WARNING!!!

WE INFORM THAT THE OFFERED CONTROL UNIT CAN BE ONLY APPLIED TO THE FITTING DEVICES. THE REQUIREMENTS OF THE TECHNICAL AND BUILDING STANDARDS CONCERNING THE CORRECTNESS OF STOVE-FITTER AND HEATING SYSTEMS HANDLING THE FIREPLACE INPUTS MUST BE MET.

WRONG USAGE OF THE CONTROL UNIT CAN LEAD BOTH TO ITS DAMAGE AND IN EXTREME CASES TO THE DAMAGE OF THE FIREPLACE INPUT AND HEATING SYSTEM CONTROLLED BY THE FIREPLACE AS WELL , ALONG WITH THE DEVICES THAT COOPERATE WITH THE HEATING SYSTEM.

Zakład elektroniczny TATAREK Jerzy Tatarek

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Zakład elektroniczny TATAREK Jerzy Tatarek

USER MANUAL

Program version 1.2 (31.10.2011)

FIREPLACE LUX (RT-08G-BUF)

CONTROL UNIT OF THE HEATING SYSTEM WITH A FIREPLACE CONTROLLED BY A CHOKE VALVE

The RT-08G-BUF control unit controls the heating system based on the water jacket fireplace that is a heat source, in which combustion process is controlled by a choke valve. The heat receivers are: Buffer container (BUF), Warm Applicable Water container (WAW) and Central Heating system (CH).

! The control unit is equipped with its own emergency power source - breaks in power supplying up to 8 secs do not interrupt its operation (over the time the emergency buffering power source is activated).

1.Basic technical parameters

Power	230V/50Hz
Power consumption without load	5W
Max connection power	750W
Operation conditions	0÷50˚C, humidity 10÷90% (no condensation)
Housing protection class	IP41
Fuse	6,3A/250V
Number of outputs to control pumps	3 * 250W/230V/50Hz
Number of nonvoltage outputs	1
Number of outputs to control the choke valve drive	1 * 5V/500mA/DC
Number of water temperature sensors	3 * KTY81 (0...+100˚C)
Temp. measurement precision	2˚C
Temp. measurement resolution	0,5˚C
Number of the time zones	4

2. Principle of Operation

The main function of the control unit is to keep temperature in the water jacket at the preset value. The task is realized by measuring temperature (T3) and controlling the cold air choke valve (PP) properly. Fireplace operation temperature is defined by the **<20> "FIREPLACE Temp."** parameter (see PARAMETERS LEVEL 1).

If the fireplace temperature (T3) is higher than the **<20> "FIREPLACE Temp."** parameter the choke valve is gradually shut off limiting air supply, and if the temperature (T3) is lower than the **<20> "FIREPLACE Temp."** parameter the choke valve is gradually opened up.

The second function is control the loading pump of the BUF container (P2). The pump P2 runs if the fireplace temperature exceeds "**BUFF ON**" and is above the buffer temperature (T1) by the **<61> DeltaBUF** parameter (see see PARAMETERS LEVEL 1).

The third function is to control the WAW pump loading the warm applicable water accumulator (WAW). The pump P1 operates if temperature of heat source (BUFFER for standard configuration, FIREPLACE for a configuration with the buffer type COMBO see fig.1) exceeds the **WAW ON** value and is higher than the WAW accumulator temperature (T2) by the **DeltaWAW** parameter (see PARAMETERS LEVEL 1).

The next function is to control the circulating pump (P3) of central heating system. The pump works if the buffer temperature exceeds the **CH ON** value. It's possible to activate the WAW priority function - - see the description of operation modes of the CH pump.

The control unit is also equipped with the clock to control the WAW priority in selected times of day.

! The fireplace can also be equipped with warm air distribution system based on the RT-03C control unit. The RT-03C control unit measures temperature in the chamber of the fireplace air ventilator and controls its rotation speed in manual or automatic mode.

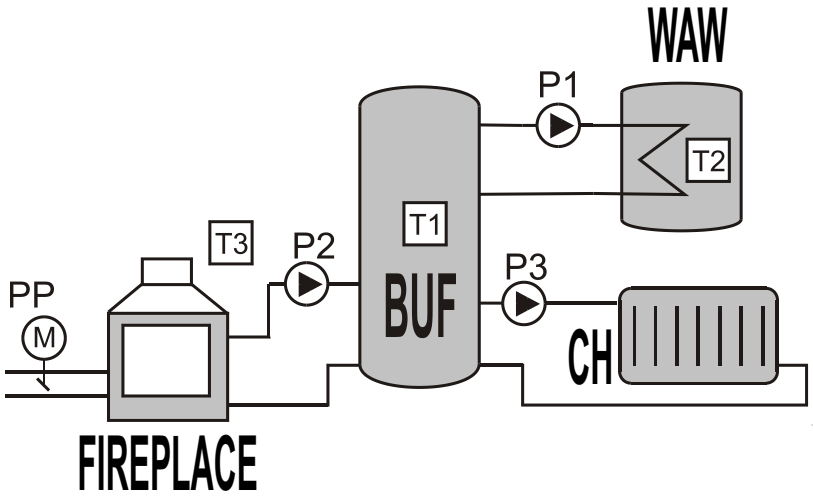


Fig. 1a Basic operation configuration of the control unit

Admission date	Realization date	Signature	Remarks

PRODUCENT ZASILACZY SIECIOWYCH
ISO 9001: 2000

CE CONFORMITY DECLARATION

Ref. No. 58.RT.01.2007/1/B

We, ZAKŁAD ELEKTRONICZNY TATAREK Jerzy Tatarek
75 Swieradowska St. , 50-559 Wroclaw

declare under our sole responsibility that
the product: Regulator of heating system with solar collector

model: RT-08, RT-08K, RT-08P, RT-08G, RT-08G-BUF

is in conformity with the basic requirements included in Directive EMC 2004/108/WE of 15.12.2004 (the electromagnetic compatibility law of 13.04.07) and Directive LVD 2006/95/WE of 21.08.07 (Laws Journal of 2007 No. 155 pos. 1098) regarding the requirements for electric devices.

To the conformity evaluation the following harmonized standards were used:

PN-EN 60730-2-1: 2002 - Automatic electric regulators for house usage and the like. Part 2-1: Specific requirements regarding electric regulators for electric house devices
PN-EN 60730-1: 2002 - Automatic electric regulators for house usage and the like. Part 1: General requirements.

PN-EN 55022: 2000 - Electromagnetic compatibility (EMC)- IT devices Characteristics of radioelectric noises. Acceptable levels and measurement methods

Complementary information:
Laboratory IASE 51-618 Wroclaw, 1 Wystawowa st.

Test report No. 39/DL/I/07 of 22.06.2007
41/DL/I/07 of 03.07.2007

Electronic Engineering Plant TATAREK
has initiated management system and complies with the following standard :
ISO9001: 2000 CERTIFICATE No. 133/2004 of 01.2004
Polish Foreign Trade Chamber

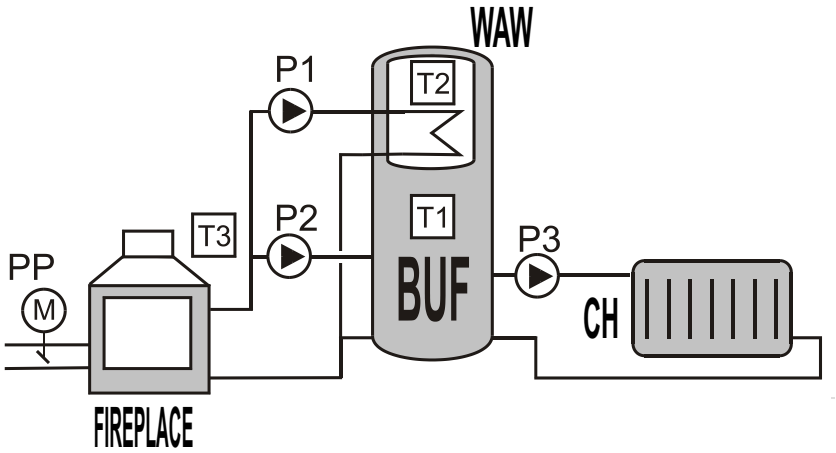
The last two digits of the year in which the CE marking was affixed: 07

Place of issue: **Manufacturer representative:**

Wroclaw **Mirosław Zasepa**

Date of issue: **Position:**

08.2007 **Konstruktor**



CH= Central Heating
WAW=Warm Applicable Water

Fig. 1b Alternative operation diagram of the buffer type COMBO, that is, the WAW container is included in the buffer.

! In case of using the COMBO buffer (the WAW is inside the buffer) you need to change the <93> BUFFER COMBO to ON because for such a configuration the loading pump of the WAW receives heat from the fireplace and not from the buffer (see fid.1)

WAW	Warm Applicable Water container (boiler)
FIREPLACE	Water jacket fireplace
BUF	Buffer container
CH	Central heating system

T1	Temperature sensor of the buffer container
T2	Temperature sensor of the WAW container
T3	Temperature sensor of the fireplace water jacket
P1	Pump loading the WAW from fireplace
P2	Pump loading the buffer container
P3	Circulating pump CH
PP	Electronically controlled choke valve of the fireplace

2.1 Choke valve operation

The choke valve regulates an air supply to the combustion chamber, which allows the temperature of the fireplace water jacket to be kept at the preset value. The task is realized by comparing the temperature of the water jacket(T3) and preset temperature (the <20>*"FIREPLACE Temp."* parameter) and then by gradual opening/shutting the choke valve. The change of the choke valve position is done every 20secs
The shutdown of the RT-08G-BUF control unit automatically causes the choke valve to be set at the rest position defined by the <50> *ChokeV State OFF* parameter (Default setting is 0% - full shut-off).

2.2 Operation of the loading pump of the buffer

The control unit controls the pump loading the buffer. The BUF pump (P2) can be switched on if water temperature in the fireplace is above the preset threshold 48°C (*parameter <60> PumpBUFtemp.ON*) and higher than temperature in the container by 2°C (*parameter "DeltaBUF"*).
Turning off the pump below the parameter *<60> PumpBUFtemp.ON* causes a faster heating of the water jacket above the dew point and as a result the longer life time of the fireplace.
The control unit protects the system from freezing, automatically turning on the circulating pump if the measured temperature is below 4°C.
The control unit realizes the after season rundown of the pump by switching it on for 1 min if it doesn't operate for a week.

2.3 CH pump operation

If the buffer temperature exceeds the preset value of 45°C (the <31> *Switch-on Temp. of PUMPS* parameter) the CH pump turns on.
During loading the warm applicable water container WAW, the CH pump runs cyclically if the WAW mode is set to **PRIORITY** (Limitation of the heat amount flowing into the CH system).
The cyclical operation is based on turning on the pump for 45 secs and then turning off for 4mins (the <32> *Stoptime of CH PUMP* parameter).
The control unit protects the system from freezing, automatically turning on the circulating pump if the measured temperature is below 4°C.
The control unit realizes the after season rundown of the pump by switching it on for 1 min if it doesn't operate for a week.

2.4 WAW pump operation

The control unit controls as well the pump loading the warm applicable water container WAW.
The loading pump can be turned on if water temperature in the fireplace is higher than the preset threshold of 45°C (the <46> *PumpWAWtemp.ON* parameter) and higher than in the WAW container by 5°C (the <44> *Delta Temp. of WAW* parameter).
The WAW pump turns on if the temperature of the WAW container is below 50°C (the <42> *Minimum temp. of WAW* parameter) and turns off if the temperature is above 60°C (the <41> *Maximum temp. of WAW* parameter)

! Loading the WAW container can be switched off in the active ECO zone if the <25> *WAW in ECO zone* parameter is set to OFF

!Lack of the temperature sensor of the WAW container causes loading the container at will. The WAW pump switches on if water temperature in the water jacket of the fireplace reaches the preset value or is above 50°C (the <42>*Minimum temp. of WAW* parameter).

After ending the loading of the WAW the pump can run for a while (<45> *Rundown Time of WAW PUMP* parameter), which prevents temperature increase of the water jacket especially in summer time when the CH pump doesn't run.

The control unit realizes the after season rundown of the pump by switching it on for 1 min if it doesn't operate for a week.

WARRANTY

1.Warranty is valid [24] months from the date of sale.
2.Producer does not take responsibility for any mechanical damages made by user.
3.MAKING REPAIRS OR MODYFYING THE DEVICE BY USER IS FORBIDDEN AND CAUSES WARRANTY CANCELATION
4.Warranty card is valid only with date of sale, seller's signature and stamp
5.Warranty and after-warranty repairs should be done only by producer, damaged regulators should be sent to producer in order to make all repairs needed.
6.Warranty protection involves the EU
7.Warranty does not exclude, not restrict and not suspend buyer's rights coming from the incompatibility of the article with the agreement (Laws Journal No. 141 Pos. 1176)

WARNING !

ANY MODIFICATION OF THE CONTROL UNIT MADE BY A USER CAN BE THE CAUSE OF SAFETY CONDITIONS DETERIORATION AND CAN EXPOSE THE USER TO ELECTRIC SHOCK OR DAMAGE DEVICES SUPPLIED.

Connection cable of the control may be replaced only by producer or his authorized service locations

WARNING!
1. Producer does not take the responsibility for damage caused by atmospheric discharge
2. and overvoltage in the mains
3. Burnt fuses are not subject to warranty replacement

Date of sale **Seller's signature and stamp**

Register No.. GIOS: E 0002240WZ

Worn out electronic and electric devices must be transfered to the utilization collection place, where will be accepted for free

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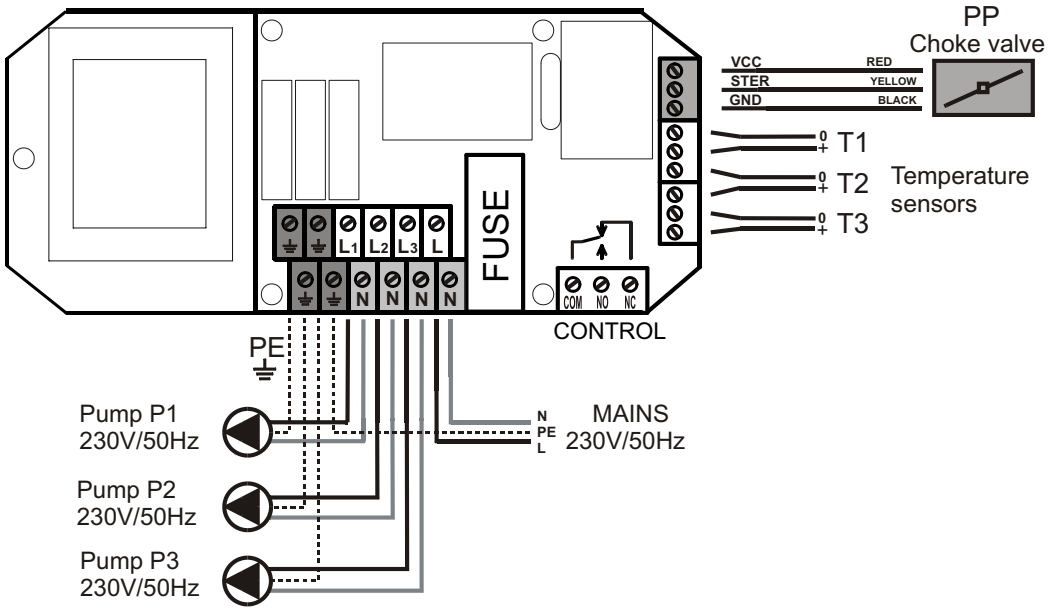


Fig.3 Electrical scheme

PP Choke valve
T1 Upper temperature sensor of the WAW container (option)
T2 Lower temperature sensor of the WAW container
T3 Temperature sensor of the fireplace water jacket
P1 Pump loading the WAW container from the fireplace
P2 Pump of the primary side of the heat exchanger (it operates if P1 or P2 is activated)
P3 CH circulating pump

2.5 WAW priority and the summer mode

By selecting WAW MODE you can run diverse strategies of operation as follows:

OFF - The WAW loading pump turned off. Only the CH pump can run.

SUMMER- Turning off the heating system in summer time (the CH pump doesn't operate). Fireplace only works in the preparation function of the WAW.

ON - Standard operation (parallel operation of pumps) without favouring the WAW circuit

PRIORITY-Faster reaching the readiness of the WAW container by limiting heat flowing into the heating system. The CH pump works cyclically. Turning off the WAW pump after loading the container causes the comeback of normal operation of the CH pump

CLOCK-outside the time zones $1...$3 the pump operates like in the ON mode and in the time zone like PRIORITY

SPECIAL-outside the time zones $1...$3 the pump operates like in the ON mode and in the time zone like PRIORITY. Additionally during loading the WAW container the preset temperature of the water jacket is raised up to 65°C.(the **<43> Loading temp. of WAW special** parameter)).

!In case of using the COMBO buffer (that is, the WAW is inside the buffer, parameter "<93> BUFFER COMBO=ON"), the WAW priority can be enhanced by setting "<62> WAW/BUF Priority=ON". It causes a cyclical operation of the buffer pump(P2) while loading the WAW.

2.6 "CONTROL" output

The control unit is equipped with the CONTROL relay whose contacts can be used e.g. to switch off another heat source when the fireplace works. The **<12> CONTROL Relay** parameter defines the function of the relay more precisely. (see PARAMETERS LEVEL 3)

REL 0 CONTROL relay turned off

REL 1 CONTROL relay turned on

3 Service of the control unit

There are elements on the control panel (fig. 2). In the turn-off state only the orange stanby state LED (7) lights and the graphic display shows current temperature of the water jacket and current time. The turn-on of the control unit follows by pressing the button (**3**) ON/OFF . In order to turn it off press once more the button (**3**)and at the same time hold it down for about 1sec. In case of supply voltage decline the control unit comes back to the state before the decline.
The operation state is presented on the graphic display (**2**). The screens inform about the operation of devices, temperature of sensors; they make it possible to change the parameters etc..The change of screen is done by pressing the CHOOSE button (**7**). If this is the screen that is able to change a parameter, press the CONFIRM button (**6**) , which causes blinking of the parameter field to be changed. By pressing "+" (**4**)or "-" (**5**) one can alter its value.
If there are more parameter fields on the screen (e.g. setting the clock) then one will go among them by pressing the CHOOSE button (**7**) . By clicking the CONFIRM button (**6**) one confirms the changes - the parameter field stops blinking. **The changed parameter not confirmed for 10 secs is not accepted by the control unit** and it recalls a previous value of the parameter.
The button F2-ESC (8) is for cancelling a current operation and going over to the screen of the fireplace.

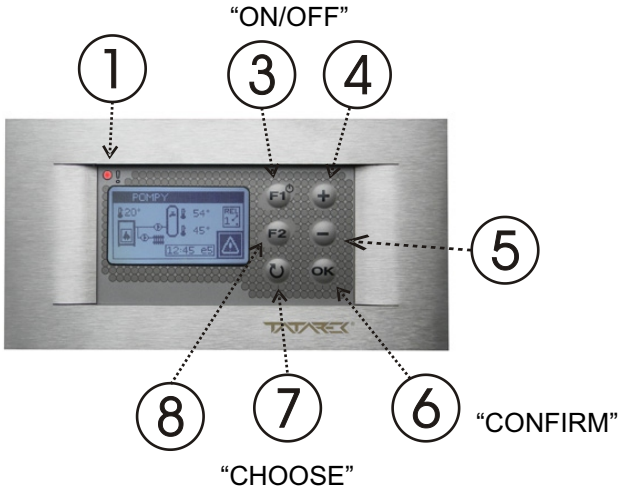


Fig.2 Control panel view

1. Control unit status diode: alarm (red), standby (orange), operation (green), manual MAN (blinking green)
2. Graphic display
3. Button F1: switch-on/off power supply
4. Increase button
5. Decrease button
6. Confirmation button
7. Parameter selection button
8. Button F2 (ESC - return to the main screen)

Demonstration change of the <50> ChokeV State OFF parameter defining the choke valve position after powering off the control unit (Parameters level 3):
Press:

* Repeatedly the button "CHOOSE" till the **PARAMETERS LEVEL** parameter setting screen appears.
* Button "CONFIRM"-> "0" blinks
* 3 times the button "+"-> "3" blinks
* Button "CONFIRM"-> "3" stops blinking (the **Parameters Level 3** has been chosen)
* Button "CHOOSE" -> current value of the **<50> ChokeV State OFF** parameter shows up
* Button "CONFIRM" -> current value, you want to change, starts blinking
* Buttons "+" and "-" -> you set the new value
* Button "CONFIRM" -> we confirm the new value
* Repeatedly the button "CHOOSE" till the "***" parameter end setting screen appears.

4 Installing the control unit

! THE REGULATOR IS SUPPLIED BY 230V/50HZ .
ANY MOVES REGARDING INSTALLATION SHOULD BE MADE AT THE DISCONNECTED MAINS.

! THE REGULATOR HAS TO BE CONNECTED TO THE MAINS WITH THE ZERO-PIN.

! THE REGULATOR SHOULD NOT BE EXPOSED TO WATER AFFECTING. ITS ENVIRONS OUGHT TO BE CLEAN.

! THE PRODUCER DOESN'T TAKE ANY RESPONSIBILITY FOR DAMAGES CAUSED BY WRONG USAGE OF THE REGULATOR.

Connection diagram of the elements of the control unit is presented on fig. 3

	PARAMETERS LEVEL 4			
No	NAME	RANGE	DEFAULT	FUNCTION
90	ProdNo.	0.....n	1	Number of the parameters set - dependent on fireplace producer
91	RESET	OFF/ON	OFF	Setting the value of "ON" causes the recall of all parameters to their default pre-sets and restarts the control unit
92	PASSWORD	0…9999	0000	„0000" PASSWORD OFF ----" PASSWORD ON
93	BUFFER COMBO	OFF/ ON	OFF	OFF- standard operation configuration (see fig.1a) ON- operation with BUFFER COMBO (WAW inside buffer)
99	Service Screen	OFF/ ON	OFF	The ON value causes diagnostics screen to be added for servicing.

Password

The changes of important parameters are possible only at unlocked password. To unlock the password you need to input proper sequence of digits with the buttons "+/-". With the CHOOSE button (7) to change the digits position and CONFIRM button (6) to acknowledge all and finish the procedure of changing the password. The unlocked password is set to "0000". Once again entering into the password change procedure causes a new password to be set.

! PASSWORD „9999" HAS CONSIDERABLE MEANING. IT CAUSES THE REACTIVATION OF THE PREVIOUS PASSWORD IF PRESENT WITHOUT IT BEING EXPOSED.

! PASSWORD OF PRODUCER'S SERVICE IS UNIQUE AND IS NOT DEPENDENT ON THE USER'S PASSWORD- IT SHOUDN'T BE EXPOSED TO THE USER. INSTEAD OF THAT THE SERVICE CAN SET THE USER HIS OWN PASSWORD.

Examples of passwords:

1.The control unit is installed with the unlocked password. The user can enter his own password e.g. "1234". From this moment the important parameters cannot be altered without the password being unlocked (that is, resetting the password "1234"). After changing essential parameters the user can leave the control unit unlocked, set any new password or enter "9999", which activates the password "1234"

2. Producer gives the control unit with the set password. The user cannot alter the important parameters. The servic can change the settings with its own secret password. At the end a serviceman enter the secret password or "9999", the user still hasn't access to the important parameters.

3. Producer gives the control unit with the set password. The user cannot alter the important parameters. The servic can change the settings with its own secret password. At the end a serviceman leaves the control unit unlocked, the user now has access to the important parameters. He can enter his own password like in example No. 1.

4. Producer gives the control unit with the set password. The user cannot alter the important parameters. The servic can change the settings with its own secret password. At the end a serviceman sets the password e.g. "1234" and tells it to the user, the user has access to the important parameters but without knowing the password the other persons cannot make the changes.

5. The user has the unlocked control unit or his own password. Serviceman decides, the user though oughtn't have access to the important parameters. The serviceman locks the control unit with his secret password, which removes the user's password and locks the control unit.

6. Serviceman doesn't have to know the user's password. Always he can use his own secret password and at the end lock with the "9999", which reactivates the user's password.

3.1 Time zones

The control unit is equipped with the clock, which enables the automatic change of the control unit operation at different times of day. 24 hrs are divided into 5 time zones (**$1, $2, $3, e4, e5**) . Each zone has a start time FROM and an end time TO. The same start and end time means the zone isn't active, which doesn't change the settings of the control unit. The time zones can overlap each other in that case binding are the settings for the active zone of higher number.

In the control unit there's a defualt zones program as follows:

ZONE $1	FROM 6.00 TO 8.00
ZONE $2	FROM 14.00 TO 17.30
ZONE $3	FROM 20.00 TO 22.30
ZONE e4	FROM 23.00 TO 5.30
ZONE e5	FROM 8.00 TO 13.30

The zones $1...$3 relates to the pump priority-loading the WAW container in the mode **CLOCK** and **Special** (see p.2.4)

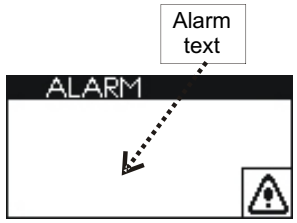
The zones e4...e5 enable lowering the preset temperature of the fireplace by the *<22> ECO Temp.* parameter at the limited demand for the heat. If the <25> *WAW in ECO zone* parameter is set to OFF then at the active ECO zones the loading of the WAW container will be turned off.

! At the default settings the time zones are not active. In order to activate them you need to set the <14> *Time zones* parameter to ON.

3.2 Screens

Alarm screens "ALARM" is not seen till the following alarm situation takes place:

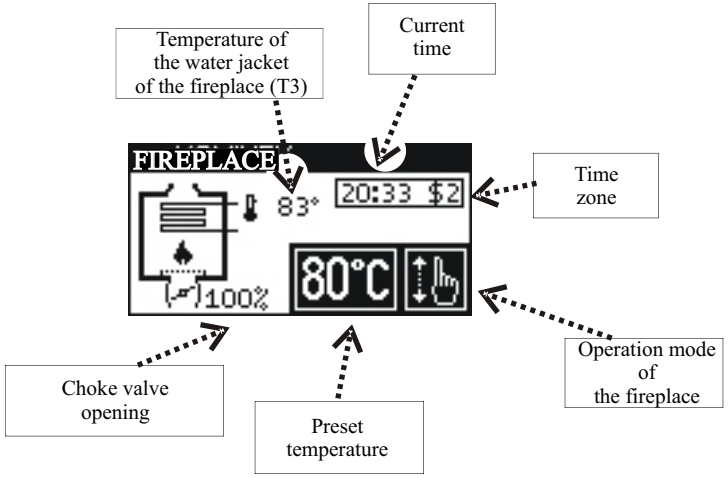
1. Damage of the T1(BUFFER) sensor. The **BUF temp. sensor (T1) damaged** text shows up.
2. Damage of the T2(WAW) sensor . The **WAW temp. sensor (T2) damaged** text shows up. The alarm dosen't initialize if the sensor is not mounted.
3. Damage of the T3 sensor of the fireplace. The **Fplace temp. sensor (T3) damaged** text shows up.
4. The exceeding of the limit temperature of the fireplace defined by the **<21> ALARM Temp.** parameter. The **too high temp. of the fireplace** text shows up.
5. The exceeding of the limit temperature of the buffer defined by the **<24> BUF ALARM Temp.** parameter. The **too high temp. of the buffer** text shows up.



Alarm situation is accompanied by a broken sound alarm that can be turned off by pressing the CONFIRM button (6)

! In the emergency of exceeding the temperature of the fireplace the CH/BUF pump turns on to cool off the fireplace.

Screen of the fireplace operation shows the current temperature of the fireplace and the level of choke valve opening.



It's a stable state, that is, in order to change it you need to press the CHOOSE button (7)
During appearing this screen you can change the preset temperature of the fireplace (the *<20> FIREPLACE Temp.* parameter). After pressing the CONFIRM button (6) the preset temperature blinks whose value can be altered with the buttons "+" (4) or "-" (5) To confirm the changes you need to press the CONFIRM button (6) once more.

! At the economic time zones "e4" or "e5" the displayed temperature is corrected by the drop (the **<22> ECO Temp.** parameter) that is indicated by the "-" minus sign instead of °C..

! During the loading of the WAW accumulator in the **WAW MODE=SPECIAL** mode the preset temperature gets automatically raised up to the **<43> Loading temp. of WAW special** parameter value that is indicated by the "+" plus sign

If the manual mode is set (**FIREPLACE MODE=MAN**) (the green LED diode (7) blinks.) you can manually control the choke valve-. The "+" button (4) causes the opening of the choke valve (one step 10%) and the "+" button (5) causes its closing.

PARAMETERS LEVEL 3
PARAMETERS CAN BE CHANGED AT THE UNLOCKED PASSWORD

No	NAME	RANGE	DEFAULT	SETTING	FUNCTION
50	ChokeV State OFF	0...100%	0%		Position of the choke valve in the power supply state turned off (0%-full shut-off, 100% - full opening)
32	Stoptime of CH PUMP	1...30mins	4mins		Break time of the CH pump in the cyclical mode. After that time the pump turns on for 45secs.
33	Hysteresis of PUMPS	1...10 °C	1°C		Temperature hysteresis of turning on/off the pumps. The temperature difference between turning on and turning off the pumps. It prevents from often switchovers, especially if there's another heat source in the heating system.
61	DeltaBUF	-10...+10°C	1°C		Minimal temperature difference between fireplace and buffer required for the BUF pump (P2) to run. Negative values have application for big buffers
62	WAW/BUF-Priority	OFF/ON	OFF		OFF - the pump loading the buffer runs normally ON- the pump loading the buffer runs cyclically at the WAW priority loading(only in case of BUFFER COMBO, that is, at the <93> = ON parameter setting
63	Rundown-TimeBUF	0..30mins	1min		Rundown time of the BUF pump. Extending the run time of the pump after ending the loading of the BUF
45	Rundown Time of WAW PUMP	0...10mins	0min		Rundown time of the WAW pump . The extending of the time for the pump operation after finishing loading the WAW container .
24	BUF ALARM Temp.	75...95 °C	85 °C		Buffer limit temperature at which the alarm generates.
21	ALARM Temp.	75...95 °C	85 °C		Fireplace temperature at which the alarm turns on.
23	FPLACE OFF Temp.	5...25 °C	10 °C		Decreasing fireplace temperature in relation to preset temperature at whose exceeding the countdown of 30mins begins up to the switch-off of fireplace (stop condition at **FIREPLACE MODE=AUTO**)
12	CONTROL Relay	2...6	2		Switch-on of the CONTROL relay if 0 fireplace temp. higher than "ControlRelayTemp" 1 Buffer temp. higher than "ControlRelayTemp" 2 WAW temperature is higher than "ControlRelayTemp" 3 BUF pump (P2) runs 4 WAW pump (P1) runs 5 CH pump (P3) runs 6 ALARM is turned on (see "Alarm screens")
16	Control-RelayTemp	5...95 °C	60 °C		Limit temperature at which the CONTROL relay turns on. (Depending on the <12> CONTROL Relay parameter.)
51	ChokeV Mode	1...2	1		Control type of the choke valve 1 Continuous control - servomotor of the choke valve is always active. 2 Dynamic control - servomotor of the choke valve is active only if the position change of the valve is needed.

! Parameter number (No.) is of auxiliary role - it helps to identify the name e.g. for different language versions

PARAMETERS LEVEL 1					
No	NAME	RANGE	DEFAULT	SETTING	FUNCTION
20	FIREPLACE Temp.	45...85 °C	55 °C		Preset temperature of the fireplace kept by the control unit
31	Switch-on Temp. of PUMPS	30...75 °C	45 °C		Minimal temperature of the buffer at which the CH pump P3 can be activated.
41	Maximum temp. of WAW	30...99 °C	60 °C		Maximal temperature of the WAW container. The exceeding turns off the loading pump
42	Minimum temp. of WAW	30...99 °C	50 °C		Minimal temperature of WAW container. The exceeding turns on the loading pump
43	Loading temp. of WAW special	30...99 °C	65 °C		Preset temperature of the fireplace automatically set at the loading of the WAW container. In the priority mode **WAW MODE=SPECIAL**
44	Delta Temp. of WAW	1...10 °C	2 °C		Minimal difference between buffer and WAWcontainer temperature needed for the WAWpump operation P1. For BUFFER COMBO setup (parameter <93>) the WAWpump gets heat from the fireplace and then it's a minimal temperature of the fireplace.
46	PumpWAW-temp.ON	30...75 °C	45 °C		Minimal temperature of the buffer at which the WAW pump P1 switches on. For BUFFER COMBO setup (parameter <93>) the WAW pump gets heat from the fireplace and then it's a minimal temperature of the fireplace.
60	PumpBUF-temp.ON	30...75 °C	48 °C		Minimal temperature of the fireplace at which the buffer pump P2 (BUF) can be activated.
10	Signal	OFF/ON /ON+ ALARM	ON + ALARM		OFF turns off sound signal ON turns on sound signal ON+ALARM turns on sound and alarm
11	Language	Polish/ English/ Deutsch	Polish		Selection of the language version
13	LCD backlight	OFF/ON	OFF		OFF - backlight is active for 2mins from the last pressing of the button ON -backlight is active when the control unit is switched on. Turning off the backlight means it equals to <15>.next
15	LCD backlight minimum	0...25%	10%		Minimal backlight level of the LCD (it's vital with negative LCD). The value 0% means a full turn-off

PARAMETERS LEVEL 2					
No	NAME	RANGE	DEFAULT	SETTING	FUNCTION
14	Time zones	OFF/ ON	OFF		OFF-time zones function disabled ON- time zones enabled acc. to the settings below, that is, <70>...<79> and <22>
70	Zone1 from	0:00...23:45	6:00		Start of the 1st time zone
71	Zone1 to	0:00...23:45	8:00		End of the 1st time zone
72	Zone2 from	0:00...23:45	14:00		Start of the 2nd time zone
73	Zone2 to	0:00...23:45	17:30		End of the 2nd time zone
74	Zone3 from	0:00...23:45	20:00		Start of the 3rd time zone
75	Zone3 to	0:00...23:45	22:30		End of the 3rd time zone
76	ECO4 from	0:00...23:45	23:00		Start of the 4th time zone - economic
77	ECO4 to	0:00...23:45	5:00		End of the 4th time zone - economic
78	ECO5 from	0:00...23:45	8:00		Start of the 5th time zone - economic
79	ECO5 to	0:00...23:45	13:30		End of the 5th time zone - economic
22	ECO Temp.	-1…-9 °C	-5 °C		The lowering of the fireplace temperature in relation to the preset temperature during the economic time zone "e4" or "e5"
25	WAW in ECO zone	OFF/ON	ON		ON-WAW loading is switched on in ECO zone OFF-WAW loading is switched off in ECO zone

There are the following operation modes of the fireplace:

MAN- Automatic control locked - only manual control of the choke valve is available Green status diode **(1)** blinks.

OFF- Setting the choke valve to the rest position (the **<50> ChokeV State OFF** parameter).Green status diode **(1)** doesn't light.

AUTO- Full automatic burning cycle in the fireplace (firing up - operation - burning out).
Automatic operation is controlled by pressing the button **(3) "ON/OFF" .** Green status diode **(1)** lights during the fireplace operation and goes out when the burnt-out state is detected.
At the end of the burning-out phase the choke valve sets to the rest position (**0%, full shut-off**), which prevents a room from cooling off and protects the water attachment against freezing.

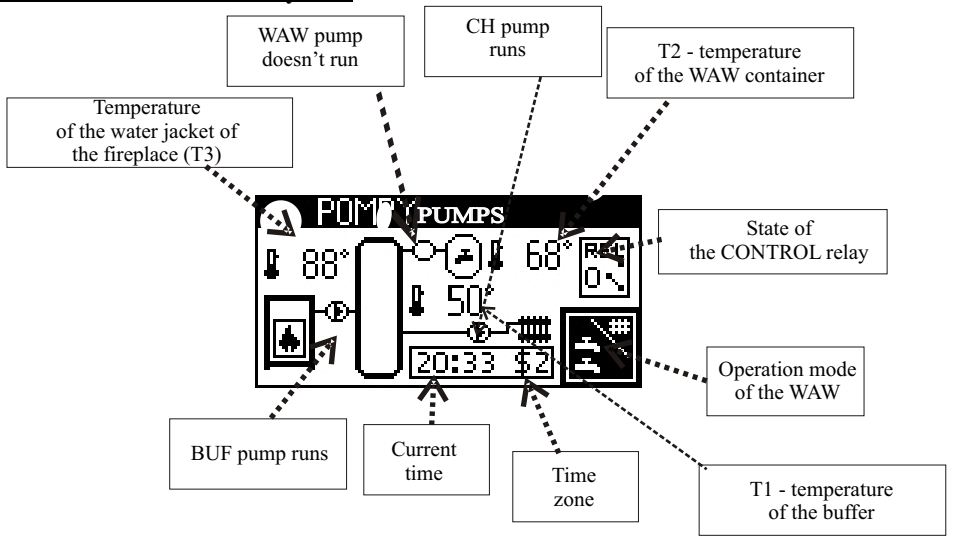
ON- The choke valve is automatically controlled to stabilize temperature of the water jacket. Green status diode **(1)** does light.

Automatic operation is activated by pressing the "ON/OFF" button (3) The choke valve is fully opened. In 2hrs the fireplace ought to heat itself and reach the preset temperature stabilized by choke valve movements. From that moment the temperature fall to the preset temperature by more than 10 °C (the **<23> FPLACE OFF Temp.** parameter) existing for 30mins is treated as a burnout of the fireplace. The control unit ends the operation cycle setting the choke valve to the rest position. Pressing the "ON/OFF" button (3) once more starts another operation cycle.
The green status diode (1) lights during the fireplace operation and goes out after recognizing the burnout state of the fireplace.

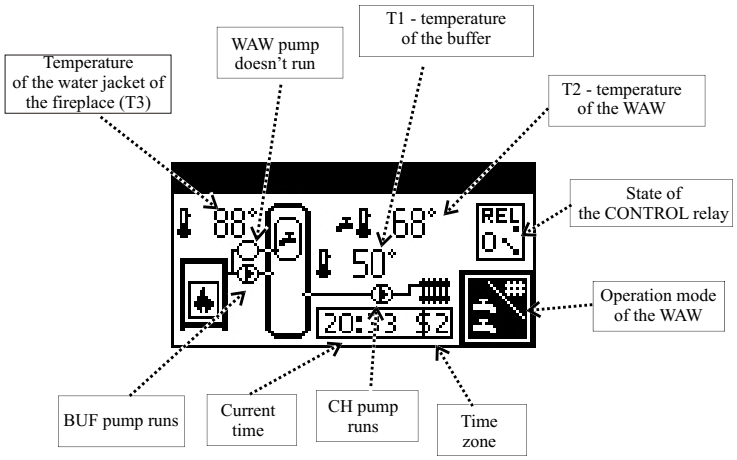
AUTO operation icon in waiting for the start of a new cycle (that is, before its start or after its end

AUTO operation icon during the cycle
It's a stable state, that is, in order to change it you need to press the CHOOSE button.

Operation screen of the whole system

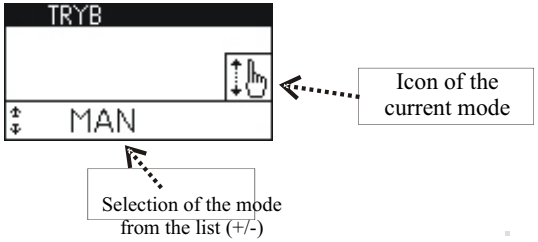


Screen of pumps operation for the basic operation configuration

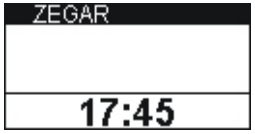


Screen of pumps operation for the alternative run configuration BUFFER COMBO

It's a stable state, that is, in order to change it you need to press the CHOOSE button (7)
Screen of the operation modes enables changing the operation mode of the fireplace and WAW container.
Possible operation modes of the fireplace are as follows (described above):
MAN/OFF/AUTO/ON
Possible operation modes of the WAW container are as follows (described above):
OFF/SUMMER/ON/PRIORITY/CLOCK/SPECIAL

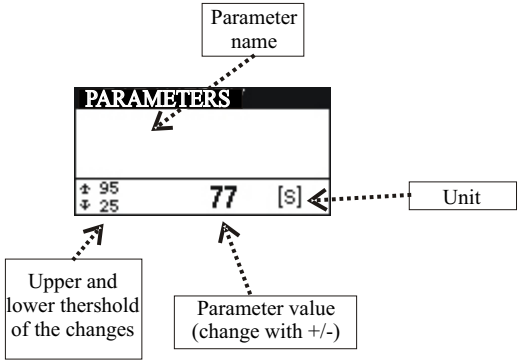


Screen of the clock



The screen shows the current time and the number of the activated time zone.
Time correction is possible after pressing the CONFIRM button (6) and the minutes field begins blinking. The blinking value can be altered with the buttons "+" or "-" Pressing the CHOOSE button (7) you come to the hours field that can be set also with the buttons "+" or "-".
Pressing the CONFIRM button (6) confirms the changes (the clock field will stop blinking).

Screen of setting the parameters
Normally the **parameters level** equals to "0" namely the parameters aren't available.
After changing the level to "1", "2" , "3" or "4" successive screens show the values of the parameters.
The last screen contains "****" after which it comes back to the above mentioned screens.



! PARAMETERS ADJUST THE CONTROL UNIT TO THE PROPERTIES OF THE FIREPLACE AND CENTRAL HEATING SYSTEM. THEIR CHANGE OUGHT TO BE CONSULTED WITH THE FIREPLACE PRODUCER.
ILL-CONSIDERED MODIFICATIONS CAN CAUSE UNSTABLE AND INEFFICIENT OPERATION OF THE SYSTEM