METAL-FACH
HEATING TECHNOLOGY

Technical and operational documentation

SEG BIO

English

Original instructions Edition I, 07/2025

Contents:

Introduction

Dear Customer, thank you for purchasing a heating boiler from METAL-FACH Technika Grzewcza Sp. z o. o. We hope that the operation of the device will meet your expectations and provide you with much satisfaction. The heating boiler has been designed and manufactured in accordance with applicable norms and standards, ensuring safe and reliable operation. Strict adherence to the instructions in the manual included with the device will ensure optimal and reliable operation of the central heating boiler for many years. This product is not intended for use by persons with impaired physical or mental abilities or lacking experience and knowledge, provided they are supervised or instructed by a person responsible for their safety. Operation by children is prohibited.

Symbols used in the manual

ATTENTION!
Very important information, always read it if it appears in a given place.

TIP!
It is worth reading this information, it makes it easier to use.

Introductory activities

(User)

Activities to be performed when accepting a METAL-FACH Technika Grzewcza Sp. z o. o. boiler:

- carefully check the completeness of the delivered boiler (Chapter: Boiler equipment) and whether the boiler has not been damaged during transport,
- compare the nameplate mounted on the boiler housing on the left or right side with your order,
- read the operating instructions carefully - it contains information necessary for the proper use of the boiler.

Should any problems arise, please contact the service department or an authorized METAL-FACH Technika Grzewcza Sp. z o. o. service center. These individuals have appropriate training and access to original parts enabling proper service and installation of METAL-FACH Technika Grzewcza Sp. z o. o. boilers, confirmed by a certificate issued at the company's headquarters.

General information

(User)

The Operation and Maintenance Manual is part of the product and is delivered with the purchased central heating boiler. The Operation and Maintenance Manual contains information regarding the construction, installation, and operation of SEG BIO series gutter burner boilers. Carefully reading the manual will ensure the correct and safe operation of our boiler.

ATTENTION!
The user is advised to follow all instructions regarding the device contained in this Technical and Operating Manual, Warranty Terms and Conditions and generally applicable legal regulations.

The boilers are delivered fully assembled. They are positioned and permanently attached to the pallet. They are additionally protected by foil packaging.
When transporting a boiler, it should be secured against shifting or rotation on the truck's cargo bed using safety devices, such as belts. Boilers should be transported in accordance with the regulations for the transport of materials. Loading and unloading should be performed using lifting equipment (forklift) with a lifting capacity exceeding 1000 kg.

Application

(User | Installer)

These boilers are designed for heating residential buildings such as single-family and multi-family homes, outbuildings, and public buildings. They are equipped with an automatic combustion chamber filling system. Thanks to the use of modern design solutions, the SEG BIO boiler achieves an efficiency of ≤90%. Proper operation and achieving the boiler's full potential depend on the quality of the installation, appropriate chimney draft, and proper operation and maintenance.

ATTENTION!
The boilers are designed for operation in open and closed water systems with gravity or forced circulation, equipped with safety devices compliant with the requirements of the applicable PN-B-02413 Heating and District Heating standard, and a closed system compliant with the PN-EN 12828 Heating systems in buildings. Design standard.

Boiler equipment

(User)

The scope of delivery includes both basic and additional components, depending on the order placed. Upon receipt, please carefully inspect the product to ensure it has not been damaged during transport and to verify the completeness of the accessories. The components included in the basic and additional equipment are described below.

Basic equipment:	**Unit of measurement**	**Quantity**
Central heating boiler	pcs.	1
Microprocessor controller – supports (see controller operating instructions)	pcs.	1
Blower fan	pcs.	1
Fuel supply system with burner	set	1
Fuel tank	pcs.	1
Boiler cleaning tools: - poker - brush - scraper	set	1
Boiler levelling feet (in SEG BIO 15-40 kW boilers)	pcs.	4
FIREMAN extinguishing system	pcs.	1

Additional equipment:	**Unit of measurement**	**Quantity**
LAMBDA SENSOR module*	pcs.	1

Documentation:	**Unit of measurement**	**Quantity**
Technical and operational documentation of the boiler	pcs.	1
Controller user manual and warranty card	pcs.	1
Instruction manual and warranty card for the blower fan	pcs.	1

ATTENTION!

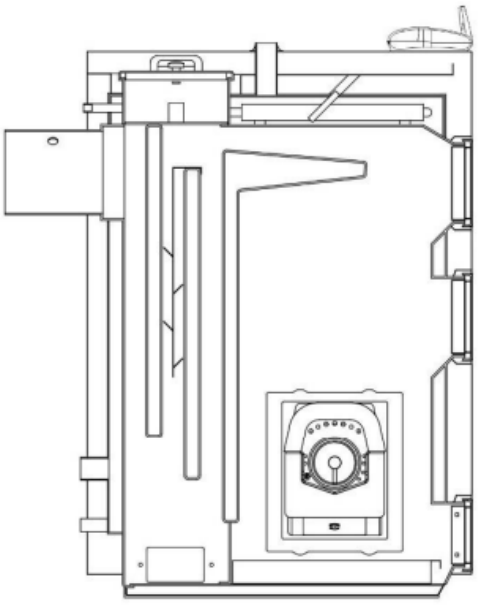
METAL-FACH Technika Grzewcza Sp. z o. o. reserves the right to introduce changes to the technical parameters, equipment and specifications of the goods offered without prior notice.

Basic elements of boiler construction

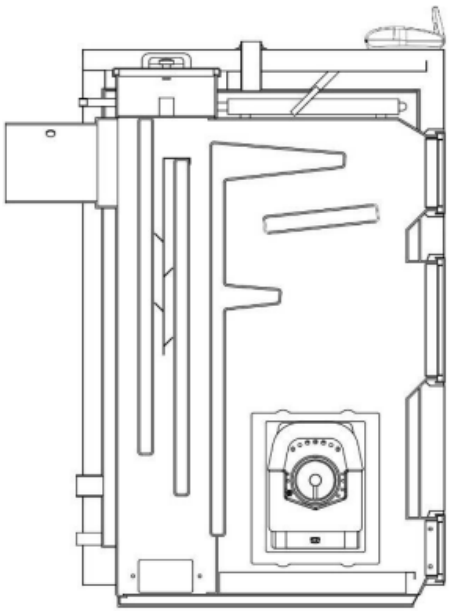
(User | Installer)

The water body is made as a welded structure from certified steel sheets for the elements in contact with exhaust gases and for the remaining elements.

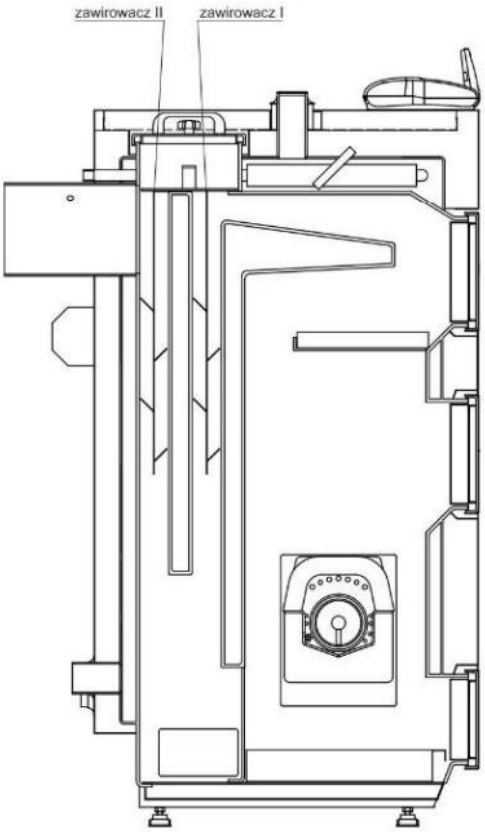
SEG BIO 50 boiler; 75kW (longitudinal cross-section)



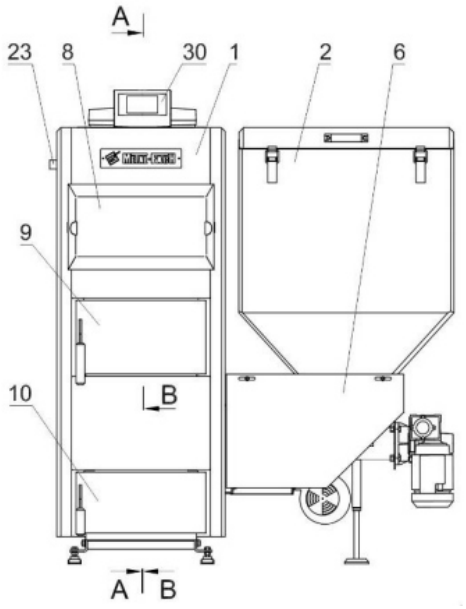
SEG BIO 50kW boiler

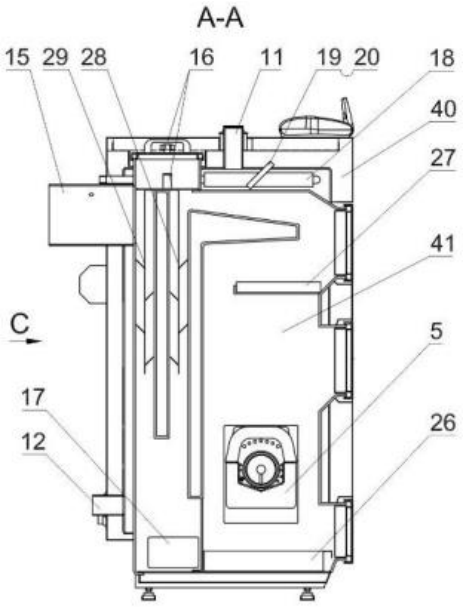


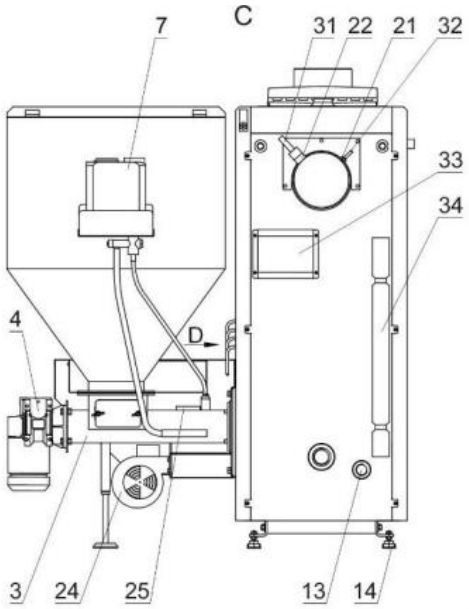
SEG BIO 75kW boiler

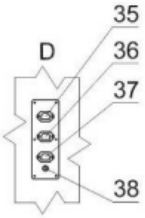


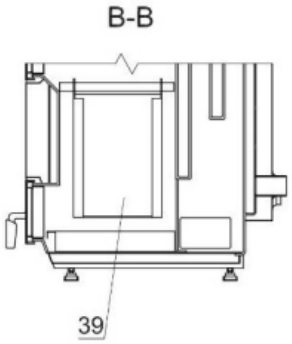
SEG BIO boiler 15-40kW











Legend :

1. Exchanger
2. Container
3. Feeder
4. Gear motor
5. Torch
6. Feeder cover
7. Fire extinguishing team
8. Cleanout door cover
9. Sight door
10. Ash pan doors
11. Supply connector
12. Return pipe
13. Drain connector
14. Adjustable foot
15. The flue
16. Upper cleanout covers
17. Ash pan cleanout
18. Cooling coil (optional)
19. STB sensor sleeve
20. Boiler temperature sensor sleeve
21. Exhaust gas temperature sensor sleeve
22. Lambda Sensor Sleeve
23. VST 212 valve connector
24. Fan
25. Feeder temperature sensor sleeve
26. Ash drawer
27. Deflector
28. Swirler I
29. Swirler II
30. Boiler operation regulator
31. Lambda probe
32. Exhaust gas temperature sensor
33. Lambda probe module
34. Boiler cleaning kit
35. Fan electrical connector
36. Feeder electrical connector
37. Igniter electrical connector
38. Feeder temperature sensor
39. Fireclay screen
40. Thermal insulation
41. Combustion chamber

Number and position of swirlers

	Cauldron	Swirler I	Swirler II
1.	SEG BIO 15	Yes	Yes
2.	SEG BIO 20	Yes	Yes
3.	SEG BIO 30	Yes	Yes
4.	SEG BIO 40	Yes	Yes
5.	SEG BIO 50	NO	Yes
6.	SEG BIO 75	NO	Yes

Technical data of the SEG BIO 15-75 boiler

(User | Installer)

Parameters		SEG BIO		
		15	**20**	**30**
Nominal thermal power	[kW]	15	20	30
Boiler power range	[kW]	4.5-15	6-20	9-30
Heating surface	[m^2]	2.1	2.54	2.85
Water capacity	[L]	60	68	73
Maximum operating pressure	[bar]	3	3	3
Maximum operating temperature	[^oC]	80	80	80
Test pressure	[bar]	4.5	4.5	4.5
Boiler class	[-]	5	5	5
Boiler efficiency	[%]	≤90	≤90	≤90
Fuel tank capacity	[L]	190	290	350
Fuel	[-]	pellets in accordance with point 5.3 (Table 9) of the PN EN 303-5:2021-09 standard (diameter: 6 ± 1 mm; 8 ± 1 mm, length 3.15 ≤ L ≤ 40, moisture ≤ 10%, ash content ≤ 0.7%, calorific value >17 MJ / kg)		
Electrical connection	[-]	5A; ~230V; 50Hz		
Electric power consumption	[W]	300	300	300
Electric power consumption (momentary during ignition)	[W]	1000	1000	1000
Temperature controller setting range	[^oC]	60-80 (every 1 ^oC)		
Required chimney draft	[Pa]	17	17	20
Design flow resistance ΔT [10K]	[mbar]	5.47	8.79	12.33
Design flow resistance ΔT [20K]	[mbar]	1.19	2.19	3.80
Boiler weight	[kg]	396*	474*	510*

*Boiler weight +/- 5kg.

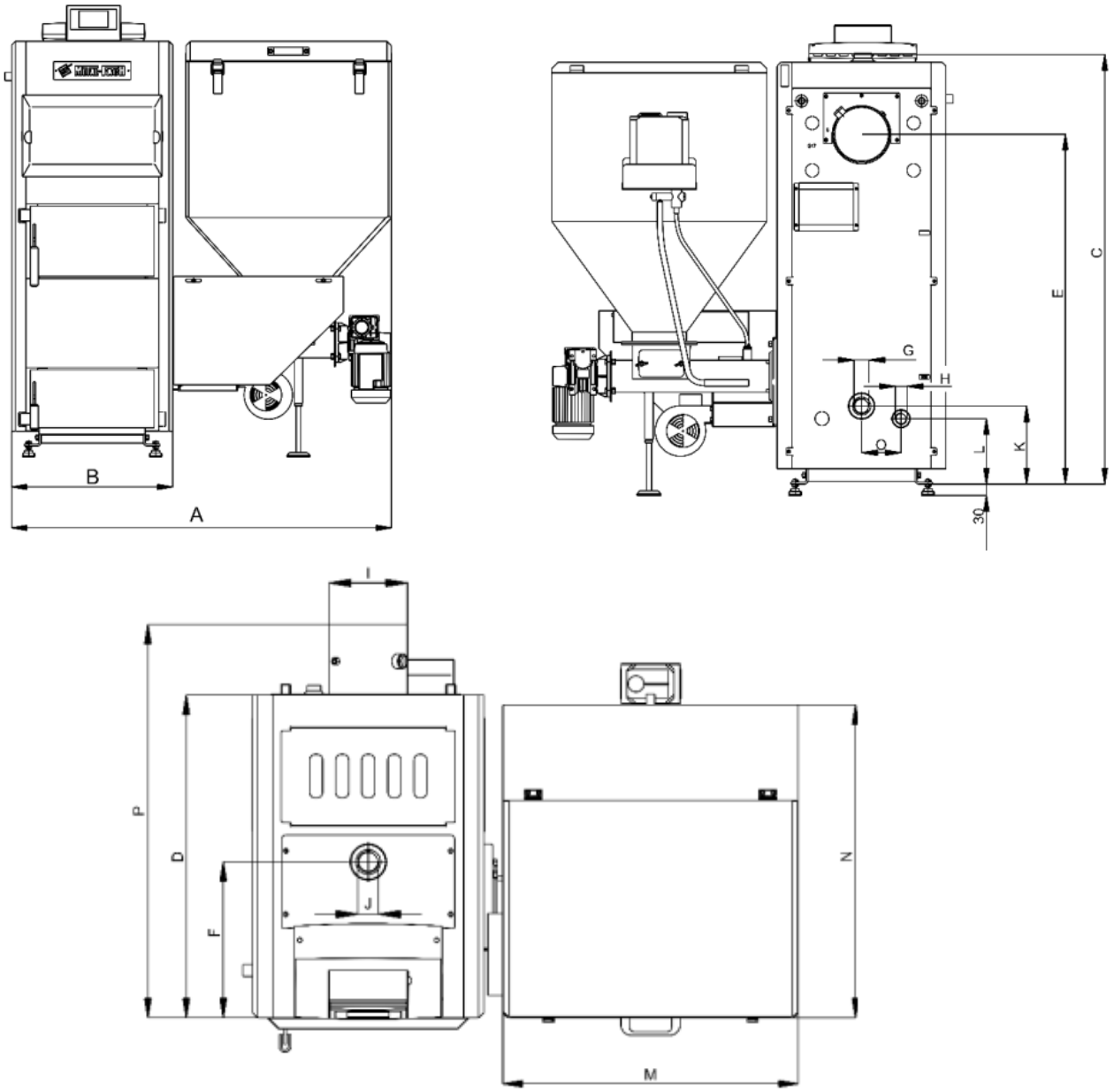
Parameters		SEG BIO		
		40	**50**	**75**
Nominal thermal power	[kW]	40	50	75
Boiler power range	[kW]	12-40	15-50	22.5-75
Heating surface	[m^2]	3.11	5.41	6.75
Water capacity	[L]	95	120	173
Maximum operating pressure	[bar]	3	3	3
Maximum operating temperature	[^{o}C]	80	80	80
Test pressure	[bar]	4.5	4.5	4.5
Boiler class	[-]	5	5	5
Boiler efficiency	[%]	≤90	≤90	≤90
Fuel tank capacity	[L]	350	400	520
Fuel	[-]	pellets in accordance with point 5.3 (Table 9) of the PN EN 303-5:2021-09 standard (diameter: 6 ± 1 mm; 8 ± 1 mm, length 3.15 ≤ L ≤ 40, moisture ≤ 10%, ash content ≤ 0.7%, calorific value >17 MJ / kg)		
Electrical connection	[-]	5A; ~230V; 50Hz		
Electric power consumption	[W]	300	400	400
Electric power consumption (momentary during ignition)	[W]	1000	1000	1000
Temperature controller setting range	[^{o}C]	60-80 (every 1 $^{\circ}$C)		
Required chimney draft	[Pa]	24	24	25
Design flow resistance ΔT [10K]	[mbar]	35.16	60.88	136.98
Design flow resistance ΔT [20K]	[mbar]	8.79	15.47	34.24
Boiler weight	[kg]	530*	725*	855*

*Boiler weight +/- 5kg.

Dimensions of the SEG BIO 15-75 boiler

(User | Installer)

SEG BIO 15-75 boiler



Dimensions	SEG BIO					
	15	**20**	**30**	**40**	**50**	**75**
A	1256	1256	1256	1306	1406	1505
B	535	535	535	585	682	793
C	1160	1355	1415	1415	1484	1520
D	705	745	795	795	1003	1175
E	910	1105	1160	1160	1110	1115
F	350	360	410	410	535	545
G	G 1 ½″	G 1 ½″	G 1 ½″	G 1 ½″	G 1 ½″	G 1 ½″
H	G ¾″	G ¾″	G ¾″	G ¾″	G ¾″	G ¾″
I	Ø180	Ø180	Ø180	Ø180	Ø220	Ø220
J	G 1 ½″	G 1 ½″	G 1 ½″	G 1 ½″	G 1 ½″	G 1 ½″
K	213	247	245	245	337	350
L	213	207	205	205	190	175
M	680	680	680	680	680	680
N	707	720	776	766	850	1075
O	125	125	125	125	175	220
P	870	905	955	955	1218	1413

*The dimension does not include the height of the boiler leveling feet.

ATTENTION!
In boilers 15-40 there are 30 mm high feet.

Automation , safety and regulation

(User | Installer)

1. The boiler automation allows you to set:

- boiler temperature;
- temperatures in the central heating circuit CO1, CO2;
- domestic hot water temperature;
- room temperature;
- return water temperature from the central heating system (boiler exchanger protection function);
- igniter operation time (depending on the fuel type);
- fuel feeder operation;
- manual control of the feeder and fan;
- automatic modulation of the burner power (fuzzy logic);
- automatic air dosing (lambda probe module).

2. Thermal sensor

A mechanical STB is located in the boiler and protects the heating system from overheating. It is set to 95 °C. Above this temperature, it turns off the fan, while simultaneously activating the central heating and domestic hot water pumps, as well as two additional ones, and opening the mixing valve.

3. Fuzzy Adjustment Method Logic (advantages):

- very advanced algorithm;
- reduces the amount of fuel burned, largely eliminating the formation of impurities and soot in the boiler;
- high stabilization of the boiler operating temperature - eliminates condensation of water vapor in the boiler;
- the combustion chamber temperature is high and stable, which reduces carbon monoxide emissions.

4. Lambda probe

The probe continuously adjusts the amount of air supplied to ensure optimal operation and minimize carbon monoxide emissions under specific boiler load, fuel type, and atmospheric conditions. This adjustment is continuous throughout the boiler's operating cycle.

5. Exhaust gas temperature sensor

Located in the boiler flue, it measures exhaust gas temperature. When the exhaust gas temperature exceeds 250 °C, the fan automatically shuts off until the combustion temperature decreases.

6. Mixing valve actuator x2

This device is used to set the desired temperature for the heating circuit in a central heating system while maintaining a constant temperature in the boiler. The temperature is calculated from a heating curve depending on the outside temperature.

Fuel

(User)

The fuel for firing boilers equipped with a self-cleaning pellet burner is:
pellets in accordance with point 5.3 (Table 9) of the PN EN 303-5:2021-09 standard:

- diameter: 6 ± 1 mm; 8 ± 1 mm;
- length 3.15 ≤ L ≤ 40;
- humidity ≤ 10%;
- ash content ≤ 0.7%;
- calorific value >17 MJ / kg;

The fuel should not contain stones, pieces of wood or other impurities.

Requirements for the boiler room and boiler installation

(User | Installer)

In Poland, boiler rooms built for solid fuel should meet the requirements of the PN-87/B-02411 standard "Boiler rooms built for solid fuel" and Journal of Laws 2015.0.1422. They are divided into two types:

1. For small boiler rooms up to 25kW, the following requirements should be met:

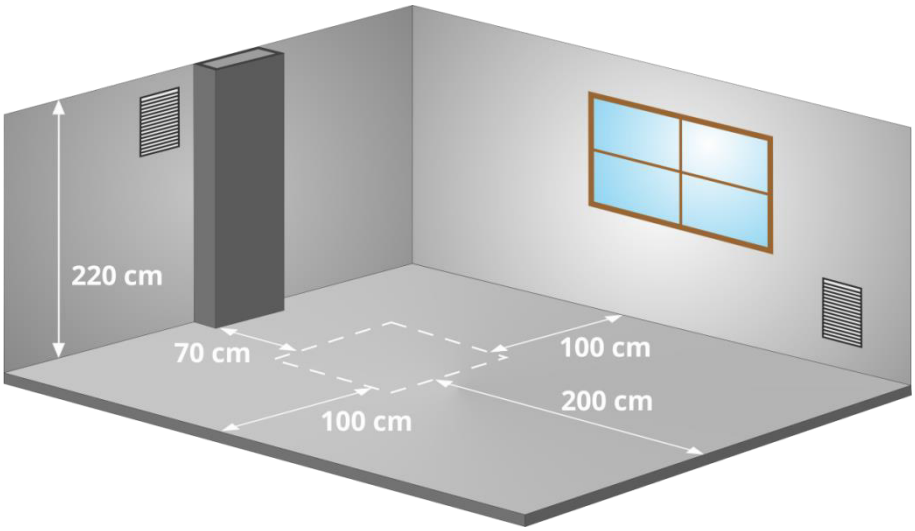
- the boiler should be placed as centrally as possible in relation to the heated rooms and in a separate room;
- the material from which the floor in the boiler room is made should be non-flammable; in the case of flammable material, the floor should be covered with a 0.7 mm thick steel sheet at a distance of at least 50 cm from the edge of the boiler; the boiler should be placed on a foundation made of non-flammable materials, protruding 0.05 m above the floor level and edged with steel angles;
- There should be artificial lighting in the room, but natural lighting is also recommended;
- the positioning of the wheel in the room should allow free access to the boiler during cleaning and maintenance; the distance from the back of the boiler to the wall should not be less than 70 cm, from the side of the boiler to the wall not less than 100 cm, and from the front of the boiler to the opposite wall not less than 200 cm;
- the height in new buildings should be at least 220 cm, in the case of existing buildings the height of the boiler room is at least 190 cm, with proper ventilation (supply and exhaust);
- supply ventilation should be provided through an unclosable opening with a minimum cross-section of 200 cm2 and located no more than 100 cm above the floor level;
- exhaust ventilation should be provided by means of an exhaust duct made of non-flammable material with a minimum cross-section of 14 x 14 cm with an inlet opening under the ceiling of the boiler room; the exhaust duct should be led above the roof and placed near the chimney; the exhaust duct must not be fitted with devices that would allow it to be closed;
- the cross-section of the chimney should be no less than 20 x 20 cm;
- there should be a floor drain in the floor of the boiler room;
- the optimal place for storing fuel is a separate room located near the boiler room;
- ash and slag should be collected in appropriate containers that can be emptied daily.

2. Boiler rooms with a thermal power of 25kW or more should additionally meet the following requirements:

- the distance of the boiler furthest from the chimney, with gravity draft, cannot exceed 50 cm of the chimney height;
- the fuel storage and slag storage should be located next to the boiler room at a storage height of up to 220 cm with a free space above the fuel of at least 50 cm;
- devices and equipment enabling vertical and horizontal transport of fuel and slag should be taken into account;
- the fuel storage room should have natural, unforced ventilation, allowing for one full air exchange per hour in the fuel storage room and three full air exchanges per hour in the slag storage room;
- the entrance door to the boiler room should be non-flammable (EI30 fire resistance class), minimum width 90 cm, opening outwards; it should have a handleless closing system enabling it to be opened outwards under pressure and inwards using a handle;

- ventilation requirements are the same as for boiler rooms with lower power; additionally, in boiler rooms with power exceeding 400 kW, in addition to supply and exhaust ventilation, there should be mechanical ventilation, switched on periodically during fuel charging and boiler deslagging, ensuring at least 10 full air changes per hour;
- in the boiler room, natural lighting should be provided, illuminating the boiler from its front, and the area of windows should be at least 1/15 of the floor area of the boiler room; half of the installed windows should be openable; electric lighting and an electrical socket with a voltage not exceeding 24 V should also be located in the room;
- there should be a sewage pit in the floor to allow for cooling of water, and its capacity should be equal to the water capacity of the largest boiler, but not greater than 2 m3;
- in the boiler room, the heat pipes should be insulated;
- The boiler setup with the minimum required distances is shown in the boiler room diagram below.

Minimum distances for setting the boiler in the boiler room



ATTENTION!
Mechanical exhaust ventilation should not be used in the boiler room.

ATTENTION!
Ensuring that there is sufficient fresh air in the boiler room will enable efficient fuel combustion.

ATTENTION!
The formation of excessive amounts of carbon dioxide in the room should be prevented.

ATTENTION!
More detailed information regarding the requirements for the construction of boiler rooms can be found in the Regulation of the Minister of Infrastructure of March 12, 2009.

TIP!
The above-mentioned provisions are guidelines that need to be verified as the regulation is subject to amendment.

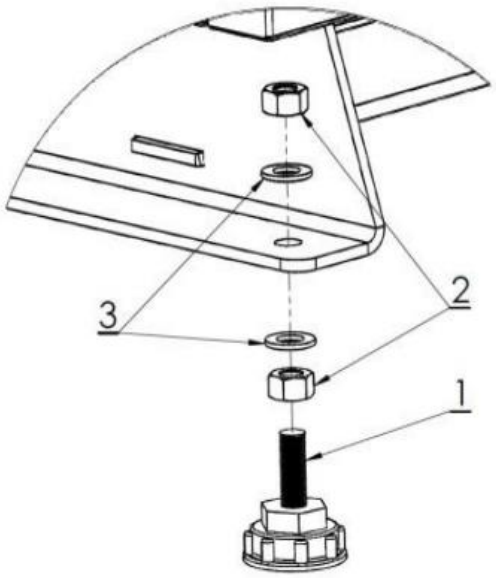
Boiler installation

(User | Installer)

A key element of installation is the correct positioning and leveling of the SEG BIO boiler. These boilers do not require special foundations. Adjustable feet facilitate boiler leveling. The boiler must be placed vertically.

1. Check if the set includes four feet.
2. Using a spirit level, level the boiler relative to the ground. If the boiler is horizontal, installing the feet is not required.
3. Screw the four feet into the designated holes.
4. Use a spirit level to level the boiler.

Method of installing the boiler leveling feet



1. Adjusting foot, 4 pcs.
2. M10 nut, 8 pcs.
3. Washer Ø10, pcs. 8

ATTENTION!
An incorrectly leveled boiler may be damaged.

ATTENTION!
It is unacceptable to place the boiler in a damp or wet room, as this accelerates corrosion, quickly leading to the destruction of the boiler.

The boiler should be placed on a heat-insulating, non-flammable base, which should extend 2 cm beyond the boiler base on all sides. If the boiler is located in a basement, it is recommended that it be placed on at least 5 cm of foundation. The strength of the subfloor, as well as fire protection requirements, are key considerations when positioning the boiler in the right location. These include:

- 20 cm safe distance from flammable materials,
- 40 cm for flammable materials with a flammability class of C3,
- 40 cm if the flammability level is unknown.

Flammability degree of building materials and products	**Building materials and products**
A - Non-flammable	Sandstone, concrete, bricks, fire-resistant plaster, mortar, ceramic tiles, granite
B - Difficult to burn	Wood-cement boards, glass fibers, mineral insulation
C1 - Difficult to burn	Beech wood, oak wood, plywood
C2 - Medium Burning	Pine, larch and spruce cork, sawn wood boards, rubber floor coverings
C3 - Easily combustible	Asphalt plywood, celluloid masses, polyurethane, polystyrene, polyethylene, plastic, PVC

Connecting the boiler to the heating system

(Installer)

The boiler should be connected to the central heating system by a company authorized by the manufacturer, and proper connection should be confirmed on the warranty card attached to this manual. The boiler should be connected according to the manufacturer's recommendations, in accordance with this manual.

ATTENTION!

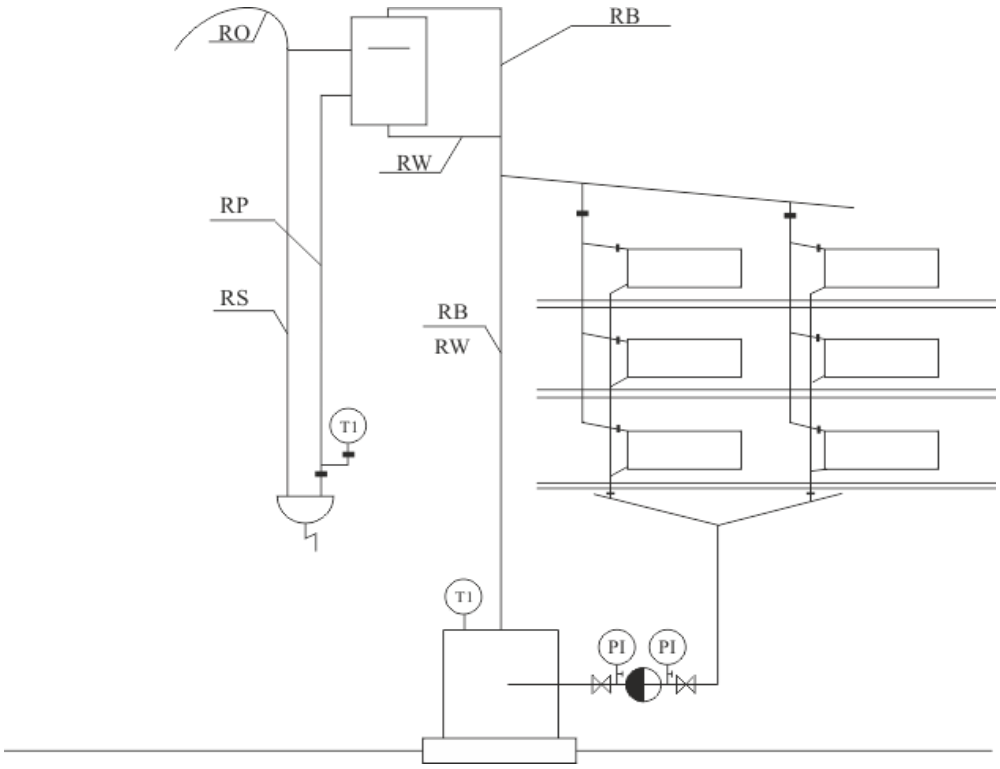
It is recommended that the first start-up of the boiler be performed in accordance with the guidelines contained in the Operation and Maintenance Manual by a person with valid authorizations.

Information on persons authorized to start up the boiler is available from the Manufacturer at +48 85 711 94 54 ext. 17.

ATTENTION!

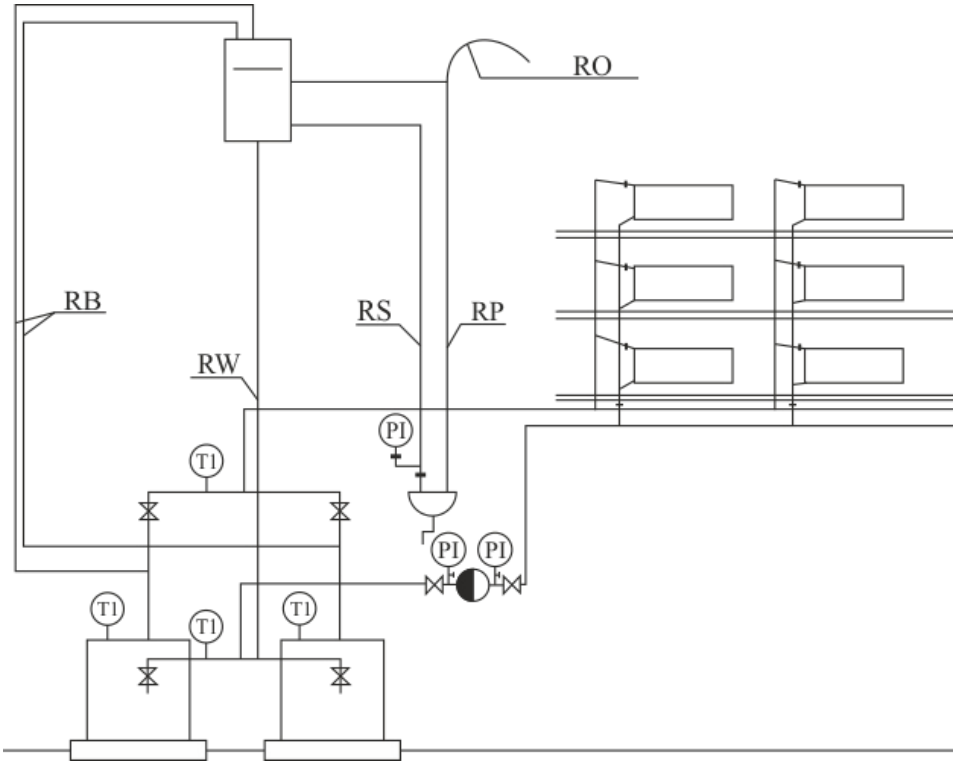
The temperature of the water returning from the installation to the central heating boiler should not be lower than 45ºC.

Connection diagrams for boilers to the heating system in accordance with the PN - 91/B - 02420 standard



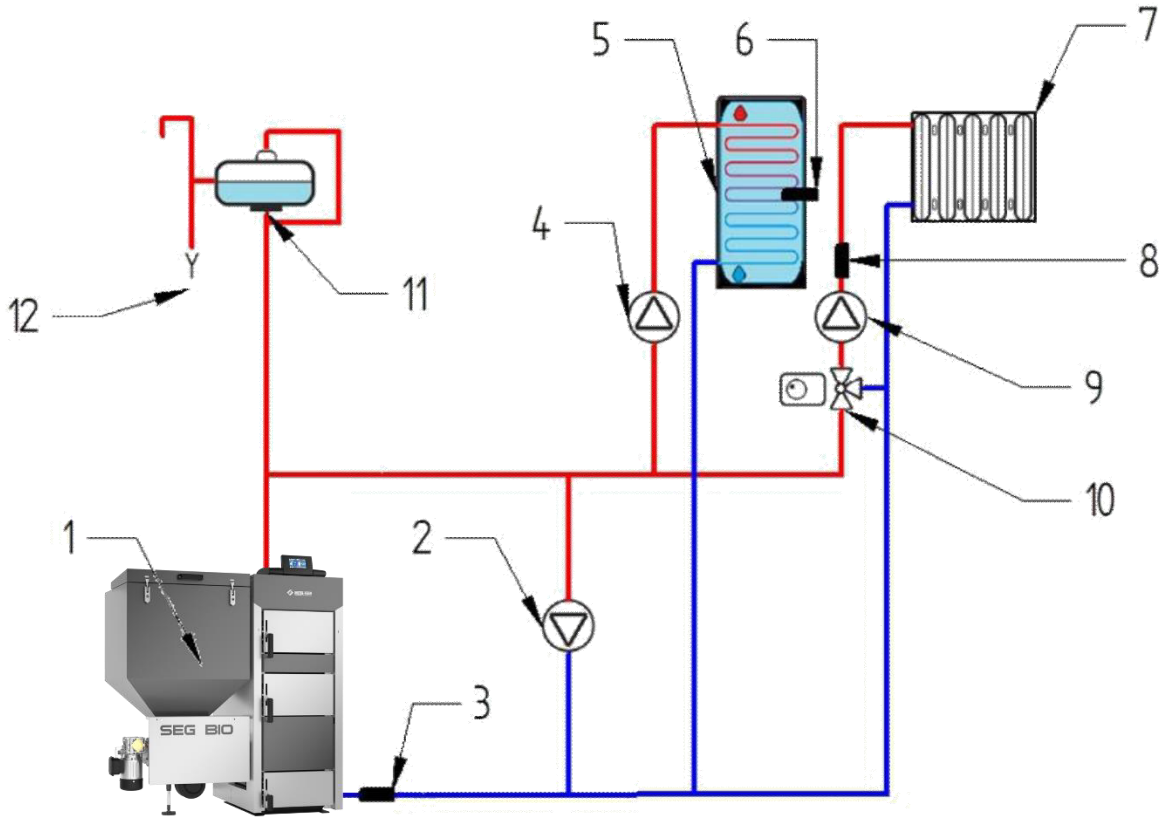
Designation	Description
RO	Vent pipe
RW	Expansion pipe
RS	Signal pipe
RP	Overflow pipe
RB	Safety pipe
T1	Temperature
P1	Pressure

Connection diagrams for boilers to the heating system in accordance with the PN - 91/B - 02420 standard



Designation	Description
RO	Vent pipe
RW	Expansion pipe
RS	Signal pipe
RP	Overflow pipe
RB	Safety pipe
T1	Temperature
P1	Pressure

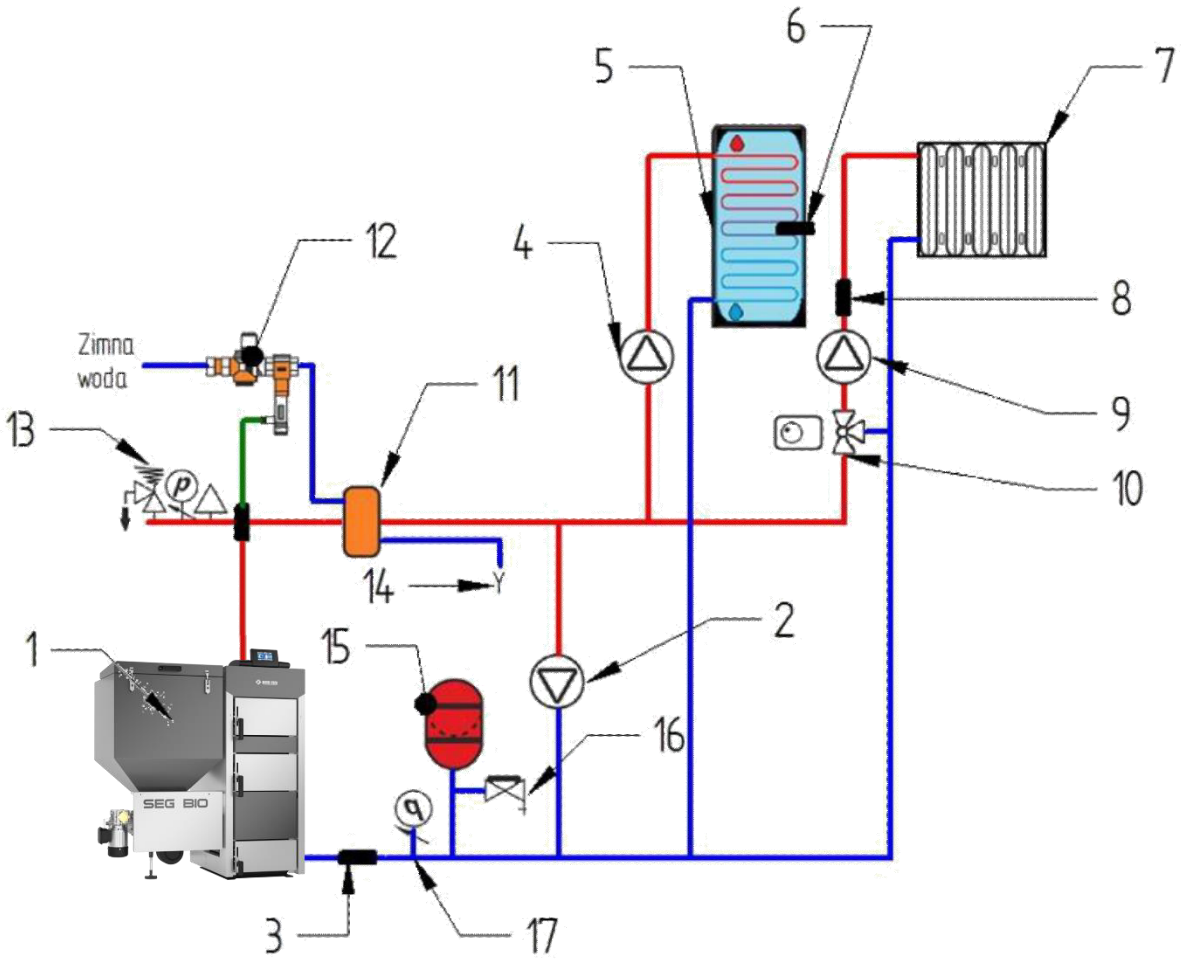
Connecting the boiler to the heating system with a shunt pump – open system



Legend

1. Cauldron
2. Shunt pump
3. Return sensor
4. DHW pump
5. DHW tank
6. DHW sensor
7. Radiators
8. Mixer sensor
9. Mixer pump
10. 3D valve with actuator
11. Open vessel
12. Outflow

Connecting the boiler to the heating system with a shunt pump – closed system



Legend

1. Cauldron
2. Shunt pump
3. Return sensor
4. DHW pump
5. DHW tank
6. DHW sensor
7. Radiators
8. Mixer sensor
9. Mixer pump
10. 3D valve with actuator
11. External cooling coil
12. Thermal valve
13. Security group
14. Outflow
15. Expansion vessel
16. Cap valve
17. Manometer

Connecting the boiler to the heating installation in a closed system

(Installer)

It is important to use elements that protect the installation against overheating and excessive pressure increase when installing the boiler in a closed heating system, and to use a controller that regulates the temperature during the combustion process.
SEG BIO boilers feature a copper coil built into the boiler heat exchanger. The coil is made of ribbed copper tubing.

ATTENTION!
The central heating installation in a closed system must meet the requirements of the PN-EN 12828:2006 standard - Heating installations in buildings and PN-EN 303-5:2012 - Heating boilers for solid fuels with manual and automatic fuel loading.

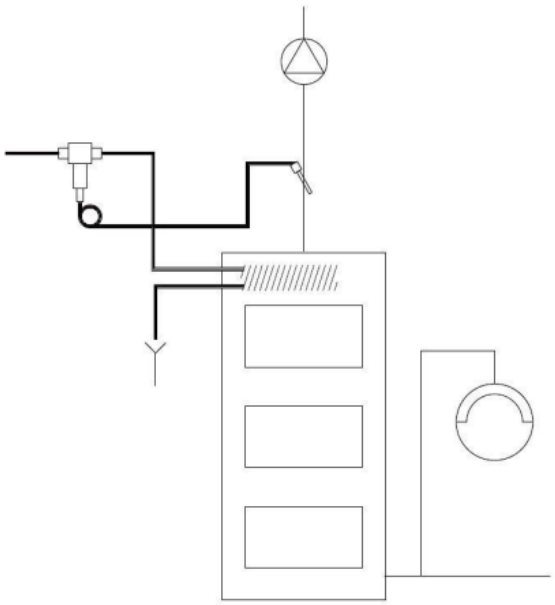
Part	Description
STB	Safety temperature limiter with manual return to the initial position
Cooling coil	Cools the installation when the temperature exceeds 97 °C
VST 112 valve	Protects against flame flashback to the solid fuel feeder by flooding the fuel in the event of excessive temperature increase
Pressure expansion vessel	Preventing excessive pressure build-up
Safety fittings	It consists of a safety valve, a pressure gauge, and a vent.

ATTENTION!
Boilers installed in a closed system must be equipped with all safety devices.

ATTENTION!
The cooling coil or cooling valve must be connected to the water supply. A water heater cannot be used as a power source, as it requires electricity to operate properly.

The coil, mounted on the system's supply line, is connected to a cold water line, which flows through it only when a thermal valve with a sensor immersed in the boiler supply line opens and a set temperature is exceeded. The water passes through the coil, absorbing heat from the boiler's water jacket, and is then discharged into a cooling sump, as directing hot water directly into the sewer lines could damage them.
The coil can lower the water temperature in the boiler shell by several degrees within a matter of seconds. If the water temperature in the boiler shell drops below the set point, the valve shuts off the water flow to the coil. In this solution, the high quality of the exchanger and valve is crucial, allowing for even multiple consecutive activation and deactivation of the safety devices.

Boiler protection diagram with built-in cooling coil and thermal protection



In solutions with a built-in safety coil, thermal protection is used. Solid fuel boilers with automatic fuel feeding do not pose a significant risk of uncontrolled temperature increases in the central heating system, as the amount of fuel fed to the burner is small. Furthermore, if the temperature rises, the protection and operation are automatically activated without user intervention. However, if something malfunctions, the controller will shut down the feeder for 30 seconds to remove embers. If the feeder temperature does not decrease within two minutes of attempting to remove embers, the controller will make another attempt. If, after four such attempts from reaching 85°C, the controller fails to lower the feeder temperature, the boiler will shut down and shut down automatically.

VST 112 valve

The emergency extinguishing device, which protects against fuel ignition in the tank, can also be connected to the water supply system and, if the set temperature is exceeded, the extinguishing device opens the water valve and operates independently of the electrical power supply.

Thanks to the appropriate design of the SEG BIO series boilers, the risk of fire penetrating into the fuel tank is small, which is prevented by the tight construction of the fuel feeder/protected by a limit switch.

ATTENTION!
The gas pressure in the expansion vessel should be checked and adjusted appropriately before using the boiler. The operation of the expansion vessel should be checked annually.

ATTENTION!
The safety valve should be installed on the heat source or in its vicinity, e.g. on the installation's power supply pipe, in an easily accessible place.

ATTENTION!
The safety valve should prevent the maximum operating pressure from being exceeded by no more than 10%.

Expansion vessel requirements

(Installer)

Every open-circuit heating system should be equipped with an expansion vessel , which is designed to absorb the increase in water volume and to vent air. This vessel should be installed at the highest point of the system, vertically above the boiler(s), if possible.
expansion vessel can be estimated by assuming that the unit capacity in relation to one kW of thermal output is 1-2 dm^3.
expansion vessel is equipped with a connector for connecting a rising safety pipe, a falling safety pipe, and an overflow pipe with a connected vent. The diameter of the vent pipe and overflow pipe is at least:

$$d = 15 + 1{,}39\sqrt{\dot{Q}} \quad \text{[mm]}$$

$\dot{Q}$ - boiler efficiency [kW]

The most important requirements for safety devices are as follows:

- expansion tank should have a volume of approximately 3.5% of the volume of water in the heating system, including the boiler,
- each boiler must have a safety pipe and an overflow pipe,
- the installation should be equipped with a signal and expansion pipe as well as a venting connector for the expansion vessel .

If multiple boilers are installed, each should be equipped with a safety pipe in accordance with the guidelines outlined in PN-91/B02413 – Protection of Open-Vent Water Heating Systems. No shut-off valves should be installed on safety and overflow pipes, and the pipes and vessel should be protected from freezing.

Connecting the boiler to the electrical installation

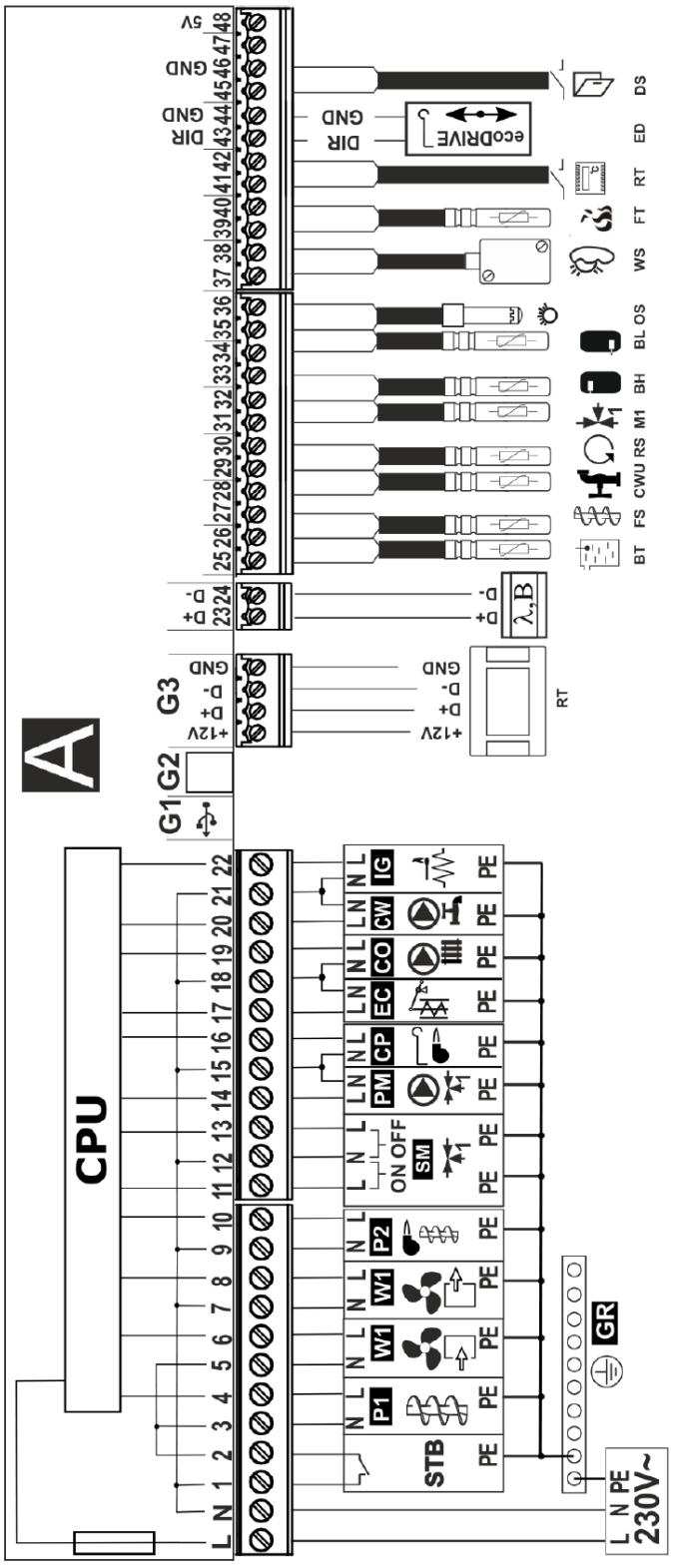
(Installer)

The boiler is designed for a 230V/50Hz connection. Installation should be performed by a qualified technician. The 230V/10A grounded connection socket should be easily accessible. The boiler power supply and the boiler room lighting should be on a separate circuit.
Completion of installation and the heating test must be recorded on the Warranty Card. The completed Warranty Card should be sent to the manufacturer's address by the user to register the user in the company's system.

ATTENTION!
The first start-up of the boiler must be carried out only by a service technician trained by the manufacturer, with a valid certificate of an Authorised Service Technician, Distributor of METAL-FACH Technika Grzewcza or a person with SEP qualifications up to 1.5kW.

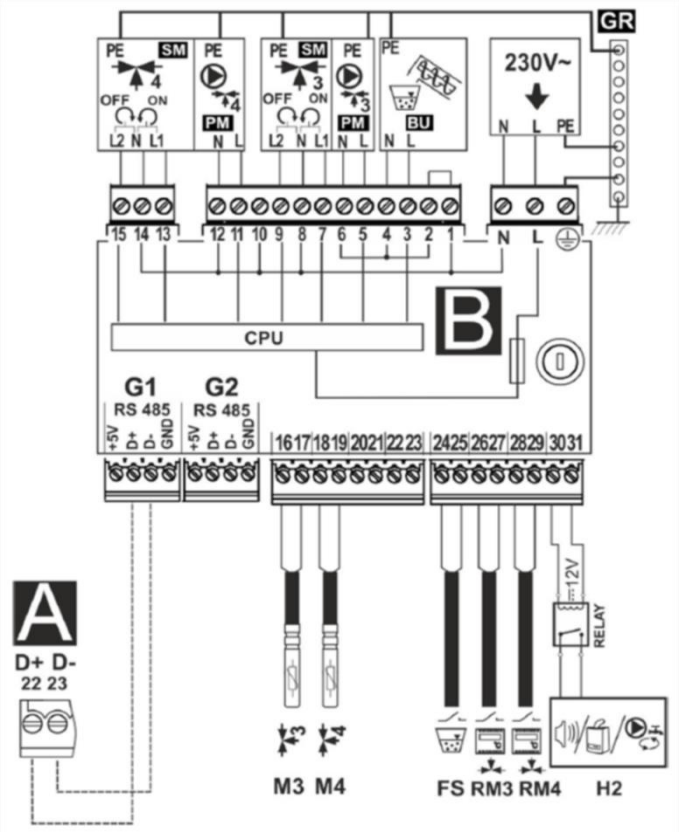
ATTENTION!
All pumps, mixer, relay, igniter, etc. are not included in the controller equipment.

Boiler connection wiring diagram - PLATINUM controller



Electrical connection diagram of the regulator:
ecoSTER TOUCH
room panel , λ – Lambda probe module, B - module for additional heating circuits,
BT – boiler temperature sensor type CT4,
FS – fuel feeder temperature sensor type CT4,
CW U – domestic hot water temperature sensor type CT4,
RS – boiler return water temperature sensor type CT4,
M1 – regulated mixer circuit temperature sensor type CT4,
BH – upper buffer temperature sensor type CT4,
BL – lower buffer temperature sensor type CT4,
OS – optical flame brightness sensor ,
WS – weather temperature sensor type CT6-P,
FT - exhaust gas temperature sensor type CT2S, RT – universal mixer thermostat (No- Nc),
ED – ecoDRIVE module (grate actuator control module),
DS – input for fuel tank flap or door opening sensor,
LN PE - mains power supply 230V~, GR – grounding strip,
STB – input to the safety temperature limiter,
P1 – main feeder, W1 – blower fan, W2 – exhaust fan, P2 – feeder 2 of the burner, SM – mixer 1 actuator,
PM – mixer 1 pump,
CP – grate cleaning actuator,
EC – exchanger cleaning motor,
C O – boiler or buffer loading pump,
C W – DHW pump,
IG – igniter,
CPU – control

Boiler connection wiring diagram - PLATINUM controller



Electrical connection diagram - additional module B, where:
M3 - temperature sensor of the regulated circuit (mixer 3) CT4,
M4 temperature sensor of the regulated circuit (mixer 4) CT4,
RM3 - Mixer room thermostat 3,
RM4 - room thermostat of mixer 4,
FS - fuel level sensor for operating the BU feeder,
H2 - voltage input for controlling the reserve boiler or for signaling alarms or for the domestic hot water circulation pump,
RELAY - relay,
LN PE - mains power supply 230V~,
PM 3/4 - 3/4 mixer pump,
SM 3/4 - 3/4 mixer actuator,
BU - fuel feeder from the bunker to the boiler tank,
CPU - control,
A - ecoMAX 860P2-T controller module A.

Connecting the boiler to the chimney

(Installer)

Smoke pipes

The purpose of flue gas ducts is to reliably discharge exhaust gases and draw in air for fuel combustion. The chimney draft required for this depends on:

- temperature difference between hot exhaust gases and cold air,
- effective chimney height,
- chimney cross-section not less than 20 x 20 cm,
- construction of the chimney (internal surfaces as smooth as possible) and tightness of the joints.

The effective chimney height is the difference in height between the highest combustion chamber and the chimney outlet. Individual chimneys must have an effective height of at least 4 m, and shared chimneys for solid and liquid fuels must have a minimum height of 5 m. The height difference between two combustion chambers must not exceed 6.5 m. In the case of sloping roofs, chimneys should terminate at the ridge (the highest edge of the roof), in an area where the wind can freely flow. This avoids draft disruptions. Always consider the building's location relative to other buildings.

Selecting a chimney

In most cases, an approximate method or selection according to the chimney manufacturer's diagrams is sufficient for chimney selection. In special cases (unfavorable pressure and temperature dependencies, large exhaust gas volume), chimneys are calculated according to the applicable standard. Low exhaust gas temperature at the boiler's nominal output can result in the emission of damp exhaust gases, soot buildup, and insufficient chimney draft. This can lead to moisture and corrosion in brick chimneys. The use of a chimney liner is recommended:

- in new buildings, a ceramic flue gas discharge system resistant to condensate, thermally insulated and with a condenser is recommended ,
- In existing buildings, it is recommended to modernise the brick chimney by using a single- or double-walled stainless steel chimney system (designed for solid fuel boilers).

The flue

The boiler is connected to the chimney via a flue and a flue pipe. The flue pipe consists of pipes and fittings installed in the rooms. Flues meet fire protection requirements for chimneys and are often made of the same material as the main chimney. Flues should be made of non-flammable materials. Flues or the casing of flues should meet the requirements specified in the Polish Standard for Fire Testing of Small Chimneys. A casing made of 12 cm thick solid brick, built with cement-lime mortar, with external plaster or pointing, is acceptable. Connectors should be as short as possible and run uphill to the chimney to avoid heat loss and additional resistance. They should not be routed to other floors. Flue pipes should not be installed in rooms where fireplaces are not permitted, and they should not be located in walls or ceilings. Due to the low exhaust gas temperature, acid-resistant or ceramic chimney liners should be used to protect the chimney from moisture and draft restriction, with condensate draining to a drain grate. A distance of at least 6 meters should be maintained between the chimney and the nearest tree canopy.

Starting the boiler

(User | Installer)

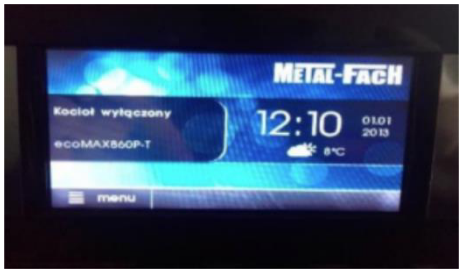
ATTENTION!
Controller settings are subject to flexibility and adjustment based on the variety of existing central heating systems, building heating requirements, and fuel calorific value. The user sets the boiler's operating parameters independently. This is not subject to service.

SEG BIO boilers have one combustion chamber - the lower one with a built-in furnace.
First start-up of the boiler - checking the connections.
Before starting the boiler for the first time, check all screw connections and tighten them if loose. If the boiler was disassembled for transport into the boiler room, remember to properly seal the surface between the boiler frame and the burner (high-temperature silicone). The next step is to connect all electrical devices controlled by the boiler (pumps, actuators, valves, etc.), and connect the temperature sensors according to the installation diagram.

ATTENTION!
Incorrect placement of sensors may result in incorrect operation of the boiler.

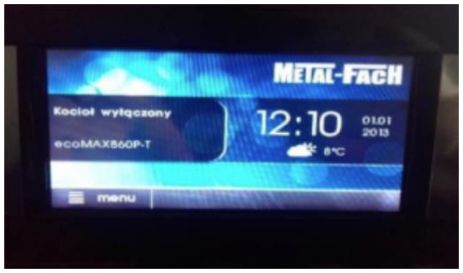
TIP!
Once all the above steps have been completed, you can proceed to the boiler start-up procedure.

Automatic start-up of the boiler - PLATINUM controller



The first step is to turn the boiler on "contact"
Controller display. The red boiler power switch is located in the upper left corner. An 8.2A fuse is located below the switch.

Turning on the boiler power supply
To turn on the boiler power, press the red button to the "I" position, as shown in the image above.



If we have performed the above steps correctly, the display will turn on as shown in the figure below.

The main menu is visible in the photo below. The controller has a touchscreen, and is operated with a finger.

Menu - handwork

Once all devices (pumps, valve actuators, etc.) are connected to the boiler, we can test their operation. To do this, use the "Manual Operation" menu. To access the manual operation menu, select the manual operation icon and confirm to enter the menu.

Main menu. To enter the main menu, press the menu button.

If we have done everything according to the instructions, we will see a menu as in the pictures below.

Starting the boiler

A boiler requires a dose of fuel to operate. When dealing with a new boiler, the first thing we do is load the hopper with the appropriate type of fuel. The feeder in boilers is a screw-type feeder (the screw is responsible for transporting the fuel to the burner). To ensure a smooth start-up, a starting dose of fuel must first be fed to the boiler burner.

To do this, select the feeder in the "Manual operation" menu and press ENTER to start it (OFF will change to ON).

Gutter burner

The photo on the right shows an empty feeder (no starting dose of fuel).

When the Manual Feeder Operation menu is set to ON, fuel will start to appear on the burner.

Turning on the boiler

To turn on the boiler controller, return to the main menu. Next, press the red button to activate the controller.

If we did everything correctly, in the upper left corner instead of the word "TURNED OFF" we will see the word "FIRING".

The ignition process

The ignition process is as follows:

- Feeding time - the feeder feeds the starting portion of fuel;
- Ignition test time - operation of the fan and feeder to ignite the fire from the embers;
- Ignition time - operation of the blower together with the igniter;

The ignition cycle has 3 attempts, if the boiler fails to ignite the message "Ignition failed" will appear.

The operation of the igniter is illustrated by the flame visible in the photo below.

The boiler is considered to be fired up when the exhaust gas temperature reaches a value 10 degrees higher than the boiler temperature. To check the exhaust gas temperature at a given moment, enter the information menu.

In the figure below we can see that the exhaust gas temperature is not 10 degrees higher than the boiler temperature, therefore the boiler operates in the "FIRING" mode.

If the exhaust gas temperature is 10 degrees higher than the boiler temperature, the boiler switches to normal operation mode, as illustrated in the photos below.

First start-up of the boiler.
If we have completed all the steps presented above, we can proceed to the first start-up of the boiler.

Turning off the boiler
If the boiler is to be out of operation for a longer period of time, the controller panel should be set to the "OFF" mode.

Restarting after the device has stopped working due to lack of fuel:
- remove carbon deposits from the burner;
- pour fuel into the tank;
- set the "OFF" mode on the controller panel;
- feed fuel to the burner using the manual fuel feeding function "TEST";
- feed fuel until clean granules appear at the beginning of the burner;
- set the "ON" mode on the control panel, after a few minutes the flame will appear;
- if you do not have a lighter, light the fire traditionally with grill lighter fluid;
- turn on the blower in "TEST";
- after lighting up, set the "ON" mode on the control panel.

Automatic start-up of the boiler after replacing the overload clutch fuse:
- remove carbon deposits from the burner;
- turn the screw to the right, to the left, then check whether there is no "foreign body" in it, e.g. a stone, a rod, if so, remove it and insert the pin;
- pour fuel into the tank;
- set the "OFF" mode on the controller panel;
- feed fuel to the burner using the manual fuel feed function, "TEST" mode;
- feed fuel until clean granules appear at the beginning of the burner;
- set the "ON" mode on the control panel, after a few minutes the flame will appear;
- if you do not have a lighter, light the fire traditionally with grill lighter fluid;
- turn on the blower in "TEST";
- after lighting up, set the "ON" mode on the control panel.

ATTENTION!
Remember to close the feeder cover tightly.

ATTENTION!
When opening the door, do not stand in front of the boiler, as burns may occur.

ATTENTION!
If the boiler is equipped with a lambda probe, it is advisable to use an exhaust gas analyser to set its characteristics when setting the blower power for subsequent boiler outputs.

When using the boiler, please remember

(User)

- the boiler may only be operated by adults who are familiar with the operating instructions;
- It is forbidden for children to stay near the boiler without the presence of adults;
- if flammable gases or vapours enter the boiler room or during work during which there is an increased risk of fire or explosion (gluing, painting, etc.), the boiler must be switched off before starting the work;
- when cleaning the carbon deposits in the burner or gutter, the boiler should be turned off ("STOP" position);
- when adding fuel to the tank, the boiler must be turned off ("STOP" position);
- flammable liquids must not be used to light the boiler, the boiler should be ignited automatically (using an igniter);
- before cleaning the boiler, the device must be turned off ("STOP" position) and cooled down;
- During operation, the boiler must not be overheated in any way;
- no flammable objects may be placed on the boiler or in its immediate vicinity;
- when removing ash, flammable materials must not be located at a distance of less than 150 cm from the boiler;
- the ash should be placed in ovenproof containers with a lid;
- when the boiler operates at a temperature lower than 60°C, condensation may occur on the steel heat exchanger and thus lead to corrosion due to the low temperature, which shortens the life of the heat exchanger; therefore, the temperature during boiler operation must be at least 60°C;
- After the heating season, the boiler and the smoke pipe should be thoroughly cleaned;
- the boiler room should be kept clean and dry.

ATTENTION!

The product is not intended for use by persons with reduced physical/mental abilities or lacking experience and knowledge, unless they are supervised or instructed by a person responsible for their safety.

ATTENTION!

Any independent interference with the electronics or construction of the boiler is prohibited.

Cleaning and maintenance

(User)

ATTENTION!

Cleaning the boiler may only be performed when the device is disconnected from the mains.

To save fuel, keep the boiler's combustion chamber and convection channels clean. The combustion chamber walls and shelves should be cleaned through the cleaning and inspection doors. The boiler heat exchanger and ash pan should also be cleaned regularly.

Cleaning should be performed using wire brushes with extension cords. This should be done during the boiler's periodic shutdown, ideally every 100 hours of operation. A thorough cleaning of the boiler should be performed once a month.

Instructions for disposing of the boiler after its service life has expired

(User)

Before scrapping the boiler, all electronic components must be disconnected. They must be disposed of in accordance with European Directive 2002/96/EC on the disposal of electronic and electrical equipment. For proper disposal, contact the manufacturer of the electronic components in accordance with the aforementioned European Directive.
The steel elements from which the boiler is made should be scrapped in designated places (scrap yards).

ATTENTION!
A used boiler intended for scrapping and its components should not be disposed of with general waste.

Spare parts list

(User | Installer)

Spare parts	Article
Sensors	GOLD temperature sensors Boiler sensor Feeder sensor Return sensor CO sensor DHW sensor External sensor Exhaust gas sensor Photo sensor Temperature sensors for PLATINUM Boiler sensor Feeder sensor Return sensor CO sensor
Drivers	GOLD, PLATINUM regulator
	STB thermal protection
Fans	RMS-108 fan RMS-120 fan
Igniter	700W lighter
Probe	Lambda Probe Kit Sleeve for Lambda Sensor
Feeder	with 1 rpm motor Feeder motor 0.09kW Feeder screw 800mm Burner securing pin M5x60, class 5.8
Instrumentation	Capillary for exhaust gas sensor Electrical harness Fan, feeder, igniter socket Rubber grommet Power switch Fuse socket Fuse Interface relay Tank gasket Revision seal Flap seal Feeder seal Door handle Side plate 1 piece Top sheet 1 piece Door 1 piece

Examples of failures and devices

(User)

Before you call for service, read the most frequently asked questions.

ATTENTION!
In the event of an unjustified service call, the customer covers the costs of labor and travel; the price list is available at www.metalfachtg.com.pl/kontakt-z-serwisem

TIP!
Online reporting: www.metalfachtg.com.pl/zglos-problem-online
Hotline: +48 85 711 94 54 ext. 17
FAQ: www.metalfachtg.com.pl/kontakt-z-serwisem
Instructional videos: https://www.youtube.com/@mf.metalfachtg

Terms and conditions of warranty

User Declaration:
I hereby declare that the boiler (hereinafter also referred to as the "device") was delivered to me in accordance with the order, new and complete. The seller has familiarized me with the operation of the device and provided me with all necessary documentation (including, in particular, the Operation and Maintenance Manual containing, among other things, the installation and operating instructions for the device, and warranty terms). I acknowledge the manufacturer's recommendation to have the device undergo regular annual technical inspections, which must be confirmed in the warranty card.

Date and legible signature of the User

Scope of warranty:
1. Liability under the warranty covers only defects resulting from causes inherent in the device at the time of its delivery to the User.
2. The warranty for the device is provided by the manufacturer (also referred to as the "Guarantor"): Jacek Kucharewicz, conducting business activity under the name METAL-FACH Technika Grzewcza Sp. z o. o., 16-100 Sokółka, ul. Sikorskiego 66, TAX: 545-182-60-12, REGON 050073833, telephone +48 85 711 94 54 ext. 17.
3. Under the warranty, the User is entitled to free repair of the device if defects are discovered during the warranty period. If the Guarantor determines that the device or its parts cannot be repaired, the Guarantor reserves the right to replace the device or its parts with new ones.

Warranty period:
For the device (boiler) – 2 years from the date of sale, but no longer than 36 months from the date of its production except:
a) exchanger – for which the warranty is 5 years from the date of sale;
b) moving, cast iron, mechanical elements, worm – for which the warranty is 1 year from the date of sale;
c) consumables (including sealing cord, gaskets, vermiculite , fireclay), electrical components, screw securing the worm clutch, cotter pins – which are not covered by the warranty.

Terms of use of the guarantee:
1. Installing the device in accordance with the Operation and Maintenance Manual (in particular, connecting the boiler to a properly installed system, performing the first start-up in accordance with the device manufacturer’s guidelines, using devices protecting the boiler against cold water returning (four-way valve with actuator, loddomat , etc.).
2. Returning a copy of the properly completed warranty card, signed and stamped by the seller, to the Manufacturer's address within 30 days from the date of sale of the device.
3. When submitting a complaint, please present a properly completed warranty card (signed and stamped by the seller) and provide supporting information regarding the purchase of the device (e.g., receipt, invoice). If the User loses the warranty card, a duplicate will not be issued.
4. The User must comply with the recommendations contained in the Technical and Operational Documentation of the device.
5. The first commissioning of the boiler must be carried out within 6 months of the date of installation by the installer in accordance with the guidelines contained in the Operation and Maintenance Manual, by a person with valid authorization (information on persons authorized to commission the boiler is available from the Guarantor at +48 85 711 94 54 ext. 17), confirmation of this fact in the warranty card, and sending a commissioning report to the Guarantor. The first commissioning of the boiler is a paid service and its cost is covered by the User.
6. Annual inspections of the device, in accordance with the guidelines contained in the Technical and Operational Documentation, carried out by specialist companies with appropriate authorizations (a sample list of specialist

companies is available from the Manufacturer - call +48 85 711 94 54 ext. 17) and recording their performance in the warranty card. Device inspection is a paid service.
7. Service on the device (e.g., device adjustment, cleaning, measurements, exhaust gas analysis) must be performed by specialist companies with appropriate authorizations (a sample list of specialist companies is available from the Manufacturer – call +48 85 711 94 54 ext. 17), in accordance with the guidelines contained in the Operation and Maintenance Manual, and service activities must be recorded in the warranty card. The User may report the need for service interventions to the Guarantor (Hotline +48 85 711 94 54 ext. 17, www.metalfachtg.pl/zglos-problem-online). This service is subject to a fee.
8. Warranty repairs must be carried out only by specialist companies with appropriate authorisations (a list of specialist companies is available from the Guarantor - +48 85 711 94 54 ext. 17), and recorded in the warranty card.
9. Use of spare parts and consumables that meet the parameters specified by the manufacturer. The use of original parts is recommended.
10. The warranty covers the territory of the Republic of Poland.

The warranty does not cover device defects resulting from:
1. Failure by the User to comply with the conditions contained in the Technical and Operational Documentation and, among others, the instructions contained therein regarding the transport, assembly, operation, use and maintenance of the device;
2. Improper storage and transport by the User;
3. Damage to device components caused by the User applying inappropriate voltage. If the device is powered directly or indirectly by generators, UPS systems, or devices, the User should consult the power supply device parameters with the manufacturer;
4. Device defects caused by a faulty heating system connected to the device;
5. Overheating of the boiler by the User;
6. The User connects the boiler to a closed system without using an appropriate cooling device;
7. The User uses inappropriate, poor quality fuel;
8. Unauthorized modifications to the device by the User

Complaints procedure:
1. If you notice that the device is not working properly, before filing a complaint, please make sure that everything has been done in accordance with the Technical and Operational Documentation.
2. The User should report the need for warranty repair immediately, preferably within 7 days of noticing the defect. Reports can be made directly to the Seller or the Guarantor (www.metalfachtg.pl/zglos-problem-online or by calling the hotline at +48 85 711 94 54 ext. 17).
3. It is recommended to refrain from using the faulty device.
4. The user is obliged to ensure free access to the device (in particular, enabling the removal of the device housing and access to the valves).
5. Warranty repairs will be performed by the Guarantor or a specialist company indicated by the Guarantor.
6. The obligations arising from the warranty will be fulfilled within 14 working days, counting from the date the device is made available (at the place of its installation) by the User.
7. The date of making the device available is agreed between the User and the Guarantor.
8. Depending on the scope of the repair, it may be performed at the User's premises, at the place of installation of the device, or at the Guarantor's facility or at the premises of a specialist company performing the work on behalf of the Guarantor.
9. The repair performed under warranty must be confirmed in the warranty card.
10. The warranty is extended by the period during which the user was unable to use the device due to a defect in the device covered by the warranty.
11. The warranty does not exclude, limit or suspend the buyer's rights arising from the provisions on warranty for defects in the sold item.

Confirmation of inspection, warranty repair, and service

Date of execution	Description of activities performed	Signature and stamp of the contractor
1.		
2.		
3.		
4.		
5.		
6.		

	Date of execution	Description of activities performed	Signature and stamp of the contractor
7.			
8.			
9.			
10.			
11.			
12.			

EC/EU Declaration of Conformity

Producer:	Product name and purpose:
	Steel central heating boiler for solid fuel with automatic fuel charging.
METAL-FACH Technika Grzewcza Sp. z o. o. Sikorskiego Street 66 16-100 Sokółka TAX 545-182-60-12	**Type:** SEG BIO
	Serial number:
	Year of production:

The above-mentioned subject of this EU declaration of conformity complies with the applicable requirements of Union harmonisation legislation .

Reference documents:

1. Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery
2. Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility
3. Directive 2014/68/EU of the European Parliament and of the Council of 15 May 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment.
4. Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits
5. Commission Regulation (EU) 2015/1189
   Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products
6. Commission Regulation (EU) 2015/1187
   Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products
7. Commission Regulation (EU) 2015/863 (ROSHIII)
   Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment
8. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006

Technical documentation :

1. Standard PN-EN 303-5:2021-09 Heating boilers for solid fuels with manual and automatic fuel charging with a nominal power up to 500 kW.
2. PN EN 1708-1:2020 Welding Basic solutions for welded steel joints Part 1. Pressure-bearing components.
3. PN EN 60335-1 2012 Household and similar electrical appliances Safety Part 1: General requirements.
4. PN EN 60335-2-102 2006/A1:2010 - Household and similar electrical appliances - Safety - Part 2-102: Particular requirements for gas, oil and solid fuel burning appliances having electrical connections.
5. PN EN 61000-6-2:2008 Electromagnetic compatibility (EMC) -- Part 6-2: Generic standards -- Immunity for industrial environments.
6. PN EN 61000-6-3:2008/A1:2012 Electromagnetic compatibility (EMC) -- Part 6-3. Generic standards -- Emission standard for residential, commercial and light-industrial environments.
7. PN-EN IEC 63000:2019-01 Technical documentation for the assessment of electrical and electronic products with regard to the restriction of hazardous substances.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The product is marked with the following marks:	**Place and date:**
CE	Sokółka, 02.2024

Approving Persons:

President of the Management Board:
Jacek Kucharewicz

Production Director:
(The person authorized to prepare technical documentation)
Eliasz Kasperuk

Warranty card

Central heating boiler with power [kW]: Type:

Number:

Production date of the boiler: Boiler sale date:

Buyer's name and surname:

Buyer's address

Date of purchase and stamp Customer's signature

I accept the warranty terms: ✓

Personal data provided in this form are processed by Jacek Kucharewicz, conducting business activity under the name METAL-FACH Technika Grzewcza Sp. z o.o., 16-100 Sokółka, ul. Sikorskiego 66, TAX: 545-182-60-12, telephone +48 85 711 94 54 ext. 17 in order to implement the provisions contained in the warranty terms and conditions – in accordance with the Act of 29 August 1997 on Personal Data Protection (consolidated text: Journal of Laws of 2014, item 1182). The user has the right to access their personal data, to correct it, to request cessation of data processing, and to object to data processing in cases indicated by law. All correspondence concerning the processing of personal data should be sent to the following address: METAL-FACH Technika Grzewcza Sp. z o.o., 16-100 Sokółka, ul. Sikorskiego 66. Providing personal data is voluntary. In accordance with the Personal Data Protection Act of 29 August 1997 (consolidated text: Journal of Laws of 2014, item 1182), we hereby inform you that the personal data provided in this form will be protected against unauthorized access.

Complaint submission

Customer data	Central heating boiler data
Name and surname	Product name:
Residential address	Model:
Phone	Serial number
Purchase document number:	Warranty period Includes | Does not include
Payment settlement document number:	
	Detailed description of the fault:

Seller's signature

Conditions for initiating the complaint repair procedure:

1. Confirmation by the point of sale that the amount due for the product being complained about has been paid constitutes the basis for initiating the complaint procedure.
2. The warranty card is the only basis for free repair.
3. The complainant undertakes to reimburse the costs incurred by METAL-FACH Technika Grzewcza Sp. z o. o. in the event of an unjustified call for a service team or failure to comply with points 1 or 2 (each commenced hour of the service technician's work PLN 70 net, travel PLN 1 net/km in both directions).
4. The legible signature of the person submitting the complaint confirms that he or she has read the basic terms and conditions of the complaint procedure.

Date of purchase and stamp Customer's signature

I declare that I have read the warranty terms and conditions under which I am making a complaint and I consent to the processing of my personal data for the purposes of the complaint process in accordance with the Personal Data Protection Act of 29 August 1997 (Journal of Laws No. 133, item 833).

Legible signature of the person submitting the complaint

The manufacturer undertakes to carry out warranty repairs within 14 days from the date of receipt of the user's written notification of damage on the manufacturer's complaint form.

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Report on the first start-up of the boiler

(Copy of the company METAL-FACH Heating Technology)

To verify your purchase and validate your warranty, you must submit a report within 30 days of first use. This can be done by:

1. E-mail - where a scan or photo of the report will be posted.
2. A letter containing a copy of the report will be sent to METAL-FACH Technika Grzewcza Sp. z o. o. The company's address can be found at the end of the Technical and Operational Document.

Boiler		**Comment**
The conditions contained in the Operation and Maintenance Manual in the chapter "Requirements for the boiler room and boiler installation" are met.	☐	
The conditions specified in the Operation and Maintenance Manual in the chapter "Connecting the boiler to the chimney" are met.	☐	
Central heating system		**Comment**
The conditions included in the Operation and Maintenance Manual in the chapter "Connecting the boiler to the heating system" are met.	☐	
Expansion vessel " are met.	☐	
There is no other heating source. If so, how does it affect the boiler's operation?	☐	
Protecting the system against freezing.	☐	
Connecting elements to the electrical installation		**Comment**
The conditions contained in the Operation and Maintenance Manual in the chapter "Connecting the boiler to the electrical installation" are met.	☐	
Equipment test		**Comment**
The sensors are located in the right place.	☐	
Sensor readings are consistent with the actual condition.	☐	
The direction of fan rotation is correct.	☐	
Opening the fan flap using the force of the blower.	☐	
The direction of rotation of the screw is correct.	☐	
Boiler start-up		**Comment**
The tightness of the hydraulic connection of the boiler to the installation is maintained.	☐	
FIREMAN system test (if installed).	☐	
Checking the connection of the fuel feeder to the boiler.	☐	
Filling the fuel tank with fuel.	☐	
Checking the fuel supply through the feeder.	☐	
Firing up the boiler according to the section "Starting the boiler".	☐	
Initial adjustment of boiler operating parameter settings.	☐	
Final adjustment of boiler operating parameter settings.	☐	

Confirmation of user training in the field		Comment
Instructions for the user on how to safely operate the boiler are included in the chapter "When using the boiler, remember to do the following."	☐	
Instruction in the operation of the boiler regulator and regulation of the combustion process.	☐	
Fan speed settings.	☐	
Boiler maintenance chapter "Cleaning and maintenance of the boiler"	☐	
Required fuel quality chapter "Fuel"	☐	
Procedure in case of emergency, chapter "Examples of device failure"	☐	

Launch date	Boiler name	Boiler power [kW]	Serial number

Name and surname of the service technician	Name and surname of the owner
Address	Address
Company seal	Contact number
Signature	Signature

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Report on the first start-up of the boiler

(Copy of the boiler owner)

To verify your purchase and validate your warranty, you must submit a report within 30 days of first use. This can be done by:

1. E-mail - where a scan or photo of the report will be posted.
2. A letter containing a copy of the report will be sent to METAL-FACH Technika Grzewcza Sp. z o. o. The company's address can be found at the end of the Technical and Operational Document.

Boiler		**Comment**
The conditions contained in the Operation and Maintenance Manual in the chapter "Requirements for the boiler room and boiler installation" are met.	☐	
The conditions specified in the Operation and Maintenance Manual in the chapter "Connecting the boiler to the chimney" are met.	☐	
Central heating system		**Comment**
The conditions included in the Operation and Maintenance Manual in the chapter "Connecting the boiler to the heating system" are met.	☐	
Expansion vessel " are met.	☐	
There is no other heating source. If so, how does it affect the boiler's operation?	☐	
Protecting the system against freezing.	☐	
Connecting elements to the electrical installation		**Comment**
The conditions contained in the Operation and Maintenance Manual in the chapter "Connecting the boiler to the electrical installation" are met.	☐	
Equipment test		**Comment**
The sensors are located in the right place.	☐	
Sensor readings are consistent with the actual condition.	☐	
The direction of fan rotation is correct.	☐	
Opening the fan flap using the force of the blower.	☐	
The direction of rotation of the screw is correct.	☐	
Boiler start-up		**Comment**
The tightness of the hydraulic connection of the boiler to the installation is maintained.	☐	
FIREMAN system test (if installed).	☐	
Checking the connection of the fuel feeder to the boiler.	☐	
Filling the fuel tank with fuel.	☐	
Checking the fuel supply through the feeder.	☐	
Firing up the boiler according to the section "Starting the boiler".	☐	
Initial adjustment of boiler operating parameter settings.	☐	
Final adjustment of boiler operating parameter settings.	☐	

Confirmation of user training in the field		Comment
Instructions for the user on how to safely operate the boiler are included in the chapter "When using the boiler, remember to do the following."	☐	
Instruction in the operation of the boiler regulator and regulation of the combustion process.	☐	
Fan speed settings.	☐	
Boiler maintenance chapter "Cleaning and maintenance of the boiler"	☐	
Required fuel quality chapter "Fuel"	☐	
Procedure in case of emergency, chapter "Examples of device failure"	☐	

Launch date	Boiler name	Boiler power [kW]	Serial number

Name and surname of the service technician	Name and surname of the owner
Address	Address
Company seal	Contact number
Signature	Signature

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METAL-FACH
HEATING TECHNOLOGY

Online form

Video instructions

Website

Contact with service:
Sikorskiego Street 66, 16-100 Sokółka
+48 85 711 94 54 ext. 17
e-mail: p.czepiel@metalfach.com.pl

Producer:
METAL-FACH Technika Grzewcza Sp. z o. o.
Sikorskiego Street 66, 16-100 Sokółka
TAX: 545-182-60-12, REGON: 523566030
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