



K1200- K1700- K2300

2<sup>nd</sup> Gen

Wood Pellet Boiler Stoves



## Installation and Operating Instructions

Read these instructions carefully before installing, using and servicing the stove.

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Thank you for purchasing a Waterford Stanley Wood pellet Stove.

Please read this manual carefully and retain it for future reference.  
 These products fulfil the requirements of the Construction Products Regulation and have been approved with the CE conformity mark;

The Boiler pellet stoves are manufactured in compliance with the EN 14785:2008 Standards

WATERFORD STANLEY bears no responsibility for any damage to the stove if it is installed by non-qualified personnel;

WATERFORD STANLEY is not responsible for any damage to stoves not installed and used in compliance to the instructions included in this manual;

All local regulations, national and European standards, must be observed when installing, operating and servicing the stove;

Whenever you need assistance, you should contact your stove’s supplier or installer. You must have the wood pellet stove serial number located on the identification plate.

The product must be commissioned by a Waterford Stanley approved service engineer.

## **1 Setting the Language for the first time.**

To set the Language to English on the controller.

Press the menu button until “set” is displayed beside the menu button.

Press the “+” button 4 times , display shows “configura.....”.

Press the set button twice until abbreviation for languages in the top and centre of the screen.

Press the “+” button until abbreviation “EN” is displayed.

Press the Menu button to set the language to English.

## 2 STANLEY PELLETT STOVE WARRANTY

### CONDITIONS OF WARRANTY

Your Stanley pellet stove is guaranteed against any part that fails (under normal operating conditions) as detailed in the following table with timelines specified from the date of installation of the appliance. If the stove is not installed within six months of date of purchase, the warranty will commence six months from the date of purchase.

Warranty Period	Parts Covered (Parts & Labour unless Stated)
Up to 1 Year	<ul style="list-style-type: none"><li>• Refractory materials (supply only)</li><li>• Rope seals, glass seals and cement seals.</li><li>• Surface Finish on Seno models.</li><li>• Grates and fire bars.</li><li>• Ceramic glass is covered for Thermal breakage (supply only).</li><li>• Rust (if reported before installation)</li><li>• Aesthetic Damage (provided reported on date of receipt)</li><li>• Electrical components under normal operation.</li></ul>
Up to 2 Years	<ul style="list-style-type: none"><li>• All external casings &amp; enamel finishes (excluding impact damage or damage caused by overfiring). Pictures of damage must be submitted to WS Service Department.</li></ul>
Up to 3 Years	<ul style="list-style-type: none"><li>• Boiler - A Leaking Boiler Report must be conducted by an Authorised Stanley Service Engineer and submitted to WS Service Department for review.</li></ul>

All warranty claims must be reported to the Waterford Stanley Service Department and must be submitted with the product serial number (located on the data plaque at the rear of the product), date of purchase, proof of purchase (if requested) and details of the specific nature of the problem.

The warranty is given only to the original consumer/purchaser only and is non-transferable. The appliance must be installed by a suitable qualified person and installed as per the requirements of the manual. Failure to comply with the Installation requirements or Building Regulations will void your warranty. Waterford Stanley reserve the right to replace any part due to manufacturing defect that fails within the warranty period under the terms of the warranty. The stove must be used for normal domestic purposes only and in accordance with manufacturer's operation instructions.

### LIMITS OF LIABILITY

The warranty does not cover:

- Special, incidental or consequential damages, injury to persons or Property, or any other consequential loss.
- Any issue caused by negligence, misuse, abuse or circumstances beyond Waterford Stanley's control.
- Any issue with wear and tear, modification, alteration, or servicing by anyone other than an authorized service engineer.
- Installation and operational related problems such as draught related issues external to the stove, inadequate venting or ventilation, excessive flue offsets, negative air pressure caused by insufficient burning of improper fuel.
- Damage caused to the stove while in transit.
- Discolouration due to over firing, damage caused by impact, damage to baffles caused by over firing and fading of surface finish on casting.
- Stress fractures on bricks.
- Rust on cast iron parts unless reported prior to stove being installed.
- Aesthetic damage, rust & missing parts on stoves purchased off display.
- Electrical components where voltage variations are in excess of 10% of nominal 230V

Note: Adequate clearance must be maintained around the appliance to ensure the ease of part removal in the possible event of their damage/failure. Waterford Stanley are not responsible for any costs incurred in the removal of items installed in the vicinity of the appliance that must be moved to facilitate a part replacement.

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### 3 Package content

- Boiler pellet stove model K1700 & K2300
- Side covers, top front cover and bottom front cover
- Instruction Manual & Power cable

#### 3.1 Unpacking the free-standing fire

To unpack the unit, remove the retractable bag containing the cardboard box. Then pull the cardboard box out by lifting it, to remove the bag containing the unit and the polystyrene plates. To complete the procedure, unscrew the four brackets that secure the unit to the wood pallet (**Error! Reference source not found.**).

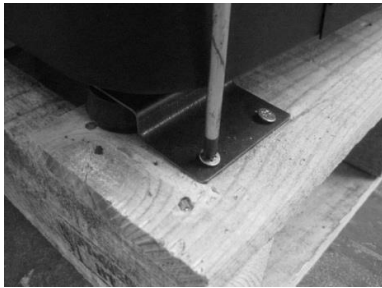


Figure 1 – Unpacking the unit

### 4 Safety precautions

Waterford Stanley is not liable for any damages to the stove if the specified precautions, warnings and operating procedures are not followed.

Waterford Stanley stoves are easy to operate and special attention was given to their components in order to protect users and installers against accidental damages.

The stoves must only be installed by a qualified installer, who should supply the client with a relevant statement of conformity and who shall be liable for the final installation and consequent product good operating conditions.

This stove must be used according to its intended use as specified by the manufacturer. The manufacturer is excluded from all liability, by contract or by tort, caused by injury to people, animals or property arising from misuse or faulty installation or servicing. After removing the packaging, verify the contents to check their integrity and completeness. If the content of the package fails to correspond to that indicated in point 1, contact the salesperson from whom you purchased the stove.

All the stove's components guarantee its operation and energy efficiency and should only be replaced with original parts provided by an authorised technical assistance centre.

The stove must be serviced at least once a year by the installation engineer. This manual is provided with the product. Please keep it close to the stove.

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#### 4.1 For your safety, we recommend that:

- Make sure you fully read and understand this instruction manual before using the boiler pellet stove as a biomass heating stove.
- Make sure that the hydronic/ plumbing circuit was correctly assembled and connected to the water supply before turning on the boiler pellet stove.
- The boiler pellet stove is not intended for use by children or persons with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they are under supervision or have been instructed concerning the use of the stove.
- Do not touch the stove if any part of your body is wet or humid;
- Do not tamper with safety or adjustment features without the manufacturer's authorization;
- Do not cover or reduce the size of the vents at the installation area;
- The boiler pellet stove requires a clear space around the stove for proper combustion, so possible air tightness of the location or any existing air extraction sources in the room may prevent the correct operation of the stove ;
- The stove must have adequate air supply to support combustion.
- Do not leave the packing materials near children;
- During normal operation, Free Standing Fire stove's door must not be opened;
- Some parts of the stove will become hot during normal operation, so avoid direct contact with parts such as the door handle and glass;
- Check the existence of any obstructions on the fume duct before turning on the stove after a long period of inactivity;
- This boiler pellet stove is intended for residential use in protected areas. Safety systems may turn off the stove. If this occurs, contact the technical assistance. In any circumstances should you attempt to interfere with the safety systems;
- The boiler pellet stove is a biomass heating stove equipped with an electric fume extractor. The occurrence of any power failure shut off the exhaust fan, the product must be connected to a naturally vented chimney/ flue to exhaust the remaining flue gases.
- During operation, NEVER turn off the free-standing fire stove by disconnecting the electric plug. The fume extractor on the free-standing pellet fire stove is electric so disconnecting the power plug will prevent the extraction of combustion flue gases;
- Your stove must be disconnected from the mains for servicing. Before doing this, the stove must be totally cooled down (if operating before);
- Never touch the interior of the stove without disconnecting it from the power mains;
- The maximum temperature of the water that can be set by the user (water set-point temperature) is 80°C. In the event of a temperature of 90°C being reached, the boiler pellet stove automatically disconnects, and the respective alarm is activated.

## 5 Technical specifications

FEATURES	K1200	K1700	K2300	Units
Weight	185	202	219	Kg
Height	1110	1192	1255	mm
Width	617	W	W	mm
Depth Total	707	710	767	mm
Diameter of the flue pipe	80	100	100	mm
Reservoir capacity	30	36	55	Kg
Maximum heating capacity	295	380	502	m <sup>3</sup>
Maximum Heat Output to boiler	11.5	14.5	18.8	kW
Maximum Heat Output to room	1.5	2.2	3.3	kW
Minimum Heat output to boiler	3.8	4.3	4.3	kW
Minimum Heat output to room	1.2	0.8	0.8	kW
Minimum fuel consumption	1.1	1.1	1.1	Kg/h
Maximum fuel consumption	3.0	3.9	5.1	Kg/h
Nominal electrical	100	134	134	W
Electric power at start-up (<10 min.)	406	434	434	W
Rated voltage	230	230	230	V
Nominal frequency	50	50	50	Hz
Efficiency @ nominal input.	92	90.9	89.2	%
Efficiency @ reduced input.	95	93.8	93.8	%
Combustion gas flow (max.)	44	33.7	18.8	g/s
Combustion gas flow (min.)	21	6.9	6.9	g/s
Max. flue gas temperature	108	126.5	153.4	°C
Min. flue gas temperature	62	66	66	°C
CO emissions at rated thermal power	0.0136	0.0162	0.02	%
CO emissions at reduced thermal power	0.0256	0.02	0.02	%
Flue draught	12	12	12	Pa
Stove water volume	19	22	22	W
Sound level max.	49.1	49.1	49.1	dB(A)

Tests performed using wood pellets with a heating capacity of 4.9 kWh/kg. The above information was obtained during product homologation tests performed at independent laboratories accredited for pellet stove tests.

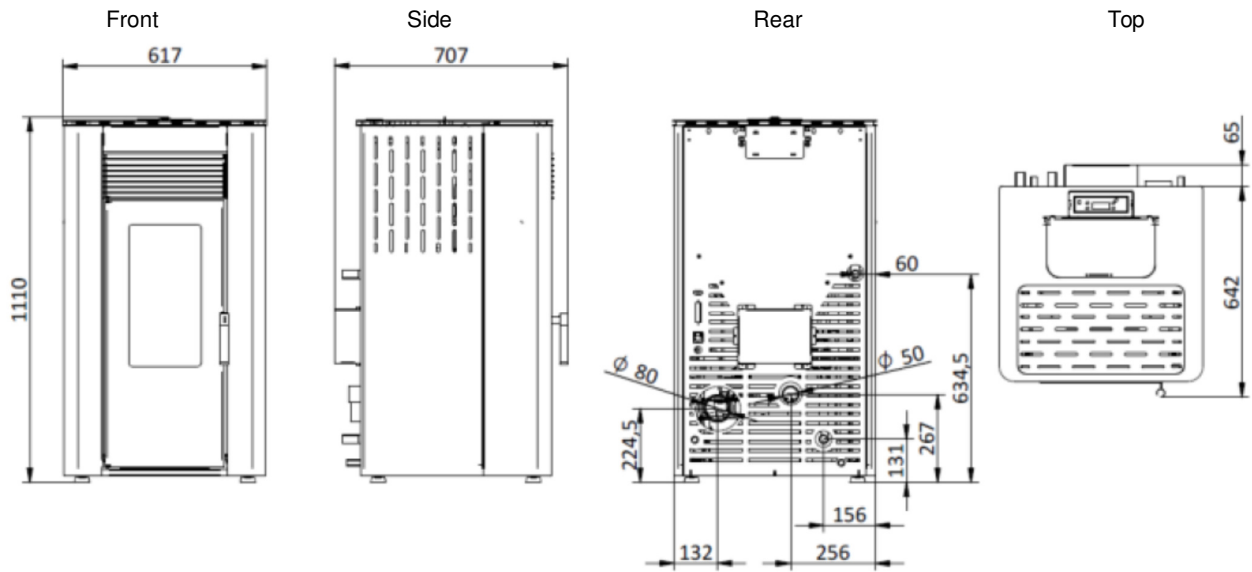


Figure 2 Dimensions of the K1200

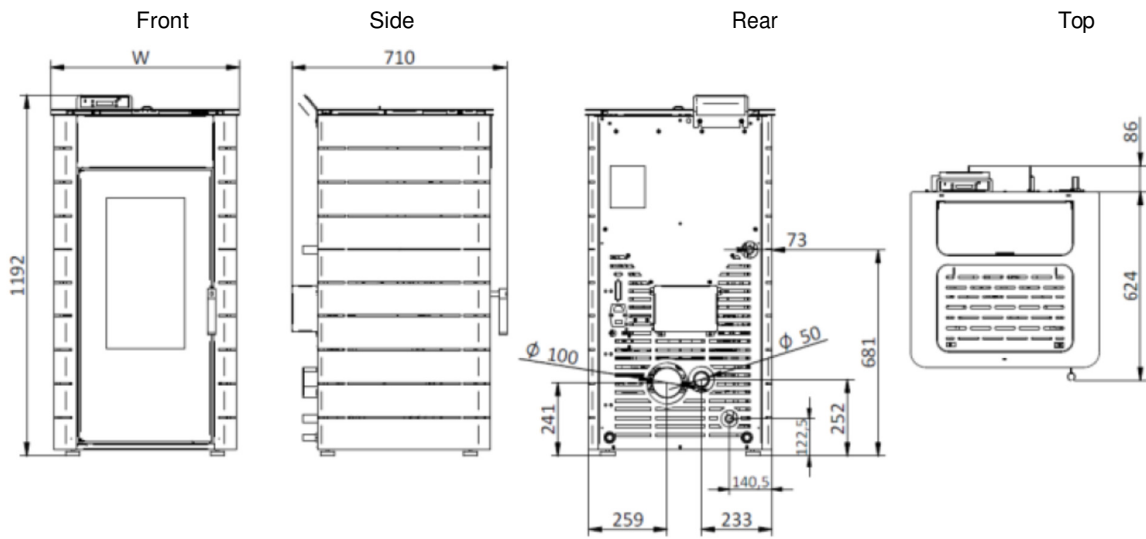


Figure 3 Dimensions of the K1700

Note, W = 626 with flat side panels, W = 704 with Curved side panels.



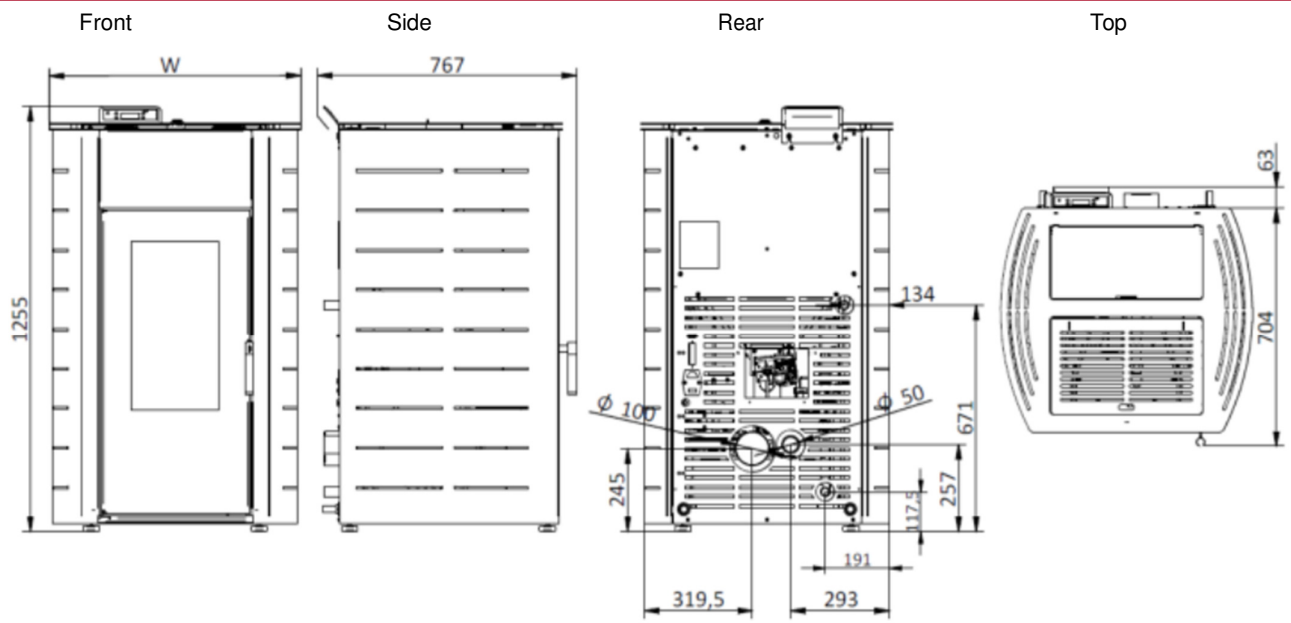


Figure 4 Dimensions of the K2300

Note, W = 644 with flat side panels, W = 746 with Curved side panels.

Figure 5 K1200  
Connections

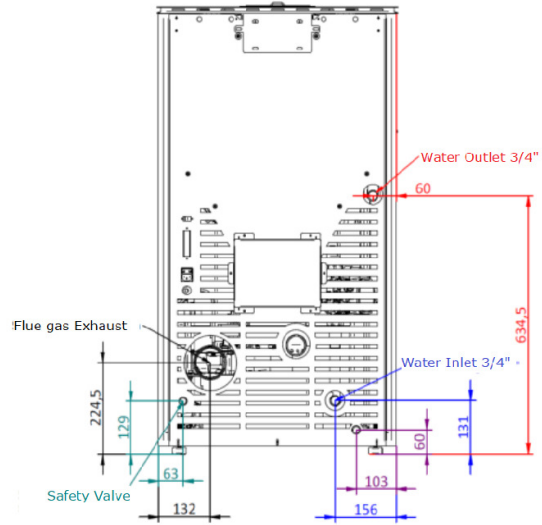


Figure 7 K1700  
Connections

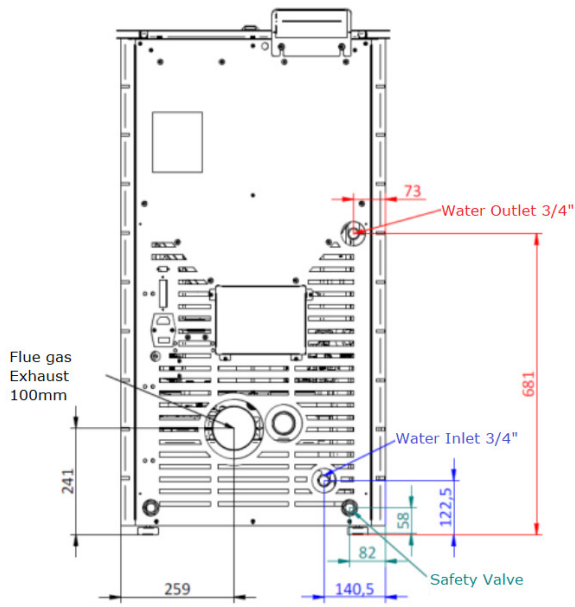
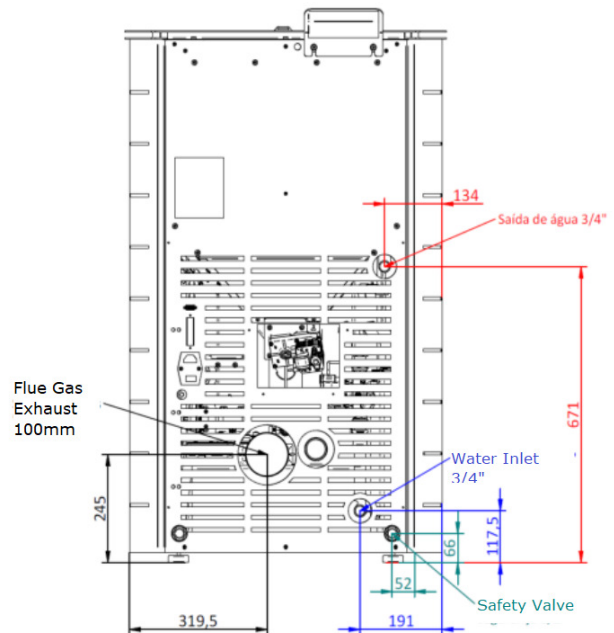


Figure 6 k2300  
Connections



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## 6 Installation of the boiler pellet stove

Before installing, please perform the following steps:

- Upon receipt, check that the product is complete and that there are no signs of damage. Any damage or defects should be checked for prior to installing the product. If there are defects please notify Waterford Stanley service department.
- The stove is equipped with four adjustable height feet at the base which allow for a simple adjustment when installed on a unlevel surface.



Figure 8 – Adjustable feet

- Remove the instruction manual from the package and hand it over to the client.
- Connect the flue, the K1200 requires an 80mm diameter flue connection, while the K1700 & K2300 require a 100mm diameter flue from the flue outlet to a cleaning Tee, it should be connected to a 125mm flue/ chimney liner.
- If a pipe is used for combustion air inlet from the outside, it shall be no longer than 60cm horizontally, there should be no bends or offsets.
- Perform the hydronic installation
- Connect the 230VAC power cable to a grounded socket.
- The surface of the stove where the hot air outlet is located must be facing the area to be heated.

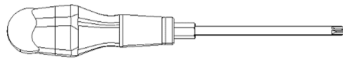
## 6.1 K1200 Assembly of removable parts

### Installing the Casings

Before installing the casings, you should check if the package is complete and in good condition. Any possible damage or missing elements should be reported before proceeding with the installation.

This section describes how to install the casings for the k1200 Stove.

To install the casings, the installer must have available:



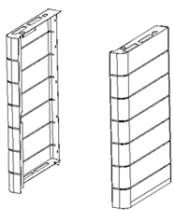
Star shaped  
screwdriver  
PH2 screw

*Figure 9 Material required to install the casings*

**IMPORTANT NOTICE: Before installing the casings, it is required that the unit is electrically isolated (unplugged).**

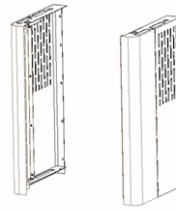
To assemble some of this models, each kit must include the following parts

#### **K1200 (Claret, White or Black)**



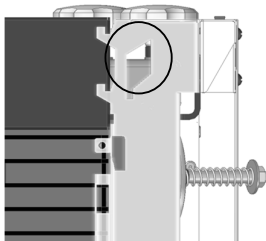
*Figure 10, 12kW Colours.*

#### **K1200, 12kW Oak**

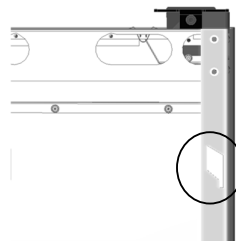


*Figure 11, 12kW Oak.*

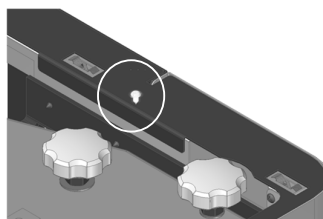
The covers should be placed on the pillars and grille slots identified in Figures 12& 13. The screw placed in the stove body must be removed and tightened after placing the side cover as shown in Figure 14.



*Figure 12*



*Figure 13*

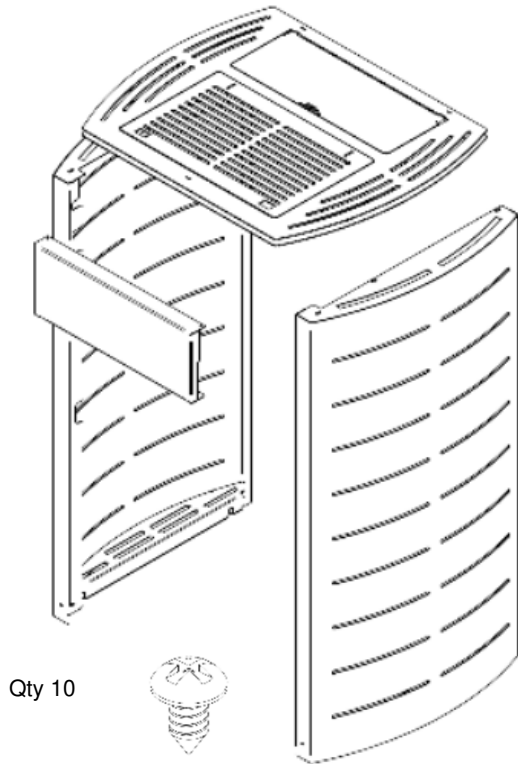


*Figure 14 screw to secure covers*

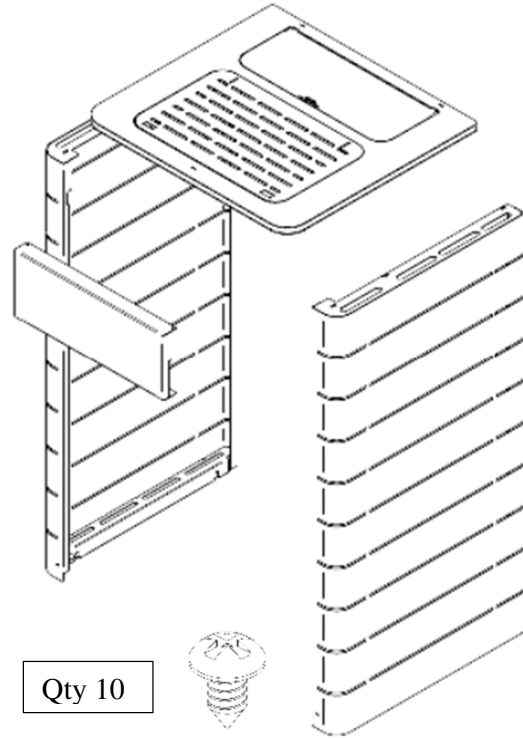
## 6.2 K1700 & K2300 Assembly of removable parts

After the installation, the stove must be fitted with the removable covers.

### Curved side Panels

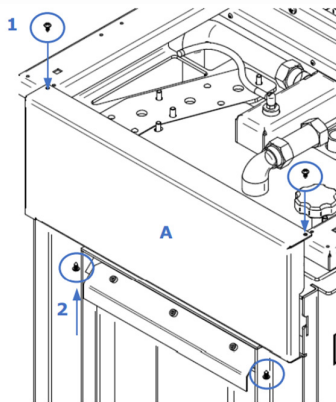


### Flat side Panels



### - Top front cover

To fit the upper front cover (A), it must be placed on the front of the equipment and then fixed using two screws from the top(1) and two from the bottom (2)

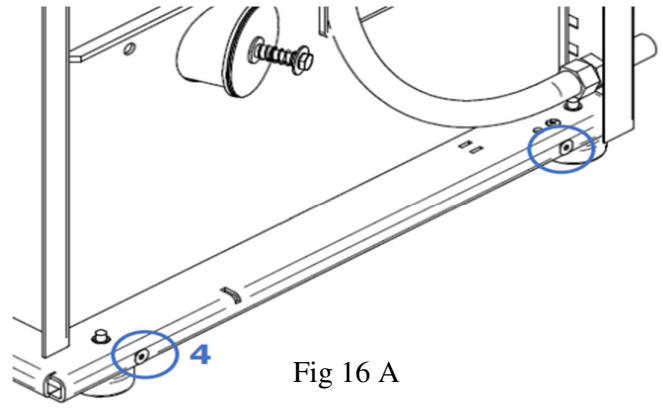
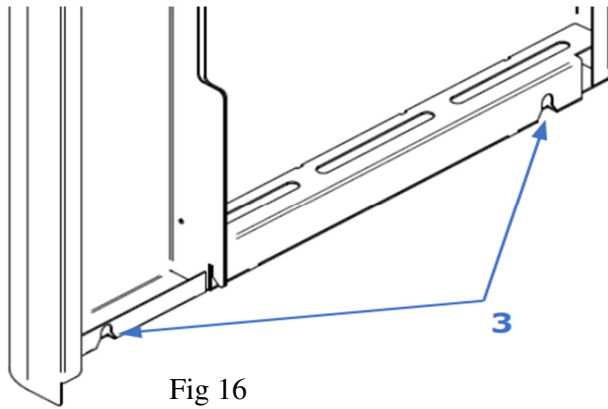


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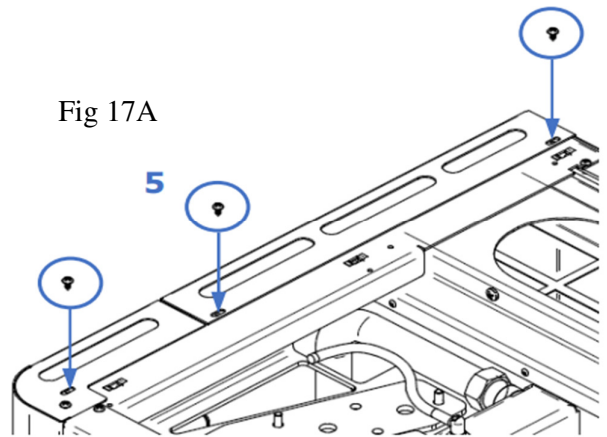
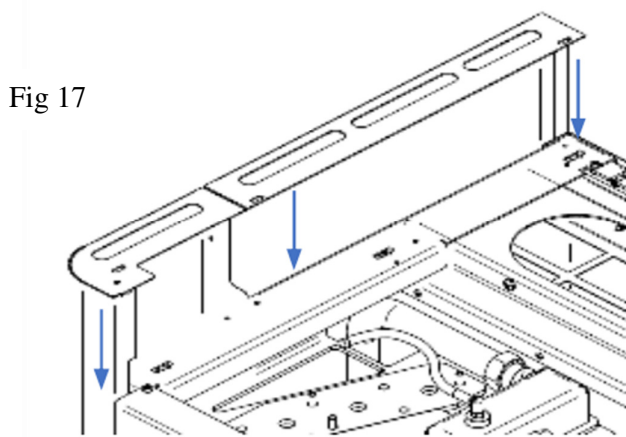
Figure 15 – Assembly of the top front cover

### - Side covers

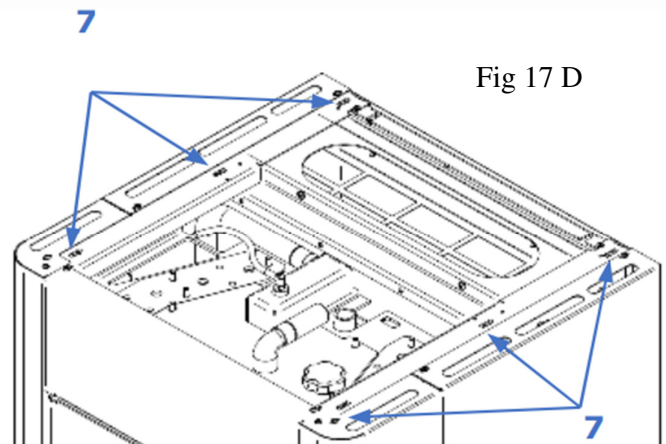
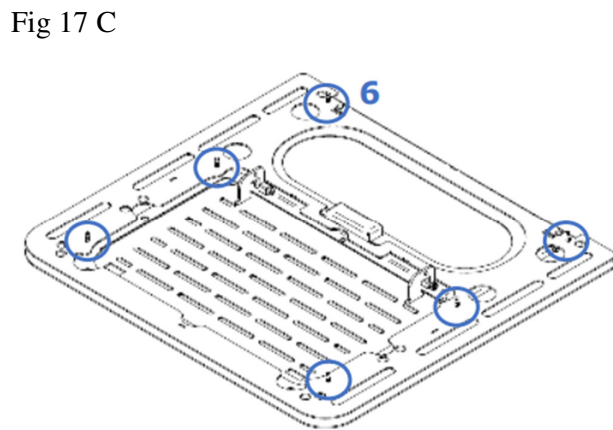
To attach the side covers, the lower holes of the covers (3) must be mounted on the guides at the bottom of the main body of the stove (4)



Slide the side panel downwards during assembly and then tighten it using three screws (5). You should repeat the same procedure for the two side panels.



To ensure that the top is properly fixed, it contains six inserts (6) at the bottom that must fit into the springs in the frame (7). It may be necessary to exert a small force to properly fit the inserts into the clips.



## 7 Installation requirements

The minimum distance between the free-standing pellet fire stove and particularly flammable surfaces is specified in Figure 17.

The top of the stove must be at least 100cm separated from the ceiling, especially in rooms with ceilings consisting of flammable materials.

The base supporting the stove cannot be made of combustible material (e.g. carpet), so make sure you use an adequate protection.

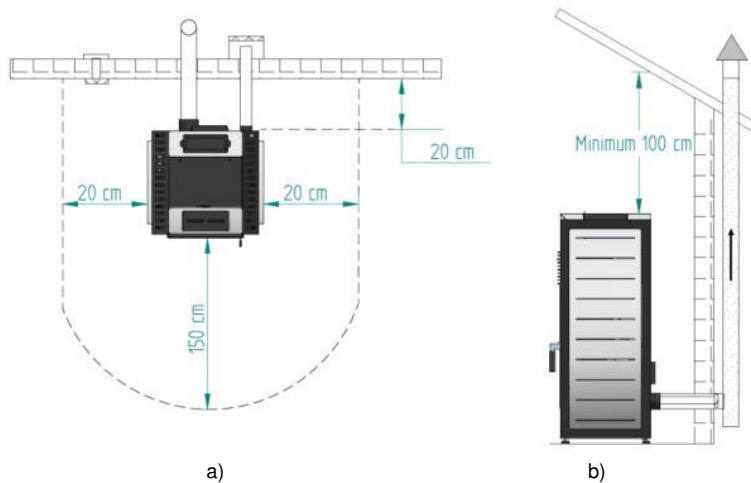



Figure 18 – Clearances to combustibles: a) plan view of the stove's installation; b) side view of the stove's installation

### 7.1 Installation of ducts and fume extraction systems:

- The exhaust pipe must have been designed for this purpose, in compliance to the location requirements and in accordance with any applicable regulations.
-  An inspection-T with an airtight lid must be attached to the exhaust pipe of the stove to allow the regular inspection of the system or discharge of heavy dust and condensates. As indicated in Figure 17, the exhaust pipe must be assembled to allow cleaning and maintenance of the pipe by inserting inspection points.
- Under normal operating conditions, the combustion gas flow should create a draught of 12 Pa one meter above the chimney neck.
- The stove must not be installed in a shared chimney
- Pipes outside the heated area must be suitably insulated

### 7.2 Installation without a chimney

The installation of the boiler pellet stove without a chimney should be performed as illustrated in Figures 19 / 20, with 80/100 mm diameter flue pipe up to the Tee piece, externally twin wall insulated stainless-steel pipes must be used and properly fastened to avoid condensation.

A blank plug must be installed at the base of the Tee section pipe to allow periodic inspections and annual maintenance, as illustrated in Figure 20.

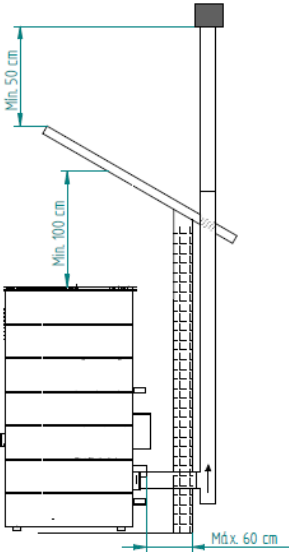


Figure 19, K1200 Installation side view.

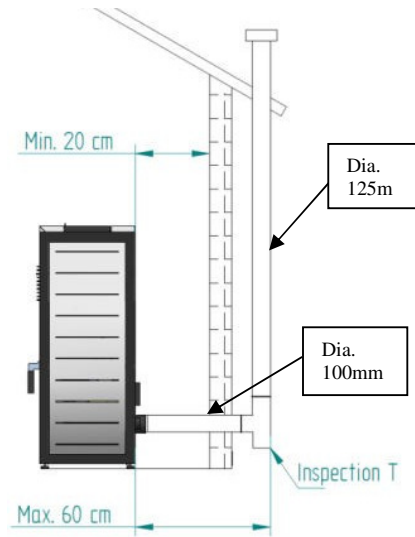


Figure 20, K1700/ 2300 Installation side view

**!** Failure to comply with these requirements may prevent the correct operation of the stove. Follow all the instructions presented on the diagrams.

**!** The pellet stove stoves operate with the combustion chamber in vacuum, so it is necessary to have a fume exhaust pipe to extract combustion gases properly.

**All material used to flue the product must comply with current Building regulations.**

**Insulation:** The flue must be double-walled and insulated to make sure that flue gases do not cool down going outwards, which would cause an inadequate circulation and condensation that may damage the stove.

**Windproof terminal:** A windproof terminal must always be installed to avoid the backflow of flue gases.

**Draught in the chimney.** All installation must guarantee a draught of 12 Pa (0.12mbars) measured when hot and at the maximum power.

**Ventilation:** The stove must have adequate air for combustion and the room must have adequate air for ventilation, adequate air supply must be provided in line with building regulations. The boiler pellet stove has a circular pipe (Ø 50mm) that may be connected to the exterior of the house. An outside air kit and adaptor from 50-100 is available to order from Waterford Stanley.

**This product should not be installed in the same room as an extractor fan. A spillage test should be undertaken where the product is installed in a room adjacent to a room with an extractor fan.**

### 7.3 Installation with a chimney

If the stove is to be installed in a chimney with a flue pipe of appropriate diameter direct to the stove. The chimney should be lined with a 125mm flexible liner suitable for use with solid fuel.

A T-piece must be installed between the connection pipe and the 125mm flexi liner to allow for periodic inspection and annual maintenance. The installation must be completed with a windproof cowl recommended for use with pellet stoves.

If you do not use the stove for a long time, check it to make sure that the flue pipes are clear before lighting the fire.



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## 7.4 Hydronic Installation

\* The chapter 16 (installation diagrams) contains the optional connection diagrams for central heating installations, with or without water heating for household use;

\* The boiler model pellet stove is equipped with a circulating pump, an expansion vessel (6 litre volume in the K1200 & K1700 models, 10 litre volume in the K2300 model) and a 3-bar safety valve; A calculation must be made in each individual installation to check the required size of the expansion vessel and additional vessel added if required.

\* The product must be installed on a sealed system. Operating pressure is between 1 and 1.5 bars;

\* To drain the boiler, attach a "T-tube" with a tap to the waste water drain the safety valve (3 bar) outlet must also be connected to the waste water drain;

\*The heating fluid must consist of water with a corrosion inhibitor non-toxic product added in the quantity recommended by the manufacturer. If the stove installation or the fluid pipes are installed in areas likely to freeze, the installation engineer must add the correct amount of antifreeze product recommended by the manufacturer to circulating fluid to avoid freezing at the estimated minimum temperature.

## 8 Fuel

The boiler pellet stove must be operated exclusively with pellets. No other fuel may be used.

Use only pellets certified by standard EN 14961-2 grade A1, with a

**6 mm diameter** and measuring **between 10 and 30 mm long**.

The pellets must not have a moisture content in excess of 8% . To guarantee a good combustion, the pellets must maintain these characteristics so they should be stored in a dry place.

The use of different pellets will reduce the efficiency of the stove and cause poor combustion.

**You should always use certified pellets and must test a sample before buying large bulk loads.**

The physical/chemical properties of the pellets (i.e. the calibre, friction, density and chemical composition) may vary within specific tolerances and according to each manufacturer. Please note that this may cause alterations to the feeding process and, consequently, the need for different doses (more or less pellets).

**The stove allows the dose of pellets to be adjusted during start-up and at power levels by  $\pm 25\%$**



Warning : The stove must NOT be used as an incinerator

---

## 9 Use of the Boiler pellet stove

### Recommendations

Before starting up the stove, please check the following:

- Guarantee that the stove is properly connected to the power mains using the 230VAC power cable.



Figure 21 – Electric power plug.

- Check to see whether the pellet reservoir is supplied with pellets. Inside the pellet reservoir is a safety grid to prevent users from reaching the worm screw.
- Ensure that before each lighting the burner is clear



The stove's combustion chamber is made from iron plate and painted with high temperature-resistant paint, releasing flue gases during the first burning sessions due to paint curing.

Make sure that the hydraulic circuit was correctly assembled and is filled to the correct pressure.

The room where the stove is installed must have adequate ventilation for all air using appliances to work concurrently.

The Boiler pellet stove stoves have a probe for measuring the room temperature. This probe is attached to the grid on the rear panel (Figure 20). For a good reading of the room temperature, avoid the contact between the end of the probe and the stove chassis. You may also attach the probe to the wall beside the stove.



Figure 22 - Room temperature probe

## 9.1 User display

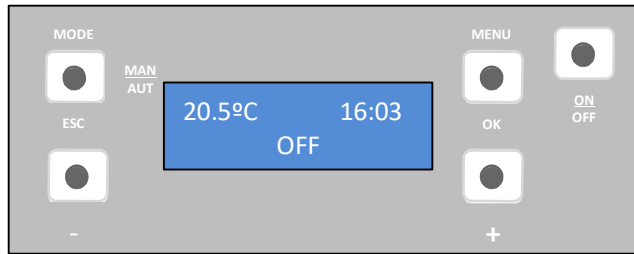


Figure23 – Remote control and display



a)

a) Key to toggle between manual and automatic mode and exit menus (esc).



b)

b) Key to access menus and confirmation key (ok).



c)

c) Key to start/stop the stove and reset error messages.



d)

d) Key to scroll the menus to the left, or to reduce the set point



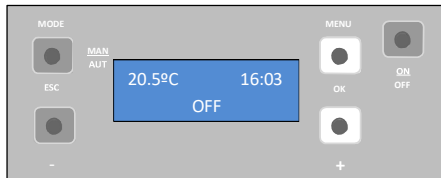
e)

e) Key to scroll menus to the right or increase the set point

## 9.2 Display information summary

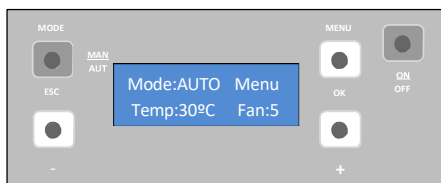
### 9.2.1 Menu

Menu indicating that the stove power is "off", the room temperature in °C and Time.



**Selecting the operation mode:** to select the operation mode, press the “mode” key to select “Manu” for manual mode or “Auto”

Note: For boiler models manual mode is unavailable.



**“Auto” mode:** in this mode, the stove shall be turned on at maximum power until reaching a temperature of 1°C above the temperature selected (set point temperature). Upon reaching the set temperature, the stove changes to minimum operating power.

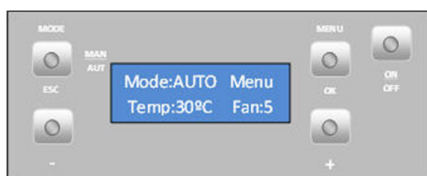
The set-point temperature can be set between 5 and 35°C by pressing the "-" key.

The "+" key allows the user to set the ventilation speed between 1-5 and automatic mode.

### 9.2.2 Water temperature

Press the Menu key twice to set the water temperature;

“Water Temp.” appears on the display. Press Set to adjust the set point.

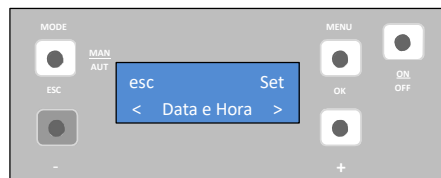


- Heating temperature

To set the desired **heating temperature** press “set”. The display starts to flash. Press the “+” or “-” key to select the desired temperature and then “ok” to confirm.

### 9.2.3 Date/Time

To set the **date and time**: press the Menu key twice followed by the “+”. “Day and Time” appears on the display. Press "set" to see the “Time” menu.



"

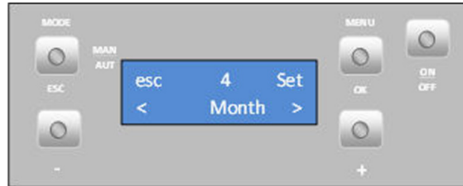
- Year

To set the **year** press "set". The display starts to flash. Press the "+" or "-" key to select the desired year and then "ok" to confirm. Press "esc" to return to the " Date and Time " menu then "+" month menu. The Timer menu appears.



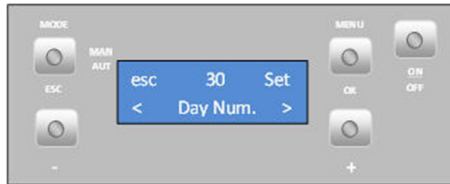
- Month

To set the **month** press "set". The display starts to flash. Press the "+" or "-" key to select the desired month and then "ok" to confirm. Press the "+" key to go to the " date " menu.



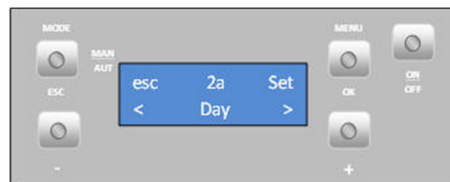
- Day of the month/ Date

To set the **date** press "set". The display starts to flash. Press the "+" or "-" key to select the desired day and then "ok" to confirm. Press the "+" key to go to the " day of the week " menu.



- Day

To set the **day of the week** press "set". The display starts to flash. Press the "+" or "-" key to select the desired day and then "ok" to confirm. Press the "+" key to go to the "Time." (Day Number) menu.



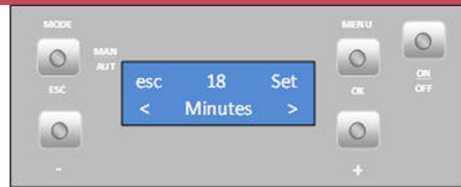
- Time

To set the **time** press "set". The display starts to flash. Press the "+" or "-" key to select the desired time and then "ok" to confirm. Press the "+" key to go to the "Minutes



- Minutes

To set the **minutes** press "set". The display starts to flash. Press the "+" or "-" key to select the desired minutes and then "ok" to confirm.

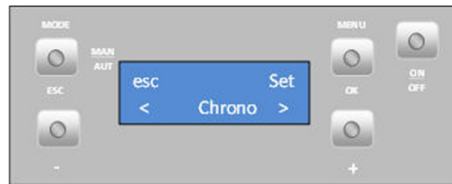


### 9.2.4 Timer

The stove is equipped with a timer that allows the stove to be turned on or off at a specified time.

Setting the timer/s

Step 1 Press the “set” button twice followed by the “+” button to display “chrono”



Step 2 Press the “set” button to display “ enable”.

Step 3 Press the “+” button to scroll right, “load profile” is displayed.

Step 4 Press the “+” button to scroll right, “reset” is displayed.

Step 5 Press the “+” button to scroll right, “program 1” is displayed.

Step 6 Press the “set” button , “enable” is displayed.

Step 7 Press the “+” button to scroll right, “start” is displayed, Press the “set” button.

Step 8 Use “+” and “-“ to adjust the “start” time. Followed by “ ok ” to confirm.

Step 9 Press the “+” button to scroll right, “stop” is displayed, Press the “set” button.

Step 10 Use “+” and “-“ to adjust the “stop” time. Followed by “ ok ” to confirm.

Step 11 Press the “+” button to scroll right, “air temperature” is displayed, Press the “set” button.

Step 12 Use “+” and “-“ to adjust the “air temperature” . Followed by “ ok ” to confirm.

Step 13 Press the “+” button to scroll right, “air temperature” is displayed, Press the “set” button.

Step 14 Use “+” and “-“ to adjust the “air temperature” . Followed by “ ok ” to confirm.

Step 15 Press the “+” button to scroll right, “water temperature” is displayed, Press the “set” button.

Step 16 Use “+” and “-“ to adjust the “water temperature” . Followed by “ ok ” to confirm.

Step 17 Press the “+” button to scroll right, “fire” is displayed, Press the “set” button.

Step 18 Use “+” and “-“ to adjust the “fire” . Followed by “ ok ” to confirm.

Step 17 Press the “+” button to scroll right, “Days” is displayed, Press the “set” button.

Step 18 Use “+” and “-“ and “ set “ buttons to select the days which the program will run on.

Step 19. Return to steps 6 and steps 2 and set both of these to “On” to enable Program 1.

Repeat for Programs 2-6 as required.

Note,

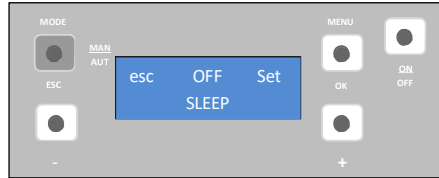
It is not possible to enable the timer until the programs are set.

Step 6 is to enable program 1.

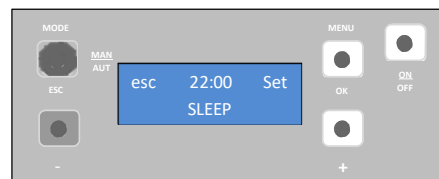
Step 2 is to enable the timer function.

### 9.2.5 Sleep

The "Sleep" menu allows you to setup the time you want the stove to turn off.



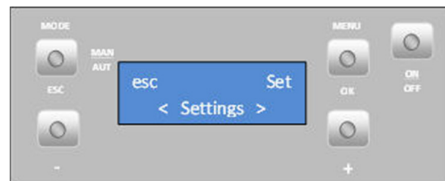
Press "set". The display starts to flash. Select the desired time using the "-" and "+" keys. After choosing the time, press "ok" to confirm. Press "esc" to return to the menu and "+" to go to the configuration menu.



## 9.3 Configuration menu

To change the **configurations** of the boiler pellet stove, press "set".

The "Língua" (Language) menu appears allowing you to select the language.



- Language

To select the **language**, press "set". Using the "+" or "-" keys, select the desired language (**Pt** – Portuguese; **Nl** – Dutch; **Gr** – Greek; **It** – Italian; **En** – English; **Fr** – French; **Es** – Spanish; **De** – German). Press "ok" to confirm.

Press the "+" key to go to the "eco" menu.



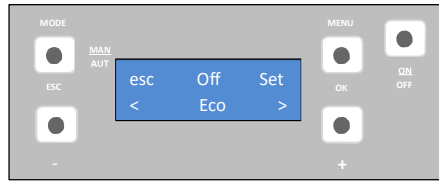
- Eco mode

If the stove is equipped with a thermostat that operates exclusively based on the temperature, the "eco mode" can be enabled to reduce the fuel consumption. In this mode, the stove operates at a set point temperature. The stove always runs at maximum operating power until it reaches a temperature (1°C) above the set point temperature. Upon reaching this temperature, the stove starts operating at minimum operating power for a preset time period. After this time has elapsed, the stove turns off. It remains off for another preset period of time. When the measured room temperature drops to a preset value, the stove turns on again at the maximum operating power.

This operation is only available in automatic mode.

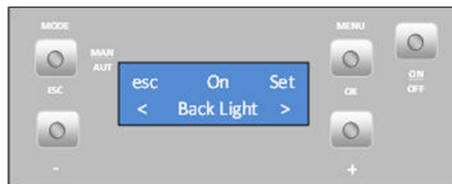
To activate the eco mode, press "set". The display starts to flash. Select "On" or "Off" using the "-" and "+" keys. Press "set" to confirm the selection.

Press "esc" to return to the previous menu and "+" to go to the (Lighting) menu.



- Lighting

To select **lit screen**, press "set". The display starts to flash. Press the "+" or "-" key to select the time at which you want the screen to light up, or choose "On" to keep the light on at all times. Press "ok" to confirm. Press the "+" key to go to the (Tones) menu.



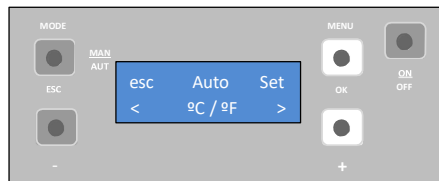
- Tones

To activate the **key tone**, press "set". The display starts to flash. Press the "+" or "-" key to select "On" or "Off". Press "ok" to confirm. Press the "+" key to go to the "°C/°F" menu.



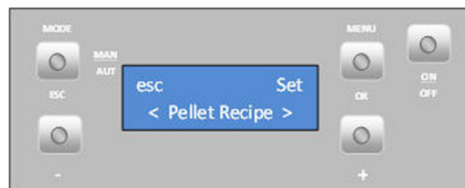
- Temperature stove (°C/°F)

To select °C / °F, press "set". The display starts to flash. Press the "+" or "-" key to select "°C", "°F" or "Auto", and then "ok" to confirm. Press the "+" key to go to the " Pellet" (Pellet Qty) menu.



- Pellet quantity

Press "set" to see the "(Temporary settings) menu.

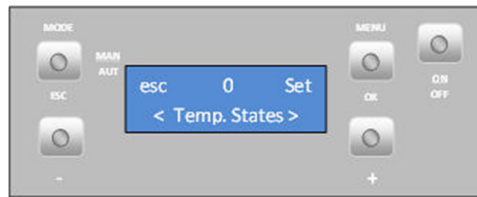


- Temporary settings

This feature allows you to increase or decrease by 25% **the quantity of pellets at start-up**. Press "set". The display starts to flash. Press "+" or "-" to increase or decrease (between -5 to +5), accordingly. Each stove must be multiplied by 5 to obtain

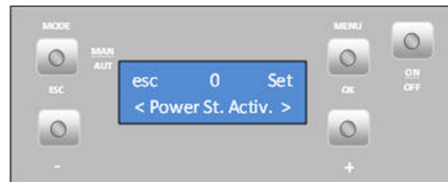


the correct percentage. Press "ok" to confirm. Press the "+" key to go to the " (Power settings) menu.



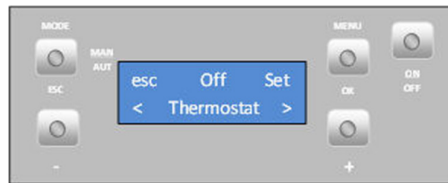
- Power settings

This feature allows you to increase or decrease by 25% the quantity of pellets at each power level. Press "set". The display starts to flash. Press "+" or "-" to increase or reduce (from -5 to +5), accordingly. Each stove must be multiplied by 5 to obtain the correct percentage. Press "ok" to confirm. Press "esc" to return to the (Pellet Qty) menu and "+" to go to the (Thermostat) menu.



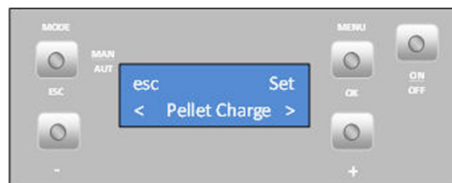
• Thermostat

This feature allows you to enable or disable the **room temperature thermostat**. Press "set". The display starts to flash. Press the "+" or "-" key to select "On" or "Off" and then "ok" to confirm. Press the "+" key to go to the (Pellet loading) menu.



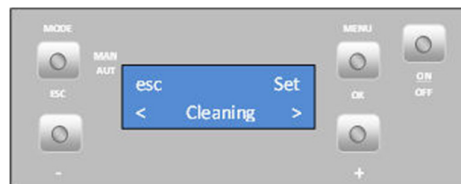
• Pellet loading

This feature allows you to enable the **worm drive** to fill the channel when it is empty to keep the stove running. Press "set"; the "ok" option appears. Press "ok" to activate the drive (the " (Activated) message appears) and "esc" to stop it. Press the "+" key to go to the (Cleaning) menu.



• Cleaning

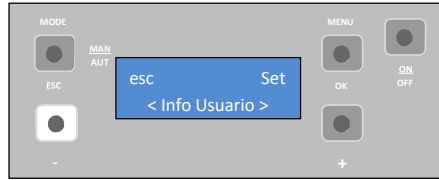
This feature allows you to **clean** the burning basket manually. Press "set"; the "ok" message appears. Press "ok" to start the cleaning; the " (Activated) message appears. When you wish to stop, press "ok". Press the "+" key to go to the (Technical) menu.



The technical menu is not available to the end user since it includes exclusively factory settings that must never be changed.

## 9.4 User Info

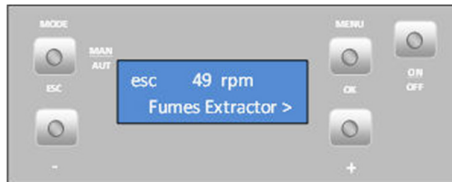
This menu contains some user information regarding the Free-Standing Fire stove. Press "set"; the " (File Code) menu appears. Display software/firmware code Press the "+" key to go to the (Operating Hours) menu.



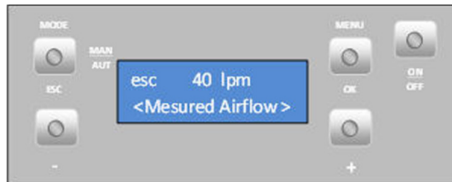
This menu shows for how many hours the stove has been operating.



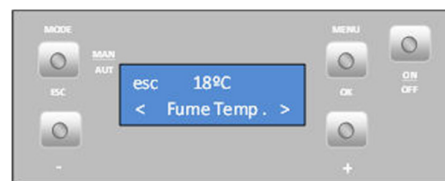
Fume extractor operating speed (rotation per minute).



Airflow measured by the air probe.

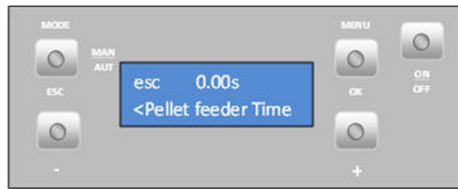


Fume temperature.



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Worm drive rotation time ("On").



Ventilation power level.



Hydraulic circuit pressure



## 10 Start-up

To start operating the Boiler pellet stove, press the start/stop button for 3sec. The display should indicate " Lighting " until the completion of this phase.

The pellets will pass through the supply channel to the burning basket (combustion chamber), where they will be ignited using a heat resistor. This process may take between 5 and 10 minutes, depending on whether the worm screw used to push through the pellets has been previously filled with fuel or is empty. Upon completion of the ignition phase, the word "On" should appear on the display. The heating power can be adjusted at any time by pressing the power selection button for approximately 1 second.

Users can choose between five preset power levels. The selected power is indicated on the display. The initial power at each start-up will correspond to the power level set before the last stop.

### 10.1 Stop

The stop sequence of the stove is started by pressing the start/stop key for 3sec.

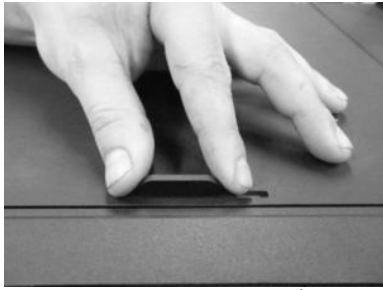
Until this phase has been completed, the display will show (Disabling). The extractor will remain active until the fume temperature of 104°F (40°C) is reached, to guarantee that all the material has been burnt.

### 10.2 Turning off the stove

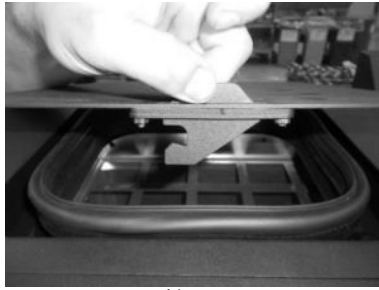
The stove should only be disconnected after stoppage.

Make sure that the display indicates "Off". If necessary, disconnect the power cable from the mains.

### 10.3 Filling the pellet reservoir



a)



b)

Figure 24

- 1 – Open the pellet reservoir lid at the top of the stove by sliding the bolt sideways, as shown in Figure 24.
- 2 – Pour the pellets into the reservoir, as shown in Figure 25.



Figure 25 – Refilling the pellet reservoir

- 3 - Turn on the stove and close the lid, pressing it down as shown in Figure 24-a.

## 11 Maintenance

The Waterford Stanley boiler model pellet stove requires careful maintenance. The most important thing is to remove the ash from the pellet burning area at regular intervals. This can be easily done by using a simple household vacuum cleaner. It should be cleaned after burning approximately 30kg of pellets.

**Note:** However, before cleaning, the power of the stove must be turned off and the stove should be cold enough to prevent accidents from occurring.

### 11.1 Weekly Maintenance K1200 model.

Remove the burning pot and the ash pan and vacuum both. The interior of the unit must also be cleaned by removing the top cover plate and cleaning the airflow pipes, as shown in Fig 27. **Error! Reference source not found.** Finally, assemble the parts in the reverse order to which they were removed and close the unit door.

To perform maintenance on the boiler model, clean the airflow pipes. To do this, raise the lid on the top of the unit and then lift the levers inside several times (Figure 26) to make the dirt accumulated inside the pipes fall out.

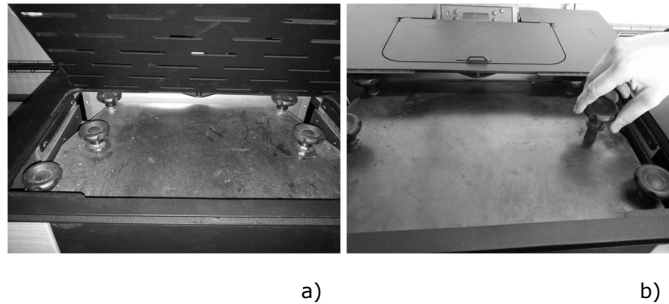
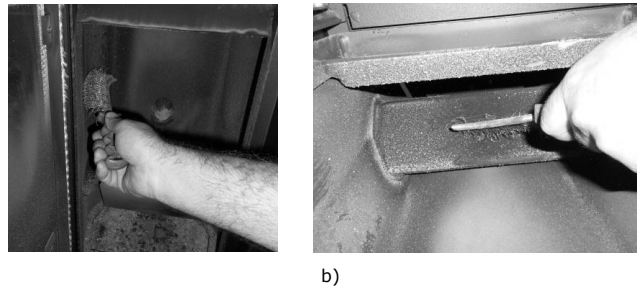


Figure 26 – Cleaning the turbulators

Then clean the inside of the unit using a steel brush on the surfaces where dirt has accumulated (Figure 27).



Then remove the burn pot (Figure 28-a) and the ash basket (Figure 28-b) and vacuum the ashes from both.

The interior of the unit must also be cleaned by opening the hatch, as shown in figure. Finally, assemble the parts in the reverse to which they were removed and close the unit door.

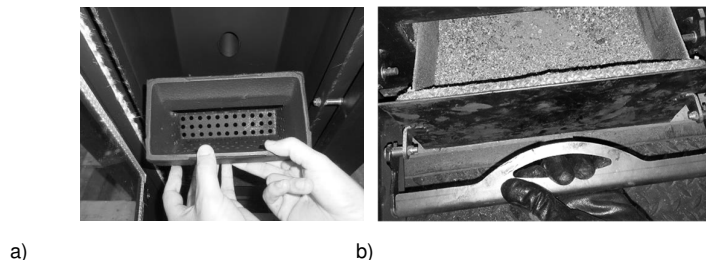


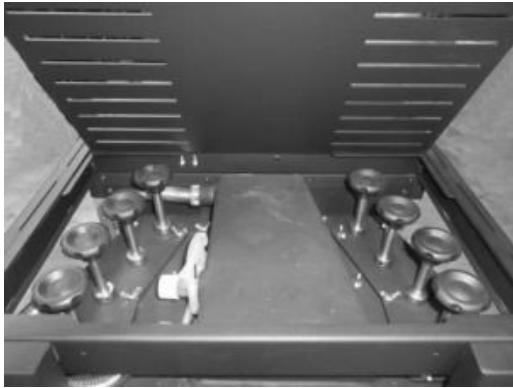
Figure 28 – a) Burning basket; b) Ash basket

**! WARNING! The maintenance task frequency depends on the quality of the pellets.**

**Note:** See the warning label and read the maintenance instructions in chapter 12.

## 11.2 Weekly Maintenance K1700 & K2300.

To perform maintenance on the boiler model pellet stove, clean the airflow pipes. To do this, raise the lid on the top of the stove (Figure 29-a) and then turn (Figure 29-b) and lift the levers inside several times (Figure 29-c) to make the dirt accumulated inside the pipes fall out.



a)



b)



c)

Figure 29 – Cleaning the turbulators

Then clean the inside of the stove using a steel brush on the surfaces where dirt has accumulated (Figure 30).



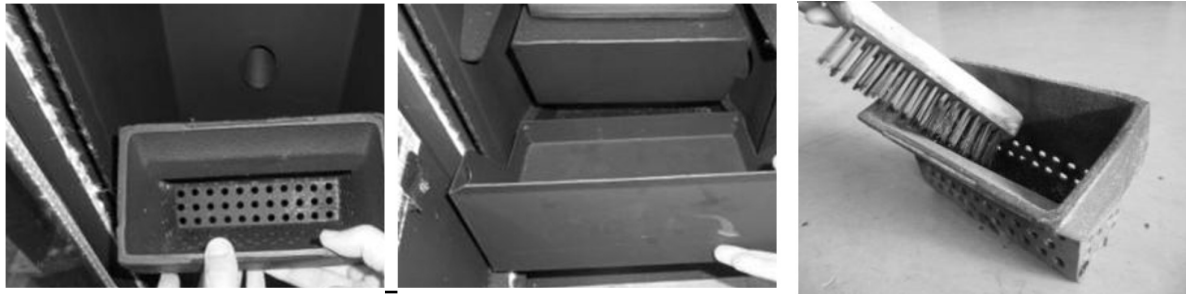
a)



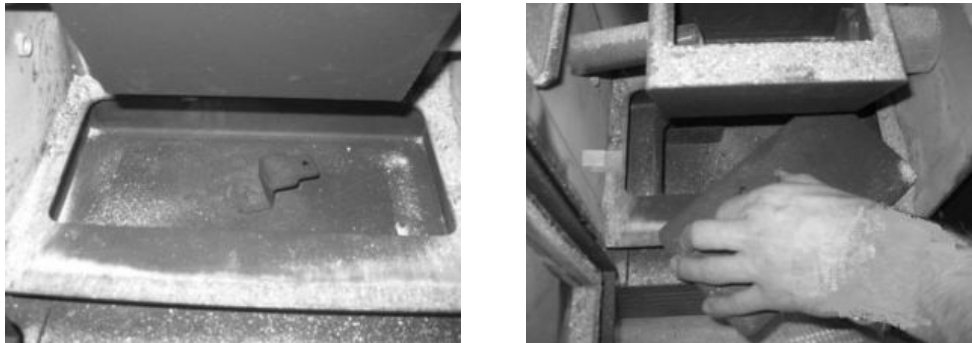
b)

Figure 30 – Cleaning the interior of the boiler model

The burning basket (Figure 31-a) and ash basket (Figure 31-b) must then be removed and the ash vacuumed from both. The interior of the stove must also be cleaned by opening the hatch, as shown in Figure 32. Finally, assemble the parts in the reverse to which they were removed and close the stove door.



a) b) c)  
Figure 31 – a) Burning basket; b) Ash basket c) Cleaning the burn basket.



a) b)  
Figure 32– Cleaning the interior of the stove

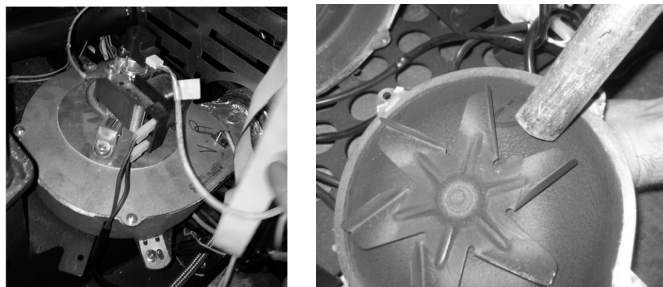
### 11.3 Additional cleaning K1200

Additional cleaning should be performed after every 600-800 kg of pellets consumed or once a year whichever comes first. Remove the side covers to access the side lids of the combustion chamber. To clean the interior of the unit, remove the lid and vacuum the ashes. Using a 20-25mm wide 80cm long steel brush thoroughly clean the fume ducts (33)



Figure 33 – Cleaning Vacuum the interior

If you notice that the fume extraction is not effective, we recommend cleaning the interior of the extractor with a vacuum cleaner, as shown in 34-a & b. At a minimum, this operation should be performed, at least, once a year.



a) b)  
Figure 34 – a) Remove the screws; b) Remove the extractor

For the backboiler unit, the procedure involves cleaning the air flow pipes and turbulators. To do this, open the lid on the top of the unit (Figure 35-a and b) and remove the four sticks (Figure 35-c and 35-d). Then pull the turbulators up (Figure 35- e). A vacuum cleaner must be used to clean this area (Figure 35-f) and the interior of the pipes can be cleaned with a steel brush. The turbulators that are removed must also be cleaned with a steel brush.

To reinstall the turbulators, execute in reverse the above procedure shown in the figures.

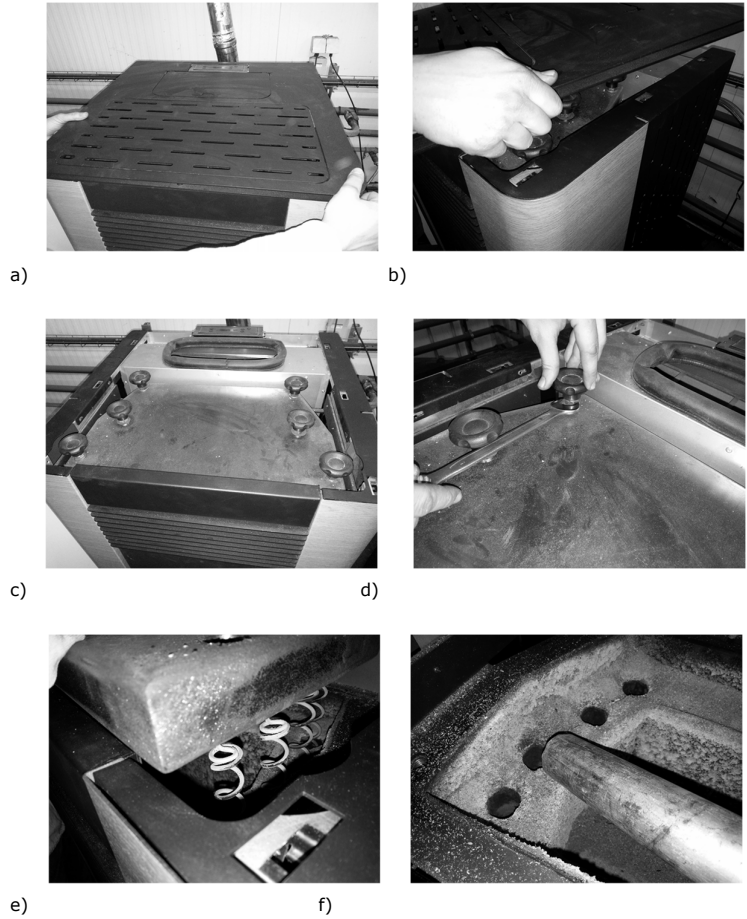


Figure 35 – Cleaning of gas passageways and turbulators



## 11.4 K1700/ K2300

Additional cleaning should be performed after every 600-800 kg of pellets consumed or once a year whichever comes first. For the boiler stove, the procedure involves cleaning the air flow pipes and turbulators. To do this, open the lid on the top of the stove (Figure 36-a) and remove the six wing nuts securing each turbulator set (Figure 36-b and 36-c). Then pull the turbulators up (Figure 36- d/e). A vacuum cleaner must be used to clean this area (Figure 36-f) and the interior of the pipes (Figure 36-g) can be cleaned with a steel brush. The turbulators that are removed must also be cleaned with a steel brush (Figure 36-h).

To reinstall the turbulators, execute in reverse the above procedure shown in the figures.



a)



b)



c)



d)



e)



f)



g)



h)

Figure 36 – Cleaning the air flow pipes and turbulators

If flue gases are not being extracted properly, we recommend you clean heat exchanger and the extractor as shown in Figures 37 and 38. However, we recommend that you perform this procedure at least once a year.

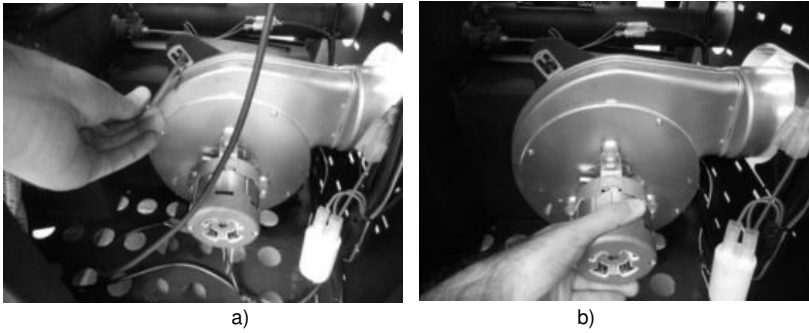


Figure 37 – a) Remove the screws; b) Remove the extractor



Figure 38 – Vacuum the air flow pipes

## 11.5 Cleaning the glass

The glass may only be cleaned with the stove completely cold, and using an appropriate product, as per the instructions for use. You should prevent the product from reaching the sealing ring and painted metal parts so that no undesirable oxidation occurs. The sealing ring is glued, so should not be exposed to moisture from water or cleaning products.



Figure 39 – Incorrect cleaning of the glass

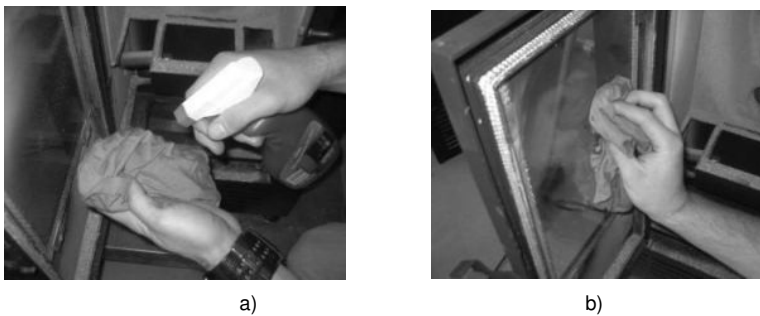



Figure 40 – Cleaning of the glass: a) moisten a soft cloth with liquid; b) clean the glass with the cloth

## 12 Alarms / failures / recommendation list

### 12.1 Alarms

Alarm	Code		Troubleshooting
Ignition failure	A01	Maximum time 2400 sec	- the worm drive channel is empty - restart the stove - resistance burnt – replace resistance - the burning basket has been incorrectly installed
No flame or lack of pellets	A02	Temperature under: - 104°F (40°C) (air model) - 109.4°F (43°C) (boiler model)	- Pellet reservoir is empty
Excess heat in the pellet drum	A03	194°F (90°C)	- the fan is not working – call for assistance - faulty thermostat - call for assistance - machine with faulty ventilation
Excess fume temperature	A04	Over 446°F (230°C) (air model); Over 446°F (260°C) (boiler model)	- the fan is not working or is working at a low power level - increase the level to the maximum (if the problem persists, call for assistance) - Insufficient extraction - Excess pellets
Pressure switch alarm	A05	The door is open, lack of draught or extractor fault for 60 sec	- close the door and clear the error message on the faulty pressure regulator - obstruction of the exhaust pipe or faulty extractor
Air mass probe	A06	40 lpm delta for 3600 sec	- pipes with insufficient extraction or obstructed pipes
The door is open	A07	Door open for 60 seconds	- close the door - clear the error message
Fume extractor is faulty	A08	Connection failure	- check connection
Fume probe failure	A09	Connection failure	- check connection
Pellet resistance error	A10	Connection failure	- check connection
Worm drive error	A11	Connection failure	- check connection
Pellet level alarm	A15		- check connection
Water pressure outside operating range	A16		- check connection
Excess water temperature	A18		- check connection


Table 2 – List of alarms

 Important note: all alarms cause the machine to shut down. The alarm must be reset and restarted. To reset the stove press the “On/Off” button for 10 seconds until the alarm sounds.

### 12.2 - Failures

Failures
Maintenance
Air probe failure
Low pellet level
The door is open
Air temperature probe failure
Water temperature probe failure
Water pressure sensor fault
Water pressure close to being outside operating range

Table 3 – List of failures

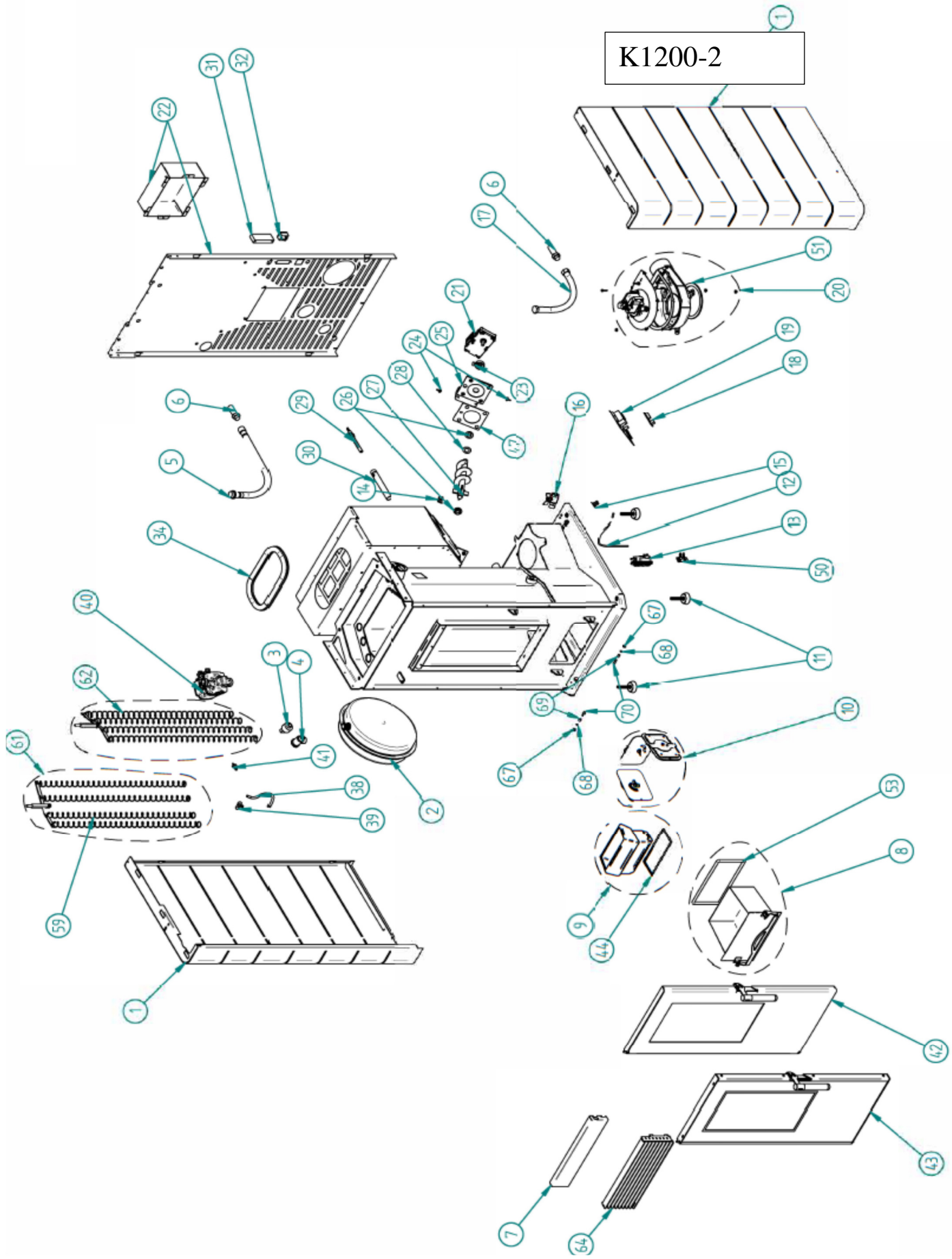
 Important note: the failures do not case the machine to shut down.

 **Warning!**

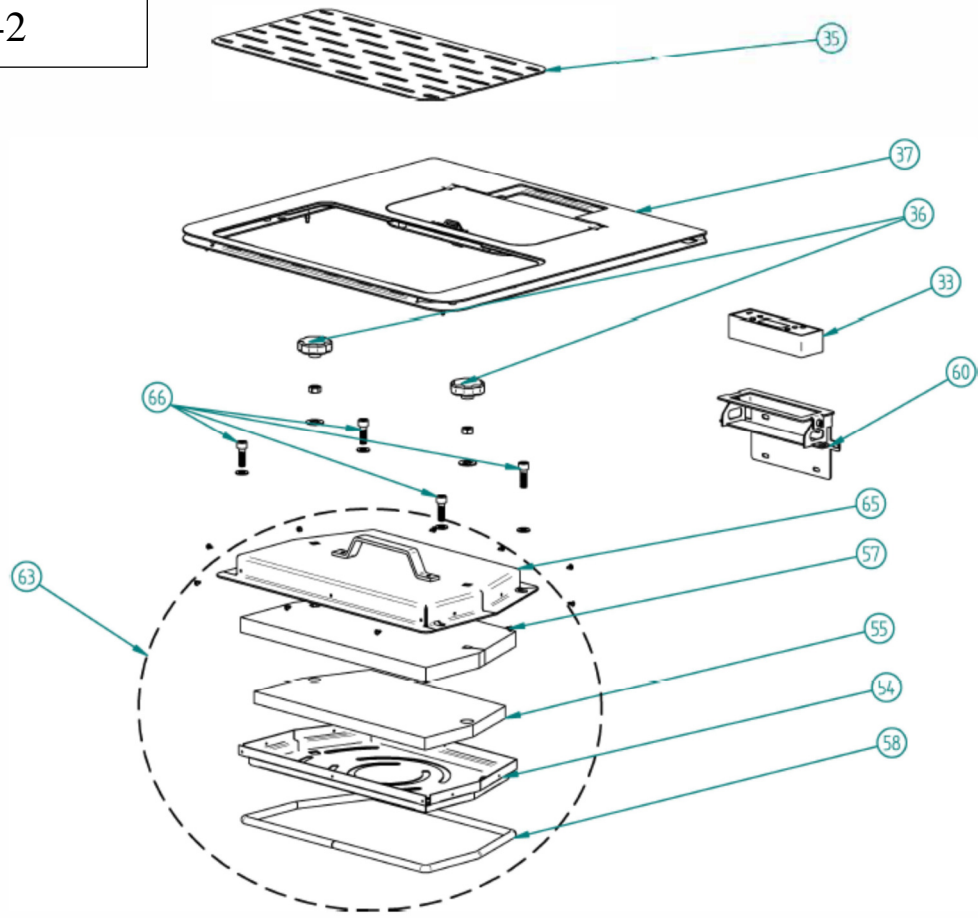
In case of an emergency, shut the stove down following the normal procedure to switch the stove off.

 **Warning!**

**THE STOVE WILL BE HOT DURING OPERATION SO CARE MUST BE TAKEN ESPECIALLY WITH THE DOOR GLASS AND HANDLE.**



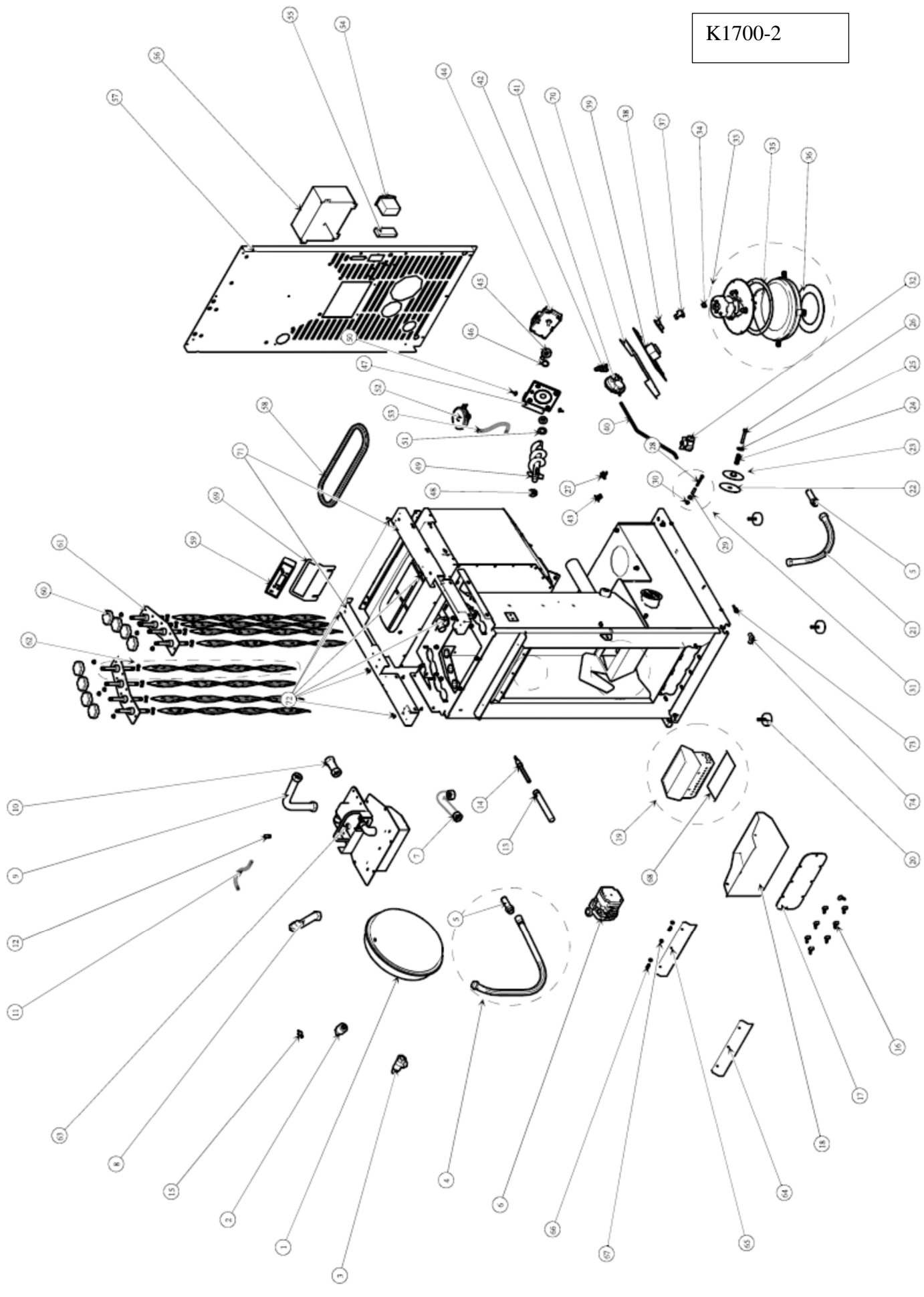
K1200-2



**K1200-2 Spare Parts**

No	Part code	Part Description	No	Part code	Part Description
2	CO080200000000	Expansion vessel 6L	34	IS1610000000010	Rubber seal G0010 750mm B20
3	CO0315000000050	Water pressure sensor 0-3 Bar	35	IS0116020300007	Drop in Top plate
4	CO0803010000000	Pressure relief valve 3 bar	36	CO0718230000112	M10 turbulator Knob
5	IC0467000000000	Clear hose with accessories	37	IC0416000300024	Top plate 12kW
6	CO0806022604274	Bearing M/M 1/2"x1/2"x40 Cr	38	IS1510080000003	Silicone tube 8x6x400
7	IS0216015300022	Cover	39	CO0813000000009	Manual air vent 1/4" Cr
8	IC0402000260000	Ash Pan	40	CO0801000000006	Grund. Pump UPM3 15-70 130 15h
9	IC0425000000007	Burn Pot with rope	41	CO0304000000040	Water temperature sensor
10	IC0120000260022	Flue cleaning port	42	IC0420000260103	Complete Door 12kW
11	CO0713000000212	Levelling Foot M10x33	43	IC0420000260104	Complete Glass Door 12kW
12	IS1510080000002	Silicone tube 8 x 6 x330	44	IS3024050000001	Fibre rope Cvt 5x400mm
13	CO0315000000030	Pressure switch 10-20 Pa	47	CO1206020000010	Motor to Auger 109,5x100x2
14	CO0306000000030	Boiler thermostat 95° C	50	CO0315000000060	Pressure switch support
15	CO0306000000020	Pellet Hopper Thermostat 110°	51	CO1206020000003	Extract fan - gasket K50- K100
16	CO0803200000001	Valve M/F 1/2x1/2	53	IS3024100000001	Fibre Cord CVT 10mm - 1 m
17	CO0805013250001	Steel mesh M/F 1/2"x1/2" 500mm	54	IS0141015260006	Turbulator Fix plate 12kW v1
18	CO0312000000021	Add on PCB pellet boilers.	55	IS1040025000010	D12kW V1 383x223x20 Vrm118
19	CO0312000000080	Main PCB K1200	57	IS6524000000001	Rockwol cap Turbul D12kW v1
20	IC0490000000006	Extractor fan K1200	58	IS3024120000000	Fibre cord Blk 12x2000mm
21	CO0310000000150	Motor worm screw	59	CO012332T034812	T348 Mol 680x24,3 diam 2 S/A
22	IC0212010030007	Back Panel	60	IS0265015300003	Display support D12kW
23	IC0114000000000	T143 Bushing	61	IC0465000260004	Turbulator Springs set Left
24	CO0728000000000	Rubber motor stop	62	IC0465000260005	Turbulator Springs set Right
25	IC0414000260001	Motor Support	63	IC0416000260025	Turbulator Cap Complete
26	CO0725001801100	T342 Bushing 18x11	64	IC0132000300011	Front Grill D12kW PRT/TXT
27	IC0415000000000	Worm-screw	65	IC0416000260012	Turbulator Cover D12kW v1
28	IS0899012000000	Stainless washer	66	CO0704061003019	Bolt Din 912 8.8 M10x30 Z/P
29	CO0303000000006	Igniter Ceramic	67	CO0705250500002	Nut Din 6923 St. Steel M5 Pol
30	IC0409000000002	Igniter tube (22x151)	68	CO0703010500024	Washer Din 125 M5 Z/B
31	ME1006100000000	Universal connection interface	69	CO010225T028612	T286 Red 8x10 7 S/A
32	CO0312000001000	Back Source PG500	70	CO012025T028912	T289Int M3x10 M5 Ntr
33	CO0312000000032	Display panel			

K1700-2

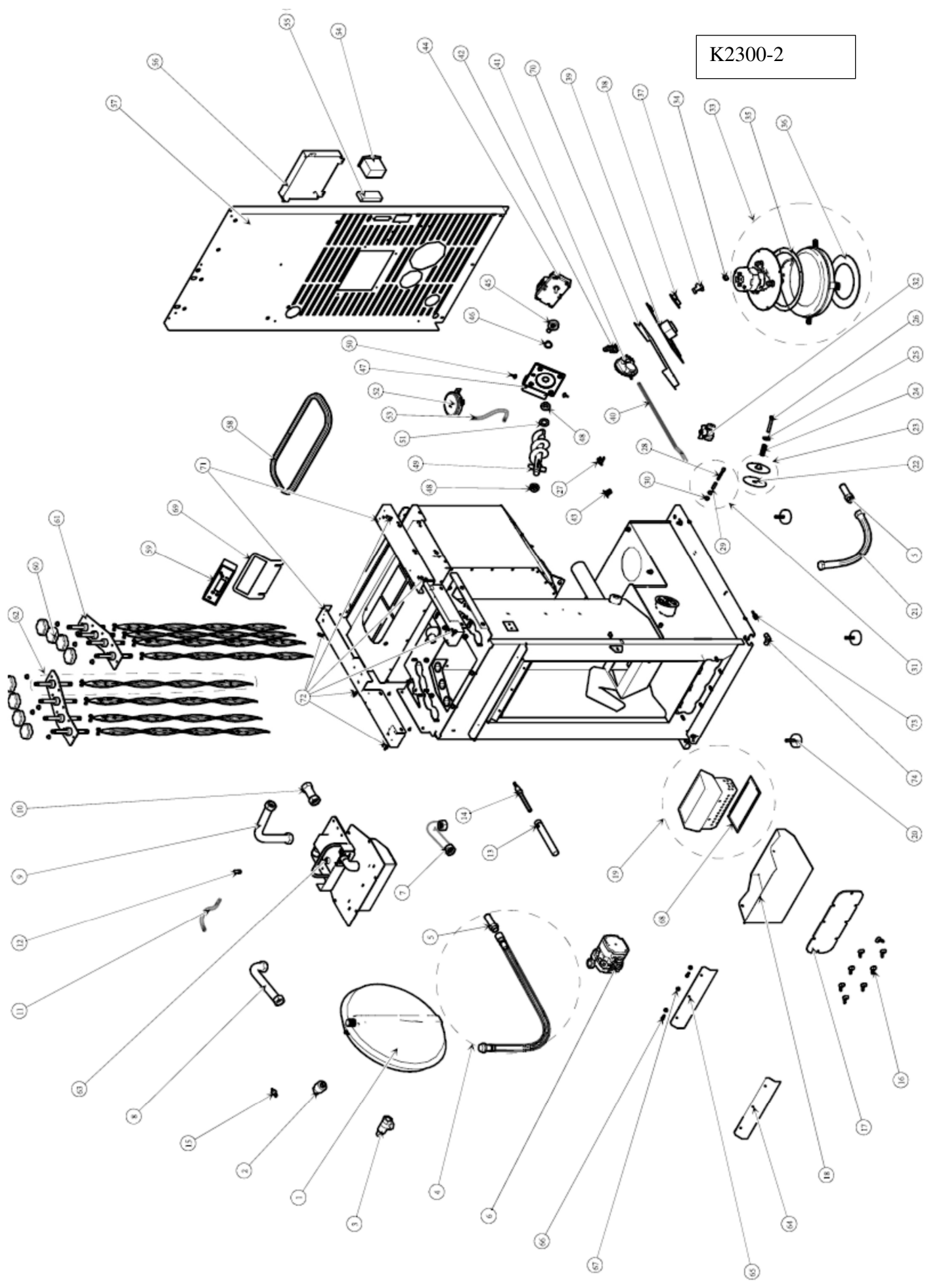


**K1700-2 Spare parts**

No	Part code	Part Description	No	Part code	Part Description
1	CO080200000000	Expansion vessel 6L	38	CO0312000000021	Add on PCB pellet boilers.
2	CO0315000000050	Water pressure sensor 0-3 Bar	39	CO0312000000112	Main PCB K1700-2 - K2300-2
3	CO0803010000000	Pressure relief valve 3 bar	40	IS1510080000007	Silicone tube 8x6x550
4	IC0467000000003	Clear hose c/w access 650mm	41	CO0315000000030	Pressure switch 10-20 Pa
5	CO0806022604274	Bearing M/M 1/2"X1/2"X40 Cr	42	CO0315000000060	Pressure switch support
6	CO0801000000006	Grund. Pump UPM3 15-70 130 15h	43	CO0306000000040	Thermostat 75°C FV RM 16A
7	IC0809000000008	SSteel flex insul. tube 210mm	44	CO0310000000150	Motor worm screw
8	IC0809000000008	SSteel flex insul. tube 210mm	45	IC0114000000000	T143 Bushing
9	IC0809000000003	SSteel flex insul. tube 290mm	46	CO0721282201212	Din 471 22x1,2 S/A
10	IC0809000000007	SSteel flex insul. tube 50mm	47	IC0414000260001	Motor Support
11	IS1510080000003	Silicone tube 8x6x400	48	CO010226T150A12	T150A 31x11 18,1 S/A
12	CO0813000000009	Manual air vent 1/4" Cr	49	IC0415000000000	Worm screw
13	IC0409000000002	Igniter tube (22x151)	50	CO0728000000000	Rubber motor stop
14	CO0303000000006	Igniter Ceramic	51	IS0899012000000	Stainless washer
15	CO0304000000040	Water temperature sensor	52	CO0315000000008	Sen Differential Press
16	CO0705260600024	Nut Din 315 M6 Z/B	53	IS1510080000000	Silicone Tube 8x6x250
17	IS0120000260002	Trapdoor 17/23 kW	54	CO0317000000030	Interrupter On/Off Filter
18	IS0102015260015	Ash tray 17 kW	55	ME1006100000000	Universal connection interface
19	IS3525000260002	Burn Pot with rope	56	IS1116010030004	Motor Protection Cover 17 kW
20	CO0713000000212	Levelling Foot M10x33	57	IS1112010030006	Back Panel 17 kW
21	CO0805013250001	Steel mesh M/F 1/2"x1/2" 500mm	58	IS1610000000006	Rubber seal 1025mm
22	CO1206020000016	Gasket 80x14x1,5	59	CO0312000000032	Display panel
23	IC0416000260000	Valve plate	60	CO0718230000112	M10 turbulator Knob
24	CO012332T019524	T195 Spring 36x13 Diam 1 Z/T	61	IS0116050260006	Turbulator Cover Right
25	CO0703220899919	washer Din 9021 M8 Z/B	62	IC0426000260000	Turbulator Cover Left
26	CO0704070805024	Bolt Din 931 8.8 M8x50 Z/B	63	IC0408000000022	Boiler Bolster17/23 kW
27	CO0306000000030	Boiler thermostat 95° C	64	IS0861015040000	Deflect Plt steel door17/23 kW
28	CO0704060604524	Bolt Din 912 8.8 M6x45 Z/P	65	IS0861015040001	Deflect Plt glass door17/23 kW
29	CO010225T025324	T253 8x24 6,25 Z/B	66	CO0704060501602	SrewDin 912 Inox M5x16 Pol
30	CO0705190600024	Nut Din 6924 M6 Z/B	67	CO0705250500002	Nut Din 6923 St. Steel M5 Pol
31	IC0414000000010	Door Bearing M6x45	68	ME1504000120002	Fibre rope Diam 6mm
32	CO0803200000001	Valve M/F 1/2x1/2	69	IS0265030300013	Display support Brkt 17/23
33	IC0490000000003	Extractor Fan	70	IS0465000030010	Main Pcb Support
34	CO0312000000035	Encoder p/PL30	71	IC0212010030015	Side panel support plates17 kW
35	CO1206020000001	Extract Gasket PL30 215x185x2	72	CO0716009000000	Spring clip2,5-3,2 p/perno S/A
36	CO1206020000007	Extract Gask PL30 CC 182x122x4	73	CO1002412700001	Nipple 7R Mac 1/8" Cr
37	CO0312000000026	Pressure Sensor Plate	74	CO0806062611270	Elbow F/F 1/8" Cr



K2300-2



K2300-2 Spare Parts

No	Part code	Part Description	No	Part code	Part Description
1	CO080200000004	Expansion Vessel	38	CO0312000000021	Add on PCB pellet boilers.
2	CO0315000000050	Water pressure sensor 0-3 Bar	39	CO0312000000112	Main PCB K1700-2 - K2300-2
3	CO0803010000000	Pressure relief valve 3 bar	40	IS1510080000003	Silicone tube 8x6x400
4	IC0467000000002	Clear hose c/w access 770mm	41	CO0315000000030	Pressure switch 10-20 Pa
5	CO0806022604274	Bearing M/M 1/2"x1/2"x40 Cr	42	CO0315000000060	Pressure switch support
6	CO0801000000006	Grund. Pump UPM3 15-70 130 15h	43	CO0306000000020	Pellet Hopper Thermostat 110°
7	IC0809000000006	SSteel flex insul. tube 230mm	44	CO0310000000150	Motor worm screw
8	IC0809000000001	SSteel flex insul. tube 250mm	45	IC0114000000000	T143 Bushing
9	IC0809000000001	SSteel flex insul. tube 250mm	46	CO0721282201212	Din 471 22x1,2 S/A
10	IC0809000000007	SSteel flex insul. tube 50mm	47	IC0414000260001	Motor Support
11	IS1510080000003	Silicone tube 8x6x400	48	CO010226T150A12	T150A 31x11 18,1 S/A
12	CO0813000000009	Manual air vent 1/4" Cr	49	IC0415000000000	Worm screw
13	IC0409000000002	Igniter tube (22x151)	50	CO0728000000000	Rubber motor stop
14	CO0303000000006	Igniter Ceramic	51	IS0899012000000	Stainless washer
15	CO0304000000004	Water temperature sensor	52	CO0315000000008	Sen Differential Press
16	CO0705260600024	Nut Din 315 M6 Z/B	53	IS1510080000000	Silicone Tube 8x6x250
17	IS0120000260002	Trapdoor 17/23 kW	54	CO0317000000030	Interrupter On/Off Filter
18	IS0102015260016	Ash tray 23 kW	55	ME1006100000000	Universal connection interface
19	IS3525000260002	Burn Pot with rope	56	IS1116010030005	Motor Protection Cover 23 kW
20	CO0713000000212	Levelling Foot M10x33	57	IS1112010030005	Back Panel 23 kW
21	CO0805013270000	Steel mesh M/F 1/2"x1/2" 700mm	58	IS1610000000013	Rubber seal 950mm
22	CO1206020000016	Gasket 80x14x1,5	59	CO0312000000032	Display panel
23	IC0416000260000	Valve plate	60	CO0718230000112	M10 turbulator Knob
24	CO012332T019524	T195 Spring 36x13 Diam 1 Z/T	61	IS0116050260006	Turbulator Cover Right
25	CO0703220899919	Washer Din 9021 M8 Z/B	62	IC0426000260000	Turbulator Cover Left
26	CO0704070805024	Bolt Din 931 8.8 M8x50 Z/B	63	IC0408000000022	Boiler Bolster 17/23 kW
27	CO0306000000030	Boiler thermostat 95° C	64	IS0861015040000	Deflect Plt steel door17/23 kW
28	CO0704060604524	Bolt Din 912 8.8 M6x45 Z/P	65	IS0861015040001	Deflect Plt glass door17/23 kW
29	CO010225T025324	T253 8x24 6,25 Z/B	66	CO0704060501602	SrewDin 912 Inox M5x16 Pol
30	CO0705190600024	Nut Din 6924 M6 Z/B	67	CO0705250500002	Nut Din 6923 St. Steel M5 Pol
31	IC0414000000010	Door Bearing M6x45	68	ME1504000120002	Fibre rope Diam 6mm
32	CO0803200000001	Valve M/F 1/2x1/2	69	IS0265030300013	Display support Brkt 17/23
33	IC0490000000003	Extractor Fan	70	IS0465000030010	Main Pcb Support
34	CO0312000000035	Encoder p/PL30	71	IC0212010030016	Side panel support plates23 kW
35	CO1206020000001	Extract Gasket PL30 215x185x2	72	CO0716009000000	Spring clip2,5-3,2 p/perno S/A
36	CO1206020000007	Extract Gask PL30 CC 182x122x4	73	CO1002412700001	Nipple 7R Mac 1/8" Cr
37	CO0312000000026	Pressure Sensor Plate	74	CO0806062611270	Elbow F/F 1/8" Cr

## 14 Electrical

### 14.1 Electrical diagram of the Boiler pellet stove.

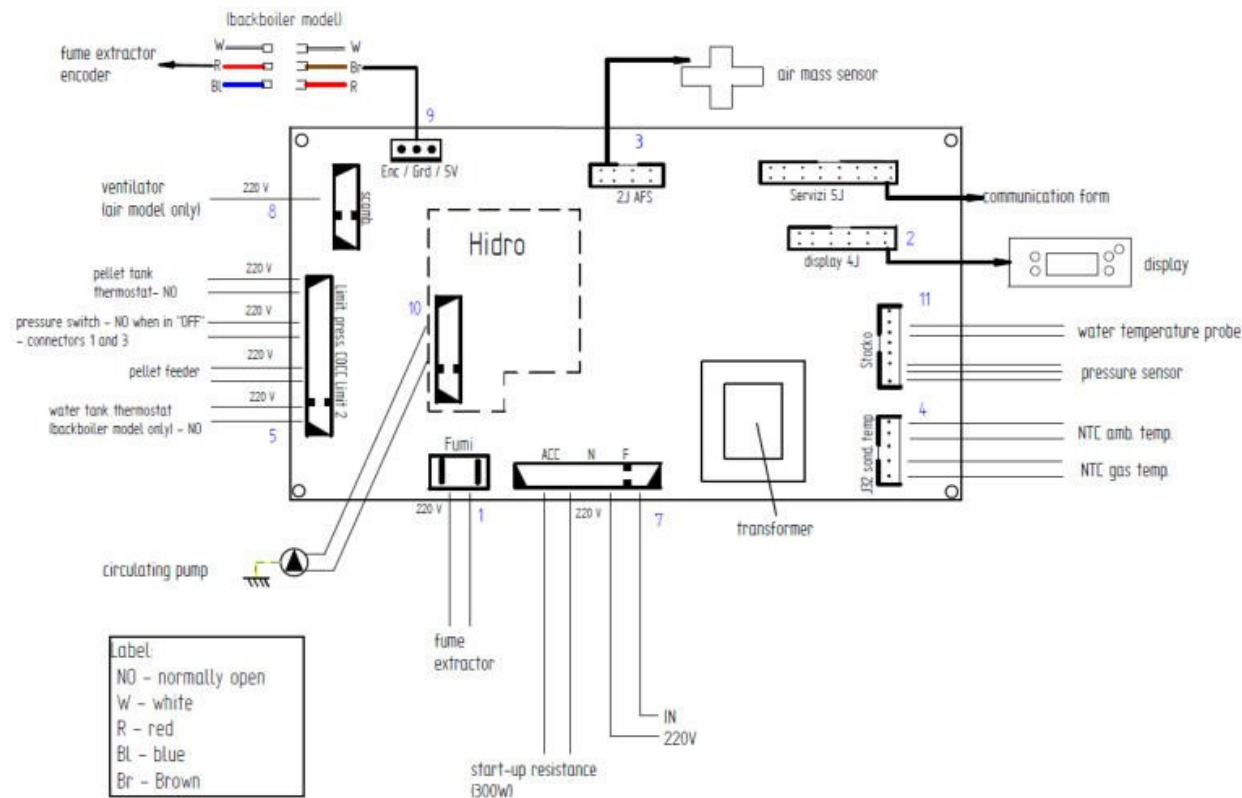


Figure 44 – Electrical diagram

### 14.2 Remote switched connection.

The volt free connection on the rear of the stove can be used to provide a remote call for heat.

The product can be set up with a remote timeclock, room thermostats and motorised valves using the standard S plan configuration where the auxiliary switch wires of the motorised valve can be connected to the remote connections in place of the wires in the picture below providing a call for heat.

All electrical connections must be made by a competent electrician.

The connection "therm" can be used in conjunction with a room thermostat, it will then allow the output of the pellet stove vary between high and low output in accordance with the thermostat.

The connection "remote" can be used in conjunction with a timer to switch the stove on or off.

#### Note.

Connections are low voltage; a closed loop will call the stove. Remote connections should be designed to switch infrequently to avoid excessive start up and shut down of the boiler.

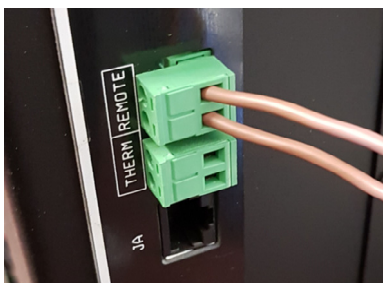


Figure 45 – Remote connection

## 15 Circulation pump

### 15.1 Performance graphs for the UPSO 15-70 130mm circulating pump

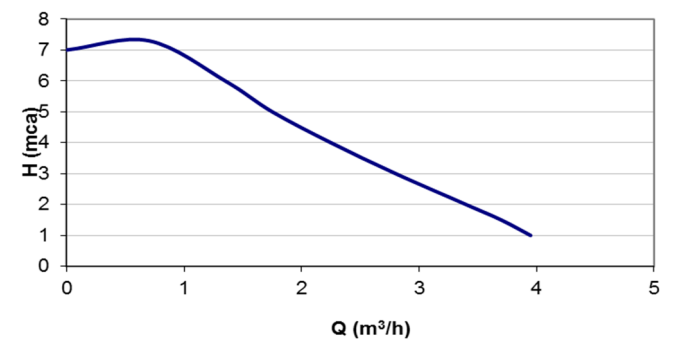


Figure 46 – Performance graphs for the circulating pump

### 15.2 Circulating pump User interface

The user interface was designed with a single button, a red/green LED and four yellow LEDs

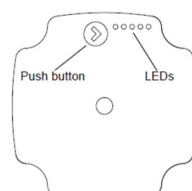


Figure 47- User interface

When the pump is operating, the LED 1 is green. 4 yellow LEDs indicate the current performance of the pump, as shown in the following table (Figure 8).

LED active	Performance (%)
LED Green	0 (Standby)
LED Green + 1 LED yellow	0 - 25
LED Green + 2 LED yellow	25 - 50
LED Green + 3 LED yellow	50 - 75
LED Green + 4 LED yellow	75 - 100

Table 1 – Performance of the pump

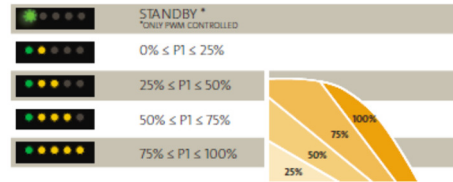


Figure 18 – Performance of the pump

**Note:** the pump is configured as standard at full capacity (75-100%).

### 15.3 Changing the setting of the pump

To switch between between the view of the performance of pump and the view of settings, just press the button once.

If you need to change the pump performance, you must press the button for 2 seconds (see Figure 9), after this action the LEDs start blinking, then you must press the button until the desired setting (see Table 5), after 10 seconds the display automatically switches to the view of performance with alteration saved.

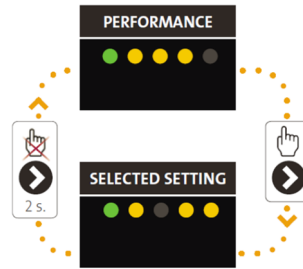


Figure 49 – Pump settings

Maximum head (m)	Configuration
2-4	
3-5	
4-6	
5-7	

Table 2 – Pump settings

### Alarms

If the pump detects one or more errors, the LED 1 changes from green to red when the alarm is activated the yellow LED indicates the type of alarm (see Table 6), if we have several alarms at the same time, the yellow LED indicates the alarm with higher priority, the priority sequence is defined on table as follows:

Display	Priority	Alarm	action
LED 1 red + LED 5 yellow 	1	Rotor is blocked	Wait or deblock the shaft
LED 1 red + LED 4 yellow 	2	Supply voltage too low	Control the supply voltage.
LED 1 red + LED 3 yellow 	3	Electrical error	Control the supply voltage or replace the pump.

Table 3 – Alarms

## Simple connection only the central heating radiators

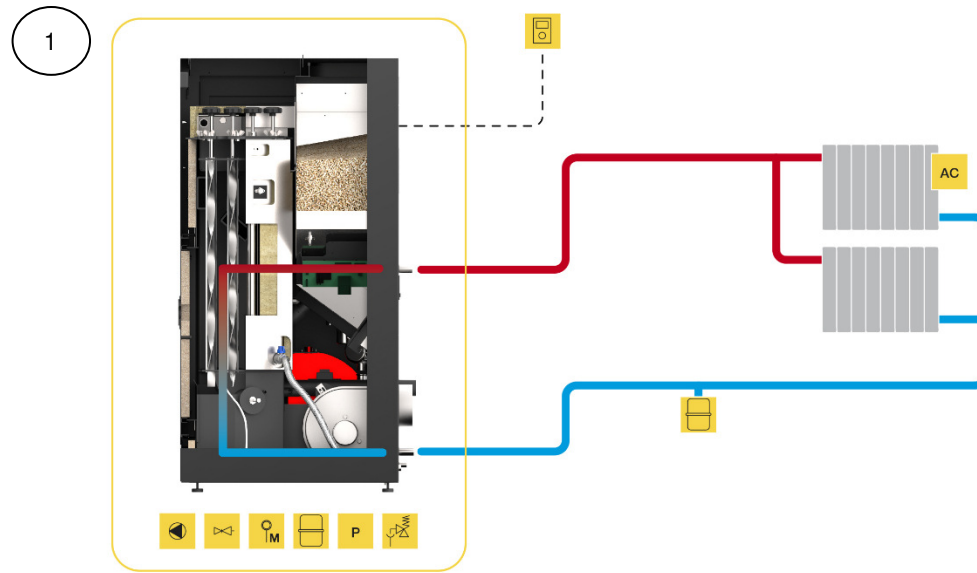


Figure 2 – Simple connection only the central heating radiators

**Note:**

- The room thermostat should have 1 to 2 ° C of hysteresis.
- Water temperature controlled regulation "On"
- Modulating pump "On"
- Water sensing inhibition "On"
- Alternative hydro shutdown "On"
- Pump "On" = 50 ° C
- Pump "Off" = 50 ° C

Pump settings can be amended during commissioning if required.

1

Connection to central heating radiators and sanitary water combined with solar panel

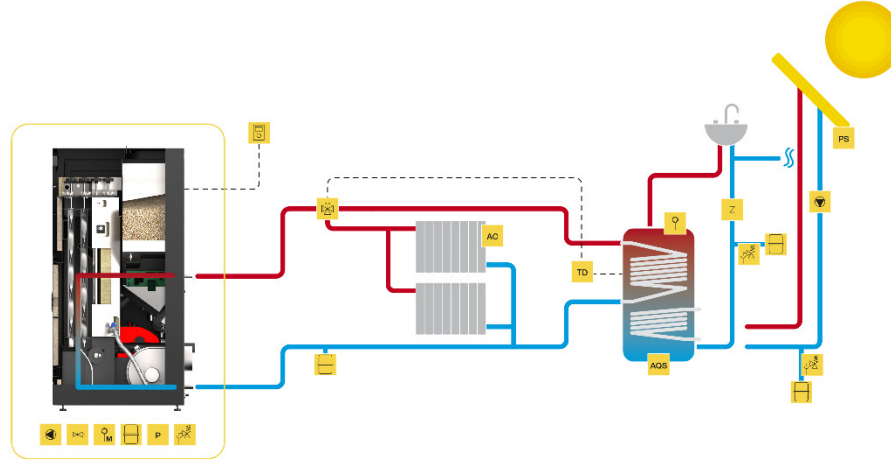


Figure 51 – Connection to central heating radiators and sanitary water combined with solar panel

Example: electrical connection of a thermostat (ambient air monitoring) of a differential thermostat connected to the deposit and three-way valve to a relay box

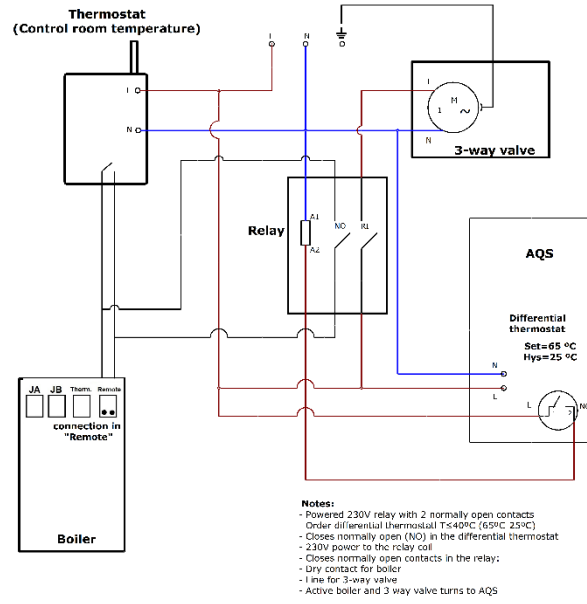


Figure 52 – electrical connection of a thermostat (ambient air monitoring) of a differential thermostat connected to the deposit and three-way valve to a relay box

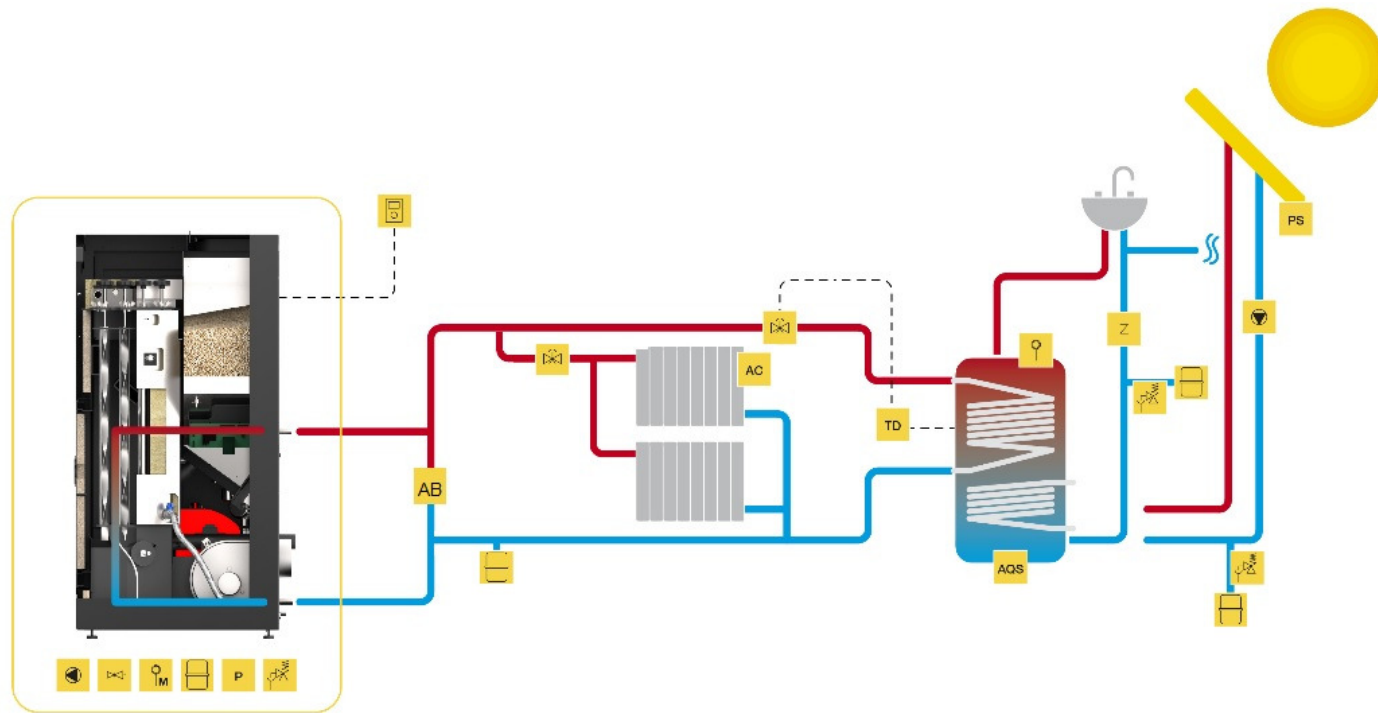


Figure 53 Connection of pellet boiler using 2 way valves and automatic bypass.

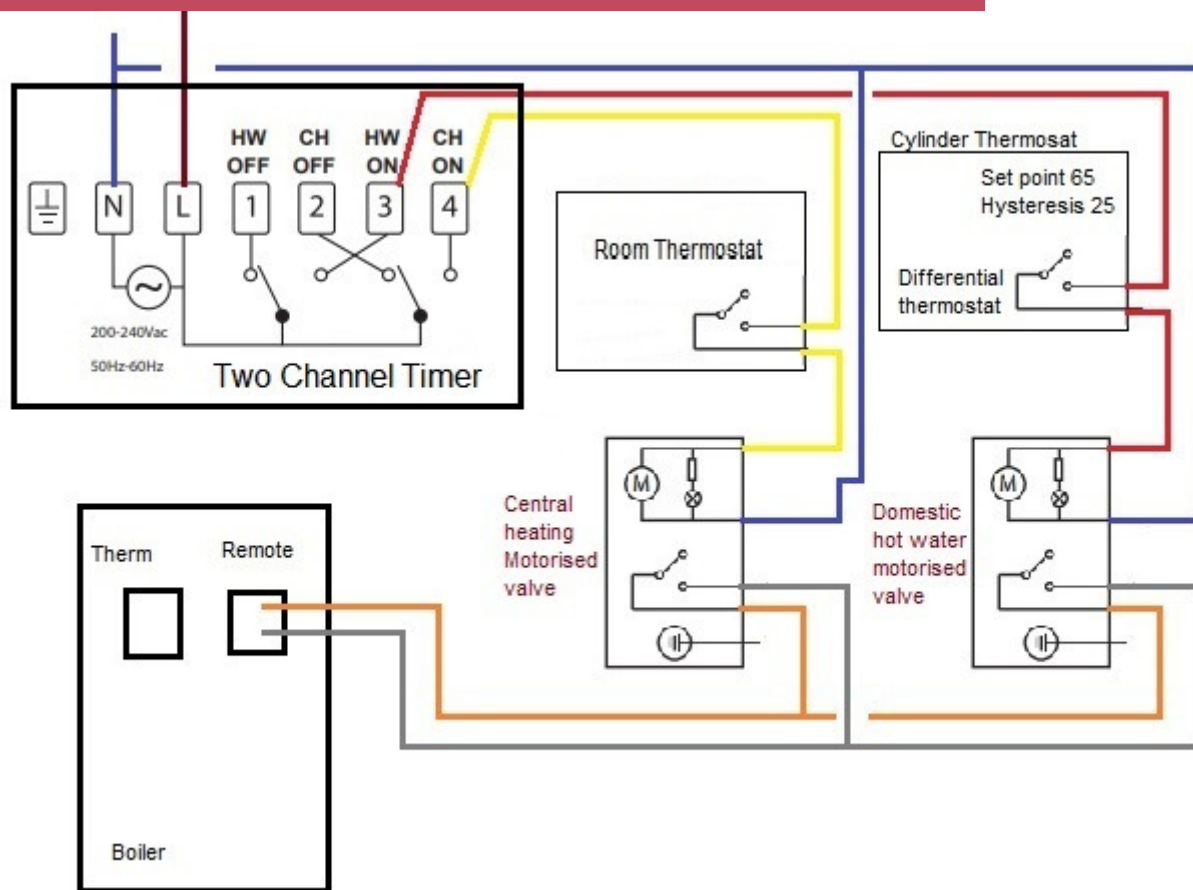


Figure 54

**Connection to central heating radiators with supplementary boiler and sanitary water combined with solar panel.**

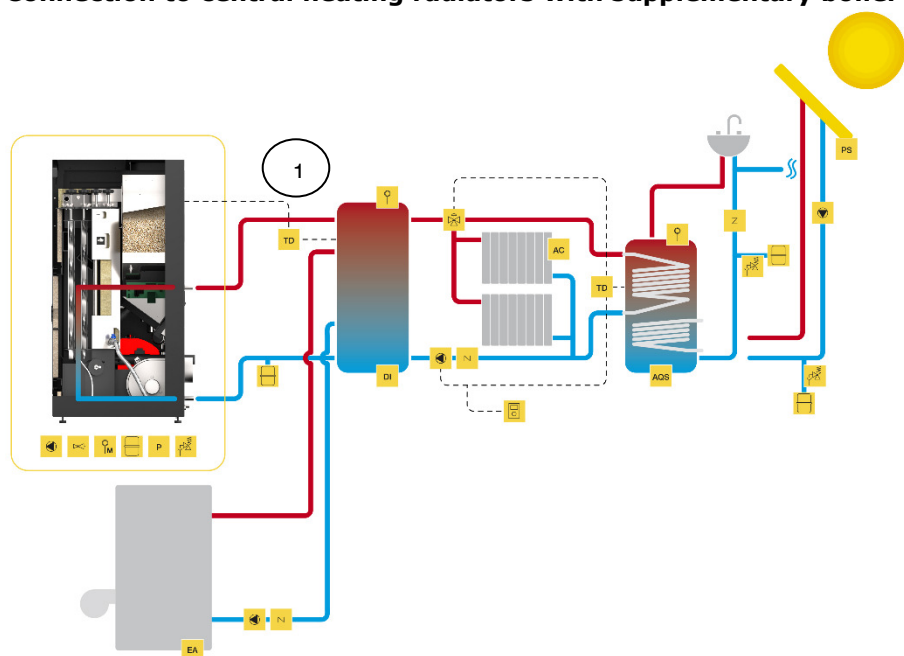


Figure 55 – Connection to central heating radiators with another boiler support and sanitary water combined with solar panel

**Note:**

- The Differential thermostat must have a hysteresis of 15 to 25 °C.
- Water temperature controlled regulation "Off" put the boiler in "manual" mode and power level to "5"
- Modulating pump "On"
- Water sensing inhibition "On"
- Alternative hydro shutdown "On"
- Pump "On" = 50 °C
- Pump "Off" = same or thermostat temperature 1°C below the temperature differential thermostat

When using the generator with differential thermostat the machine must be connected in the CONNECTION "Remote".

Calculation deposits of inertia / buffer tank: for pellet boilers it is recommended that the buffer tank has 20l/kW.

**Connecting underfloor heating in conjunction with another boiler support and sanitary water combined with solar panel**

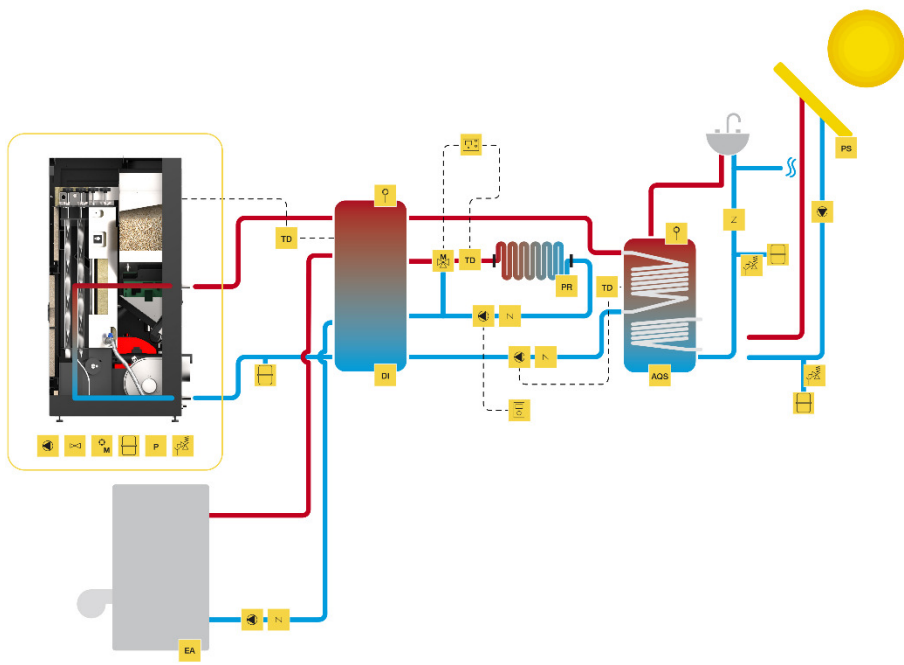


Figure 56 – Connecting underfloor heating in conjunction with supplementary boiler and domestic hot water combined with solar panel

### Symbols

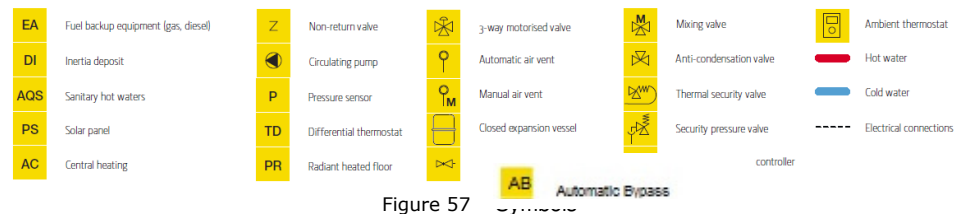


Figure 57

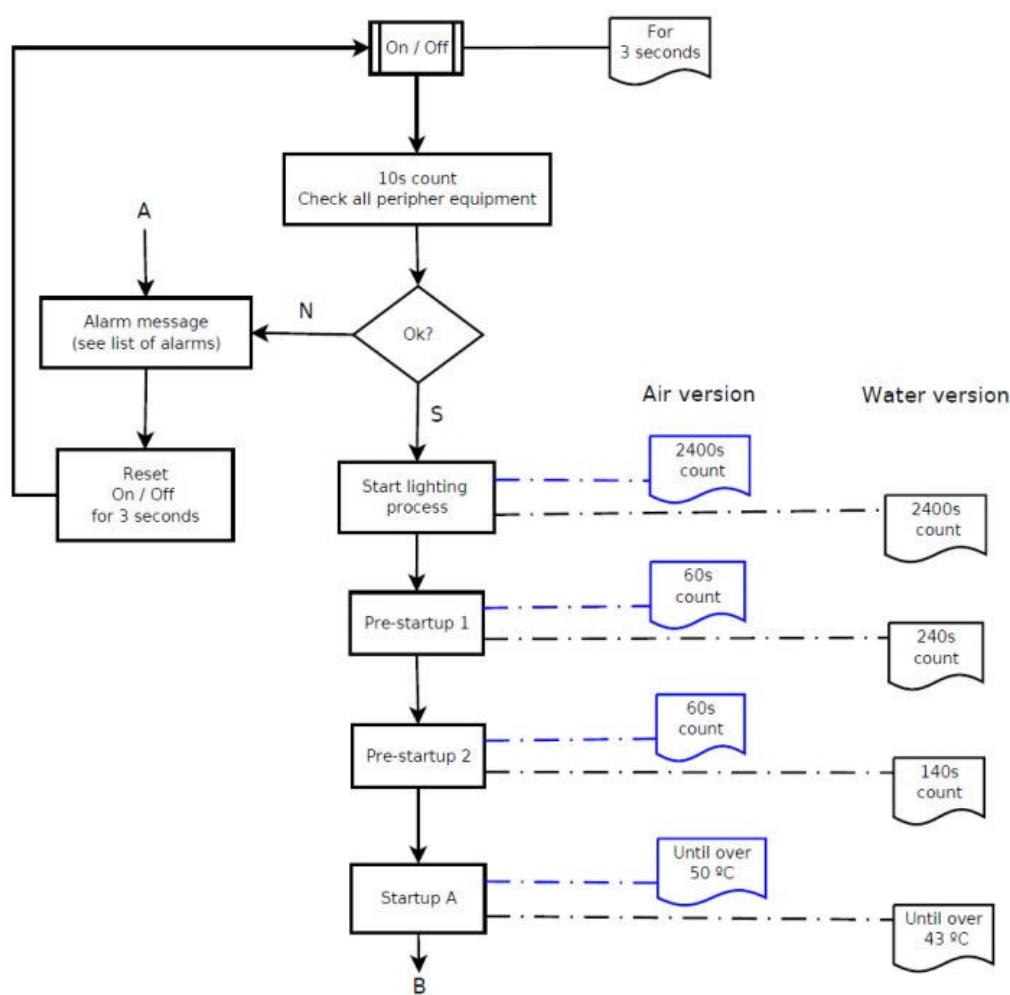
## 17 Life cycle of a Boiler pellet stove

Around 90% of the materials used in the manufacture of these stoves are recyclable, thus helping to reduce environmental impact and contributing to the sustainable development of the Planet. End-of-life stoves should be returned to authorised waste processing systems. We advise you to contact your local authorities for instructions.

## 18 Annexes

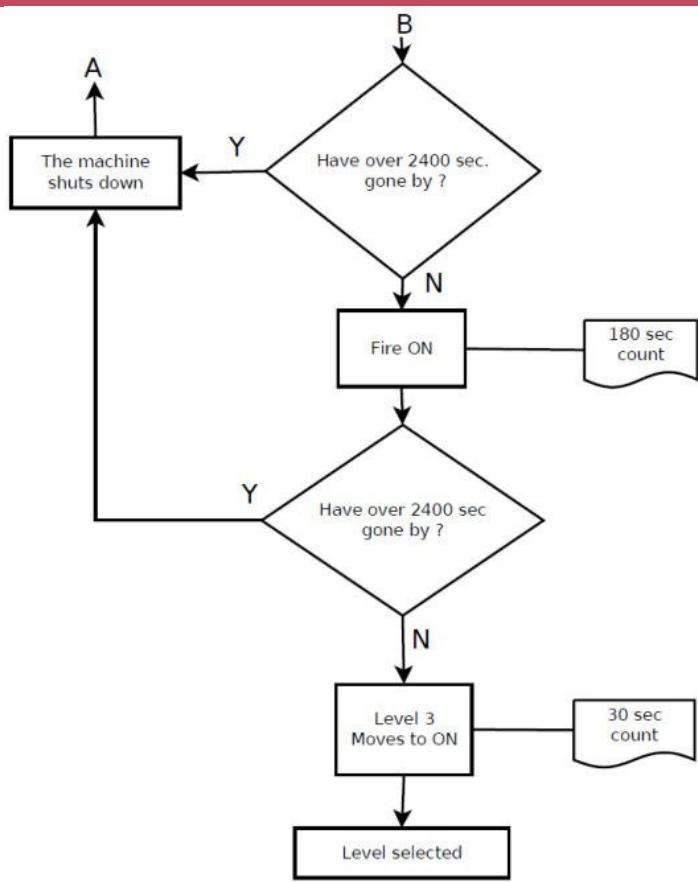
Operations flow charts

### • Flow chart 1 – Normal activation

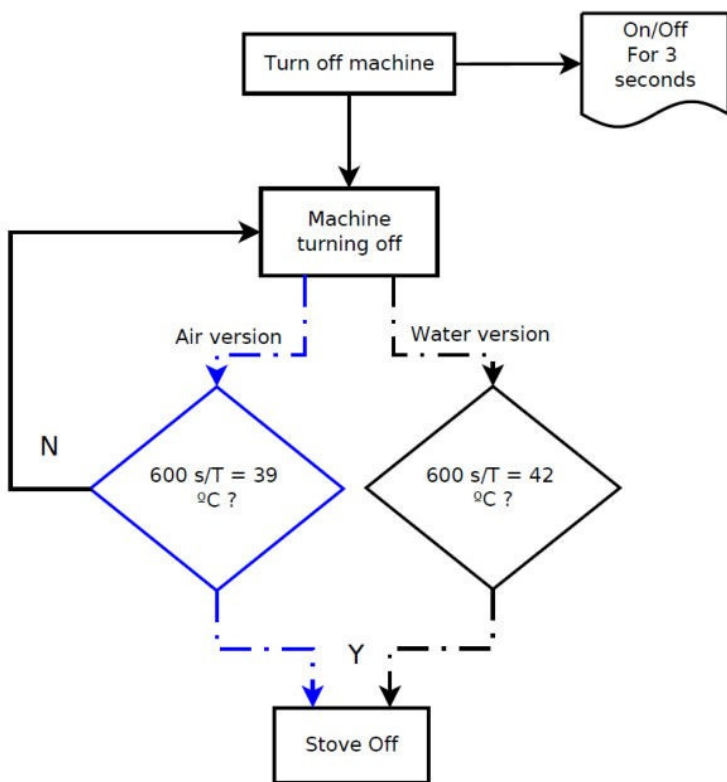


**Note** (only for the boiler model): The circulating pump operates intermittently from the moment the water temperature reaches 50°C and operates continuously from the set-point temperature.





• Flow chart 2 – Switching off the pellet stove.



**Note** The circulating pump is turned off when the water temperature reaches below 40°C.

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