

# Centrometal

## HEATING TECHNIQUE

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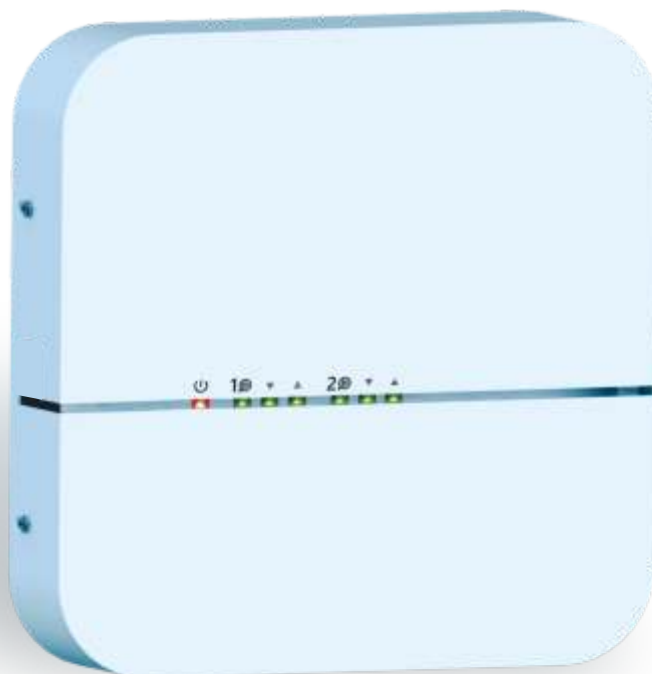
ENG

## Technical instructions

for installation and using the additional equipment

CM2K module for  
mixing circuits / DHW / Recirculation

for connection to: PelTec, Cm Pelet-set Touch, BioTec-L  
BioTec Plus, EKO-CKS P Unit, EKO-CKS Multi Plus



# CM2K

Thank you for purchasing our product

Please read these technical instructions carefully so that you can use and adjust the CM2K module as easily as possible. After reading the instructions, place them in an appropriate place where you can easily find them if you need further information about the operation and use of the CM2K module.

Please make sure that the CM2K module has been disposed of in order to reduce environmental pollution.

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## TECHNICAL CHARACTERISTICS CM2K

Inputs	4x sensor inputs (NTC5K, 2x main flow/DHW, 1x outdoor, 1x reserve)
	2x room corrector inputs CSK
	2x digital inputs (CSK-Touch: wire)
	1x power supply 12VDC
Outputs	4x semi-conductor (triac / 2x pump, 2x mixing valve actuator)
Output power	Triacs (2x) max. 200W (1A)
Power supply	195-265V/50Hz
Max. power	
Electricity consumption	
Conductor cross section	1-1,5 mm <sup>2</sup>
IP protection	IP20 according EN
Environment temperature	-10 do 40°C
CM2K mass	715 g
Housing material	Flame resistant ABS (UL94V-0)
CM2K dimensions	(WxHxD) 200x40x200

### Sensor technical characteristics

Sensor type	NTC5K
Min. conductor cross section	0,5-0,75 mm <sup>2</sup>
Max. conductor length	50 m

### EC Declaration

The product complies with the requirements of the current rules and is marked CE.  
The EC Declaration of Conformity is available on request, contact the manufacturer.



## BASIC PARTS

### INPUTS:

- 4x sensor input (NTC5K sensor - 2x main flow/DHW, 1x outdoor sensor, 1x reserve)
- 2x room corrector CSK input (possibility of connection with 3 or 2 wires - connection depends of boiler type and boiler firmware)
- 2x digital input (CSK-Touch: wire)
- 1x 12VDC

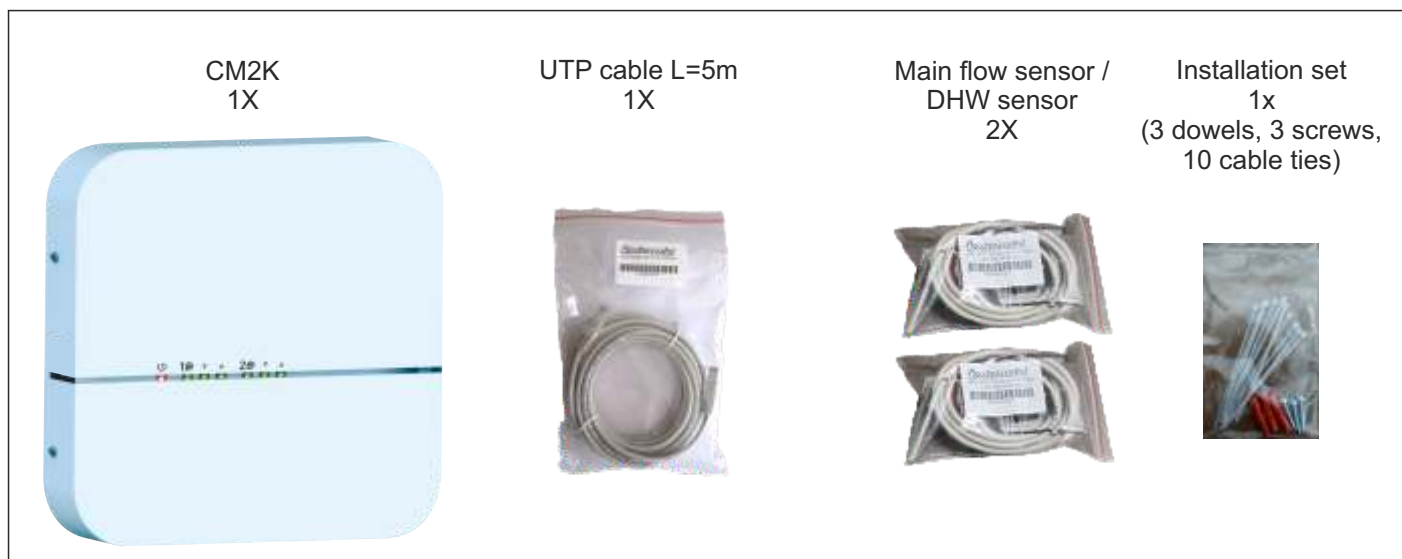
### OUTPUTS:

- 2x standard (230V) - pump
- 2x standard (230V) - actuator
- 2x UTP connector for connecting to the boiler and connection more CM2K modules or other additional equipment (WiFi box...)

### DELIVERY in cardboard box:

- 1x CM2K module
- 2x NTC5K (main flow sensor / DHW sensor)
- 1x UTP cable 5m
- 3x dowel+screw
- 10x cable ties
- 1x technical instructions

## DELIVERY CONTENT



## ADDITIONAL EQUIPMENT FOR CM2K

Room corrector **CSK**



Outdoor sensor **OVT**



**Note:**

**Room corrector CSK** is **NOT** in delivery package.

With CM2K module is possible to use only **CSK room corrector** from producer Centrometal.

Maximum of two room correctors can be connected, one for each circuit.

**Outdoor sensor OVT** is **NOT** in delivery package.

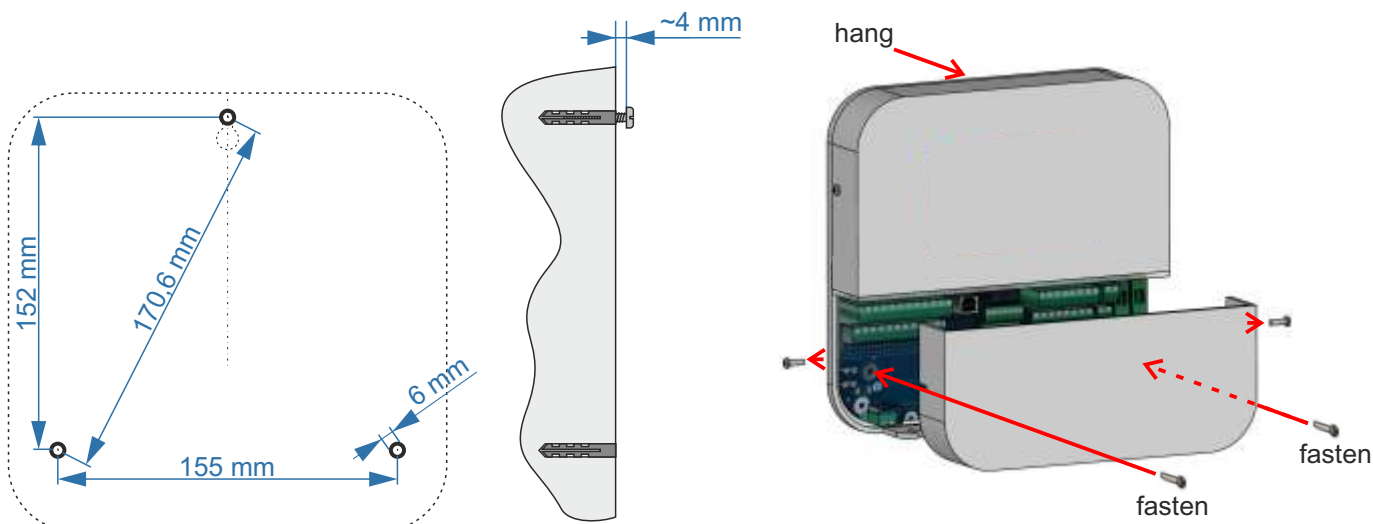
At certain boilers outdoor sensor is in standard delivery and at some boilers it must be **separately ordered**.

## INSTALLATION

CM2K module is installed on the wall or on hard surface in closed dry room.

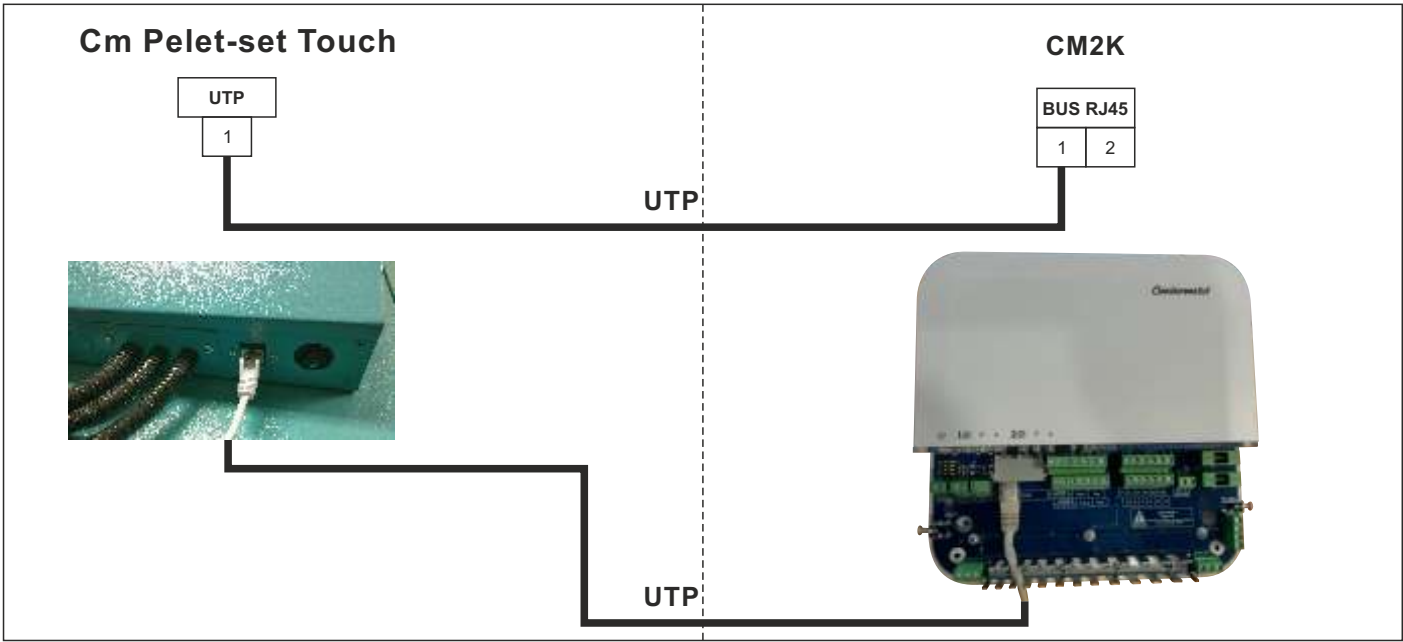
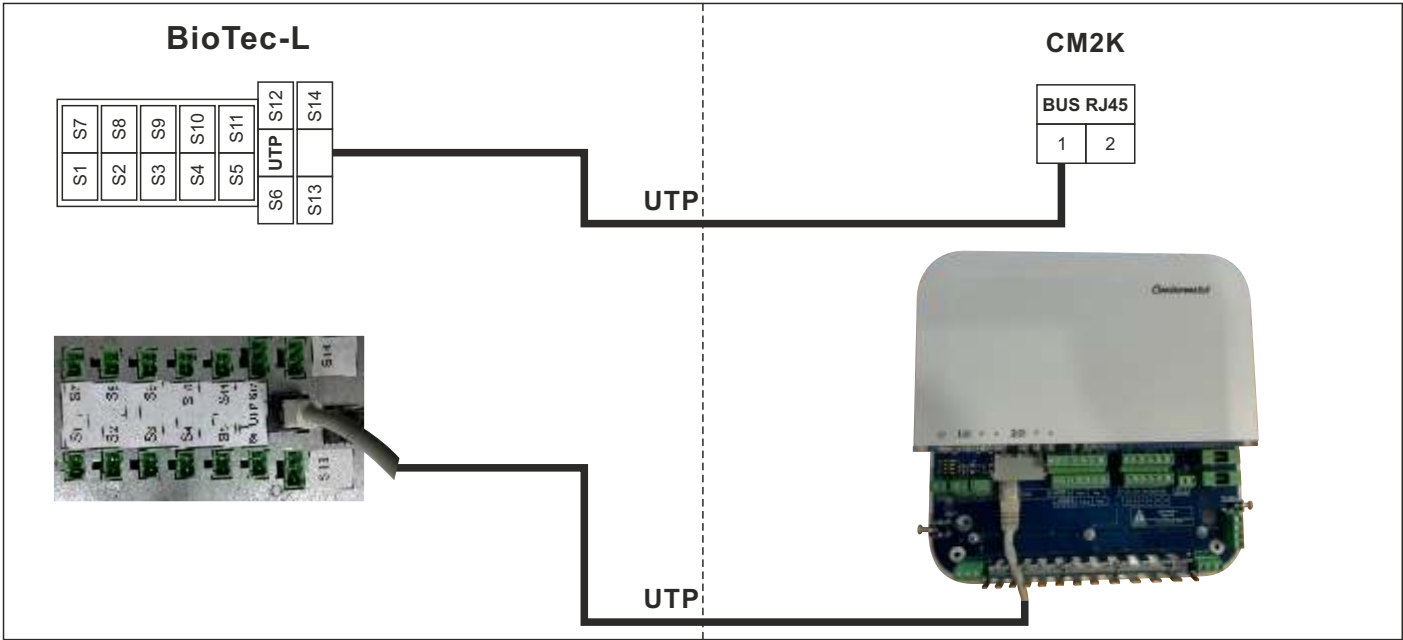
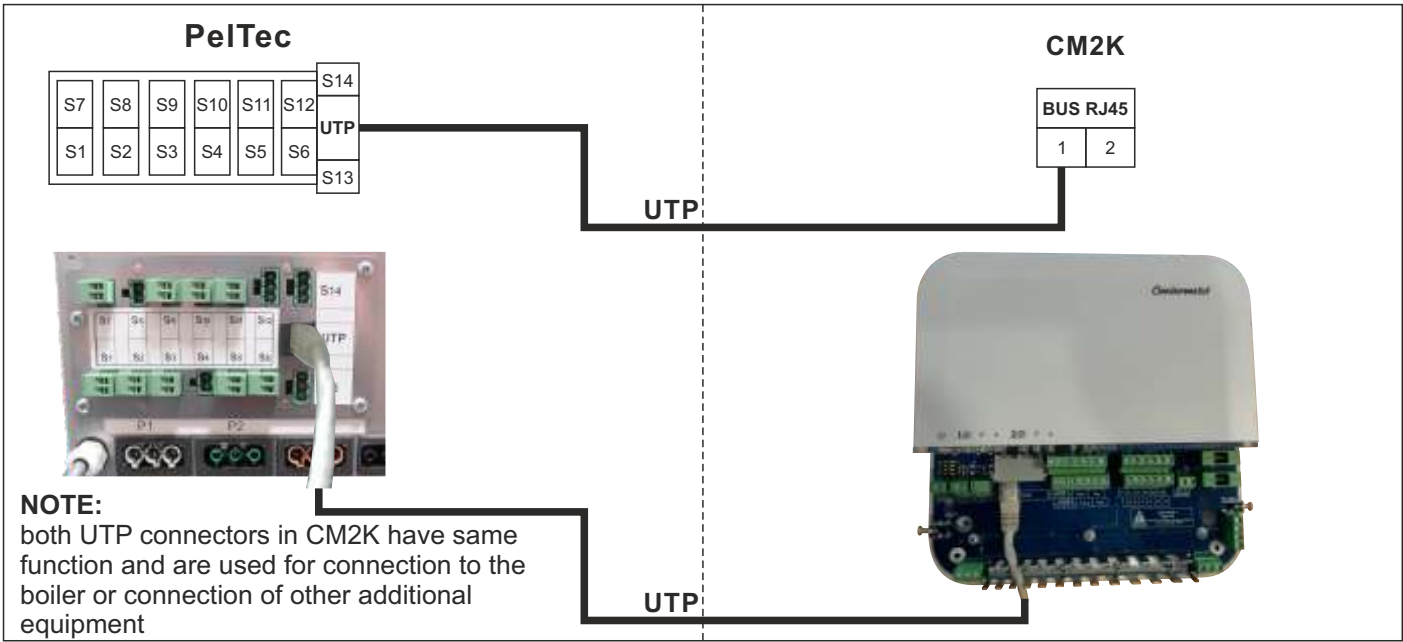
According the picture below, drill 3 holes 6 mm x 35-45 mm.

Insert 3 dowels into drilled holes and install screw into upper dowel with ca. 4 mm distance from the wall.

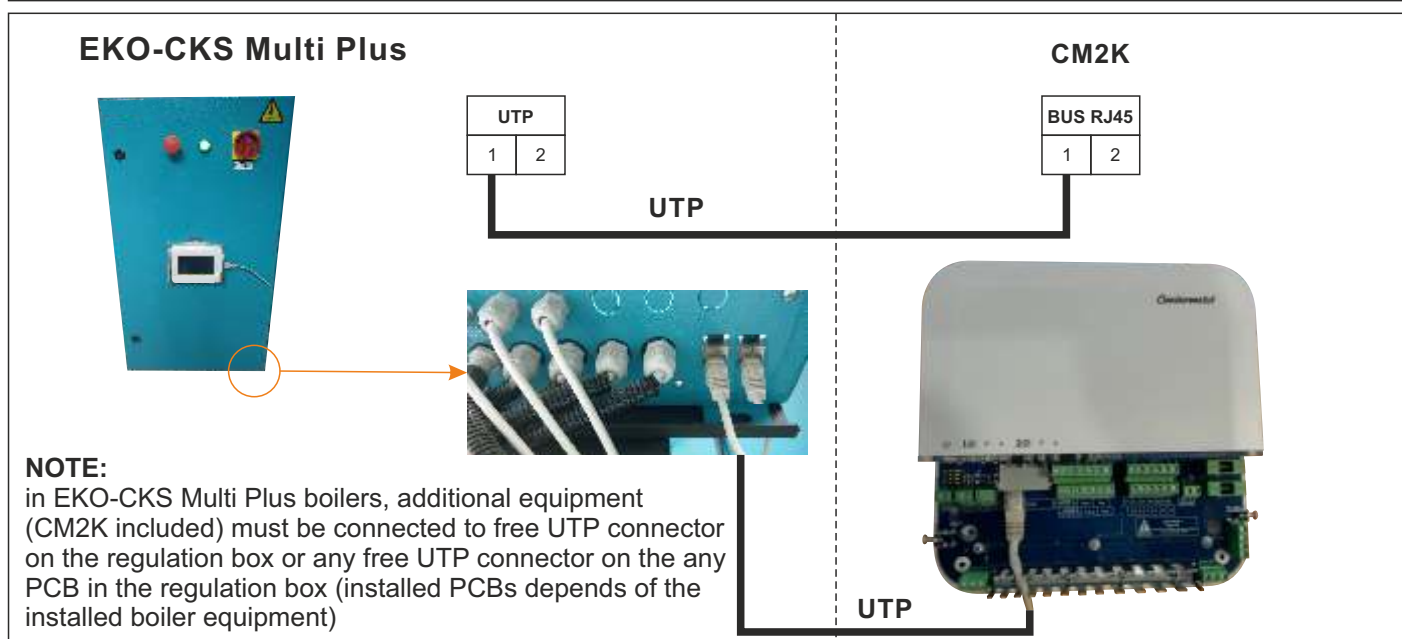
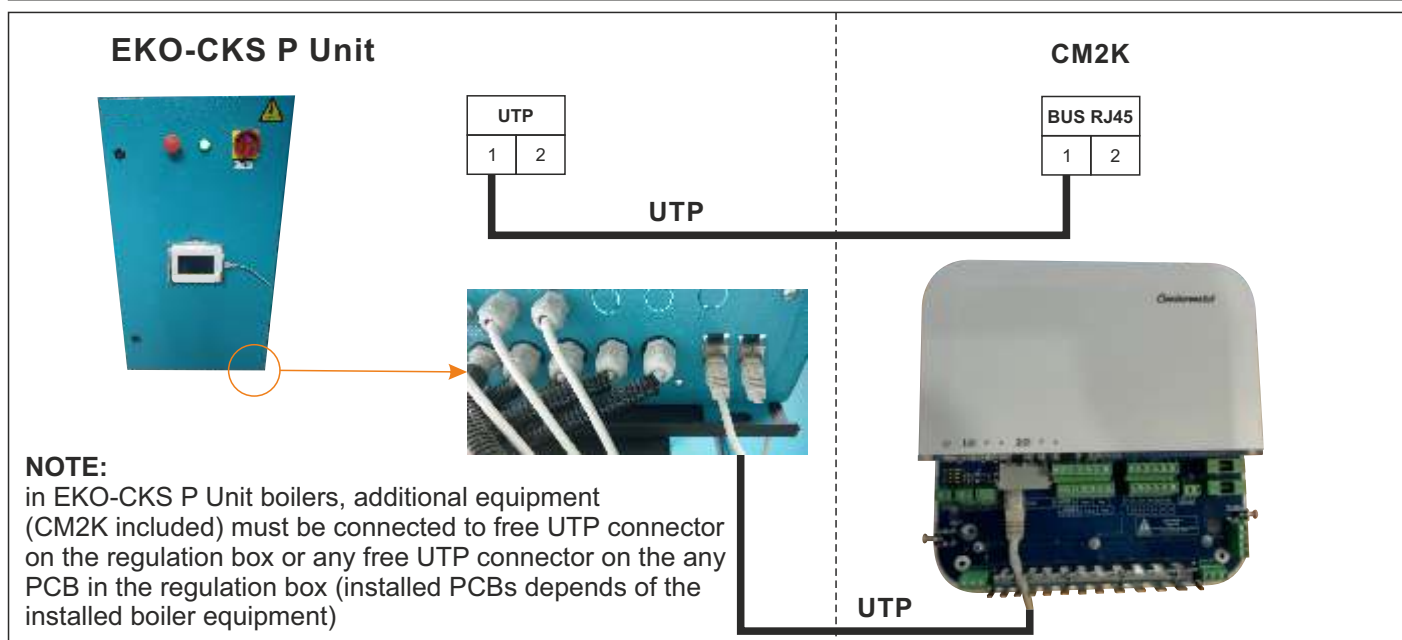
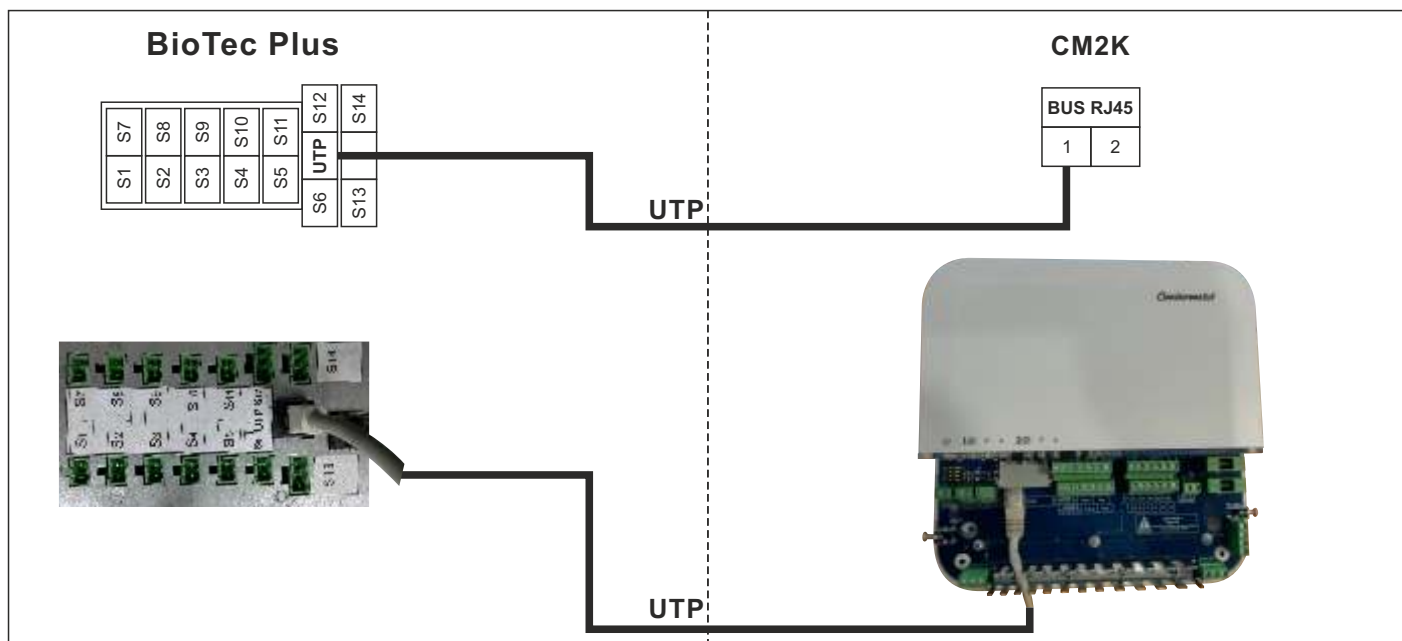


Remove lower cover, hang the module on the upper screw, install lower screws to the mounting holes in the module and in the wall. Fasten the screws to secure the module to the wall.

CONNECTION TO THE BOILER



## CONNECTION TO THE BOILER


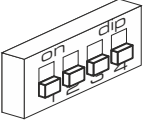

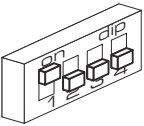

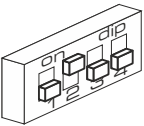

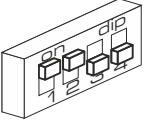



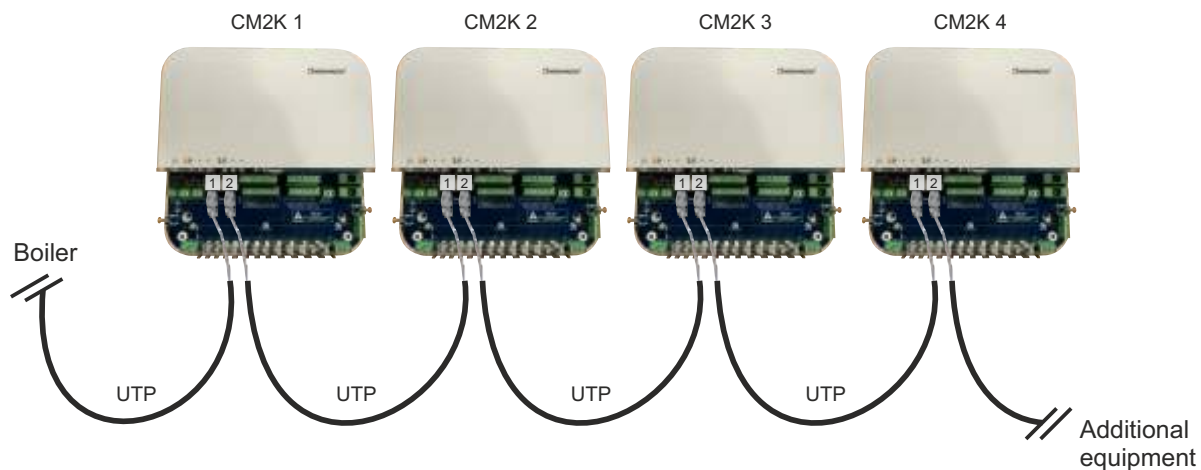


## CONNECTING MORE CM2K MODULES

Maximum up to 4 modules can be connected. Connection is done by UTP cables. UTP input/output 1 or UTP input/output 2 can be used (they both have same function, free connector is used for connection of next module or for connection of other additional equipment).

If there are more than 1 CM2K installed, in every module is necessary to set device address (0-4). Address is set by SW switches on the PCB of the module (below casing cover of the connection clamps). Order of connection is not important, circuit number is defined by module address with SW switches (every module must have different address, i.e. two devices can't have same address).

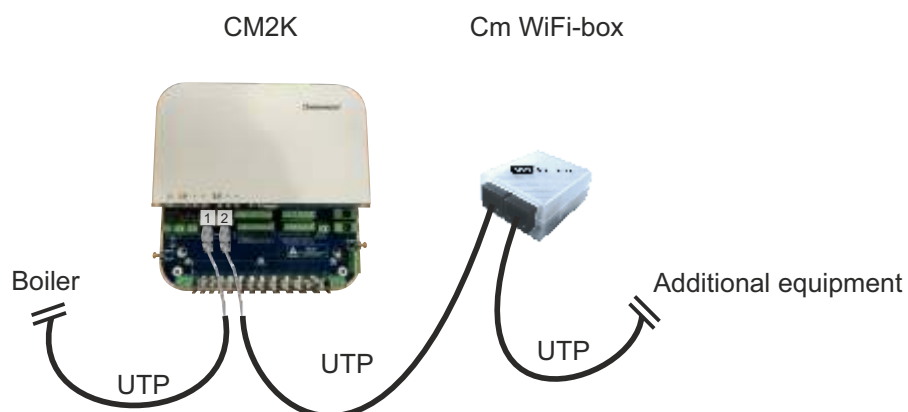
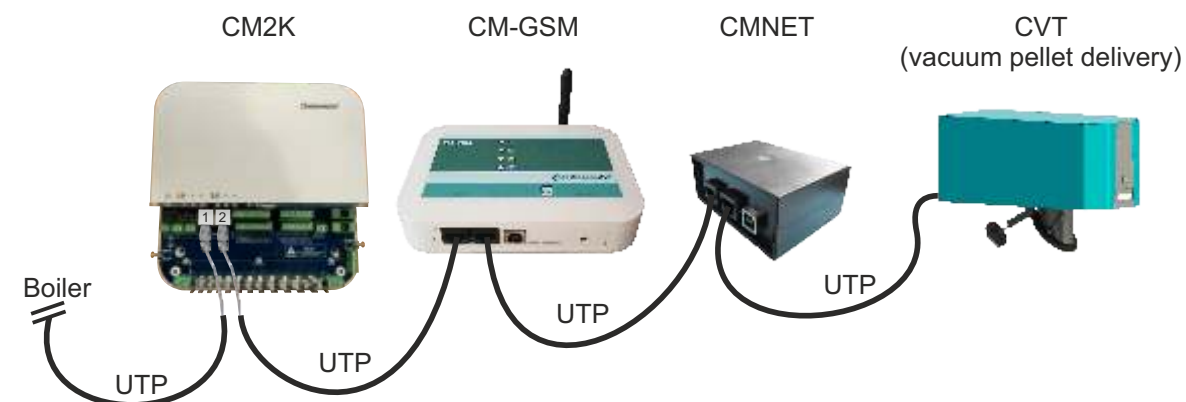
 <p>Position of the SW switches</p>	<b>Device 1</b> 1 - off 2 - off 3 - off 4 - off		
	<b>Device 2</b> 1 - on 2 - off 3 - off 4 - off		
	<b>Device 3</b> 1 - off 2 - on 3 - off 4 - off		
	<b>Device 4</b> 1 - on 2 - on 3 - off 4 - off		



## CONNECTION TO THE OTHER DEVICES (CM WIFI-BOX, CM-GSM, CMNET, CVT)

Connection is done with UTP cables. Every additional equipment device has 2 UTP connectors. Both UTP connector have same function. Devices can be connected in any order.

Example of connection:





## INPUTS AND OUTPUTS CONNECTION



### Digital input

①	+	-
	12VDC	

### Digital inputs/outputs

①a	D.COR1	D.COR2
	+	-
	+	-

#### 1 - Input (12V DC):

CSK-Touch digital room corrector uses power supply via input / output D.COR when the boiler main switch is ON.

OPTION - input (12V DC): can be used to power CSK-Touch digital room corrector when the boiler main switch is OFF (additional equipment: 12V DC rectifier)

#### 1a - Digital inputs/outputs:

Wired connection of CSK-Touch digital room corrector. It is not important which output each individual corrector is connected to, but pay attention to have the corrector terminal "+" connected to the CM2K terminal "+" and vice versa, to have the corrector terminal "-" connected to the CM2K terminal "-".

### UTP inputs/outputs

②	UTP1	UTP2
	BUS RJ45	

### Inputs/outputs for UTP cables

- one input/output is for connection to the boiler
- free input/output is used for connecting more CM2K modules or other additional equipment

### Circuit 1 inputs

③	A.COR 1	Tsp 1	Tos
	1 2 3		

### Circuit 1 inputs

- A.COR 1- room corrector
- Tsp 1 - main flow sensor
- Tos - outdoor sensor

### Circuit 2 inputs

④	A.COR 2	Tsp 2	Tspr
	1 2 3		

### Circuit 2 inputs

- A.COR 2- room corrector
- Tsp 2 - main flow sensor
- Tspr - reserve (not used)

### Triac outputs (230 V)

⑤	P1	C1	O1	P2	C2	O2
	N	N	N	N	N	N

Outputs phase live wire (L)\*

Outputs common null (N)

- \* P1 - circuit 1 pump  
C1 - circuit 1 actuator - close  
O1 - circuit 1 actuator - open  
P2 - circuit 2 pump  
C2 - circuit 2 actuator - close  
O2 - circuit 2 actuator - open

#### NOTE:

The maximum current for each pump output is  $I_{max} = 1 A$

In case of installation of a stronger or three-phase pump, it is necessary to install an additional contactor.

### Power supply

⑥	N	F
	230VAC	

### CM2K power supply

power supply 230V must be connected to control connected pumps and actuators

### Earthing

⑦	EARTH1	EARTH2	EARTH3
	1 2 3 4	1 2 3	1 2 3

### Common earthing

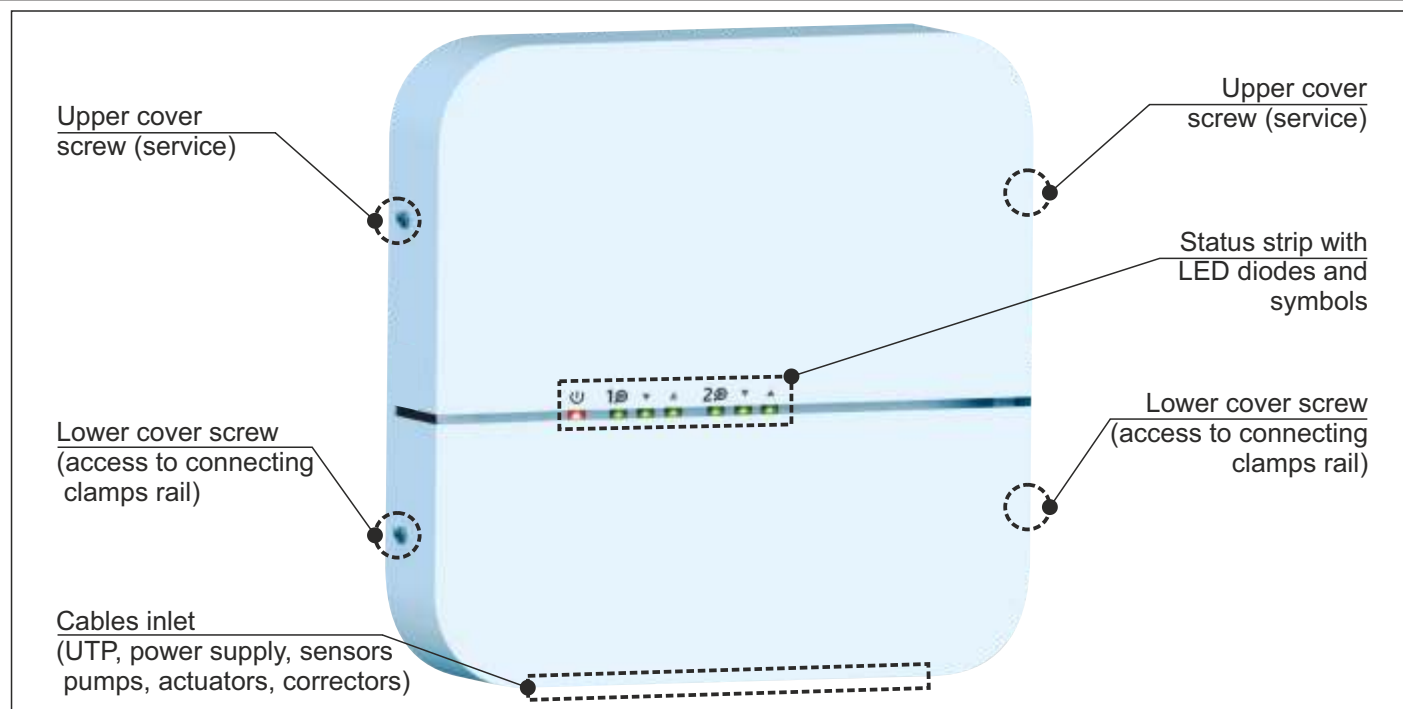
connect earthing of the power supply and connected pumps


⑧ **Cable connectiong rail**  
fasten the cables to the rail with cable ties


⑨ F2 - fuse 1,6A - outputs 2. circuit  
(pump, actuator)

⑩ F1 - fuse 1,6A - outputs 1. circuit  
(pump, actuator)

## LED INDICATORS



 - **status** - indicates CM2K status; connection with the boiler is ok, boiler is connected to the power supply and main switch is on - doesn't mean that CM2K is connected to the power supply (230V)

 - **pump** - indicates working of the pump (LED ON = pump works / LED OFF = pump doesn't work)

 - **actuator - close** (LED ON = actuator closes / LED OFF = actuator doesn't work)

 - **actuator - open** (LED ON = actuator opens / LED OFF = actuator doesn't work)

NOTE: actuator open and actuator close can't work at the same time

## EXAMPLES OF LED INDICATORS



**1. Circuit**  
All devices are off



**2. Circuit**  
All devices are off



**1. Circuit**  
Pump works; Mixing valve closes



**2. Circuit**  
Pump works; Mixing valve closes



**1. Circuit**  
Pump works; Mixing valve opens



**2. Circuit**  
Pump works; Mixing valve opens

## CONFIGURATIONS



**For configuration schemes and view on the screen look in the boiler regulation technical instructions.**

Boiler configuration must be set in the **Installation** menu (under PIN).

**PelTec** - CM2K can be enabled only in schemes that have accumulation tank or hydraulic crossover.

**BioTec-L** - CM2K can be enabled in all configurations (schemes) because all have accumulation tank.

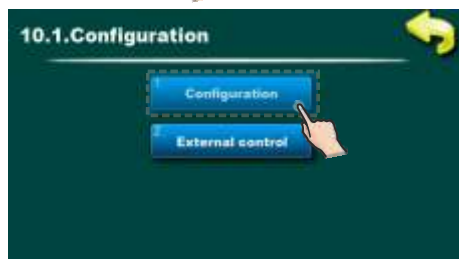
**Cm Pelet-set Touch** - CM2K can be enabled in all configurations (schemes) because all have accumulation tank, hydraulic crossover or 4-way mixing valve.

**BioTec Plus** - CM2K can be enabled in all configurations (schemes) because all have accumulation tank.

**EKO-CKS P Unit** - CM2K can be enabled in all configurations (schemes) because all have accumulation tank or hydraulic crossover.

**EKO-CKS Multi Plus** - CM2K can be enabled in all configurations (schemes) because all have accumulation tank.

Example of scheme selecting: **PelTec**



## ENABLING CM2K

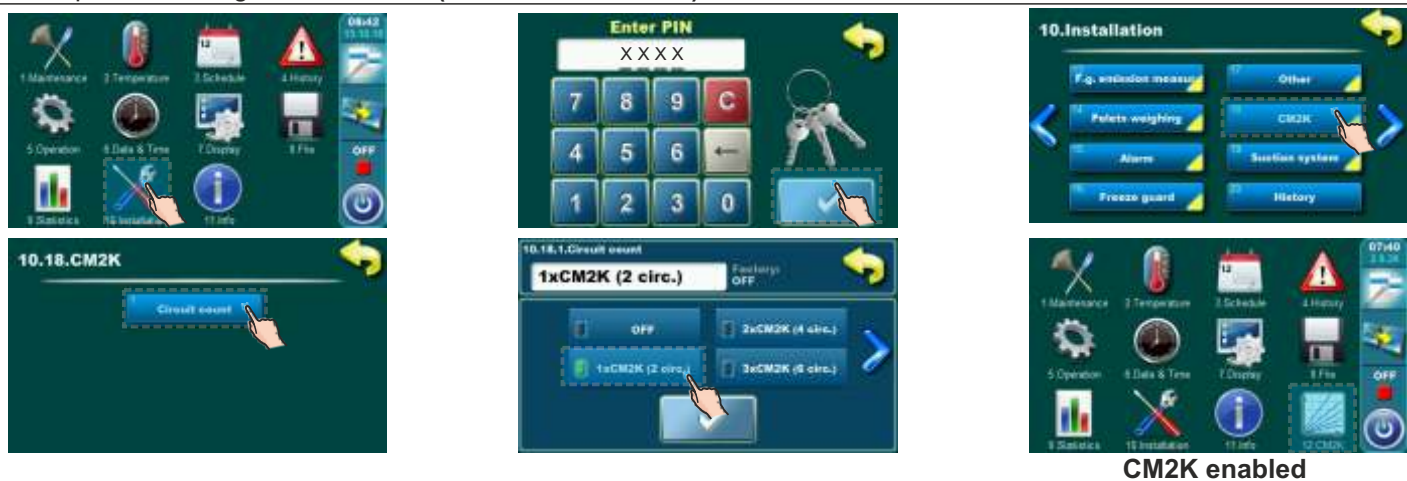
CM2K can be enabled only by authorized serviceman in **Installation** menu (PIN). By selecting number of CM2K modules, module is enabled (every module can control 2 circuits). By selecting number of CM2K modules, option REGULATOR/CM2K is enabled (activated) and in the main menu Regulator/CM2K menu icon will be displayed. User can use this menu to monitor and adjust some of the parameters.



**Display order and ordinal numbers in regulation don't have to match exactly to this instructions. They depend of the configuration, firmware version and setting of the regulation.**

**NOTE:** after enabling any of CM2K modules (2 circuits), for each circuit, heating type must be set / selected. After selecting the heating type, it is enabled and settings for it are displayed.

Example of enabling CM2K: **PeITec (1xCM2K - 2 circuits)**



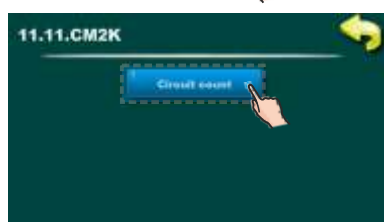
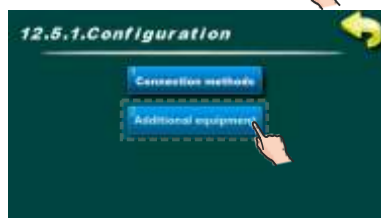
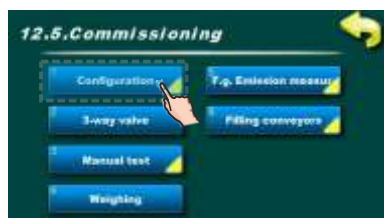
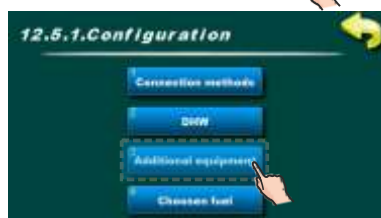
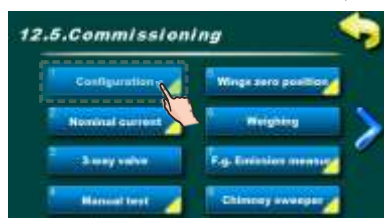
Example of enabling CM2K: **BioTec-L (2xCM2K - 4 circuits)**

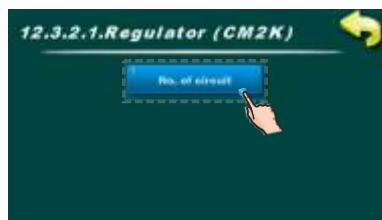
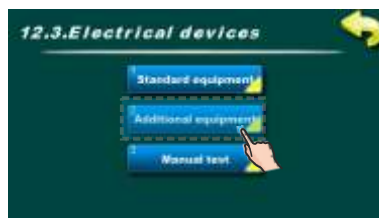


Example of enabling CM2K: **Cm Pelet-set Touch (1xCM2K - 2 circuits)**





**CM2K enabled**Example of enabling CM2K: **BioTec Plus (1xCM2K - 2 circuits)****CM2K enabled**Example of enabling CM2K: **EKO-CKS P Unit (1xCM2K - 2 circuits)****CM2K enabled**Example of enabling CM2K: **EKO-CKS Multi Plus (1xCM2K - 2 circuits)**

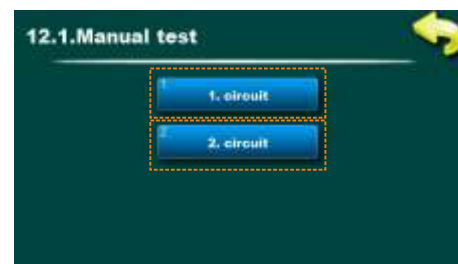
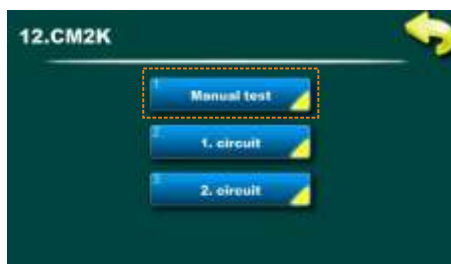


CM2K enabled

## MANUAL TEST

In this menu all outputs to the connected devices /(pumps/actuators) can be manually tested. Every circuit can be separately tested. Depending of the number of enabled circuits, manual test for each circuit is shown.

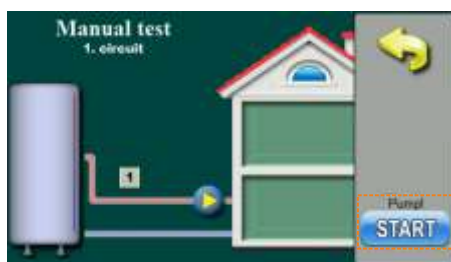
Example of manual test menu:



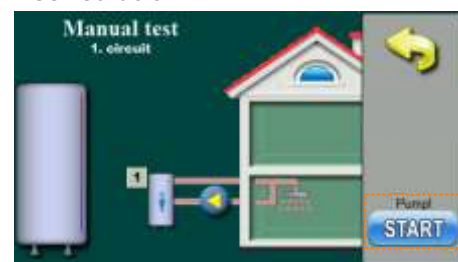
Example:  
Radiator/Floor/Const. temp.



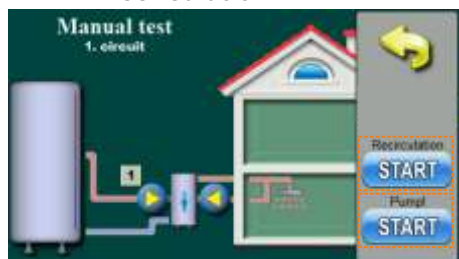
Example:  
DHW



Example:  
Recirculation



Example:  
DHW + Recirculation

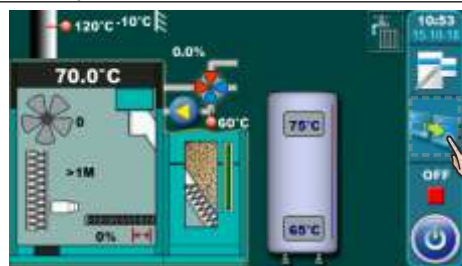


### NOTE:

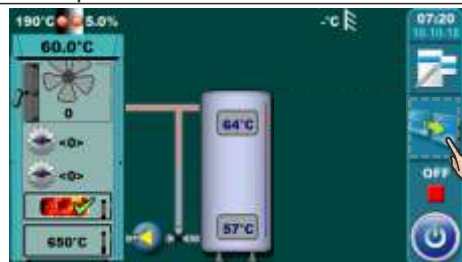
- By pressing the button START, pump or valve actuator opening/closing is started and this button becomes STOP
- by pressing the button STOP, pump or valve actuator opening/closing is stopped and this button becomes START
- with this options, demand for work of output/connected device is manually started, but is necessary to check if outputs is actually activated and device is actually working.

## CM2K VIEW SELECTION

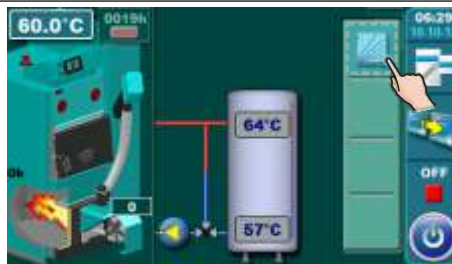
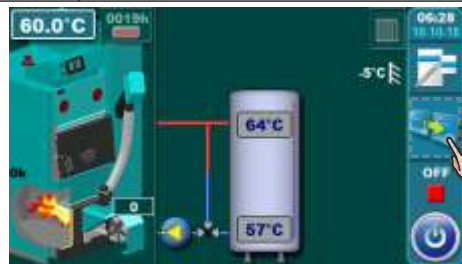
Example: **PeiTec**



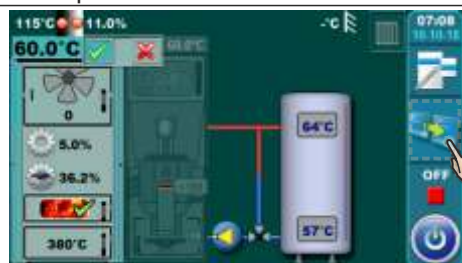
Example: **BioTec-L**



Example: **Cm Pelet-set Touch**



Example: **BioTec Plus**



Example: **EKO-CKS P Unit**









Example: **EKO-CKS Multi Plus**



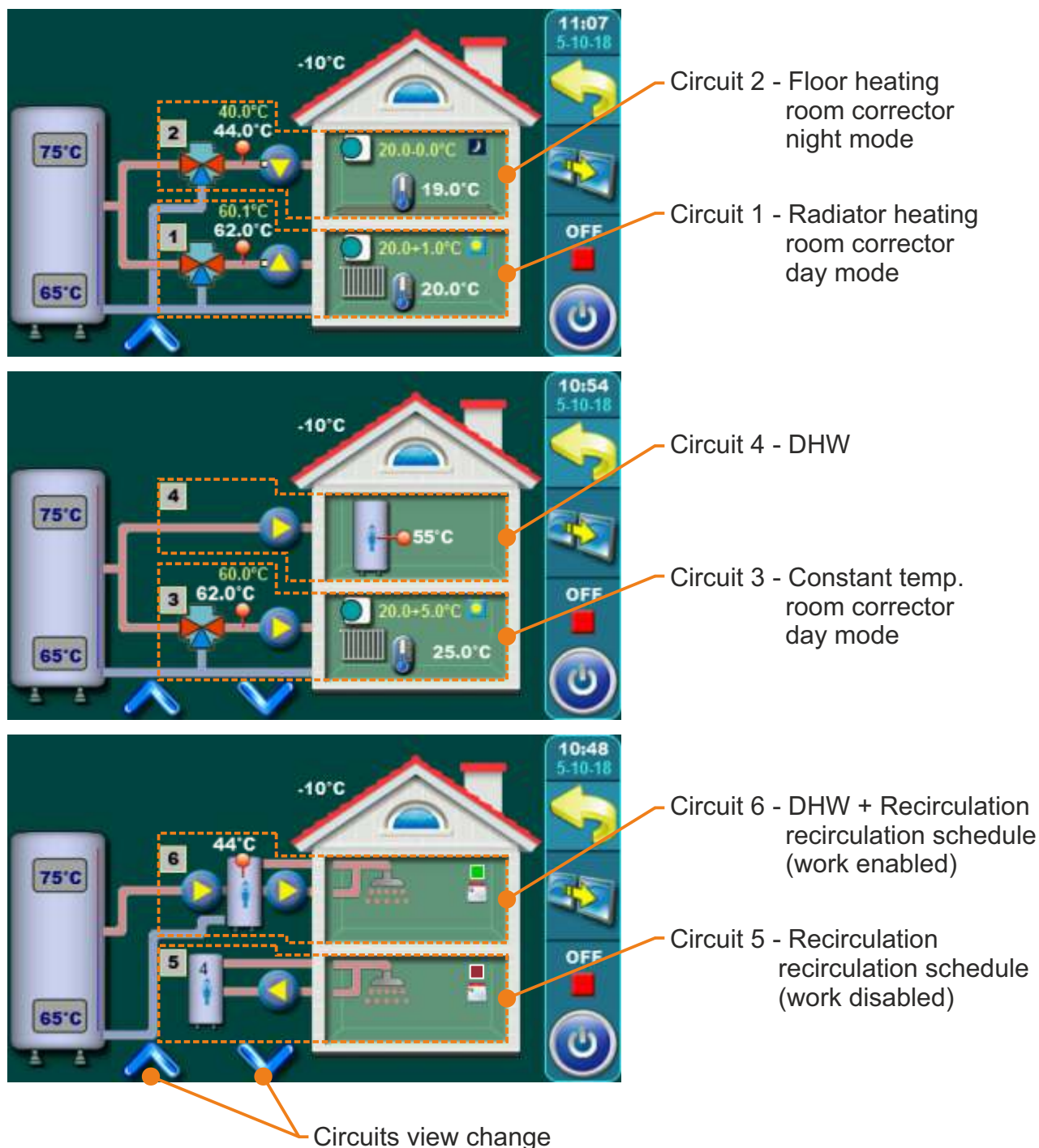


## CM2K VIEW

Enabled circuits and their settings can be monitored (circuit type: Radiators / Floor / Const. temp. / DHW / Recirculation / DHW+Recirculation; set temperatures; measured temperatures; pumps working; actuator working; schedules; working mode...).

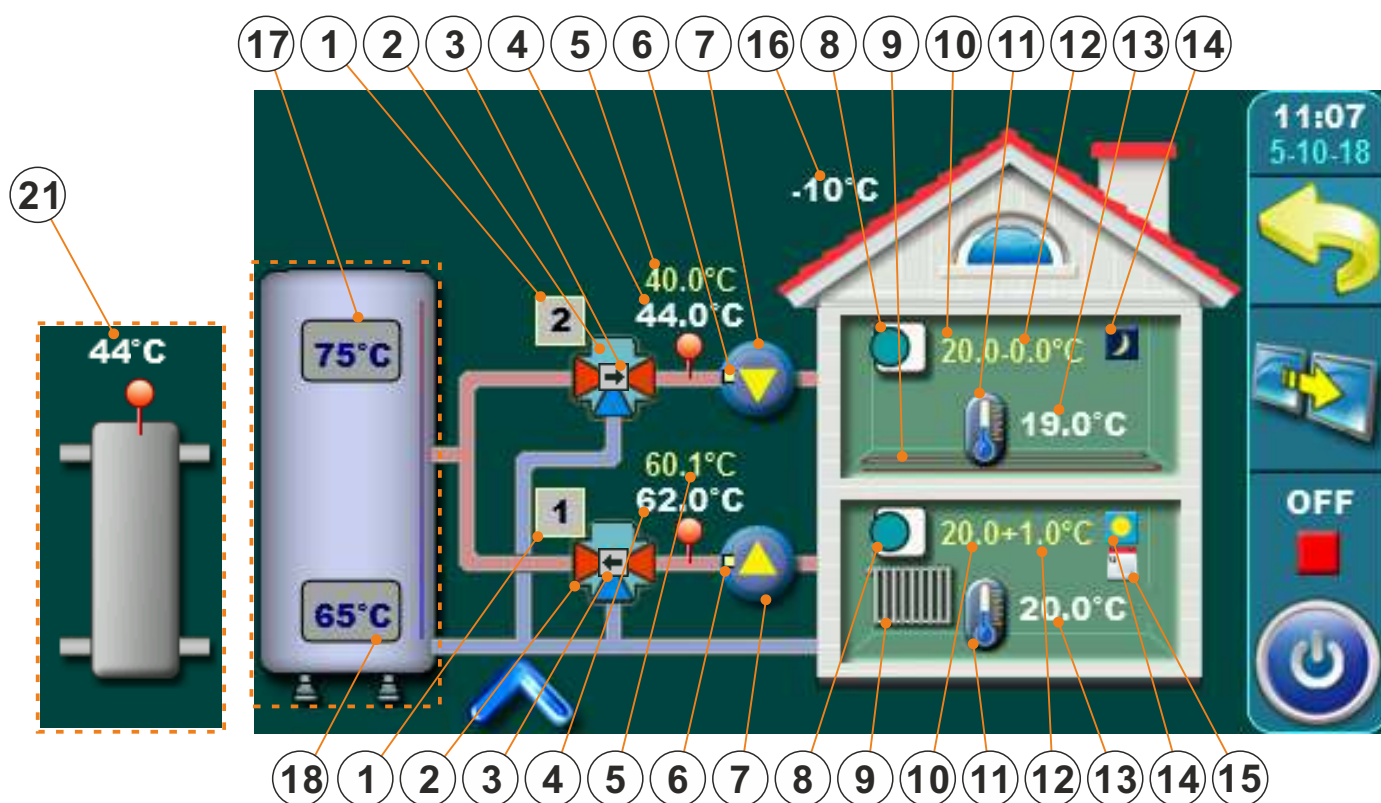
To access CM2K options view press button  or  on main screen (there will be new window with CM2K view or tools menu with additional button for CM2K view and other additional equipment buttons). To go back to main menu press button  or to cycle between views press . If there is more than one CM2K installed, in CM2K view, views between CM2K modules (circles) can be changed by pressing buttons   (in one view is one CM2K, i.e. two circuits).

## CIRCUIT TYPES AND CM2K VIEW SYMBOLS



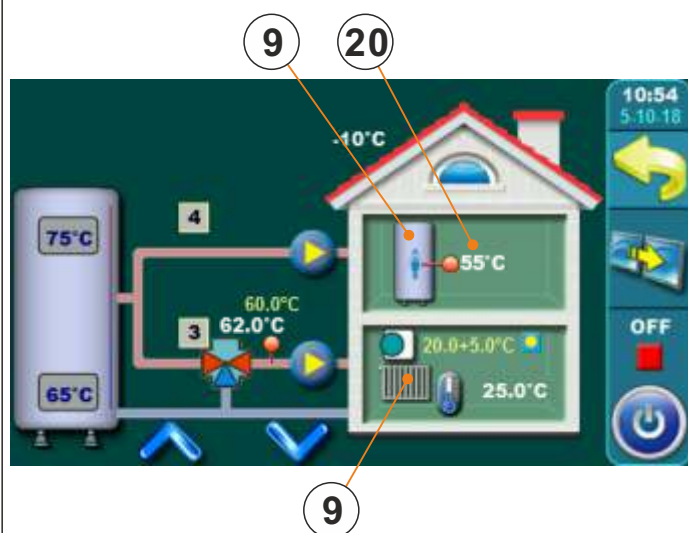
## CM2K VIEW EXAMPLES

1. circuit - radiator heating / room corrector / day mode (with schedule)  
 2. circuit - floor heating / room corrector / night mode

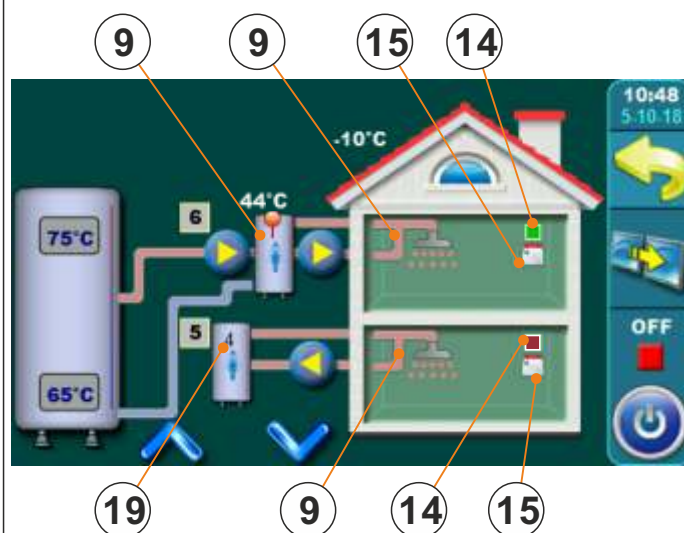


- |                                    |  |
|------------------------------------|--|
| 1 - circuit number                 | 12 - corrector correction setting                      |
| 2 - mixing valve with actuator     | 13 - measured room temp.                               |
| 3 - actuator working indication    | 14 - work mode indication                              |
| 4 - measured main flow temp.       | 15 - schedule/work enabled/disabled indication         |
| 5 - calculated main flow temp.     | 16 - measured outdoor temp.                            |
| 6 - pump working demand indication | 17 - measured accumulation tank upper temp.            |
| 7 - pump                           | 18 - measured accumulation tank lower temp.            |
| 8 - room corrector                 | 19 - indication of DWH tank with enabled recirculation |
| 9 - circle heating type            | 20 - measured DHW (domestic hot water) tank temp.      |
| 10 - set room temp.                | 21 - measured CRO (hydraulic cross over) temp.         |
| 11 - room temp. indication         |  |

3. circuit - constant temp. / room corrector / day mode  
 4. circuit - DHW



5. circuit - Recirculation / Recirculation enabled (by schedule)  
 6. circuit - DHW + Recirculation / Recirculation disabled (by schedule)

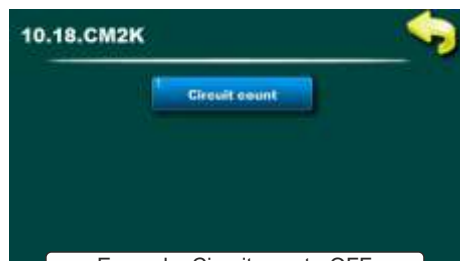


## CM2K SETTINGS

Initial settings of working parameters for CM2K must be done by authorized serviceman because enabling and certain setting parameters are under **Installation** menu (PIN). After enabling the CM2K module in main menu new icon (menu) **Regulation/CM2K** will appear. Under this menu user can adjust certain parameters of heating circuits.

**NOTE:** every parameter will be marked by who can set it, serviceman and user **(S/K)** or only serviceman **(S)**.

**EXAMPLE:** view of the **CM2K** menu under **Installation** menu (PIN) - parameters with **(S/K)** indication will be displayed also under **CM2K** menu in the main menu so user can adjust them.



Example: Circuit count - OFF



Example: Circuit count - 2 CM2K (4 circuits)



Example: heating type - Disabled



Example: Heating type - radiator



Example: Heating type - radiator



Example: Heating type - radiator

## DESCRIPTION AND PARAMETERS VALUE

### NOTES:

- at initial circle view (before adjusting) are only certain parameters shown (X. circuit / Valve time / Heating type / Corrector). After adjusting the circuit heating type, in main menu of heating circuit, other parameters will be shown according the set heating type.
- certain parameters depends of the boiler type to which CM2K is installed and view is set according to this. Because of this, certain parameters are shown or not shown depending of the boiler type.

### Circuit count **(S)**

This parameter is used to set number of CM2K modules i.e. number of circuits (1 CM2K = 2 circuits)

By selecting and confirmation of CM2K modules this parameter is enabled.



Factory setting		setting
Circuit count	OFF	OFF / 1xCM2K... 4xCM2K

### X. circuit **(S/K)** (in this example - 1. circuit)

Enable and disable heating circuit.

This parameter is used to enable or disable heating circuit (set parameters are stored).

Factory setting		setting
1. circuit	ON	OFF/ON

### Valve time **(S/K)**

Setting the mixing valve actuator speed.

This parameter is used for setting the speed of the mixing valve actuator speed for work of 90° (open/close). It must be set according the installed mixing valve actuator speed.

Factory setting		setting
Valve time	120 sec	10-300 sec

### Heating type **(S)**

Setting the heating circuit type.

This parameter is used to set heating circuit type. After setting the heating circuit type, in main menu of the circuit, other setting parameters will be shown according the heating circuit type.



Factory setting		setting
Heating type	Disabled	Disabled/Radiator/Floor/Constant temp./DHW/*Pool/Recirculation/DHW+Recirculation

\* NOT USED

**Corrector (S)**

With this parameter, we adjust does if exist a room corrector (thermostat) or not, the type of corrector, and external control.



Factory setting		setting
Corrector	OFF	OFF / CSK (3 wires) / CSK (2 wires) / CSK-Touch / Reg. control

**OFF:** The corrector is not used to measure the room temperature and control the operation of the pump.

**CSK (3 wires):** standard connection of the corrector CSK (Centrometal) with 3 wires, the corrector measures the room temperature and the set room temperature can be corrected from -5°C to +4.6°C and the heating circuit can be turned OFF/ON via the corrector. The corrector is connected to pins 1, 2 and 3.

**CSK (2 wires):** if there are only 2 wires for connecting the corrector CSK (Centrometal), the corrector only gives information about the room temperature, the set room temperature cannot be corrected via the corrector, not can the heating circuit be switched ON/OFF via the corrector. The corrector is connected to pins 2 and 3.

**CSK-Touch:** the CSK-Touch (Centrometal) corrector can be connected wired (2 wires, to Digital inputs) or wirelessly, via the CM WiFi-box. The corrector measures the room temperature, it is possible to correct the set temperature of the room, turn OFF/ON the heating circuit, set the schedule of the heating circuit, switch ON/OFF the boiler, set the temperatures of the boiler, the accumulation tank and the DHW tank, set the schedule of the boiler and the DHW circuit, there are messages about errors and warnings on the boiler and heating, if there is a connection to the Internet, the display of the weather forecast...

**Reg. control:** control of the heating circuit pump by external regulation such as a floor heating control terminal block or a voltage-free room thermostat. The room temperature cannot be read on the boiler screen. External regulation (control terminal block, room thermostat...) is connected to pins 1 and 2.

**Note:**

The CSK and CSK-Touch room correctors are related to the set circuit heating curve (ie to the calculated main flow temperature) by room temperature correction.



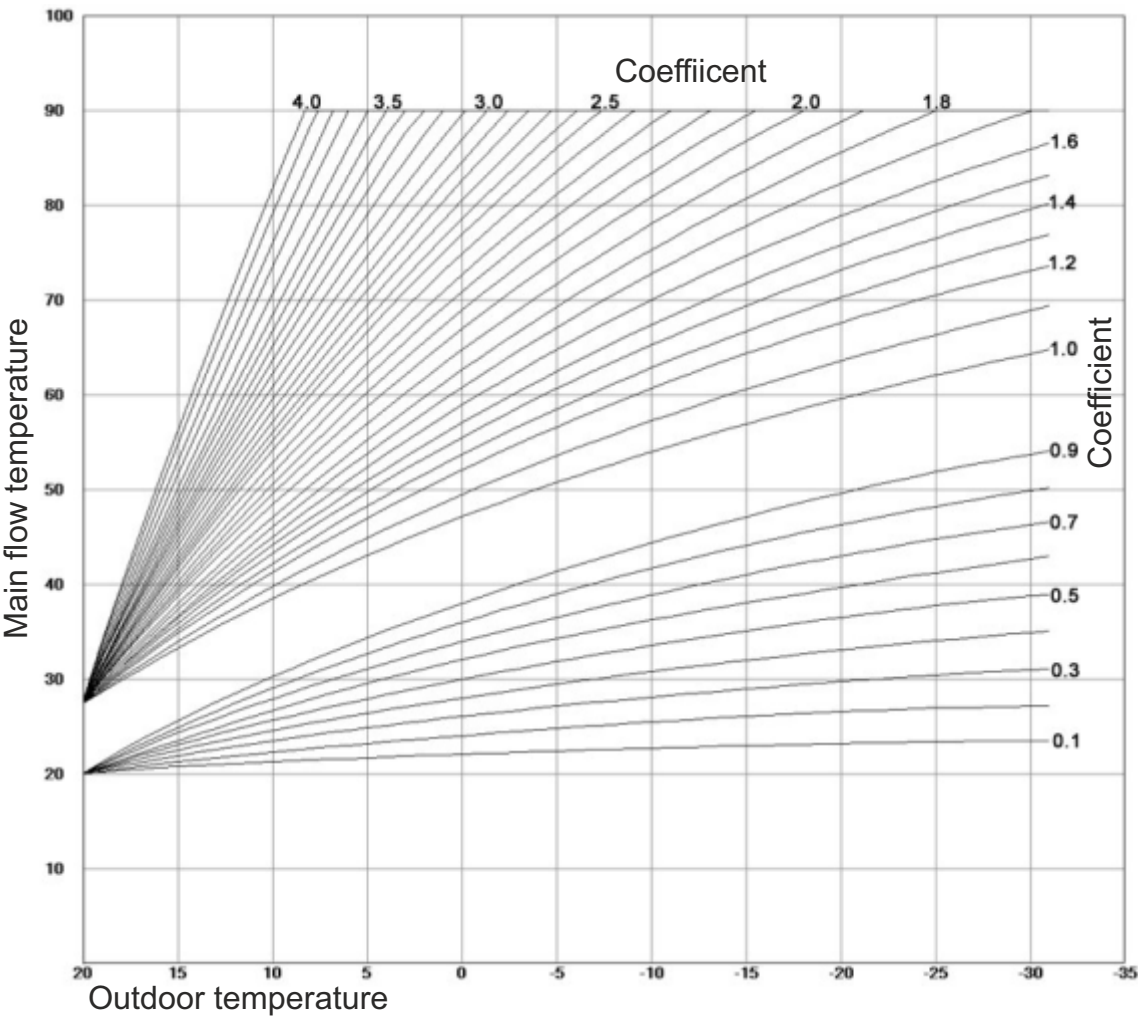
DESCRIPTION AND PARAMETERS VALUE BY HEATING CIRCUIT TYPE

RADIATOR / FLOOR

X. circuit (S/K) - see page18  
Valve time (S) - see page 18  
Heating type (S) - see page 18  
Corrector (S) - see page 19

Heating curve (S/K)  
Setting of the heating curve.  
Heating curve is one of the parameters for main flow temp. calculation.

Factory setting		setting
Heating curve	1.0	0.1-4.0



**Day / Night temp. (S/K)**

Setting the heating circuit mode.

This parameter is used to set heating circuit mode. Selecting the Day temp. heating circuit always works according set day temp., selecting the Night temp. heating circuit always works according set night temp. and by selecting the Table 1/2, heating circuit automatically switches mode between set day and set night temp. according the time set in the Table 1/2.

Factory setting		setting
Day/night temp.	Day temp.	Day temp. / Night temp. / Table 1 / Table 2

**Table 1 / Table 2 (S/K)**

Setting the schedule tables with heating circuit mode switching between day and night temp.. For each day 3 mode switching can be set. All settings from one day can be selected and copy/paste to any another day of the week. After any adjustment they must be confirmed by pressing OK button to save the settings. Two tables can be set but only one can be active.

The interface displays a table titled "1. circuit - Table 1" with columns for days of the week (MON, TUE, WED, THU, FRI, SAT, SUN) and rows for time slots (06:00, 22:00, and empty slots). The interface includes several interactive elements:

- week day day selecting button:** A button on the left side of the table used to select a specific day.
- circuit number:** A label indicating the selected circuit (1. circuit).
- back button:** A yellow arrow button in the top right corner.
- day temp. / night temp.:** Indicators on the left side of the table rows.
- time setting area (buttons):** A vertical column of buttons on the right side of the table used to set specific times.
- entire day selected:** A selection box on the left side of the table.
- copy button:** A button with a document icon used to copy settings from one day to another.
- paste button:** A button with a document icon used to paste settings from one day to another.
- OK (confirmation) button:** A blue button with a checkmark used to confirm the settings.

**Correction coefficient (S/K)**

Setting the correction coefficient for room corrector.

This parameter is used for setting the correction coefficient of the room corrector which will be used for main flow temp. calculation. Higher value of this parameter, higher effect it will have on main flow temp. calculation. This parameter is used only if room corrector is installed.

Factory setting		setting
Correction coeff.	1.0	0.1 - 5.0

**Pump off (S/K)**

This menu is used for setting the parameters for switching off circuit pump according outdoor temperature and settings in this menu (doesn't affect DHW and Recirculation).

It has 3 options: **Outside temp. / Difference / Time**

**Toutside (S/K)**

Setting outside temperature.

This parameter is used to set according which outside temp. circuit pump will stop.

Factory setting		setting
Toutside	20°C	0 - 40°C

**Out temp. difference (S/K)**

Setting the difference.

This parameter is used to set difference on which circuit pump will start again and delay time will be reset.

Factory setting		setting
Out. temp. difference	2°C	0 - 5°C

**Time (S/K)**

Setting the time.

This parameter is used to set time delay for switching off the circuit pump when temperature for pump switching off is reached.

Factory setting		setting
Time	30 min	0 - 600 min

**Min. temperature radiator / floor / constant temp. (S)**

Setting the main flow min. temp.

This parameter is used to set mixing circuit main flow min. temp..



Factory setting		setting
Min. temp. radiator/floor/constant temp.	20°C	20 - 90°C

**Max. temperature radiator / floor / constant temp. (S)**

Setting the main flow max. temp.

This parameter is used to set mixing circuit main flow max. temp..



Factory setting		setting
Max. temp. radiator/floor/constant temp.	90°C	20 - 90°C

**Day room temperature (S/K)**

Setting the day room temp.

This parameter is used to set desired heating circuit day room temperature.

Factory setting		setting
Day room temp.	20°C	5.0. - 30.0°C

**Night room temperature (S/K)**

Setting the night room temp.

This parameter is used to set desired heating circuit night room temperature.

Factory setting		setting
Night room temp.	20°C	5.0. - 30.0°C

**dT pump off (S)**

Setting the room corrector difference.

This parameter is used to set how many °C measured room temp. must be higher than set room temp. to switch off the circuit pump (only if room corrector is installed).



Factory setting		setting
dT pump Off	0.5°C	0.0. - 3.0°C

**dT pump on (S)**

Setting the room corrector difference.

This parameter is used to set how many °C measured room temp. must be lower than set room temp. to switch on the circuit pump (only if room corrector is installed).



Factory setting		setting
dT pump On	0.5°C	0.0. - 3.0°C



**Transition time (S/K)**

This parameter is used only when there isn't room corrector installed because regulation doesn't have info regarding measured room temp. This is presumed time in which system will achieve set room temp. between switching from day to night mode and vice versa, i.e. in which time main flow temp. will be optimized for quick transition.

Factory setting		setting
Transition time	3600 sec	0 - 18000 sec

**Note:**

If room corrector CSK (additional equipment) is connected to the CM2K, this parameter is not used.

**CONSTANT TEMPERATURE**

**X. circuit (S/K)** - see page 18

**Valve time (S)** - see page 18

**Heating type (S)** - see page 18

**Corrector (S)** - see page 19

**Pump off (S/K)** - see page 22

**Day room temp. (S/K)** - see page 22

**Night temp. (S/K)** - see page 22

**Day / Night temp. (S/K)** - see page 21

**Table 1/2 (S/K)** - see page 21

**dT pump off (S)** - see page 22

**dT pump on (S)** - see page 22

**Transition time (S/K)** - see page 23

**Day constant temp. (S/K)**

Setting the circuit main flow constant temp. for day mode.

This parameter is used to set desired circuit main flow constant temp. for day mode.

Factory setting		setting
Day constant temp.	60°C	20 - 90°C

**Night constant temp. (S/K)**

Setting the circuit main flow constant temp. for night mode.

This parameter is used to set desired circuit main flow constant temp. for night mode.

Factory setting		setting
Night constant temp.	60°C	20 - 90°C

**DHW**

**X. circuit (S/K)** - see page 18

**Heating type (S)** - see page 18

**DHW Temperature (S/K)**

Setting the DHW tank temperature.

This parameter is used to set desired DHW tank (domestic hot water) temp.

Factory setting		setting
DHW temp.	50°C	40 - 80°C

**DHW difference (S/K)**

Setting the DHW difference.

This parameter is used to set desired DHW tank (domestic hot water) difference.

Factory setting		setting
DHW difference	5°C	4 - 40°C

**DHW schedule (S/K)**

Setting the schedule for DHW.

this parameter is used to set if DHW schedule is active or not and select active Table 1/2 according to which schedule will work.

Factory setting		setting
DHW schedule	OFF	OFF / Table 1 / Table 2

**Table 1 / Table 2 (S/K)**

Setting the DHW schedule tables.

This parameter is used for setting the tables according DHW schedule will work. Only one table can be active.

**RECIRCULATION**

**X. circuit (S/K)** - see page 18

**Heating type (S)** - see page 18

**DHW circuit (S)**

Setting the DHW circuit for which recirculation will be enabled.

DHW circuit which has circulation installed must be selected. Selecting the DHW circuit must be done according how this circuit is regulated (boiler or one of CM2K circuits).



Sensor installed **(S)**   
NOT USED

Time On rec. **(S/K)**  
Recirculation pump work time.  
Setting the recirculation pump work time when recirculation is active.

Factory setting		setting
Time On rec.	5 min	0 - 1440 min

Time Off rec. **(S/K)**  
Recirculation pump stop time.  
Setting the recirculation pump stop time when recirculation is active.

Factory setting		setting
Time Off rec.	5 min	0 - 1440 min

Recirculation table **(S/K)**  
Recirculation work and stop table.

week day  
whole day  
selecting button

circuit number

back button

work start

work stop

1. circuit - Rec. table							
	MON	TUE	WED	THU	FRI	SAT	SUN
	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

time setting field  
(buttons)

whole day  
select

1. circuit - Rec. table							
	MON	TUE	WED	THU	FRI	SAT	SUN
	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

copy button

paste button

1. circuit - Rec. table							
	MON	TUE	WED	THU	FRI	SAT	SUN
	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

OK (confirmation)  
button

## DHW + RECIRCULATION

X. circuit (S/K) - see page 18

Heating type (S) - see page 18

DHW temp. (S/K) - see page 23

DHW difference (S/K) - see page 23

Time On rec. (S/K) - see page 24

Time Off rec. (S/K) - see page 24

DHW schedule (S/K) - see page 23

Table 1 (S/K) - see page 21

Recirculation table (S/K) - see page 24



Company assumes no responsibility for possible inaccuracies in this book originated typographical errors or rewriting, all the pictures and diagrams are principal and it is necessary to adjust each actual situation on the field, in any case the company reserves the right to enter their own products such modifications as considered necessary.

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***Centrometal***  
**HEATING TECHNIQUE**