



PELLET STOVE

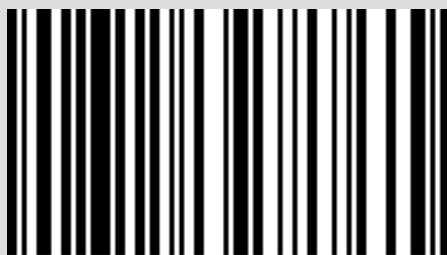
CLIO HYDRO 16 S2

CLIO HYDRO 23 S2

PART 2 - OPERATION AND CLEANING

Instructions in English

MCZ



8901634503

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12-PRECAUTIONS BEFORE START-UP

GENERAL PRECAUTIONS

Remove any objects that may burn from the brazier (manual, various adhesive labels or any polystyrene).

Check that the brazier is positioned correctly and rests properly on the base.



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



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

If after repeated attempts, the flame fails to ignite, despite a regular flow of pellets in the brazier, which **must rest snugly against the slots and be clean without any ash incrustations**. If no anomaly is found during this inspection, there may be a problem with the product components or installation may not be correct.



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



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

If necessary, touch up the paint with the spray can of the specific colour. (See "Pellet stove accessories").



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



ATTENTION!

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

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

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

This is absolutely normal as the structure is made of laminated steel and must not be considered a defect.

It is extremely important to make sure the boiler does not reach high temperatures straight away, but to increase the temperature gradually using low power at first.

This will prevent damaging the ceramic or serpentine stone tiles, the welds and the steel structure.



DO NOT EXPECT HEATING EFFICIENCY IMMEDIATELY!!!

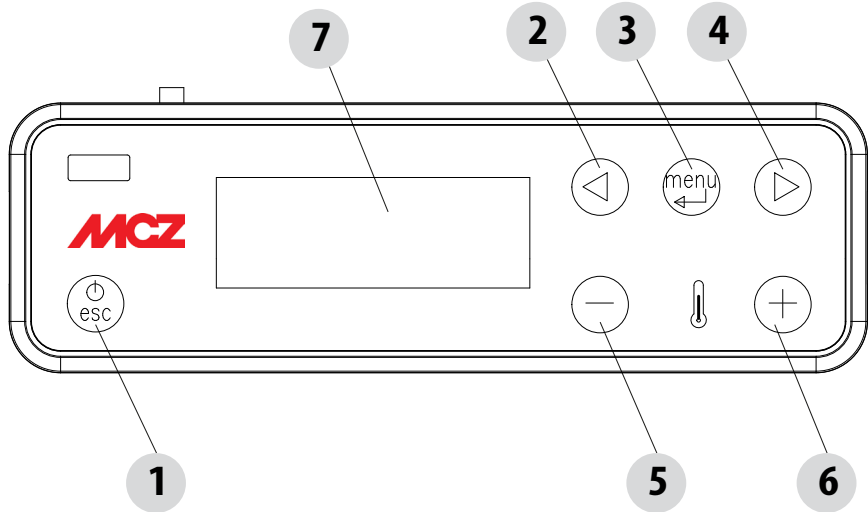
ATTENTION!

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

13-CONTROL PANEL

CONTROL PANEL DISPLAY

Menu options



KEY

1. Switching on/switching off the boiler	5. Decrease set temperature / programming functions.
2. Scrolling down through the programming menu	6. Increase set temperature / programming functions.
3. Menu	7. Display.
4. Scrolling up the programming menu	

MAIN MENU

Press key 3 (menu) to access. The options accessed are:

- Date and Time
- Timer
- Sleep (only when boiler is on)
- Settings
- Info

Date and time configuration

Configure the time and date as follows:

- Press the “menu” key.
- Select “Date and Time”.
- Press “menu” to confirm.
- Scroll through with the arrow keys and select the variables to be edited one at a time: Day, Hour, Min, Num. day, Month, Year.
- Press “menu” to confirm
- Use the + and - keys to edit.
- Finally, press “menu” to confirm and “esc” to exit.

14-MENU ITEMS AND OPERATION

PROGRAMMED MODE (TIMER) - Main menu

The current time and date must be configured to ensure correct operation of the timer.

There are six configurable TIMERS; for each one, the user can select a start and stop time and the days of the week when it is in use. When one or more programs are active, the status of the boiler and the TIMER “n” alternate on the display. “n” is the number of timer programs in use, separated by dashes.

Example:

TIMER 1 Timer 1 program active.

TIMER 1-4 Timer 1 and 4 programs active.

TIMER 1-2-3-4-5-6 All timer programs active.

EXAMPLE OF PROGRAMMING

With the boiler on or off:

- access the MENU,
- scroll to the TIMER item using the <> arrows,
- press the “Menu” key
- the system shows “P1” (Press the <> keys to move through the timers P2, P3, P4, P5, P6)
- Press the “Menu” key to activate “P1”.
- press + - and select “ON”
- press the “Menu” key to confirm

At this point the start time is 00:00. Press the + - key to set the start time and press the “menu” key to confirm.

Next, the proposed stop time is 10 minutes later than the configured start time: press the + key and edit the stop time, and press the “menu” key to confirm.

Next, you are asked to set the days of the week when the configured timer is to be enabled or disabled. Press the - or + keys to select the day you want to activate the time. It will light up white, then confirm with the “menu” key. If no day is selected for enabling the timer, the timer program is no longer enabled on the status window.

Next, program the other days or press “ESC” to exit. Repeat this procedure to program the other timers.

EXAMPLES OF PROGRAMMING

P1			P2		
on	off	day	on	off	day
08:00	12:00	mon	11:00	14:00	mon
Boiler on between 08:00 and 14:00					

P1			P2		
on	off	day	on	off	day
08:00	11:00	mon	11:00	14:00	mon
Boiler on between 08:00 and 14:00					

P1			P2		
on	off	day	on	off	day
17:00	24:00	mon	00:00	06:00	tue
Boiler on between 17:00 on Monday to 06:00 on Tuesday					

14-MENU ITEMS AND OPERATION

NOTES ON USE OF THE TIMER

- The timer always starts the boiler with the last temperature and ventilation settings (or with the default settings at 20°C and V3 if they have never been altered).
- The start time can be between 00:00 and 23:50
- If the stop time has not yet been saved, the program proposes a start time at +10 minutes.
- If a timer program turns off the boiler at 24:00 on one day and another program starts it up at 00:00 on the next day: the boiler remains on.
- A program has a start-up and/or shut-down time that overlap the times of another program: if the boiler is already on, the start has no effect while OFF turns off the boiler.
- When the boiler is on and the timer is active, pressing the OFF key turns off the boiler; the boiler then restarts automatically at the next time of the timer.
- When the boiler is off and the timer is active, pressing the ON key turns on the boiler; the boiler then stops automatically at the next time of the timer.

SLEEP FUNCTION (main menu)

Sleep may be activated only when the boiler is on and allows you to quickly set a time for the product to turn off.

To set the Sleep function, proceed as follows:

- Enter the MENU
- Scroll to the SLEEP item with the <> arrows
- Press Menu
- Set the turn-off time you want using the + and - keys.

The panel shows a default time of 10 minutes after the current time, which can be adjusted with key 4 up to the following day (i.e. the turn-off can be delayed for a maximum of 23 hours and 50 minutes).

If the SLEEP function is active with the TIMER active, the former has priority, therefore the boiler will not turn off at the time set in the timer program but at the time set by the sleep function, even if it comes after the time set by the timer.

ADJUSTMENTS MENU

To access the menu, proceed as follows:

- Press the - + keys
- Scroll with the <> arrows and select "Set Amb. T" or "Set Water T"
- Press "menu" to enter the option selected.
- Change with the + - keys.
- Press "menu" to confirm and "esc" to exit.

14-MENU ITEMS AND OPERATION

SETTINGS MENU

The SETTINGS menu is for configuring use of the boiler:

- a. Language.
- b. Cleaning (shown only when boiler is off).
- c. Feed screw loading (shown only when boiler is off).
- d. Tones.
- e. External thermostat (activation).
- f. Auto Eco (activation).
- g. Eco Turn-off T (default 10 minutes)
- h. Pump on T (default 50°C).
- i. Auxiliary boiler (default deactivated).
- j. Pellet recipe.
- k. Fumes rpm % ventilation.
- l. Maximum power (1-5 - default 5).
- m. Component test (shown only when boiler is off).
- n. "Chimney sweeper" function (can be enabled only when boiler is on, for checking emissions in field).
- o. System configuration (factory settings: system 02).
- p. Season
- q. Technical menu.

NOTE: Some of the options listed above cannot be enabled in certain "system configurations".

a - Language

Select the language as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Use the arrow keys to scroll through and select "language".
- Press "menu" to confirm.
- Use the + - keys to select the required language (IT/EN/DE/FR/ES/NL/PL/DA)
- Press "menu" to confirm and "esc" to exit.

b - Cleaning

Select "Cleaning" (only with boiler off) as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Use the arrow keys to scroll through and select "Cleaning"
- Press "menu" to confirm.
- Use the + - keys to select "On".
- Press "menu" to confirm and "esc" to exit.

14-MENU ITEMS AND OPERATION

c - Load feed screw

This is for filling the pellet loading system. This can be enabled only when the boiler is off. A 180" countdown appears. The auger stops automatically at the end of the countdown and the menu closes.

To select "Load auger" (only with boiler off) proceed as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Scroll with the arrows and select "Load auger".
- Press "menu" to confirm.
- With the + - keys, select "Enable".
- Press "menu" to confirm and "esc" to exit.

d - Tones

This function is disabled by default. To enable it proceed as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Use the arrow keys to scroll through and select "Tones"
- Press "menu" to confirm.
- Use the + - keys to select "On".

e - External thermostat

EXTERNAL THERMOSTAT (not included with the boiler, it must be provided by the user)

The temperature of the boiler can also be controlled by an external thermostat in the room. It should be positioned centrally in the room where the boiler is installed. It provides a closer match between the heating temperature requested of the boiler and the actual room temperature it provides.

Connect the wires of the external thermostat to points 1-2 of the terminal block on the boiler.

Once the thermostat has been connected it needs to be enabled.

To do this, proceed as follows:

- Press the "menu" key.
- Scroll with the arrows to "Settings".
- Press "menu" to select.
- Now use the arrows to scroll to "External thermostat".
- Press "menu" to select.
- Press the - + keys.
- Select "On" to activate the external thermostat.
- Press the "menu" key to confirm.
- Press the "esc" key to exit.

f - Auto-Eco activation

To select the Auto-Eco function, proceed as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Scroll with the arrows and select "Auto-Eco".
- Press "menu" to confirm.
- Use the + - keys to select "On".
- Press "menu" to confirm and "esc" to exit.

14-MENU ITEMS AND OPERATION

g - Eco Stop T

To select the Eco Stop T function, proceed as follows:

- Press the “menu” key.
- Use the arrow keys to scroll through and select “Settings”
- Press “menu” to confirm.
- Scroll with the arrows and select “T Eco off”.
- Press “menu” to confirm.
- Enter the minutes with the + - keys.
- Press “menu” to confirm and “esc” to exit.

AUTO ECO MODE

For activation of the “Auto Eco” mode and time settings, see paragraphs 8 f and 8 g respectively.

The “ECO stop T” can be adjusted to ensure correct operation in the various environments in which the boiler can be installed and to avoid constant stopping and starting when the room temperature is subject to sudden change (drafts, poorly insulated rooms, etc.).

The ECO stop procedure is activated automatically when all the power recall devices included in the “system configuration” are satisfied: room temperature probe/external thermostat (configurations 1-2-3), flow switch (configuration 2), thermostat/ntc (10 kΩ B3435) puffer (configuration 4-5) or thermostat/ntc (10 kΩ B3435) boiler (configuration 2-3). If all the devices present are satisfied, the time begins to decrease “T ECO stop” (10 minutes default, can be changed in the “Settings” menu). During this phase, the panel alternates between displaying ON with a small flame and Crono (if active) - Eco active. The minutes counting down to the Eco Stop are shown at the top of the display. The flame moves to P1 and remains there until the set “T Eco Stop” time reaches zero, and if the conditions are still satisfied, turns off the boiler. The ECO stop count is cancelled if one of the devices recalls power.

When the boiler begins to turn off, the panel shows: Off - Eco Active - flashing small flame.

When the boiler turns off, OFF-ECO appears on the display with the flame symbol off.

The following conditions have to be met simultaneously for the ECO to restart:

- Power recall
- 5 minutes have passed since shut-down.
- $TH_0 < TSetH_0$.
- If the power is recalled by the domestic hot water (DHW), the 5' are ignored and the boiler starts up as required.

NOTE: In configuration 4 - 5 the Auto Eco mode is enabled automatically. Also when in configuration 2 - 3, with the ‘summer’ function set, it is enabled automatically. Where it is prescribed that it should be enabled, the mode cannot be disabled.

h - T Pump On

This option enables adjustment of the pump activation temperature.

Select the Pump On T function as follows:

- Press the “menu” key.
- Use the arrow keys to scroll through and select “Settings”
- Press “menu” to confirm.
- Scroll with the arrows and select “T Pump On”.
- Press “menu” to confirm.
- Use the + - keys to change the °C.
- Press “menu” to confirm and “esc” to exit.

i - Auxiliary boiler

An additional module (optional) must be installed to allow the start-up of an auxiliary boiler when the main boiler is off or has been stopped due to an alarm. The default settings have this function disabled. To enable the function, go to the settings menu.

14-MENU ITEMS AND OPERATION

j - Pellet Recipe

This function is for adapting the boiler to the type of pellet in use. As there are many types of pellet available on the market, the operation of the boiler can vary considerably according to the quality of the fuel. When the pellets clog up the brazier due to excess loading of fuel or when the flames are high even at low power, or when the flames are low, it is possible to decrease/increase the amount of pellets in the brazier:

Available values:

-3 = A decrease of 30% on the factory setting.

-2 = A decrease of 20% on the factory setting.

-1 = A decrease of 10% on the factory setting.

0 = No changes.

1 = An increase of 5% on the factory setting.

2 = An increase of 10% on the factory setting.

3 = An increase of 15% on the factory setting.

Edit the recipe as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Scroll with the arrows and select "Pellet recipe"
- Press "menu" to confirm.
- Alter the % with the + - keys.
- Press "menu" to confirm and "esc" to exit.

k - Fumes rpm % ventilation

In the event the installation presents problems in extracting smoke (lack of draft or even pressure in the duct), it is possible to increase the smoke and ash extraction speed. This change resolves all the potential problems related to pellets clogging in the brazier and deposits forming at the bottom of the brazier itself caused by poor quality fuel or fuel that produces a lot of ash. The extraction speed may be altered between -30% to +50%, with increments of 10 percent at a time. Negative variation can be necessary if the flame is too low.

To alter this parameter, proceed as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Scroll with the arrows and select "Fumes rpm Var."
- Press "menu" to confirm.
- Alter the % with the + - keys.
- Press "menu" to confirm and "esc" to exit.

14-MENU ITEMS AND OPERATION

l - Maximum power

Allows you to set the maximum power limit of the flames which the boiler can use to reach the set target temperature.

Modify the power as follows:

- Press the “menu” key.
- Use the arrow keys to scroll through and select “Settings”
- Press “menu” to confirm.
- Scroll with the arrows and select “Maximum power”.
- Press “menu” to confirm.
- Change the power from 01 to 05 using the + - keys.
- Press “menu” to confirm and “esc” to exit.

m - Components test

This can be done only when the boiler is off and allows you to select the components to be tested:

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

Enable the “Component test” function (only with boiler off) as follows:

- Press the “menu” key.
- Use the arrow keys to scroll through and select “Settings”
- Press “menu” to confirm.
- Use the arrow keys to scroll through and select “Component test”
- Press “menu” to confirm.
- Use the + - keys to select the test to be carried out.
- Press “menu” to confirm and “esc” to exit.

n - Chimney sweep Function

This function can only be activated when the boiler is on and power is supplied, and it forces operation of the boiler at the parameters P5, with the ventilator (if present) in V5. Any corrections to the loading/smoke ventilation percentage must be read. This state lasts 20 minutes, the countdown is displayed on the panel. During this interval, the system ignores any thermostat/puffer/room set point/ set point H₂O values, only the safety shut-down at 85°C remains active. The technician can stop this phase at any moment by quickly pressing the on/off key. Enable the “Chimney sweeper” function as follows:

- Press the “menu” key.
- Use the arrow keys to scroll through and select “Settings”
- Press “menu” to confirm.
- Use the arrow keys to scroll through and select “Chimney sweeper function”
- Press “menu” to confirm.
- Use the + - keys to select “On” (Off by default)
- Press “menu” to confirm and “esc” to exit.

14-MENU ITEMS AND OPERATION

o - System configuration

To change the configuration of the system, proceed as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Use the arrow keys to scroll through and select "System configuration"
- Press "menu" to confirm.
- Use the + - keys to modify the configuration between 01 and 05.
- Press "menu" to confirm and "esc" to exit.

p - Season

In configurations 2 and 3, enabling the "summer" function disables deviation of the 3-way valve towards the heating system to prevent the radiators from heating up, and so the flow is always towards the hot water system (DHW).

Selecting the "summer" option automatically enables the auto-eco function (cannot be deactivated). The room temperature probe/ external thermostat are ignored.

Modify the function as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Use the arrow keys to scroll through and select "Season"
- Press "menu" to confirm.
- Use the + - keys to select "Summer" or "Winter".
- Press "menu" to confirm and "esc" to exit.

q - Technical menu

To access the technical menu you must contact the service centre as it requires a password.

Access the "technical menu" as follows:

- Press the "menu" key.
- Use the arrow keys to scroll through and select "Settings"
- Press "menu" to confirm.
- Use the arrow keys to scroll through and select "Technical menu"
- Press "menu" to confirm.
- With the + - keys, select "Product Type", "Service", "Parameters", "Sanitary Par", "Counter memories", "Enable fan" and "Puffer data".
- Press "menu" to confirm and "esc" to exit.

14-MENU ITEMS AND OPERATION

SYSTEM CONFIGURATIONS

At the time of installation, the product must be configured according to the type of system by selecting the relative parameter in the “SETTINGS” menu.

There are 5 possible configurations, described below:

Configuration	Description
1	Room temperature control via boiler's on-board probe or by enabling external thermostat.
2	2.1 Ambient temperature management with a probe fitted on the boiler or by enabling an external ambient thermostat; instant production of hot sanitary water with plate exchanger in FACTORY CONFIGURATION. 2.2 Room temperature control via boiler's on-board probe or enabling external thermostat; DHW production for storage cylinder or storage with thermostat (optional). DISCONNECT THE INTERNAL THREE-WAY VALVE AND FLOW SWITCH (IF PRESENT)
3	Room temperature control via boiler's on-board probe or enabling external thermostat; DHW production with NTC probe (10 kΩ B3435). DISCONNECT THE INTERNAL THREE-WAY VALVE AND FLOW SWITCH (IF PRESENT)
4	External Puffer controlled by thermostat.
5	External Puffer controlled by NTC probe (10 kΩ B3435).

SYSTEM WITH: DIRECT PELLET STOVE AND ROOM PROBE

Adjustable setting

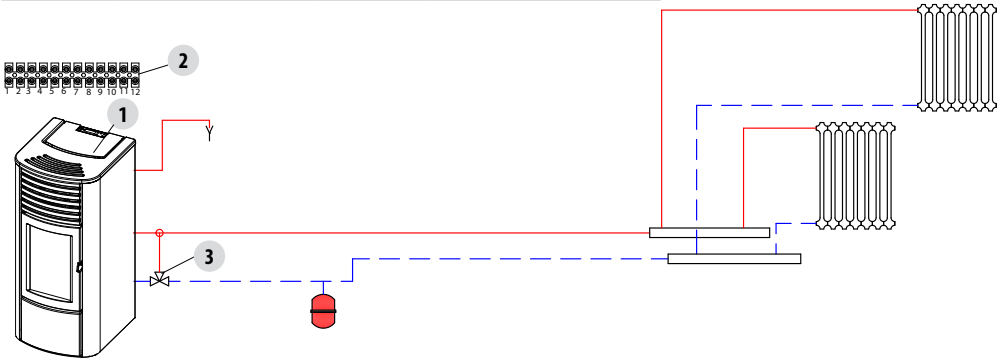
SET	VALUES
AMBIENT TEMP.	5°C - 35°C
WATER TEMP	30°C - 80°C

Parameters to be set

Settings	Value
Configuration	1

Hydraulic diagram

Num.	Description	Num.	Description
1	Pellet Boiler	3	Anti-condensation valve
2	Rear terminal block		



14-MENU ITEMS AND OPERATION

SYSTEM WITH: DIRECT PELLET STOVE AND ROOM THERMOSTAT

Adjustable setting

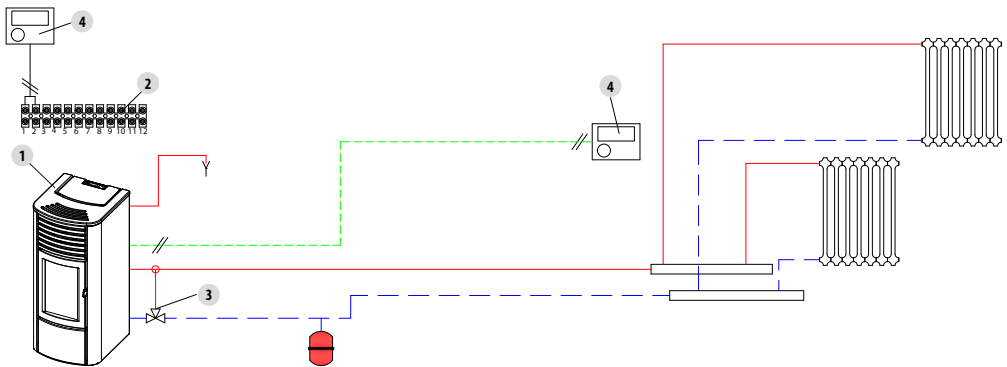
SET	VALUES
WATER TEMP	30°C - 80°C

Parameters to be set

Settings	Value
Configuration	1
External thermostat	ON

Hydraulic diagram

Num.	Description	Num.	Description
1	Pellet Boiler	3	Anti-condensation valve
2	Rear terminal block	4	Room thermostat



14-MENU ITEMS AND OPERATION

SYSTEM WITH: DIRECT PELLET STOVE, ROOM PROBE AND DHW STORAGE CYLINDER

Adjustable setting

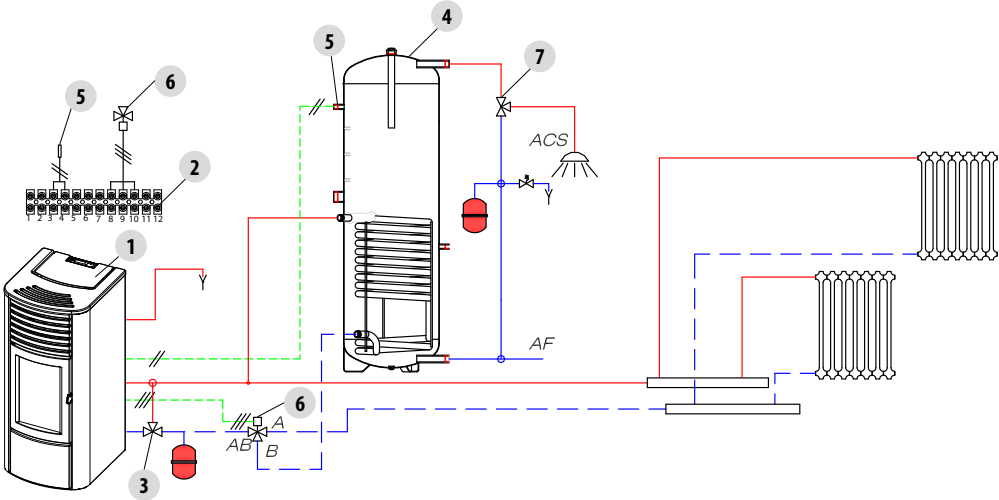
SET	VALUES
AMBIENT TEMP.	5°C - 35°C
WATER TEMP	30°C - 80°C
BOILER TEMP.	30°C - 80°C

Parameters to be set

Settings	Value
Configuration	3

Hydraulic diagram

Num.	Description	Num.	Description
1	Pellet Boiler	5	Storage cylinder probe
2	Rear terminal block	6	3-way diverter valve
3	Anti-condensation valve	7	DHW Thermostatic Valve
4	DHW storage cylinder		



14-MENU ITEMS AND OPERATION

SYSTEM WITH: DIRECT PELLET STOVE, ROOM THERMOSTAT AND DHW STORAGE CYLINDER

Adjustable setting

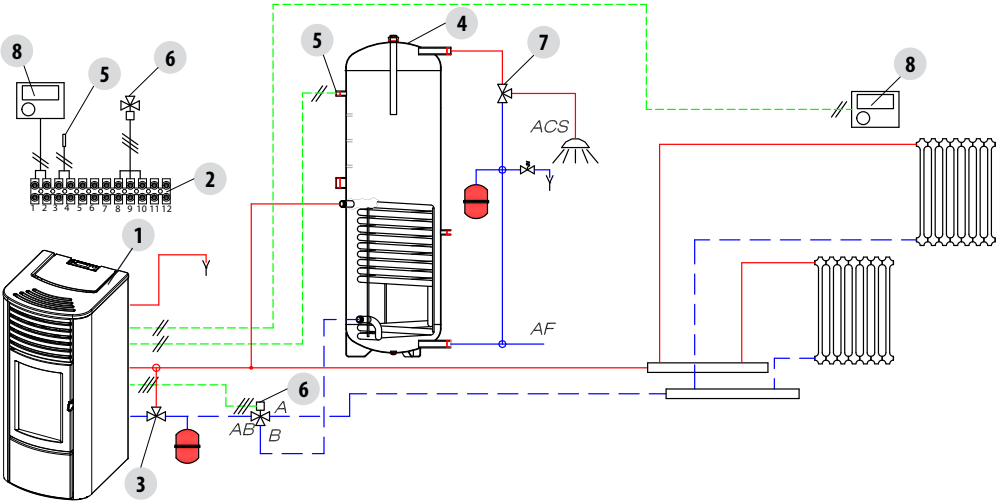
SET	VALUES
WATER TEMP	30°C - 80°C
BOILER TEMP.	30°C - 80°C

Parameters to be set

Settings	Value
Configuration	3
External thermostat	ON

Hydraulic diagram

Num.	Description	Num.	Description
1	Pellet Boiler	5	Storage cylinder probe
2	Rear terminal block	6	3-way diverter valve
3	Anti-condensation valve	7	DHW Thermostatic Valve
4	DHW storage cylinder	8	Room thermostat



14-MENU ITEMS AND OPERATION

SYSTEM WITH: PELLET STOVE AND PUFFER

Adjustable setting

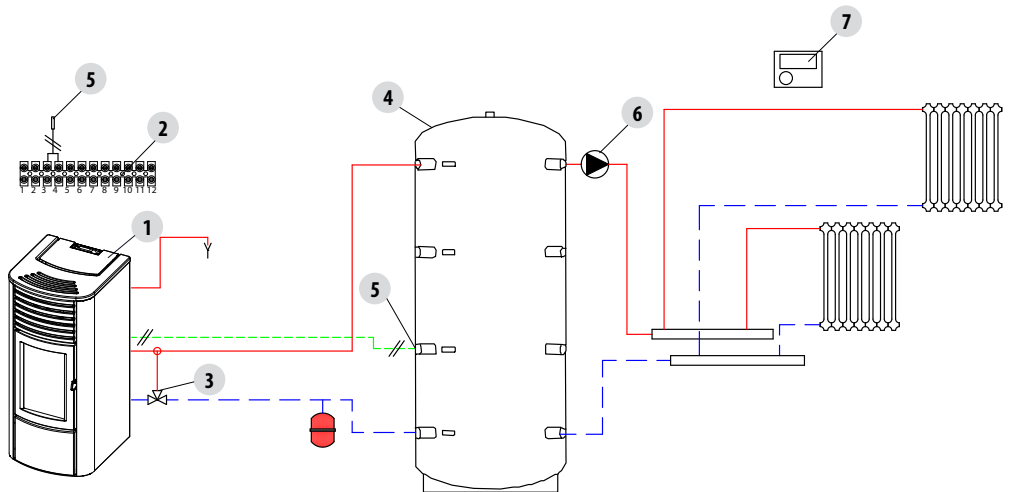
SET	VALUES
PUFFER TEMP.	55°C - 75°C

Parameters to be set

Settings	Value
Configuration	5

Hydraulic diagram

Num.	Description	Num.	Description
1	Pellet Boiler	5	Puffer probe
2	Rear terminal block	6	System pump
3	Anti-condensation valve	7	Room thermostat
4	Puffer		



14-MENU ITEMS AND OPERATION

SYSTEM WITH: PELLET STOVE, PUFFER AND EMERGENCY BOILER (WALL-MOUNTED)

Adjustable setting

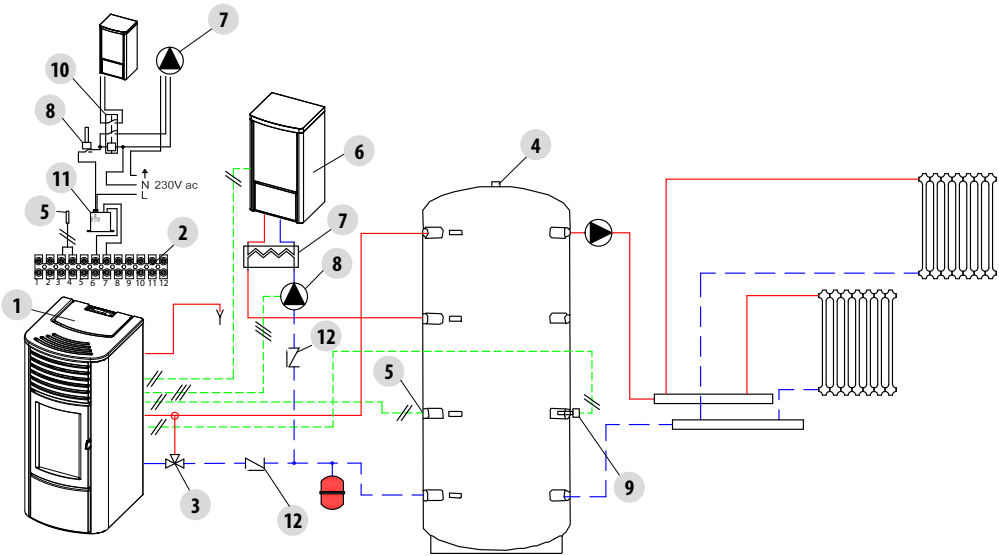
SET	VALUES
PUFFER TEMP.	55°C - 75°C

Parameters to be set

Settings	Value
Configuration	5
Auxiliary Boiler	ON

Hydraulic diagram

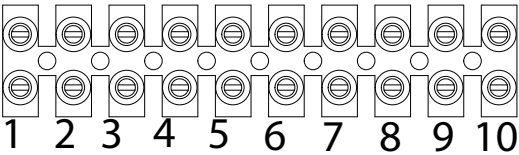
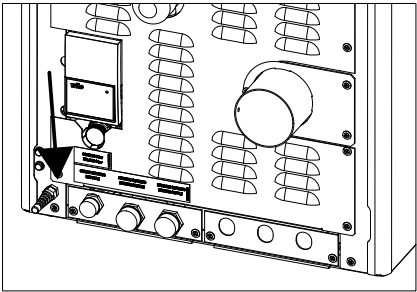
Num.	Description	Num.	Description
1	Pellet Boiler	7	Plate heat exchanger
2	Rear terminal block	8	System pump
3	Anti-condensation valve	9	Emergency boiler thermostat
4	Puffer	10	Activation relay
5	Puffer Probe	11	Auxiliary boiler connection module
6	Emergency boiler	12	Non-return valve



14-MENU ITEMS AND OPERATION

OPERATING MODE

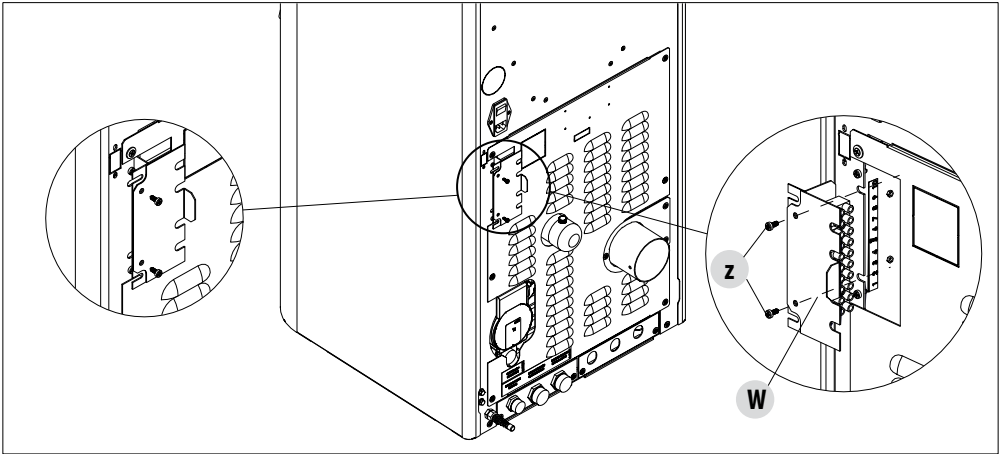
The operating mode for hydro stoves is only AUTOMATIC (there is no manual operating mode available). The modulation of the flame is controlled according to the “System configuration” by the room temperature probe located at the back of the appliance (see img.), by the external thermostat, by the temperature of the water in the boiler or by the NTC probes.



ELECTRICAL CONNECTIONS

TERMINAL BLOCK CONTACTS	
POS.1-2 EXTERNAL THERMOSTAT/PUFFER THERMOSTAT	POS.8 NEUTRAL THREE-WAY VALVE
POS.3-4 PUFFER/BOILER PROBE	POS.9 THREE-WAY VALVE PHASE (sanitary)
POS.5 EARTHING	POS.10 THREE-WAY VALVE PHASE (heating)
POS.6-7 AUXILIARY BOILER	

To access terminal block “W”, remove the cap as reported in part 1 of the manual (in the paragraph devoted to the removal of the back panel). Then loosen the two screws “z” and take out terminal block “W”. Perform the necessary connections and place everything back.



14-MENU ITEMS AND OPERATION



PLEASE NOTE: FOR THE ELECTRICAL CONNECTIONS REFER TO CHAPTER "14-ELECTRICAL PLAN" HEREIN

- *The wires of the water pressure switch that are set up in the boiler need to be connected to the hydraulic kit (optional).*
- *The wires of the flow switch are set up in the boiler for the connection to the hydraulic kit (optional) with domestic hot water.*

START-UP

Press key **1** (esc) to start up the appliance. The display will show ON with the flashing flame symbol. When the flame stops blinking, the boiler has reached the operating condition for "supplying power".

The default target room temperature is set at 20°C. To change this setting, follow the instructions in the adjustments menu; do the same to set the heating water temperature and the speed of the ventilation fan. To activate an external thermostat, if present, see the dedicated paragraph.

POWER SUPPLY

When start-up is complete, the panel will display ON with a constant flame at level 3 . The modulation of the flame for higher or lower power is then controlled autonomously on the basis of the temperatures set in the "System configuration."

15 - SAFETY DEVICES AND ALARMS

SAFETY DEVICES

The product is fitted with the following safety devices

PRESSURE SWITCH

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

SMOKE TEMPERATURE PROBE

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

CONTACT THERMOSTAT IN THE FUEL TANK

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

CONTACT THERMOSTAT IN THE BOILER

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

WATER TEMPERATURE SENSOR

When the water reaches the stop temperature (85°C) the probe automatically instructs the boiler to turn off "OFF Stand-by".

ELECTRICAL SAFETY

The boiler is protected against violent changes in current by a general fuse located in the control panel at the back of the boiler. Other fuses that protect the circuit boards are located on the latter.

SMOKE FAN

If the fan stops, the electronic board shuts off the supply of pellets in good time, and an alarm message is displayed.

GEAR MOTOR

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

TEMPORARY POWER CUT

When a power cut is less than 10" the boiler returns to its previous operating state; if it is more, it executes a cooling/re-ignition cycle.

FAILED START-UP

If the fuel fails to ignite during the start-up phase, the boiler will go into alarm status.

ANTI-FREEZE FUNCTION

If the probe in the boiler detects a water temperature of less than 5°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 a few seconds to keep it from seizing up.

15 - SAFETY DEVICES AND ALARMS



TAMPERING WITH THE SAFETY DEVICES IS PROHIBITED

If the product is NOT used as described in this instruction manual, the manufacturer declines all liability for any damage caused to persons and property. The manufacturer furthermore refuses to accept responsibility for damage to persons and property arising from the failure to observe all the rules contained in the manual and in particular:

- *All the necessary measures and/or precautions must be adopted when performing maintenance, cleaning and repairs.*
- *Do not tamper with the safety devices.*
- *Do not remove the safety devices.*
- *Connect the product to an efficient smoke expulsion system.*
- *First, check that the environment where it is to be installed is properly ventilated.*

Only after having eliminated the cause of the intervention of the safety system is it possible to relight the product and therefore restore the automatic operation of the probe. This manual will help you understand which anomaly has occurred, and explain how to intervene according to the alarm message displayed on the appliance.

15 - SAFETY DEVICES AND ALARMS

ALARM SIGNALLING

When a condition occurs other than the one expected for regular operation of the boiler, an alarm is triggered.

The reason for the alarm is given on the control panel. The sound signal is not enabled for alarms A01-A02 in order not to disturb the user when there is an absence of pellets in the night tank.

Panel signalling	type of problem	Solution
A01	The fire does not ignite.	Check the level of pellets in the hopper. Check that the brazier is correctly positioned in its seat and has no build-up or unburned material. Make sure the spark plug warms up. Thoroughly empty and clean the brazier before restarting.
A02	The fire goes out abnormally.	Check the level of pellets in the tank.
A03 Thermostats alarm	The temperature of the pellet tank or the water temperature exceed the envisaged safety threshold.	Wait until the end of the cooling phase, stop the alarm and re-ignite the boiler setting the supply of fuel to minimum (SETTINGS menu - pellet recipe). If the alarm persists, contact the service centre. Check whether the room fan is working correctly (if there is one).
A04	Smoke overtemperature.	The set smoke threshold has been exceeded. Reduce the load of pellets (SETTINGS menu - Pellet recipe).
A05 Pressure switch alarm	Fumes pressure switch intervention or water pressure insufficient.	Check for chimney obstructions / door open or the pressure of the hydraulic system.
A08	Anomalous operation of smoke fan.	If the alarm persists, contact the service centre.
A09	Fault with the smoke sensor.	If the alarm persists, contact the service centre.
A19	Fault with water sensor.	Water sensor detached / interrupted / defective / not recognised.
A20	Puffer probe alarm.	Puffer probe detached / interrupted / defective / not recognised.
Service	Routine maintenance warning (does not seize)	When this blinking message appears upon start-up, it means it is time to carry out scheduled maintenance. Call the assistance centre.

ALARM RESET



NEVER open the stove door whilst it is either in the initial start-up or on its shut down cycle, pellets will still be smoldering or therefore volatiles may be present.

ATTENTION!

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

15 - SAFETY DEVICES AND ALARMS

To reset the alarm, press and hold key 1 (ESC) for a few seconds. The boiler checks whether the cause of the alarm is ongoing. In the first case, the alarm continues to be displayed, in the second case it turns OFF. If the alarm persists, contact a service centre.

NORMAL SHUTDOWN (on the panel: OFF with flashing flame symbol)

When the shutdown key is pressed, or when there is an alarm signal, the boiler enters the thermal extinguishing phase which involves automatic execution of the following phases:

- Stop pellet loading
- The room fan (if installed) keeps running at the set speed so that the smoke temperature reaches 100°C, then runs at minimum speed until the shut down temperature is reached.
- The smoke extractor fan is activated at maximum speed and remains on for a fixed period of 10 minutes, at the end of which if the smoke T has dropped below the stop threshold, the fan stops, otherwise it will continue to operate at minimum speed until the temperature drops below the threshold.
- If the boiler has been shutdown regularly but, due to thermal inertia, the smoke temperature exceeds the threshold again, the shutdown phase will be repeated at minimum speed until the temperature falls.

BLACKOUT with boiler ON

In the event of a blackout, the boiler does the following:

- Power failure of less than 10": continues the work in progress;
- After a loss of power of more than 10" which occurred when the boiler was on, or during ignition, you can restore the boiler to its previous operating condition when power returns as follows:
 1. Cool the boiler by activating the smoke extractor at minimum speed for 10' then proceed to the next step;
 2. Restore the boiler to the operating condition prior to the blackout.

During phase 1, the panel shows ON BLACK OUT.

During phase 2, the panel shows Start-up.

If during phase 1 the system receives manual user commands from the control panel, it stops the blackout restoration sequence and begins the start-up or shutdown commanded by the user.

BLACKOUT OF MORE THAN 10" DURING EXTINCTION OF BOILER

If there is a power loss EXCEEDING 10" while the boiler is shutting down, when power is restored the boiler will automatically turn on in shutdown mode, even if the smoke temperature has fallen below 45°C in the meantime. This phase can be skipped by pressing key 1 (esc) (skips to start-up) and pressing it again (recognises that the boiler is off).

16-RECOMMENDATIONS FOR SAFE USE



ONLY CORRECT INSTALLATION AND APPROPRIATE MAINTENANCE AND CLEANING OF THE APPLIANCE CAN GUARANTEE CORRECT OPERATION AND SAFE USE OF THE PRODUCT

We would like to inform you that we are aware of cases of malfunctioning of domestic pellet-fuelled heating products, mainly due to incorrect installation and inappropriate maintenance.

We would like to assure you that all of our products are extremely safe and certified according to European standards of reference. The ignition system has been tested with the utmost attention to enhance ignition efficiency and to prevent any type of problem, even in the worst operating conditions. In any case, like for any other pellet-fuelled product, our appliances must be installed correctly and undergo regular periodical cleaning and maintenance to guarantee safe operation. Our studies show us that malfunctioning is mainly due to the combination of part or all of the following factors:

- Brazier holes obstructed or brazier deformed, due to lack of maintenance and conditions which can cause delayed ignitions, generating an anomalous production of unburned gases.
- Insufficient combustion air due to a reduced or clogged air inlet duct.
- Use of smoke ducts nonconforming to regulatory installation requirements, failing to guarantee an adequate draught.
- Partially clogged chimney, due to lack of maintenance, reducing the draught and making ignition difficult.
- End chimney pot nonconforming to the indications of the instruction manual, and therefore not suitable to prevent potential inverse draught.
- This factor is crucial when the product is installed in especially windy areas, such as coastal regions.

The combination of one or more of these factors could generate important malfunctioning conditions.

To keep this from occurring, it is fundamental to guarantee that the product is installed in compliance with standards in force.

Furthermore it is of the utmost importance to respect the following simple rules:

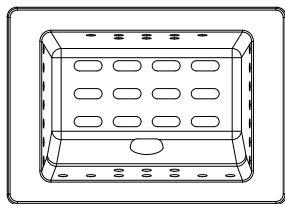
- Every time the brazier is removed for cleaning, it must always be put back properly in the work position before using the product, completely removing any residual filth left on the support base.
- Pellets must never be loaded in the brazier manually, either before ignition or during operation.
- The accumulation of unburned pellets ensuing a failed ignition must be removed before repeating ignition. Also check that they are fed correctly and that the combustion air inlet/smoke outlet are regular.
- If ignition fails repeatedly, immediately suspend use of the product and contact a qualified technician to check its operation.

Compliance with these indications is absolutely sufficient to guarantee proper operation and to avoid any type of problems with the product.

If the above-mentioned precautions are not taken, and during ignition the brazier is overloaded with pellets thus generating anomalous smoke in the combustion chamber, carefully follow the indications below:

- Do not disconnect electrical power to the product for any reason whatsoever: this would stop the smoke extractor, releasing smoke into the environment.
- Take the precaution of opening the windows to ventilate the installation room from any smoke in the environment (the chimney might not work properly).
- Do not open the fire door: this would compromise regular operation of the smoke extraction system to the chimney.
- Just switch the stove off by acting on the on-off button on the control panel (not the rear power supply socket button!) and move away until smoke has been completely extracted.
- Before attempting re-ignition, clean the brazier and its air passage holes completely of all deposits and unburned pellets. Put the brazier back in place, removing any residue from its support base. If ignition fails repeatedly, immediately suspend use of the product and contact a qualified technician to check its operation and the chimney.

17-CLEANING AND MAINTENANCE



EXAMPLE OF A CLEAN BRAZIER



EXAMPLE OF A DIRTY BRAZIER

Only by properly servicing and cleaning the product is it possible to ensure its safety and correct operation.



ATTENTION!

All the cleaning operations of all parts must be performed with the product completely cold and the plug disconnected.

Disconnect the product from the 230V power supply before performing any maintenance operations.

The product requires little maintenance if used with certified good quality pellets.

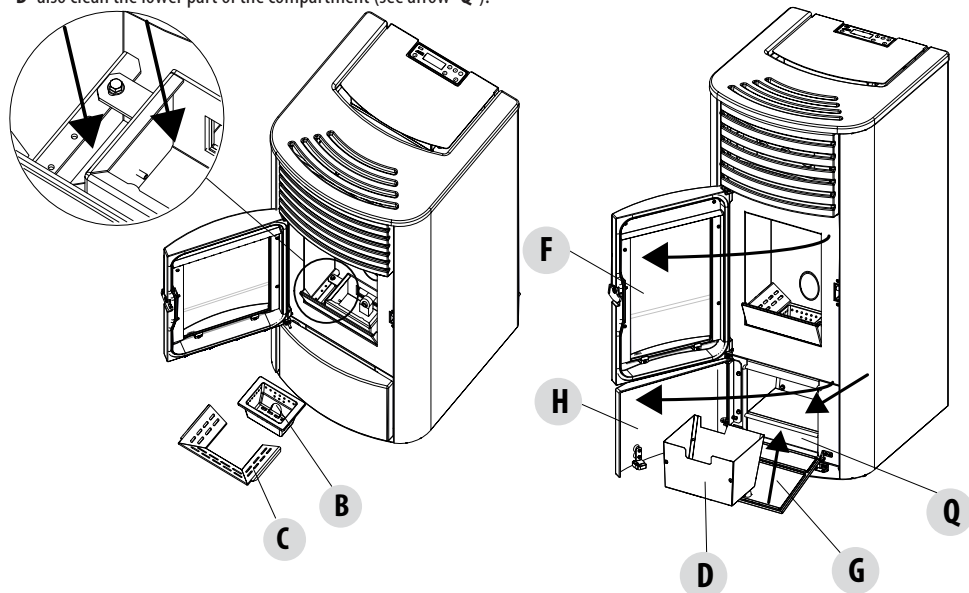
DAILY OR WEEKLY CLEANING PERFORMED BY THE USER

Cleaning the brazier and the ash pan

Lift part "C" from its place and remove brazier "B". Use the vacuum nozzle to clean away any ash from the area under the brazier. We recommend performing this operation every 2-3 days depending on what type of pellet is being used.

Press door "H" at the bottom right and open it. Turn the handle of door "G" to the right and open it by moving it downwards.

Remove and empty ash pan "D". Wipe away any residual ash before reinserting the pan. Your experience and the quality of the pellets will determine the ash pan cleaning frequency. However, it is recommended not to exceed 7 days. After removing and emptying the ash pan "D" also clean the lower part of the compartment (see arrow "Q").



Attention! When cleaning is completed, remember to put part "C", brazier "B" and ash pan "D" back in place and close all the doors ("G", "H", "F") back up again.

17-CLEANING AND MAINTENANCE

CLEANING THE GLASS

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



ATTENTION!

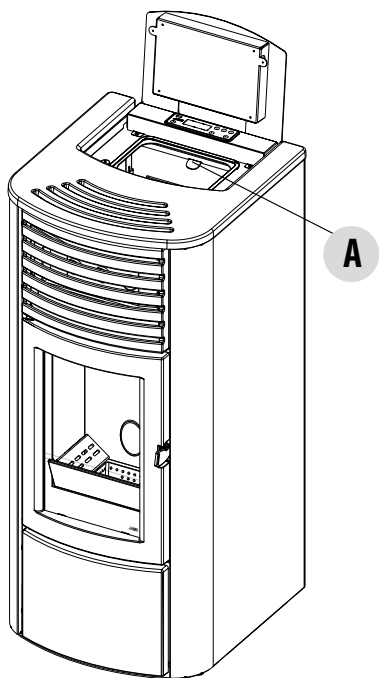
Do not use abrasive products and do not spray the glass cleaning product on the painted parts and on the door gaskets (ceramic fibre cord).

CLEAN THE EXCHANGER AND THE COMPARTMENT BENEATH THE BRAZIER EVERY 2/3 DAYS

Cleaning the exchanger and the compartment beneath the brazier is a simple operation but very important if the boiler is to maintain optimal performance.

We therefore recommend cleaning the internal exchanger every 2-3 days, performing these simple operations in sequence:

- **Activate the "CLEANING" function** - with the boiler off press - menu, select "Settings", with the arrows <> select "Cleaning", confirm with the "Menu" key, activate the cleaning "ON" with the + - keys. This procedure starts the smoke extractor on the maximum setting to expel the soot that becomes dislodged when the exchanger is cleaned.
- **Clean the pipe unit** - Using lever "A" located under the tank cover, vigorously shake the turbulators 5-6 times. This will remove any soot that has deposited in the exchanger's smoke ducts during normal stove operation. The accumulated ash will settle in the compartment under the ash pan, this is why we recommend cleaning when emptying the ash pan so, using a vacuum cleaner, also vacuum the lower compartment "Q".
- **Deactivate the "CLEANING" function** - this function is deactivated automatically after two minutes. If you need to stop the function sooner, press the "Esc" key.
- **Clean the pipe units (see next page)**
- **Empty ash pan "D".**
- **Clean the smoke extractor compartment (see next page)**
- When done cleaning, close the cover and ash tray.



If cleaning is not done every 2-3 days, the boiler could go into alarm caused by ash clogging after several hours of operation.

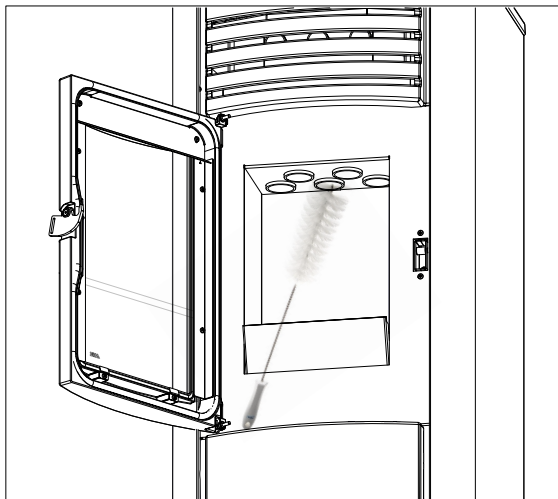
17-CLEANING AND MAINTENANCE

CLEANING THE PIPE UNITS

For better performance of the boiler, the pipes inside the combustion chamber should be cleaned once a month.

Open the firebox door and use the brush provided to clean the 5 pipes positioned at the top inside the combustion chamber. Brush the pipes several times so that the ash deposited inside them falls to the bottom around the brazier.

Use a vacuum cleaner to remove all fallen material.



PERIODIC CLEANING PERFORMED BY A QUALIFIED TECHNICIAN

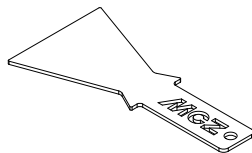
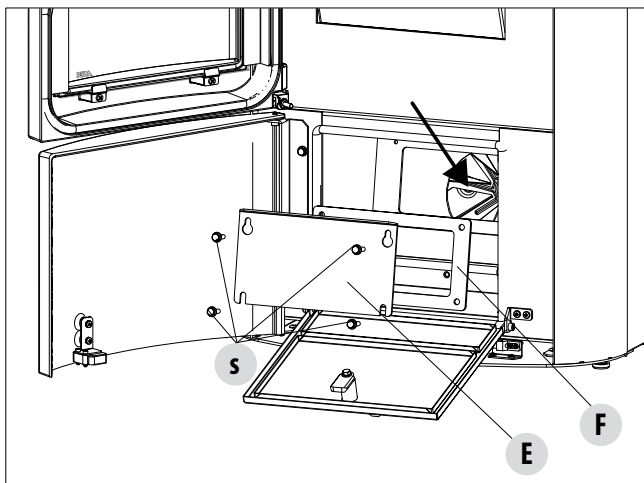
CLEANING THE SMOKE EXTRACTOR COMPARTMENT

In the area behind ash pan "D", there is the smoke cap "E", which must be removed to clean the smoke extractor. Therefore:

- loosen the screws "S"
- remove cap "E"

Now, use the nozzle of a vacuum cleaner, remove any ash and soot that may have built up in the lower exchanger indicated by the arrow. Before putting cap "E" back, we recommend changing gasket "F".

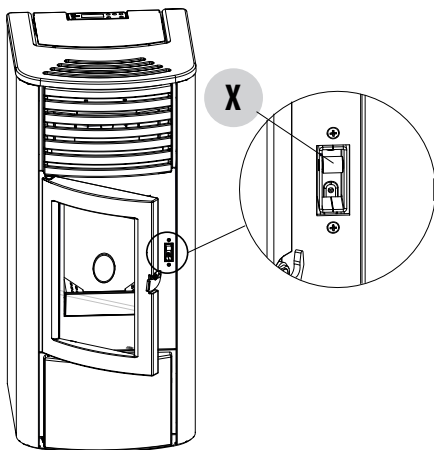
Before removing ash using a vacuum cleaner, it is recommended to clean the internal walls of the stove using the supplied scraper.



17-CLEANING AND MAINTENANCE

PERIODICAL CHECK OF THE DOOR CLOSURE

Make sure the door closure ensures a correct sealing action (with the “paper sheet” test) and that when the door is closed, the closing block (X in the figure) does not protrude from the sheet metal to which it is secured. For some products it will be necessary to disassemble the cladding to be able to assess the anomalous protrusion of the block when the door is closed.



CLEANING THE SMOKE EXPULSION SYSTEM AND GENERAL CHECKS

Clean the smoke outlet system, especially around the “T” joints, elbows and any horizontal sections of the smoke duct. For information on periodically cleaning the flue, contact a skilled chimney sweep.

Check the seal of the ceramic fibre gaskets on the door of the stove. If necessary, order new replacement gaskets from the retailer or contact an authorised service centre to carry out the operation.



ATTENTION:

The frequency with which the smoke outlet system is cleaned depends on the use of the boiler and the type of installation.

We recommend relying on an authorised service centre for end-of-season cleaning and maintenance, as they will carry out all of the previously mentioned work and inspect the stove components.

SHUTDOWN (end of season)

At the end of each season, before switching the product off, it is recommended to remove all the pellets from the hopper with a vacuum cleaner with a long pipe.

We recommend removing the unused pellet from the tank because it can retain moisture. Disconnect any combustion air ducting that can lead moisture inside the combustion chamber but, above all, ask the specialised technician to refresh the paint inside the combustion chamber with the special silicone spray paints (available at any store or CAT) during the necessary annual end of season scheduled maintenance operations. This way the paint will protect the inner parts of the combustion chamber, blocking any type of oxidative process.

When not in use the appliance must be disconnected from the mains power supply. It is recommended to remove the power cable for additional safety, especially in the presence of children.

The service fuse may have to be replaced if the control panel display does not switch on when the product is switched on again by pressing the main switch on its side.

There is a fuse compartment on the back of the product, under the power socket. Open the fusebox cover with a screwdriver and replace the fuses if necessary (3.15 A delayed) - seek assistance from an authorised and qualified technician.

17-CLEANING AND MAINTENANCE

REPLACING THE OVERPRESSURE DISCHARGE FOR THE COMBUSTION CHAMBER

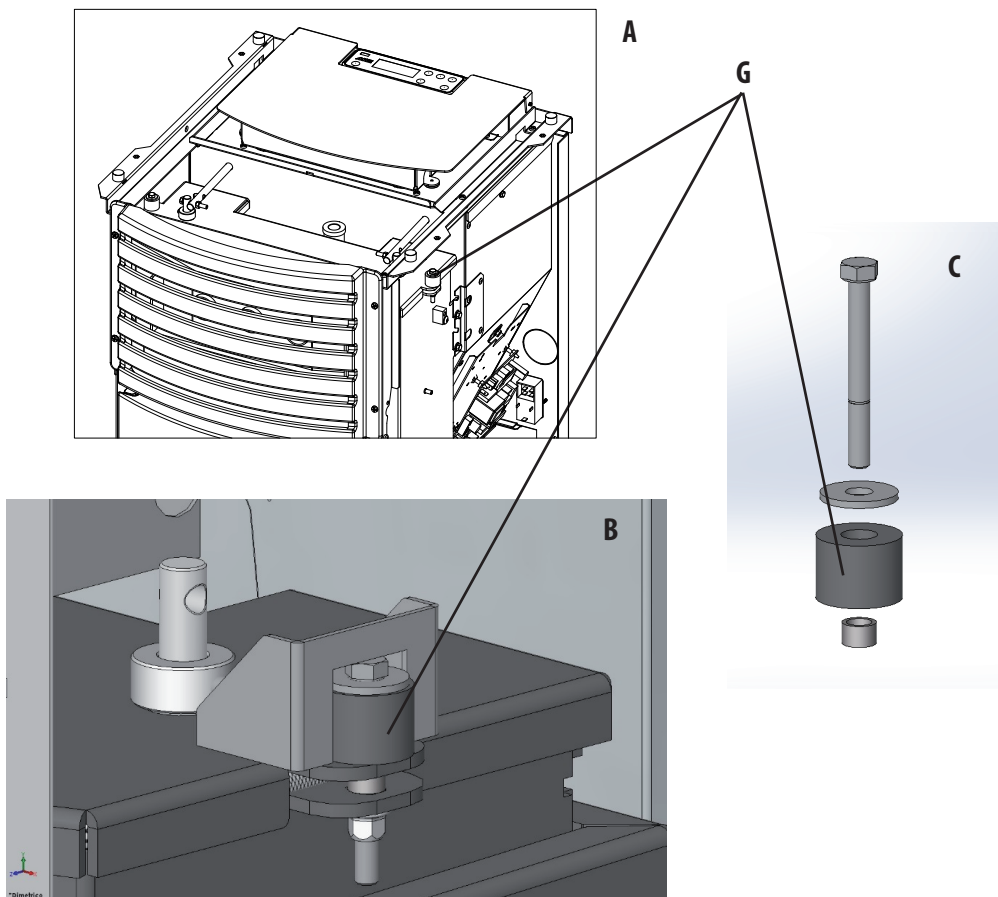
Overpressure rubber bushing "G" of the combustion chamber (fig. A) may get worn and/or damaged, it is therefore necessary to replace it once a year to ensure correct system operation.

To replace it, follow the instructions below

- Remove the top
- Remove the first ceramic panel of the side cladding or the steel panel (depending on the type of stove)
- Unscrew the screw-washer-rubber bushing-roller shown in figure A/C (on both sides of the cover). It is now possible to assemble the new kit:
- Prepare the screw-washer-rubber bushing-roller aligned as shown in fig. C and screw them into the structure.
- Tighten the screw all the way.

Now ensure that the compression of the rubber bushing is correct using the template supplied with the kit:

- Place the template on the cover (fig. B); the head of the screw must be touching the element above it. If necessary, tighten or loosen the screw so that it is touching the upper element.



17-CLEANING AND MAINTENANCE

CHECKING THE INTERNAL COMPONENTS



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

We recommend that an annual maintenance service is carried out (with a scheduled service contract). This service is essentially a visual and functional inspection of the internal components. The following is a summary of the checks and/or maintenance that are essential for the correct operation of the product.

- Gear motor
- Smoke extractor fan
- Smoke probe
- Ignition spark plug
- Pellet/water automatic rearm thermostat
- Room/water temperature probe
- Motherboard
- Fuses protecting panel-motherboard
- WIRING

	PARTS/INTERVAL	2-3 DAYS	7 DAYS	30 DAYS	60-90 DAYS	1 YEAR
UNDER THE USER'S RESPONSIBILITY	Brazier*	•				
	Ash pan		•			
	Glass	•				
	Lower compartment		•			
	Turbulators	•				
BY THE QUALIFIED TECHNICIAN	Complete exchanger				•	
	Smoke duct			•		
	Door gasket				•	
	Internal parts					•
	Flue					•
	Circulation pump					•
	Plate heat exchanger					•
	Plumbing components					•
	Electro-mechanical components					•
	Overpressure silicon damper for combustion chamber					•
	Door closure operation					•

* THE FREQUENCY OF CLEANING SHOULD BE INCREASED IF THE PELLETS ARE OF POOR QUALITY.

18-FAULTS/CAUSES/SOLUTIONS



ATTENTION:
GUIDE FOR THE USE OF THE SPECIALISED TECHNICIAN ONLY

ATTENTION:

All repairs must be carried out exclusively by a specialised technician, while the boiler is completely cold and the electric plug is disconnected. The operations in bold type must be carried out by specialised personnel. The manufacturer will not be liable and the guarantee is invalidated if this condition is not respected.

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The pellets are not fed into the combustion chamber.	The pellet hopper is empty	Fill the tank with pellets
	Sawdust has blocked the feed screw	Empty the tank and remove the sawdust from the feed screw by hand
	Faulty gear motor	<i>Replace the gear motor</i>
	Faulty electronic board	<i>Replace the circuit board</i>
The fire goes out or the boiler stops automatically.	The pellet hopper is empty	Fill the tank with pellets
	The pellets are not fed	See the previous anomaly
	The pellet temperature safety probe has been triggered	Let the boiler cool down, reset the thermostat until the problem is resolved and switch the boiler back on. If the problem persists contact Technical Assistance.
	The door is not closed properly or the gaskets are worn	<i>Close the door and replace the gaskets with original ones</i>
	Unsuitable pellets	Change the type of pellets with those recommended by the manufacturer
	Low pellet supply	<i>Check the flow of fuel following the instructions in the booklet.</i>
	The combustion chamber is dirty	Clean the combustion chamber, following instructions in the manual
	Clogged outlet	Clean the smoke duct
	Faulty smoke extraction motor	<i>Check the motor and replace it, if necessary</i>
	Pressure switch broken or defective.	<i>Replace the pressure switch.</i>

18-FAULTS/CAUSES/SOLUTIONS

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The boiler runs for a few minutes and then goes out.	Start-up phase is not completed	Repeat start-up
	Temporary power cut	Wait for the automatic restart
	Clogged smoke duct	Clean the smoke duct
	Faulty or malfunctioning temperature probes	<i>Check and replace the probes</i>
	Faulty spark plug	<i>Check the spark plug and replace it, if necessary</i>
Pellets accumulate in the brazier, the glass of the door gets dirty and the flame is weak	Insufficient combustion air	Clean the brazier and check that all the holes are clear. Perform a general cleaning of the combustion chamber and the smoke duct. Check that the entry of air is not obstructed.
	Damp or unsuitable pellets	Change the type of pellets
	Faulty smoke evacuation motor	<i>Check the motor and replace it, if necessary</i>
The smoke evacuation motor does not work	No electrical supply to the boiler.	Check the mains voltage and the protection fuse
	The motor is faulty	<i>Check the motor and capacitor and replace them, if necessary</i>
	Defective motherboard	<i>Replace the electronic board</i>
	Control panel broken	<i>Replace the control panel</i>
In the automatic position the boiler always runs at full power.	Thermostat is set to minimum	Reset the temperature of the thermostat.
	Room thermostat in position that always detects cold.	Reposition of the probe
	Malfunctioning temperature probe.	<i>Check the probe and replace it if necessary.</i>
	Faulty or malfunctioning control panel.	<i>Check the panel and replace if necessary.</i>
The stove does not run	No power supply	Check that the plug is inserted and the main switch is in the "I" position.
	Pellet probe stop	<i>Cancel stoppage by changing the setting of the rear thermostat. If the problem persists, request assistance.</i>
	Blown fuse	Replace the fuse.
	Pressure switch broken (lockout indicated).	Insufficient pressure of water in boiler
	Clogged smoke exhaust or smoke duct.	Clean the smoke outlet and/or the smoke duct.
	Water temperature sensor triggered	Call for assistance

18-FAULTS/CAUSES/SOLUTIONS

ANOMALIES RELATED TO THE HYDRAULIC CIRCUIT

No increase in temperature with boiler in operation	Incorrect combustion adjustment.	Check recipe and parameters.
	Boiler / system dirty.	Check and clean the boiler.
	Insufficient stove power.	Check that the boiler is properly sized for the requirements of the system.
	Poor pellet quality	Use quality pellets.
Condensation in boiler	Incorrect temperature setting.	<i>Set the boiler to a higher temperature.</i>
	Insufficient fuel consumption.	<i>Check the recipe and/or technical parameters.</i>
Radiators cold in winter	Room thermostat (local or remote) set too low. If remote thermostat, check if it is defective.	<i>Set to higher temperature or replace (if remote).</i>
	Circulator does not run because blocked.	<i>Free up the circulator by removing the plug and turning the shaft with a screwdriver.</i>
	Circulator does not run.	<i>Check the electrical connections of the circulator; replace if necessary.</i>
	Radiators have air in them	<i>Vent the radiators</i>

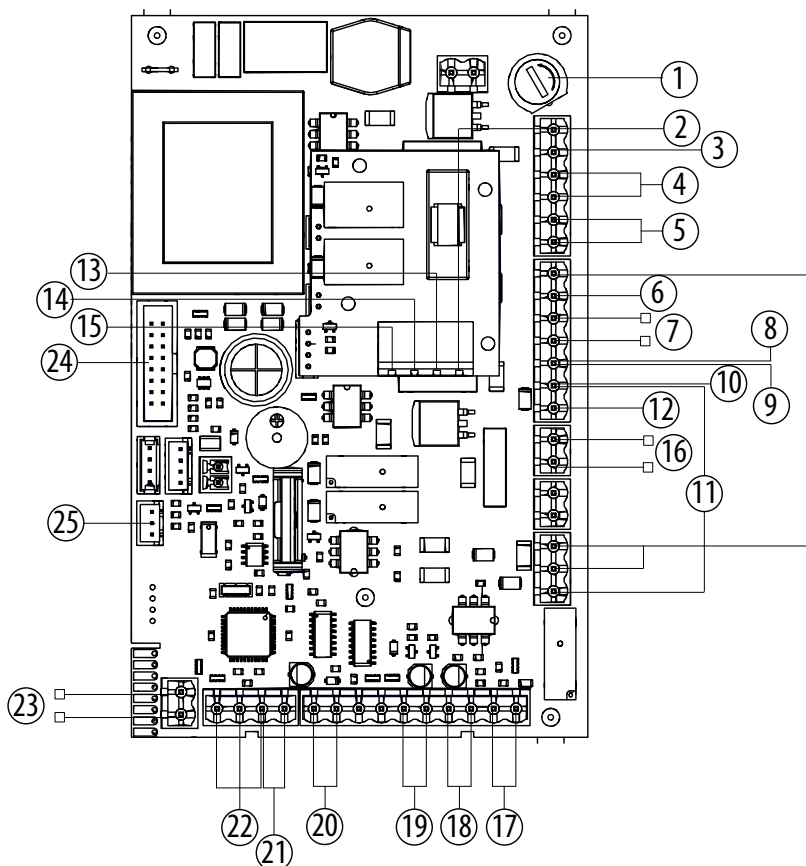


ATTENTION!

The operations in italics must be carried out by specialised personnel.

The manufacturer will not be liable and the guarantee is invalidated if this condition is not respected.

19-CIRCUIT BOARD



MOTHERBOARD WIRING KEY

- | | |
|-----------------------------|--|
| 1. FUSE | 14. 3-WAY VALVE PHASE (DHW) |
| 2. BOARD PHASE | 15. 3-WAY VALVE PHASE (HEATING) |
| 3. BOARD NEUTRAL | 16. AUXILIARY BOILER CONNECTION (TERMINAL BLOCK) |
| 4. SMOKE EXTRACTOR | 17. SMOKE PROBE |
| 5. ROOM FAN | 18. EXTERNAL THERMOSTAT CONNECTION (TERMINAL BLOCK) |
| 6. WATER SAFETY THERMOSTAT | 19. ROOM TEMPERATURE PROBE |
| 7. GLOW PLUG | 20. PUFFER/BOILER PROBE CONNECTION (TERMINAL BLOCK) |
| 8. PELLET SAFETY THERMOSTAT | 21. BOILER WATER TEMPERATURE PROBE |
| 9. AIR PRESSURE SWITCH | 22. SMOKE EXTRACTOR FAN REV CONTROL |
| 10. WATER PRESSURE GAUGE | 23. STORAGE CYLINDER FLOW SWITCH OR THERMOSTAT TO CONNECT TO THE HYDRAULIC KIT (ACCESSORY) |
| 11. FEED SCREW | 24. CONTROL PANEL |
| 12. PUMP NEUTRAL | 25. EASY CONNECT (ACCESSORY) |
| 13. PUMP PHASE | |

PLEASE NOTE The electrical wiring of individual components is fitted with pre-wired connectors of different sizes.



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