

Operating Manual



PELLETRONIC TOUCH

TOUCH V2.00

ENGLISH



ÖkoFEN
PELLET HEATING

E1389EN 2.0

Europe's specialist in pellet heating

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Approved: Humberger Stephan

Author:

ÖkoFEN Forschungs- und EntwicklungsgesmbH

Technical editorial department

Gewerbepark 1
A-4133 Niederkappel
AUSTRIA

Tel.: 0043(0)7286/7450
Fax: 0043(0)7286/7450/10

oekofen@pelletsheizung.at
www.oekofen.com

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Subject to modifications

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1 Dear Customer

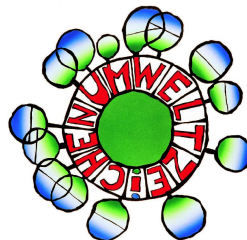
ÖkoFEN is Europe's leading specialist in pellet heating.

Proficiency, innovation and quality combined. This is the tradition on which ÖkoFEN shapes the future. We are very pleased that you too have decided to purchase a product from ÖkoFEN.

- This instruction manual is intended to help you operate the product safely, properly and economically.
- Please read this instruction manual right through and take note of the safety warnings.
- Keep all documentation supplied with this unit in a safe place for future reference.
Please pass on the documentation to the new user if you decide to part with the unit at a later date.
- Please contact your authorised dealer if you have any questions.



ÖkoFEN attaches great importance to the development of new products. Our R&D Department repeatedly challenges the effectiveness of tried-and-tested systems and works continuously on improvements. In this way, we secure our technological advantage. We have already received many national and international awards for our products. All our products comply with European standards in respect of quality, efficiency and emissions.



2 Use only for the purpose intended

The Pellematic pellet heating system is designed to heat water for central or other indirect heating systems and hot water supply for buildings. It is not permissible to use the Pellematic pellet heating system for any other purpose. Reasonable foreseeable inadvertent uses for the Pellematic heating system are not known.



The Pellematic complies with all relevant directives, guidelines, regulations and standards as part of the declaration of conformity that applies to this type of equipment.

EU guidelines	Designation
2006/42/EG	Guidelines for machines
2006/95/EG	Low voltage guidelines
2001/95/EG	Product safety guideline
2004/108/EG	Guideline for electromagnetic compatibility of components (EMVG)

The following harmonised standards have been applied:

Standards	Designation
EN 303–5	Boilers Part 5
EN 14961–2	Pellets for non-industrial use

The following Austrian standards, guidelines and specifications have been applied:

Standards	Designation
TRVB H 118	Technical directive on fire prevention

3 Types of safety warning sign

The warning signs use the following symbols and text.

Types of safety warning sign

1. Risk of injury
2. Consequences of risk
3. Avoiding risk



1. Risk of injury:

Danger - indicates a situation that could lead to death or life-threatening injury.



Warning - indicates a situation that could lead life-threatening or serious injury.



Caution - indicates a situation that could lead to injury.



Note - indicates a situation that could lead to property damage.



2. Consequences of risk

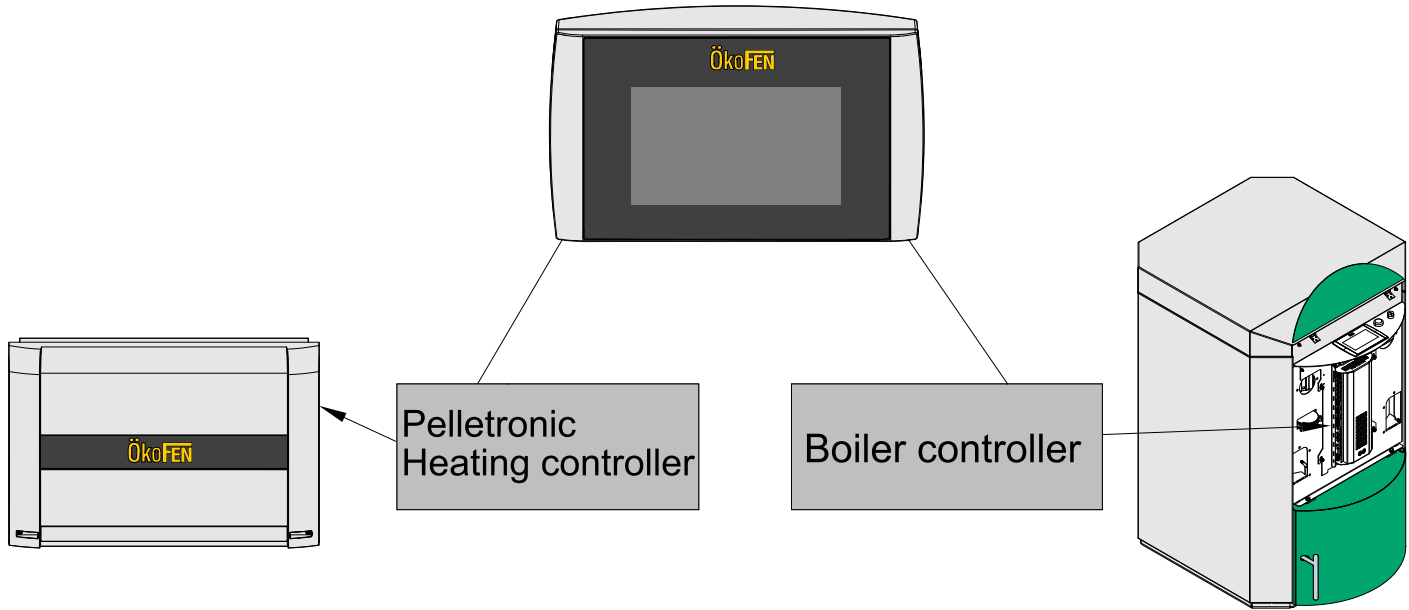
Effects and consequences resulting from incorrect operation.

3. Avoiding risk

Observing safety instructions ensures that the heating system is operated safely

4 Pelletronic heating controller and operating device with touch screen.

The heating controller controls the heating system and regulates the operating modes, heating circuits, domestic hot water, accumulator, existing boiler and the solar thermal system. All inputs and outputs are connected with the heating controller. Visualisation and operation of the heating controller is done with the operating device with touch screen. It displays all menu options and measuring values of the heating controller. All specific settings of the heating system is done with the Touch operating device.

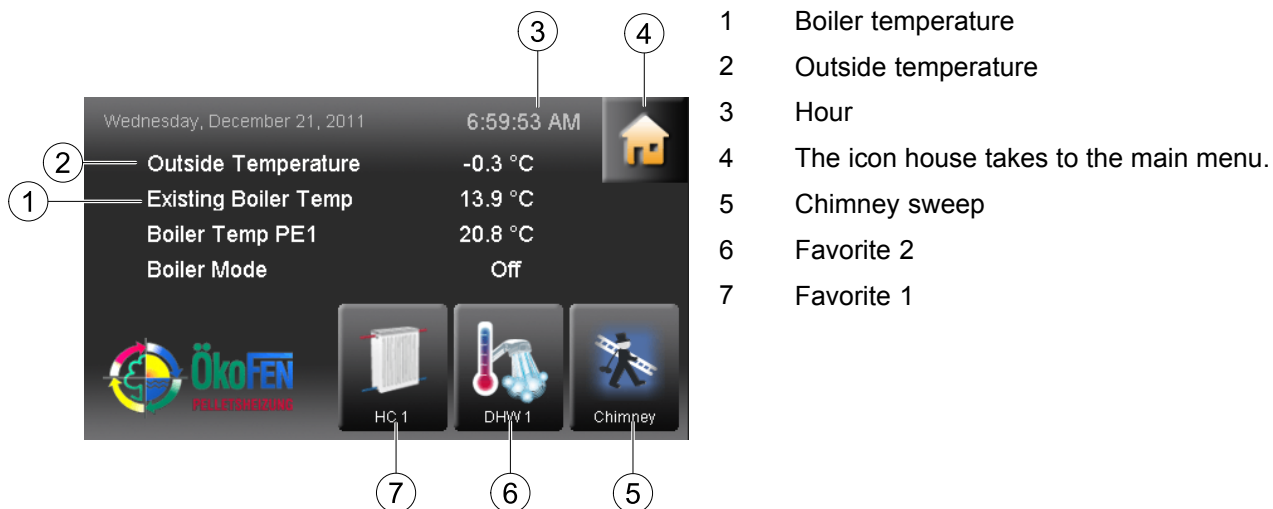


4.1 Operating Device with Touch screen

The Touch operating device is mounted on the control board of Pellematic. The 4.7" color display is surrounded by a design foil with logo. Apply finger pressure to operate the Touch screen.

4.2 Opening window

The touch panel is dark when in standby mode. As soon as the surface of the screen is touched, it lights up and displays the opening window.



4.3 Chimney sweep

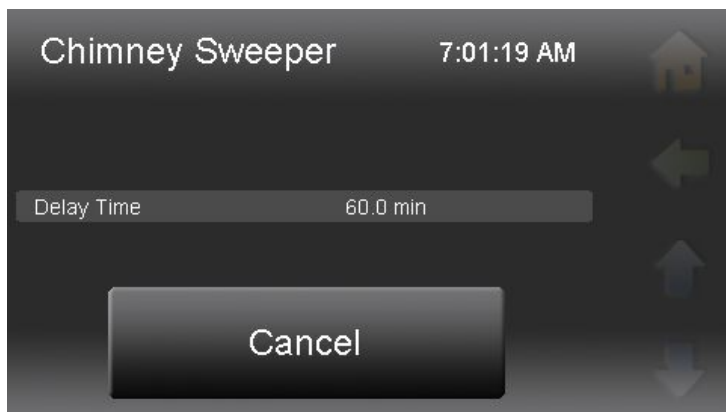
The function Chimney sweep is only for chimney sweeper or authorised service technicians. It is used for exhaust gas measurement.



Menu **Chimney sweep** is in the opening window.



After selecting the chimney sweep function it will query whether to execute. If yes then press the tick box.



- Boiler temperature set is 60°C for the total running time of 30 minutes.
- It displays the actual boiler temperature and delay time.
- Chimney sweep is stopped with **Cancel**.

4.4 User controls and their function

1. How to navigate to the right menu

Navigation-icons

Icon-view	chosen Icon-view	If you touch an icon, that icon turns green. This indicates that the item is selected and enables that function.
-----------	------------------	--



The yellow home symbol takes you directly to the main menu.



The horizontal arrow takes you one step back.



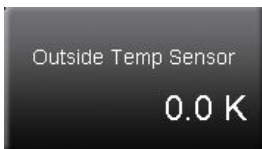
With the blue down arrow you get to additional lines of information on this item. (Down - scroll down).



With the blue up arrow you get to additional lines of information on this item. (Top of page - scroll up)

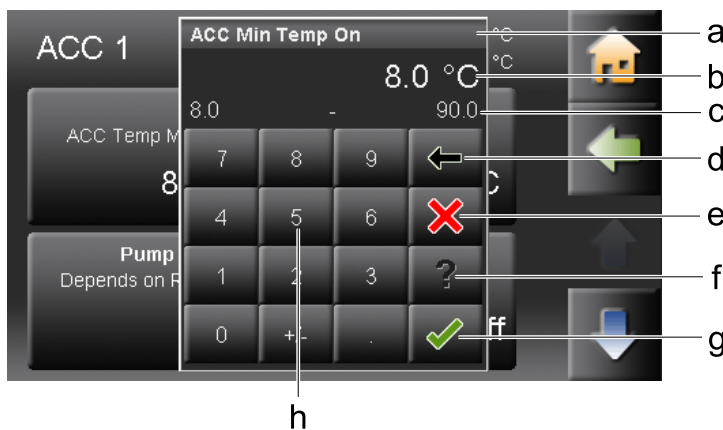


Navigate to the respective menu item.



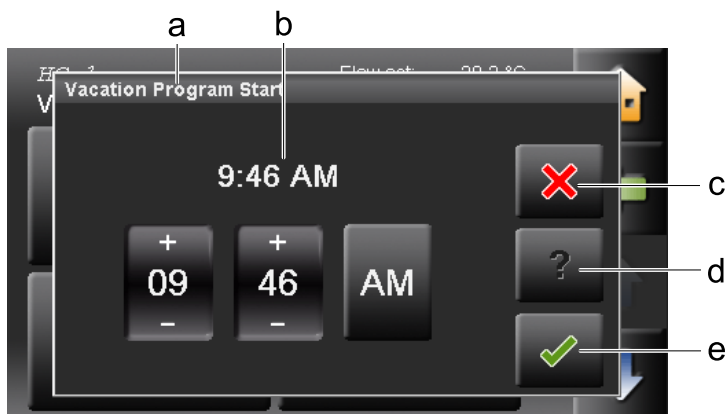
Once the respective item has been selected then parameters may be set. It will display either a numeric or text keypad.

2. Numeric keyboard



- a. Name of parameter
- b. Value of parameter with unit
- c. Min/max value – Values outside this range are not accepted.
- d. Delete input of numbers – touch once to delete one place.
- e. Cancel – You return to the menu item. Input of a new value was not accepted. The original value is then restored.
- f. Help function – inactive
- g. Confirm
- h. Numeric keyboard – used to enter values within the Min - Max range.

3. Time and date block



- a. Name of parameter
- b. Adjustable time or date
- c. Cancel
- d. Help function – inactive
- e. Confirm



With the Plus Minus block you change numbers.

4. Text selection



- a. Name of parameter
- b. Status texts
The number of status texts depends on the parameter.

Choose a status text. The setup menu closes automatically and the chosen status text is displayed in the menu.

Note

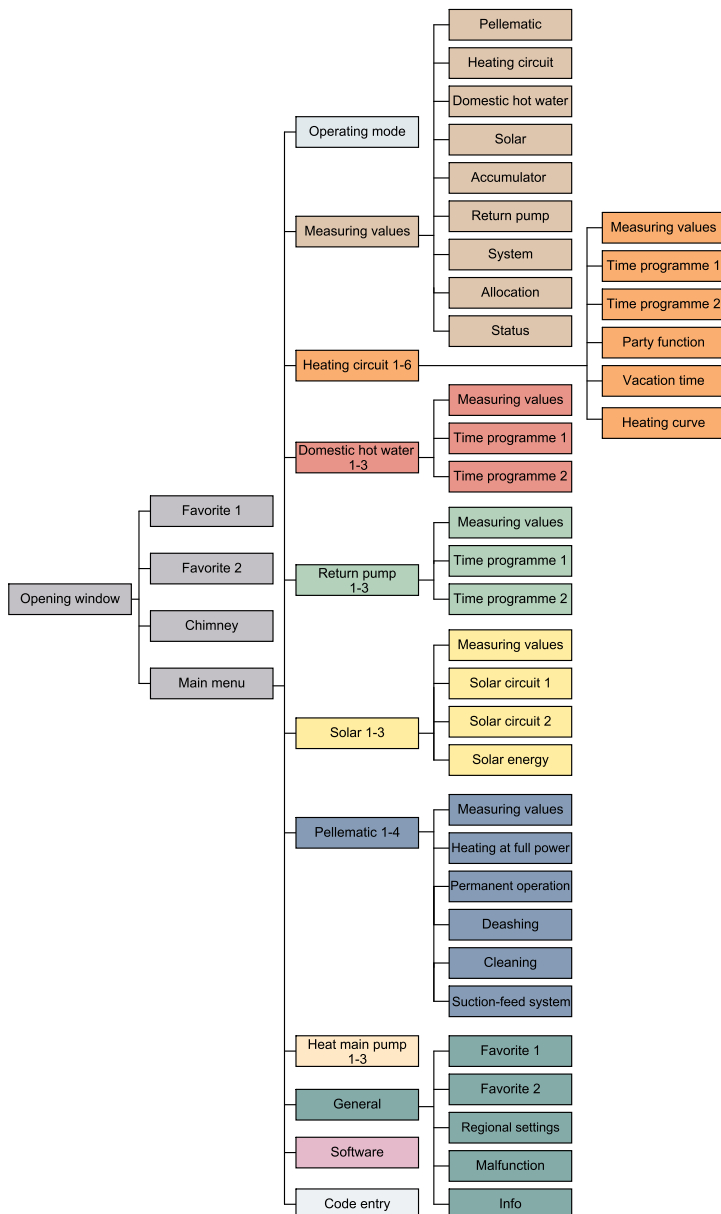
Although a scroll down menu is open, the navigation/parameter icons behind are still active and can be used.

4.5 Main Menu

In the main menu all submenus are displayed. Press the icon required to access that programme.



Menu navigation of Pelletronic Touch



5 Mode

In the menu item Modes you can see the operating mode of the heating system, heating circuits, domestic hot water and solar.



The menu item **Mode** is in the Main menu.



Overview of the operating modes

- Heating Plant
- Heating system 1-6 .
- Domestic hot water 1-3
- Solar 1-3

Choose the operating mode and set accordingly.

OPERATING MODES SYSTEM

Off	The adjusted operating mode of the heating circuits and DHW is inactive. The frost protection function is active.
Auto	The adjusted operating mode of the heating circuits and DHW is active. The frost protection function is active.
Domestic hot water	The adjusted operating mode of the DHW is active. The adjusted operating mode of the heating circuits is active. The frost protection function is active.

The operating mode heating circuits, domestic hot water and solar are described in the respective chapters.

6 Measuring Values

In the menu item Values you can view current settings or set new values for the heating circuit, domestic hot water, accumulator or solar.



The menu item **Measuring Values** is in the Main menu.



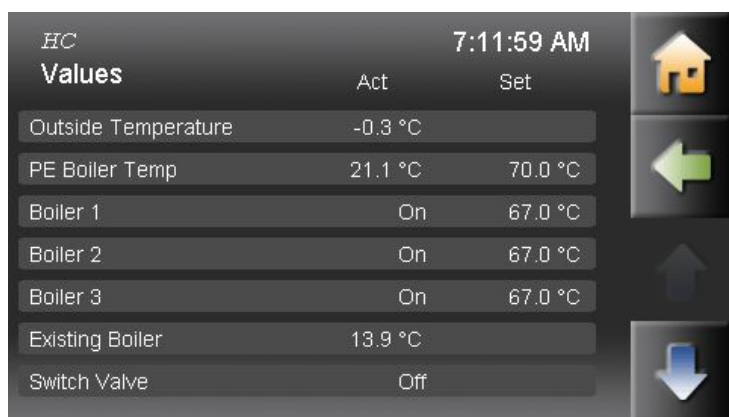
Select the appropriate submenu.

In the menu item **Heating circuit** you see all actual and set values of the heating circuits in your heating system.

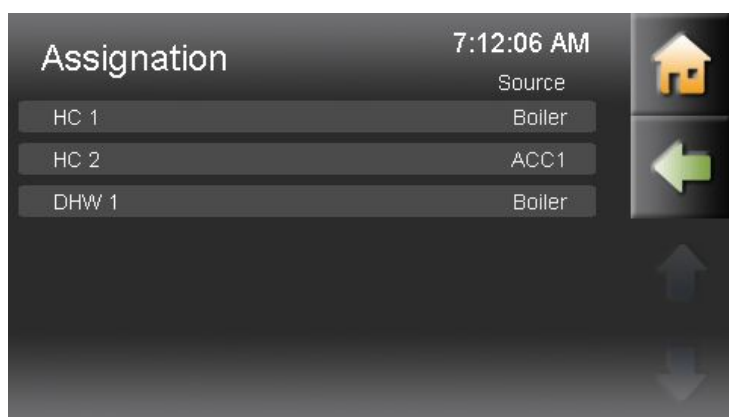
In the menu item **Domestic hot water** you see all actual and set values of the DHW production.

In the menu item **Solar** you see all actual and set values of the solar thermal system.

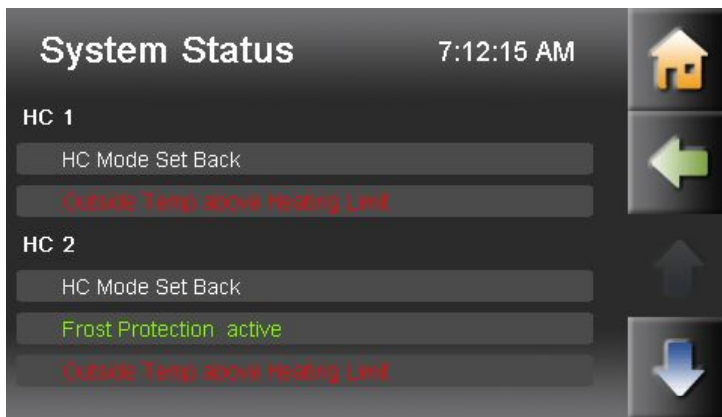
In the menu item **Accumulator** you see all actual and set values of the accumulator.



In the menu item **System** you see all actual and set values of the overall heating system.



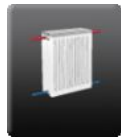
In the menu item **Allocation** you see which heating circuits are allocated to the boiler or to the accumulators.



System Status is an overview of the whole heating system.

7 Heating Circuit

Heating Circuit contains all relevant parameters and settings. It can operate up to 6 heating circuits.



Heating Circuit is in the Main menu.



Heating Circuit has following menu items:

- Mode
- Room Temp Heating
- Room Temp Set back
- Time Allocation
- Values
- Time 1
- Time 2
- Party
- Vacation
- Heating Curve

Mode	<p>Off Only the frost protection function is active.</p> <p>Auto The boiler starts heating automatically according to the set room temperature.</p> <p>Heating The boiler heats constantly accordingly to the Set room temperature.</p> <p>Set back The boiler heats constantly accordingly to the Set back room temperature.</p> <p>The operating mode of the heating circuits can only be changed if the plant operating mode is set to AUTO. The adjusted heating limits and maximum flow temperatures are used in all operating modes.</p>
Room Temp Heating	Choose your room temperature (Temperature within the heating times).
Room Temp Set back	Choose Room Temp Set back (= Minimum temperature beyond the heating times).
Time Allocation	Activate Time 1 (= Time programme 1) and Time 2 .

7.1 Measuring values Heating circuit



Measuring values HC is in the Main menu.

HC Values		7:12:32 AM	
	Act	Set	
Outside Temperature	-0.3 °C		
PE Boiler Temp	21.1 °C	70.0 °C	
Boiler 1	On	67.0 °C	
Boiler 2	On	67.0 °C	
Boiler 3	On	67.0 °C	
Existing Boiler	13.9 °C		
Switch Valve	Off		

This displays all corresponding heating circuit values:

- Actual value
- Set value
- Inputs (sensors)
- Outputs (pumps, mixer and motors)

7.2 Time programme Heating circuit

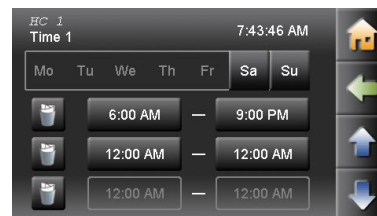
The heating circuit programme is used to set the heating times.



Time 1 (=Timeprogramme 1) and Time 2 are in the menu Heating circuit.



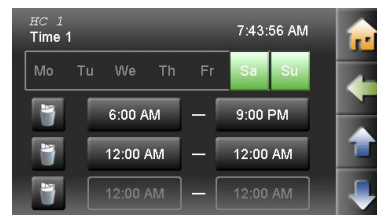
1 Select Time programme 1



6 Mo-Fr were assigned heating times
With you get to the remaining days Sa-Su.



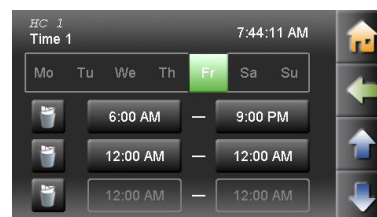
2 Select the heating days.
The activated days are displayed in green.



7 Sa-Su were assigned to heating times.




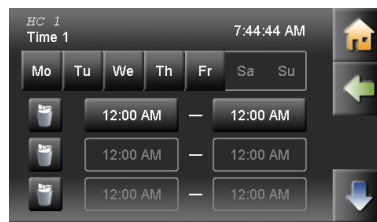
3 Enter the heating times for these heating days (Mo-Th).




8 With and you switch between the heating blocks. You can activate or deactivate heating days in the heating block.



4 The heating times for Mo-Th are assigned.
With  you assign the days heating times further.




9 With  you set all the heating times in the line and below to 0.



5 Friday is activated and heating times assigned.



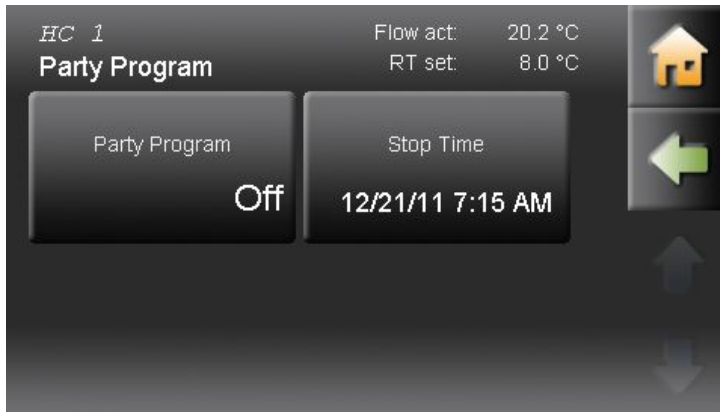
10 Go back with . Select Time 2. For each circuit are two time programmes. You can select two-time programmes. In the menu item **Time Allocation** you can activate Time programme 1 or 2.

7.3 Party

The party function extends the heating time once, without changing the heating times.



Party is in the Main menu.



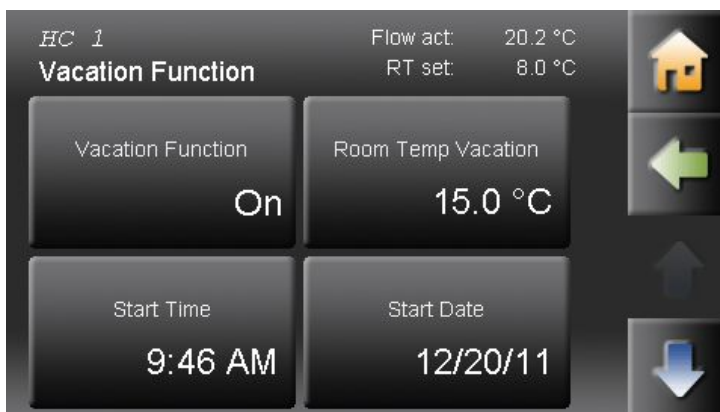
The party function is basically inactive. Enter the required stop time that the room should be heated until. Activate the Party function. The heating time is extended up to the indicated time. Then the party function deactivates itself automatically.

7.4 Vacation

The holiday programme cancels the heating times and heats for the entered period on the set temperature level.



Vacation is in the Main menu.



Enter the room temperature on which in your absence the building should be heated. Enter the departure (start time) and return (finish date) and activate the vacation programme.

Note

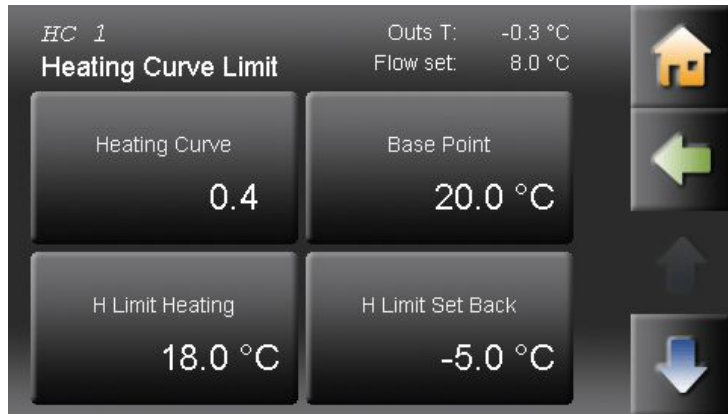
To return to an already temperate building you should enter the day before your return as the finish date.

7.5 Heating curve and Heating limits

Starting up for the first time, the authorised technical adviser adjusts the heating curve, the base point and the heating limits on the building situation and the hydraulics. If the Set room temperature is not reached or exceeded, adjust the heat curve with the flow temperatures according to outside temperatures.



Heating curve is in the menu **Heating circuit**.



Heating curve 0.0 – 4,0

The heating curve describes the combination between outdoor temperature and the associated flow temperature for a heating circuit.

Base point adjustable from 20 - 45

With the change the of base point, you provide a parallel shift of the heating curve.

H limit heating

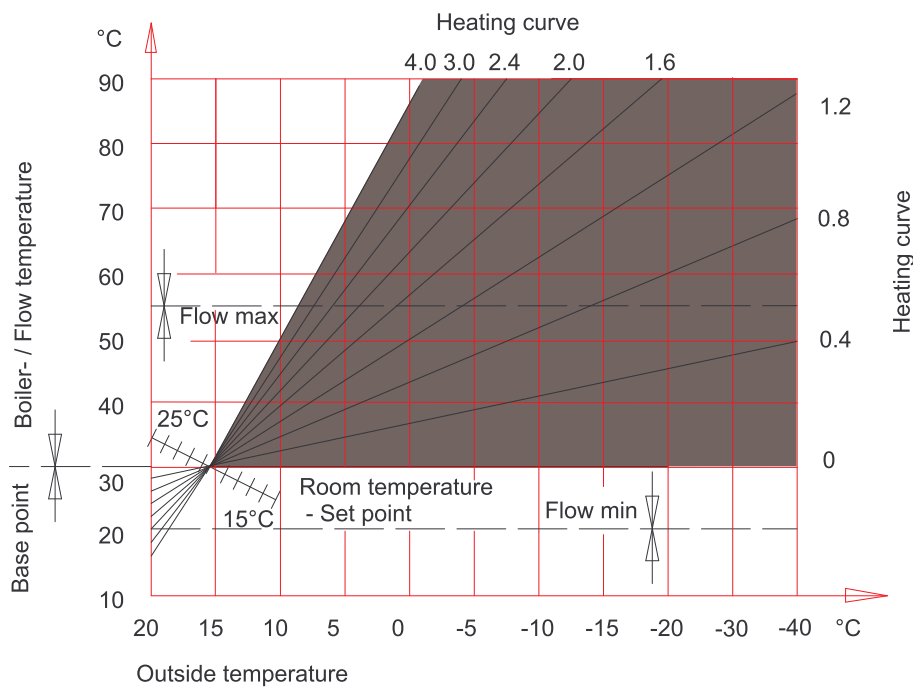
If the average outside temperature is higher than the set temperature, the heating circuit switches off in the heating mode.

H limit set temperature

If the average outside temperature is higher than the set temperature, the heating circuit switches off in the Set back mode.

Adjustment of heating curve and the base point to the building

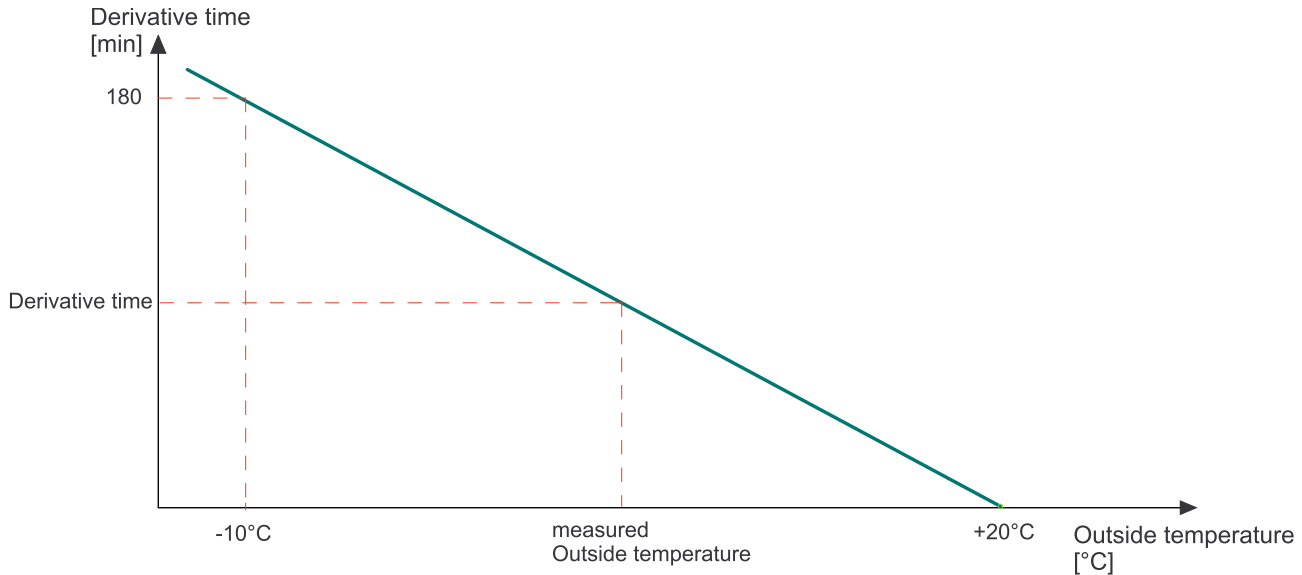
Because of the building's thermal inertia, it is recommended to perform no more than one adjustment step per day.



Daytime outside temp	Room temperature	
	too warm	too cold
+5 to +15°C	Decrease heating curving value by 0.2	Increase heating curving value by 0.2
	Decrease base point value by 5°	Increase base point value by 5°
-20 to +5°C	Decrease heating curve value by 0.2	Increase heating curve value by 0.2

Advanced run up:

This function ensures that the set room temperature is reached by the programmed heating time by starting the boiler early. The figure you set is a maximum and will be reduced by the controller depending on the outside temperature as shown in the graph below. We suggest 180mins for underfloor heating in screed and 60-80mins for most radiator systems. [user adjustable]



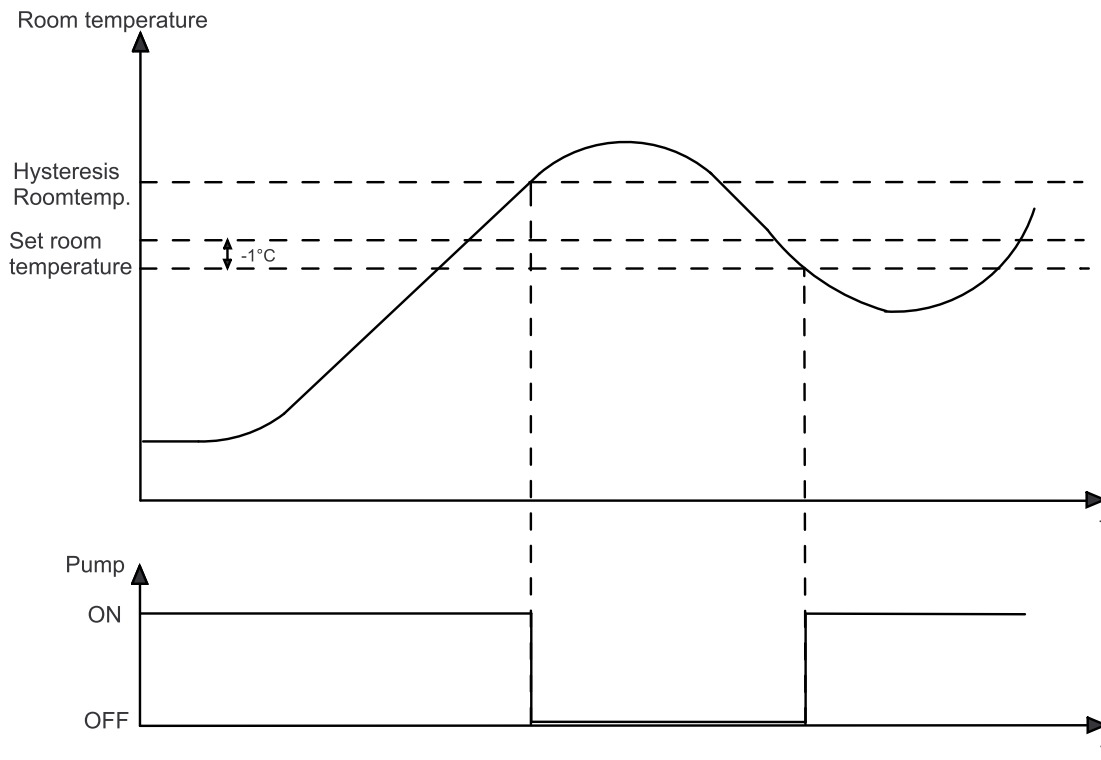
Room thermostat influence

If the measured room temperature deviates from the set room temperature it corrects the heating controller and the flow temperature with the room thermostat influence.

The Room thermostat influence indicates how much the flow temperature is raised or lowered so that the Set room temperature is reached.

Room temperature hysteresis

The room temperature hysteresis prevents the cycling (On Off On Off...) of the heating circuit pump: If the Set room temperature + room temperature hysteresis is reached, the associated pump stops. If the Set room temperature is - 1°C, the pump switches on again.



7.6 Screed programme

The screed programme may be operated up to 31 days.

A desired flow temperature must be adjusted for each individual day. These temperatures are constant and not dependent on outside temperature or room thermostat settings. The function is switched off automatically at the end of the programme and the heating circuit reverts to the previous operating mode.

NOTICE

Damages to the screed by too high temperatures.

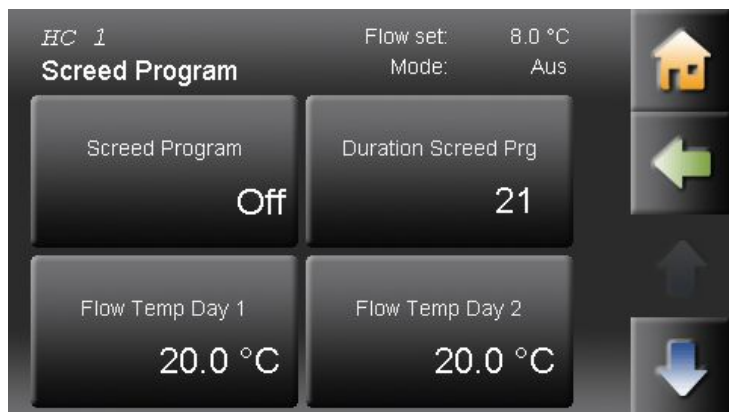
Only use this programme in conjunction with a pump interlock switch positioned on the flow from pump to under floor central heating – this must be set to the max. safe temperature for the conditions of the floor. No liability is accepted by the Pelletronic supplier for damage to floors or sub floors.

Continuous power supply is required to the controller to maintain the settings for this programme.


Only use programme temperatures approved by the UFCH and flooring suppliers.



Screed programme is in the menu Heating circuit.



At the end of the screed programme it will switch itself off automatically and return to the previous mode. Enter the number of heating days. There are 0-31 heating days possible. According to the number of heating days a Flow temperature set appears for every heating day. Select every single day and adjust the Flow temperature set. The pre-set Flow temperature set per day is 20 °C.

With  you get to all other days.

8 Domestic hot water (DHW)

It can operate up to three menu items in **DHW**. Domestic hot water includes all parameters and settings for hot water production .



DHW is in the Main menu.



DHW has following menu items:

- Mode
- DHW Boost
- Water Temp Set
- Water Temp Min
- Values
- Time programme
- Time 1
- Time 2

Mode

Off Set water temperature is reduced to 8° for frost protection.

Auto Domestic hot water will be heated to the set temperature during time periods.

On The system heats up the domestic hot water continuously on the Water temp set.

You can change the mode domestic hot water only when the **Operation mode** is on **AUTO**.

DHW Boost

Heats the hot water once on the Water temp set.

Water Temp Set

Set the water temperature.

Water Temp Min

Set the minimum water temperature. The water temperature never falls below this value, unless the domestic hot water mode is **OFF**.

Values

You see all the DHW corresponding measuring values.

Time programme

Activate **Time 1** (= Time programme 1) and **Time 2**.

Time 1 and Time 2

In the DHW time programme you set the times of the hot-water processing. The DHW time programme works the same way as the heating circuit programme. See chapter [7.2 Time programme Heating circuit, page 17](#)

8.1 Measuring values Domestic hot water



Measuring values DHW is in the Main menu.

DHW Values		7:17:36 AM	
	Act	Set	
Outside Temperature	-0.3 °C		
PE Boiler Temp	21.1 °C	70.0 °C	
Boiler 1	On	67.0 °C	
Boiler 2	On	67.0 °C	
Boiler 3	On	67.0 °C	
Existing Boiler	13.9 °C		
Switch Valve	Off		

Displayed are all the corresponding measuring values:

- Actual value
- Set value
- Inputs (sensors)
- Outputs (pumps, mixer and motors)

8.2 Time programme DHW

In the **Time Programme DHW return pump** you set the DHW usage times.



Time 1 (=Time programme 1) and Time 2 are in the menu **Domestic hot water**.

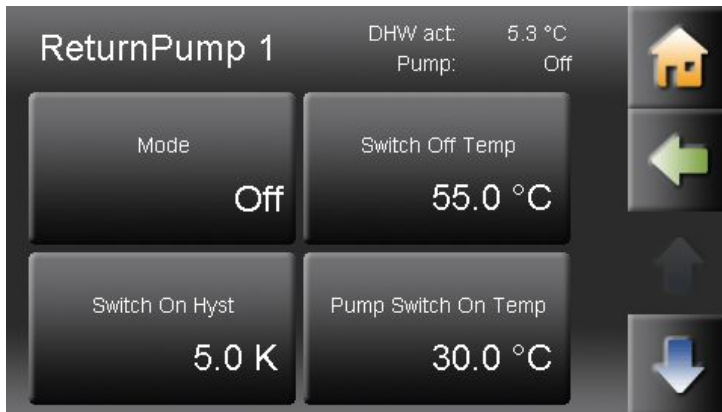
DHW 1 Time 1		7:17:41 AM				
Mo	Tu	We	Th	Fr	Sa	Su
	6:00 AM	—	9:00 PM			
	12:00 AM	—	12:00 AM			
	12:00 AM	—	12:00 AM			

The domestic hot water time programme works the same way as the heating circuit time programme. See chapter [7.2 Time programme Heating circuit, page 17](#)

9 DHW Return pump



DHW Return pump is in the Main Menu.



The Return pump enables the immediate use of hot water. DHW Return pump has following menu items:

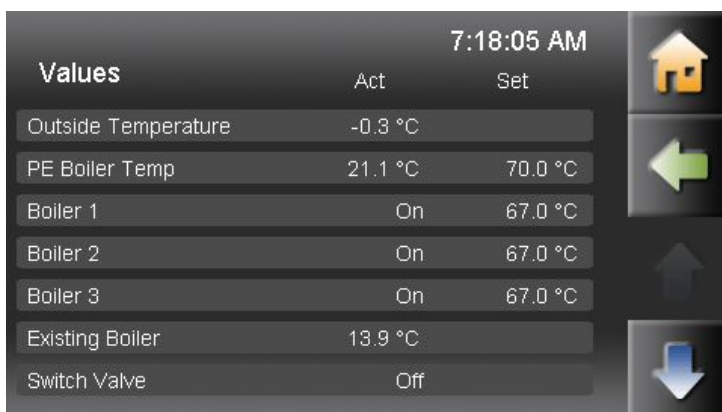
- Mode
- Switch off temperature
- Switch on hysteresis
- Time allocation
- Values
- Time 1
- Time 2

Mode	Off ... DHW Return pump inactive Auto ... Temperature regulation within the time programme
Switch off temperature	If the return temperature sensor of the DHW Return pump reaches the Switch off temperature , the pump switches off.
Switch on Hysteresis	If the return temperature falls below the switch off temperature – the DHW Return pump switches on again!
Time Allocation	Choose the time programme 1 or 2.
Values	You see all the DHW pump corresponding measuring values.
Time 1, Time 2	In the Return pump time programme you set the run times of the Return pump. The Return pump – time programme works the same way like the heating circuit time programme. See chapter 7.2 Time programme Heating circuit, page 17

9.1 Measuring values DHW Return pump



Measuring values DHW Return pump is in menu DHW Return pump.



You see all the Heating circuit corresponding measuring values:

- Actual value
- Set value
- Inputs (sensors)
- Outputs (pumps, mixer und motors)

9.2 Time programme DHW return pump

In the Time Programme DHW return pump you set the DHW usage times.



Time 1 (=Time programme 1) and Time 2 are in the menu DHW return pump.



The DHW return pump time programme works the same way as the heating circuit time programme. See chapter [7.2 Time programme Heating circuit, page 17](#)

10 Solar

Solar includes all relevant parameters and settings for the solar thermal system. You can control up to 6 solar circuits.



Solar is in the Main menu.

Solar has following menu items:

- Measuring values Solar
- Solar circuit 1–2
- Solar energy- Yield



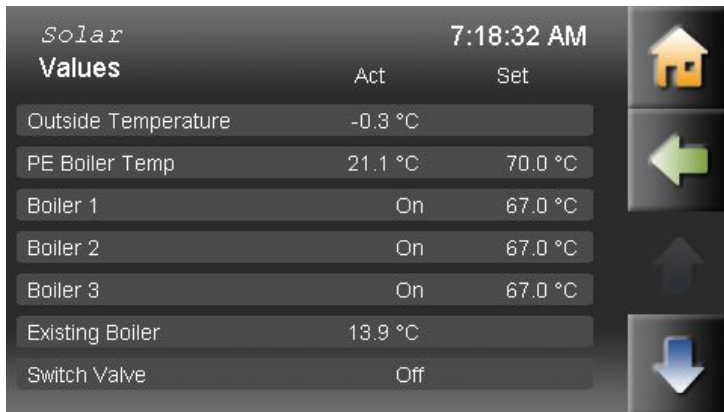
10.1 Measuring values Solar



Measuring values Solar is in the menu Solar.

It displays all measuring values of Solar:

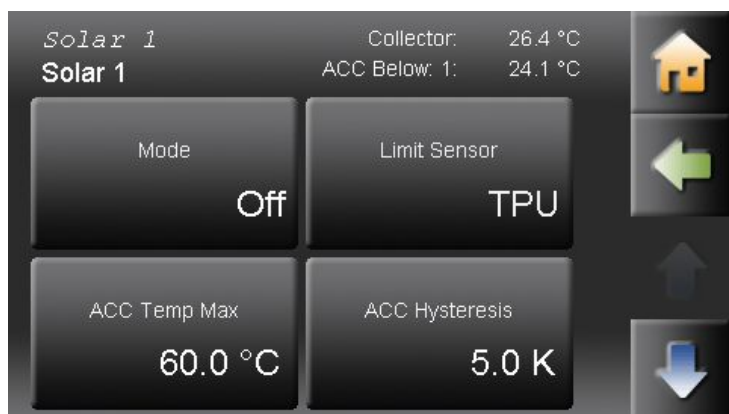
- Actual values
- Set values
- Inputs (sensors)
- Outputs (pumps, mixer and motors)



10.2 Solar circuit



Solar circuit 1 and 2 are in menu Solar.



Solar circuit has two **operating modes**:

- **ON** Charge, as long as the Collector temperature + hysteresis is higher than the temperature of the ACC lower sensor or ACC temperature is reached.
- **OFF** No charge

As **limit sensor** choose TPU, TPM, TPO, or DHW sensor.

Note

The solar thermal system can be switched on/off irrespective of the plant mode.

The operation mode SOLAR can also be changed, if the **OPERATING MODE PLANT** is set to **OFF!**



WARNING

VERY HIGH DOMESTIC HOT WATER storage temperatures are possible!

We recommend consulting your specialist installer before changing these settings.

ACC temp Max

If the temperature in the ACC is higher than the ACC temp Max, the solar pump switches off. The limit sensor measures the temperature in the ACC.

ACC Hysteresis

The solar circuit pump is switched off due to the ACC temp Max is reached. The temperature must fall under ACC temp Max minus hysteresis, then the solar circuit pump switches on again. The hysteresis prevents a solar pump cycling (On Off On Off).

Collector Hyst On

If between the collector sensor and TPU, ACC lower sensor the temperature difference is greater than the Coll Hyst A, switches the solar pump On.

Collector Hyst Off

If between the collector sensor and TPU, ACC lower sensor the temperature difference is smaller than the Coll Hyst A, switches the solar pump Off.

Collector smoothing mode

It only functions on solar circuit one, it can be switched on and off and it ensures an efficient delivery of energy from the collectors.

Note

This can only be set, when the speed control function is on. Setting in the code protected parameter.

Collector smoothing Min Temp

At this temperature the solar pump starts to run at minimum speed.

Collector smoothing Control range

The pump speed increases within the set range as the collector temperature increases.

10.3 Yield - Solar Energy

This function measures the yield of the solar thermal system and displays current energy and logs previous days.

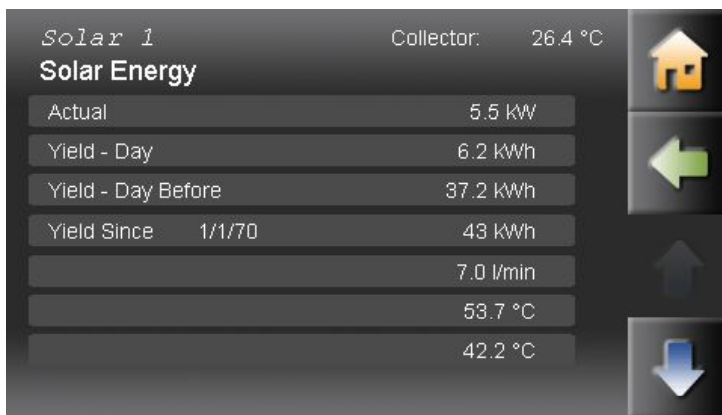
Note

For the function solar energy it is necessary to install:

- Pulse volume meter (must be connected to **24 VOLT** and **Z_IN**)
- Flow temperature sensor
- Return temperature sensor



Yield - Solar Energy is in the menu Solar.



Yield measuring of solar energy has following menu items:

- Actual
Display of the current solar energy, refreshes every 60 sec.
- Yield - Day
Display of todays solar energy since 00:00.
- Yield - Day before
Display of the of yesterdays solar energy.
- Yield since
Display of the solar energy since the last set date.
- Flow rate
Display of the current flow rate, refreshes every 60 sec.
- Flow temperature
Display of the current flow temperature
- Return temperature
Display of the current return temperature

11 Pellematic

Pellematic includes all the relevant parameters and settings for the control of the pellet boiler. There are up to 4 Pellematic boilers possible.



Pellematic is in the Main menu.



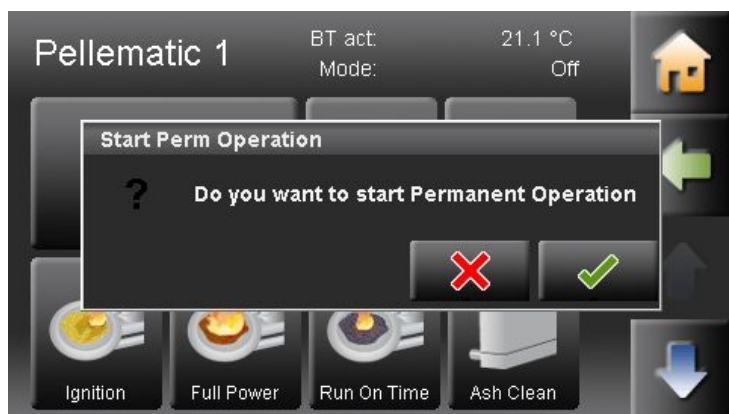
Pellematic has following items:

- Measuring values Pellematic
- Permanent operation
- Full power
- Burner plate cleaning
- Boiler cleaning
- Pellet level

11.1 Permanent operation



Permanent operation is in the menu Pellematic.



If you confirm the query, you activate the function **Permanent operation**.

First of all, the spring-driven motor opens the fire protection system at the burner- the process takes about 2 minutes. After that the burner motor runs in permanent operation and transports pellets to the burner plate. In heating systems with auger delivery it will also operate the extraction auger in permanent operation.

11.2 Measuring values Pellematic



Measuring values Pellematic is in the menu Pellematic.

Pellematic Values		7:19:24 AM
	Act	Set
Outside Temperature	-0.3 °C	
PE Boiler Temp	21.1 °C	70.0 °C
Boiler 1	On	67.0 °C
Boiler 2	On	67.0 °C
Boiler 3	On	67.0 °C
Existing Boiler	13.9 °C	
Switch Valve	Off	

It displays all measuring values of Pellematic:

- Actual values
- Set values
- Inputs (sensors)
- Outputs (pumps, mixer and motors)

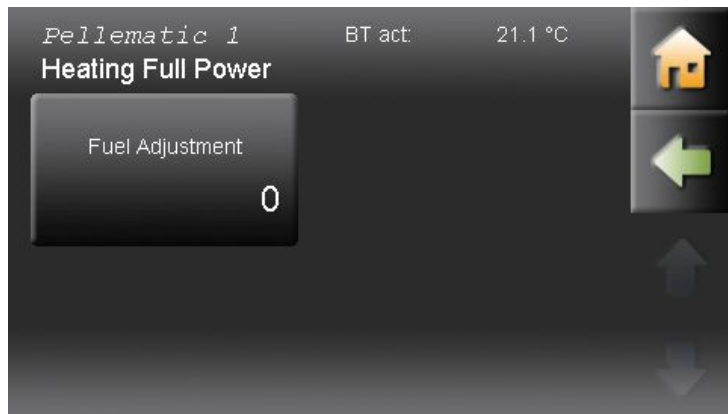
Boiler Temperature	Actual Boiler Temperature
Combustion chamber sensor	Actual Combustion chamber sensor. (Displayed only, if a NiCrNi combustion chamber sensor is connected)
Boiler status	Displays the actual status of the boiler.
Burner Run Time S	Burner run time in tenth seconds.
Burner Rest Time	Rest time of the burner in tenth seconds.
Burner Fan Speed	Burner Fan Speed in percent.
Flue Gas Fan Speed	Flue Gas Fan speed in percent.
UW Speed	Power of the pump with activated speed control.
Burner Contact	Status (On/Off)
Kap RA	Capacitive sensor of the burner Status (On/Off)
Kap ZW	Capacitive sensor at the hopper Status (On/Off)
	Note Default display always with suction system. Display alternative with auger system.
Flame Return Gate	Status (On/Off) Flame Return Gate
Existing Boiler	Status (On/Off) Existing Boiler
Ignition Temperature	Min temperature and connected combustion chamber as criteria for ignition.
Burner Starts	Number of Burner Starts of the system
Burner Run Time H	Burner Run Time in hours
Average Run Time	Average Run Time according to the number of ignitions
Number Ignition	Number of Ignitions with electrical ignition
Ignition Stick	Status (On Off) Ignition Stick
Motor B Cleaning	Status (On Off) Motor B Cleaning

Relay Fault Signal	Status (On Off) Relay Fault Signal
Motor RA1	Status (On Off) Motor RA1
Motor RES1	Status (On Off) Motor RES1
Motor Burner Auger	Status (On Off) Motor Burner Auger

11.3 Full Power



Full Power is in the menu Pellematic



In the menu item Full Power you can adjust the fuel feed.

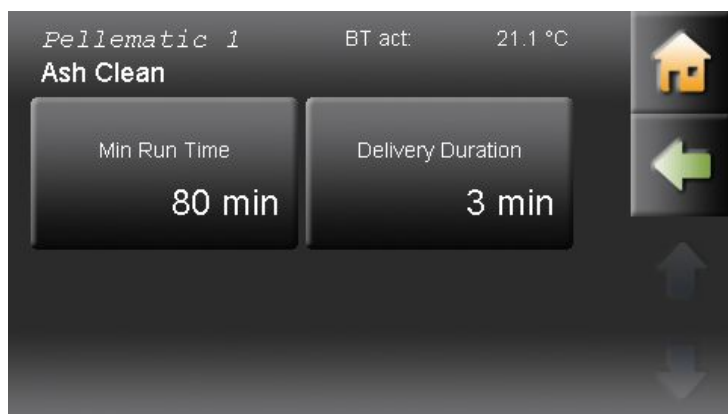
Fuel correction:

The burner auger run time is calculated automatically by the PLC depending on the rated power and the boiler setpoint temperature. The burner motor is controlled accordingly. You can reduce or increase the value calculated by the PLC 10 steps up or down.

11.4 De-ashing system



De-ashing system is in the menu Pellematic.



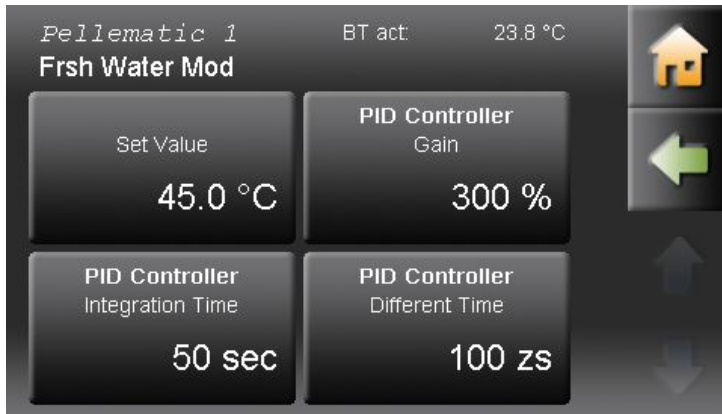
The menu item De-ashing system is available only when De-ashing system is connected. The activation is only possible after entering the Code for service technicians. The de-ashing system and the burner plate cleaning work parallel.

- **Min run time** of the boiler until next de-ashing procedure. Value adjustable
- **Ash delivery time** Is the run time of the ash auger. Value adjustable.

11.5 Fresh Water Module



Fresh Water Module is in the menu Pellematic.



11.6 Boiler Cleaning



Boiler Cleaning is in the Pellematic menu.

Boiler Cleaning has the following menu items.

- Cleaning/Filling
- Cleaning 2
- Min Run Time
- Cleaning Time



Adjust the suction system according to the demands of your heating system.

Cleaning/Filling

The value to be set is the time (full hour) at which the boiler cleaning sequence is performed. On vacuum systems the hopper is also filled at the same time, regardless of whether it is empty or not.

Cleaning 2

You can set in **Cleaning/Filling** a second cleaning sequence. The value to be set is the time (full hour) at which the additional boiler cleaning sequence is performed. Example: 20h = additional boiler cleaning sequence performed at 20:00. On vacuum systems the hopper is also filled at the same time, regardless of whether it is empty or not.

Default value -1h: It is not performed a second cleaning sequence.

Min Run Time

Min Run Time of the boiler until next cleaning sequence. Value adjustable.

Cleaning Time

Duration of the boiler cleaning sequence in seconds. Value adjustable.

11.7 Suction System



Suction System is in the Pellematic menu.



Suction System has the following menu items:

- Cleaning/Filling
- Frequence RA Motor
- Pause RA Motor
- Suction interval

Adjust the suction system according to the demands of your heating system.

Cleaning/Filling

The value to be set is the time (full hour) at which the boiler cleaning sequence is to be performed.

The cleaning of the boiler is performed at the same time.

In **Cleaning 2** a second cleaning/filling sequence can be set. The value to be set is the time (full hour) at which the additional boiler cleaning sequence is performed. Example: 20h = additional boiler cleaning sequence performed at 20:00. On vacuum systems the hopper is also filled at the same time, regardless of whether it is empty or not.

Frequ RA Motor

Frequency for storage room suction systems in pulse mode, only for vacuum systems.

Pause RA Motor

Pause time for storage room extractor motor - suction system in pulse mode. If pause time = 0 then no pulse mode.

Suction Interval

Run time of burner auger until next Suction Interval.

The hopper is filled at this time regardless of whether it is empty or not.

11.8 Level detection system



Level detection system is in the Pellematic menu.



Level detection system has the following menu items:

- Mode
 - Textile Tank
 - Storage Room
 - Capacitive Sensor
- Limit Value
- Correction Value

Adjust the suction system according to the demands of your heating system.

Mode Choose:

Textile Tank

Level detection system using weighing cells for FlexILO textile tanks.

Storage Room

Level detection system using weighing cells at the hopper for storage rooms. (only for Pellematic Type PES 36–56)

Capacitive Sensor...Level detection system using a capacitive sensor for storage rooms and Textile tanks.

Limit Value

is the minimum weight for a warning message. Value adjustable. The warning message appears on the operating device and disappears when the filling weight is above the set minimum weight.

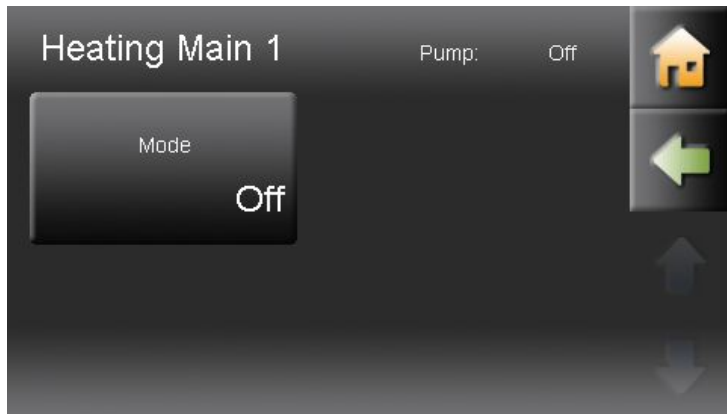
Correction Value

Only if mode **Flexi Tank** or **Storage** room is chosen. Set the display of the current weight to 0 by putting in the negative of the current weight shown

12 Heat Main Pump



Heat Main Pump is in the Main menu.



The Heat Main Pump is an additional pump, when the boiler or accumulator is separated far from the pump station. In the menu item **Component**, you can assign any or all circuits to operate with the Heat Main Pump. The Heat Main Pump runs with any assigned pump.

Switch the Heat Main Pump **On** or **Off**.

Note

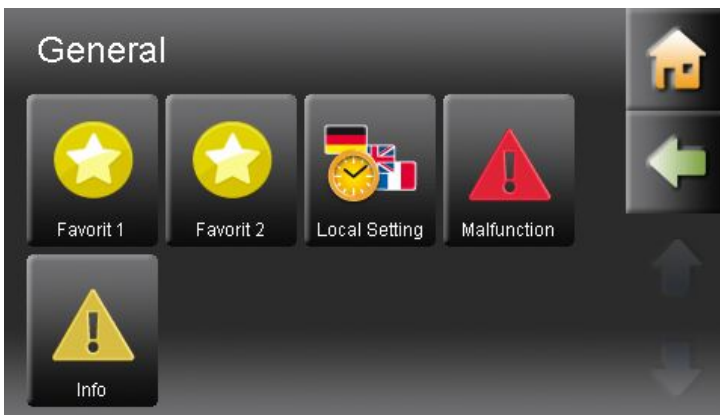
For each heating controller only one Heat Main Pump or circulation pump can be used. The Heat Main Pump and the circulation pump are closed from each other.

13 General

General includes the complete heating control related settings and individual operating options for the customer.



General is in the Main menu.



The menu **General** includes::

- Favorite 1
- Favorite 2
- Local setting
- Malfunction
- Info

13.1 Favorite 1 and 2



Favorite is in the General menu.



With this function you can display most commonly used menu items in the start menu. This then enables direct access.

Select the menu item you wish to be displayed as Favorite 1 in the Start menu.



The selected item is now green, this icon is now displayed in the start menu and active.

13.2 Local Settings



Local Settings is in the General menu.



Local Settings has the following menu items:

- Language
- Unit
- Date
- Time

Language

Choose between the languages German, English UK, English U.S. French, Spanish, Italian, Dutch, Danish and Russian.

Unit

You can choose between metric and imperial measuring systems.

Date

Set the current date.

Time

Set the current time.

13.3 Malfunction



Malfunction is in the General menu.



Fault messages appear immediately, they will overlay all screen menu items. Every fault message will display the date, time and the type of fault. It will remain until acknowledged.

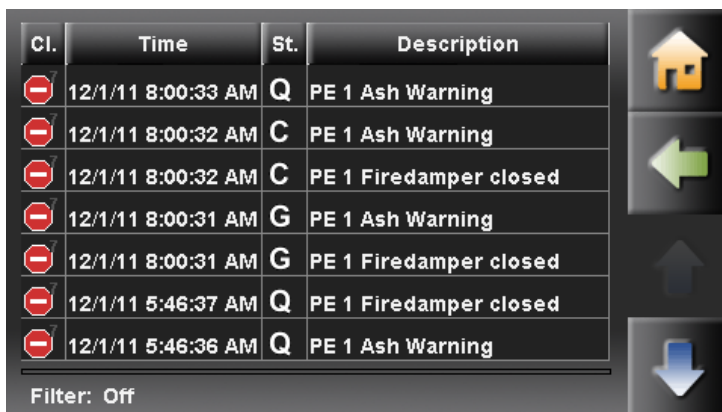


The fault remains in the incident reports log until corrected.

13.4 Information



Information is in the General menu.



In the menu item Information all faults are listed chronologically.

The fault texts have 3 status

- C.....CURRENT — when the fault occurs
- Q.....QUIT — when the fault has been rectified
- G.....GONE — when the fault has been reset by pressing ENTER

14 Software



Software is in the Main menu.

Software shows the current version of software in use.

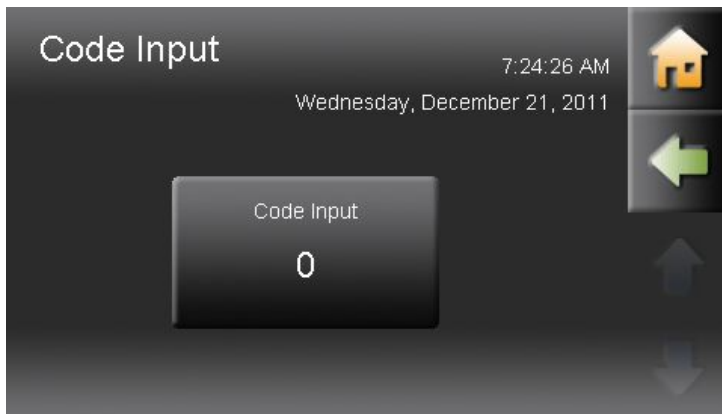


15 Code Input

The heating controller is composed of 2 levels, one for customer and one for ÖkoFEN service technicians. At the customer level the operator can adjust the heating system to their needs. At the ÖkoFEN service technician level advanced settings for startup and customisation of the heating systems are possible. The service technician level is protected with a password/code to prevent unauthorised changes. The password /code entry appears in the main menu.



Code Input is in the Main menu.



Touch the icon Code input.



Enter the code in the numeric block.



You have reached the level of ÖkoFEN service technicians. All additional menu items are visible.

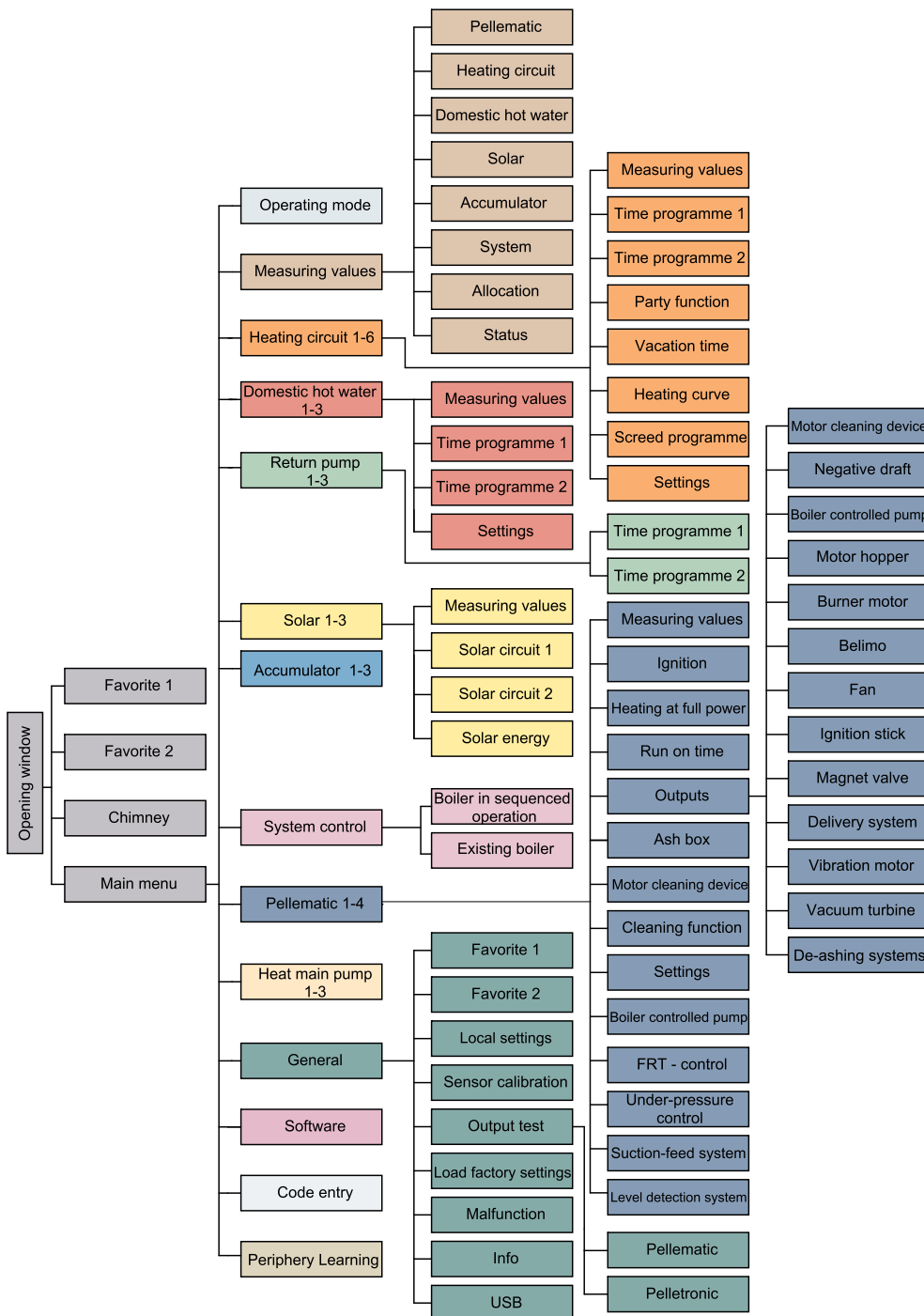
16 Start up

Start up of the heating system is based on the complete installation of the heating system and after completion and inspection of the hydraulic installation. Start up and Settings in the code-protected parameters may only be adjusted by ÖkoFEN Service technicians and qualified and authorised personnel.

Before performing start up on the installation, you must consider using the checklist for the entire heating system (see Pellematic installation instructions).

To perform the installation-specific settings, you must enter via code input into the service technician level. See Chapter 15 Code Input, page 43

Menu guide shows the menu levels and menu items of the Pelletronic heating controller with the additional menu items for ÖkoFEN Service technicians



17 Description of the heating controller module

The heating controller is designed to control the heat distribution in a heating system. It consists of a casing with an internal circuit board and terminals. The cover plate of the casing is removable.



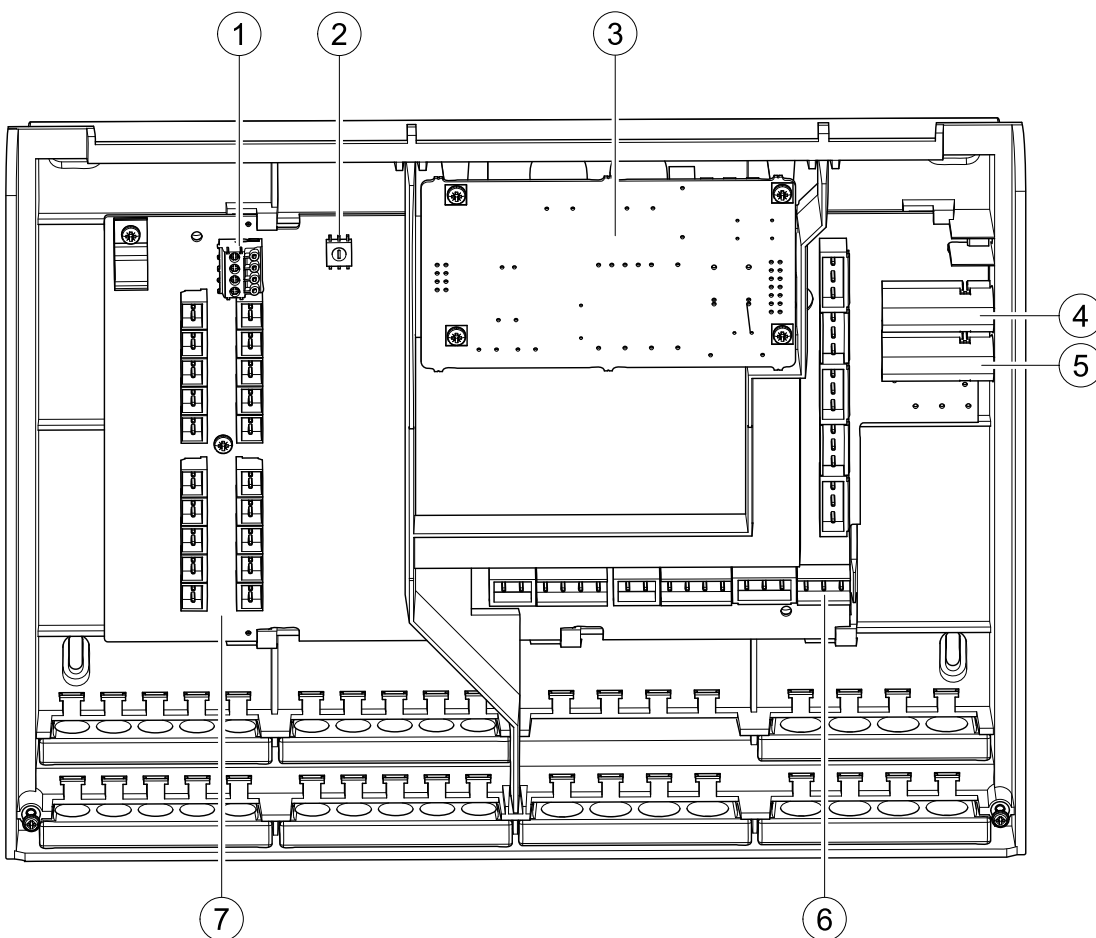
DANGER

Electric shock danger

Make sure before opening, that the whole heating system is powered down.

Note

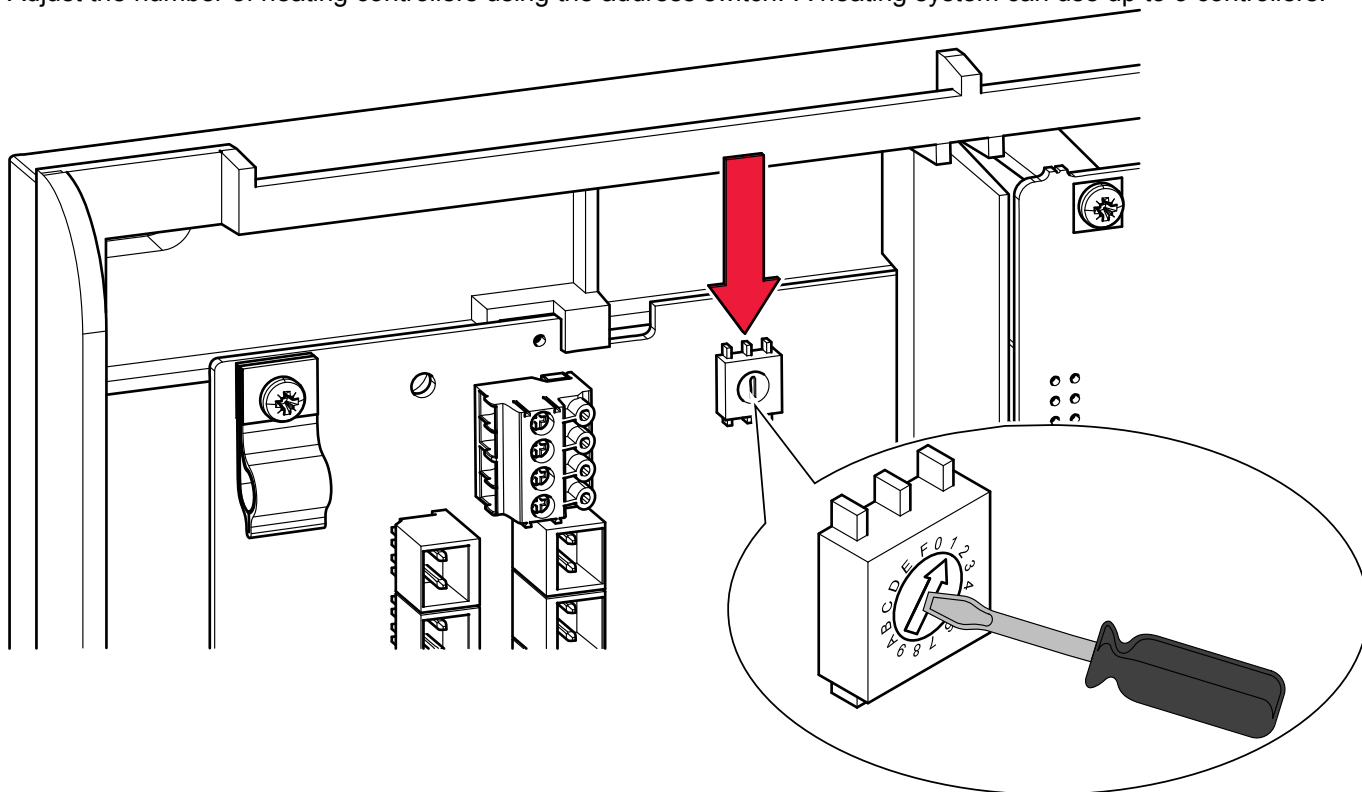
The heating controller is protected up to 8A total current consumption. Each output may be occupied with 2 A. Make sure that these values are not exceeded by the connected devices.



1	Bus connecting terminal RS485 A and B	5	Fuse 8 A (slow-acting) limits the current consumption of the heating controller.
2	Address switch	6	Low voltage – area (dangerous voltage)
3	Slot for an optional power supply (The power supply is needed when the burner control CMP 06.2 is used. The power supply takes over the bus supply.)	7	Extra low voltage (PELV)
4	Fuse 6,3 A (fast) for X31 and X33		

17.1 Setting the address at the heating controller

Adjust the number of heating controllers using the address switch. A heating system can use up to 3 controllers.



Base setting= 0

With several heating controllers you assign each heating circuit starting with 0 for the corresponding number. (0–2)

0	=	Heating controller 1
1	=	Heating controller 2
2	=	Heating controller 3

NOTICE

Property damage

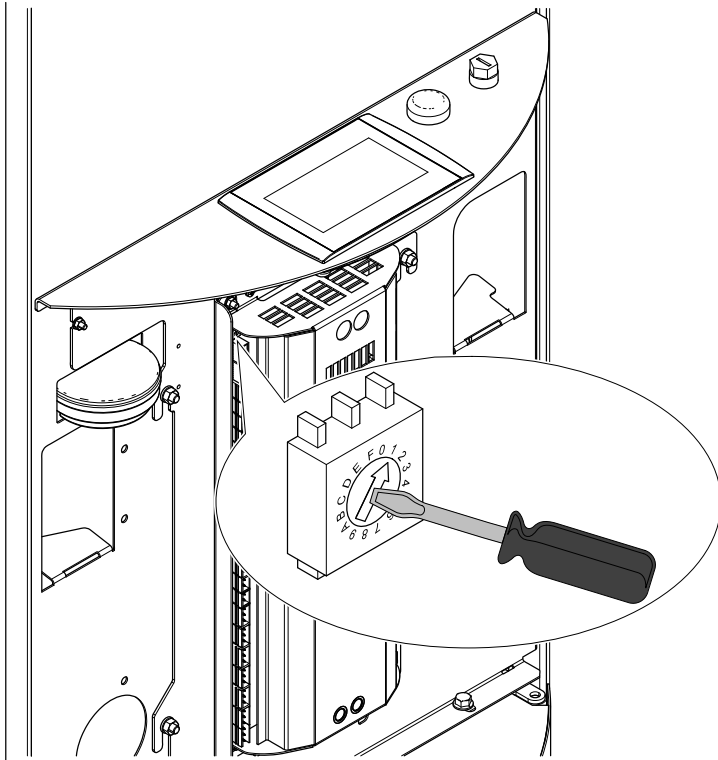
Adjust the order by using the address switch, this is only possible if the heating system is powered down.

Note

The settings in the remote control are described in the **Operation instruction Remote controller**.

17.2 Setting the address at the burner controller

Adjust the the burner controller using the address switch. If operating as a cascade system set the switch accordingly.



Base setting= 0

At the operating with cascade systems you assign to every boiler with 0 beginning the suitable number.

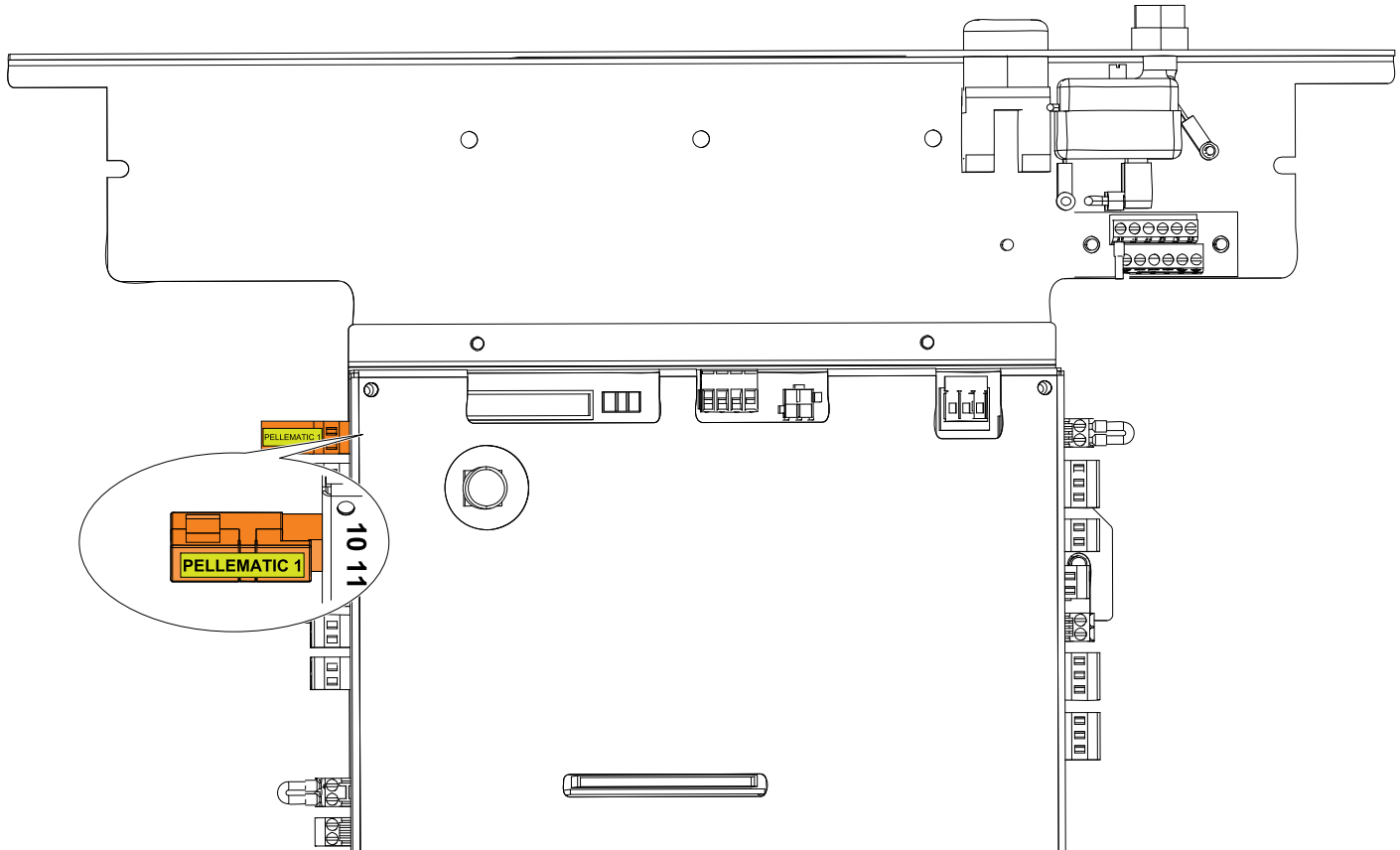
NOTICE

Property damage

Adjust the order using the address switch this is only possible when the system is powered down.

17.3 Setting the address at the boiler controller CMP

In systems with 2,3 or 4 CMP's the Pellematic plugs 1 to 4 must be inserted at the input RGF 10 11 terminal of each boiler controller before using Learn Periphery. The different Pellematic plugs 1 to 4 must be numbered according to the boiler numbers.

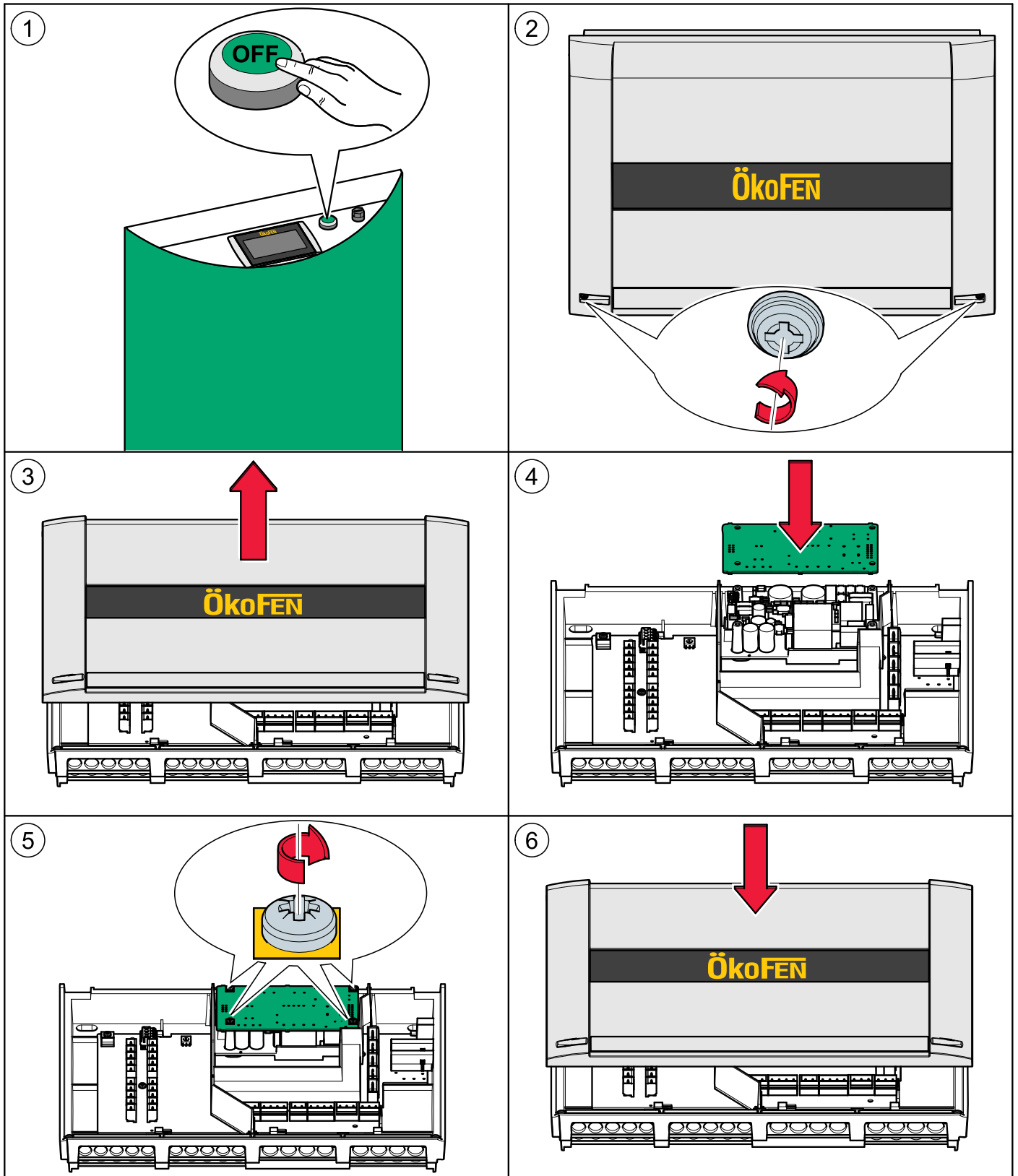


NOTICE

Property damage

Adjust the order using the address switch this is only possible when the system is powered down.

17.4 Assembly or disassembly of the power supply



17.5 Assembly and disassembly of the heating controller board

It is possible to take off the heating controller board from the controller casing without disconnecting the inputs and outputs.

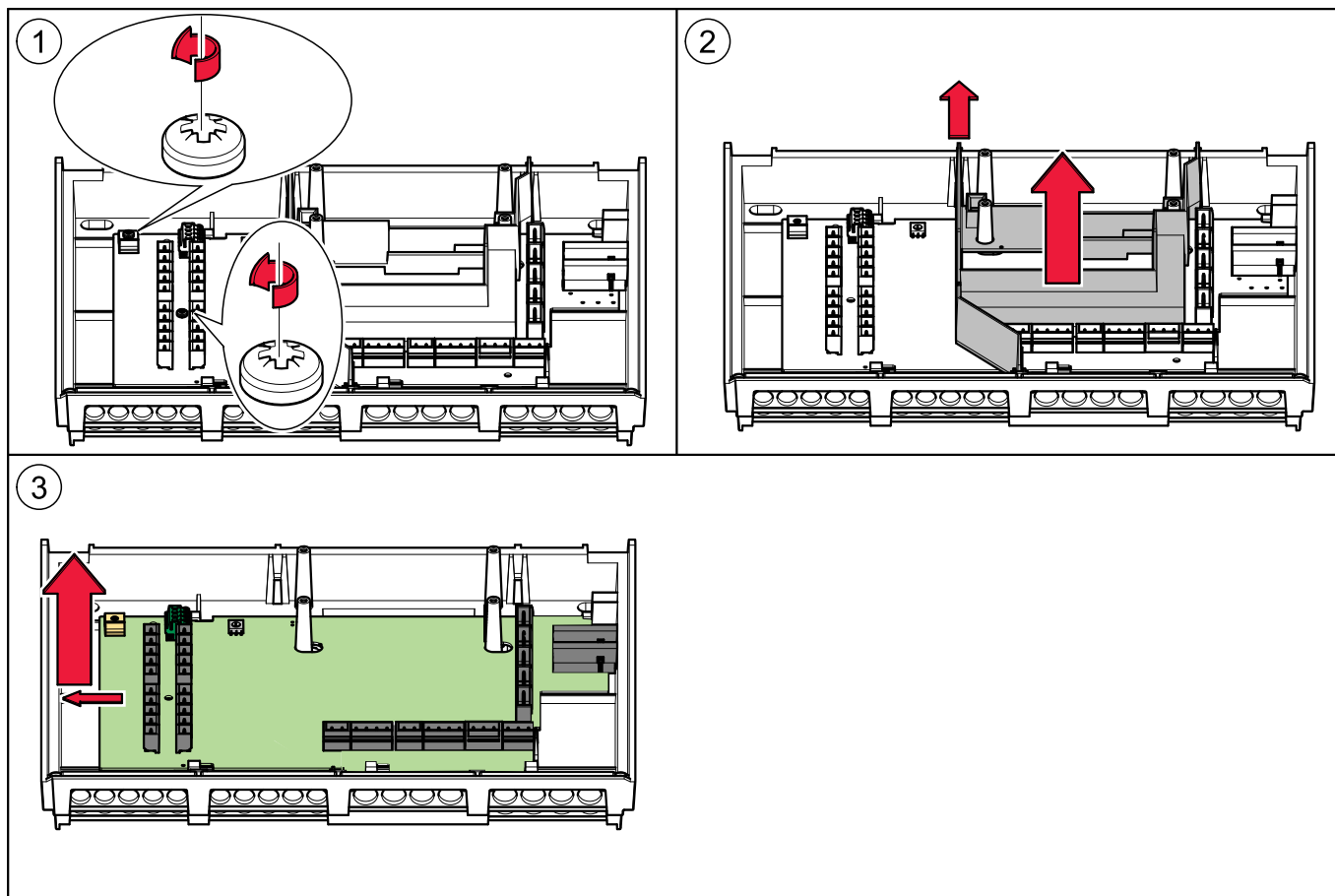
1. Make sure the heating system is powered down.

NOTICE

Electrostatic discharge damage

Before starting work, touch a grounded object to avoid damage to the insulation board by electrostatic charging.

2. Open the cover plate of the heating controller.
See previous chapter [17.4 Assembly or disassembly of the power supply, page 49](#)
3. Pull all the plugs in from the circuit board. Leave the plugs with the wiring in the casing.
4. Disassemble of the power supply (optional)
See previous chapter [17.4 Assembly or disassembly of the power supply, page 49](#)
5. Disassemble the circuit board from the heating controller.



6. The installation of a new circuit board should be in reverse order.

18 Description of the Operating device module

18.1 Replacing a Touch operating device

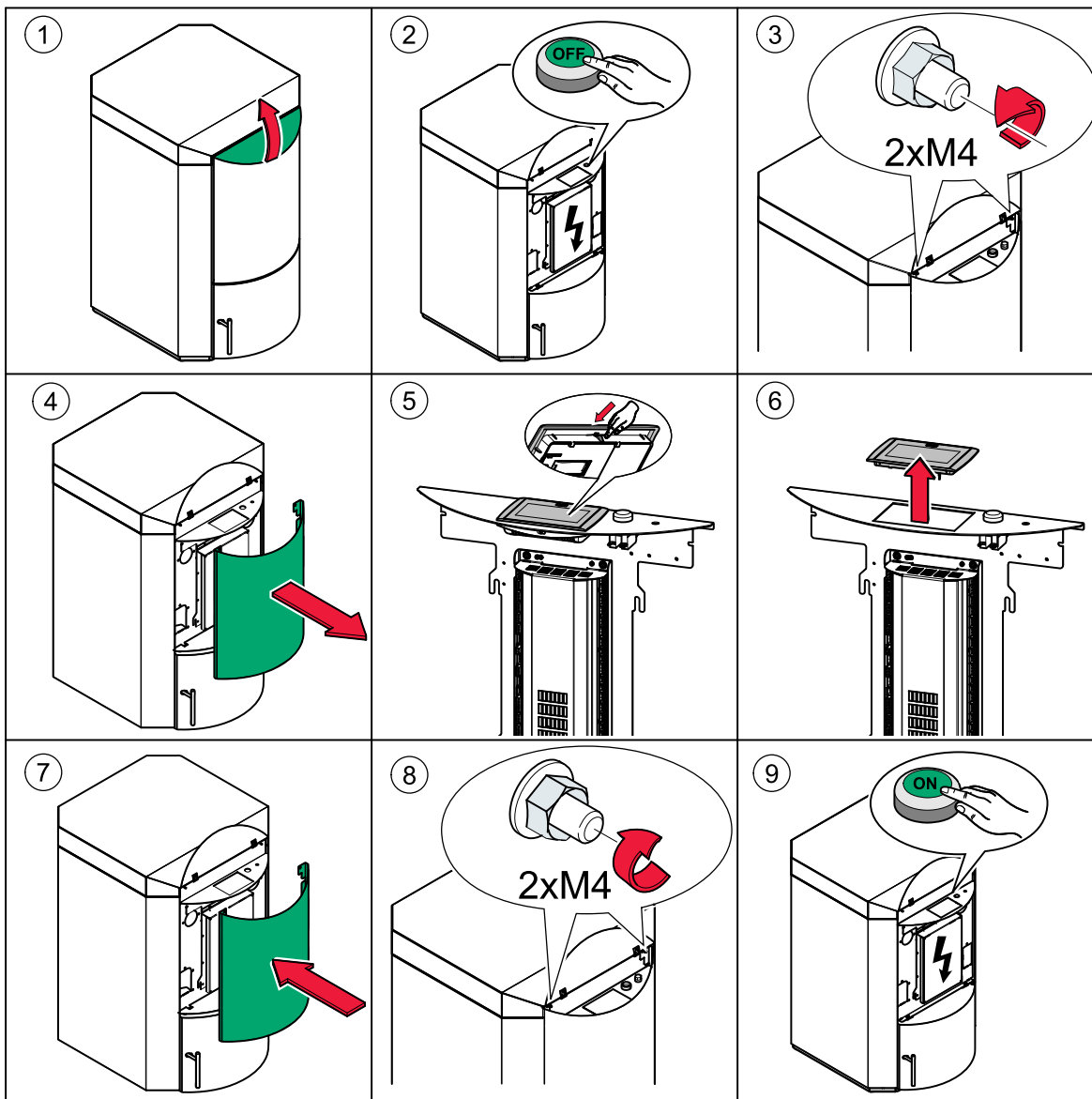
You exchange the integrated operating device (in the control panel) as follows.

DANGER

Electric shock
Switch off the system before work commences on the boiler.

NOTICE

Breakdown Touch operating device
Before you press out the Touch operating device, you must unplug all cables from the operating device.
While pressing out the operating device you have to counter the top with the palm, so that the operating device does not pop out and fall to ground.

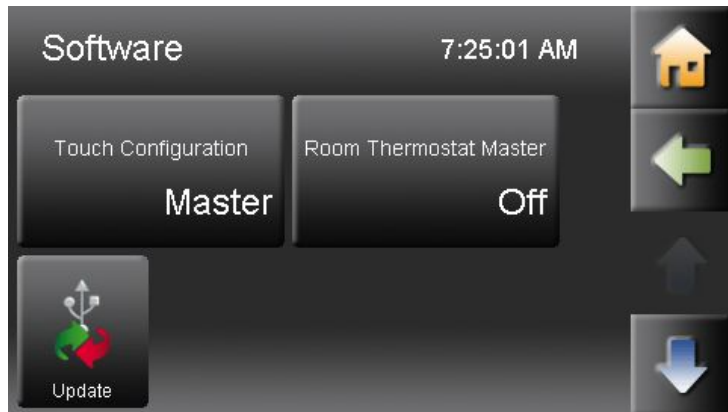


19 Software



Software is in the Main menu.

Contains the software update of the Touch heating controller, the remote control and the boiler controller, as well as the configuration from the Touch as Master (Operating device), and Slave (Remote control) and activation of the room thermostat. (Master)



19.1 Configuration

The Touch Controller is either MASTER (= Operating device) or SLAVE (= Remote control). The Touch controller is standard as **Master** configured. It must therefore be configured locally in accordance with the use.

Note

Only one Touch to be configured as Master and one as Slave per heating system

Procedure:

1. Choose menu item Software
Touch Configuration.
2. Choose for each Remote control the Configuration **Slave** and assign it to a **heating circuit**.
3. Wait until all components are booted up and operational.
4. Learn Periphery
See capitel [20 Periphery Learning, page 54](#)
5. The Operating device and the associated Remote controller are functional now.

19.2 Activating the function Room thermostat

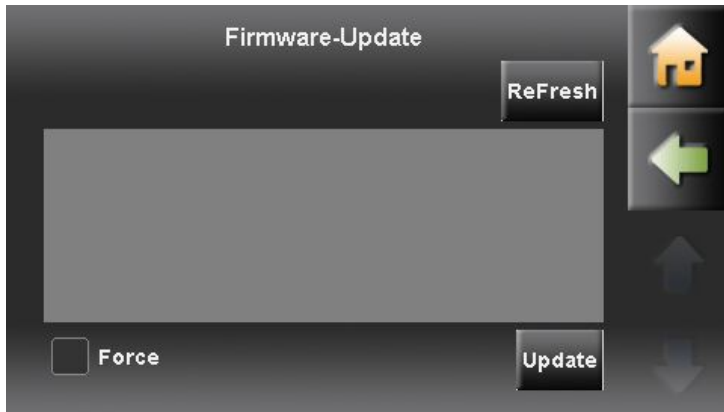
The function **Room thermostat Master** can be activated only if:

- The Touch Operating device is configured as MASTER.
- The Touch Operating device is situated in the living space.

Activate the integrated room thermostat MASTER by assigning the appropriate circuit (HC 1 – 6).

19.3 Update Heating Controller, Touch Operating device and Remote Control

The update is for the heating controller, the Touch operating device and the Touch remote control



Firmware Update — Approach:

1. Switch off complete heating system.
2. Take the touch operating device out of the control panel.
3. Plug in the USB flash drive with the new software in the back of the slot: **USB 0** of the heating controller.
4. Place the touch operating device in the control panel.
5. Switch on the heating controller.
6. Go to the **CODE** button, enter the code to reach the level settings.
7. Go to the button **Software**



8. Choose **Update**

Note

If you have forgotten to insert the USB stick - Press the **Refresh** button (wait about 1min)

9. Select the appropriate software.
10. Press the Button **Update** and reply to the query with **YES**.

19.4 Software Update

First perform a software download. In the ÖkoFEN download area is always the current software available for downloading.

Link: <http://ftp.pelletsheizung.at>

For access information, please contact your ÖkoFEN representative.

20 Periphery Learning

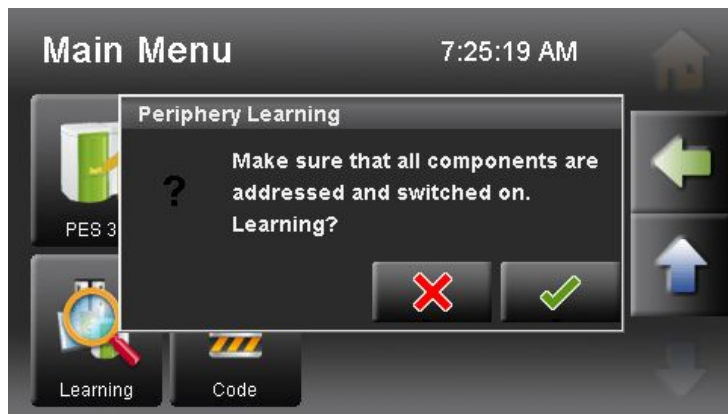
In the menu item **Periphery Learning** the heating circuit regulator recognises which components (devices, pumps, mixers and sensors) exist in the heating system. After **Periphery Learning** the Touch operating device indicates, if all components are present.

Note

All heating controllers, burner controller, touch operating devices and remote controls must be addressed and turned on.



Periphery Learning is in the Main menu.

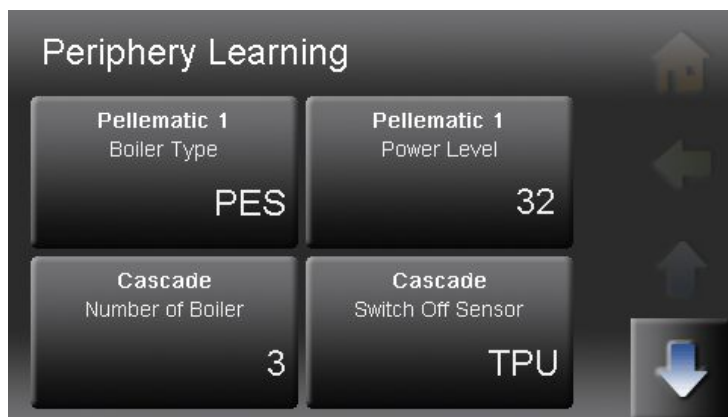


Periphery Learning appears only in the level for the ÖkoFEN service technician.

Confirm the query.

Note

After this query it is not possible to get back.



- **Cascade - number of boilers**
Enter the number of existing boilers.

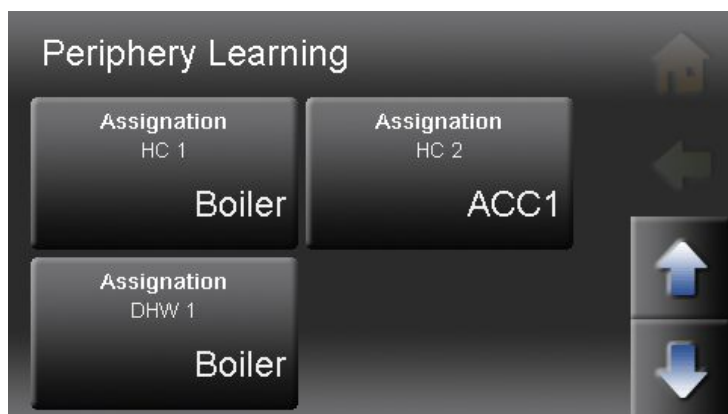
Note

If the number of boilers is higher than 1, additional settings are necessary. See [26.1 Cascade settings, page 68](#)

- **DHW - Switch On/Off - sensor**
Choose a Switch On and a Switch Off sensor.

Note

Appears only if a accumulator exists in the system.



- **Allocation**
Assign Heating circuit 1-6 and DHW 1-3 to the respective boiler or accumulator.
- Touch the Button **Periphery Learning**.
The heating circuit controller examines and recognises the existing components.

21 Heating circuits settings



Heating circuits settings is in the Main menu.



Heating circuits settings has following menu items:

- Mode
- Room Temp Heating
- Room Temp Set back
- Time Allocation
- Values
- Time 1
- Time 2
- Party
- Vacation
- Heating Curve
- Screed programme

See customer menu [7 Heating Circuit, page 16](#)



The additional menu items **Heating circuits settings** are for the ÖkoFEN Service technician. The icon setting appears in the menu Heating circuits only after the code input. Touch the Icon **Setting** to reach all other adjustable parameters.

Max Flow temperature

Set the maximum flow temperature to the chosen heating circuit.

Min Flow temperature

Set the minimum flow temperature to the chosen heating circuit.

Temperature increase
(System heat loss adjustment)

Set the boiler or accumulator temperature above the set flow temperature of the circuit calling for the highest temperature.
E.g. Set at 5°C with a heating/DHW circuit with a set temperature of 60°C the minimum boiler / accumulator temperature will be set to 65°C.
The boiler does not start when boiler/accumulator is above the minimum temperature.

Mixer Yes/No

Choose type of valve used to control heating circuits.

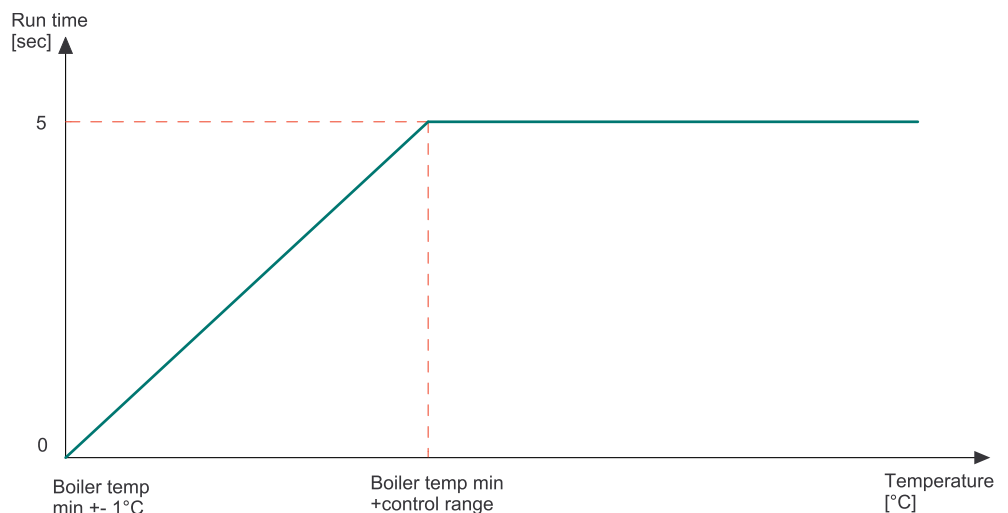
Heating circuit with mixer motor or direct heating circuit

Mixer open– rest – close

Is the opening / rest / closing time of the mixer.

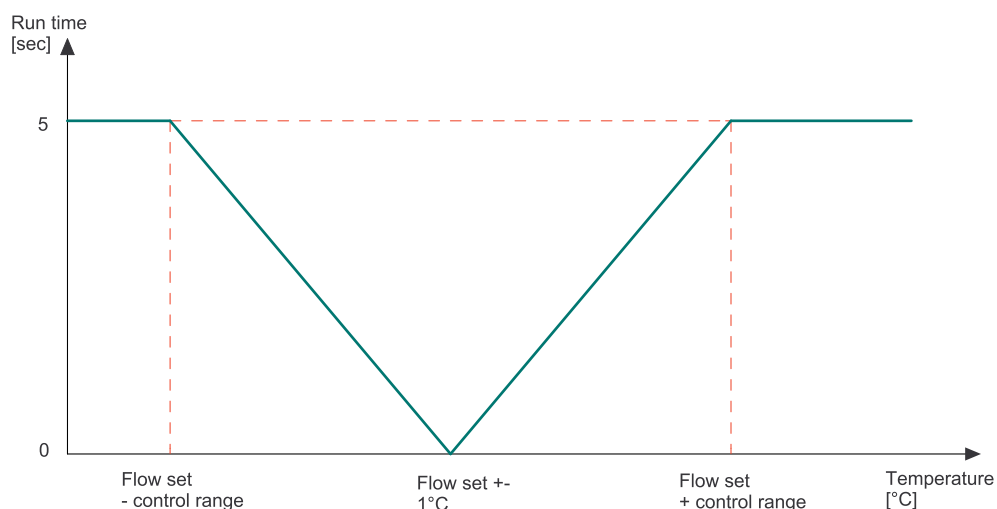
Boiler load range

The mixer opening speed increases with boiler temperature in the set range.



Flow range

This function dynamically reduces the rate at which the mixer operates to reduce boiler cycling, particularly useful when starting systems with high load.



Boiler temperature smoothing

The boiler temperature smoothing controls the boiler load by smoothing the operation of the mixer.

Note

The boiler temperature smoothing operates only on systems **without** accumulator and existing boiler.

Temperature rise

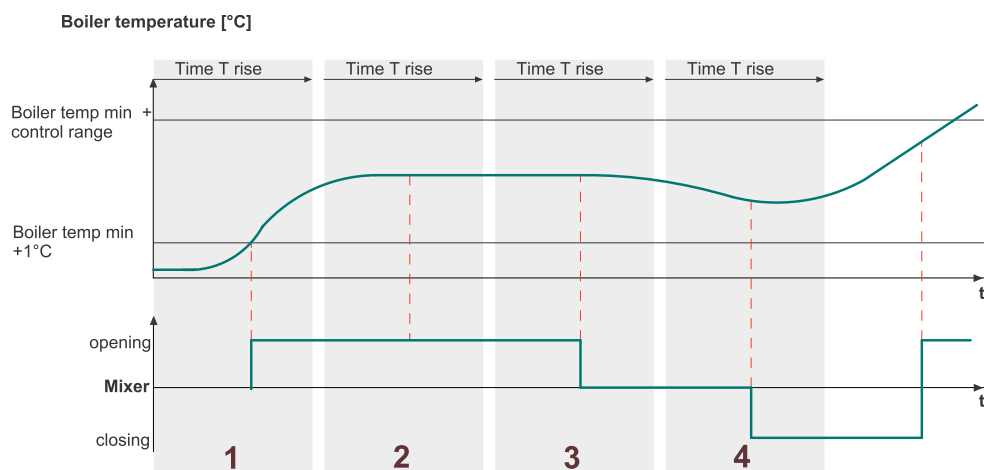
The minimum value of the temperature rise at the boiler sensor.

Boiler load control range

Is the temperature range within the Pelletronic measures.

Minimum Temp/Rise time

This is the minimum temperature rise required over the rise time.



1 The boiler temperature rises or exceeds the minimum temperature within the set rise time. The Mixer opening time is not influenced.

2 The boiler temperature remains steady within the set rise time. The mixer stays in the same position.

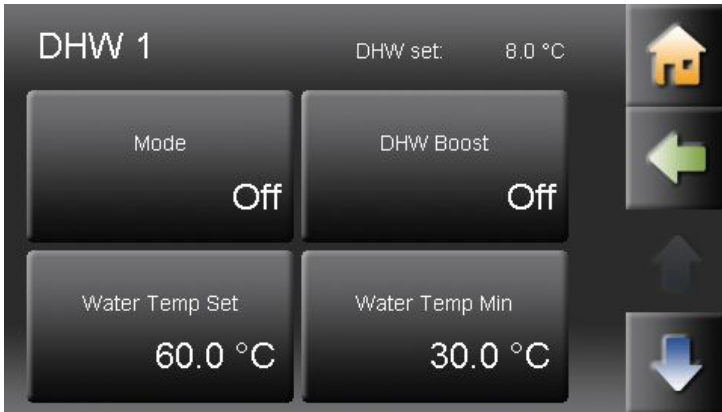
3 The boiler temperature falls within the set rise time. The mixer starts to close.

4 The boiler temperature rises or exceeds the minimum temperature within the set rise time. The Mixer opening time is not influenced.

22 DHW settings



DHW settings is in the Main menu.



DHW settings has following menu items:

- Mode
- DHW Boost
- Water Temp Set
- Water Temp Min
- Values
- Time programme
- Time 1
- Time 2

See customer menu [8 Domestic hot water \(DHW\)](#), page 25



The additional menu items **DHW settings** are for the ÖkoFEN Service technician. The icon setting appears in the menu DHW only after the code input. Touch the Icon setting reach all other adjustable parameters.

DHW priority

Switch the hot water priority on or off. DEFAULT setting ON. Useful for combination tanks with radiator systems. If ON the heating circuits will not run until the DHW reaches the set point. If OFF the DHW and heating will operate in parallel.

Temperature increase

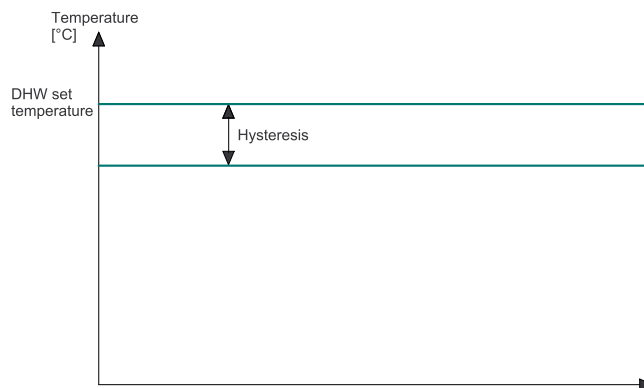
This increases the DHW set temperature. E.g. Use this function to overcome heat losses in connecting pipe work.

Pump run on

This function is set in minutes and determines the run on time of the DHW pump. This allows residual energy in the boiler or accumulator to be transferred to the DHW cylinder. E.g. 10 min or if the boiler temp is lower than DHW cylinder, whatever occurs first.

Hysteresis

Maintains the temperature of the DHW within this range during a timed or manual ON period. Only functions when the operating mode of the DHW has to be ON or AUTO. If the operating mode is set AUTO, there has to be a demand for the burner.



Legionella protection

Raises DHW cylinder temperature to Legionella pasteurisation temperature 65° on a chosen day each week. You can deactivate this function.

Note

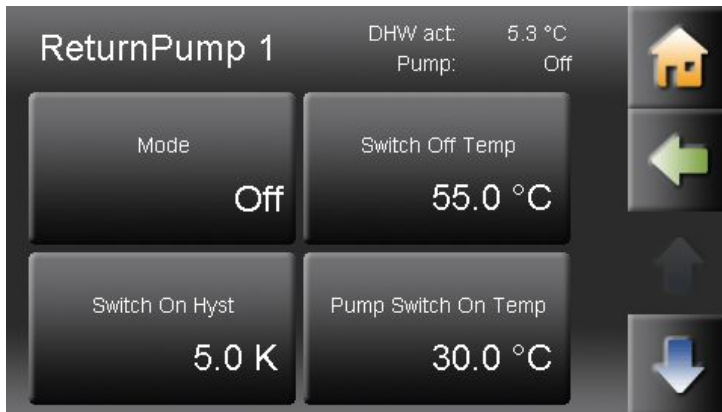
Full pasteurisation may not be possible in some types of cylinder due to position of boiler coil or other considerations, consult relevant cylinder manufactures for details.

Risk of Scolding from very hot water!

23 DHW Return Pump settings



DHW Return Pump settings is in the Main menu.



DHW Return pump settings has following menu items:

- Mode
- Switch off Temperature
- Switch on Hysteresis
- Time Allocation
- Values
- Time 1
- Time 2

See customer menu [9 DHW Return pump, page 27](#)

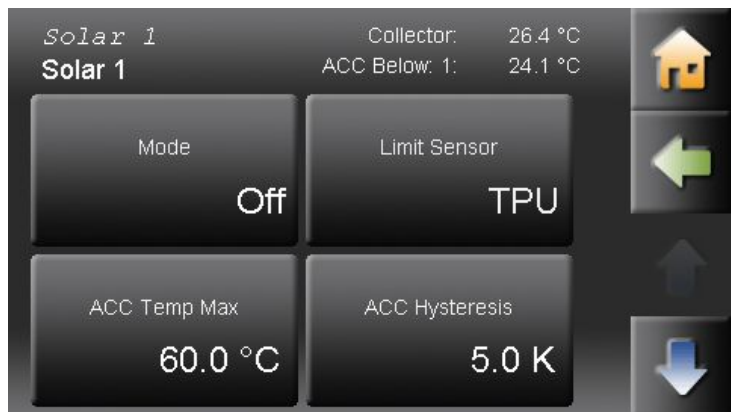
The additional menu items **DHW Return Pump settings** are for the ÖkoFEN service technician. They are present after entering the code:

- | | |
|---------------------------------|---|
| Pump release temperature | The DHW temperature must be higher than the Pump release temperature , otherwise the DHW return pump does not switch on. |
| Flushing interval | If the DHW Return Pump is not active although it is in the ON mode, the pump runs according to the Flushing interval for refreshing the return-flow sensor. |
| Purging time | Enter the Flushing time min , which the DHW Return Pump must run till the end of the flushing interval for getting correct values from the return-flow sensor. |

24 Solar settings



Solar settings is in the Main menu



Solar settings has following menu items.

- Mode
- ACC Temp Max
- ACC Hysteresis
- Collector Hyst On
- Collector Hyst Off
- Collector regulation Mode
- Collector regulation Temp Min
- Collector regulation control range

See customer menu [10 Solar](#), [page 29](#)

The additional menu items **Solar settings** are for the ÖkoFEN Service technician. They are present after entering the code:

Limit Sensor

The Limit Sensor measures the temperature in the accumulator. You can choose as limit sensor: TPO, TPM, TPU lower sensor and DHW sensor.

Solar Switch Off Coll Overheating

If the collector reaches the collector overheating temperature, the solar pump turns off.

Solar Switch Off Coll Overheating Hyst

The solar circuit pump switches on again when the collector temperature falls below the Coll Overheating minus Coll Overheating Hyst temperature.

Pump/Diverter Valve

You can choose for every solar circuit between solar pump and diverter valve.

Pump Type

Choose between A category pump and standard pump.

Pump Speed Controller

The speed regulation of the solar pump can be switched on and/or off. Only functions with suitable pumps.

NOTICE

If the pump speed control is on, standard pumps can be damaged.

D2 different types of A rated pumps: Analog pumps with 0-10 V control and PWM pumps with 24V. For each type of pump you have to adjust the signal at the heating controller.

The plug connector X34 is for the Jumper-settings. Use a jumper with a grid dimension of 2.54 mm. The terminals X11 and X21 can receive or export a different signal strength depending on the jumper position.

Terminal	Designation	Function	Plug connector	Position
X11	Out 1	PWM Out	A-B and C-D	0
		Analog Out 0-10V	A-B and C-D	X
X21	Out 2	PWM Out	E-F and G-H	0
		Analog Out 0-10V	E-F and G-H	X

0.... Jumper is not set, pins open.

X.... Jumper is set, pins closed.

Collector Protection

The collector protection function can be switched ON or OFF.

Note

Even if the operation mode of the solar thermal system is OFF, the collector protection is active, provided that it is turned on. This serves to protect the solar thermal system.

Collector Protection Protection Temp

If the collector protection function is activated and the collector sensor reaches the protection temperature, the DHW pumps and heating circuit pumps switches on. Further the mixer open till the maximum flow temperature is reached. This process stops if the collector temperature rises until the Solar Switch off / Collector Overheating.

Note

The collector protection must be set lower than the Solar Switch off / Collector Overheating.

Collector Protection Protection Temp Hyst

This process also stops when the collector temperature falls below the collector protection temperature minus protection temperature hysteresis falls.

Scavenging Mode

You can switch Scavenging ON and OFF. The scavenging process compensates different temperatures in the solar circuit.

Scavenging Rest Time Scavenging

With Rest Time and Run Time you set the scavenging interval.

Scavenging Collector Temp Min

If the collector temperature is below the collector temperature minimum, the scavenging process is not performed.

Scavenging Start Time Scavenging Stop Time

With the Start Time you set the beginning of the scavenging process. Start and Stop time are avoiding an unnecessary operation of the solar circuit pump.

Prio Mode

Systems with more than one solar hot water cylinder/combination cylinder. Select priority of solar cylinders. Allows cascade function loading of cylinders. Cylinders can be loaded in series cascade or in parallel.

Prio Run Time

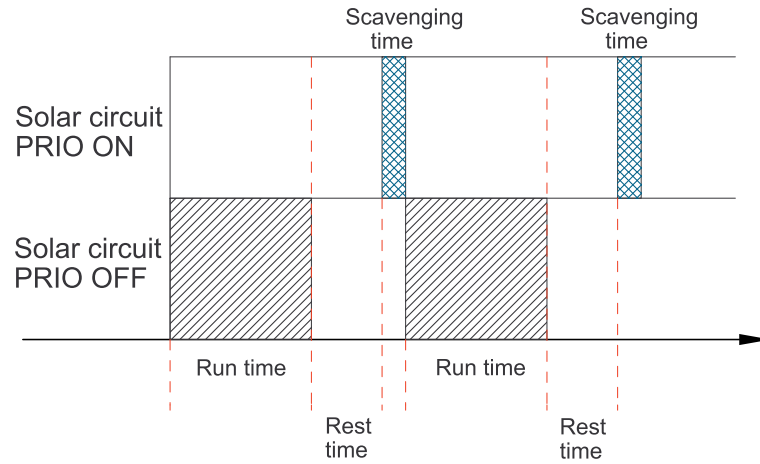
Set the solar pump pulse programme for solar circuit PRIO 2. Only for solar circuit PRIO 2 it is necessary to set the solar pump pulse programme. After the scavenging period of solar circuit PRIO 2 follows the scavenging interval of both solar circuits.

Prio Rest Time

After the scavenging interval follows the scavenging time.

Prio Scavenging Time

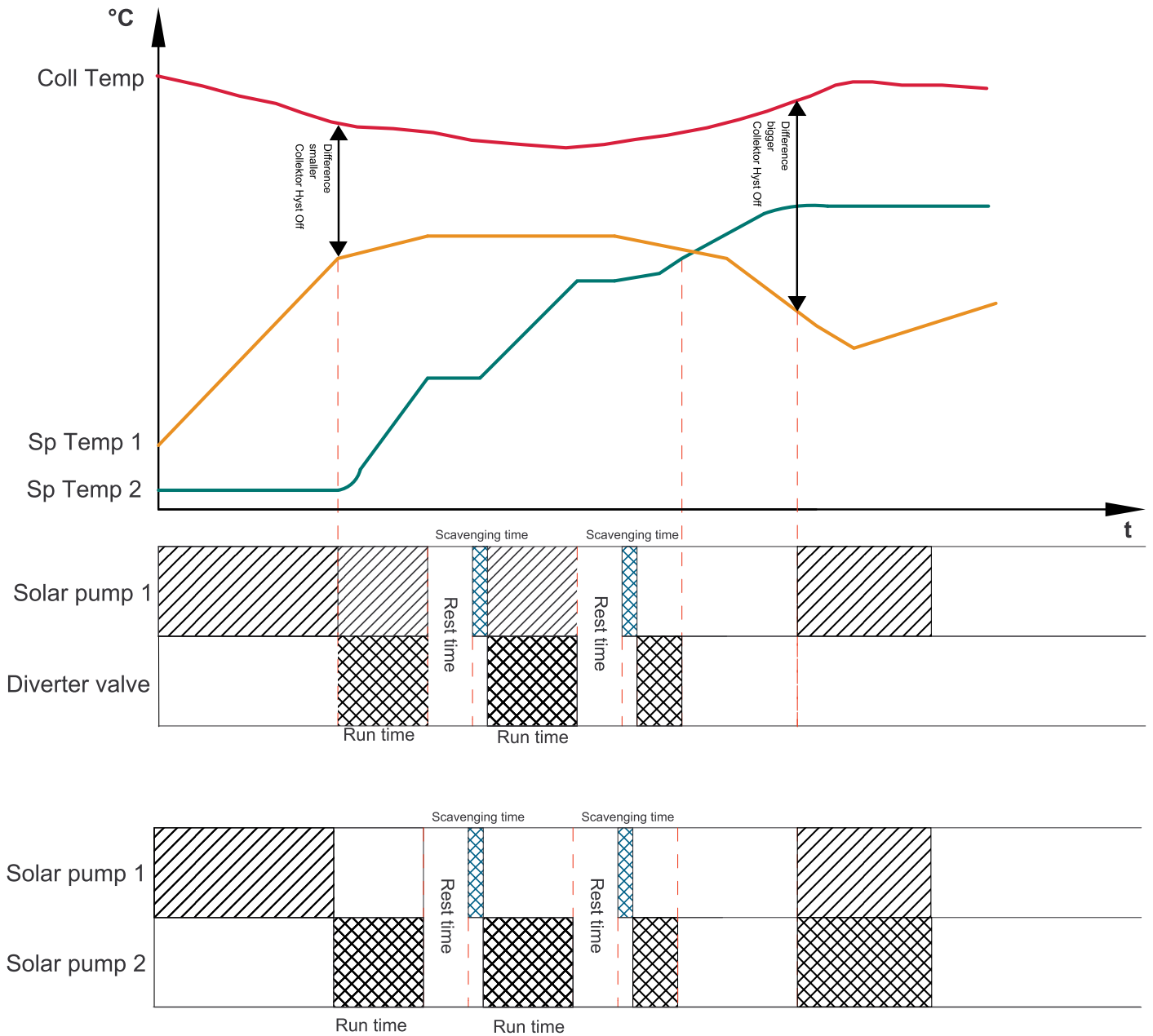
During the scavenging time the solar circuit checks, if there is a new demand for PRIO 1 or not. If there is a demand for solar circuit 1, the pump runs, if not the scavenging period of solar circuit 2 starts. If during the scavenging period of solar circuit 2 there is a demand from solar circuit 1, it will be immediately fulfilled.



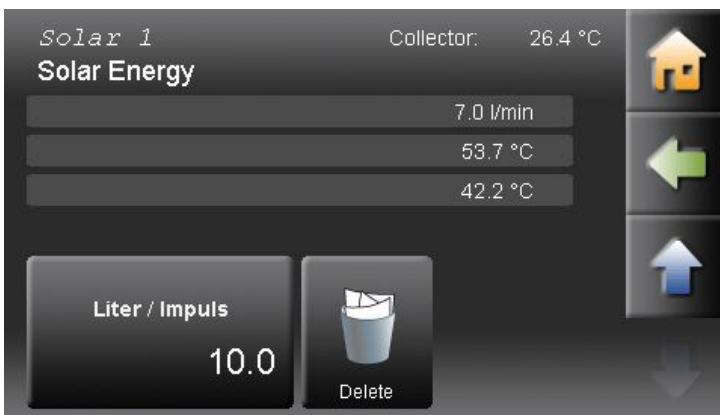
Parallel Operation Temp Difference

This setting only appears with two solar circuits with two pumps. The procedure is the same as with one pump. Additionally both pumps can run in parallel. If the temperature difference between collector and TPU lower sensor from the solar circuit with PRIO A is higher than the temperature difference, both solar circuits run parallel. The parameter value is only in solar circuits with PRIO A visible and adjustable.

Timing chart for **2 solar circuits with 1 pump and 1 diverter Valve** and **2 solar circuits with 2 pumps** (solar circuit 1 ... Prio 1, solar circuit 2 ... Prio 2):



24.1 Solar Energy settings

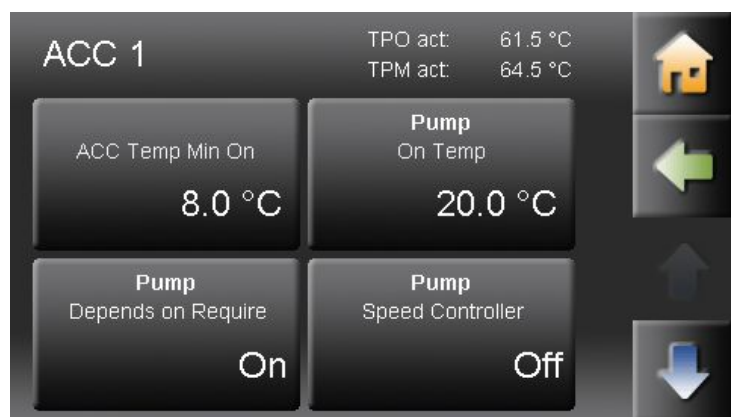


- **Litre/Pulse**
Adjust this setting to the flow rate. The basic setting 1,0 l / min corresponds to the flow rate of the ÖkoFEN profit set.
 - **Delete**
Delete the date and the gain of **Gain since**.
- Note**
Remove the date and the actual gain during the startup by pressing the Delete button.

25 Accumulator settings



Accumulator is in the Main menu. Accumulator is displayed after entering the code in the Main menu.



Accumulator has following menu items.

- ACC Temp Min On
- Pump On Temp
- Pump Depends on Require
- Pump Speed Controller
- Pump Switch Off Hyst
- Pump Run On Time
- Pump Control Range

Each heating circuit you can regulate one accumulator. You can operate maximum three heating controllers in a system.

Therefore the number of accumulators is limited to 3. Connect the sensor of the accumulator to the heating controller. Then perform **Periphery Learning**. In **Periphery Learning** you assign to the participants (heating circuit or hot water) an accumulator.

Make further adjustments in the menu **Accumulator**.

ACC Temp Min On

If the temperature at the TPO (AC upper sensor) falls below the specified value of **ACC temp min**, a burner demand occurs to load the accumulator until the TPM (AC middle sensor) reaches the limit.

Pump On Temp

If the temperature at the TPO (AC upper sensor) rises over the value of the **Pump On Temp**, all the pumps of the assigned participants are activated.

Pump Depends on Require

ON: The accumulator is loaded, the accumulator is not loaded further.
OFF: The accumulator is loaded, but the accumulator is charged further, as long as the accumulator temperature does not exceed the accumulator temperature or the boiler temperature does not exceed the Pump On Temperature.

Pump Speed Controller

Announcement of achievement of the buffer case pump at cycling mode.

OFF: The ACC pump runs not speed regulated.

ON: The ACC pump runs speed regulated.

Pump Switch Off Hyst

The **ACC Pump Control Range** at cycling mode. The ACC pump starts to run at the pump release temperature with 30% of achievement. The power increases linearly to Pump On Temp + control range on 100%.

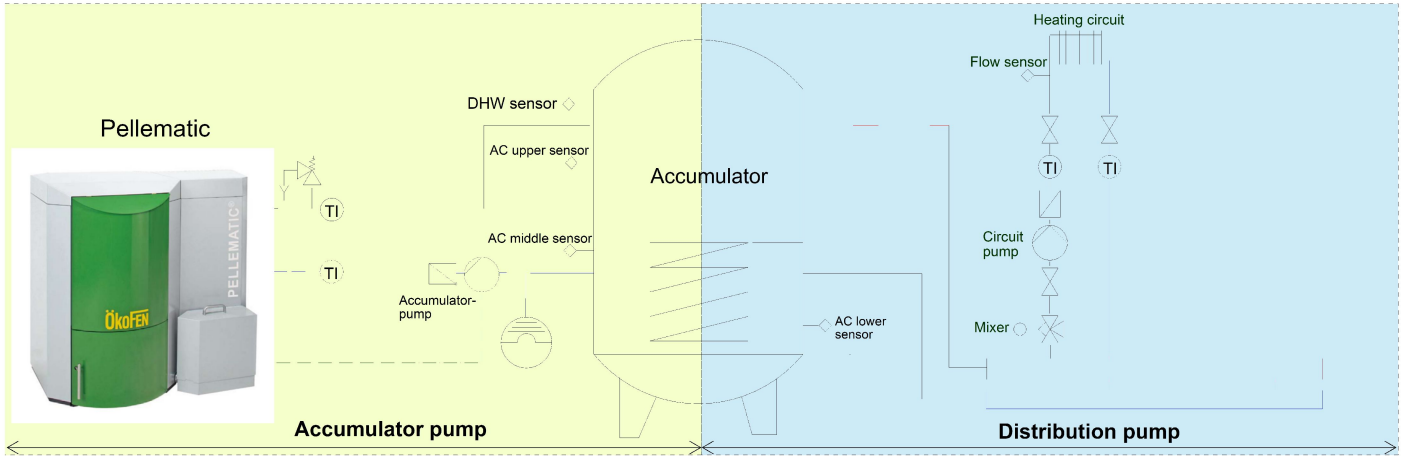
Pump Run On Time

The pump switches off only after falling short of the **Pump On Temp** minus **Pump Switch Off Hyst**.

It prevents the **ON OFF ON OFF** of the ACC pump.

Pump Control Range

Pump Control Range after switching off the burner demand – in minutes.

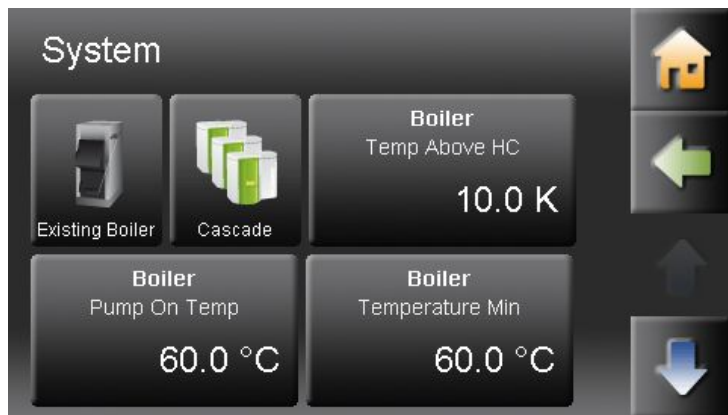


26 System Controlling

In the system menu you can adjust all heating system related parameters.



System Controlling is in the Main menu.



Existing Boiler

In the menu item **Existing Boiler** are all parameters to regulate the Pellematic with an existing boiler.

Cascade

In the menu item **Cascade** are all parameters for the regulation of 2, 3 or 4 boilers.

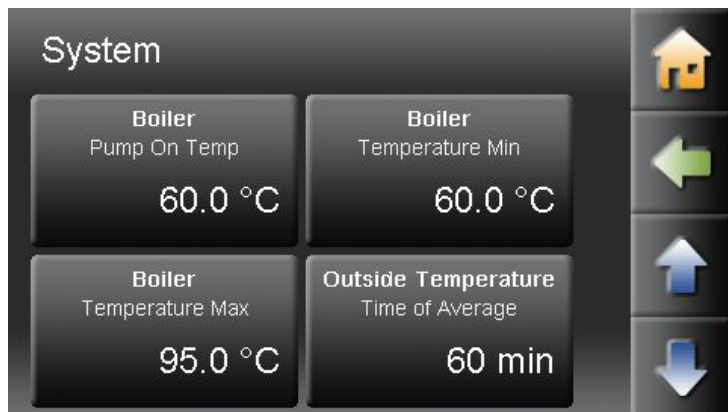
Boiler Temp Above

Boiler Pump On Temp

If the Boiler temperature reaches the **Boiler Pump On Temp**, the pumps are switched on.

Note

In heating systems with no accumulator, the **Boiler Pump On Temp** may lie not under 60°C.



Boiler Temperature Min

The **Boiler Temperature Min** protects the boiler. In heating systems with no accumulator, the **Boiler Temperature Min** may be not under 60°C.

Boiler Temperature Max

If the boiler or the accumulator reaches the **Boiler Temperature Max**, all heating circuit pumps switch on to transport the heat energy out of the boiler. This process stops when the boiler temperature falls below the **Boiler Temperature Max – Boiler Temp Above**. (e.G.: BT Max 95°C minus Boiler Temp Above 10°C = 85°C)



Frost Protection – Protection Temp

If the outside temperature falls below the **Frost Protection – Protection Temp** the heating circuits are scavenged periodically. Default is 4°C, adjustable from -20 to 4°C.

Note

The Frost Protection is additionally always active: i.e. If the temperature of the **Flow sensor** or the **AC upper sensor** is 8°C, the burner demand activated.

Frost Protection– Scavenging Time/Pause Time

If the outside temperature falls below the **Frost Protection – Protection Temp** the periodically Scavenging occurs according to Scavenging Time and Pause Time. Default values: Scavenging Time 5min and Pause Time 60 min.

Note

If the pump other reasons is activated because of the Pause Time starts again.

Outside Temperature – Time of Average

With this function you define how long the outside temperature should be determined.

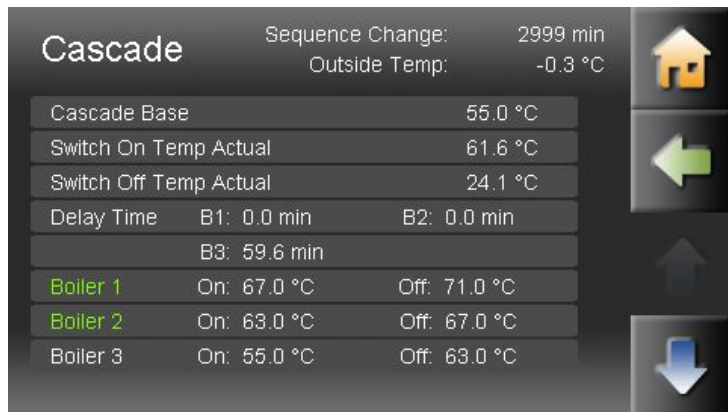
0 = no message

26.1 Cascade settings

The cascade regulates the common operation of two, three and four pellet boilers or 3 pellet boilers and a peak load boiler. Therefore are cascade systems with and without accumulator.



Cascade settings is in the Main menu. Cascade settings is displayed after entering the code in the Main menu.



Cascade settings has following menu items:

Actual values – not adjustable

- Cascade Base
- Switch On Temp Actual
- Switch Off Temp Actual
- Delay Time
- Boiler 1
- Boiler 2
- Boiler 3
- Boiler 4

Set values – adjustable

- Hysteresis
- Delay Time
- Delay Temp
- Cascade Base Min
- Sequence Changes
- Peak Load Boiler

Conditions for a cascade:

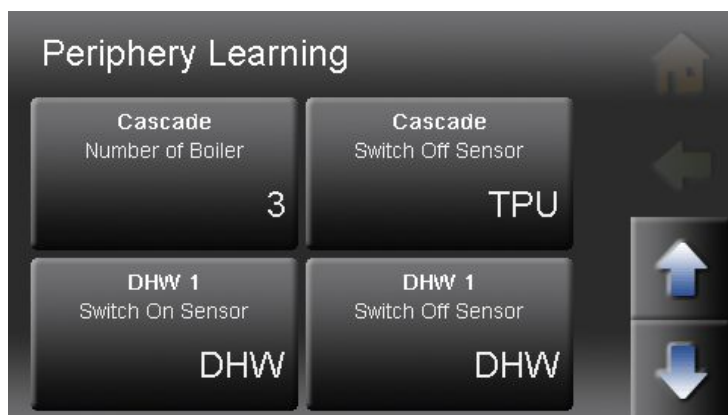
- A cascade system with an accumulator is only possible with accumulator No.1.
- If accumulator No.1 is installed all boilers must be assigned to this accumulator (No.1)
- The accumulator pump must be connected to the boiler.

Periphery Learning

Note

Prior to the **Periphery Learning**, all components must be connected properly.

The number of boilers and selection of the switch off sensor in a cascade system with an accumulator must be taken in the menu Periphery Learning. See Chapter [20 Periphery Learning, page 54](#)



Number of Boilers

Insert the number of boilers. Peak load boilers count to the number of boilers. Example: 3 Pellematic and 1 Peak load boiler results in a number of 4!

Switch Off Sensor

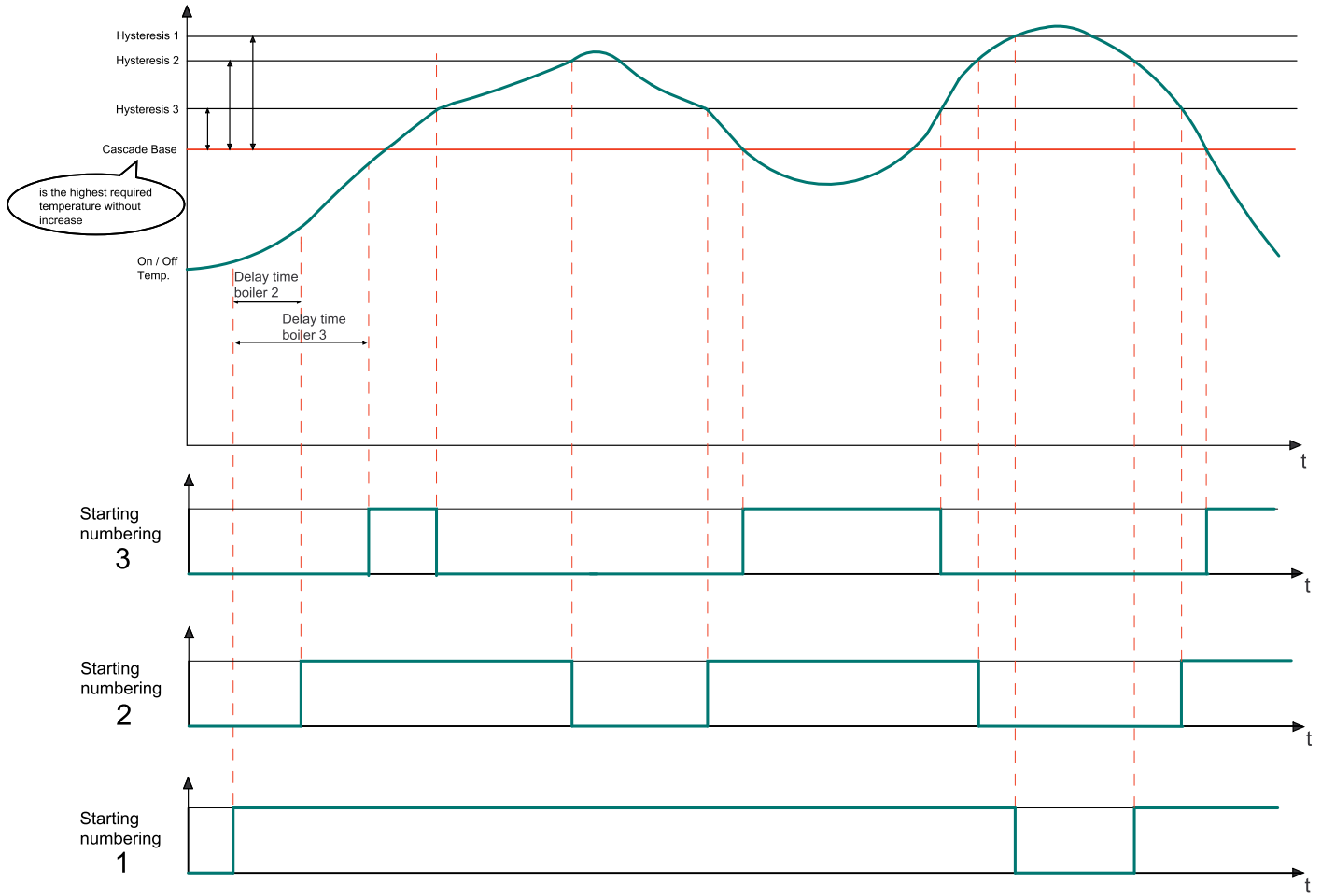
If an accumulator is present, you can choose the TPO (AC upper sensor) or the TPM (AC middle sensor) for the Switch Off Sensor. If there exists no accumulator in the system, then you do not have this choice.

Not adjustable

Cascade Base	The Cascade Base is the calculated source temperature for the function of the cascade. It results according to the amount of set values. The Hysteresis is added to the Cascade Base.
Switch On Temp Actual	The Switch on sensor at a accumulator is always the TPO (AC upper sensor) The Switch on sensor at a hydraulic seperator is the boiler sensor (switch off sensor). The Switch on sensor maesures the Switch On Temp Actual .
Switch Off Temp Actual	The Switch off sensor at a accumulator is the TPO (AC upper sensor) or the TPM (AC middle sensor) The switch off sensor at a hydraulic seperator is the boiler sensor (= switch on sensor). The switch on sensor maesures the Switch Off Temp Actual .
Delay Time	At first starts only one boiler. Each further boilers start after the Delay Time. You see the remaining Delay Time of each boiler.
Boiler 1– 4	The boilers are numbered from 1 – 4. The numbering system is the same as the actual boiler numbers. If the text of that boiler is green, it symbolises a burner demand. As well as the boiler numbering there is also sequence numbering. It can be different to the boilers numbering because of the sequence changes. The settings Hysteresis, Delay Time and Delay Temperature refer to the starting numbering of the boiler.

Adjustable

Hysteresis	The setting of the Hysteresis refers to the boilers starting numbering. For each starting numbers there is an individually adjustable Hysteresis. The Hysteresis enables a gradual ON and turn-OFF of the boilers. See graphic.
Delay Time	The setting of the Delay Time refers to the starting numbers of the boilers. Apart from the starting number 1, each starting number has a Delay Time. At first it starts only the boiler with the starting number 1. Every other boiler starts at the end of the Delay Time in which is checked if the boiler or the boilers can fulfil the requirements. With the buner demand of the boiler with starting number 1, all Delay Times starts at the same time.
Delay Temp	The setting of the Delay Temp refers to the starting numbers of the boiler. Apart from the starting number 1, each starting number has a Delay Temp. If the outside temperature is higher than the Delay Temp, there is no burner demand.
Cascade Base Min	If the Cascade Base (calculated from the set values) falls below this value it will deactivate. If there is no requirement, the cascade only activates, if the frost protection function is active (8°C).
Sequence Changes	To load the boilers equally, the starting numbers of the boilers change at the end of the time Sequence Changes . The time Sequence Changes refers to the actual boiler run time. Note With setting 0 , no Sequence Change is made! It always starts boiler No.1 at first.
Peak Load Boiler	The Peak Load Boiler is actually the last boiler (the highest boiler number). It has the highest starting number. The Peak Load Boiler is exempt from the Sequence change. It is used only for managing energy peaks and always starts at last.



26.2 Existing Boiler

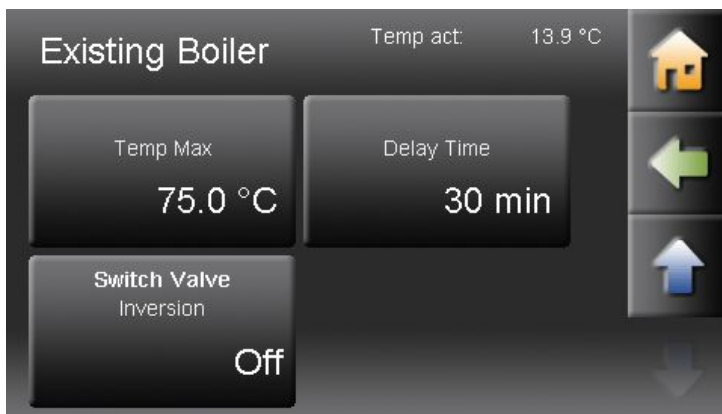
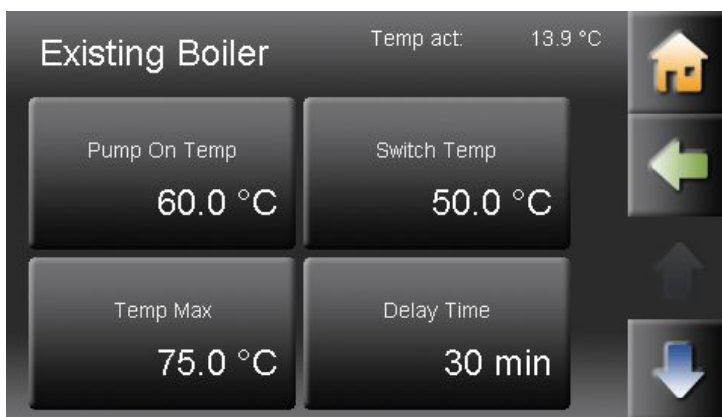
The Existing Boiler menu describes all settings required to integrate an existing boiler and control it with the Touch control system. If an existing boiler is present, it is detected from the heating controller using the boiler sensor of the existing boiler. (Terminal X13).

Additional terminals on heating controller:

- Terminal X13 — Boiler sensor Existing Boiler
- Terminal X24 — Switch valve



Existing Boiler is in the System Control menu.



Boiler Temp

Shows the actual boiler temperature. (existing boiler)

Note

The return temperature increase is not regulated by the Pelletronic Touch.

Pump On Temp

Replace with: If the Boiler temperature reaches the **Pump On Temp**, the pumps are switched on.

Switch Temp

If the **Switch Temp** is reached, the Pellematic switches off.

The switch valve stays to use the residual heat of the Pellematic.

Temp Max

If the existing boiler reaches the **Temperature Max** outside the heating times, all DHW circuits and heating circuits switch ON. (DHW preference is active).

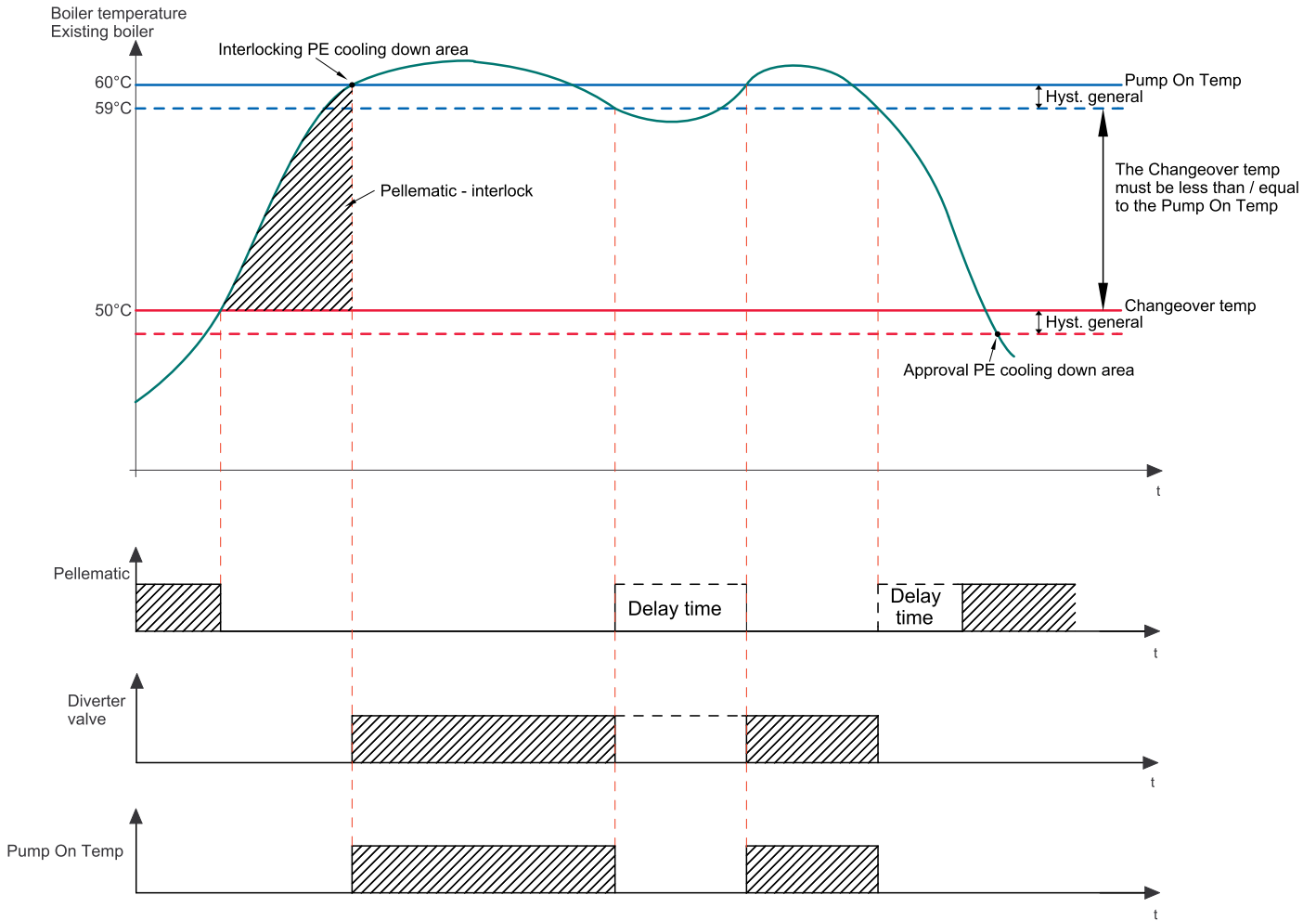
Delay Time

If the temperature of the existing boiler falls below the **Switch Temp** no burner demand is required within the delay time.

Switch Valve Inversion

The inversion of the Switch Valve turns the reserve output of the first I/O Box. An installation of the Switch Valve in both directions is possible.

The following diagram shows very well the process of action and the dependence of the parameters



If the **Existing Boiler** reaches the **Switch Temp**, the Pellematic switches off. The system draws the energy further from the Pellematic, until the **Existing Boiler** reaches the Pump On Temp. Only then the energy from the **Existing Boiler** is obtained.

Advantages:

- The available energy of the Pellematic is used as much as possible.
- The condensation of the Existing Boiler is prevented.

27 Pellematic settings

27.1 Measuring values



Measuring values is in the Pellematic menu.

Pellematic Values		7:29:33 AM
	Act	Set
Outside Temperature	-0.3 °C	
PE Boiler Temp	21.2 °C	70.0 °C
Boiler 1	On	67.0 °C
Boiler 2	On	67.0 °C
Boiler 3	Off	8.0 °C
Existing Boiler	13.9 °C	
Switch Valve	Off	

It displays all measuring values of Pellematic:

- Actual values
- Set values
- Inputs (sensors)
- Outputs (pumps, mixer and motors)

27.2 Ignition settings



Ignition settings is in the menu Pellematic.

Pellematic 1 Ignition		BT act: 21.2 °C
Burner Auger Run Time	Rest Time	
50 zs	20 zs	
Burner Fan	Flue Gas Fan	
100 %	100 %	

Ignition settings has following menu items:

- Burner Auger Run Time
- Rest Time
- Burner Fan
- Flue Gas Fan
- Hyst Flue Gas Temp
- Min Flue Gas Temp
- Max Flue Gas Temp

The additional menu items **Ignition settings** are for the ÖkoFEN Service technician. They are present after entering the code:

Burner Auger Run Time	Run duration of the burner auger during the ignition period, expressed in tenths seconds.
Rest Time	Rest Time of the burner auger during the ignition period, expressed in tenths seconds.
Burner Fan	Speed of the combustion air fan during the ignition period.
Flue Gas Fan	Speed of the flue gas fan during the ignition period.

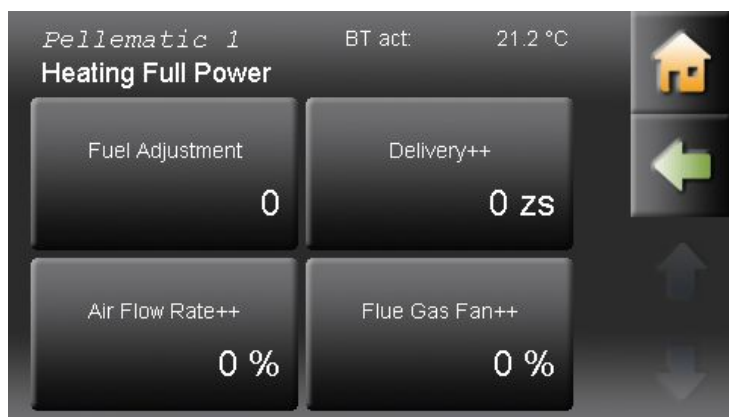
Hyst Flue Gas Temp The flue gas temperature must be above the boiler temperature plus Hyst Flue Gas Temp for a successful ignition.

Min Flue Gas Temp Is the minimum limit of the flue gas temperature for the ignition.
Max Flue Gas Temp Is the maximum limit of the flue gas temperature for the ignition.

27.3 Full power settings



Full power settings is in the menu Pellematic



Full power settings has following menu items:

- Fuel Adjustment
- Delivery ++
- Air Flow Rate ++
- Flue Gas Fan ++

The additional menu items **Full power settings** are for the ÖkoFEN Service technician. They are present after entering the code:

Fuel Adjustment

The run duration of the burner auger is calculated from the boiler controller. It is independent from the rated power and the boiler set temperature and is set automatically. The burner motor is then controlled accordingly. You can raise or reduce the run time, calculated by the boiler controller, respective in 10 steps.

Delivery ++

Adjustment of the run time of the burner motor in the Full Power mode. Expressed in tenths of a second.

Air Flow Rate ++

Adjusting the speed of the combustion air fan in the Full Power mode.

Flue Gas Fan ++

Adjusting the flue gas fan in the Full Power mode.

27.4 Run On Time settings



Run On Time is in the Pellematic menu.



Run On Time has following menu items:

- Burner Fan Performance
- Flue Gas Fan Speed
- Burner Fan Run On Time
- Flue Gas Fan Run On Time
- Burner Fan/AGT Off
- Flue Gas Fan/AGT Off
- Burner Fan/FRT Off
- Flue Gas Fan/FRT Off

The additional menu items **Run On Time settings** are for the ÖkoFEN Service technician. They are present after entering the code:

Burner Fan Performance	Adjusting the speed of the burner fan in the full power mode in percent. The speed reduces continuously in the run on time.
Flue Gas Fan Speed	Adjusting the speed of the flue gas fan in the full power mode in percent. The speed reduces continuously in the run on time.
Burner Fan Run On Time	Minimum run on time of the burner air fan at the moment of switch off in seconds.
Flue Gas Fan Run On Time	Minimum run on time of the flue gas fan at the moment of switch off in seconds
Burner Fan/AGT Off	The burner fan runs after the minimum delay time has elapsed even until the flue gas temperature is lower than the boiler temperature + the set temperature value: e.g: Boiler temperature = 76°C + 32°C = 108°C Switch off temperature.
Flue Gas Fan/AGT Off	The flue gas fan runs after the minimum delay time until the flue gas temperature is lower than the boiler temperature + the set temperature value: e.g: Boiler temperature = 76°C + 12°C = 88°C Switch off temperature.
Burner Fan/FRT Off	The burner fan runs after the minimum delay time until the combustion chamber temperature is lower than the boiler temperature + the set temperature value: e.g: Boiler temperature = 76°C + 250°C = 326°C Switch off temperature.
Flue Gas Fan/FRT Off	The flue gas fan runs after the minimum delay time until the combustion chamber temperature is lower than the boiler temperature + the set temperature value: e.g: Boiler temperature = 76°C + 150°C = 226°C Switch off temperature.

27.5 Output Settings



Output Settings is in the Pellematic menu.



Output Settings has following menu items:

- Ignition Stick
- Ash Clean
- Magnet Valve
- Boiler Clean
- Flue Gas Fan
- Boiler Control Pump
- Delivery System
- Burner Auger
- Burner Fan
- Fire Protection

The additional menu items **Output Settings** are for the ÖkoFEN Service technician. They are present after entering the code:

Display of all **Output Settings** in the system allows remote verification of pumps and valve settings.

Exception: Accumulator pump – controlled by the boiler

For each connected motor, you will see the following values: mA-actual, volt-actual, mA-minimum-set, mA-maximum-set, operating hours, Length of time in which the motor shall be located beyond the min and max values before an error message is displayed.

The min. and max. values and the duration are adjustable.

27.6 De-ashing system settings



De-ashing system settings are in the Pellematic menu.



De-ashing system settings has following menu items:

- Mode
- Minimum Run Time
- Delivery Duration
- Run On Time

The menu item **Ash Clean** is present after the activation of a external de-ashing system or a burner plate cleaning system. The activation is only possible after entering the Code for service technicians. The external de-ashing system and the burner plate cleaning system run parallel.

Mode You activate the function of an external de-ashing system and the burner plate cleaning system.
 0 = inactive, 1 = active — If you have an external de-ashing system and a burner plate cleaning system, they run parallel.
 Before each ignition the de-ashing system and / or the burner plate cleaning system are active for 20 seconds.

Note

If there is no burner demand longer than 5 days, the de-ashing system activates itself on Friday on 12:00 for 3/5 minutes. This prevents a ash solidification around the auger.

Minimum Run Time Is the Minimum Run Time of the boiler until the next ash removal sequence. Value adjustable.

Delivery Duration Is the run time of the ash auger. Value adjustable.

Run On Time Remaining Run Time of the boiler after the error message "ash box full" until it switches off completely.

27.7 Boiler cleaning



Boiler cleaning is in the Pellematic menu.

Set the boiler cleaning according to your requirements.

- Cleaning/Filling
- Cleaning 2
- Min Run Time
- Cleaning Time

See customer menu [11.6 Boiler Cleaning, page 35](#)



27.8 Washing



Washing is in the Pellematic menu.



Washing has following menu items:

- Mode
- Min Run Time
- Washing Time

Set the washing function according to your requirements.

Mode Activate the washing function (ON/OFF)

Note

After Learning Periphery in systems with condensing technology, the mode is ON by default.

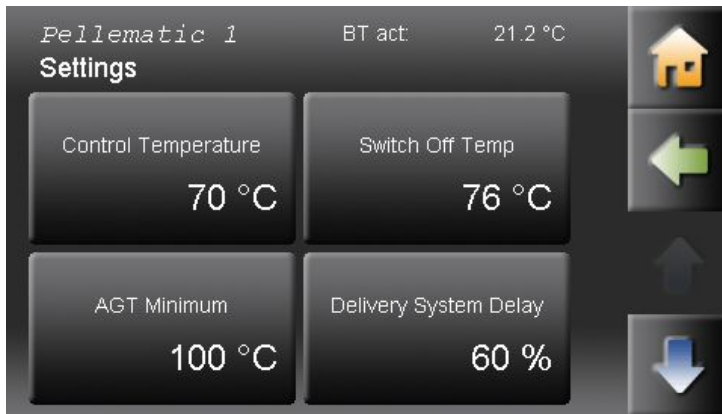
Min Run Time Minimum Run Time of the boiler until the next cleaning.

Washing Time Duration of boiler cleaning in seconds.

27.9 Settings



Settings is in the Pellematic menu.



Settings has following menu items.

- Control Temperature
- Switch Off Temp
- AGT Minimum
- Delivery System Delay
- Burner Demand
- Malfunction Mode
- Hand Filling Hopper
- Capacitive Sensor RA Active
- Capacitive Sensor ZW Active

The additional menu items **Settings** are for the ÖkoFEN Service technician. They are present after entering the code:

Control Temperature	Setting the boiler temperature set.
Switch Off Temp	Reaching the Switch Off Temp, the boiler switches off.
AGT Minimum	AGT Minimum is to regulate of the boiler performance. If the Flue gas minimum temperature falls below, the boiler power increases independently of the boiler temperature, Displayed only with connected flue gas sensor.
Delivery System Delay	Delay of the Delivery System relative to the burner auger – only on auger systems.
Burner Demand	Choose between 2 types of regulating the burner: Standard: Boiler runs in accordance with the burner demand of the heating controller. Impuls: Boiler starts when the heating controller sends a one-time signal and switches off when the Switch Off Temperature is reached.
Malfunction Mode	If a malfunction occurs, the boiler controller controls the relay fault signal. The potential-free contact (Output SM 20 19) displays the malfunctions by using an external display device. (1–230V). You can choose the following functions: On / Off: By warning Ash or warning Pellets the contact closes 1x: If a malfunction occurs, the contact closes – Closed By warning "Ash box full" appears a flashing pulse. (Contact closes once) blinc: 1 Pulse = all other malfunctions 2 Pulses = one sensor is defect 3 Pulses = one motor is defect 4 Pulses = Safety temperature sensor or emergency stop switch is defect.
Hand Filling Hopper	Setting, if Pellematic is installed as a Hand filling hopper. 0 = inactive, 1 = active

Capacitive Sensor RA Active
Capacitive Sensor ZW Active

Activate the capacitive sensor on the burner.
 0 = inactive
 Activate the capacitive sensor on the hopper.
 0 = inactive, 1 = active

Do you have a burner plate cleaning system, it runs parallel with the external de-ashing system.

Note

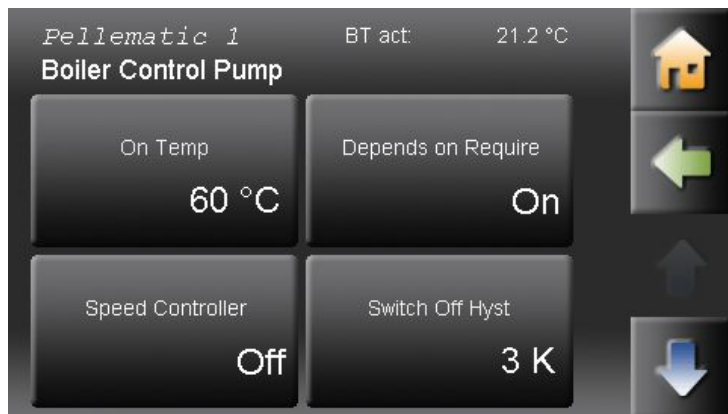
Replace with: If the boiler has had no burner demand in 5 days the de-ashing system will automatically activate on Friday at 12:00 for 3/5 minutes. This prevents the settling of ash in the auger.

Before each ignition the de-ashing system and / or the burner plate cleaning system are active for 20 seconds.

27.10 Boiler Controlled Pump



Boiler Controlled Pump is in the Pellematic menu.



Boiler Controlled Pump has following menu items

- On Temp
- Depends On Require
- Speed Controller
- Switch Off Hyst
- Run On Time
- Control Range

Note

The output Boiler controlled Pump is limited to 2.5A.

The additional menu items **Boiler Controlled Pump** are for the ÖkoFEN Service technician. They are present after entering the code:

- On Temp** When reaching the **On Temp** the output UW is activated or switched on the Boiler Controlled Pump. The On Temp is the boiler temperature minimum.
- Depends On Require** When reaching the **On Temp** and an existence of **Depends On Require** the output UW is activated. (The burner run on time is considered)
- Speed Controller** The **Speed Controller** allows (after their release - On Temp and Depends On Require) the Boiler Controlled Pump in the cycling mode.
- Switch Off Hyst** The **Switch Off Hyst** is the hysteresis for the boiler temperature minimum. It prevents the clocking (ON OFF ON OFF) of the Boiler Controlled Pump.
- Run On Time** The **Run on time** is how long the UW continues to run after the end of burner demand. – in minutes
- Control Range** Is the **Control Range** of output UW at cycling mode. The speed controller starts at the boiler temperature minimum with a speed of 30% and increases to the boiler temperature minimum + **Control Range** up to 100% speed.

27.11 FRT Controller



FRT Controller is in the Pellematic menu.



FRT Controller has following menu items.

- Mode
- Min Temp
- Set Value ++
- Limit Up
- Limit Down
- PID Controller Amplification
- PID Controller Time Integral
- PID Controller Time Differential

The additional menu items **FRT Controller** are for the ÖkoFEN Service technician. They are present after entering the code:

Mode	The activation of the FRT Controller of the combustion chamber temperature is only possible with a connected combustion chamber sensor. On... FRT Controller active Off... FRT Controller inactive
Min Temp	Is the combustion chamber temperature minimum for a successful ignition.
Set Value ++	Set Value ++ for the regulation of the combustion chamber temperature.
Limit Up	If the combustion chamber temperature falls below the Set Value ++ , increases the run time of the burner auger maximum of this percentage.
Limit Down	If the combustion chamber temperature raises above the Set Value ++ , decreases the run time of the burner auger maximum of this percentage.
PID Controller Amplification	P-contingent for the regulation of the combustion chamber temperature.
PID Controller Time Integral	I-contingent for the regulation of the combustion chamber temperature.
PID Controller Time Differential	D-contingent for the regulation of the combustion chamber temperature.

27.12 Negative Draft



Negative Draft is in the Pellematic menu.



Negative Draft has following menu items.

- Mode
- Set Value
- Malfunction Time
- Minimum
- Maximum
- Washing
- PID Controller Amplification
- PID Controller Time Integral
- PID Controller Time Differential

The additional menu items **Negative Draft** are for the ÖkoFEN Service technician. They are present after entering the code:

Mode

Set Value

If the Negative Draft falls in the combustion chamber under the **Set Value**, the speed of the flue gas fan increases. Increases the negative draft, the speed of the flue gas fan reduces again. Value = 0, the Negative Draft control is inactive. (Displayed only with connected Negative Draft measuring)

Malfunction Time

If the negative pressure in the combustion chamber is below longer than the adjusted error time, the system shows the malfunction „Flue gas fan???”

Minimum

If the negative draft **Minimum** in the combustion chamber is below and for longer than 1 minute, the system goes into Malfunction. Value = 0 the Negative Draft control is inactive. (Displayed only with connected Negative Draft measuring)

Maximum

If the negative draft **Maximum** in the combustion chamber is exceeded for longer than 1 minute, the system goes into Malfunction. (Displayed only with connected Negative Draft measuring)

Washing

The function **Washing** is only available at condensing boiler systems. If the in **Washing** adjusted Negative Draft falls below, the scrubber cleans the heat exchanger of the condensing boiler. The Washing occurs to the opposed washing duration and the washing interval, though maximum 1x per hour.

PID Controller Amplification

P-contingent for the regulation of the combustion chamber (Displayed only with activated negative draft control)

PID Controller Time Integral

I-contingent for the regulation of the combustion chamber (Displayed only with activated negative draft control)

PID Controller Time Differential

D-contingent for the regulation of the combustion chamber (Displayed only with activated negative draft control)

28 Heating Main Pump



Heating Main Pump is in the Main menu.



If no return temperature sensor of the return pump is connected to the system, the Heating Main Pump appears automatically in the Main menu. Each heating controller there is a maximum of one heat main pump possible. You switch the Heating Main Pump ON and OFF. The Heating Main Pump is a backup pump. You assign the pump to all available pumps in the system. When you click on an icon, it lights up green. A green icon symbolises an assigned pump.

Note

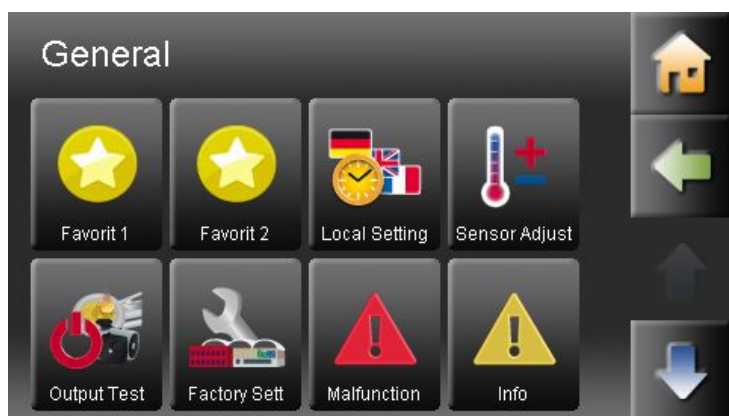
A Heating Main Pump and a Return Pump exclude themselves.

29 General settings

General settings includes the whole heating control, all relevant settings and individual operation options for the customer.



General settings is in the Main menu.



General settings contains:

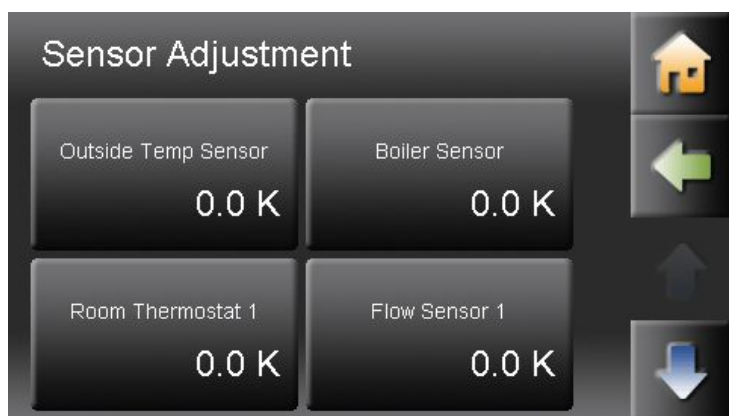
- Favorit 1
- Favorit 2
- Local Setting
- Sensor Adjust
- Output Test
- Factory Setting
- Malfunction
- Information
- USB



29.1 Sensor Adjust



Sensor Adjust is in the menu General Settings



For long cable lengths are slight variations of the sensor values possible. The Sensor Adjust function allows you to adjust each sensor by plus/ minus 10° C.

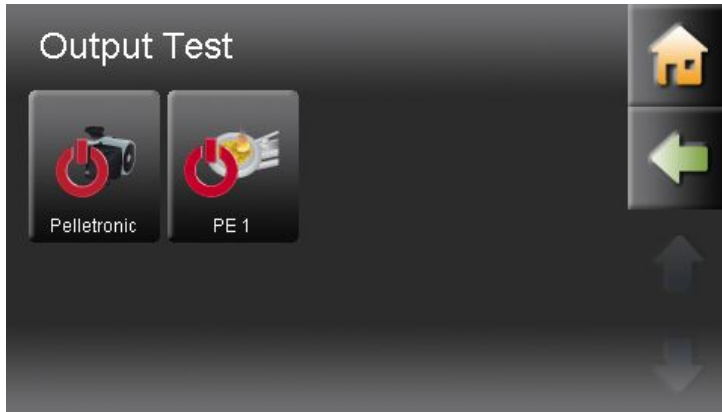
Note

You have to connect each sensor to the heating controller and activate it in the menu item Periphery Learning.

29.2 Output Test



Output Test is in the menu General settings.



In the menu Output Test you choose between the outputs of the Pelletronic heating controller and the Pellematic boiler control.

Output Test Pelletronic:

You find all the heating controller connected devices. You can switch each device on and off.

Output Test Pellematic:

You find all the boiler control connected devices. You can switch each device on and off.

29.3 Factory setting



Factory setting ist in the menu General settings.

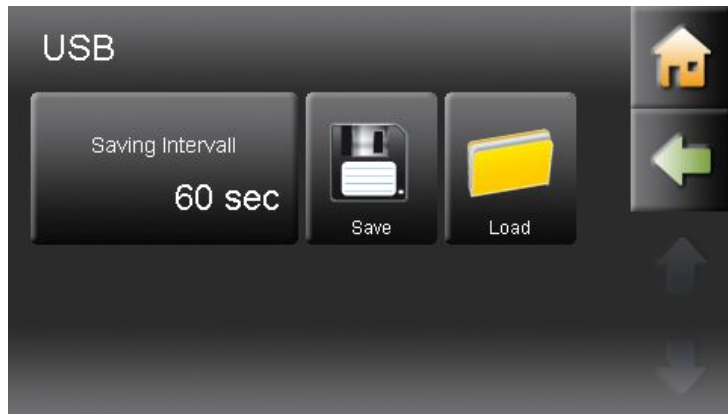


You can restore the original factory settings.

29.4 USB



USB is in the menu General settings.



USB is used for recording data. You must have plugged in USB stick.

- **Save**
Used to ensure the individual settings on site before you make any software updates. With the file name which you enter here, you can access the data when loading settings again.
- **Load**
Load the saved settings after a software update.

30 Appendix

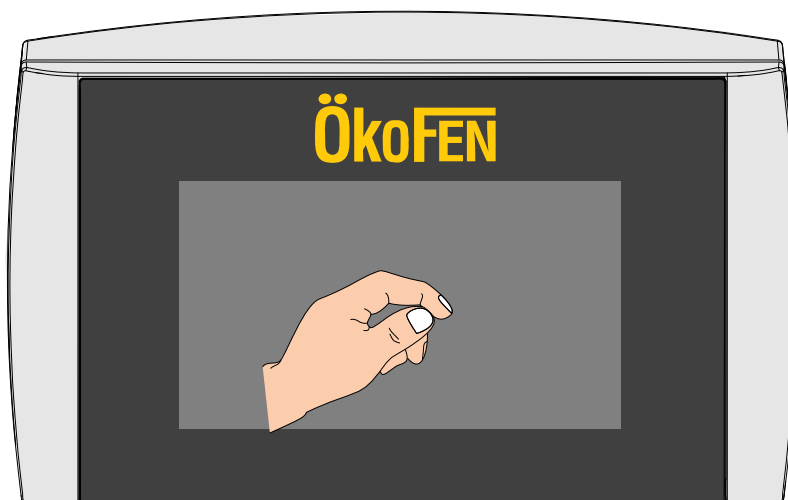
30.1 Calibration

Execute a calibration as follows.

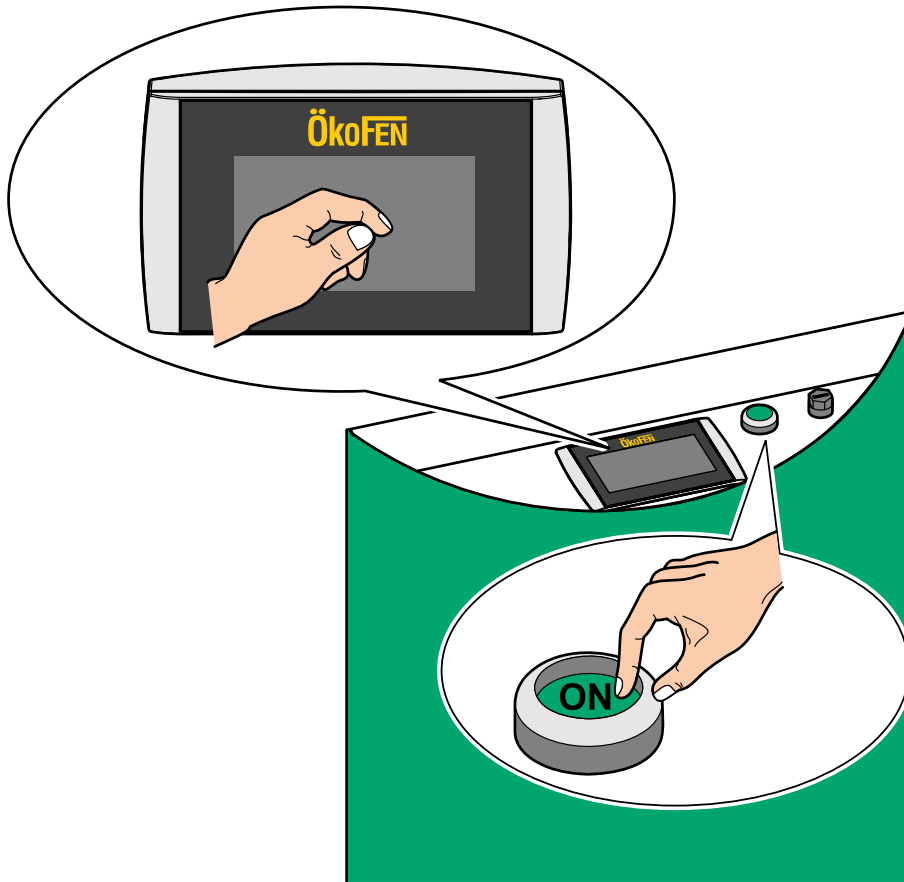
1. Switch off the whole heating system



2. Press by using a finger on the Touch operating device.



3. Keep your finger pressed and switch the boiler on again.



4. After a few seconds of waiting time the following mask appears on the Touch operating device:



5. Now press the crosshairs in the row they appearing concentric. Use a pen or similar for a more precise adjustment.



NOTICE

Property damage

Be careful well when using the touch screen surface!

NOTICE

Decalibration

Do not place items on the Touch operating device!

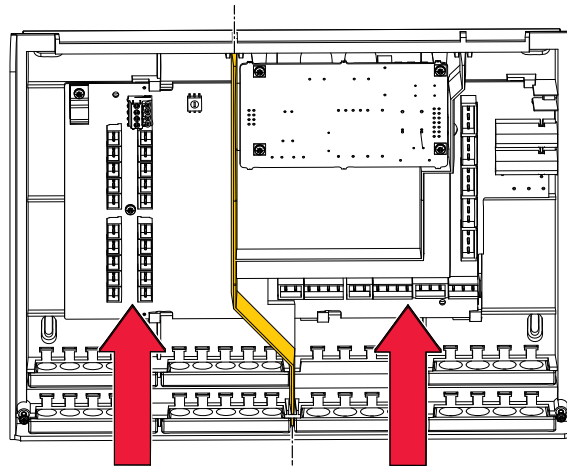
30.2 Connection plan

The Connection plan is a description of all the electrical connections from the Pelletronic heating controller:

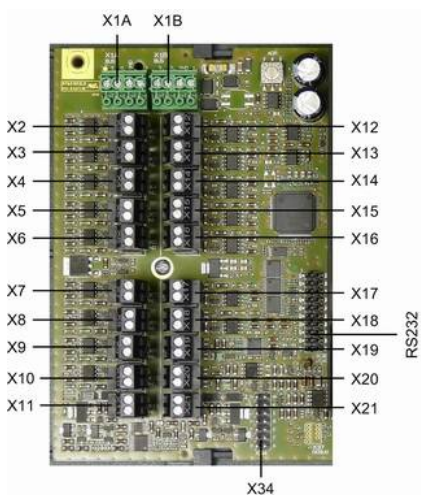


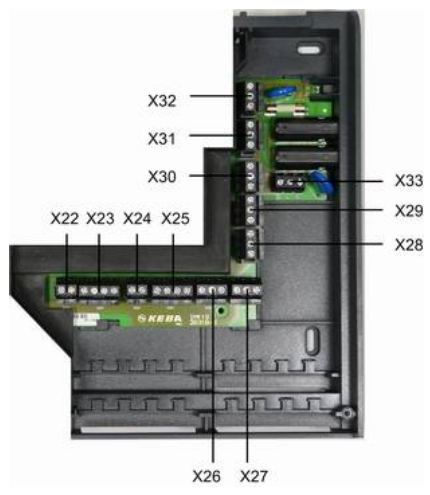
DANGER

Only an authorised technician may perform the electrical installation of the heating controller. Make sure the whole system is powered down and isolated before commencing work.



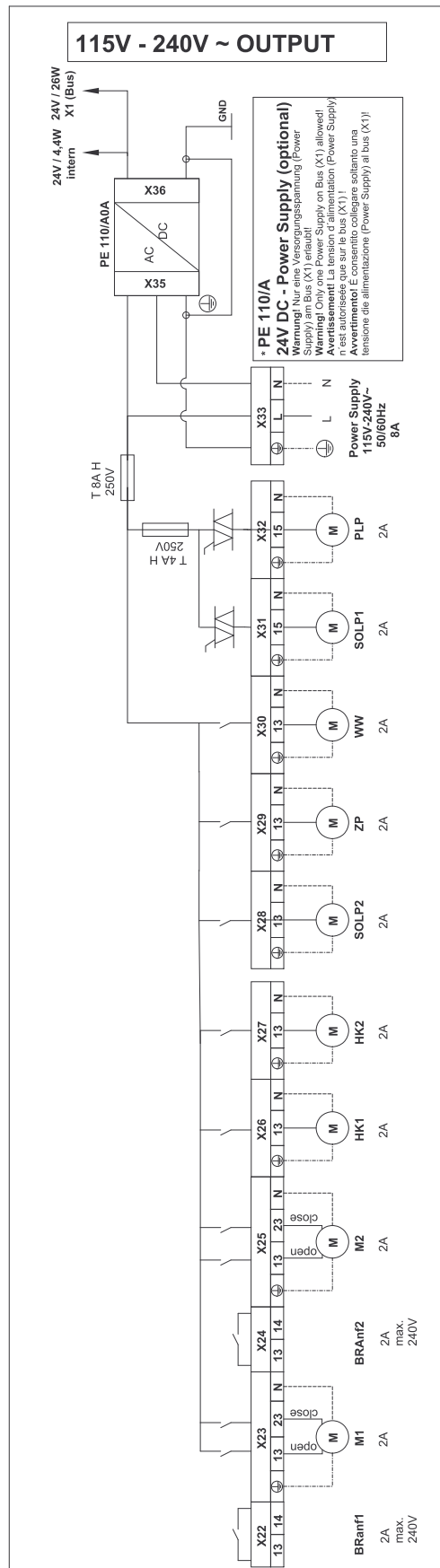
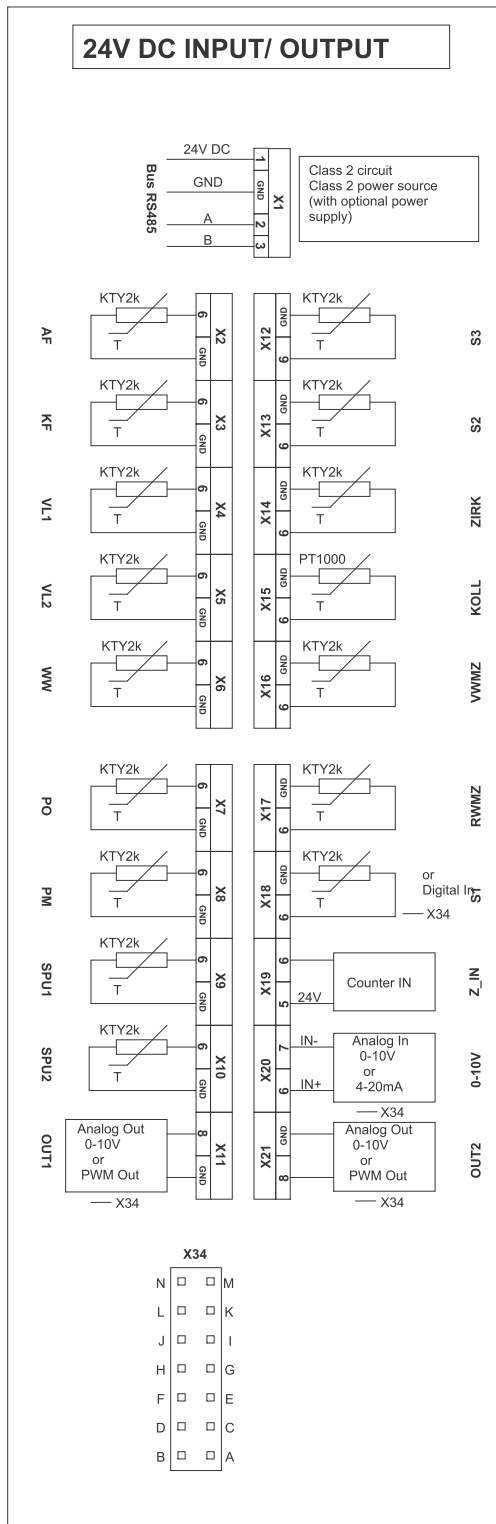
Terminals extra-low voltage zone		Terminals low voltage zone	
X1A	Bus wiring – Bus RS485	Burner demand 1 – BRanf 1	X22
X1B	Bus wiring – Bus RS485	Mixer HK1 opening – M1	X23 – 13/N
X2	Outdoor sensor – AF	Mixer HK1 closing – M1	X23 – 23/N
X3	Boiler sensor – KF	Burner demand 2 – BRanf 2	X24
X4	Flow sensor HK1 – VL1	Mixer HK2 opening – M2	X25 – 13/N
X5	Flow sensor HK2 – VL2	Mixer HK2 closing – M2	X25 – 23/N
X6	DHW sensor – WW	Heating circuit pump – HK1	X26
X7	AC upper sensor – PO	Heating circuit pump – HK2	X27
X8	AC middle sensor – PM	Solar pump 2 – Sol P2	X28
X9	AC lower sensor 1 – SPU1	Return pump – Heat main pump – ZP	X29
X10	AC lower sensor 2 – SPU2	Domestic hot water – WW	X30
X11	Analogue voltage output – OUT1	Solar pump 1– Sol P1	X31
X12	Reserve – S3	Accumulator pump – PLP	X32
X13	Reserve – S2	Power supply 115V – 240V~	X33
X14	Return sensor – ZIRK		
X15	Collector sensor – KOLL		
X16	Solar energy Flow – VWMZ		
X17	Solar energy Return – RWMZ		
X18	Reserve – S1		
X19	Flow rate 24V – Z_IN		
X20	Reserve – 0-10V		
X21	Analogue voltage output – OUT2		

Terminals extra-low voltage zone				
	X1A	Bus wiring – Bus RS485		
	X1B	Bus wiring – Bus RS485		
X2	Outdoor sensor – AF		X12	Reserve – S3
X3	Boiler sensor – KF		X13	Reserve – S2
X4	Flow sensor HK1 – VL1		X14	Return sensor – ZIRK
X5	Flow sensor HK2 – VL2		X15	Collector sensor – KOLL
X6	DHW sensor – WW		X16	Solar energy Flow – VWMZ
X7	AC upper sensor – PO		X17	Solar energy Return – RWMZ
X8	AC middle sensor – PM		X18	Reserve – S1
X9	AC lower sensor 1 – SPU1		X19	Flow rate 24V – Z_IN
X10	AC lower sensor 2 – SPU2		X20	Reserve – 0-10V
X11	Analogue voltage output – OUT1		X21	Analogue voltage output – OUT2
	X34		Jumper	

Terminals low voltage zone				
X32	Accumulator pump – PLP			
X31	Solar pump 1– Sol P1			
X30	Domestic hot water – WW			
X25 – 23/N	Mixer HK2 closing – M2		X33	Power supply 115V – 240V~
X25 – 13/N	Mixer HK2 opening – M2		X29	Return pump – Heat main pump – ZP
X24	Burner demand 2 – BRanf 2		X28	Solar pump 2 – Sol P2
X23 – 23/N	Mixer HK1 closing – M1			
X23 – 13/N	Mixer HK1 opening – M1			
X22	Burner demand – BRanf 1			
	X26		Heating circuit pump – HK1	
	X27	Heating circuit pump – HK2		

Electrical wiring diagrams heating controller

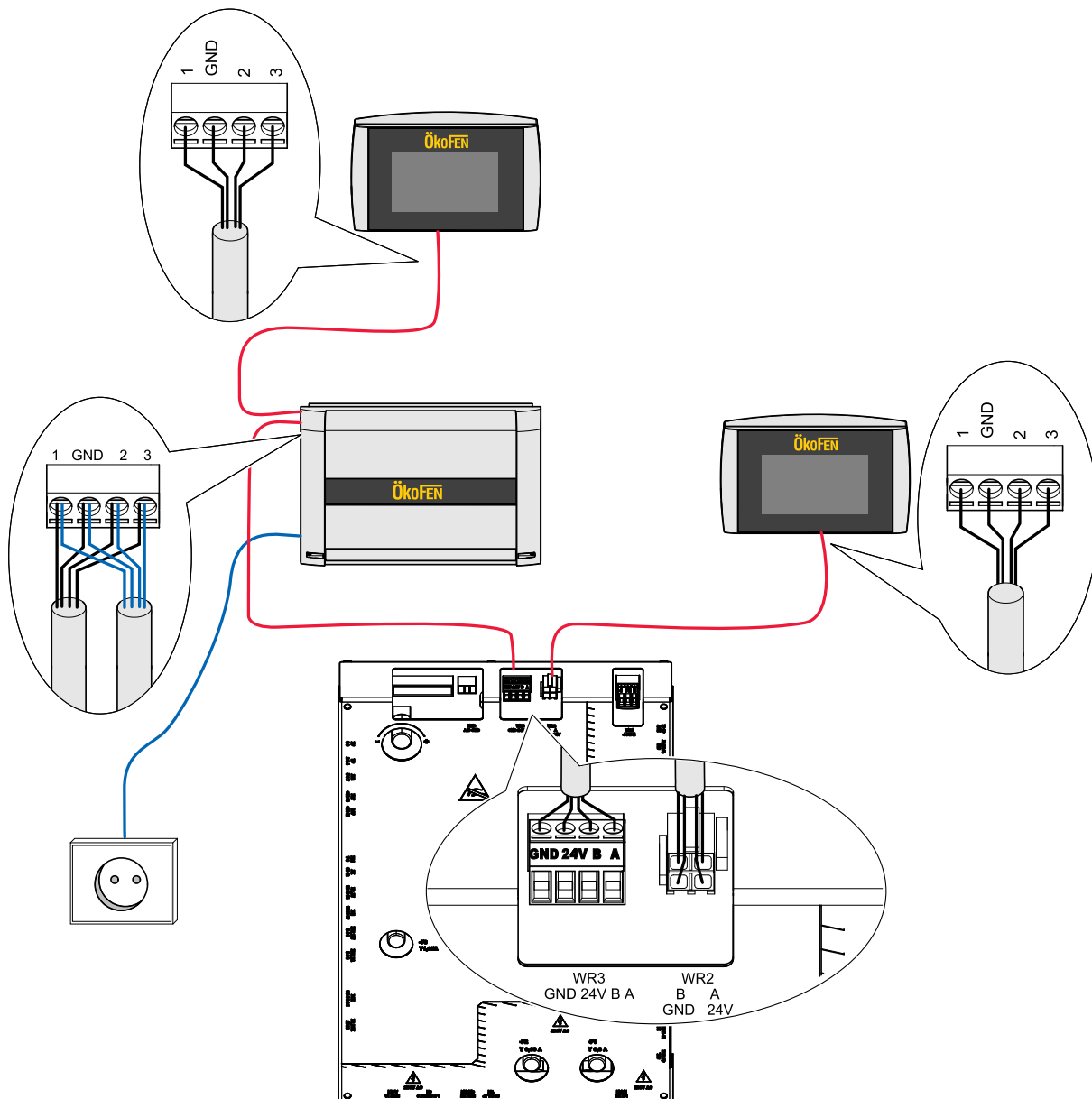
The wiring diagrams are also located on the inside of cover of the heating controller.



30.3 Wiring diagrams

Wiring diagram with:

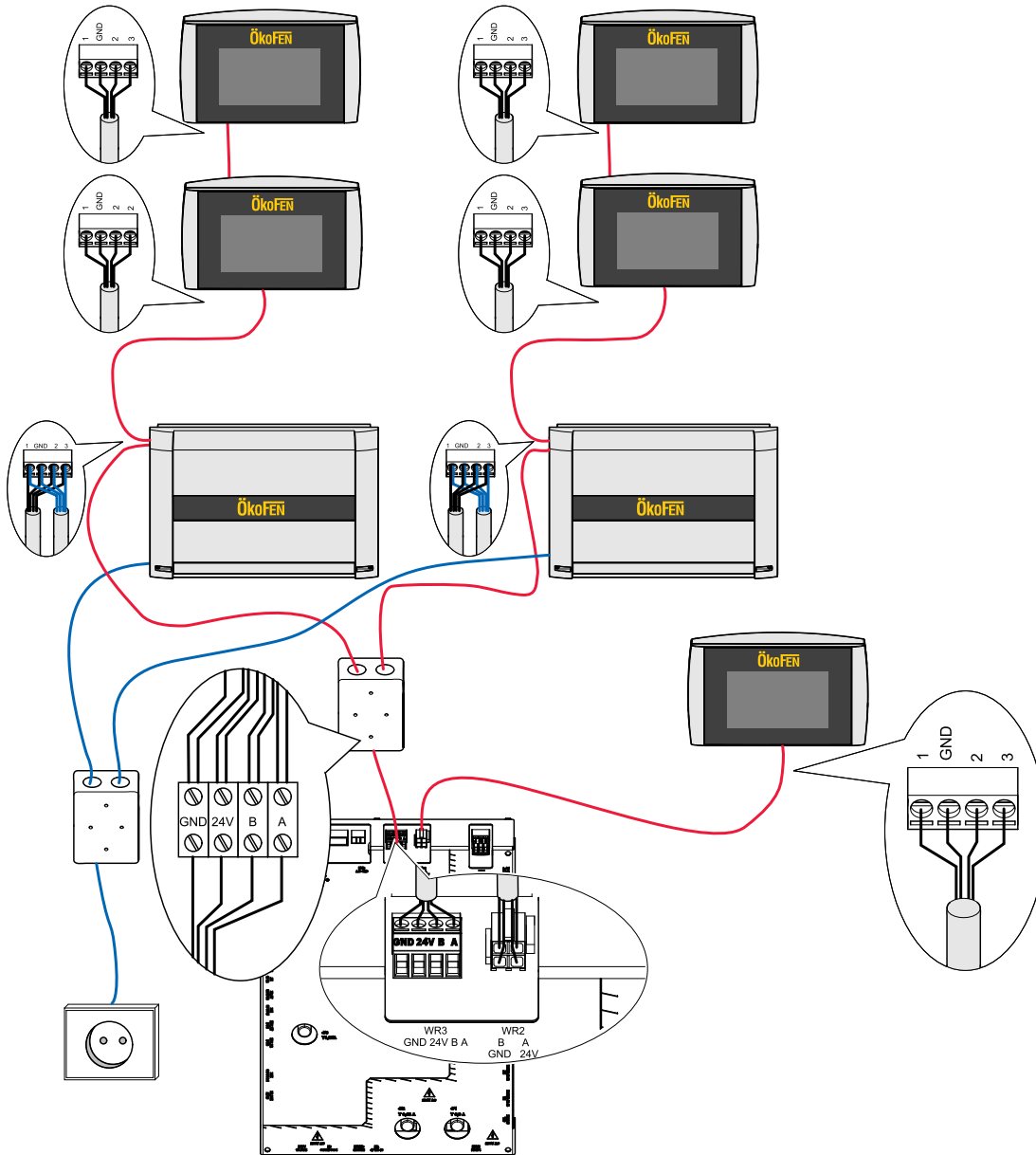
- 1... Boiler controller CMP 6.2
- 1... Heating Controller Pelletronic
- 1... Touch Operating device (Master)
- 1... Touch remote control (Slave)



Input cmp	Input Touch
Bus terminal WR2	Bus terminal X1
24V	1
GND	GND
A	2
B	3

Wiring diagram with:

- 1... Boiler controller CMP 6.2
- 2... Heating Controller Pelletronic
- 1... Touch Operating device (Master)
- 4... Touch remote control (Slave)



Input cmp	Input Touch
Bus terminal WR2	Bus terminal X1
24V	1
GND	GND
A	2
B	3

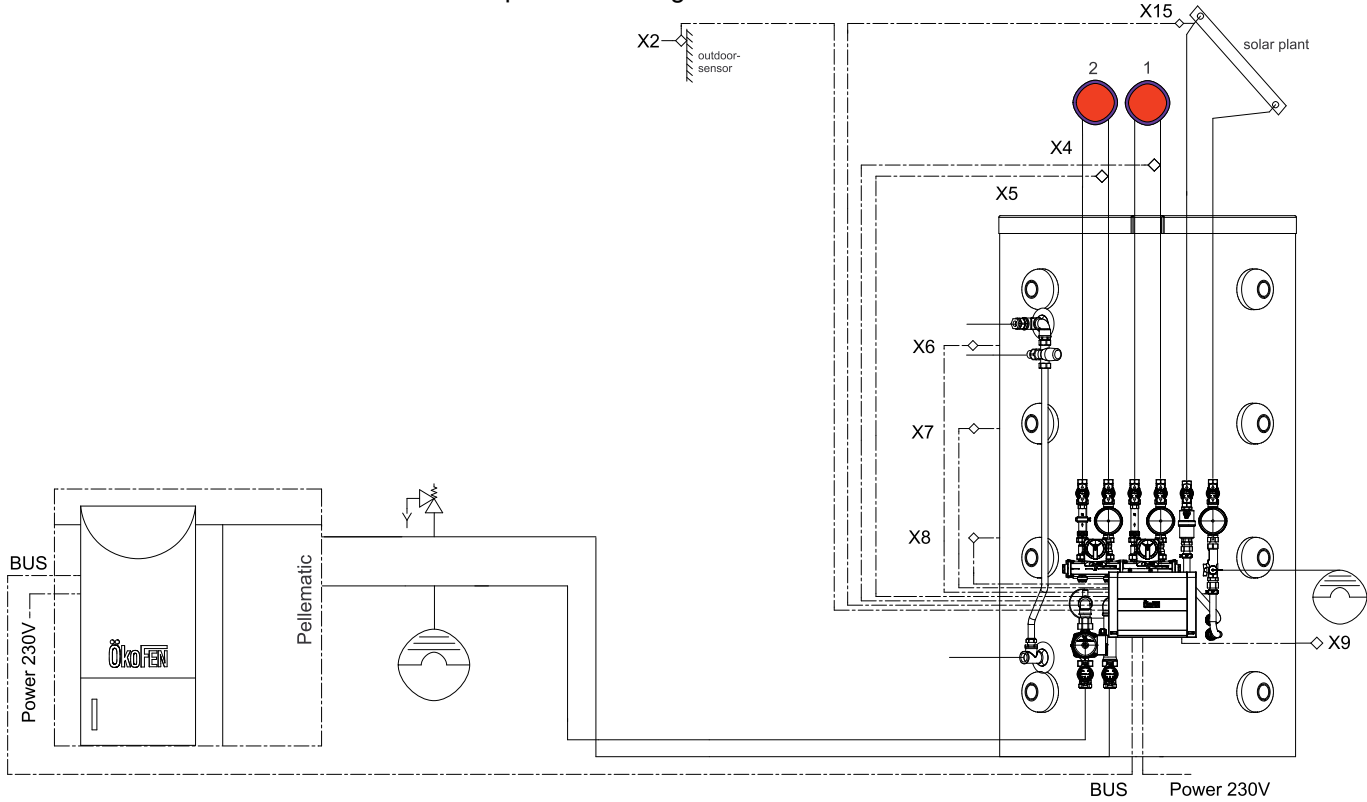
30.4 Cable specification Pelletronic Touch

Power supply	K 02	X33	YML-J	3x1	x
OUTPUTS see on wiring diagram on the front side					
Function – Shortcut	Cable	Pin I/O BOX	Cable type	Section	Max Ampere
Burner contact 1 – BRanf 1	K 03	X22	YML-J	3x0.75	2A
Mixer HK1 AUF – M1	K 12	X23 – 13/N	YML-J	3x0.75	2A
Mixer HK1 ZU – M1	K 12	X23 – 23/N	YML-J	3x0.75	2A
Burner contact 2 – BRanf 2	K 30	X24	YML-J	3x0.75	2A
Mixer HK2 AUF – M2	K 13	X25 – 13/N	YML-J	3x0.75	2A
Mixer HK2 ZU – M2	K 13	X25 – 23/N	YML-J	3x0.75	2A
Heating circuit pump – HK1	K 14	X26	YML-J	3x0.75	2A
Heating circuit pump – HK2	K 15	X27	YML-J	3x0.75	2A
Solar pump 1 – Sol P1	K 16	X31	YML-J	3x0.75	2A
Return pump – Heat main pump – ZP	K 29	X29	YML-J	3x0.75	2A
Domestic hot water – WW pump	K 21	X30	YML-J	3x0.75	2A
Solar pump 2 – Sol P2	K 23	X28	YML-J	3x0.75	2A
Accumulator pump – PLP	K 05	X32	YML-J	3x0.75	2A
Bus wiring – Bus RS485	K 01	X1A	LS-YYCVY-0Z	4x0.75	x
Bus wiring – Bus RS485		X1B	LS-YYCVY-0Z	4x0.75	x
Analogue voltage output – OUT1	K 28	X11	YML	2x0.75	x
Analogue voltage output – OUT2	K 71	X21	YML	2x0.75	x
INPUTS see on wiring diagram on the front side					
Function – Shortcut	Cable	Pin I/O BOX	Cable type	Section	Max Ampere
Outdoor sensor – AF	K 09	X2	YML	2x0.75	KTY 2k
Boiler sensor – KF	K 04	X3	YML	2x0.75	KTY 2k
Flow sensor HK1 – VL1	K 10	X4	YML	2x0.75	KTY 2k
Flow sensor HK2 – VL2	K 11	X5	YML	2x0.75	KTY 2k
DHW sensor – WW	K 19	X6	YML	2x0.75	KTY 2k
AC upper sensor (TPO) – PO	K 18	X7	YML	2x0.75	KTY 2k
AC middle sensor (TPM) – PM	K 17	X8	YML	2x0.75	KTY 2k
AC lower sensor 1 – SPU1	K 20	X9	YML	2x0.75	KTY 2k
AC lower sensor 2 – SPU2	K 22	X10	YML	2x0.75	KTY 2k
Reserve sensor – S3		X12	YML	2x0.75	KTY 2k
Sensor existing boiler – S2		X13	YML	2x0.75	KTY 2k
Sensor return pump – ZIRK	K 29	X14	YML	2x0.75	KTY 2k
Collector sensor – KOLL	K 08	X15	YML	2x0.75	PT 1000
Solar energy Flow – VWMZ	K 25	X16	YML	2x0.75	KTY 2k
Solar energy Return – RWMZ	K 26	X17	YML	2x0.75	KTY 2k
Sensor Reserve – S1		X18	YML	2x0.75	KTY 2k/Dig I
Flow rate 24V – Z_IN		X19	YML	2x0.75	x
Reserve – 0-10V		X20	YML-J	3x1	x

30.5 Hydraulic connecting diagrams

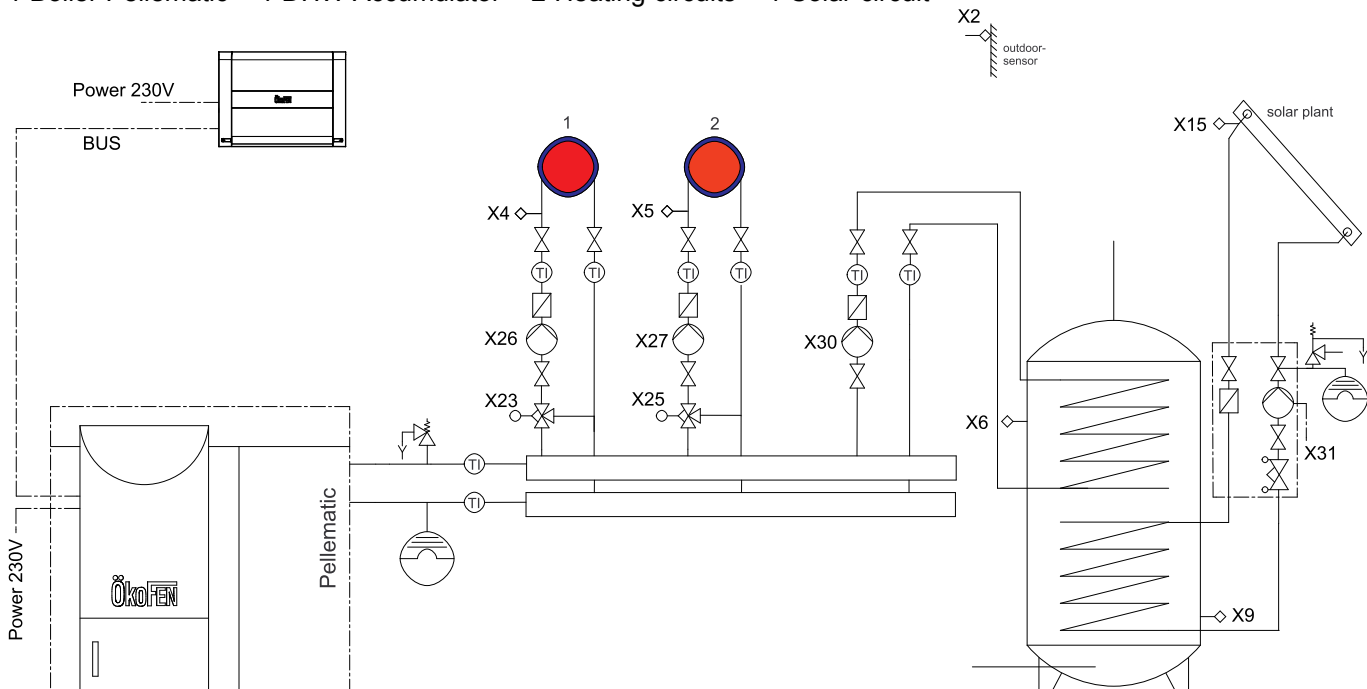
30.5.1 Diagram 1

1 Boiler Pellematic – 1 Accumulator Pellaqua – 2 Heating circuits – 1 Solar circuit



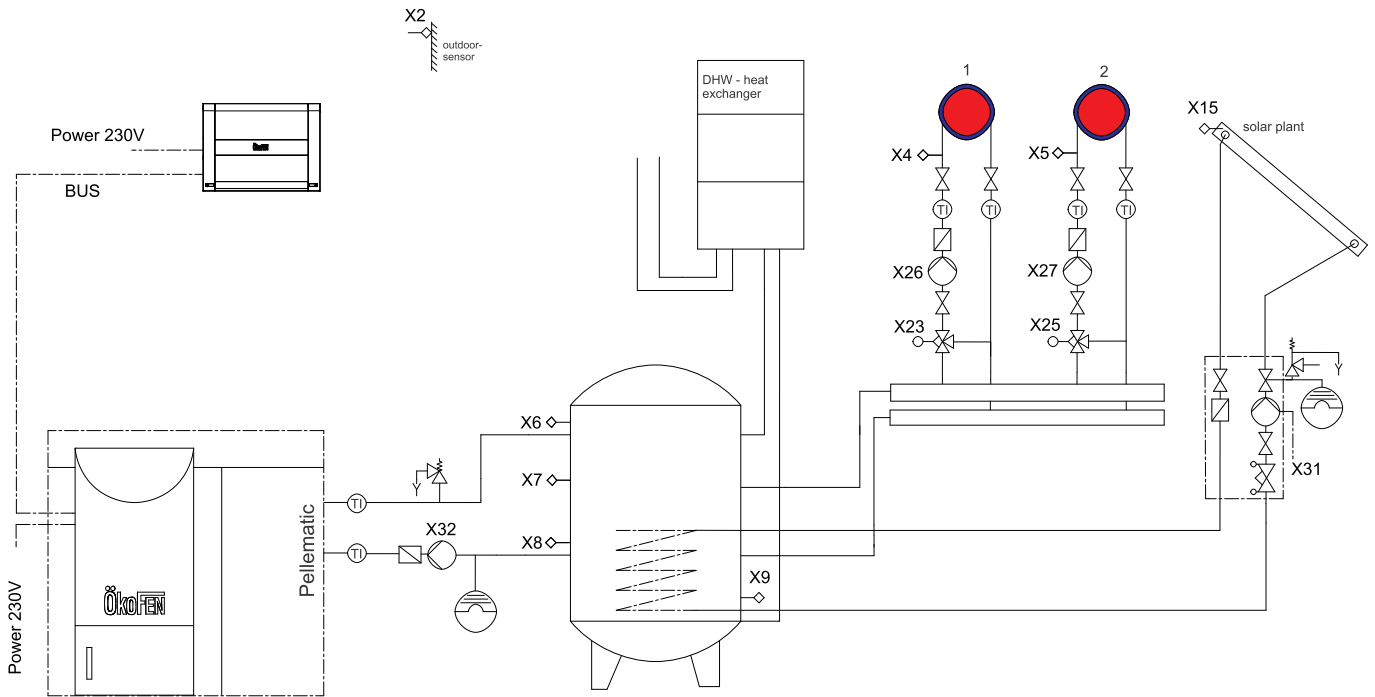
30.5.2 Diagram 2

1 Boiler Pellematic – 1 DHW Accumulator – 2 Heating circuits – 1 Solar circuit



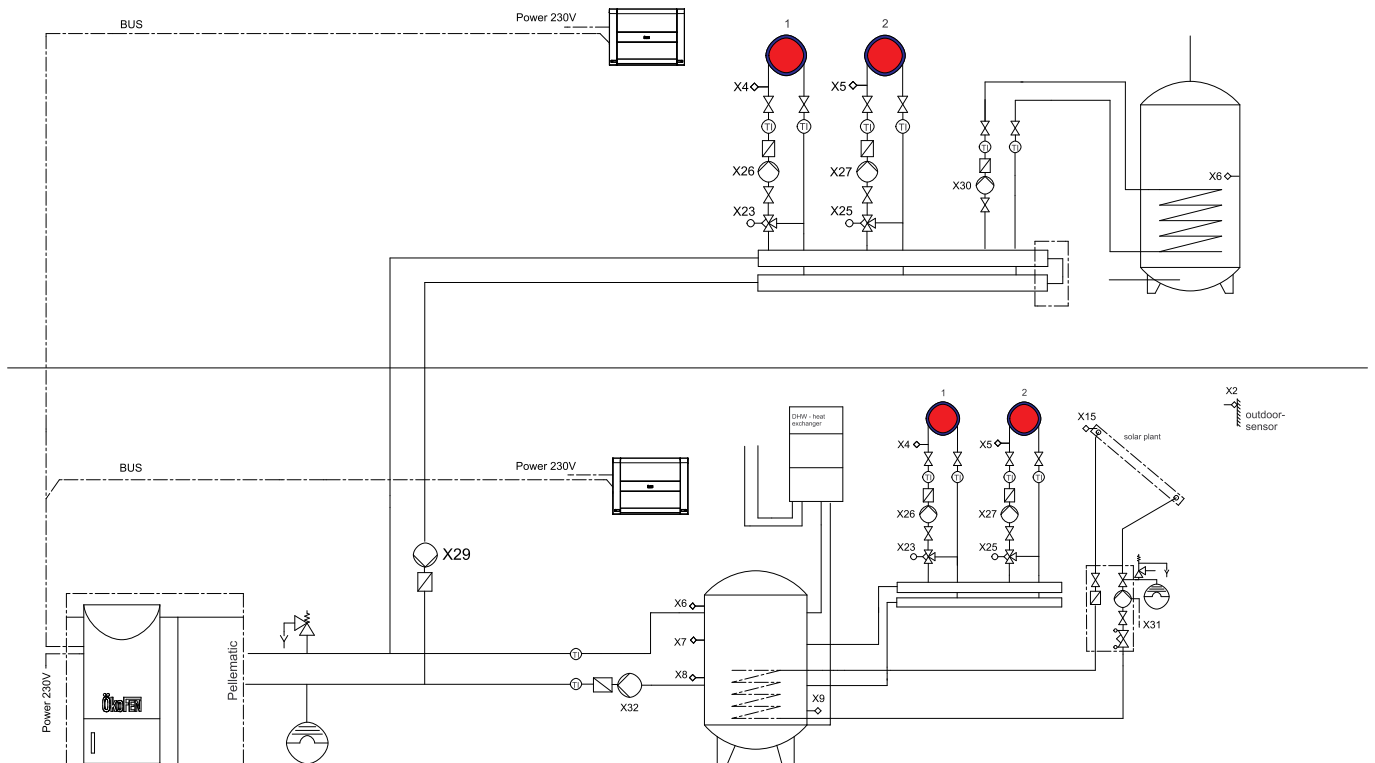
30.5.3 Diagram 3

1 Boiler Pellematic – 1 Accumulator – 2 Heating circuits – 1 Fresh water module – 1 Solar circuit



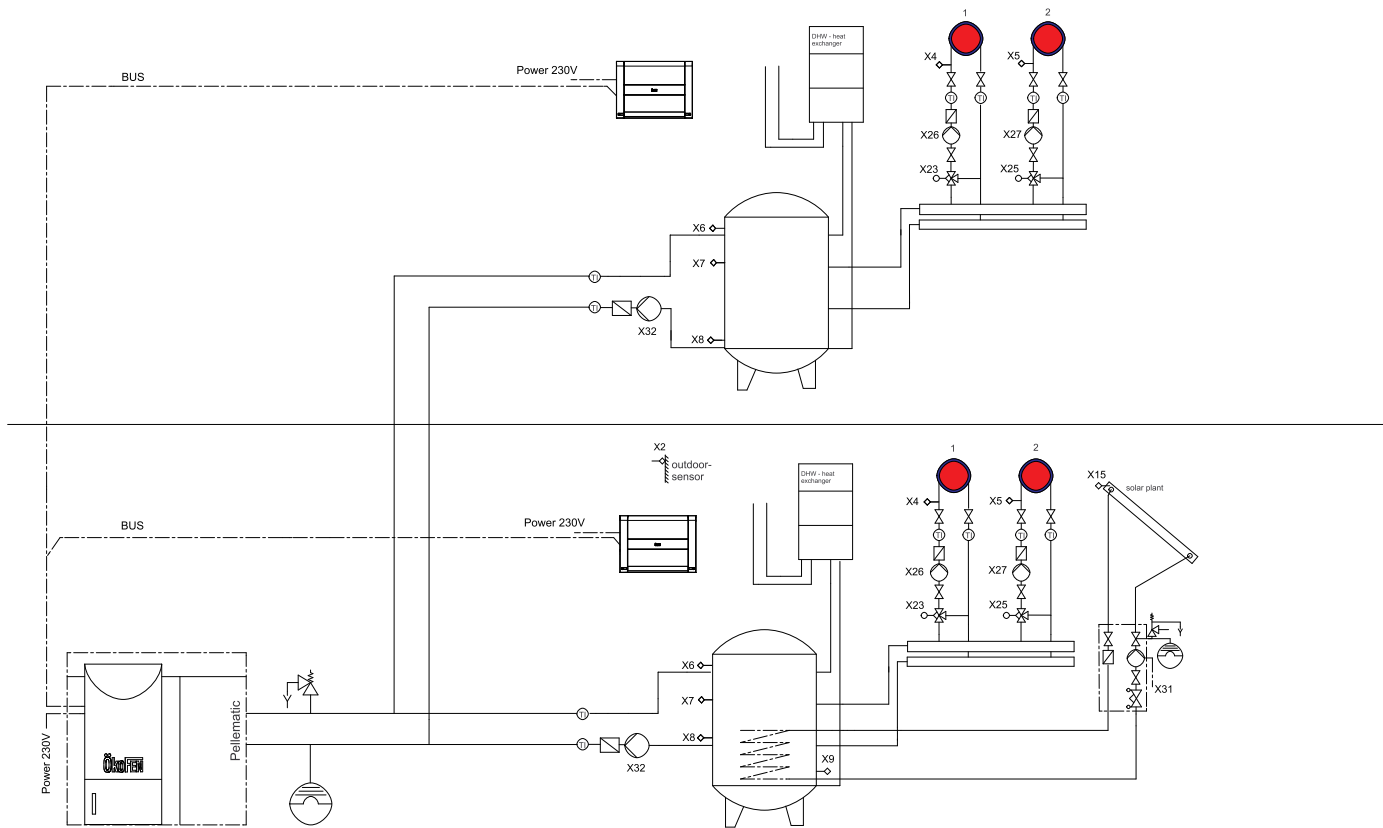
30.5.4 Diagram 4

1 Boiler Pellematic – 1 Accumulator – 1 Fresh water module – 4 Heating circuits – 1 Solar circuit – 1 DHW Accumulator



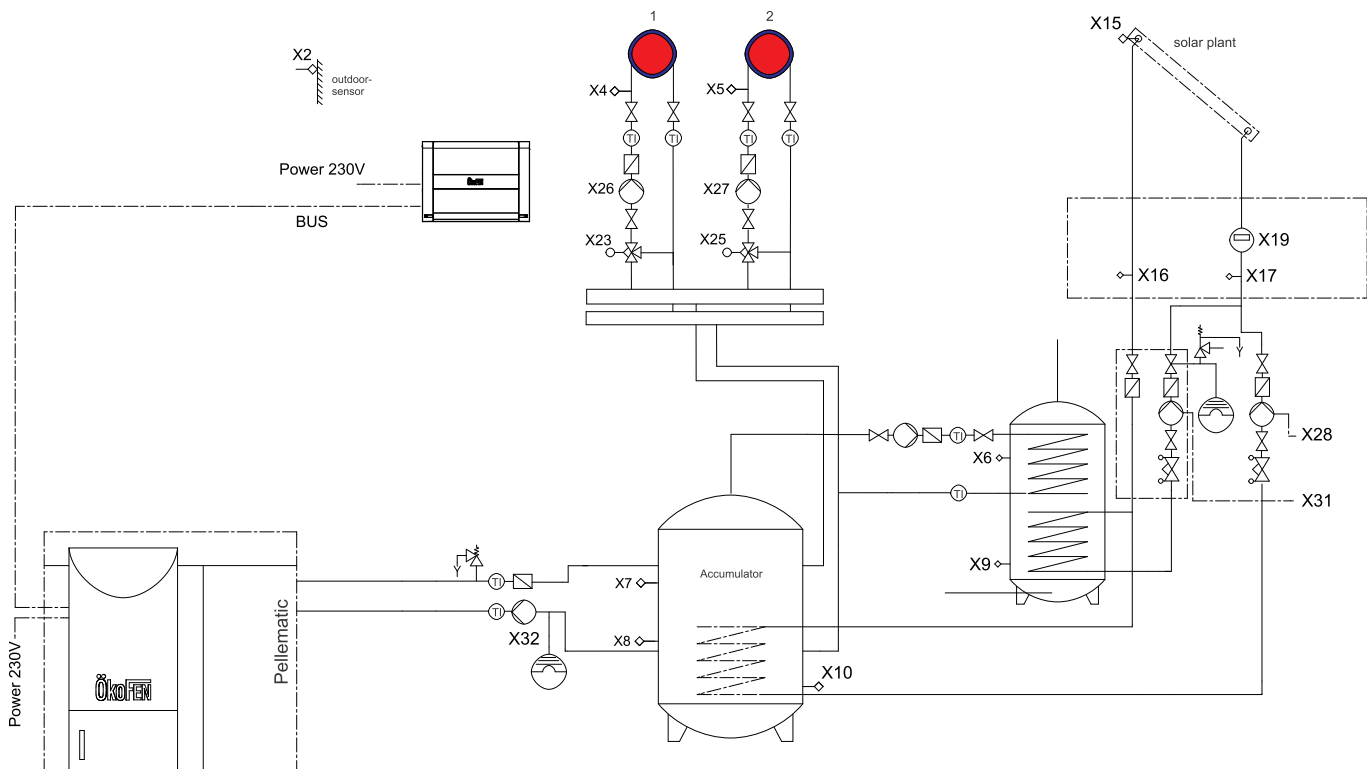
30.5.5 Diagram 5

1 Boiler Pellematic – 2 Accumulators – 1 Fresh water module – 4 Heating circuits – 1 Solar circuit



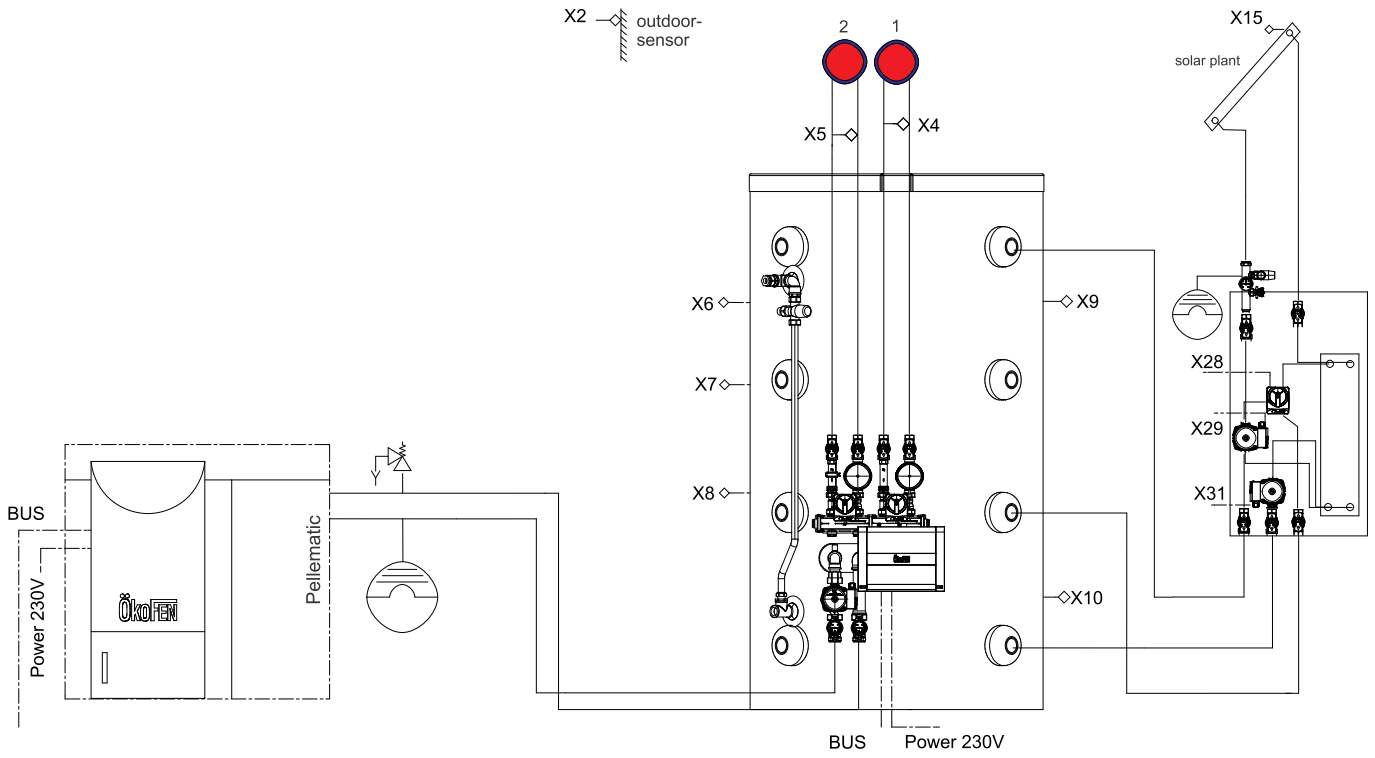
30.5.6 Diagram 6

1 Boiler Pellematic – 1 Accumulator – 1 DHW Accumulator – 2 Heating circuits – 2 Solar circuits



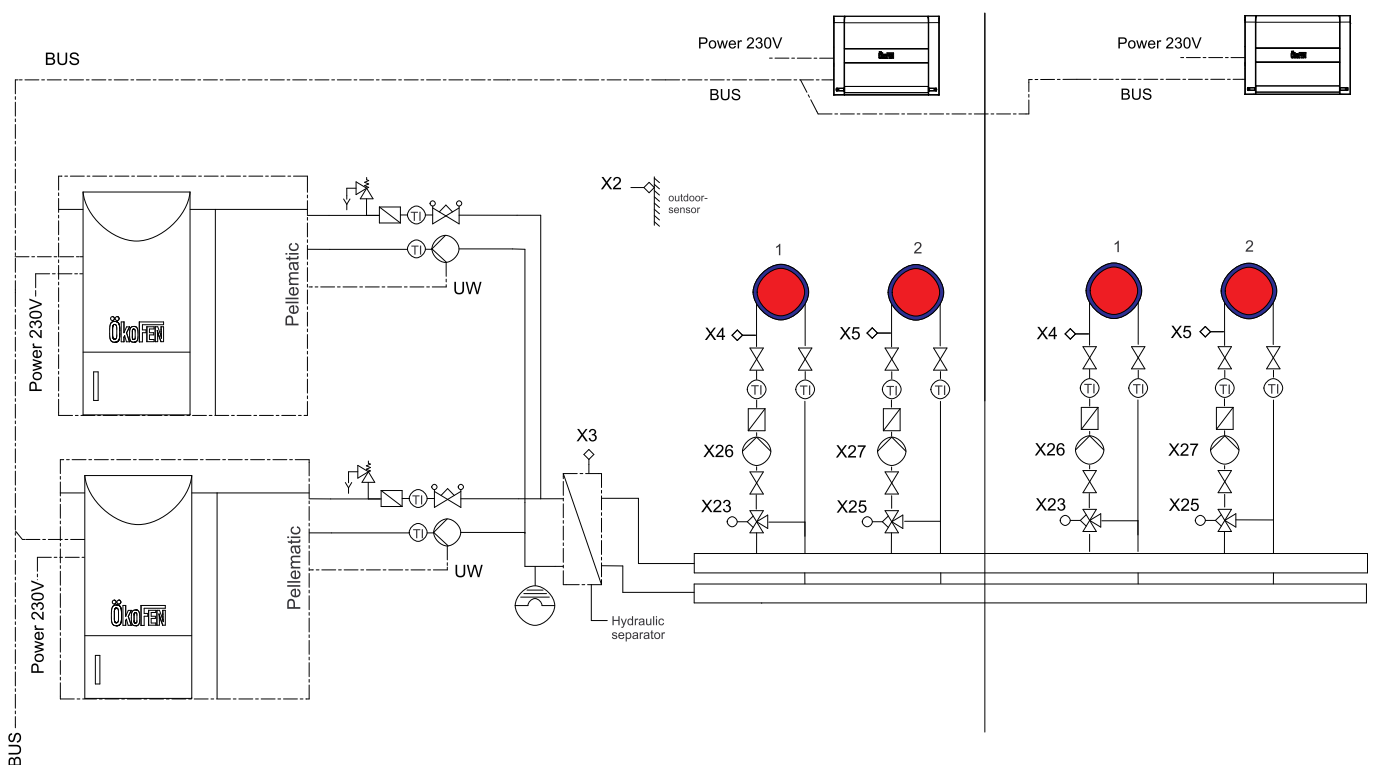
30.5.7 Diagram 7

1 Boiler Pellematic – 1 Accumulator – 2 Heating circuits – 1 Layer charge module



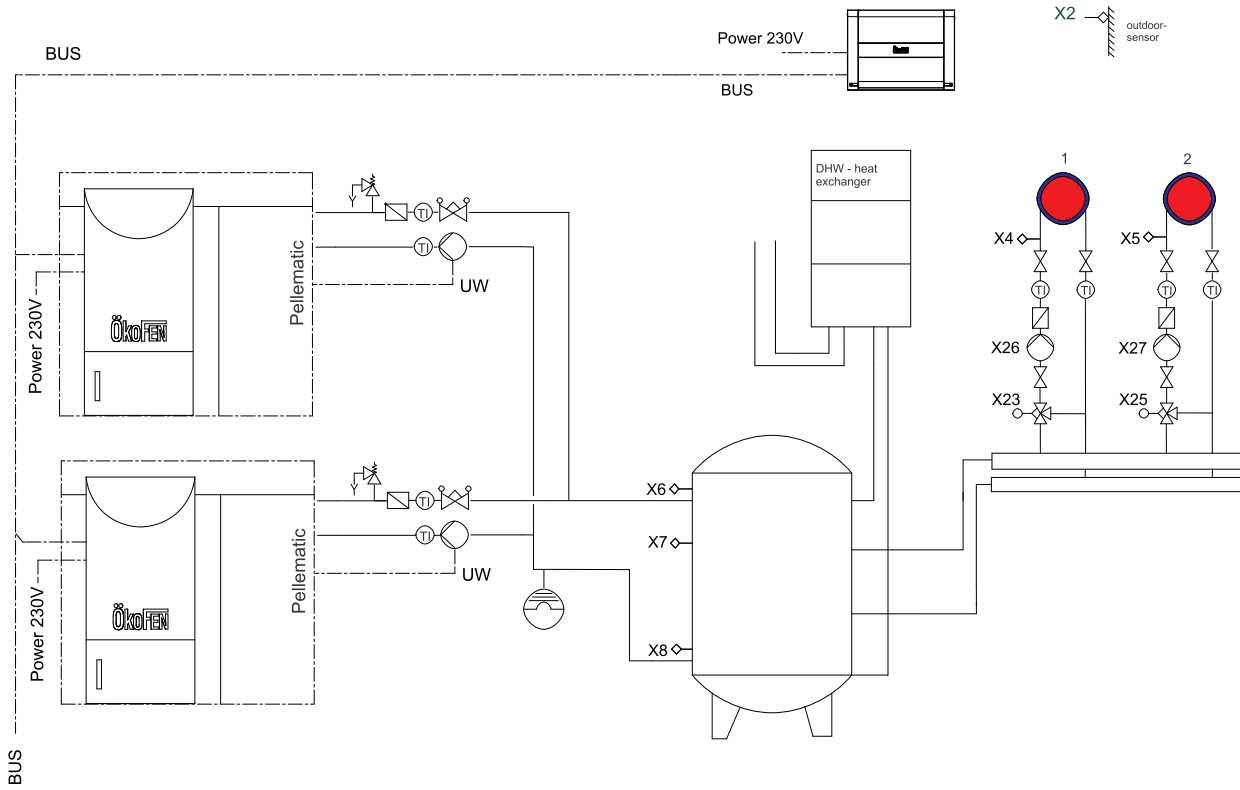
30.5.8 Diagram 8

2 Boilers Pellematic – 1 Hydraulic separator – 4 Heating circuits



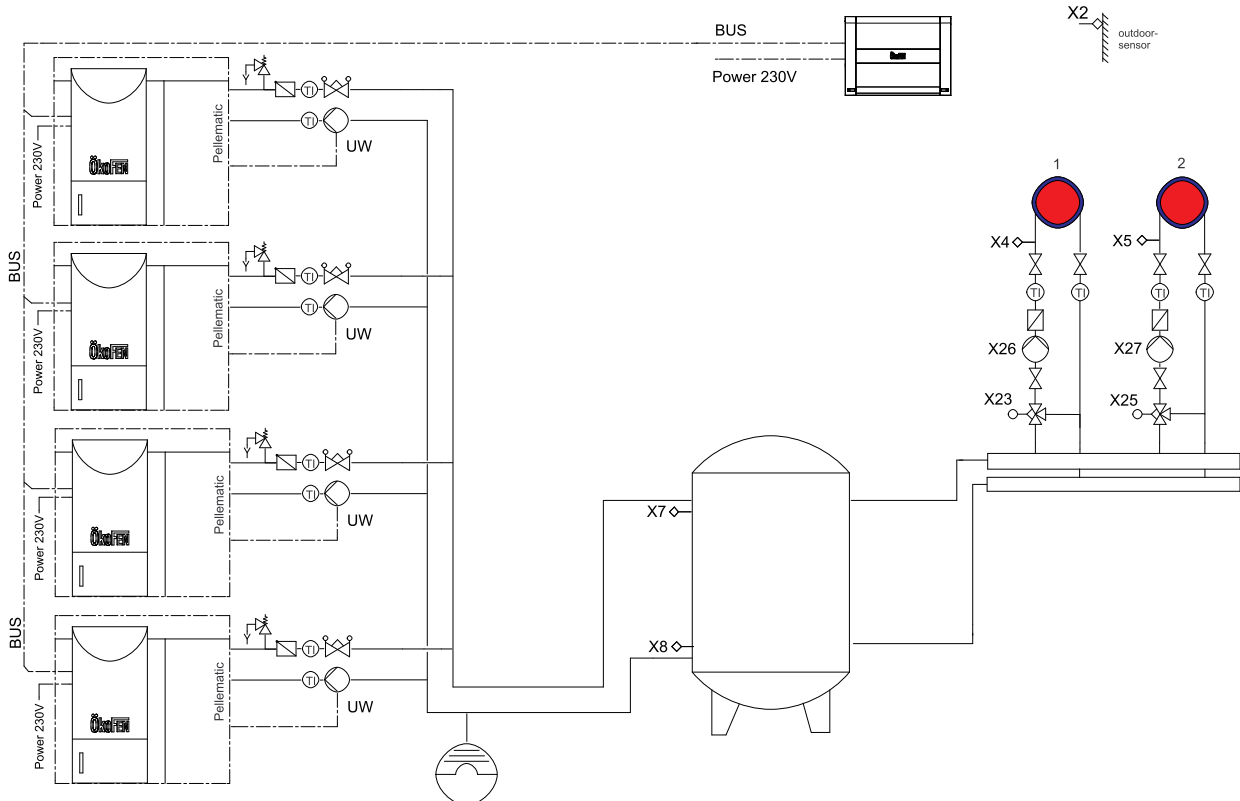
30.5.9 Diagram 9

2 Boilers Pellematic – 1 Accumulator – 1 Fresh water module – 2 Heating circuits



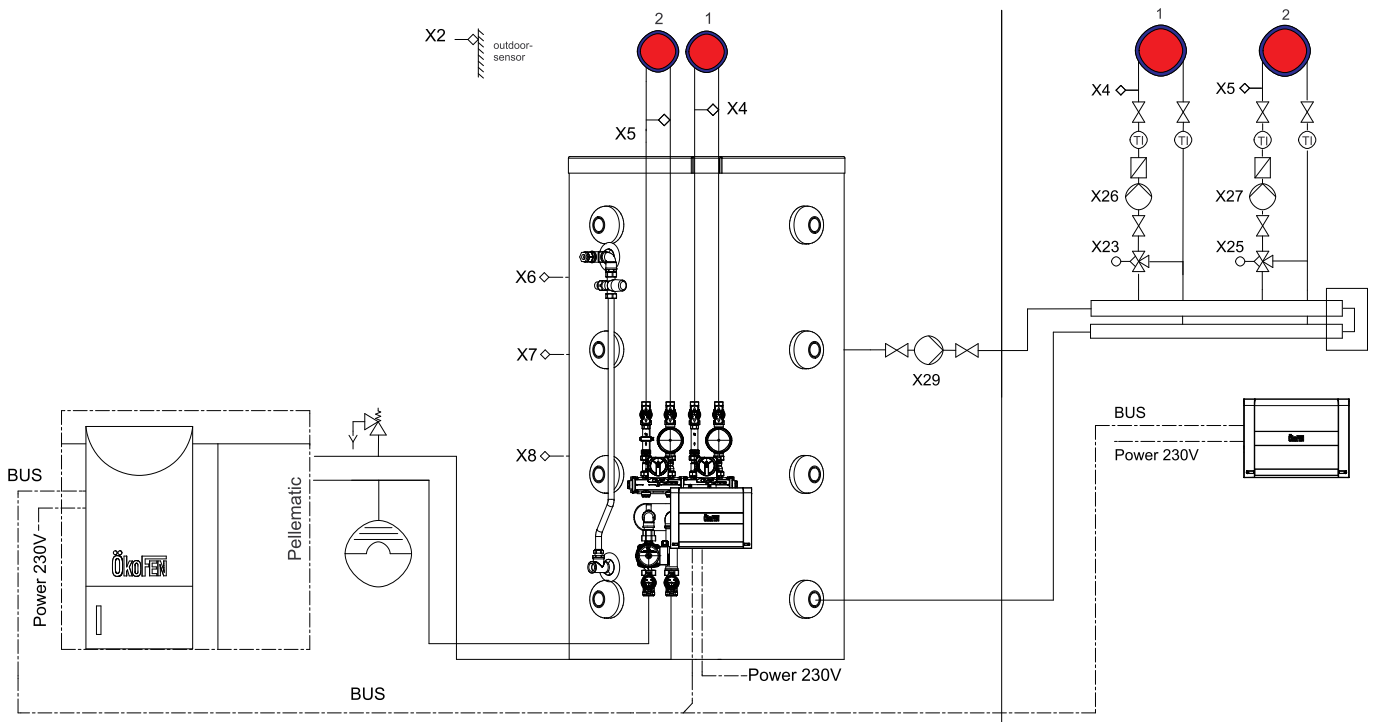
30.5.10 Diagram 10

4 Boilers Pellematic – 1 Accumulator – 2 Heating circuits



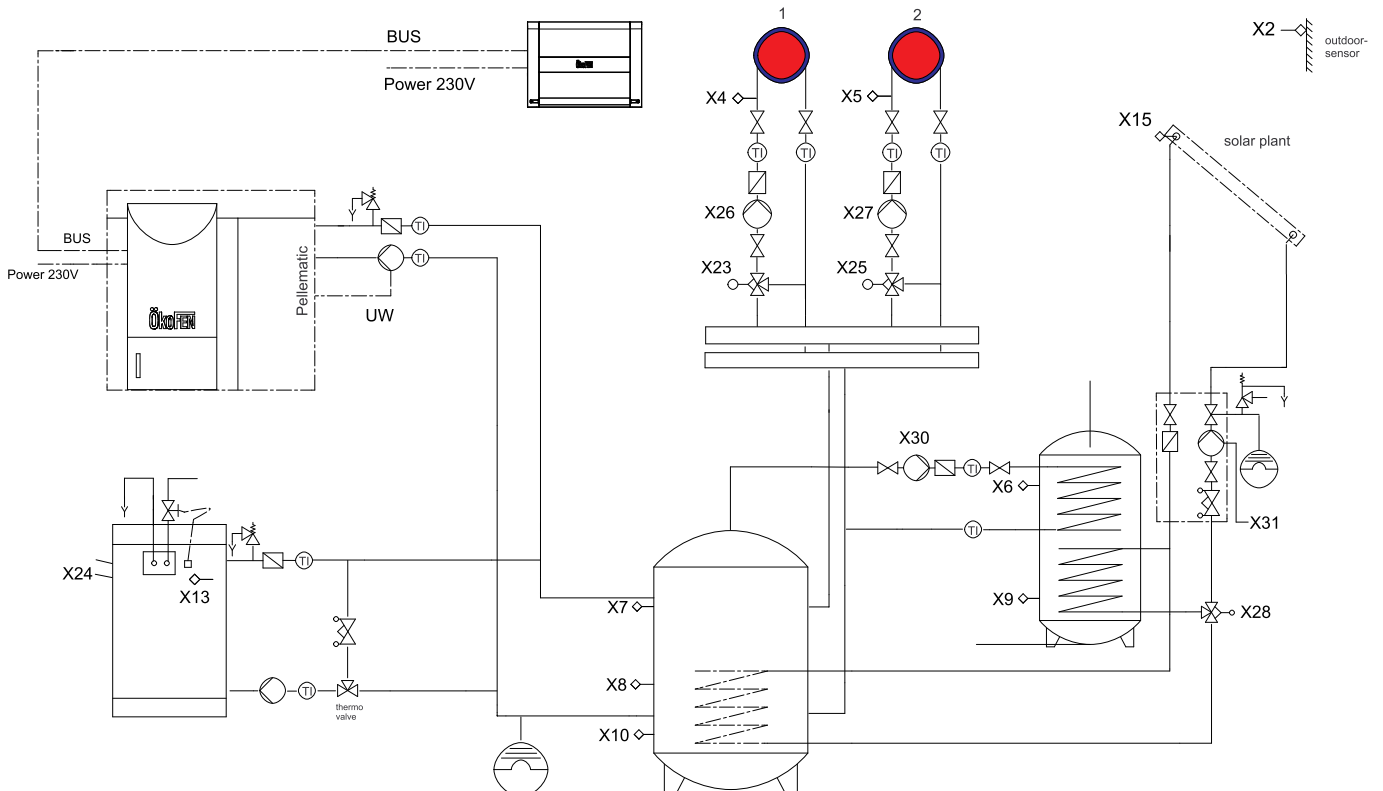
30.5.11 Diagram 11

1 Boiler Pellematic – 1 Accumulator – 4 Heating circuits



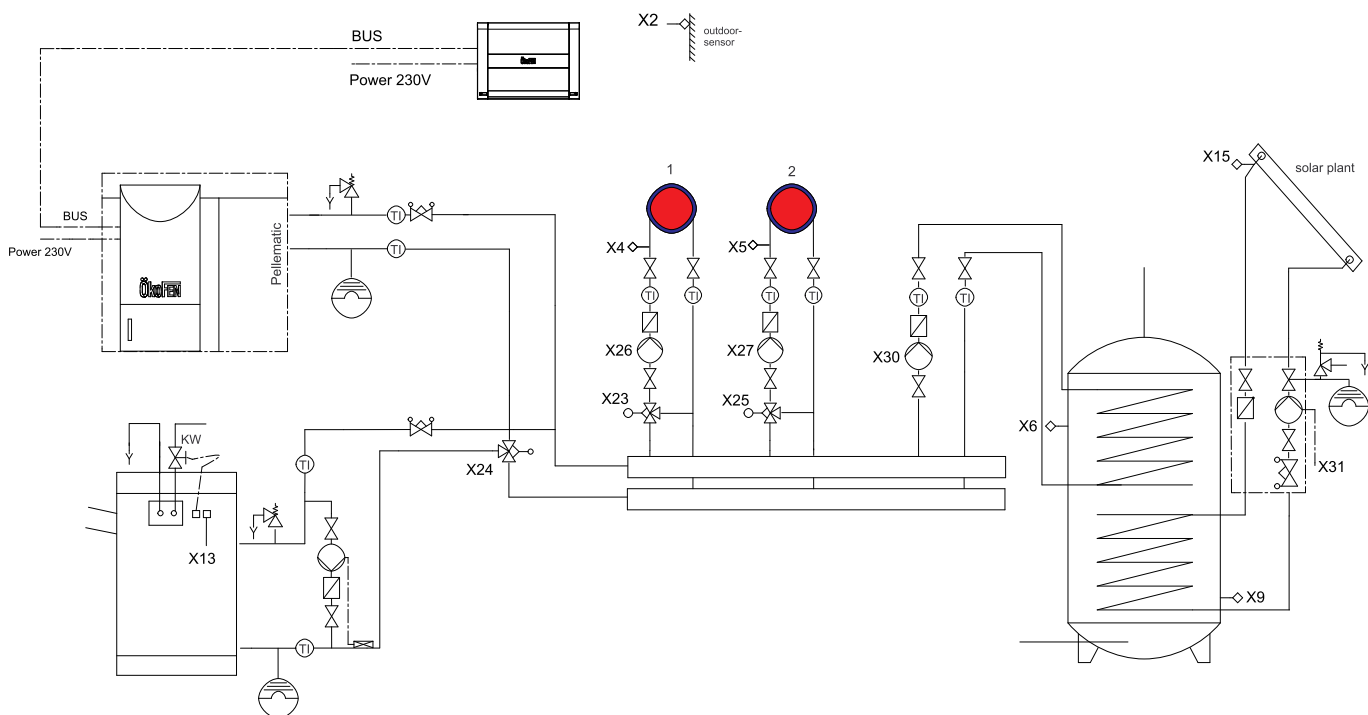
30.5.12 Diagram 12

1 Boiler Pellematic – 1 Wooden boiler – 1 DHW Accumulator – 1 Accumulator – 2 Heating circuits – 2 Solar circuits



30.5.13 Diagram 13

1 Boiler Pellematic – 1 Wooden boiler – 1 DHW Accumulator – 2 Heating circuits – 1 Solar circuit



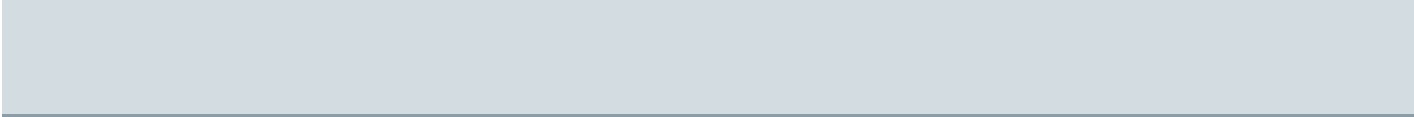
30.6 Default values and settings

Customer		System					
Master operating mode							
Master operating mode	OFF						
Heating circuit		HK 1	HK 2	HK 3	HK 4	HK 5	HK 6
Operating mode	OFF						
Set room temperature	22.0°C						
Set back temperature	18.0°C						
Time programme 1	active						
Time programme 2	inactive						
MO - SO	06:00 – 21:00						
	00:00 – 00:00						
	00:00 – 00:00						
Party function	inactive						
Party function till	act. Time						
Vacation time	OFF						
Temperature	15°C						
from	act. Date/Time						
till	act. Date/Time						
Heating curve/ Heating limits							
Heating curve	0.4						
Base point	20.0°C						
H limit heating	18.0°C						
H limit set temperature	minus 5°C						
Derivative time	180 min						
Room thermostat influence	1						
Room thermostat hysteresis	0.0°C						
Settings							
Maximum flow temperature	55.0°C						
Minimum flow temperature	20.0°C						
Temperature of boiler above heating circuits	5.0°C						
Type of heating circuit	mixed						
Mixer opening	5 sec						
Mixer off	15 sec						
Mixer closing	5 sec						
Boiler load range	10.0°C						
Flow range	10.0°C						

BT smoothing							
Temperature increase	2,5°C						
Control range	6.0°C						
Screed programme							
No. of heating days	21						
Flow set	every day 20°C						
Screed programme	inactive						
Domestic hot water		WW 1	WW 2	WW 3			
Operating mode	OFF						
DHW boost	OFF						
Actual water temperature	60.0°C						
Water temperature minimum	30.0°C						
Time programme 1	active						
Time programme 2	inactive						
MO - SU	06:00 – 21:00						
	00:00 – 00:00						
	00:00 – 00:00						
Settings							
DHW preference	ON						
Temperature of boiler above heating circuits	10.0°C						
Run on time	10 min						
DHC hysteresis	5.0°C						
Legionella protection	Monday						
Accumulator		PU 1	PU 2	PU 3			
Settings							
Accumulator Temp min ON	10.0°C						
Pump release temperature	20.0°C						
Pump Depends on Require	ON						
Pump Speed Controller	OFF						
Pump Switch Off Hyst	3K						
Pump Run On Time	15min						
Pump Control Range	5K						
Solar		SO 1	SO 2	SO 3	SO 4	SO 5	SO 6
Operating mode	OFF						
Sol pump switch on	10.0°C						
Sol pump switch off	5.0°C						
TPU max	60.0 °C						

TPU hyst	5.0°C						
Collector smoothing	OFF						
Collector Temp Min	60.0°C						
Control range	10.0°C						
Settings							
Limit Sensor	AC lower sensor						
Collector Temp Max	130.0°C						
Hysteresis for maximum collector temperature	30.0°C						
Type of pump	Standard						
Speed controller	OFF						
Collector protection	OFF						
Protection temperature	120.0°C						
Protection hysteresis	10.0°C						
Scavenging	OFF						
Rest time SV	10 min						
Run time SV	1 min						
Coll min SV	20.0°C						
Period Scavenging	09:00 - 18:00						
Priority	x						
Run time	x						
Rest time	x						
Scavenging time	x						
Solar energy							
Volume per pulse	1.0 l						
Heat main pump							
Operating mode	OFF						
Member	NO						
System Controlling							
Settings							
Boiler Temp Above	10.0°C						
Boiler temperature minimum	60.0°C						
System Max	95.0°C						
Boiler Pump On Temp	60°C						
Outside Temperature – Time of Average	4.0°C						
Frost protection Scavenging time	5 min						
Frost protection Pause Time	60 min						
General							

Language	German						
USB							
Recording	OFF						
Recording interval	1 min						
Sensor calibration							
Sensor	all sensors 0.0°C						
Existing boiler							
Valve switch on temperature	60.0°C						
Valve hysteresis	2.0°C						
Inversion UV	NO						
Delay time	30 min						
Pump switch on temperature	60.0°C						



Manufacturer:

ÖkoFEN Forschungs- und EntwicklungsgesmbH

Gewerbepark 1
A-4133 Niederkappel
AUSTRIA
Tel.: 0043(0)7286/7450
Fax: 0043(0)7286/7450/10
oekofen@pelletsheizung.at
www.oekofen.com

United Kingdom:

Organic Energy Ltd

Severn Road
Welshpool
Powys
Wales SY21 7AZ
Tel.: 0044 (0) 845 458 4076
or: 0044 (0) 1938 530 070
Fax: 0044 (0) 1938 559 222
info@organicenergy.co.uk
www.organicenergy.co.uk