ECOLOGIC PLUS

PELLET BOILER

OPERATING AND MAINTENANCE INSTRUCTIONS

ThermoFLUX

Dear customer,

Congratulations on choosing a pellet boiler from the ThermoFLUX d.o.o. range.

Please read these operating instructions and follow the instructions for use, safety and proper operation of the boiler.

Always keep the operating instructions close to the boiler.

The right to technical changes is reserved.

Contents

1. Safety

For **your** safety

Follow these safety instructions carefully to avoid danger and damage to people and property.

Target group

The pellet boiler must only be operated by trained users.
Supervise children near the pellet boiler. Cleaning and user maintenance must not be carried out by children.

Connecting the pellet boiler

- The pellet boiler must only be connected by authorized service technicians.
- Use pellet boiler only with suitable fuel (see page 7).
- Observe the stated requirements for electrical connection
- Changes to an existing installation may only be made by authorized specialists.

Incorrectly executed works on the heating system can lead to life-threatening accidents.

Electrical work may only be carried out by qualified electricians.

Works, repairs and regular cleaning of pellet boiler

Make adjustments and work on the pellet boiler only in accordance with the instructions in this operating manual. Repairs to the pellet boiler must only be carried out by authorized specialists. Cleaning and maintenance of the pellet boiler is required. Description and intervals are described on page ....

Do not modify or remove accessories or installed accessories.

Do not open or tighten the pipe connections.

Hot surfaces can cause burns

Do not touch hot surfaces inside the pellet boiler or on uninsulated pipes, couplings and exhaust pipes. Operate the boiler only using the supplied handles. Insulate the exhaust pipe and do not touch it during operation. The ash tray door must not be opened during heating operation; otherwise, injuries, material damage and flue gas development are possible!

What to do if you smell exhaust gases

Exhaust gases can lead to life-threatening poisoning

- Turn off the pellet boiler
- Ventilate the place where the boiler is located
- Close the doors to the living rooms

What to do in case of fire

In case of fire, there is a risk of burns and explosion.

- Turn off the pellet boiler.
- Use a tested ABC class fire extinguisher.

What to do if there is a problem with the pellet boiler

Error messages indicate malfunctions in the heating system. Faults that are not corrected can have life-threatening consequences. Do not validate error messages several times at short intervals. Inform your heating expert so they can analyse the cause and correct the malfunction.

Intended use

The pellet boiler may only be installed and used in closed heating systems according to EN 12828, taking into account the associated assembly and operation instructions. The pellet boiler is intended exclusively for heating water for heating that has the quality of drinking water.

Intended use requires that the fixed installation is performed in combination with approved system-specific components.

Commercial or industrial use for any purpose other than heating facilities or heating drinking water is not considered intended use.

Any use other than this must be approved by the manufacturer.

Misuse of the pellet boiler or improper operation (e.g., prolonged operation in an open state) is prohibited and leads to the exclusion of liability. Misuse also occurs if the components of the heating system are changed in their intended function (e.g., by closing the drainage and supply air ducts) or if fuel that is not intended for this pellet boiler is used.

Permitted fuels

The boiler is suitable for pellet combustion according to EN ISO 17225-2:2014, quality class A1, Enplus-A1. It is not allowed to operate with unsuitable fuels or pellets that have a large amount of slag.

- Diameter: 6mm
- Length 5 to 30 mm (max. 20% of pellet up to 45 mm)
- Residual humidity: max. 7 to 12%.

Note: Waste must not be incinerated in this pellet boiler

Permissible water hardness

Water is used as a heat transfer medium. For the initial charging of the heating system and recharging after repair, limescale-free water is required. Replenishment of fresh water containing limescale must be kept to a minimum in order to limit limescale deposition. In order to protect the boiler from calcification, it is necessary to take into account the hardness of the heating water.

Applicable standards and directives:

Austria:	ÖNORM H 5195-1 must be observed.
Germany:	VDI 2035
Switzerland:	SWKI 97-1

Heating system installation / standard

The pellet boiler must operate in a closed heating system.

Applicable standards:

ÖNORM / DIN EN 12828 heating systems in buildings

The following standards are still in use:

Austria:	closed systems according to ÖNORM B 8131
Germany:	closed systems according to DIN 4751 Part 2

Installation room requirements

Boiler room ventilation

Applicable standards:

TRVB H 118

ÖNORM H 5170

Rule: Provide a cross section of supply air according to ÖNORM H 5170 of 2 cm² per kW of nominal boiler power, but at least a total cross section of 200 cm².

Installation in a dry room

A dry room is required for installation. In particular, tumble dryers in the same room are only allowed as condenser tumble dryers. Ambient temperatures greater than 0°C and less than 35°C must be ensured.

Building and fire protection rules must be followed

Risk of fire due to flammable materials! Flammable materials must not be stored near the pellet boiler. National regulations on construction and fire protection must be observed.

Chimney connection / fireplace system

Serious injuries and property damage caused by a faulty exhaust system! Damage to the exhaust system, such as poor cleaning condition of the exhaust pipe or insufficient draft in the chimney can lead to serious combustion problems (e.g., spontaneous ignition of smouldering gas / deflagration)!

According to EN 303-5, the entire exhaust system must be designed to prevent possible soot, insufficient delivery pressure and condensation. The entire exhaust system – chimney and connection – must be calculated in accordance with ÖNORM / DIN EN 13384-1. The values of the exhaust gases of the pellet boiler can be found in the technical data, page 37.

Local laws and regulations apply

The chimney must be approved by the chimney sweep

A deflagration flap must be installed in the exhaust pipe in accordance with TRVB H 118 (Austria only).

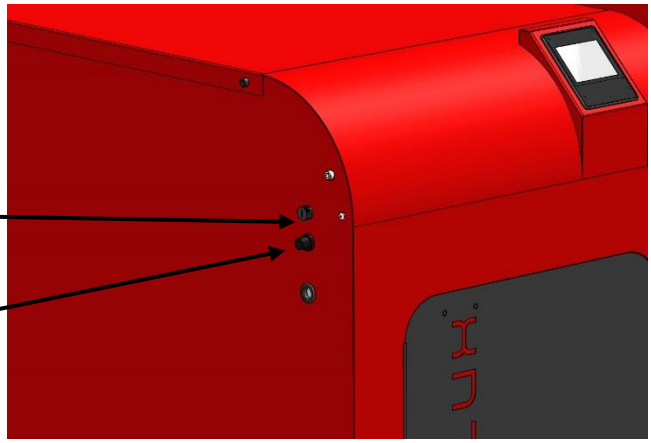
Boiler safety devices

No.	Safety device	function
1	ON/off button	If the boiler overheats: Press the ON/OFF button for 5 seconds Automatic operation is switched off The controller switches off the boiler in a controlled manner Pumps continue to operate
2	Safety Temperature Limiter (STB)	If the water temperature in the boiler exceeds 90°C, the fuel supply is stopped and the exhaust fan is switched off at a boiler temperature of max. Pumps continue to operate. As soon as the temperature drops below 85°C, the STB can be unlocked mechanically. To do this, press the white button on the STB after loosening the black threaded connection.
3	Safety valve	Overheating protection When the boiler pressure reaches a maximum of 3 Bar, the safety valve opens and blows out the heating water in the form of steam.
4	Safety switch rotating grid	The boiler can only be started if the rotating grid is in a horizontal position (figure on page 29).
5	Fuse	Protects the boiler from overvoltage

Fuse position

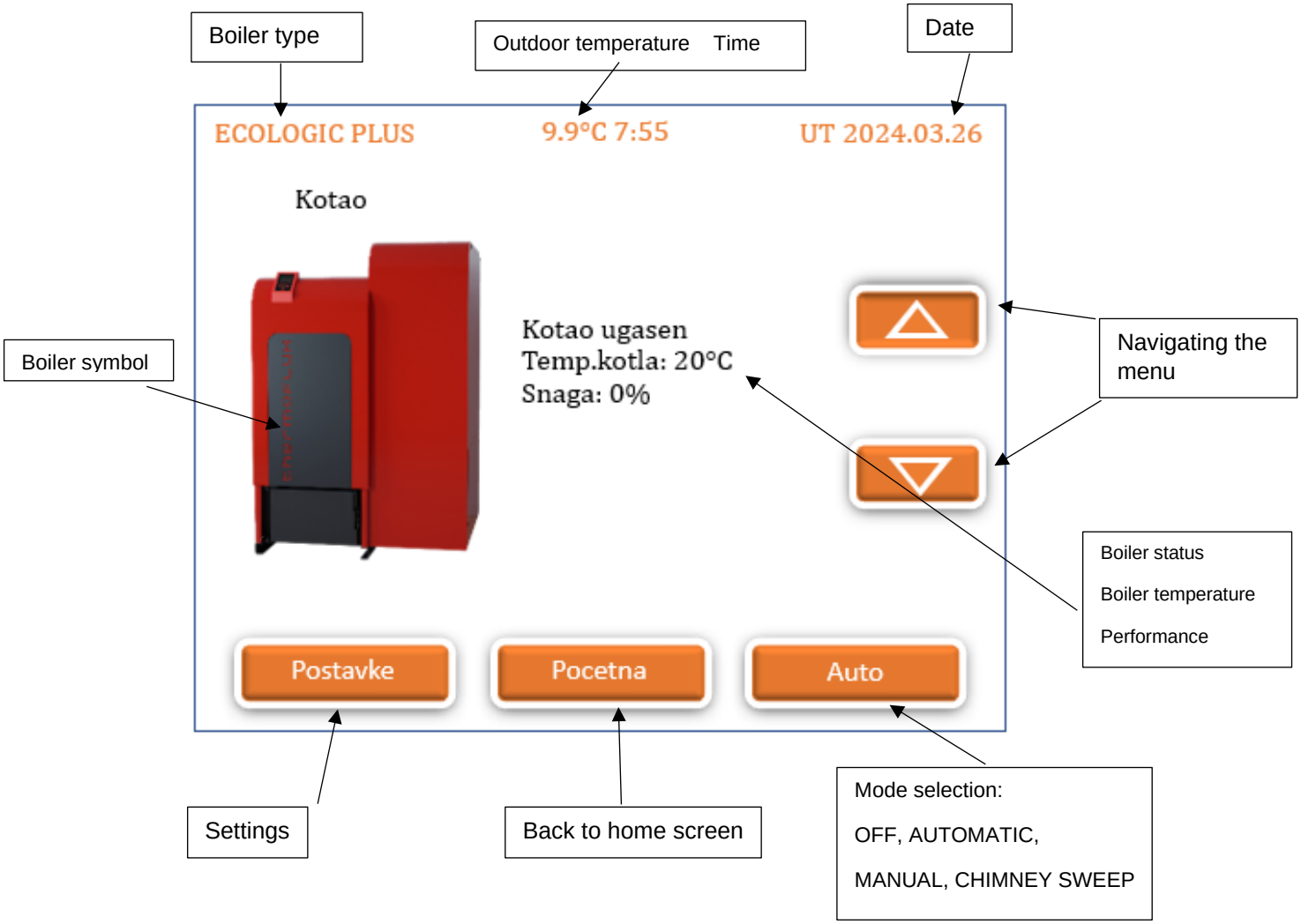
and

Safety temperature limiter (STB)



2. OPERATING **boiler** controls

Explanation **of key** functions

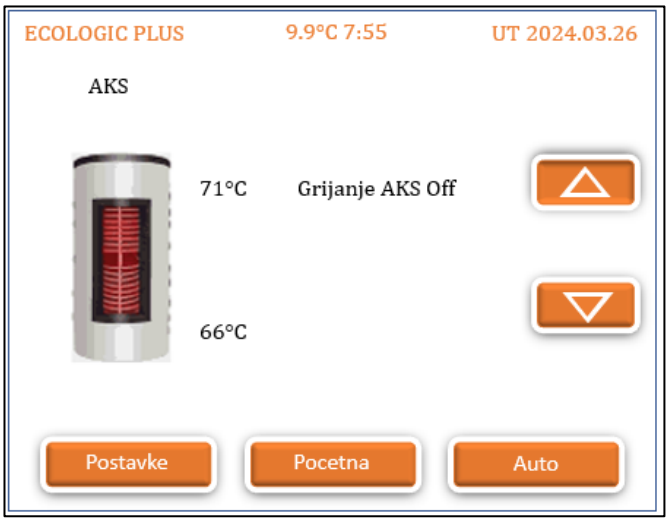


Basic control menu structure

In the basic menu, you can make the most common necessary settings and queries:

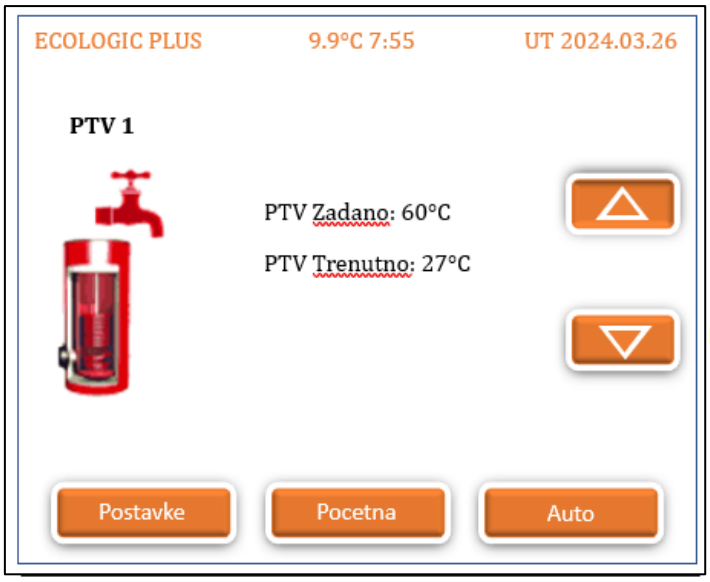
1. Overview of boiler operating data:

2. Set TARGET buffer tank temperature:

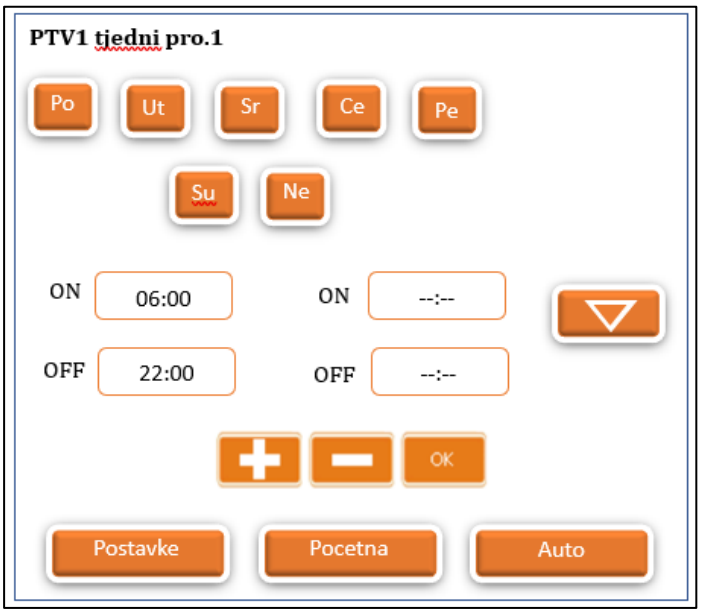


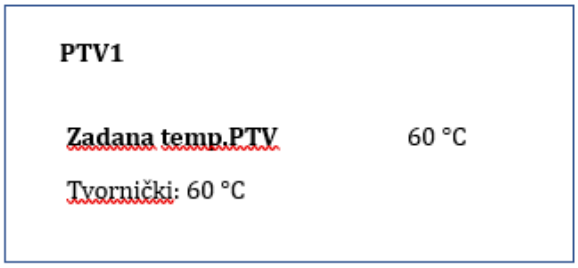
The target buffer tank temperature can only be set if "Fixed charging" is set in the buffer tank settings. If "Auto charging" is active, this will be calculated automatically.

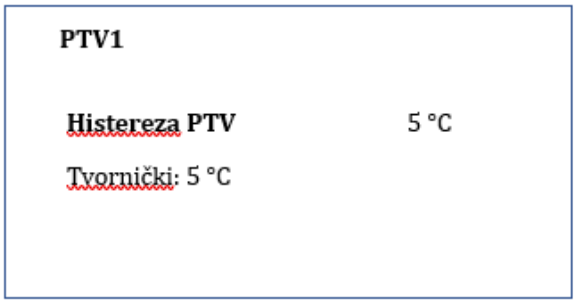
3. Set the weekly boiler program and TARGET temperature:



Auf Boilersymbol drücken

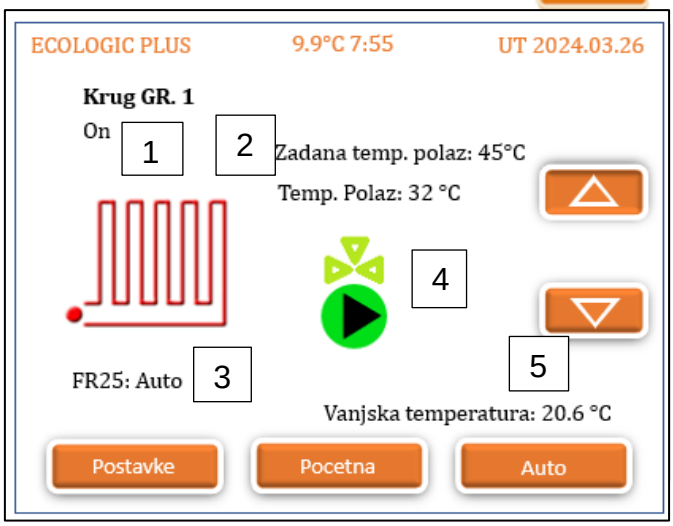




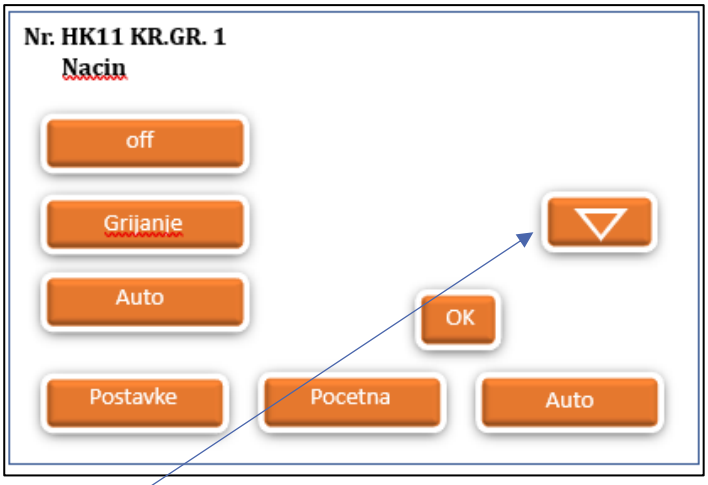


4. Setting the weekly heating program, operating mode and temperatures:

Mixed heating circuit with FR25

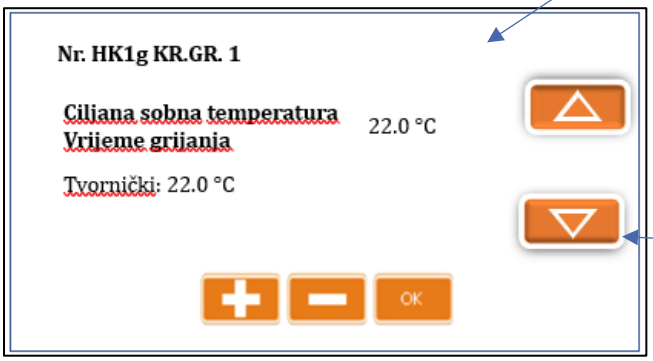


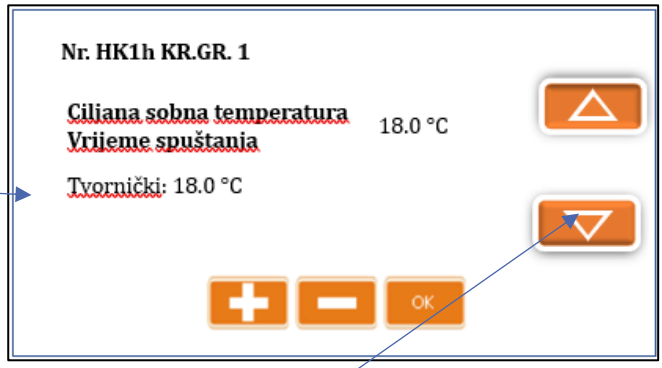
Auf Heizkreis Symbol drücken

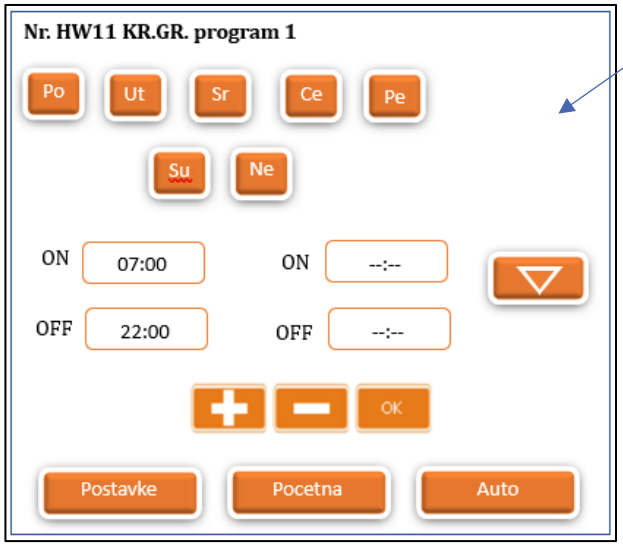


1	Heating circuit status
2	Target flow and actual temp.
3	Room thermostat mode
4	Pump/Mixer On/Off screen
5	Current room temperature

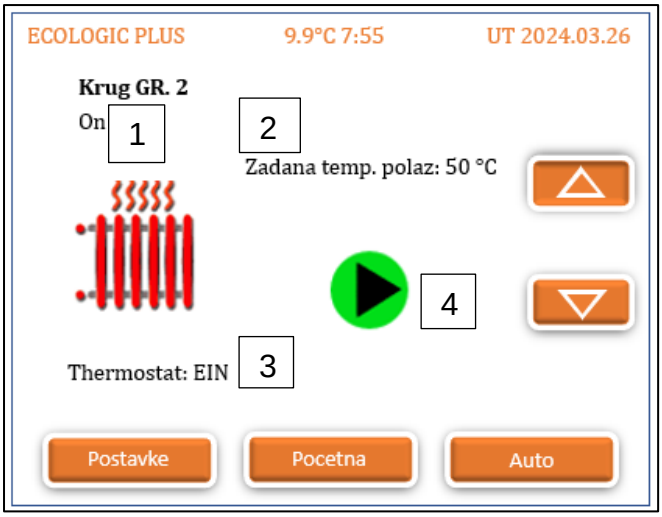
Off	boiler extinguished frost protection
Reduced	boiler is constantly running with downtime
Heating	boiler is constantly operating normally
Automatic	automatic operation after the set heating time



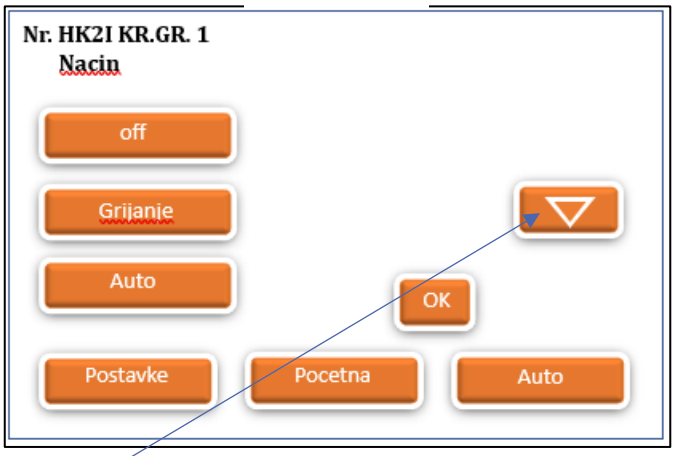




Direct heating circuit with room temperature "switch"

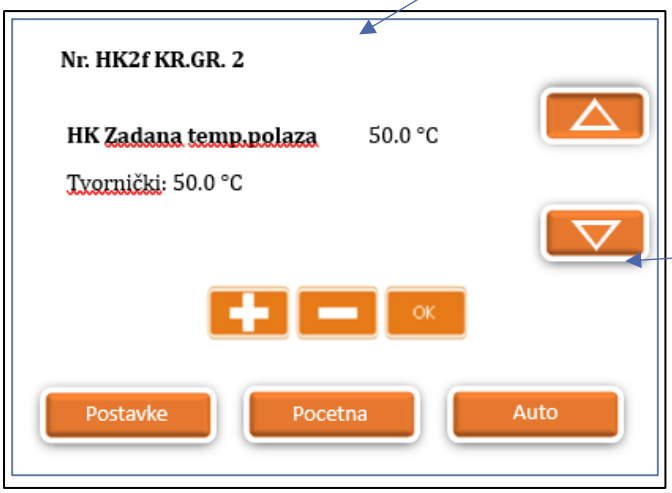


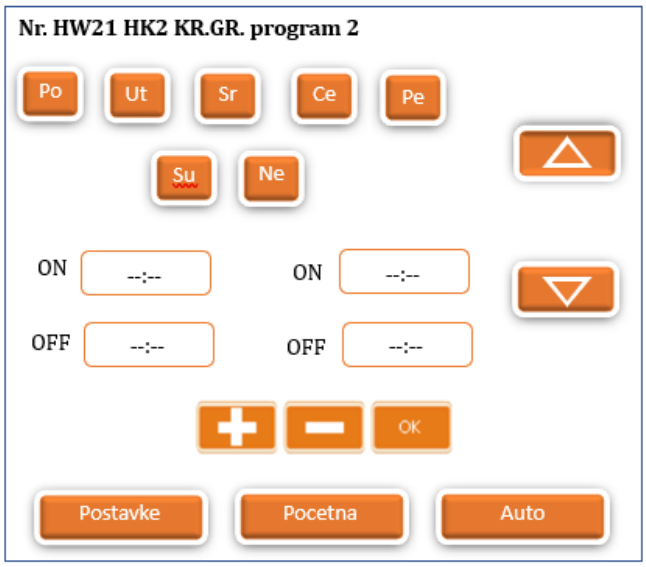
Auf Heizkreis Symbol drücken



1	Heating circuit status
2	Target flow
3	Room thermostat status
4	Pump On/Off screen

Off	boiler extinguished frost protection
Heating	boiler is constantly operating normally
Automatic	automatic operation after the set heating time





5. **Pellet charging time (only displayed if Automatic Charging is activated)**

Punjenje aktivno means that the automatic charging is activated and will be performed at the set time.

Punjenje deaktivirano means automatic charging is deactivated.

Note: Automatic charging is done at the set time. If the boiler is in heating mode at this time, it may take up to 45 minutes for the automatic charging to take place. Because the boiler needs to cool down first!

Napuni sada Use this button to request automatic charging before the next burner start.

Note: The button is only displayed if the boiler is set to "Off" and the level sensor indicates "Empty".

If you pressed "Load now", it will appear. OK

6. System Information

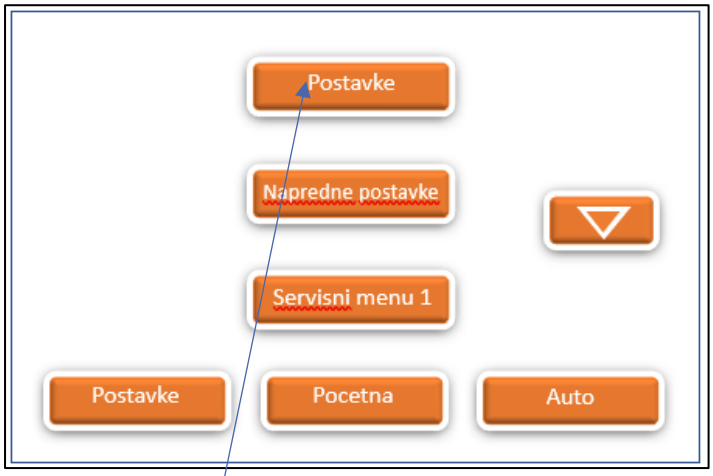
Boiler type	Boiler performance
SW version	Software version of the controller
Consumption	Quantity of pellets consumed in kg
Starting the burner	Burner start-up counter
Dosage	Total pellet dosing time
Empty the ashes in	Remaining time to insert until ash needs to be emptied

Expanded structure of the control menu

In the expanded menu, you can make settings for the following functions:

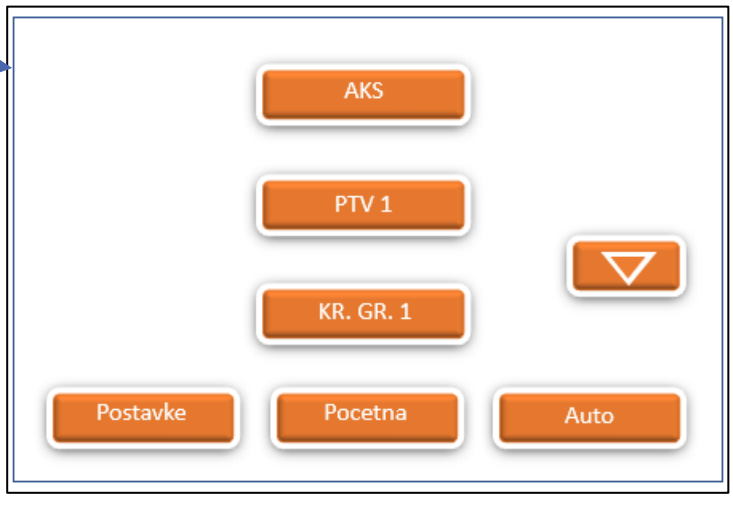
- Boiler
- Ash removal
- Buffer tank
- Boiler
- Heating circuit
- WLAN module
- Language
- Date/Time
- Weekly programme

From the home screen, press the Settings button and use the triangle button to get to the function you want to change.

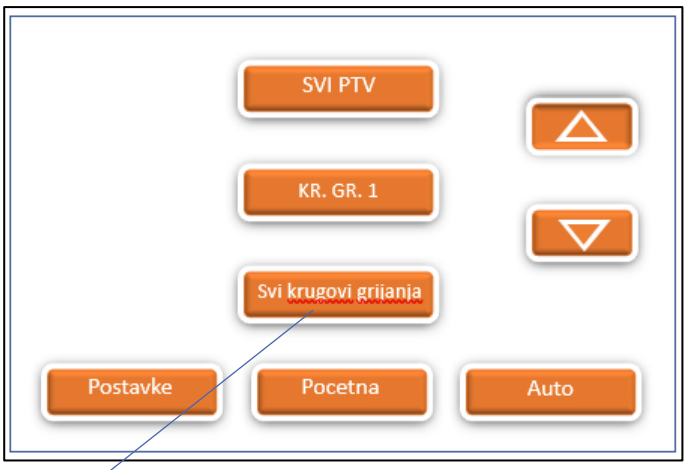


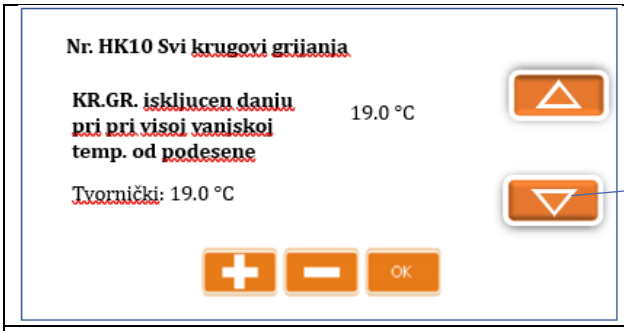
The standard settings of the activated consumers (buffer tank tank, boiler, heating circuit) can be adjusted under Settings.

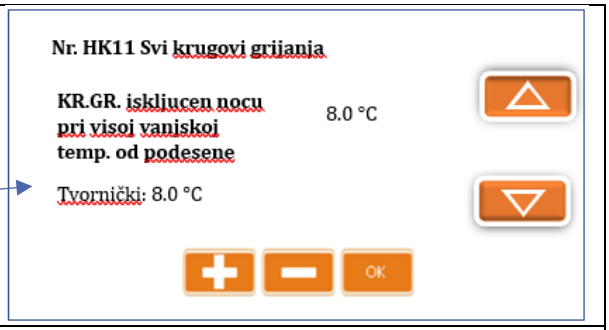
NOTE: If no consumer is activated, the settings are not displayed here! Instead, a "Settings not available" message is displayed.



In addition to the standard settings for the buffer tank, boilers and individual heating circuits, which can also be set directly by touching the appropriate image, here are the settings that apply to all heating circuits.





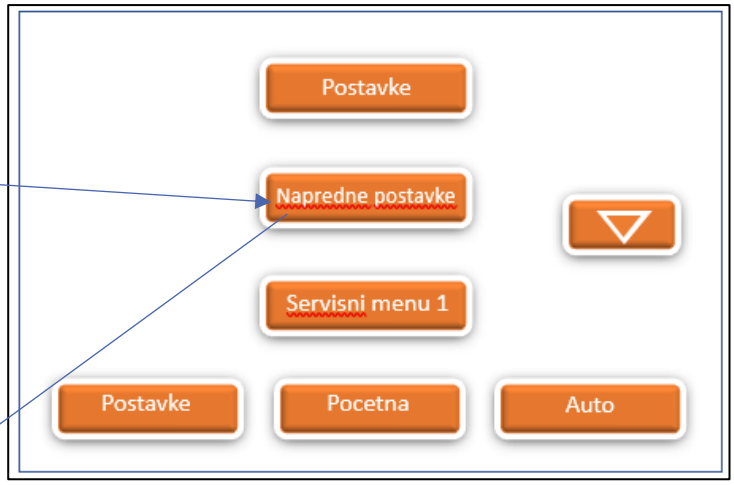


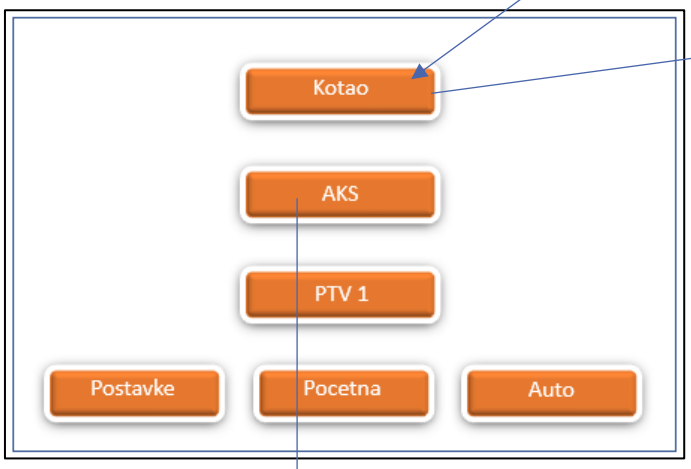
Switching to summer/winter operation
Normal operation:
Active only for heating circuits that are adapted to weather conditions! (See page…)
If the outdoor temperature is above the set value for more than 24 hours, **all** weather-adapted heating circuits are switched off during the heating period.

Switching to summer/winter mode
Reduced mode:
Active only for heating circuits that are adapted to weather conditions! (See page…)
If the outdoor temperature is above the set value for more than 24 hours, **all** weather-adapted heating circuits are switched off during the period of reduced operation.

Advanced settings:

Under advanced settings, individual consumers (buffer tank, boiler, heating circuit) can be activated and various basic adjustments can be made.





The KE1 parameter is only active if the boiler is operated via an external request (non-potential contact control board IO47 terminal 9,10). When the contact is closed, the boiler is always regulated to the boiler temperature set here. Whether the buffer tank or water heater is activated.

Buffer tank:

Target buffer tank temperature

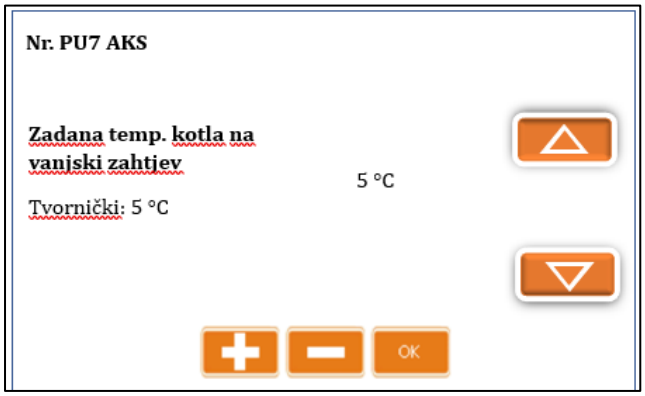
Buffer tank charging starts when the temperature on the upper buffer tank sensor drops below this value. Charging stops when this temperature on the lower sensor is exceeded and the upper sensor is higher than the target temperature plus PU7 hysteresis.

It can only be set if PU1a parameter is set to "Fixed charging"!

Target boiler temperature when charging the buffer tank

While charging the buffer tank, the boiler is set to this temperature.

Buffer tank/return pump switch-on threshold based on boiler temperature

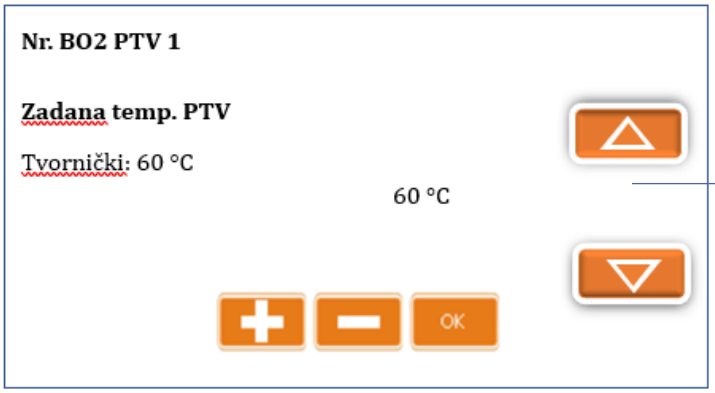


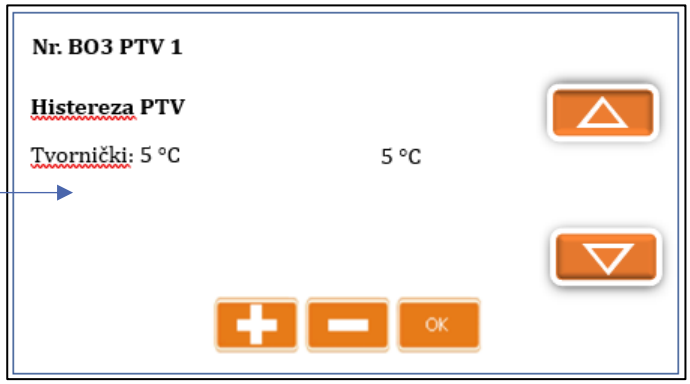
Buffer tank temperature hysteresis on/off:

With 2 sensors = buffer tank charging ends at target temp. + Hysteresis measured on the **lower sensor.** Buffer tank charging starts at buffer tank setpoint – hysteresis measured on the **upper buffer tank sensor.**

With 1 sensor = on/off switch hysteresis only applies to the **upper buffer tank sensor.**

Boiler





Target boiler temperature:

The boiler charging stops when the target temperature is reached.

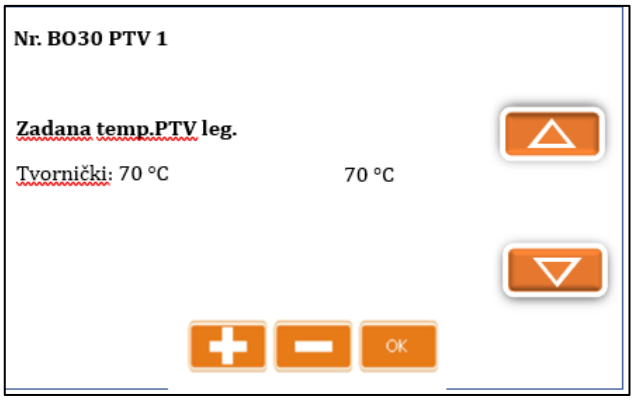
Charging starts when the temperature drops below the target temperature minus BO3 hysteresis.

Legionella control time:

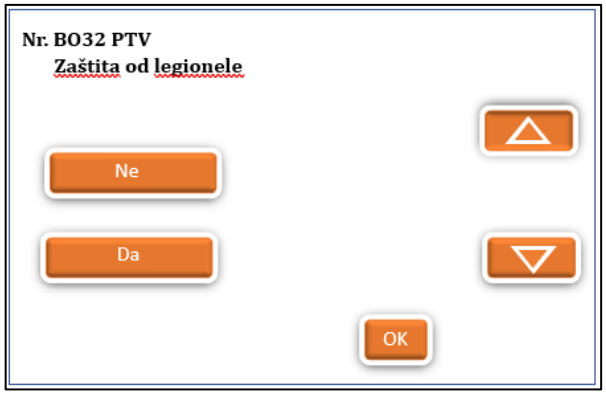
Day and time when Legionella control should be activated. This refers to Boiler 1!

The same adjustment options apply to boilers 2 and 3 (with expansion plate only!).

These settings apply to all boilers



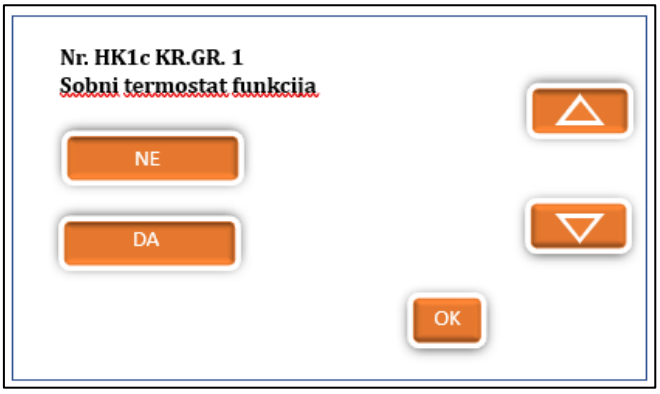
Target temperature for Legionella control



Legionella control active for all boilers:

YES NO

Heating circuit 1

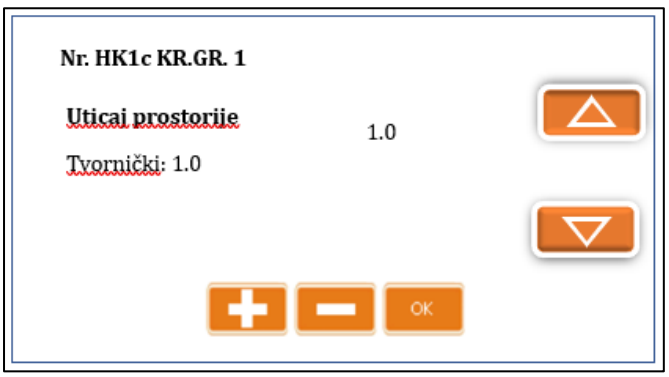


Room thermostat function HC1:

Only possible with FR25!

No = heating circuit pump always works when in heating mode.

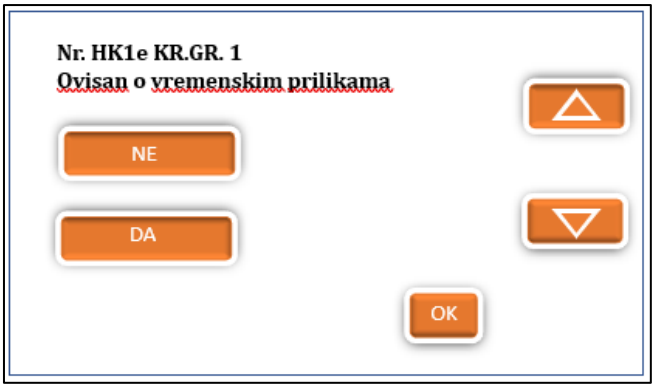
DA = If the target room temperature is exceeded by 0.5°C, the heating circuit pump is switched off. If the target room temperature drops below 0.5°C, the heating circuit pump switches on.



Room effect HC1:

Only possible with FR25!

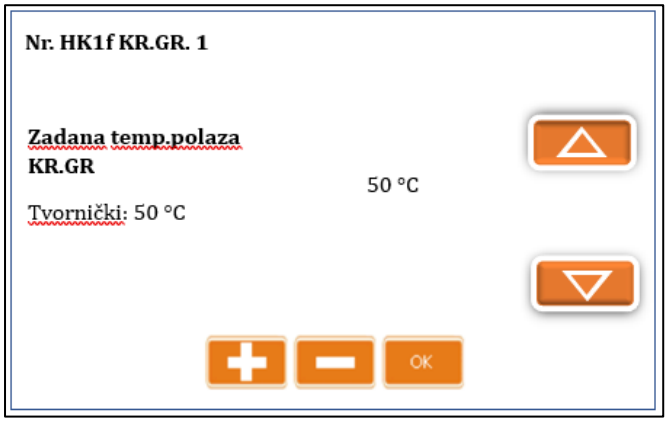
Room temperature changes due to outside heat or cold (e.g., sunlight, Swedish stove or open windows) can be compensated by the room effect. The room temperature sensor is integrated into the FR25, which records the room temperature and compares it with the default setting (daytime or reduced temperature). By activating the room effect, the supply temperature depending on the weather is adjusted upwards (the actual room temperature is lower than the target room temperature) or downwards (the actual room temperature is higher than the target room temperature) via the room sensor. The temperature adjustment level can be set using this parameter.



HC1 weather dependent:

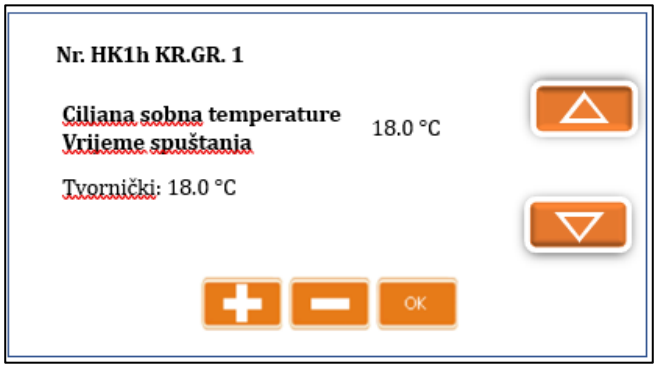
No = adjustment without external sensor

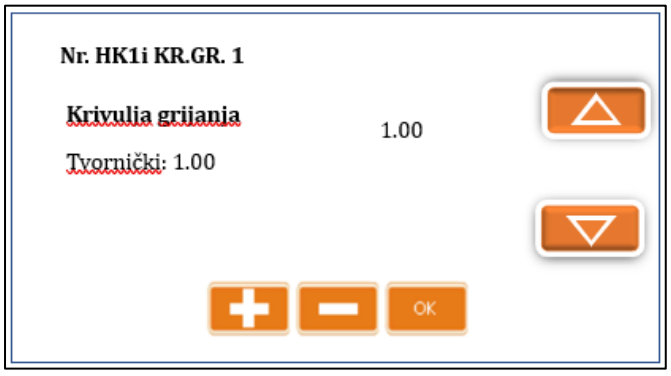
Yes = the target temperature of the supply line is automatically calculated using the heating curve via an external sensor.



Target supply temperature for heating circuit 1

Only set if the heating circuit is not weather dependent!





Characteristic heating curve on a slope heating circuit 1:

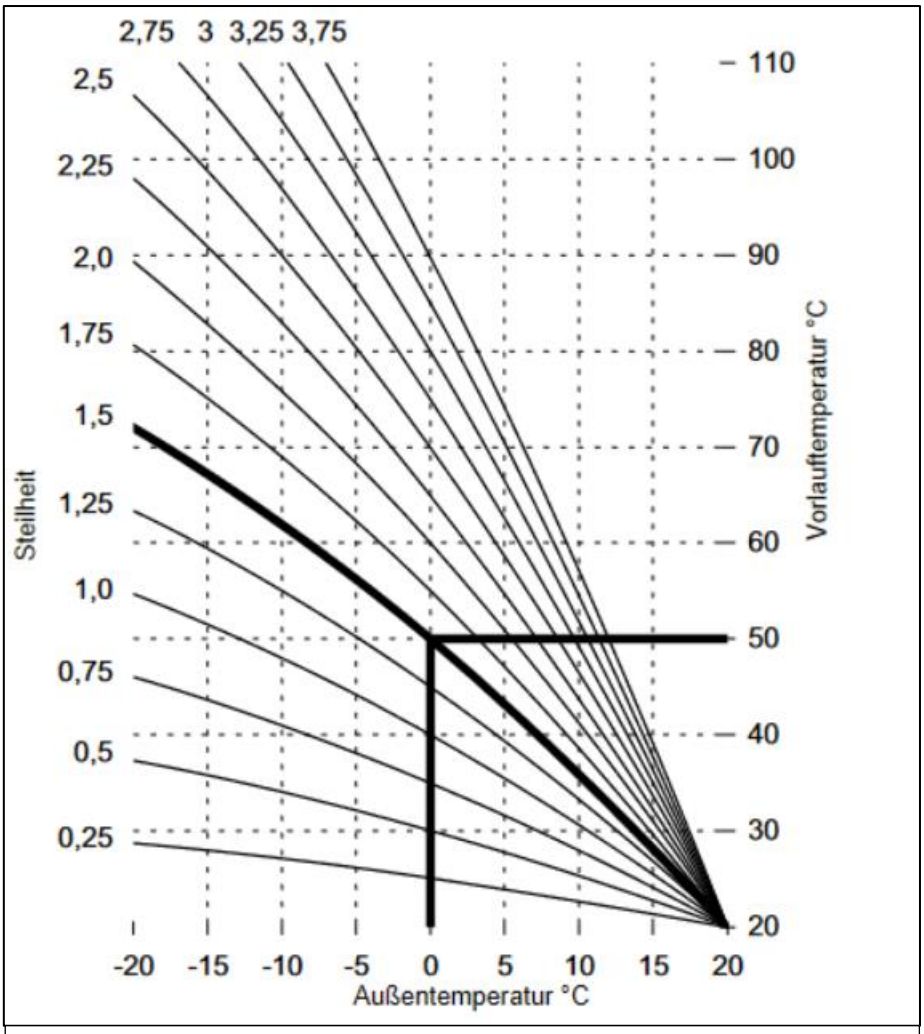
Used to calculate the target supply temperature.

Recommended setting values:

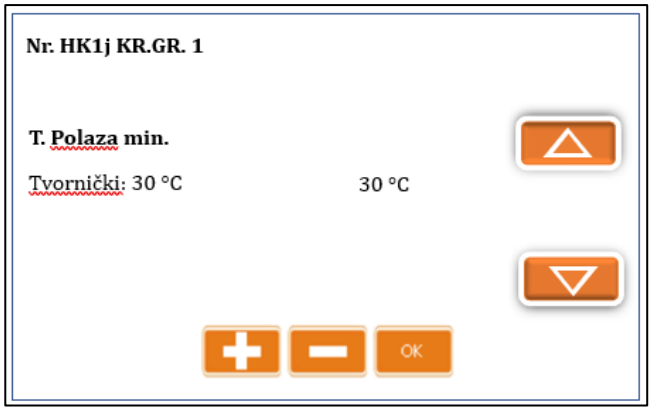
Underfloor heating: 0.30 – 1.00

Radiators: 1.20 – 2.00

Convectors: 1.50 – 2.00

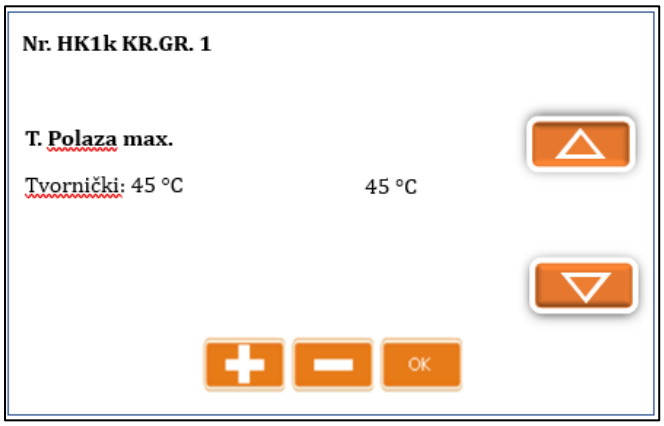


Heating curve display



Supply temperature limit for heating circuit 1 downwards

In the mode of heating or reducing the supply temperature it does not fall below the supply temperature



The upper supply temperature limit for heating circuit 1

In the mode of heating or reducing the supply temperature it is not exceeded

Note for underfloor heating: Additionally, use an electromechanical thermostat that interrupts the power supply of the associated heating circuit pump!

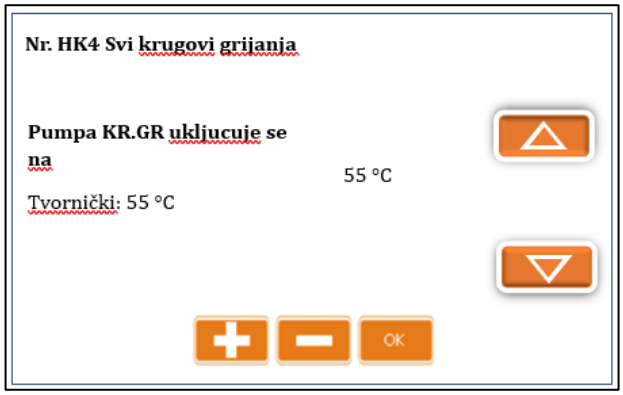
Only possible with FR25!

If the actual room temperature is different from the temperature displayed on the room thermostat, this can be corrected here.

NOTE: the correct temperature is displayed only when the setting knob on FR25 is in zero position!

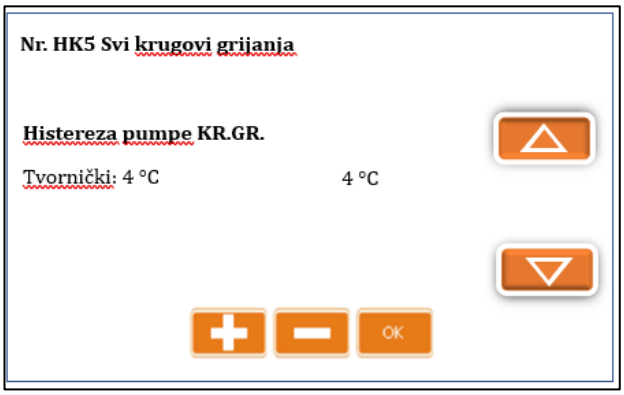
The same setting options apply to heating circuits 2-5 (HC 3-5 with additional board only)!

these settings apply to all heating circuits

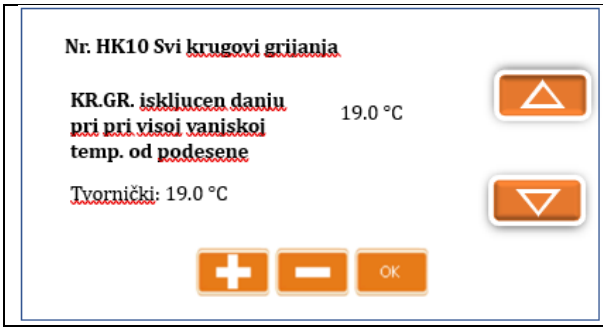


Minimum boiler temperature at which the heating circuit pumps may be switched on.

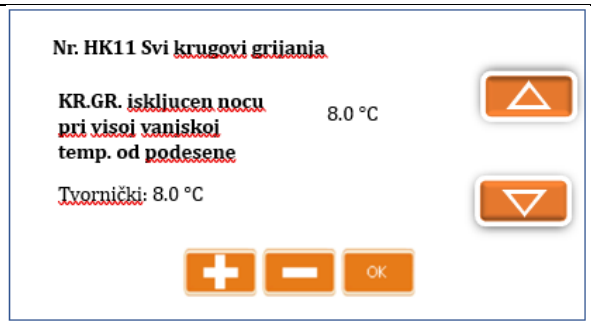
NOTE: If the buffer tank is registered, this value refers to the buffer tank and must be set lower accordingly!



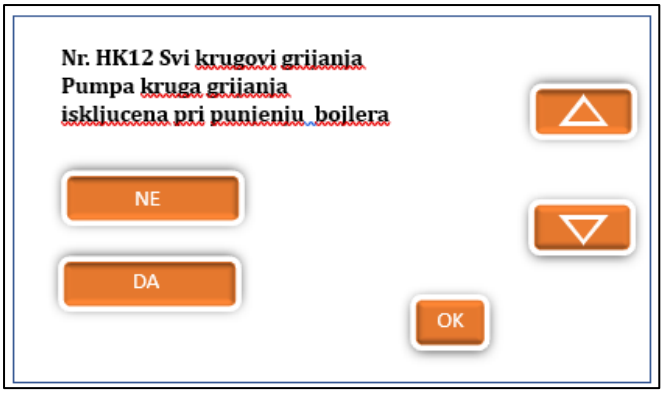
Hysteresis of switching on and off the heating pumps based on the flow rate setpoint.



Switching to summer/winter operation
Normal operation:
Active only for heating circuits that are adapted to weather conditions! (See page…)
If the outdoor temperature is above the set value for more than 24 hours, **all** weather-adapted heating circuits are switched off during the heating period.



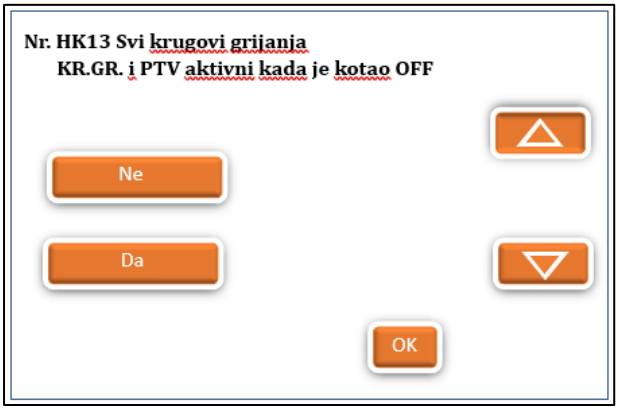
Switching to summer/winter mode
Reduced mode:
Active only for heating circuits that are adapted to weather conditions! (See page…)
If the outdoor temperature is above the set value for more than 24 hours, **all** weather-adapted heating circuits are switched off during the period of reduced operation.



Boiler priority

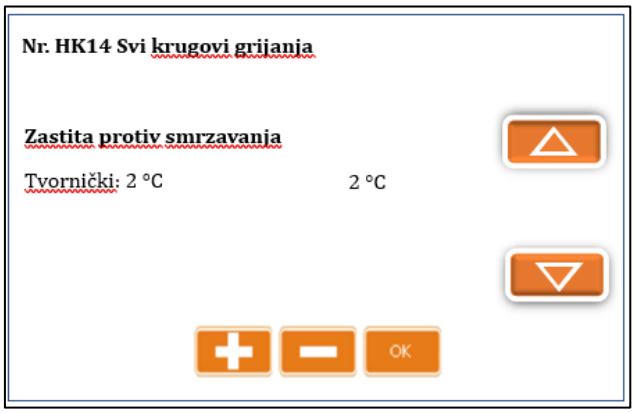
No = boiler and heating circuits in parallel operation

Yes = boiler priority, the heating circuit pumps only turn on when the boiler is charged.

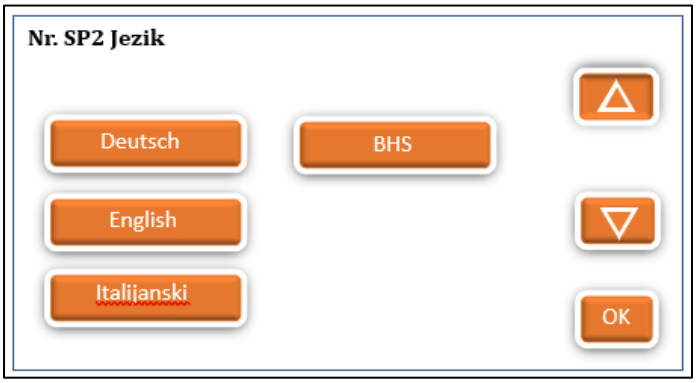


No = if the boiler switch is off, the heating circuits and boiler are also not active

Yes = If the boiler switch is off, the heating circuits and boiler remain active (e.g., in transitional periods in combination with solar)



If the outdoor temperature is below this value, the frost protection is active (all heating circuit pumps are running)



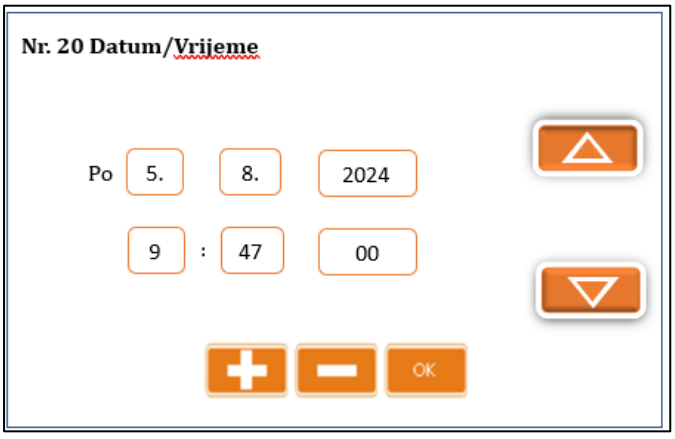
Language selection

German

English

Italian

BCS



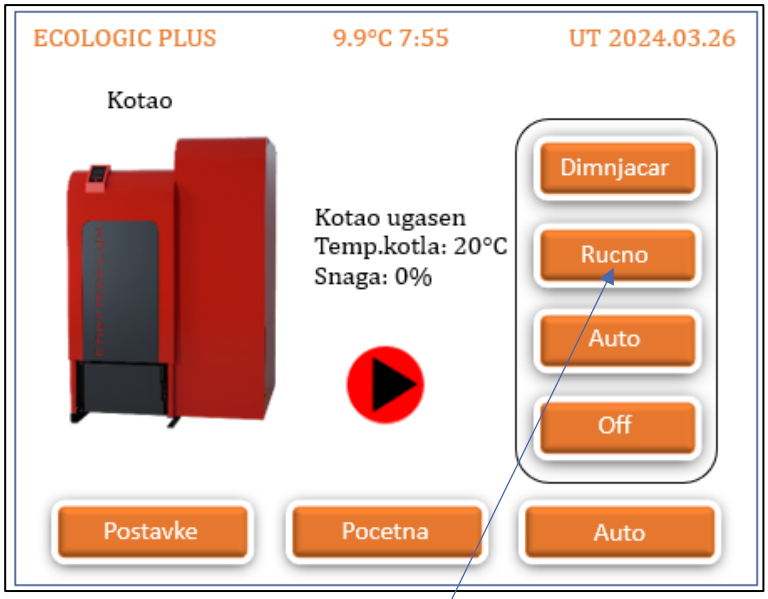
Set Date & Time

For WLAN module settings, refer to the WLAN module user manual

Service Level 1-3

A password is required to access the service level. Parameter settings are exclusively reserved for trained technicians.

Actuator Test



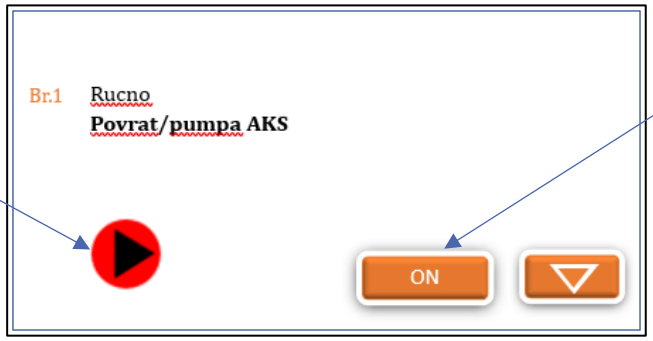
Select "Manual" mode to enter the actuator test

Only possible when switched off and not in operation!

Pump view:

Red = OFF

Green = ON

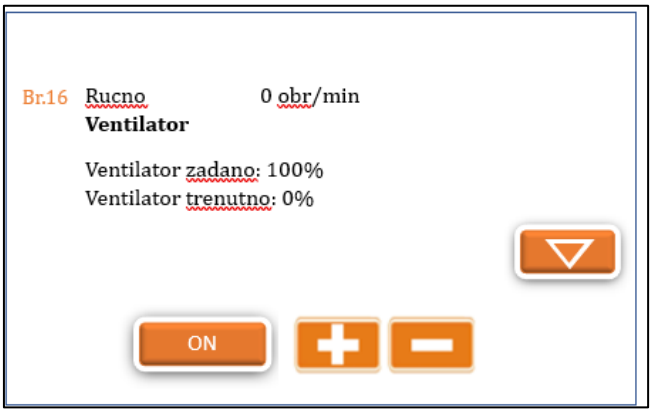


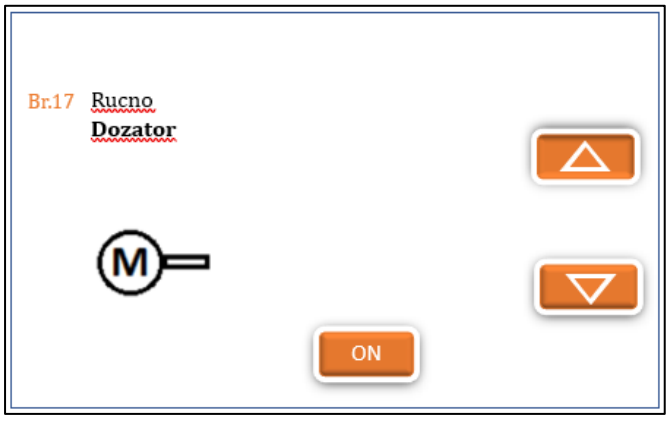
Press and hold = the pump stops as soon as you release the button

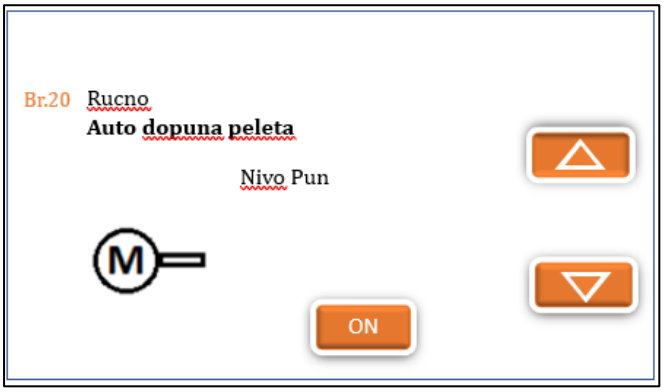
Double tap = pump running until the button is pressed again

All installed pumps and mixers, as well as operational relevant actuators, are available in the manual menu and can be tested individually.

Overview of the most important actuators:

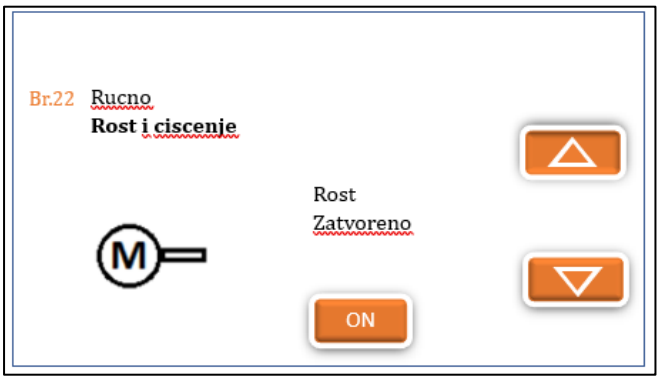






Here, the automatic filling process of the suction turbine and auger screw can be performed manually (e.g., during the initial filling)

NOTE: Charging can only be done at BRT below 100°C. If this is the case, the blue text "disappears".



NOTE: If the grid is opened using the actuator test, it does not need to be closed again. The grid automatically returns to the "closed" position before the burner is started.

3. First commissioning

Heating preparation

Assembly, installation and first commissioning of the boiler must only be carried out by qualified personnel and is described in the assembly instructions.

Before the first commissioning, the following preparatory works must be carried out on site:

1. Electrical installations
2. Water installation and heating system is charged
3. Exhaust gas connection including all insulation works
4. Works in accordance with fire protection regulations
5. The ventilation opening in the boiler room is open
6. Heat dissipation by heating system is provided.
7. Shut-off valves for the supply and return lines are open
8. All lids and doors on the pellet boiler are closed
9. Fuel is available

Warming up

Secure the boiler power supply by switching on the boiler room fuses and emergency switches.

Setting or adjusting boiler functions, see boiler operating instructions, page 10

Automatic cleaning

After a certain operating time, the heating phase is interrupted by the automatic cleaning phase. After cleaning, the heating operation will resume automatically.

4. Cleaning and maintenance

Regular cleaning and maintenance of the boiler prolongs the service life and is a basic condition for smooth operation! The number of required cleaning intervals depends directly on the ash content of the pellet. For the described cleaning intervals, we refer to standardized pellets with an ash content of 0.3%. Doubling the ash content halves the cleaning cycles described.

Attention: Risk of injury!
Before starting the cleaning work, turn off the boiler and allow it to cool down. Use the cleaning tool provided – wear protective gloves if necessary.

Recommendation: When cleaning, use an ash vacuum cleaner.

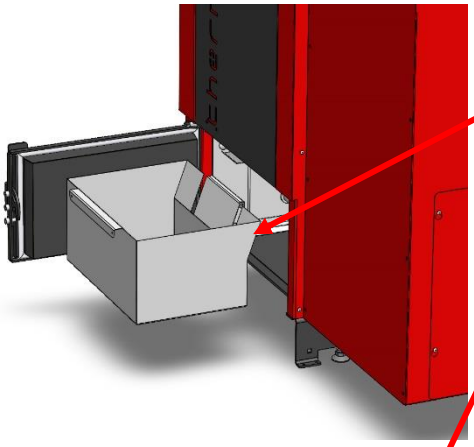
Empty the ash tray

After burning about 500 kg of pellets, it is necessary to check and, if necessary, empty the ash trays.

The boiler has an automatic ash discharge message, which is regulated by the running time of the insertion screw. When they are reached, message no. 52 Empty the ashes appears (the boiler remains in normal operation).

If this message appears, empty the ashes as described below. If the ash tray door is open for at least 1 minute, the message "Has the ash been emptied?" will appear on the control panel.

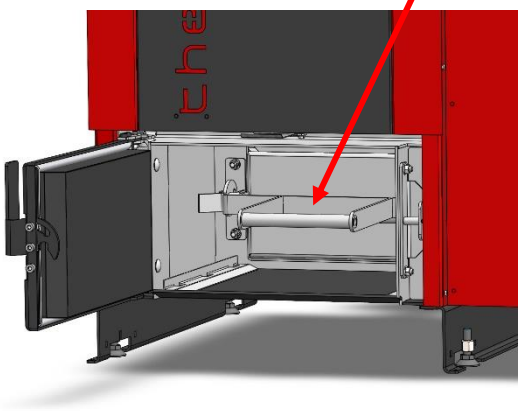
	Replace the ash tray and close the door. Only then can the message be confirmed with "YES". The timer will now be reset. The error message "Empty the ashes" can now be confirmed.



1. Open the door and remove the ash tray.

2. Press the folding lever of the second ash tray downwards and remove the ash tray as well. If necessary, empty both ash trays.

The rear ash tray must be emptied once or twice per heating period.



3. Clean the inside of the boiler from ash residues before reinstalling both ash trays.

4. When inserting the ash trays, proceed in the reverse order. **Make sure the rocker is pushed upwards and rests noticeably in place**. Check the door seal.

5. Close the doors.

Periodic cleaning

Periodic cleaning must be done after 4 tons of pellets or at least once a year.

1. **Tools required:**

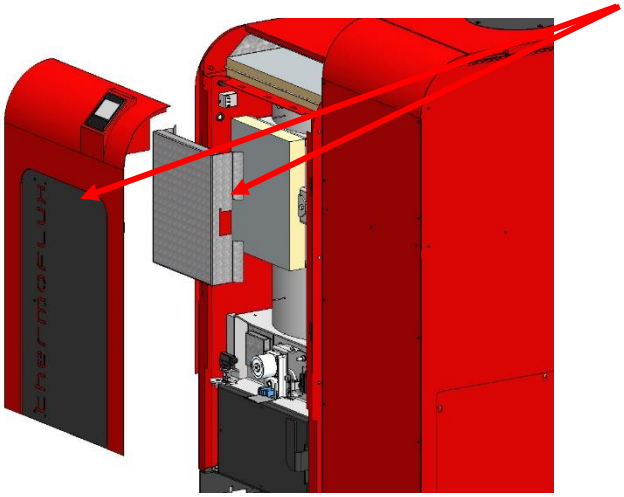
Delivered as a package:

- combustion chamber and grid cleaning brush
- scraper

Not delivered:

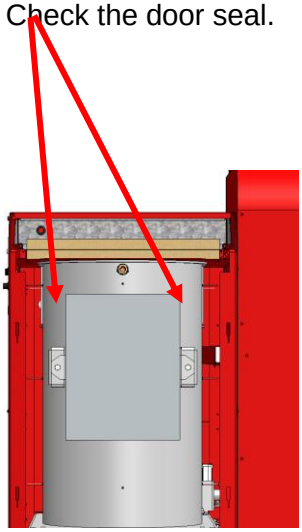
- Allen key sw 5
- hex key SW 8
- small broom or cleaning brush
- ash vacuum cleaner
- ash box for vacuum cleaners (for the protection of ash vacuum cleaners, available in building materials stores)

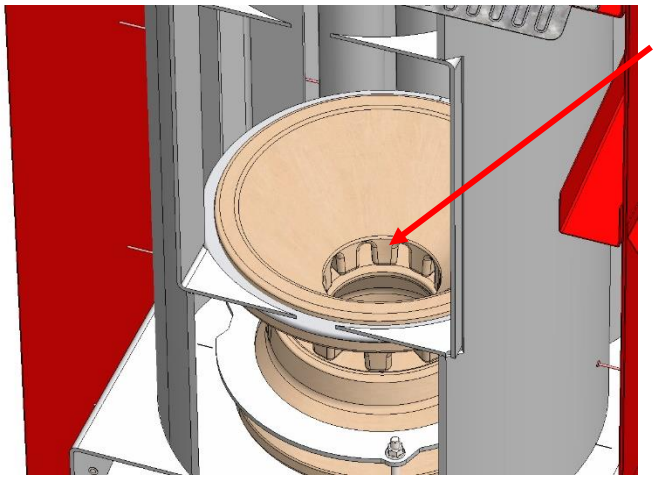
2. **Cleaning the combustion chamber and rotating grid**



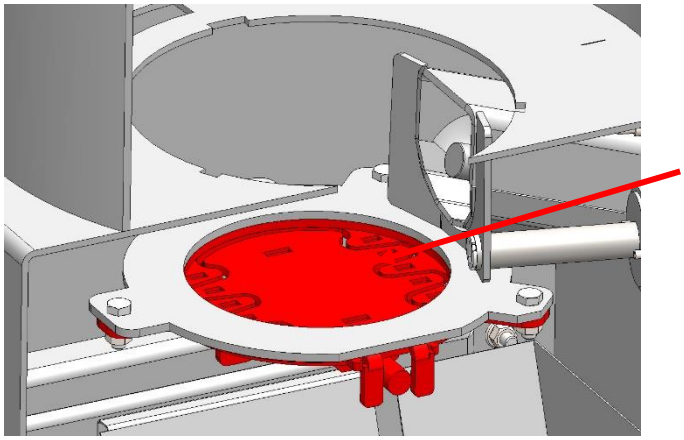
1. Remove the black front panels from the boiler. (fastening with buckle)

2. Loosen the screws on the combustion chamber door and open them. Check the door seal.



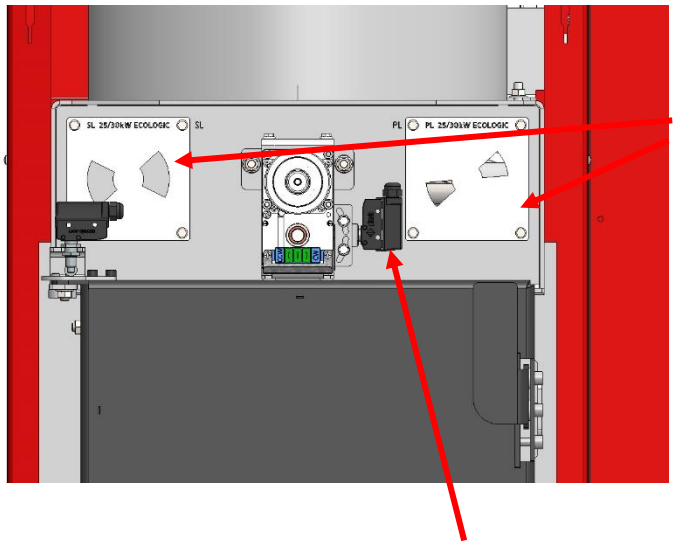


3. Use the cleaning brush and ash vacuum cleaner to clean the inner walls of the combustion chamber and air vents.



4. Clean the rotating grid with the cleaning brush and ash vacuum cleaner.

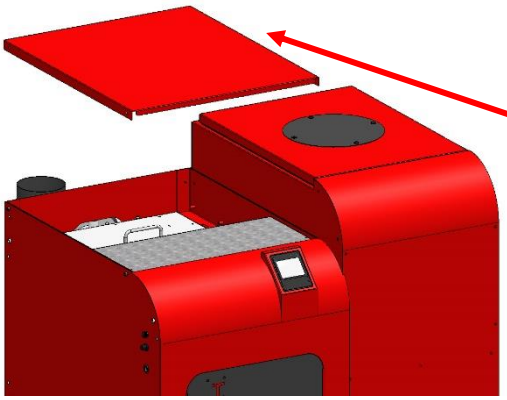
5. Clean the ignition pipe with an ash vacuum cleaner



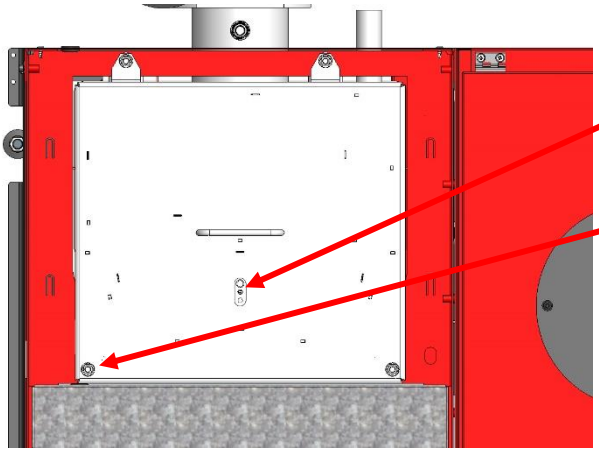
Note: The openings on the flaps are factory-set for proper operation.

Safety switch for the rotating grid

3. Cleaning the heat exchanger

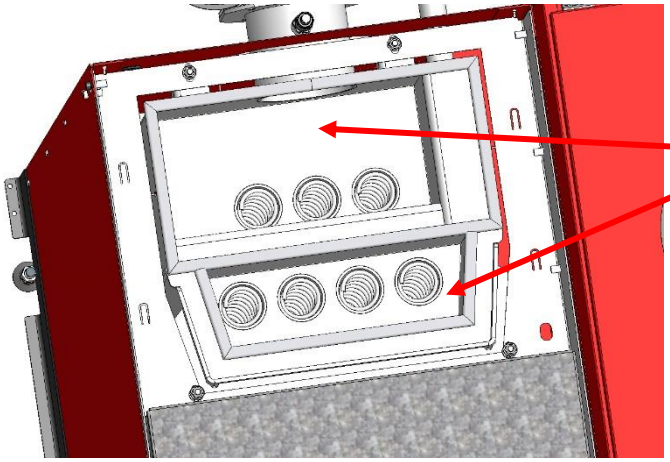


1. Remove the top cover from the boiler.



2. Remove the flame temperature sensor from the protective cover.

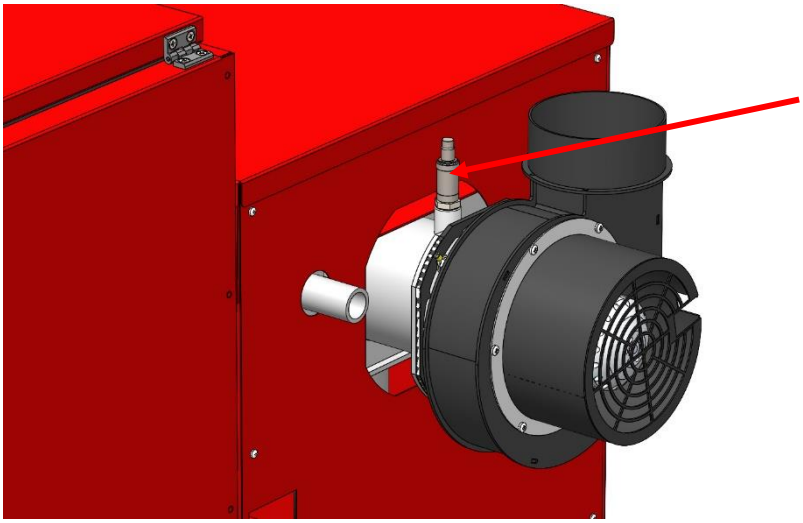
3. Loosen the four screws on the combustion chamber cover and lift the cover. **Be careful when lowering the cover, pay attention to the protective cover.** Clean the protective sleeve. Check the cover gasket.



4. Use a small broom and vacuum cleaner to clean the surfaces of the heat exchanger and fan outlet for induced draft from ash deposits.

5. Reassemble in reverse order.

4. Cleaning the oxygen sensor



1. Release the oxygen sensor from the screw connection. Caution: Sensor is hot, use protective gloves.

2. Clean the oxygen sensor with a brush, tap it carefully and check for any damage.

3. Reinstall all components in reverse order.

5. Checking system pressure, safety valve, ventilation

1. Perform the test when the system is cold. Read the system pressure on the pressure gauge and compare it with the value during commissioning. If the system pressure has dropped, top up with water. If this happens often, the heating system is leaking! Inform the installer. If the pre-pressure of the expansion vessel is lower than the system pressure, top up with nitrogen until the pre-pressure is 0.1 to 0.2 Bar higher than the system pressure (top up to be performed by the installer).

2. Regularly check all ventilation openings in the entire heating system for leaks. If liquid is leaking, replace the quick valve. The ventilation cover must be loose (screw it about two turns) to ensure correct function.

3. Regularly check the safety valve for leaks and dirt. Note: Inspection work must be carried out in accordance with the manufacturer's instructions.

6. Exhaust pipe cleaning

Dismantle the exhaust pipe of the boiler – chimney and remove the fly ash.

Measurement of emissions by chimney sweeps or control bodies

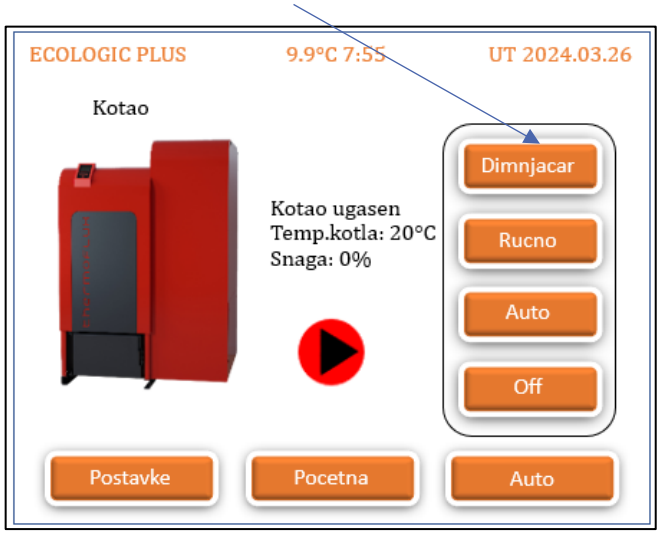
Different legal regulations require periodic inspections of heating systems. In Germany, this is regulated by 1. BImSchV, and in Austria by state laws (§15a Agreement).

Preparation of the pellet boiler by the operator for successful measurement:

- Clean the boiler immediately before measurement (combustion chamber, rotating grid, area after the heat exchanger to the induced draft fan outlet) and empty the ash tray.
- Make sure you have enough fuel and use only fuels that are of high quality and meet the requirements, see page 7.
- On the day of the measurement, ensure that there is a sufficient amount of heat, e.g., the buffer tank must be able to absorb heat for the duration of the measurement.
- A suitable measuring hole with a flat exhaust pipe must be available for measurement. The measuring hole must be twice the diameter of the exhaust pipe since the last deflection. Incorrect position of the measuring hole changes the measurement result.
- When cleaning is complete, reassemble all components in reverse order and check for leaks and correct position.

Perform emission measurement:

The boiler has its own function to clean the chimney, for this to work, switch the boiler from "OFF" to "Chimney Sweep".



All heating circuits are set to the maximum supply temperature and boiler charging begins. The boiler is set to the maximum temperature.

As soon as the boiler reaches the maximum power, the timer starts and after 20 minutes a measurement message appears.

When the window is confirmed, the operation ends. Automatic interruption occurs after 2 hours.

5. Troubleshooting

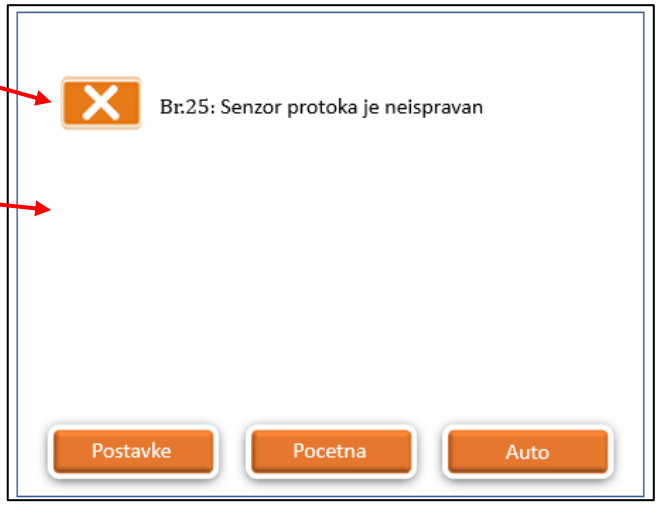
List of problems with solutions

Error code	Display text	Solution
2	Attention: Too high temperature! STB failed	Check the circulation pump, unlock STB, check F1 fuse for IO47
11	The upper buffer tank sensor is defective	Check the buffer tank sensor at the top
13	Buffer tank sensor at the bottom is defective	Check the buffer tank sensor at the bottom
15	Boiler temperature sensor is defective	Check the boiler temperature sensor
17	Return temperature sensor is defective	Check the return temperature sensor
19	Combustion chamber sensor interruption	Check the combustion chamber sensor
20	Combustion chamber sensor short circuit	Check the combustion chamber sensor
21	Oxygen sensor interruption	Check the oxygen sensor (O2 sensor).
22	Oxygen sensor short circuit	Check the oxygen sensor (O2 sensor).
23	Boiler sensor interruption	Check the boiler sensor sensor
24	Boiler sensor short circuit	Check the boiler sensor sensor
25	Flow sensor is defective	Check the flow sensor for heating circuit 1
27	Flow sensor is defective	Check the flow sensor for heating circuit 2
29	Flow sensor is defective	Check the flow sensor for heating circuit 3
31	Flow sensor is defective	Check the flow sensor for heating circuit 4
32	Grid does not work	Check the cable, Control: grid blocked?, check the F1 fuse for IO47
33	Flow sensor is defective	Check the flow sensor for heating circuit 5
34	Failure of the SZ fan	Check the cable, check the SZ fan, check the F2 fuse for IO47
40	Return increase temperature is not reached	Check the temperature sensor, no fuel
41	Ignition failed	Check ignition, dirt, rust, enough fuel? Check the F1 fuse for IO47
42	The flame went out	Enough fuel? Check the rear ash tray
43	Pellet empty	Check the pellet turbine or discharging auger, order more pellets
50	Outdoor temperature sensor is defective	Outdoor temperature sensor (control works on frost protection)
52	Empty the ashes	Empty the ash tray (warning only)
61	Room sensor is not connected / defective	Check the room thermostat (summary fault)
100	IO36 is not connected	Connect an additional board, only via customer service
200	Parameter error	Call the customer service

Confirm error message

As soon as the cause of the errror is eliminated, the button can be pressed to return the boiler to operation.

If multiple faults occur at the same time, they are listed one after the other.



Customer service request

If you were unsuccessful in resolving the issue, please contact customer service and endure that the following information is ready:

Authorized dealer	
Date of invoice	
Type	
Serial number	
Software version	
Year of manufacture	
Commissioning date	

6. Warranty

The harmonized EU warranty periods of 24 months for the end customer towards the seller apply to all ThermoFLUX products and components. Damage caused by normal wear and tear is excluded from the warranty because there is no defect in the product. The parts that are worn include seals and insulation. The warranty period for the boiler housing is 5 years.

In particular, any damage caused by mechanical, chemical or thermal overload, electrical overvoltage as well as faults caused by improper operation or improper installation, handling, use, cleaning, maintenance and operation are excluded from the warranty. The same applies to the use of unpermitted fuels and unprofessional interventions on the pellet boiler.

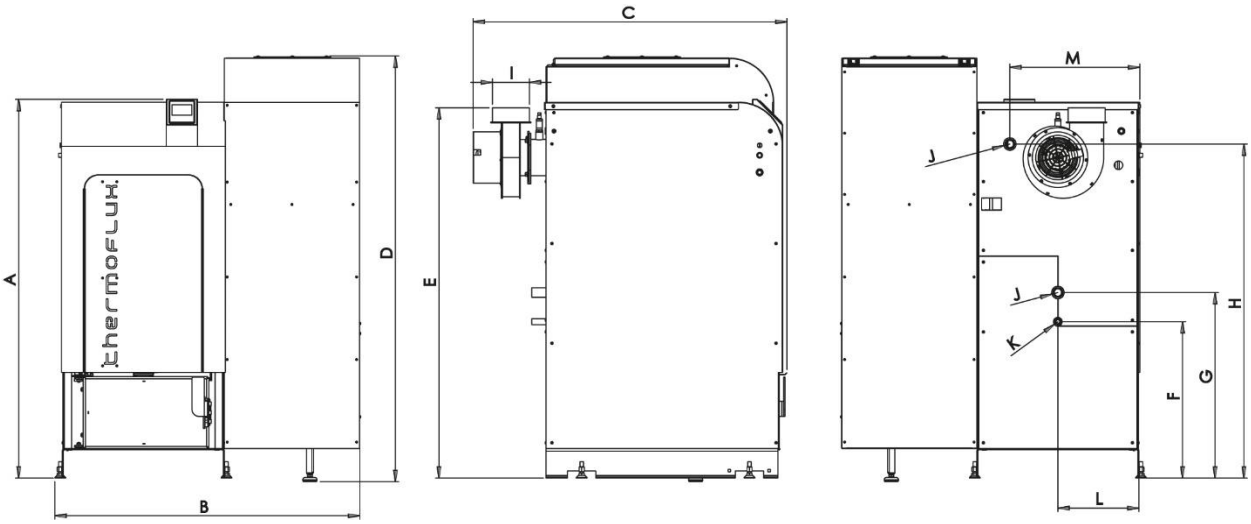
All of our components have been tested by neutral testing institutes as part of extensive quality tests and approvals to ensure they are designed according to regular operating conditions and strict internal quality criteria before leaving our premises. If errors do occur, please contact your local authorized company, stating the date of purchase and the boiler serial number.

7. Appendix

Technical data

	Unit	Logic 15	Logic 20	Logic 25	Logic 30	Logic 37	Logic 44
Performance data							
Heat output range	kW	5.6 – 17.5	5.6 – 20	8 - 25	7.5-30	10.5 - 37	10.5 - 44
Partial load / rated power	%	91-.91.3	91-91.7	92.6-93.6	92.4-93.8	92.3-94.6	92.3-94.6
Energy label (boiler + adjustment)		A+	A+	A+	A+	A+	A+
Power consumption operation	W	125					
Standby power consumption	W	8					
Electrical connection (voltage/frequency)	V, Hz	230/50					
Rated current (fuse)	A	10					
Exhaust gas values (based on 13% O2)							
Temperature of exhaust gases partial load / rated power	°C	58-130	33-137	56-137	62-123	69.5-139.7	69.5-139.7
Dust content at partial load / rated power	mg/Nm³	6-8	7-8	6-7	4	4.5	5.5
CO content at partial load / rated power	mg/Nm³	29-137	33-137	72-39	41-25	28-34	28-24
Exhaust gas mass flow at partial load / rated power	g/s	4.6 - 9.1	4.6 - 10.4	6.6 - 16.9	7.74 – 15.7	8.5 – 23.19	8.5 – 23.19
Chimney draft required	Pa	12					
Maximum permissible draft in the chimney [1]	Pa	20					
Min. cross-section of the supply air in the boiler room	cm²	200					
Boiler class according to EN 303-5:2012	-	5					
Water							
Maximum allowable operating pressure	Bar	3					
Water resistance (at 20°C)	Pa	240					
Maximum supply temperature	°C	85					
Minimum return temperature	°C	55					
Water content	L	55	55	55	68	68	80
Weight	kg	370	370	370	370	395	415
Fuel							
Permitted fuel	-	EN ISO 17225-2:2014, quality class A1, ENplus-A1					
Pellet consumption (partial load / nominal performance)	kg/h	1.7 – 5.7	2.4 – 7.5	1.7 / 5.7	2.0 / 6.7	2.4 / 8.3	2.8 / 10.0
Pellet tank capacity	kg	165					

Pellet boiler dimensions



			Ecologic Plus 15-20	Ecologic Plus 25-30	Ecologic Plus 37-44
A	Boiler height	mm	1301	1301	1533
B	Boiler width	mm	1072	1072	1072
C	Boiler depth	mm	1104	1104	1097
D	Pellet tank height	mm	1490	1490	1490
E	Height of flue pipe connection	mm	1301	1301	1491
F	Emptying height	mm	550	550	550
G	Return connection height	mm	652	652	652
H	Flow connection height	mm	1174	1174	1364
I	Diameter of flue pipe connection	mm	130	130	130
J	Flow/Return connections	zoll	33.7	33.7	42.4
K	Outlet connection	zoll	21.3	21.3	21.3
L	Side return connection	mm	285	285	285
M	Side flow connection	mm	457	457	493

Efficient operation of low emission heating

To ensure the efficient operation of your low-emission pellet boiler, pay attention to the following information:

Installation and adjustment of the pellet boiler must only be carried out by qualified, trained personnel.

Only use fuels listed in the operating instructions (see page 7). This is the only way to ensure low emission, economical and smooth operation of your pellet boiler.

Perform maintenance and cleaning works on the pellet boiler at regular intervals (see page 27). This not only ensures the functional reliability of the pellet boiler and its safety devices, but also the efficient operation of low-emission heating. You can get the best service for your pellet boiler by entering into a maintenance contract.

Your pellet boiler can be regulated in the range from 30 to 100% of the nominal heat output. The boiler should, if possible, be operated in the medium and upper performance range to avoid unnecessary emissions in low-load operation. The ideal combination is with a room modulation or heating controller to avoid unnecessary pacing and ensure the longest possible running time.

From an energy perspective, a buffer tank and combination with a solar system is recommended. This ensures efficient operation of your low-emission pellet boiler.

Disassembly and Disposal Instructions

Disassembly

Disassembly the boiler and associated system components by an expert.

Disposal instructions

Disposing of the packaging: Your heating company will be responsible for disposing of the packaging for your Firevision product.

Final shutdown and disposal of the heating system
Firevision products are recyclable. To disassemble the boiler, it must be disconnected from the power supply. All components must be disposed of appropriately in accordance with country-specific regulations.

CE Declaration of Conformity

EC-DEKLARACIJA O USUGLAŠENOSTI

U skladu sa ISO/IEC Guide 22 i EN45014

Mi.....: **ThermoFLUX d.o.o.**
Bage 3
70101 Jajce
Bosna i Hercegovina

Izjavljujemo sa vlastitom odgovornošću da je proizvod

Naziv/Oznaka.....: Automatski kotao na pelet

Tip / Model.....: ECOLOGIC PLUS 15/20; 25/30; 37/44.

Na koji se odnosi ova deklaracija, u skladu sa sljedećim normativnim dokumentima:

EC-Direktivama : MD 2006/42/EC
LVD 2006/95/EC
EMCD 2014/30/EU
RoHS 2011/65/EU

Primijenjenim harmoniziranim standardnima:
EN 303-5:2012; EN ISO 12100:2010; EN287-1: 2011, EN 61000-6-2; EN 61000-6-3; EN 60335-1; EN 60335-2-102; EN 62233; EN 50581

Drugim navedenim standardima i specifikacijama: EN 55014-1:2006/A2:2011; EN 55014-2:1997/A2:2008; EN 6100-3-2:2006/A2:2009; EN 61000-3-3:2008; EN 10201:2004; EN ISO 7000:2004

Primijenjena procedura za ocjenu usuglašenosti: Modul B-D
Granična vrijednost emisija produkata sagorijevanja (Klasa): 5
Certifikati koji su izdati: Izvještaj o ispitivanju tipa br.: PL-19035

Akreditirano tijelo: TU Wien; Prüflabor für Feuerungsanlagen – Inst. f. Verfahrenstechnik, Umwelttechnik und Techn. Biowissenschaften Getreidemarkt 9 / 166; A-1060 Wien

Ovim izjavljujemo da je gore navedeni proizvod konceptom i načinom izrade, u skladu sa sigurnosnim i zaštitnim normama koje odgovaraju gore navedenim direktivama i standardima.
Pri tome su svi pogonski uslovi i uslovi primjene u skladu sa priloženim uputstvom za upotrebu i tehničkom dokumentacijom.
Prilikom samo jedne promjene na proizvodu koja nije u dogovoru sa nama ova izjava gubi važnost.

Prezime, ime i funkcija potpisnika:

Direktor Tomislav Ladan

Jajce 03.09.2018.
Mjesto i datum

Potpis, pečat

Deklaracija TFX-00