Centrometal
HEATING TECHNIQUE

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ENG

TECHNICAL INSTRUCTIONS

Description and using of EKO-CKS P UNIT controller

CE

- USER

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

EKO-CKS P UNIT

TU-R-CKSP-04-2024-v1.12v-ENG

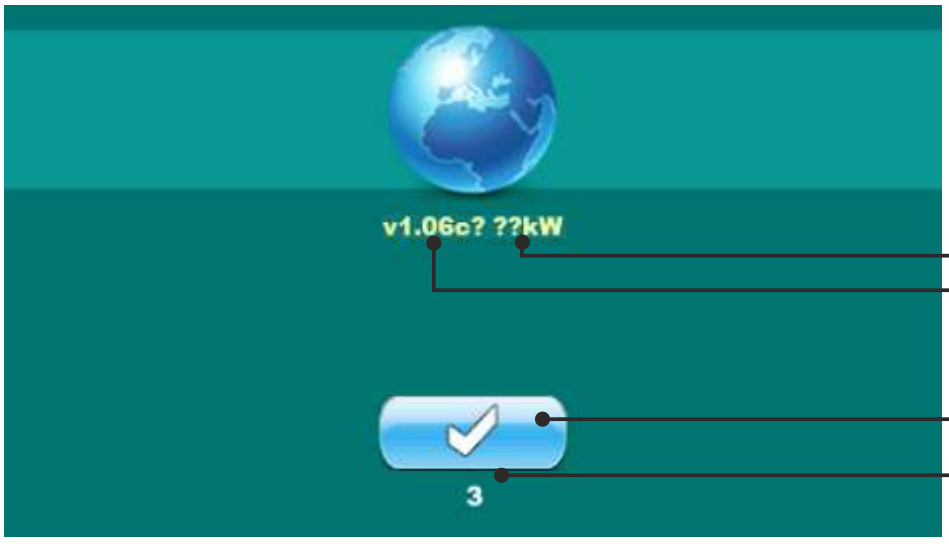
DESCRIPTION

SWITCHING ON

After turning on the main switch, screen will display language selection menu and software version. To select the language, press the flag of language you want.

Software version
Boiler power
(140, 180, 230, 280, 320
430, 499, 560 kW)
Language selection

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



Software version
Boiler power
(140, 180, 230, 280, 320
430, 499, 560 kW)
Button”OK”
Initial message duration
(countdown)

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.

RIGHT SIDE TOOLBAR

LEGEND:

1 - Time & Date
2 - Display selection - Main menu / Main screen
3 - Dropdown menu
4 - State of the current boiler status (working phase)
5 - Boiler Start / Stop

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 ''Main screen'' press the button ''Display selection''.

BUTTONS

Button ''**ON / OFF**''
options: on / off boiler operation''

Button ''**OK**''

Button ''**DISPLAY SELECTION**''
options: main menu / main screen

Button ''**START**''/''**STOP**''

Button ''**BOILER OPERATION DISPLAY**''
Options: graphic / numeric display / additional equipment

Navigation buttons:
''**LEFT**'', ''**RIGHT**'', ''**UP**'', ''**DOWN**''

Button ''**ENTER**''

Button ''**DELETE**''

Button ''**BACK**''

Button ''**FACTORY SETTINGS**''

Button''**PREVIOUS SCREEN**''

Button ''**INFORMATION**''

Button ''**NEXT SCREEN**''

Button ''**COPY**''

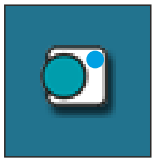
Button ''**PASTE**''

SYMBOLS

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

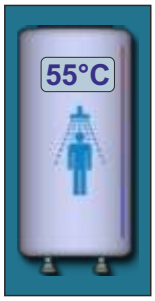
The pump has a request for work (next to the pump symbol bright yellow square when the consumer given the demand for work the pump, the pump does not work if you have not met all the conditions for work, for example. low temp. in the boiler, otherwise the pump normally works)

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



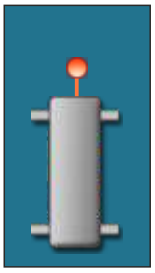
Domestic hot water tank with current temperature

External control: enabled work (button ON)

External start disabled; enabled start of the boiler via schedule

External control request boiler to work

External control doesn't request boiler to work



Hydraulic crossover with the current temperature

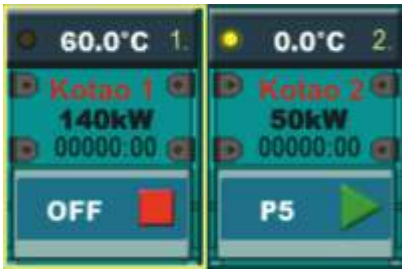
Hydraulic crossover

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

Display / Drop-down menu button (all existing elements of automatic / remote boiler start are included)

External start enabled

External start disabled



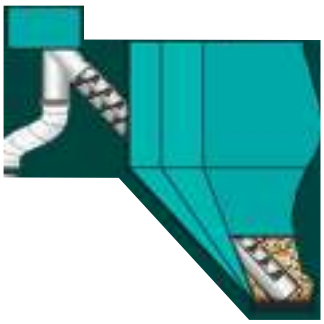
Preview boilers in cascade

Heating + DHW mode

AUTO
PTV < > Grij. + PTV
mode

Cyclone with fan

DHW mode



Pellet tank
with screw
feeder

Compressor symbol with work indicator (on / off).

Dispenser

Alternative boiler: Manual OFF

Alternative boiler: Manual ON

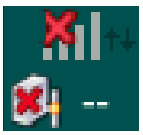
Alternative boiler: AUTO START

Alternative boiler: ON

Alternative boiler: OFF

Alternative boiler: FREEZE ON

Auxiliary boiler



CM-GSM module network status

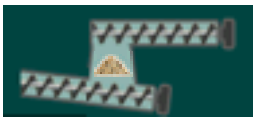
Regulation is connected with web portal (internet supervision is possible)

Regulation is not connected with web portal (internet supervision is not possible)

Refilling the pellet tank from the large pellet tank:

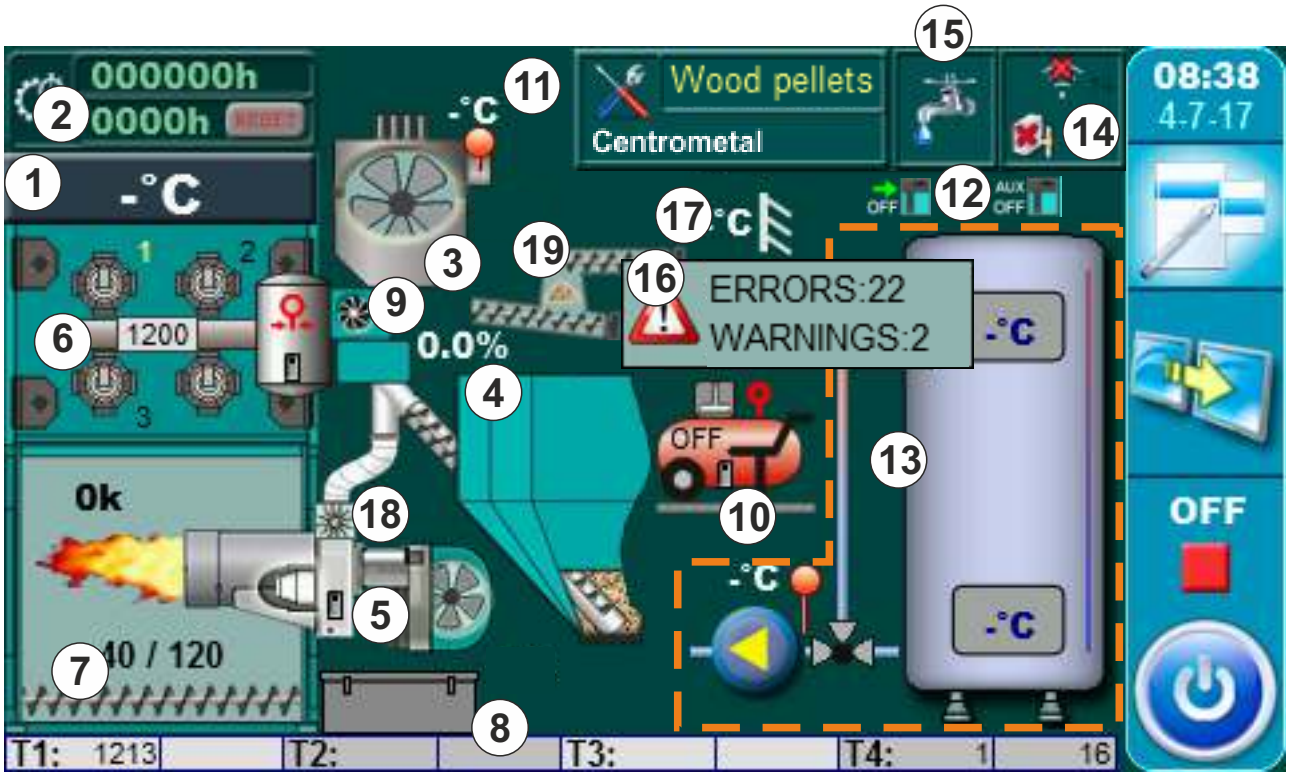
Screw feeder + three-phase motor

2x screw feeder + three-phase motor



2x screw feeder + three-phase motor + sensor

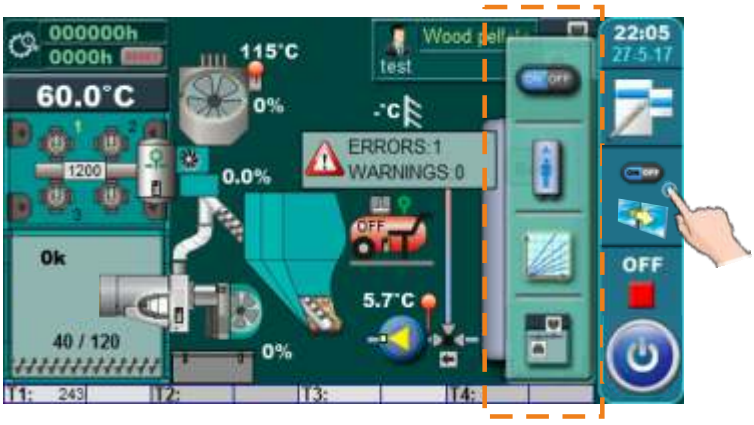
MAIN SCREEN



1 - Boiler temperature
2 - Working hours counters
3 - Cyclone ((140-430 kW) if is installed and configured) (Additional equipment for EKO-CKS P UNIT 140-430, standard equipment for EKO-CKS P UNIT 499-560)
4 - Pellet tank with feeder screw
5 - Pellet burner
6 - Automatic cleaning system of the heat exchanger's flue gas tubes (passages) by air (pneumatic) (Additional equipment)
7 - Automatic ash removal system out of the boiler combustion chamber (spiral) (Additional equipment)
8 - Ash box (if is installed)
9 - Automatic ash removal system out of the flue gas chamber (spiral) (Additional equipment)
10 - Compressor
11 - Flue gas temperature
12 - Alternative boiler / Auxiliary boiler
13 - Depend about configuration
14 - Network status (CM-GSM/WiFi) (if is installed - additional equipment)
15 - Work mode
16 - Errors / Warnings
17 - Outdoor temperature
18 - Dispenser (Additional equipment)
19 - Refilling

DROPDOWN MENU

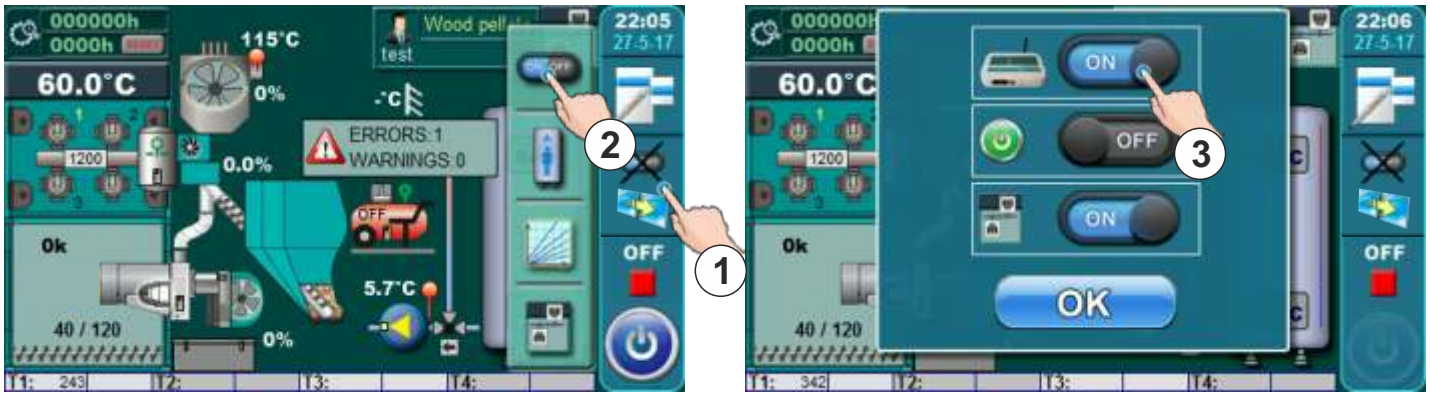
Additional equipment can be managed through dropdown menu on main screen of boiler control unit.



Dropdown menu

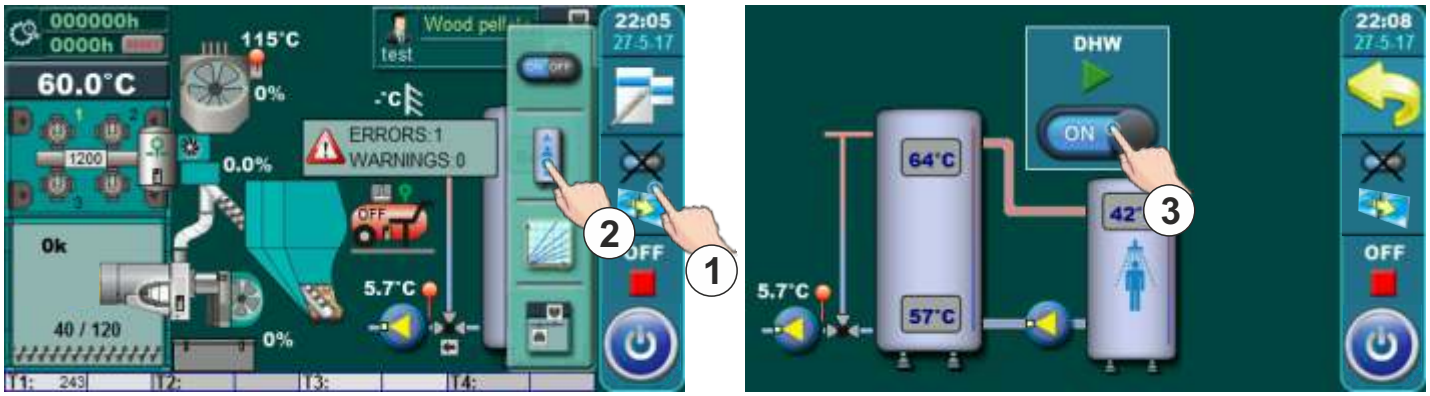
By pressing button for boiler operation on display will be displayed dropdown menu for acces to configurated equipment.

Additional equipment managment by dropdown menu



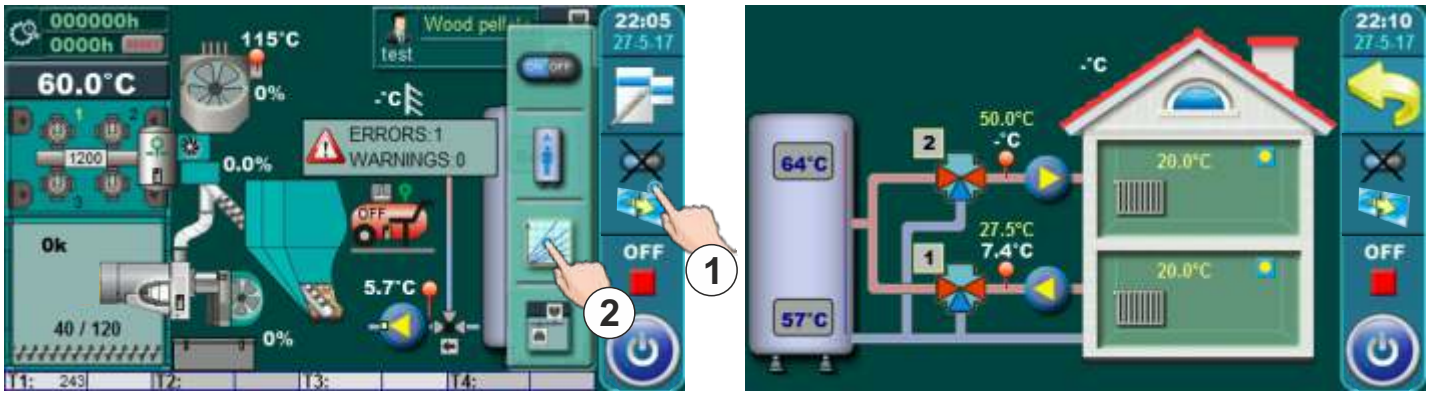
By pressing button for boiler operation (1) on display will be displayed dropdown menu. By pressing button for additional equipment managment (2) on display will be displayed menu for additional equipment managment where is possible to turn on / off additional equipment. Additional equipment menu depend about installed and configured additional equipment.

Domestic hot water managment by dropdown menu (if is installed and configured)



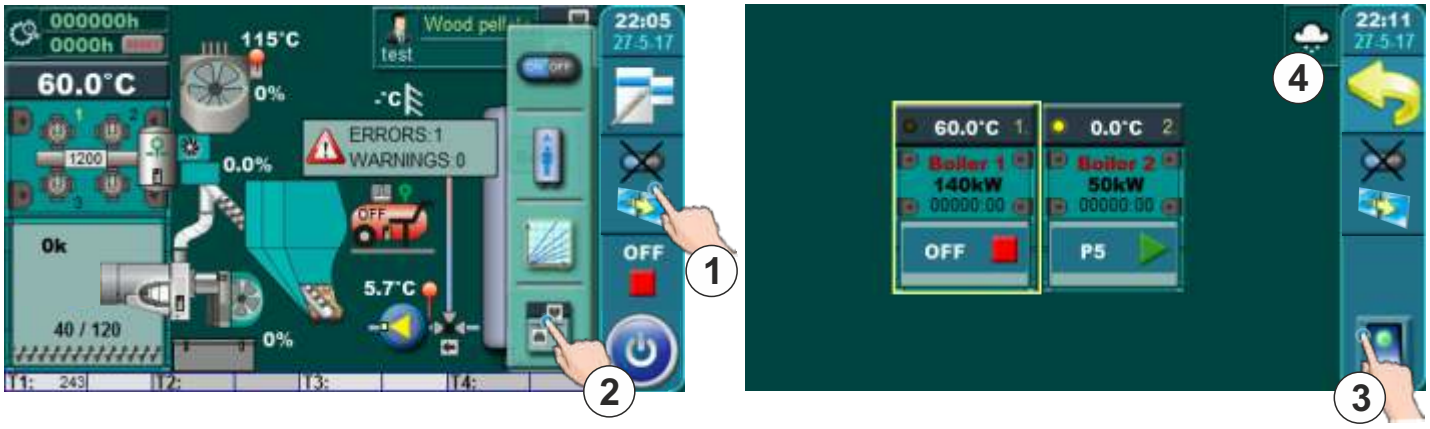
By pressing button for boiler operation (1) on display will be displayed dropdown menu. By pressing button for domestic hot water managment (2) on display will be displayed menu for DHW managment where is possible to turn on / off domestic hot water.

Regulator (if is installed and configured)



By pressing button for boiler operation (1) on display will be displayed dropdown menu. By pressing button for regulator (2) on display will be displayed heating circuit preview.

Cascade managment by dropdown menu (if is installed and configured)



By pressing button for boiler operation (1) on display will be displayed dropdown menu. By pressing button for cascade managment (2) on display will be displayed menu for cascade managment. By pressing button (3) is possile to start / stop boiler in cascade. On toolbar (4) are showned which of SUMMER / WINTER mode is active.

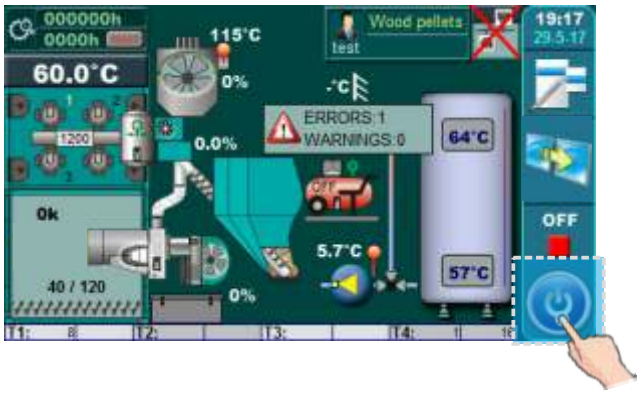
BOILER OPERATION PHASES

"OFF" - burner OFF
"S0" - initial fan blowing
"S1" - filling without fan
"S2" - filling with fan
"C0" - waiting for flame to appear
"C1" - stabilisation stage 1
"C2" - stabilisation stage 2
"C3" - stabilisation stage 3
"P1" - power 1
"P2" - power 2
"P3" - power 3
"P4" - power 4
"P5" - power 5
"A0" - extinguishing, waits for flame disappearing
"A1" - fan blowing
"A2" - pause, the boiler is waiting for the conditions to start
"PF0" - operation after el. power failure
"PF1A" - operation after el. power failure
"PF1B" - operation after el. power failure
"PF2" - operation after el. power failure
"PF3" - operation after el. power failure

BOILER START / STOP

BOILER START:

For boiler start is neccesary to press ON / OFF button. After pressing ON / OFF button on display will be displayed window for boiler start confirmation. Press „OK" to confirm boiler start.



BOILER STOP:

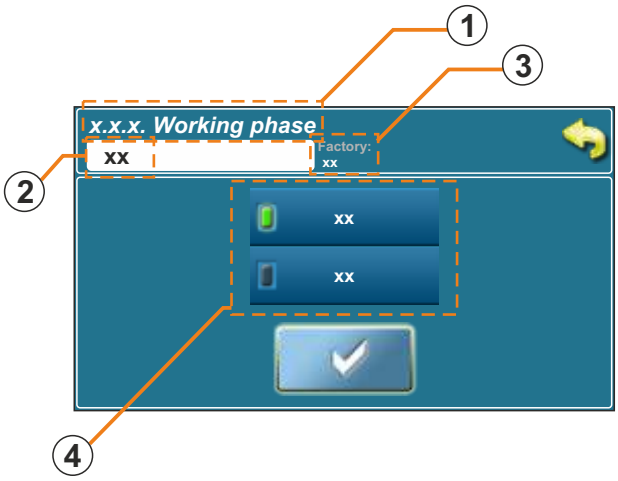
For boiler stop is neccesary to press ON / OFF button. After pressing ON / OFF button on display will be displayed window for boiler stop confirmation. Press „OK" to confirm boiler stop.

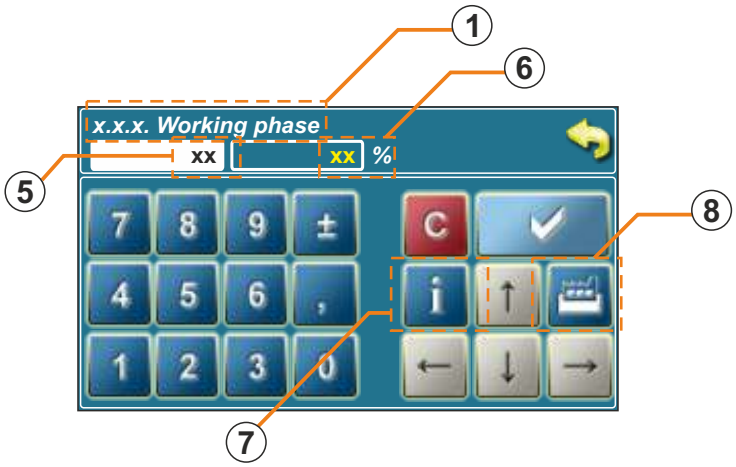
PARAMETERS MANAGMENT

Methods for parameters input

Method 1: entering parameters by choosing offered values.

Method 2: entering parameters by numerical keyboar (numerical values).





1 - Working phase bar
- on this bar will be showned name of working phase for which changing parameters value

2. Parameter value
- in this box are shown currently adjusted value

3. Factory adjusted value
- in this box are shown factory adjusted value of this parameter

4. Possible selection (Method 1)
- in this box are located available options for choose

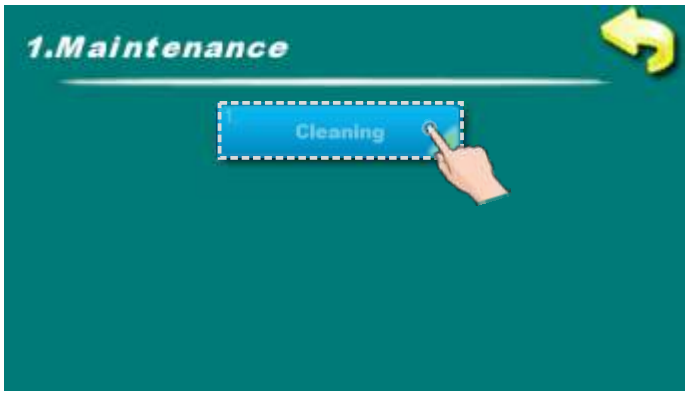
5. Parameter value
- in this box are shown currently write value

6. Currently adjusted value
- in this box are shown currently adjusted value of paramete (last confirmed)

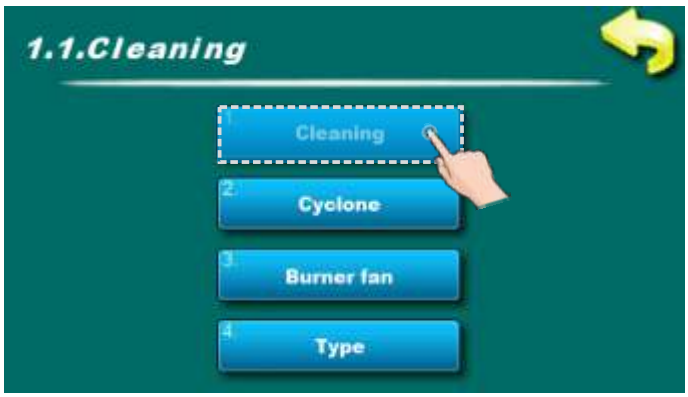
7. Info button
- info button telling us value of factory adjustment, max. possible value for adjustment and min. possible value for adjustment

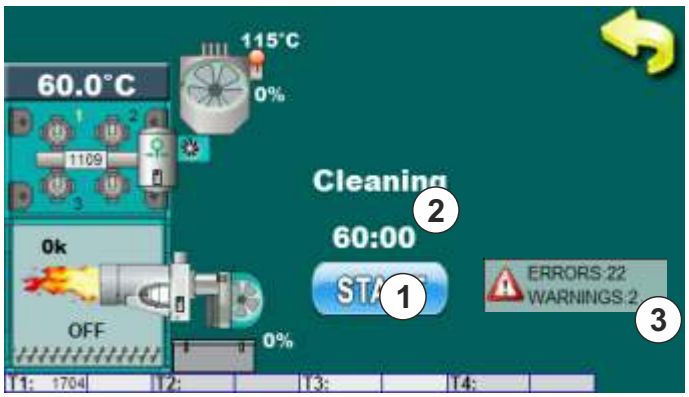
8. Factory settings
- by pressing this button parameter value will be adjusted to factory value

1.0. MAINTENANCE



1.1.1. CLEANING





Before cleaning is neccesary to start „Cleaning" option by pressing „START" button (1). Depending about which components are selected in point „1.1.4. Type" these components will be start with work with duration of 60 minutes (2). Now is possible to start with cleaning.
Pay attention to errors and warnings if they are displayed on the screen (3).

1.1.2. CYCLONE ((140-430 kW) if is installed and configured)

In this parameter is possible to adjust percentage of cyclone work in cleaning option (if is cyclone selected in point „1.1.4. Type").

Possible adjustment:

- Factory adjustmen: 100%

- Minimal adjustment value: 20%
- Maximal adjustment value: 100%

1.1.3. BURNER FAN

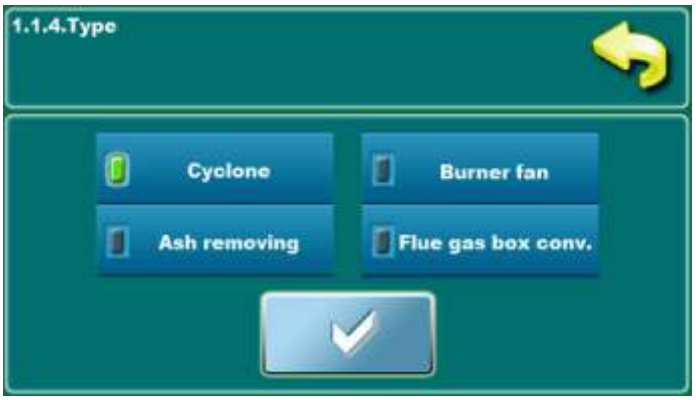
In this parameter is possible to adjust percentage of burner fan work in cleaning option (if is burner fan selected in point „1.1.4. Type").

Possible adjustment:

- Factory adjustmen: 100%

- Minimal adjustment value: 20%
- Maximal adjustment value: 100%

1.1.4. TYPE

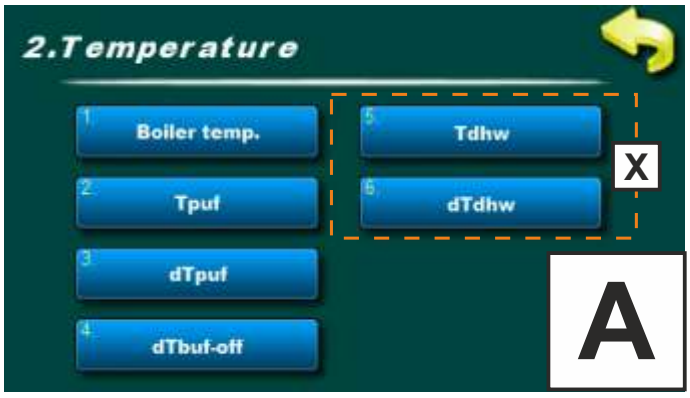


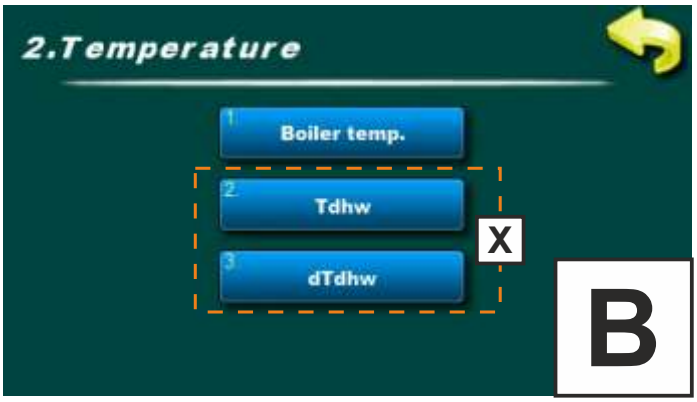
In this parameter is possible to select component which will be work in cleaning option (1.1.1. Cleaning).

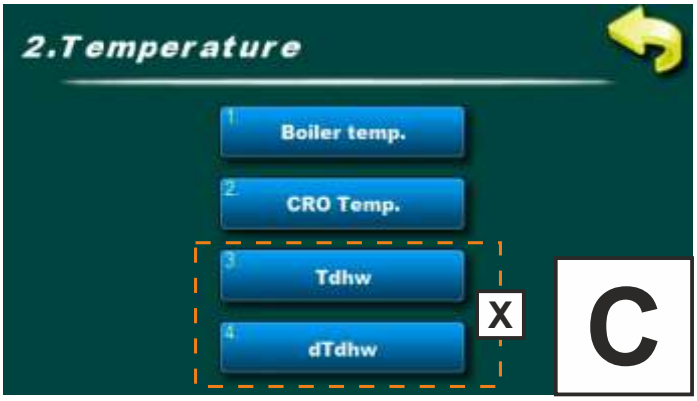
- Factory selected: -
Possible selection:
- Cyclone (if is installed and configured)
- Burner fan
- Ash removing (if is installed and configured)
- Flue gas box conveyor (if is installed and configured)

Every compontent can be selected independent on other components selection. All components can work in the same time.

2. TEMPERATURE





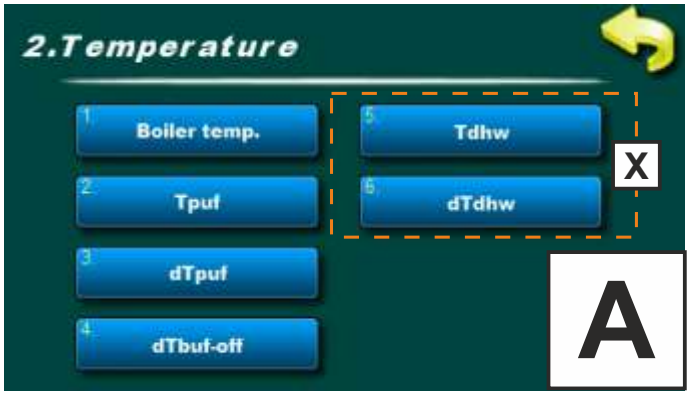


A - connection method: **„BUF**" (buffer tank)
B - connection method: **„CRO**" (hydraulic crossover)
C - connection method: **„CRO + Sensor"** (hydraulic crossover + sensor)

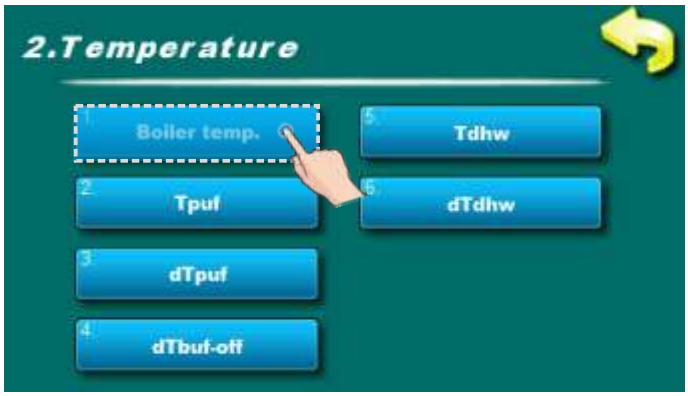
X - only if **„DHW**" (domestic hot water) exist on heating system (must be configured like additional equipment)

A

CONNECTION METHOD: **BUF (buffer tank)**

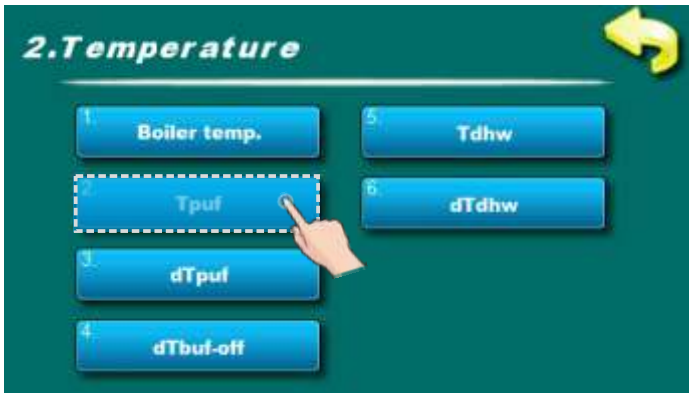


2.1. -A- BOILER TEMPERATURE



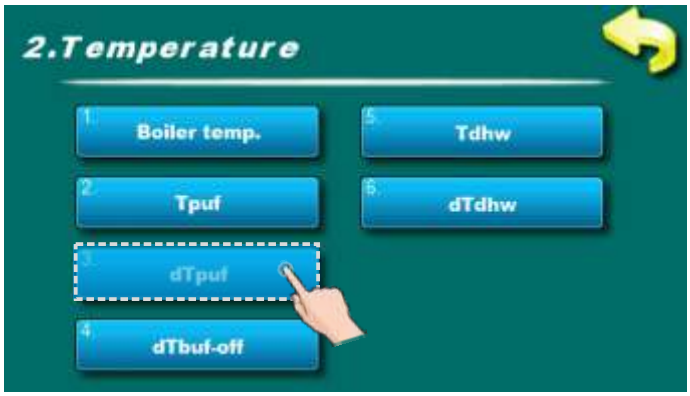
This parameter is adjusted automatic by displayed formula.

2.2. -A- BUFFER TANK TEMPERATURE (if is installed and configured)



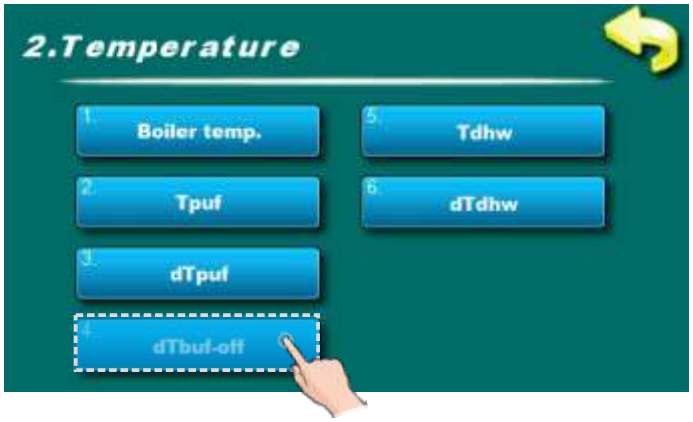
In this parameter is possible to adjust accumulation tank temperature.
Possible adjustment:
- Factory adjusted: 80°C
- Minimal adjustment value: 65°C
- Maximal adjustment value: 90°C

2.3. -A- DIFFERENCE OF BUFFER TANK TEMPERATURE (if is installed and configured)



In this parameter is possible to adjust buffer tank temperature difference.
Possible adjustment:
- Factory adjusted: 15˘C
- Minimal adjustment value: 15°C
- Maximal adjustment value: 75°C

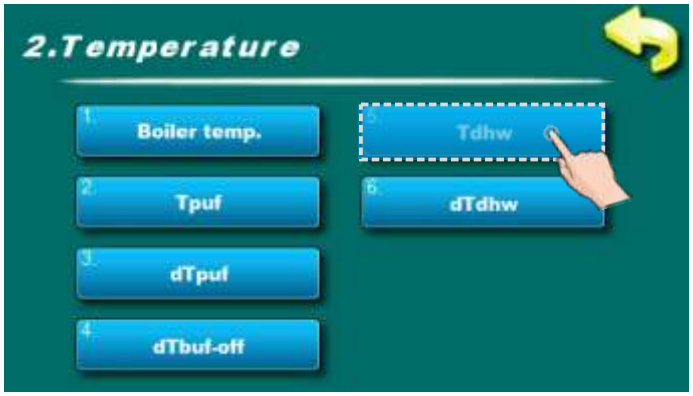
2.4. -A- dTBUF-off (Difference of buffer tank temperature for boiler shut down (pause)) (if is installed and configured)



Possible adjustment:
- Factory adjusted: 10°C
- Minimal adjustment value: 5°C
- Maximal adjustment value: 10°C

Condition for boiler shut down and pause: dTbuf-off < Tbuf (wanted temperature of buffer tank (up) - (measured temperature of buffer tank (down)).

2.5. -A- DOMESTIC HOT WATER TEMPERATURE (if is installed on heating installation and configured)



In this parameter is possible to adjust domestic hot water temperature.

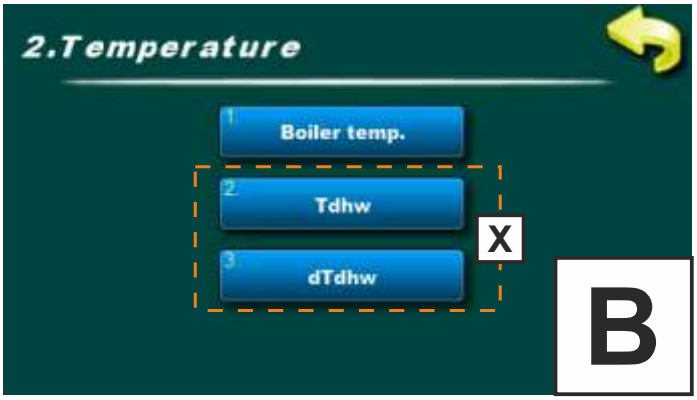
Possible adjustment:
- Factory adjusted: 50˚C
- Minimal adjustment value: 10°C
- Maximal adjustment value: 70°C

2.6. -A- DIFFERENCE OF DOMESTIC HOT WATER TEMPERATURE (if is installed on heating installation and configured)

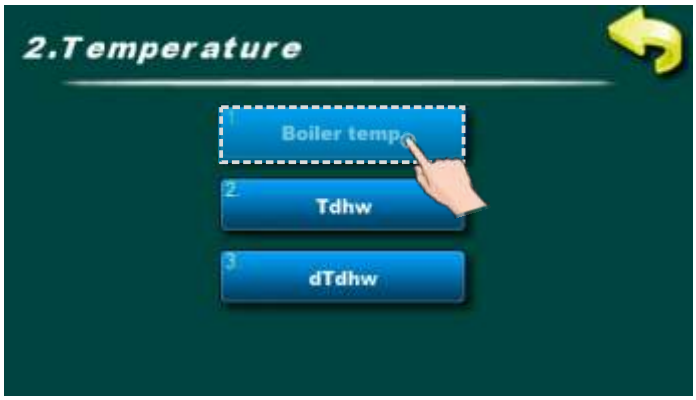
This parameter can't be adjusteds. Factory adjusted difference for domestic hot water is 5°C.

B

CONNECTION METHOD: **CRO (hydraulic crossover)**



2.1. -B- BOILER TEMPERATURE



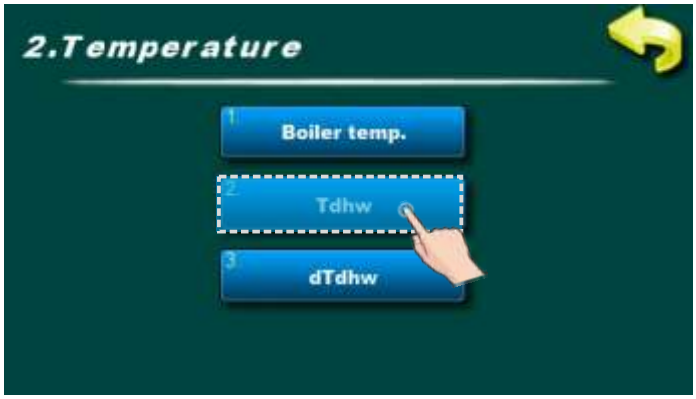
In this parameter is possible to adjust boiler temperature.

Possible adjustment:

- Factory adjusted: 80°C

- Minimal adjustment value: 65°C
- Maximal adjustment value: 90°C

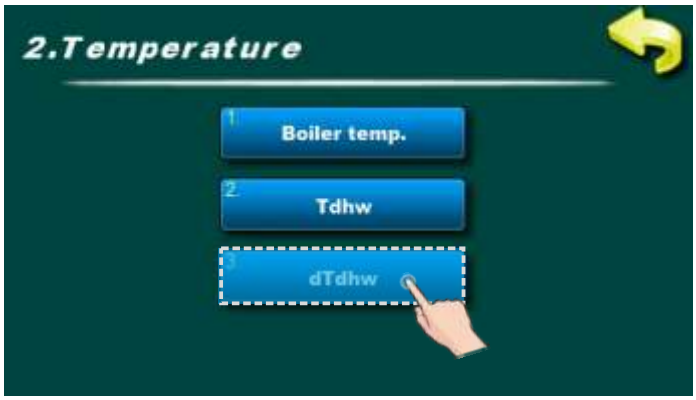
2.2. -B- DOMESTIC HOT WATER TEMPERATURE (if is DHW configured)



In this parameter is possible to adjust domestic hot water temperature.

Possible adjustment:
- Factory adjusted: 50˚C
- Minimal adjustment value: 10°C
- Maximal adjustment value: 70°C

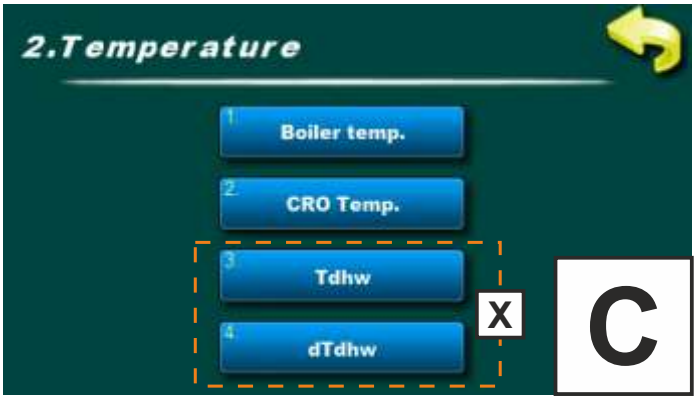
2.3. -B- DIFFERENCE OF DOMESTIC HOT WATER TEMPERATURE (if is DHW configured)



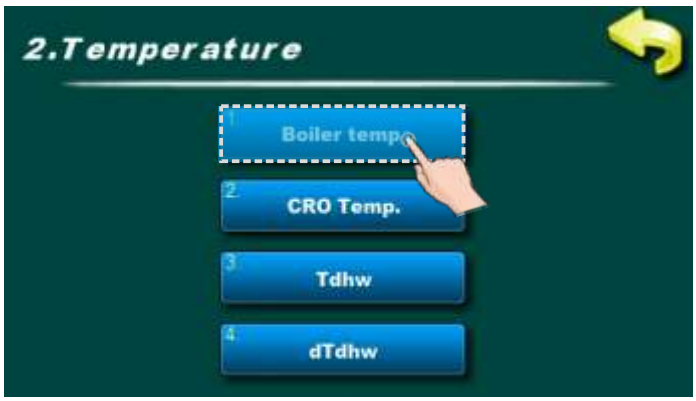
This parameter can't be adjusteds. Factory adjusted difference for domestic hot water is 5°C.

C

CONNECTION METHOD: **CRO + sensor**
(hydraulic crossover + sensor)

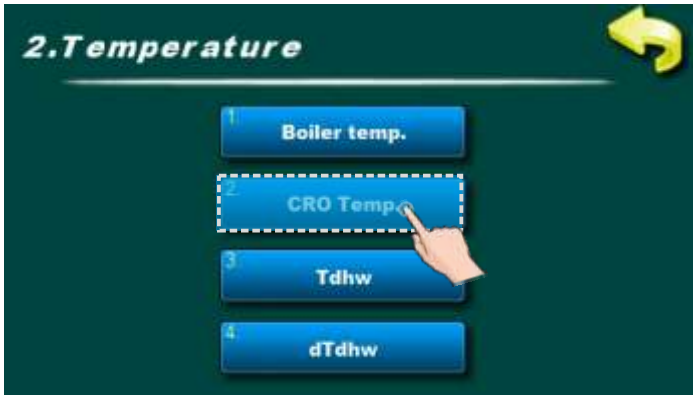


2.1. -C- BOILER TEMPERATURE



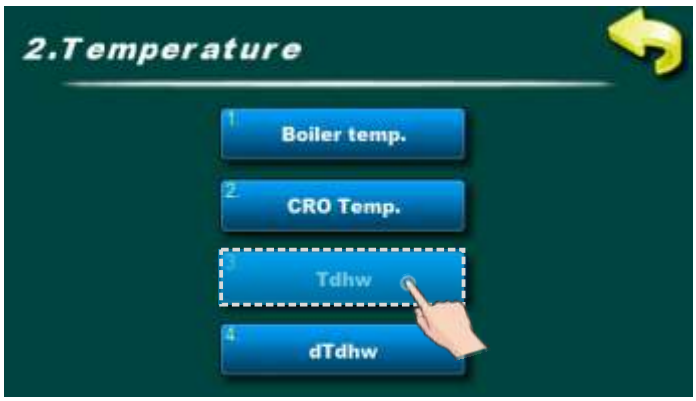
This parameter is adjusted automatic by displayed formula.

2.2. -C- HYDRAULIC CROSSOVER TEMPERATURE



In this parameter is possible to adjust hydraulic crossover temperature.
Possible adjustment:
- Factory adjusted: 75°C
- Minimal adjustment value: 65°C
- Maximal adjustment value: 80°C

2.3. -C- DOMESTIC HOT WATER TEMPERATURE (if is DHW configured)



In this parameter is possible to adjust domestic hot water temperature.

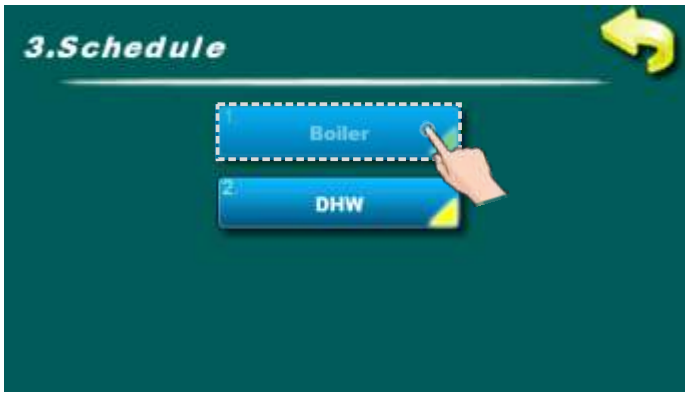
Possible adjustment:
- Factory adjusted: 50°C
- Minimal adjustment value: 10°C
- Maximal adjustment value: 70°C

2.4. -C- DIFFERENCE OF DOMESTIC HOT WATER TEMPERATURE (if is DHW configured)

This parameter can't be adjusteds. Factory adjusted difference for domestic hot water is 5°C.

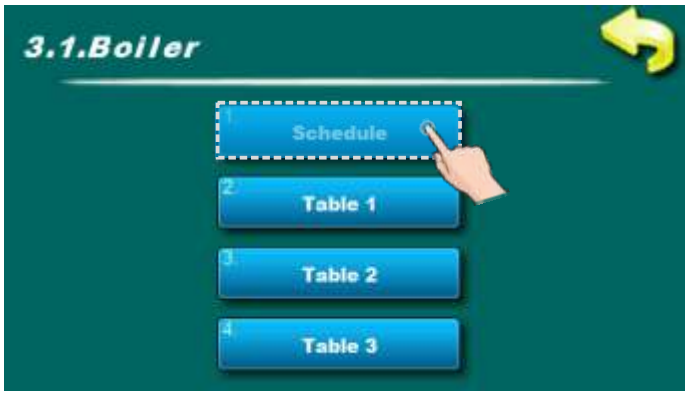
3.0. SCHEDULE

3.1. BOILER



Boiler schedule adjustment.

3.1.1. SCHEDULE



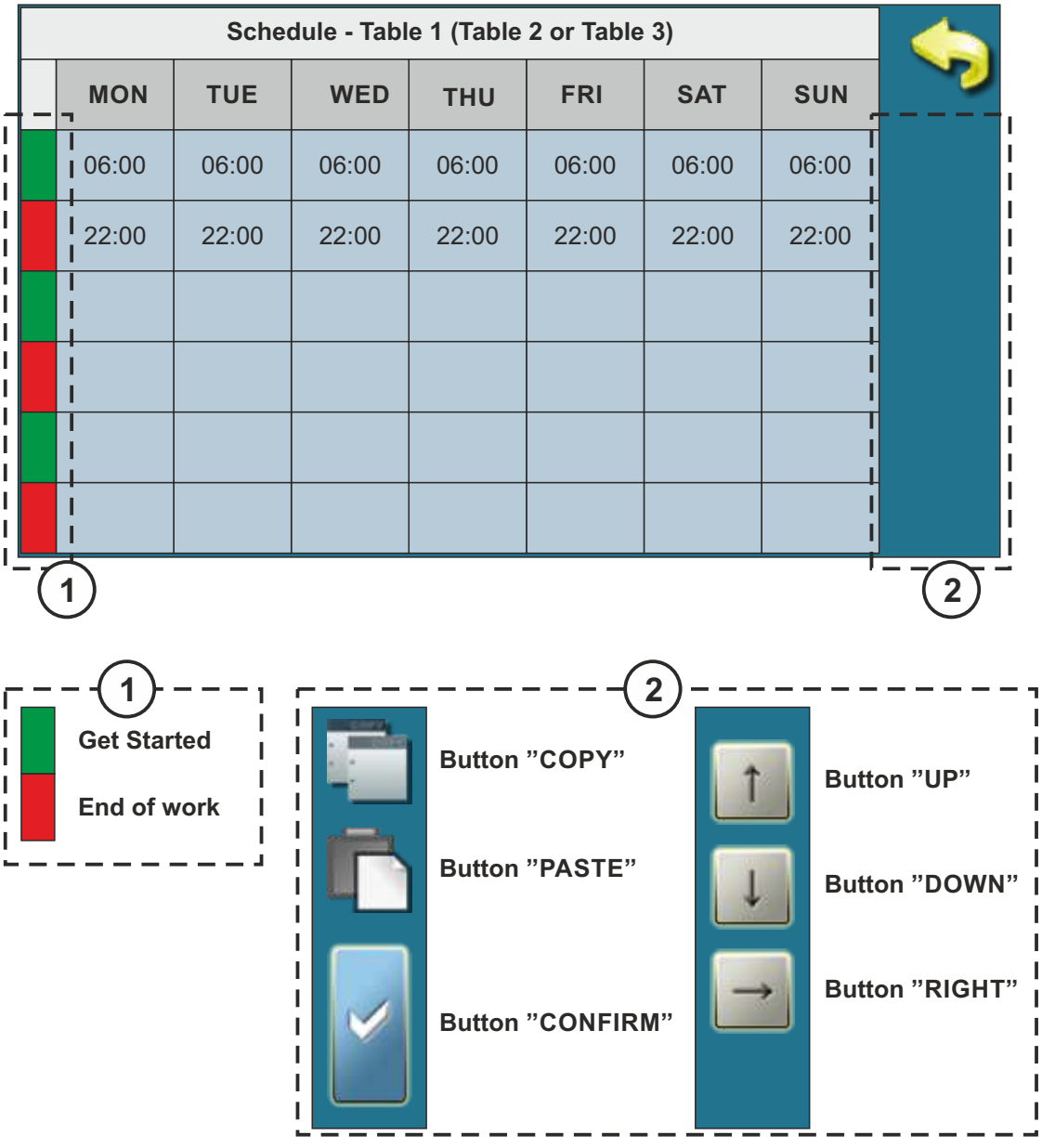
Possible selection:

- Factory selected: OFF (schedule is turned off)

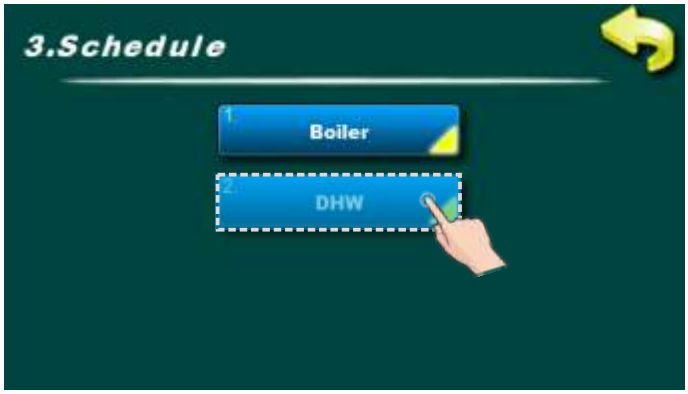
- Table 1 - Scheduled starting times are turned-on and work according to the settings in Table 1
- Table 2 - Scheduled starting times are turned-on and work according to the settings in Table 2
- Table 3 - Scheduled starting times are turned-on and work according to the settings in Table 3

3.1.2., 3.1.3., 3.1.4. 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.

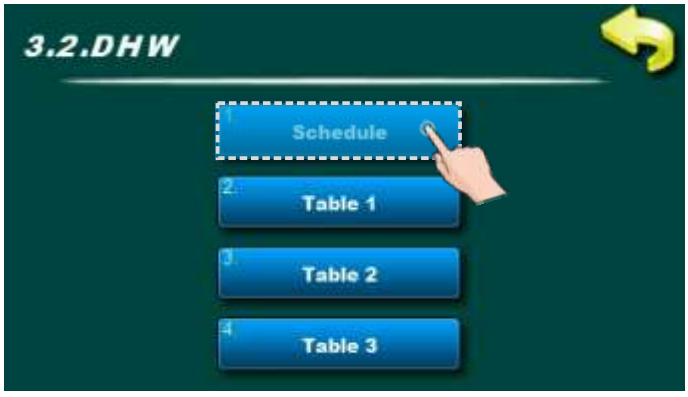


3.2. DHW (if is configured)



Domestic hot water schedule adjustment.

3.2.1. SCHEDULE



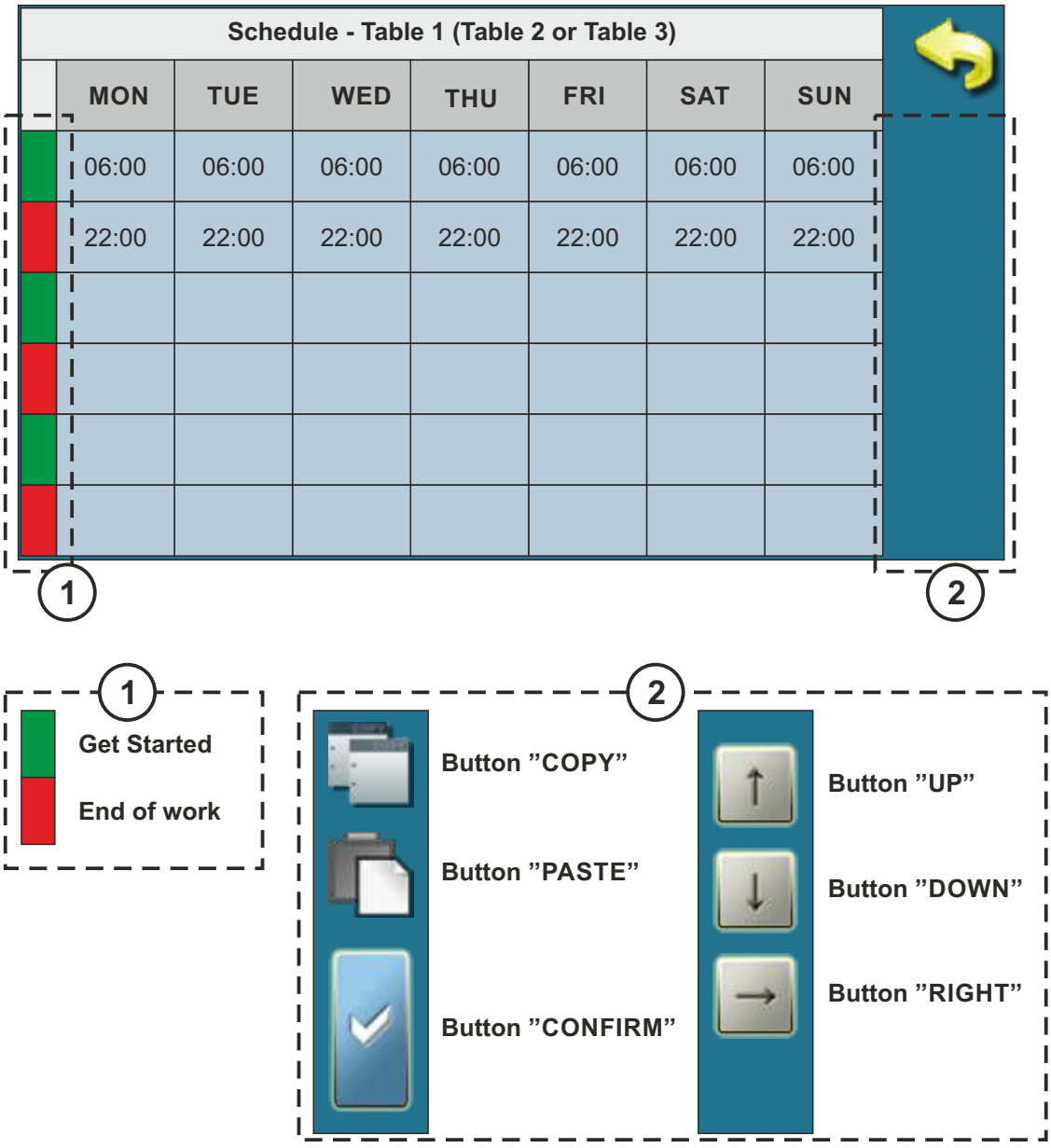
Possible selection:

- Factory selected: OFF (schedule is turned off)

- 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

3.2.2., 3.2.3., 3.2.4. 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.



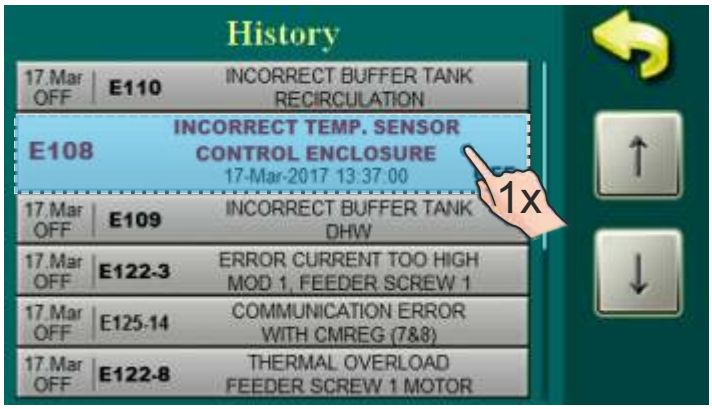
4. HISTORY

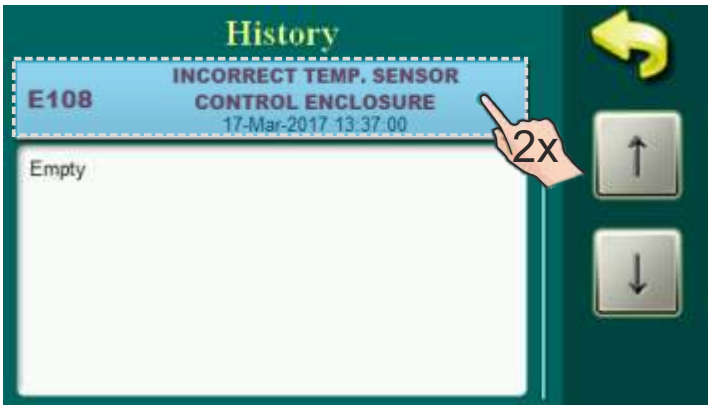
By pressing on „History" button will be opened menu for choosing history list. It can be choosen between error list and warning list. Informations history are placed with error list.

Written is: - time of occurrence errors/ warnings/ informations
- error/warning/information code
- description of the error/warning/information.

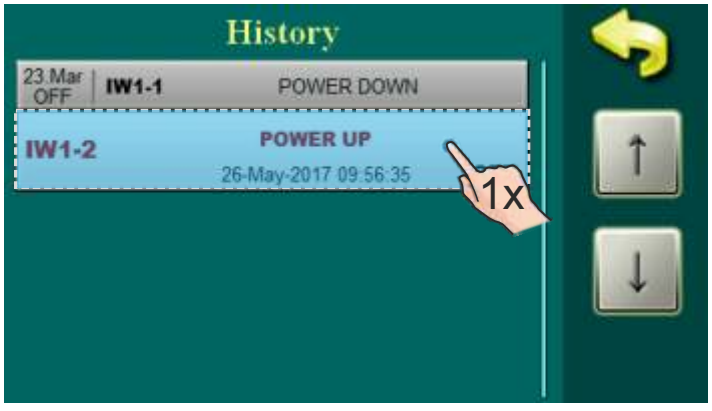
The first press on the field error/warning/information field is indicated, in addition to see and date generated errors/warnings/information. The second press on the selected error/ warning/information, prints a detailed description of the error/warnings/information and corrective action errors/warnings/information. If for some error/warning/information there is no description on current software version, on the screen will be displayed "empty".

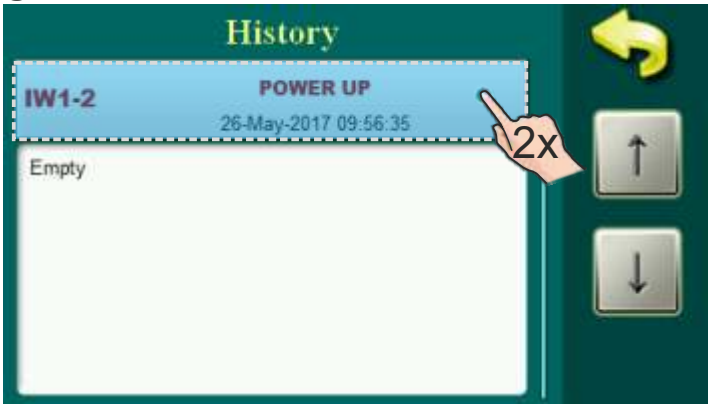
Error list





Warnings list





ERROR LIST

ERRORS:

ERROR	NAME	DESCRIPTION
E1	IGNITION ERROR	**Boiler status:** Ignition failed. **Possible causes:** Feeder screw don't supply fuel or don't supply enough to burner (it's not filled enough), not enough pellet in pellet tank, dirty burner grate, dirty/faulty photocell, faulty el. lighter.
E1_1	IGNITION ERROR AFTER POWER FAIL	**Boiler status:** Ignition failed, before that power failure in working phase. **Possible causes:** Power failure in working phase.
E2	FLAME LOSS WHILE WORKING	**Boiler status:** Flame loss in burner working phase. **Possible causes:** Feeder screw don't supply enough fuel to burner, not enough fuel in pellet tank, dirty burner grate, dirty photocell.
E2_1	FLAME LOSS AFTER POWER FAIL	**Boiler status:** Flame loss in burner working phase, before that power failure in working phase. **Possible causes:** Power failure in burner working phase, after power up burner failed to clean grate.
E3	FLUE GAS TEMPERATURE TOO HIGH	**Boiler status:** Flue gas temperature is too high in burner working phase. **Possible causes:** Dirty boiler, adjusted power is too big, bad reading from flue gas sensor.
E4	SAFETHY THERMOSTAT	**Boiler status:** Safety thermostat interrupt el. power because of too high temperature in boiler; wait until the boiler temperature drops below max. operating temperature and activate STB safety thermostat; try to find and eliminate causes of STB safety thermostat activation. **Possible causes:** Power failure in burner working phase, disabled heat transfer to buffer tank or to consumers.
E5	PRESSURE	**Boiler status:** Too high pressure in firebox. **Possible causes:** Not enough clean (reduced passage) flue gas passages, flue gas tubes or chimney, adjusted too high fuel (pellet) supply, invalid pressure switch, too low chimney underpressure.
E6	PELLET SUPPLY TUBE TEMPERATURE TOO HIGH	**Boiler status:** Pellet supply tube (to burner) temperature is too high. **Possible causes:** Plastic supply tube is damaged (have holes); Plastic supply tube is not properly installed (not sealed); Invalid bimetal thermostat on pellet supply tube.
E7_1	WATER PRESSURE LOW	**Boiler status:** Water pressure is too low. **Possible causes:** Water leakage from heating system, problem with expansion vessel, invalid limiter for low pressure.

E7_2	WATER PRESSURE HIGH	**Boiler status:** Water pressure is too high. **Possible causes:** Problem with expansion vessel, invalid limiter for low pressure.
E8	TEMPERATURE TOO HIGH CONTROL ENCLOSURE	**Boiler status:** Junction box temperature too high. **Possible causes:** High temperature of junction box environment, invalid junction box sensor.
E9	WRONG DATE AND TIME	**Boiler status:** Time and date are not adjusted, it stayed on factory settings. **Possible causes:** Time and date are not adjusted, it necessary to adjust it.
E101	INCORRECT BOILER SENSOR TK1	**Boiler status:** Incorrect boiler sensor. **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E102	INCORRECT FLUE GAS SENSOR	**Boiler status:** Incorrect flue gas sensor. **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E103	INCORRECT RETURN LINE SENSOR	**Boiler status:** Incorrect boiler return sensor **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E104	INCORRECT BUFFER TANK SENSOR UP	**Boiler status:** Incorrect buffer tank sensor (up) **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E105	INCORRECT BUFFER TANK SENSOR DOWN	**Boiler status:** Incorrect buffer tank sensor (down) **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E106	INCORRECT OUTSIDE TEMPERATURE SENSOR	**Boiler status:** Incorrect outside temperature sensor **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E107	INCORRECT CROSSOVER TEMPERATURE SENSOR UP	**Boiler status:** Incorrect crossover temperature sensor **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E108	INCORRECT TEMPERATURE SENSOR CONTROL ECLOSURE	**Boiler status:** Incorrect junction box temperature sensor. **Possible causes:** Interruption on connection to the junction box, cold connection or invalid sensor.

E109	INCORRECT TEMPERATURE SENSOR DHW.	**Boiler status:** Incorrect temperature sensor DHW. **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E110	INCORRECT TEMPERATURE SENSOR RECIRCULATION	**Boiler status:** Incorrect temperature sensor recirculation. **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
E111	PHOTOCELL ERROR	**Boiler status:** Photocell error. **Possible causes:** Interruption on el. connection between photocell and junction box, connection to the junction box, cold connection or invalid photocell.
E111	PHOTOCELL ERROR	**Boiler status:** Photocell error. **Possible causes:** Interruption on el. connection between photocell and junction box, connection to the junction box, cold connection or invalid photocell.
E112	CYCLONE INVERTER ERROR	**Boiler status:** Cyclone inverter error. **Possible causes:** Problem with entry tension, cyclone fan, bad el. connections or inverter is invalid.
E113	BURNER INVERTER ERROR	**Boiler status:** Burner inverter error. **Possible causes:** Problem with entry tension, burner fan, bad el. connections or inverter is invalid.
E115	PUMP (CONTACTOR) ERROR	**Boiler status:** Pump (contacor) error **Possible causes:** Problem with boiler pump, bad adjustment of thermic protection, problems with contactor.
E116	ASH REMOVING (CONTACTOR) ERROR	**Boiler status:** Ash removing (contactor) error **Possible causes:** Problems with ash removing motor device, bad adjustment of thermic protection, problems with contactor.
E118	DISPENSER (CONTACTOR) ERROR	Dispenser (contactor) error (if is dispenser installed - additional equipment).
E122_1	CONTROL ERROR MOD 1, FEEDER SCREW 1	Control error mod 1, feeder screw 1 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E122_2	CURRENT RISE ERROR MOD 1, FEEDER SCREW 1	Current rise error mod 1, feeder screw 1 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).

E122_3	ERROR CURRENT TOO HIGH MOD 1, FEEDER SCREW 1	Error current too high mod 1, feeder screw 1 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E122_4	ERROR ASYMMETRY MOD 1, FEEDER SCREW 1	Error current too high mod 1, feeder screw 1 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E122_5	ERROR CURRENT TOO LOW MOD 1, FEEDER SCREW 1	Error current too low mod 1 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E122_6	ERROR UNWANTED CURRENT MOD 1, FEEDER SCREW 1	Error unwanted current mod 1, feeder screw 1 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E122_7	THERMAL OVERLOAD MOD 1, FEEDER SCREW 1	Thermal overload mod 1, feeder screw 1 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E122_8	THERMAL OVERLOAD FEEDER SCREW 1 MOTOR	Thermal overload feeder screw 1 motor - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E123_1	CONTROL ERROR MOD 2, FEEDER SCREW 2	Control error mod 2, feeder screw 2 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E123_2	CURRENT RISE ERROR MOD 2, FEEDER SCREW 2	Current rise error mod 2, feeder screw 2 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E123_3	CURRENT RISE ERROR MOD 2, FEEDER SCREW 2	Current rise error mod 2, feeder screw 2 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E123_4	ERROR ASYMMETRY MOD 2, FEEDER SCREW 2	Error asymmetry mod 2, feeder screw 2 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E123_5	ERROR CURRENT TOO LOW MOD 2, FEEDER SCREW 2	Error current too low mod 2, feeder screw 2 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).

E123_6	ERROR UNWANTED CURRENT MOD 2, FEEDER SCREW 2	Error unwanted current mod 2, feeder screw 2 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E123_7	THERMAL OVERLOAD MOD 2, FEEDERSSCREW 2	Thermal overload mod 2, feeder screw 2 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E123_8	THERMAL OVERLOAD FEEDER SCREW 2 MOTOR	Thermal overload feeder screw 2 motor - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E124_1	CONTROL ERROR MOD 3, FEEDER SCREW 3	Control error mod 3, feeder screw 3 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E124_2	CURRENT RISE ERROR MOD 3, FEEDER SCREW 3	Current rise error mod 3, feeder screw 3 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E124_3	ERROR CURRENT TOO HIGH MOD 3, FEEDER SCREW 3	Error current too high mod 3, feeder screw 3 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E124_4	ERROR ASYMMETRY MOD 3, FEEDER SCREW 3	Error asymmetry mod 3, feeder screw 3 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E124_5	ERROR CURRENT TOO LOW MOD 3, FEEDER SCREW 3	Error current too low mod 3, feeder screw 3 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E124_6	ERROR UNWANTED CURRENT MOD 3, FEEDER SCREW 3	Error unwanted current mod 3, feeder screw 3 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E124_7	THERMAL OVERLOAD MOD 3, FEEDER SCREW 3	Thermal overload mod 3, feeder screw 3 - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).
E124_8	THERMAL OVERLOAD FEEDER SCREW 3 MOTOR	Thermal overload feeder screw 3 motor - Pellet feeding conveyors from the seasonal tank (if is installed - additional equipment).

E125_1	COMMUNICATION ERROR WITH MOTHERBOARD	Call service man!
E125_2	COMMUNICATION ERROR WITH SENSOR BORD	Call service man!
E125_4	COMMUNICATION ERROR WITH EXT BOARD A15	Call service man!
E125_5	COMMUNICATION ERROR WITH EXT BOARD A14	Call service man!
E125_6	COMMUNICATION ERROR WITH EXT BOARD A13	Call service man!
E125_7	COMMUNICATION ERROR WITH EXT BOARD A12	Call service man!
E125_8	COMMUNICATION ERROR WITH EXT BOARD A0	Call service man!
E125_9	COMMUNICATION ERROR WITH EXT BOARD A1	Call service man!
E125_10	COMMUNICATION ERROR WITH EXT BOARD A2	Call service man!
E125_11	COMMUNICATION ERROR WITH CMREG (1&2)	**Possible causes:** Interruption in el. connections between junction box and CM2K or invalid CM2K heating module.
E125_12	COMMUNICATION ERROR WITH CMREG (3&4)	**Possible causes:** Interruption in el. connections between junction box and CM2K or invalid CM2K heating module.

E125_13	COMMUNICATION ERROR WITH CMREG (5&6)	**Possible causes:** Interruption in el. connections between junction box and CM2K or invalid CM2K heating module.
E125_14	COMMUNICATION ERROR WITH CMREG (7&8)	**Possible causes:** Interruption in el. connections between junction box and CM2K or invalid CM2K heating module.
E125_15	COMMUNICATION ERROR WITH CMGSM	**Possible causes:** Interruption in el. connections between junction box and CMGSM or invalid CMGSM module.
E125_16	COMMUNICATION ERROR WITH CMNET	**Possible causes:** Interruption in el. connections between junction box andCMNET or invalid CMNET module.
E125_17	COMMUNICATION ERROR WITH WIFI MODULE	**Boiler status:** Boiler work normally. The problem occurs in the work of additional equipment internet supervision (WiFi) if installed. **Possible causes:** Check the UTP cable and its connections with the electric boards.
E126_1	UNKNOWN BOILER POWER!	**Possible causes:** Key for power loading is not installed or recognized, cold connection or invalid key.
E126_2	WRONG BOILER POWER	Call service man!
E126_3	MOTHERBOARD CHANGED!	Call service man!
E127	SENSOR CM2K 1.CIRCUIT	**Boiler status:** Pump of 1+ heating circuit doesn't work. Boiler work normally. **Possible causes:** Error on flow temperature sensor of 1+ heating circuit (on regulator CM2K).
E128	CORRECTOR CM2K 1.CIRCUIT	**Boiler status:** Pump of 1+ heating circuit work in intervention mode by heating curve. Boiler work normally. **Possible causes:** Error on room corrector of 1+ heating circuit (CM2K regulator), bad corrector connection to the CM2K or room corrector failure.
E129	SENSOR CM2K 2.CIRCUIT	**Boiler status:** Pump of 2+ heating circuit doesn't work. Boiler work normally. **Possible causes:** Error on main flow temperature sensor of 2+ heating circuit (on regulator CM2K).

E130	CORRECTOR CM2K 2.CIRCUIT	**Boiler status:** Pump of 2+ heating circuit work in intervention mode by heating curve. Boiler work normally. **Possible causes:** Error on room corrector of 2+ heating circuit (CM2K regulator), bad corrector connection to the CM2K or room corrector failure.
E131	SENSOR CM2K 3.CIRCUIT	**Boiler status:** Pump of 3+ heating circuit doesn't work. Boiler work normally. **Possible causes:** Error on main flow temperature sensor of 3+ heating circuit (on regulator CM2K).
E132	CORRECTOR CM2K 3.CIRCUIT	**Boiler status:** Pump of 3+ heating circuit work in intervention mode by heating curve. Boiler work normally. **Possible causes:** Error on room corrector of 3+ heating circuit (CM2K regulator), bad corrector connection to the CM2K or room corrector failure.
E133	SENSOR CM2K 4.CIRCUIT	**Boiler status:** Pump of 4+ heating circuit doesn't work. Boiler work normally. **Possible causes:** Error on main flow temperature sensor of 4+ heating circuit (on regulator CM2K).
E134	CORRECTOR CM2K 4.CIRCUIT	**Boiler status:** Pump of 4+ heating circuit work in intervention mode by heating curve. Boiler work normally. **Possible causes:** Error on room corrector of 4+ heating circuit (CM2K regulator), bad corrector connection to the CM2K or room corrector failure.
E135	SENSOR CM2K 5.CIRCUIT	**Boiler status:** Pump of 5+ heating circuit doesn't work. Boiler work normally. **Possible causes:** Error on main flow temperature sensor of 5+ heating circuit (on regulator CM2K).
E136	CORRECTOR CM2K 5.CIRCUIT	**Boiler status:** Pump of 5+ heating circuit work in intervention mode by heating curve. Boiler work normally. **Possible causes:** Error on room corrector of 5+ heating circuit (CM2K regulator), bad corrector connection to the CM2K or room corrector failure.
E137	SENSOR CM2K 6.CIRCUIT	**Boiler status:** Pump of 6+ heating circuit doesn't work. Boiler work normally. **Possible causes:** Error on main flow temperature sensor of 6+ heating circuit (on regulator CM2K).
E138	CORRECTOR CM2K 6.CIRCUIT	**Boiler status:** Pump of 6+ heating circuit work in intervention mode by heating curve. Boiler work normally. **Possible causes:** Error on room corrector of 6+ heating circuit (CM2K regulator), bad corrector connection to the CM2K or room corrector failure.
E139	SENSOR CM2K 7.CIRCUIT	**Boiler status:** Pump of 7+ heating circuit doesn't work. Boiler work normally. **Possible causes:** Error on main flow temperature sensor of 7+ heating circuit (on regulator CM2K).

E140	CORRECTOR CM2K 7.CIRCUIT	**Boiler status:** Pump of 7+ heating circuit work in intervention mode by heating curve. Boiler work normally. **Possible causes:** Error on room corrector of 7+ heating circuit (CM2K regulator), bad corrector connection to the CM2K or room corrector failure.
E141	SENSOR CM2K 8.CIRCUIT	**Boiler status:** Pump of 8+ heating circuit doesn't work. Boiler work normally. **Possible causes:** Error on main flow temperature sensor of 8+ heating circuit (on regulator CM2K).
E142	CORRECTOR CM2K 8.CIRCUIT	**Boiler status:** Pump of 8+ heating circuit work in intervention mode by heating curve. Boiler work normally. **Possible causes:** Error on room corrector of 8+ heating circuit (CM2K regulator), bad corrector connection to the CM2K or room corrector failure.
E143	NO COMPRESSED AIR	Call service man!
E144	SERVICE TIME COMPRESSOR	Call service man!

WARNINGS:

WAR.	NAME	DESCRIPTION
W2	INCORRECT BUFFER TANK SENSOR UP	**Boiler status:** Incorrect buffer tank sensor (up) **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
W3	INCORRECT BUFFER TANK SENSOR DOWN	**Boiler status:** Incorrect buffer tank sensor (down) **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
W4	INCORRECT BUFFER TANK SENSOR DOWN	**Boiler status:** Incorrect buffer tank sensor (down) **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
W5	INCORRECT RETURN LINE SENSOR	**Boiler status:** Incorrect boiler return sensor **Possible causes:** Interruption on el. connection between sensor and junction box, connection to the junction box, cold connection or invalid sensor.
W7	TEMPERATURE TOO HIGH CONTROL ENCLOSURE	**Boiler status:** Junction box temperature too high. **Possible causes:** High temperature of junction box environment, invalid junction box sensor.
W8	ASH REMOVING CONTACTOR	**Boiler status:** Ash removing (contactor) error **Possible causes:** Problems with ash removing motor device, bad adjustment of thermic protection, problems with contactor.
W9	ASH REMOVING 2 CONTACTOR	**Boiler status:** Ash removing 2 (contactor) error **Possible causes:** Problems with ash removing 2 motor device, bad adjustment of thermic protection, problems with contactor.
W14	FACTORY SETTING LOADED	Factory settings loaded!
W15	NO COMPRESSED AIR	No compressed air.

W16	COMPRESSOR RUNNING TOO LONG (Air loss)	**Boiler status:** boiler works normally **Possible causes:** - the compressor relief valve does not close (air leakage sound is heard) and the compressor cannot reach the set air pressure. The compressor relief valve needs to be replaced with a new one. - electromagnetic valve for condensate discharge leaks air even when there is no order to discharge condensate. The cause may be dirt in the valve or a faulty valve. It is necessary to remove and blow out the valve, if this does not help, it is necessary to replace it with a new one. - leakage in the connecting pipe for supplying compressed air from the compressor. The pipe needs to be replaced with a new one. - pneumat valve leakage when the valve is not activated. Disassemble the pneumat valve and try to clean the dirt, if that does not help, replace the pneumat valve.
W17	COMPRESSOR SWITCHED OFF MANUALY	Compressor switched off manually.
W18	SERVICE TIME COMPRESSOR	Service time for compressor.
W22	WRONG TIME AND DATE	**Possible causes:** Time and date are not adjusted, it stayed on factory settings.

INFORMATIONS:

INFO.	NAME
I4_1	ASH REMOVING TURNED OFF
I4_2	ASH REMOVING TURNED ON
IW1_1	POWER DOWN
IW1_2	POWER UP

5.0. OPERATION

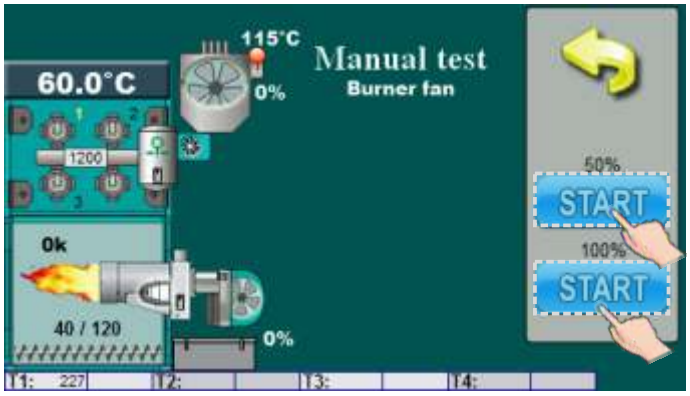
5.1. FORCED SHUTDOWN

Option for boiler force shut down. By pressing on „OK" button boiler and all boiler processes will be forced shut down.

Option „FORCED SHUTDOWN" is not usual procedure for turning OFF the boiler.
IMPORTANT! To be able to stop all processes, you must first turn off the boiler in the usual way by pressing and then STOP.

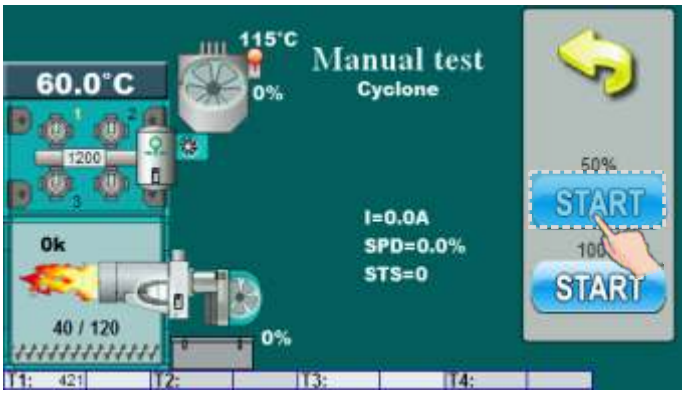
5.2 MANUAL TEST

5.2.x BURNER FAN



START 50% - fan speed must be on 50%
START 100%-fan speed must be on max. rpm
It is necessary to press the "START" next to the corresponding symbols and check if the fan operates according to the selected option. 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.x CYCLONE - (additional equipment for EKO-CKS P UNIT 140-430)



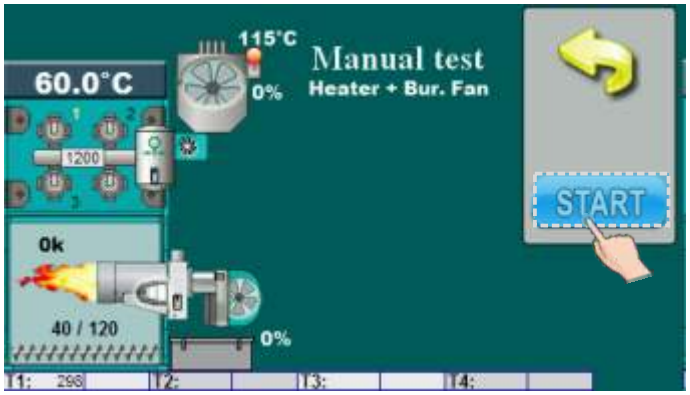
This option allows you to check Cyclone work.

NOTE:
„Cyclone" test will be factory placed in menu „5.2. Manual test" for boilers EKO-CKS P UNIT 499-560 because cyclone is standard delivery for that boilers.
For boilers EKO-CKS P UNIT 140-430 „Cyclone" test will be placed in menu „5.2.x. Additional eqipment" and that only if is installed and configured as additional equipment.

5.2.x FEEDER SCREW

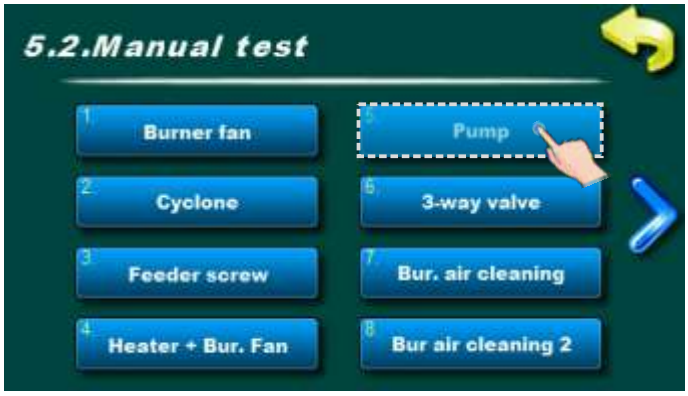
This option allows you to check the motor device of feeding screw.
It is necessary to press the "START" next to the corresponding symbol and check that the motor device of the feeding screw is working. After pressing the" STOP" engine will stop working. Each time you press" 'START" it becomes" STOP" 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.

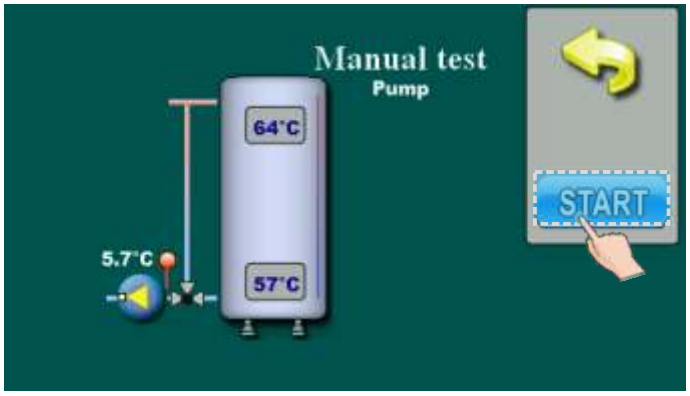
5.2.x ELECTRIC HEATER + BURNER FAN



This option allows you to check electric heater and burner fan.
It is necessary to press the "START" next to the corresponding symbol and check if the electric heater and burner fan is working. After pressing the" STOP" electric heater and burner fan will stop working. Each time you press" 'START" it becomes "STOP" and vice versa. The display will show animation of the electric heater and burner fan when the option is active.

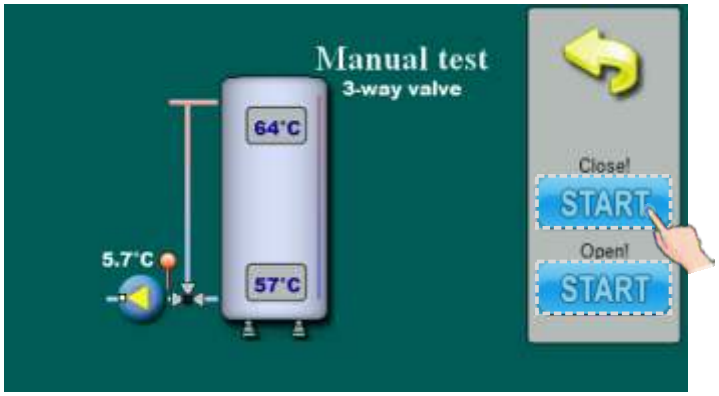
5.2.x PUMP





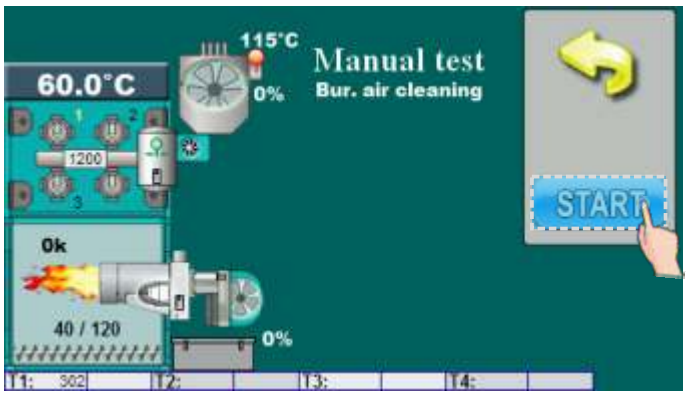
This options enables check of the work for pump between boiler and buffer tank.
It is necessary to press the "START" next to the corresponding symbol and check if the pump work. After pressing the" STOP" pump will stop working. Each time you press" 'START" it becomes "STOP" and vice versa. The display will show animation of the pump.

5.2.x 3-WAY MIXING VALVE



This option allows you to check the work for 3-way mixing valve.
It is necessary to press the "START" next to the corresponding symbol and check if the 3-way mixing valve working. After pressing the" STOP" mixing valve will be stop working. Each time you press "START" it becomes "STOP" and vice versa. On display will be displayed mixing valve opening / closing symbol. When is „CLOSE" button pressed mixing valve must close water flow in from buffer tank. When is „OPEN" button pressed mixing valve must open water flow from buffer tank.

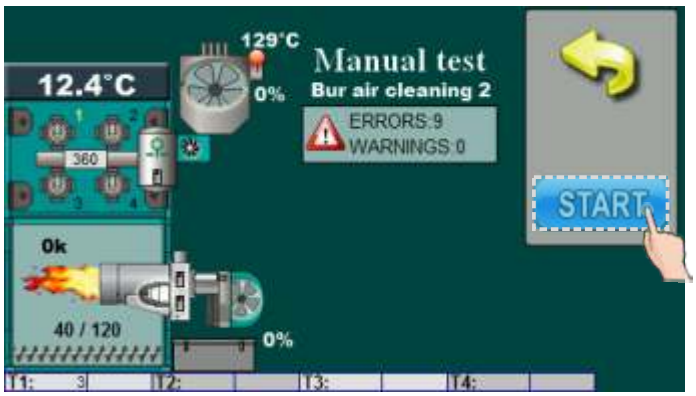
5.2.x BURNER AIR CLEANING



This option allows you to check burner air cleaning work.
It is necessary to press „START" next to the corresponding symbol and check if air cleaning work. After pressing „STOP" burner air cleaning will be stop working. Each time you press" 'START" it becomes "STOP" and vice versa. On display air cleaning symbol will be change color.

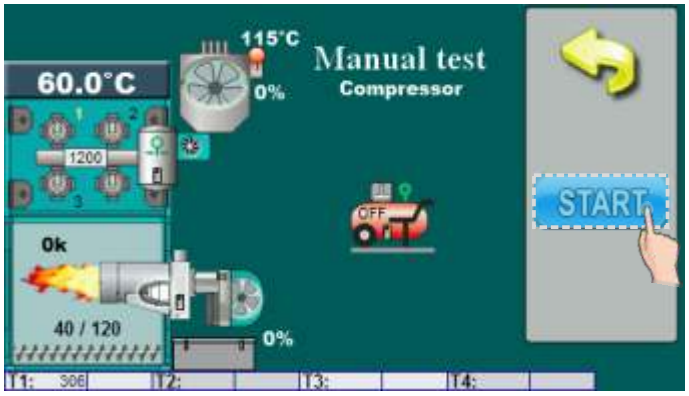
5.2.x BURNER AIR CLEANING 2 (only for EKO-CKS P UNIT 499-560)

NOTE:
This option will be visible only for boilers EKO-CKS P UNIT 499-560 which have option for Burner air cleaning 2!



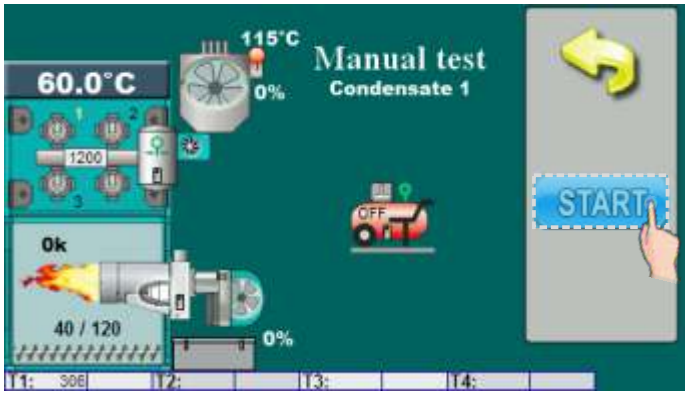
This option allows you to check burner air cleaning 2 work.
It is necessary to press „START" next to the corresponding symbol and check if air cleaning work. After pressing „STOP" burner air cleaning will be stop working. Each time you press" 'START" it becomes "STOP" and vice versa. On display air cleaning symbol will be change color.

5.2.x COMPRESSOR



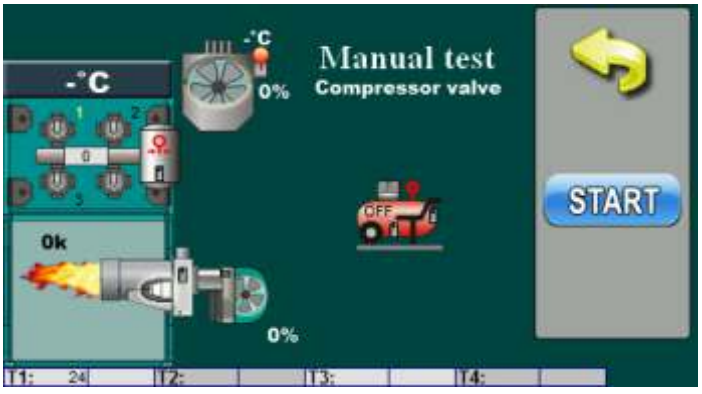
This option allows you to check compressor work.
It is necessary to press „START" next to the corresponding symbol and check if compressor work. After pressing „STOP" compressor will be stop working. Each time you press" 'START" it becomes "STOP" and vice versa. On display will be displayed „ON" marker on compressor symbol.

5.2.x CONDENSATE 1



This option allows you to check work of valve for condensate drainage 1. By pressing „START" valve will be opened.

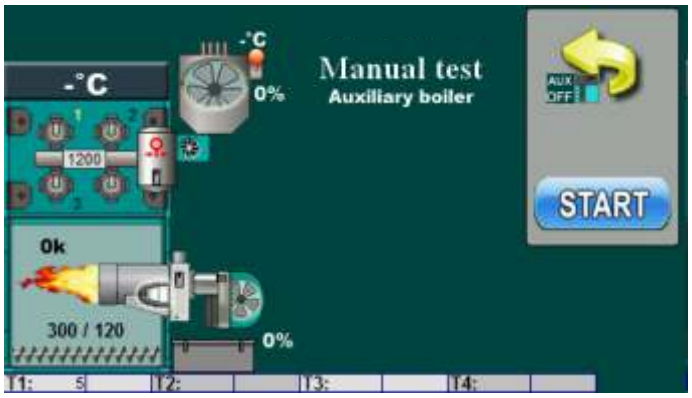
5.2.x COMPRESSOR VALVE



With this option you can check a work of the valve for Compressor valve.
(available from 31. 05. 2019. for boiler sizes 430, 499 and 560 kW).

By pressing „START" valve will be opened.

5.2.x AUXILIARY BOILER

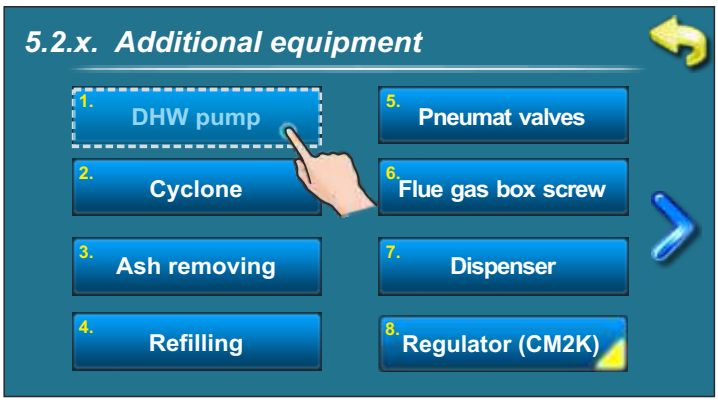


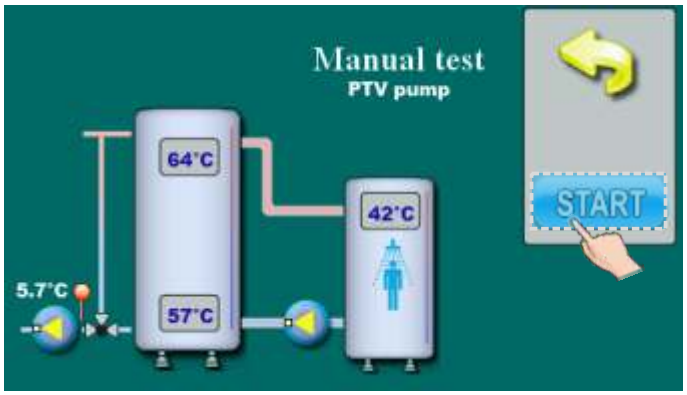
This option exists only if "Auxiliary boiler" is selected by an authorized service technician as the RELAY option.
This option, by pressing the START key, allows you to check the operation of the RELAY that activates the operation of the "Auxiliary boiler".

5.2.x MANUAL TEST OF ADDITIONAL EQUIPMENT

This option enables testing additional equipment.

5.2.x.x DHW PUMP - (additional equipment)

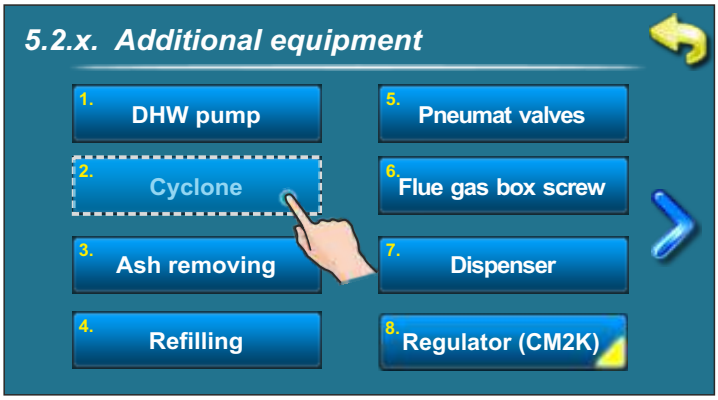


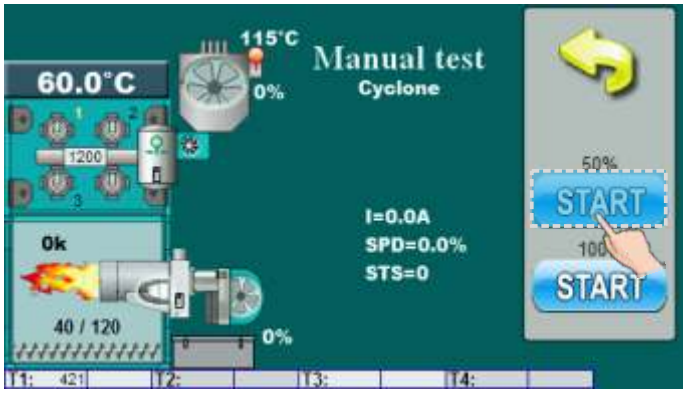


This option allows you to check DHW pump.

5.2.x.x CYCLONE - (additional equimpent for EKO-CKS P UNIT 140-430)

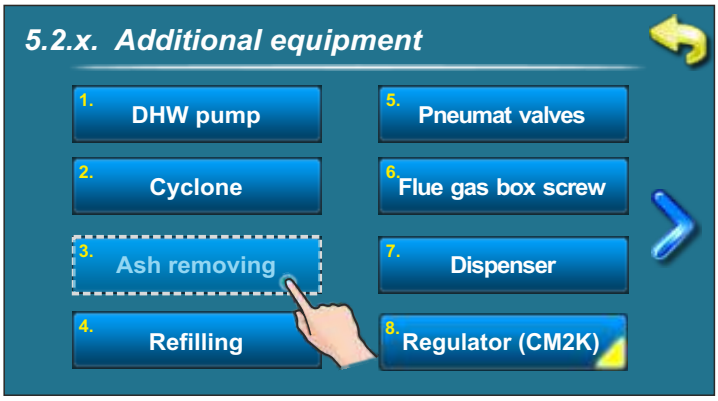
NOTE:
This option will be visible only for boilers EKO-CKS P UNIT 140-430 which have installed cyclone as additional equipment!
Boilers EKO-CKS P UNIT 499-560 have installed cyclone as standard delivery and manual test will be in menu „5.2. Manual test".

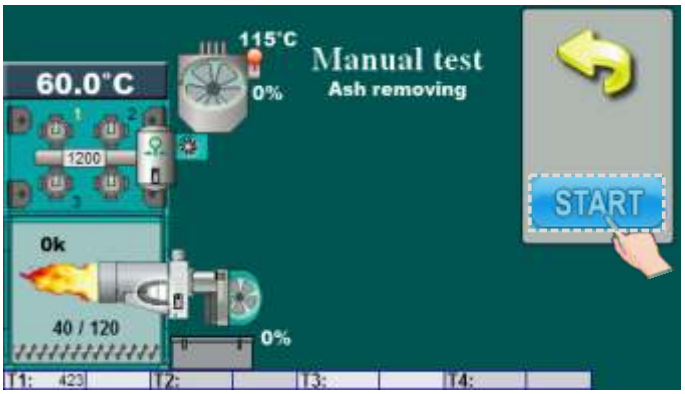




This option allows you to check Cyclone work.

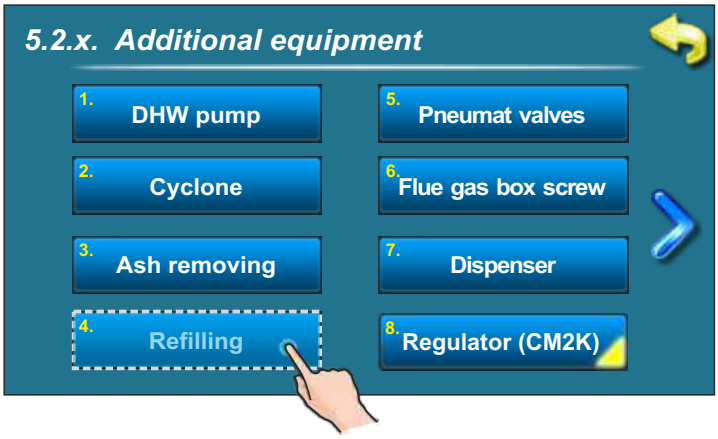
5.2.x.x ASH REMOVING - (additional equipment)





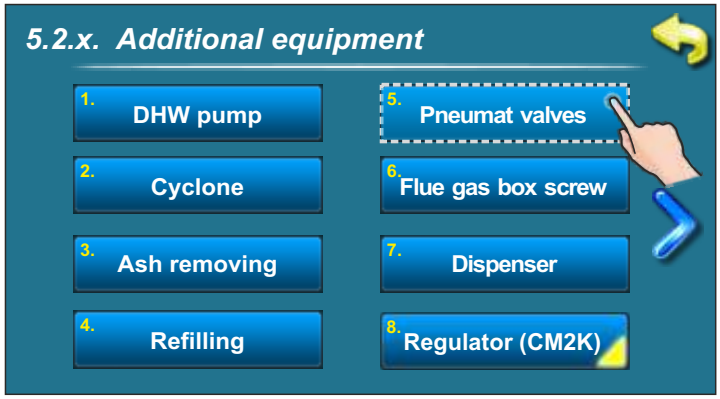
This option allows you to check work of ash removing by conveyor.

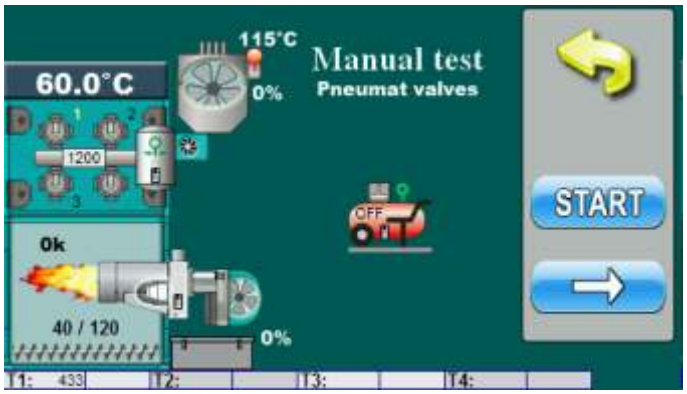
5.2.x.x REFILLING - (additional equipment)



This option allows you to check work of refilling system.

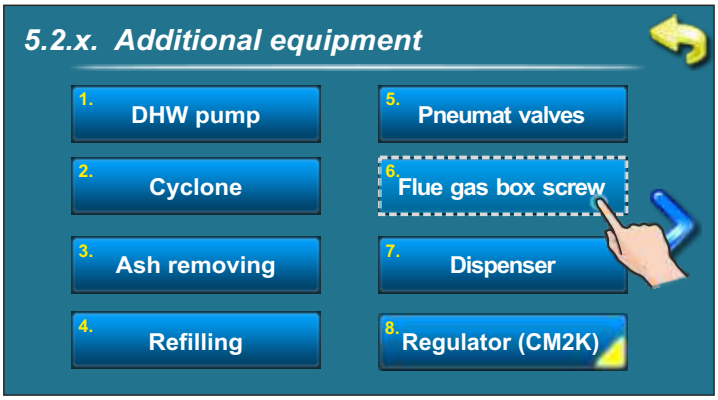
5.2.x.x PNEUMAT VALVES - (additional equipment)

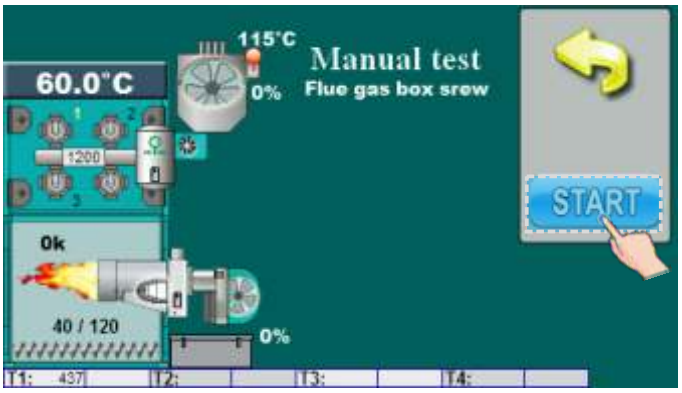




This option allows you to check work of pneumat valves.

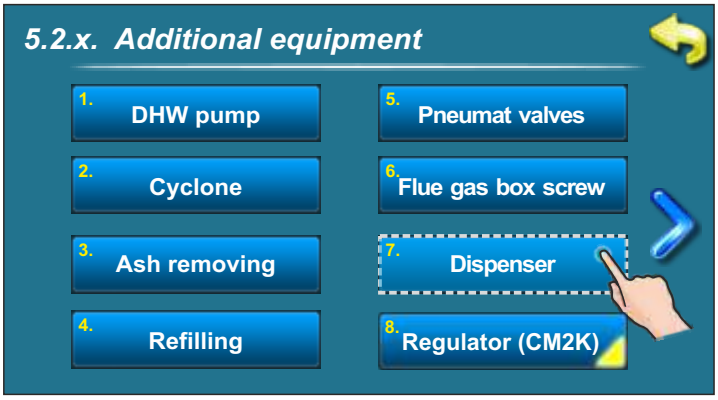
5.2.x.x FLUE GAS BOX SCREW - (additional equipment)

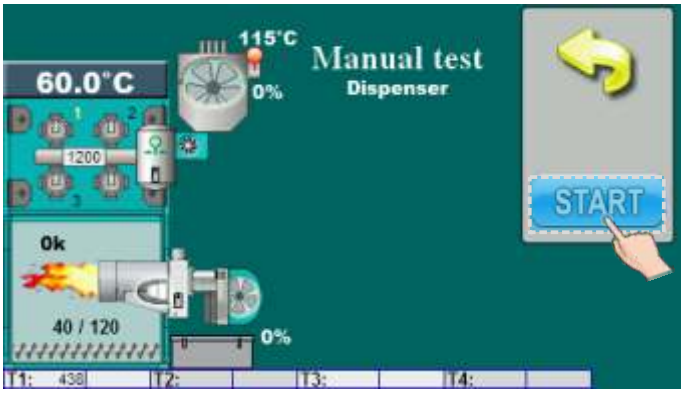




This option allows you to check work of flue gas box cleaning system.

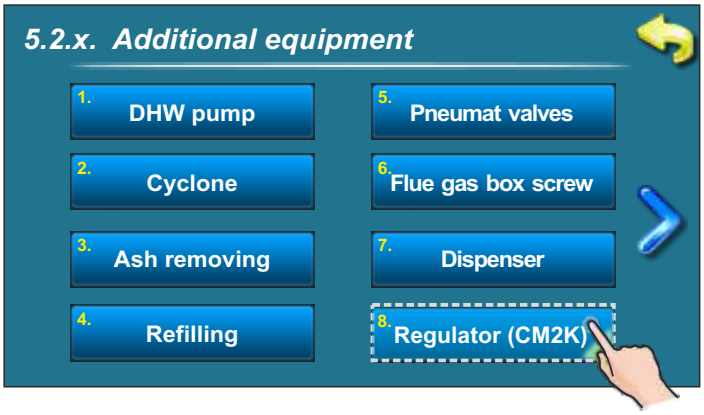
5.2.x.x DISPENSER - (additional equipment)



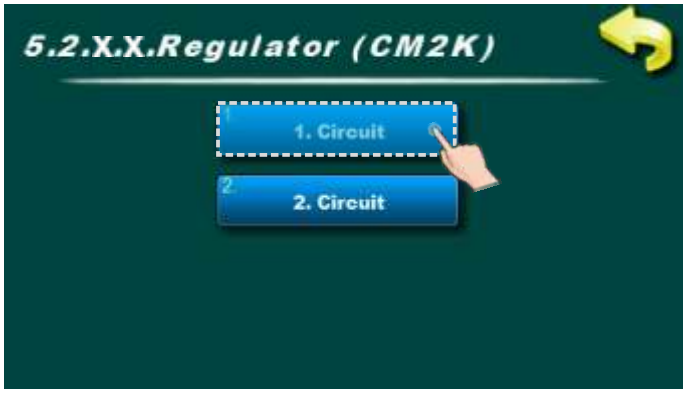


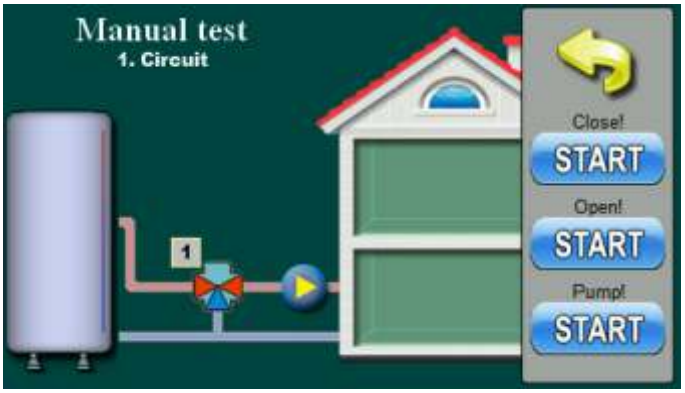
This option allows you to check work of fuel dispenser.

5.2.x.x REGULATOR CM2K - (additional equipment)



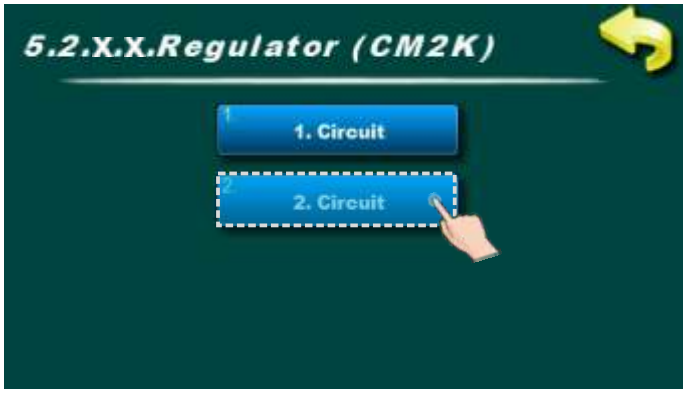
5.2.x.x.1 REGULATOR CM2K - 1. CIRCUIT (additional equipment)

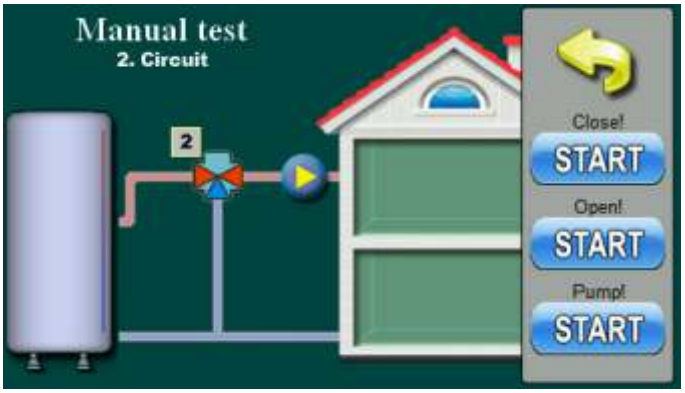




This option allows you to check work pump and mixing valve on 1. heating circuit.

5.2.x.x.2 REGULATOR CM2K - 2. CIRCUIT (additional equipment)





This option allows you to check work pump and mixing valve on 2. heating circuit.

Note: Number od heating circuit depend about installed number of CM2K modules!

5.3 FILLING CONVEYOR

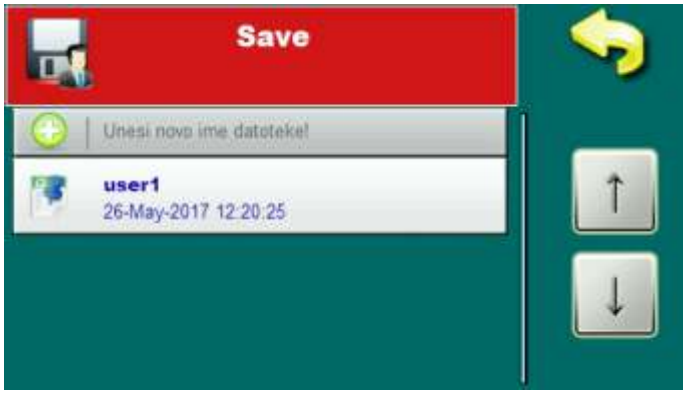
This option allow filling of empty feeder screw with pellets. At start-up or missing fuel, when is feedery screw empty this option is used for filling feeder screw. By pressing „START" feeder screw start with work. This option must be turned on until fuel start droping from feeder screw.

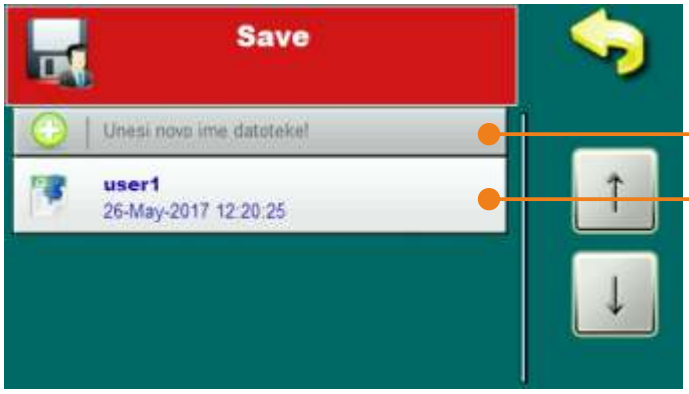
5.4 WEIGHING CHECK

This option allow weighing feeder screw supply in set time.

5.5. SAVE / LOAD

5.5.1. SAVE

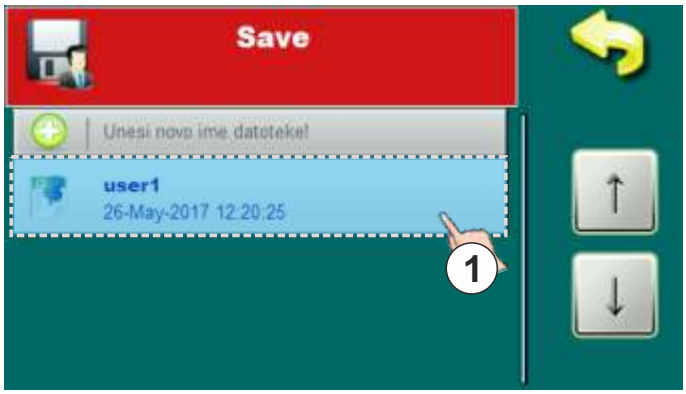




Button for saving settings in new image

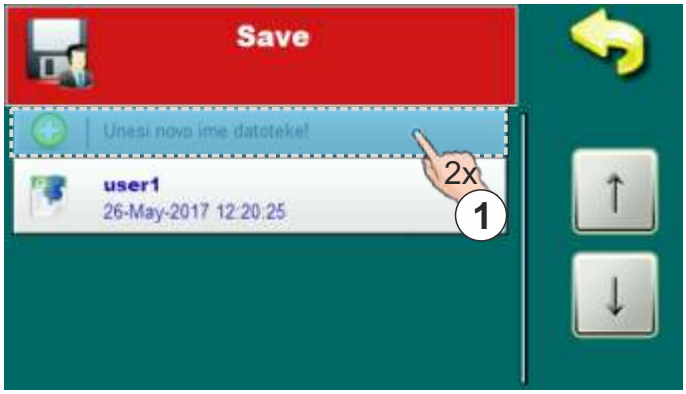
Existing saved image (if exist)

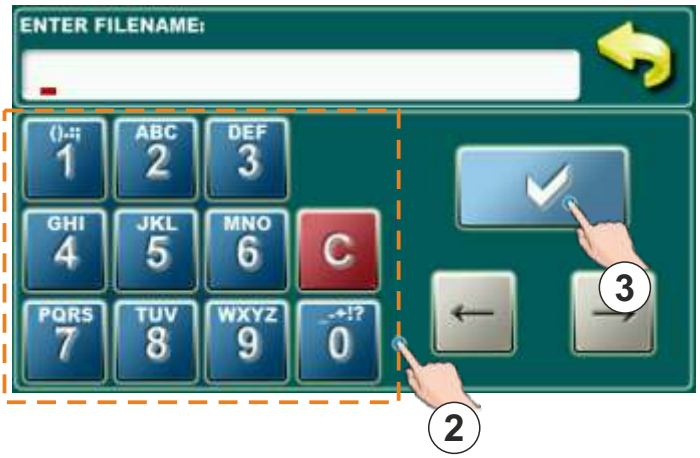
SAVING ADJUSTMENTS IN EXISTING IMAGE



For saving in existing image is necessary to press on exist image (1). On display will be displayed message „Are you sure?". Is necessary to confirm message (2) and press button for saving confirmation (3). On display will be displayed message „Successful" which mean that settings are successful saved. Confirm message by pressing button (4).

SAVING ADJUSTMENTS IN NEW IMAGE





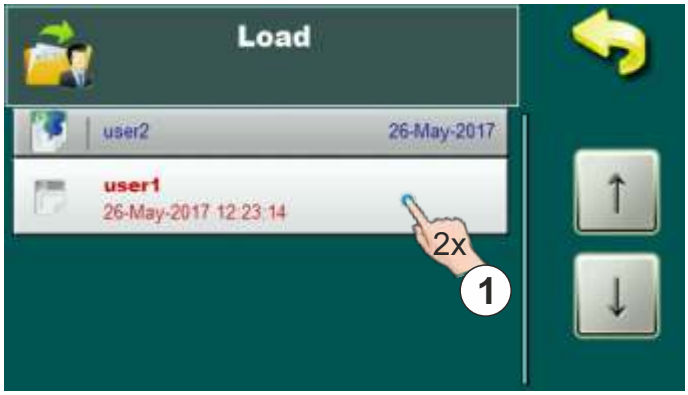
For saving in new image is necessary to press twice on button (1). On display will be displayed option for image name entry. Is necessary to enter image name through numerical part (2). To confirm name press button (3). On display will be displayed message „Successful" which mean that settings are successful saved. Confirm message by pressing button (4).

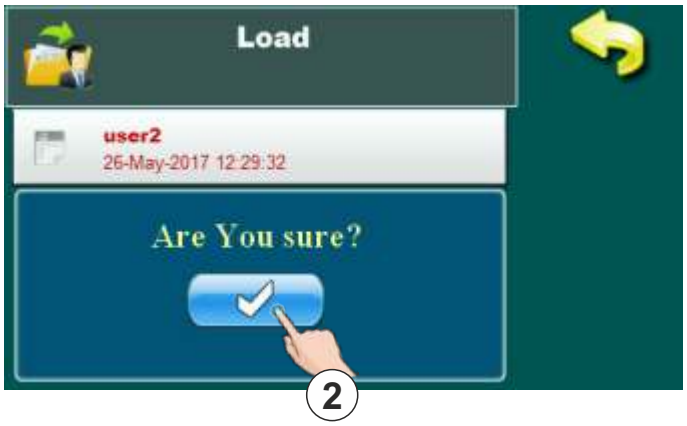
5.5.2. LOAD

Saved image

Saved image

PROCEDURE FOR LOAD IMAGE





For loading is necessary choose image which we want to load and press on it (1). On display will be displayed message „Are you sure?". Is necessary to confirm message (2). On display will be displayed message „Successful" which mean that settings are successful loaded. Confirm message by pressing button (3).

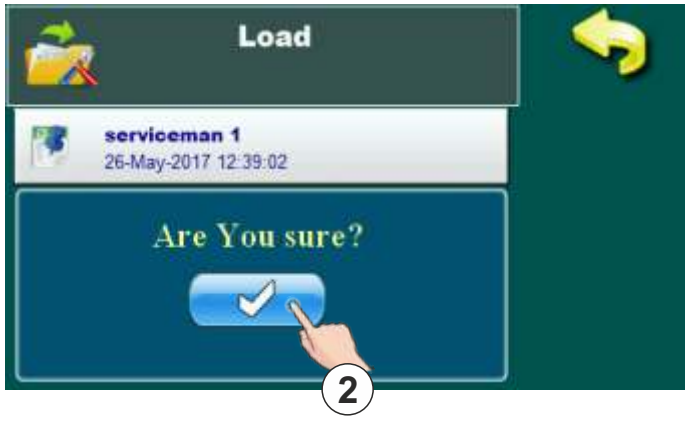
5.5.3. LOAD SERVICE

If is needed, with this option i always possible to load setting which is serviceman adjust and saved at first start-up.

Adjusted fuel for which are saved settings

Saved image with serviceman settings

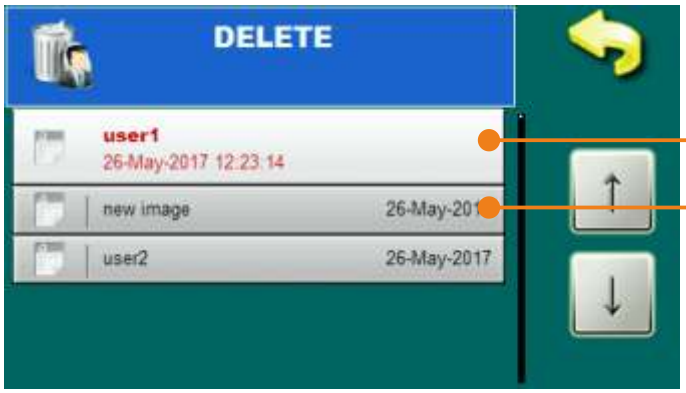
PROCEDURE FOR LOAD SERVICEMAN IMAGE



For loading of serviceman settings is necessary to choose image which we want to load and press on it (1). On display will be displayed message „Are you sure?". Is necessary to confirm message (2). On display will be displayed message „Successful" which mean that settings are successful loaded. Confirm message by pressing button (3).

5.5.4. DELETE

If is needed, with this option is possible to delete saved images.



Saved image

Saved image

PROCEDURE FOR DELETING IMAGE

For delete image is necessary to choose exist image which we want to delete and press on it (1). On display will be displayed message „Are you sure?". Is necessary to confirm message (2) and press button for saving confirmation (3). On display will be displayed message „Successful" which mean that image are successful deleted. Confirm message by pressing button (4).

5.6 STANDARD EQUIPMENT

NOTE:
„Cyclone" will be factory placed in menu „5.6. Standard equipment" for boilers EKO-CKS P UNIT 499-560 because cyclone is standard delivery for that boilers.
For boilers EKO-CKS P UNIT 140-430 „Cyclone" will be placed in menu „5.7. Additional eqipment" and that only if is installed and configured as additional equipment.

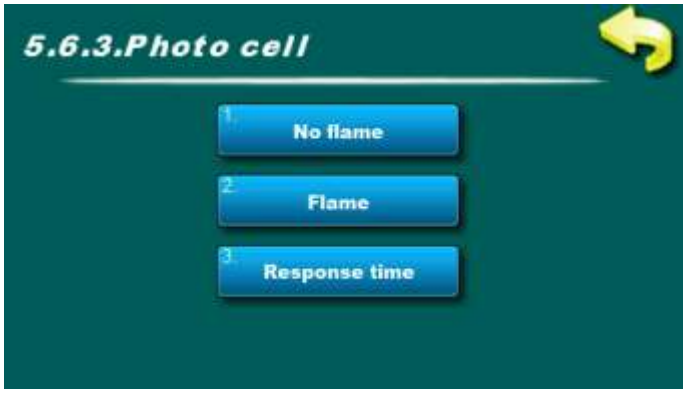
5.6.x FEEDER SCREW

This option allow preview of feeder screw parameters. User can't change this parameters.

5.6.x COMPRESSED AIR

This option allow preview of compressed air parameters. User can't change this parameters.

5.6.x PHOTOCELL



This option allow preview of photocell parameters. User can't change this parameters.

5.6.x 3-WAY MIXING VALVE

This option allow preview of 3-way mixing valve parameters. User can't change this parameters.

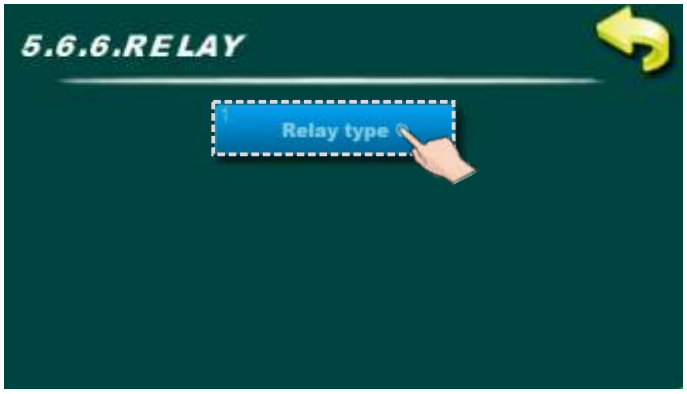
5.6.x MOTOR MODULES

This option is only available if an authorized service technician has configured "MOTOR MODULES" under "permanent settings".

"MOTOR MODULES" - pellet dosing into the burner only using a 3-phase (400 V) motor. If a coil is installed in the conveyor, the 3-phase motor (400 V) must have a built-in reverse brake.

This option is used to view the entered parameters of the three-phase pellet conveyor motor. The user cannot change these parameters.

5.6.x RELAY



This option is used to view the settings of the multifunction RELAY. Select a multifunction RELAY can only be to do by an authorized service technician.

Relay type (possible choice)
- factory: Disabled
- ALARM
- Alt. Boiler (Alternative boiler)
- Auxiliary boiler

Relay type: ALARM (can only be selected by an authorized service technician)

Alarm type (can only be selected by an authorized service technician):
- factory: Stop errors (the relay switches on when an error occurs which stops further operation of the boiler)
- **All errors** (the relay switches on when any fault from the boiler fault list occurs)
- **Errors + Warn.** (the relay switches on when any fault from the boiler fault list occurs or warning from the boiler warnings list)

Relay polarity (possible choice, can be selected by the user):
- factory: Normal close
- Normal open

Relay type: Alt. boiler (can only be selected by an authorized service technician)

Alt. Boiler state (possible choice, can be selected by the user):

- factory: AUTO START
Possible choice: Manual OFF, Manual ON, AUTO START, OFF, ON, FREEZE ON

AUTO START – The relay will give a request for the operation of the alternative boiler if the boiler (main boiler) needs to work, and the occurrence of a fault on the main boiler does not allow its operation.

Manual OFF – the option to switch on the alternative boiler is switched off manually (RELAY will not switch ON an alternative boiler)

Manual ON – RELAY permanently requests the operation of an alternative boiler

OFF – The AUTO START gave an order to the RELAY to switch on the alternative boiler, but it was switched off by the schedule of the main boiler or the external start (external control) of the main boiler.
After the schedule or external start (external control) of the main boiler requests boiler operation the state "OFF" goes into the state "ON" and RELAY gives a request for the operation of an alternative boiler.

ON – RELAY gives a request for the operation of an alternative boiler. This state can automatically change only to the **"OFF"** state if the main boiler schedule or external start (external control) of the main boiler is switched off, the state returns to **"ON"** when the schedule or external start (external control) of the main boiler requests operation boiler.

FREEZE ON – if the state "FREEZE ON" has been selected when the need for operation of the main boiler due to freeze on protection RELAY gives a request for the operation of an alternative boiler and the state goes to "ON".

Important!
When the state "ON" or "OFF" is selected, it is considered that the boiler has requested the operation of an alternative boiler (which means that there is a delay in the operation of the main boiler) only by manual selection it is possible to change these states.

Relay type: Auxiliary boiler (can only be selected by an authorized service technician)

The relay is switched on if there is a permit for operation of the boiler (main boiler) and the CONDITIONS FOR OPERATION OF THE AUXILIARY BOILER are fulfill).

ON Time (possible choice, can be selected by the user):

- Cold start: Factory: 9000 sec, possible choice 0-21600 sec

- Difference: Factory: 3600 sec, possible choice 0-18000 sec

OFF Time (possible adjustment, can be selected by the user):

- Factory: 300 sec, possible choice 0-18000 sec

CONDITIONS FOR OPERATION OF THE AUXILIARY BOILER:

- fulfilled conditions for operation of auxiliary boiler: CONDITION 1 and CONDITION 2 must be fulfilled:

CONDITION 1: ON TIME (boiler start time (main boiler))
Factory: 3600 sec, adjustable: 0 - 18000 sec

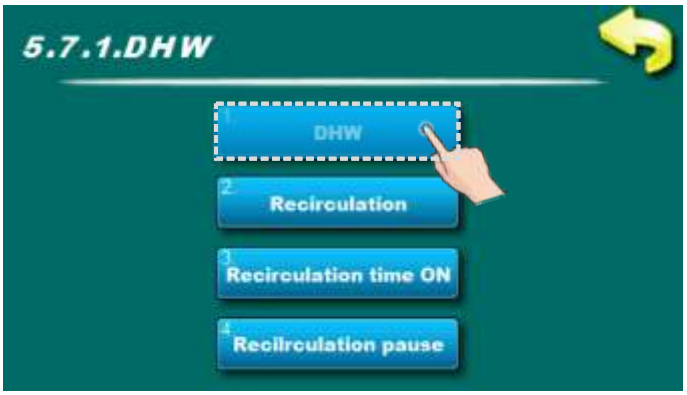
CONDITION 2:
a) Boiler (main boiler) is connected to the storage tank BUF
CONDITION 2: Tbuf_set - Tbuf_up measured > Taku_kz
Taku_kz: Factory: 6°C, adjustable 1°C - 15°C
b) Boiler (main boiler) is connected to the hydraulic crossover CRO + sensor
CONDITION 2: Ths_kz > Ths_set - Ths_measured
Ths_kz: Factory: 6°C, adjustable 1°C - 15°C
c) Boiler (main boiler) is connected to the crossover CRO (HS)
CONDITION 2: (there is no condition)

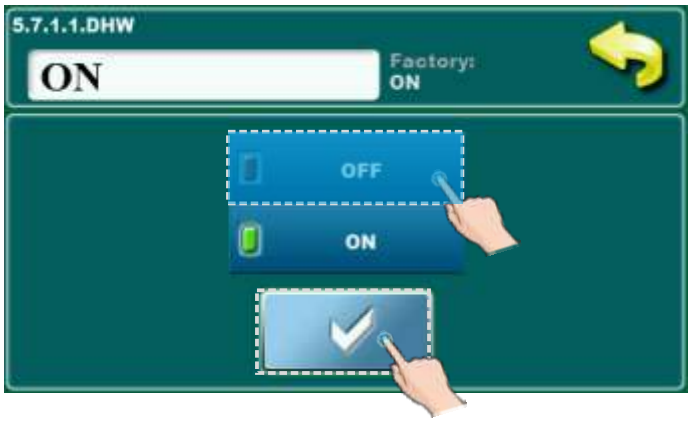
DISAPPEARANCE OF CONDITIONS FOR OPERATING AUXILIARY BOILER (relay shuts down the auxiliary boiler):
OFF TIME (time from the moment when the boiler (main boiler) realize the set temperature), factory: 300 sec, adjustable 0-18000 sec

Note: switching off the boiler (main boiler) manually, by time program or remotely automatically switches off the auxiliary boiler.

5.7. ADDITIONAL EQUIPMENT (for equipment which was installed and configured by an authorized tehnician)

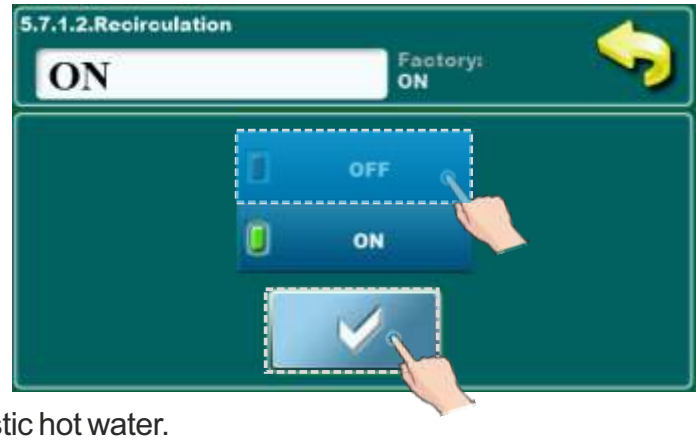
5.7.x.1 DHW





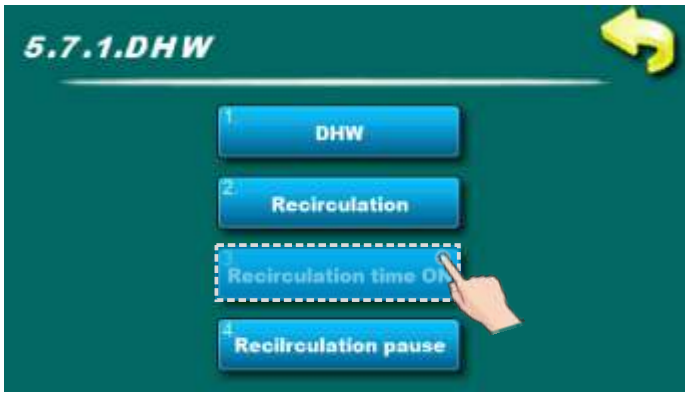
This option allow domestic hot water turning on / off.
Factory: ON

5.7.x.2 RECIRCULATION (if is configured)



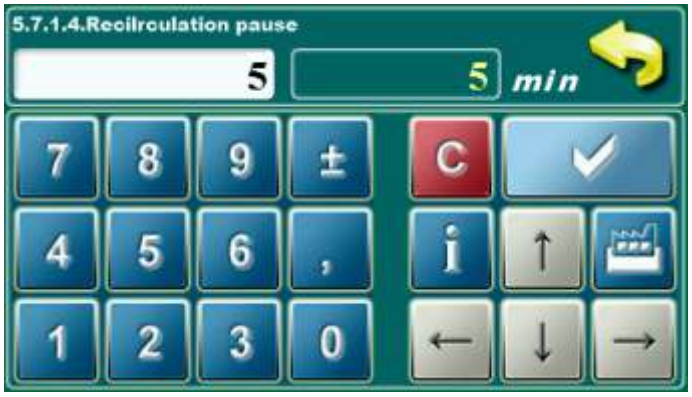
This option allow turning on / off recirculation of domestic hot water.

5.7.x.3 RECIRCULATION TIME ON (if is configured)



In this parameter is possible to adjust working time for recirculation.
Possible adjustment:
- Factory adjusted: 5 min
- Minimal adjustment value: 0 min
- Maximal adjustment value: 1440 min

5.7.x.4 RECIRCULATION PAUSE (if is configured)



In this parameter is possible to adjust recirculation pause time.
Possible adjustment:
- Factory adjusted: 5 min
- Minimal adjustment value: 0 min
- Maximal adjustment value: 1440min

5.7.x CYCLONE (additional equimpent for EKO-CKS P UNIT 140-430)

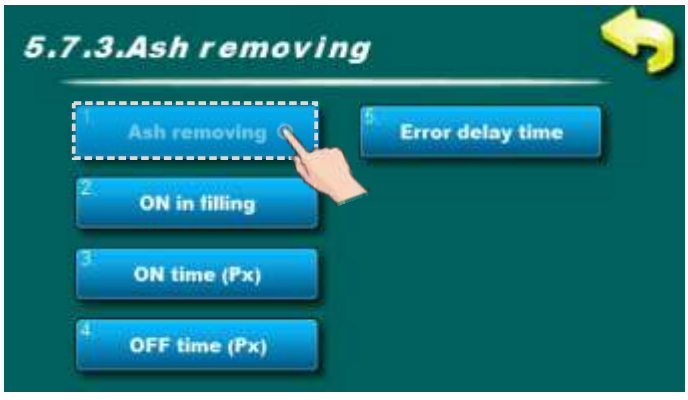
NOTE:
„Cyclone" will be factory placed in menu „5.6. Standard equipment" for boilers EKO-CKS P UNIT 499-560 because cyclone is standard delivery for that boilers.
For boilers EKO-CKS P UNIT 140-430 „Cyclone" will be placed in menu „5.7. Additional eqipment" and that only if is installed and configured as additional equipment.

It's not possible to adjust this parameter.

5.7.x ASH REMOVING

This option allow adjustment of ash removing system.

5.7.x.1. ASH REMOVING



It's not possible to change this parameter.

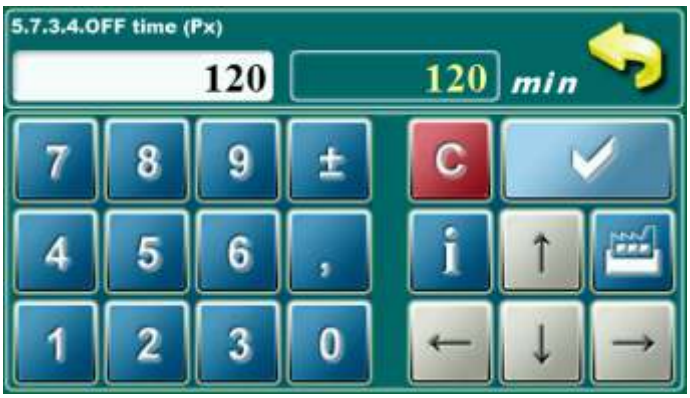
5.7.x.2 ON IN FILLING

It's not possible to change this parameter.

5.7.x.3 ON TIME (Px)

In this parameter is possible to adjust ash removing working time.
Possible adjustment:
- Factory adjusted: 300 sec
- Minimal adjustment value: 1 sec
- Maximal adjustment value: 7200 sec

5.7.x.4 OFF TIME (Px)



In this parameter is possible to adjust ash removing off time.
Possible adjustment:
- Factory adjusted: 120 min
- Minimal adjustment value: 30 min
- Maximal adjustment value: 360 min

5.7.x.5 ERROR DELAY TIME

It's not possible to change this parameter.

5.7.x PNEUMAT

This option allow preview of pneumat parameters. User can't change this parameters.

5.7.x REFILLING

REFILLING - refilling the pellet tank (with boiler) from the seasonal pellet tank.

Possible types (selected by an authorized service technician):
- OFF
- 1 screw
- 2 screws
- 2 screws + sensor

The user can view and adjust some parameters only.

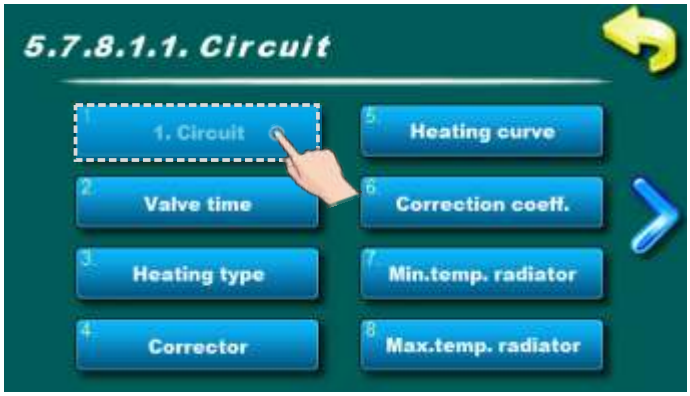
5.7.x FLUE GAS BOX SCREW

This option allow preview of flue gas box cleaning parameters. User can't change this parameters.

5.7.x REGULATOR CM2K

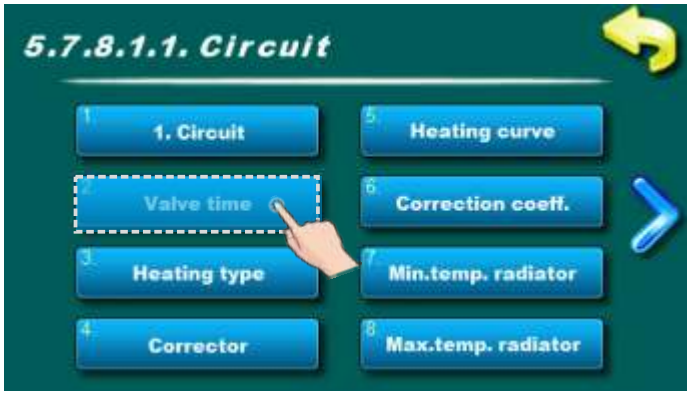
In this menu is possible to change parameters for heating circuits. Number of heating circuits depend about number of installed CM2K modules.

5.7.x.x.1. 1. CIRCUIT / 2. CIRCUIT / 3.CIRCUIT / 4. CIRCUIT...



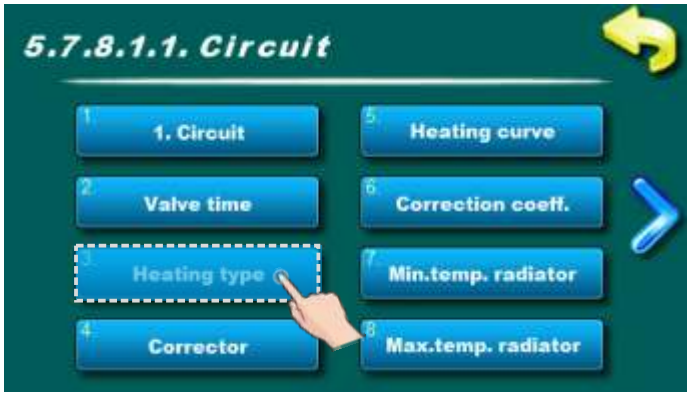
In this parametes is possible to turn on / off heating circuit.

5.7.x.x.2. VALVE TIME



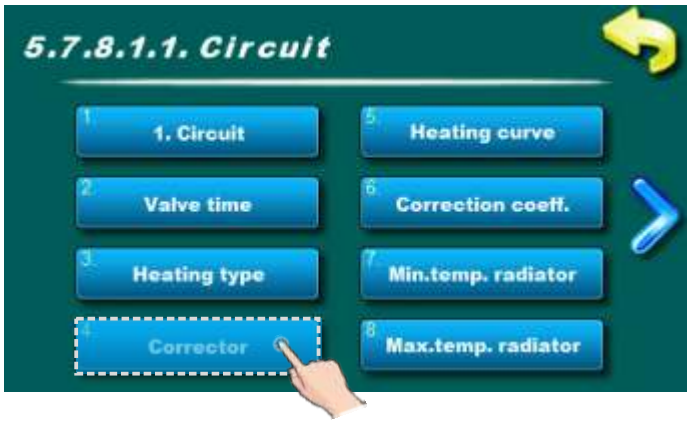
This parameter is available only for preview. It's not possible to change this parameter.

5.7.x.x.3. HEATING TYPE



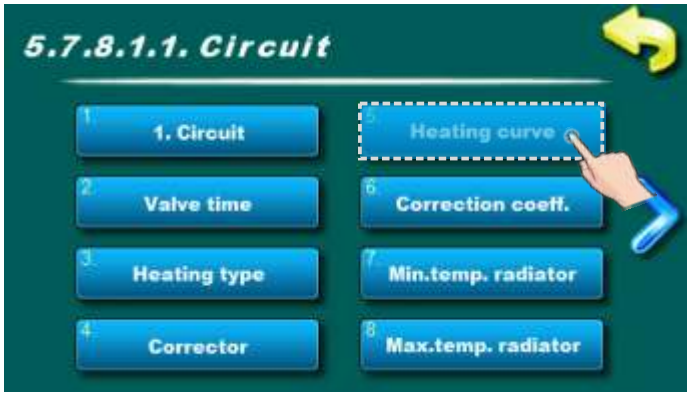
This parameter is available only for preview. It's not possible to change this parameter.

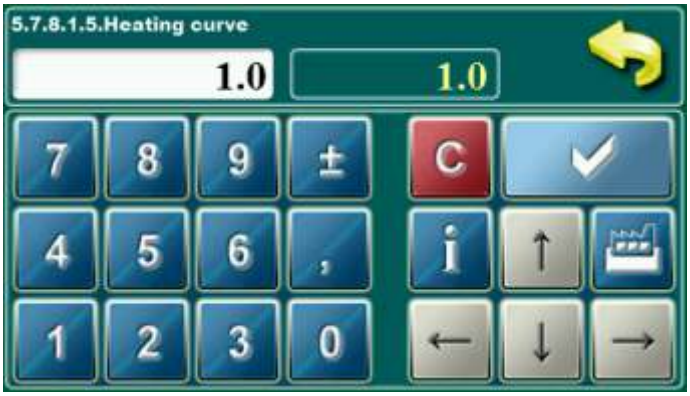
5.7.x.x.4. CORRECTOR



This parameter is available only for preview. It's not possible to change this parameter.

5.7.x.x.5. HEATING CURVE

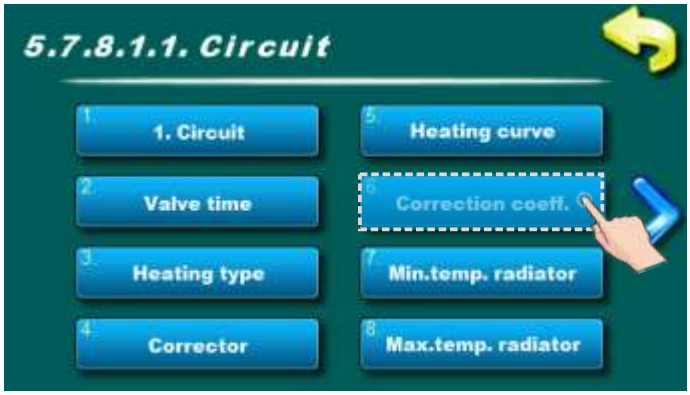


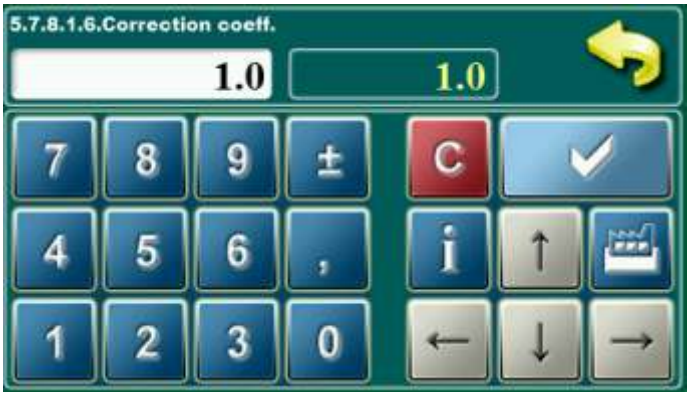


This parameter determine the coefficient of the heating curve. The regulation calculate required flow temperature according to the heating curve and outside temperature to achieve the desired room temperature.

Possible adjustment: - Factory adjusted: 1
- Minimal adjustment value: 0,1
- Maximal adjustment value: 4,0

5.7.x.x.6. CORRECTION COEFF.

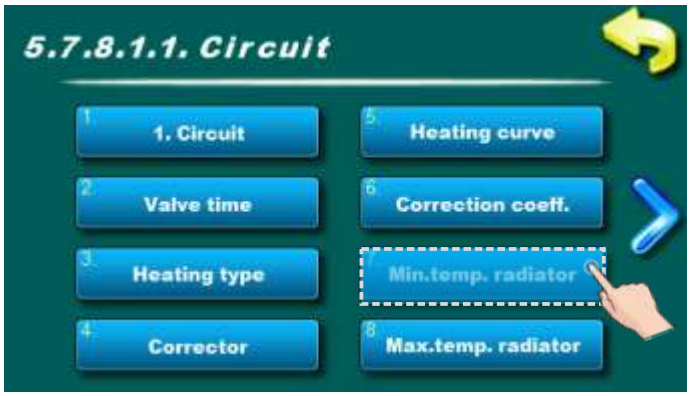


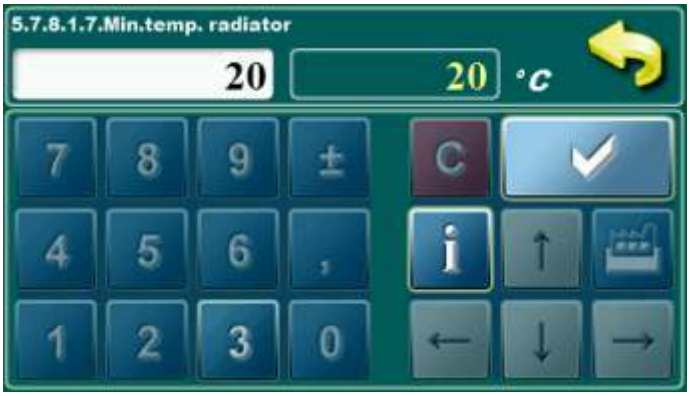


This parameter determines the influence of the room corrector. When this coefficient is larger, room corrector will more affect to the calculated required flow temperature in the heating circuit.

Possible adjustment: - Factory adjusted: 1
- Minimal adjustment value: 0,1
- Maximal adjustment value: 5,0

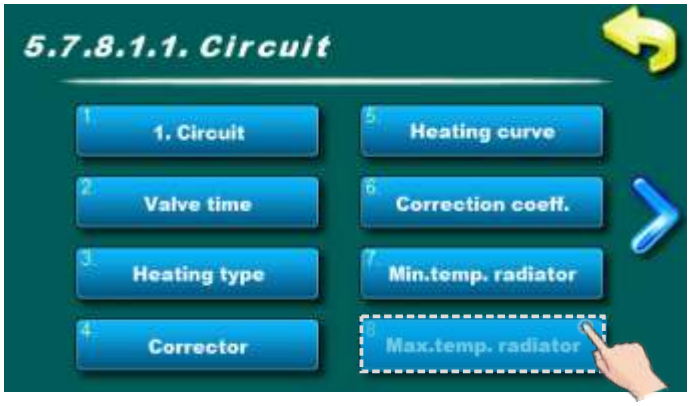
5.7.x.x.7. MINIMAL TEMPERATURE RADIATOR

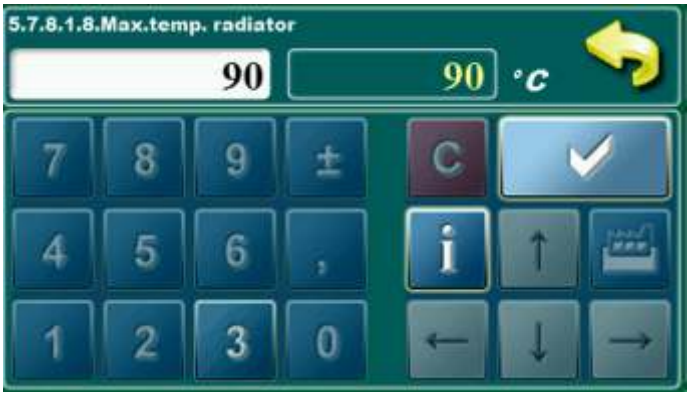




This parameter is available only for preview. It's not possible to change this parameter.

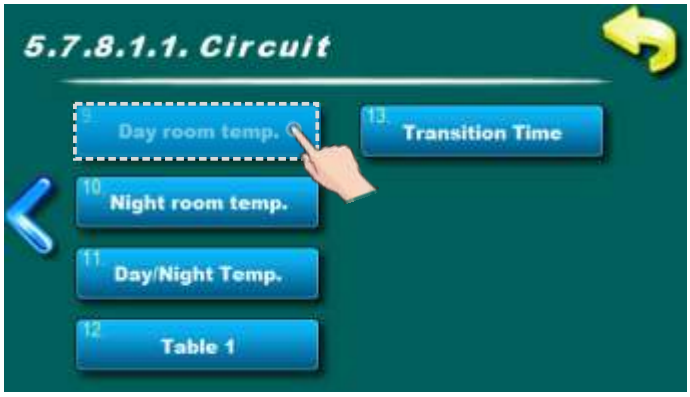
5.7.x.x.8. MAXIMAL TEMPERATURE RADIATOR

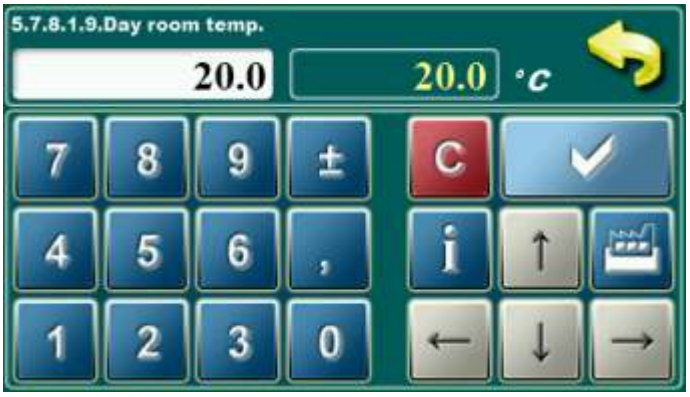




This parameter is available only for preview. It's not possible to change this parameter.

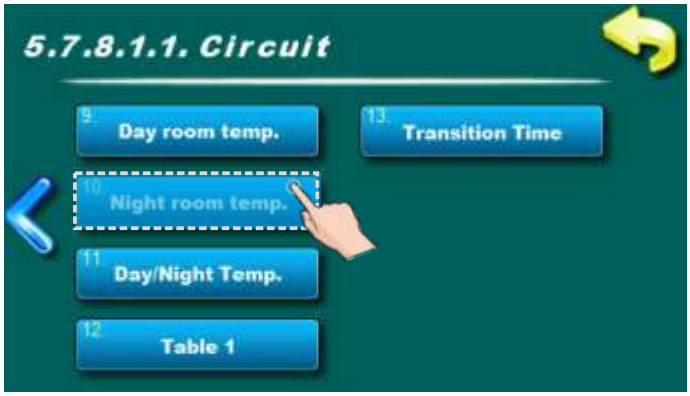
5.7.x.x.9. DAY ROOM TEMPERATURE

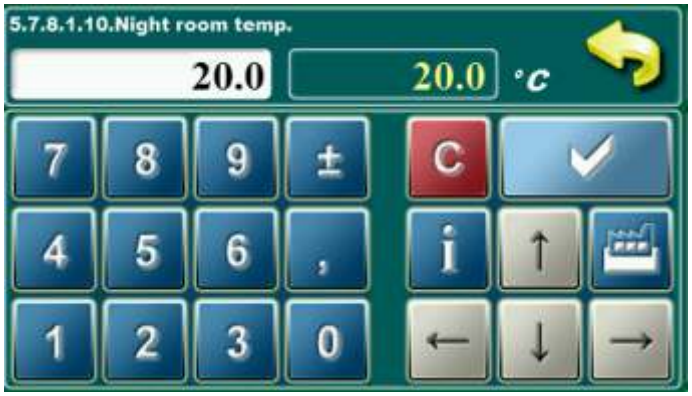




This parameter determines the value of day room temperature.
Possible adjustment: - Factory adjusted: 20,0°C
- Minimal adjustment value: 5°C
- Maximal adjustment value: 30,0°C

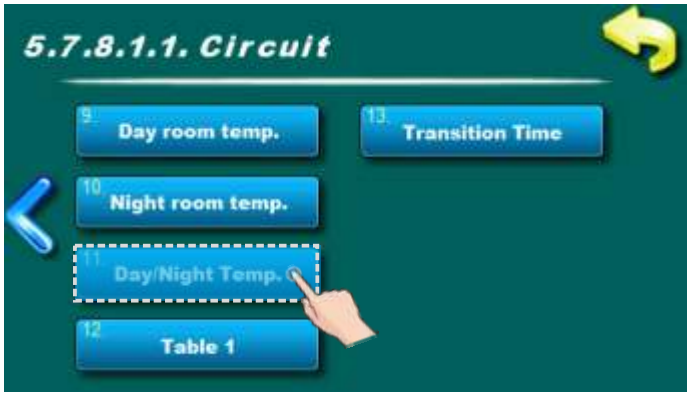
5.7.x.x.10. NIGHT ROOM TEMPERATURE





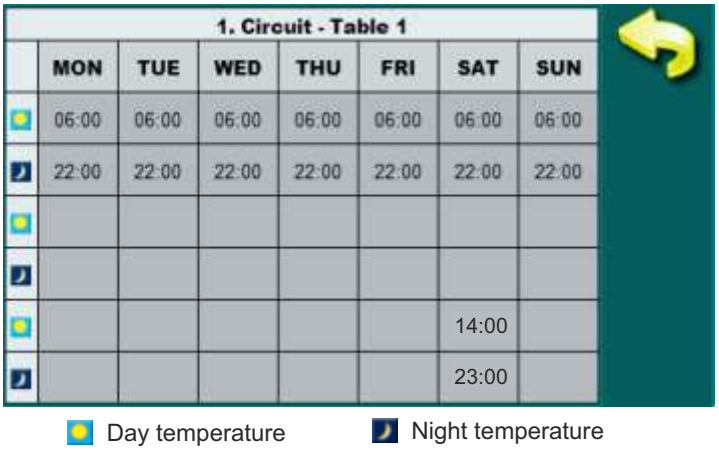
This parameter determines the value of night room temperature.
Possible adjustment: - Factory adjusted: 20,0°C
- Minimal adjustment value: 5°C
- Maximal adjustment value: 30,0°C

5.7.x.x.11. DAY / NIGHT TEMPERATURE



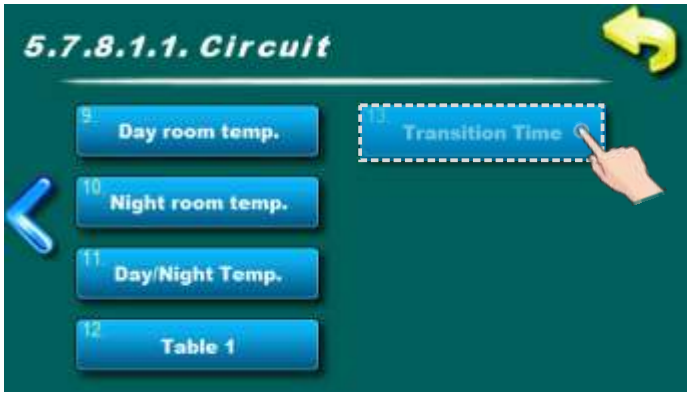
This option enables you to choose type of desired temperature (day, night or table.) In next page you can see how to fill a table.
Possible selection:
- Factory selected: Day temperature
- Possible selection: Day temperature, Night temperature, Table

5.7.x.x.12. TABLE 1



Each cell marks the beginning of some type (day/night) of selected room temperature. According to this table every day from monday at 06:00 am is activated day room temperature, until 22:00 pm when is activated night room temperature until tuesday, when at 06:00 am is again activated day room temperature. On saturday, the day temperature is activated at 05:00 am and works until 10:00 am when is switched to night temperature. At 14:00 pm is again activated day room temperature up to 23:00 pm when is again switched to night temperature. When passed one cycle (week) circle starts again from the beginning. The values of a day/night room temperature can be selected as is described in previous pages.

5.7.x.x.13. TRANSITION TIME

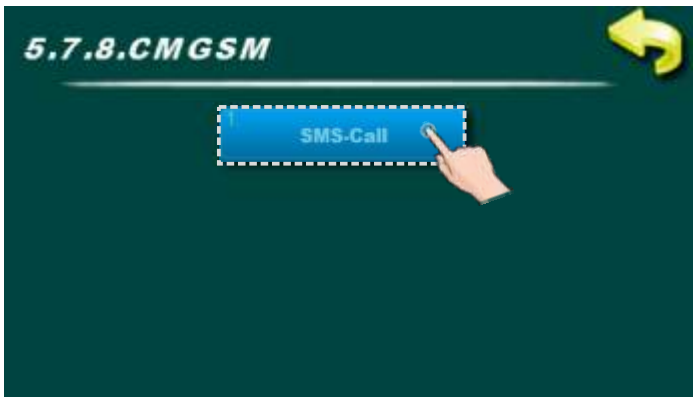


This parameter is used only when configuration doesn't contain room corrector, because regulation doesn't have information of room temperature.
This parameter is time which is presumed that the system will achieve a given room temperature in a transition from day to night mode, and vice versa. So, this is time in which will "flow temperature" be optimally adjusted to achieve quick transition.

Possible adjustment: - Factory adjusted: 3600 sec
- Minimal adjustment value: 0 sec
- Maximal adjustment value: 18000 sec

5.7.x. CMGSM

5.7.x.1. SMS-CALL



Option for turning on / off sms-call (if is installed and configured).
Possible selection:
- Factory selected: OFF
- Possible selection: ON, OFF;

5.7.x. CASCADE

5.7.x.1. CASCADE

This option allow preview of cascade selection. User can't change this parameter.

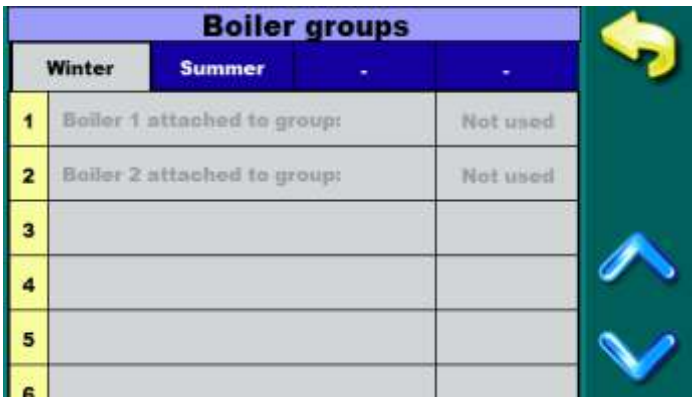
5.7.x.2. DEVICE NUMBER

This option allow preview of device number adjustment. User can't change this parameter.

5.7.x.3. DEVICE ADRESS

This option allow preview of device adress selection. User can't change this parameter.

5.7.11.4. BOILER GROUPS



This option allow preview of boiler groups selection. User can't change this parameter.

5.7.11.5. TIME TO ON

This option allow preview of time to ON adjustment. User can't change this parameter.

5.7.11.6. TIME TO OFF

This option allow preview of time to OFF adjustment. User can't change this parameter.

5.7.x.7. TIME DIFFERENCE

This option allow preview of time difference adjustment. User can't change this parameter.

5.7.x.8. COUNTER RESET

This option allow you to reset counter.

5.7.x. INTERNET SUPERVISION

IMPORTANT NOTES:

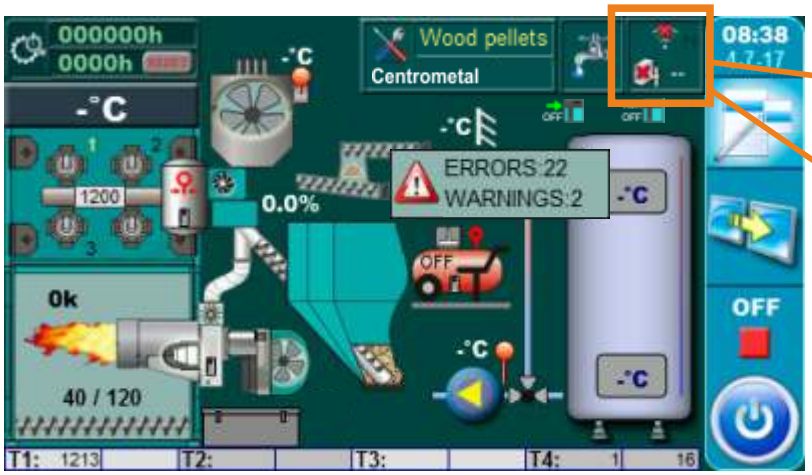
CM WiFi-box requires active DHCP server of Access Point (e.g. router) because manual setting of network parameters is not possible. For more informations contact administrator of your home network.

To be able to use Cm WiFi box on EKO-CKS P UNIT boiler, minimum required firmware versions of the boiler regulation must be: "v1.09"
Boiler version is displayed in the "INFO" menu.
If there is older firmware version, it must be updated to be able to use Cm WiFi box.
For firmware 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.

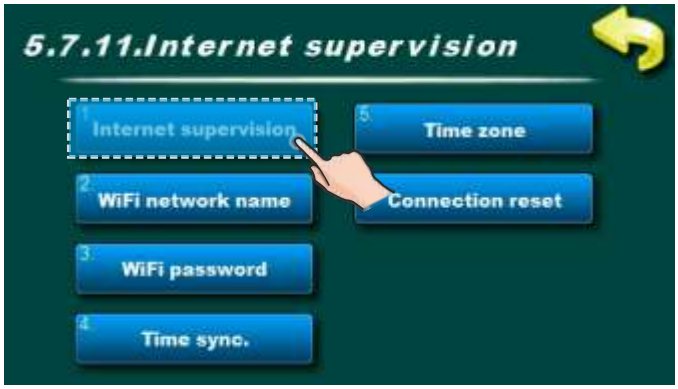
This option is used to set the regulation to connect boiler to the internet through local Wi-Fi network.
This option is used to change internet supervision settings.
This option is only visible if "Cm WiFi box" is connected to the boiler regulation by UTP cable.

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.



Regulation is connected with web portal (internet supervision is possible)

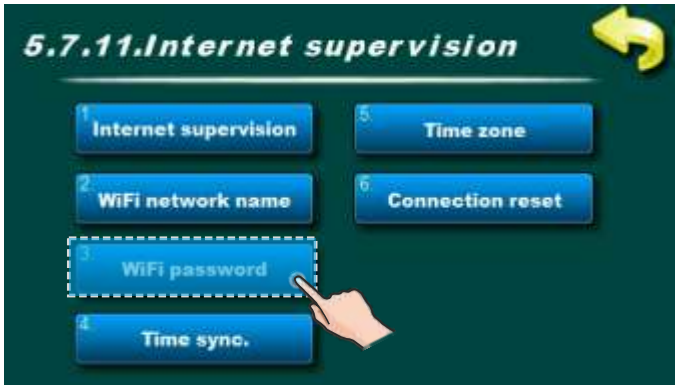
Regulation is not connected with web portal (internet supervision is not possible)



Factory: Supervision + control
OFF, Supervision, Supervision + control

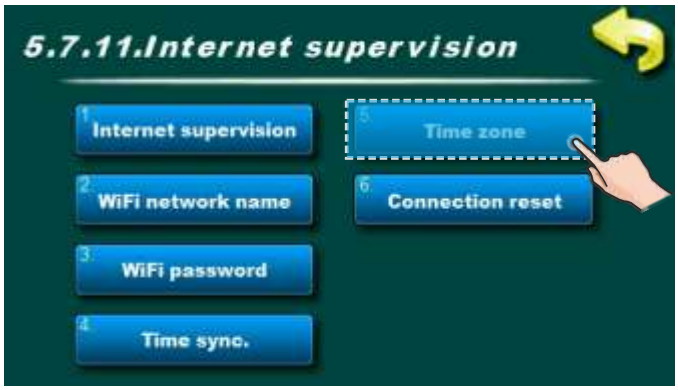
This option is used to set and enable/disable internet supervision.

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 able to connect to the WiFI network.

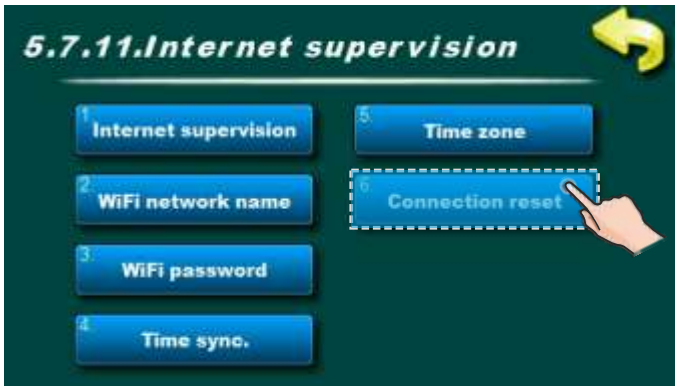


This option allows you to enter a password for your home Wi-Fi network. You must enter exact password or else boiler will not be able to connect to the WiFi network.

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

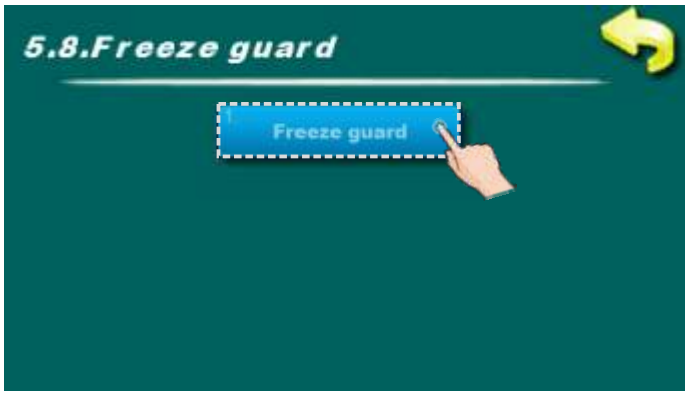


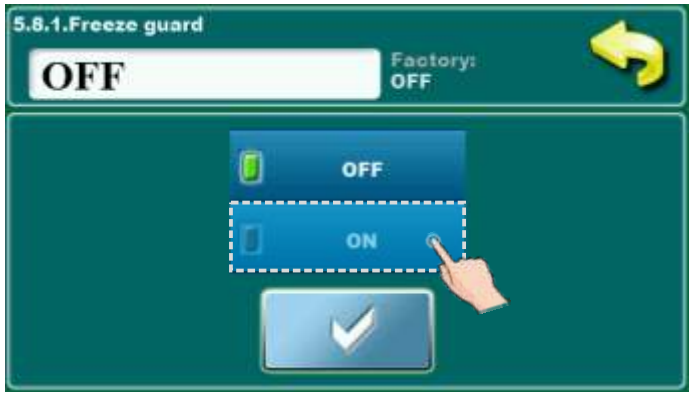
This option allows you to set the time zone if the boiler is in a different time zone than the web portal server. (this option must be set if you enable "Time syncronisation option")



This option allows you to reset connection with home network.

5.8. FREEZE GUARD





Option for freeze guard turning on / off.
Possible selection:
- Factory selected: OFF
- Possible selection: OFF, ON;

5.9. WORK MODE

Option for work mode choose.

Possible selection:
- Factory selected: Heating + DHW
- Possible selection: Heating + DHW, AUTO DHW<>Heat. + DHW, DHW

Heating+DHW - this mode is possible if there are heating circuit/s and DHW, the heating and DHW tank are controlled according to set conditions.
AUTO DHW<>Heat.+DHW - This mode is possible if there are heating circuit/s and DHW, the controller changes Heating+DHW and DHW mode according to set conditions (outside temperature) and it automatically adjusts the system to the selected working mode and to the selected working mode conditions.
DHW - this mode is possible if there are heating circuit/s and DHW, but DHW mode is manually or automatically selected, or there are no heating circuits, just DHW.

Note:
If you really want to use DHW in DHW mode via CM2K, all heating circuits must be manually disabled in CM2K and Heating+DHW mode must be selected

6.0. DISPLAY

6.1. SCREENSAVER

Of 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 be turned off.
Possible adjustment:
- Factory adjusted: 600 sec
- Minimal adjustment value: 10 sec
- Maximal adjustment value: 3600 sec

6.2 LANGUAGE SELECTION

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.(The time until this screen appears can be adjusted in point 6.3.)

Possible selection:

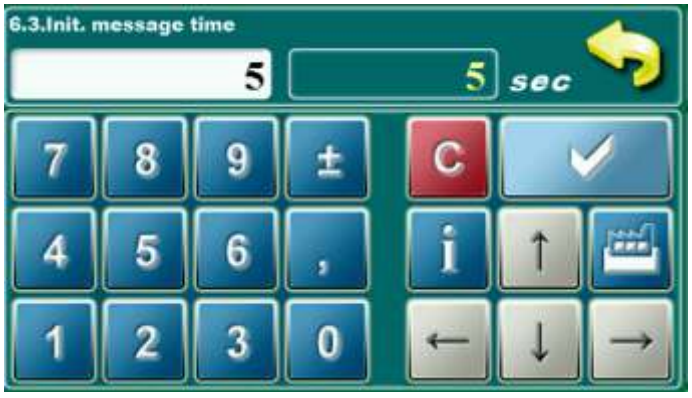
- Factory selected: ON

- Possible selection: ON, OFF;

IMPORTANT!

Automatically resume boiler operation after the disappearance of electric power (PF phases) is not possible if language selection option is turned on.

6.3 INITIAL MESSAGE TIME



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 6.2.) Is set to"DISABLE".

Possible adjustments:

- Factory adjusted: 5 sec

- Minimal adjustment value: 0 sec
- Maximal adjustment value: 20 sec

6.4. SHOW TIMERS

Option for tuning on/off for working hours counter on main screen.
Possible selection:
- Factory selected: ON
- Possible selection: ON, OFF;

6.5. DATE & 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. The clock could be faster/slower (the shift could be 2-3 minutes per month), which is considered normal and we recommend that you adjust it periodically.

6.6. SOUND VOLUME

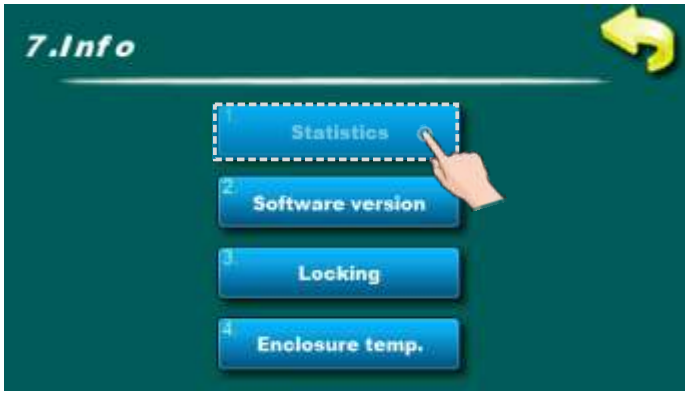
- Sound volume - adjust one of the 3 volume or turn OFF the sound completely.

6.7. SOUND TYPE

- Sound type - select one of the 10 offered sound types.

7.0. INFO

7.1 STATISTICS

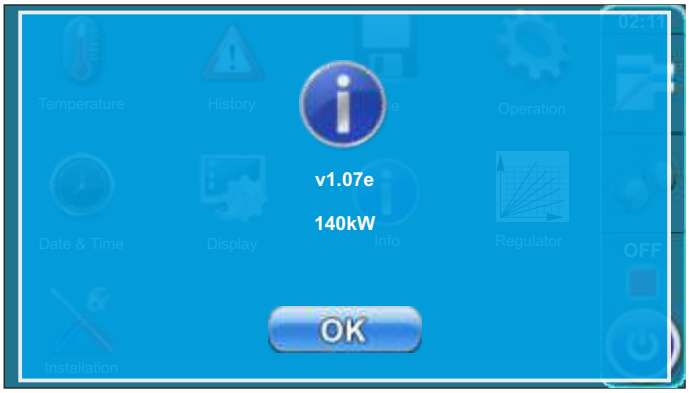


The regulation follows the startup number of the boiler and the work time of certain parts of the boiler.

Boiler devices in statistics:

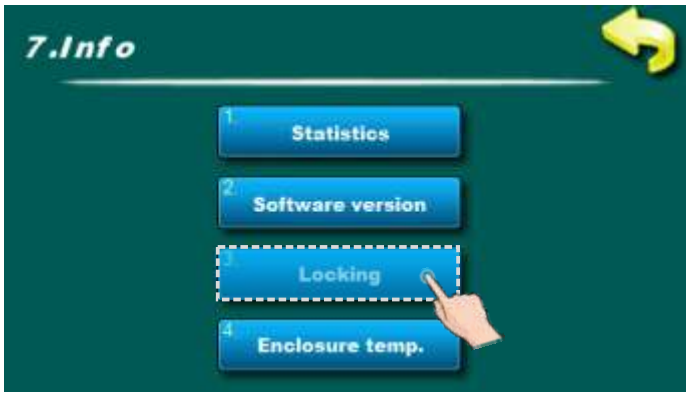
- operation (min)
- burner fan (min)
- flue gas fan (min)
- feeder screw (min)
- heater (min)
- heater count
- pump (min)
- pump count
- flue gas box screw
- ash removing (min)
- time to cleaning (min)
- compressor (min)
- compressor service (min)

7.2. SOFTWARE VERSION



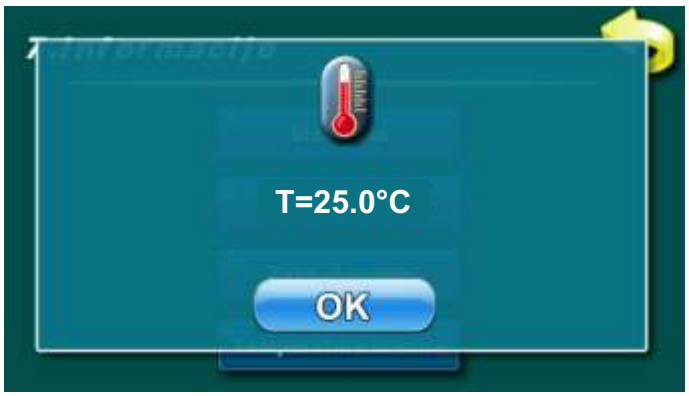
Software version displaying.

7.3. LOCKING



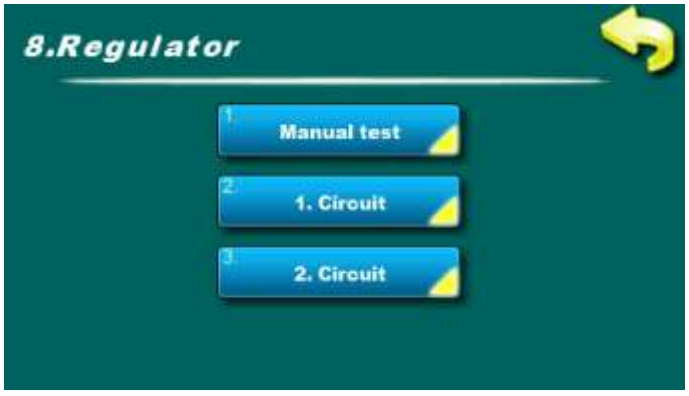
Status of screen locking.
A - if is screen locked on display will be displayed locking informatio - date, time and user which is lock screen.

7.4. ENCLOSURE TEMPERATURE (junction box temperature)



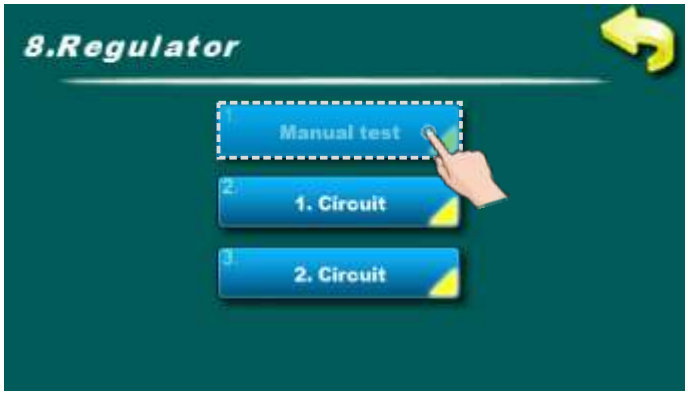
Displaying of junction box temperature.

8. REGULATOR

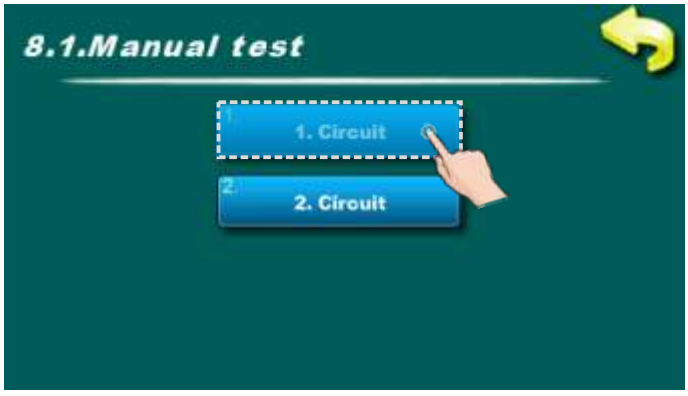


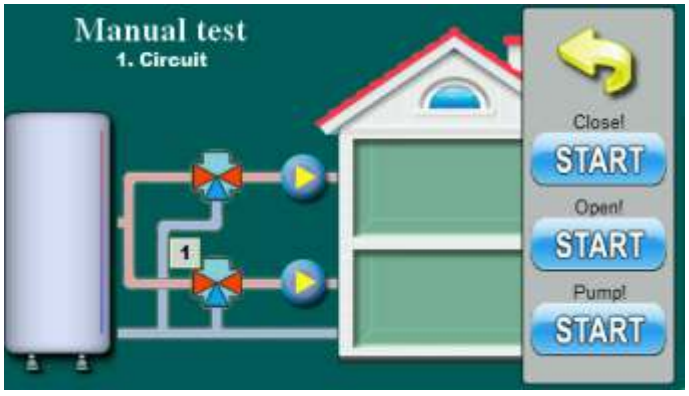
Menu „Regulator" is showed only if module for two heating circuits CM2K-B is installed and configurated.

8.1. MANUAL TEST



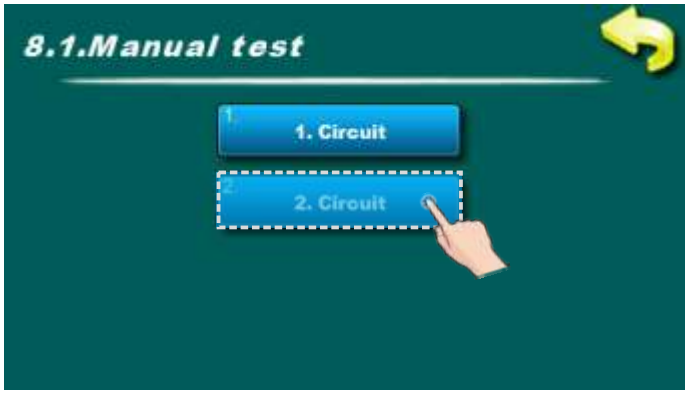
8.1.1. 1. CIRCUIT

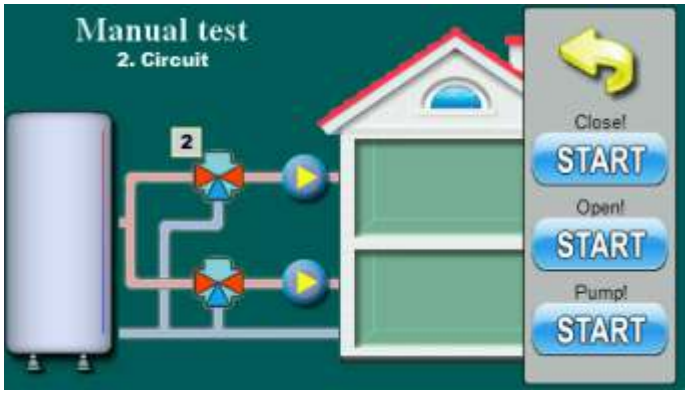




Option for testing elements of 1st heating circuit (mixing valve (START-open), mixing valve (START-close) and pump (START)).

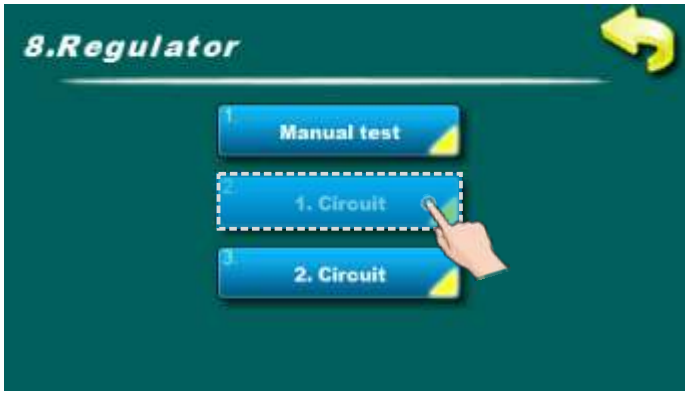
8.1.2. 2. CIRCUIT

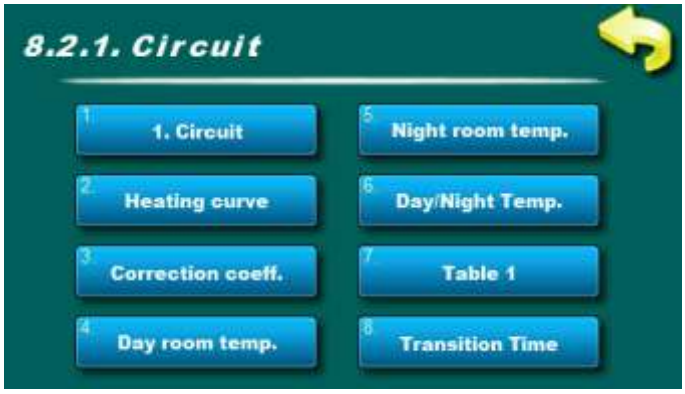




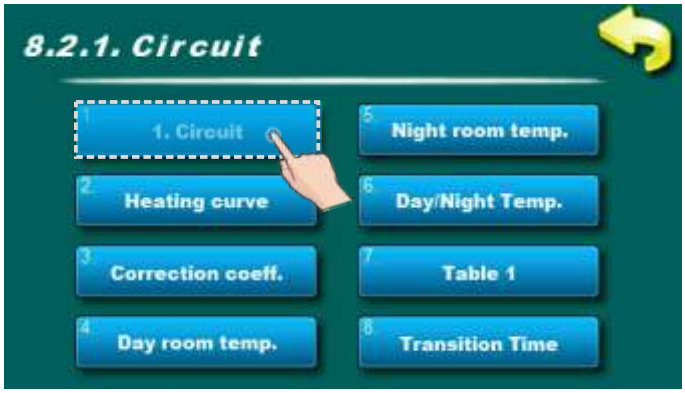
Option for testing elements of 1st heating circuit (mixing valve (START-open), mixing valve (START-close) and pump (START)).

8.2. 1. CIRCUIT



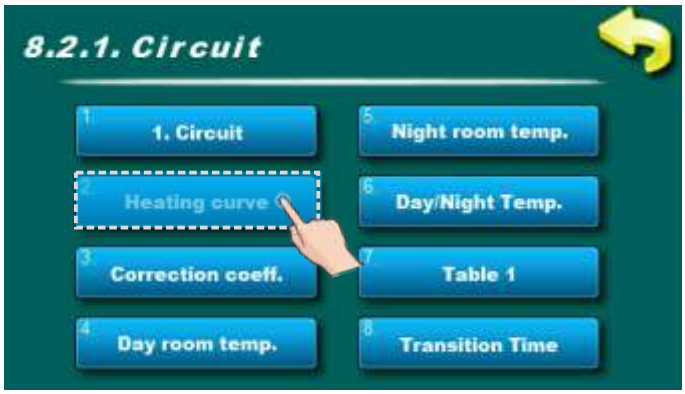


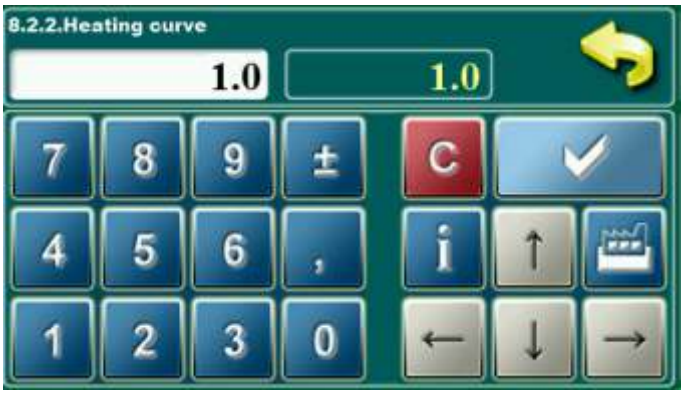
8.2.2.1. CIRCUIT



Option for turning on / off first heating circuit.
Possible selection:
- Factory selected: ON
- Possible selection: ON, OFF;

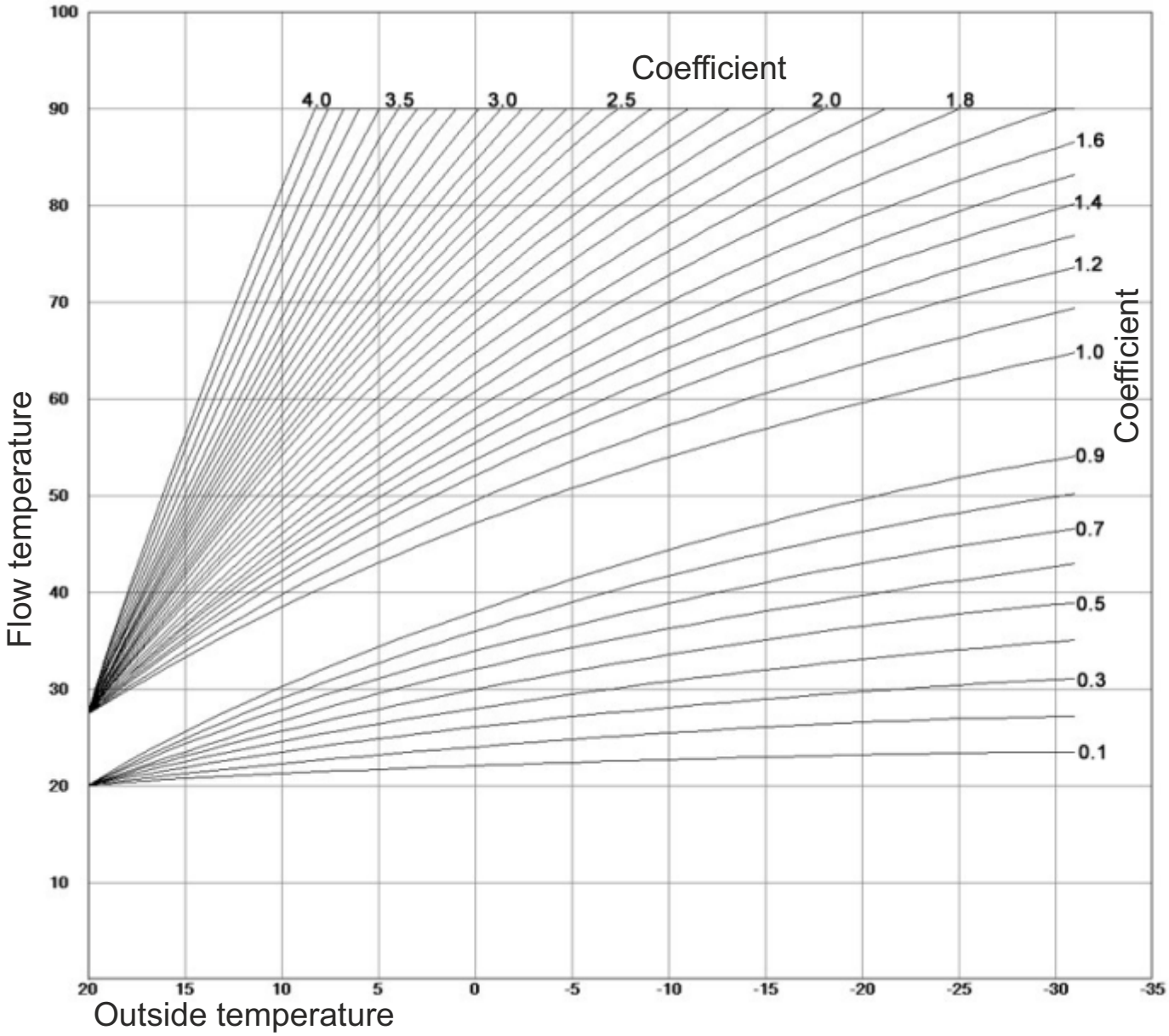
8.2.2. HEATING CURVE



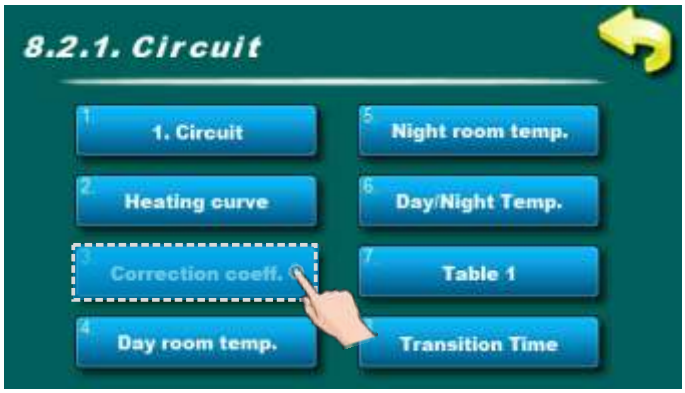


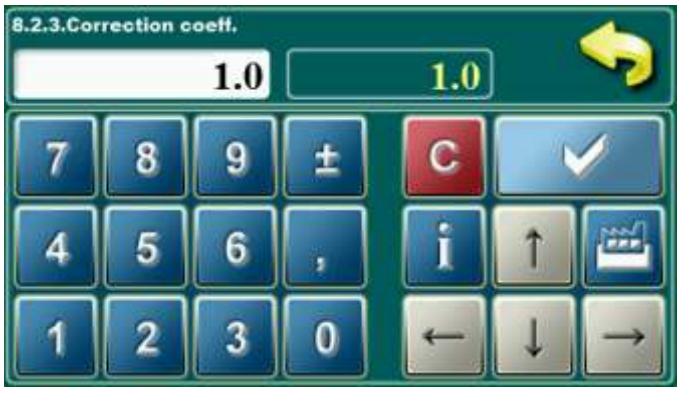
This parameter determine the coefficient of the heating curve. The regulation calculate required flow temperature according to the heating curve and outside temperature to achieve the desired room temperature.

Possible adjustment: **- Factory adjusted: 1**
- Minimal adjustment value: 0,1
- Maximal adjustment value: 4,0



8.2.3. CORRECTION COEFF.

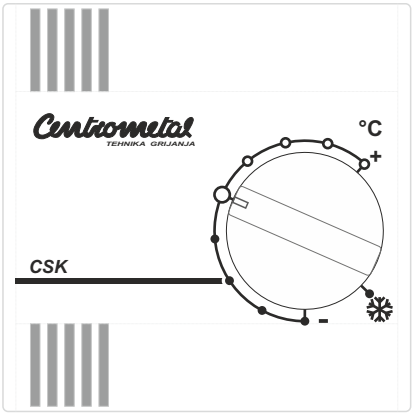




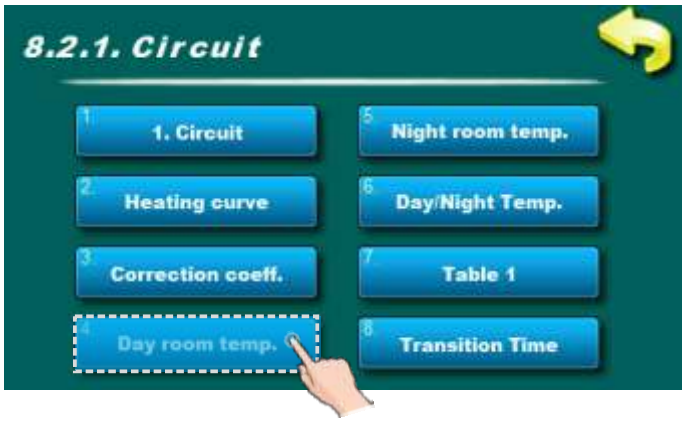
This parameter determines the influence of the room corrector. When this coefficient is larger, room corrector will more affect to the calculated required flow temperature in the heating circuit.

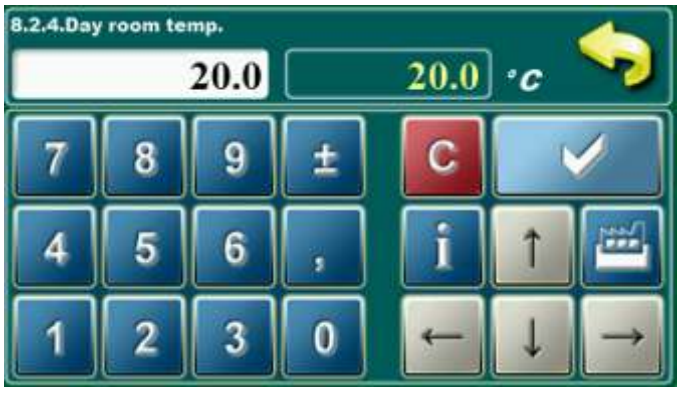
Possible adjustment: - Factory adjusted: 1

- Minimal adjustment value: 0,1
- Maximal adjustment value: 5,0



8.2.4. DAY ROOM TEMPERATURE



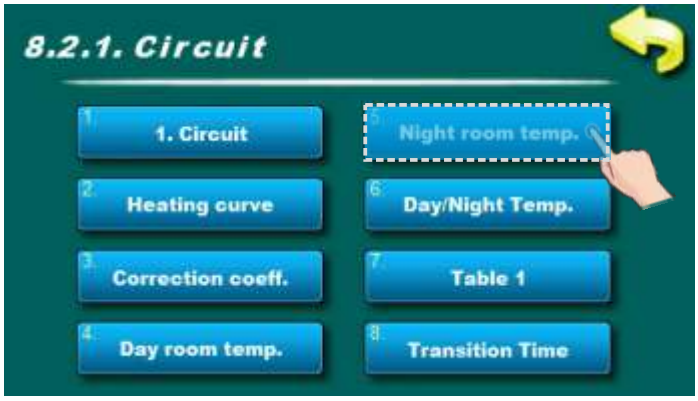


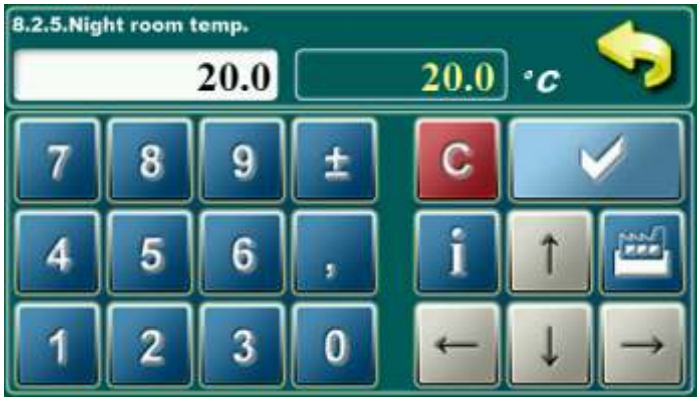
This parameter determines the value of day room temperature.

Possible adjustment: - Factory adjusted: 20,0°C

- Minimal adjustment value: 5°C
- Maximal adjustment value: 30,0°C

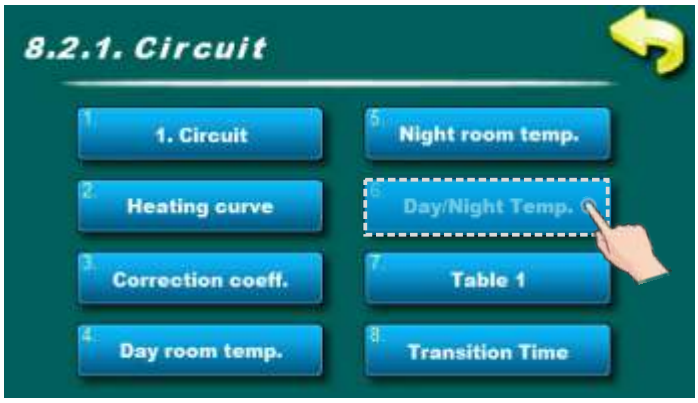
8.2.5. VALUE OF NIGHT ROOM TEMPERATURE





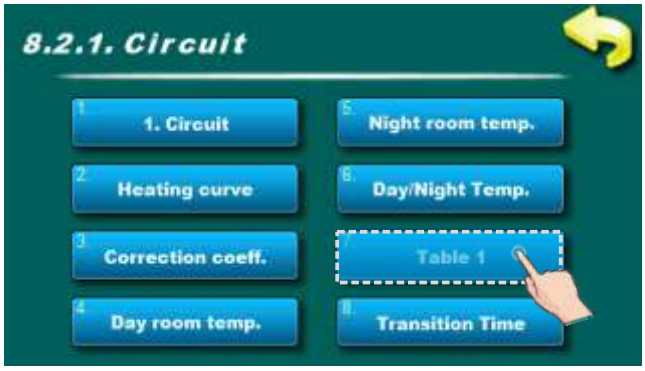
This parameter determines the value of night room temperature.
Possible adjustment: - Factory adjusted: 20,0°C
- Minimal adjustment value: 5°C
- Maximal adjustment value: 30,0°C

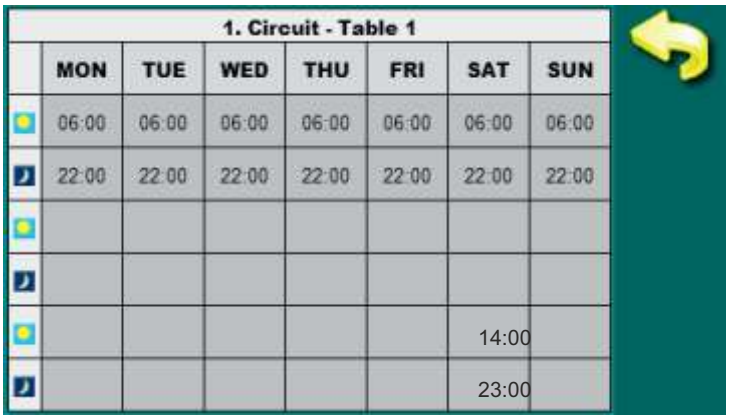
8.2.6. DAY/NIGHT TEMPERATURE CHOICE



This option enables you to choose type of desired temperature (day, night or table.) In next page you can see how to fill a table.
Possible selection:
- Factory selected: Day temperature
- Possible selection: Day temperature, Night temperature, Table

8.2.7. DAY/NIGHT TEMPERATURE CHOICE

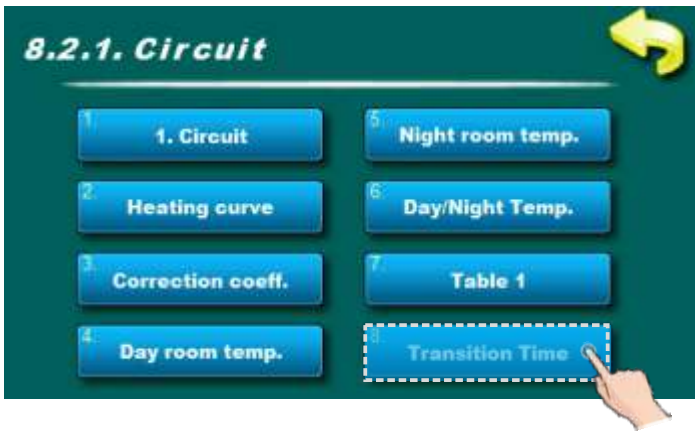




Day temperature Night temperature

Each cell marks the beginning of some type (day/night) of selected room temperature. According to this table every day from monday at 06:00 am is activated day room temperature, until 22:00 pm when is activated night room temperature until tuesday, when at 06:00 am is again activated day room temperature. On saturday, the day temperature is activated at 05:00 am and works until 10:00 am when is switched to night temperature. At 14:00 pm is again activated day room temperature up to 23:00 pm when is again switched to night temperature. When passed one cycle (week) circle starts again from the beginning. The values of a day/night room temperature can be selected as is described in previous pages.

8.2.8. TRANSITION TIME

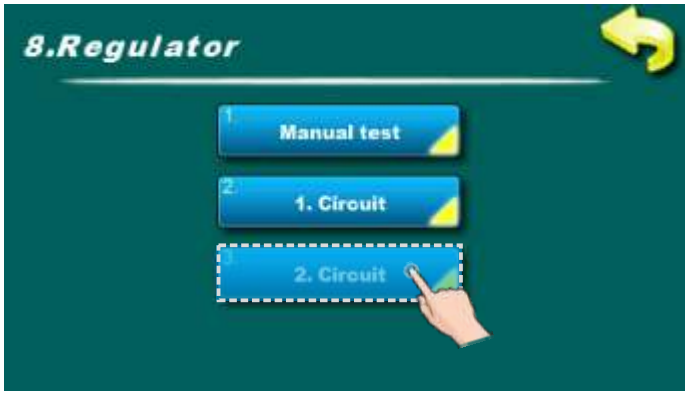


This parameter is used only when configuration doesn't contain room corrector, because regulation doesn't have information of room temperature.

This parameter is time which is presumed that the system will achieve a given room temperature in a transition from day to night mode, and vice versa. So, this is time in which will "flow temperature" be optimally adjusted to achieve quick transition.

Possible adjustment: - Factory adjusted: 3600 sec
- Minimal adjustment value: 0 sec
- Maximal adjustment value: 18000 sec

8.3. 2. CIRCUIT



Setting parameters for all activated heating circuits is adjusting in same way like in 1st circuit.

9. CORRECTION

If is appear a lot of unburned fuel in ash box than is possible to use this option which is used for better (completed) fuel burning. With increase value of parameter fuel will be better burn.
Note: use only if is appear a lot of unburned fuel in ash box.

Possible adjustment:
- Factory adjustment value: 0
- Minimal adjustment value: 0
- Maximal adjustment value: 3

10. LOCKING

10.1. LOCK

Option for locking display. Display can be locked only if exist profile for locking (10.2. Add user; 10.4. User list). When is display locked is possible to move through all menus but parameters can't be changed.

10.2. ADD USER

Option for adding new locking user. It's necessary to enter name of user through numerical part (1) and confirm it by pressing confirm button (2). Enter pin and confirm it. After that is necessary to re-entry pin and confirm it.

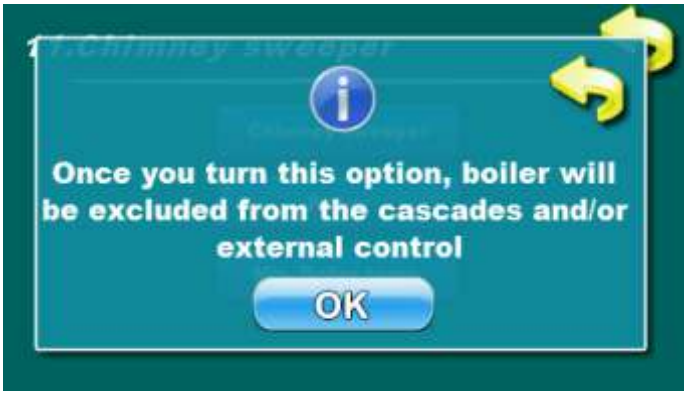
10.3. DELETE USER

Option for delete users. You need to enter the pin of the user you want to delete. Confirm the pin entry by pressing the confirmation button.

10.4. USER LIST

11. CHIMNEY SWEEPER

11.1. CHIMNEY SWEEPER



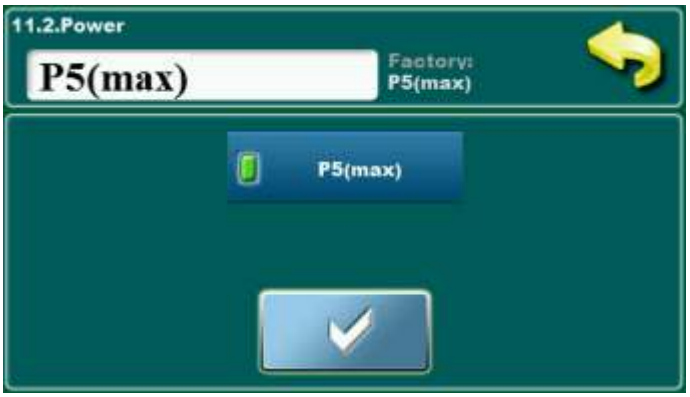
This option allows the flue gas measurement at different boiler powers. When this option is turned on, counter will appear on display. Time will start counting when the boiler reaches selected power (Dx). Text of the counter is red. When the boiler reach the selected power (Dx) and is on selected power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

Possible selection:

- Factory selected: OFF

- Possible selection: OFF, ON;

11.2. POWER



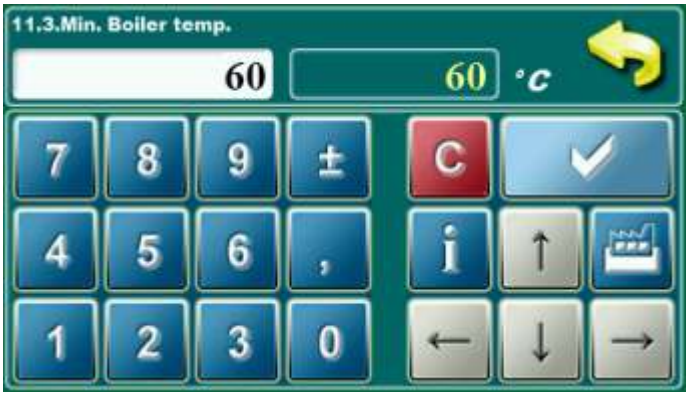
This option allows the boiler to work in different powers in order to measure the flue gases in the boiler modulation phases.

Possible selection:

- Factory selected: D5(max)

- Possible selection: D5(max), D2(min);

11.3. MINIMAL BOILER TEMPERATURE



Adjustment of minimal boiler temperature when is chimney sweeper mod activated.

Possible adjustment:

- Factory adjusted: 60°C

- Minimal adjustment value: 60°C
- Maximal adjustment value: 60°C

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