SERVICE OF VISION PELLET BOILERS

CONTENT

1 INTRODUCTION

The document presented before you is a manual for the product service (stoves and boilers) of VISION. In this connection, the document contains brief descriptions of individual product lines, working principles and basic components of the automatic regulation of the pellet combustion process. Products with the purpose of heating bio-fuels (pellets) can be divided into two basic groups:

1.Stoves

2. Boilers

Stoves are intended for warming the living space, but with their design they are intended also for installation in the mentioned space. According to the way the space is heated, or according to the method of heat transfer, obtained by combustion of pellets, the fireplaces can be divided into two subgroups:

1. **Dry stoves** (SIMPLE and STANDARD series) the surrounding area is heated only by warm air.
2. **Hydro stoves** (KAMIN i EXLUSIVE series) the surrounding area is heated by means of a central heating system, and a smaller part of the heat is emitted into the space in the form of heat radiation.

On the other hand, boilers are only intended for connection to the central heating system. The heat produced by combustion of pellets transmits only to the fluid of the heating system, are well insulated so as not to heat the heat in the surrounding area. They are installed in separate rooms (boiler rooms). According to the power or capacity of heating a certain volume of space, they are divided into two basic groups:

1. **Boilers with** power till 100 kW are intended for heating of residential and business premises up to about 900m^2 and average ceiling height about 2.5m.
2. **Industrial boilers** with power over 100 kW, intended for the heating of industrial halls, plants or for other purposes connected for other purpose as liquid water heaters (water or antifreeze).

Boilers whose pellet fuel is automated ie. The pellet burning process is controlled by a microcontroller built into the boiler control unit. VISION install the control units of the manufacturer Atech - Fumis, the so-called Alpha (40, 65, 75) depending on the characteristics of the boiler.

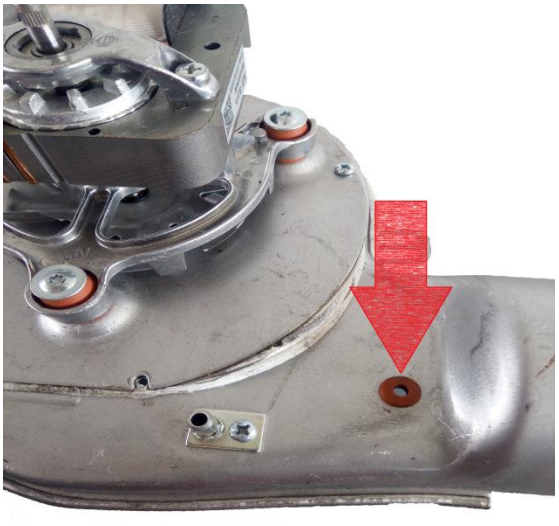
Managed by this manual are people who are primarily mentally and physically capable of performing service, have prior knowledge or work experience in the field of servicing and are authorized by VISION. The service provider should have a developed ability to observe the details in order to prevent the occurrence of an error while handling this instruction.

2 ELECTROMECHANICAL PARTS

In order for the control unit to manage the pellet combustion process, it has to have properly set up and functional components that can be divided into two basic groups:

2.1 Sensors – senses

2.1.1 TC themperature sensor



The sensor is intended for reading the temperature of the exhaust gases. The end of the sensor with the metal shield is placed in the required position on the exhaust fan housing as in the picture above. In the event that the fan is mounted on an adequate flange (in some versions of the boilers), the sensor is placed in the provided hole on the flange, it is necessary to ensure sealing between the sensor and the flange with a high temperature resistant silicone.

2.1.2 NTC themperature sensor

NTC is a negative temperature coefficient resistor which is used to measure the temperature of the liquid in the boiler. It is inserted into copper tubes in the form of a tube in such a way that the end of the sensor

in the form of a cylindrical thickening is placed at the bottom of the tube only so that it makes contact with the copper surface. Attention should be paid when mounting the boiler liner so that the sensor does not move from the original position. It is recommended that when the sensor is placed in the capsule, it is closed with a small piece of glass wool or other sealed material that is temperature resistant in order to prevent the movement of the sensor during the installation of the coating in order to obtain the accurate information about the temperature of the liquid.

In the case of the SIMPLE and STANDARD fireplaces, this sensor is used to measure the temperature of the environment that is heated. In the case of a product with anti-condenser pump (from 50kW to more) beside the water temperature in the boiler, this type of sensor is used to measure the water temperature in the return line from the switch to the boiler.

2.1.3 Pressure switch

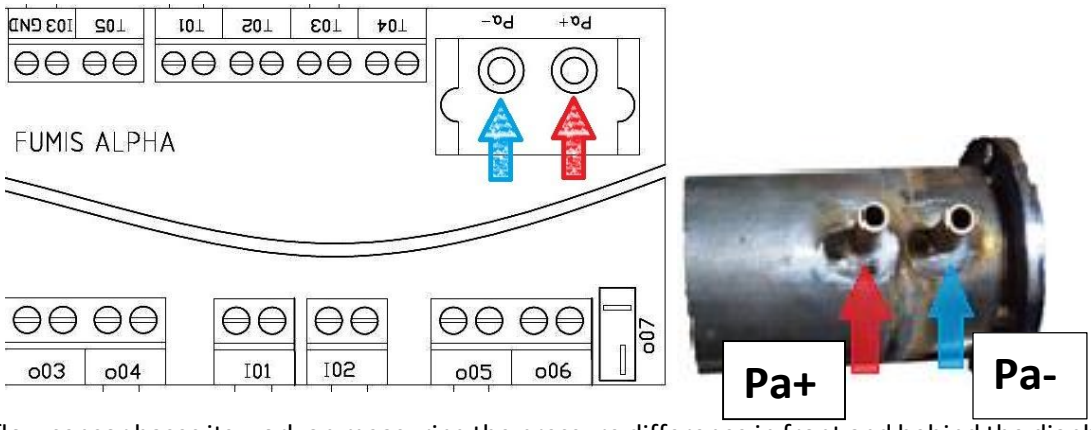
The pressure control is a safety pressure switch. It performs the function of protecting the device (boiler / stove) or people and objects that are in the immediate vicinity of the possibility of producing a fire due inadequate draft created in the combustion chamber. Substance is created when the air or flue gases are drawn through the flue pipe. The factory preset is set to activate contacts at a pressure of (Poff = 40 Pa; Mon = 60 Pa). It is connected with a silicon hose to the intended terminal located on the exhaust fan housing.

The error that can occur with this system on the boiler (the boiler does not go into a stable operating mode) is the silicon cord closing due to inadequate smoke, mechanical damage to silicon lines or the failure of the pressure switch itself.

2.1.4 Thermostat

The thermostat is a safety switch for the temperature of the liquid in the boiler. It performs the function of protecting the device (boiler / fireplace), the central heating system or people and objects that are located close to the boiler and heating installation due to overheating and the formation of a fire when the boiler temperature is exceeded. The factory thermostat is set to activate contacts at the maximum operating temperature of the device (fireplace / boiler) of 105°C. The probe thermostat is inserted together with the NTC temperature sensor in the copper coil located in the boiler body. The built-in thermostat has a bistable characteristic, ie. once the thermostat is activated due to temperature overrun, it remains active even when the temperature of the device falls. In this regard, when the cause of overheating of the boiler is eliminated, the thermostat must be manually reset by pressing the small pin located below the black protective cap most often on the back of the boiler.

- **Airflow sensor so-called "delta"**



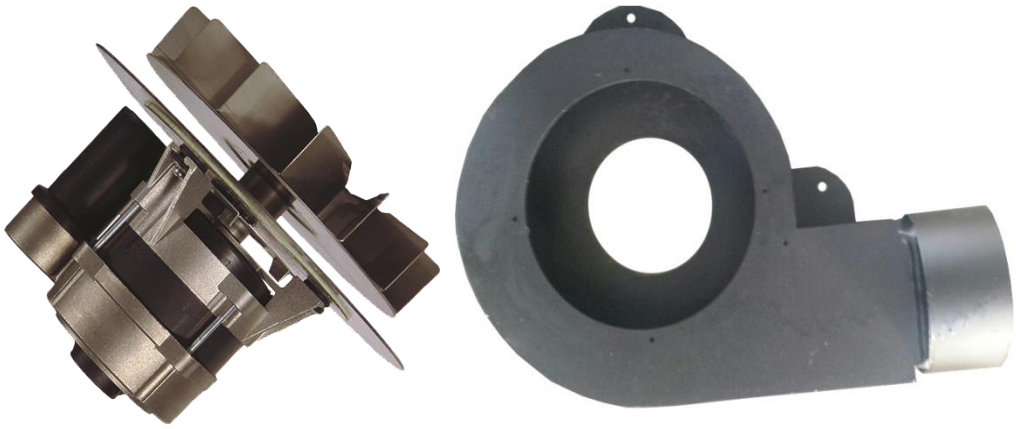
The air flow sensor bases its work on measuring the pressure difference in front and behind the diaphragm on the suction line of the boiler. The sensor itself is located directly on the control unit and is connected with the diaphragm using two silicone hoses for Pa + and Pa-. Based on the obtained measurement results, the control unit optimizes the combustion process in a way that controls the speed of the suction and exhaust fans.

2.2 Actuators - executive devices

2.2.1 Heater

The heater is a device by which the incineration of the pellet or the first pellet dose in the burner is carried out. In all stoves and boilers, in addition to some industrial ones, identical 250W heaters are installed. They work at 230V AC. They are installed in the foreseen tube for which the end is in the bottom of the burner.

2.2.2 Fans



Fans are electric motors designed for supplying fresh air and extracting exhaust gases in the combustion process. The fans control the control unit by defining the fan speed of the output voltage on its windings. They are installed in flanges (the most common case) or as standalone air vents if the fan is designed with the housing. The second type of fan is a tangential fan that is installed only in the dry stoves of the series SIMPLE / STANDARD.

2.2.3 Dispenser-auger assembly

The dispenser assembly is characterized by the step of the spiral of the dispenser and the engine rpm speed (rounds per minute speed). Its function is transporting pellets from the tank to the burner where the combustion will take place. The amount of dosage pellet depends on the working time of the dispenser engine which is spiraled. The required quantity of pellets that is inserted into the burner is determined by the time of operation of the dispenser engine, i.e. it is in function from time (the control unit is operated during the operation of the engine of the dispenser) and therefore it must be ensured that **the spiral and the dosing motor are compatible with the current parameters of the boiler operating mode**.

For larger boilers, when a larger amount of pellets are required to burn, two dozen spiral circuits and two motors are produced. **The servicer should pay attention to the type and speed of the engine, and adjust the boiler operating parameters accordingly!**

2.2.4 Water pump

The pump is a device that enables or initiates the flow of liquids through the central heating system. In the KAMIN series and boilers up to 25kW, the factory is built into the boilers together with the expansion vessel and the safety valve. For other boilers it is necessary to install the pump and the expansion vessel at a later stage. The pump also controls the control unit and in most cases (other than industrial boilers) directly connects to the same. The pump is 93W and 230V 50Hz.

Some boilers of 50 kW and more have a built-in anti-condenser pump that allows circulation or mixing of water in the boiler itself. It also controls by control unit and is directly connected to it. When installing the pump, the service technician should pay attention to the direction of flow of the liquid, ie, to achieve fluid flow from the switch to the bottom of the boiler.

3 ELECTRIC CONNECTION SCHEMES

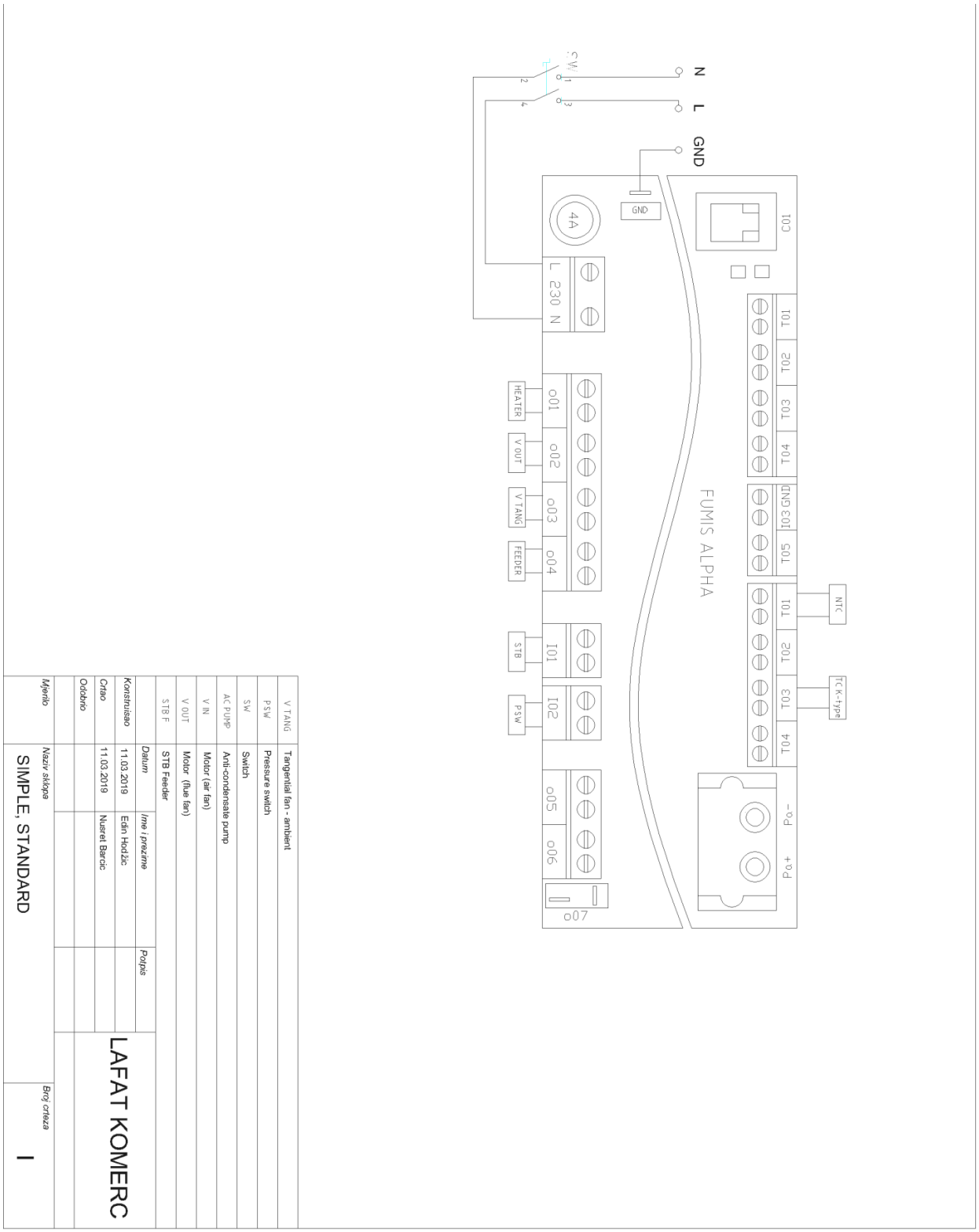
The electrical connection diagrams of the device to the control unit differ in the basic series of boiler-stoves. The connection principle is similar but the differences come with the expansion of the control unit's system for connecting multiple devices. If we look at the statement markings on the control unit, we will see the following:

1. T0X tags - indicate terminals for connecting a sensors (TC, NTC);
2. I0X tags - means terminals for connecting protective **switching** devices (STB, PSW);
3. O0X tags - indicate terminals for connecting output devices (gear motors, Heater);

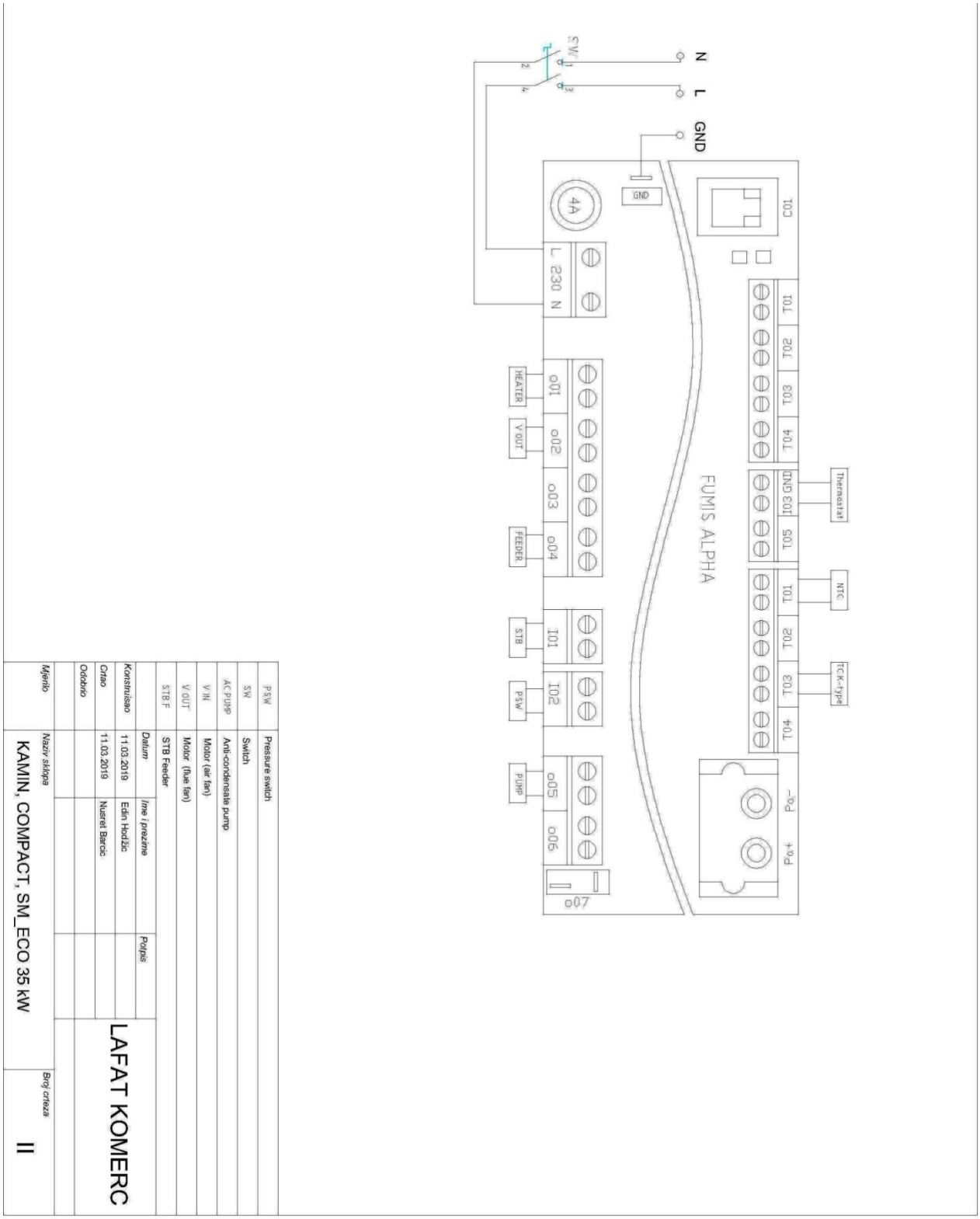
Errors made during connection of the device by failure to comply with these markings can lead to permanent damage to a particular item or in the case of a control unit.

Connection schemes for individual series of boilers / stoves will be shown in further text.

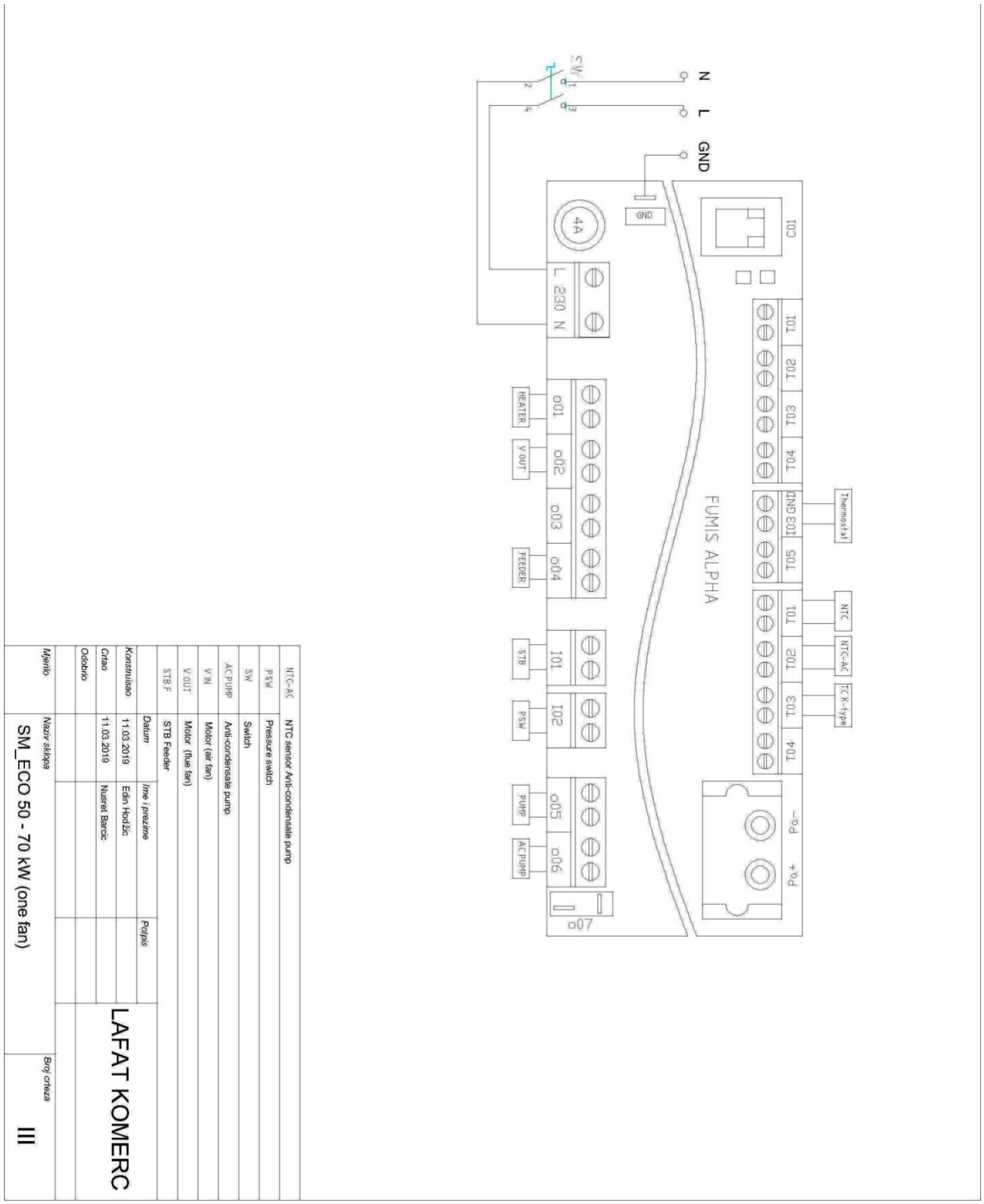
- **SIMPLE/STANDARD:**


N
L
GND
SW1
GND
4A
L 230 N
C01
T01
T02
T03
T04
T05
I03 GND
FUMIS ALPHA
NTC
TC K-type
Pa+
Pa-
HEATER
V OUT
V TANG
FEEDER
STB
PSW
o01
o02
o03
o04
I01
I02
o05
o06
o07
V TANG Tangential fan - ambient
PSW Pressure switch
SW Switch
AC PUMP Anti-condensate pump
V IN Motor (air fan)
V OUT Motor (flue fan)
STB F STB Feeder
Datum
Konstruisao 11.03.2019
Crtao 11.03.2019
Odobrio
Ime i prezime
Edin Hodžic
Nusret Barcic
Potpis
LAFAT KOMERC
Mjerilo
Naziv sklopa
SIMPLE, STANDARD
Broj crteza
I

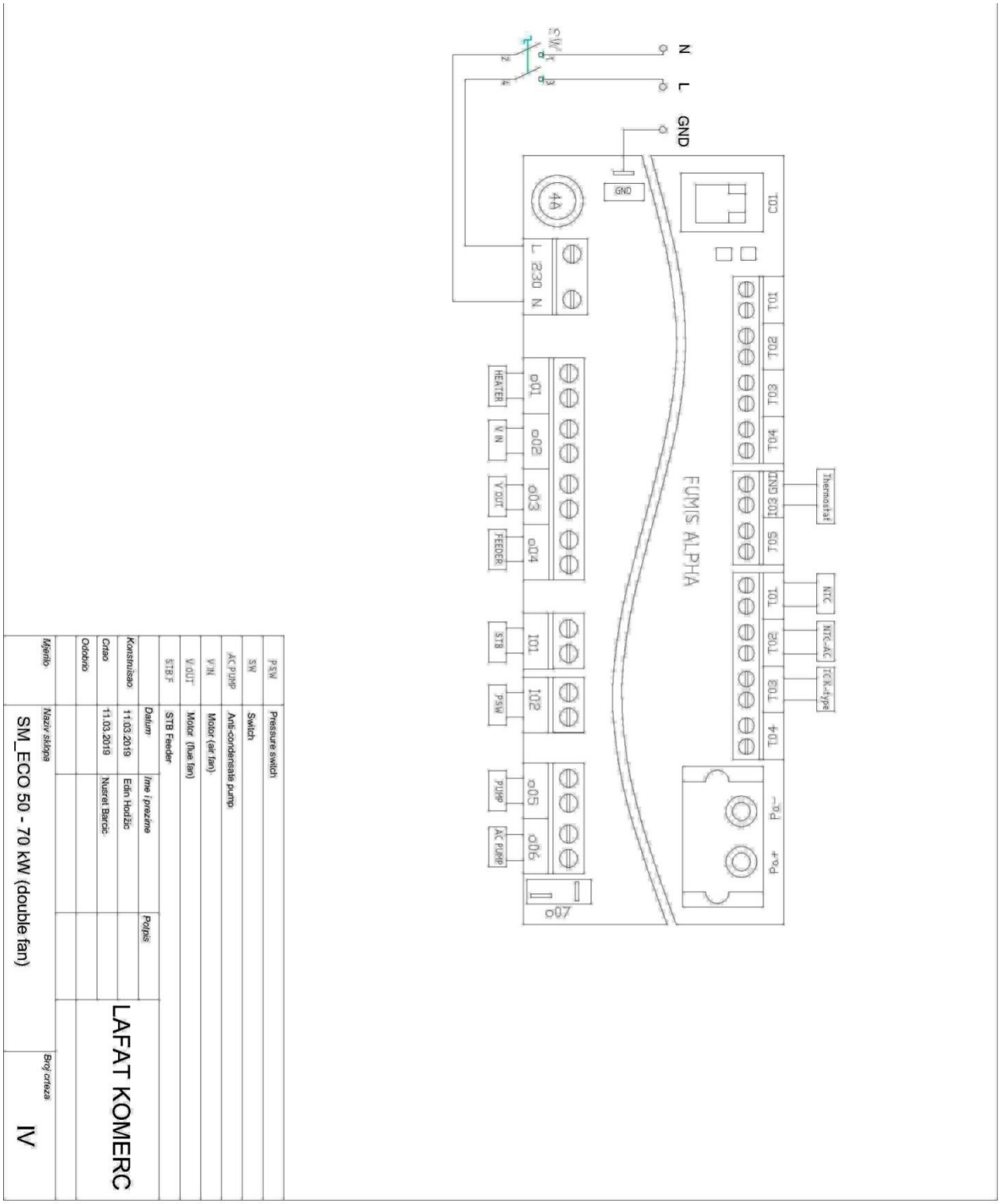
- **KAMIN/COMPACT/SM_ECO 35 kW:**



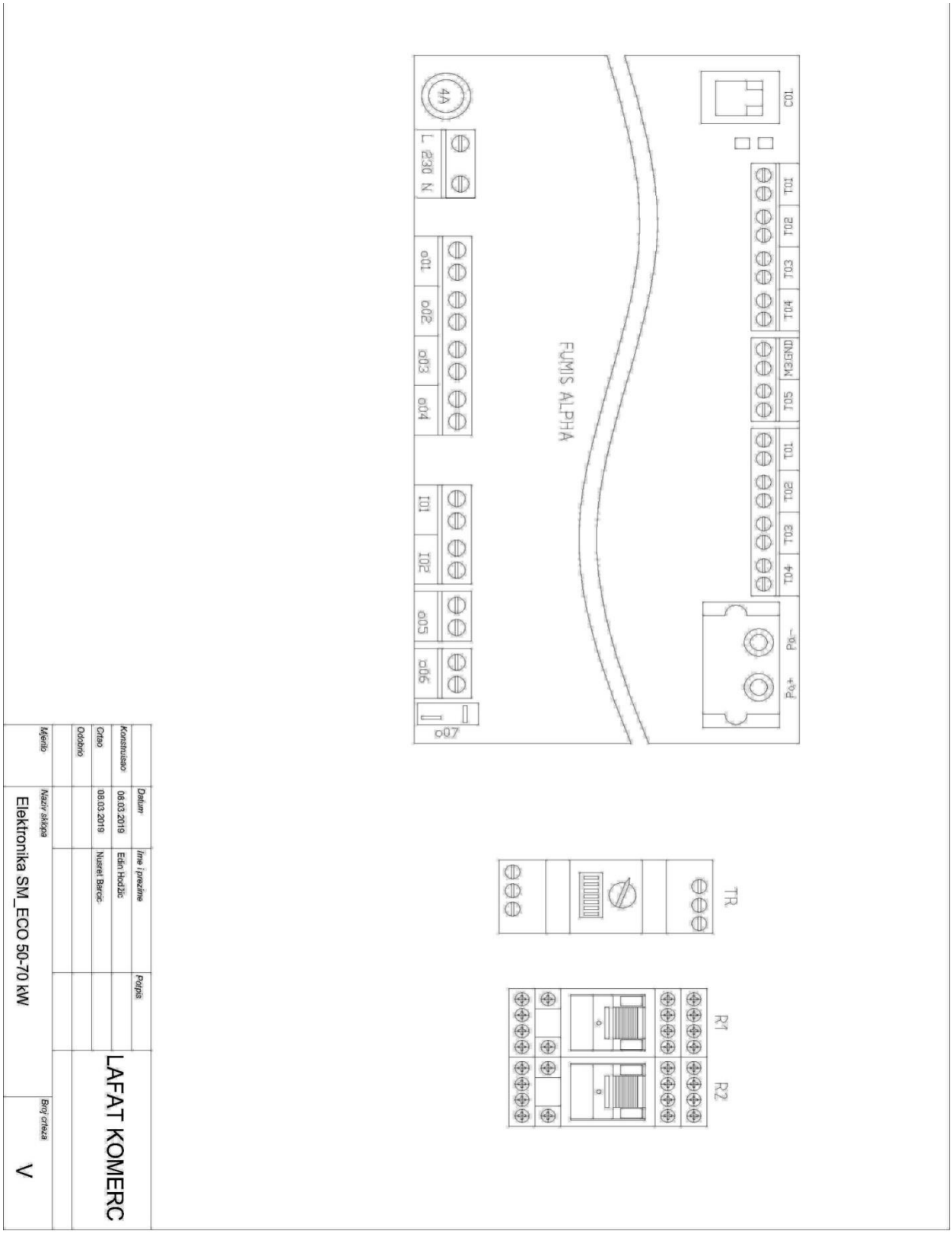
- **SM ECO 50 – 70 kW ,*with only one fan (smoke extraction):***

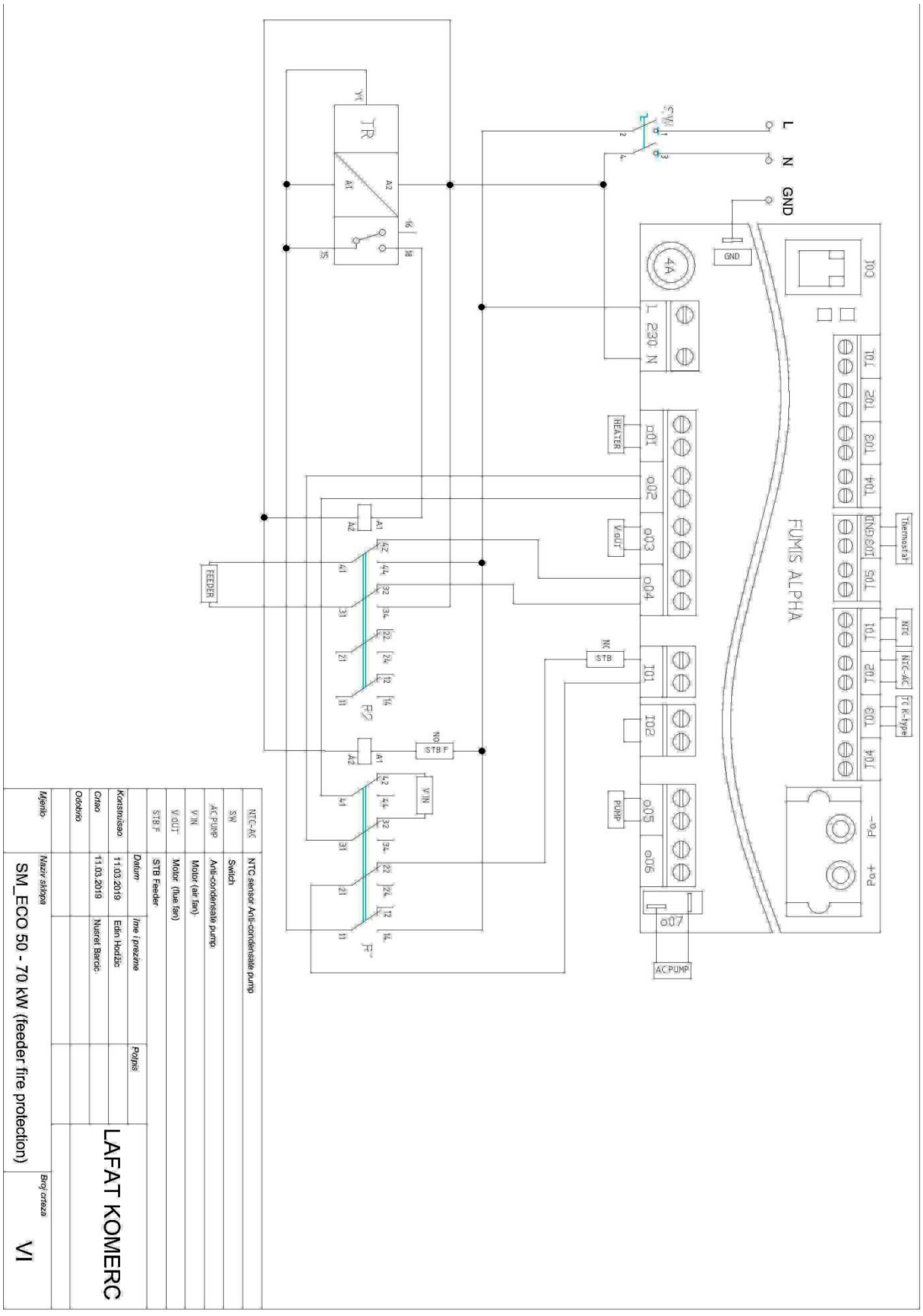


- **SM ECO 50 – 70 kW ,** ***with two fans primar air and smoke extraction):***

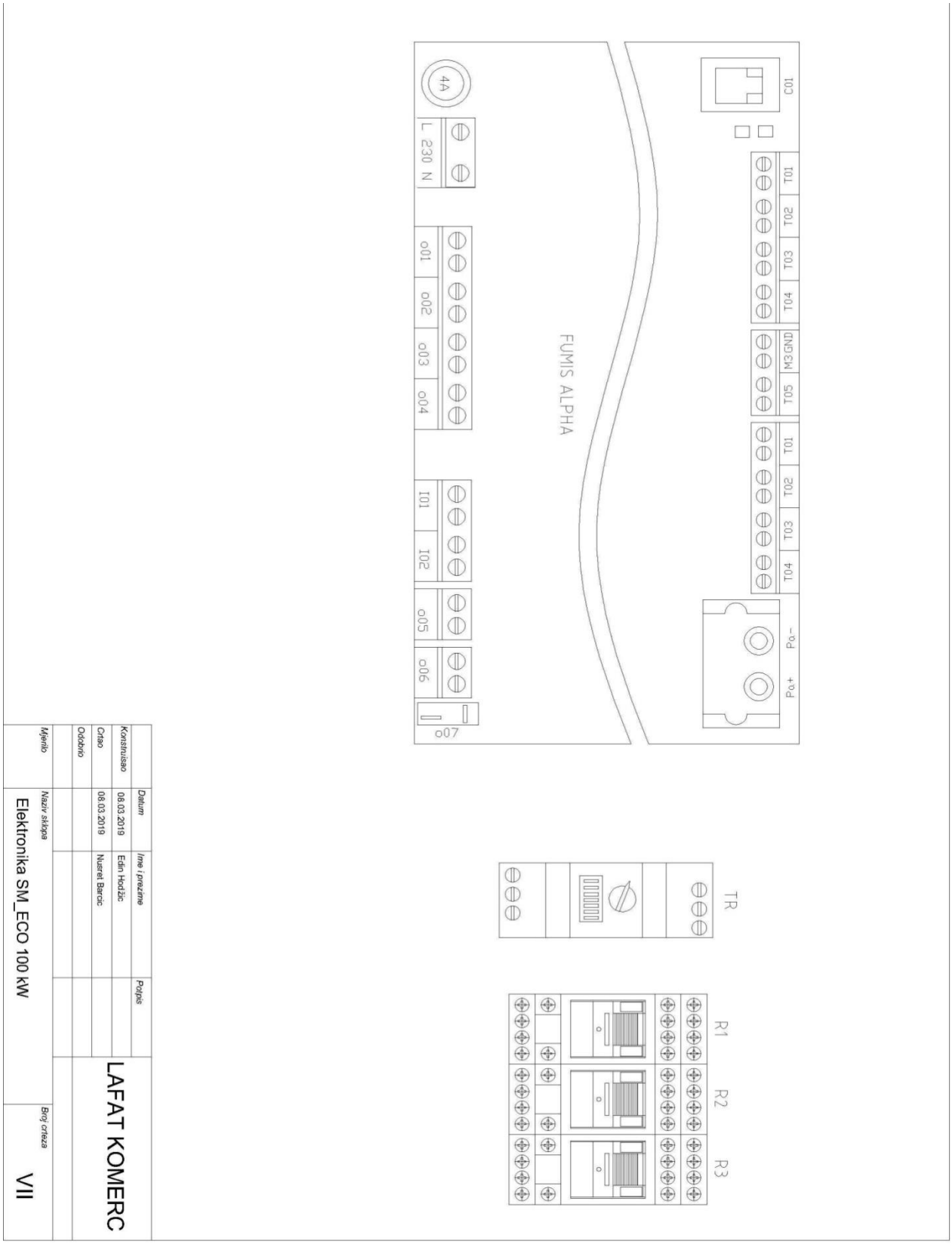


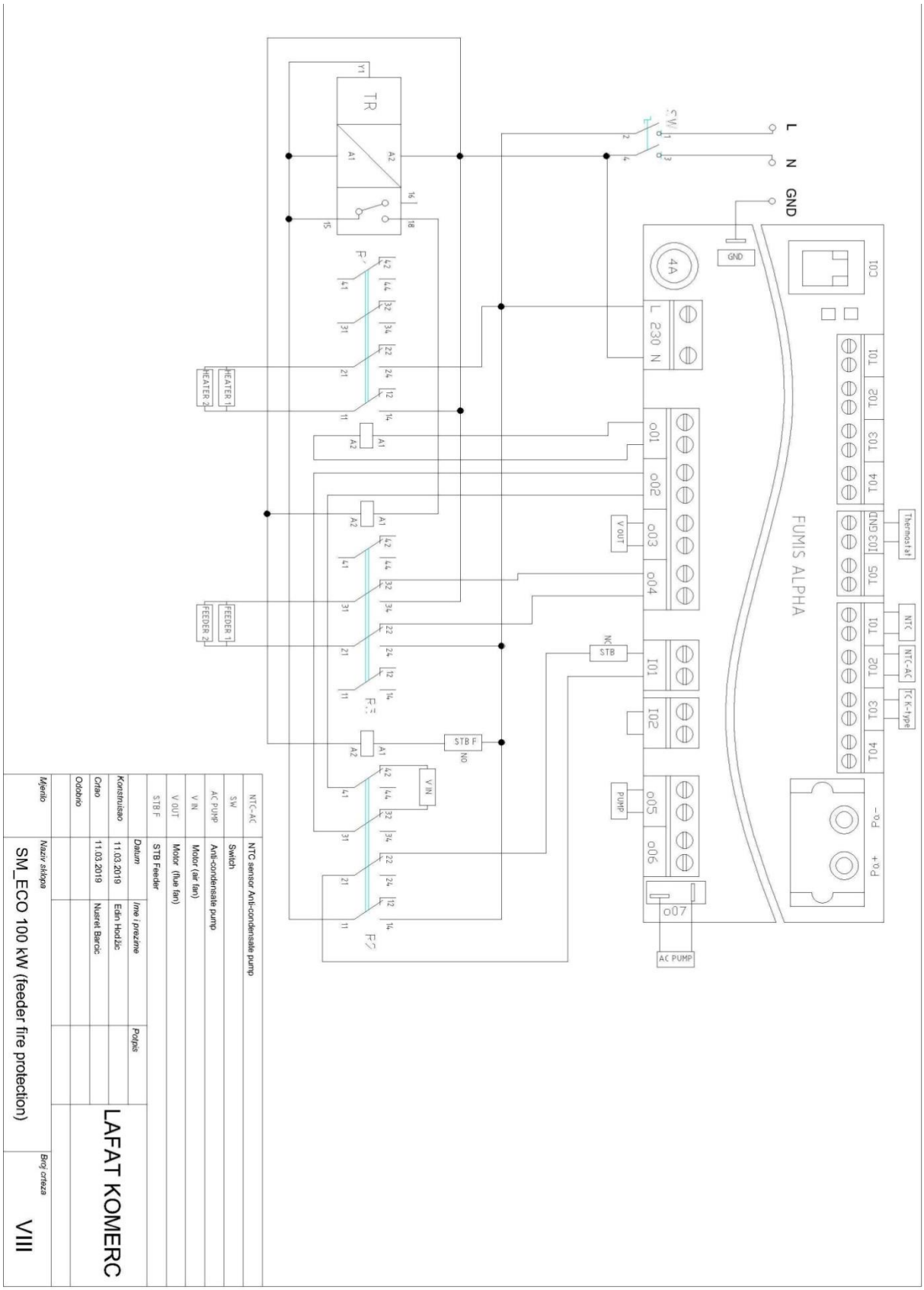
- **SM ECO 50 – 70 kW *with dosing auger overheat protection:***




L
N
GND
FUMIS ALPHA
HEATER
FEEDER
PUMP
AC PUMP
STB
STB F
V IN
V OUT
Thermostat
NTC
NTC-AC
TC K-type
Pa+
Pa-
NTC-AC NTC sensor Anti-condensate pump
SW Switch
AC PUMP Anti-condensate pump
V IN Motor (air fan)
V OUT Motor (flue fan)
STB F STB Feeder
Datum
Konstruisao 11.03.2019
Crtao 11.03.2019
Odobrio
Ime i prezime
Potpis
Edin Hodžic
Nusret Barcic
LAFAT KOMERC
Mjerilo
Broj crteza
VI
Naziv sklopa
SM_ECO 50 - 70 kW (feeder fire protection)

- **SM ECO 100kW and higher:**




L
N
GND
FUMIS ALPHA
Thermostat
NTC
NTC-AC
TC K-type
PUMP
AC PUMP
STB F
NC STB
V OUT
V IN
HEATER 1
HEATER 2
FEEDER 1
FEEDER 2
TR
NTC-AC NTC sensor Anti-condensate pump
SW Switch
AC PUMP Anti-condensate pump
V IN Motor (air fan)
V OUT Motor (fuel fan)
STB F STB Feeder
Datum
Konstruisao 11.03.2019 Edin Hodžic
Crtao 11.03.2019 Nuarel Barcic
Odobrio
Ime i prezime
Potpis
LAFAT KOMERC
Mjerilo
Naziv sklopa
SM_ECO 100 kW (feeder fire protection)
Broj crteza
VIII

4 PROGRAMMING BOILERS WITH A MANUAL UNIT

For the programming of boiler control units in the field, a handy device is used so-called. "Manual programmer". It contains the complete programs necessary for programming various boiler models produced. In the programmer's package, a connection cable is provided by which the programmer binds to the boiler control unit as well as the list of addresses of previously stored programs for the respective programmer.

It is necessary to switch off the original display of the boiler from the control unit, switch the cable coming with the programmer to one end in the control unit and at the other end into the programmer for the intended connectors (on the **control port**).

After connecting and starting the control unit, if everything is correct, "**01.01**" appears on the display of the programmer. The tag represents the location of the program in the programmer's memory. The first part of the tag in this case **01** - represents the serial number of the folder, and the second part of the tag behind the point .**01**- represents the regular file number in the selected folder. **Press UP, DOWN to scroll through the program list menu, and press ENTER - to select the program to be transferred to the control unit.**

Programs for different types of boilers are arranged in folders (first mark), and the file program itself (second tag) is always under the serial number 01.

REMARK: The list of program serial numbers is **valid for one programmer only**, so it is forbidden to use another list from a colleague of the service who does not belong to the original programmer. In case of losing the list of programs, it is necessary to contact VISION service department that can issue identical.

For example, we want to program the boiler with the program according to the list of programmers 02. We connect the programmer, blink our first tag ... .to **UP** we select the folder 02. Press the ENTER button to select this folder, blink the second mark 01. Always 01 is the first file of the program we need Select any folder. Then, with the ENTER key again, we select the file.

When we have finished selecting the program, the **Load** indicator will appear on the display of the programmer and the LED above the CONT will be active.

Confirm again with ENTER will appear loading display (tag in the form of vertical bars). This indicates that the program is loaded into the control unit. After filling in the display (two lines of dashes), the PASS tag appears. Again, confirm with ENTER, on the display will write Load which is the end of one program load process. We turn off the programmer, we return the boiler display connector to the original location on the control unit and thus we have finished the boiler programming.

5 SERVICE SETTINGS

The boiler from the factory is delivered with a program of pre-defined operating parameters which after manual change can no longer be easily returned to the factory settings except for reprogramming, so do not change the operating parameter if it really is not necessary.

The service menu is locked to prevent access to unskilled curious people.

5.1 Access to the service menu

After switching on the control unit and starting the display on the display, we click on the stalk right until the service mark is activated (the last diode in the upper right corner) as in the picture below

Click on the button (+) until we reach the last number, for example, this is number 8.

After that, the following screen will appear

Click on the **ENTER** button**.**

We'll get four numbers. (numbers are randomly generated, that is, with each unlock, there will be other numbers)

It is necessary to collect four numbers and increase their sum by one. In our case:

3 + 4 + 2 + 4 = 13 and when 1 is added, the result is 14. Click ENTER and the following screen will appear

Use the button (+) increase the number to the value of the results (14)

Then, pressing ENTER again, we will see the next display:

By this we unlocked the service menu and now we can perform certain checks or modifications. The service menu will be locked again after half an hour of inactive operation or if the control unit is reset to the main switch located on the back of the boiler.

5.2 Setting operating parameters

When we unlock the Service Menu, we can access the operating parameters of the boiler.

We press the (+) button until we reach number 8 (in the older versions of program 7) and after a second we will see the Par (parameters):

Clicking again ENTER will show the zero parameter parameter P000, the (+) and (-) keys are selected which parameter we want from P000 to P0105. After that, pressing ENTER will show the value of the parameter, which we increase or decrease with the (+) and (-) keys. After the correct value is set, pressing the ENTER key will save the parameter value.

When we have adjusted the whole parameter with the BACK button in the top left corner, we return to the home screen.

5.3 Other settings in the service menu

The service menu includes settings for thirteen items, of which the first seven or eight (1-7 or 1-8 dependent on the software) are unlocked while the others are from 7 or 8 to 13 are locked. We have explained access to locked settings in the chapter "**Accessing the service menu**". We will further describe and explain the specific functions of the service menu item.

SETTING NR.	MARK	VALUE	MEANING	DESCRIPTION
[1]	----------	OFF Lo Hi	Disabling user settings changes - lock the display	--------
[2]	----------	OFF, 1, 2, … 5	Adjusts the brightness of the display	OFF-off illumination in idle status
[3]	----------	1, 2, 3	Adjust the background information on the display	1 hour / temperature 2-temperature 3- hour
[4]	----------	1, 2, … 5	Volume of sounds of the keys and warnings	-------
[5]	----------	˚C ; ˚F	Temperature measurement unit	-------
[6]	---------	Info	------	-------
[7]	---------	ON; OFF	Unlock / Lock service settings	------
[8]	PAr	P000 – P105	Setting the operating parameters	-------
[9]	din	i01;…. i04	Check digital input status	(STB; Pressure switch…etc)
[10]	Ain	t01; … t05; Press	Check the status of analog inputs	T-of smoke gasses, T-of water, Pressure.
[11]	dout	o01; … o07	Manually turn on / off individual outputs	Outputs with voltage regulation are set from 0-255
[12]	Sc	-----	Reading interval of operation, the ignition, turning off the boiler, etc.	-------
[13]	Logs	-----	-------	-------

6 First ignition of the boiler

The boiler must be inspected and commissioned by an authorized service technician only so that the guarantee for the boiler is valid. The service technician should check all necessary items before and when commissioning the boiler to ensure that the boiler is properly installed and functioning impeccably. For this purpose, VISION is issuing Check Lists for authorized repairers, which the service technician must fill in when commissioning the boiler to work with the users. An example of such a list is shown in the pictures below

VISION	CHECK LIST FOR FIRST IGNITION OF BOILER	Page 2 of 2

Check the boiler operation

Check description	YES	NO	Comment
Completed filling of spiral auger/dispenser with pellets	☐	☐	
The combustion vessel filled to the top of the heater after 2.5 min	☐	☐	
The boiler ignited pellets	☐	☐	The duration of the ignition: _____minuts
The pump is turned on at 65°C	☐	☐	
The boiler reduces the power of 5°C before the set temperature (modulates) as it approaches the set temperature	☐	☐	
The boiler turn off after reaching the set temperature.	☐	☐	
The boiler goes back to the ignition stage after the temperature drops below 15 ° C below the set point	☐	☐	
* Testing only if the * acc container is connected The boiler is switched off at the specified temperature of the storage tank (acc container max)	☐	☐	
* Testing only if the * acc container is connected The boiler is turning on at the specified temperature of the storage tank (acc container min)	☐	☐	
Check all openings on the boiler - doors, lids, nuts, in the correct condition	☐	☐	
Boiler put into operation / Boiler repaired	☐	☐	
The user has undergone basic work training and boiler control	☐	☐	
Note, remark, suggestion: *accumultion tank			

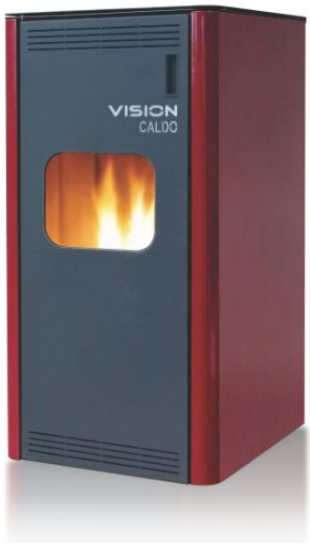
By its signature, the user agrees with all of the above and declares that there is no ambiguity with the operation of the boiler

Date: _____._____.201___ zear. User:_____
Print first and last name

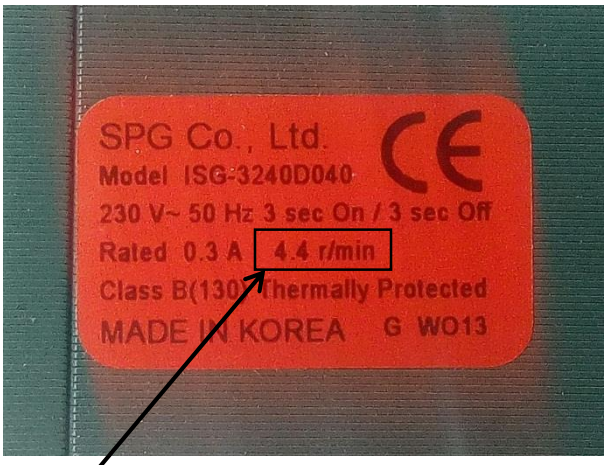
Service technician:_____ Signature of the user:_____

Note: A copy of the completed form is retained by the user and a second copy is attached by the service agent to the work order and warranty card.

6.1 KAMIN / EDGE 15 kW



Design type of burner and gear motor pellet dispenser:



Has to be : 4.4 rpm

Parameters:

0. Fuel ignition timeout --> [20]

1. Ignition test timeout --> [15]

2. Fuel type --> [0]

3. Heat up feeder OFF time --> [200]

4. Heat up feeder ON time --> [200]

5. Fuel ignition feeder 1 OFF time --> [150]

6. Fuel ignition feeder 1 ON time --> [20]

7. Ignition test feeder 1 OFF time --> [100]

8. Ignition test feeder 1 ON time --> [25]

9. Power 1 feeder 1 OFF time --> [106]

10. Power 1 feeder 1 ON time --> [16]

11. Power 2 feeder 1 OFF time --> [104]

12. Power 2 feeder 1 ON time --> [18]

13. Power 3 feeder 1 OFF time --> [103]

14. Power 3 feeder 1 ON time --> [20]

15. Power 4 feeder 1 OFF time --> [100]

16. Power 4 feeder 1 ON time --> [23]

17. Power 5 feeder 1 OFF time --> [98]

18. Power 5 feeder 1 ON time --> [25]

19. Stop fire fan 1 speed --> [255]

20. Test fire fan 1 speed --> [200]

21. Heat up fan 1 speed --> [100]

22. Fuel ignition fan 1 speed --> [154]

23. Ignition test fan 1 speed --> [161]

24. Power 1 fan 1 speed --> [150]

25. Power 2 fan 1 speed --> [152]

26. Power 3 fan 1 speed --> [154]

27. Power 4 fan 1 speed --> [156]
28. Power 5 fan 1 speed --> [159]
29. Test fire fan 2 speed --> [0]
30. Stop fire fan 2 speed --> [0]
31. Heat up fan 2 speed --> [0]
32. Fuel ignition fan 2 speed --> [0]
33. Ignition test fan 2 speed --> [0]
34. Power 1 fan 2 speed --> [0]
35. Power 2 fan 2 speed --> [0]
36. Power 3 fan 2 speed --> [0]
37. Power 4 fan 2 speed --> [0]
38. Power 5 fan 2 speed --> [0]
39. Quickheat fan 2 speed --> [0]
40. Stop fire fan 3 speed --> [0]
41. Test fire fan 3 speed --> [0]
42. Heat up fan 3 speed --> [0]
43. Fuel ignition fan 3 speed --> [0]
44. Ignition test fan 3 speed --> [0]
45. Power 1 fan 3 speed --> [0]
46. Power 2 fan 3 speed --> [0]
47. Power 3 fan 3 speed --> [0]
48. Power 4 fan 3 speed --> [0]
49. Power 5 fan 3 speed --> [0]
50. Cool fluid exit temp. diff. --> [10]
51. Water/air temperature --> [75]
52. Water temperature in stove mode --> [0]
53. Cool fluid entry temp. diff. --> [0]

54. Ignition test gases temperature --> [50]
55. Modulation start gases temperature --> [250]
56. Heating device OFF gases temperature --> [48]
57. Maximum (error) gases temperature --> [250]
58. Fan 2 as ambient min. gases temp. --> [120]
59. No fuel (error) gases temperature --> [50]
60. Fan 1 blow cleaning period --> [30]
61. Fan 1 blow cleaning duration --> [10]
62. Fan 1 blow cleaning speed --> [170]
63. Air pulse cleaning duration --> [0]
64. Chamber cleaning duration/rot. --> [0]
65. Ash extraction auger duration --> [0]
66. Ash extraction auger period --> [0]
67. ON temperature --> [60]
68. OFF temp./T1-T2 for max.modul.speed --> [50]
69. Anti-condensation exit temp. --> [0]
70. Heat up duration --> [40]
71. Fuel ignition temp. check samples --> [3]
72. Fuel ignition temperature rise --> [1]
73. User fuel feeder 1 ON time factor --> [100]
74. User fuel fan 1 speed factor --> [100]
75. Wood fuel fan 1 speed factor --> [100]
76. Selected configuration --> [4]
77. 2nd room temperature --> [0.0]
78. Flame ON level --> [110]
79. Flame OFF level --> [10]
80. Flame OFF detection delay --> [2]

81. Underpressure setpoint --> [0]

82. Min. (error) underpressure/airflow --> [0]

83. Underpressure/airflow error delay --> [0]

84. Accumulator temperature --> [0]

85. T1-T2 for water pump OFF --> [0]

86. Boiler to accu. temperature drop --> [0]

87. Keep fire fan 1 speed --> [160]

88. Keep fire feeder 1 ON time --> [3]

89. Keep fire fan 1 duration --> [15]

90. Keep fire period --> [20]

91. Feeder 2 delay/ON time factor --> [0]

92. Pellets quality --> [1]

93. Wood quality --> [1]

94. Time to service --> [0]

95. Stove cool fluid entry temp. diff. --> [0]

96. Stove cool fluid exit temp. diff. --> [0]

97. T1-T2 for min. modul. speed --> [0]

98. Full level --> [0]

99. Low level --> [0]

100. Empty level --> [0]

101. Blow out duration --> [120]

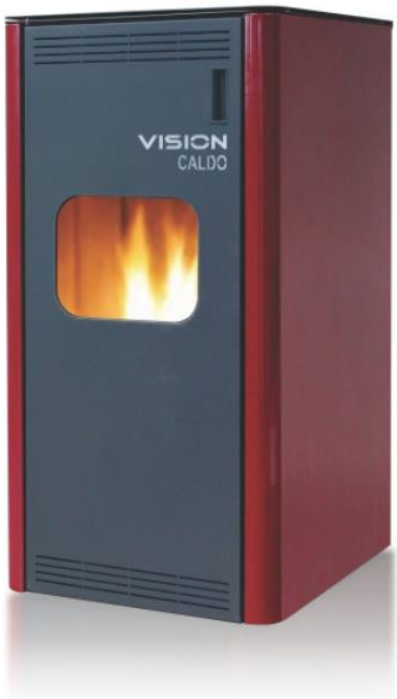
102. Antifreeze temperature --> [0]

103. Water pump minimum speed --> [80]

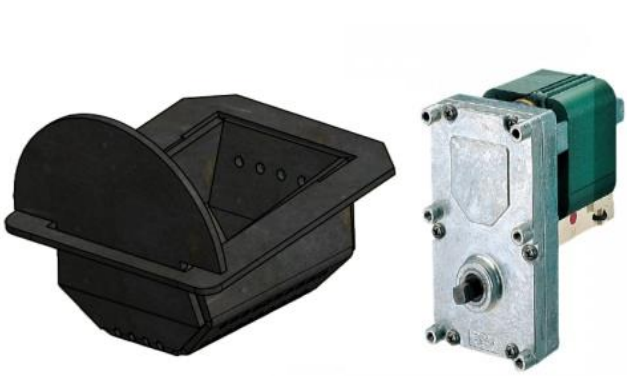
104. Water pump maximum speed --> [240]

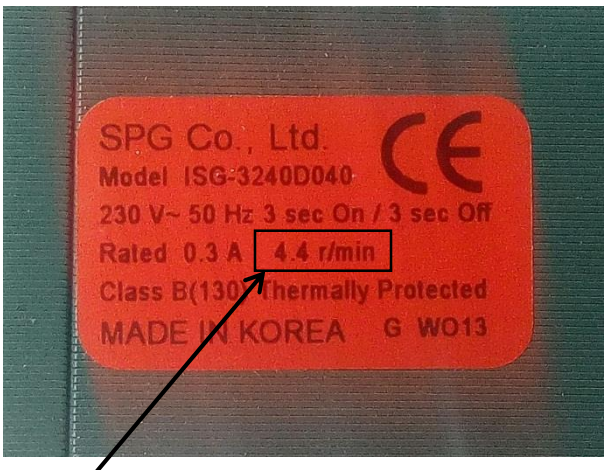
105. Reserved 105 --> [0]

6.2 KAMIN 20 kW



Design type of burner and gear motor pellet dispenser:





Has to be : 4.4 rpm

Parameters:

0. Fuel ignition timeout --> [20]

1. Ignition test timeout --> [15]

2. Fuel type --> [0]

3. Heat up feeder OFF time --> [200]

4. Heat up feeder ON time --> [200]

5. Fuel ignition feeder 1 OFF time --> [150]

6. Fuel ignition feeder 1 ON time --> [20]

7. Ignition test feeder 1 OFF time --> [100]

8. Ignition test feeder 1 ON time --> [25]

9. Power 1 feeder 1 OFF time --> [103]

10. Power 1 feeder 1 ON time --> [17]

11. Power 2 feeder 1 OFF time --> [100]

12. Power 2 feeder 1 ON time --> [20]

13. Power 3 feeder 1 OFF time --> [99]

14. Power 3 feeder 1 ON time --> [23]

15. Power 4 feeder 1 OFF time --> [97]

16. Power 4 feeder 1 ON time --> [25]

17. Power 5 feeder 1 OFF time --> [95]

18. Power 5 feeder 1 ON time --> [27]

19. Stop fire fan 1 speed --> [255]

20. Test fire fan 1 speed --> [200]

21. Heat up fan 1 speed --> [100]

22. Fuel ignition fan 1 speed --> [154]

23. Ignition test fan 1 speed --> [161]

24. Power 1 fan 1 speed --> [150]

25. Power 2 fan 1 speed --> [152]

26. Power 3 fan 1 speed --> [154]

27. Power 4 fan 1 speed --> [156]
28. Power 5 fan 1 speed --> [159]
29. Test fire fan 2 speed --> [0]
30. Stop fire fan 2 speed --> [0]
31. Heat up fan 2 speed --> [0]
32. Fuel ignition fan 2 speed --> [0]
33. Ignition test fan 2 speed --> [0]
34. Power 1 fan 2 speed --> [0]
35. Power 2 fan 2 speed --> [0]
36. Power 3 fan 2 speed --> [0]
37. Power 4 fan 2 speed --> [0]
38. Power 5 fan 2 speed --> [0]
39. Quickheat fan 2 speed --> [0]
40. Stop fire fan 3 speed --> [0]
41. Test fire fan 3 speed --> [0]
42. Heat up fan 3 speed --> [0]
43. Fuel ignition fan 3 speed --> [0]
44. Ignition test fan 3 speed --> [0]
45. Power 1 fan 3 speed --> [0]
46. Power 2 fan 3 speed --> [0]
47. Power 3 fan 3 speed --> [0]
48. Power 4 fan 3 speed --> [0]
49. Power 5 fan 3 speed --> [0]
50. Cool fluid exit temp. diff. --> [10]
51. Water/air temperature --> [75]
52. Water temperature in stove mode --> [0]
53. Cool fluid entry temp. diff. --> [0]

54. Ignition test gases temperature --> [50]
55. Modulation start gases temperature --> [250]
56. Heating device OFF gases temperature --> [48]
57. Maximum (error) gases temperature --> [250]
58. Fan 2 as ambient min. gases temp. --> [120]
59. No fuel (error) gases temperature --> [50]
60. Fan 1 blow cleaning period --> [30]
61. Fan 1 blow cleaning duration --> [10]
62. Fan 1 blow cleaning speed --> [170]
63. Air pulse cleaning duration --> [0]
64. Chamber cleaning duration/rot. --> [0]
65. Ash extraction auger duration --> [0]
66. Ash extraction auger period --> [0]
67. ON temperature --> [60]
68. OFF temp./T1-T2 for max.modul.speed --> [50]
69. Anti-condensation exit temp. --> [0]
70. Heat up duration --> [40]
71. Fuel ignition temp. check samples --> [3]
72. Fuel ignition temperature rise --> [1]
73. User fuel feeder 1 ON time factor --> [100]
74. User fuel fan 1 speed factor --> [100]
75. Wood fuel fan 1 speed factor --> [100]
76. Selected configuration --> [4]
77. 2nd room temperature --> [0.0]
78. Flame ON level --> [110]
79. Flame OFF level --> [10]
80. Flame OFF detection delay --> [2]

81. Underpressure setpoint --> [0]

82. Min. (error) underpressure/airflow --> [0]

83. Underpressure/airflow error delay --> [0]

84. Accumulator temperature --> [0]

85. T1-T2 for water pump OFF --> [0]

86. Boiler to accu. temperature drop --> [0]

87. Keep fire fan 1 speed --> [160]

88. Keep fire feeder 1 ON time --> [3]

89. Keep fire fan 1 duration --> [15]

90. Keep fire period --> [20]

91. Feeder 2 delay/ON time factor --> [0]

92. Pellets quality --> [1]

93. Wood quality --> [1]

94. Time to service --> [0]

95. Stove cool fluid entry temp. diff. --> [0]

96. Stove cool fluid exit temp. diff. --> [0]

97. T1-T2 for min. modul. speed --> [0]

98. Full level --> [0]

99. Low level --> [0]

100. Empty level --> [0]

101. Blow out duration --> [120]

102. Antifreeze temperature --> [0]

103. Water pump minimum speed --> [80]

104. Water pump maximum speed --> [240]

105. Reserved 105 --> [0]

6.3 KOTAO EDGE 23 kW

Design type of burner and gear motor pellet dispenser :

Parameters:

0. Fuel ignition timeout --> [20]

1. Ignition test timeout --> [15]

2. Fuel type --> [0]

3. Heat up feeder OFF time --> [200]

4. Heat up feeder ON time --> [200]

5. Fuel ignition feeder 1 OFF time --> [150]

6. Fuel ignition feeder 1 ON time --> [18]

7. Ignition test feeder 1 OFF time --> [100]

8. Ignition test feeder 1 ON time --> [30]

9. Power 1 feeder 1 OFF time --> [107]

10. Power 1 feeder 1 ON time --> [11]

11. Power 2 feeder 1 OFF time --> [103]

12. Power 2 feeder 1 ON time --> [15]

13. Power 3 feeder 1 OFF time --> [98]

14. Power 3 feeder 1 ON time --> [20]

15. Power 4 feeder 1 OFF time --> [94]

16. Power 4 feeder 1 ON time --> [24]

17. Power 5 feeder 1 OFF time --> [91]

18. Power 5 feeder 1 ON time --> [27]

19. Stop fire fan 1 speed --> [255]

20. Test fire fan 1 speed --> [200]

21. Heat up fan 1 speed --> [100]

22. Fuel ignition fan 1 speed --> [154]

23. Ignition test fan 1 speed --> [161]

24. Power 1 fan 1 speed --> [150]

25. Power 2 fan 1 speed --> [152]

26. Power 3 fan 1 speed --> [154]
27. Power 4 fan 1 speed --> [156]
28. Power 5 fan 1 speed --> [159]
29. Test fire fan 2 speed --> [0]
30. Stop fire fan 2 speed --> [0]
31. Heat up fan 2 speed --> [0]
32. Fuel ignition fan 2 speed --> [0]
33. Ignition test fan 2 speed --> [0]
34. Power 1 fan 2 speed --> [0]
35. Power 2 fan 2 speed --> [0]
36. Power 3 fan 2 speed --> [0]
37. Power 4 fan 2 speed --> [0]
38. Power 5 fan 2 speed --> [0]
39. Quickheat fan 2 speed --> [0]
40. Stop fire fan 3 speed --> [0]
41. Test fire fan 3 speed --> [0]
42. Heat up fan 3 speed --> [0]
43. Fuel ignition fan 3 speed --> [0]
44. Ignition test fan 3 speed --> [0]
45. Power 1 fan 3 speed --> [0]
46. Power 2 fan 3 speed --> [0]
47. Power 3 fan 3 speed --> [0]
48. Power 4 fan 3 speed --> [0]
49. Power 5 fan 3 speed --> [0]
50. Cool fluid exit temp. diff. --> [10]
51. Water/air temperature --> [75]
52. Water temperature in stove mode --> [0]

53. Cool fluid entry temp. diff. --> [0]
54. Ignition test gases temperature --> [50]
55. Modulation start gases temperature --> [250]
56. Heating device OFF gases temperature --> [47]
57. Maximum (error) gases temperature --> [250]
58. Fan 2 as ambient min. gases temp. --> [120]
59. No fuel (error) gases temperature --> [50]
60. Fan 1 blow cleaning period --> [30]
61. Fan 1 blow cleaning duration --> [10]
62. Fan 1 blow cleaning speed --> [170]
63. Air pulse cleaning duration --> [0]
64. Chamber cleaning duration/rot. --> [0]
65. Ash extraction auger duration --> [0]
66. Ash extraction auger period --> [0]
67. ON temperature --> [60]
68. OFF temp./T1-T2 for max.modul.speed --> [50]
69. Anti-condensation exit temp. --> [0]
70. Heat up duration --> [40]
71. Fuel ignition temp. check samples --> [6]
72. Fuel ignition temperature rise --> [2]
73. User fuel feeder 1 ON time factor --> [100]
74. User fuel fan 1 speed factor --> [100]
75. Wood fuel fan 1 speed factor --> [100]
76. Selected configuration --> [4]
77. 2nd room temperature --> [0.0]
78. Flame ON level --> [110]
79. Flame OFF level --> [10]

80. Flame OFF detection delay --> [2]

81. Underpressure setpoint --> [0]

82. Min. (error) underpressure/airflow --> [0]

83. Underpressure/airflow error delay --> [0]

84. Accumulator temperature --> [0]

85. T1-T2 for water pump OFF --> [0]

86. Boiler to accu. temperature drop --> [0]

87. Keep fire fan 1 speed --> [160]

88. Keep fire feeder 1 ON time --> [3]

89. Keep fire fan 1 duration --> [15]

90. Keep fire period --> [20]

91. Feeder 2 delay/ON time factor --> [0]

92. Pellets quality --> [1]

93. Wood quality --> [1]

94. Time to service --> [0]

95. Stove cool fluid entry temp. diff. --> [0]

96. Stove cool fluid exit temp. diff. --> [0]

97. T1-T2 for min. modul. speed --> [0]

98. Full level --> [0]

99. Low level --> [0]

100. Empty level --> [0]

101. Blow out duration --> [120]

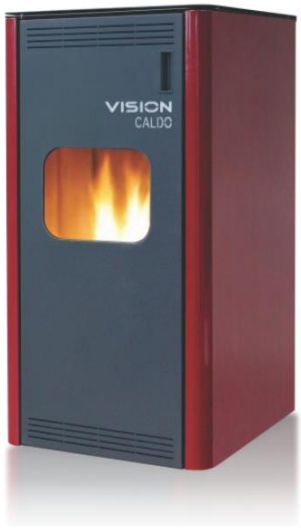
102. Antifreeze temperature --> [0]

103. Water pump minimum speed --> [80]

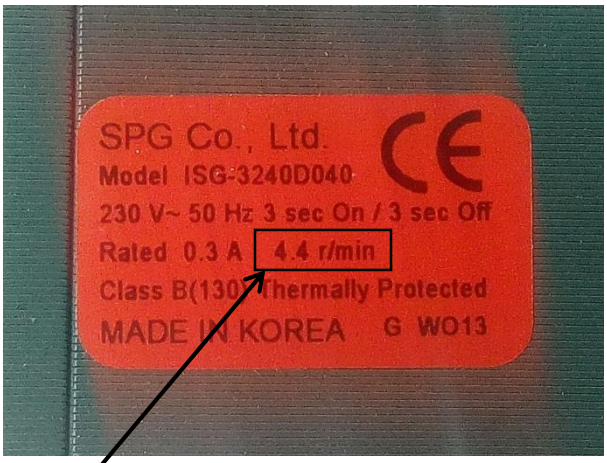
104. Water pump maximum speed --> [240]

105. Reserved 105 --> [0]

6.4 KAMIN / COMPACT 25 kW



Design type of burner and gear motor pellet dispenser



Has to be : 4.4 rpm

Parameters:

0. Fuel ignition timeout --> [20]

1. Ignition test timeout --> [15]

2. Fuel type --> [0]

3. Heat up feeder OFF time --> [200]

4. Heat up feeder ON time --> [200]

5. Fuel ignition feeder 1 OFF time --> [150]

6. Fuel ignition feeder 1 ON time --> [18]

7. Ignition test feeder 1 OFF time --> [100]

8. Ignition test feeder 1 ON time --> [30]

9. Power 1 feeder 1 OFF time --> [107]

10. Power 1 feeder 1 ON time --> [13]

11. Power 2 feeder 1 OFF time --> [103]

12. Power 2 feeder 1 ON time --> [17]

13. Power 3 feeder 1 OFF time --> [98]

14. Power 3 feeder 1 ON time --> [22]

15. Power 4 feeder 1 OFF time --> [94]

16. Power 4 feeder 1 ON time --> [26]

17. Power 5 feeder 1 OFF time --> [91]

18. Power 5 feeder 1 ON time --> [29]

19. Stop fire fan 1 speed --> [255]

20. Test fire fan 1 speed --> [200]

21. Heat up fan 1 speed --> [100]

22. Fuel ignition fan 1 speed --> [154]

23. Ignition test fan 1 speed --> [161]

24. Power 1 fan 1 speed --> [150]

25. Power 2 fan 1 speed --> [152]

26. Power 3 fan 1 speed --> [154]

27. Power 4 fan 1 speed --> [156]
28. Power 5 fan 1 speed --> [159]
29. Test fire fan 2 speed --> [0]
30. Stop fire fan 2 speed --> [0]
31. Heat up fan 2 speed --> [0]
32. Fuel ignition fan 2 speed --> [0]
33. Ignition test fan 2 speed --> [0]
34. Power 1 fan 2 speed --> [0]
35. Power 2 fan 2 speed --> [0]
36. Power 3 fan 2 speed --> [0]
37. Power 4 fan 2 speed --> [0]
38. Power 5 fan 2 speed --> [0]
39. Quickheat fan 2 speed --> [0]
40. Stop fire fan 3 speed --> [0]
41. Test fire fan 3 speed --> [0]
42. Heat up fan 3 speed --> [0]
43. Fuel ignition fan 3 speed --> [0]
44. Ignition test fan 3 speed --> [0]
45. Power 1 fan 3 speed --> [0]
46. Power 2 fan 3 speed --> [0]
47. Power 3 fan 3 speed --> [0]
48. Power 4 fan 3 speed --> [0]
49. Power 5 fan 3 speed --> [0]
50. Cool fluid exit temp. diff. --> [10]
51. Water/air temperature --> [75]
52. Water temperature in stove mode --> [0]
53. Cool fluid entry temp. diff. --> [0]

54. Ignition test gases temperature --> [50]
55. Modulation start gases temperature --> [250]
56. Heating device OFF gases temperature --> [47]
57. Maximum (error) gases temperature --> [250]
58. Fan 2 as ambient min. gases temp. --> [120]
59. No fuel (error) gases temperature --> [50]
60. Fan 1 blow cleaning period --> [30]
61. Fan 1 blow cleaning duration --> [10]
62. Fan 1 blow cleaning speed --> [170]
63. Air pulse cleaning duration --> [0]
64. Chamber cleaning duration/rot. --> [0]
65. Ash extraction auger duration --> [0]
66. Ash extraction auger period --> [0]
67. ON temperature --> [60]
68. OFF temp./T1-T2 for max.modul.speed --> [50]
69. Anti-condensation exit temp. --> [0]
70. Heat up duration --> [40]
71. Fuel ignition temp. check samples --> [6]
72. Fuel ignition temperature rise --> [2]
73. User fuel feeder 1 ON time factor --> [100]
74. User fuel fan 1 speed factor --> [100]
75. Wood fuel fan 1 speed factor --> [100]
76. Selected configuration --> [4]
77. 2nd room temperature --> [0.0]
78. Flame ON level --> [110]
79. Flame OFF level --> [10]
80. Flame OFF detection delay --> [2]

81. Underpressure setpoint --> [0]

82. Min. (error) underpressure/airflow --> [0]

83. Underpressure/airflow error delay --> [0]

84. Accumulator temperature --> [0]

85. T1-T2 for water pump OFF --> [0]

86. Boiler to accu. temperature drop --> [0]

87. Keep fire fan 1 speed --> [160]

88. Keep fire feeder 1 ON time --> [3]

89. Keep fire fan 1 duration --> [15]

90. Keep fire period --> [20]

91. Feeder 2 delay/ON time factor --> [0]

92. Pellets quality --> [1]

93. Wood quality --> [1]

94. Time to service --> [0]

95. Stove cool fluid entry temp. diff. --> [0]

96. Stove cool fluid exit temp. diff. --> [0]

97. T1-T2 for min. modul. speed --> [0]

98. Full level --> [0]

99. Low level --> [0]

100. Empty level --> [0]

101. Blow out duration --> [120]

102. Antifreeze temperature --> [0]

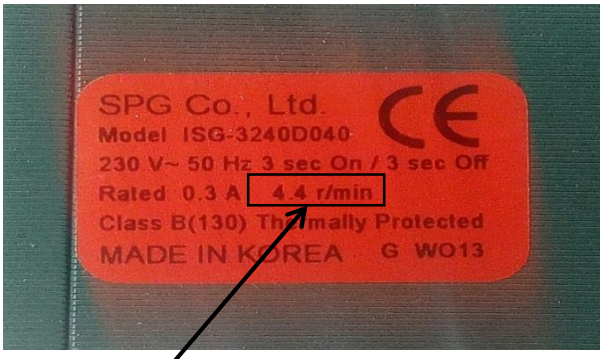
103. Water pump minimum speed --> [80]

104. Water pump maximum speed --> [240]

105. Reserved 105 --> [0]

6.5 COMPACT 33 kW

Design type of burner and gear motor pellet dispenser



Has to be : 4.4 rpm

Parameters:

0. Fuel ignition timeout --> [20]

1. Ignition test timeout --> [15]

2. Fuel type --> [0]

3. Heat up feeder OFF time --> [200]

4. Heat up feeder ON time --> [200]

5. Fuel ignition feeder 1 OFF time --> [150]

6. Fuel ignition feeder 1 ON time --> [40]

7. Ignition test feeder 1 OFF time --> [100]

8. Ignition test feeder 1 ON time --> [30]

9. Power 1 feeder 1 OFF time --> [40]

10. Power 1 feeder 1 ON time --> [15]

11. Power 2 feeder 1 OFF time --> [40]

12. Power 2 feeder 1 ON time --> [15]

13. Power 3 feeder 1 OFF time --> [40]

14. Power 3 feeder 1 ON time --> [16]

15. Power 4 feeder 1 OFF time --> [40]

16. Power 4 feeder 1 ON time --> [18]

17. Power 5 feeder 1 OFF time --> [40]

18. Power 5 feeder 1 ON time --> [20]

19. Stop fire fan 1 speed --> [200]

20. Test fire fan 1 speed --> [200]

21. Heat up fan 1 speed --> [100]

22. Fuel ignition fan 1 speed --> [155]

23. Ignition test fan 1 speed --> [161]

24. Power 1 fan 1 speed --> [137]

25. Power 2 fan 1 speed --> [140]

26. Power 3 fan 1 speed --> [180]
27. Power 4 fan 1 speed --> [190]
28. Power 5 fan 1 speed --> [200]
29. Test fire fan 2 speed --> [0]
30. Stop fire fan 2 speed --> [0]
31. Heat up fan 2 speed --> [0]
32. Fuel ignition fan 2 speed --> [0]
33. Ignition test fan 2 speed --> [0]
34. Power 1 fan 2 speed --> [0]
35. Power 2 fan 2 speed --> [0]
36. Power 3 fan 2 speed --> [0]
37. Power 4 fan 2 speed --> [0]
38. Power 5 fan 2 speed --> [0]
39. Quickheat fan 2 speed --> [0]
40. Stop fire fan 3 speed --> [0]
41. Test fire fan 3 speed --> [0]
42. Heat up fan 3 speed --> [0]
43. Fuel ignition fan 3 speed --> [0]
44. Ignition test fan 3 speed --> [0]
45. Power 1 fan 3 speed --> [0]
46. Power 2 fan 3 speed --> [0]
47. Power 3 fan 3 speed --> [0]
48. Power 4 fan 3 speed --> [0]
49. Power 5 fan 3 speed --> [0]
50. Cool fluid exit temp. diff. --> [10]
51. Water/air temperature --> [82]
52. Water temperature in stove mode --> [0]

53. Cool fluid entry temp. diff. --> [0]

54. Ignition test gases temperature --> [55]

55. Modulation start gases temperature --> [255]

56. Heating device OFF gases temperature --> [60]

57. Maximum (error) gases temperature --> [255]

58. Fan 2 as ambient min. gases temp. --> [200]

59. No fuel (error) gases temperature --> [60]

60. Fan 1 blow cleaning period --> [30]

61. Fan 1 blow cleaning duration --> [30]

62. Fan 1 blow cleaning speed --> [180]

63. Air pulse cleaning duration --> [0]

64. Chamber cleaning duration/rot. --> [0]

65. Ash extraction auger duration --> [0]

66. Ash extraction auger period --> [0]

67. ON temperature --> [60]

68. OFF temp./T1-T2 for max.modul.speed --> [50]

69. Anti-condensation exit temp. --> [45]

70. Heat up duration --> [80]

71. Fuel ignition temp. check samples --> [2]

72. Fuel ignition temperature rise --> [1]

73. User fuel feeder 1 ON time factor --> [100]

74. User fuel fan 1 speed factor --> [100]

75. Wood fuel fan 1 speed factor --> [100]

76. Selected configuration --> [4]

77. 2nd room temperature --> [0.0]

78. Flame ON level --> [110]

79. Flame OFF level --> [10]

80. Flame OFF detection delay --> [2]

81. Underpressure setpoint --> [0]

82. Min. (error) underpressure/airflow --> [0]

83. Underpressure/airflow error delay --> [0]

84. Accumulator temperature --> [0]

85. T1-T2 for water pump OFF --> [0]

86. Boiler to accu. temperature drop --> [0]

87. Keep fire fan 1 speed --> [160]

88. Keep fire feeder 1 ON time --> [3]

89. Keep fire fan 1 duration --> [15]

90. Keep fire period --> [20]

91. Feeder 2 delay/ON time factor --> [0]

92. Pellets quality --> [1]

93. Wood quality --> [1]

94. Time to service --> [0]

95. Stove cool fluid entry temp. diff. --> [0]

96. Stove cool fluid exit temp. diff. --> [0]

97. T1-T2 for min. modul. speed --> [0]

98. Full level --> [0]

99. Low level --> [0]

100. Empty level --> [0]

101. Blow out duration --> [120]

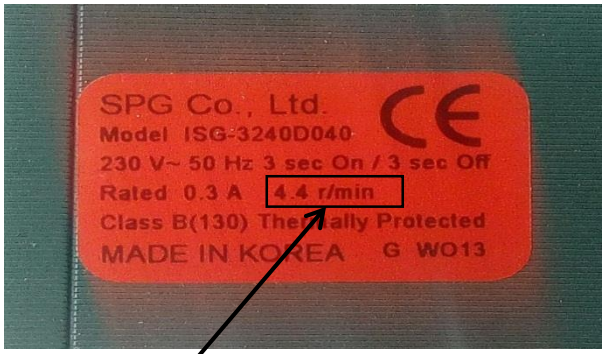
102. Antifreeze temperature --> [0]

103. Water pump minimum speed --> [80]

104. Water pump maximum speed --> [240]

6.6 SM ECO 35 kW

Design type of burner and gear motor pellet dispenser:



Has to be : 4.4 rpm

Parameters:

0. Fuel ignition timeout --> [20]

1. Ignition test timeout --> [15]

2. Fuel type --> [0]

3. Heat up feeder OFF time --> [200]

4. Heat up feeder ON time --> [200]

5. Fuel ignition feeder 1 OFF time --> [200]

6. Fuel ignition feeder 1 ON time --> [30]

7. Ignition test feeder 1 OFF time --> [100]

8. Ignition test feeder 1 ON time --> [30]

9. Power 1 feeder 1 OFF time --> [40]

10. Power 1 feeder 1 ON time --> [15]

11. Power 2 feeder 1 OFF time --> [40]

12. Power 2 feeder 1 ON time --> [16]

13. Power 3 feeder 1 OFF time --> [40]

14. Power 3 feeder 1 ON time --> [17]

15. Power 4 feeder 1 OFF time --> [40]

16. Power 4 feeder 1 ON time --> [18]

17. Power 5 feeder 1 OFF time --> [40]

18. Power 5 feeder 1 ON time --> [20]

19. Stop fire fan 1 speed --> [200]

20. Test fire fan 1 speed --> [200]

21. Heat up fan 1 speed --> [100]

22. Fuel ignition fan 1 speed --> [150]

23. Ignition test fan 1 speed --> [161]

24. Power 1 fan 1 speed --> [137]

25. Power 2 fan 1 speed --> [140]
26. Power 3 fan 1 speed --> [150]
27. Power 4 fan 1 speed --> [160]
28. Power 5 fan 1 speed --> [170]
29. Test fire fan 2 speed --> [0]
30. Stop fire fan 2 speed --> [0]
31. Heat up fan 2 speed --> [0]
32. Fuel ignition fan 2 speed --> [0]
33. Ignition test fan 2 speed --> [0]
34. Power 1 fan 2 speed --> [0]
35. Power 2 fan 2 speed --> [0]
36. Power 3 fan 2 speed --> [0]
37. Power 4 fan 2 speed --> [0]
38. Power 5 fan 2 speed --> [0]
39. Quickheat fan 2 speed --> [0]
40. Stop fire fan 3 speed --> [0]
41. Test fire fan 3 speed --> [0]
42. Heat up fan 3 speed --> [0]
43. Fuel ignition fan 3 speed --> [0]
44. Ignition test fan 3 speed --> [0]
45. Power 1 fan 3 speed --> [0]
46. Power 2 fan 3 speed --> [0]
47. Power 3 fan 3 speed --> [0]
48. Power 4 fan 3 speed --> [0]
49. Power 5 fan 3 speed --> [0]
50. Cool fluid exit temp. diff. --> [10]
51. Water/air temperature --> [80]

52. Water temperature in stove mode --> [0]
53. Cool fluid entry temp. diff. --> [0]
54. Ignition test gases temperature --> [55]
55. Modulation start gases temperature --> [255]
56. Heating device OFF gases temperature --> [60]
57. Maximum (error) gases temperature --> [255]
58. Fan 2 as ambient min. gases temp. --> [200]
59. No fuel (error) gases temperature --> [60]
60. Fan 1 blow cleaning period --> [30]
61. Fan 1 blow cleaning duration --> [30]
62. Fan 1 blow cleaning speed --> [140]
63. Air pulse cleaning duration --> [0]
64. Chamber cleaning duration/rot. --> [0]
65. Ash extraction auger duration --> [0]
66. Ash extraction auger period --> [0]
67. ON temperature --> [60]
68. OFF temp./T1-T2 for max.modul.speed --> [50]
69. Anti-condensation exit temp. --> [45]
70. Heat up duration --> [80]
71. Fuel ignition temp. check samples --> [6]
72. Fuel ignition temperature rise --> [2]
73. User fuel feeder 1 ON time factor --> [100]
74. User fuel fan 1 speed factor --> [100]
75. Wood fuel fan 1 speed factor --> [100]
76. Selected configuration --> [4]
77. 2nd room temperature --> [0,0]
78. Flame ON level --> [110]

79. Flame OFF level --> [10]

80. Flame OFF detection delay --> [2]

81. Underpressure setpoint --> [0]

82. Min. (error) underpressure/airflow --> [0]

83. Underpressure/airflow error delay --> [0]

84. Accumulator temperature --> [0]

85. T1-T2 for water pump OFF --> [0]

86. Boiler to accu. temperature drop --> [0]

87. Keep fire fan 1 speed --> [160]

88. Keep fire feeder 1 ON time --> [3]

89. Keep fire fan 1 duration --> [15]

90. Keep fire period --> [20]

91. Feeder 2 delay/ON time factor --> [0]

92. Pellets quality --> [1]

93. Wood quality --> [1]

94. Time to service --> [0]

95. Stove cool fluid entry temp. diff. --> [0]

96. Stove cool fluid exit temp. diff. --> [0]

97. T1-T2 for min. modul. speed --> [0]

98. Full level --> [0]

99. Low level --> [0]

100. Empty level --> [0]

101. Blow out duration --> [120]

102. Antifreeze temperature --> [0]

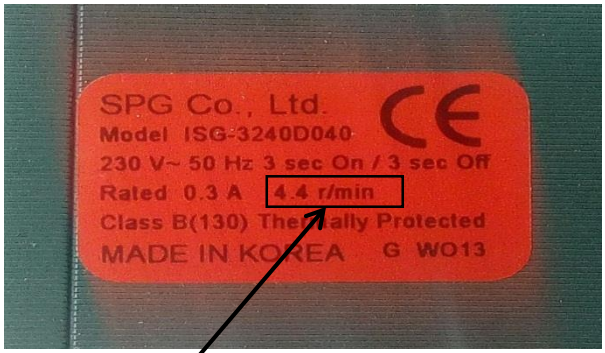
103. Water pump minimum speed --> [80]

104. Water pump maximum speed --> [240]

105. Reserved 105 --> [0]

6.7 SM ECO 50 kW

Design type of burner and gear motor pellet dispenser:



Parameters Has to be : 4.4 rpm

0. Fuel ignition timeout --> [30]

1. Ignition test timeout --> [15]

2. Fuel type --> [0]

3. Heat up feeder OFF time --> [100]

4. Heat up feeder ON time --> [200]

5. Fuel ignition feeder 1 OFF time --> [200]

6. Fuel ignition feeder 1 ON time --> [15]

7. Ignition test feeder 1 OFF time --> [150]

8. Ignition test feeder 1 ON time --> [30]

9. Power 1 feeder 1 OFF time --> [124]

10. Power 1 feeder 1 ON time --> [86]

11. Power 2 feeder 1 OFF time --> [115]

12. Power 2 feeder 1 ON time --> [92]

13. Power 3 feeder 1 OFF time --> [96]

14. Power 3 feeder 1 ON time --> [100]

15. Power 4 feeder 1 OFF time --> [90]

16. Power 4 feeder 1 ON time --> [110]

17. Power 5 feeder 1 OFF time --> [86]

18. Power 5 feeder 1 ON time --> [120]

19. Stop fire fan 1 speed --> [200]

20. Test fire fan 1 speed --> [200]

21. Heat up fan 1 speed --> [0]

22. Fuel ignition fan 1 speed --> [120]

23. Ignition test fan 1 speed --> [120]

24. Power 1 fan 1 speed --> [165]

25. Power 2 fan 1 speed --> [165]

26. Power 3 fan 1 speed --> [165]

27. Power 4 fan 1 speed --> [165]
28. Power 5 fan 1 speed --> [160]
29. Test fire fan 2 speed --> [170]
30. Stop fire fan 2 speed --> [170]
31. Heat up fan 2 speed --> [90]
32. Fuel ignition fan 2 speed --> [90]
33. Ignition test fan 2 speed --> [120]
34. Power 1 fan 2 speed --> [160]
35. Power 2 fan 2 speed --> [170]
36. Power 3 fan 2 speed --> [170]
37. Power 4 fan 2 speed --> [170]
38. Power 5 fan 2 speed --> [170]
39. Quickheat fan 2 speed --> [175]
40. Stop fire fan 3 speed --> [0]
41. Test fire fan 3 speed --> [0]
42. Heat up fan 3 speed --> [0]
43. Fuel ignition fan 3 speed --> [0]
44. Ignition test fan 3 speed --> [0]
45. Power 1 fan 3 speed --> [0]
46. Power 2 fan 3 speed --> [0]
47. Power 3 fan 3 speed --> [0]
48. Power 4 fan 3 speed --> [0]
49. Power 5 fan 3 speed --> [0]
50. Cool fluid exit temp. diff. --> [10]
51. Water/air temperature --> [80]
52. Water temperature in stove mode --> [0]
53. Cool fluid entry temp. diff. --> [0]

54. Ignition test gases temperature --> [60]
55. Modulation start gases temperature --> [255]
56. Heating device OFF gases temperature --> [55]
57. Maximum (error) gases temperature --> [255]
58. Fan 2 as ambient min. gases temp. --> [10]
59. No fuel (error) gases temperature --> [55]
60. Fan 1 blow cleaning period --> [10]
61. Fan 1 blow cleaning duration --> [30]
62. Fan 1 blow cleaning speed --> [180]
63. Air pulse cleaning duration --> [0]
64. Chamber cleaning duration/rot. --> [0]
65. Ash extraction auger duration --> [0]
66. Ash extraction auger period --> [0]
67. ON temperature --> [60]
68. OFF temp./T1-T2 for max.modul.speed --> [50]
69. Anti-condensation exit temp. --> [45]
70. Heat up duration --> [180]
71. Fuel ignition temp. check samples --> [3]
72. Fuel ignition temperature rise --> [1]
73. User fuel feeder 1 ON time factor --> [100]
74. User fuel fan 1 speed factor --> [100]
75. Wood fuel fan 1 speed factor --> [100]
76. Selected configuration --> [4]
77. 2nd room temperature --> [0.0]
78. Flame ON level --> [0]
79. Flame OFF level --> [0]
80. Flame OFF detection delay --> [0]

81. Underpressure setpoint --> [200]

82. Min. (error) underpressure/airflow --> [0]

83. Underpressure/airflow error delay --> [0]

84. Accumulator temperature --> [0]

85. T1-T2 for water pump OFF --> [0]

86. Boiler to accu. temperature drop --> [0]

87. Keep fire fan 1 speed --> [160]

88. Keep fire feeder 1 ON time --> [3]

89. Keep fire fan 1 duration --> [15]

90. Keep fire period --> [20]

91. Feeder 2 delay/ON time factor --> [0]

92. Pellets quality --> [1]

93. Wood quality --> [1]

94. Time to service --> [0]

95. Stove cool fluid entry temp. diff. --> [0]

96. Stove cool fluid exit temp. diff. --> [0]

97. T1-T2 for min. modul. speed --> [0]

98. Full level --> [0]

99. Low level --> [0]

100. Empty level --> [0]

101. Blow out duration --> [60]

102. Antifreeze temperature --> [0]

103. Water pump minimum speed --> [80]

104. Water pump maximum speed --> [240]

105. Reserved 105 --> [0]

6.9 ERRORS

E004	Communication error (Display, display cable, CR32 battery, motherboard or voltage variation)
E101	Water probe on anti-condensation pumps
E105	System crash. Firmware needs to be reinstalled
E107	Burner probe. (If the boiler owns that probe)
E108	STB (Safety thermostat for overheating)
E109	Presostat
E110	Boiler water temperature probe
E111	Exhaust temperature probe
E115	Electric shock. Try reinstalling the firmware or replacing the system board