

# Centrometal

## HEATING TECHNIQUE

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## Technical instructions



using of **REGULATION**  
hot water boiler PelTec / PelTec-lambda



## Cerbos

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**THE FIRST START-UP MUST BE DONE BY AUTHORIZED PERSON  
OTHERWISE PRODUCT WARRANTY IS NOT VALID**

## PelTec 12-48

## PelTec-lambda 12-48

## SWITCHING ON

After turning on the main switch, screen will display language selection menu and software version. You can choose between 12 languages, Croatian, French, Portuguese, English, Slovenian, Italian, Serbian, German, Czech, Hungarian, Slovakian and Spanish. To select the language, press the flag of language you want.



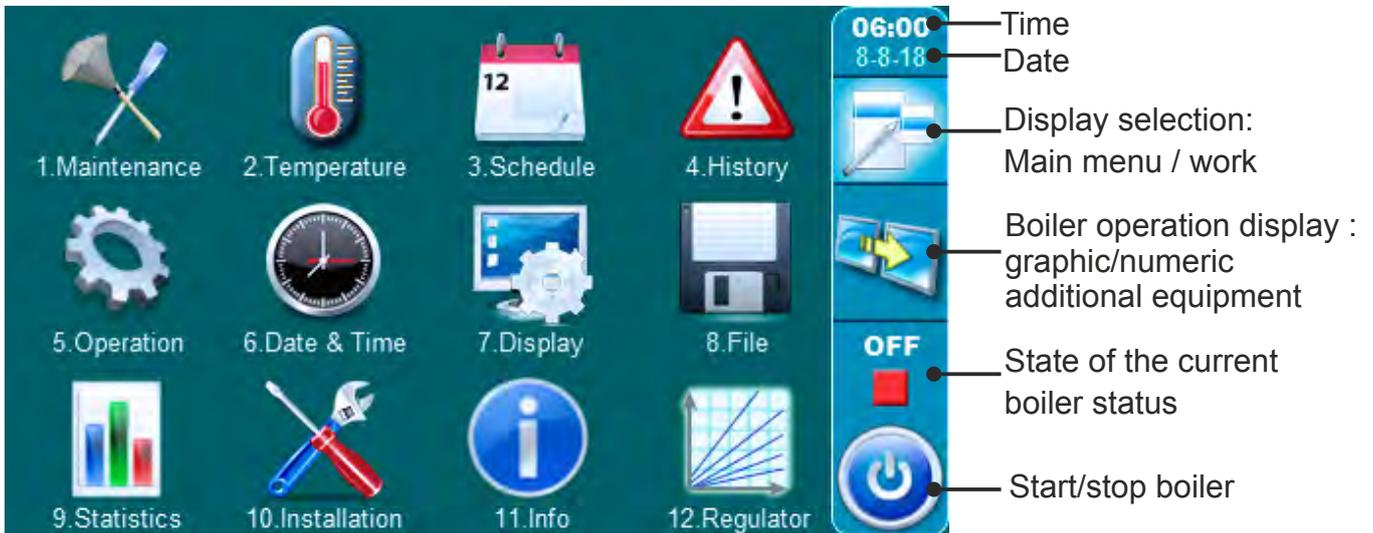
If the language selection is "disabled" (display > language sel > disabled), initial message wil appear in the screen as long as the set in the menu "Welcome time" (display > welcome time).



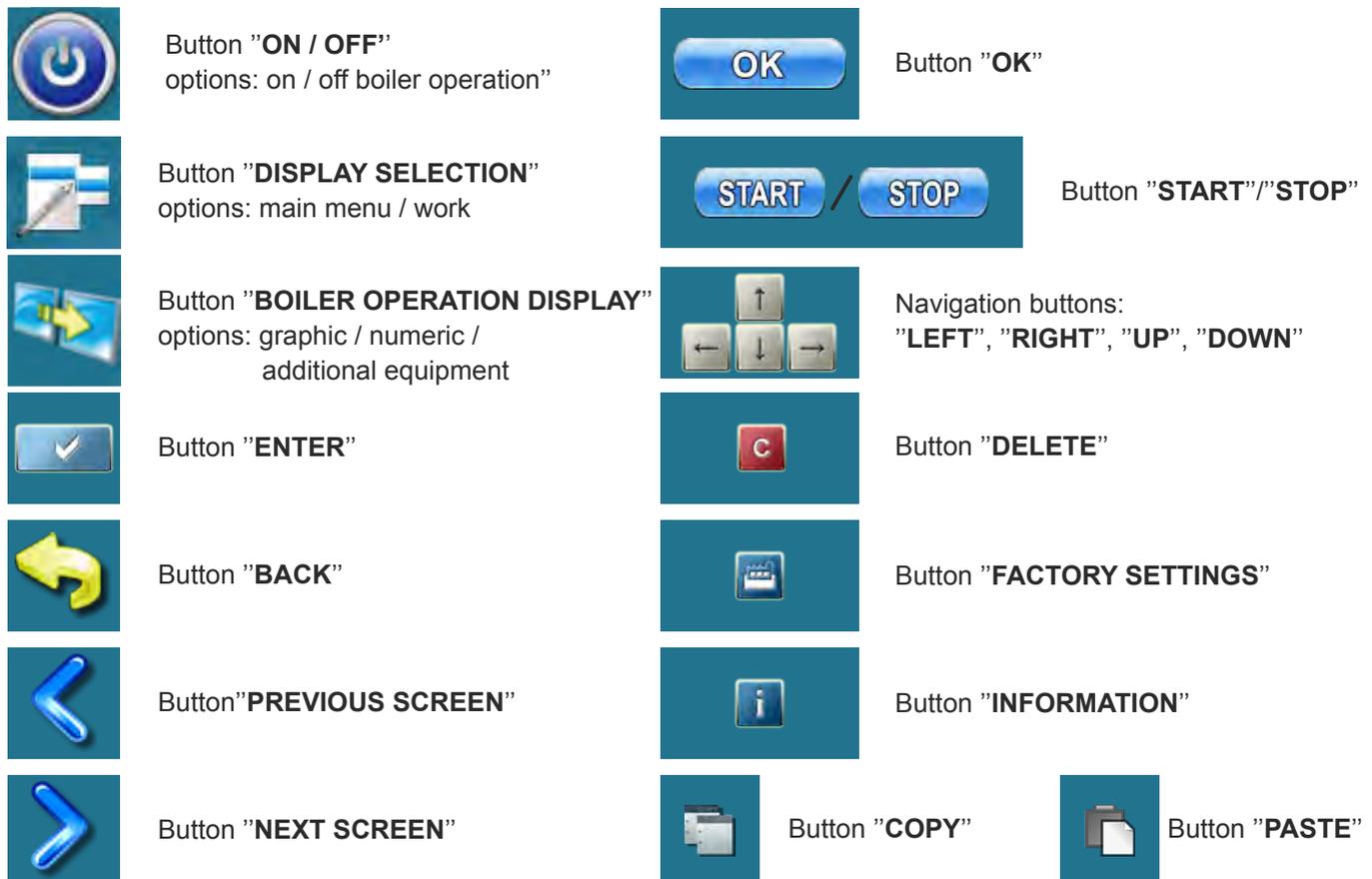
**When turning the main switch the screen should not be pressed (by finger ...). If the screen when you turn the main switch is pressed (on the screen labeled "Firmware update ") regulation is in "software update" that can be used by authorized personnel only. If this happens, it is necessary to turn off the main switch and restarted without any pressure on the display.**

## MAIN MENU

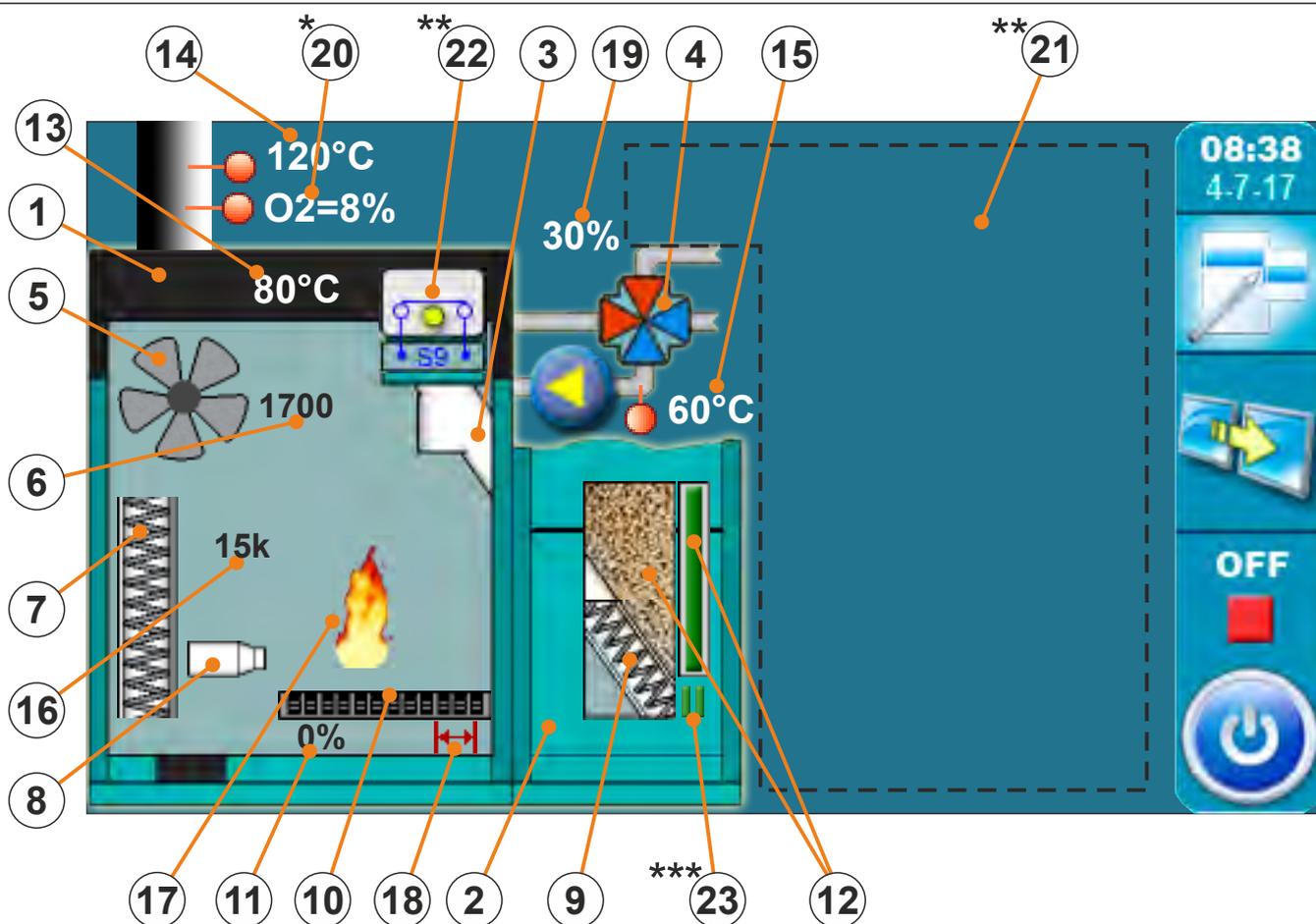
The main menu is used to select the desired submenu. To select a specific menu you must press the appropriate icon on the screen. To switch between the "Main menu" and "Boiler working display" press the button "Display selection". To switch between graphic and numeric display of the boiler using press "Boiler operation display".



## BUTTONS



**SYMBOLS**



- |  |   |
|--|---|
| <p>1 - Boiler</p> <p>2 - Pellet tank</p> <p>3 - Pellet feeding screw</p> <p>4 - 4-way mixing valve with motor device<br/>(when working, left/right arrow will be shown)</p> <p>5 - Symbol of fan operation<br/>(when working, symbol is turning)</p> <p>6 - Fan speed (rpm)</p> <p>7 - Symbol of flue gas channel cleaner<br/>(when working, symbol is moving)</p> <p>8 - Symbol of electric heater<br/>(when working, symbol changes color)</p> <p>9 - Symbol of pellet feeding screw<br/>(when working, symbol is moving)</p> <p>10 - Symbol of mechanism for grate cleaning<br/>(when working, symbol moves left/right)</p> <p>11 - Current position of burner grate<br/>(0% - closed, 100% - open)</p> | <p>12 - Pellet level in the tank (3 levels)</p> <p>13 - Boiler temperature sensor</p> <p>14 - Flue gas sensor</p> <p>15 - Flow temperature sensor</p> <p>16 - Resistance of photocell (luminous intensity of flame)</p> <p>17 - Flame<br/>(symbol appears when there is the flame)</p> <p>18 - Symbol of microswitch in mechanism for grate cleaning</p> <p>19 - Percentage of opens of the 4-way mixing valve with motor device<br/>(0% - closed, 100% - open)</p> <p>* 20 - The percentage of oxygen in the flue gases</p> <p>** 21 - The symbols in this section depend on the selected configuration</p> <p>** 22 - External control symbol (see point 13.1)</p> <p>*** 23 - Suction system symbol (off,pause,on)</p> |
|--|---|

\* Only on PelTec-lambda

\*\* Displaying these symbols depends on the configuration set up by an authorized service

\*\*\* For more informations about this symbol see "Technical instructions for vacuum wood pellet feeding system".

**SYMBOLS**

4-way mixing valve with motor device



Motor device doesn't work

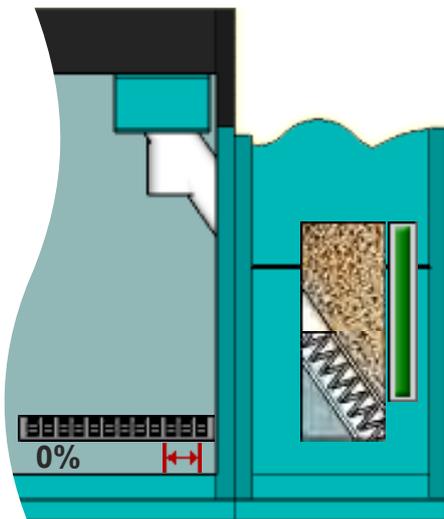


Motor device is closing the valve

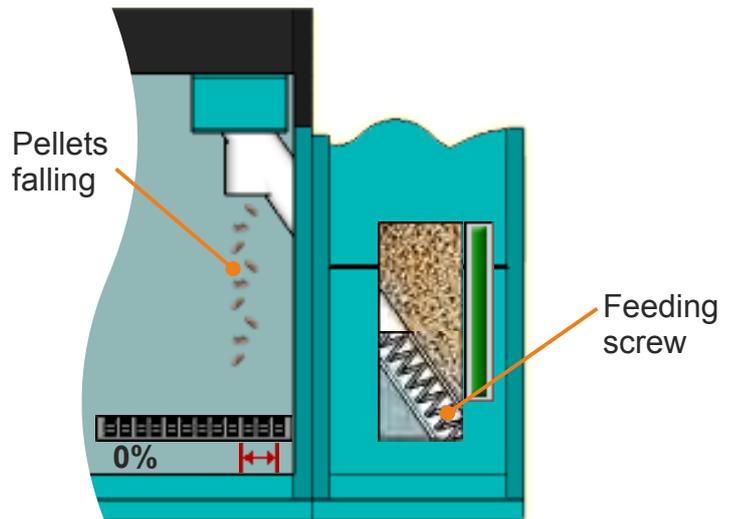


Motor device is opening the valve

Pellet feeding screw

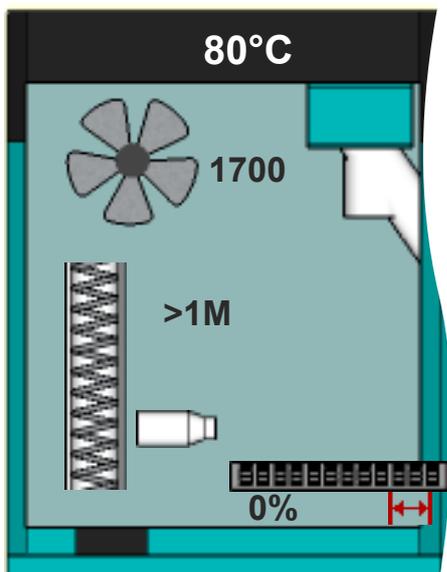


Pellet feeding screw doesn't work

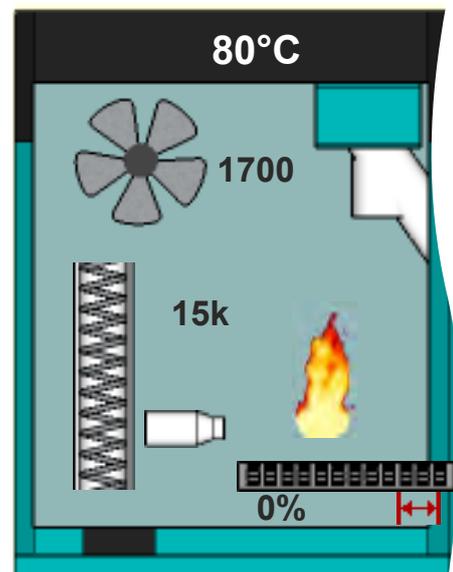


Pellet feeding screw is working (pellets are falling and screw is moving)

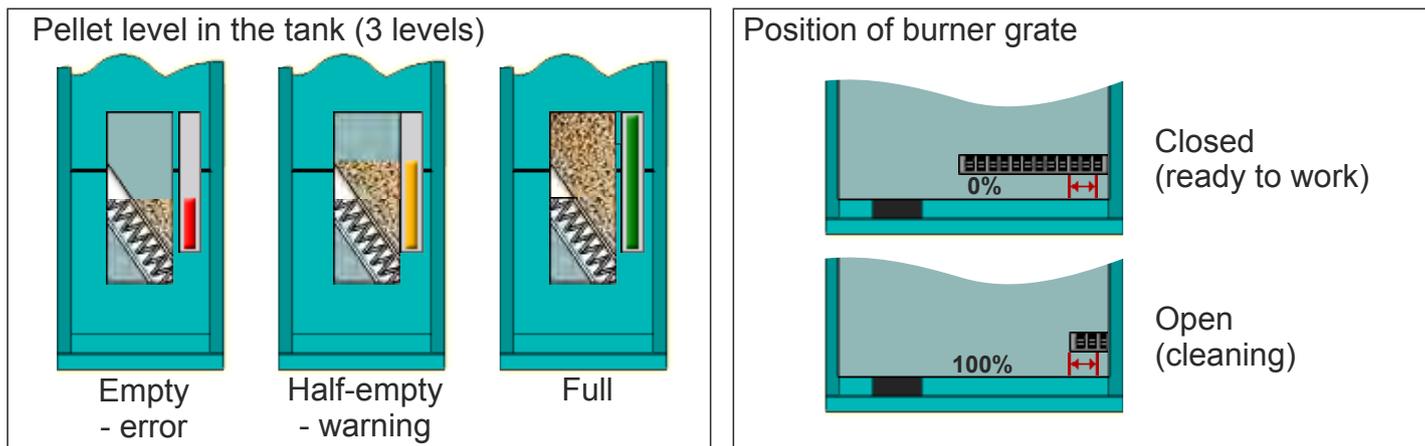
Flame symbol



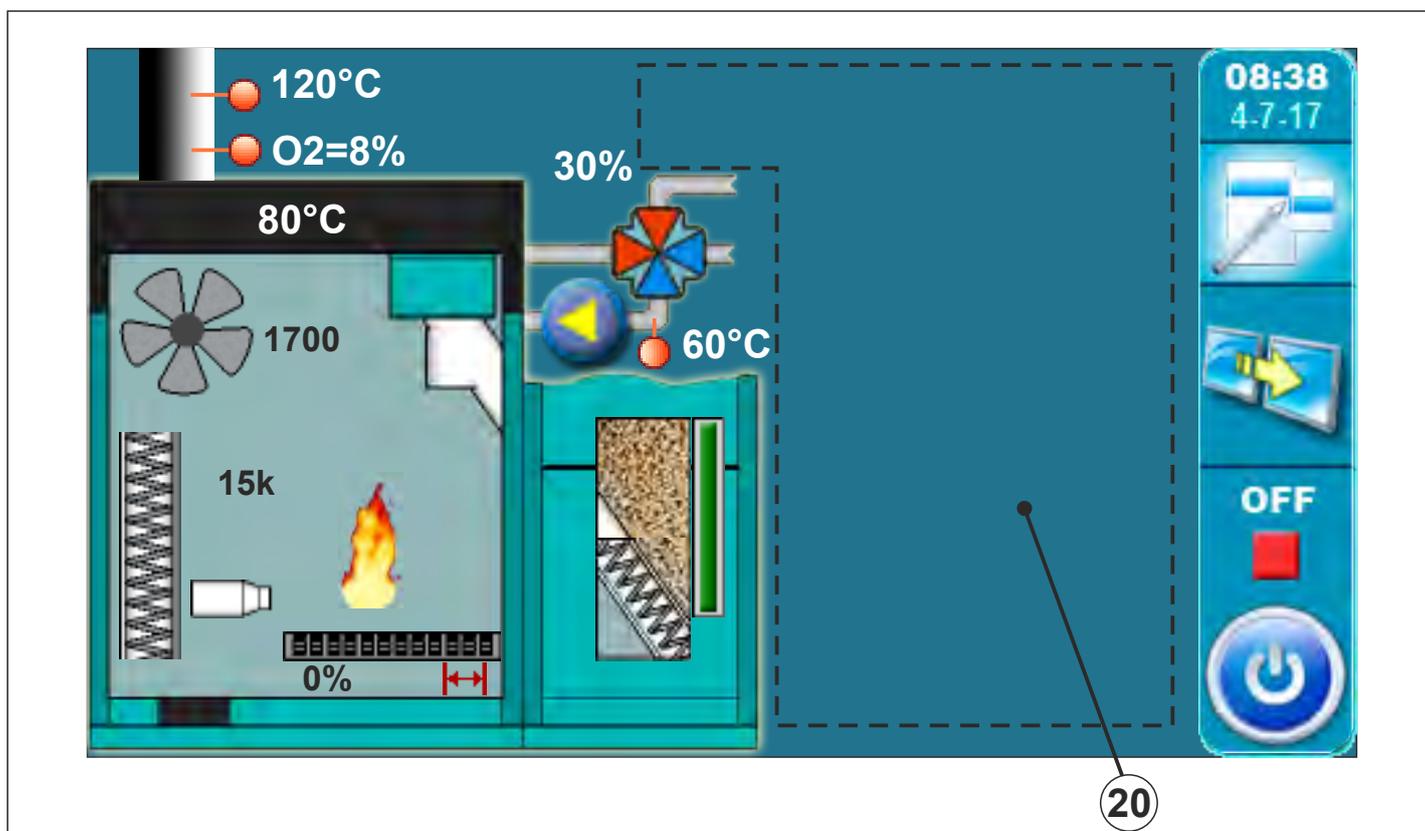
There is no flame



There is a flame



**CONFIGURATION SYMBOLS**



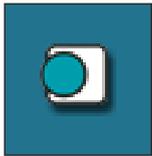
The following symbols are shown on the display configuration (page 4, mark 20 in the figure)



Pump (when pump is working symbol is rotating, otherwise idle)



The pump has a request for work (next to the pump symbol bright yellow square when the consumer given the demand for work the pump, the pump does not work if you have not met all the conditions for work, for example. low temp. in the boiler, otherwise the pump normally works)



Room thermostat



Next to the room thermostat symbol bright blue circle (the room thermostat has requested for operating the pump, the pump does not work if you have not met all the conditions for its operation, for example. low temp. in the boiler, otherwise normally works)



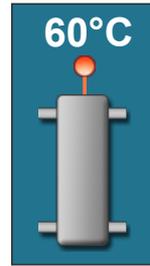
Heating circuit



Boiler flow temperature



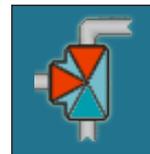
Domestic hot water tank with current temperature



Hydraulic crossover with the current temperature



Accumulation tank with current temperature at top of the tank and at the bottom of the tank.



3-way diverter valve (showing the open and closed pipe)



Chimney sweeper

## 1.0. MAINTENANCE

### 1. Maintenance

1. Manual B.Cleaning

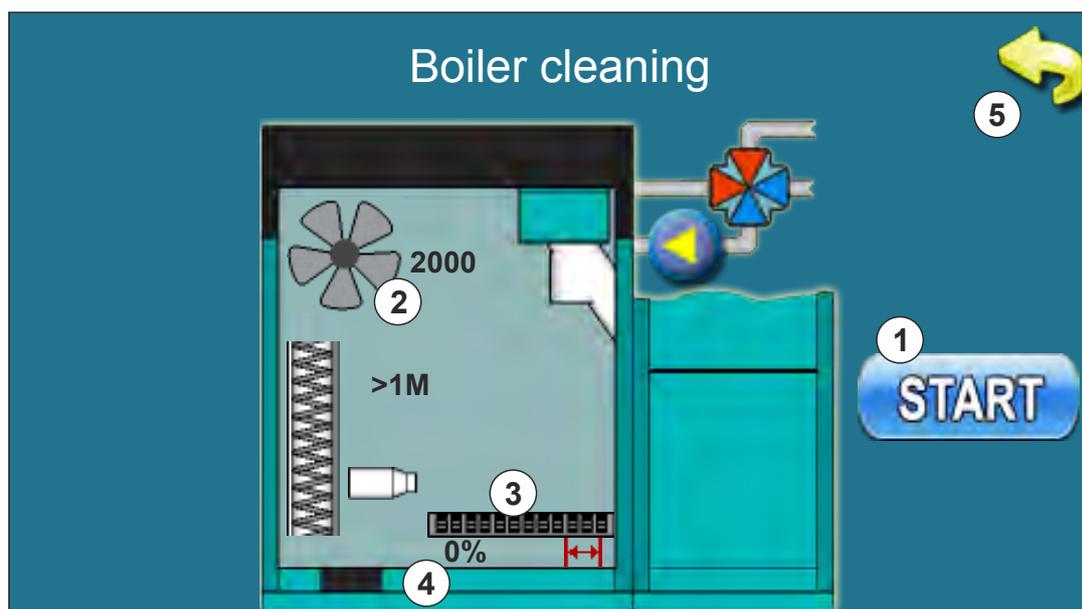
2. Filling screw transp.

3. System Airvent

### 1.1. CLEANING THE BOILER

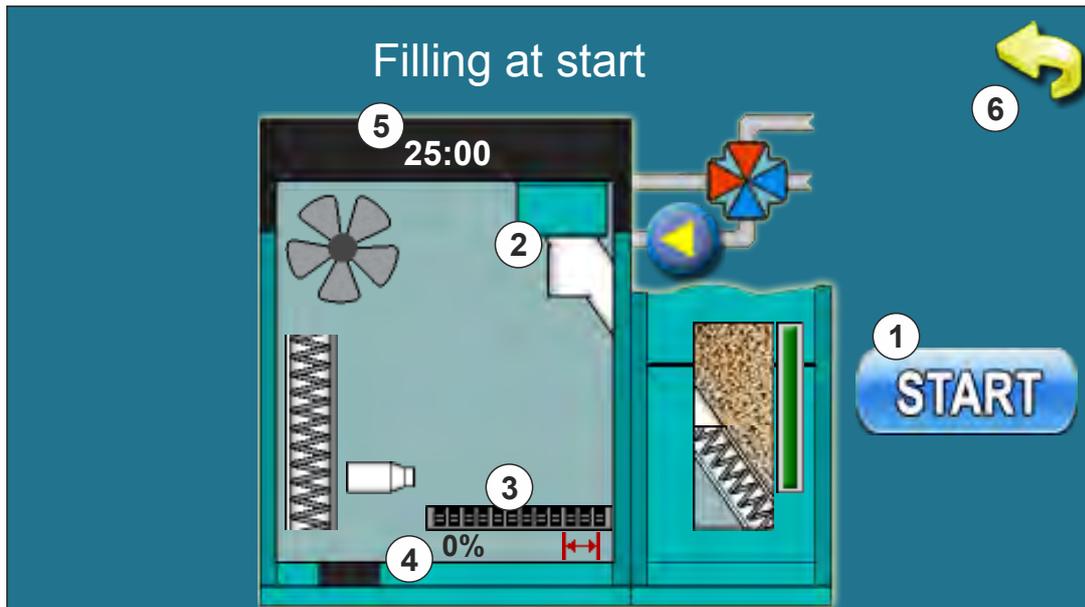
**Cleaning the boiler** - By pressing the button "START" (1) fan will begin work (2), an burner grate (3) will move into the open position (100%) (4), (button "START" will become a button "STOP").

This option enables you to during cleaning of combustion chamber, boiler ash does not come out of the boiler, and since the burner grate is open ash falls into the ash box. After cleaning, it is necessary to press the "STOP" to shut off the fan and burner grate move back to the closed position (0%) (4) (same thing will happen if you press the button "BACK" (5)). After cleaning, it is necessary to empty the ashtray.



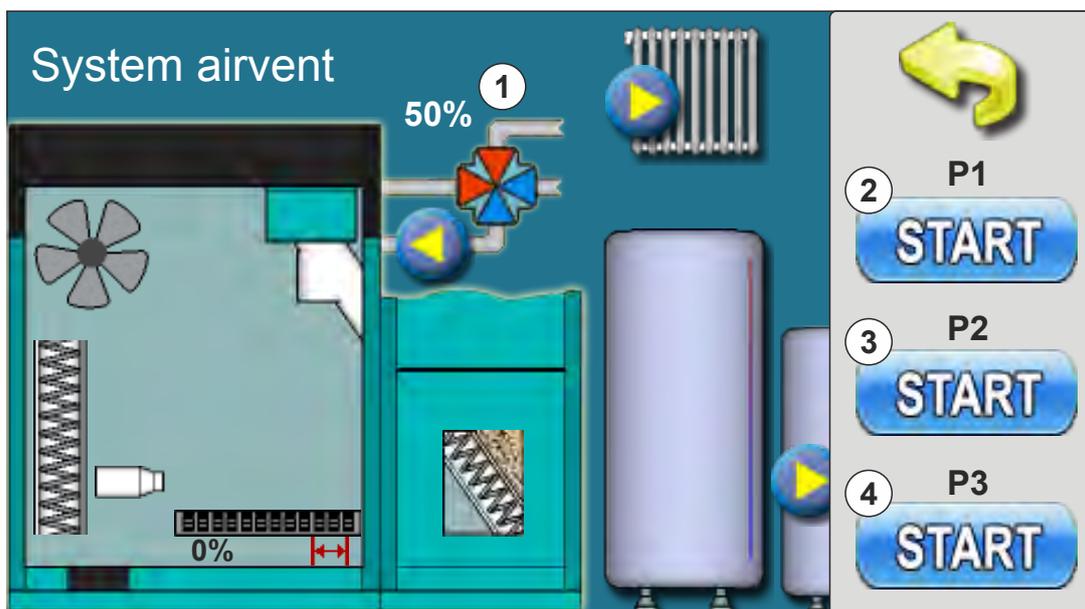
## 1.2. FILLING AT START

**Filling at start** - by pressing "START" (1) pellet feeding screw starts to operate (2) (works 25 min), and the burner grate (3) moves to the open position (100%) (4) to make pellets fall down in ashtray. After this process is complete pellet feeding screw stops working, the burner grate is returned to the closed position (0%) (4). After completion of the initial filling of pellets ashtrays need to put in pellet tank. For the duration of this process, the display shows the countdown process duration (5). Before starting this process, it is necessary to fill the pellet tank. The process may be interrupted by pressing button "STOP" or "BACK" (6).



## 1.3. SYSTEM AIRVENT

**System airvent** - entering the above menu, the motor device of 4-way mixing valve opens the valve to 50%(1). By pressing "START" next to a particular pump symbol, the pump starts to work (2, 3, 4) (button "START" become button "STOP"). By pressing the button "STOP" the pump stops working. In this option is not possible to work 2 or 3 pumps at the same time.



## 2.0. TEMPERATURE

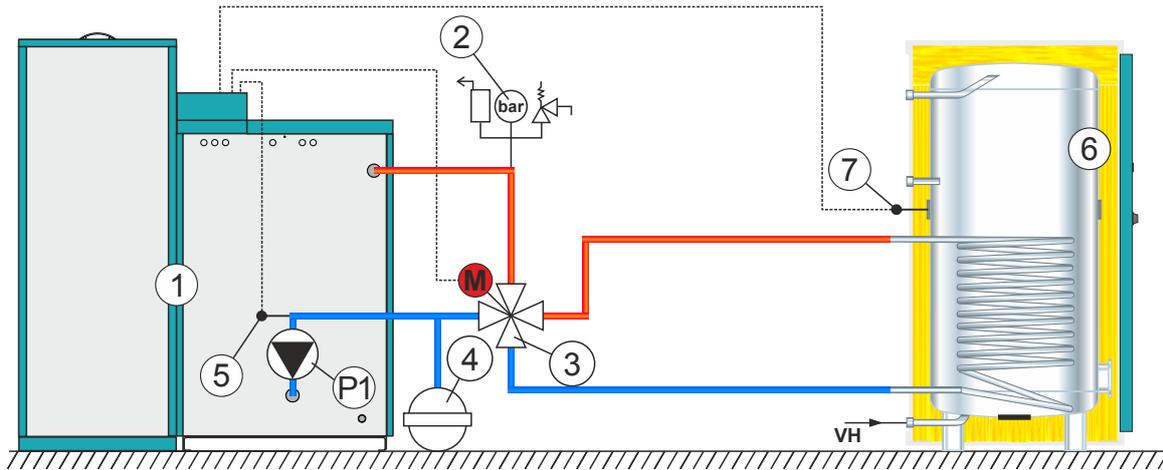
Temperatures choice depends on the configuration of heating. Below are shown all types of installation and configuration.

### CONFIGURATION 1 - DOMESTIC HOT WATER (DHW)

#### Scheme of configuration

Scheme 1. Configuration DHW

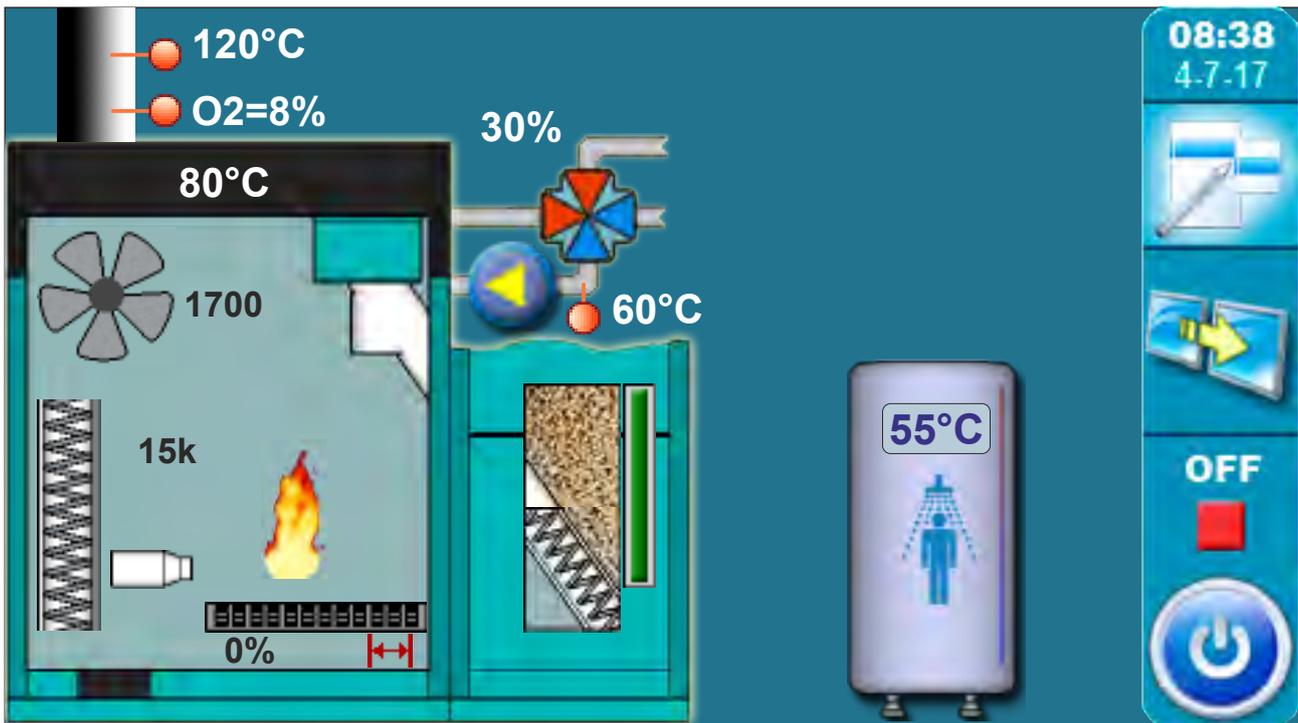
Required sensors: - return flow temp. sensor  
- DHW sensor



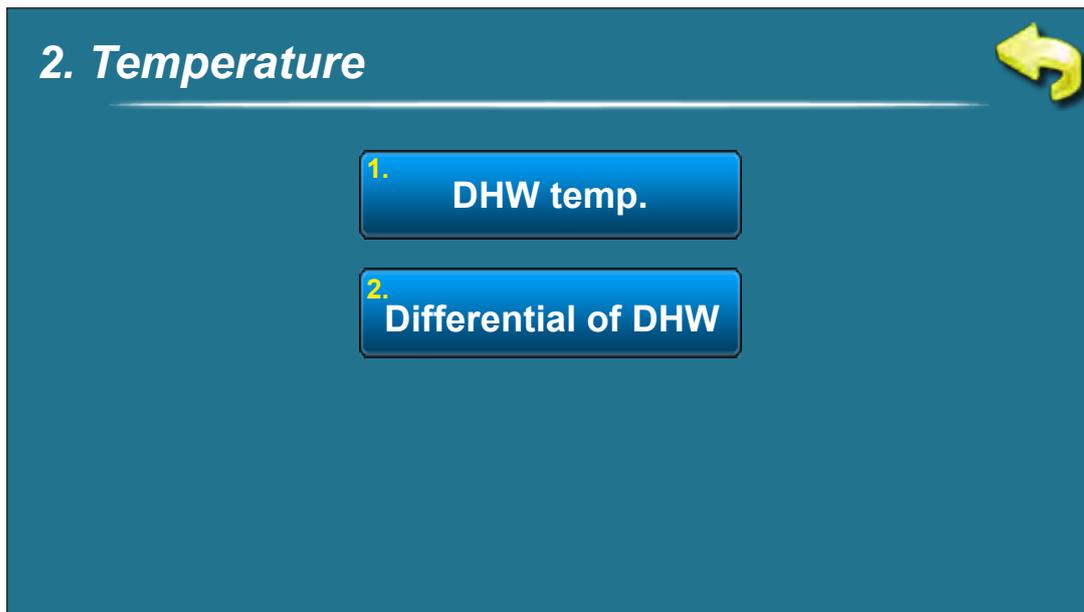
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel

- 5 - Return flow temperature sensor
- 6 - DHW tank
- 7 - DHW sensor

#### On the screen



## 2. TEMPERATURES (CONFIGURATION DHW)



### 2.1 TEMPERATURE DHW

**Possible selection:**

**default:** 50°C  
Minimum: 40°C  
Maximum: 80°C

Temperature setting options of DHW (domestic hot water).

### 2.2 DIFFERENCE DHW

**Possible selection:**

**default:** 5°C  
Minimum: 4°C  
Maximum: 40°C

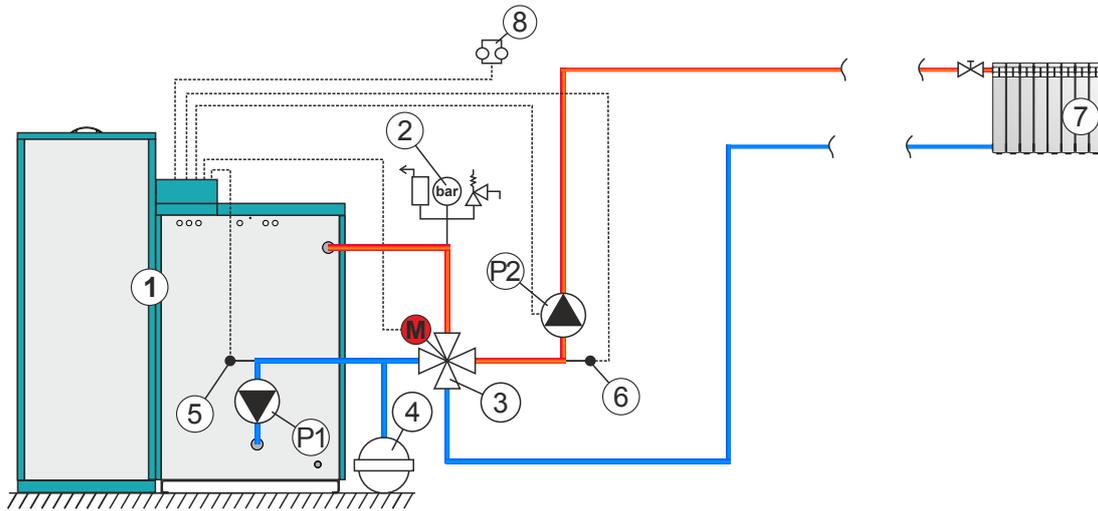
The possibility of setting domestic hot water difference.

**CONFIGURATION 2 - DIRECT HEATING CIRCUIT (DHC)**

**Scheme of configuration**

**Scheme 2. Configuration DHC**

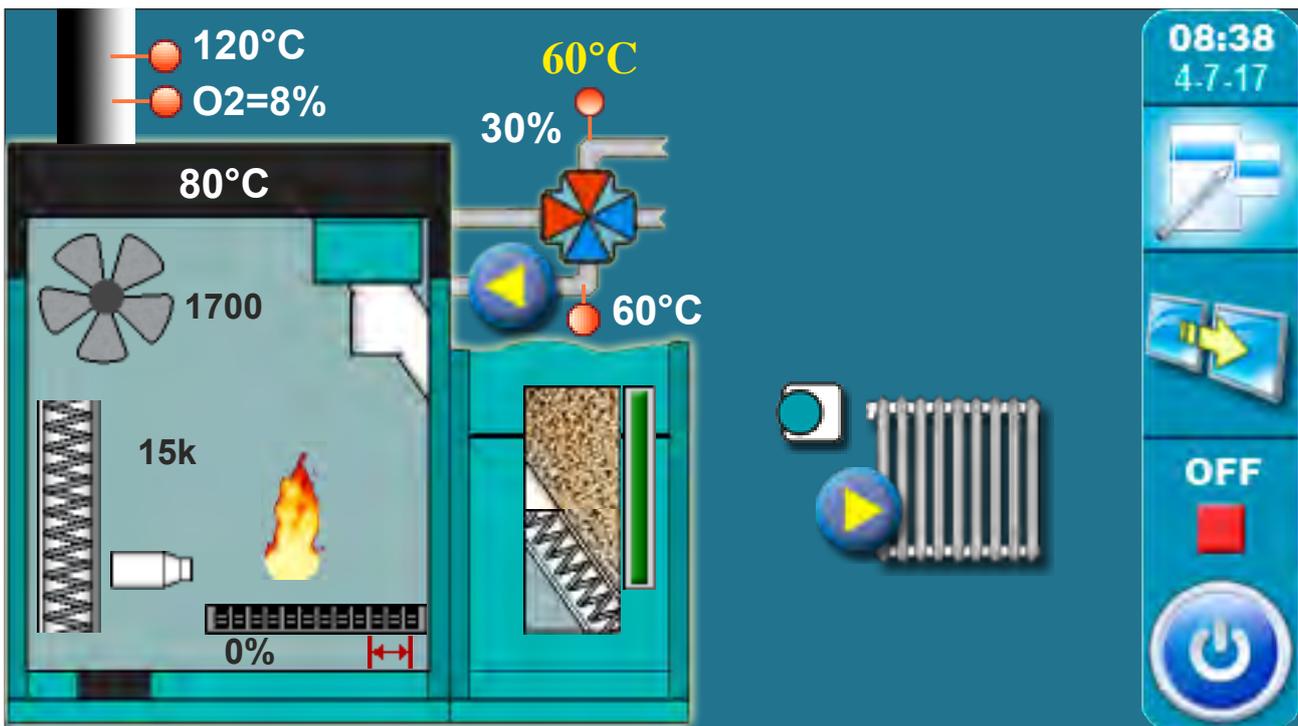
**Required sensors:** - return flow temp. sensor  
- flow temperature sensor



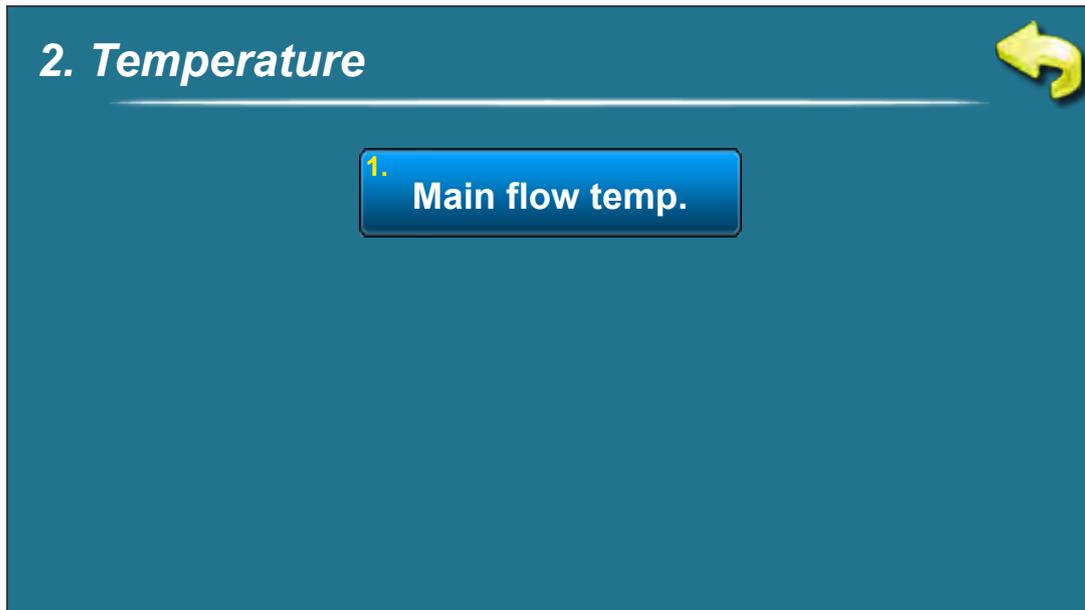
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel

- 5 - Return flow temperature sensor
- 6 - Flow temperature sensor
- 7 - Heating circuit
- 8 - Room thermostat

**On the screen**



## 2. TEMPERATURE (CONFIGURATION DHC)



### 2.1 FLOW TEMPERATURE

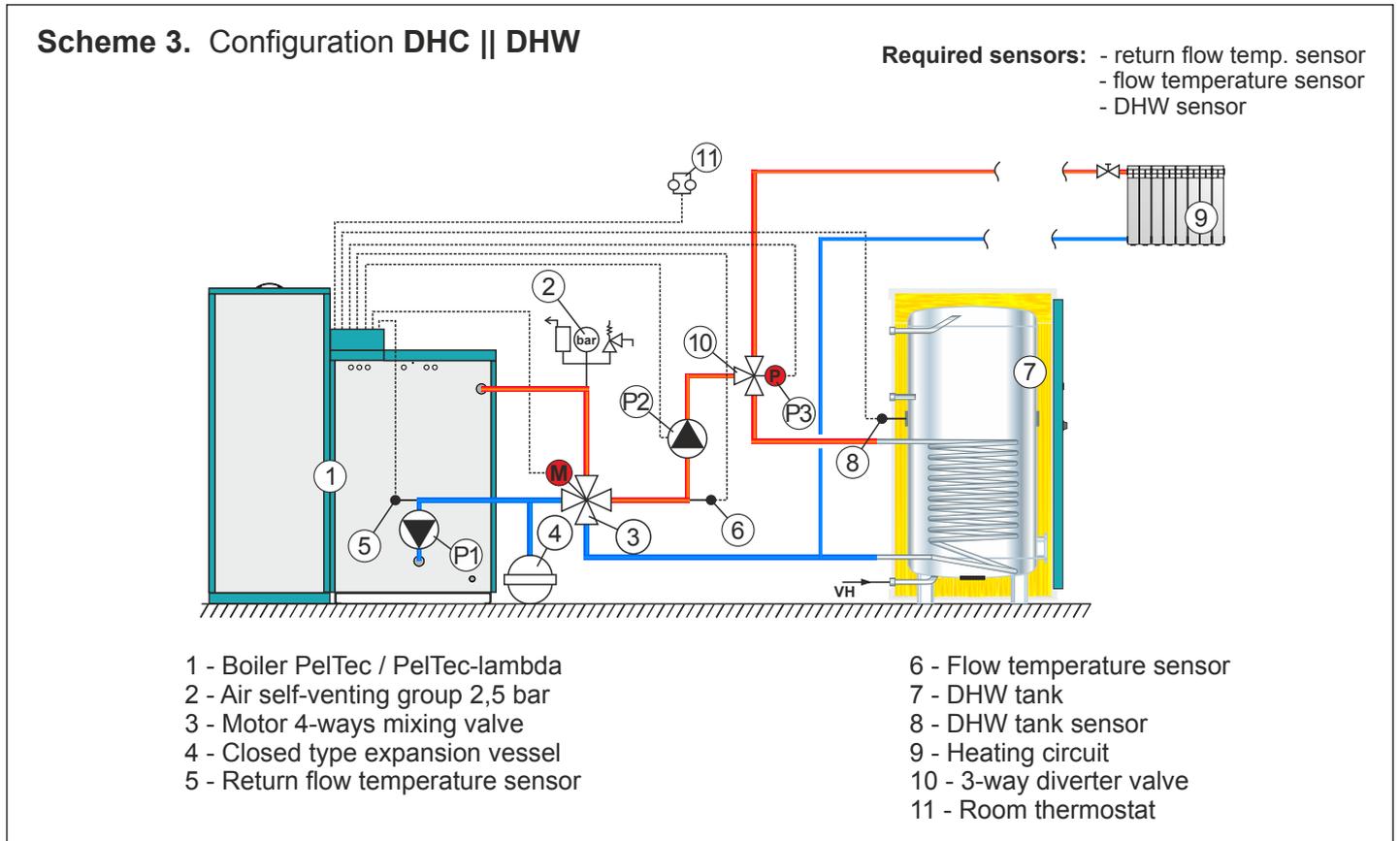
Possible selection:

**default:** 60°C  
Minimum: 30°C  
Maximum: 90°C

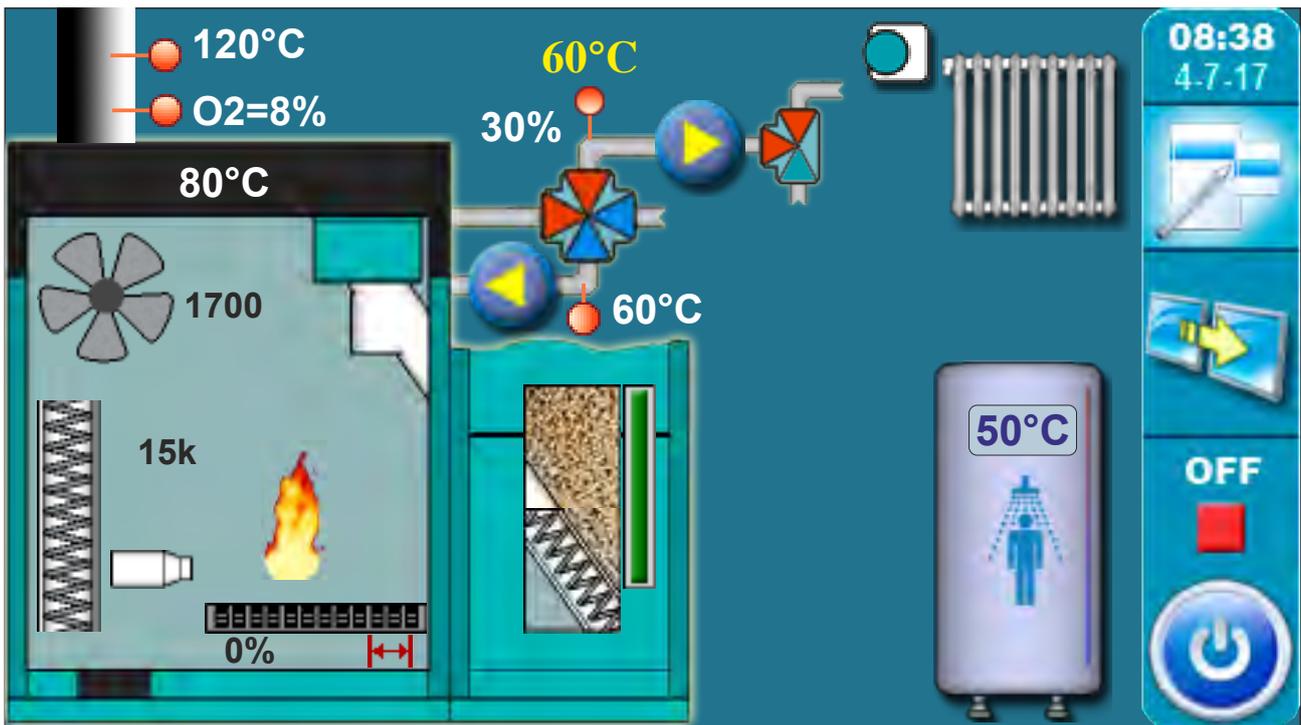
The possibility of setting flow temperature

**CONFIGURATION 3 - DHW || DHC**

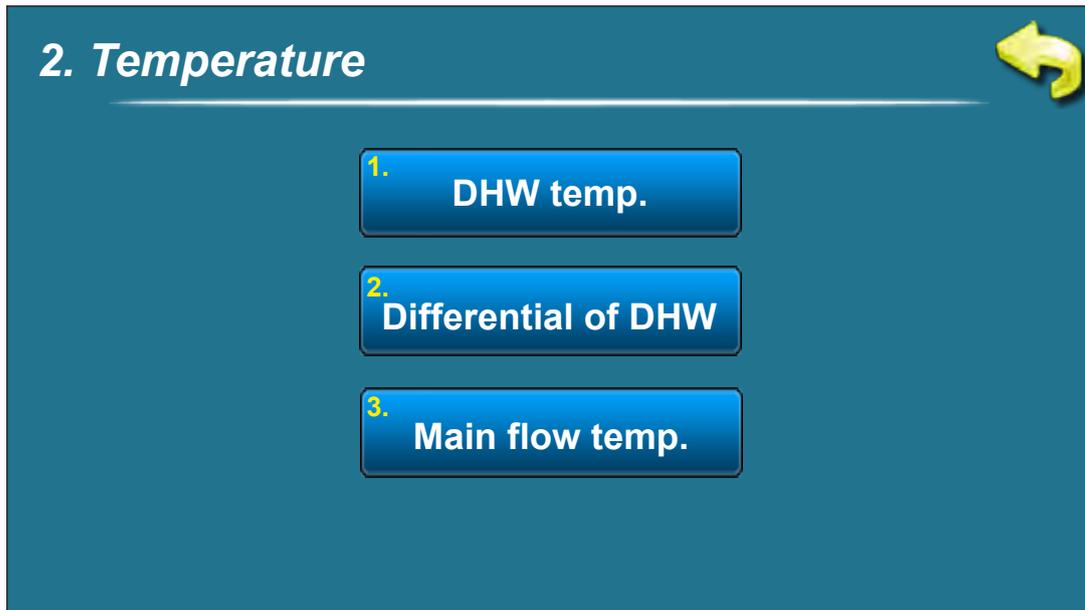
**Scheme of configuration**



**On the screen**



## 2. TEMPERATURE (CONFIGURATION DHW || DHC)



### 2.1 TEMPERATURE DHW

**Possible selection:**

**default:** 50°C  
Minimum: 40°C  
Maximum: 80°C

Temperature setting options of DHW (domestic hot water).

### 2.2 DIFFERENTIAL OF DHW

**Possible selection:**

**default:** 5°C  
Minimum: 4°C  
Maximum: 40°C

The possibility of setting differential of DHW.

### 2.3 FLOW TEMPERATURE

**Possible selection:**

**default:** 60°C  
Minimum: 30°C  
Maximum: 90°C

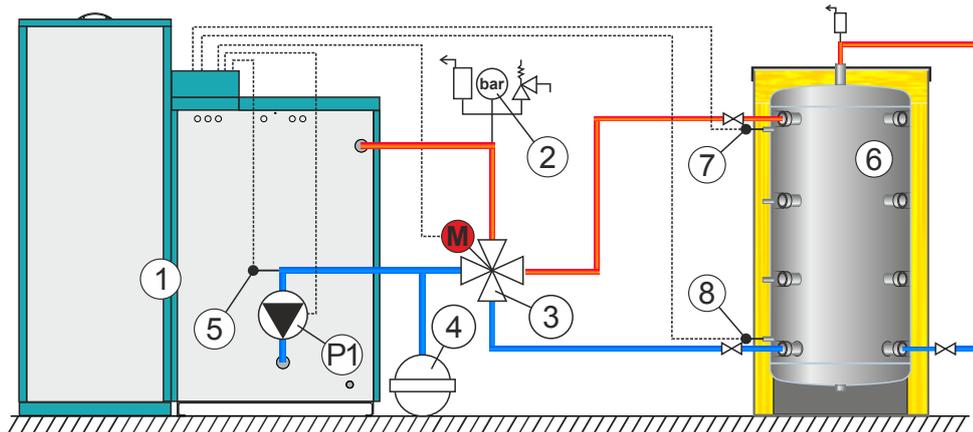
The possibility of setting flow temperature

**CONFIGURATION 4 - ACCUMULATION TANK**

**Scheme of configuration**

**Scheme 4. Configuration BUF**

**Required sensors:** - return flow temp. sensor  
 - accumulation tank sensor (upper)  
 - accumulation tank sensor (lower)



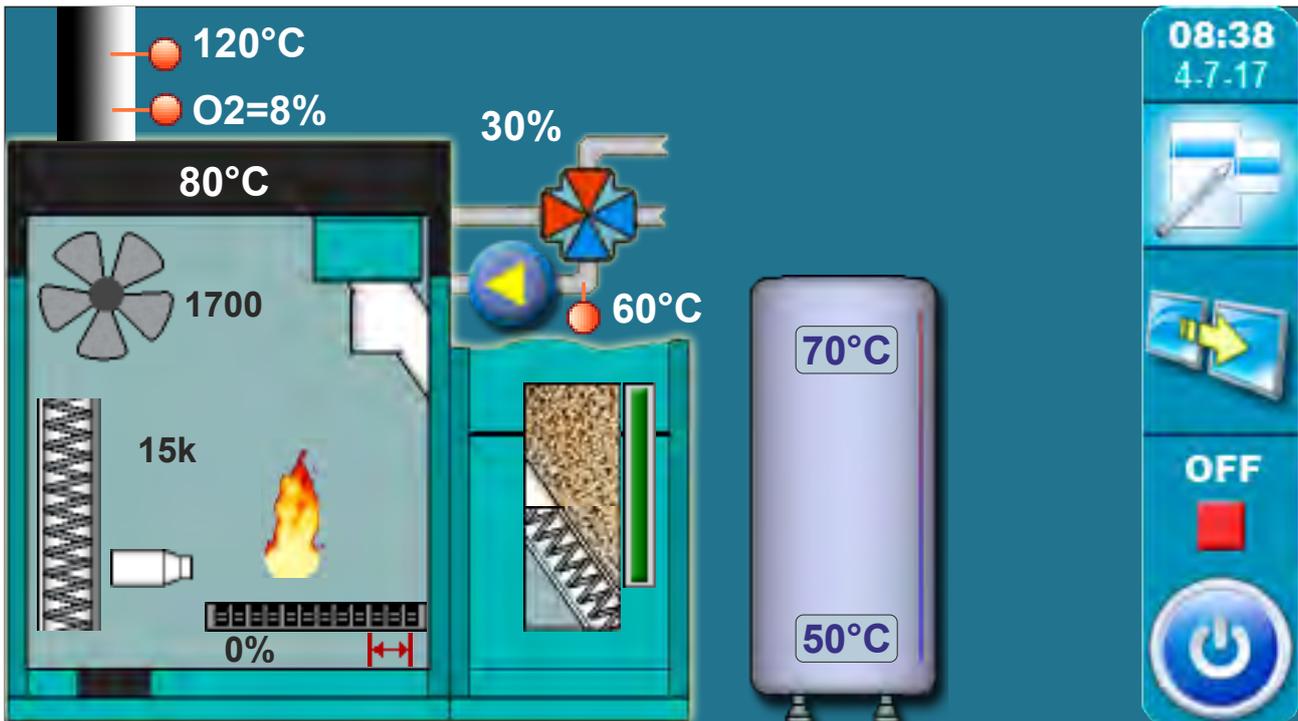
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel

- 5 - Back flow temperature sensor
- 6 - Accumulation tank CAS
- 7 - Accumulation tank sensor CAS 1 (upper)
- 8 - Accumulation tank sensor CAS (lower)

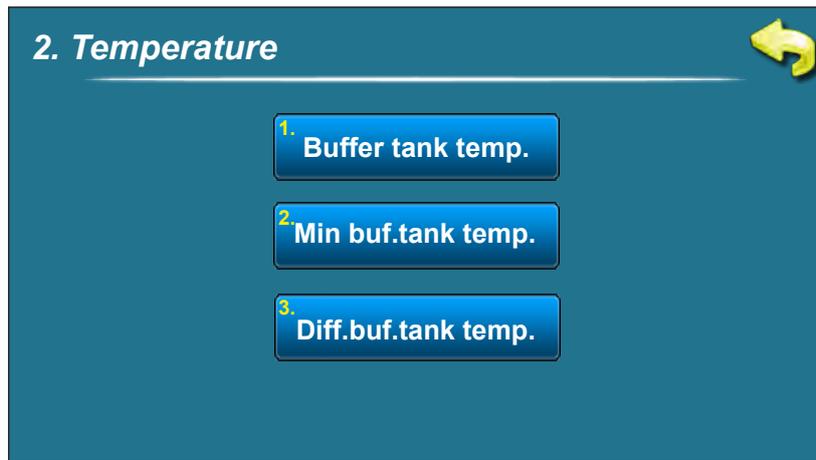
**NOTES:**

- In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".
- In this configuration is possible to connect external control (external start).

**On the screen**



## 2. TEMPERATURE (CONFIGURATION BUF)



### 2.1 TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 80°C  
 Minimum: 40°C  
 Maksimum: 85°C

The possibility of setting the desired temperature of the accumulation tank.

### 2.2 MINIMUM TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 20°C  
 Minimum: 5°C  
 Maksimum: 64°C

The possibility of setting the minimum temperature of the accumulation tank. When minimum temperature of accumulation tank (upper sensor) is reached, all heat pumps connected to the boiler control will be shut down. The minimum accumulation tank temperature does not affect the operation of the DHW pump.

### 2.3 ACCUMULATION TANK DIFFERENCE

**Possible selection:**

**default:** 10°C  
 Minimum: 5°C  
 Maksimum: 30°C

The possibility of setting the accumulation tank difference.

**Description of work:**

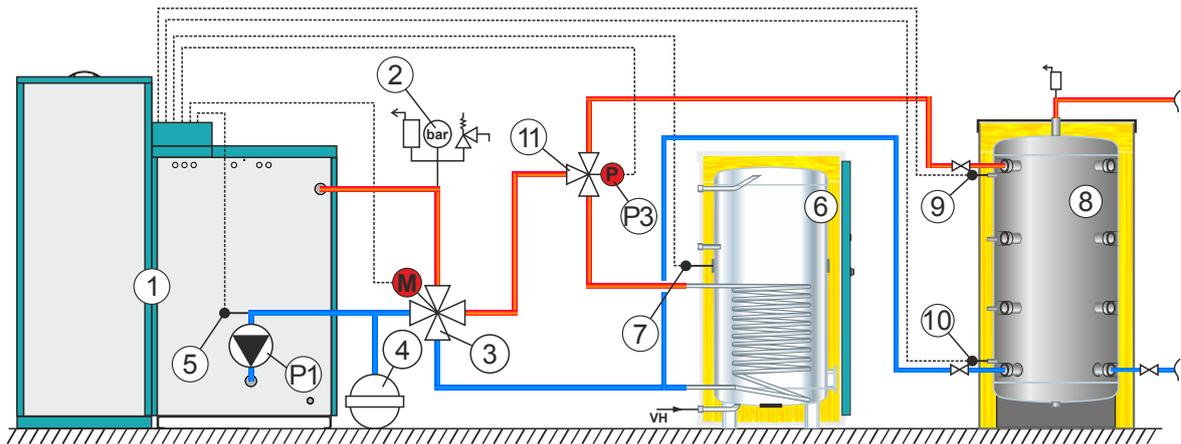
The regulation reads on the upper sensor accumulation tank temperature, minimum accumulation tank temperature and accumulation tank difference. At the bottom sensor, regulation reads the accumulation tank shutdown difference that can be set in the installation menu (under PIN). When the boiler is switched on, it works until the temperature on the lower sensor (T accumulation tank - T accumulation tank shutdown difference) is reached. The boiler will turn ON again when accumulation tank upper temperature (upper sensor) reach the (T accumulation tank - T accumulation tank difference).

**CONFIGURATION 5 - DHW||BUF**

**Scheme of configuration**

**Scheme 5. Configuration DHW || BUF**

**Required sensors:** - return flow temp. sensor  
 - DHW tank sensor  
 - accumulation tank sensor (upper)  
 - accumulation tank sensor (lower)



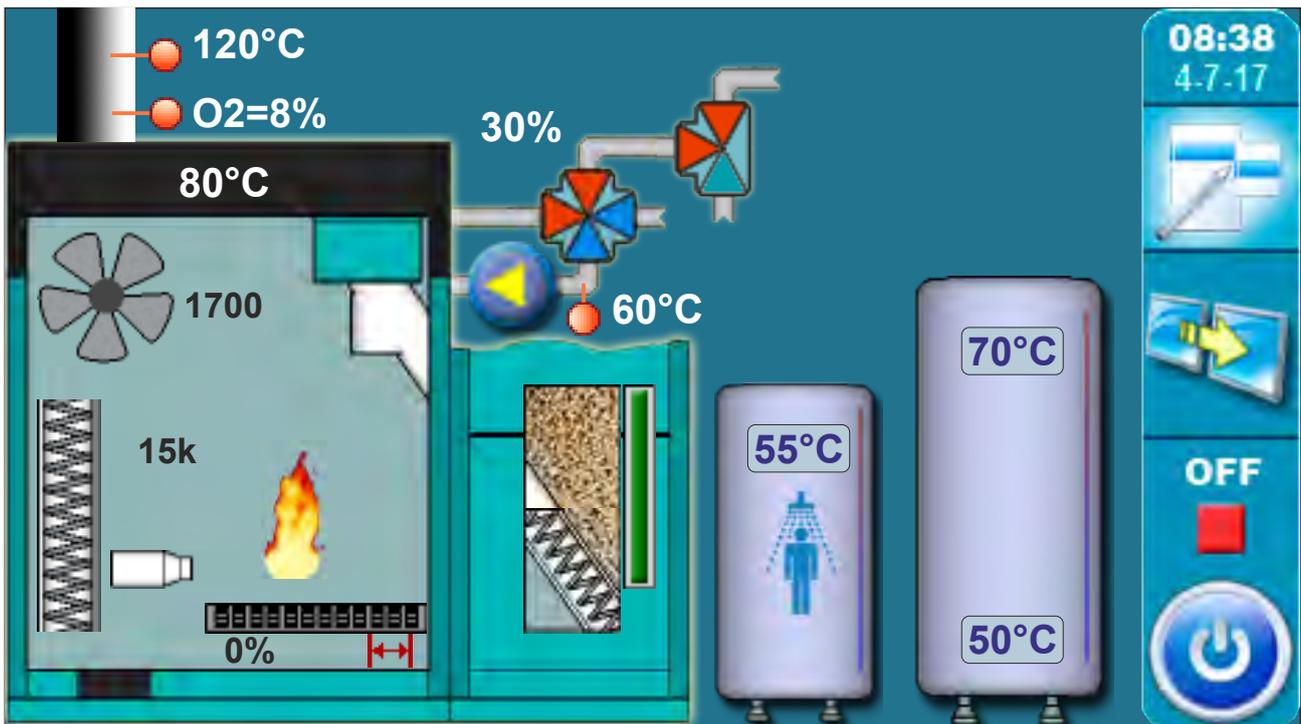
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel
- 5 - Return flow temperature sensor
- 6 - DHW tank

- 7 - DHV tank sensor
- 8 - Accumulation tank CAS
- 9 - Accumulation tank sensor CAS 1 (upper)
- 10 - Accumulation tank sensor CAS 2 (lower)
- 11 - 3-way diverter valve

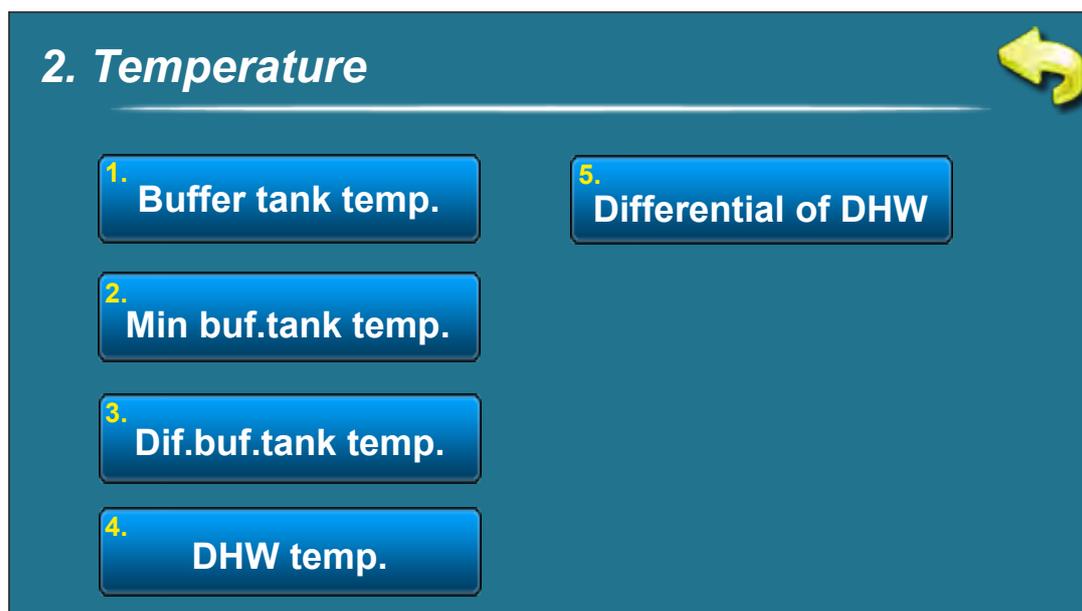
**NOTE:**

In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".

**On the screen**



## 2. TEMPERATURE (CONFIGURATION DHW || BUF)



### 2.1 TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 80°C

Minimum: 40°C

Maksimum: 85°C

The possibility of setting the desired temperature of the accumulation tank.

### 2.2 MINIMUM TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 20°C

Minimum: 5°C

Maksimum: 64°C

The possibility of setting the minimum temperature of the accumulation tank.

### 2.3 ACCUMULATION TANK DIFFERENCE

**Possible selection:**

**default:** 10°C

Minimum: 5°C

Maksimum: 30°C

The possibility of setting the accumulation tank difference.

## **2.4 TEMPERATURE DHW**

**Possible selection:**

**default: 50°C**

Minimum: 40°C

Maximum: 80°C

Temperature setting options of DHW (domestic hot water).

## **2.5 DIFFERENCE DHW**

**Possible selection:**

**default: 5°C**

Minimum: 4°C

Maximum: 40°C

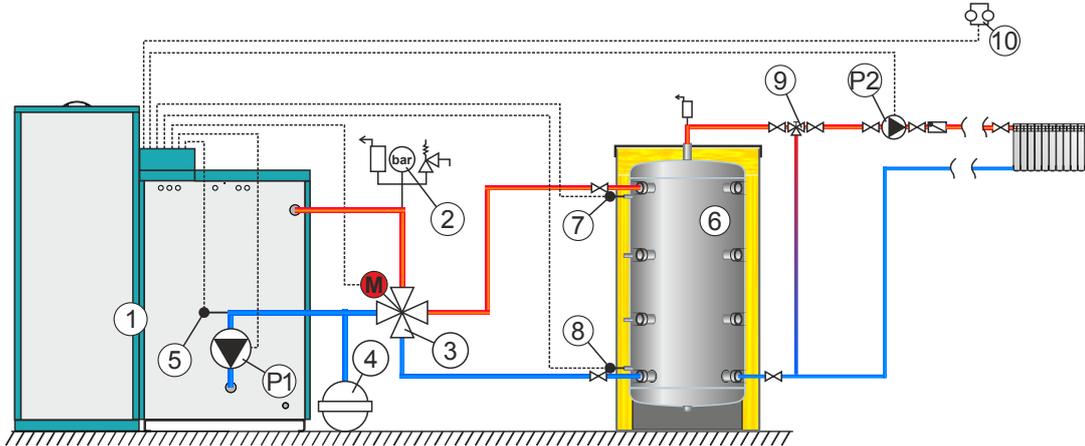
The possibility of setting domestic hot water difference.

**CONFIGURATION 6 - BUF--IHC**

**Scheme of configuration**

**Scheme 6. Configuration BUF -- IHC**

**Required sensors:** - return flow temp. sensor  
 - accumulation tank sensor (upper)  
 - accumulation tank sensor (lower)



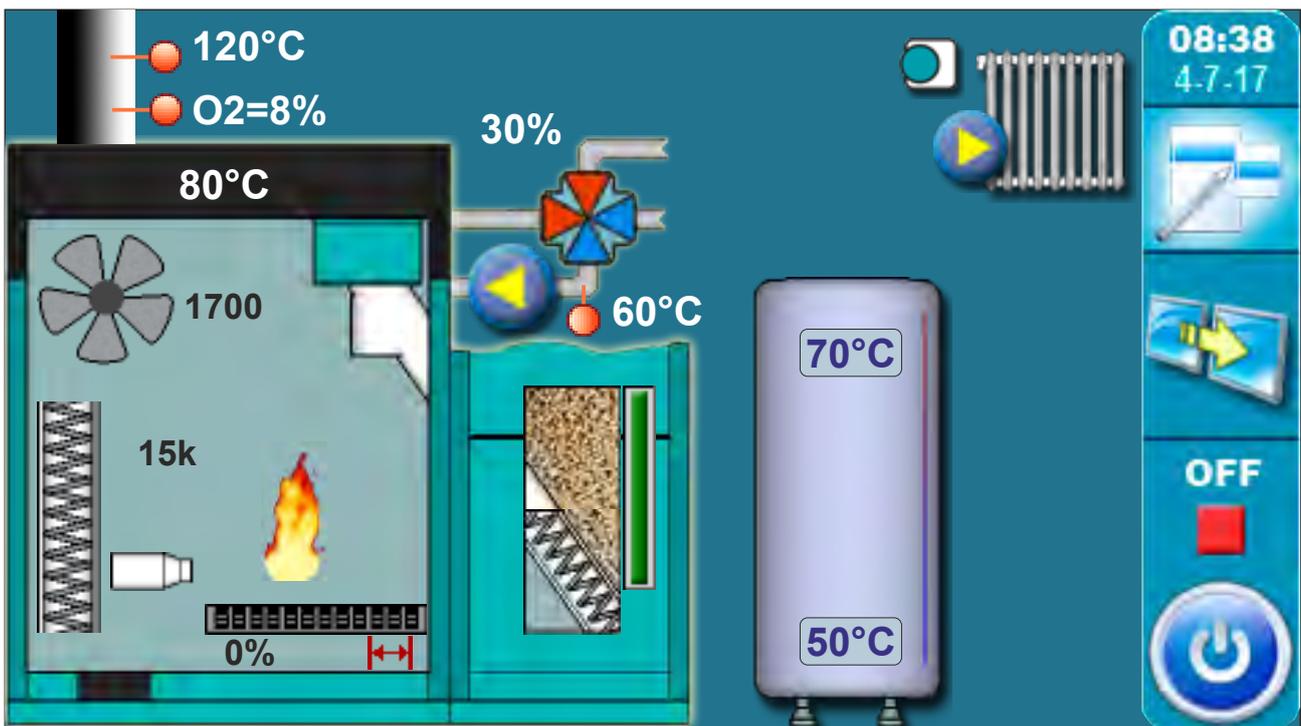
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel
- 5 - Return flow temperature sensor

- 6 - Accumulation tank CAS
- 7 - Accumulation tank sensor CAS 1 (upper)
- 8 - Accumulation tank sensor CAS 2 (lower)
- 9 - 3-way manual mixing valve
- 10 - Room thermostat

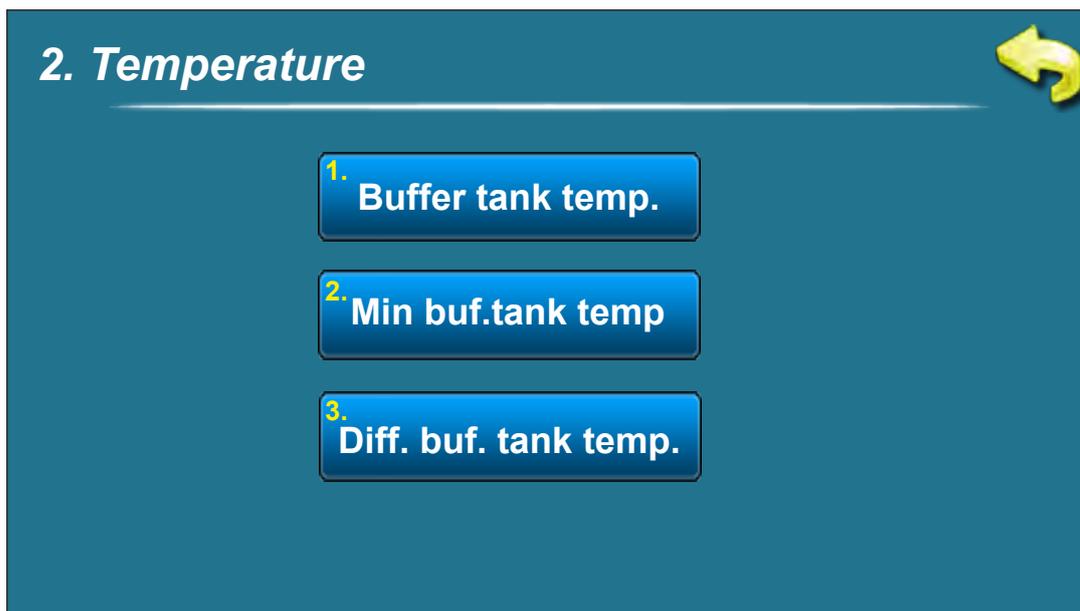
**NOTE:**

In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".

**On the screen**



## 2. TEMPERATURE (CONFIGURATION BUF--IHC)



### 2.1 TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 80°C

Minimum: 40°C

Maksimum: 85°C

The possibility of setting the desired temperature of the accumulation tank.

### 2.2 MINIMUM TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 20°C

Minimum: 5°C

Maksimum: 64°C

The possibility of setting the minimum temperature of the accumulation tank.

### 2.3 ACCUMULATION TANK DIFFERENCE

**Possible selection:**

**default:** 10°C

Minimum: 5°C

Maksimum: 30°C

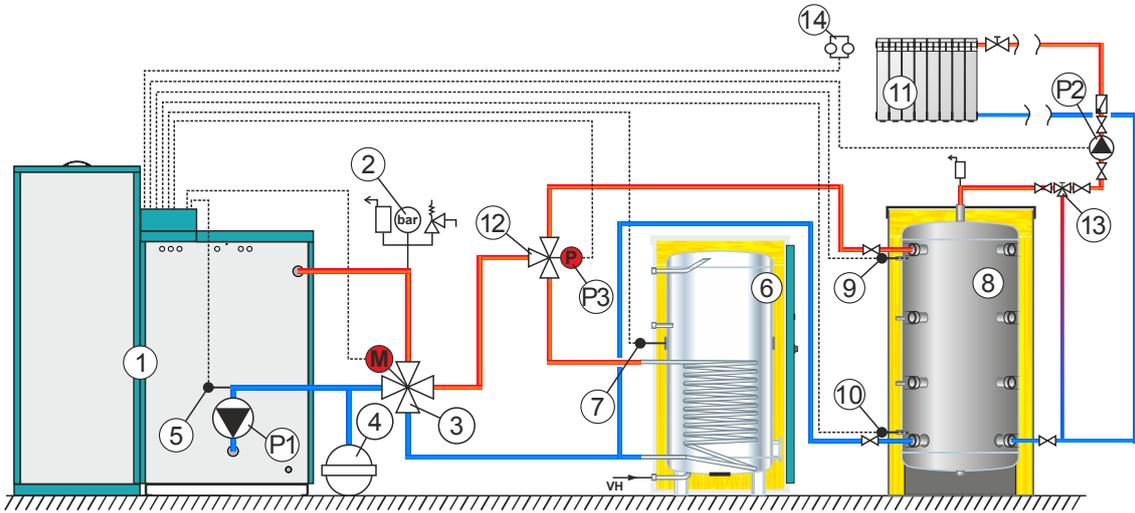
The possibility of setting the accumulation tank difference.

**CONFIGURATION 7 - DHW || BUF--IHC**

**Scheme of configuration**

**Scheme 7. Configuration DHW || BUF -- IHC**

**Required sensors:** - return flow temp. sensor  
 - DHW tank sensor  
 - accumulation tank sensor (upper)  
 - accumulation tank sensor (lower)



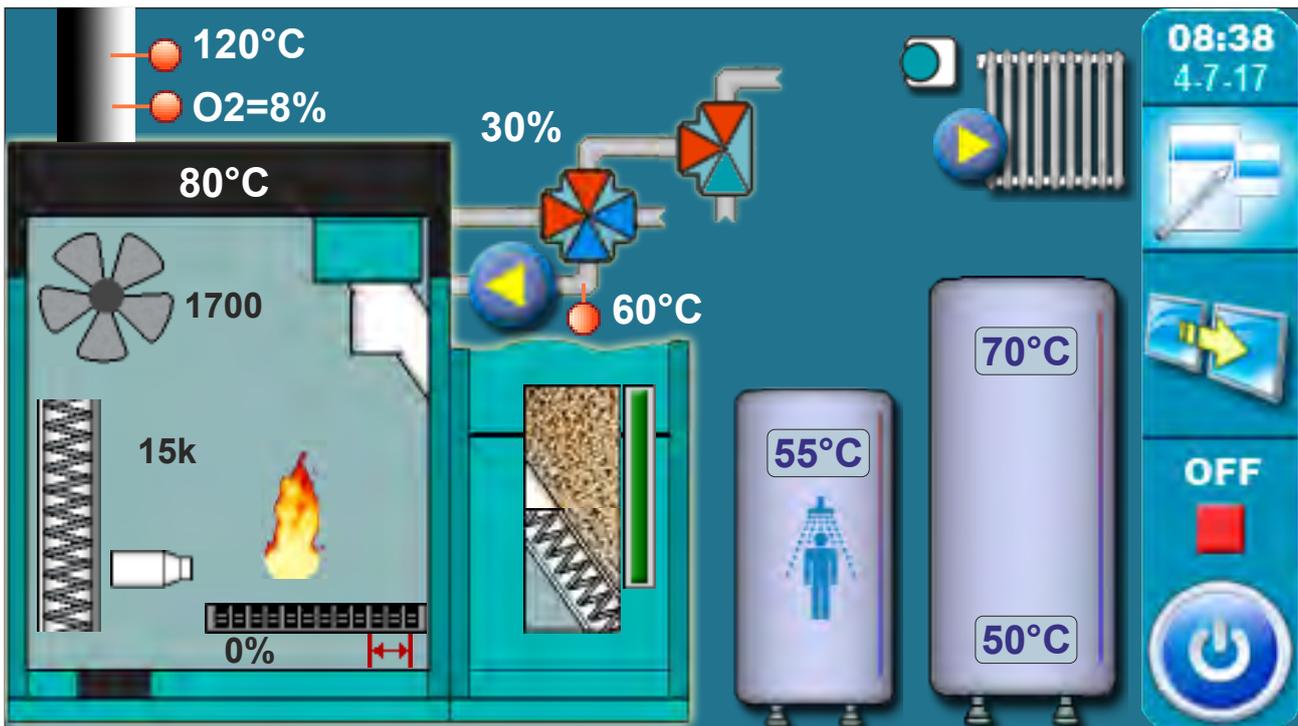
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel
- 5 - Return flow temperature sensor
- 6 - DHW tank
- 7 - DHW tank sensor

- 8 - Accumulation tank CAS
- 9 - Accumulation tank sensor CAS 1 (upper)
- 10 - Accumulation tank sensor CAS 2 (lower)
- 11 - Heating circuit
- 12 - 3-way diverter valve
- 13 - 3-way manual mixing valve
- 14 - Room thermostat

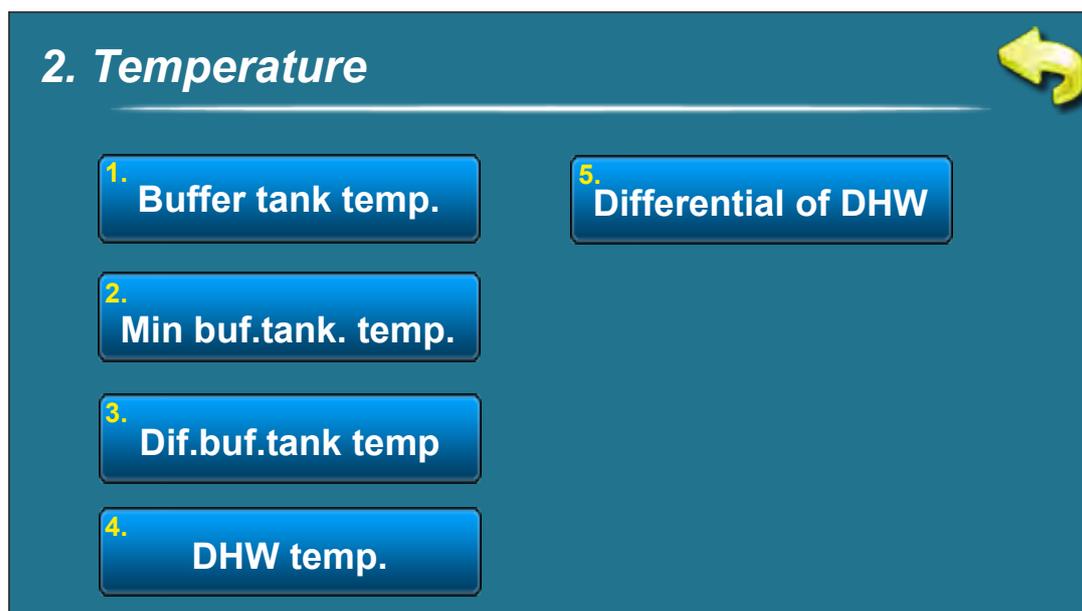
**NOTE:**

In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".

**On the screen**



## 2. TEMPERATURE (CONFIGURATION DHW || BUF--IHC)



### 2.1 TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 80°C

Minimum: 40°C

Maksimum: 85°C

The possibility of setting the desired temperature of the accumulation tank.

### 2.2 MINIMUM TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 20°C

Minimum: 5°C

Maksimum: 64°C

The possibility of setting the minimum temperature of the accumulation tank.

### 2.3 ACCUMULATION TANK DIFFERENCE

**Possible selection:**

**default:** 10°C

Minimum: 5°C

Maksimum: 30°C

The possibility of setting the accumulation tank difference.

## **2.4 TEMPERATURE DHW**

**Possible selection:**

**default: 50°C**

Minimum: 40°C

Maximum: 80°C

Temperature setting options of DHW (domestic hot water).

## **2.5 DIFFERENCE DHW**

**Possible selection:**

**default: 5°C**

Minimum: 4°C

Maximum: 40°C

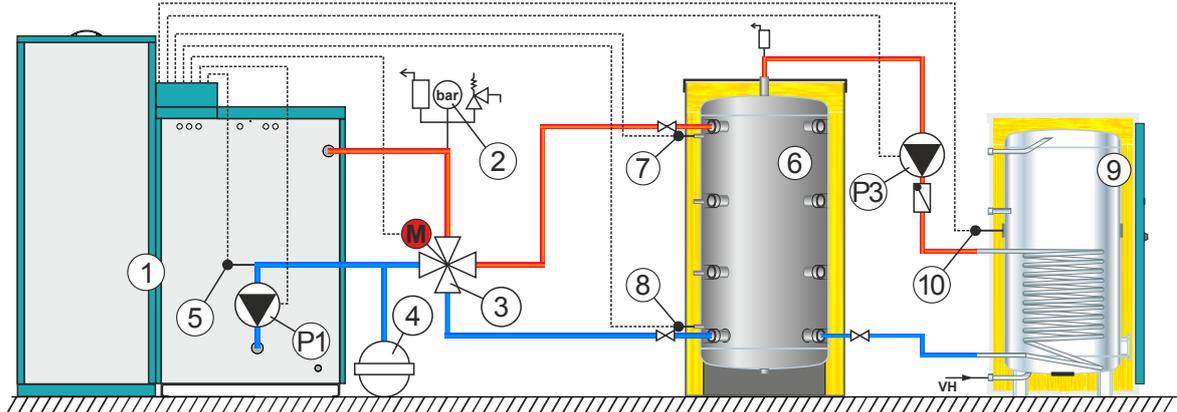
The possibility of setting domestic hot water difference.

**KONFIGURATION 8 - BUF-- DHW**

**Scheme of configuration**

**Scheme 8. Configuration BUF -- DHW**

**Required sensors:** - return flow temp. sensor  
 - DHW tank sensor  
 - accumulation tank sensor (upper)  
 - accumulation tank sensor (lower)



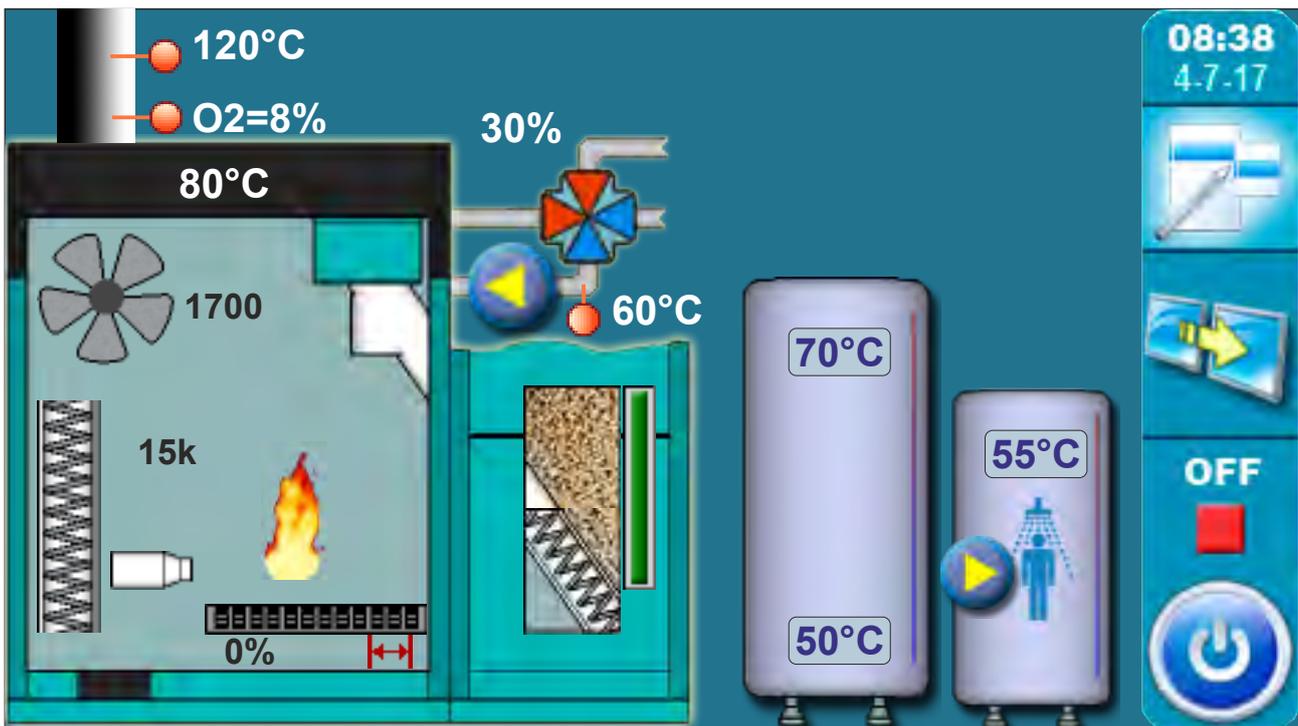
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel
- 5 - Return flow temperature sensor

- 6 - Accumulation tank CAS
- 7 - Accumulation tank sensor CAS 1 (upper)
- 8 - Accumulation tank sensor CAS 2 (lower)
- 9 - DHV tank
- 10 - DHV tank sensor

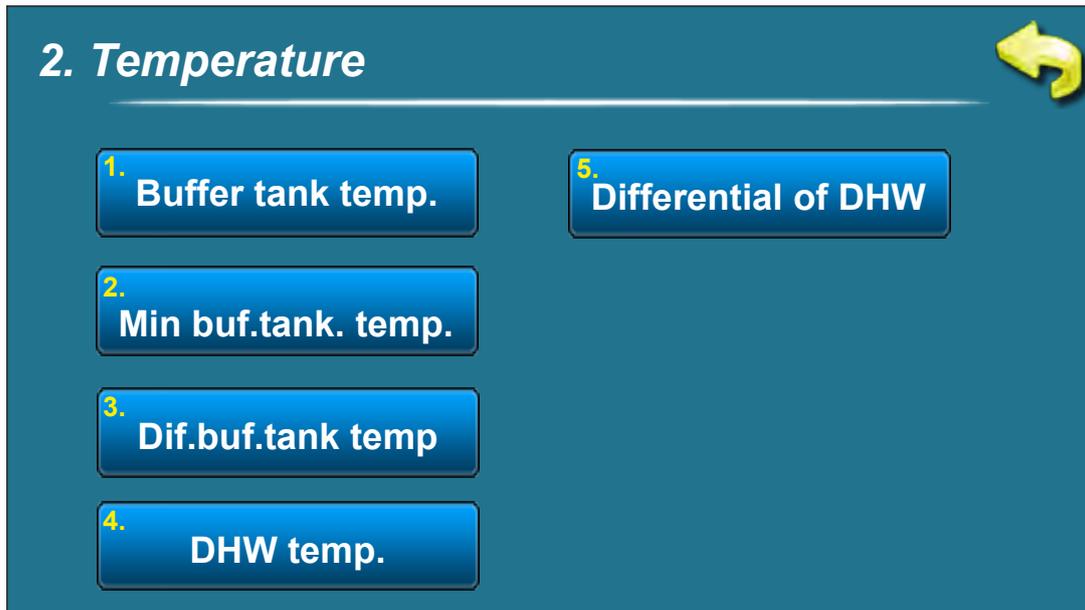
**NOTES:**

- In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".
- In this configuration is possible to connect external control (external start).

**On the screen**



## 2. TEMPERATURE (CONFIGURATION BUF--DHW)



### 2.1 TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 80°C  
 Minimum: 40°C  
 Maksimum: 85°C

The possibility of setting the desired temperature of the accumulation tank.

### 2.2 MINIMUM TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 20°C  
 Minimum: 5°C  
 Maksimum: 64°C

The possibility of setting the minimum temperature of the accumulation tank.

### 2.3 ACCUMULATION TANK DIFFERENCE

**Possible selection:**

**default:** 10°C  
 Minimum: 5°C  
 Maksimum: 30°C

The possibility of setting the accumulation tank difference.

## **2.4 TEMPERATURE DHW**

**Possible selection:**

**default: 50°C**

Minimum: 40°C

Maximum: 80°C

Temperature setting options of DHW (domestic hot water).

## **2.5 DIFFERENCE DHW**

**Possible selection:**

**default: 5°C**

Minimum: 4°C

Maximum: 40°C

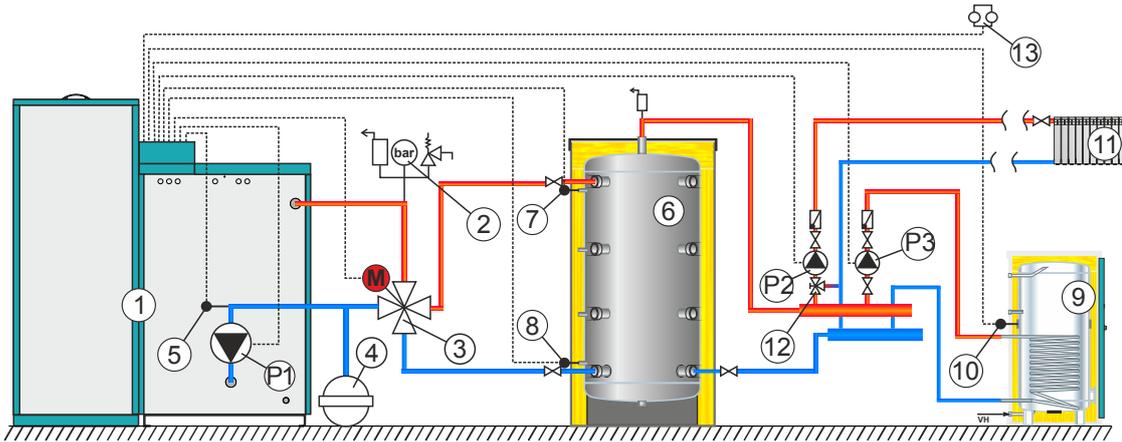
The possibility of setting domestic hot water difference.

**CONFIGURATION 9 - BUF -- IHC || DHW**

**Scheme of configuration**

**Scheme 9. Configuration BUF -- IHC || DHW**

**Required sensors:** - return flow temp. sensor  
 - DHW tank sensor  
 - accumulation tank sensor (upper)  
 - accumulation tank sensor (lower)

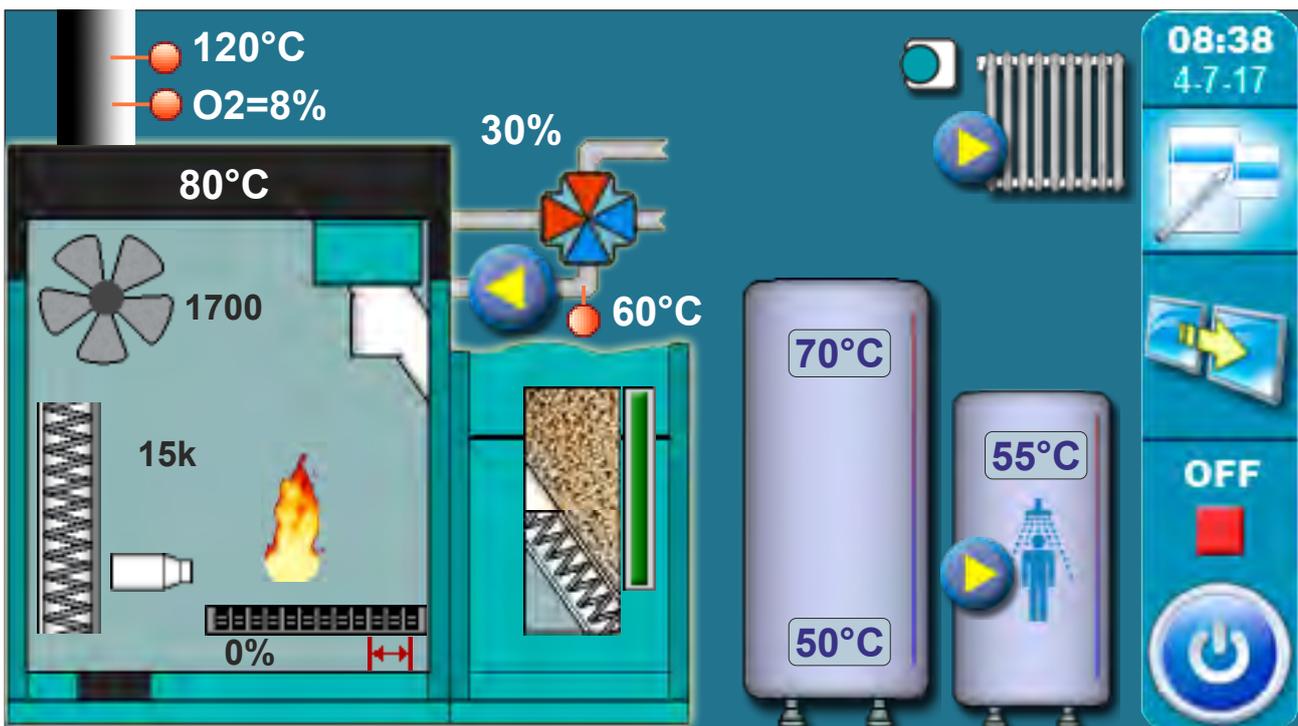


- |  |  |
|--|--|
| 1 - Boiler PelTec / PelTec-lambda          | 8 - Accumulation tank sensor CAS 2 (lower) |
| 2 - Air self-venting group 2,5 bar         | 9 - DHW tank                               |
| 3 - Motor 4-ways mixing valve              | 10 - DHW tank sensor                       |
| 4 - Closed type expansion vessel           | 11 - Heating circuit                       |
| 5 - Return flow temperature sensor         | 12 - 3-way manual mixing valve             |
| 6 - Accumulation tank CAS                  | 13 - Room thermostat                       |
| 7 - Accumulation tank sensor CAS 1 (upper) |  |

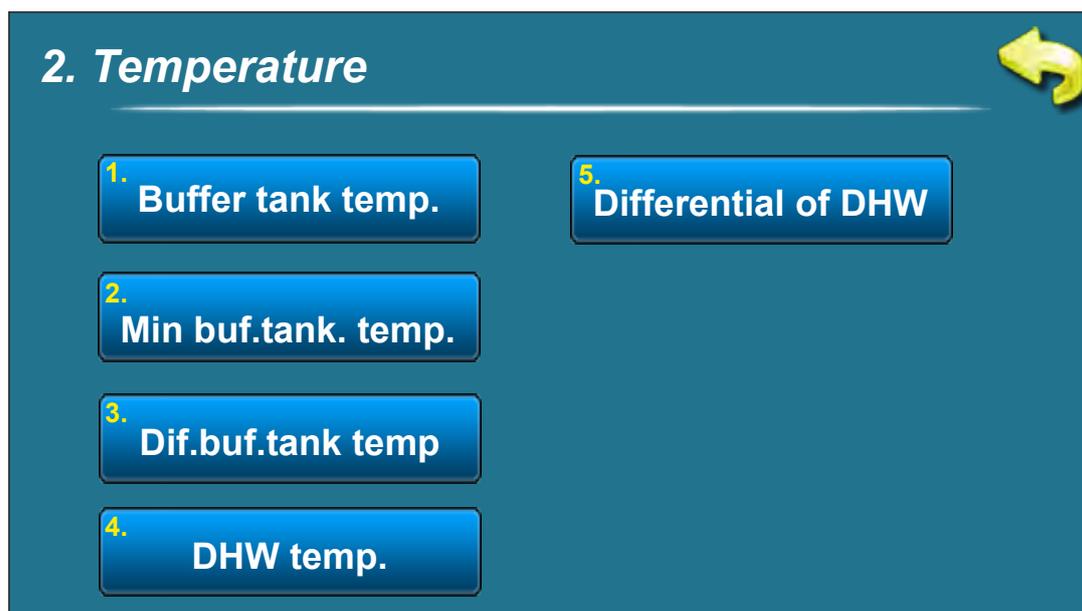
**NOTES:**

- In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".
- In this configuration is possible to connect external control (external start).

**On the screen**



## 2. TEMPERATURE (CONFIGURATION BUF--IHC || DHW)



### 2.1 TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 80°C

Minimum: 40°C

Maksimum: 85°C

The possibility of setting the desired temperature of the accumulation tank.

### 2.2 MINIMUM TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 20°C

Minimum: 5°C

Maksimum: 64°C

The possibility of setting the minimum temperature of the accumulation tank.

### 2.3 ACCUMULATION TANK DIFFERENCE

**Possible selection:**

**default:** 10°C

Minimum: 5°C

Maksimum: 30°C

The possibility of setting the accumulation tank difference.

## 2.4 TEMPERATURE DHW

**Possible selection:**

**default:** 50°C

Minimum: 40°C

Maximum: 80°C

Temperature setting options of DHW (domestic hot water).

## 2.5 DIFFERENCE DHW

**Possible selection:**

**default:** 5°C

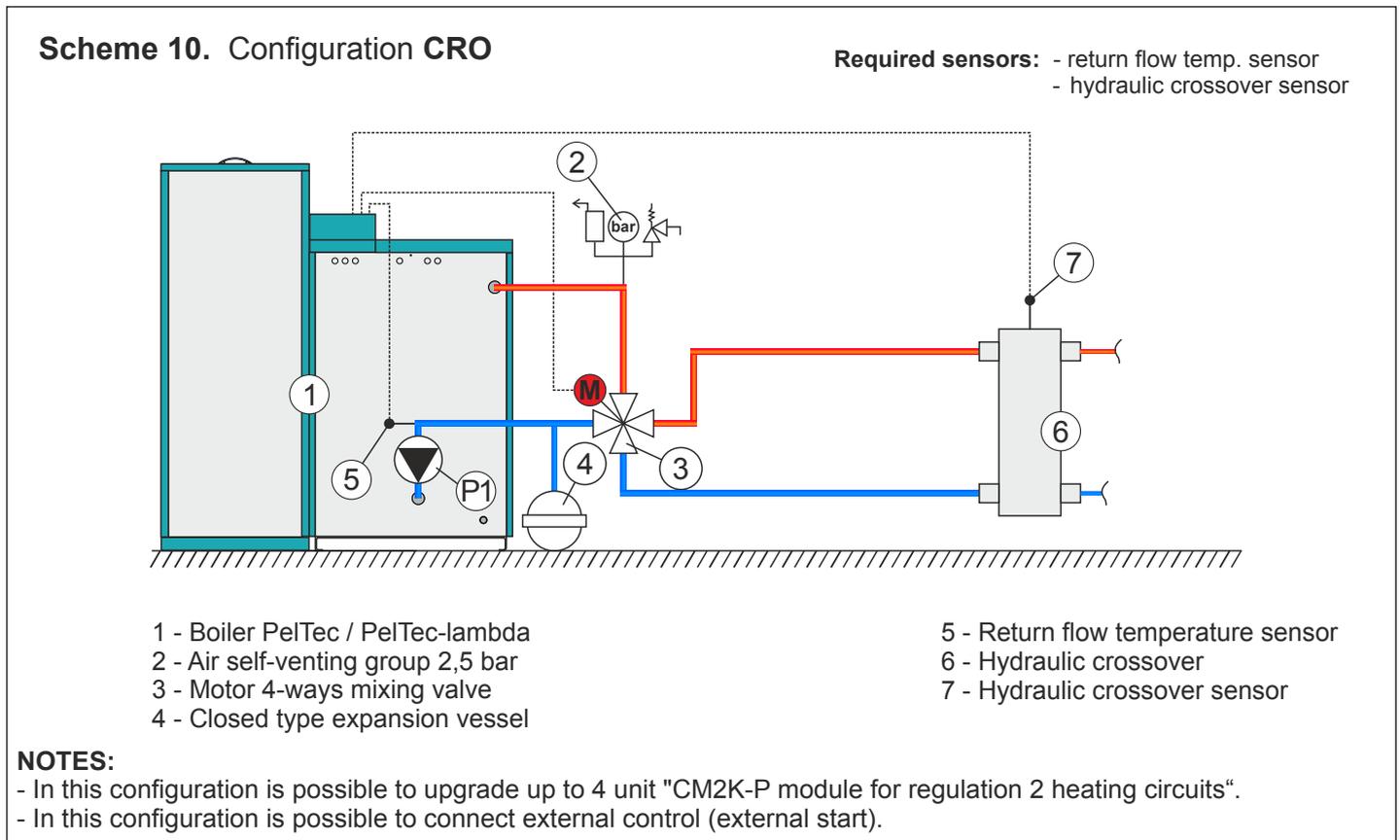
Minimum: 4°C

Maximum: 40°C

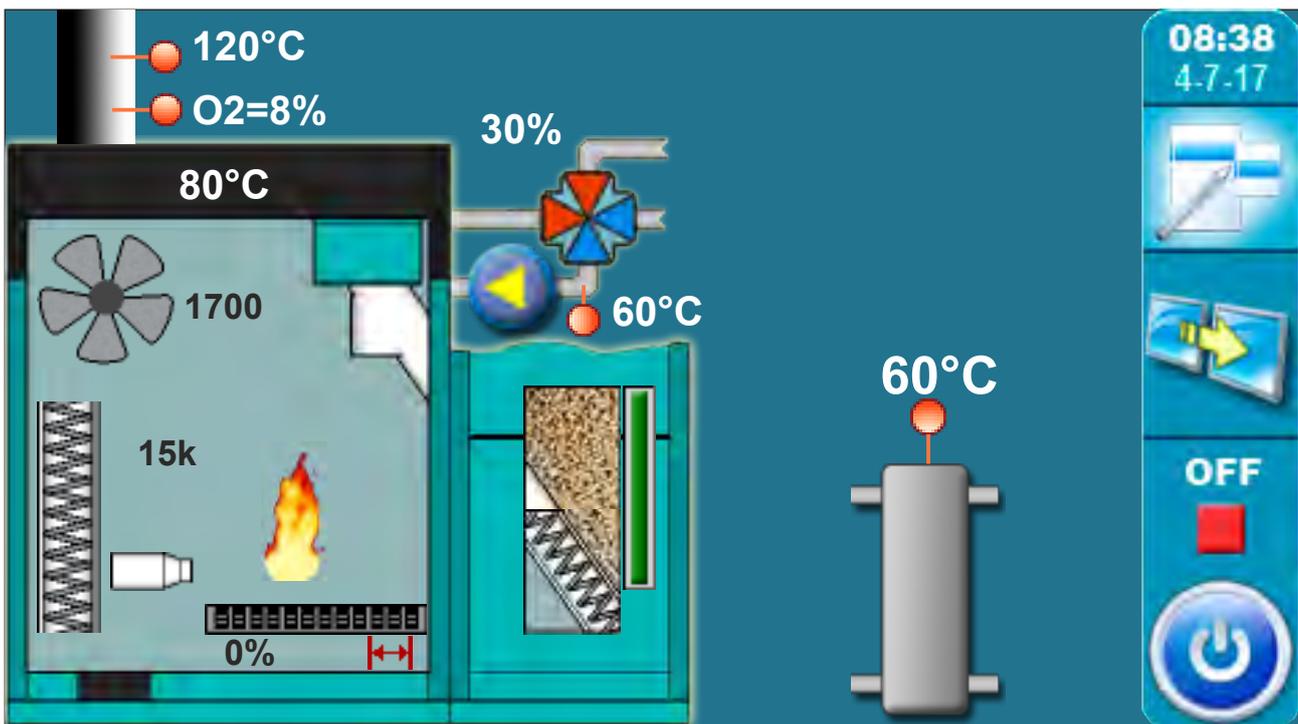
The possibility of setting domestic hot water difference.

**CONFIGURATION 10 - HIDRAULIC CROSSOVER (CRO)**

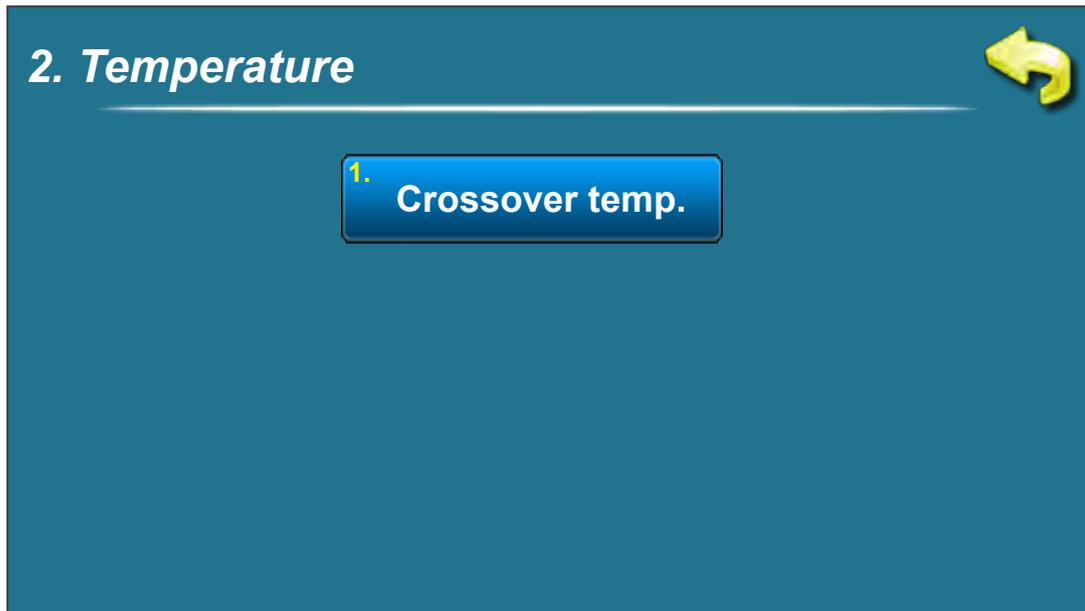
**Scheme of configuration**



**On the screen**



## 2. TEMPERATURE (CONFIGURATION HIDRAULIC CROSSOVER)



### 2.1 TEMPERATURE OF HIDRAULIC CROSSOVER

**Possible selection:**

**default:** 80°C  
Minimum: 70°C  
Maksimum: 85°C

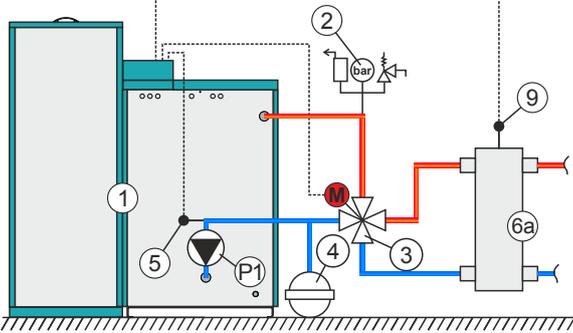
The possibility of setting the hydraulic crossover temperature.

**CONFIGURATION 11 - (CRO / BUF) (used only in cascades and external start)**

**Scheme of configuration**

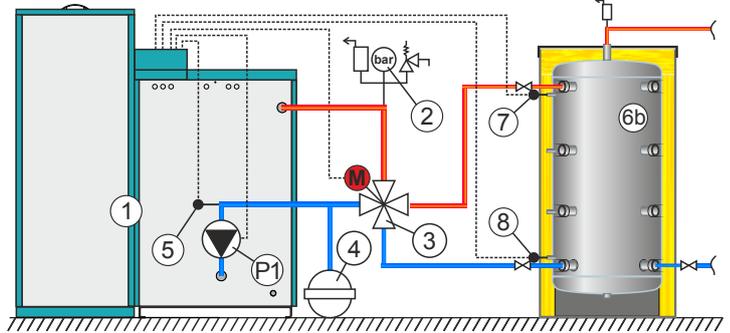
**Scheme 11. Configuration CRO / BUF**

Version 1: (display shows 1 temperature, eg. hydraulic crossover)



- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel
- 5 - Return flow temperature sensor

Version 2: (Display shows 2 temperatures (eg. accumulation tank))



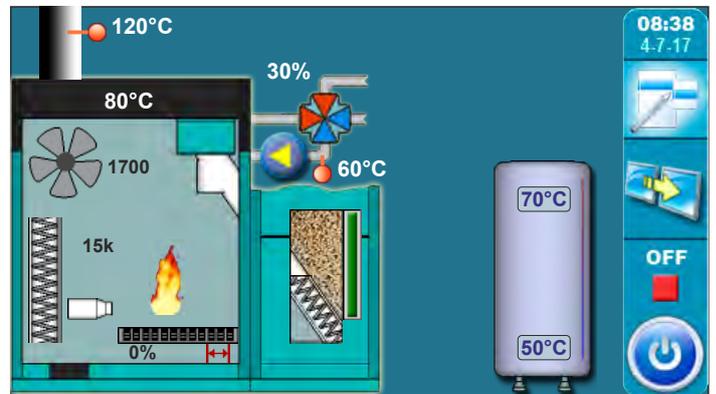
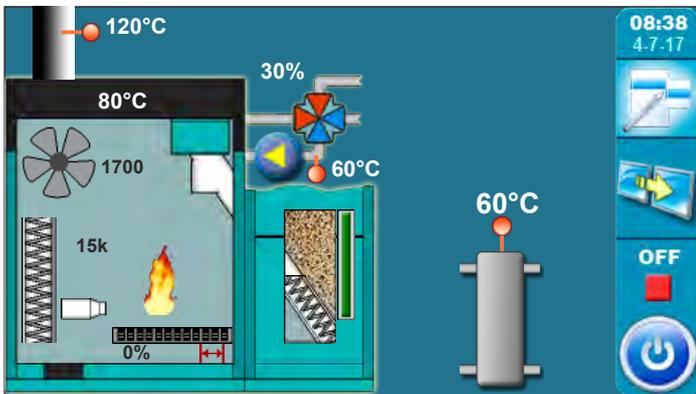
- 6a - Hydraulic crossover
- 6b - Accumulation tank
- 7 - Accumulation tank sensor 1 (upper)
- 8 - Accumulation tank sensor 2 (lower)
- 9 - Hydraulic crossover sensor

Connecting the temp. sensor 9 (version 1) and temp. sensors 7, 8 (version 2) is not required for operation of the boiler. These temperatures are only informative, only to see the temperatures and they don't affect boiler operation. If temp. sensors are not connected, regulation will show temperature " - °C". The boiler regulation will not report any error even if the sensors are or defective.

**NOTES:**

- In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".
- In this configuration is possible to connect external control (external start).

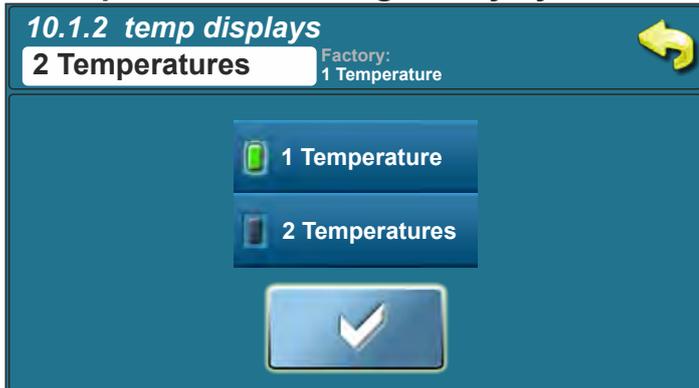
**On the screen**



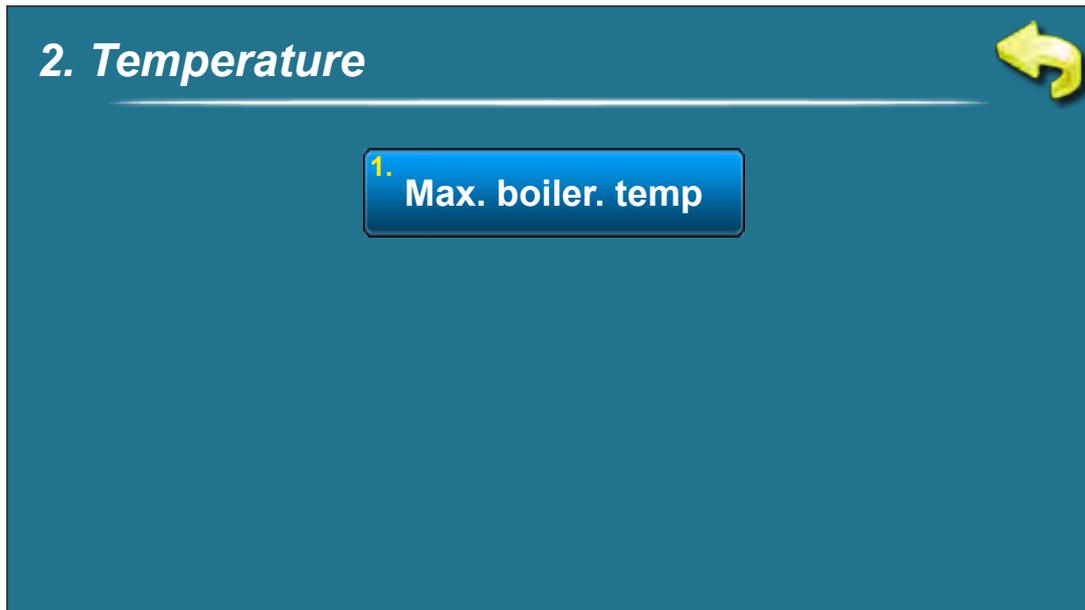
When "1 Temperature" is selected, screen shows hydraulic crossover with 1 temperature.

If "2 Temperatures" is selected, screen shows accumulation tank with 2 temperatures.

This option can be changed only by authorized serviceman.



## 2. TEMPERATURE (CONFIGURATION CRO/BUF)



### 2.1 MAXIMUM BOILER TEMPERATURE

**Possible selection:**

**default:** 80°C  
Minimum: 70°C  
Maksimum: 85°C

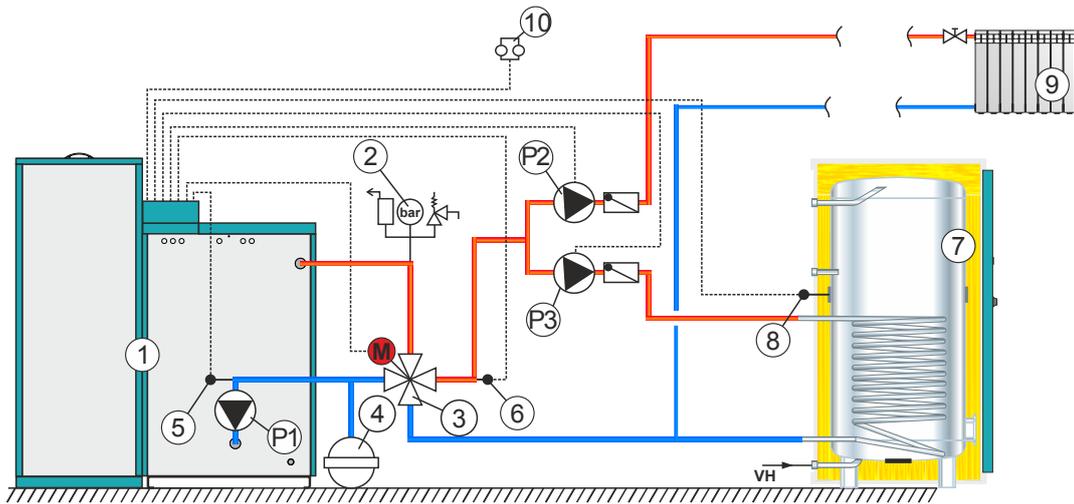
The possibility of setting the hydraulic crossover temperature.

**CONFIGURATION 12 - DHW || DHC (2)**

**Scheme of configuration**

**Scheme 12. Configuration DHC || DHW (2)**

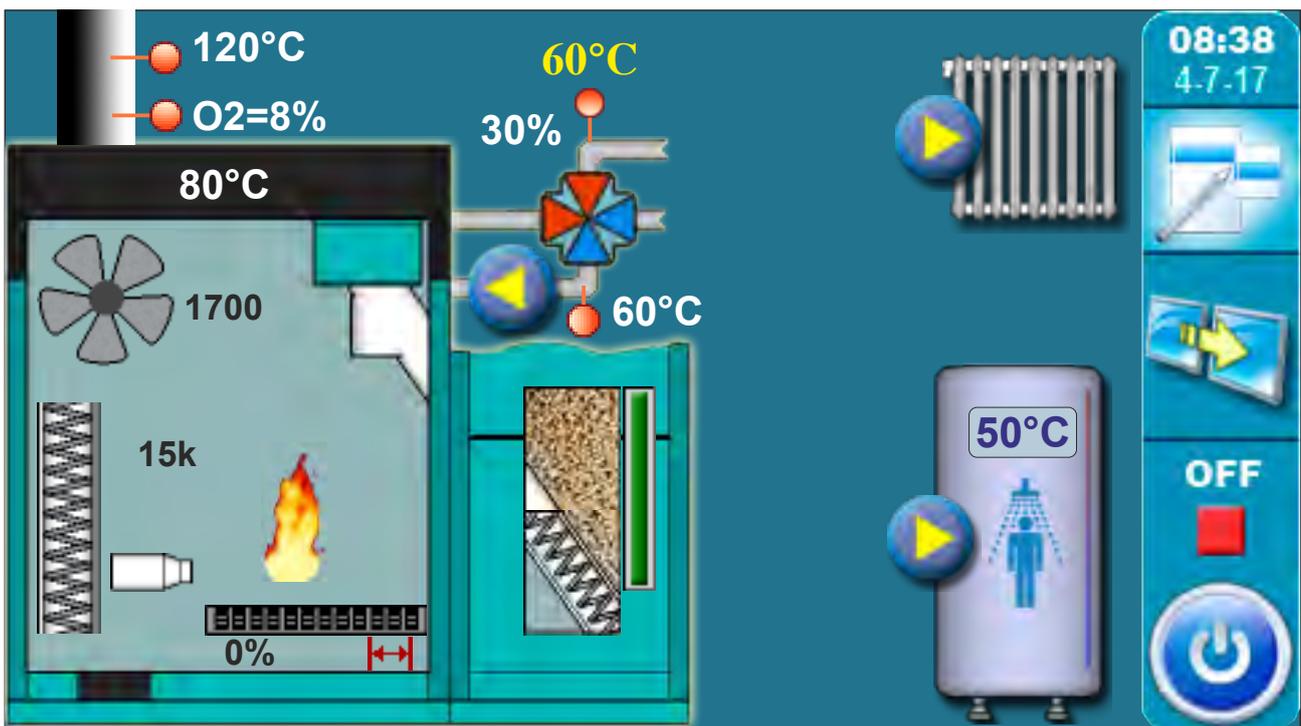
**Required sensors:** - return flow temp. sensor  
- flow temperature sensor  
- DHW sensor



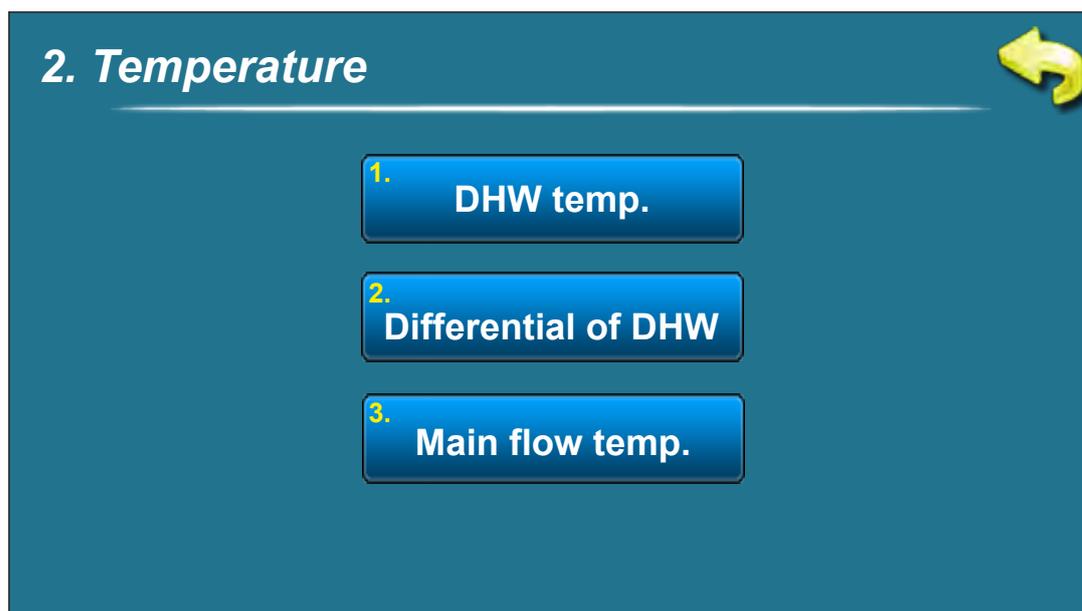
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vesse
- 5 - Return flow temperature sensor

- 6 - Flow temperature sensor
- 7 - DHW tank
- 8 - DHW tank sensor
- 9 - Heating circuit
- 10 - Room thermostat

**On the screen**



## 2. TEMPERATURE (CONFIGURATION DHW || DHC(2))



### 2.1 TEMPERATURE DHW

**Possible selection:**

**default:** 50°C  
Minimum: 40°C  
Maximum: 80°C

Temperature setting options of DHW (domestic hot water).

### 2.2 DIFFERENCE DHW

**Possible selection:**

**default:** 5°C  
Minimum: 4°C  
Maximum: 40°C

The possibility of setting domestic hot water difference.

### 2.3 FLOW TEMPERATURE

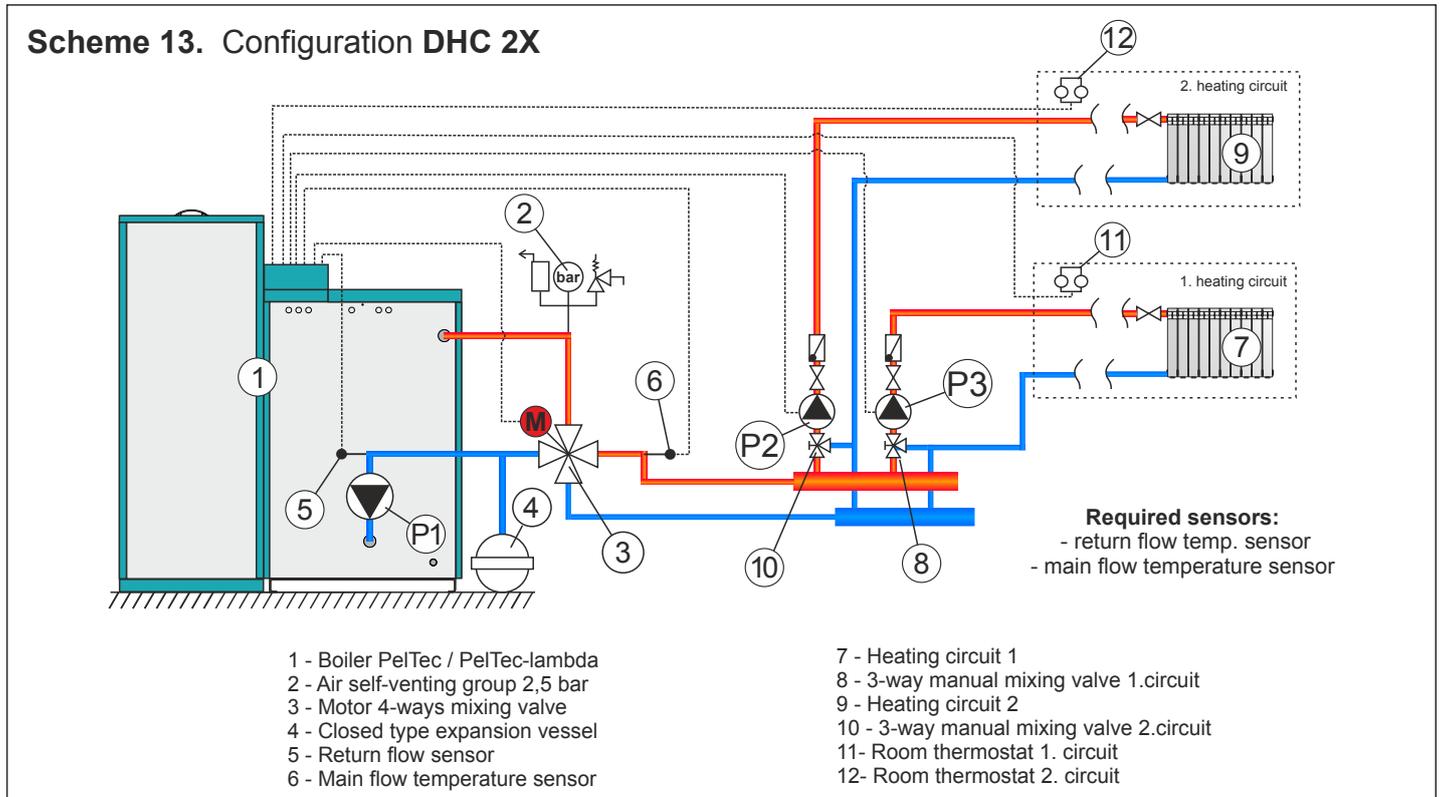
**Possible selection:**

**default:** 60°C  
Minimum: 30°C  
Maximum: 90°C

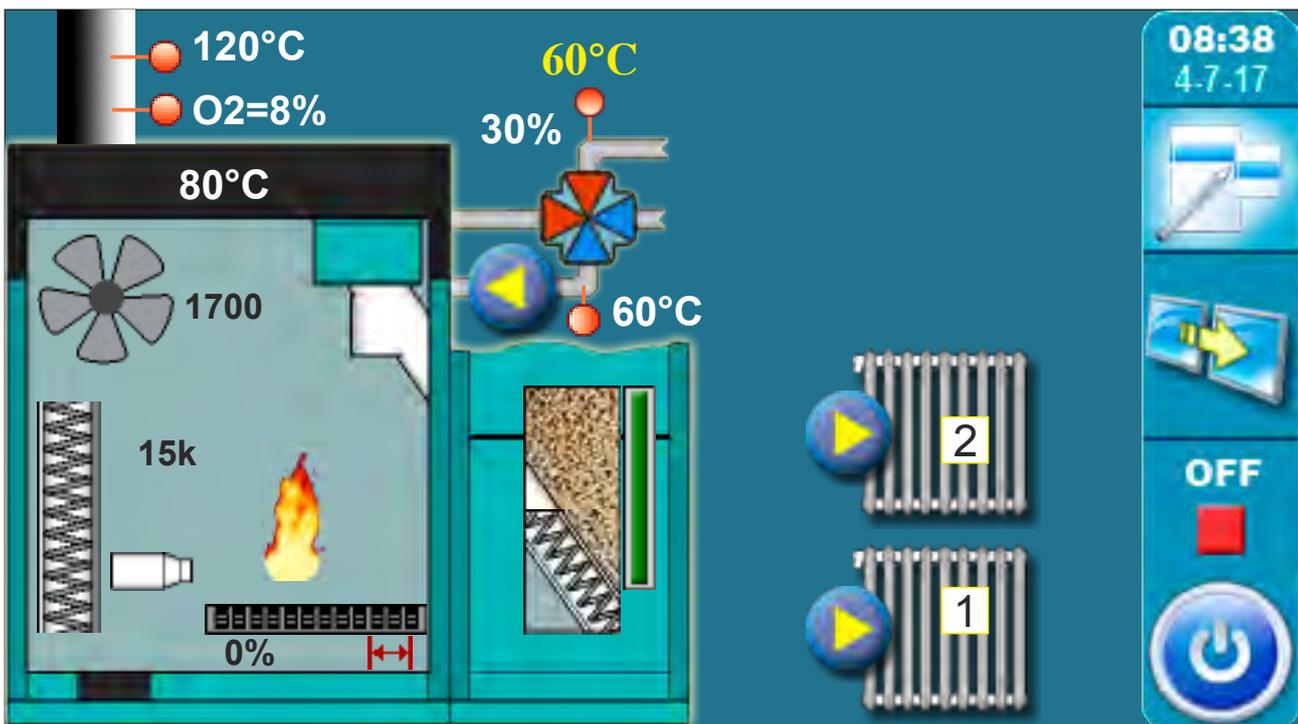
The possibility of setting flow temperature

**CONFIGURATION 13 - DHC 2X**

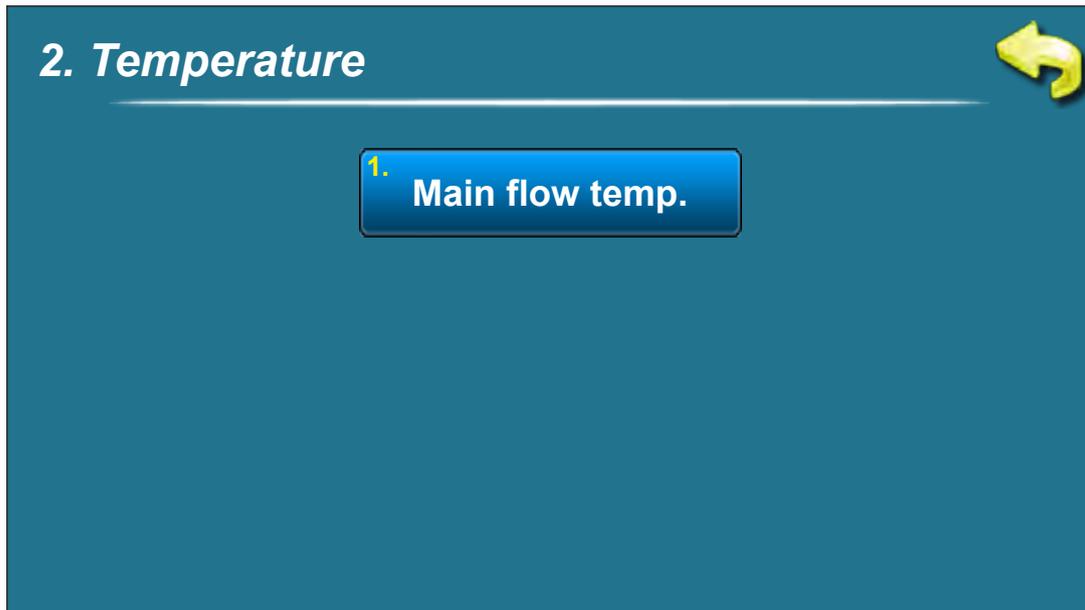
**Scheme of configuration**



**On the screen**



## 2.0 TEMPERATURES (CONFIGURATION DHC 2X)



### 2.1 FLOW TEMPERATURE

Possible selection:

**default:** 60°C  
Minimum: 30°C  
Maximum: 90°C

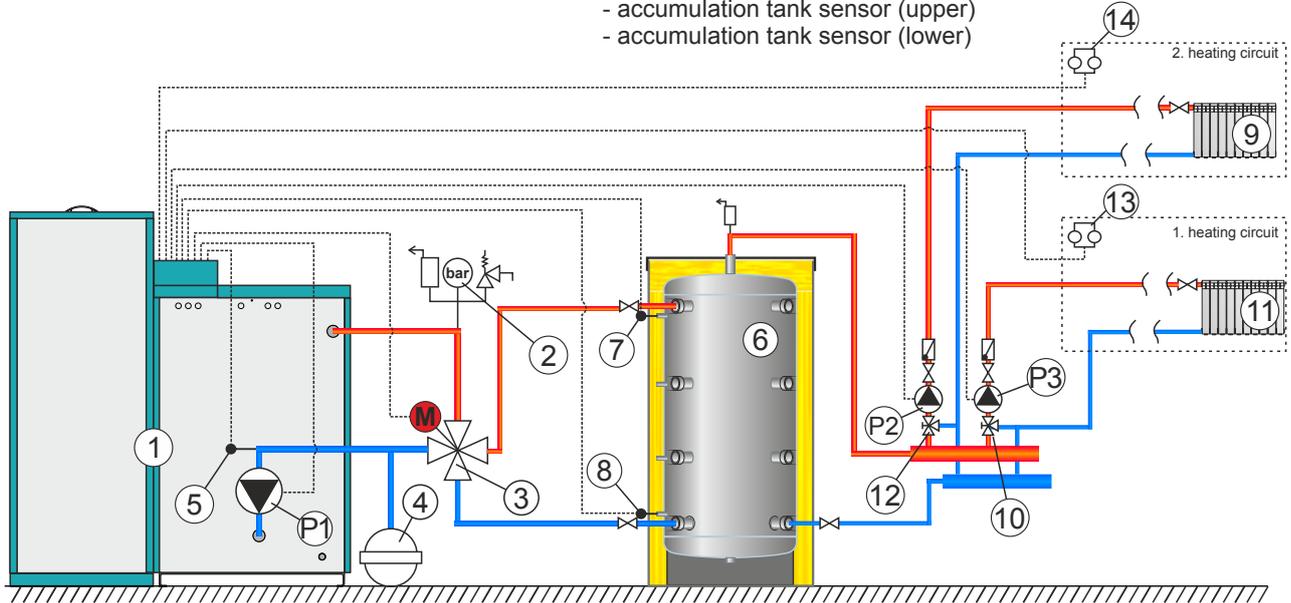
The possibility of setting flow temperature

**CONFIGURATION 14 - AKU--IKG 2X**

**Scheme of configuration**

**Scheme 14. Configuration BUF--IHC 2X**

**Required sensors:** - return flow temp. sensor  
 - accumulation tank sensor (upper)  
 - accumulation tank sensor (lower)

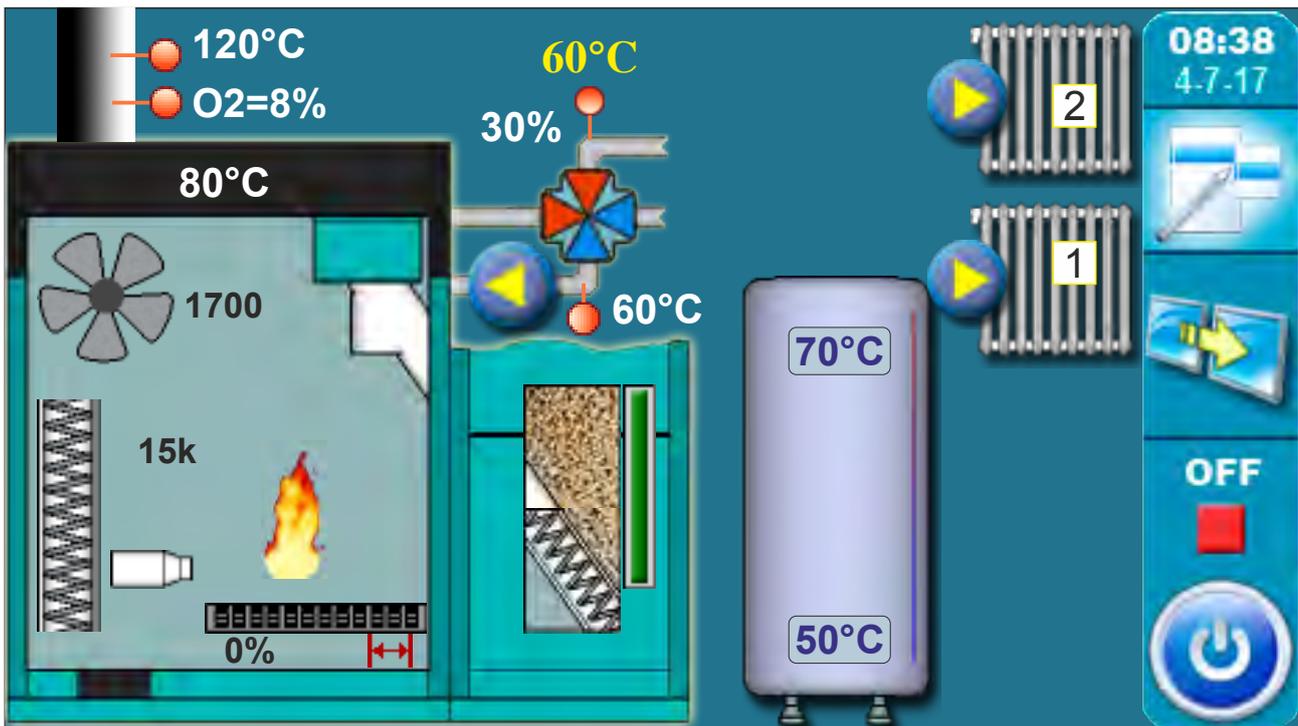


- |  |  |
|--|--|
| 1 - Boiler PelTec / PelTec-lambda          | 8 - Accumulation tank sensor CAS 1 (lower) |
| 2 - Air self-venting group 2,5 bar         | 9 - Heating circuit 1                      |
| 3 - Motor 4-ways mixing valve              | 10 - 3-way manual mixing valve 1.circuit   |
| 4 - Closed type expansion vessel           | 11 - Heating circuit 2                     |
| 5 - Return flow sensor                     | 12 - 3-way manual mixing valve 2.circuit   |
| 6 - Accumulation tank CAS                  | 13 - Room thermostat 1. circuit            |
| 7 - Accumulation tank sensor CAS 1 (upper) | 14 - Room thermostat 2. circuit            |

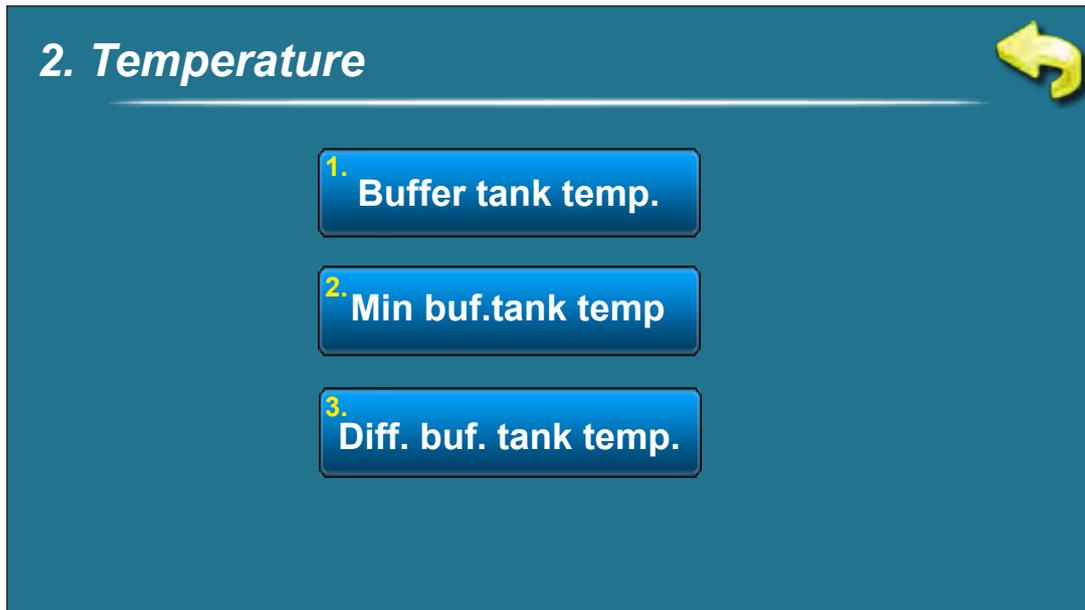
**NOTES:**

- In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".
- In this configuration is possible to connect external control (external start).

**On the screen**



## 2. TEMPERATURES (CONFIGURATION BUF--IHC2X)



### 2.1 TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 80°C

Minimum: 40°C

Maksimum: 85°C

The possibility of setting the desired temperature of the accumulation tank.

### 2.2 MINIMUM TEMPERATURE OF THE ACCUMULATION TANK

**Possible selection:**

**default:** 20°C

Minimum: 5°C

Maksimum: 64°C



### 2.3 ACCUMULATION TANK DIFFERENCE

**Possible selection:**

**default:** 10°C

Minimum: 5°C

Maksimum: 30°C

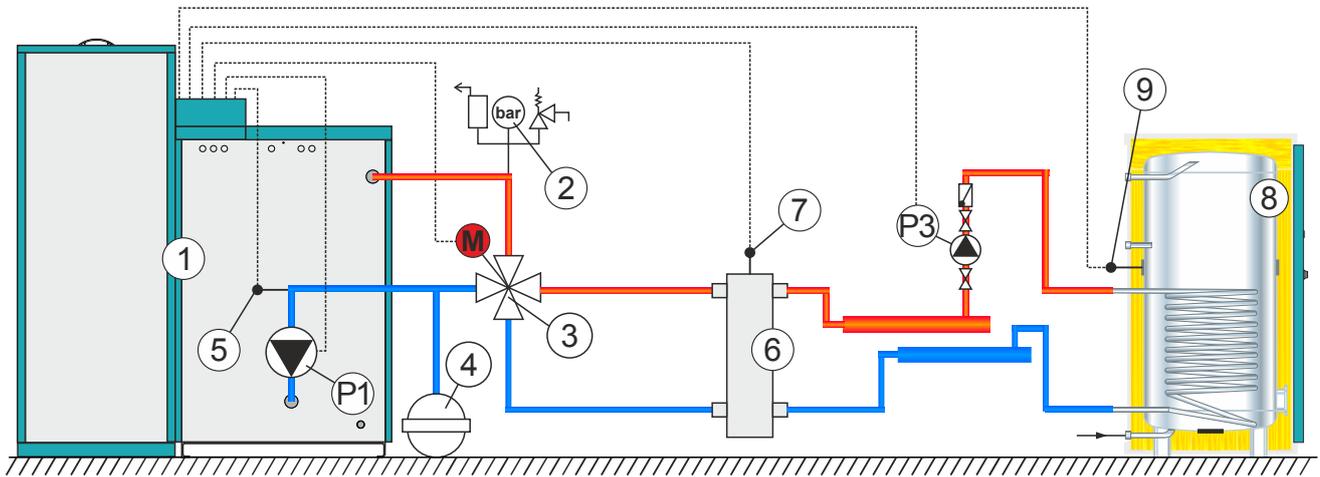
The possibility of setting the accumulation tank difference.

**CONFIGURATION 15 - CRO--PTV**

**Scheme of configuration**

**Scheme 15. Configuration CRO--PTV**

**Required sensors:** - return flow temp. sensor  
 - DHW tank sensor  
 - hydraulic crossover sensor



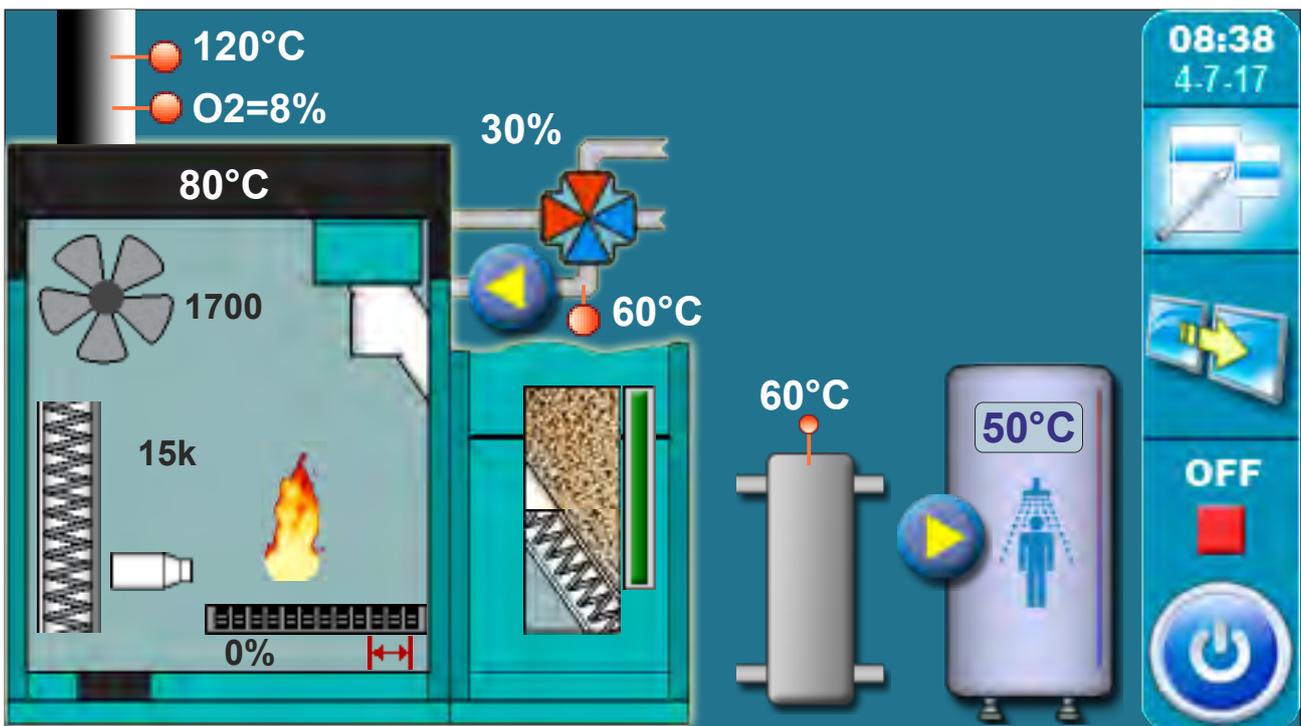
- 1 - Boiler PelTec / PelTec-lambda
- 2 - Air self-venting group 2,5 bar
- 3 - Motor 4-ways mixing valve
- 4 - Closed type expansion vessel
- 5 - Return flow sensor

- 6 - Hydraulic crossover
- 7 - Hydraulic crossover sensor
- 8 - DHW tank
- 9 - DHW tank sensor

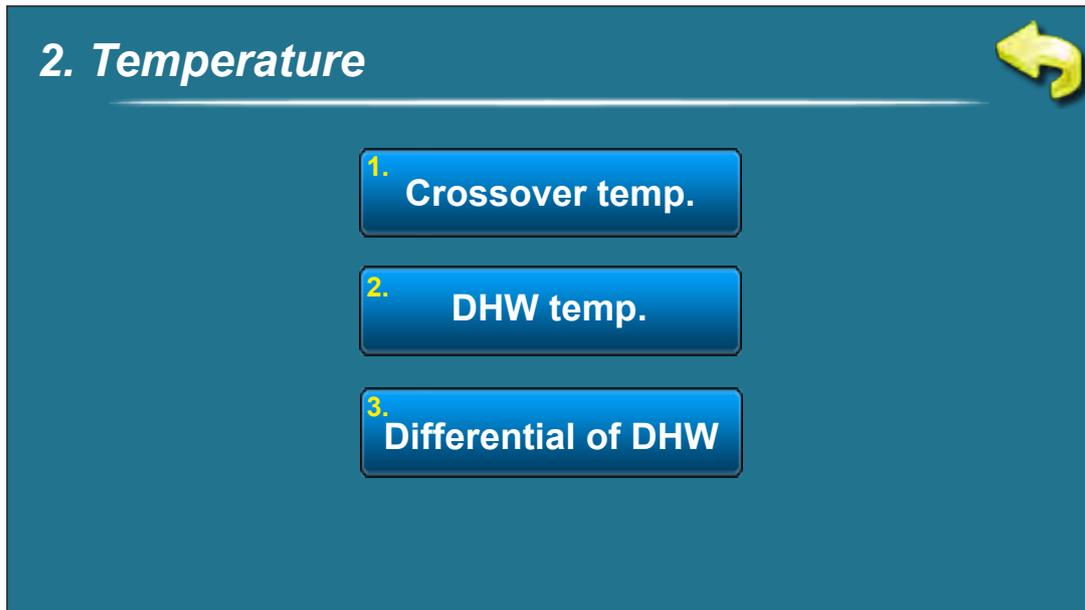
**NOTE:**

In this configuration is possible to upgrade up to 4 unit "CM2K-P module for regulation 2 heating circuits".

**On the screen**



## 2. TEMPERATURE (CONFIGURATION CRO -- DHWD)



### 2.1 TEMPERATURE OF HIDRAULIC CROSSOVER

**Possible selection:**

**default:** 80°C  
Minimum: 70°C  
Maksimum: 85°C

The possibility of setting the hydraulic crossover temperature.

### 2.2 TEMPERATURE DHW

**Possible selection:**

**default:** 50°C  
Minimum: 40°C  
Maximum: 80°C

Temperature setting options of DHW (domestic hot water).

### 2.3 DIFFERENCE DHW

**Possible selection:**

**default:** 5°C  
Minimum: 4°C  
Maximum: 40°C

The possibility of setting domestic hot water diference.

### 3.0. SCHEDULE



### 3.1. SCHEDULE

**Possible selection:**

Disable - Schedule is turned off (**default**)

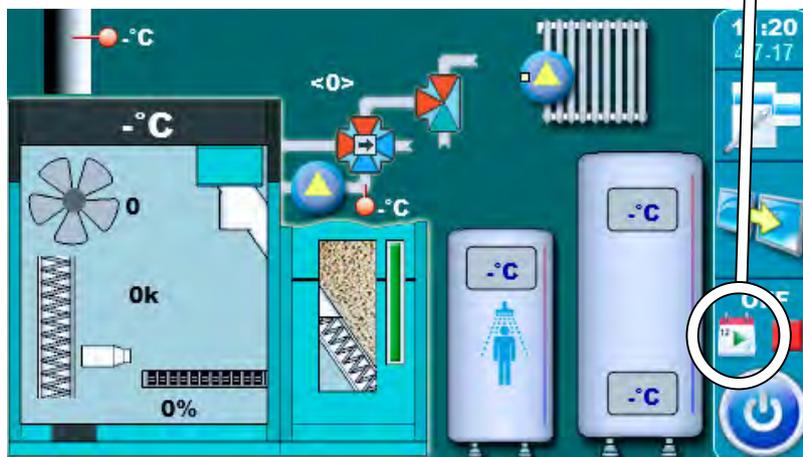
Table 1 - Scheduled starting times are turned-on and work according to the settings in Table 1

Table 2 - Scheduled starting times are turned-on and work according to the settings in Table 2

Table 3 - Scheduled starting times are turned-on and work according to the settings in Table 3



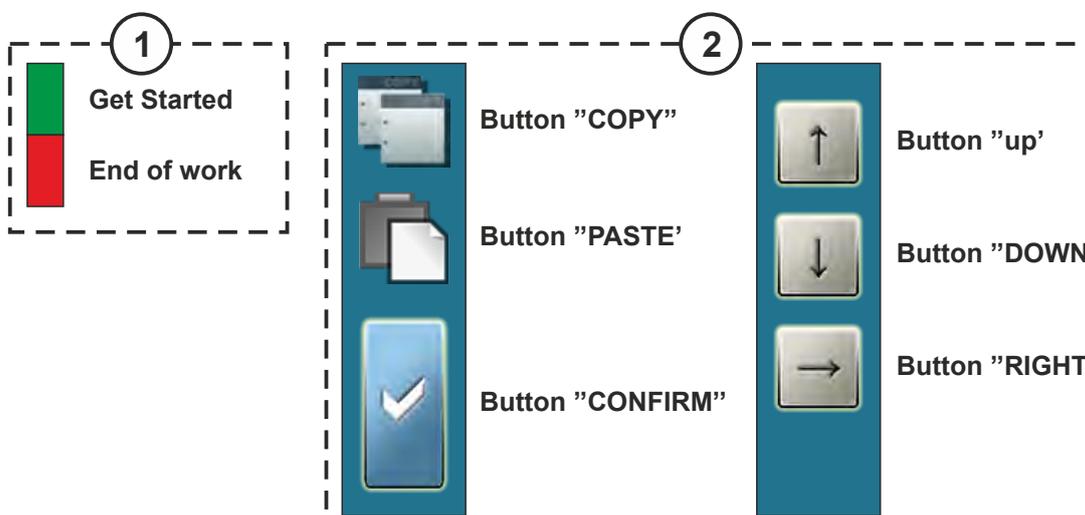
**ALWAYS WHEN SCHEDULE IS ENABLED (TABLE 1,2 OR 3)  
ON THE MAIN SCREEN WILL APPEAR SYMBOL**



### 3.2. - 3.4. TABLE 1, 2, 3

Possibility of schedule is done using tables. They can be pre-set 3 tables of schedule of which only one table can be active. It is possible for every day of the week set 3 turning-on and 3 turning-off the boiler. Turn-on is marked by a green field and turn-off is marked with red field. You can adjust the starting times for one day and copied the same starting times to all other days. After setting the starting times for one day you have to click on the field that day (the whole day will be marked), on the right side will show the button "COPY". Press this key (now you have copied the setting of that day and now will show button "PASTE"). It is necessary to press the day for which you want this settings and press the button "PASTE". After that, the same starting time will be copied in the selected day. If you want the same settings for the other days, just select the desired day and press button "PASTE". After filling the table with the starting times, press button "BACK', and press button "CONFIRM" for saving this settings.

Schedule - Table 1 (Table 2 or Table 3)							
	MON	TUE	WED	THU	FRI	SAT	SUN
06:00	06:00	06:00	06:00	06:00	06:00	06:00	06:00
22:00	22:00	22:00	22:00	22:00	22:00	22:00	22:00



**4.0. HISTORY**



Error list / warnings used in order to have an insight into the errors / warnings that have occurred. Written is: time of occurrence errors / warnings, error code / warning; description of the error / warning. The first press on the field error / warning field error / warnings is indicated, in addition to see and date generated errors / warnings. The second press on the selected error / warning, prints a detailed description of the error / warnings and corrective action errors / warnings.

**E** - conditions that result the shutdown of the boiler. The error must be rectified before the next boiler starts.

ERROR	NAME	DESCRIPTION
E1	DHW sensor error	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF. <b>Possible causes:</b> Interruption on el. connections between sensor and boiler, connection to the boiler, cold connection or DHW sensor is invalid.
E2	Buffer tank sensor error (Up)	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF. <b>Possible causes:</b> Interruption on el. connections between sensor and boiler, cold connection or buffer tank sensor (up) is invalid.
E3	Buffer tank sensor error (Down)	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF. <b>Possible causes:</b> Interruption on el. connections between sensor and boiler, cold connection or buffer tank sensor (down) is invalid.
E4	Flue gas sensor error	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF. <b>Possible causes:</b> Interruption on el. connections between sensor and boiler, cold connection or invalid flue gas sensor.
E5	Outside temperature sensor error	<b>Boiler status:</b> Boiler work normally, problem appears on work of CM2K-P regulator if is installed. <b>Possible causes:</b> Interruption on el. connections between sensor and boiler, cold connection or invalid outside temperature sensor.
E6	Main flow sensor error	<b>Possible causes:</b> Interruption on el. connections between sensor and boiler, cold connection or invalid main flow sensor.
E7	Return flow sensor error	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF. <b>Possible causes:</b> Interruption on el. connections between sensor and boiler, connection to the boiler, cold connection or invalid return flow sensor.
E8	Pellet supply tube temperature too high	<b>Boiler status:</b> Staying in phase OFF (can be appear in OFF phase because of bimetal sensor information about too high temperature). <b>Possible causes:</b> Feeding tube temperature is higher than 80°C, interruption on el. connections between bimetal sensor and boiler, connection to boiler, cold connection or invalid bimetal sensor.

<b>E8-1</b>	Pellet supply tube temperature too high	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF (it's appear after I8 notice and completion of adjusted retry ignition number). <b>Possible causes:</b> Feeding tube temperature is higher than 80°C, interruption on el. connections between bimetal sensor and boiler, connection to boiler, cold connection or invalid bimetal sensor.
<b>E8-2</b>	Pellet supply tube temperature too high	<b>Boiler status:</b> Boiler go from phase S0 to OFF (it's appear after I8 notice and completion of adjusted retry ignition number because of bimetal sensor information about too high temperature in phase S0). <b>Possible causes:</b> Feeding tube temperature is higher than 80°C, interruption on el. connections between bimetal sensor and boiler, connection to boiler, cold connection or invalid bimetal sensor.
<b>E9</b>	Boiler sensor error	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF. <b>Possible causes:</b> Interruption on el. connections between sensor and boiler, connection to the boiler, cold connection or invalid sensor.
<b>E10</b>	Unknown boiler power	<b>Boiler status:</b> Boiler immediate go to phase OFF. <b>Possible causes:</b> Key for power loading is not installed or recognized, cold connection or invalid key.
<b>E11</b>	Photocell error	<b>Boiler status:</b> Boiler go to phase OFF after ending phase S0 (retry start is allowed). <b>Possible cause:</b> Invalid photocell (sending information that flame exist in phase S0).
<b>E12</b>	Safety pressure switch	<b>Boiler status:</b> Boiler immediate go to phase OFF. <b>Possible causes:</b> Firebox resistance is too low in phases S2, S3, S4, (S5). If any door or any opening for cleaning on boiler is not properly closed, turbulators area is not closed or PVC tube for pellet supply has holes. Interruption in el. connection between safety pressure switch and boiler, connection to the boiler, cold connection or invalid safety pressure switch. Interruption or bad sealing of safety pressure switch pipe.
<b>E13</b>	Fan error	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E14</b>	Memory error	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E15</b>	Communication error with motherboard	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E16</b>	Communication error with sensor board	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF.
<b>E17*</b> Only on PelTec-lambda	Lambda probe error	a) Error occurs in the phase of "OFF" The problem is with el. heater which is integrated into the lambda probe b) Error occurs in all phases except "OFF" The problem is with the communication system within the lambda(Cables, connectors, el. boards, software)
<b>E18</b>	No flame in ignition phase	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E19</b>	Flame disapeared working phase	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E20</b>	Flame disapeared 220V	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E21</b>	Error grate cleaner	<b>Boiler status:</b> Boiler immediate go to phase OFF.

## History

<b>E22</b>	Fuel level	<b>Boiler status:</b> Boiler go to phases S7, C0 and OFF.
<b>E23</b>	Flame disappeared in ignition phase	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E24</b>	Flame disappeared stabilization phase	<b>Boiler status:</b> Boiler immediate go to phase OFF..
<b>E25</b>	Hydra. switch sensor error	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E26</b>	Fuel sensor	<b>Boiler status:</b> Boiler immediate go to phase OFF.
<b>E28</b>	Communication error with CMREG	<b>Boiler status:</b> Boiler work normally.

### Errors of additional equipment: CMNET (modul for boiler cascade)

<b>E27</b>	Communication error with CMNET	<b>Boiler status:</b> Boiler immediate go to phase OFF.
------------	--------------------------------	---

### Errors of additional equipment: CM2K-P

<b>E29-1</b>	Sensor reg. 1. circuit	<b>Boiler status:</b> Boiler work normally. The problem occurs in the work of additional equipment CM2K-P if embedded.
<b>E29-2</b>	Sensor reg. 2. circuit	
<b>E29-3</b>	Sensor reg. 3. circuit	
<b>E29-4</b>	Sensor reg. 4. circuit	
<b>E29-5</b>	Sensor reg. 5. circuit	
<b>E29-6</b>	Sensor reg. 6. circuit	
<b>E29-7</b>	Sensor reg. 7. circuit	
<b>E29-8</b>	Sensor reg. 8. circuit	
<b>E30-1</b>	Corrector reg. 1. circuit	
<b>E30-2</b>	Corrector reg. 2. circuit	
<b>E30-3</b>	Corrector reg. 3. circuit	
<b>E30-4</b>	Corrector reg. 4. circuit	
<b>E30-5</b>	Corrector reg. 5. circuit	
<b>E30-6</b>	Corrector reg. 6. circuit	
<b>E30-7</b>	Corrector reg. 7. circuit	
<b>E30-8</b>	Corrector reg. 8. circuit	

**Errors of additional equipment: Pelet suction system**

<b>E31</b>	The flap is not closed	<b>Boiler status:</b> Boiler work normally. The problem occurs in the work of additional equipment - "pellet suction system" if installed. <b>Possible causes:</b> Check if the flap is blocked with pellets , if the sensor is soiled with dust, if the sensor is about 1 mm distant from the flap, if the sensor reacts on the flap ( the LED lamp is switching on the sensor ).
<b>E32</b>	There are no pellets in the big tank/room	<b>Boiler status:</b> Boiler work normally. The problem occurs in the work of additional equipment - "pellet suction system" if installed. <b>Possible causes:</b> Check the pellet level in the big tank/room , check if the flexible tubes are blocked, check if the turbine net is full with dust.
<b>E33</b>	The Mole or Feeder screw does not work	<b>Boiler status:</b> Boiler work normally. The problem occurs in the work of additional equipment - "pellet suction system" if installed. <b>Possible causes:</b> Check the electric connections on the mole/feeder screw, check the filthiness of the mole/feeder screw
<b>E34</b>	Communication error with the CMVAC	<b>Boiler status:</b> Boiler work normally. The problem occurs in the work of additional equipment - "pellet suction system" if installed. <b>Possible causes:</b> Check the UTP cable and its connections with the electric boards.

**Errors of additional equipment: CM-GSM**

<b>E35</b>	Communication error with CM-GSM	<b>Boiler status:</b> Boiler work normally.
------------	---------------------------------	---

**Errors of additional equipment: INTERNET SUPERVISION (WiFi)**

<b>E36</b>	Communication error with WiFi	<b>Boiler status:</b> The problem occurs in the work of additional equipment internet supervision (WiFi) if installed. <b>Possible causes:</b> Check the UTP cable and its connections with the electric boards.
------------	-------------------------------	---

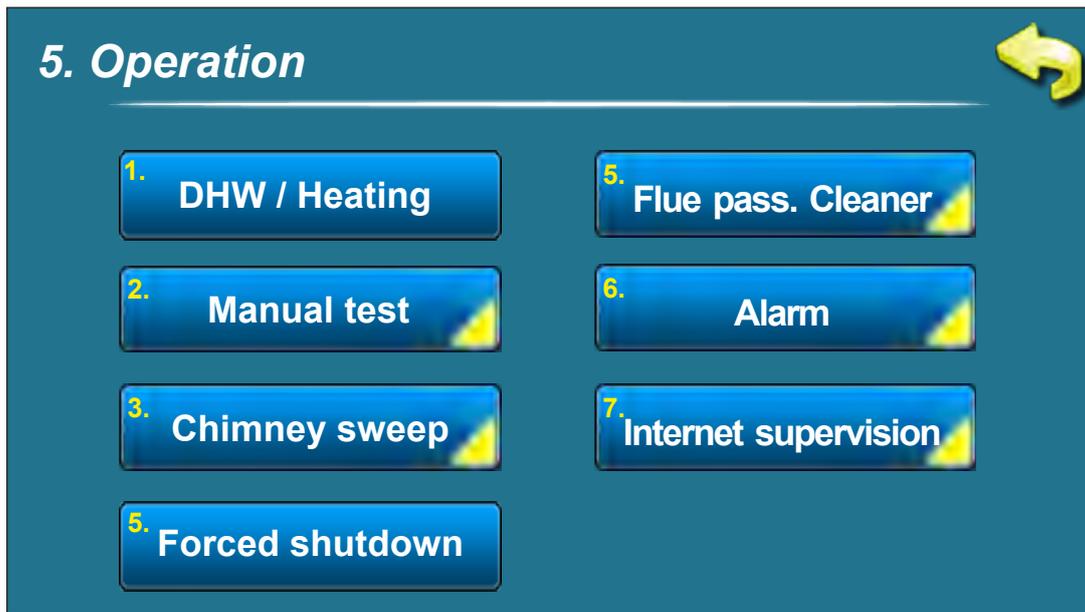
**INFORMATION / WARNING**

**W-state information boiler that does not stop the operation of the boiler**

**WARNINGS**

<b>W1</b>	Fuel level	<b>Boiler status:</b> Boiler will be work for a while, if pellet tank don't be refilled with pellets will be shown „E22 Fuel level” what's mean that is no enough fuel for continue of boiler work. <b>Possible causes:</b> Low fuel level in pellet tank, enough for short time.
<b>W2</b>	No flame ignition stage	<b>Boiler status:</b> Fire didn't appear after the adjusted max. time. Boiler will repeat ignition the adjusted number of times before error E18 appear. <b>Possible causes:</b> Poor pellets in the burner for a proper burning, moist pellets or bad electric heater.
<b>W2_1</b>	Retry ignition	<b>Boiler status:</b> The boiler adds a certain amount of pellets and starts the ignition again adjusted number of times and then error E18 appear. <b>Possible causes:</b> Poor pellets in the burner for a proper burning, moist pellets or bad electric heater.
<b>W5</b>	Factory setting loaded	<b>Boiler status:</b> The boiler works normally with loaded factory default settings
<b>W6</b>	Low return temperature	<b>Boiler status:</b> Boiler will be work normally (cause is necessary eliminate because, in longer work of boiler, will be condensation appear in boiler and flue gas tubes clogging). <b>Possible causes:</b> Problem with 4-way mixing valve / motor device, problem with return flow temperature sensor.

**5.0. OPERATION**



**5.1. DHW/HEATING\***

**Possible selection:**

DHW+ Heating - boiler works as needed for heating and domestic hot water

Only DHW - boiler works only when there is demand for domestic hot water

\*DHW priority- boiler works as needed for heating and DHW but with DHW priority

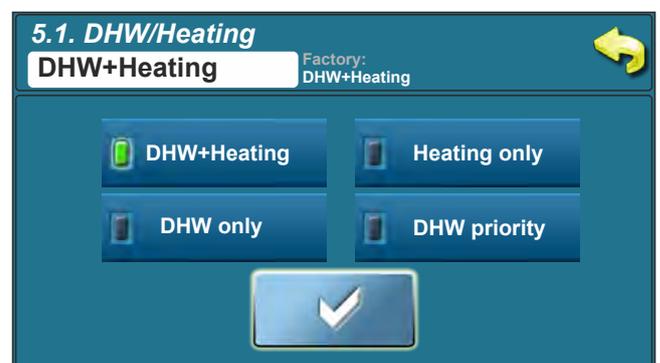
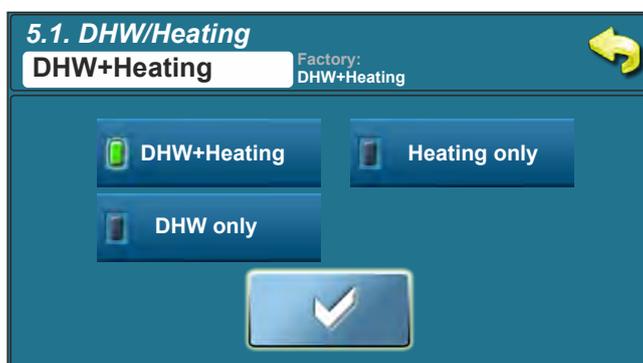
\*\* Heating only- boiler works only when there is demand for heating (possible only on conf. 15)

This option is used to set the boiler as needed, for heating and domestic hot water (winter mode) or only for domestic hot water (summer mode).

\*Option DHW / HEATING is available only in configurations that contain hot water and heating (configurations 3,5,7,9,12,15)

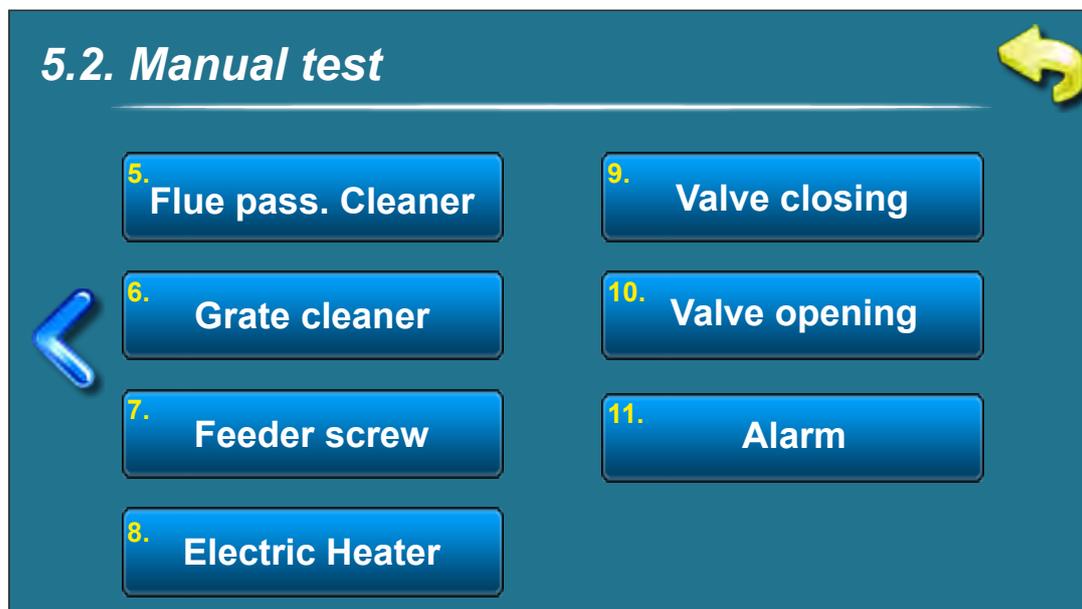
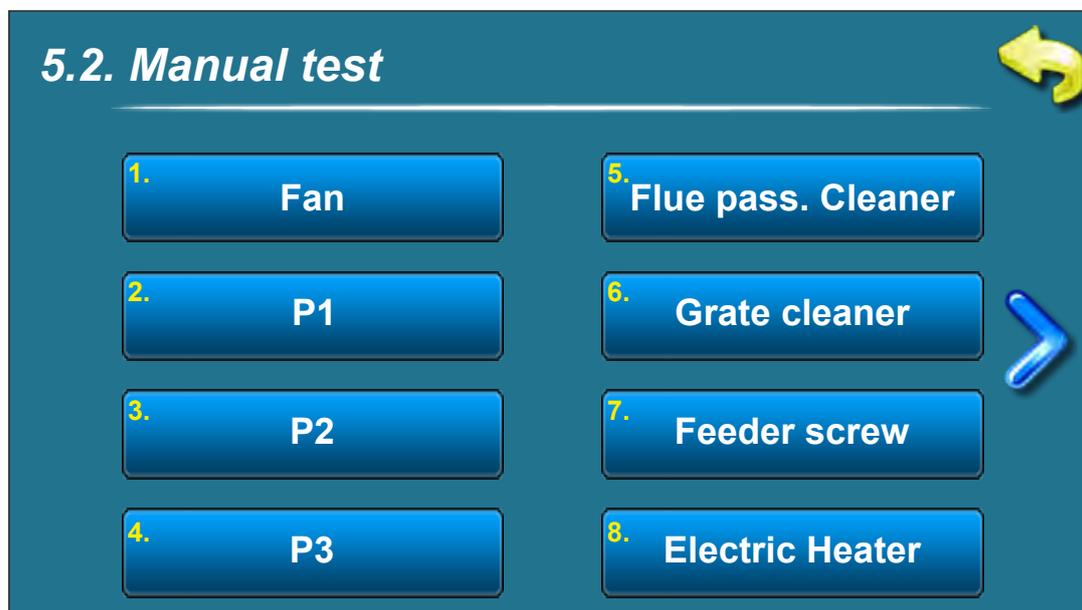
\*Only configurations 3,5,7,9,15

\*\*Only configuration 12



## 5.2. MANUAL TEST

Manual test is an option which enables testing of all parts of the boiler in order to check their technical accuracy.



**MANUAL TEST IS POSSIBLE ONLY WHEN THE BOILER  
IS SWITCHED OFF**

### 5.2.1. FAN

**Possible selection:**

START 1700 rpm - fan speed must be 1700 rpm

START MAX - fan speed must be on maximum (cca. 2800 rpm)

It is necessary to press the "START" next to the corresponding symbols and check if the fan operates according to the selected option (1700 rpm or cca. 2800 rpm). After pressing the "STOP" fan will turn off. Each time you press "START" it becomes "STOP" and vice versa. The display will rotate the fan symbol and will be displayed which speed spinning when the option is active.

### 5.2.2. - 5.2.4. P1, P2, P3

This option enables check of the work of the connected pumps or diverter valve (P1, P2, P3).

It is necessary to press the "START" next to the corresponding symbol of the adequate pump and check to see if the pump is running. After pressing the "STOP" pump will stop working. Each time you press "START" it becomes "STOP" and vice versa. On display will be the symbol of the corresponding pump rotate when the option is active. Pump marks (P1, P2, P3) depend on the currently selected CONFIGURATION which is written on the screen.

### 5.2.5. FLUE GAS CHANNEL CLEANER

This option allows you to check the motor device of flue gas channel cleaner.

It is necessary to press the "START" next to the corresponding symbol and check that the motor device of flue gas channel cleaner will run turbulators. After pressing the "STOP", motor device will stop working. Each time you press "START" it becomes "STOP" and vice versa. Turbulators symbol is moving on display when the option is active.

### 5.2.6. GRATE CLEANER

This option allows you to check the motor device of grate cleaner.

It is necessary to press the "START" next to the corresponding symbol and check that the motor device moves burner grate. After pressing the "STOP" engine will return a burner grate in the work position, the burner grate is closed (0%). Each time you press "START" it becomes "STOP" and vice versa. When this option is active, symbol of burner grate is moving on display. When grate comes in one of two final positions, the main display shows the symbol "  " .

### 5.2.7. FEEDER SCREW

This option allows you to check the motor device of feeding screw.

It is necessary to press the "START" next to the corresponding symbol and check that the motor device of the feeding screw is working. After pressing the "STOP" engine will stop working. Each time you press "START" it becomes "STOP" and vice versa. When the option is active, on display will move a symbol of the pellet feeding screw and will show animation falling pellet boiler.

### 5.2.8. ELECTRIC HEATER

This option allows you to check electric heater.

It is necessary to press the "START" next to the corresponding symbol and check if the electric heater is working. After pressing the "STOP" electric heater will stop working. Each time you press "START" it becomes "STOP" and vice versa. The display will show animation of the electric heater when the option is active. **In this option, when the electric heater is working, then also and fan is working (fan symbol rotates when the option is active).**

### 5.2.9. VALVE CLOSING

This option allows you to check the motor device of 4-way mixing valve.

It is necessary to press the "START" next to the corresponding symbol and check if the motor device of 4-way mixing valve is working. Motor device should close the 4-way mixing valve. After pressing the "STOP" motor device will stop working. Each time you press "START" it becomes "STOP" and vice versa. The display will show the symbol of (closing) motor device when the option is active.

### 5.2.10. VALVE OPENING

This option allows you to check the motor device of 4-way mixing valve.

It is necessary to press the "START" next to the corresponding symbol and check if the motor device of 4-way mixing valve is working. Motor device should open the 4-way mixing valve. After pressing the "STOP" motor device will stop working. Each time you press "START" it becomes "STOP" and vice versa. The display will show the symbol of (opening) motor device when the option is active.

### 5.2.11. ALARM

This option allows you to check the work of sound/light alarm CAL (not included in delivery).

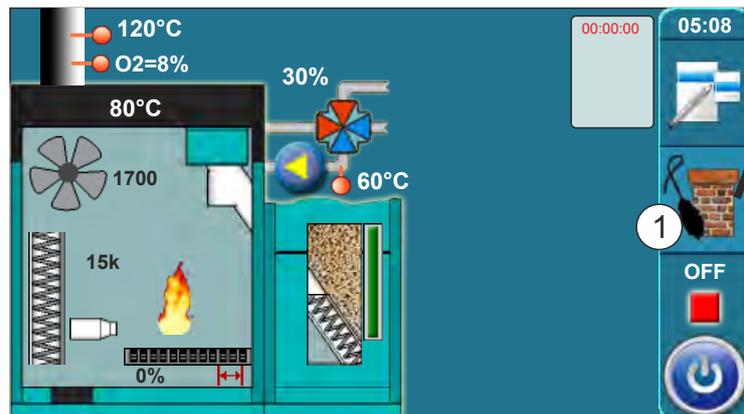
It is necessary to press the "START" next to the corresponding symbol and make sure that it works properly. It can be particularly checked for errors and fuel level.

### 5.3. CHIMNEY SWEEPER

This option allows the flue gas measurement at different boiler powers. When this option is turned on, counter will appear on display. Time will start counting when the boiler reaches selected power (Dx). Text of the counter is red. When the boiler reach the selected power (Dx) and is on selected power for set time and factory set temperature of the boiler is achieved counter turns green and flue gases can be measured.

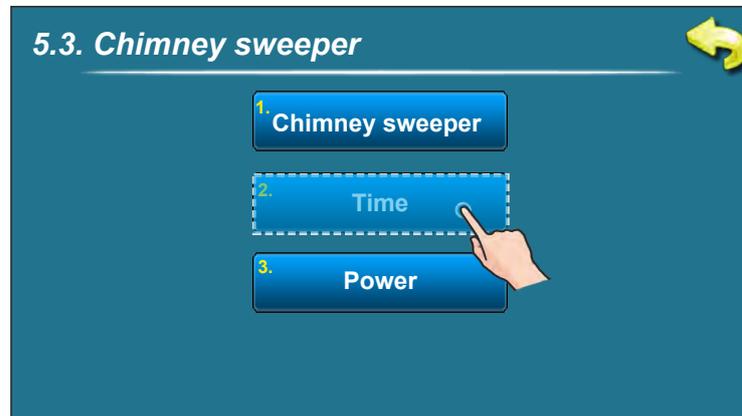


When this option is turned ON, button "BOILER OPERATION DISPLAY" becomes a button "CHIMNEY SWEEPER" (1). Pressing this button directly opens the menu "CHIMNEY SWEEPER" (without the need for scrolling through the menus). In this menu, is access to change parameters of "CHIMNEY SWEEPER" menu.



The factory set temperature that must be achieved to start measuring (except for conditions that can be changed - boiler power and time).

- the minimum boiler temperature: min. 60°C



### 5.3.2 TIME

**Possible selection:**

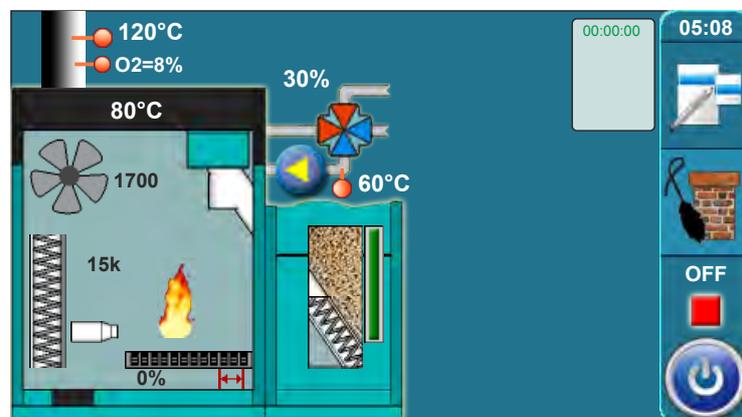
**Factory: 600 sec**

Minimum: 600 sec

Maximum: 3600 sec

After the set parameters are met there is min. time to stabilize the flame before measuring. This time begins to run when the boiler is on selected power Dx and minimum boiler temperature.

After the expiration of this time the text of the counter becomes green (1) and only then is allowed to start measuring.





### 5.3.3 POWER

**Possible selection:**

**Factory: D6 ~ 100% (maximum power)**

Possible selection:

- D2 ~ 25% (minimum power)
- D3 ~ 45%
- D4 ~ 65%
- D5 ~ 85%
- D6 ~ 100% (maximum power)

This option allows the boiler to work in different powers in order to measure the flue gases in the boiler modulation phases. The boiler works on the selected power so long as the option is turned off, or the boiler temperature reach 3°C less than the set maximum temperature of the boiler (in this case the boiler reduces power). The boiler always achieves a nominal power D6 ~ 100% and then goes to the selected modulation power.



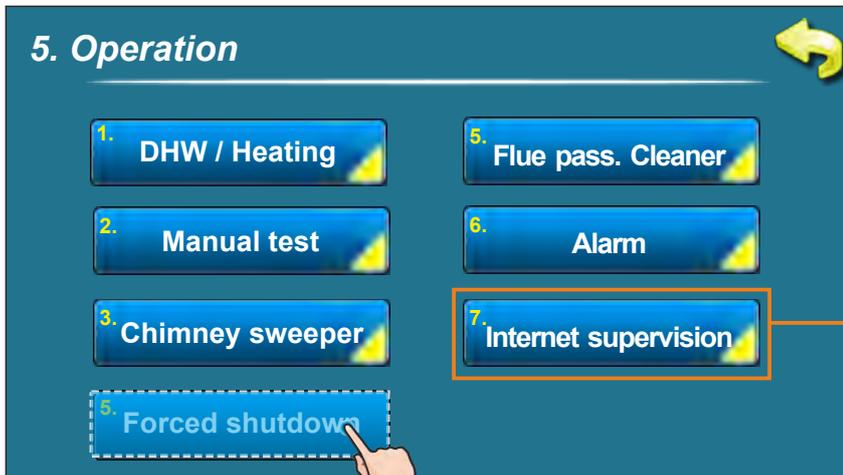
### IMPORTANT!

**When is turned ON option "chimney sweeper", external control switches OFF automatically, after you have turned OFF the "chimney sweeper" boiler continues according to the requirements of external control. If an external control doesn't request burner work, then the burner shuts down and goes into a break, otherwise burner will continue to work.**

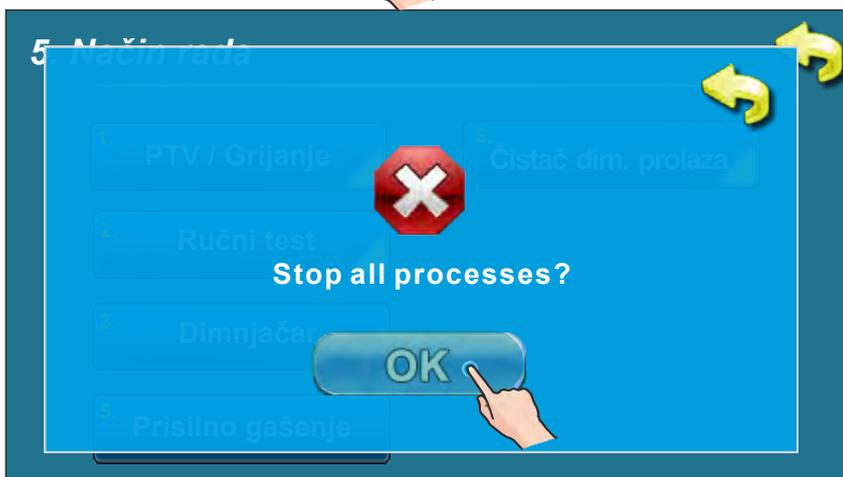
## 5.4. FORCED SHUTDOWN

This option is used to forced stop all processes.

First must be pressed the ON/OFF button to put the boiler in shutdown procedure and then "forced shutdown" button. All processes are stopped. After activating this option, it is necessary to clean the burner grate before restarting.



shown only if WiFi box is installed (additional equipment)



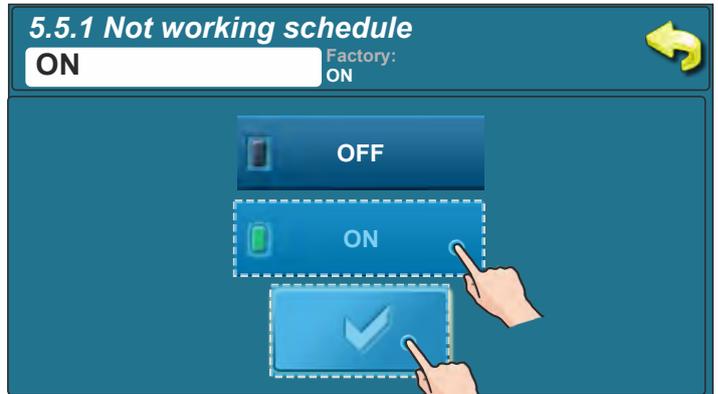
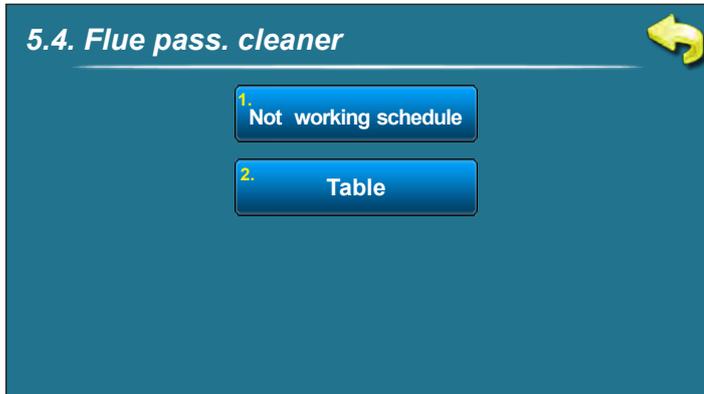
**IMPORTANT!** To be able to stop all processes, you must first turn off the boiler in the usual way by pressing  and then STOP.



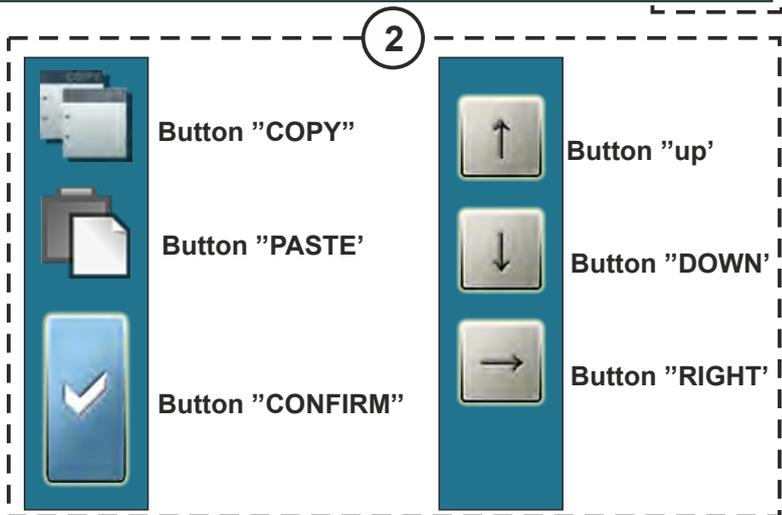
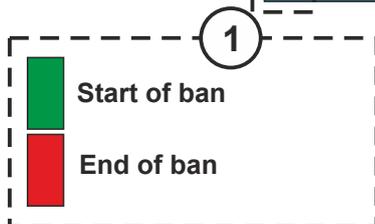
### 5.5. FLUE PASS. CLEANER

This option is used to disable working of flue gas passages cleaning (eg. in the night to prevent noise).

In times that are placed in the table is prevented clean flue passages. Times can be adjusted in the table in the same way as in table "Schedule".



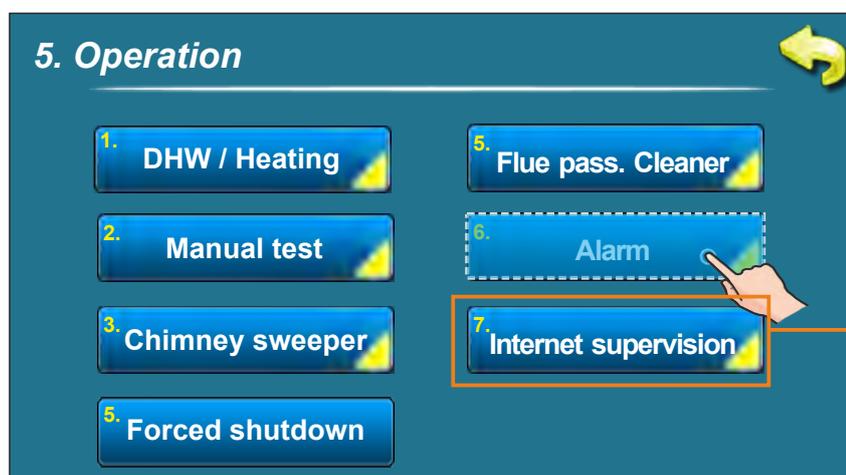
Flue pass. Cleaner - Table							
	MON	TUE	WED	THU	FRI	SAT	SUN
1	00:00	00:00	00:00	00:00	00:00	00:00	00:00
	07:00	07:00	07:00	07:00	07:00	07:00	07:00
	19:00	19:00	19:00	19:00	19:00	19:00	19:00
	23:59	23:59	23:59	23:59	23:59	23:59	23:59



According to the data in the table, cleaning the flue passage is banned from 0:00 to 7:00 and from 19:00 to 21:00 every day of the week. This means that boiler will clean the flue passages only during the period from 07:01 to 18:59. Table can be adjusted according to the needs in the same way as the table "Schedule" (see 3.2-3.4).

## 5.6. ALARM

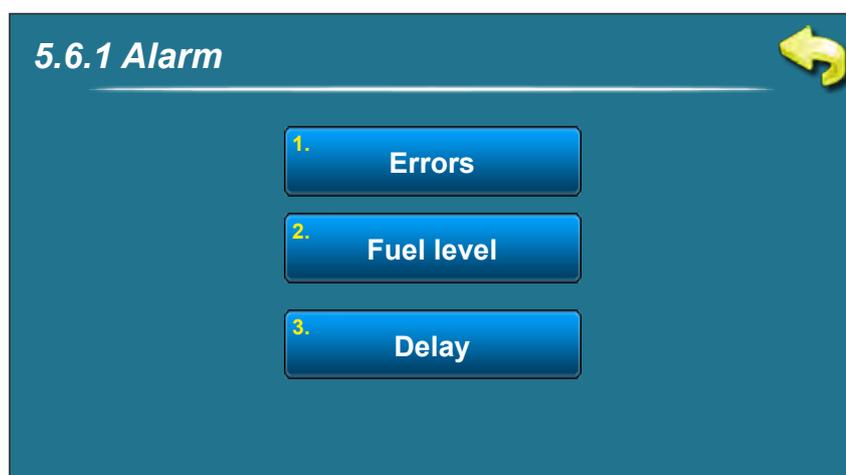
This option is used to report errors or fuel level warning by speaker or lamp when the user isn't near of the boiler.(speaker and lamp are additional equipment and they must be installed only by an authorized person).



shown only if WiFi box is installed (additional equipment)



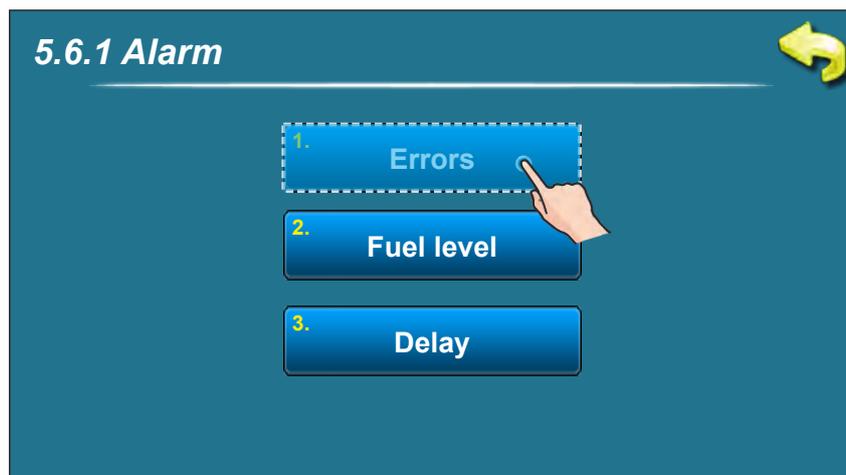
\* Shortcut for disabling speaker for low fuel level warning



\* By pressing this button user can disable/enable the fuel level warning sound from the speaker. (It refers only to warning about the low fuel level in the tank when speaker is selected as connected device). If only lamp is connected and selected as connected device, this shortcut is not displayed.

When speaker is disabled, this symbol becomes .

### 5.6.1.1 ERRORS



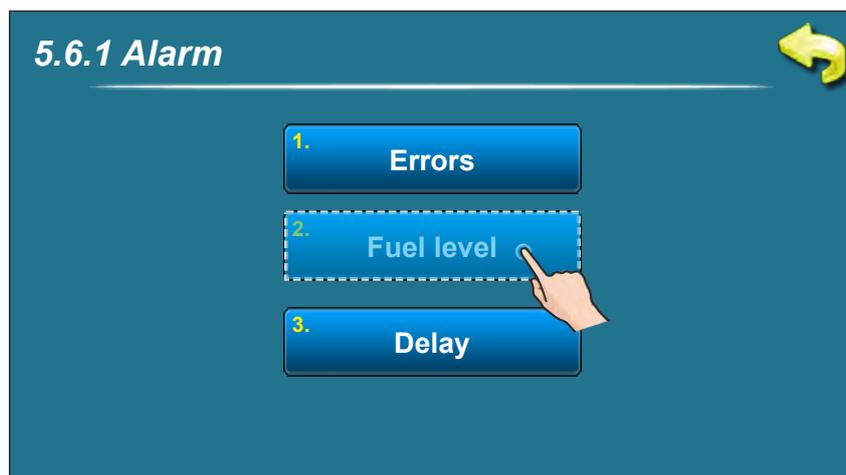
**Possible selection:**

**Factory: OFF**

Off, Continuous, Fast 1 time, Fast 3 times, Slow 1 time, Slow 3 time, Table

This parameter determines whether the output 1 errors occur. By selecting certain types of signals will be activated in the selected signal format.

### 5.6.1.2 FUEL LEVEL



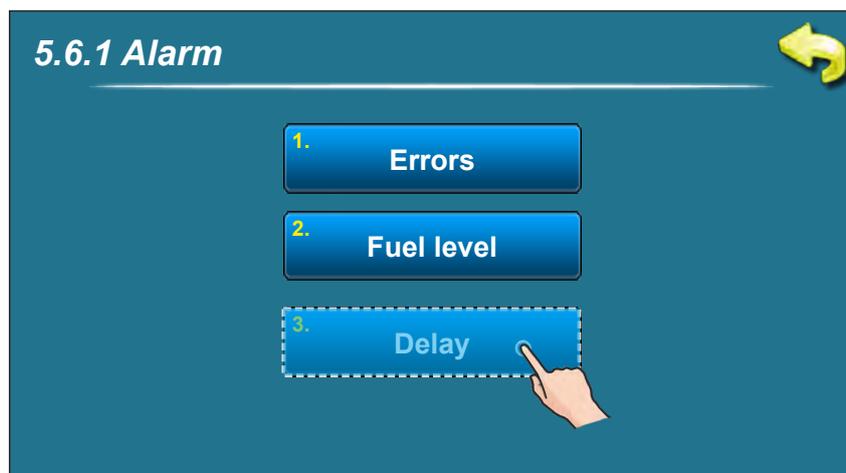
**Possible selection:**

**Factory: OFF**

Off, Continuous, Fast 1 time, Fast 3 times, Slow 1 time, Slow 3 time, Table

This parameter determines whether the output 1 fuel level warning occur. By selecting certain types of signals will be activated in the selected signal format.

### 5.6.1.3 DELAY



**Possible selection:**

**Factory: 20 sec**

Minimum: 5 sec

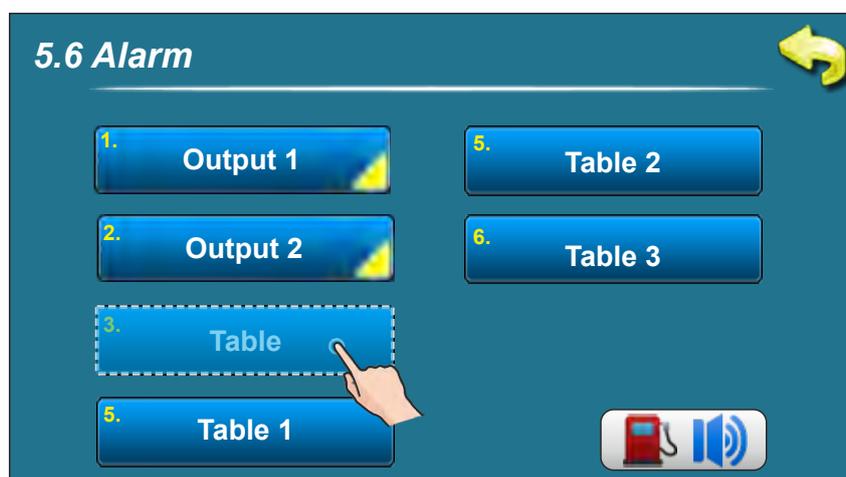
Maksimum: 3600 sec

This parameter determines interval of signal repeating.

(This parameter will be ignored if the selected signal is "continuous").

In the same way it is possible to adjust the parameters of the output 2 (5.6.2)

### 5.6.3 TABLE



**Factory: Table 1**

Table 1, Table 2

This parameter is used to select the predefined table for the alarm. The automatic switching on and off or changing the signal type at a specific time. It is possible to adjust signal type for speaker and signal type for low fuel level warning. The table will be operational only if is "table" selected in point 5.5.1.1 for output 1 (signal type) or in point 5.5.2.1 for output 2 (signal type).

5.6.4 TABLE 1

**5.6 Alarm**

1. Output 1

5. Table 2

2. Output 2

6. Table 3

3. Table

4. Table 1

Alarm - Table 1

	MON	TUE	WED	THU	FRI	SAT	SUN
1	00:00 						
2							
3							
4							
5							
6							

- ① Type of alarm alert
  - Lamp
  - Speaker
- ② Time
- ③ Symbol for alarm of boiler errors.
- ④ Symbol for alarm of fuel level warning
- ⑤ Signal type of boiler errors alarm.
- ⑥ Signal type of fuel level warning

Alarm - Table 1

	MON	TUE	WED	THU	FRI	SAT	SUN
1	00:00 						
2		② 06:00 ③					PON 2
3		①	④				
4		⑤	⑥				
5							
6							

Setting values on table 1

Using the table to turn on or of and change type of signal for alarm or low fuel level warning at different times and days. When you enter the editing table, it is necessary to press 2 times the desired box (day) and then opens a new window where you can turn on and off, set signal type for boiler error, fuel level warning and the time at which the selected signal type takes effect. Eg. to change the time, it is necessary to press the box with time. When pressed on the box with time, its background becomes white and then it is possible to change the parameters by pressing the "up" and "down" ( ). It is possible to specify the type of signal 16 changes per day.

On the next page are described all symbols for types of signal. In the same way, you can fill table 2 (table 3 is not used).

**The type of connected device (lamp or speaker) can be set only in installation menu, only by an authorized person.**

## Symbol descriptions (signal types)

For boiler error alarm (red)

Symbol	Description
—	Off
	Continuous
	Fast 1 time
	Fast 3 times
	Slow 1 time
	Slow 3 times

For fuel level warning (green)

Symbol	Description
—	Off
	Continuous
	Fast 1 time
	Fast 3 times
	Slow 1 time
	Slow 3 times

## Example of filled table

Alarm - Table 1							
	MON	TUE	WED	THU	FRI	SAT	SUN
1	00:00 	00:00 		15:00    			
2	06:00   						
3		12:00    					
4							
5							
6							

  
 Page up / down

According to table alarm is off on monday in 00:00, then is turned on in 06:00 (fast 3X for boiler error and fast 1X for fuel level warning). This way to alert the alarm goes until 00:00 tuesday when switched off again. In tuesday 24:00 alarm is active again (continuous for boiler error and 3X slow for fuel level warning. This way of alert alarm is active all day wednesday (day and night) until thursday at 15:00 when the alert alarm type changes (continuous for errors and fast 3X for fuel level warning. This way of alert alarm is valid on friday, saturday and sunday until monday at 00.00 when start a new table circuit.

**Note: Delay between two alarm indication can not be changed in the table, but it can be set in the alarm menu as described in point 5.6.1**

## Internet supervision (additional equipment)

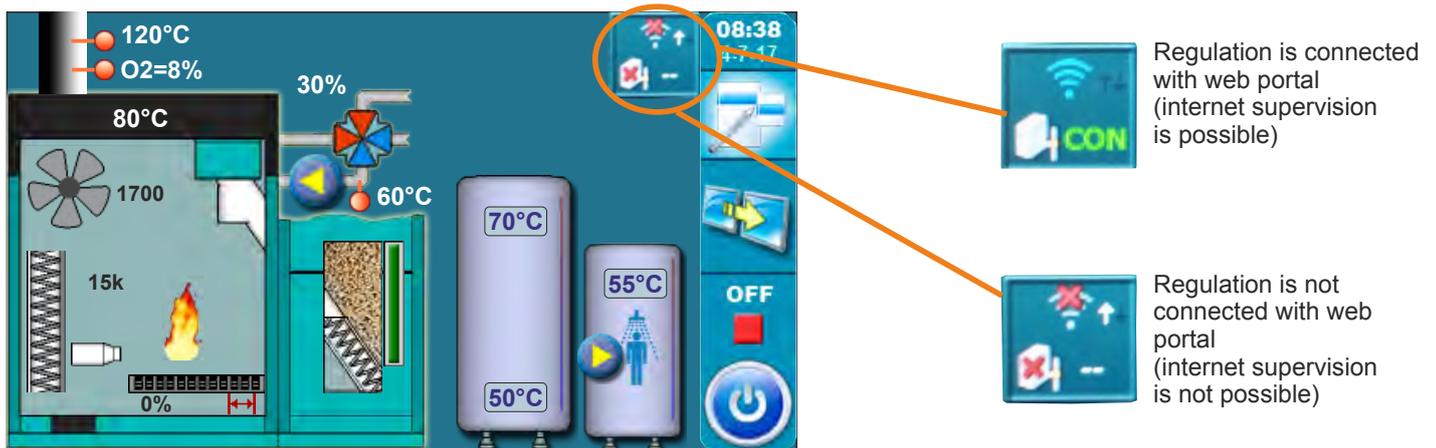
### 5.7. INTERNET SUPERVISION - available only from software version "v2.82m"

This option is used to set the regulation to connect boiler to the internet through local Wi-Fi network. This option is used to change internet supervision settings.

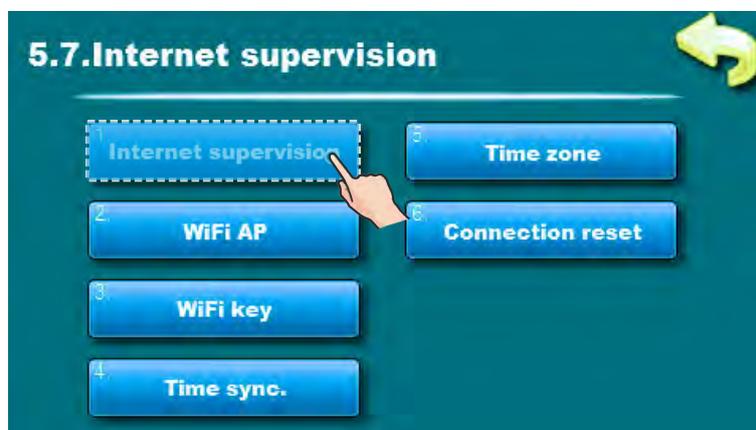
This option is only visible if "Cm WiFi box" is connected to the boiler regulation by UTP cable.



When "Cm WiFi box" is connected to the boiler and internet supervision is enabled, a new icon appears on the main screen showing the status of internet supervision.



#### 5.7.1 INTERNET SUPERVISION

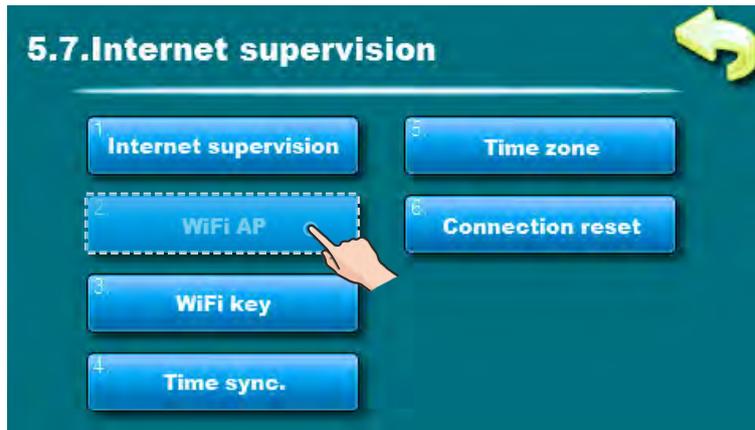


**Factory: Supervision + control**

OFF, Supervision, Supervision + control

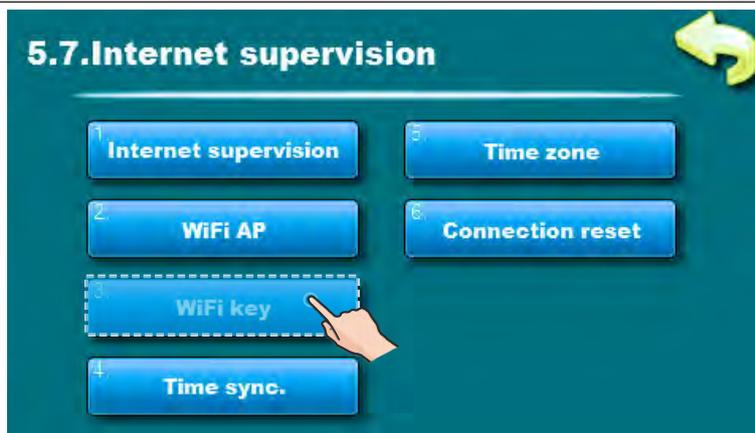
This option is used to set and enable/disable internet supervision.

### 5.7.2 WIFI AP (NAME OF WIFI HOME NETWORK)



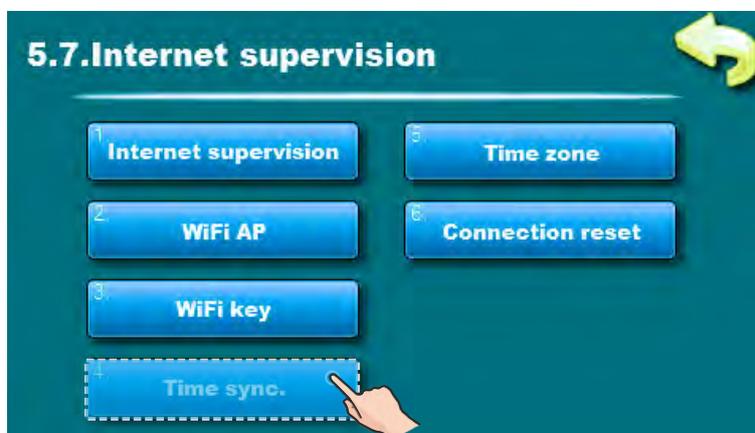
This option allows you to enter the name of WiFi home network to which you want to connect the "Cm WiFi box" and the boiler. You must enter exact WiFi network name or else boiler will not be able to connect to the WiFi network.

### 5.7.3 WiFi KEY (HOME NETWORK PASSWORD)



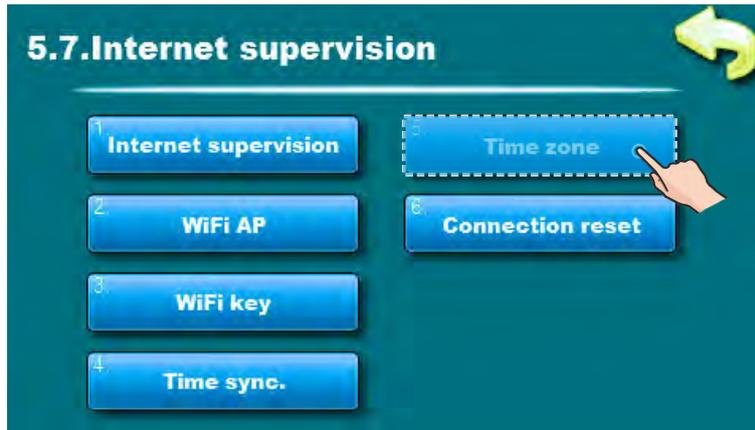
This option allows you to enter a password for your home Wi-Fi network. You must enter exact password or else boiler will not be able to connect to the WiFi network.

### 5.7.4 TIME SYNCRONIZATION



This option allows boiler time synchronization with web server time (internet time).

### 5.7.5 TIME ZONE



This option allows you to set the time zone if the boiler is in a different time zone than the web portal server. (this option must be set if you enable "Time synchronisation option")

### 5.7.6 CONNECTION RESET



This option allows you to reset connection with home network.

### IMPORTANT NOTES



**CM WiFi-box requires active DHCP server of Access Point (e.g. router) because manual setting of network parameters is not possible. For more informations contact administrator of your home network.**



**To be able to use Cm WiFi box on PelTec/PelTec Lambda boiler, minimum required software versions of the boiler regulation must be:  
"v2.82m\_30" / "v2.82m\_30L"                      "v2.82m\_270" / "v2.82m\_270L"  
You can check boiler version by pressing the "INFO" button under main menu.  
If there is older software version, it must be updated to be able to use Cm WiFi box. For software update please contact authorized serviceman.**



**For detailed configuration of the Cm WiFi box please refer to the Cm WiFi box manual received with the Cm WiFi box.**

## 6.0. DATE AND TIME



This option is used to set the date and time. This option is used to set the date and time. It is necessary for starting times, and the recording of errors / warnings (for the occurrence of errors / warnings, remembers the date and time of occurrence). After setting the date and time it is necessary to press the "CONFIRM" for saving date and time. If there is a significant clock delay or clock setting at 00:00 or the date on 1.1.2000. It is necessary to replace the battery on the back of the display (battery type CR 1220).

## 7.0. DISPLAY



### 7. Display:

- |                         |                   |
|-------------------------|-------------------|
| 7.1. Screensaver        | 7.4. Sound volume |
| 7.2. Language selection | 7.5. Sound type   |
| 7.3. Welcome time       |                   |

### 7.1. SCREENSAVER

**Possible selection: Default: 600 seconds** Minimum: 10 seconds Maksimum: 3600 seconds  
If at some time nothing was pressed on the screen, the screensaver will turn on, to prevent damage on the screen. Once you touch the screen, the screensaver will turn off.

### 7.2. LANGUAGE SELECTION

**Possible selection:** Enabled (**default**), Disabled

This option enables or disables screen with the choice of language regulation when you turn-on main switch. If is marked "DISABLED", after turning-on the main switch, it will be set on before selected language and after some time, display will show the work display of the boiler (duration of this screen can be adjusted in Section 7.3.).

### 7.3. WELCOME TIME

**Possible selection: Default: 5 seconds** Minimum: 0 seconds Maximum: 20 seconds

This option is used to set the desired duration of the initial message after turning on the main switch. This option is only available if the option" LANGUAGE SELECTION" (point 7.2.) Is set to"DISABLED".

### 7.4. SOUND VOLUME

**Possible selection: Default: Volume 3, OFF, volume 1, volume 2, volume 3**

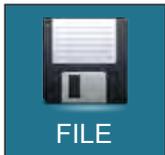
This option is used to set speaker volume.

### 7.5. SOUND TYPE

**Possible selection: Default: Type 1, Type 1, Type 2, Type 3, Type 4, Type 5, Type 6, Type 7, Type 8, Type 9, Type 10**

This option is used to adjust type of speaker sound. It is possible to choose between 10 different types of sounds.

## 8.0. FILE



### 8. FILE:

- 7.1. LOAD FACTORY
- 7.2. SAVE

7.3. LOAD

### 8.1. LOAD FACTORY

After pressing "LOAD FACTORY" you will see a message "LOAD FACTORY SETTINGS?". Pressing button "OK" will load the default settings of regulation. Pressing the "BACK" will return to the previous menu.

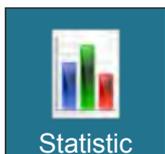
### 8.2. SAVE

After pressing "SAVE" you will see a message "SAVE CURRENT SETTINGS?". Pressing button "OK" the current setting of regulation will be saved in memory. Settings can be saved in three different memory places (memory 1, memory 2, memory 3). Pressing the "BACK" will return to the previous menu.

### 8.3. LOAD

Settings can be loaded from one of 3 different memories in which the settings are saved. After pressing "LOAD" you will see "LOAD SAVED SETTINGS?". Pressing button "OK" saved settings (saved in option SAVE) will be loaded. Pressing the "BACK" will return to the previous menu.

## 9.0. STATISTIC



### Statistics of boiler operation and certain parts:

- |               |                  |            |            |
|---------------|------------------|------------|------------|
| - Burner work | - Fan            | - Power D6 | - Power D2 |
| - Starting    | - Heater         | - Power D5 | - Power D1 |
| - F. Screw    | - Vacuum turbine | - Power D4 | - Power D0 |
| - Flame       | - Vacuum cycles  | - Power D3 |            |

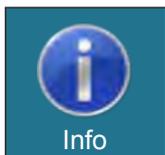
The regulation follows the startup number of the boiler and the work time of certain parts of the boiler.

## 10.0. INSTALLATION



### MENU ONLY FOR AUTHORIZED SERVICE

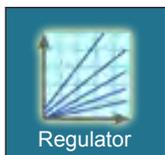
## 11.0. INFO



Menu with general information:

- Software version
- Boiler Power
- WiFi ID

## 12.0. REGULATOR (CM2K-P)



This option is only visible if it is activated in "Installation men." Access to the installation have only authorized person (by entering PIN) ". For more informations about this menu see "Technical instructions, Module for control of two heating circuits (CM2K-P)".

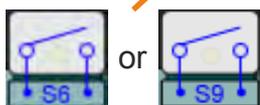
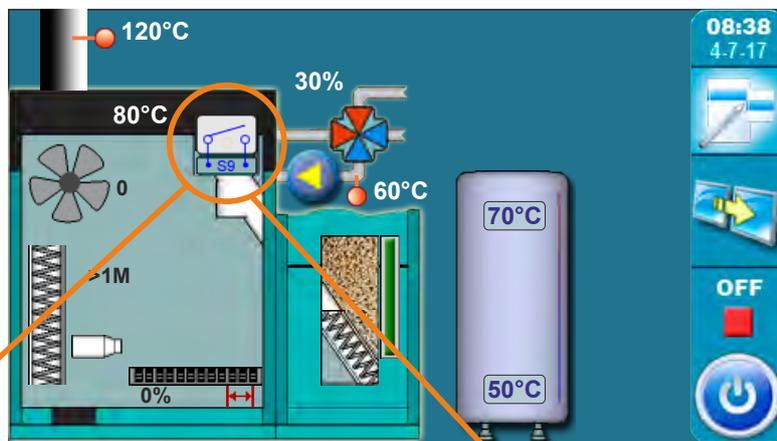
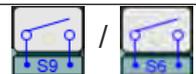
### 13. ADDITIONAL

#### 13.1 EXTERNAL CONTROL

Only authorized serviceman can enable external control ("installation menu") only in the following configurations:

		External control connected to:
Configuration 4:	<b>BUF</b>	<b>S6</b>
Configuration 6:	<b>BUF--IHC</b>	<b>S6</b>
Configuration 8:	<b>BUF--DHW</b>	<b>S6</b>
Configuration 9:	<b>BUF--IHC  DHW</b>	<b>S6</b>
Configuration 10:	<b>CRO</b>	<b>S6</b>
Configuration 11:	<b>CRO/BUF</b>	<b>S9</b>
Configuration 14:	<b>BUF--IHCX2</b>	<b>S6</b>

When external control is connected and configured in "installation" menu, symbol appears in main screen.



External control doesn't request burner work



External control request burner work



### IMPORTANT!

The boiler must be switched on in the usual way otherwise external control will have no effect, even if external control request burner work.



**13.2 TABLE OF RESISTANCES OF NTC 5K/25°C SENSOR**

Measuring range from -20 to +130°C

Used as: **Boiler temperature sensor, DHW tank sensor,  
Return flow temperature sensor, Main flow temperature sensor**

Temperature (°C)	Resistance (Ω)
-20	48.535
-15	36.465
-10	27.665
-5	21.158
0	16.325
5	12.694
10	9.950
15	7.854
20	6.245
25	5.000
30	4.028
35	3.266
40	2.663
45	2.184
50	1.801
55	1.493
60	1.244
65	1.041
70	876
75	740,7
80	629,0
85	536,2
90	458,8
95	394,3
100	340,0
105	294,3
110	255,6
115	222,7
120	190,7
125	170,8
130	150,5

**13.3 TABLE OF RESISTANCES OF THE PT1000 SENSOR**

Measuring range from -30 to +400°C  
Used as: Flue gas temperature sensor

Temperature (°C)	Resistance(Ω)	Temperature (°C)	Resistance (Ω)
-30	885	185	1.712
-25	904	190	1.732
-20	923	195	1.751
-15	942	200	1.770
-10	962	205	1.789
-5	981	210	1.809
0	1.000	215	1.828
5	1.019	220	1.847
10	1.039	225	1.866
15	1.058	230	1.886
20	1.077	235	1.905
25	1.096	240	1.924
30	1.116	245	1.943
35	1.135	250	1.963
40	1.154	255	1.982
45	1.173	260	2.001
50	1.193	265	2.020
55	1.212	270	2.040
60	1.231	275	2.059
65	1.250	280	2.078
70	1.270	285	2.097
75	1.289	290	2.117
80	1.308	295	2.136
85	1.327	300	2.155
90	1.347	305	2.174
95	1.366	310	2.194
100	1.385	315	2.213
105	1.404	320	2.233
110	1.424	325	2.251
115	1.443	330	2.271
120	1.462	335	2.290
125	1.481	340	2.309
130	1.501	345	2.328
135	1.520	350	2.348
140	1.539	355	2.367
145	1.558	360	2.386
150	1.578	365	2.405
155	1.597	370	2.425
160	1.616	375	2.444
165	1.635	380	2.463
170	1.655	385	2.482
175	1.674	390	2.502
180	1.693	395	2.521
		400	2.540

**13.4 OPERATION PHASES (SHOWN ON THE SCREEN)**



OFF	The boiler is switched "OFF"
S0	Initial blowing, waiting for grate starting position
S1	Not used
S2	Starting supply of pellets
S3	Waiting for flame
S4	Electric Heater operation after flame arrival
S5	Developing phase
SP1	Stabilization phase 1
SP2	Stabilization phase 2
SP3	Stabilization phase 3
SP4	Stabilization phase 4
SP5	Stabilization phase 5
S6	Additional developing phase
D0	Power D0
D1	Power D1
D2	Power D2
D3	Power D3
D4	Power D4
D5	Power D5
D6	Power D6
S7	Phase of shutting down
PF0	Phase after electric power is back, heater is on and waiting for the flame (if the flame came up > PF1, else -> PF4)
PF1	Electric Heater shuts down and goes to PF2
PF2	Developing phase, after it in the PF3
PF3	Waiting for the disappearance of the flame and goes to phase PF4
PF4	The final blow, turning "ON" again, or go in the phase "OFF" (depending on requirements)
CO	Grate cleaning phase





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