, do not approach the door , it could cause burns;
• Do not touch the exhaust fumes;
• Do not perform any type of cleaning;
• Do not dump the ashes;
• Do not open the ash tray;
• Be careful that children do not come near;

Never remove the protection grille in the hopper. When filling, do not let the sack of pellets touch any hot surfaces.



Instructions for safe and efficient use

• The device can be used by children that are not less than 8 years old and people with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, provided being under supervision of someone responsible or after having received instructions relating to the safe use of the device and to the understanding of the dangers inherent to it. Children should not play with the device. Cleaning and maintenance to be performed by the user should not be made by children without supervision;

• Do not use the Boiler as a ladder or scaffold;

• Do not put clothes to dry on the Boiler.
Any clothes hangers and suchlike must be kept a suitable distance from the Boiler. - Risk of fire

• Carefully explain that the Boiler is made from material subjected to high temperatures for the elderly , the disabled, and in particular for all children, keeping them away from the Boiler during operation

• Do not touch the Boiler with wet hands: the Boiler has electrical components that could produce sparks if handled incorrectly.

• Never open the glass door of the pellet Boiler while the Boiler is in operation.

• The Boiler must be connected to an electrical system equipped with an earthing conductor in accordance with regulations 73/23 and 93/98 EEC;

• The system must be of adequate electrical power declared the Boiler;

• Do not wash the inside of the Boiler with water; The water could damage the electrical insulation, causing electric shock;

• Do not expose your body to hot air for a long time. Do not overheat the room you are in and where the Boiler is installed.
This can damage the physical conditions and cause health problems;

• Do not expose to direct the flow of hot air plants or animals;

• The pellet Boiler is not a cooking element;

• External surfaces during operation can become very hot. Do not touch them except with the appropriate protection.

• The plug of the device power cable must be connected only after installation and assembly of the device and must remain accessible after installation, if the unit is not provided of a double-pole switch suitable and accessible.

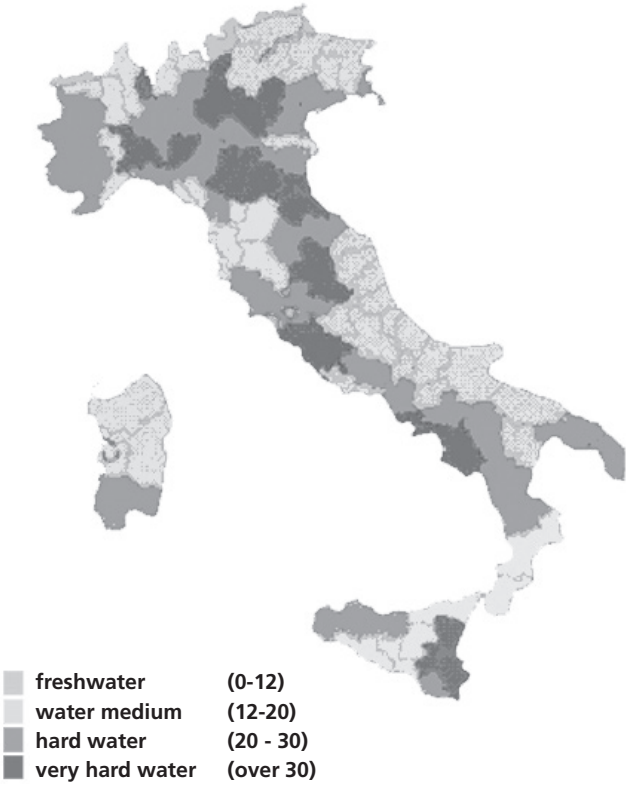
• Do not lay objects, glasses, infusers, room perfumers on the boiler, they could be damaged or to damage the boiler (in this case de warranty does not respond).

Tampering with the safety devices is prohibited. It is only after eliminating the cause which gave rise to the intervention of the safety system, that it is possible to relight the Boiler and thus reset the automatic operation of the sensor. Consult this manual at paragraph relating to alarms which explains what to do based on the alarm message the boiler display.

Water Characteristics

The characteristics of the water used to fill the system are very important to prevent the build-up of mineral salts and the formation of incrustations along the pipes, in the boiler and in the heat exchangers. Therefore, please get your plumber's advice concering:
• Hardness of water circulating in the system, to prevent problems of incrustation and limescale, especially in the domestic water heat exchanger (>15° French).
• Installation of a water softener (if water hardness > 15° French).
• Filling the system with treated water (demineralised).

If you have very extensive system, with a large amount of water, or which require frequent refilling, it is recommended the installation of water softening system. It 'should be noted that the encrustations drastically reduce performance because of their low thermal conductivity.

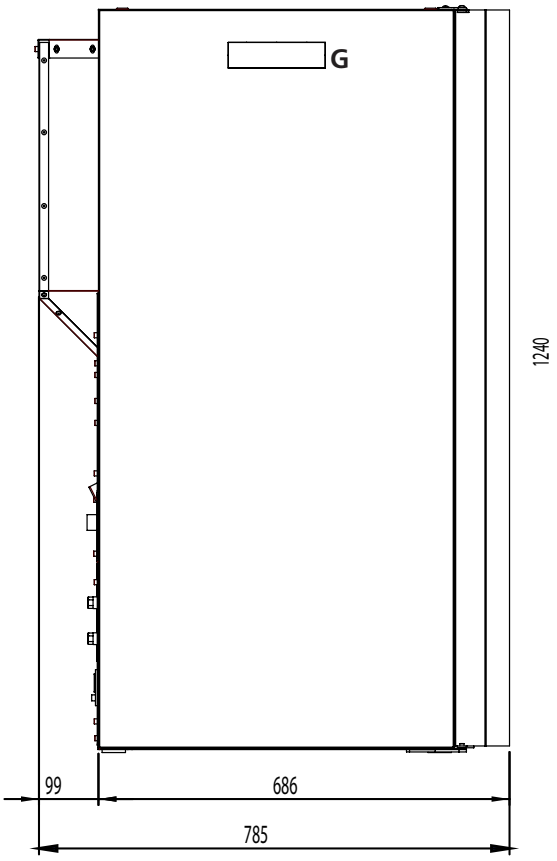


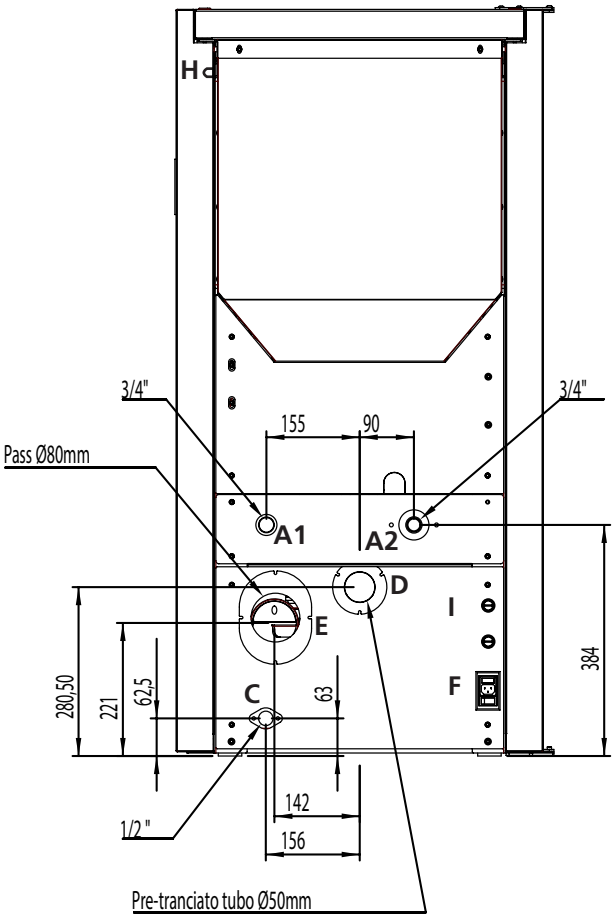
Pellet

The pellets are cylinders of compressed wood, produced from sawdust and wood processing (chips and sawdust), generally produced by sawmills and carpenters. The binding capacity of the lignin contained in wood, allows to obtain a compact product without adding additives and foreign chemicals to the wood, is therefore obtained a natural fuel with high yield. The use of expired pellets or any other unsuitable material can damage parts of the boiler and impair proper operation: this can lead to the termination of the guarantee, and its producer responsibility.

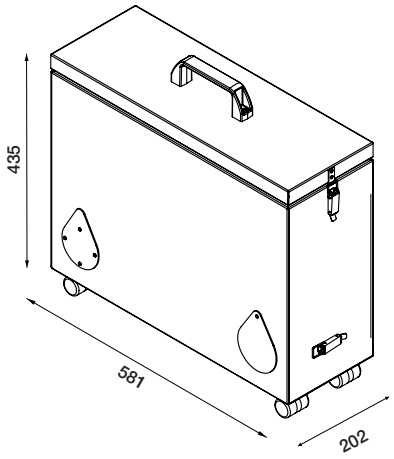
For our products use pellets diameter 6 mm, length 30 mm and a maximum of 8% and A1 certified according to the UNI EN ISO 17225-2 standard. Keep the pellets away from heat sources and not in humid environments or with explosive atmosphere.

Technical Specification Boiler 20_24

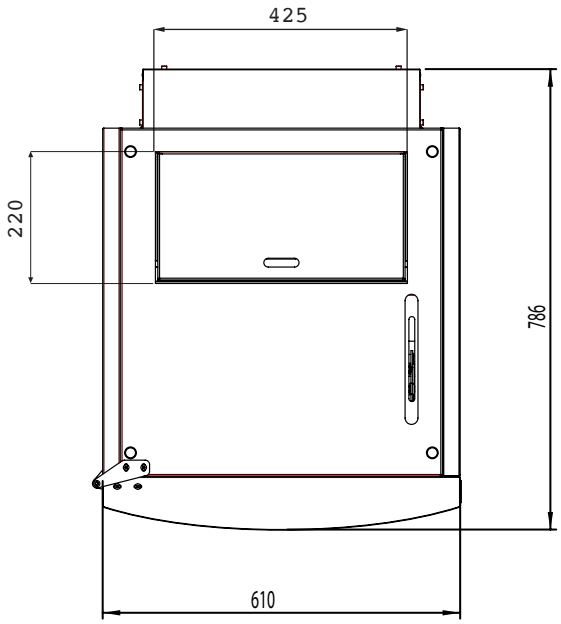




A1 = heating water delivery
A2 = heating water return
C = safety valve
D = reintegration
E = system emptying
F = position main power switch to
G = the control panel
H = water temperature sensor
I = pressure



Measures to be taken into consideration in the case of an ash compactor

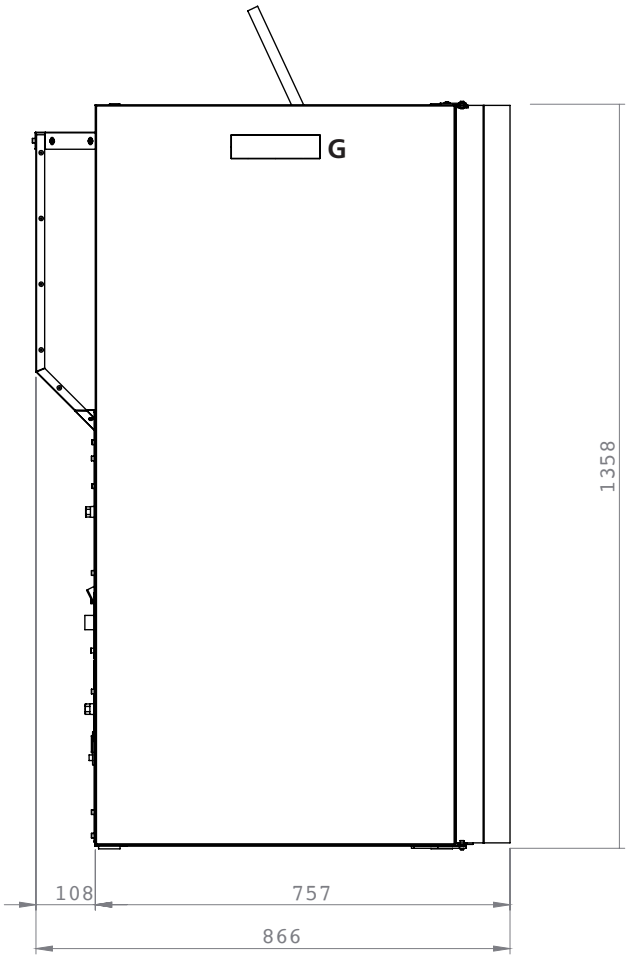


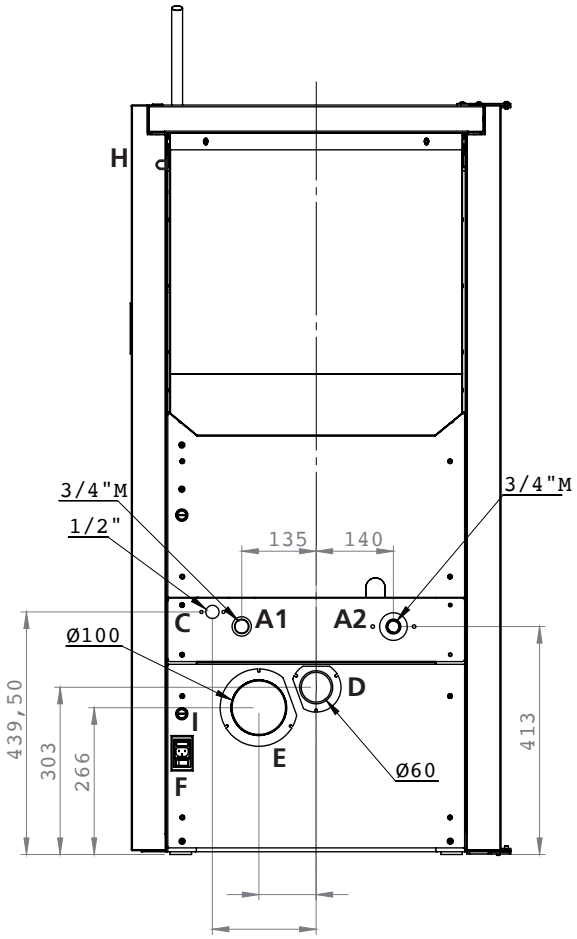
N.B.
1 - Measures with a tolerance of about 10 mm
2 - Measures and images are indicative and can vary depending on the aesthetic of the pellet boiler.

PARAMETERS	UNIT OF MEASUR.	CPC200 ① CPC200-AUTO ② CPC200-PA	CPC240 ① CPC400-AUTO ② CPC240-PA
Heat input	kW	19	23,0
Nominal heat output	kW	17,51	21,0
Reduced heat output	kW	5,21	6,3
CO concentration at nominal reference (10% O_2)	mg/m³	19,3	97
CO concentration at reduced reference (10% O_2)	mg/m³	245	412
Nominal efficiency	%	92,13	91,1
Reduced efficiency	%	88,82	92,1
Pellet consumption (min-max)	kg/h	3,9 - 1,2	4,7 - 1,4
Heated surface	mc	470	540
Flue gas flow rate (min-max)	kg/s	0,0047 - 0,0104	0,0049 - 0,014
Draft (min-max)	Pa/mbar	5 - 10 / 0,05 - 0,1	4 - 10 / 0,04 - 0,1
Flue gas temperature (min-max)	°C	56,6 - 90,5	56,6 - 96
Boiler water	litri	50	50
Sanitary water capacity	litri/minuto	10,1	12,37
Maximum working pressure	Bar	2,5	2,5
Tank capacity	kg/litri	60 - 92	60 - 92
Smoke outlet tube	mm	80	80
Diameter air intake	mm	50	50
Connecting heating	Inch	3/4	3/4
Connecting sanitary water	Inch	1/2	1/2
Nominal voltage	V	230	230
Nominal frequency	Hz	50	50
Power consumption max	W	330	330
Power consumption at rated power	W	76 - 84	76 - 84
Power consumption at minimum power	W	54 - 66	54 - 66
Power consumption in standby	W	3,5	3,5
Water pressure (at 10 k)	mbar	123,5	186,8
Water pressure (at 20 k)	mbar	30,9	46,7
Autonomy of combustion (min - max)	h	15 - 50	12 - 42
Minimum temperature to return	°C	55	55
Noisiness (according to EN 15036-1)	dB	36	36
Boiler class		5	5
Boiler weight	Kg	240	240
Operation with respect to the smoke exhaust		Depression	
Boiler type		Not condensation	
Energy class		A+	
IEE		① 116 ②	① 120 ②
Stars environmental decree		★★★★☆	★★★★☆
Operation range		60 - 80° C	60 - 80° C
Dusts at 13% O2 Ref. Nominal thermal power		4,8	5,9
N° Test Report		K13492014T1 - K13492014T2 - K19482016Z1 K19602016Z1 - K13492016E7 - K1349209	

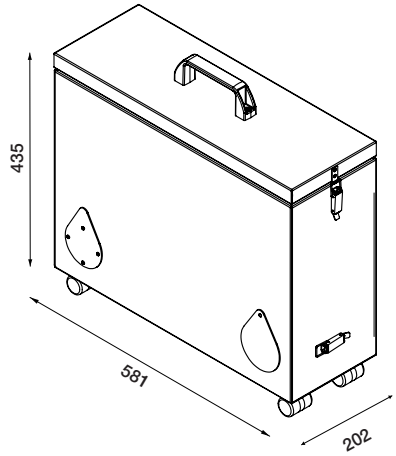
It is recommended that the control of emissions after installation.

Technical Specification Boiler 28_32

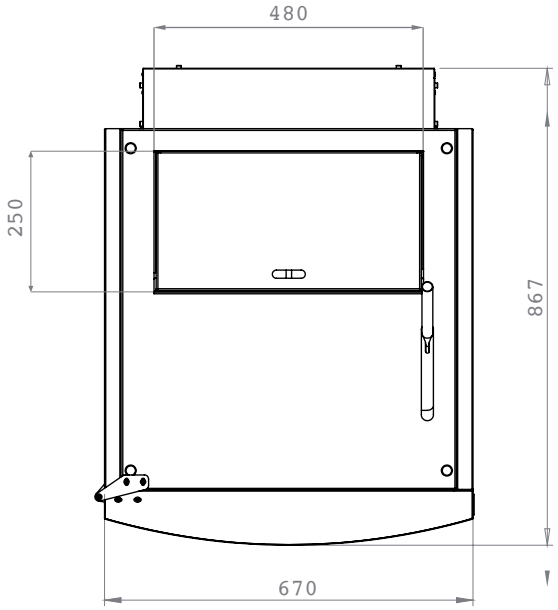




A1 = heating water delivery
A2 = heating water return
C = safety valve
D = reintegration
E = system emptying
F = position main power switch to
G = the control panel
H = water temperature sensor
I = pressure



Measures to be taken into consideration in the case of an ash compactor



N.B.
1 - Measures with a tolerance of about 10 mm
2 - Measures and images are indicative and can vary depending on the aesthetic of the pellet boiler.

PARAMETERS	UNIT OF MEASUR.	CPC280 ① CPC280-AUTO ② CPC280-PA ②	CPC320	CPC340-AUTO CPC340-PA
Heat input	kW	27,10	31,5	33,2
Nominal heat output	kW	25,0	29,0	31,2
Reduced heat output	kW	6,3	6,3	6,3
CO concentration at nominal reference (10% O_2)	mg/m³	38,0	31	39
CO concentration at reduced reference (10% O_2)	mg/m³	228,2	228,2	228,2
Nominal efficiency	%	92,2	92,1	94,0
Reduced efficiency	%	90,65	90,65	90,65
Pellet consumption (min-max)	kg/h	1,4 - 5,5	1,4 - 6,5	1,4 - 6,8
Heated surface	mc	630	750	770
Flue gas flow rate (min-max)	kg/s	0,0048 - 0,0157	0,0048 - 0,0176	0,0048 - 0,0199
Draft (min-max)	Pa/mbar	5-9/0,05-0,09	5-10/0,05-0,1	5-10/0,05-0,1
Flue gas temperature (min-max)	°C	63,8 - 115	63,8 - 124	63,8 - 98
Boiler water	litri	60	60	60
Sanitary water capacity	litres/min	12,4	13,8	14
Maximum working pressure	Bar	2,5	2,5	2,5
Tank capacity	kg/litres	80 - 123	80 - 123	80 - 123
Smoke outlet tube	mm	100	100	100
Diameter air intake	mm	60	60	60
Connecting heating	Inch	3/4	3/4	3/4
Connecting sanitary water	Inch	1/2	1/2	1/2
Nominal voltage	V	230	230	230
Nominal frequency	Hz	50	50	50
Power consumption max	W	330	330	330
Power consumption at rated power	W	85 - 95	95	95
Power consumption at minimum power	W	70 - 90	70	70
Power consumption in standby	W	4	4	4
Water pressure (at 10 k)	mbar	285,9	405	466
Water pressure (at 20 k)	mbar	71,5	101,2	117
Autonomy of combustion (min - max)	h	14,5 - 56	9 - 56	8,5 - 56
Minimum temperature to return	°C	55	55	55
Noisiness (according to EN 15036-1)	dB	38	38	38
Boiler class		5	5	5
Boiler weight	Kg	290	290	290
Operation with respect to the smoke exhaust		Depression		
Boiler type		Not condensation		
Energy class		A+	A+	A+
IEE		118	118	119
Stars environmental decree		60 - 80° C		60 - 80° C
Operation range		★★★★☆	★★★★☆	★★★★☆
N° Test Report		K1949201 6Z1 - K19612016Z1 K12032016E8 - K12032019E41		
Dusts at 13% O2 Ref. Nominal thermal power	mg/m³	12	12	11

It is recommended that the control of emissions after installation.

Installation

For all the information and any further clarification, please refer to the UNI 10683: 2012.

Boiler room

Make sure that the room has requirements and characteristics comply with the standards in force. Also make sure that the floor of the room is suitable to support the weight of the boiler.
E 'must also drain into the room at least as much air as is required for a normal combustion: you have to practice then, in the walls of the room, the openings with a free section of at least 6 cm^2 per 1 kW (859.64 kcal / h). The minimum section of the opening must not be lower than 100 cm^2.
The section can be calculated using the following relationship:
$S = K * Q \geq 100$ cm^2, where "S" is expressed in cm^2, "Q" in kW, the "K" = 6 cm^2 / kW

These openings must be protected by grates, metal mesh or other suitable protection provided does not reduce the minimum section, and positioned so as to avoid them being obstructed.

The air flow can also be obtained from a room adjacent to the installation provided that the flow can occur freely through permanent openings communicating with the non-reclosable outer. The air flow must be smooth and clean air, unpolluted, and not taken from outlets that may be contaminated (example: garage)

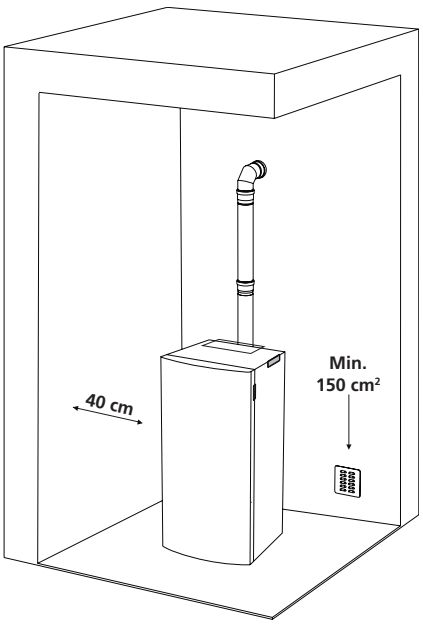
The adjacent with respect to the installation should not be placed in depression respect to the external environment by means of reverse draft caused by the presence in this space of another used appliance or intake device.

Flue pipe

To mount the smoke channels is imperative to use non-flammable and suitable to withstand the combustion products and any condensates, and comply with regulations.
- the flue must not be connected to any other fireplace, Boiler, boiler, or any kind of fume hood
- the flue must be properly spaced from combustible or flammable materials through air or suitable insulator
- according to UNI 10683/12, the boiler must not be in the same room as extractor fans, gas appliances and type B or devices which the local depression
- the internal section of the chimney must be uniform, preferably circular, square or rectangular sections must have rounded edges with a radius not less than 20 mm, the maximum ratio between the sides of 1.5; walls as smooth as possible and without restrictions, the regular curves without discontinuities, deviations from the axis no greater than 45°
- each device must have its own flue of section equal to or greater than the diameter of the flue gas pipe of the Boiler and a height of not less than that required
- it is forbidden to make fixed or mobile apertures on the chimney to connect equipment other than that to which it is subservient
- it is forbidden to run inside of the chimney, although oversized, other channels of supply of air and piping for utilities
- it is recommended that the chimney is equipped with a collection chamber for solid materials and any condensates located below the mouth of the barrel, so as to be easily opened and inspected by the door airtight
- the chimney must have section and internal form equivalent to that of the flue
- the chimney must have a useful outlet section not less than twice that of the flue
- the chimney must be constructed so as to prevent the penetration in the chimney of rain, snow, and foreign bodies in such a way that in case of winds in any direction or angle is assured the discharge of the combustion products (windproof cowl)
- the horizontal section should be a maximum length of about 2.3 meters, and you can use a maximum of three 90 ° bends
- in all changes of direction at 90 ° of the chimney must be possibly a tee with inspection
- all sections of the chimney should be inspected to make possible the periodic maintenance
- in the chimney it is necessary to prepare one or more measuring points in the event that you need to perform combustion analysis. These measuring points must be sealed.
- The device should not be installed in the flue shared.

Connection to the flue pipe

The flue pipe must have internal dimensions not larger than 20x20 cm, or diameter 20 cm. In the event of larger dimensions, or of the flue pipe being in poor condition (for example cracks, poor insulation, etc.), it is advisable to fit a stainless steel pipe of suitable diameter inside the flue pipe throughout its length, right up to the top.
Check with suitable instruments that there is a draught as indicated in the table. This type of connection ensures the evacuation of the fumes even in the event of a temporary power cut.
At the bottom of the flue pipe, provide an inspection cap to allow periodic checking and cleaning, which must be done annually. Make a gas-tight connection to the flue pipe, using pipes and connectors as recommended by us.
You must ensure that a windproof cowl should be fitted which complies with the standards in force



Connection to an external flue with insulated or double-wall pipe

The only type of pipe which is permissible is insulated (double-walled) stainless steel, smooth on the inside, fixed to the wall. Flexible stainless steel pipe must not be used. At the bottom of the flue pipe, provide an inspection cap to allow periodic checking and cleaning, which must be done annually. Make a gas-tight connection to the flue pipe, using pipes and connectors as recommended by us. You must ensure that a windproof cowl should be fitted which complies with the standards in force. Check with suitable instruments that there is a draught as indicated in the table.

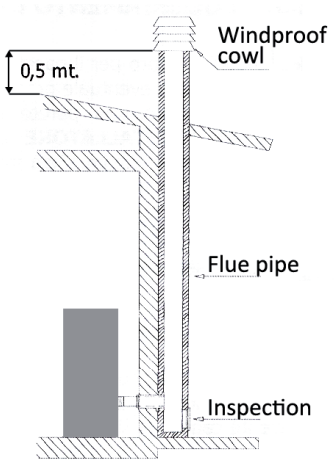


Fig. 2: connection to the flue pipe.

Connection to the flue pipe

For proper functioning, the connecting pipe between the Boiler and the chimney or flue duct must have a slope of not less than 3% in the horizontal stretches, the length of which must not exceed 2 metres and the vertical distance between one tee connector and another (change of direction) must not be less than 1,5 m. Check with suitable instruments that there is a draught as indicated in the table. At the botton of the flue pipe, provide an inspection cap to allow periodic checking and cleaning, which must be done annually. Make a gas-tight connection to the flue pipe, using pipes and connectors as recommended by us.

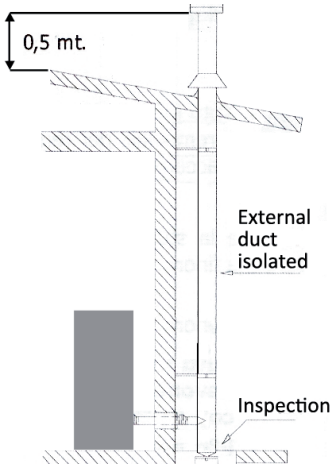
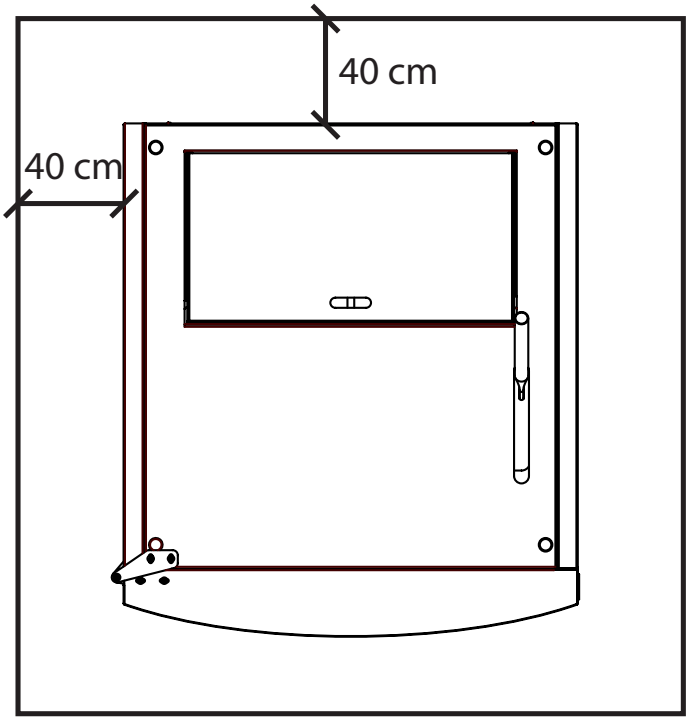
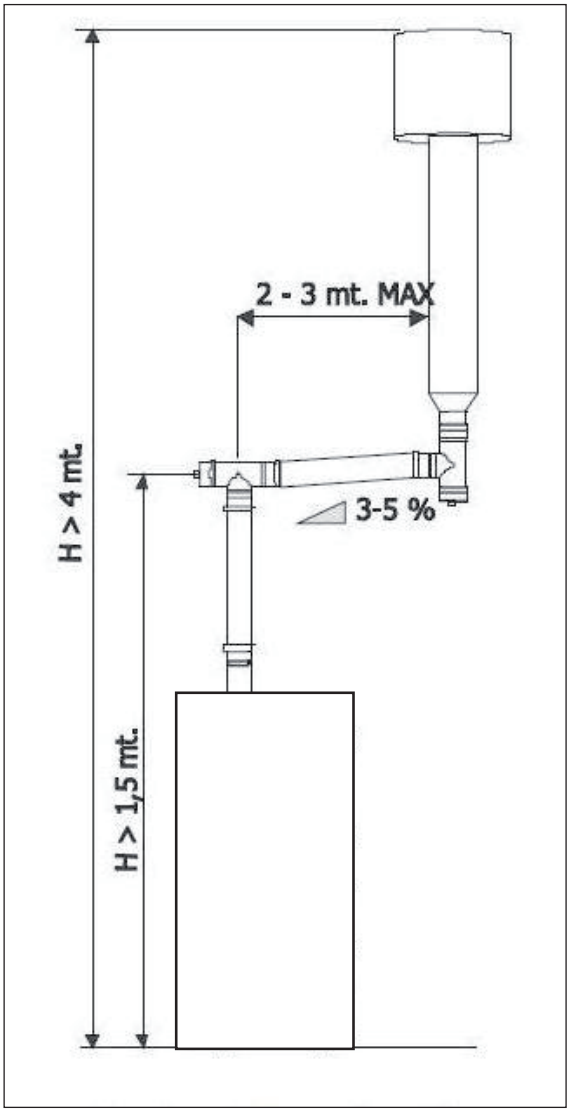


Fig. 3: connection to an external flue with insulated or double-wall pipe.

Distance to objects

The boiler should be inspected on all sides, so you have to keep a distance of at least 40 cm at the back and sides. It is also recommended to keep the pellets and all flammable materials at a suitable distance





REMARKS:

- the appliance must be installed by a qualified technician in possession of the technical and professional requirements according to the DM37/2008 that, under its responsibility, to ensure compliance with the rules of good technique.
- the boiler must be connected to a heating system and/or to a network of production of sanitary hot water, consistent with its performance and its power
- you need to keep in mind all laws and national, regional, provincial and municipal laws of the country in which you installed the device
- check that the floor is not flammable: if necessary use a suitable platform
- in the room where the generator must be installed to heat must not pre-exist or be installed with an extractor hood or ventilation ducts of the collective type.

Should these devices be located in adjacent rooms communicating with the installation, and 'prohibited the simultaneous use of the heat generator, where there is a risk that one of the two rooms being placed in depression than the other
- it is not permissible to install in bedrooms or bathrooms
- for hydraulic connections (see next chapter) it is advisable to use where possible of hoses
- the boiler is equipped with a flue gas fans for the extraction of exhaust gases and works in depression with respect to the combustion chamber;
- the boiler works with low flue gas temperatures. During installation take adequate measures to prevent the formation of condensation.

In order to achieve the test report results, please load the performance parameters retained by the manufacturer and the qualified technician. They will use these parameters once verified that, during the installation, it is possibile to reproduce the laboratory conditions.

Plumbing system connection

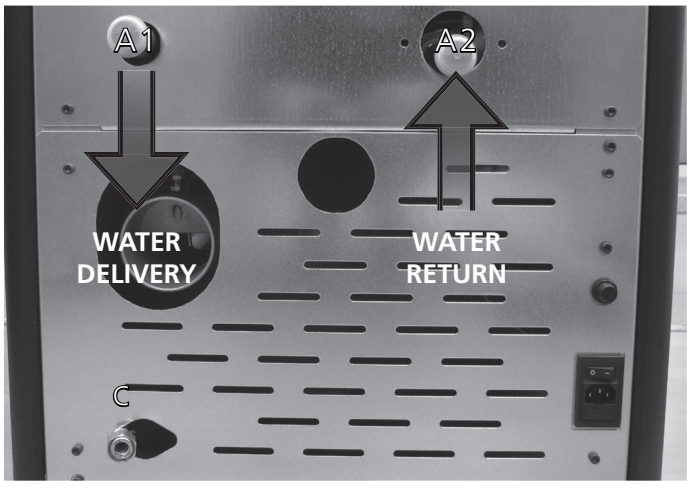
The connection of the boiler to the plumbing system must be made ONLY by specialized personnel who are capable of carrying out installation properly, in compliance with current standards in the country of installation. The manufacturer will not be held responsible for damage to persons or things in the event of failed operation if the aforementioned warning is not complied with. It is mandatory to install an anti-condensate valve on the return of the system, set at 60 ° C. The valve is not supplied with the boiler.

Closed vessel system

This product has been designed and built to work with closed vessel systems. In general, the closed vessel system has the following expansion as **the expansion vessel pre-loaded.**

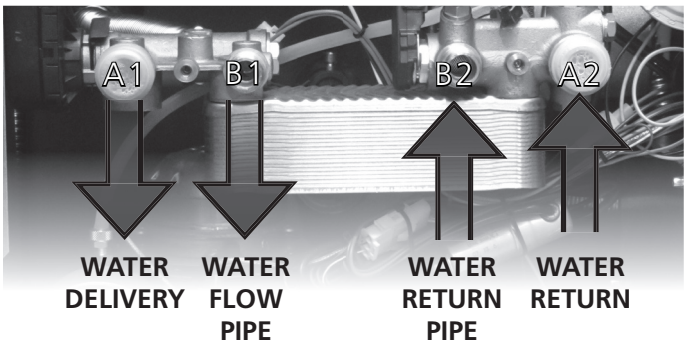
In addition to the expansion device, the closed vessel system must be provided in accordance with current Italian
UNI 10412-2 (2009) by:
- safety valve
- thermostat control of the circulator
- device alarm sounds
- temperature Indicator
- pressure indicator
- audio alarm
- automatic adjustment
- safety thermostat with manual reset
- circulation system

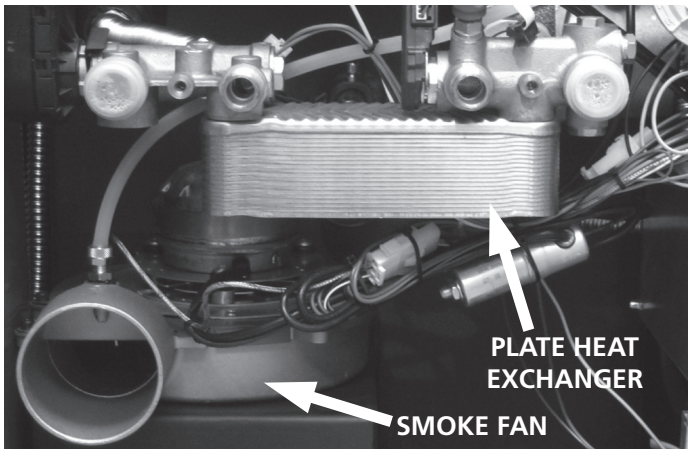
Diagram connection boiler



The pressure relief valve (C) must always be connected to a water drain pipe. The tube must be capable of with standing high temperature and pressure.

Connection diagram for boiler equipped with kit for domestic hot water production





A1 = heating water delivery 3/4 " M
A2 = heating water return 3/4 " M
B1 = domestic water flow pipe 1/2 " M
B2 = domestic water return pipe 1/2 " M

The boiler can also be equipped with a **full kit for the production of domestic hot water.**
This kit comprises:
- a plate heat exchanger
- a three-way diverter valve
- water flow switch
- pipes and unions for connection

The kit is preassembled by the manufacturer's task is to heat the domestic water from the water line of the dwelling. In the moment in which there is request for opening a hot water tap, the flow switch commands the diverter valve to convey the hot water contained inside of the boiler towards the plate heat exchanger.
In the case in which the heater is turned off and there is demand for sanitary water, the heater after 30 seconds from the request, it automatically starts the ignition process to heat the water inside the boiler and then to heat the sanitary water.

Directions for use

If the installation of the boiler provides interaction with another existing system complete with a heater (gas boiler, gas boiler, oil boiler, etc..) consult qualified personnel who can then answer the compliance of the system, as envisaged by the law in force.

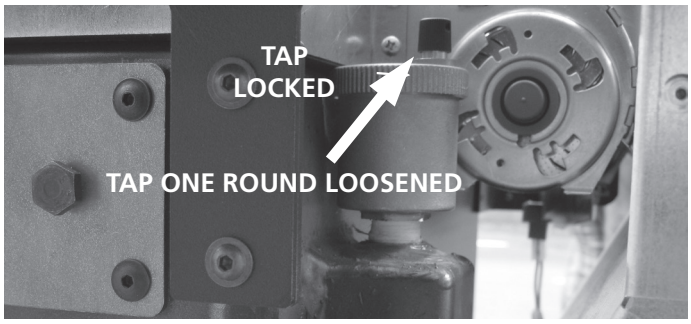
Flushing the system

In accordance with the UNI-CTI 8065 is strongly recommended to wash the entire system before connecting it in order to get rid of residues and deposits.

After flushing the system to protect it against corrosion and deposits, it is recommended the use of inhibitors.
Upstream from the Boiler, always install shutters so as to disconnect it from the plumbing system should it be necessary to move it, or when it requires routine and/or special maintenance. Connect the boiler using hoses so that the boiler is not too strictly connected to the system, and to allow slight movement.
These are as helpful as the supply and return piping system if the heating system is on a higher floor than the boiler.
The exhaust pipe pressure is connected temporarily to a carafe or a funnel to avoid, in case of overpressure, that the water gush bathrooms and the structure and the floor.

Filling the thermo Boiler funding of sanitary kit

Once all the water connections, proceed to check pressure seal by filling the boiler. During this operation, any air in the system is released from the automatic vent valve.



The filling pressure of the system when **COLD** must be **1 bar**. During operation, if the system pressure drops (due to evaporation of dissolved gases in the water) to values lower than the minimum indicated above, the user must use the filling tap to bring the pressure back up to its normal pressure.
For proper operation of the boiler when **HOT,** the pressure in the boiler must be **1,1 bar.**

Replenishment of the System

The replenishment has to be slowly carried out in order to let the air bubbles flow out through the right oulets that are placed on the heating system.

In heating systems with a closed circuit the loading cold pressure of the system and the inflation pressure of the expanding vase must correspond.

• in heating systems with open vase, the direct contact between the circulating liquid and the air is allowed. During the heating-season the user must regularly check the circulating water level in the expansion vase.The content of water in the system of recirculation must be stable hold.
Experiences show that the user must regularly check the water level every 14 days in order to maintain a stable water content.
The replenishment process must be carried out in case of necessity of more water when the boiler has cooled down. These preventive measures aim to prevent the insurgence of thermic stress of the steel body of the boiler.
• in systems with open vase, the pressure of water in boiler, when the system is cold, mustn't be lower than 0,3 bar;
• the water used to fill up the heating system must be decontaminate and without air.

The loading valve is required and must be provided in the hydraulic system.

This operation must be carried out with caution following these steps:
• open the vent's valve of the radiator ,of the boiler and the system;
• Gradually open the filling tap of the system checking that the automatic vent's valves, placed on the system, are regularly working;
• Close the vent's valves of the radiators as soon as the air flows out;
• check through the pressure gauge placed in the system that the pressure is reaching 1 bar (this is required only for systems with closed vase, you have to look for local rules that allow it); whereas for systems with open vase the restoration will be automatic;
• Close the filling tap of the system and then let the air flow out again through the vent's valve of the radiator;

You must not mix water of the heating system with antifreeze or anticorrosion substances in wrong concentrations.
This could ruin the seals and provoke the insurgence of noises while operating.
The producer refuses any responsibility for damages towards persons, animals or things if this warning will not be respected.

EN

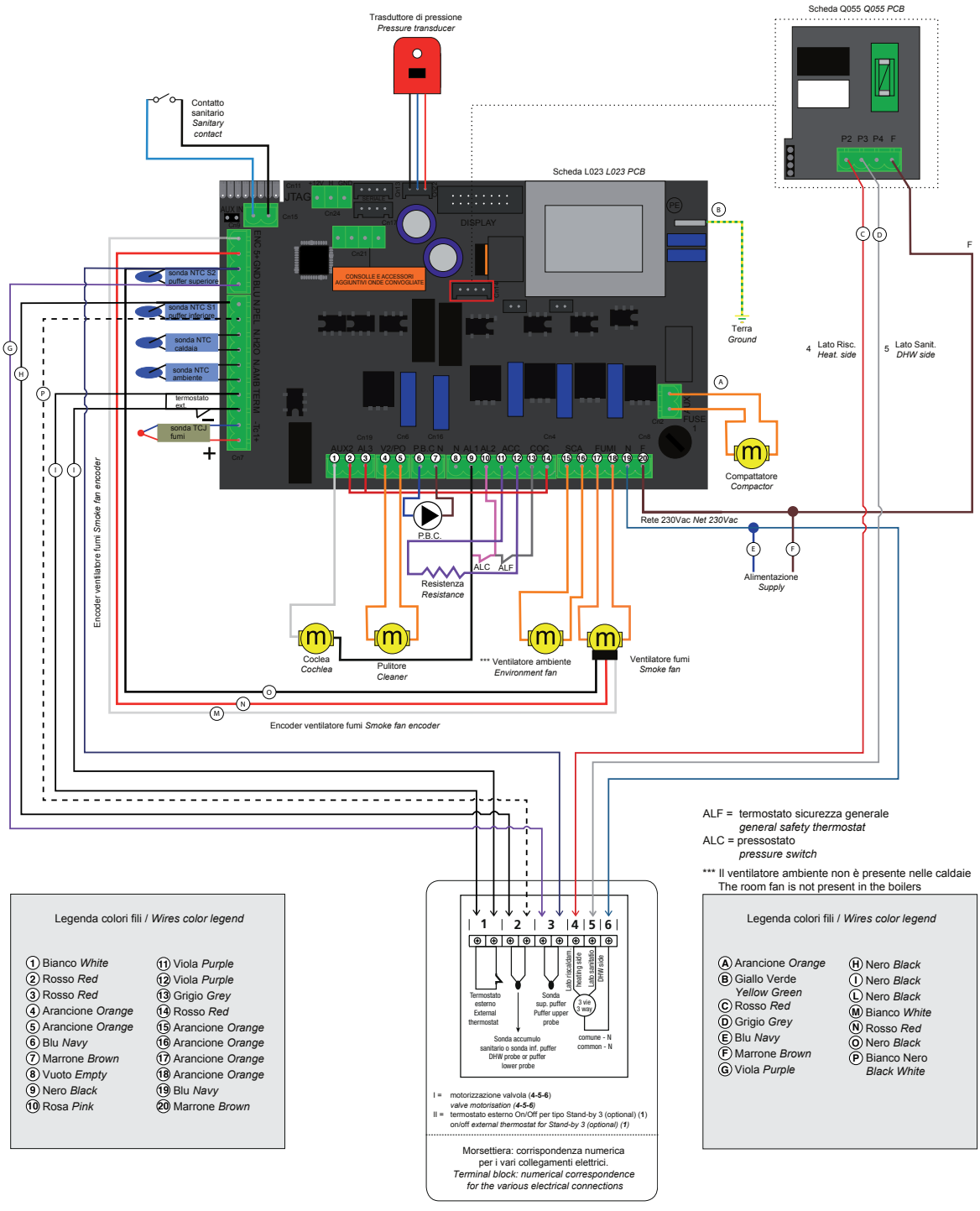
Configuration of the hydraulic diagram of the boiler

BY A SPECIALIZED TECHNICIAN

Before starting the boiler, it is necessary to configure the hydraulic scheme on which we want to work. The boiler is set up to receive the clean contact of an external thermostat (open / closed, the thermostat must not give tension to the back. If the thermostat carries voltage to the board causing faults, the warranty is void), two temperature probes and a motorized valve . All these components can be connected via the terminal board on the back of the boiler.

Electrical diagram of the control unit

Schema connessioni elettriche caldaia
Boiler electrical connection diagram



Per il tecnico specializzato:

To configure the hydraulic diagram, press the SET key and then scroll to the "Technical settings" menu with the power key. PPress the SET key again to enter the menu and enter the access key in possession of only the technician authorized by the manufacturer. Confirm the password using the set key and the key of the power go to menu 3 "hydraulic scheme". Confirm with the SET key and use the and keys to select the required hydraulic scheme number.

For end user:

It is possible to change the boiler operating principle according to the season by choosing between summer and winter. To select the season press SET, the season selection will appear on the display. Then press the set key again and select the season with keys 1 and 2. Once selected, press the ON / OFF key to exit.

The choice of season changes the boiler operation, see next chapter.

Following the principles of operation of the various hydraulic diagrams.

Important considerations:

- healthcare will always have priority
- There are three types of stand-by:
  Type 01: the ambient temperature detected by the probe on the board has reached the SET AIR set
  Type 02: the water temperature in the boiler has reached the SET H2O set
  Type 03: the external thermostat has detected that the desired temperature has been reached and therefore the contact is open.

In this specific case the boiler behaves as follows:

If the thermostat carries voltage to the card causing faults, the warranty will expire.
To configure the thermostat, simply remove the jumper on the THERM terminal (see the tab on page 16) and connect our room thermostat, OPERATION BY A SPECIALIZED TECHNICIAN.

How to select the type of Stand-by (OPERATION BY A SPECIALIZED TECHNICIAN):

Press the SET button; press button to go to menu 09. Press the SET button again. Enter the access key and confirm it by pressing the SET key again. Press the key to go to menu 9-5.

The display will show the different stand-by modes mentioned above, choose the mode using the and keys.

NOTE: The hydraulic scheme 00 is set by default, the WINTER season with stand-by mode 02.
When the Boiler is switched off manually or by programming, automatic ignitions exit from a stand-by state will not be possible.

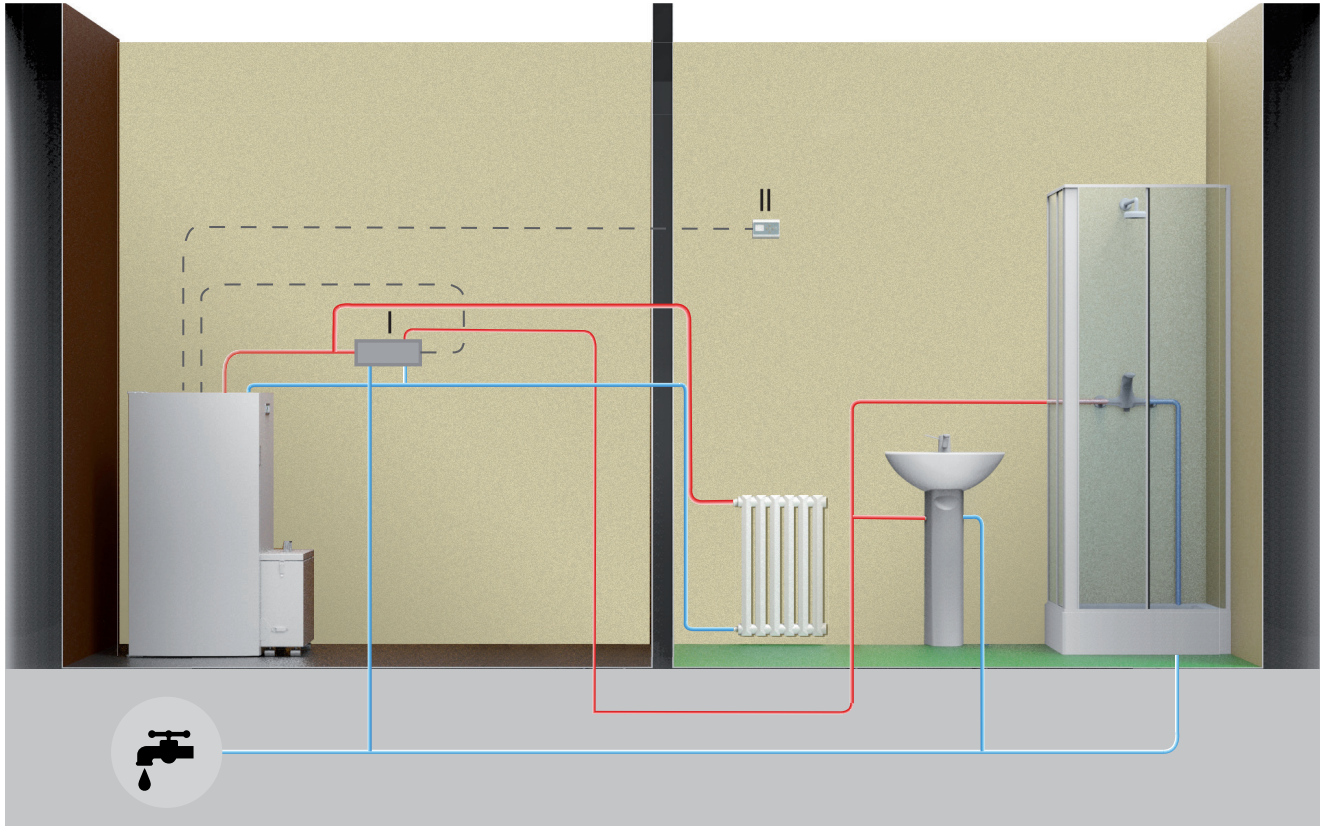
How to enable or disable the stand-by mode:

Press the SET button. With the key, go to menu 05 and confirm with the SET key. Use key sto select whether to enable (ON) or disable (OFF) the boiler stand-by function.

Press the ON / OFF button to exit

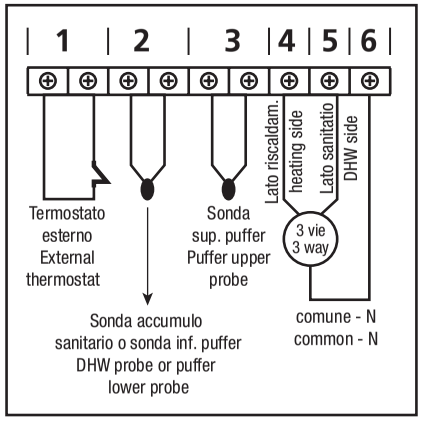
Let's see specifically the behavior of the boiler according to the hydraulic scheme, the presence and the stand-by mode and the chosen season.

Scheme 00: boiler/thermostove connected to the heating circuit and to a sanitary kit equipped with a flow switch installed from the producer only if specified when ordered. Defeated scheme, the absence of the sanitary kit does not cause problems to the functioning of the boiler/thermostove.
The scheme is indicative and wants to demonstrate only the components that can be managed by the boiler/thermostove.
Any relay pumps must be controlled separately from the boiler/thermostove.



I = Plate sanitary kit with integrated diverter valve
II = External thermostat ON / OFF or stand-by type 3 (optional) (**1**)

Terminal block: numerical correspondence for the various electrical connections.



a) To set the water temperature in the boiler/thermostove, press the . Increase or decrease degrees with the keys e .

b) To set the desired temperature in the room (using the probe on the board) press the key.
Increase or decrease degrees with the and keys.

c) To set the work power, press the key and adjust it with the e

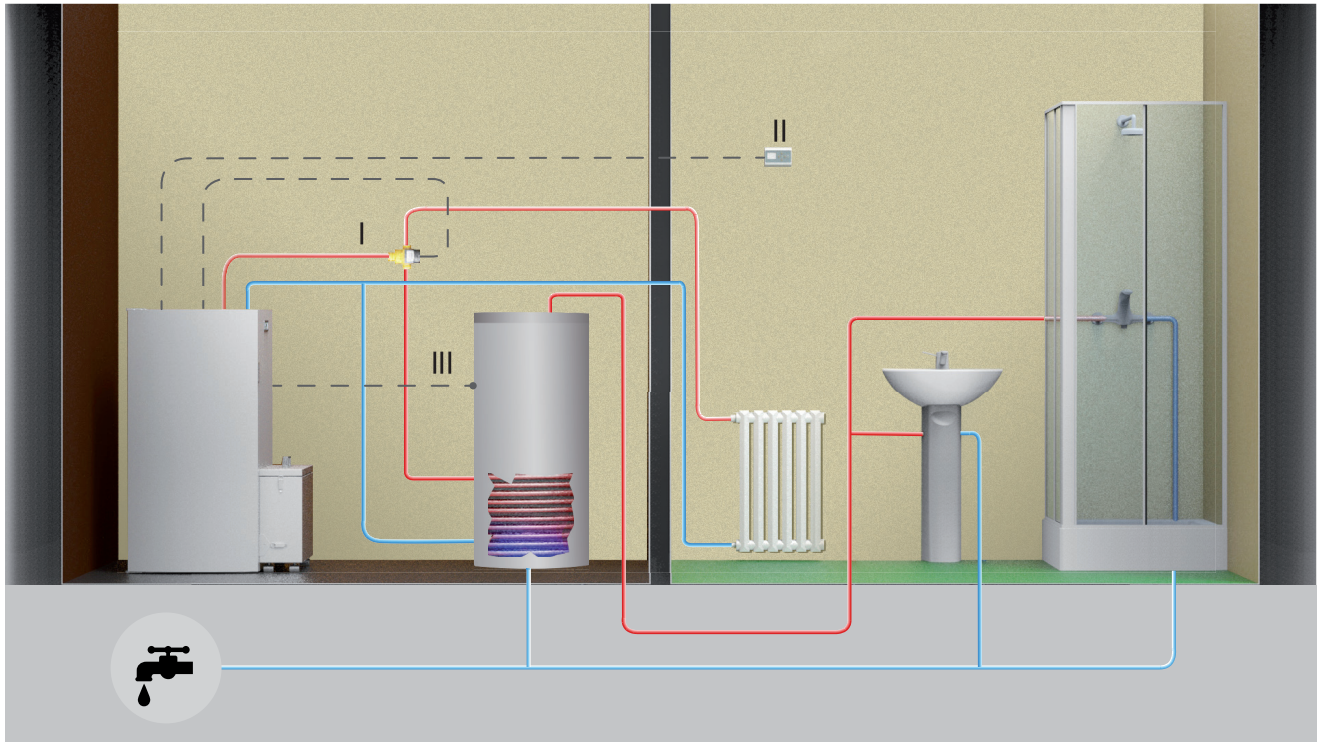
Reaction from the stand-by state is when a heat increase is required to return to a chosen stand-by condition (when it is set to ON) or when there is a health risk.

Hydraulic scheme		Stand-by	Stand-by type	Season	boiler/thermostove circulator status	boiler/thermostove status
HEATING + SANITARY	SANITARY DOES NOT CALL	OFF	01 (AMB.)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> SET H_2O (a) OR IF AMB PROBE. > AIR SET (b)
HEATING + SANITARY	HEALTH CALL	OFF	01 (AMB.)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> 80 ° C
HEATING + SANITARY	SANITARY DOES NOT CALL	ON	01 (AMB.)	WINTER	ON IF H_2O > PR. 25	STAND-BY IF AMB PROBE > SET AMB. (B); MODULE SE H2O> SET H_2O;
HEATING + SANITARY	HEALTH CALL	ON	01 (AMB.)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> 80 ° C
HEATING + SANITARY	SANITARY DOES NOT CALL	OFF	02 (H_2O)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> SET H_2O (a)
HEATING + SANITARY	HEALTH CALL	OFF	02 (H_2O)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> 80 ° C
HEATING + SANITARY	SANITARY DOES NOT CALL	ON	02 (H_2O)	WINTER	ON IF H_2O > PR. 25	STAND-BY IF PROBE H_2O> SET H_2O (a)
HEATING + SANITARY	HEALTH CALL	ON	02 (H_2O)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> 80 ° C
HEATING + SANITARY	SANITARY DOES NOT CALL	OFF	03 (TERM. ES.)	WINTER	ON IF H_2O > PR. 25	MODULE SE TERM. ES. SATISFIED OR IF H_2O PROBE> SET H_2O (a)
HEATING + SANITARY	HEALTH CALL	OFF	03 (TERM. ES.)	WINTER	ON IF H_2O > P PR. 25	MODULE SE PROBE H_2O> 80 ° C
HEATING + SANITARY	SANITARY DOES NOT CALL	ON	03 (TERM. ES.)	WINTER	ON IF H_2O > PR. 25	STAND-BY TERM. ES. SATISFIED; MODULE SE H_2O> SET H_2O; (B)
HEATING + SANITARY	HEALTH CALL	ON	03 (TERM. ES.)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> 80 ° C
HEATING + SANITARY	SANITARY DOES NOT CALL	OFF	ONLY 2 (H_2O)	SUMMER	ON IF H_2O > PR. 25	STAND-BY IF H_2O PROBE> SET FORWARD STAND-BY IN (a)
HEATING + SANITARY	HEALTH CALL	OFF	ONLY 2 (H_2O)	SUMMER	ON IF H_2O > PR. 25	MODULE SE PROBE H_2O> 80 ° C
HEATING + SANITARY	SANITARY DOES NOT CALL	ON	ONLY 2 (H_2O)	SUMMER	ON IF H_2O > PR. 25	STAND-BY IF PROBE H_2O> SET H_2O (a)
HEATING + SANITARY	HEALTH CALL	ON	ONLY 2 (H_2O)	SUMMER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> 80 ° C

NB: By setting the "Summer" command, the boiler/thermostove will go into standby and will only switch back on if there is a sanitary water call.

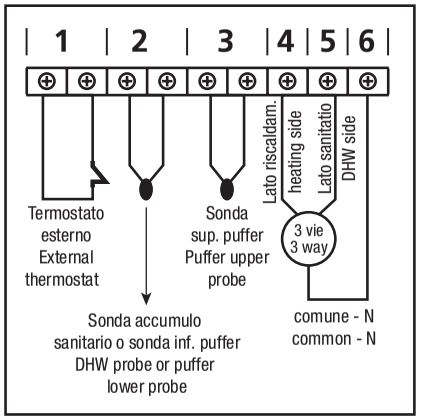
Scheme 01: the boiler/thermostove is connected to a domestic hot water tank and to the heating circuit.
During the "WINTER" mode the boiler/thermostove is switched off when the contact (thermostat) below is satisfied. The boiler/thermostove is switched on when the contact (thermostat) detects a temperature below SET ACS - ΔT (ΔT can be set by technical parameters).
By setting the "SUMMER" mode the temperature is considered always satisfied.

The scheme is indicative and wants to demonstrate only the components that can be managed by the boiler/thermostove. Any relay pumps must be controlled separately from the boiler/thermostove.



I = Valve motorization **(4 - 5 - 6)**
II = External thermostat ON / OFF or stand-by type 3 (optional) (**1**)
III = ON / OFF thermostat on ACS tank (**2**)

Terminal block: numerical correspondence for the various electrical connections.

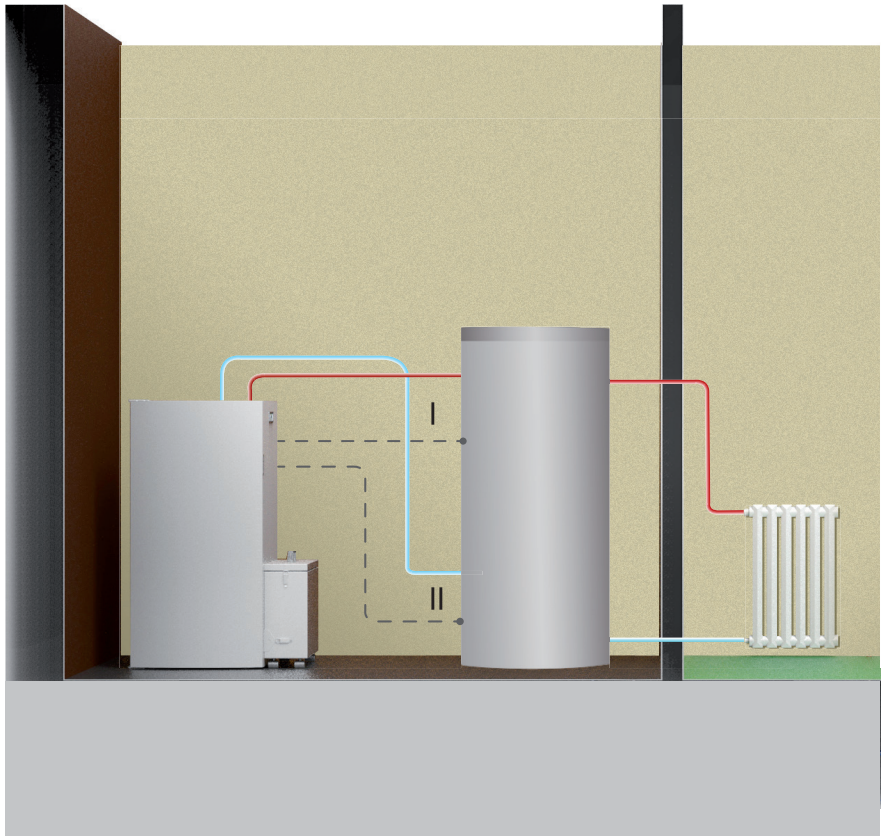


a) To set the water temperature in the boiler/thermostove, press the key. Increase or decrease degrees with keys and .
b) To set the desired temperature in the room (using the probe on the board) press the key. Increase or decrease degrees with keys and .
c) To set the work power press the key and adjust it with the and keys.

The rinsing from the stand-by state occurs automatically when a heat increase is required to return to satisfy the chosen stand-by condition (when this is set to ON) or when there is a health risk.

Hydraulic scheme		Stand-by	Stand-by state	Season	circulator heater condition	State heating boiler/thermostove
HEATING + ACS IN CONTACT	SANITARY DOES NOT CALL	OFF	01 (AMB.)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O> SET H_2O (a); IF AMB PROBE > AIR SET (b)
HEATING + ACS IN CONTACT	SANITARY IN CALL	OFF	01 (AMB.)	WINTER	ON IF H_2O > PR. 25 e H_2O > ACS	MODULE IF PROBE H_2O> 80 ° C
HEATING + ACS IN CONTACT	SANITARY DOES NOT CALL	ON	01 (AMB.)	WINTER	ON IF H_2O > PR. 25	MODULE SE H2O> SET H_2O; (a) STAND-BY IF AMB PROBE. > SET AMB .; (B)
HEATING + ACS IN CONTACT	SANITARY IN CALL	ON	01 (AMB.)	WINTER	ON IF H_2O > PR. 25 e H_2O > ACS	MODULE IF PROBE H_2O> 80 ° C
HEATING + ACS IN CONTACT	SANITARY DOES NOT CALL	OFF	02 (H_2O)	WINTER	ON IF H_2O > PR. 25	MODULE IF PROBE H_2O > SET H2O (a)
HEATING + ACS IN CONTACT	SANITARY IN CALL	OFF	02 (H_2O)	WINTER	ON IF H_2O > PR. 25 e H_2O > ACS	MODULE IF PROBE H_2O > 80°C
HEATING + ACS IN CONTACT	SANITARY DOES NOT CALL	ON	02 (H_2O)	WINTER	ON IF H_2O > PR. 25	STAND-BY IF PROBE H_2O > SET H2O (a)
HEATING + ACS IN CONTACT	SANITARY IN CALL	ON	02 (H_2O)	WINTER	ON IF H_2O > PR. 25 e H_2O > ACS	MODULE IF PROBE H_2O > 80°C
HEATING + ACS IN CONTACT	SANITARY DOES NOT CALL	OFF	03 (TERM. ES.)	WINTER	ON IF H_2O > PR. 25	MODULE IF EXTERNAL THERMOSTAT SATISFIED OR IF PROBE H_2O> SET H2O (a)
HEATING + ACS IN CONTACT	SANITARY IN CALL	OFF	03 (TERM. ES.)	WINTER	ON IF H_2O > PR. 25 e H_2O > ACS	MODULE IF PROBE H_2O > 80°C
HEATING + ACS IN CONTACT	SANITARY DOES NOT CALL	ON	03 (TERM. ES.)	WINTER	ON IF H_2O > PR. 25	STAND-BY EXTERNAL THERMOSTAT SATISFIED; MODULE IF H_2O> SET H_2O; (to)
HEATING + ACS IN CONTACT	SANITARY IN CALL	ON	03 (TERM. ES.)	WINTER	ON IF H_2O > PR. 25 e H_2O > ACS	MODULE IF PROBE H_2O > 80°C
HEATING + ACS IN CONTACT	SANITARY DOES NOT CALL	OFF/ON	01/02/03	SUMMER	ON IF H_2O > PR. 25	STAND-BY
HEATING + ACS IN CONTACT	SANITARY IN CALL	OFF/ON	01/02/03	SUMMER	ON IF H_2O > PR. 25 e H_2O > ACS	MODULE IF PROBE H_2O > 80°C

Scheme 02 : the boiler/thermostove is connected to a technical water puffer.
The boiler/thermostove is switched off when the lower contact (thermostat) is satisfied.
The boiler/thermostove is switched on when the upper contact (thermostat) is not satisfied.
The heating water will then be taken from this puffer by means of the pumps and the relays are not controlled by the boiler/thermostove control unit.

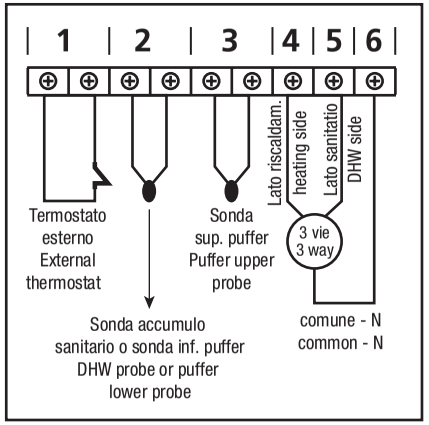


The scheme is indicative and wants to demonstrate only the components that can be managed by the boiler/thermostove. Any relay pumps must be controlled separately from the boiler/thermostove.

I = ON / OFF higher thermostat on Technical water Puffer (**3**)

II = ON / OFF lower thermostat on Technical water Puffer (**2**)

Terminal block: numerical correspondence for the various electrical connections.



a) To set the boiler/thermostove water temperature, press the . Increase or decrease the degrees with the and .

b) To set the desired temperature in the room (using the probe on the board) press the key.
Increase or decrease degrees with the and keys.

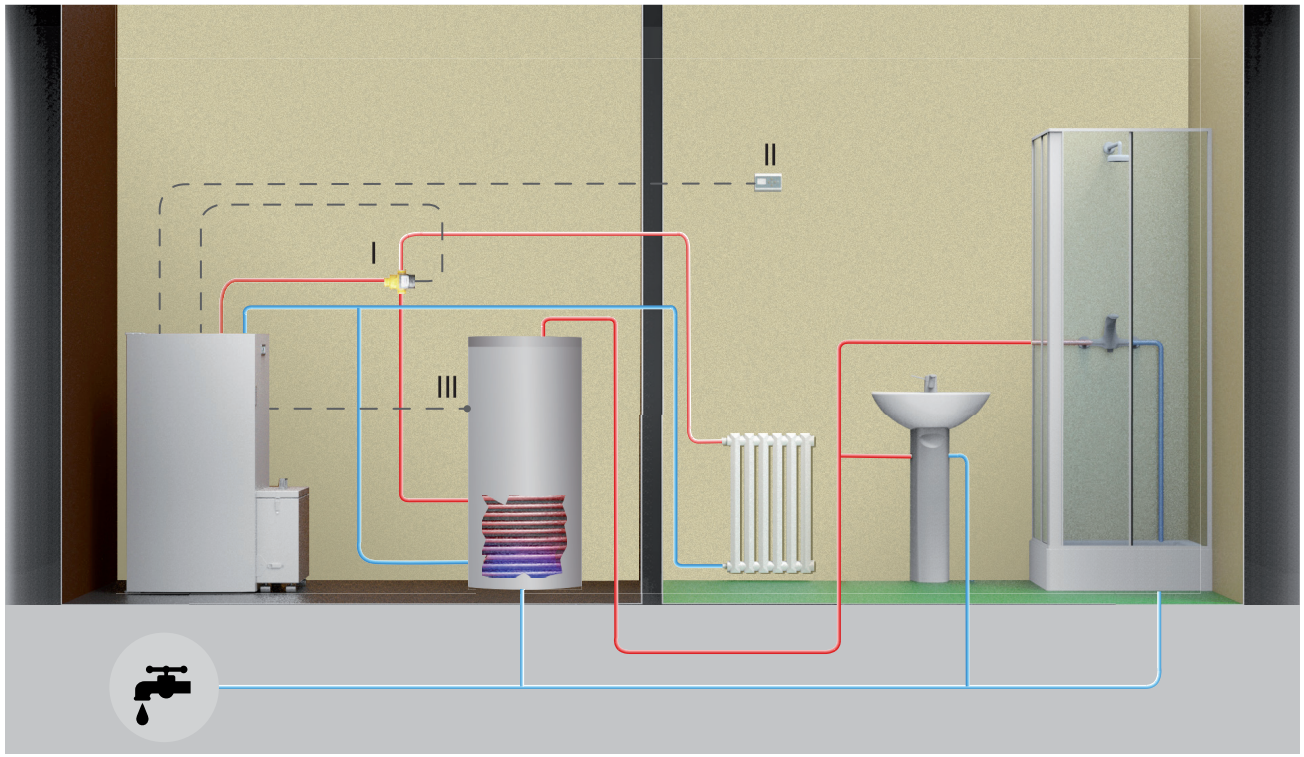
The working power is automatically set from the machine.

The rinsing from the stand-by state occurs automatically when a heat increase is required to return to satisfy the chosen stand-by condition (when this is set to ON) or when there is a risk of hot water inside the puffer.

Hydraulic scheme		Stand-by	Stand-by state	Season	Circulator heater condition	State heating boiler/thermostove
CONTACT PUFFER	LOW AND HIGH THERMOSTAT DO NOT CALL	OFF	01/02/03	WINTER / SUMMER	ON IF H_2O > PR 25	MODULE AND IF H_2O PROBE> 80 ° STAND-BY FORCE
CONTACT PUFFER	LOW THERMOSTAT CALLS AND HIGH DOES NOT CALL	OFF	01/02/03	WINTER / SUMMER	ON IF H_2O > PR 25	WORK AND IF H_2O PROBE> 80 ° MODULE
CONTACT PUFFER	LOW AND HIGH CALL THER-MOSTAT	OFF	01/02/03	WINTER / SUMMER	ON IF H_2O > PR 25	WORK AND IF H_2O PROBE> 80 ° MODULE
CONTACT PUFFER	LOW THERMOSTAT DOES NOT CALL AND HIGH CALL	OFF	01/02/03	WINTER / SUMMER	ON IF H_2O > PR 25	WORK AND IF H_2O PROBE> 80 ° MODULE
CONTACT PUFFER	LOW AND HIGH THERMOSTAT DO NOT CALL	ON	01/02/03	WINTER / SUMMER	OFF	STAND-BY
CONTACT PUFFER	LOW THERMOSTAT CALLS AND HIGH DOES NOT CALL	ON	01/02/03	WINTER / SUMMER	ON IF H_2O > PR 25	WORK AND IF H_2O PROBE> 80 ° MODULE
CONTACT PUFFER	LOW AND HIGH CALL THER-MOSTAT	ON	01/02/03	WINTER / SUMMER	ON IF H_2O > PR 25	WORK AND IF H_2O PROBE> 80 ° MODULE
CONTACT PUFFER	LOW THERMOSTAT DOES NOT CALL AND HIGH CALL	ON	01/02/03	WINTER / SUMMER	ON IF H_2O > PR 25	WORK AND IF H_2O PROBE> 80 ° MODULE

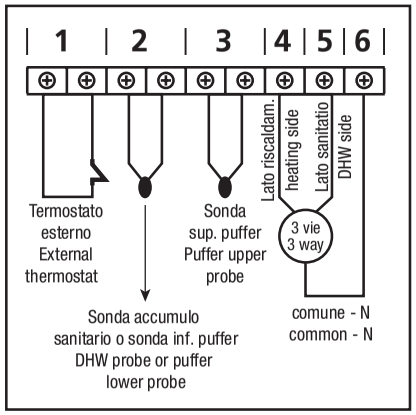
Scheme 03: the boiler/thermostove is connected to a domestic hot water tank and to the heating circuit.
During the "WINTER" mode the boiler/thermostove is switched off when the probe is satisfied. The boiler/thermostove is switched on when the probe detects a lower temperature to SET DHW - ΔT (ΔT settable by technical parameters). By setting the "SUMMER" mode the temperature is considered always satisfied.

The scheme is indicative and wants to demonstrate only the components that can be managed by the boiler/thermostove.
Any relay pumps must be controlled separately from the boiler/thermostove.



I = Valve motorization (**4 - 5 - 6**)
II = External thermostat ON / OFF or stand-by type 3 (optional) (**1**)
III = NTC10K probe on DHW tank (**2**)

Terminal block: numerical correspondence for the various electrical connections.



a) To set the water temperature in the boiler/thermostove press the key. Increase or decrease the degrees with the keys and .
b) To set the desired temperature in the room (using the probe on the board) press the key . Increase or decrease degrees with the and keys.
c) To set the work power, press the key and adjust it with the and keys.
d) To adjust the temperature inside the DHW tank, press the button . Increase or decrease the desired degrees with the and .

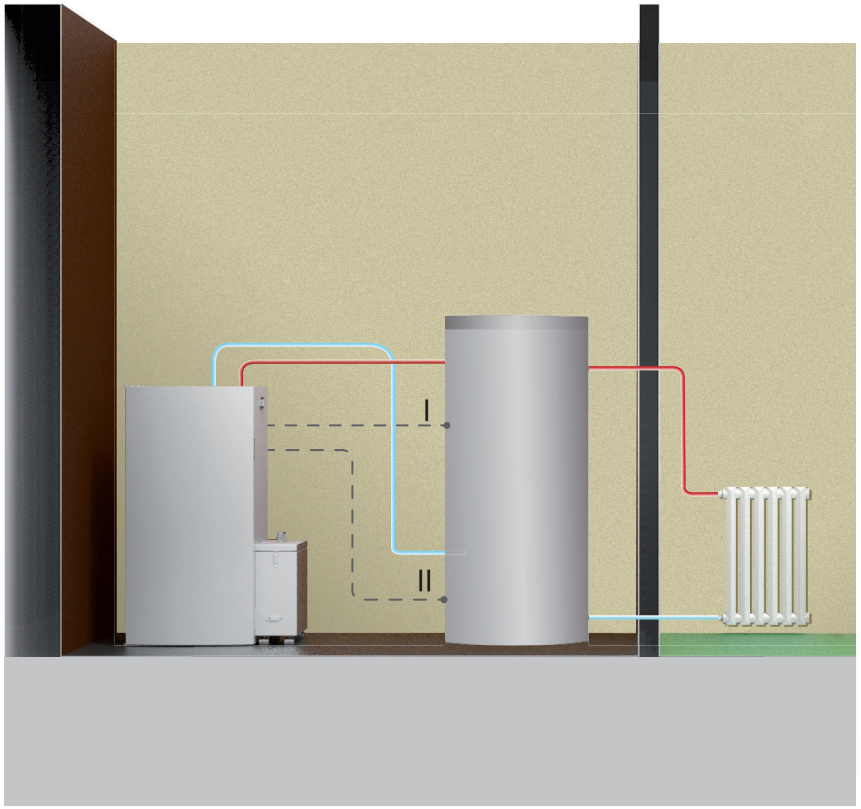
Sanitary water will always have priority on the heating.

The rinsing from the stand-by state occurs automatically when a heat increase is required to return to satisfy the chosen stand-by condition (when this is set to ON) or when there is a risk of hot water inside the DHW tank.

Hydraulic scheme		Stand-by	Stand-by state	Season	Circulator heater condition	State heating boiler/thermostove
HEATING + DHW WITH PROBE	PROBE ACS > SET ACS.	OFF	01 (AMB.)	WINTER	ON IF H_2O > PR 25	RATED HEAT INPUT IF H_2O PROBE> SET H_2O (a) OR IF AMB PROBE > SET (b)
HEATING + DHW WITH PROBE	PROBE ACS < SET ACS.	OFF	01 (AMB.)	WINTER	ON IF H_2O > SON ACS + 3° AND IF H_2O> PR 25	OPERATION AND RATED HEAT INPUT IF PROBE H_2O> SET DHW +10 (d)
HEATING + DHW WITH PROBE	PROBE ACS > SET ACS.	ON	01 (AMB.)	WINTER	ON IF H_2O > PR 25	STAND-BY IF AMB PROBE > AIR SET (b)
HEATING + DHW WITH PROBE	PROBE ACS < SET ACS.	ON	01 (AMB.)	WINTER	ON IF H_2O > ACS + 3° AND IF H_2O> PR 25	OPERATION AND RATED HEAT INPUT IF PROBE H_2O> SET ACS +10 (d)
HEATING + DHW WITH PROBE	PROBE ACS > SET ACS.	OFF	02 (H_2O)	WINTER	ON IF H_2O > PR 25	RATED HEAT INPUT IF PROBE H_2O> SET H_2O (a)
HEATING + DHW WITH PROBE	PROBE ACS < SET ACS.	OFF	02 (H_2O)	WINTER	ON IF H_2O > ACS + 3° AND IF H_2O> PR 25	OPERATION AND RATED HEAT INPUT IF PROBE H_2O> SET ACS +10 (d)
HEATING + DHW WITH PROBE	PROBE ACS > SET ACS.	ON	02 (H_2O)	WINTER	ON IF H_2O > PR 25	STAND-BY IF PROBE H_2O> SET H_2O (a)
HEATING + DHW WITH PROBE	PROBE ACS < SET ACS.	ON	02 (H_2O)	WINTER	ON IF H_2O > ACS + 3° AND IF H_2O> PR 25	RATED HEAT INPUT IF PROBE H_2O> SET ACS +10 (d)
HEATING + DHW WITH PROBE	PROBE ACS > SET ACS.	OFF	03 (TERM. ES.)	WINTER	ON IF H_2O > PR 25	RATED HEAT INPUT IF THERMOSTAT EXTERNAL SATISFIED
HEATING + DHW WITH PROBE	PROBE ACS < SET ACS.	OFF	03 (TERM. ES.)	WINTER	ON IF H_2O > ACS + 3° AND IF H_2O> PR 25	OPERATION AND RATED HEAT INPUT IF PROBE H_2O> SET ACS +10 (d)
HEATING + DHW WITH PROBE	PROBE ACS > SET ACS.	ON	03 (TERM. ES.)	WINTER	ON IF H_2O > PR 25	STAND-BY THERMOSTAT EXTERNAL SATISFIED; RATED HEAT INPUT IF H_2O> SET H_2O (a);
HEATING + DHW WITH PROBE	PROBE ACS < SET ACS.	ON	03 (TERM. ES.)	WINTER	ON IF H_2O > ACS + 3° AND IF H2O> PR 25	OPERATION AND RATED HEAT INPUT IF PROBE H_2O> SET ACS +10 (d)
HEATING + DHW WITH PROBE	PROBE ACS > SET ACS.	OFF/ON	ONLY 2 (H_2O)	SUMMER	ON IF H_2O > ACS + 3° AND IF H_2O> PR 25	STAND-BY IF DHW PROBE> SET ACS + 1 AND FORCE ST-BY IN ON (d)
HEATING + DHW WITH PROBE	PROBE ACS < SET ACS.	OFF/ON	ONLY 2 (H_2O)	SUMMER	ON IF H_2O > ACS + 3° AND IF H_2O> PR 25	OPERATION AND RATED HEAT INPUT IF PROBE H_2O> SET ACS +10 (d)

Once the “Stand-by” condition is satisfied, before the shutdown, a time set by parameter must pass without a change of state.

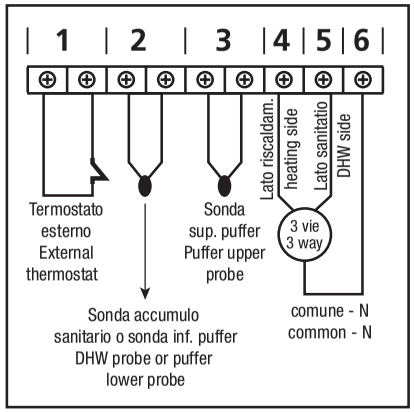
Scheme 04 : the boiler/thermostove is connected to a technical water puffer.
The boiler/thermostove is turned off when the lower probe is satisfied.
The heating boiler/thermostove is switched on when the upper probe is not satisfied.
The heating water will then be taken from this puffer by means of the pumps and the non-commanding relay from the boiler/thermostove's control unit.



The scheme is indicative and wants to demonstrate only the components that can be managed by the boiler/ thermostove. Any relay pumps must be controlled separately from the boiler/thermostove

I = Upper probe NTC10K on technical water puffer (**3**)
II = Lower probe NTC10K on technical water puffer (**2**)

Terminal block: numerical correspondence for the various electrical connections.



a) To set the temperature at the top of the puffer, press the key. Use the and keys to select the desired degrees
b) To set the temperature on the bottom of the puffer, press the key and use the e and B keys to select the desired degrees

The working power is set automatically by the machine.

N.B. For correct operation the upper SET must be set at a lower temperature than the lower SET.

Hydraulic scheme		Stand-by	Stand-by state	Season	3 way	Circulator heater condition	State heating boiler/thermostove
2-SIDE PUFFER (4)	S1 E S2 > SET PUFFER	OFF	01/02/03	WINTER / SUMMER	OFF	ON IF H_2O > PR 25 AND H_2O >S1+3°	RATED HEAT INPUT AND IF H_2O PROBE> 80 ° STAND-BY FORCE
2-SIDE PUFFER (4)	S1 E S2 < SET PUFFER	OFF	01/02/03	WINTER / SUMMER	ON	ON IF H_2O > S1 + 3° H_2O> PR 25	H_2O PROBE> 80 ° RATED HEAT INPUT
2-SIDE PUFFER (4)	S1 E S2 > SET PUFFER	ON	01/02/03	WINTER / SUMMER	OFF	OFF	STAND-BY
2-SIDE PUFFER (4)	S1 E S2 < SET PUFFER	ON	01/02/03	INVERNO/ ESTATE	ON	ON IF H_2O > S1 + 3° H_2O> PR 25	H_2O PROBE> 80 ° RATED HEAT INPUT

Stand-by is recommended to ON

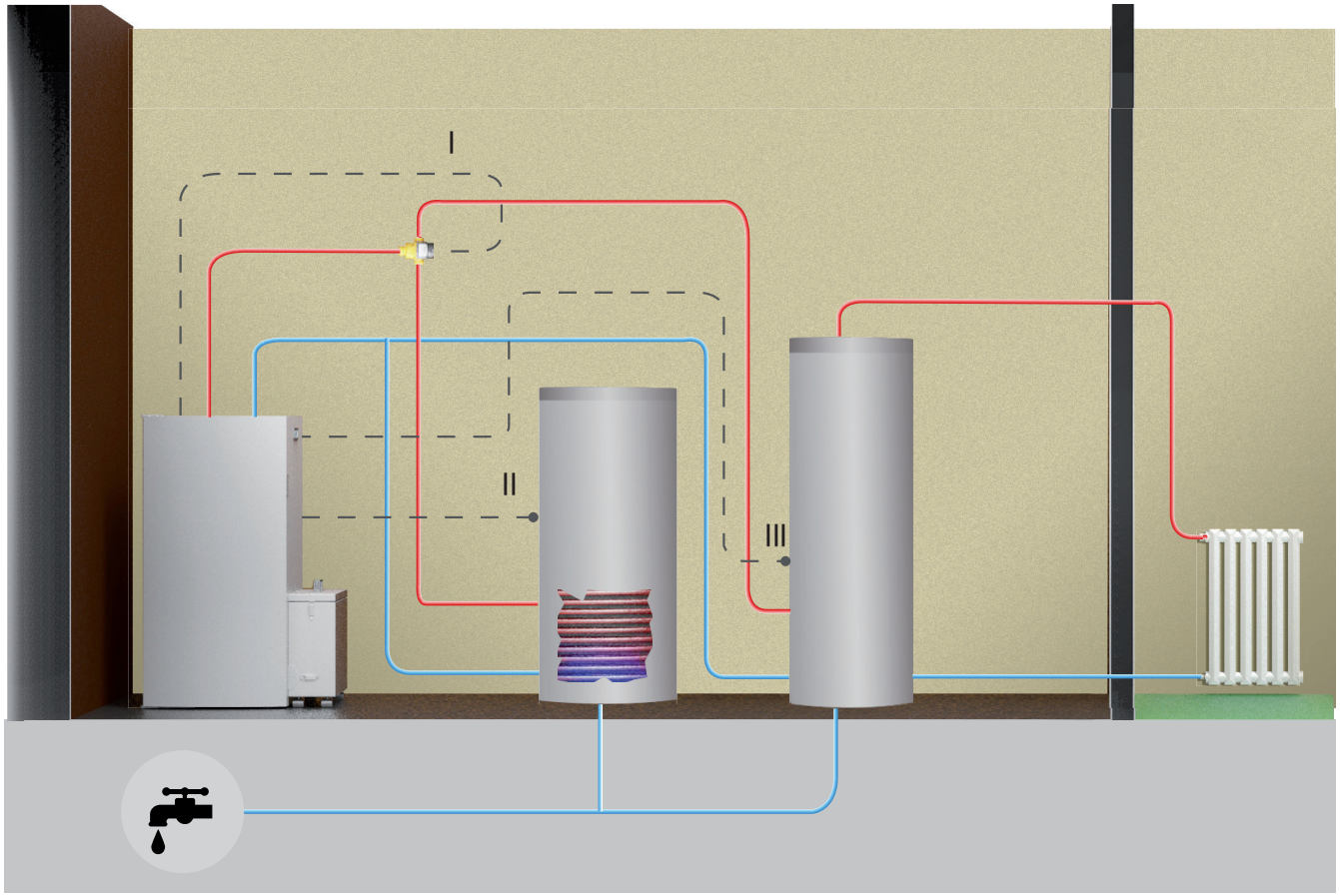
S1: Upper Probe (I)

S2: Lower Probe (II)

It is possible that the circulator works despite the boiler/thermostove is set on “OFF” or “STAND BY”. This happens because the temperature of the water inside the boiler/thermostove is higher than the temperature of the puffer’s top.

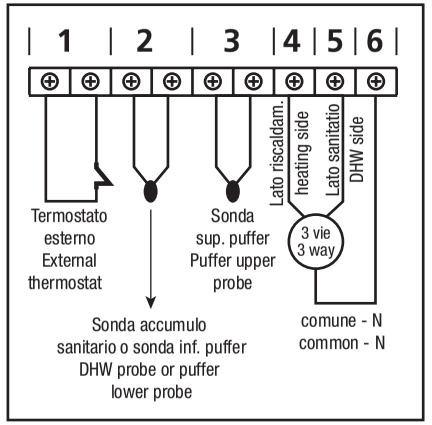
Scheme 05 : the boiler/thermostove is connected to a technical water puffer and to an ACS tank.
The boiler/thermostove is switched off when all the probes are satisfied. The boiler/thermostove is switched on when one of the probes is on call.
The heating water will then be taken from this puffer by means of the pumps and the relays are not controlled by the boiler/thermostove control unit.

The scheme is indicative and wants to demonstrate only the components that can be managed by the boiler/thermostove. Any relay pumps must be controlled separately from the boiler/thermostove.



I = Valve motorization (**4-5-6**)
II = NTC10K probe on ACS tank (**2**)
III = NTC10K probe on Technical water Puffer (**3**)

Terminal block: numerical correspondence for the various electrical connections.



a) To set the temperature in the DHW tank, press the key. Use the and keys to select the desired degrees
b) To set the temperature in the technical water puffer, press the key and use the and keys to select the desired degrees
c) To set the work power press the key and adjust it with the keys and

Sanitary water will always have priority on the heating.

Hydraulic scheme		Stand-by	Stand-by state	Season	Pomp	State heating boiler/thermostove
PUFFER + DHW PROBE BOILER/ THERMOSTOVE	DHW PROBE <DHW SET AND PUFFER PROBE> SET PUFFER	OFF	01/02/03	WINTER	ON IF $H_2$0 > DHW PROBE +3°	RATED HEAT INPUT AND IF H_2O PROBE> 80 ° STAND-BY FORCE
PUFFER + DHW PROBE BOILER/ THERMOSTOVE	DHW PROBE < DHW SET AND PUFFER PROBE > SET PUFFER	ON	01/02/03	WINTER	ON IF H_2O> DHW PROBE +3° IF H_2O> PR 25	OPERATION AND RATED HEAT INPUT H_2O PROBE> 80 °
PUFFER + DHW PROBE BOILER/ THERMOSTOVE	DHW PROBE > DHW SET AND PUFFER PROBE < SET PUFFER	ON	01/02/03	WINTER	ON IF H_2O> PUFFER +3° H_2O> PR 25	OPERATION AND RATED HEAT INPUT PROBE H_2O> 80 °
PUFFER + DHW PROBE BOILER/ THERMOSTOVE	DHW PROBE > DHW SET AND PUFFER PROBE < SET PUFFER	OFF	01/02/03	WINTER	ON IF H_2O> PROBE PUFFER + 3° H_2O> PR 25	OPERATION AND RATED HEAT INPUT H_2O PROBE> 80 °
PUFFER + DHW PROBE BOILER/ THERMOSTOVE	DHW PROBE > DHW SET AND PUFFER PROBE > SET PUFFER	OFF	01/02/03	WINTER	ON IF $H_2$0+5 > PROBE PUFFER	RATED HEAT INPUT
PUFFER + DHW PROBE BOILER/ THERMOSTOVE	DHW PROBE > DHW SET AND PUFFER PROBE > SET PUFFER	ON	01/02/03	WINTER	ON IF H_2O > PROBE DHW AND IF H_2O> PR PUMP ON	STAND-BY
PUFFER + DHW PROBE BOILER/ THERMOSTOVE	SONDA DHW > SET DHW	OFF/ON	SOLO 2 (H_2O)	SUMMER	ON IF H_2O > PROBE DHW +3° H_2O> PR 25	STAND-BY IF DHW PROBE> SET DHW + 1 AND FORCE ST-BY IN ON
PUFFER + DHW PROBE BOILER/ THERMOSTOVE	SONDA DHW < SET DHW	OFF/ON	SOLO 2 (H_2O)	SUMMER	ON IF H_2O > PROBE DHW +3° H_2O> PR 25	RATED HEAT INPUT IF H_2O PROBE> SET DHW +10

When the boiler/thermostove is working and the H_2O's boiler/thermostove= SET ACS +10° → pass in modulation

NB: Keeping the "SUMMER" command set, the technical water Puffer is always considered satisfied.

EN

Ignition

Remove any components which might burn from the firebox and from the glass (various instructions and adhesive labels)

Charge pellet

Fuel is loaded from the upper part by opening a door. Pour the pellets in the hopper. When empty, this is easier if performed in two steps:
- Pour half of the contents of the bag into the hopper and wait for the fuel to settle on the bottom.
- Then pour in the rest.

Never remove the protection grille in the hopper. When filling, do not let the sack of pellets touch any hot surfaces.

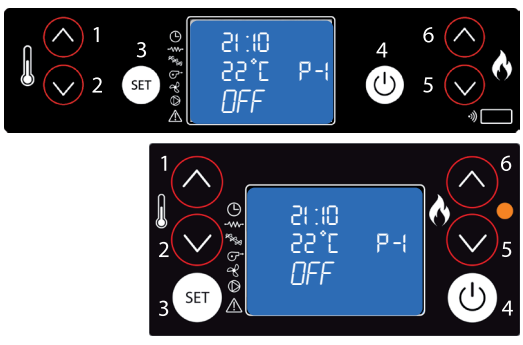
The brazier should be cleaned before each starting.

Control Panel

Button ⏻ is used to switch the machine on/off and to exit programming.
Buttons and are used to adjust temperature, for displays and for the programming functions.
Buttons and are used to adjust heating power.

LED	SYMBOL	DESCRIPTION
1		The LED lights up when a program is active.
2		The LED lights up when the resistance is active.
3		The LED lights up when the loading of pellet is active.
4		The LED lights up when the smoke fan is active.
5		The LED lights up when the room fan is active. (where present)
6		The LED lights up when the circulator is active. (Boilers and thermostoves)
7		The LED lights up when there is a warning.

1. Temperature increase
2. Temperature decrease
3. Key SET
4. Pulsante on/off
5. Operating power decrease
6. Operating power increase



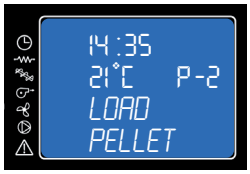
For our products use pellets diameter 6 mm, length 30 mm and a maximum of 6% and A1 certified according to the UNI EN ISO 17225-2 standard. Keep the pellets away from heat sources and not in humid environments or with explosive atmosphere.

Preliminary checks
Before switching on the machine, make sure that the pellet hopper is full, the combustion chamber is clean, the glass door is closed, the power supply plug is connected and the switch on the back is set to "1."

Information on the display

TURNED OFF
The machine is off.

TURNED ON
The machine is in the first ignition phase. The glow plug and fume extractor are active.



LOAD PELLET
In this phase of the ignition process the machine starts loading the pellets into the brazier. The glow plug, the fume extractor and the cochlea engine are active.

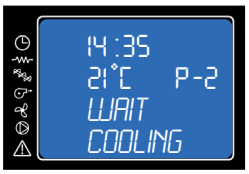
FIRE PRESENT
In this phase of the ignition process the machine starts loading the pellets into the brazier. The fume extractor and the cochlea engine are active.

WORK
The machine is working, in this case at power 3. The detected room temperature is 21 ° C. During normal work, the fumes fan, the auger motor and the room fan are active.

BRAZIER CLEANING
The machine is cleaning the basket. The smoke extractor runs at maximum speed and the pellet load is at minimum.

OK STAND BY
All the requests have been satisfied and the machine is ready for the "STAND BY" mode.

HOLD REQUEST
The machine is in a "STAND BY" mode as everything has been satisfied and is waiting for an heating request to turn on.



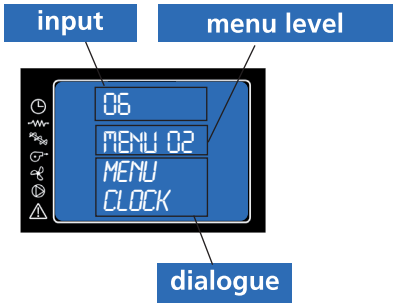
WAIT COOLING
The machine has to complete the cooling cicle before turning on again.

Programming menu

Menu 02 SET CLOCK

To access the set clock option, press the "SET" button (3), with the button (5) scroll through the submenus until MENU 02 - SET CLOCK and with buttons 1 and 2 select the current day. Press the "SET" button (3) to confirm. Then use buttons 1 and 2 to set the time and press "SET" (3) to advance to the minutes setting by pressing buttons 1 and 2. By pressing set again it's possible to access various submenus in order to set the date, day, month, and year. To do so, repeat the steps indicated above, using buttons 1, 2, and 3. The following table briefly describes the structure of the menu, focusing only on those selections which are available to the user.

level 1	level 2	level 3	level 4	value
02 - set clock				
	01 - day			day of the week
	02 - hour			hour
	03 - minutes			minutes
	04 - day			day of the month
	05 - month			month
	06 - year			year



Set the current time and date. The device comes equipped with a lithium battery that allows the internal clock to operate autonomously for over 3-5 years.

Menu 03 SET CHRONO

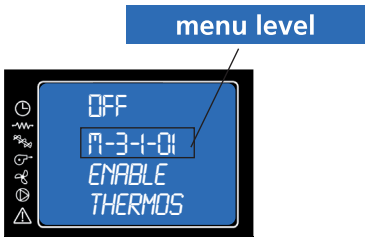
Press the "SET" button (3) and then button 5 to arrive at the desired menu; press "SET" (3) to enter. Enter menu M-3-1 and with buttons 1 and 2 select whether or not to activate the thermostat (on/off), which allows you to program the automatic ignition of the machine. Once the thermostat is activated/ deactivated, press button "4" (OFF) and continue scrolling though the submenus using button 5. Select which submenu you wish to enter in order to access the daily, weekly, and weekend programmes.
To set the ignition times and days repeat the previous steps:
- access the submenu using "SET" (3)
- adjust the days, times, and activation status (on/off) with buttons 1 and 2
- confirm by pressing the "SET" button (3)
- exit from the submenu/menu with button 4 to turn it off

The following table briefly describes the structure of the menu, focusing only on those selections which are available to the user.

level 1	level 2	level 3	level 4	value
03 - set thermostat				
	01 - activate thermos.			
		01 - activate thermos.		on/off
	02 - day programme			
		01 - daily thermostat		on/off
		02 - start 1 day		hour
		03 - stop 1 day		hour
		04 - start 2 day		hour
		05 - stop 2 day		hour

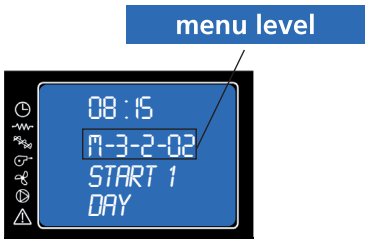
level 1	level 2	level 3	level 4	value
03 - set thermostat				
	01 - activate thermos.			
		01 - activate thermos.		on/off
	02 - day programme			
		01 - daily thermostat		on/off
		02 - start 1 day		hour
		03 - stop 1 day		hour
		04 - start 2 day		hour
		05 - stop 2 day		hour
	03 - week program.			
		01 - week thermostat		on/off
		02 - start program. 1		hour
		03 - stop program. 1		hour
		04 - monday progr. 1		on/off
		05 - tuesday progr. 1		on/off
		06 - wednesday prog. 1		on/off
		07 - thursday prog 1		on/off
		08 - friday prog 1		on/off
		09 - saturday prog 1		on/off
		10 - sunday prog 1		on/off
		11 - start program. 2		hour
		12 - stop program. 2		hour
		13 - monday progr. 2		on/off
		14 - tuesday progr. 2		on/off
		15 - wednesday prog. 2		on/off
		16 - thursday prog 2		on/off
		17 - friday prog 2		on/off
		18 - saturday prog 2		on/off
		19 - sunday prog 2		on/off
		20 - start program. 3		hour
		21 - stop program. 3		hour
		22 - monday progr. 3		on/off
		23 - tuesday progr. 3		on/off
		24 - wednesday prog. 3		on/off
		25 - thursday prog 3		on/off
		26 - friday prog 3		on/off
		27 - saturday prog 3		on/off
		28 - sunday prog 3		on/off
		29 - start program. 4		hour
		30 - stop program. 4		hour
		31 - monday progr. 4		on/off
		32 - tuesday progr. 4		on/off
		33 - wednesday prog. 4		on/off
		34 - thursday prog. 4		on/off

Menu 03 SET CHRONO



Submenu 03 - 01 - activate thermostat

This allows you to activate and deactivate all of the functions of the thermostat

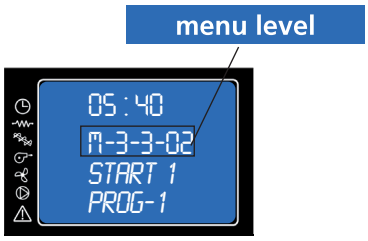


Submenu 03 - 02 - daily programme

This allows you to enable, disable, and set the daily functions of the thermostat.

It's possible to set more operating ranges delimited by the times set according to the following table where the OFF setting tells the clock to ignore the command:

selection	meaning	possible values
START 1	activation time	hour - OFF
STOP 1	shut-off time	hour - OFF
START 2	activation time	hour - OFF
STOP 2	shut-off time	hour - OFF



Submenu 03 - 03 - weekly programme

This allows you to enable, disable, and set the weekly functions of the thermostat.

Plan programming carefully in order to avoid overlapping activation/deactivation times in a single day in different programmes.

PROGRAMME 1			
menu level	selection	meaning	possible values
02-03-02	START PROGRAM 1	activation time	time - OFF
02-03-03	STOP PROGRAM 1	shut-off time	time - OFF
02-03-04	MONDAY PROGRAM 1	reference day	on/off
02-03-05	TUESDAY PROG 1		on/off
02-03-06	WEDNESDAY PROG 1		on/off
02-03-07	THURSDAY PROGR 1		on/off
02-03-08	FRIDAY PROGRAM 1		on/off
02-03-09	SATURDAY PROGR 1		on/off
02-03-10	SUNDAY PROGR 1		on/off

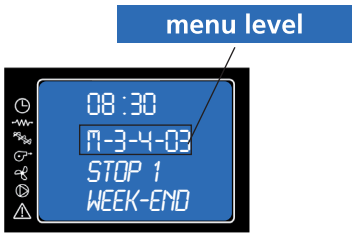
PROGRAMME 2			
menu level	selection	meaning	possible values
03-03-11	START PROGRAM 2	activation time	time - OFF
03-03-12	STOP PROGRAM 2	shut-off time	time - OFF
03-03-13	MONDAY PROGRAM 2	reference day	on/off
03-03-14	TUESDAY PROG 2		on/off
03-03-15	WEDNESDAY PROG 2		on/off
03-03-16	THURSDAY PROGR 2		on/off
03-03-17	FRIDAY PROGRAM 2		on/off
03-03-18	SATURDAY PROGR 2		on/off
03-03-19	SUNDAY PROGR 2		on/off

PROGRAMME 3			
menu level	selection	meaning	possible values
03-03-20	START PROGRAM 3	activation time	time - OFF
03-03-21	STOP PROGRAM 3	shut-off time	time - OFF
03-03-22	MONDAY PROGRAM 3	reference day	on/off
03-03-23	TUESDAY PROG 3		on/off
03-03-24	WEDNESDAY PROG 3		on/off
03-03-25	THURSDAY PROGR 3		on/off
03-03-26	FRIDAY PROGRAM 3		on/off
03-03-27	SATURDAY PROGR 3		on/off
03-03-28	SUNDAY PROGR 3		on/off

PROGRAMME 4			
menu level	selection	meaning	possible values
03-03-29	START PROGRAM 4	activation time	time - OFF
03-03-30	STOP PROGRAM 4	shut-off time	time - OFF
03-03-31	MONDAY PROGRAM 4	reference day	on/off
03-03-32	TUESDAY PROG 4		on/off
03-03-33	WEDNESDAY PROG 4		on/off
03-03-34	THURSDAY PROGR 4		on/off
03-03-35	FRIDAY PROGRAM 4		on/off
03-03-36	SATURDAY PROGR 4		on/off
03-03-37	SUNDAY PROGR 4		on/off

Submenu 03 - 04 - program week-end

This allows you to enable, disable, and set the weekend functions of the thermostat (days 5 and 6, or Saturday and Sunday).



REMARKS:

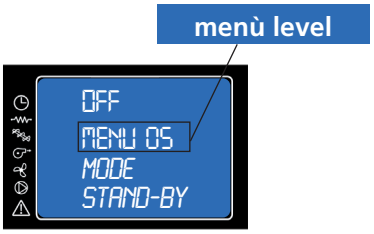
- in order to avoid confusion and unwanted start-ups or shutdowns, activate only one programme at a time unless you know exactly what you'd like to achieve
- deactivate the daily program if you want to use the weekly program
- always leave the weekend programme deactivated if you use weekly programmes 1, 2, 3, and 4.
- activate the weekend programme only after you have deactivated the weekly programme.

Menu 04 - select language

Press the SET button to access the menu and press (5) up to the MENU 04 - SELECT LANGUAGE. Then press the SET button to access the menu. Select the desired language using the keys (1) e (2)

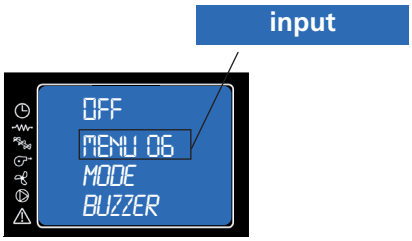
Menu 05 - stand-by mode

Press the SET key. Using the key (2), go to menu 05 and confirm with the SET key. Using the key (1) choose whether to enable (ON) or disable (OFF) the stand-by function.
Press the ON/OFF key (4) to exit.
If enabled, the device will go to stand-by once the set temperature has been reached.
FOR AIR STOVES ONLY: In the presence of an external thermostat, to go to stand-by mode, both the external thermostat and the ambient probe on the stove must be satisfied.



Menù 06 - buzzer mode

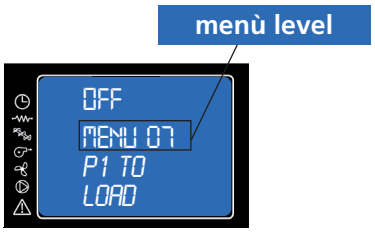
It allows you to enable or disable the acoustic buzzer on the controller.



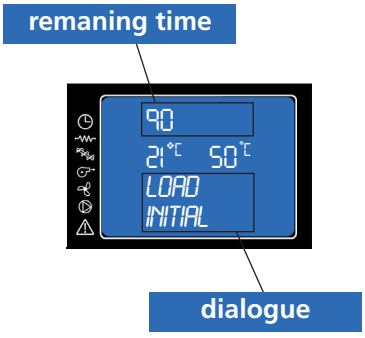
Menù 07 - start load

This function is only available in OFF and allows you to load the screw feeder on first start-up, when the pellet tank is empty.
Having selected Menu 7, the writing as in Figure (A) will scroll on the display. Then press (1). The smoke fan switches on at maximum speed, the screw feeder switches on and remains on until the time indicated on the display is up or until the key (2) is pressed. (Figure B)

A

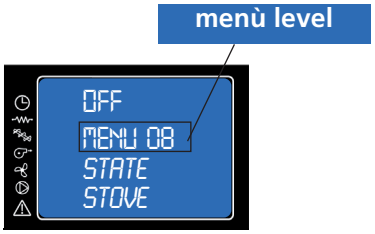


B



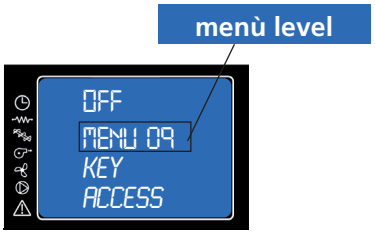
Menù 08 - stove status

Displays the work status.



Menù 09 - technical calibration

This item of the menu is reserved for the installation technician.



Alarm signals

In the event of a working defect, the system informs the user about the type of failure occurred.
The following table summarises the alarms, kind of problem and possible solution:

Display		Kind of problem	Solution
ALAR 1	**BLACK OUT**	There is no power supply	As soon as the power supply is back, the Boiler starts a cooling cycle. After completing the cycle it starts working automatically
ALAR 2	**PROBE EXHAUST**	The smokes sensor is broken or not connected to the pcb	Contact an Authorized Assistance Center
ALAR 3	**HOT EXHAUST**	Smokes temperature too high	Switch off the Boiler, allow it to cool down and perform ordinary cleaning. If the problem persists, contact an Authorized Assistance Center for cleaning the Boiler and the flue
ALAR 4	**FAN FAILURE**	Smokes extractor blocked or broken	Contact an Authorized Assistance Center
ALAR 5	**NO LIGHTIN**	The Boiler cannot start up This is the first light-up	Fill in the tank with pellets Start up again
ALAR 6	**NO PELLET**	The pellet boiler switched off while working	Fill in the tank with pellets
ALAR 7	**SAFETY THERMAL**	The water temperature exceeds 90°C. The circulating pump is blocked or there is no water in the hydraulic system	Check the power supply on the pump. Check limestone does not block the pump impeller
ALAR 8	**FAILURE DEPRESS**	Obstructed flue	Clean the flue or check there are no obstructed grids near the smokes exhaust
ALAR B	**ERROR TRIAC COCLEA**	The cochlea loads too much pellet	Contact an Authorized Assistance Center
ALAR C	**PROBE WATER**	Water probe faulty	Contact an Authorized Assistance Center
ALAR D	**HOT WATER**	Water temperature too high	Allow the boiler to cool down. If the problem persists, contact an Authorized Assistance Center and have the hydraulic system checked
ALAR E	**PRESS WATER**	Water pressure too high	Allow the boiler to cool down. If the problem persists, contact an Authorized Assistance Center and have the hydraulic system checked
SERV		The Boiler has worked for 1300 hours. Supplementary maintenance required	Contact an Authorized Assistance Center

Regular checks should be carried out by the user, who should only contact the Authorized Assistance Center if no solution is found.

EN

Failure on electrical devices

Mancata accensione

If the flame does not light up during the switching on or if the smokes temperature does not reach a suitable value in the foreseen time gap, the Boiler switches off and you will read the words "NO LIGHTIN".
On the display. Press the key "On/Off" to reset the alarm. Wait until the cooling phase is completed, clean the brazier and start a new light-up.

Switching off while working

The Boiler suddenly switches off while working (for example because it has run out of pellets in the tank or because the motor reducer for pellets loading got broken). The Boiler continues working until the pellets left in the brazier ends. You will then read the words "NO PELLET" on the display and the Boiler switches off. Press the key "On/Off" to reset the alarm. Wait until the cooling phase is completed. Clean the brazier and start a new light-up.

These alarms remind you that the brazier must be cleaned and installed correctly before switching on the Boiler.

There is no power supply

In the event of a power drop longer than 30 seconds, the Boiler can exhaust some smoke in the room: this causes no risks. As soon as you have the power supply again, the Boiler will have the words "BLACK OUT" on the display. After completing the cooling phase, the Boiler will start up again automatically according to the previous settings. (only in the self-cleaning one)

Do not attempt to start the Boiler before the required time or it may get blocked. If this occurs, switch off the switch on the back of the pellet boiler for 1 minute, set it on again and wait 10 minutes before starting the Boiler again.

The power socket where the Boiler is connected should be fitted with "earth connection complying with regulations in force." The Manufacturer shall not be held responsible for damage to things or people resulting from negligent installation.

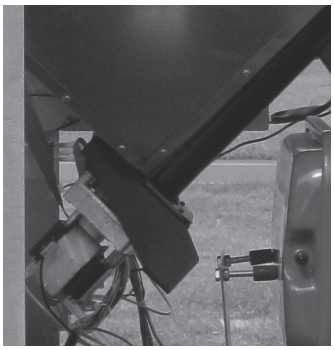
Manual restart thermostat

Intervention in case of danger

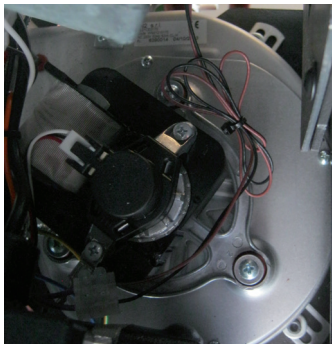
In case of fire, disconnect the power supply, use a fire extinguisher in accordance with, and if necessary, call the fire department and then contact an authorised qualified technical assistance

Safety devices

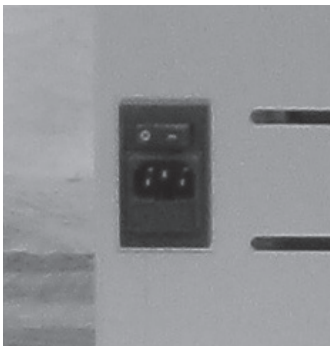
Water temperature probe: if the water temperature approaches the blocking temperature (100 °C), the probe requires to interrupt the supply of pellets.



Reduction motor: if the motor stops for signaling *"ALAR-DEP-FAIL"* or *"ALAR-SIC-FAIL"* the boiler continues to function until the flame goes out for lack of fuel, and until It has cooled down to the minimum level.

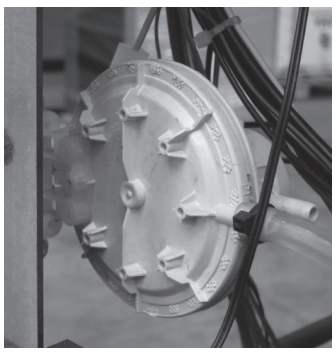


Flue gas temperature sensor: thermocouple that measures the temperature of the fumes while keeping the operation or shuts the boiler when the flue gas temperature drops below the preset value.

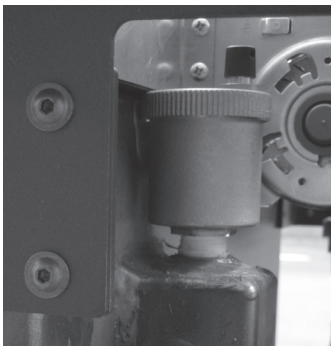


Electrical safety: the Boiler is protected against violent surges of current (ex. lightnings) by the main fuse 4 A which is located on the control panel at the rear of the boiler. Other fuses to protect the electronic boards are to be found on the boards themselves.

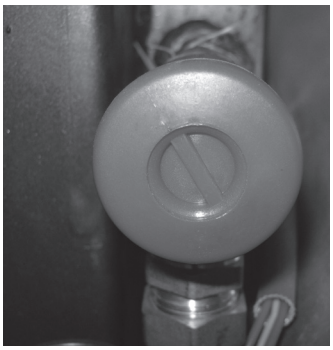
Safety thermostat with manual reset for the water temperature: if the temperature of the water tank exceeds the preset safety level of 100 °C immediately stops the operation of the boiler and the display will show *"ALAR-SIC-FAIL"*. To restart you need to reset manually.



Smoke pressure switch: it controls the pressure in the smoke duct. It blocks the pellet loading auger in case the drain is blocked or there are significant counterpressions, for example in the presence of wind, open combustion chamber door or fume extractor failure. At the time the pressure switch is activated, the message will appear *"ALAR-DEP-FAIL"*.



Automatic vent valve: this valve eliminates the air inside the boiler and of the heating system.



Safety valve: this valve acts to prevent over pressurization of the hydraulic system.
If the pressure of the boiler or plant exceeds 2,5 bar it drains the water from the circuit.

Anti-freeze function: if the probe in the boiler detects a water temperature of less than 6°C, the circulation pump is automatically activated to keep the system from freezing.

Pump anti-seizure function: if the pump is not used for prolonged periods, it is activated periodically for 10 seconds, to prevent it blocks.

39

Maintenance and cleaning / Boiler with cast iron brazier

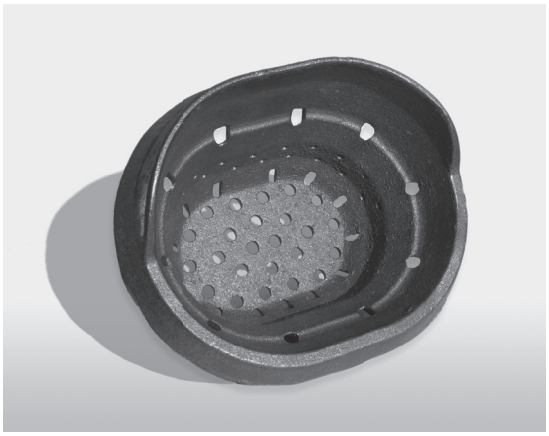
All cleaning of all parts must be carried out with the Boiler completely cold and unplugged to avoid burns and thermal shock. The boiler does not need much maintenance if used with certified quality pellet. The need for maintenance varies depending on the conditions of use (switching on and off repeatedly) and depending on the performance required. It is recommended periodic monitoring of the boiler to check its condition.

Parts	Everyday	Every 2-3 days	Every week	Every 15 days	Every 30 days	Every 60-90 days	Every 1 year
Brazier	◊						
Cleaning the ash collection compartment with suction device		◊					
Cleaning ash tray		◊					
Exchanger (turbulators)	◊						
Flame-shell		◊					
Cleaning the interior heat exchanger / smoke fan compartment						•	
Cleaning complete exchanger							•
Clean "T" to exhaust						•	
Flue							•
Door gasket ash						•	
Internal parts							•
Flue pipe							•
Circulation pump							•
Heat exchanger (where present)							•
Hydraulic components							•
Electromechanical components							•

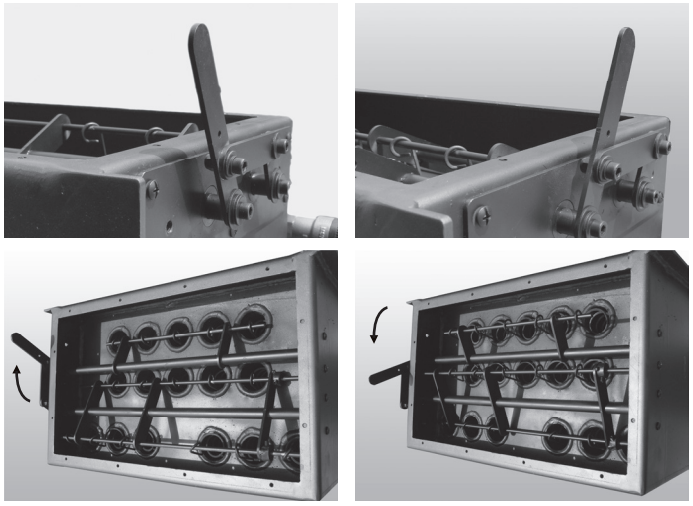
◊ by the user / • by the authorised qualified technical assistance

BY THE USER
Daily control

The boiler requires a simple and thorough cleaning in order to ensure a more efficient performance and smooth operation. Clean the grate using the appropriate tool from the ash and any incrustation which could obstruct the passage of air. In the case of depletion of pellets in the tank may accumulate unburned pellets in the burn pot. Always empty the residuals from the grate before each start. Remember that only a brazier located and clean properly can ensure ignition and optimal operation of your boiler. When positioning the crucible, carefully check that the ends of the pads completely adhere to their home and that the hole with pipe dedicated to the passage of the resistance. There should be no residual combustion in the contact zone between the edges of the crucible and the support surface on the door crucible.



Cleaning exchanger - boiler off



Fouling act as insulation and the thicker they are, the lower the heat that is transmitted to the water and to the structure generally. Therefore very important to perform the cleaning of the tube bundle, said exchanger also, to prevent the fouling of the same and prevent clogging and jamming of the cleaning device. Pull and push quickly for 5-6 times the lever so that the springs can remove the soot deposited on the pipes.

Check every 2/3 days

Cleaning the ash collection compartment
Clean and empty the ash tray being careful with hot ash. The ash must be completely cold for a vacuum cleaner to be used to remove it. Only if the ash is completely cold, you can also use a canister vacuum cleaner suitable for picking up particles of a certain size.

Cleaning ash and combustion chamber including the spark plug lead.

Flame-shell cleaning

Cleaning of stainless steel and satin-finish surfaces

Normally these surfaces do not need to be treated, but if they do, avoid cleaning them with abrasive materials. For surfaces in stainless and satin brushed steel we recommend cleaning with a paper towel or a clean dry cloth moistened with a detergent based on non-ionic surfactants (<5%) A spray glass cleaner may be used.

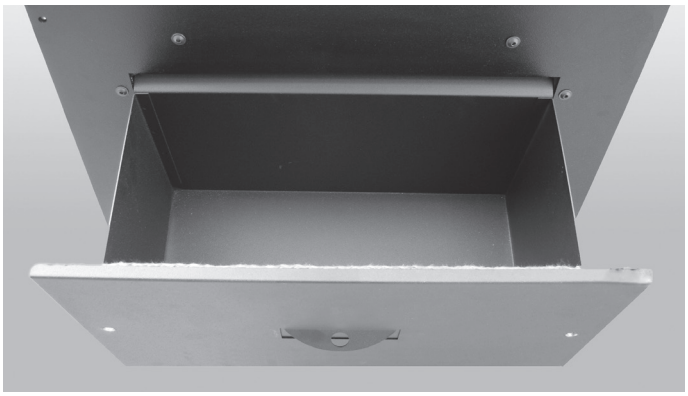
Avoid contact with skin cleanser and eyes. In case this happens, sprinkle with plenty of water and contact the nearest medial center.

Cleaning of painted pats

Do not clean the painted parts with wet rags when the unit is in operation or hot to prevent thermal shock to the paint which may cause it to detach. Do not use abrasive or aggressive products or materials. Clean with damp cotton or paper towels. The silicon paints used by manufacturer possess technical characteristics that make them resistent to very high temperatures. There is however a physical limit (380° C - 400° C) beyond which the paint begins to fade or (over 450°) to vitrify; it may then flake and detach from the steel surface. If this happens, it means that temperatures have been reached that are far above those at which the unit should operate properly.

Do not use abrasive materials or harsh. Clean with damp cotton or paper towels.

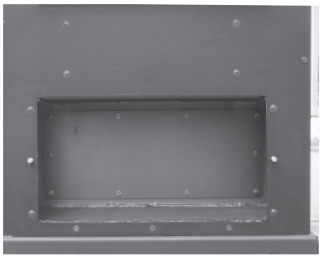
Lower ash drawer cleaning
Check every 7 days

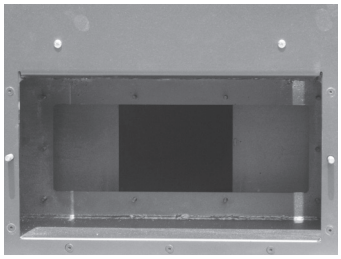


Clean bottom ash from the fallen debris during operation. You can access the ash pan by loosening the two wing nuts that hold the drawer inspection. Remove the tray, empty and clean the wall and only the corners with a suction device or with dedicated tooling. Then mount the drawer and tighten the two knobs being careful to restore the tightness, very important during operation.

Check every 60/90 days
(Only for boiler 20/24)

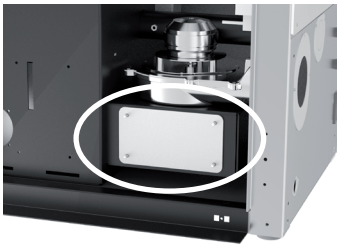
Cleaning the interior baffle / smoke fan compartment

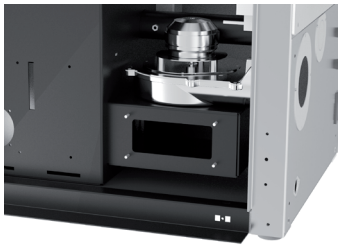




Inside the compartment where there is the ash tray, there is a second cover, fixed by the cockerels, which gives access to the compartment at the base of the duct dedicated to the flue and the wall of the fume extractor fan. Use a suction device for thorough cleaning of the cabinet. Check the integrity of the seal in ceramic fiber.

Cleaning the interior baffle / smoke fan compartment. (Only for boiler 28/32)





Remove the side of the boiler. Now the tube for the air aspiration is visible. In the lower part there is a plate; remove this plate to access to the fumes compartment. Use an ash-aspirator to remove the residues in the flue gas compartment and carefully clean the part on your left that gives access to the final part of the vertical pipe heat exchanger.

Maintenance and cleaning / Boiler with self-cleaning brazier

All cleaning of all parts must be carried out with the Boiler completely cold and unplugged to avoid burns and thermal shock. The boiler does not need much maintenance if used with certified quality pellet. The need for maintenance varies depending on the conditions of use (switching on and off repeatedly) and depending on the performance required.
It is recommended periodic monitoring of the boiler to check its condition.

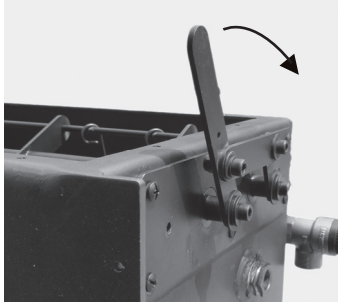
Parts	Everyday	Every 2-3 days	Every week	Every 15 days	Every 30 days	Every 60-90 days	Every 1 year
Brazier			◊				
Cleaning the ash collection compartment with suction device		◊					
Cleaning ash tray		◊					
Exchanger (turbulators)	◊						
Flame-shell		◊					
Cleaning the interior heat exchanger / smoke fan compartment						•	
Cleaning complete exchanger							•
Clean "T" to exhaust						•	
Flue							•
Door gasket ash						•	
Internal parts							•
Flue pipe							•
Circulation pump							•
Heat exchanger (where present)							•
Hydraulic components							•
Electromechanical components							•

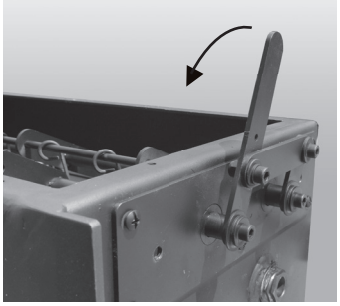
◊ by the user / • by the authorised qualified technical assistance

BY THE USER
Daily control

Cleaning exchanger - boiler off

Fouling act as insulation and the thicker they are, the lower the heat that is transmitted to the water and to the structure generally. Therefore very important to perform the cleaning of the tube bundle, said exchanger also, to prevent the fouling of the same and prevent clogging and jamming of the cleaning device. Pull and push quickly for 5-6 times the lever so that the springs can remove the soot deposited on the pipes.





Check every 2/3 days

Cleaning the ash collection compartment
Clean and empty the ash tray being careful with hot ash. The ash must be completely cold for a vacuum cleaner to be used to remove it. Only if the ash is completely cold, you can also use a canister vacuum cleaner suitable for picking up particles of a certain size.

Cleaning ash and combustion chamber including the spark plug lead.

Flame-shell cleaning

Cleaning of stainless steel and satin-finish surfaces

Normally these surfaces do not need to be treated, but if they do, avoid cleaning them with abrasive materials. For surfaces in stainless and satin brushed steel we recommend cleaning with a paper towel or a clean dry cloth moistened with a detergent based on non-ionic surfactants (<5%) A spray glass cleaner may be used.

Avoid contact with skin cleanser and eyes. In case this happens, sprinkle with plenty of water and contact the nearest medial center.

Cleaning of painted pats

Do not clean the painted parts with wet rags when the unit is in operation or hot to prevent thermal shock to the paint which may cause it to detach. Do not use abrasive or aggressive products or materials. Clean with damp cotton or paper towels. The silicon paints used by manufacturer possess technical characteristics that make them resistent to very high temperatures. There is however a physical limit (380° C - 400° C) beyond which the paint begins to fade or (over 450°) to vitrify; it may then flake and detach from the steel surface. If this happens, it means that temperatures have been reached that are far above those at which the unit should operate properly.

Do not use abrasive materials or harsh. Clean with damp cotton or paper towels.

Lower ash drawer cleaning

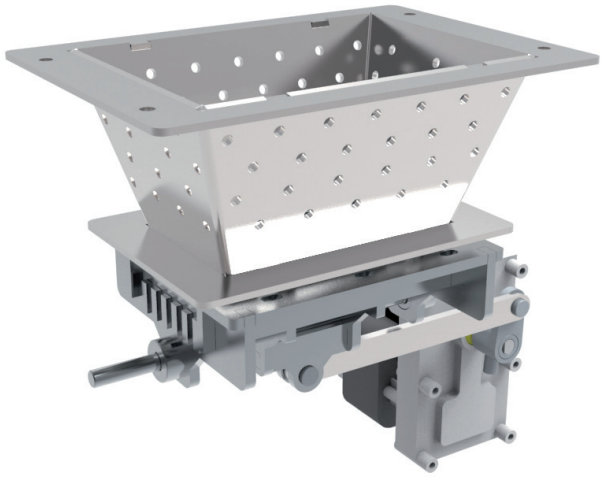
Clean bottom ash from the fallen debris during operation. You can access the ash pan by loosening the two wing nuts that hold the drawer inspection. Remove the tray, empty and clean the wall and only the corners with a suction device or with dedicated tooling. Then mount the drawer and tighten the two knobs being careful to restore the tightness, very important during operation.

Check every 7 days

Self-cleaning brazier cleaning

The boiler requires a simple and thorough cleaning in order to ensure a more efficient performance and smooth operation. If your boiler is equipped with a self-cleaning brazier, do not remove it during cleaning. The brazier must be locked and cleaned by an ash aspirator.

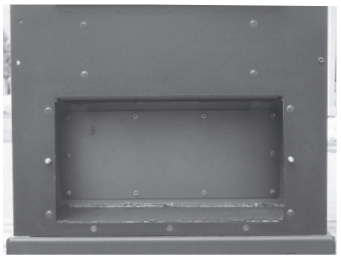
Clean the brazier from the ash and any rest with the appropriate tool. They could obstruct the air passages.
If the pellet in the tank is exhausted, there might be a residual unburnt pellets in the brazier. If the pellet in the tank is exhausted, there might be a residual unburnt pellets in the brazier. It's also important to clean the ash accumulated inside of the combustion room around the brazier. The frequency of this operation depends on the use of the boiler.

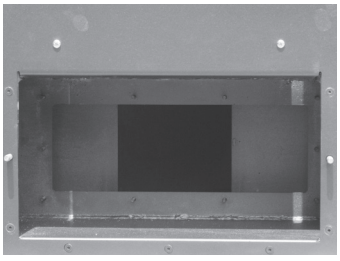


Check every 60/90 days
(Only for boiler 20/24)

Cleaning the interior baffle / smoke fan compartment

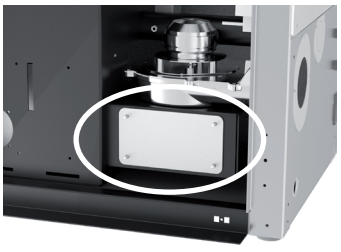
Inside the compartment where there is the ash tray, there is a second cover, fixed by the cockerels, which gives access to the compartment at the base of the duct dedicated to the flue and the wall of the fume extractor fan. Use a suction device for thorough cleaning of the cabinet. Check the integrity of the seal in ceramic fiber.

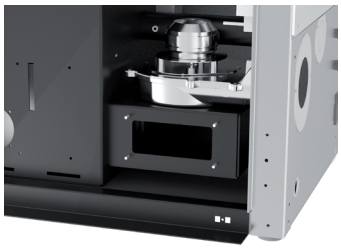




Cleaning the interior baffle / smoke fan compartment. (Only for boiler 28/32)

Remove the side of the boiler. Now the tube for the air aspiration is visible. In the lower part there is a plate; remove this plate to access to the fumes compartment. Use an ash-aspirator to remove the residues in the flue gas compartment and carefully clean the part on your left that gives access to the final part of the vertical pipe heat exchanger.





Maintenance and cleaning / Boiler with ash-compactor

All cleaning of all parts must be carried out with the Boiler completely cold and unplugged to avoid burns and thermal shock. The boiler does not need much maintenance if used with certified quality pellet. The need for maintenance varies depending on the conditions of use (switching on and off repeatedly) and depending on the performance required. It is recommended periodic monitoring of the boiler to check its condition.

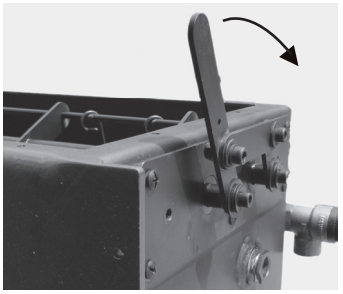
Parts	Everyday	Every 2-3 days	Every week	Every 15 days	Every 30 days	Every 60-90 days	Every 1 year
Brazier			◊				
Cleaning the ash collection compartment with suction device				◊			
Cleaning ash tray	◊						
Exchanger (turbulators)		◊					
Flame-shell		◊					
Cleaning the interior heat exchanger / smoke fan compartment						•	
Cleaning complete exchanger							•
Clean "T" to exhaust						•	
Flue							•
Door gasket ash						•	
Internal parts							•
Flue pipe							•
Circulation pump							•
Heat exchanger (where present)							•
Cochlea							•
Hydraulic components							•
Electromechanical components							•

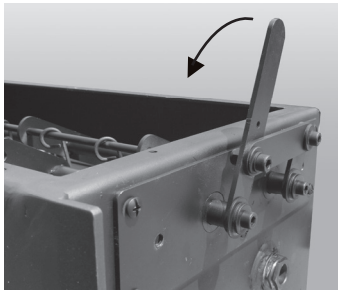
◊ by the user / • by the authorised qualified technical assistance

A CURA DELL'UTENTE FINALE
Controllo quotidiano

Cleaning exchanger - boiler off

Fouling act as insulation and the thicker they are, the lower the heat that is transmitted to the water and to the structure generally. Therefore very important to perform the cleaning of the tube bundle, said exchanger also, to prevent the fouling of the same and prevent clogging and jamming of the cleaning device. Pull and push quickly for 5-6 times the lever so that the springs can remove the soot deposited on the pipes.





Check every 2/3 days

Cleaning the ash collection compartment
Clean and empty the ash tray being careful with hot ash. The ash must be completely cold for a vacuum cleaner to be used to remove it. Only if the ash is completely cold, you can also use a canister vacuum cleaner suitable for picking up particles of a certain size.

Cleaning ash and combustion chamber including the spark plug lead.

Flame-shell cleaning

Cleaning of stainless steel and satin-finish surfaces

Normally these surfaces do not need to be treated, but if they do, avoid cleaning them with abrasive materials. For surfaces in stainless and satin brushed steel we recommend cleaning with a paper towel or a clean dry cloth moistened with a detergent based on non-ionic surfactants (<5%) A spray glass cleaner may be used.

Avoid contact with skin cleanser and eyes. In case this happens, sprinkle with plenty of water and contact the nearest medial center.

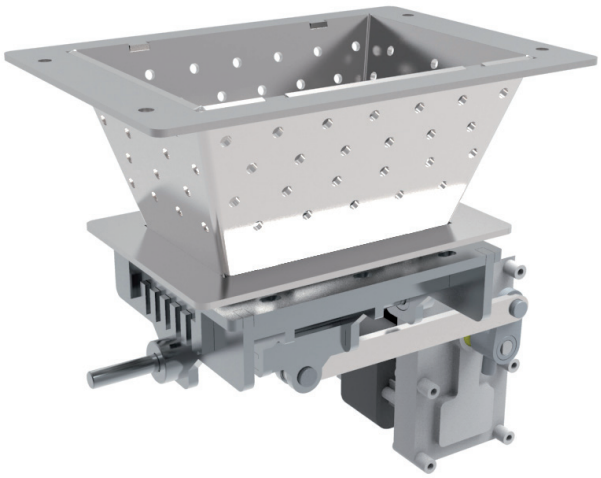
Cleaning of painted pats

Do not clean the painted parts with wet rags when the unit is in operation or hot to prevent thermal shock to the paint which may cause it to detach. Do not use abrasive or aggressive products or materials. Clean with damp cotton or paper towels. The silicon paints used by manufacturer possess technical characteristics that make them resistent to very high temperatures. There is however a physical limit (380° C - 400° C) beyond which the paint begins to fade or (over 450°) to vitrify; it may then flake and detach from the steel surface. If this happens, it means that temperatures have been reached that are far above those at which the unit should operate properly.

Do not use abrasive materials or harsh. Clean with damp cotton or paper towels.

Self-cleaning brazier cleaning

The boiler requires a simple and thorough cleaning in order to ensure a more efficient performance and smooth operation. If your boiler is equipped with a self-cleaning brazier, do not remove it during cleaning. The brazier must be locked and cleaned by an ash aspirator. During the internal cleaning of the boiler, in order to avoid the overflow of ash, it is possible to switch on the smoke expulsion fan. To activate this function, press the button ◁▷ and then the button ⏻. The display shows "PUL STUF" (boiler cleaning). To stop the fan, simply press the button ⏻ for a few seconds, or wait until the cleaning cycle is completed (255 seconds). Clean the brazier from the ash and any rest with the appropriate tool. They could obstruct the air passages. If the pellet

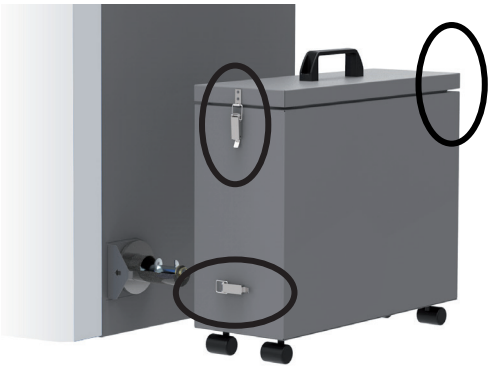


in the tank is exhausted, there might be a residual unburnt pellets in the brazier. If the pellet in the tank is exhausted, there might be a residual unburnt pellets in the brazier. It's also important to clean the ash accumulated inside of the combustion room around the brazier. The frequency of this operation depends on the use of the boiler.

Check every 15 days

Compactor removal

Empty the compactor when it is full. To check the level of filling, open the top by using the two hooks. If the compactor needs to be cleaned, follow these steps:
- be sure that the top is closed;
- open the two side hooks;



- remove the compactor from the boiler;

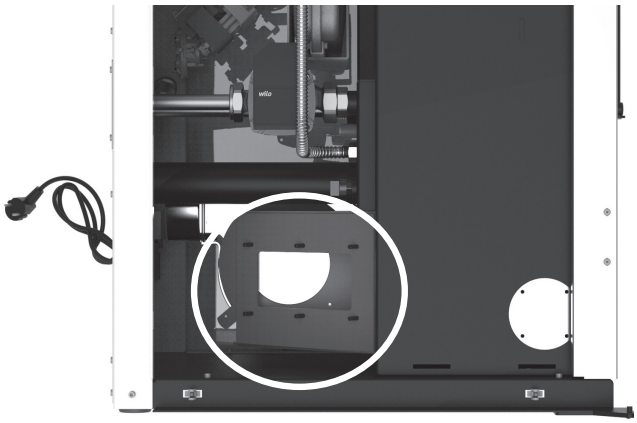
- close the little opening on the side;
- empty completely the compactor; the wheels may help to carry it.

Make this operation with the boiler switched off and completely cold. Make sure there are no still lit embers.

Check every 60-90 days

Cleaning the interior baffle / smoke fan compartment

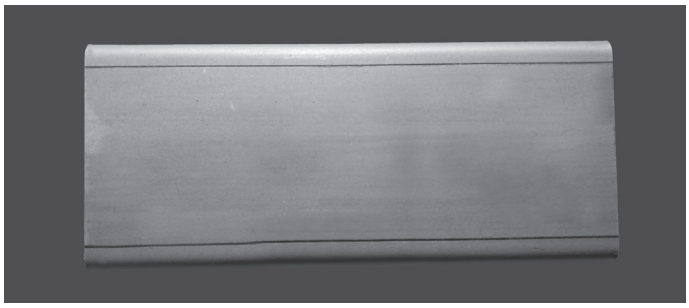
Remove the side of the boiler. Now the tube for the air aspiration is visible. In the lower part there is a plate; remove this plate to access to the fumes compartment. Use an ash-aspirator to remove the residues in the flue gas compartment and carefully clean the part on your left that gives access to the final part of the vertical pipe heat exchanger.



Maintenance and cleaning for all models

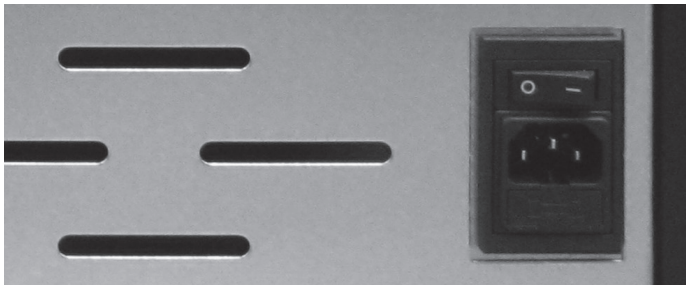
Cleaning the steel flame-shell

Every 2-3 days it is important to remove the steel flame-shell in order to clean it and remove the dirty that may fall during the cleaning of the exchange pipes.



Shutting the Boiler down

In the period when the Boiler is out of use it must be disconnected from the electricity mains. For greater safety, especially if there are children around, we recommend removing the power cable from the rear of the Boiler.



Before placing the Boiler in storage, you should remove all pellets from the hopper with a vacuum cleaner with a long extension. If the fuel is left in the hopper, it may get damp, stick together, and be difficult to light at the beginning of the next season. If pressing the main switch (located on the back of the Boiler) does not make the control panel display light up, it could mean that the service fuse needs replacing. On the rear of the Boiler there is a fuse holding compartment which is located underneath the supply socket. With a screwdriver open the cover of the fuse holding compartment, and re place the fuse if necessary (3,15 AT delayed type). Plug the unit back in and press the main switch.

CLEANING BY THE TECHNICAL

Check every year

Compartment ventilation flue gas cleaning

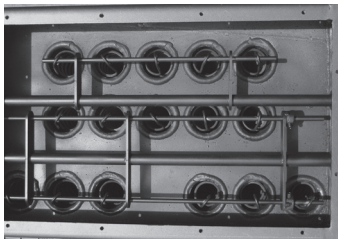
Remove the fixing screws and remove the smoke fan for cleaning of the same. Perform the task with the greatest care not to bend the fan blades.

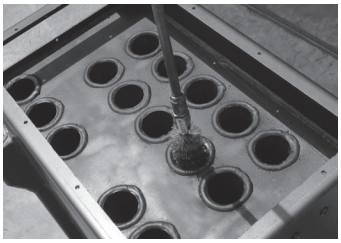
Clean flue

Clean the flue system especially near the fittings to "T", curves and any horizontal sections. Is necessary to check and remove any deposit of ash and soot before the same clogging the passage of smoke.

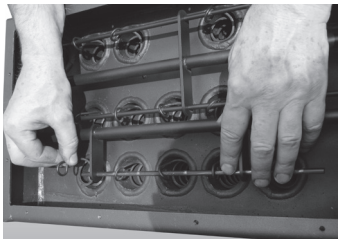
Cleaning the exchanger

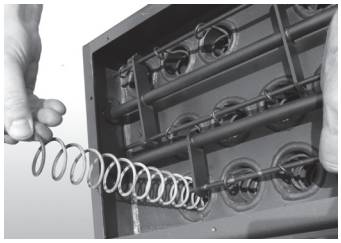
Lift the upper door that covers the tube by unscrewing the screws. Pull out the 16 soft brush and wipe with a clean 16 exchanger tubes.



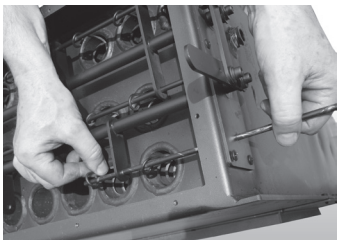


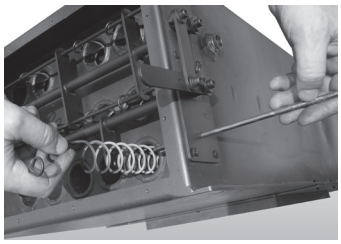
Perform cleaning after removing the springs inserted in each pipe. The operation is simple by removing the springs from the horizontal pin to which they are attached.



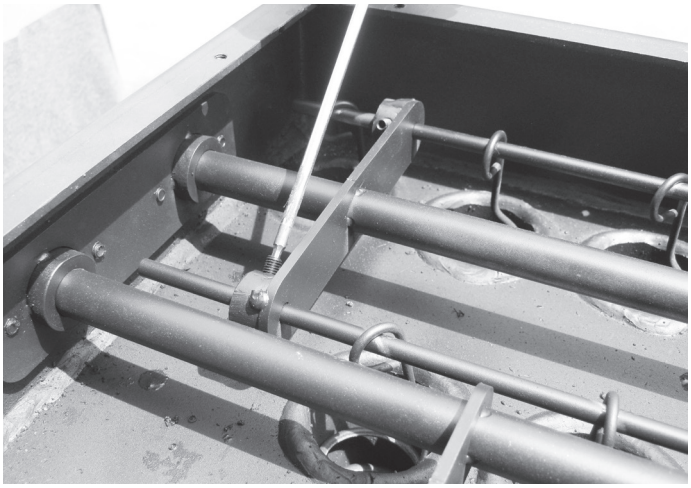


To do this, the horizontal pin can be pulled through a hole in the wall of the boiler body.

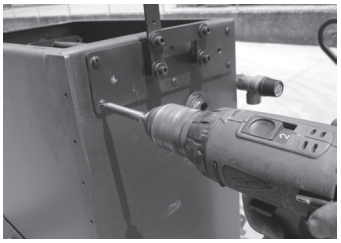


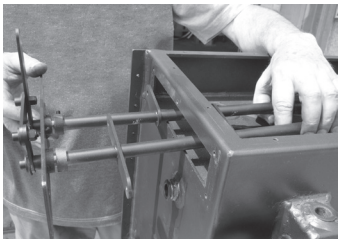


Now the upper section to the heat exchanger is free from any encumbrance so as to allow a perfect cleaning. Once a year is also recommended to clean the upper compartment of the exchanger. To make a proper cleaning is recommended to suck the ash, remove all horizontal joints with a screwdriver, then again suck the ash.



The transaction can be completed with a screwdriver by removing the wall of the boiler and removing all horizontal joints.





Following the cleaning of the upper compartment of the exchange section, store the upper closure cover. This cover must be closed, as well as with normal screws, with webbing in ceramic fiber rope to ensure the watertight closure of the boiler. This general cleaning should be carried out at the end of the season in order to facilitate the general removal of all residues of combustion, without waiting too long, because with time and humidity these residues can become compacted. Check the seal of the ceramic fiber gaskets on the door of the boiler. Then clean the flue system especially near the fittings to "T" and any horizontal sections.

For your safety, the frequency of cleaning the smoke discharge system must be determined on the basis of how the boiler is used.

In case of failure or inadequate cleaning of the heater may have function problems such as:
- poor combustion
- blackening of the glass
- clogging of grate with accumulation of ash and pellets
- ash deposit and excessive deposits on the heat exchanger resulting in poor performance.

The check of electromechanical components must be performed only by qualified personnel with technical knowledge of electricity and combustion.

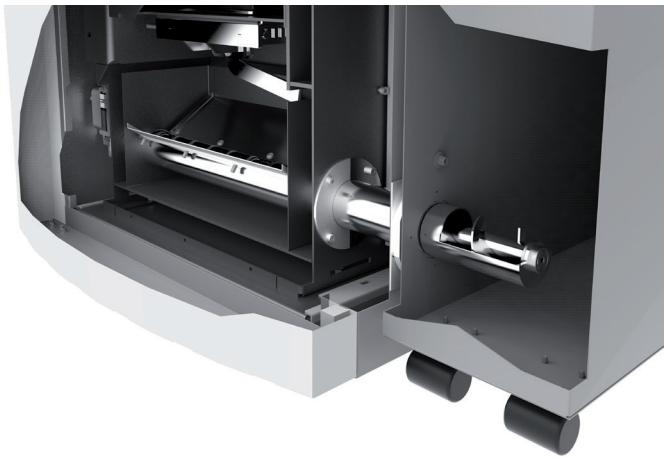
We recommend that an annual maintenance service is carried out, preferably under a programmed service contract. The essential part of this service is a visual and functional check on the following components:

- reduction motor
- smoke expulsion fan
- smoke sensor
- heat-exchanger fan
- ignition sparkplug
- resettable pellet thermostat
- room temperature sensor
- pressostat
- motherboard
- fuse protecting panel - motherboard

These operations must be performed by a qualified technician, or the user who will take responsibility in the event of damage during maintenance.
Perform this maintenance heater cold and in the absence of electricity. If such maintenance is performed by an authorized service center is the responsibility of the customer.

Cochlea cleaning

Remove the screws that secure the top panel under the combustion room door. With an ash-aspirator, remove all the residue deposited along the canal.



Make this operation with the boiler switched off and completely cold. Make sure there are no still lit embers.

Problems and solutions

All repairs must be carried out exclusively by a specialised technician, with the Boiler completely cold and the electric plug pulled out. Is prohibited from any unauthorized modification to the device and the replacement of parts with other non-original. The operations marked in bold type must be carried out by specialised personnel.

Check for proper combustion of the shape and color of the flame

PROBLEM	POSSIBLE CAUSE	SOLUTION
The flame thickens at the base and the tip has not pulled upwards.	1. Bad regulation that determines: • Too full of pellets • Low fan speed 2. The duct is obstructed or there are pressures that hamper the smooth evacuation of fumes	1. Define the adjustment of the boiler **2. Clean the smoke duct and check the pressure switch that measures the proper depression of the chimney**
Flame swollen and bursting with color from orange to yellow with dark tips	1. Combustion wrong 2. Flame oxygen deficient	1. Define the adjustment of the Boiler 2. Make sure the air duct up to the brazier is not obstructed **3. Contact your Authorized Assistance Center**

In normal combustion, the flame should have a tapered shape, compact, with character "lively" and with the tips tend to be vertical or crushed towards the back of the firebox. You have to have the feeling that the flame is pulled upwards.

Anomalies related to the scope mechanical or electronic

PROBLEM	POSSIBLE CAUSE	SOLUTION
Pellet not being fed into the combustion chamber.	1. Pellet hopper empty 2. Feeder screw blocked by sawdust 3. Reduction motor defective 4. Defective electronic board 5. One of the thermostats with manual reset is triggered	1. Refill pellet hopper 2. Empty the hopper and manually free the feeder screw of sawdust **3. Replace reduction motor** **4. Replace electronic board** 5. Reset on the back of the boiler the safety thermostat after verifying the cause
The boiler does not run	1. Plug out of place 2. Lack of electricity supply 3. Parameter suction power to change 4. Pellet or water sensor in lockout 5. Fuse blown 6. Obstruction of nests or foreign bodies in the chimney or fireplace	1. Check the correct position of the sparkplug in the grate 2. Check that the electric socket is plugged in and that the main switch is in position "I" **3. Contact your Authorized Assistance Center** 4. Wait for the cooling of the pellets or water tank and turn on the boiler **5. Replace the fuse** 6. Remove all foreign matter from the chimney or flue outlet of the barrel. It is recommended that the intervention of a chimney sweep

PROBLEM	POSSIBLE CAUSE	SOLUTION
The fire goes out or the Boiler stops automatically	1. Pellet hopper empty 2. Pellets not being fed in 3. Intervention of pellet temperature sensor 4. Door not closed properly or gaskets worn 5. Boiler temperature is too high 6. Unsuitable pellets 7. Low pellet feed rate 8. Combustion chamber dirty 9. Smoke outlet obstructed 10. Smoke extraction motor failed 11 Pressure switch faulty or defective	1. Refill pellet hopper If it is first ignition the fuel, having to go the route that goes from the tank to the brazier, may not be able to arrive on time and in the right amount programmed **2. If after repeated ignitions did not appear in the flame, even with regular supply of pellets, the problem may be related to the components of the heater or the improper installation** 3. Let the Boiler cool down completely, reset the thermostat till lockout ceases, relight Boiler;if problem persists, contact technical assistance 4. Close the door or **replace the gaskets with original spare parts** **5. Check for proper operation of the water pump, if necessary, replace the component** 6. Change to a type of pellet recommended by the manufacturer **7. Have the fuel feed rate checked by technical service** 8. Clean the combustion chamber, following instructions in the manual 9. Clean the smoke duct **10. Check the motor and replace if necessary** **11. Replace the pressure**
The Boiler runs for a few minutes and then goes out.	1. Lighting cycle not completed 2. Temporary failure of electricity supply. 3. Smoke duct obstructed. 4. Temperature sensors defective or broken. 5. Sparkplug failure.	1. Re-run lighting cycle 2. See previous instruction 3. Clean smoke duct **4. Check and replace sensors as necessary** **5. Check the plug and replace if necessary**
Pellet build up in grate, door glass gets dirty and flame is weak	1. Insufficient combustion air 2. Pellets damp or unsuitable 3. Smoke extractor motor broken 4. Bad adjustment. Wrong ratio between air and pellet	1. Check that the room air intake is present and free. Check that the pipe Ø 5 cm for air inlet is not obstructed. Clean the grate and check that all the airways are clear. Carry out a general cleaning of the combustion chamber and the smoke duct. Check the state of the door gaskets 2. Change the type of pellet **3. Check the motor and replace if necessary** **4. Contact your Authorized Assistance Center**

53

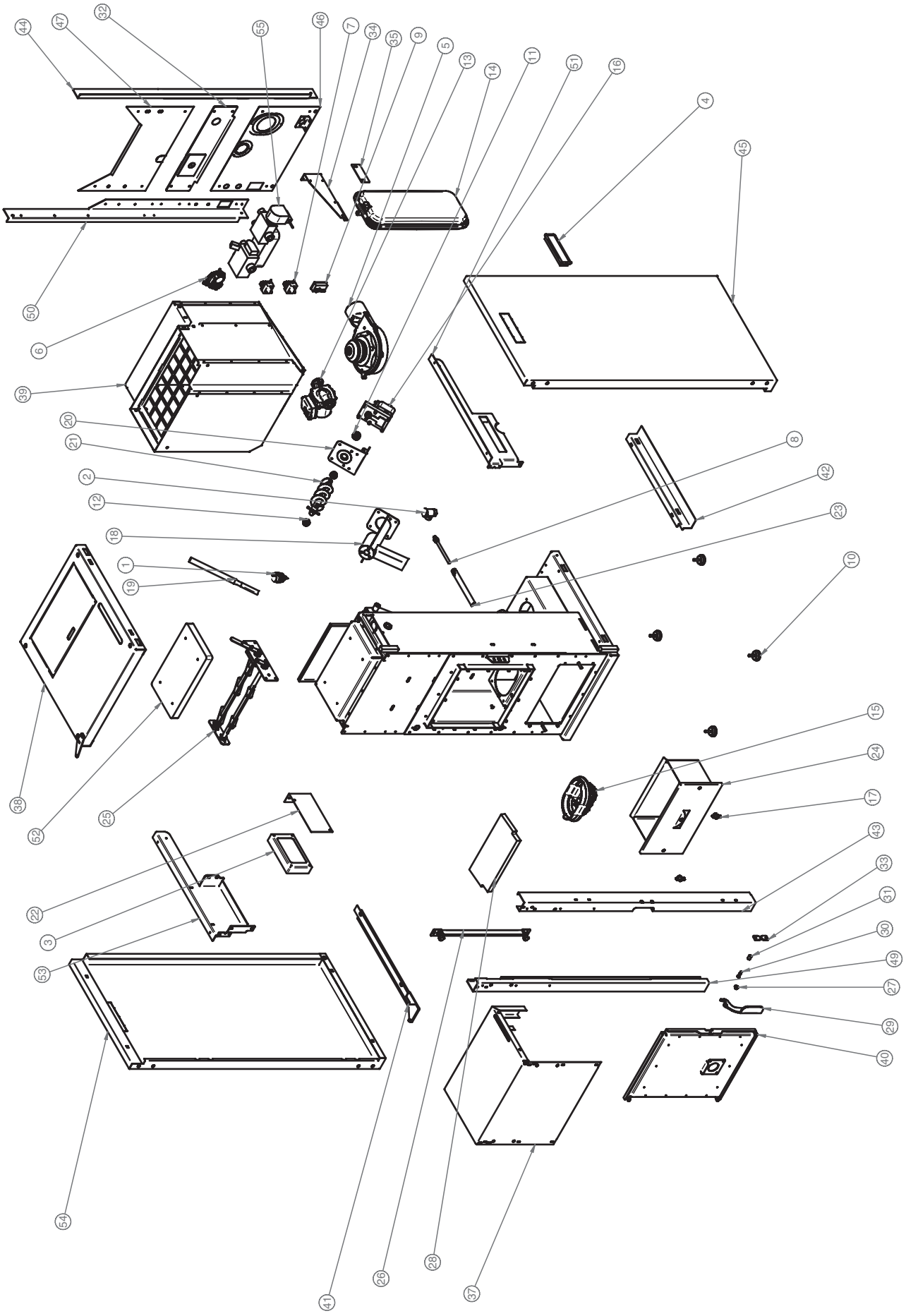
The smoke extraction motor does not work	1. No electrical supply to the Boiler 2. The motor is broken 3. Defective electronic board 4. Control panel broken	1. Check the supplay voltage and the protection fuse **2. Check the motor and capacitor and replace if necessary** **3. Replace electronic board** **4. Replace the control panel**
The air fan convention never stops	1. Temperature sensor temperature control defective or broken 2. Fan failure	**1. Check operation of the sensor and replace if necessary** **2. Check operation of the motor and replace if necessary**
In the automatic position the Boiler always runs at full power	1. Room thermostat set to maximum 2. Temperature sensor defective 3. Control panel defective or broken	1. Reset the thermostat temperature **2. Check the operation of the sensor and replace if necessary** **3. Check the panel and replace if necessary**
The Boiler starts up "alone"	1. Incorrect programming of the cronothermostat	1. Check the settings of the cronothermostat
The power does not change even if you manually adjust	1. The board is set to automatic correction of power in proportion to the temperature	**1. Contact your Authorized Assistance Center**

Anomalies related to the plumbing circuit

PROBLEM	POSSIBLE CAUSE	REMEDY
No increase in temperature with Boiler in operation	1. Incorrect combustion adjustment 2. Boiler/system dirty 3. Insufficient Boiler power	1. Check parameters 2. Check and clear the boiler 3. Check that the Boiler is properly sized for the requirements of the system

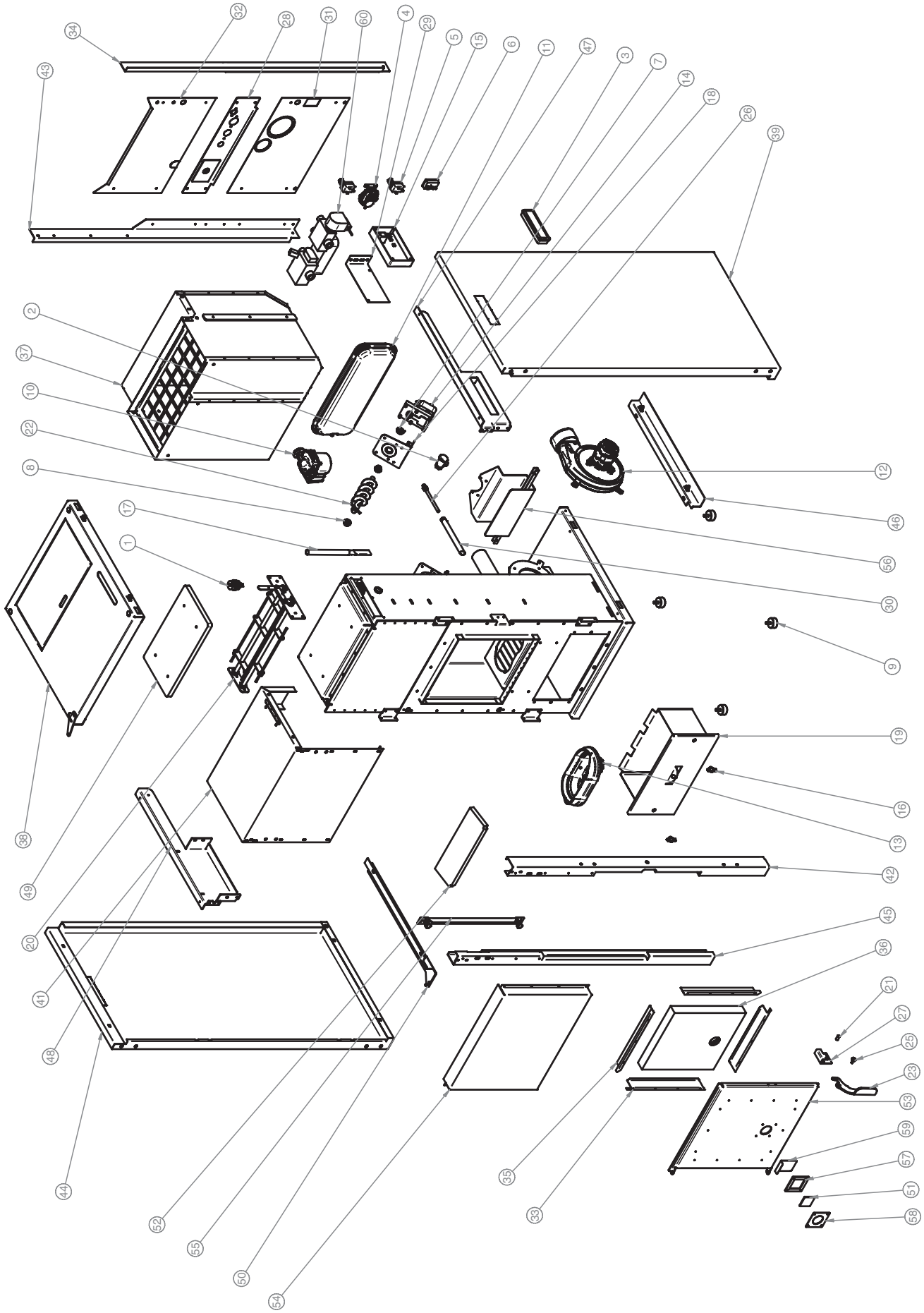
PROBLEM	POSSIBLE CAUSE	SOLUTION
Condensation in boiler	1. Incorrect setting maximum water temperature in the boiler 2. Insufficient fuel consumtion	1. Set the Boiler to a higher temperature. The maximum water temperature in the boiler is 65 ° C and can not be set below 40 ° C or above 80 ° C. It is advisable to never adjust the temperature below 60 ° C to avoid condensation in the boiler. **Adjust the power of the pump at a higher temperature to 60° C.** **2. Checking the boiler setting (technical parameters setting) in order to avoid excessive fuel consumption, guarantee the expected heating capacity and safeguard the integrity of the product** **3. Check the correct operation of the anti-condensation valve**
Radiators cold in winter but the Boiler boils	1. Circulator does not run because blocked 2. Radiators have air in them	**1. Free up the circulator by removing the plug and turning the shaft with a screwdriver. Check the electrical connections of the same, replace if necessary** **2. Vent the radiators**
Hot water in not provided	1. Circulator pump blocked	**1. Free the circulator pump**
The Boiler boils under "modulation" that reaches the temperature set on the thermostat of the Boiler	1. It 'been set to a value of thermostat too high 2. It was set too much power to the implant.	1. Lower the temperature in the boiler 2. Reduce the value of operating power
The Boiler goes into "modulation" as it reaches the temperature set on the thermostat of the Boiler even at low temperatures of the water in the boiler	1. Modify the parameter for the maximum smoke temperature modulation to edit 2. Dirty Boiler: the fumes are too high temperature.	**1. Contact your Authorized Assistance Center** **2. Clean the tube bundle**
High variability of domestic hot water temperature	1. Water flow is too high	**1. Reduce the flow of water (4/6 liters per minute)**
Exits little hot water	1. Insufficient water pressure in the network 2. Tap or mixer clogged with limescale 3. Water group clogged 4. The heat exchanger does not work 5. Air in: pump cavitation for the presence of air, the water does not rotate.	**1. Check the setting of the pressure reducing valve** **2. Install a water demineralizer** **3. Check and clean the sanitary kit** **4. Replace the plate heat exchanger** **5. Bleed the brake system, remove air by venting the radiators.**

Never turn off the heater by removing electricity. Let always complete the shutdown cycle, otherwise you may damage the structure and have trouble lighting in the future.


44
47
32
55
46
7
34
35
9
5
13
14
11
51
16
4
45
50
6
39
20
21
2
12
18
1
19
8
42
23
10
38
52
25
15
24
17
43
33
31
30
49
27
29
40
22
3
53
54
41
26
28
37

LISTA RICAMBI CPC20-24

Posizione	Numero documento	Titolo	Quantità
1	321016	VALVOLA DI SFOGO ARIA AUTOMATICA 1/2 MKV 0251210 PER TERMOS	1
2	321018	VALVOLA DI SICUREZZA 3 BAR MSV/E 0207525 PER TERMOSTUF	1
3	4790173	SCHEDA ELETTR	
4	410002LCD	DISPLAY STUFA NEUTRO	1
5	410005	VENTOLA ESPULSIONE FUMI R2E150-AN91-22	1
6	4790060	PRESSOSTATO FUMI HUBA TARATURA 60 PASCAL	1
7	410009C	TERMOSTATO 100°C LS1 8025 2.5A T85 CON CAPILLARE 1,5 METRI	1
8	4790069	RESISTENZA X ACC.300W CERAMICA PSX-2-240-B TH/CPC	1
9	410011	MODULO ALIMENTAZIONE POLYSNAP BZ01001	1
10	410401	PIEDINO ANTIVIBRANTE M8X32	4
11	410056B	FISSAGGIO COCLEA X D. ALBERO=16MM	1
12	410065BR	BUSSOLA IN BRONZO XSTUFA 6/8/12KW D.16	2
13	4790030	CIRCOLATORE ELETTRONICO WILO YONOS PARA	1
14	410692	VASO DI ESPANSIONE 8 LITRI VAREM PER TERMOSTUFA	1
15	411689	BRACIERE IN GHISA 2013 PER TERMOSTUFA 20	1
	411690	BRACIERE IN GHISA 2013 PER TERMOSTUFA 24/28	1
16	410006	MOTORIDUTTORE COCLEA MEM390 230/50/2RPM	1
17	412253	GALLETTO FISSO PLASTICA MASCHIO 8X35 GP/48	2
18	414601	ASSIEME TUBO CARICO PELLET	1
19	414609	TUBO LEVA PER KIT PULIZIA	1
20	414614	ASSIEME SUPPORTO COCLEA 15-32	1
21	414636B	COCLEA X CALDAIA 15/32 D.16MM	1
22	414689	SUPP. SCHEDA ELETTRONICA DX	1
23	4732052	TUBO CANDELA CERAMICA TH17-20-24-28-32 L=192	1
24	415402	ASSIEME CASSETTO CENERE TH/CPC 20-24	1
26	415407	ASSIEME CERNIERA PORTA TH/CPC20-24	1
27	415412	PERNO MANIGLIA TH CPC 20-24	1
28	415542	PIASTRA SUPPORTO ESTERNO TH/CPC20-24	1
29	415444	MANIGLIA TH20-24	1
30	415448	PERNO PER BUSSOLA PORTA TH/CPC20-24	1
31	415449	BUSSOLA DI PORTA TH/CPC20-24	1
32	415451	PIASTRA VERSIONE UNIFICATA PRETRANCIATA C/S KIT SANITARIO	1
33	415453	BLOCCHETTO REGOLABILE PER MANIGLIA TH/CPC20-24	1
34	415575	MONTANTE POSTERIORE SX TH20-24	1
37	415501	ASSIEME CHIUSURA SUPERIORE FIBRA CERAMICA CPC20-24	1
38	415512	PIASTRA TOP CPC20-24 GRIGIO RAL 9006	1
	415513	SPORTELLO CARICO PELLET GRIGIO RAL 9006 CPC20-24	1
39	415503	ASSIEME SERBATOIO PELLET CPC20-24	1
40	415504	ASSIEME PORTA CPC 20-24	1
41	415505	ASSIEME SALDATO SUPPORTO FIANCO SX E CERNIERA CPC20-24	1
42	415523	SUPPORTO INFERIORE PANNELLO LATERALE DX CPC 20-24	1
43	415526	MONTANTE ANTERIORE PER LANA DX CPC20-24	1
44	415527	MONTANTE POSTERIORE SUPPORTO SERBATOIO DX CPC20-24	1
45	415528	PANNELLO LATERALE DX GRIGIO RAL9006 CPC20-24	1
46	415529	SCHIENA INFERIORE CPC20-24	1
47	415530	SCHIENA SUPERIORE CPC 20-24	1
49	415537	MONTANTE ANTERIORE PER LANA SX CPC20-24	1
50	415538	MONTANTE SUPPORTO SERBATOIO SX CPC20-24	1
51	415539	STAFFA SUPPORTO SERBATOIO DX CPC20-24	1
52	4735009	BATTIFIAMMA	1
53	415544	STAFFA SUPPORTO SERBATOIO SX CPC20-24	1
54	415545	PANNELLO LATERALE SX GRIGIO CPC20-24 RAL 9006	1


32
28
31
60
4
29
5
15
6
11
47
3
7
14
18
26
39
34
43
2
37
10
22
8
17
1
12
46
56
30
9
19
16
13
42
45
36
21
27
25
23
53
59
57
51
58
35
33
38
49
20
41
48
44
52
55
50
54

LISTA RICAMBI CPC28-32

Posizione	Numero documento	Titolo	Quantità
1	321016	VALVOLA DI SFOGO ARIA AUTOMATICA MKV 0251210 PER TERMOS	1
2	321018	VALVOLA DI SICUREZZA 3 BAR 1/2" F/F	1
3	4790173	SCHEDA ELETTR	
4	410002LCD	DISPLAY STUFA NEUTRO	1
5	4790060	PRESSOSTATO FUMI HUBA TARATURA 60 PASCAL	1
6	410009	TERMOSTATO 100°C LS1 8025 2.5A T85	1
7	4790069	RESISTENZA X ACC.300W CERAMICA PSX-2-240-B TH/CPC	1
8	410011	MODULO ALIMENTAZIONE POLYSNAP BZ01001	1
9	410056B	FISSAGGIO COCLEA X D. ALBERO=16MM	1
10	410065BR	BUSSOLA IN BRONZO XSTUFA 6/8/12KW D.16	2
11	410401	PIEDINO ANTIVIBRANTE M8X32	4
12	4790030	CIRCOLATORE ELETTRONICO WILO YONOS PARA	1
13	410692	VASO DI ESPANSIONE 8 LITRI VAREM PER TERMOSTUFA	1
14	410699	VENTILATORE ESPULSIONE FUMI PL30CE0010 COD.W931300050 D.100	1
15	411691	BRACIERE IN GHISA 2013 PER TERMOSTUFA 28-32 COD.100010450	1
16	412035	MOTORIDUTTORE COCLEA FB1167 230/50/3RPM	1
17	412253	GALLETTO FISSO PLASTICA MASCHIO 8X35 GP/48	2
18	414609	TUBO LEVA PER KIT PULIZIA CPC-TH26/30KW	1
19	414614	ASSIEME SUPPORTO COCLEA 15-32	1
20	414624	ASSIEME CASSETTO CENERI TH 26-30 KW	1
21	414625	ASSIEME KIT PULIZIA TH/CPC28-32	1
22	414635	BUSSOLA D10X18 PR80 GREZZO PER PORTA	1
23	414636B	COCLEA X CALDAIA 15/32 D.16MM	1
24	414646	MANIGLIA TH26-30	1
26	414657	PERNO E15X20,7 PR80 GREZZO PER MANIGLIA	1
27	414672	LINGUETTA REGOLAZIONE MANIGLIA TH/CPC28-32	1
28	414685	LAMIERA SUPPORTO KIT SANITARIO TH 26-30 KW	1
29	414689	SUPP. SCHEDA ELETTRONICA DX TH 26-30KW	1
30	4732052	TUBO CANDELA CERAMICA TH17-20-24-28-32 L=192	1
31	414701	SCHIENA INFERIORE CPC28-32	1
32	414702	SCHIENA SUPERIORE CPC28-32	1
33	414705	MONTANTE SUPPORTO SERBATOIO DX CPC28-32	1
34	414708	ASSIEME PORTA CPC 28-32	1
35	414714	ASSIEME SERBATOIO CPC28-32	1
36	414718	PIASTRA TOP CPC28-32 GRIGIO RAL9006	1
	414719	SPORTELLO CARICO PELLET CPC28-32 GRIGIO RAL9006	1
37	414722	PANNELLO LATERALE DX CPC28-32 GRIGIO RAL9006	1
38	414719	PIASTRA TOP	1
	414718	SPORTELLO CARICO PELLET	1
39	414727	ASSIEME CHIUSURA SUPERIORE FIBRA CERAMICA CPC28-32	1
40	414736	MONTANTE ANTERIORE PER LANA DI ROCCIA DX CPC28-32	1
41	414738	MONTANTE SUPPORTO SERBATOIO CPC28-32	1
42	414739	PANNELLO LATERALE SX CPC28-32 GRIGIO RAL9006	1
43	414740	MONTANTE ANTERIORE PER LANA DI ROCCIA SX CPC28-32	1
44	414742	SUPPORTO INFERIORE PANNELLO LATERALE DX CPC28-32	1
45	414743	STAFFA SUPPORTO SERBATOIO DX CPC28-32	1
46	414745	STAFFA SUPPORTO SERBATOIO SX CPC28-32	1
47	414746	VERMICULITE COPERCHIO CORPO CPC 26-30 410X230X20	1
49	4735009	BATTIFIAMMA	
50	414766	CARTER PER ISOLAMENTO SUPPLEMENTARE CPC28-32	1
51	414808	ASSIEME CERNIERA PORTA TH 28-32	1
52	414811	ASSIEME STAFFA SUPPORTO VASO ESPANSIONE TH/CPC28-32	1

NOTES

NOTES