HEATING CIRCUIT
ATTACK®
WOOD & PELET, SLX

MANUAL FOR INSTALLATION AND OPERATION OF MODULES TO ATTACK WOOD & PELLET, SLX

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CONTENT

1. GENERAL INFORMATION

1.1 INTRODUCTION

Dear Customer,

thank you for the trust you showed to our company by purchasing the extended control of the heating circuit in our boilers ATTACK WOOD&PELLET and ATTACK SLX LAMBDA TOUCH. the boiler program and the additional modules are designed according to the latest know-how in the field of heating circuit regulation.
Please read this attached manual carefully, and always store it nearby the boiler, so that in case of need it is easily available. This manual contains important and necessary information for the correct installation of modules, installation of heating circuit elements, and the heating circuit operation.
continuous improvement and development of our products can cause slight differences in pictures and content. hereby we reserve the right of technical changes of products without prior notice.

1.2 SECURITY

This manual uses the following warning signs to illustrate the seriousness of imminent danger and important security warnings:

CAUTION

There is an imminent threat of a dangerous situation if the correct steps are not followed, can lead to serious damage of health or property. **Follow the steps according the instruction!**

WARNING

Can lead to a dangerous situation, and if the correct steps are not taken, can lead to serious damage of health and property. **Proceed with extreme caution!**

NOTICE

Can lead to a dangerous situation, and if the correct steps are not taken, can lead to damage of health and property.

2. DESCRIPTION OF THE HEATING CIRCUIT

ATTACK WOOD & PELLET *and* ATTACK SLX LAMBDA TOUCH boilers enable you to control multiple heating circuit elements. Control of the heating circuit through the boiler is independent from the actual condition of the boiler. The basic part of the heating circuit are two modules. To use both modules and the correct regulation of the heating circuit it is necessary to connect the top and middle sensor to the accumulation tank.
The module set contains:

- HZS 532 Module (Order code SL20952)
- PLC board (1 pc)
- cables (1 pc)

- connector 3,5 - 2 (3 pc)
- connector 5,08 - 3 (3 pc)
- connector 5,08 - 4 (1 pc)
- users manual (1 pc)

HZS 533 Module (Order code SL20951)

- PLC board (1 pc)
- cables (1 pc)
- connector 3,5 - 2 (3 pc)
- connector 5,08 - 3 (1 pc)
- connector 5,08 - 4 (1 pc)
- sensor PT1000 (2 pc)
- users manual (1 pc)

For the correct function of the heating circuit it is necessary to additionally purchase also the following

- the necessary amount of circulation pumps
- temperature sensors in heating devices (sensor type PT1000)
- mixing valves
- room thermostats (optional)

After purchasing the necessary equipment interconnect HZS 532 and HZS 533 boards with the main boiler board (MAIN BOARD) and connect the equipment to the boards according to connection diagram nr. 2.

WARNING

During connection of this equipment there is a risk of electrocution. never connect these devices to while the boiler is connected to mains. Work with increased caution.

Description of connection diagram nr. 1

CL - burner cleaning motor
FL - burner air intake flap
HS - ignition spiral
F - female
M - male
FAN - burner ventilator
HALL - burner ventilator rotation speed sensor
PH - photocell
GND - grounding
P - primary air servoengine of gasifying part
S - secondary air servoengine of gasifying part
M1 - pellet vacuum delivery motor
M2 - turbulator cleaning motor
M3 - exhaust fan
EL - electronic lock
MD - main door end switch
FD - feeding door end switch
CARD - slot for installing the memory card containing the software.
LAN - internet connection portal
STB - emergency thermostat
Tatm - middle accumulation tank sensor
Tatu - upper accumulation tank sensor
Tex - flue gas temperature sensor
Tb - boiler temperature sensor
LS - lambda probe
PS - pellet presence sensor
BR - burner
EMC - filter
L - phase
N - neutral
PE - grounding
S - signal

Cable colors description:
A - black
B - blue
C - green-yellow
D - red
E - white
F - brown
G - yellow
H - green
J - grey

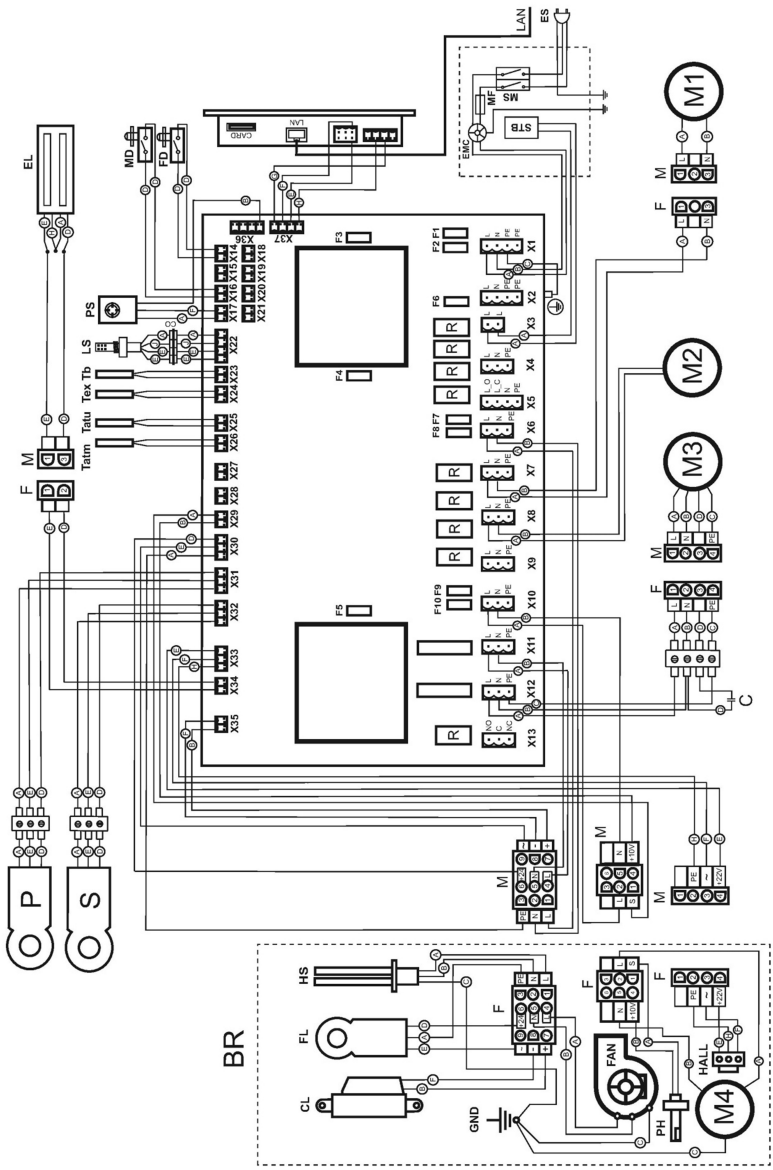


Diagram nr. 1:Main boiler board connection diagram for ATTACK WOOD & PELLET

Description of electric connection diagram nr. 2

RTR - room thermostat for controlling radiators

RTF - room thermostat for controlling floor heating

PF - floor heating pump

PT - D.H.W. tank pump

PS - solar panel pump

SF - floor temperature sensor

SD - D.H.W. tank temperature sensor

MF - floor heating mixing valve

MR - radiator mixing valve

PR - radiator pump

SR - radiator temperature sensor

SS - solar panel temperature sensor

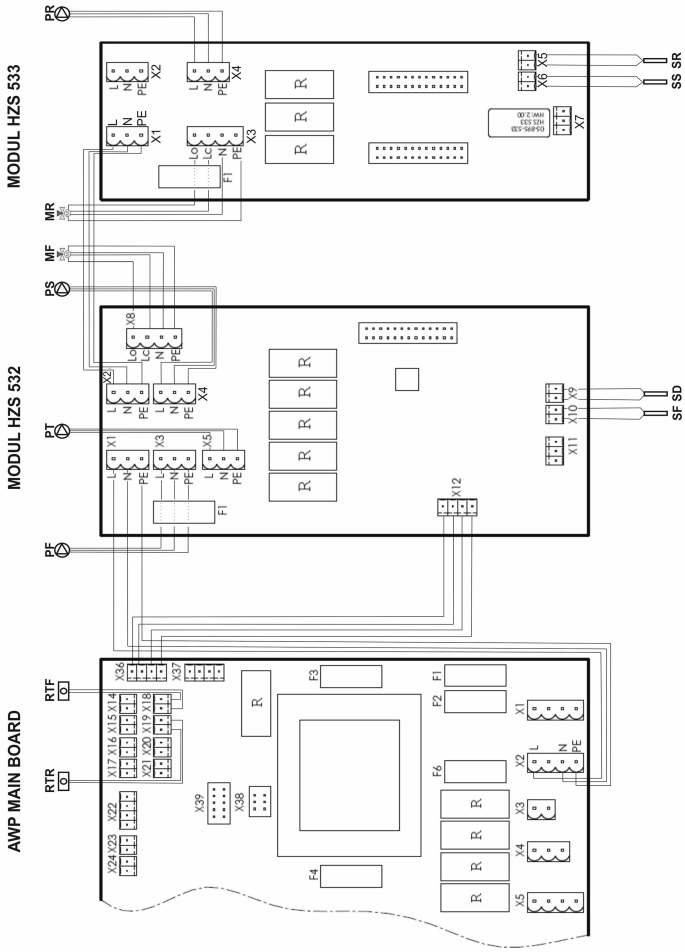


Diagram nr. 2: module and control elements connection diagram

For physical installation of heating circuit elements you can use diagram nr. 3

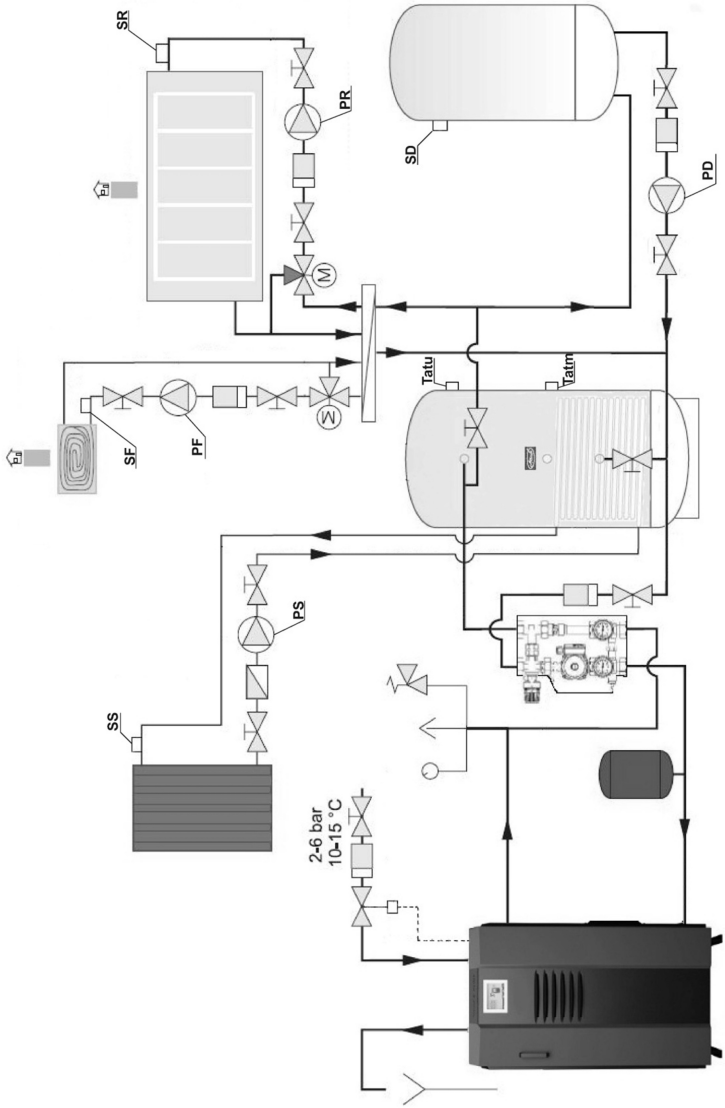


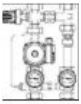
Diagram nr. 3: Hydraulic boiler connection diagram

Description of diagram nr. 3:

- AWP or SLX boiler

- heating unit

- D.H.W tank

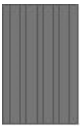


- ATTACK Oventrop mixing unit

- expansion (pressure) tank

- Accumulation tank with possibility of connecting a solar system

- floor heating



- Solar panel

- heating water splitter

 - closing valve

 - Filter

 - pump

 - temperature sensor

 - Manostat

 - non-return flap valve

 - Thermoregulatory valve STS 20

 - Thermostatic three-way valve

 - motorized three.way mixing valve

 - motorized three.way splitting valve

 - Room thermostat

abbreviations:

SS - solar panel temperature sensor

PS - solar pump

SF - floor temperature sensor

PF - floor heating pump

SR - radiator temperature sensor

PR - radiator pump

SD - D.H.W. tank temperature sensor

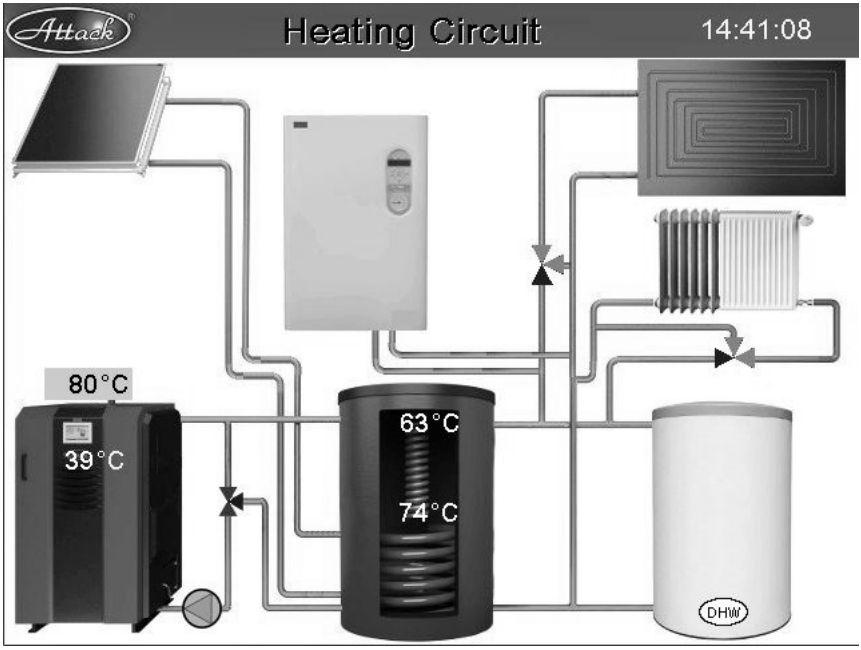
PD - D.H.W.tank pump

After correct installation of all heating circuit elements, it is possible to control directly from the boiler the heating of the accumulation tank, D-H.W. tank, radiators, floor heating, heating from solar panels, and triggering of the automatic boiler.

After tuning the boiler on you can display all devices connected to the heating circuit on the boiler screen. For displaying the heating circuit click the ATTACK logo in the upper blue bar.(picture. 1).

Picture. 1 click to display the heating circuit on AWP

Picture 2 click to display the heating circuit on SLXL



Picture. 3 description of the basic display of the heating circuit.
A heating circuit schematic will be displayed. r. 3). this heating circuit diagram is the same for SLX, except in it the SLX boiler is included. after the physical installation of the devices it is also necessary to activate the given device on the boiler display. you can activate the given device by clicking on its icon.

NOTICE

For the activation and setting of parameters for all devices, click on the symbol of the given device. all abbreviations in the descriptions of heating circuit elements are referenced in hydraulic diagram nr.1.

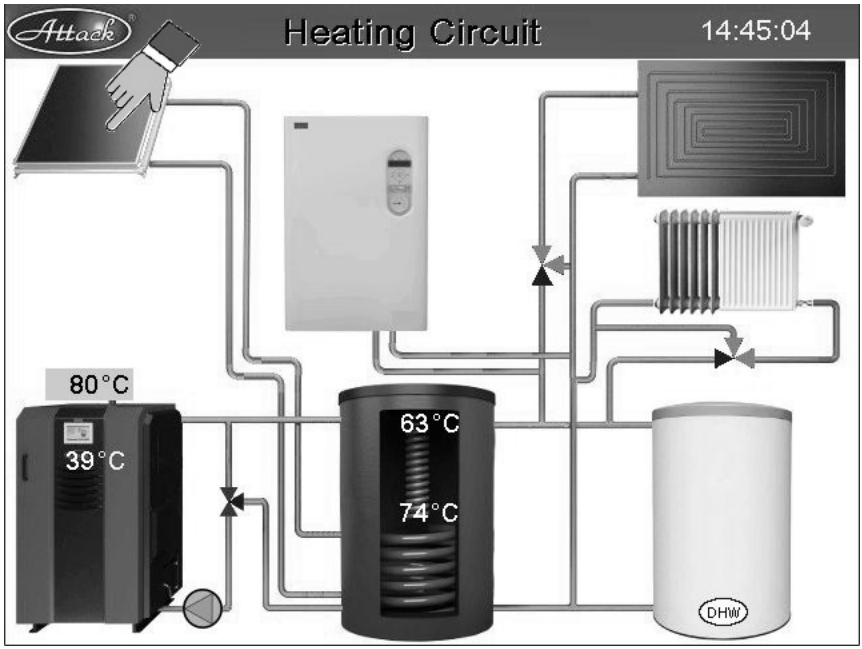
If the devices are not actually present and connected, the system will not allow their connection directly through the boiler screen! The system will also not allow the testing of pumps and three way valves, if they are not connected to the system!

2.1 SOLAR PANEL CONNECTION

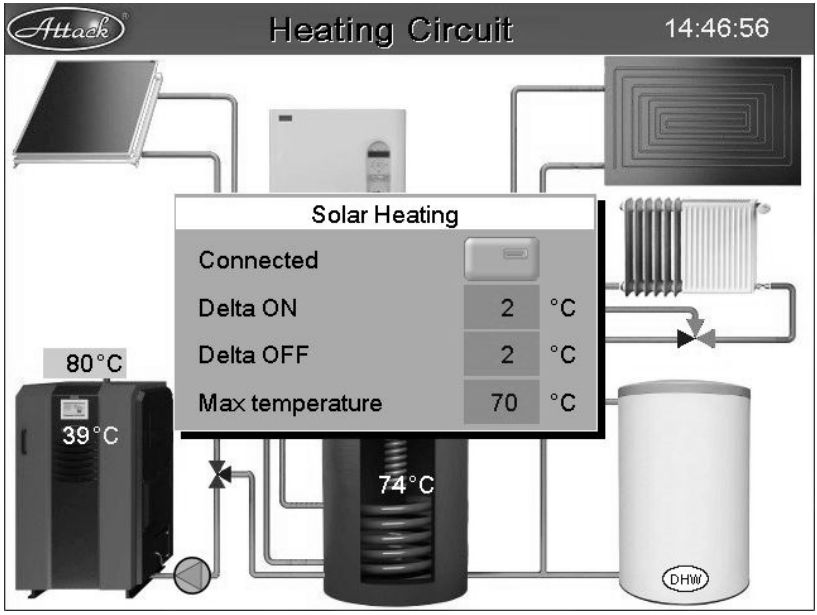
For the physical installation of the module you will need:

- Solar panels
- heat sensor (SS)
- pump (PS)
- valves
- non return flap valve

After the physical installation of all the elements activate the module also on the boiler screen by clicking on the solar panel symbol.



Picture. 4 click to activate solar panels
After clicking you will be shown a table with device parameters.



Picture. 5 Solar panel activation

Parameter description:

Connected - enables to connect the solar panels to the system
Delta ON - determines, how many degrees higher must the water temperature in solar panels be, than the water temperature in the accumulation tank at the middle sensor, in order to turn on the solar pump for charging the accumulation tank.
Delta OFF - determines, how many degrees higher must the water temperature in the accumulation tank at the middle sensor be, than the water temperature in solar panels, in order to turn of the solar pump for charging the accumulation tank.
Maximum temperature - is the maximum water temperature at the middle sensor in accumulation tank, at which the solar pump for charging the accumulation tank will be shut off.

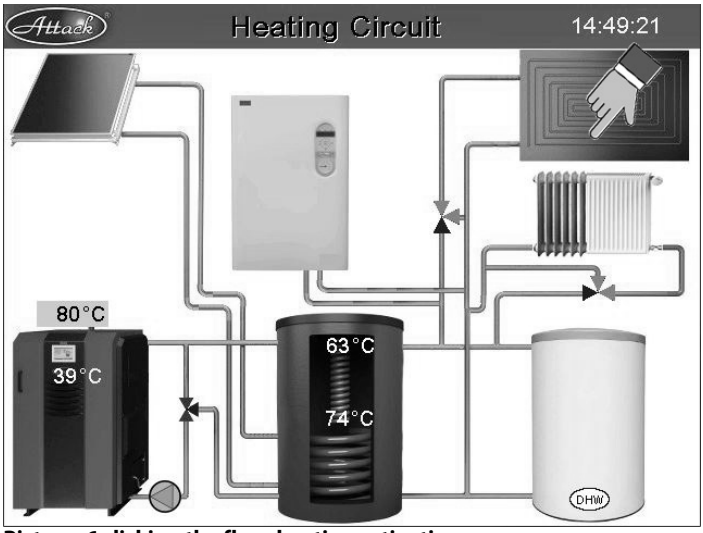
2.2 FLOOR HEATING CONNETION

For activation of the floor heating click on its symbol on the display. A table with parameters where you can activate floor heating will be displayed.
For the physical installation of the module you will need:

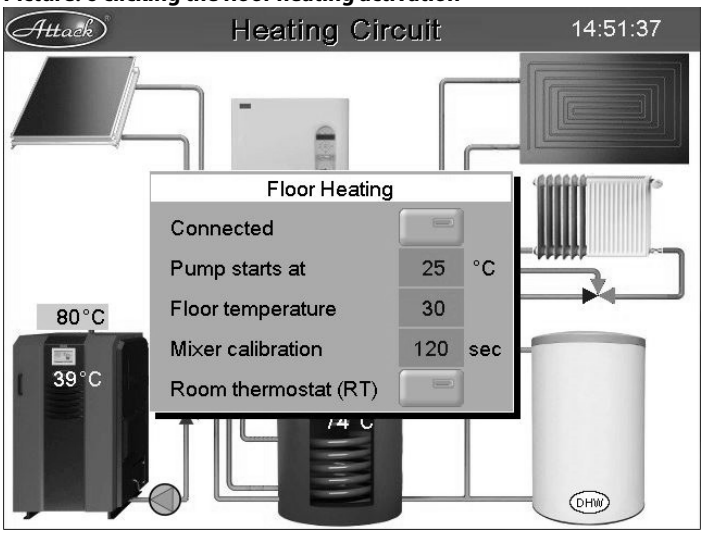
- temperature sensor (SF)
- pump (PF)
- electric mixing valve
- room thermostat (optional)

NOTICE

It is necessary to connect the room thermostat on the N O contacts (normally open)



Picture. 6 clicking the floor heating activation



Picture. 7 connecting the floor heating

Connected - floor heating will be turned on after activating this option

Turning on the pump at - the minimum temperature of the top sensor in the accumulation tank at which the pump will be turned on.
Floor temperature - setting of the desired floor temperature
Mixing valve calibration - the time necessary for full opening of the three way valve. to define this parameter it is necessary to measure the time of switching the valve from one end position to the other end position prior to installation.
Room thermostat (IT) - enables to control the floor heating (switching the pump on or off and the three way valve) as required. if not connected to the system, the mixing valve will keep the set temperature and the pump is always turned on.

NOTICE

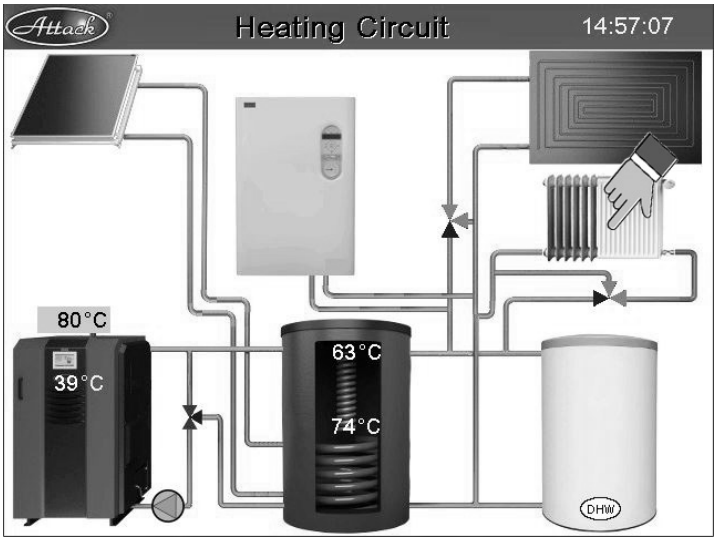
It is necessary to connect the room thermostat to the N O connectors (normally open)

2.3 RADIATOR HEATING CONNECTION

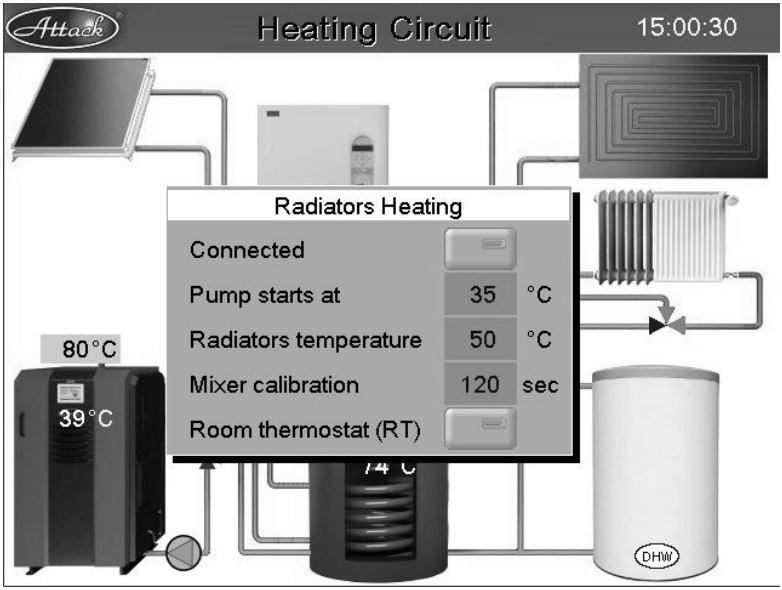
For activation and setting of parameters for radiator heating click on the radiator symbol, and a parameter table will be displayed.
For the physical installation of the module you will need:

- temperature sensor(SR)
- pump (PR)
- mixing valve
- room thermostat (optional)

Parameter description and functionality is equal to paragraph 2.2.



Picture. 8 Clicking to activate the radiator heating



Picture. 9 connecting radiator heating

2.4 D.H.W.HEATING CONNECTION

After clicking the D.H.W. tank symbol, the system will display the parameter table for activating the d.h.w heating (picture 13 and 14).

NOTICE

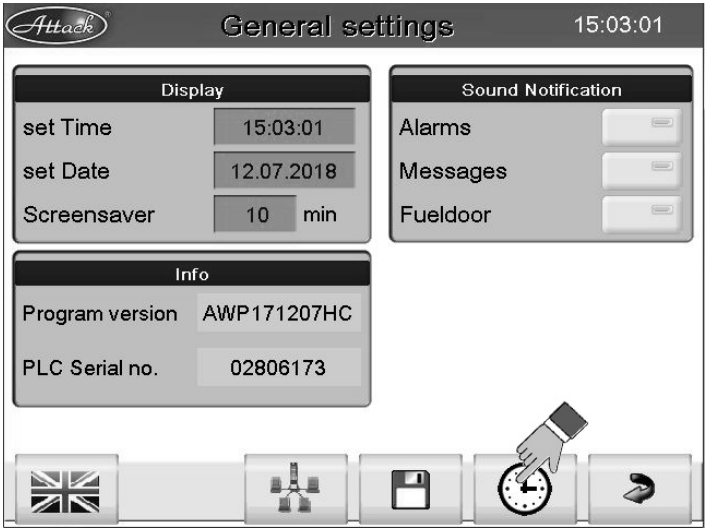
When heating the D.H.W. it is necessary to activate the days on which you wish to heat D.H.W. the timer enables you to set 3 time intervals for each day you wish to heat. **If the modules and necessary sensors are not connected, the timer function will not be available.**
The timer is activated during production and is displayed with a green color. You can activate or deactivate any day by clicking on it. turning on the D.H.W. heating depends on the temperature in the accumulation tank.

For the physical installation of the module you will need:

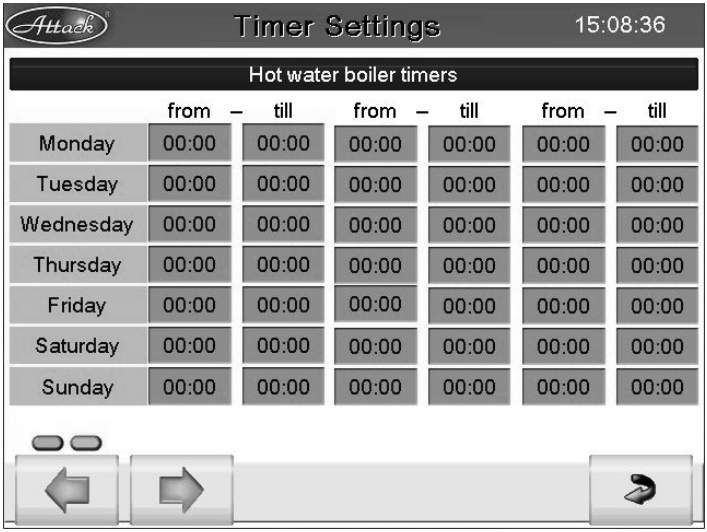
- D.H.W. tank
- temperature sensor (SD)
- pump. (PD)

Picture. 10 entering the custom settings on AWP

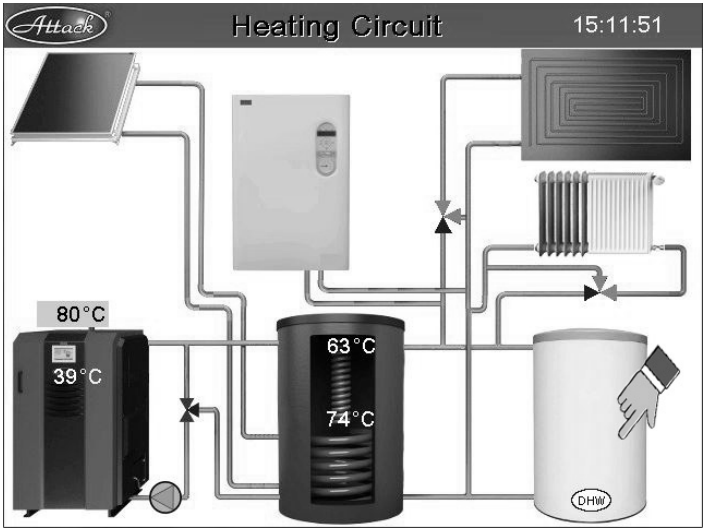
Picture. 11 entering the custom settings on SLX



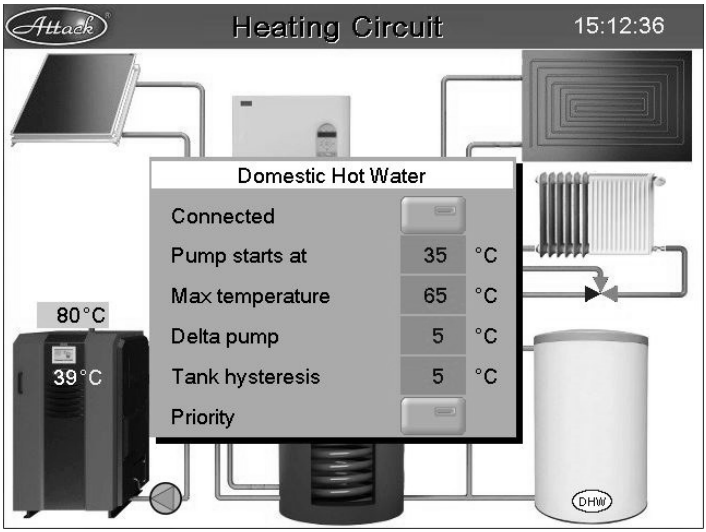
Picture. 12 Clicking to display the timer.



Picture. 13 Setting the timer on AWP and SLXL boilers



Picture. 14 clicking to display the D.H.W heating activation



Picture. 15 Activation of D.H.W. tank heating.

Connected - After activating this function the electronics will enable the control of D.H.W. tank heating.
Turning the pump on at - is the temperature at the upper temperature sensor in the accumulation tank, at which the pump for heating D.H.W. will be turned on.

Maximum temperature - determines the maximum temperature of D.H.W. in the tank. After reaching this temperature the heating pump will be turned off.

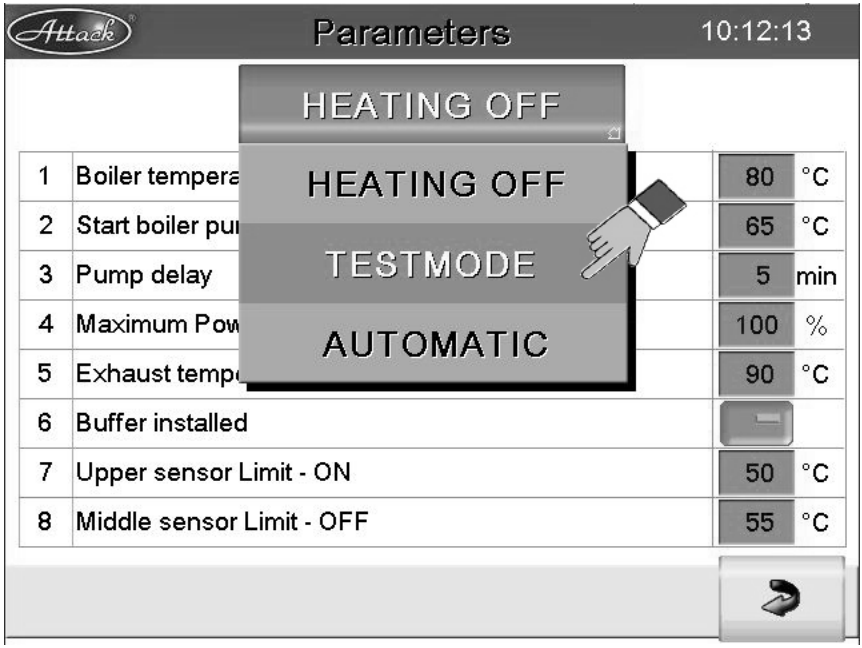
Pump delta - is the difference between the maximum temperature and the actual temperature of the D.H.W. if the temperature at the upper sensor decreases below the maximum temperature by the set temperature difference, the heating pump will turn on again.

Tank hysteresis - is the temperature difference between the accumulation tank and the D.H.W. tank.
Priority - is turned on if you want to prioritize the preparation of D.H.W. before regular heating

3. TESTING THE HEATING CIRCUIT PUMPS AND MIXING VALVES.

The system in ATTACK WOOD & PELLET and SLX LAMBDA TOUCH boilers allows to directly test the pumps and mixing valves connected to the heating circuit. To test these, it is necessary to choose the TEST MODE from the parameters. During testing, the boiler must be turned off.

Picture. 16 entering the parameters

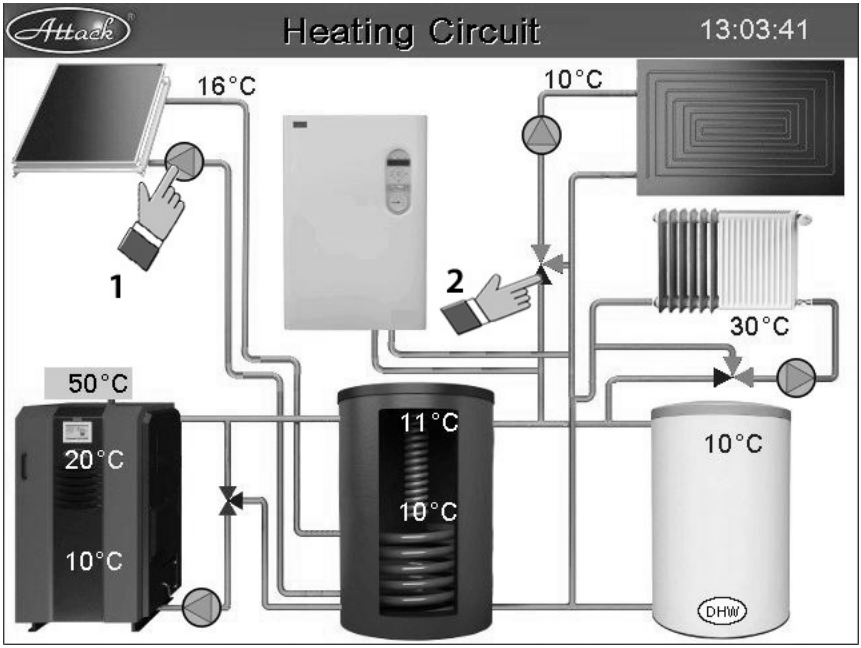


Picture. 17 choosing the TEST MODE

Enter the heating circuit, after entering, you can conclude a pump test through directly clicking the pump symbol.

NOTICE

Similarly you can test also the mixing valves. After clicking the mixing valve symbol the test of this device will start. However, during testing no opening value of the mixing valve will be displayed.

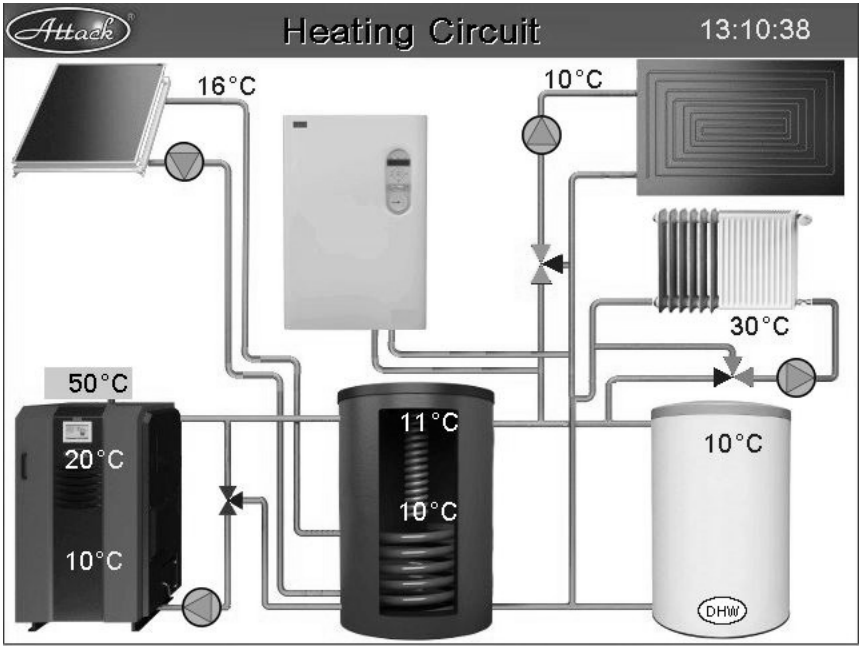


Picture. 18 1 - clicking the pump, 2 - clicking the valve

After clicking the pump symbol it will light up green and start a rotational movement. It is possible to stop the testing by repeatedly clicking the same pump symbol. the same way, you can start and stop the testing of mixing valves by clicking the given direction of the mixing valve.

NOTICE

After finishing the heating circuit devices test, it is necessary to turn off all the tested devices.



Picture. 19 Displaying the pump in operation and opened valve.

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ISO 9001
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ATTACK, s.r.o. producer reserves the right to change technical parameters and dimensions of boilers without previous warning.

ATTACK, s.r.o. – 07/2018