

KOSTRZEWA®
Experts in heating technology



Offer 2014

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Dear Customers

For your comfort and to provide a reliable knowledge to our Customers, we hereby present a new publication by the KOSTRZEWA team.

It is a complete compendium of both our offer and heating technology issues, including a specification of common fuels.

The detailed solution descriptions, with pictures and diagrams, will allow you to familiarize your future Customers with our offer and the short specification of fuel market will improve the awareness and prevent issues related with fuel choice.

We believe, that this new tool will become a communication bridge between KOSTRZEWA and your Customers, as well as the representative of our brand, and we hope that

You will find the information useful and we look forward to your comments and suggestions.

KOSTRZEWA Owners

Barbara KOSTRZEWA
KOSTRZEWA Technika Kuchnia
KOSTRZEWA Pasaż

Masuria - the Land of a Thousand Lakes



Today's world

is confronted with the depletion of fossil fuels, dramatic increase in fuel prices and deterioration of the environment.

We have taken up a challenge for further development with simultaneous decisive acting on the protection of natural resources and reduction of greenhouse gases. It is feasible with state of the art low emission heating devices using the renewable resources sources (wide range of biomass fuels).

Coal or oil burning causes the increase in carbon dioxide concentration in the atmosphere which is one of the main gases causing the greenhouse effect. The greenhouse effect, in the opinion of the scientists causes unusual and violent atmospheric phenomena on our planet, occurring even more often. The climatic changes may not be stopped, but can be suppressed by reducing carbon dioxide emission to the atmosphere.



pellets

Each one of us Pellets

We all can take part by abandoning fossil fuels in favour of renewable energy sources, e.g. the biomass.

The biomass combustion does not emit additional carbon dioxide, since the quantity of the gas is equal to absorbed by the plants in the photosynthesis process. A diversity of fuels is available: wood logs (most common), wood chips or grains, and processed fuels: briquette and pellets. The latter have no shortcomings such as a wide range of moisture content or low power density. It is a standard fuel with repeatable features for each supply.

Pellet is a processed wood waste (sawdust, chips), pressed at a high pressure. The process is carried out without any additional bonding agents, due to the wood wool content. Due to the difficulties in obtaining raw materials, pellet manufacturers attempt to granulate other plant materials, i.e. straw, sunflower husk, hay, bran, rape cake, corn, sugar reed etc. Some of the products have already been accepted by the clients and enjoy popularity, specifically due to low prices. The result is the pellets with 6-25 mm diameter and up to few centimetres in length (4-5 x diameter). They feature low moisture and ash content (respectively 8-12% and approx. 0.5%), low content of other hazardous substances, and high calorific value (17-18 MJ/kg).

- Pellets 18 MJ/kg
- Propane 46 MJ/kg
- Heating oil 39 MJ/l
- Coal 26 MJ/kg

Pellets have several advantages:

- clean and easy to use (1 ton of fuel produces approx. 5 kg of ash, assuming 0.5% ash content)
- easy transport and storage (usually purchased in 15-25 kg bags delivered on pallets, does not require special storage conditions).

¹ The values apply to wood pellets.
The pellets made of other plant material are characterized with slightly higher ash content and lower calorific value.

Savings - PLN 6900

2,1 kg pellets substitutes 1 litre of heating oil
1,4 ton pellets substitutes 1 ton of coal

Significant savings in fuel allow return of investment within a single heating season.

Annual cost of heating oil for
200 m² house

Annual cost of pellets for
200 m² house

3000L x 4,00² PLN = 12 000 PLN 6000kg x 0,83³ PLN = 5100 PLN

SAVINGS - PLN 6900



2) Price based on average fuel prices in year 2012

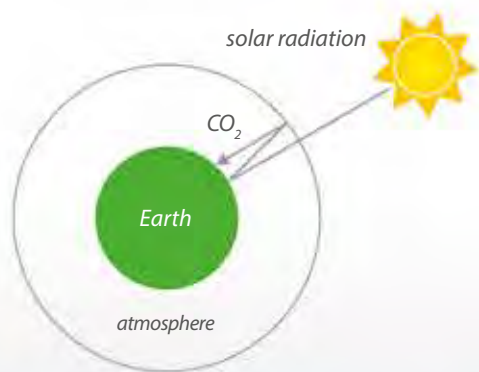
The economic advantages of the pellets are distinct considering current economic situation. Heating oil is a convenient fuel, which have gained many users who now content with rapid increase in heating costs. Oil heating is almost twice as expensive as pellet heating.

The easiest method to switch from heating oil to other cheaper alternatives is the installation of a pellet burner in used oil boiler. The offered Platinum Bio burners are compatible with oil boilers, does not require special installation procedures (installation in a boiler doors or special opening), and can be connected to the standard electrical system.

The pellets are fed from the pellet reservoir and are batched as per user requirements.

The burners feature automatic start and stop system, and convenience similar to the oil boiler. They also require low investments and thus offer fast return of investment. Please note, that the design rules for the heat exchanger for oil boiler are different than for the heat exchangers for solid fuel boilers. If feasible, we recommend purchase of the new solid fuel boiler.

Oil boiler with the pellet burner also has a reduced efficiency compared to oil burning. Especially in large heating systems (>200 kW), there is a several percent decrease in efficiency resulting in measurable fuel losses. Coal users shall be aware of waste gas emission in the fuel combustion process. New heating devices include several improvements, e.g. automatic ignition system. We recommend thorough comparison of available devices, since the choice will determine your comfort for many years.



Carbon dioxide retains excessive heat at the surface, which is not removed to the superstratum.

Pellet specification	
Diameter	6–12 mm
Length	4–5 diameter
Bulk density	500–600 kg/m³
Moisture content	8–12%
Ash content	< 0,5%
Fines content	< 1,5%
Calorific value	17–18 MJ/kg
Sulphur content	≤ 0,08%
Chloride content	≤ 0,03%

Gas emission to the environment		
Gasses	Coal	Pellets
SO ₂ [kg/t]	16	0,126
NO ₂ [kg/t]	1	0,775
CO ₂ [kg/t]	2000	0
Dust [kg/t]	22,5	0,09



The comfort of boiler operation is not only affected by the device quality, but also by the fuel quality. The most important fuel property, making pea coal burning possible in a boiler with auger tube and burner assembly is its caking power. Pea coal with caking power RI<20 is compatible with most automatic boilers with auger tube and burner assembly. High caking power may cause sinter and slag at the auger tube and burner assembly. Unfortunately, the parameter is not specified in coal mine certificates and is usually ignored by the coal suppliers. Due to the deficiency in pea coal with suitable parameters, the suppliers sometimes mix high quality pea coal with low quality grade or even fine coal.

A rule of thumb says that the higher the calorific value, the higher the caking power.

Wet fuel can be a serious issue. Pea coal is generally produced in a wet process, and low ambient temperature and rain does not allow coal to evaporate. Wet fuel may cause reservoir corrosion, and react with sulphur in the evaporation process inside the auger.

It is advantageous to purchase the pea coal in the spring or in the summer, when the fuel is dry and the price is low.

The decision on fuel purchase shall not only be guided by the price, since the hasty purchase may cause serious boiler operation issues.

The parameters of a high quality pea coal which will guarantee failure free heating in the winter are specified below:

- hard coal type 31.2
- calorific value (Q_{ri}) over 26 000 kJ/kg
- grain size 5–25 mm
- caking ability with Rogi method RI<20
- ash content (non-combustibles) 10%
- sulphur content < 0,8%
- moisture content <10% (summer)

The background of the entire page is a lush green field with several red poppies in bloom. The top of the image is framed by bright green, leafy branches, possibly from an oak tree, which are slightly out of focus. The sky is a pale, bright blue, and the overall lighting is very bright, creating a soft, ethereal glow across the scene. The text is centered in the upper half of the image.

Technology in
harmony with nature
is fundamental to our
operation.



description

Technical data

automatics

overall dimensions

accessories

Platinum Bio burner

The numbers speak for themselves - over 10,000 pellet burners sold.

Operation control is simplified to provide the highest comfort.



ecoCombustion

models [kW]

16 24 32 40



fuels



pellets

pellets / oats
50 / 50

7/24

service

H25N20SZ

heat
resistant steelGSM
module

> 94,5%

burner
efficiency

3 years

3 years
warranty

Description

Platinum Bio pellet burners have a good reputation, and our engineers have made every effort to ensure excellent parameters and performance.

Available Platinum Bio models:

- PB16 16 kW output
- PB24 24 kW output
- PB32 32 kW output
- PB40 40 kW output

Each Platinum Bio burner features maximum efficiency >94,5%.

Considering the environment and your wallet we have created second generation Fuzzy Logic1 controller for precise power adjustment to the building heat demand.

Combined with a precise, automatic air supply with a broadband lambda sensor2 it allows saving up to 40% fuel.

1. second generation Fuzzy Logic saves 20% fuel
2. lambda sensor saves 20% fuel



- 1 burner body
made of heat resistant
steel, with resistance
up to 1150°C
- 2 electric connections
plate
- 3 burner
housing
- 4 furnace
with multi-point
forced air
- 5 sealing rope



Features

- automatic ignition
- automatic second generation
Fuzzy Logic controller
- flame regulation with
photocell
- low thermal
inertia
- low energy consumption
- up to 16 heating circuits
control (heaters, floor heating
or domestic hot water) -
optional
- burner temperature control -
the highest safety
- three ignition stages eliminate
gas explosion
- AUTOSTART at voltage loss - current
settings are stored
- the primary and secondary air allows
reduction of CO2 emission to the gas
and oil boiler level
- efficiency >94.5%
- automatic grate cleaning function -
not available in gravity reservoir
version
- oats - burner designed with possibility
to burn oats³ – optional

3. recommended 50/50 pellets/oats ratio

The first gravitational
burner with second
generation Fuzzy Logic
modulation made in
Poland.

- Three year warranty reduces
operational and service costs in
a long term operation.
- low price with EU grants

Specification

The design may change due to improvements.

PARAMETR	PPB 16 kW	PPB 24 kW	PPB 32 kW	PPB 40 kW
Pellet output range [kW]	4.8–16	7.2–24	9.6–32	12–40
CO emission [ppm]	< 100	< 100	< 100	< 100
Fuel	pelet	pelet	pelet	pelet
Fuel diameter [mm]	6–8	6–8	6–8	6–8
Supply voltage [V]	230	230	230	230
Average electricity consumption [W]	30	35	40	45
Max. power consumption (ignition) (W)	415	415	450	450
Protection rating	IP 40	IP 40	IP 40	IP 40
Standard fuel feeder length [m]	1,6	1,6	1,6	1,6
Standard reservoir dimensions	620 x 620	620 x 620	620 x 620	620 x 620
Width, depth, height [mm]	x 1551	x 1551	x 1551	x 1551
Standard reservoir capacity [L]	295	295	295	295
Fuel feeder lenght (option) [m]	2.5; 3	2.5; 3	2.5; 3	2.5; 3
Expanded reservoir dimensions	620 x 620	620 x 620	620 x 620	620 x 620
Width, depth, height [mm]	x 2051	x 2051	x 2051	x 2051
Expanded reservoir capacity [L]	470	470	470	470

Fuel parameters

Sawdust pellets as per

EN 14961-2:2011 class A1:

- size 6 +/- 1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- lenght $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Oats¹

- moisture content < 12%

1. recommended pellet/oat ratio - 50/50

description

technical data

automatics

dimensions

accessories

Platinum Bio

second generation Fuzzy Logic controller

Large alphanumeric display for easy communication and operation.



Control

- fuel feeding from the reservoir
- burner screw
- air pressure blower
- igniter
- central heating pump
- domestic hot water pump
- mixing valve²

Functions

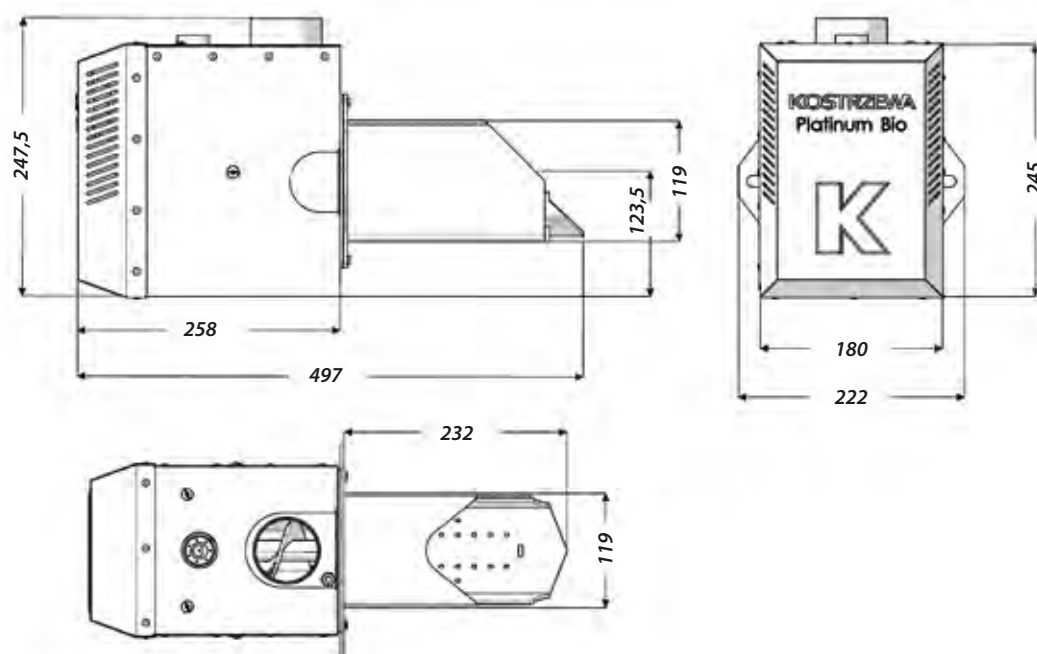
- Statistics preview
 - minimum, maximum and average burner power
 - minimum, maximum and average fuel consumption. Temperature parameters are presented as numbers and graphs on a large display along with many other functions
- Burner operation and comfort may be compared to the oil burner.

Second generation Fuzzy Logic controller and advanced menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignition cycles significantly reduces the amount of electric energy used).

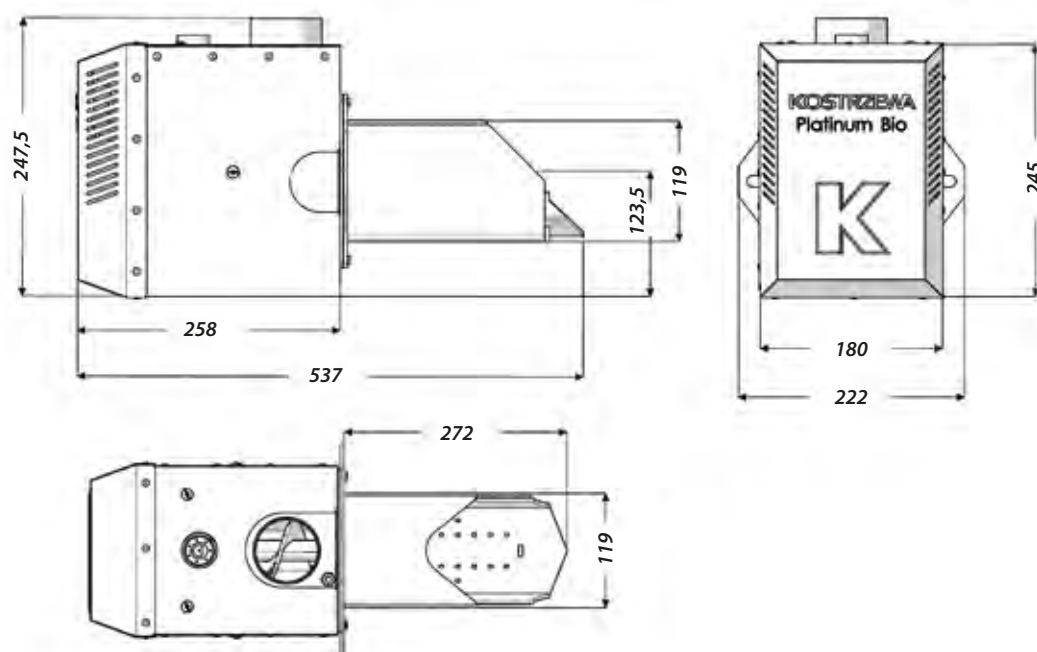
2. with optional module - 1-16 heating circuits (heaters or floor heating)

Dimensions

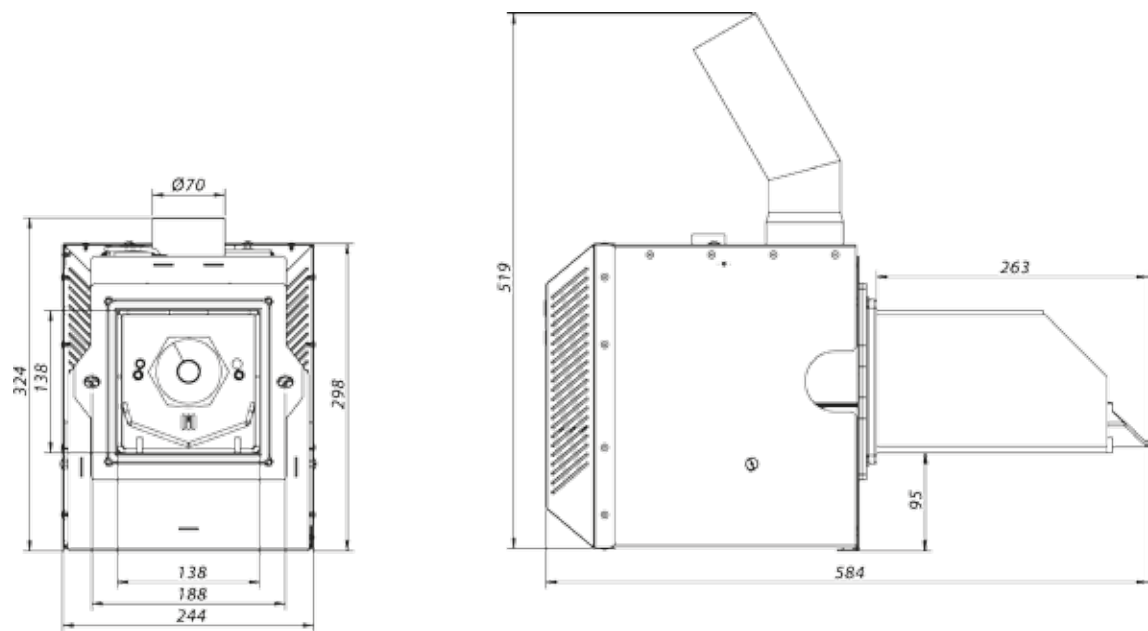
Platinum Bio 16 kW burner



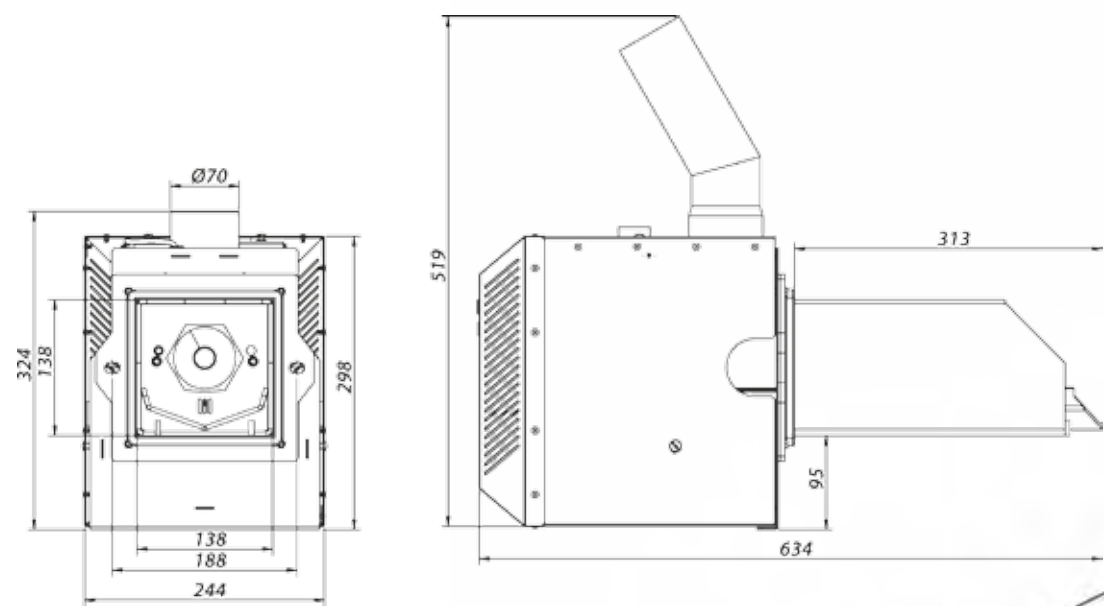
Platinum Bio 24 kW burner



Platinum Bio 32 kW burner



Platinum Bio 40 kW burner



description

technical data

automatics

dimensions

accessories

Specification

Standard and optional accessories

TYPE	PPB 16 kW	PPB 24 kW	PPB 32 kW	PPB 40 kW
power range on pellet [kW]	4.8–16	7.2–24	9.6–32	12–40
FUEL TYPES				
pellets	S	S	S	S
oats/ pellets 50/50	O	O	O	O
RESERVOIR				
standard 295 [L]	O	O	O	O
alternative: 203; 286; 470; 770; 1386 [L]	O	O	O	O
external feeding	O	O	O	O
fuel feeding from the reservoir to the burner	S	S	S	S
BURNER				
heat resistant steel H25N20S2	S	S	S	S
gravitational burner	S	S	S	S
automatic ash removal	S	S	S	S
fuel ignition element	S	S	S	S
air pressure blower	S	S	S	S
gear motor	S	S	S	S
photo cell	S	S	S	S
pellets grate	S	S	S	S
oats/pellets grate	O	O	O	O
AUTOMATICS				
boiler temperature sensor	S	S	S	S
burner temperature sensor	S	S	S	S
Heated area temperature sensor	O	O	O	O
domestic hot water sensor	O	O	O	O
lambda sensor	O	O	O	O
modular design allowing to connect additions	S	S	S	S
GSM module	O	O	O	O
AUTOMATICS AND CONTROL FEATURES				
Fuel feeder from reservoir control	S	S	S	S
Fuel screw installed in burner control	S	S	S	S
Fuel igniter control	S	S	S	S
Air pressure blower control	S	S	S	S
Domestic hot water pump control	S	S	S	S
central heating pump control	S	S	S	S
mixing valve control **	O	O	O	O
cooperation with GSM module	S	S	S	S

TYPE	PPB 16 kW	PPB 24 kW	PPB 32 kW	PPB 40 kW
AUTOMATIC SYSTEMS				
second generation Fuzzy Logic controller	s	s	s	s
domestic hot water priority	s	s	s	s
communication	CAN	CAN	CAN	CAN
fuel selection	s	s	s	s
alternative function "boiler operation"	s	s	s	s
output testing	s	s	s	s
domestic hot water weekly program	s	s	s	s
weekly room temperature program	s	s	s	s
simple menu	s	s	s	s
advanced menu	s	s	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s	s	s
Alarms history	s	s	s	s
Help system	s	s	s	s
alarm codes	s	s	s	s
service mode	s	s	s	s
language - multilingual	s	s	s	s
ADDITIONAL MODULES				
solar system and accumulation tank control	o	o	o	o
control of 3 additional mixing valves (max. 16)	o	o	o	o
DELIVERY				
ask your local distributor	s	s	s	s
ask your local distributor	s	s	s	s
WARRANTY/Years				
burner body	3	3	3	3
burner mechanics and automatics	2	2	2	2

The price list for optional accessories is available from the manufacturer

Key

- s – standard accessories
- o – optional accessories
- ** with additional module 1-16 heating circuits (heaters or floor heating)

Safety first!





descriptions

technical data

automatics

dimensions

accessories

Platinum Bio burner (industrial)

Platinum Bio burners feature high power with economic burning process and low fuel gas emission.



ecoCombustion

models [kW]

A	50	100	
B	150	200	300

fuels



pellets

outdoor temp.
compensation

7/24

service
heat

H25N20S2

resistant
steelGSM
module

> 96%

burner
efficiency

3 years

3 years
warrantybroadband
6-wire
lambda sensor

Description

Always the highest quality

Independence - you decide where to buy the fuel and what fuel to buy

Available Platinum Bio 2 models:

- PB50 50 kW power
- PB100 100 kW power
- PB150 150 kW power
- PB200 200 kW power
- PB300 300kW power

- Second generation Fuzzy Logic controller and advanced menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignitions significantly reduces the amount of electric energy used).
- Low price with EU grants.
- Burner components made of H25N20S2 heat resistant steel, with resistance up to 1150°C.

- Pellet reservoir made of galvanized metal sheet - zinc coating reduces fuel reservoir corrosion.
- Three year warranty reduces operational and service costs in a long term

1. second generation Fuzzy Logic saves 20% fuel

- 1 **burner body**
made of heat resistant steel, with resistance up to 1150°C
- 2 **burner housing**
- 3 **combustion chamber**
with multi-point forced air supply



Advantages

- **Ecology** = CO₂ emission = 0
- **Fuel saving** up to 40% - with second generation Fuzzy Logic controller and broadband lambda sensor
- **Economy** – low electrical power consumption with photo cell
- **Durability** – designed and made of high quality heat resistant and stainless steel - 3 years warranty
- **Convenience** – fully automatic device with automatic start and stop
- **Innovation** – exchangeable with oil burner (saves 50% of costs compared to oil heating and 60% fuel compared to liquid gas heating costs)
- **Multifunctional** – control of several heating circuits, solar system and accumulation tank - optional
- **Independence** – you decide where to buy the fuel and what fuel to buy

We saved 40% of fuel with the broadband lambda sensor combined with a precise, automatic regulation of air amount.

2. the lambda sensor saves up to 20% of fuel.

Specification

The design may change due to improvements.

PARAMETER	PPB 50 kW	PPB 100 kW	PPB 150 kW	PPB 200 kW	PPB 300 kW
Power range on pellet (kW)	15–55	30–110	45–165	60–220	90–330
CO emission (ppm)	< 100	< 100	< 100	< 100	< 100
Fuel	pellets	pellets	pellets	pellets	pellets
fuel diameter (mm)	6–8	6–8	6–8	6–8	6–8
Supply voltage (V)	230	230	230	230	230
Average electricity consumption (W)	380–680	460–760	600–900	600–900	600–900
Protection rating	IP 40	IP 40	IP 40	IP 40	IP 40
Standard fuel feeding pipe length (m)	2	2	2	2	2
Standard fuel reservoir dimensions	620 x 620	620 x 620	620 x 620	620 x 620	620 x 620
Width, depth, height (mm)	x 1551	x 1551	x 1551	x 1551	x 1551
Standard reservoir capacity (l)	295	295	295	295	295
Fuel feeder lenght (option) (m)	2,5; 3	2,5; 3	2,5; 3	2,5; 3	2,5; 3
Expanded fuel reservoir dimensions	620 x 620	620 x 620	620 x 620	620 x 620	620 x 620
Width, depth, height (mm)	x 2051	x 2051	x 2051	x 2051	x 2051
Expanded reservoir capacity (l)	470	470	470	470	470

Fuel parameters

Sawdust pellets as per

EN 14961-2:2011 class A1:

- size 6 +/-1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- lenght $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$



description

technical data

automatics

dimensions

accessories

Platinum Bio burner control cabinet (industrial use)

with second generation
Fuzzy Logic control

Large alphanumeric display for easy
communication and operation.



Controls

- fuel feeding mechanism from the reservoir
- burner fuel feeding screw
- pressure blower
- fuel ignition mechanism
- heating system circulation pump
- domestic hot water circulation pump
- mixing valve

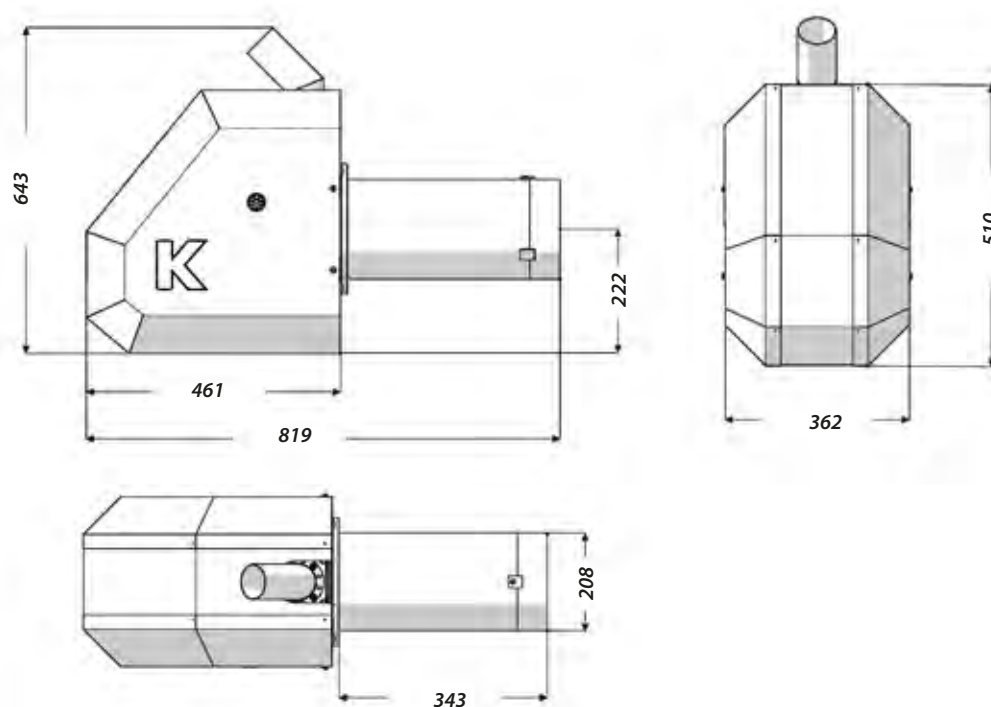
Functions

- Statistics preview
 - minimum, maximum and average burner power
 - minimum, maximum and average fuel consumption. Temperature parameters are presented as numbers and graphs on a large display along with many other functions
- Burner operation and comfort may be compared to the oil burner.
- For production areas heating and other industrial buildings heating with non standard requirements - the parameters can be modified in extended service mode.

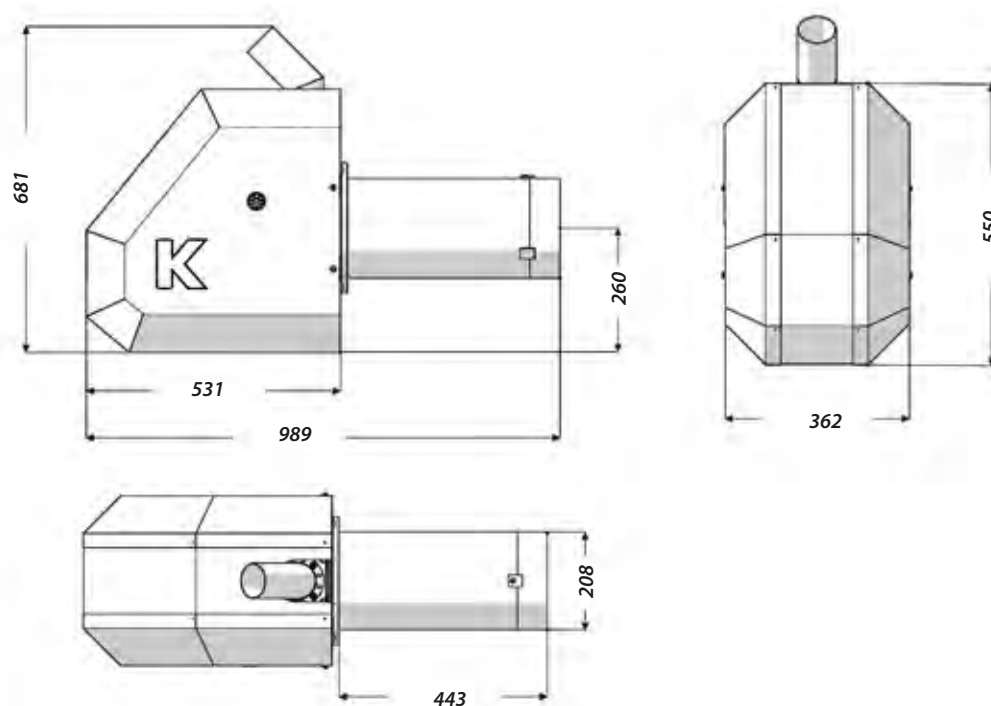
Second generation Fuzzy Logic controller and advanced menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignitions significantly reduces the amount of electric energy used).

Dimensions

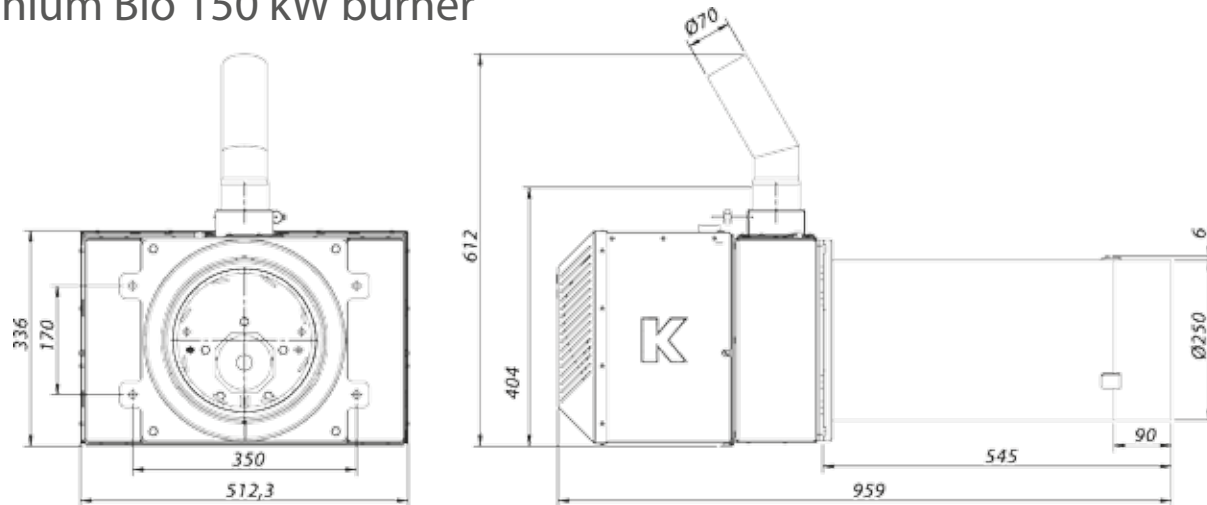
Platinum Bio 50 kW burner



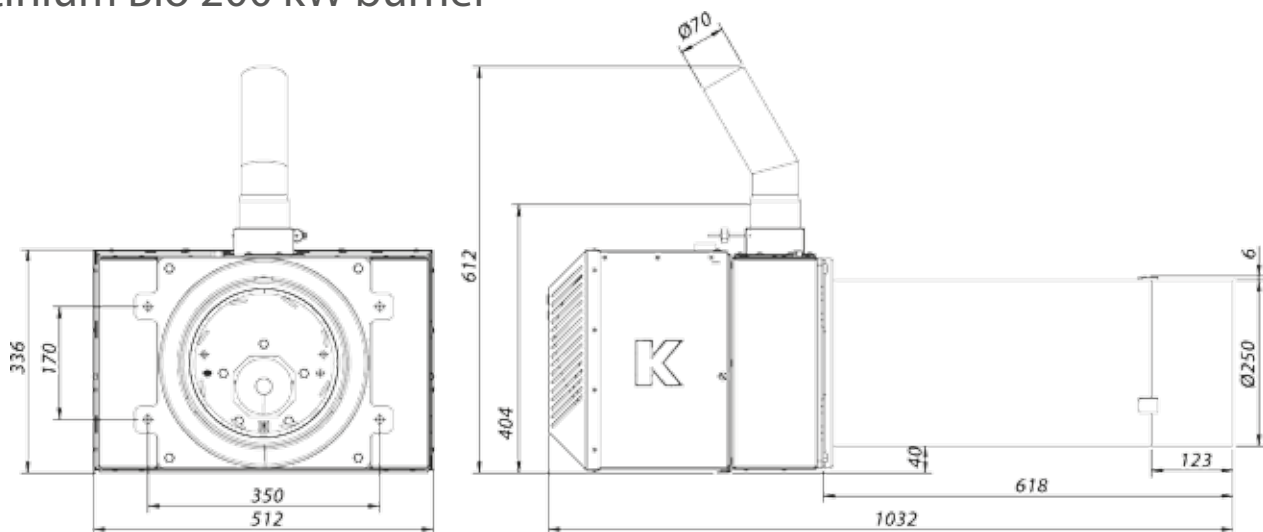
Platinum Bio 100 kW burner



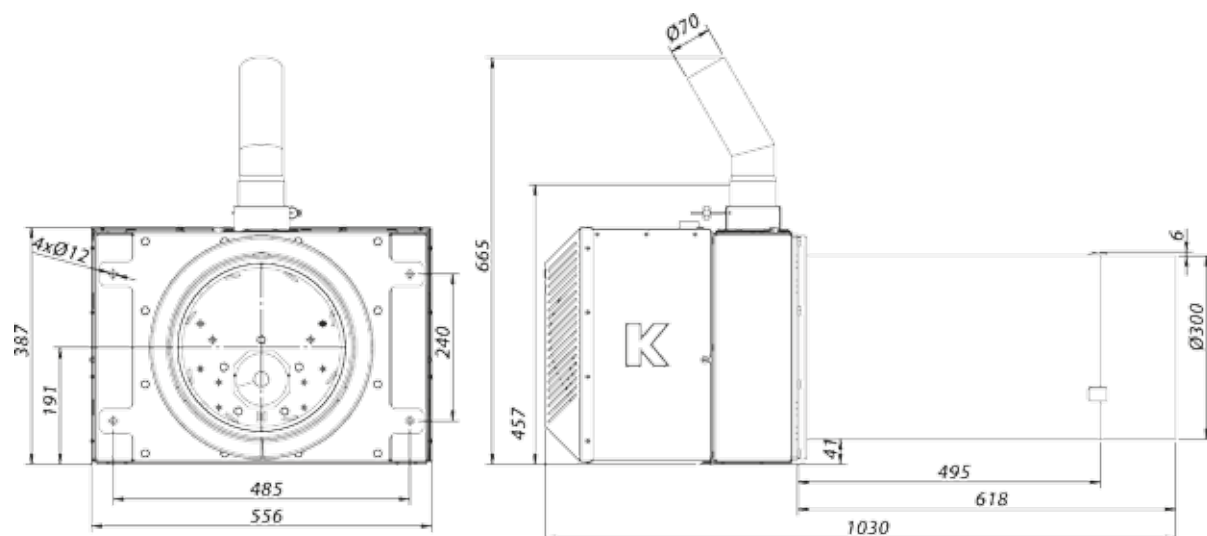
Platinum Bio 150 kW burner



Platinum Bio 200 kW burner



Platinum Bio 300 kW burner



description

technical data

automatics

dimensions

accessories

Specification

Standard and optional accessories

TYPE	PPB 50 kW	PPB 100 kW	PPB 150 kW	PPB 200 kW	PPB 300 kW
Power range on pellet (kW)	15–55	30–110	45–165	60–220	90–330
FUEL TYPES					
pellets	S	S	S	S	S
FUEL RESERVOIR					
standard 295 [L]	O	O	O	O	O
alternative: 203; 286; 470; 770; 1386 [L]	O	O	O	O	O
external feeding	O	O	O	O	O
fuel feeding from the reservoir to the burner	S	S	S	S	S
BURNER					
heat resistant steel H25N20S2	S	S	S	S	S
cylindrical burner design	S	S	S	S	S
gravitational burner	S	S	S	S	S
automatic ash removal	S	S	S	S	S
Fuel ignition element	S	S	S	S	S
pressure blower (for PPB 300 kW - 2 pcs.)	S	S	S	S	S
gear motor	S	S	S	S	S
photo cell	S	S	S	S	S
pellets grate	S	S	S	S	S
AUTOMATICS					
boiler temperature sensor	S	S	S	S	S
burner temperature sensor	S	S	S	S	S
IP66 metal control cabinet	S	S	S	S	S
main switch	S	S	S	S	S
safety switch	S	S	S	S	S
status lamps	S	S	S	S	S
Heated area temperature sensor	O	O	O	O	O
domestic hot water sensor	O	O	O	O	O
lambda sensor	S	S	S	S	S
modular design	S	S	S	S	S
GSM module	O	O	O	O	O
AUTOMATICS AND CONTROL FEATURES					
Fuel feeding mechanism from the reservoir control	S	S	S	S	S
Fuel feeding screw in the burner control	S	S	S	S	S
pressure blower control	S	S	S	S	S
Fuel ignition element control	S	S	S	S	S
heating system circulation pump control	S	S	S	S	S
Domestic hot water circulation pump control	S	S	S	S	S
mixing valve control	S	S	S	S	S
cooperation with GSM module	S	S	S	S	S

TYPE	PPB 50 kW	PPB 100 kW	PPB 150 kW	PPB 200 kW	PPB 300 kW
AUTOMATIC SYSTEMS					
second generation Fuzzy Logic controller	s	s	s	s	s
domestic hot water priority	s	s	s	s	s
communication	CAN	CAN	CAN	CAN	CAN
alternative function “boiler operation”	s	s	s	s	s
output testing	s	s	s	s	s
domestic hot water weekly program	s	s	s	s	s
weekly room temperature program	s	s	s	s	s
simple menu	s	s	s	s	s
advanced menu	s	s	s	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s	s	s	s
alarm log	s	s	s	s	s
help	s	s	s	s	s
alarm codes	s	s	s	s	s
service mode	s	s	s	s	s
language - multilingual	s	s	s	s	s
OPTIONAL MODULES					
solar system and accumulation tank control	o	o	o	o	o
system control with 3 additional mixing valves (max. 16)	o	o	o	o	o
DELIVERY					
delivery to the address indicated	s	s	s	s	s
24h delivery	s	s	s	s	s
WARRANTY/Years					
burner body	3	3	3	3	3
burner mechanics and automatics	2	2	2	2	2

The price list for optional accessories is available at the manufacturer.

Key

- s – standard accessories
- o – optional accessories

Welcome to the circle of
satisfied and relaxed
Customers.





descriptions

technical data

automatics

dimensions

accessories

Platinum Bio Lite burner (industrial)

High power with low fuel consumption

Platinum Bio burners feature high power with economic burning process and low fuel gas emission.



ecoCombustion

models [kW]



fuels



pellets

outdoor temp.
compensation

7/24

service
heat

H25N20S2

resistant
steelGSM
module

> 96%

burner
efficiency

3 years

3 years
warranty

Description

Available Platinum Bio Lite models:

- PB50 50 kW power
- PB100 100 kW power
- PB150 150 kW power
- PB200 200 kW power
- PB300 300kW power

- Second generation Fuzzy Logic control and advanced menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignitions significantly reduces the amount of electric energy used).
- Low price with EU grants.
- Burner components made of H25N20S2 heat resistant steel, with resistance up to 1150°C.

- Pellet reservoir made of galvanized metal sheet - zinc coating reduces fuel reservoir corrosion.
- Three year warranty reduces operational and service costs in a long term

1. second generation Fuzzy Logic saves 20% fuel



- 1 **burner body**
made of heat resistant steel, with resistance up to 1150°C
- 2 **burner housing**
- 3 **combustion chamber**
with multi-point forced air supply



Advantages

- **Ecology** = CO₂ emission = 0
- **Fuel saving** up to 20% - with second generation Fuzzy Logic controller
- **Economy** – low electrical power consumption with photo cell
- **Durability** – designed and made of high quality heat resistant and stainless steel - 3 years warranty
- **Convenience** – fully automatic device with automatic start and stop
- **Innovation** – exchangeable with oil burner (saves 50% of costs compared to oil heating and 60% fuel compared to liquid gas heating costs)
- **Multifunctional** – control of several heating circuits, solar system and accumulation tank - optional
- **Independence** – you decide where to buy the fuel and what fuel to buy

Second generation Fuzzy Logic controller and advanced menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignition cycles significantly reduces the amount of electric energy used).

Specification

The design may change due to improvements.

PARAMETER	Lite 50 kW	Lite 100 kW	Lite 150 kW	Lite 200 kW	Lite 300 kW
Power range on pellet (kW)	15–55	30–110	45–165	60–220	90–330
CO emission (ppm)	< 100	< 100	< 100	< 100	< 100
Fuel	pellets	pellets	pellets	pellets	pellets
fuel diameter (mm)	6–8	6–8	6–8	6–8	6–8
Supply voltage (V)	230	230	230	230	230
Average electricity consumption (W)	380–680	460–760	600–900	600–900	600–900
Protection rating	IP 40	IP 40	IP 40	IP 40	IP 40
Standard fuel feeding pipe length (m)	2	2	2	2	2
Standard fuel reservoir dimensions	620 x 620	620 x 620	620 x 620	620 x 620	620 x 620
Width, depth, height (mm)	x 1551	x 1551	x 1551	x 1551	x 1551
Standard reservoir capacity (l)	295	295	295	295	295
Fuel feeder length (option) (m)	2,5; 3	2,5; 3	2,5; 3	2,5; 3	2,5; 3
Expanded fuel reservoir dimensions	620 x 620	620 x 620	620 x 620	620 x 620	620 x 620
Width, depth, height (mm)	x 2051	x 2051	x 2051	x 2051	x 2051
Expanded reservoir capacity (l)	470	470	470	470	470

Fuel parameters

Sawdust pellets as per

EN 14961-2:2011 class A1:

- size 6 +/- 1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$



description	technical data	automatics	dimensions	accessories
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Platinum Bio

second generation Fuzzy Logic controller

Large alphanumeric display for easy communication and operation.



Controls

- fuel feeding from the reservoir
- burner screw
- air pressure blower
- igniter
- central heating pump
- domestic hot water pump
- mixing valve

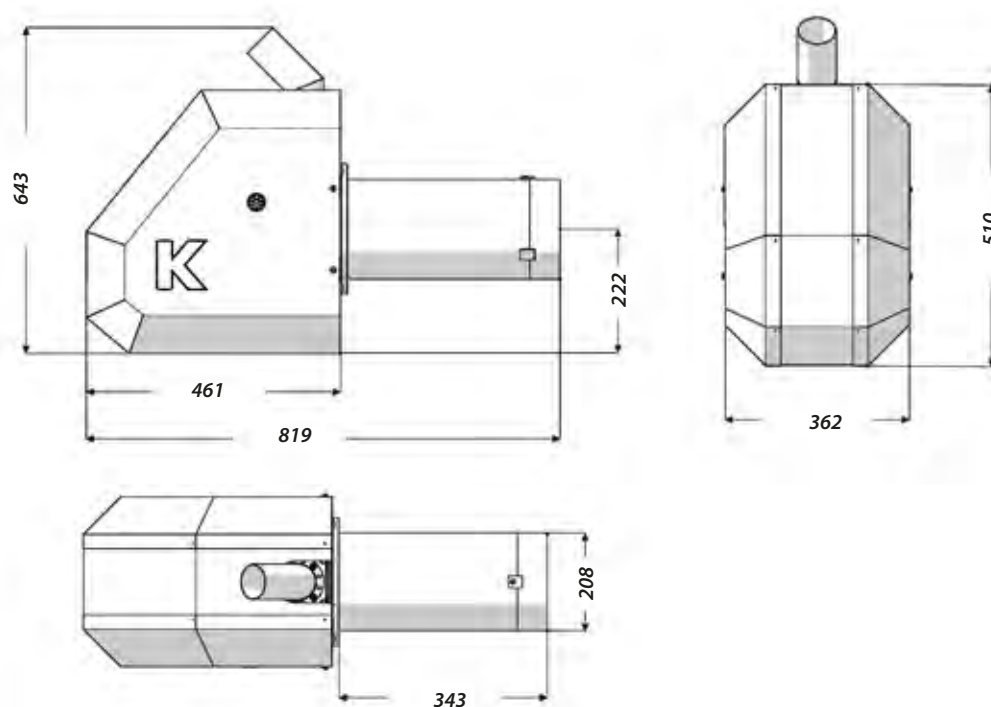
Functions

- Statistics preview
 - minimum, maximum and average burner power
 - minimum, maximum and average fuel consumption. Temperature parameters are presented as numbers and graphs on a large display along with many other functions
- Burner operation and comfort may be compared to the oil burner.
- For production areas heating and other industrial buildings heating with non standard requirements - the parameters can be modified in extended service mode.

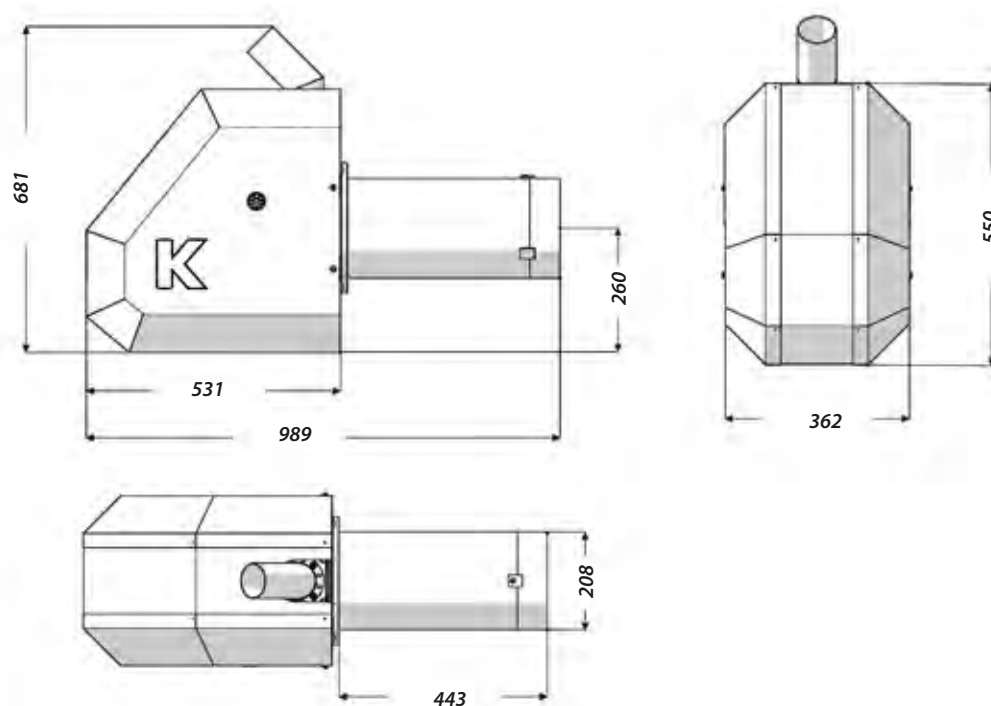
Second generation Fuzzy Logic controller and advanced menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignition cycles significantly reduces the amount of electric energy used).

Dimensions

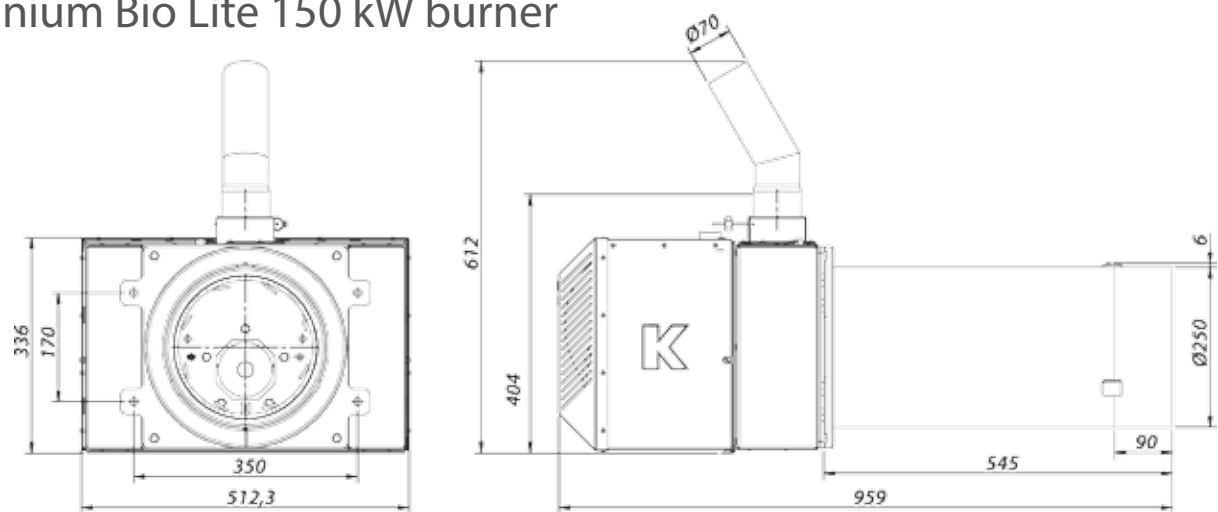
Platinum Bio Lite 50 kW burner



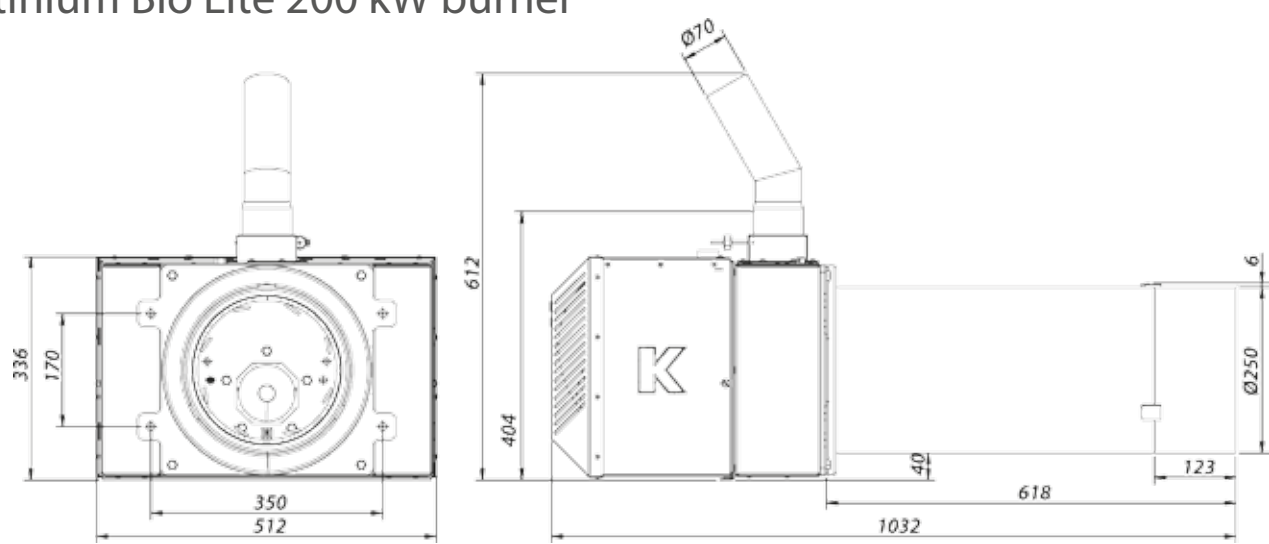
Platinum Bio Lite 100 kW burner



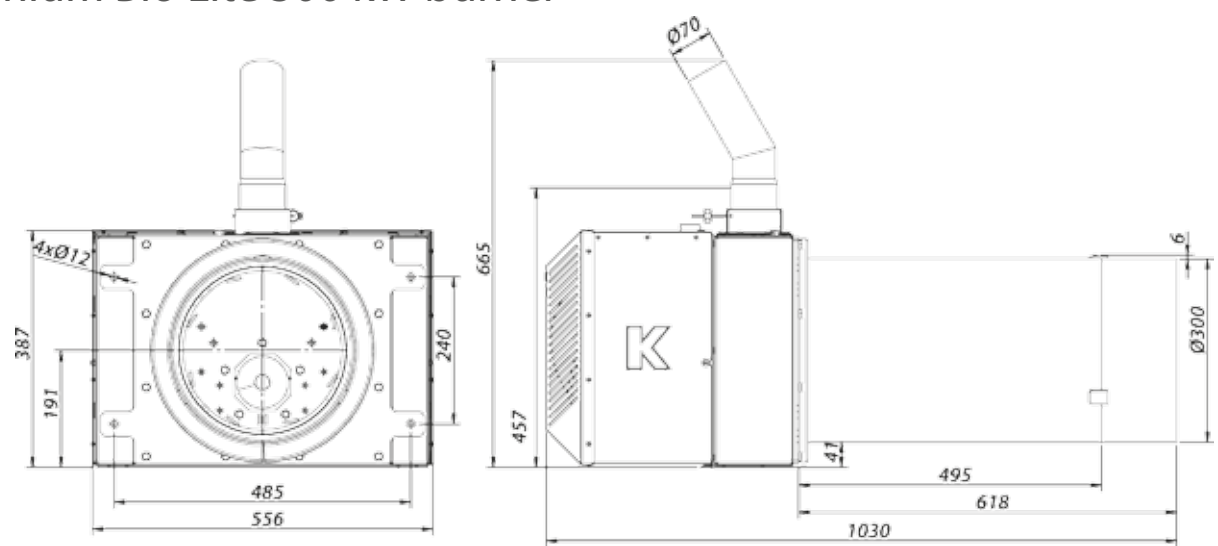
Platinum Bio Lite 150 kW burner



Platinum Bio Lite 200 kW burner



Platinum Bio Lite 300 kW burner



description	technical data	automatics	dimensions	accessories
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Specification

Standard and optional accessories

TYPE	Lite 50 kW	Lite 100 kW	Lite 150 kW	Lite 200 kW	Lite 300 kW
Power range on pellet (kW)	15–55	30–110	45–165	60–220	90–330
FUEL TYPES					
pellets	S	S	S	S	S
FUEL RESERVOIR					
standard 295 [L]	O	O	O	O	O
alternative: 203; 286; 470; 770; 1386 [L]	O	O	O	O	O
external feeding	O	O	O	O	O
fuel feeding from the reservoir to the burner	S	S	S	S	S
BURNER					
heat resistant steel H25N20S2	S	S	S	S	S
cylindrical burner design	S	S	S	S	S
gravitational burner	S	S	S	S	S
automatic ash removal	S	S	S	S	S
Fuel ignition element	S	S	S	S	S
pressure blower (for PPB 300 kW - 2 pcs.)	S	S	S	S	S
gear motor	S	S	S	S	S
photo cell	S	S	S	S	S
pellets grate	S	S	S	S	S
AUTOMATICS					
boiler temperature sensor	S	S	S	S	S
burner temperature sensor	S	S	S	S	S
Heated area temperature sensor	O	O	O	O	O
domestic hot water sensor	O	O	O	O	O
lambda sensor	O	O	O	O	O
modular design	S	S	S	S	S
GSM module	O	O	O	O	O
AUTOMATICS AND CONTROL FEATURES					
Fuel feeding mechanism from the reservoir control	S	S	S	S	S
Fuel feeding screw in the burner control	S	S	S	S	S
pressure blower control	S	S	S	S	S
Fuel ignition element control	S	S	S	S	S
heating system circulation pump control	S	S	S	S	S
Domestic hot water circulation pump control	S	S	S	S	S
mixing valve control	S	S	S	S	S
cooperation with GSM module	S	S	S	S	S

TYPE	Lite 50 kW	Lite 100 kW	Lite 150 kW	Lite 200 kW	Lite 300 kW
AUTOMATIC SYSTEMS					
second generation Fuzzy Logic controller	s	s	s	s	s
domestic hot water priority	s	s	s	s	s
communication	CAN	CAN	CAN	CAN	CAN
alternative function “boiler operation”	s	s	s	s	s
output testing	s	s	s	s	s
domestic hot water weekly program	s	s	s	s	s
weekly room temperature program	s	s	s	s	s
simple menu	s	s	s	s	s
advanced menu	s	s	s	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s	s	s	s
alarm log	s	s	s	s	s
help	s	s	s	s	s
alarm codes	s	s	s	s	s
service mode	s	s	s	s	s
language - multilingual	s	s	s	s	s
OPTIONAL MODULES					
solar system and accumulation tank control	o	o	o	o	o
system control with 3 additional mixing valves (max. 16)	o	o	o	o	o
DELIVERY					
delivery to the address indicated	s	s	s	s	s
24h delivery	s	s	s	s	s
WARRANTY/Years					
burner body	3	3	3	3	3
burner mechanics and automatics	2	2	2	2	2

The price list for optional accessories is available at the manufacturer.

Key

- s – standard accessories
- o – optional accessories



Economical solutions.



description

technical data

automatics

dimensions

installations

accessories

Mini Bio

smallest pellet boiler in Poland

Automatic second generation
Fuzzy Logic1 controller reduces fuel
consumption by up to 20%.



ecoCombustion

models [kW]

10

20



Bundesamt
für Wirtschaft
und Ausfuhrkontrolle

fuels



pellets

pellets / oats
50 / 50

7/24

manufacturer
serviceP265
GHboiler
steel

H25N20S2

heat resistant
steelGSM
module

5 class

boiler
class

> 92.8%

heat resistant
steel

5 years

5 years
warranty +
2 years extended
warranty

Description

The only operations required for the Mini Bio boiler is to charge the main 230 l reservoir with fuel, every 3-14 days and remove ash from the burner and the central heating boiler.

Mini Bio boiler for pellets and oats is a "new look at the automatic burning of solid fuels in Poland and Europe". It is an optimum device intended for installation in houses, with small boiler rooms or at places without boiler rooms at all. The area of heated building is 50 to 300 (m²)².

The main Mini Bio boiler features are compact design and easy operation, consisting in charging the main reservoir with fuel and pressing the START button. The messages are shown on a large display. In several minutes, the device will automatically ignite the fuel, select optimum operation parameters and maintain constant room and domestic hot water temperature.

The device has four sections. The full boiler is a 600 x 600 x 1600 mm cuboid (10 kW output) or 700 x 700 x 1650 mm (20 kW output).

The first section is a steel heavy duty tubular **heat exchanger**. Following 3T guidelines (time, turbulator, and temperature) allowed very compact design of the heat exchanger. The heat exchanger is made of high quality 4-5 mm boiler steel P265GH.

The second section is a **Platinum Bio** burner for burning 6-8 mm diameter pellets and optional grain (oats). The structural components are made of heat resistant steel H25N20S2, with resistance up to 1150°C. With second generation Fuzzy Logic controller and power saving components, the burner consumes less fuel and energy compared to other devices available.



- ❶ reservoir cover
- ❷ fuel reservoir
- ❸ flexible fuel feeding tube
- ❹ furnace doors
- ❺ **Platinum Bio boiler**
is practically a maintenance free device, its operation is easy to provide the highest comfort
- ❻ round steel heat exchanger
- ❼ flue
- ❽ heat exchanger cleanout



front



rear

Mini Bio boilers meet PN-EN 303-5:2012 requirements

Features

The third section is the reservoir installed on the top of **heat exchanger** to save space. The reservoir capacity is 230 l.

The fourth section is the **controller** of the entire building heating system. It is designed for easy maintenance with clear menu and high degree of design and technological advancement.

The first controller in Poland with automatic power modulation and second generation Fuzzy Logic system - reduces fuel and electrical power consumption by up to 20%

- automatic burner start
- flame control with photocell
- low electricity consumption
- up to 16 heating circuits control
- (heaters, floor heating or domestic hot water) - optional

- burner working temperature control - the highest safety
- three ignition stages eliminate gas explosion during the ignition process
- AUTOSTART at voltage loss - current settings are stored
- the primary and secondary air allows reduction of CO₂ emission to the level of gas and oil burners
- automatic cleaning

1. Second generation Fuzzy Logic controller allow fuel consumption reduction by up to 20%

2. depending on building heat demand

3. option - recommended pellets/oats ratio - 50/50

4. burner can be installed in every new or used solid, liquid or gas fuel boiler without modifications to existing boiler. It is assembled with the adapter available to order.



Technical specification

The design may change due to improvements.

PARAMETER	MB 10 kW	MB 20 kW
Power range on pellet (kW)	3.3–10	6–20
Control method	Fuzzy Logic 2	Fuzzy Logic 2
Class as per PN-EN 303-5:2012	5	5
Water capacity (l)	48	90
Max. operating pressure (bar)	2	2
Max. operating temperature (°C)	85	85
Test pressure (bar)	4	4
Flue draught (mbar)	0.15–0.25	0.15–0.25
Flue gas temperature at nominal / minimum thermal power (°C)	140 / 90	160 / 90
Min. return water temperature (°C)	45	45
Average fuel consumption (pellets) at nominal / minimum thermal power (kg/h)	3 / 1	6 / 2
Flue diameter (mm)	135	160
Supply/return connector diameter (in.)	G1"	G1.1/4"
Power supply (V)	230	230
Max. power consumption (ignition) (W)	400	400
Weight (kg)	200	270
Fuel reservoir capacity (l)	230	240
Charging opening dimensions (mm)	555 x 555	655 x 655

Fuel parameters

Sawdust pellets as per EN 14961-2:2011 class A1:

- size 6 +/-1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Oats¹

- moisture content < 12%

1. recommended pellet/oat ratio - 50/50



Platinum Bio

with second generation Fuzzy Logic control

Automatic boiler power modulation with second generation Fuzzy Logic controller - reduces fuel consumption by up to 20%, as well as power consumption.



Control

- fuel conveyor from the reservoir
- burner screw
- pressure blower
- igniter
- central heating pump
- domestic hot water pump
- mixing valve¹

Functions

- automatic burner start
- flame control with photocell
- low thermal inertia during starting and stopping

- low energy consumption
- up to 16 heating circuits control (heaters, floor heating or domestic hot water) x - optional
- burner working temperature control - the highest safety
- three fuel ignition stages eliminate gas explosion during ignition process
- AUTOSTART function after voltage loss - current settings are stored
- primary and secondary air reduces CO₂ emission to the gas and oil burner level automatic
- cleaning function, removes slag from the grate - not available in reservoir burners
- oats burner design allows grain burning (oats) - optional²

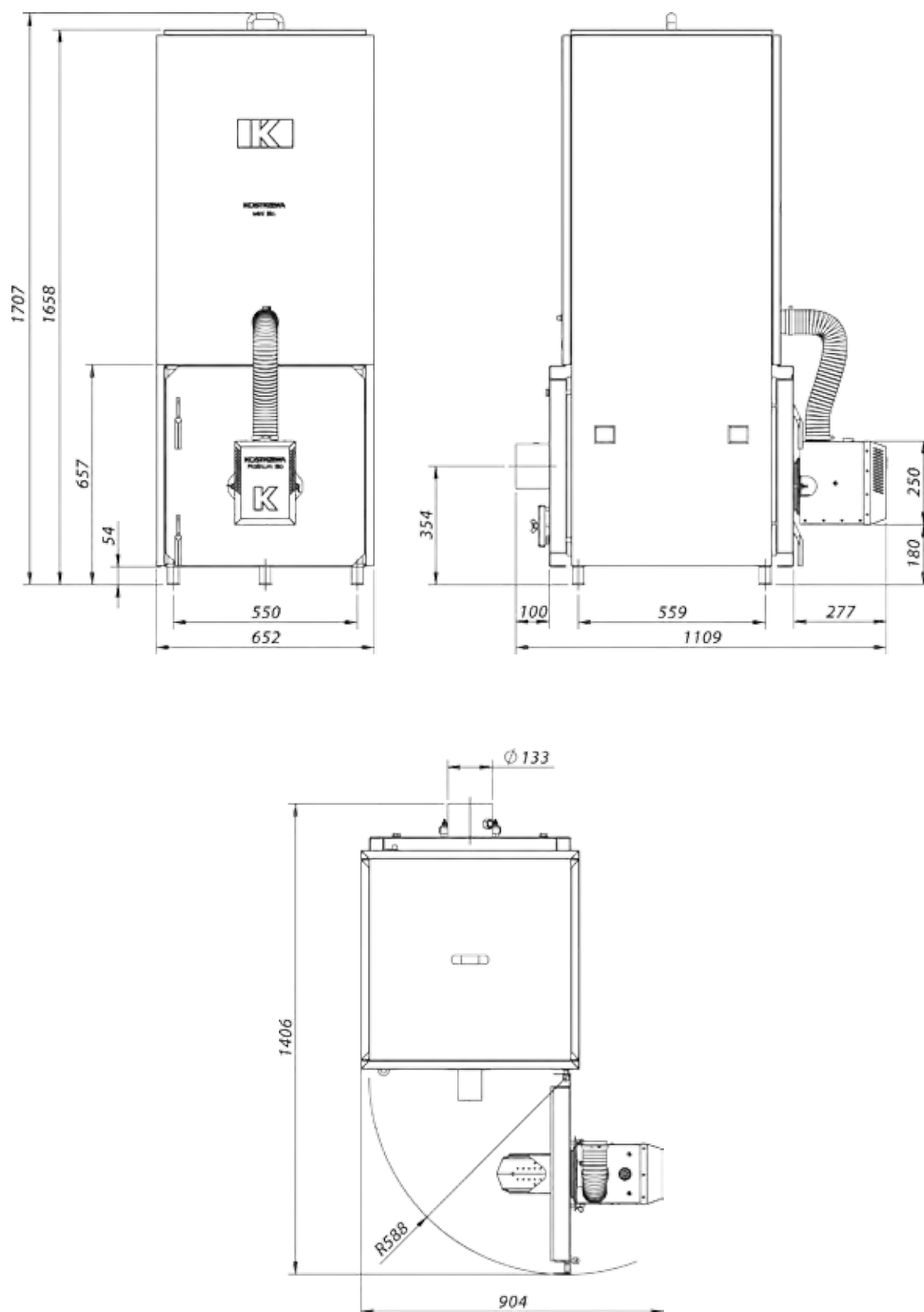
- Statistics preview
 - minimum, maximum and average burner power
 - minimum, maximum and average fuel consumption.
- Temperature parameters are presented as numbers and graphs on a large display along with many other functions - optional
- Boiler operation and comfort may be compared to the oil boiler.

1. with auxiliary module 1-16 heating circuits (heaters or floor heating)

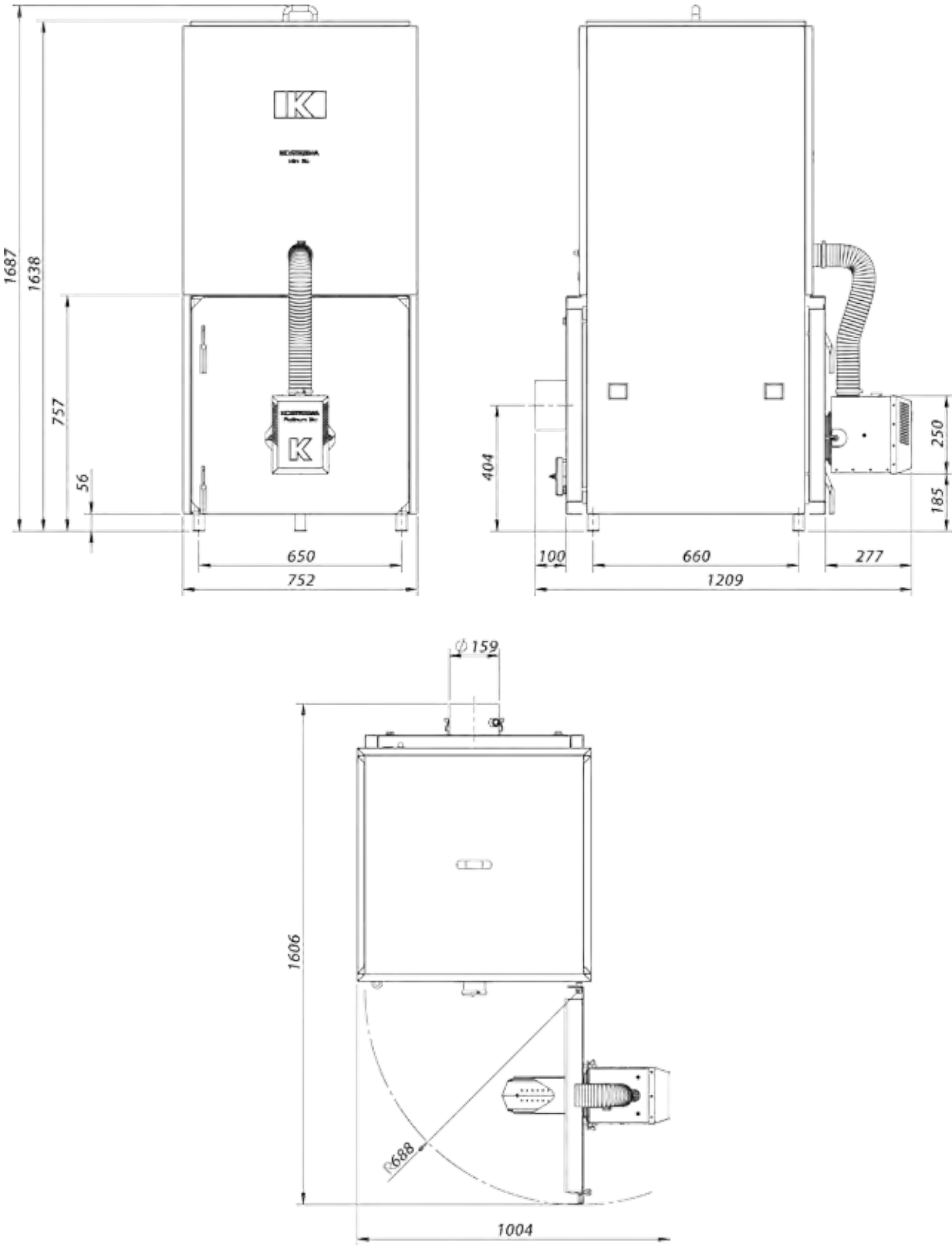
2. recommended pellet/oat ratio - 50/50

Dimensions

Mini Bio 10 kW



Mini Bio 20 kW



Installation diagram

Diagram 1 Caution! Additional modules may be required.

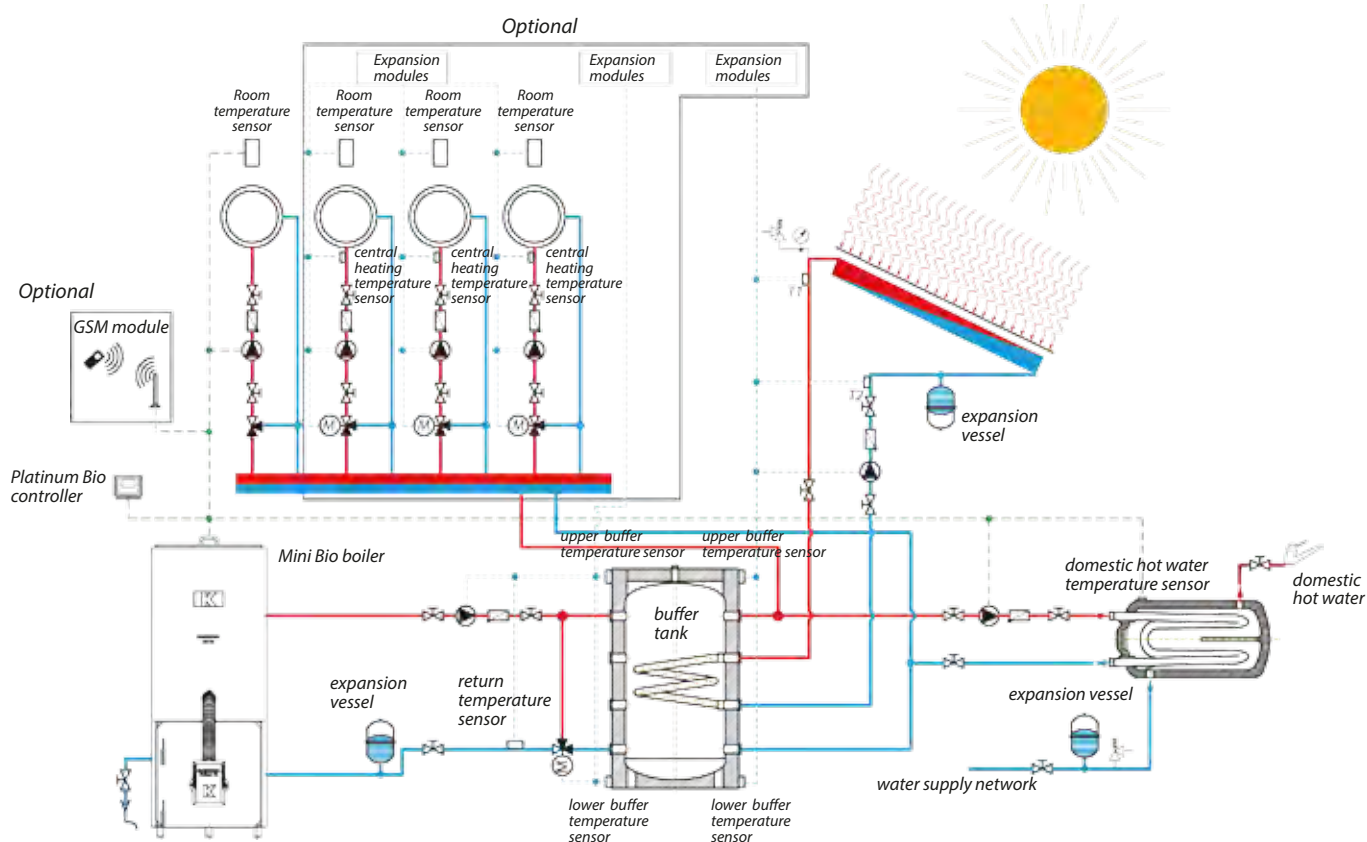


Diagram 2 Caution! Additional modules may be required.

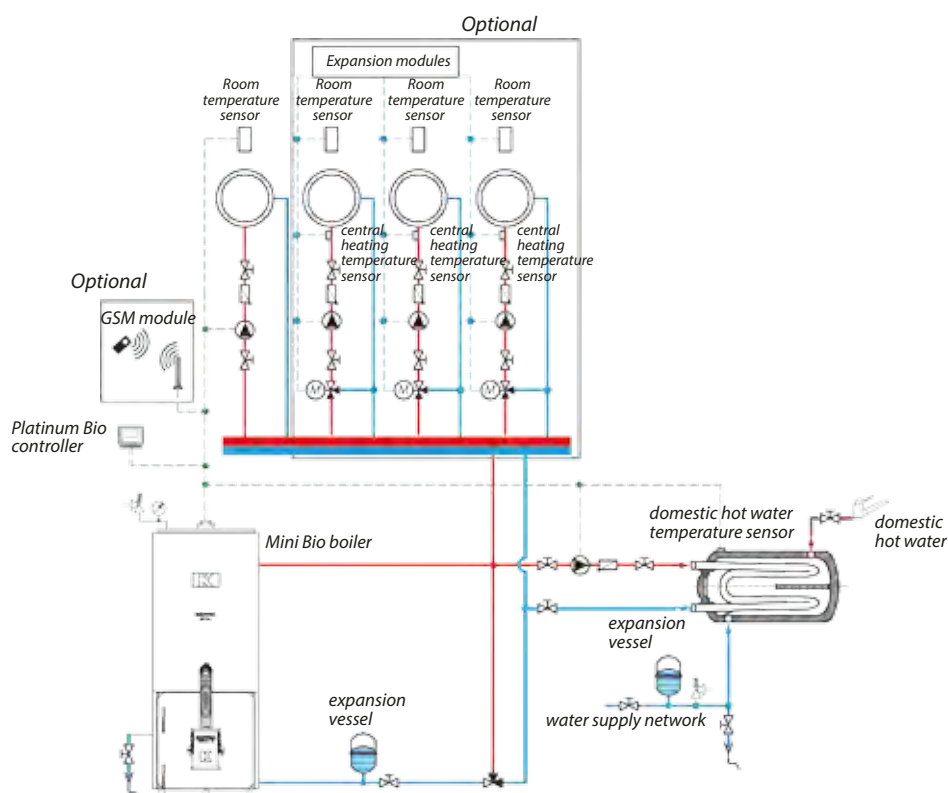
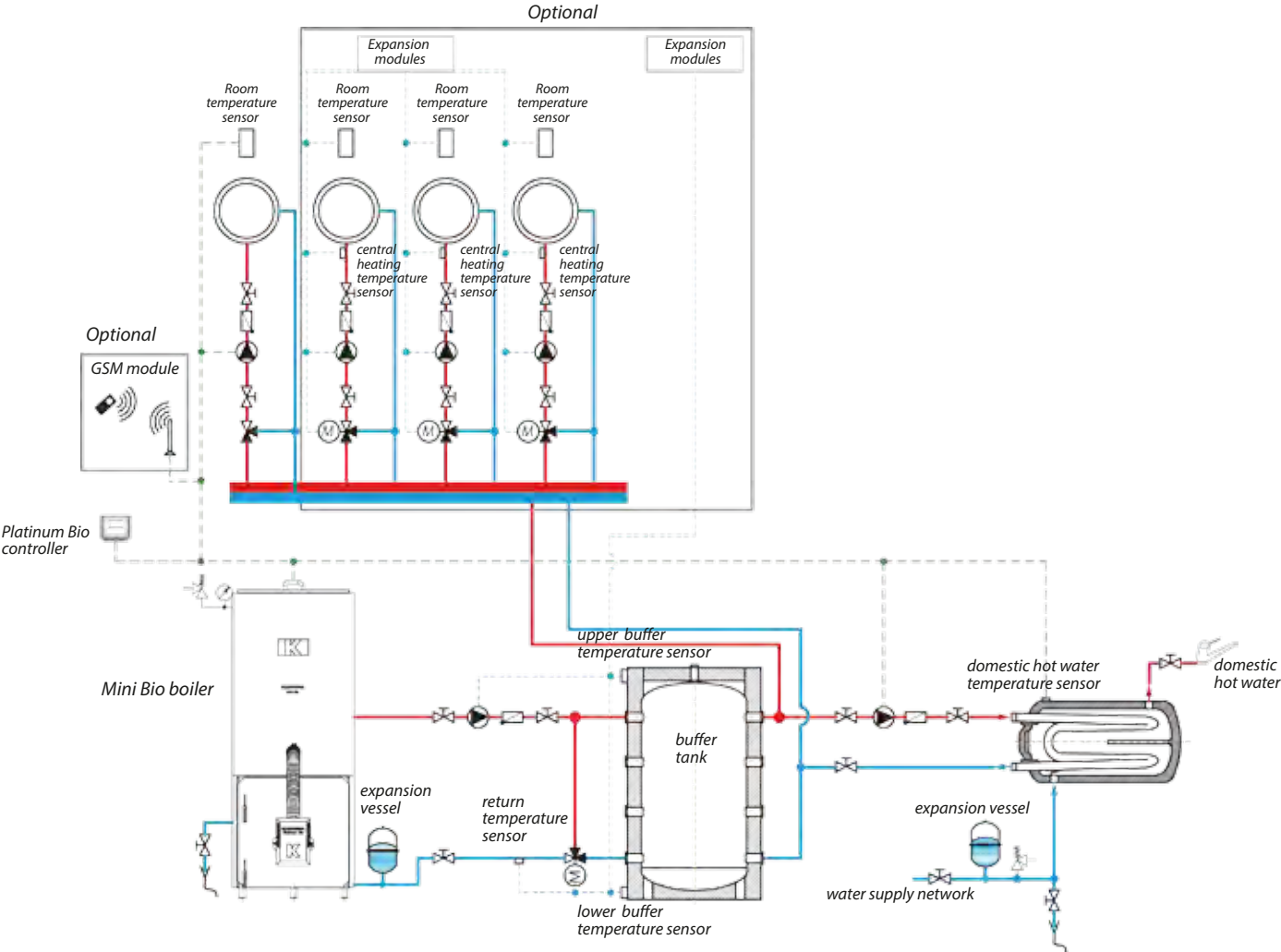


Diagram 3 Caution! Additional modules may be required.



description

technical data

automatics

dimensions

installation

accessories

Specification

Standard and optional accessories

TYPE	MB 10 kW	MB 20 kW
power range on pellet (kW)	3,3–10	6–20
building area (m²)	50–200	100–300
FUEL TYPES		
pellets	s	s
oats/pellets 50/50	s	s
HORIZONTAL HEAT EXCHANGER		
boiler steel P265GH	s	s
no. of exchanger draughts	2	2
flue gas turbulator	o	o
exchanger design*	3t	3t
optional closed system	s	s
left doors	o	o
horizontal cylindrical heat exchanger	s	s
built-in heat exchanger ceramics	o	o
RESERVOIR		
basic (l)	s / 230 l o/177 l	s / 240 l o/177 l
external feeding	o	o
fuel feeding from the reservoir to the burner	s	s
BURNER		
heat resistant steel H25N20S2	s	s
reservoir burner	s	s
automatic ash removal	s	s
ignition and heating element	s	s
pressure blower	s	s
gear motor	s	s
photo cell	s	s
built-in burner ceramics	o	o
pellets burning grate	s	s
oats/pellets burning grate	o	o
AUTOMATICS		
boiler temperature sensor	s	s
burner temperature sensor	s	s
ambient temperature sensor	o	o
domestic hot water sensor	o	o
lambda sensor	o	o
modular design	s	s
GSM module	o	o
AUTOMATICS AND CONTROL FEATURES		
Fuel feeding from reservoir control	s	s
fuel feeding mechanism control	s	s
pressure blower control	s	s
igniter control	s	s
heating pump control	s	s
hot domestic water pump control	s	s
mixing valve control **	o	o
cooperation with GSM module	s	s

TYPE	MB 10 kW	MB 20 kW
AUTOMATIC SYSTEMS		
second generation Fuzzy Logic controller	s	s
domestic hot water priority	s	s
communication	CAN	CAN
fuel selection	s	s
alternative function "boiler operation"	s	s
output testing	s	s
domestic hot water weekly program	s	s
weekly room temperature program	s	s
simple menu	s	s
advanced menu	s	s
outdoor temp.compensation, solar module and accumulation tank control via control menu	s	s
alarm log	s	s
help	s	s
alarm codes	s	s
service mode	s	s
language - multilingual	s	s
AUXILIARY MODULES		
Solar system and buffor control	o	o
system control with 3 additional mixing valve (max. 16)	o	o
DELIVERY		
delivery to the address indicated	s	s
24h delivery	s	s
WARRANTY/Years		
boiler body integrity	5	5
mechanics and automatics	2	2
extended warranty - mechanics and automatics	2	2

The price list for optional accessories is available at the manufacturer.

Key

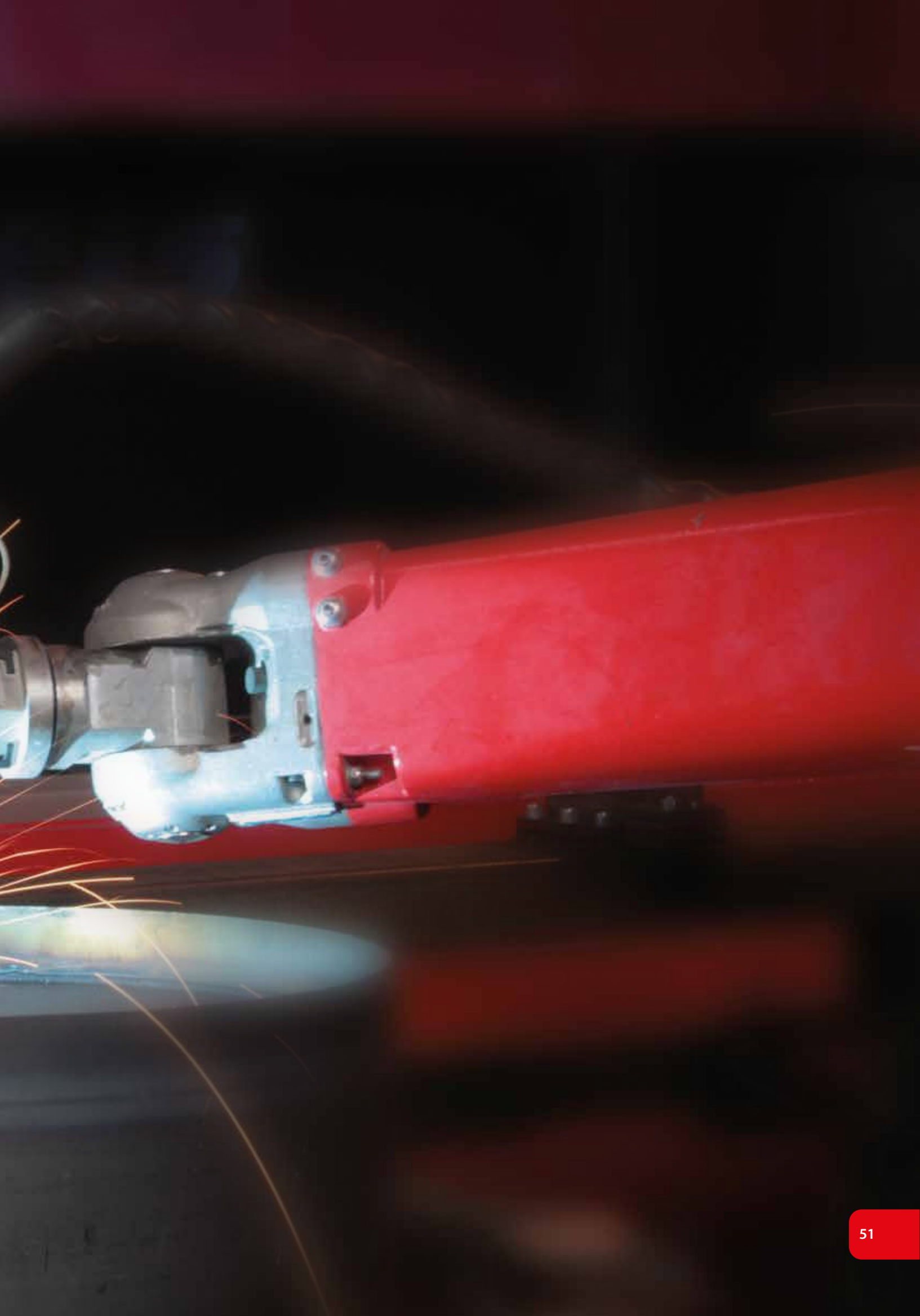
s - standard accessories
o - optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)

Our technologies
are in constant development.

REIS



description

technical data

automatics

dimensions

installation

accessories

Mini Bio Luxury

The ceramics are commonly used.

To reduce the combusted fuel amount, emission and efficiency, we have coated the combustion chamber with the highest class ceramics. The temperature in the combustion chamber is over 1000°C..



ecoCombustion

models [kW]

10 20


broadband 6-wire
lambda sensor


fuels



pellets


pellets / oats
50 / 50

outdoor temp.
compensation

7/24

service

P26S
GH

steel

H25N20S2

heat resistant
steel

GSM
module

5 class

boiler
class

>92.8%

boiler
efficiency

5 years

5 years
warranty +
2 years extended
warranty

Description

Mini Bio Luxury is a version of the smallest boiler Mini Bio with even more accessories.

Sophisticated ease of operation and responsible use of fuels are the requirements coped with by the Kostrzewa engineers to design a state of the art and innovative heating system and Luxury series, with improved efficiency.

It is an optimum device intended for installation in households, with small or without boiler rooms. The area of heated building is 50 to 300 m².

Mini Bio Luxury is fitted with built in ceramic combustion chamber inside of the heat exchanger, which heats up to over 1000°C temperature for extremely efficient biomass combustion. Flue gas turbulators retain all the energy inside the boiler.

Mini Bio Luxury is also fitted with a manifold for connecting other devices in the boiler room - outdoor temperature compensation with 4 heating circuits and broadband second generation lambda sensor¹. All this in standard equipment

¹. lambda sensor saves 20% fuel

- 1 reservoir cover
- 2 fuel reservoir
- 3 flexible fuel feeding tube
- 4 furnace doors
- 5 **Platinum Bio burner**
is practically a maintenance free device, its operation is easy to provide the highest comfort
- 6 round steel heat exchanger
- 7 flue
- 8 heat exchanger cleanout



- 9 flue gas turbulator
- 10 ceramic combustion chamber
- 11 **Platinum Bio Slim controller**
- 12 **broadband lambda sensor**
for automatic and precise air supply, saves up to 20% fuel



Mini Bio Luxury boilers meet PN-EN 303-5:2012 requirements

Features

- **Ecology - Emission CO₂ = 0**
- **Excellent comfort** – entire heating system control. Automatics for controlling most of the boiler room equipment. The combustion process is automatic, the fuel consumption and emission to the atmosphere are significantly reduced. Device parameters are controlled via a simple and clear menu.
- **Economy** – second generation Fuzzy Logic1 controller and broadband lambda sensor save up to 40% fuel.
- The boiler room control system is based on **soft controls**, depending on heat demand of each building floor and domestic hot water demand. The device modulates power. It automatically supplies the air required for proper combustion, saving up to 40% fuel.
- **Innovation** – heat exchanger design following 3T guidelines. Following 3T guidelines (time, turbulator, and temperature) allowed very compact design and high efficiency.
- **Economy** – Platinum Bio burner - energy efficient heart of the system. Advanced component for generating heat energy from pellets. Durable, energy efficient, reliable and silent, made of heat resistant steel and acid resistant steel for continuous and reliable operation.
- **Multifunctional** – control of several heating circuits, solar system and accumulation tank - optional.
- **Safety** – pressure sensor - optional.
- **Convenience** – fully automatic with automatic start and stop.

1. Second generation Fuzzy Logic controller allow fuel consumption reduction by up to 20%



Specification

The design may change due to improvements.

PARAMETER	MBL 10 kW	MBL 20 kW
power range on pellet (kW)	3.3–10	6–20
Control method	Fuzzy Logic 2	Fuzzy Logic 2
Class as per PN-EN 303-5:2012	5	5
Water capacity (l)	48	90
Max. operating pressure (bar)	2	2
Max. operating temperature (°C)	85	85
Test pressure (bar)	4	4
Flue draught (mbar)	0.15–0.25	0.15–0.25
Flue gas temperature at nominal / minimum thermal power (°C)	140/90	160/90
Min. return water temperature (°C)	45	45
Average fuel consumption (pellets) at nominal / minimum thermal power (kg/h)	3/1	6/2
Flue diameter (mm)	135	160
Supply/return connector diameter (in.)	G1"	G1.1/4"
Power supply (V)	230	230
Max. power consumption (ignition) (W)	400	400
Weight (kg)	270	340
Fuel reservoir capacity (l)	230	240
Fuel loading opening dimensions (mm)	555 x 555	655 x 655

Fuel parameters

Sawdust pellets as per EN 14961-2:2011 class A1:

- size 6 +/- 1 mm; 8 +/- 1 mm
- recommended calorific
- value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Oats¹

- moisture content < 12%



1. zalecana mieszanka pelet/owies w proporcjach 50/50

description

technical data

automatics

dimensions

installation

accessories

Platinum Bio Slim

Smooth and intelligent adjustment of fuel and air supply

Compatible with pellets, oats and wood burning boilers.



Control

- fuel conveyor from the reservoir
- burner screw
- pressure blower
- igniter
- central heating pump
- domestic hot water pump
- 4 mixing valves

Functions

- automatic ignition of fuel
- flame recognition with photocell
- low thermal inertia during start and stop

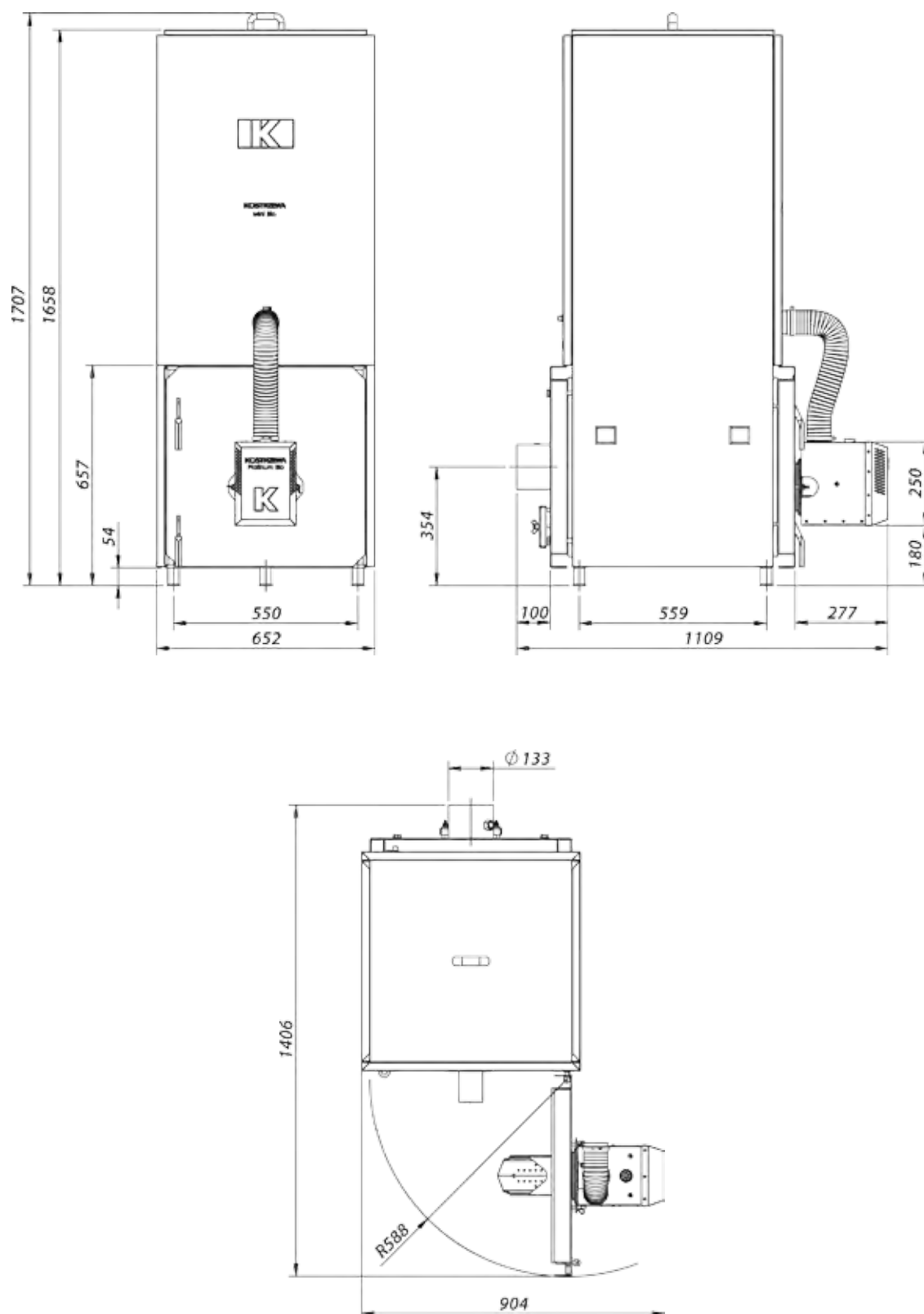
- low electricity consumption
- possibility to control up to 16 heating circles (radiators, floor heating or hot water) - option
- burner temperature control - the highest safety
- three ignition stages eliminate gas explosion during the ignition process
- AUTOSTART at voltage loss - current settings are stored
- primary and secondary air reduces CO₂ emission to the gas and oil burner level
- automatic cleaning function, removes slag from the grate - not available in gravitational burners

- oats - burner design allows grain burning (oats) – optional¹
- Statistics preview - minimum, maximum and average burner power - minimum, maximum and average fuel consumption
- Temp. parameters are presented as numbers and graphs on a large display along with many other functions - optional
- Boiler operation and comfort may be compared to the oil boiler.

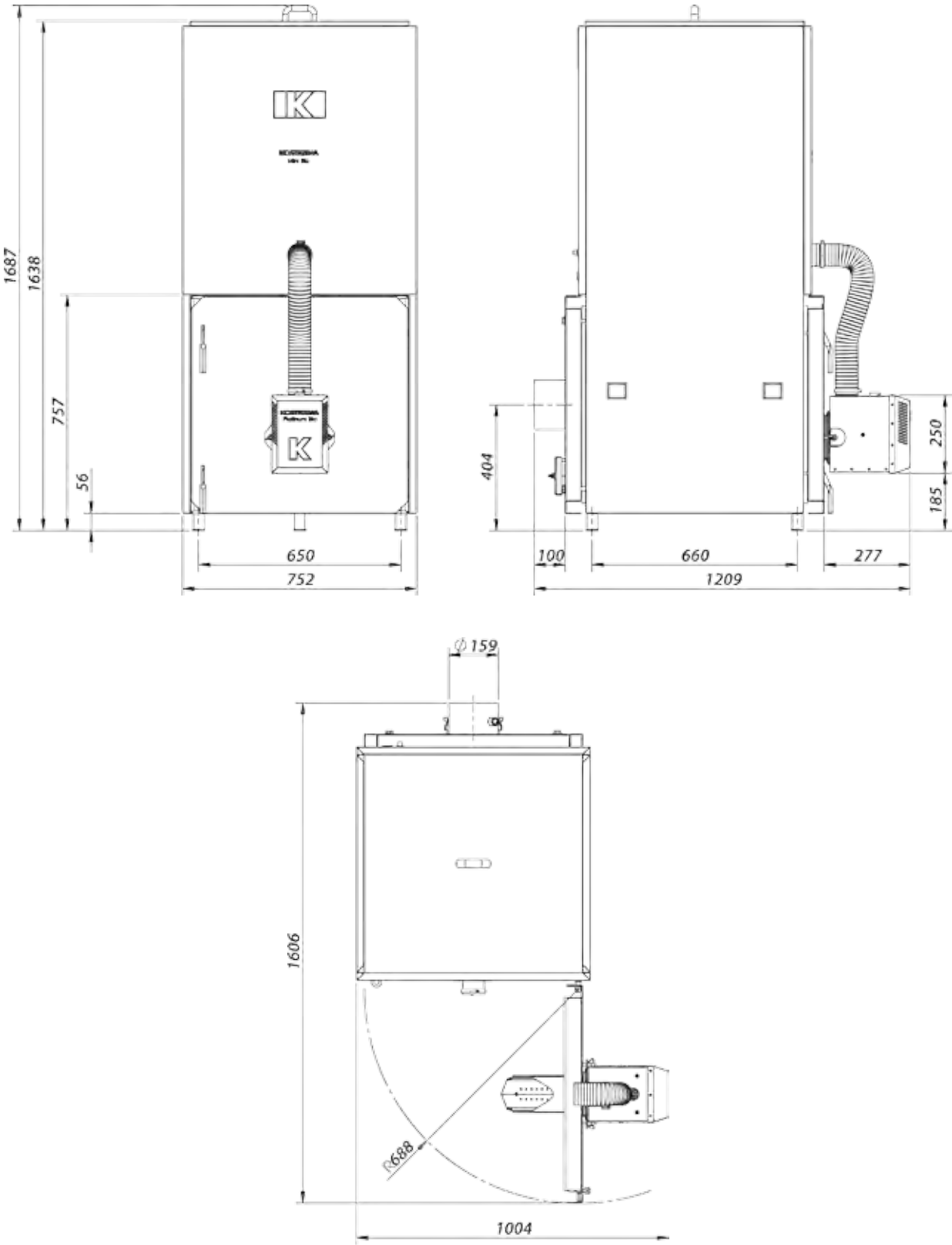
1. Recommended pellets/oats ratio - 50/50

Dimensions

Mini Bio Luxury 10 kW



Mini Bio Luxury 20 kW



Installation diagram

Diagram 1 Caution! Additional modules may be required.

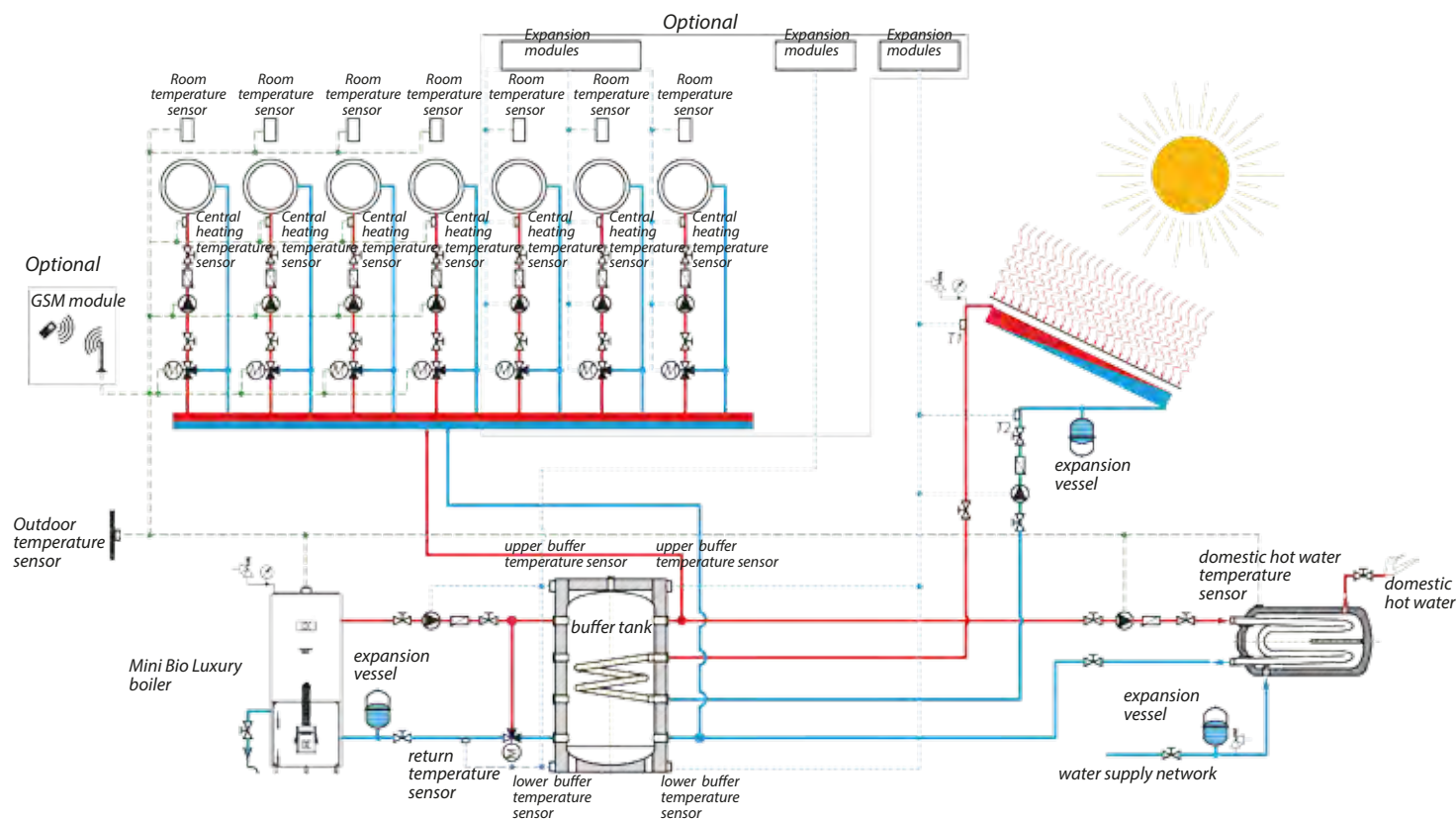


Diagram 2 Caution! Additional modules may be required.

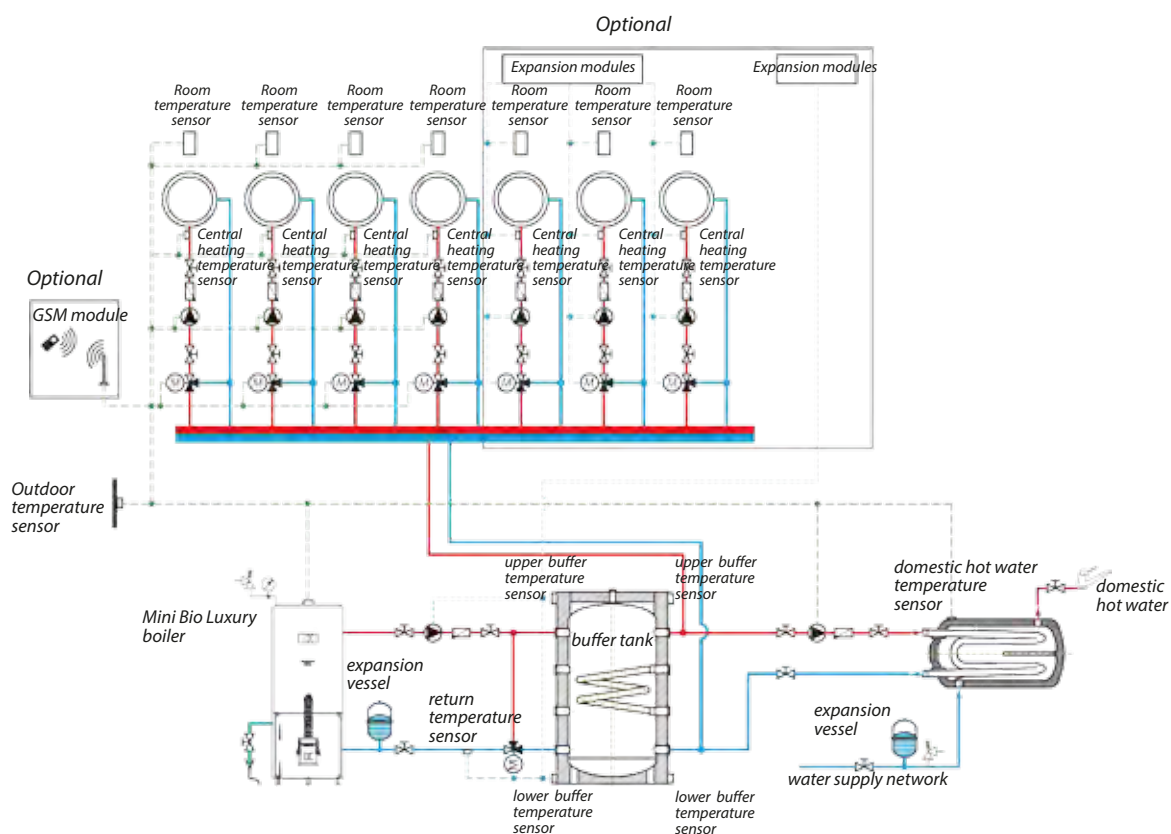
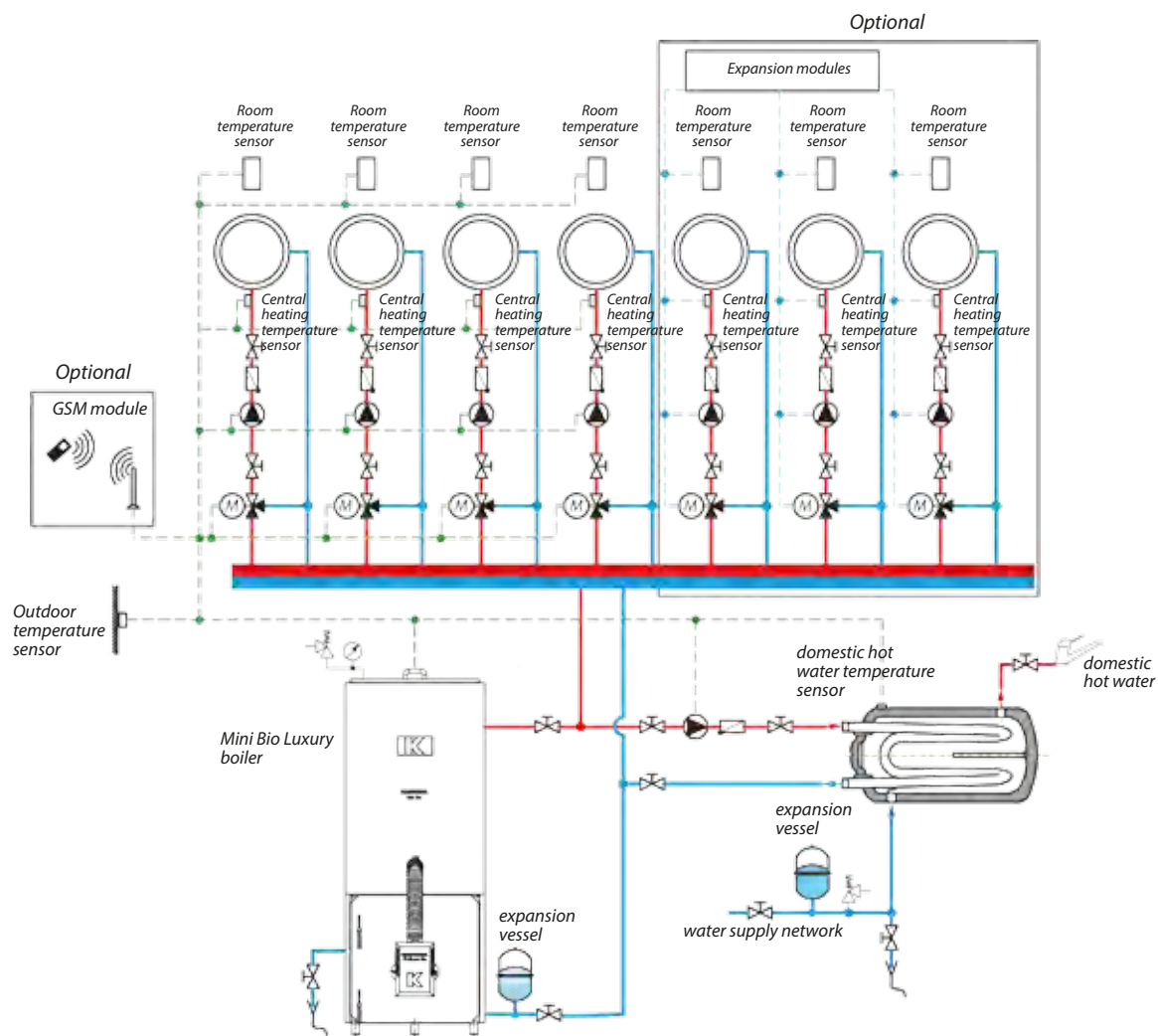


Diagram 3 Caution! Additional modules may be required.



description

technical data

automatics

dimensions

installs

accessories

Specification

Standard and optional accessories

TYPE	MBL 10 kW	MBL 20 kW
power range on pellet (kW)	3,3–10	6–20
building area (m ²)	50–200	100–300
FUEL TYPES		
pellets	s	s
oats/pellets 50/50	s	s
HORIZONTAL HEAT EXCHANGER		
boiler steel P265GH	s	s
no. of exchanger draughts	2	2
flue gas turbulator	s	s
exchanger design*	3t	3t
possibility to connect on closed system	s	s
left doors	o	o
horizontal cylindrical heat exchanger	s	s
built-in heat exchanger ceramics	s	s
RESERVOIR		
basic (l)	s / 230 l o/177 l	s / 240 l o/177 l
external feeding	o	o
fuel feeding from the reservoir to the burner	s	s
BURNER		
heat resistant steel H25N20S2	s	s
reservoir burner	s	s
automatic ash removal	s	s
ignition and heating element	s	s
pressure blower	s	s
gear motor	s	s
photo cell	s	s
built-in burner ceramics	s	s
pellets grate	s	s
oats/pellets grate	o	o
AUTOMATICS		
boiler temperature sensor	s	s
burner temperature sensor	s	s
heated area temperature sensor	o	o
domestic hot water sensor	o	o
lambda sensor	s	s
modular design	s	s
GSM module	o	o
AUTOMATICS AND CONTROL FEATURES		
Fuel feeding from reservoir control	s	s
burner screw control	s	s
pressure blower control	s	s
igniter control	s	s
Heating system pump control	s	s
hot domestic water pump control	s	s
3 mixing valves control**	s	s
cooperation with GSM module	s	s

TYPE	MBL 10 kW	MBL 20 kW
SYSTEMS IN AUTOMATICS		
Lambda sensor	s	s
second generation Fuzzy Logic controller	s	s
domestic hot water priority	s	s
communication	CAN	CAN
fuel selection	s	s
alternative function "boiler operation"	s	s
output testing	s	s
domestic hot water weekly program	s	s
weekly room temperature program	s	s
simple menu	s	s
advanced menu	s	s
outdoor temp. compensation, solar module and accumulation tank control via controller	s	s
alarm log	s	s
help	s	s
alarm codes	s	s
service mode	s	s
language - multilingual	s	s
AUXILIARY MODULES		
Solar system and buffer tank control	o	o
system control with 3 additional mixing valves (max. 16)	s	s
DELIVERY		
delivery to the address indicated	s	s
24h delivery	s	s
WARRANTY/Years		
boiler body integrity	5	5
mechanics and automatics	2	2
extended warranty - mechanics and automatics	2	2

The price list for optional accessories is available at the manufacturer.

Key

s – standard accessories
o – optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)

Our engineers will do everything
to meet your needs





description

technical data

automatics

dimensions

installation

accessories

Maxi Bio

Wins with perfection

Designed for extreme tasks

broadband 6-wire
lambda sensor

ecocombustion

models [kW]

50 75 100 150 200 285

fuels



pellets

outdoor temp.
compensation

7/24

service

P265
GH

boiler steel

H25NC2652

heat resistant
steelGSM
module

5 klasa

boiler
class

>91%

boiler
efficiency

3 years

3 years
warranty

Description

New Maxi Bio line
is a synergy between
ecology and economy.

Manufactured to use
in extreme conditions.

Maxi Bio is a new line of automatic
devices for heating large area buildings
with pellets.

Maxi Bio is a new line of automatic
devices for heating large area buildings
with pellets.

We know the responsibility
of administrators of heated areas,
and the Maxi Bio boiler line is adapted
for operation in most extreme conditions,
irrespective of time and weather.
Kostrzewa designers have put much effort
to create an almost maintenance free
device.

Main design assumptions

- Readily available fuel.
- CO₂ emission = 0.
- Low electric energy consumption.
- High device efficiency – low fuel consumption.
- Easy maintenance - compatible with additional fuel pellet chamber and automatic ash removal.



- 1 round steel heat exchanger
- 2 fuel gas turbulator
- 3 Platinum Bio burner
is practically a maintenance free device, its operation is easy to provide the highest comfort
- 4 Platinum Bio burner control cabinet (industrial use)
- 5 flue
- 6 broadband lambda sensor
for automatic and precise air supply, saves up to 20% fuel
- 7 two heat exchanger cleanouts



Maxi Bio boilers meet PN-EN 303-5:2012 requirements

Features

- heat exchanger design following 3T guidelines (time, turbulator, temp.)
- three draught exchanger –
 - even more improved efficiency
 - even lower emission
 - even lower fuel consumption
- innovative second generation Fuzzy Logic controller¹ –
 - even more precise burner modulation and reduction of fuel and energy consumption
- broadband lambda sensor²
 - precisely supplies air for automatic fuel burning
- self cleaning burner
 - additional screw inside the burner which removes the ashes from burners grates
- pressure sensor - safety first
 - automatically protects the device when there is low or no flue draught
- low energy consumption
- control of all heating system components
- made of high quality steel to provide the highest durability - 5 year warranty with 2 year extended warranty
- ceramic combustion chamber – heats up to white resulting burnout of the unburned fuel and gases parts
- automatic start and stop of the burner
- compatible with an additional large fuel reservoir

Maxi Bio means quality and safety

1. second generation Fuzzy Logic controller allows fuel consumption reduction by up to 20%

2. the lambda sensor saves up to 20% of fuel.

Technical specification

The design may change due to improvements.

PARAMETER	MXB 50 kW	MXB 75 kW	MXB 100 kW	MXB 150 kW	MXB 200 kW	MXB 285 kW
Power range on pellet (kW)	15–50	23–75	30–100	45–150	60–200	86–285
Control method	Fuzzy Logic 2	Fuzzy Logic 2	Fuzzy Logic 2	Fuzzy Logic 2	Fuzzy Logic 2	Fuzzy Logic 2
Class as per PN-EN 303-5:2012	5	5	5	5	5	5
Max. operating pressure [bar]	2	2	2	2	2	2
Max. operating temperature [°C]	80	80	80	80	80	80
Test pressure [bar]	4	4	4	4	4	4
Flue gas temperature at nominal / minimum thermal power [°C]	100–170	100–170	100–170	100–170	100–170	100–170
Min. return water temperature [°C]	45	45	45	45	45	45
Power supply [V]	230	230	230	230	230	230
Max. power consumption (ignition)[W]	~ 380 ÷ 680	~ 380 ÷ 680	~ 460 ÷ 760	~ 460 ÷ 760	~ 600 ÷ 900	~ 600 ÷ 900
Weight (kg)	475	559	677	885	983	1368
Fuel reservoir capacity [L]	295	295	295	295	295	295

Fuel parameters

Sawdust pellets as per EN 14961-2:2011 class A1:

- size 6 +/-1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$



description

technical data

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dimensions

installation

accessories

Heavy duty Platinum Bio control cabinet

with second
generation
Fuzzy Logic control

Large alphanumeric display for easy
communication and operation



Control

- fuel conveyor from the reservoir
- fuel feeding screw inside of burner
- air pressure ventilator
- ignitor central
- central heating pump
- domestic hot water pump
- mixing valve¹

1. with additional module 1-16 heating circuits
(heaters or floor heating)

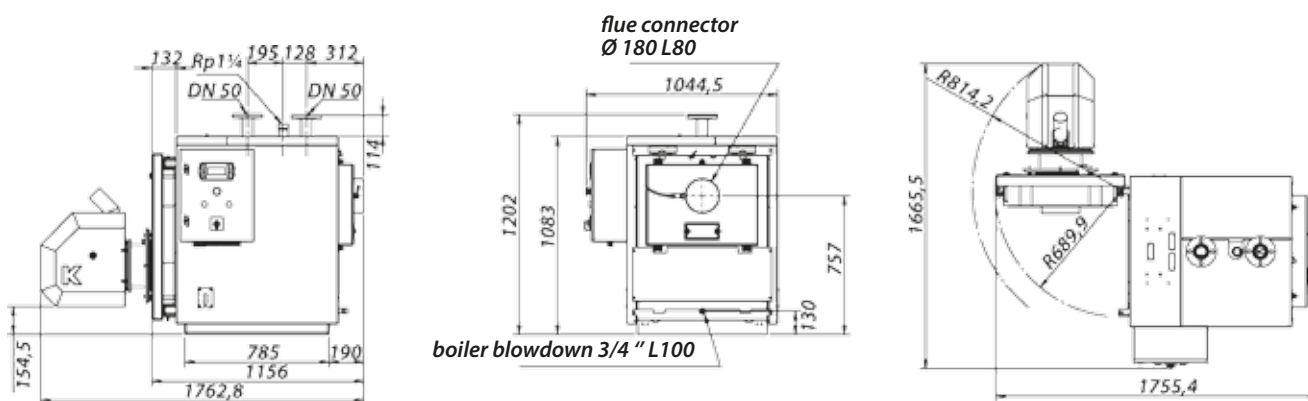
Funkcje

- Statistics preview
 - minimum, maximum and average burner power
 - minimum, maximum and average fuel consumption Temperature
 parameters are presented as numbers and graphs on a large display along with many other functions
- Burner operation and comfort may be compared to the oil burner.
- For production floors and other industrial buildings with non standard requirements - the parameters can be modified in extended service mode.

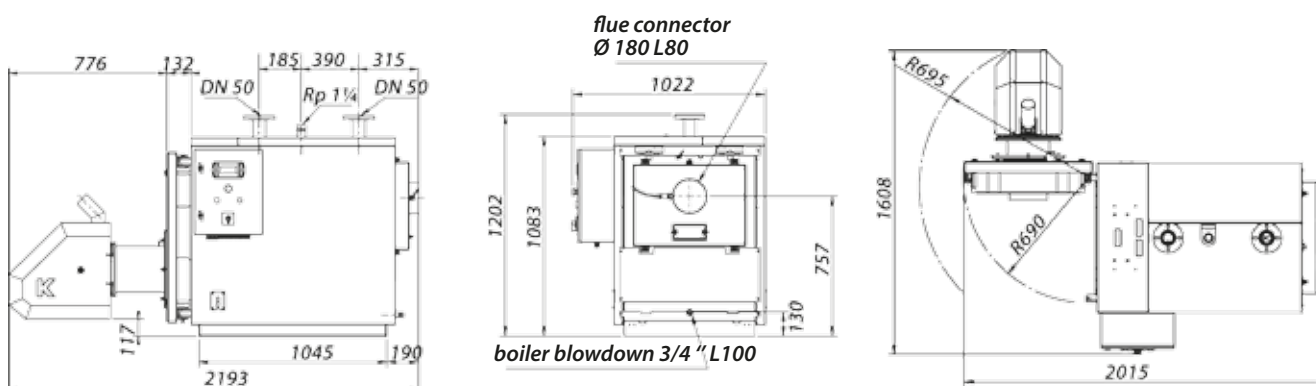
Second generation Fuzzy Logic controller and advanced 2 parts menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignitions significantly reduces the amount of electric energy used).

Dimensions

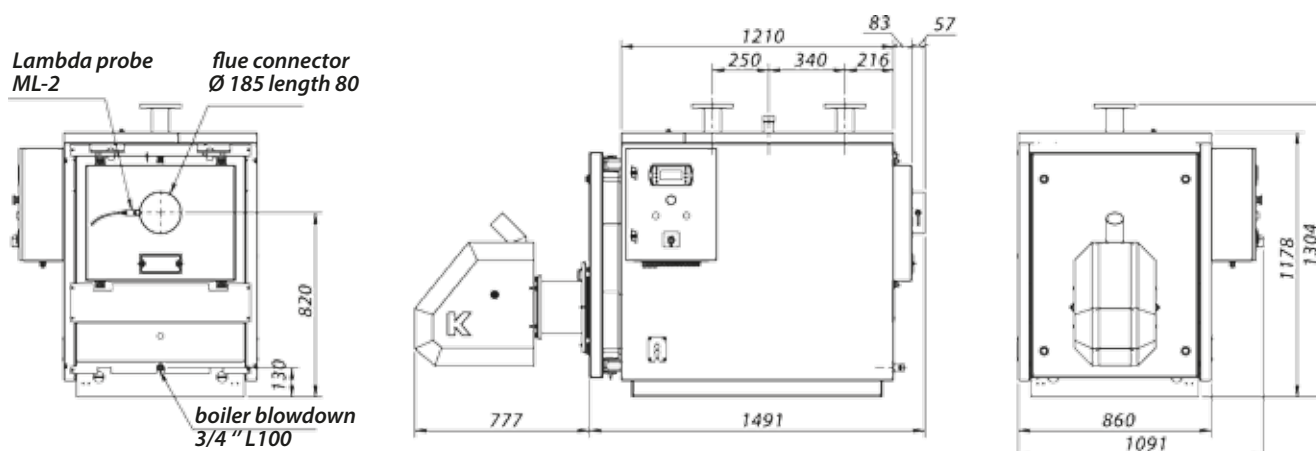
Maxi Bio 50 kW



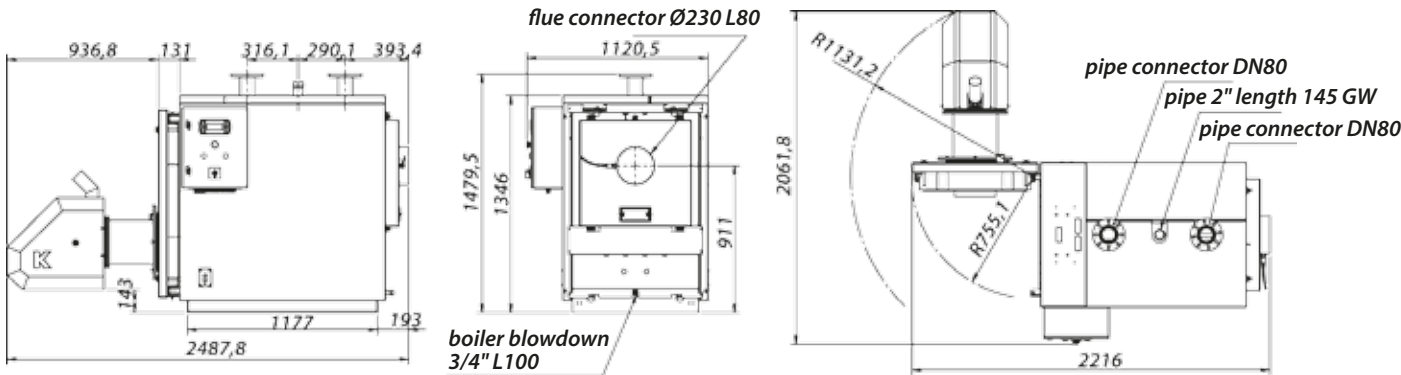
Maxi Bio 75 kW



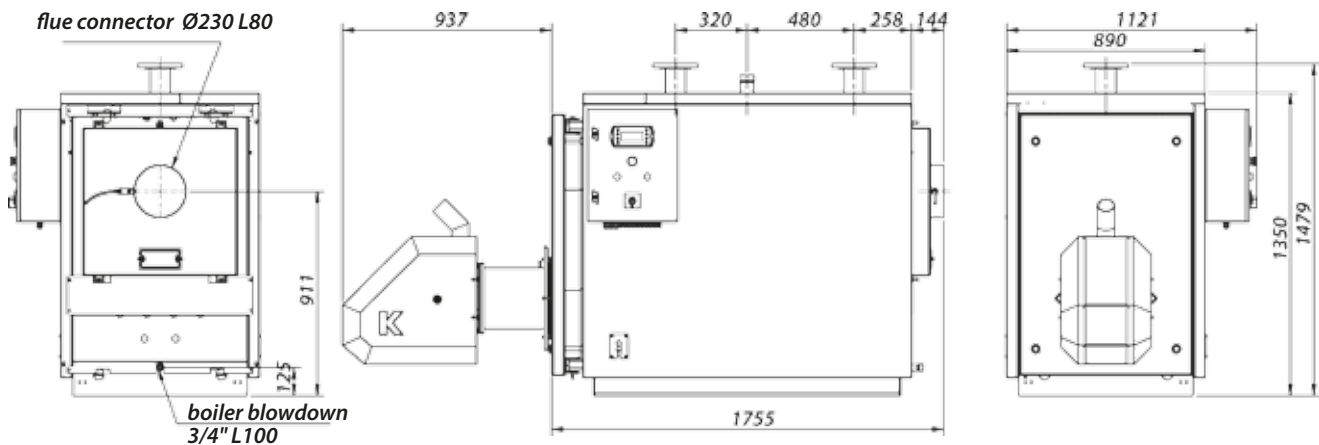
Maxi Bio 100 kW



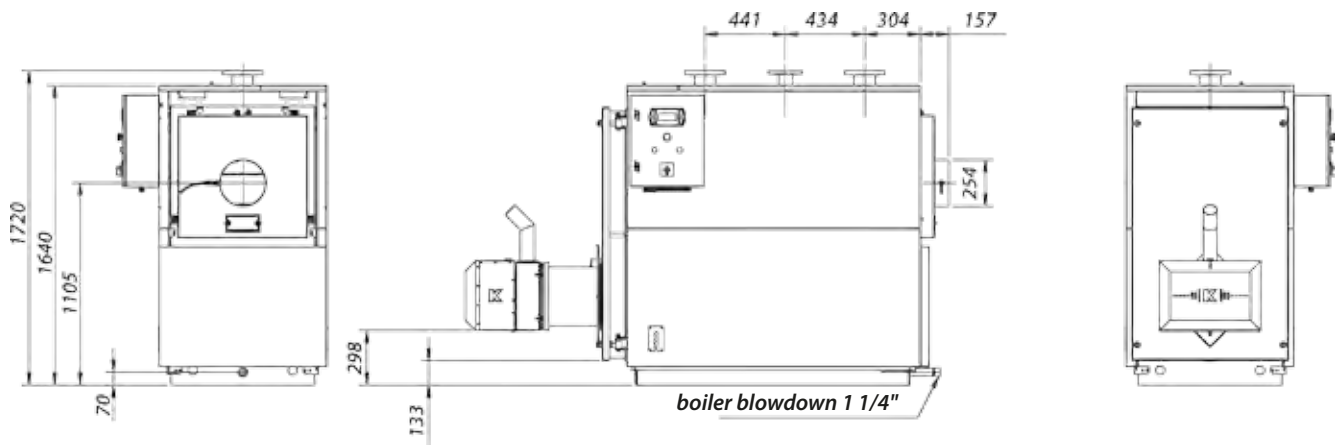
Maxi Bio 150 kW



Maxi Bio 200 kW



Maxi Bio 285 kW



Installation diagram

Diagram 1 Caution! Additional modules may be required.

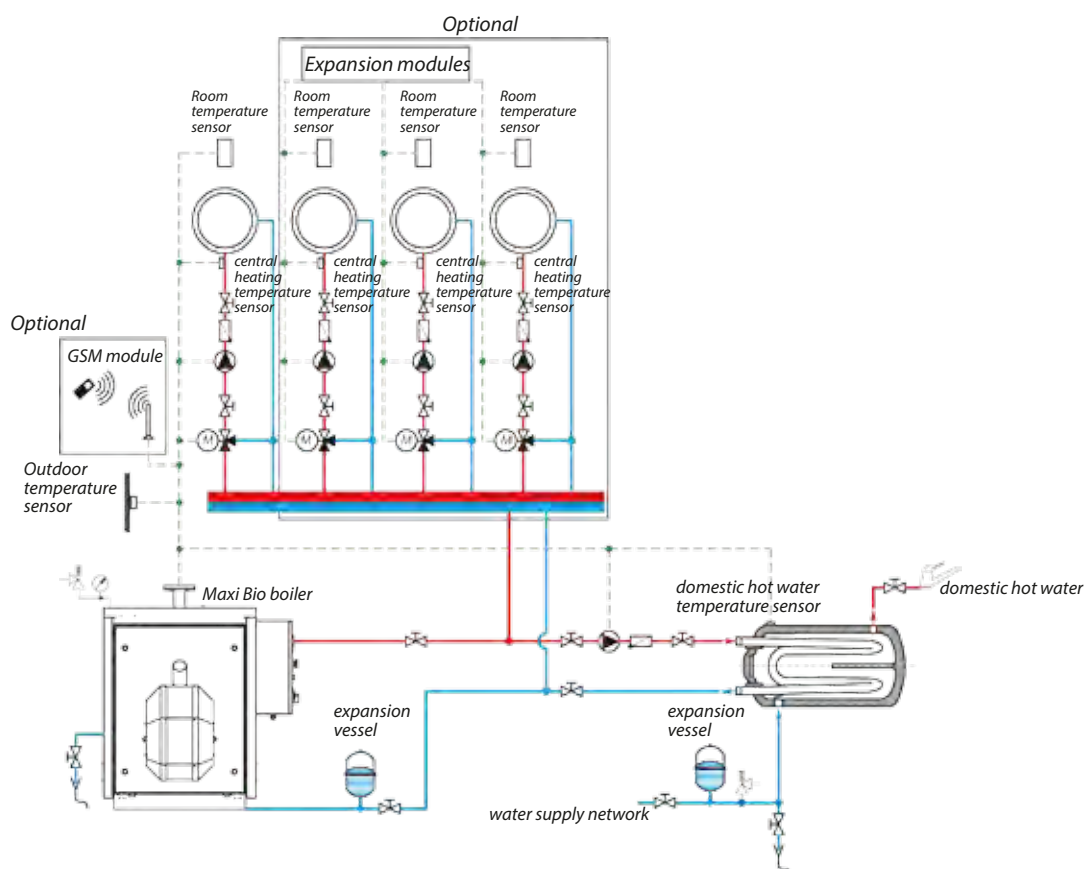


Diagram 2 Caution! Additional modules may be required.

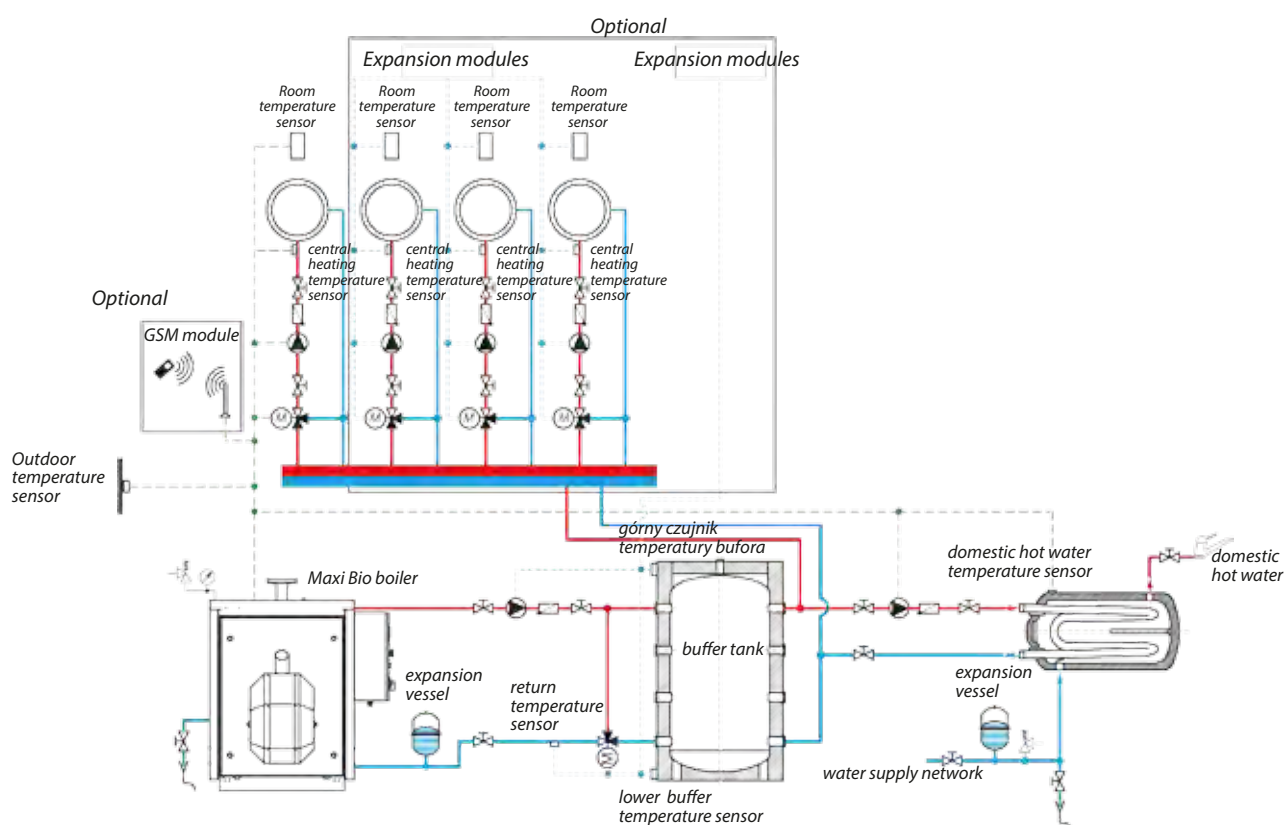
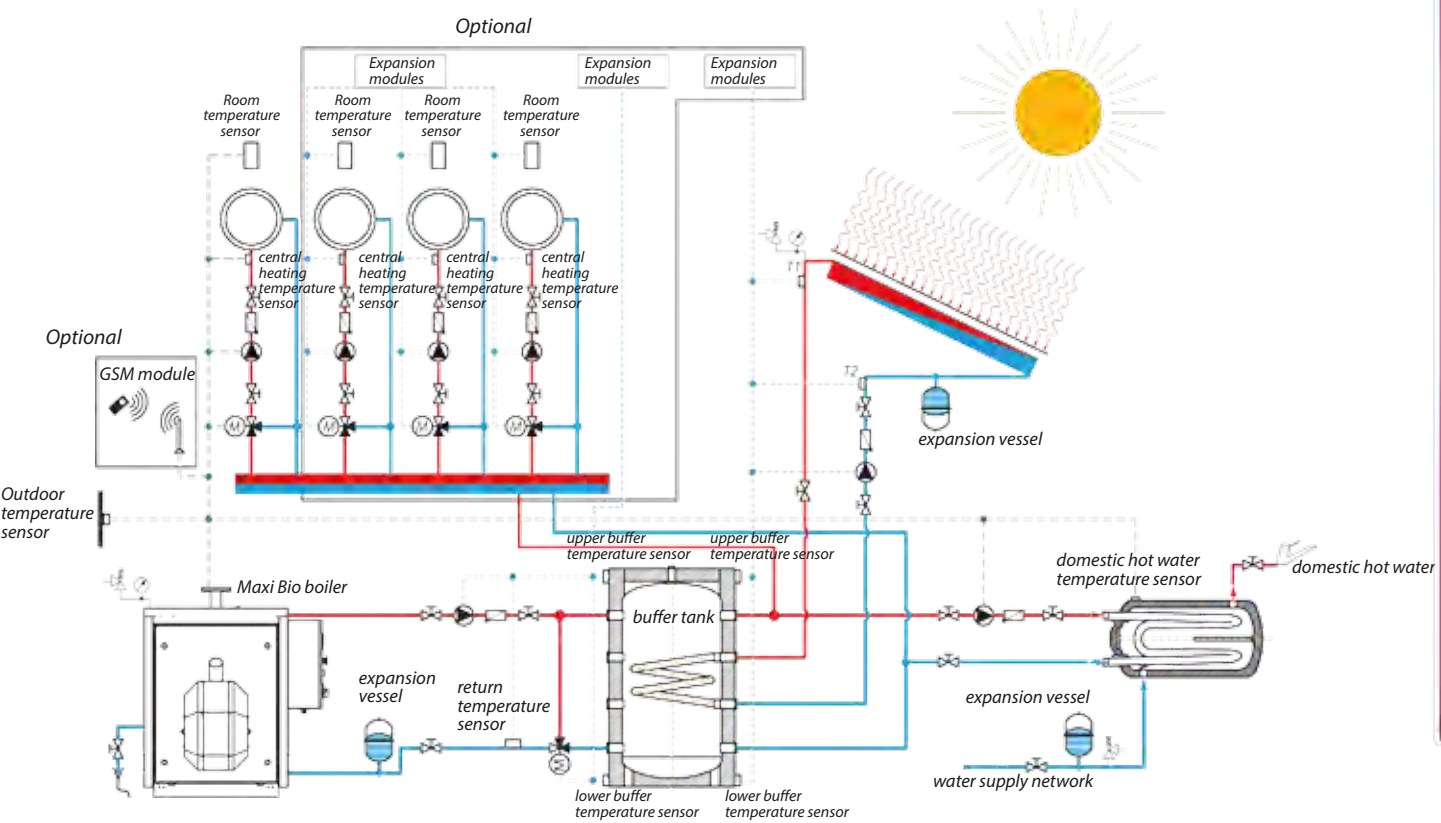


Diagram 3 Caution! Additional modules may be required.



Specification

Standard and optional accessories

TYPE	MXB 50 kW	MXB 75 kW	MXB 100 kW	MXB 150 kW	MXB 200 kW	MXB 285 kW
power range on pellet (kW)	15–50	23–75	30–100	45–150	60–200	86–285
FUEL TYPES						
pellets	s	s	s	s	s	s
HORIZONTAL HEAT EXCHANGER						
boiler steel P265GH	s	s	s	s	s	s
no. of exchanger draughts	3	3	3	3	3	3
flue gas turbulator	s	s	s	s	s	s
exchanger design*	3t	3t	3t	3t	3t	3t
possibility of connection to closed system	s	s	s	s	s	s
left/right doors	s	s	s	s	s	s
horizontal cylindrical heat exchanger	s	s	s	s	s	s
counterflow heat exchanger	s	s	s	s	s	s
RESERVOIR						
standard: 295 [L]	s	s	s	s	s	s
alternative: 203; 286; 470; 770; 1386 [L]	o	o	o	o	o	o
external feeding	o	o	o	o	o	o
fuel feeding from the reservoir to the burner	s	s	s	s	s	s
BURNER						
heat resistant steel H25N20S2	s	s	s	s	s	s
cylindrical burner design	s	s	s	s	s	s
gravitational burner	s	s	s	s	s	s
ignition and heating element	s	s	s	s	s	s
pressure blower	s	s	s	s	s	s
gear motor	s	s	s	s	s	s
photo cell	s	s	s	s	s	s
pellets grate	s	s	s	s	s	s
air diffuser	s	s	s	s	s	s
AUTOMATICS						
boiler temperature sensor	s	s	s	s	s	s
burner temperature sensor	s	s	s	s	s	s
pressure sensor	o	o	o	o	o	o
IP66 metal cabinet	s	s	s	s	s	s
main switch	s	s	s	s	s	s
safety switch	s	s	s	s	s	s
status lamps	s	s	s	s	s	s
heated area temperature sensor	o	o	o	o	o	o
domestic hot water sensor	o	o	o	o	o	o
lambda sensor	s	s	s	s	s	s
modular design	s	s	s	s	s	s
GSM module	o	o	o	o	o	o

TYPE	MXB 50 kW	MXB 75 kW	MXB 100 kW	MXB 150 kW	MXB 200 kW	MXB 285 kW
AUTOMATICS FEATURES – CONTROL						
Fuel screw from reservoir control	s	s	s	s	s	s
burner screw control	s	s	s	s	s	s
pressure blower control	s	s	s	s	s	s
igniter control	s	s	s	s	s	s
heating system circulation pump control	s	s	s	s	s	s
hot domestic water circulation pump control	s	s	s	s	s	s
mixing valve control	s	s	s	s	s	s
cooperation with GSM module	s	s	s	s	s	s
AUTOMATIC SYSTEMS						
second generation Fuzzy Logic controller	s	s	s	s	s	s
domestic hot water priority	s	s	s	s	s	s
communication	CAN	CAN	CAN	CAN	CAN	CAN
alternative function “boiler operation”	s	s	s	s	s	s
output testing	s	s	s	s	s	s
domestic hot water weekly program	s	s	s	s	s	s
weekly room						
temperature program	s	s	s	s	s	s
simple menu	s	s	s	s	s	s
advanced menu	s	s	s	s	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s	s	s	s	s
alarm log	s	s	s	s	s	s
help	s	s	s	s	s	s
alarm codes	s	s	s	s	s	s
service mode	s	s	s	s	s	s
language - multilingual	s	s	s	s	s	s
AUXILIARY MODULES						
Solar system and buffer control	o	o	o	o	o	o
system control with 3 additional mixing valves (max. 16)	o	o	o	o	o	o
DELIVERY						
delivery to the address indicated	s	s	s	s	s	s
24h delivery	s	s	s	s	s	s
WARRANTY/Years						
boiler body integrity	3	3	3	3	3	3
mechanics and automatics	2	2	2	2	2	2

The price list for optional accessories is available at the manufacturer.

Key

s – standard accessories
o – optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)



A woman wearing a blue jacket, white helmet, and sunglasses is seated in a helicopter. She is looking out over a vast, snowy mountain landscape under a clear blue sky. The helicopter's rotor blades are visible in the foreground.

Return
to a warm
house.

description

technical data

automatics

dimensions

installation

accessories

Compact Bio

Unique look,
always an
inspiration



ecoCombustion

models [kW]

10

16

24



5 years

5 years warranty
+ 2 years
extended warranty

fuels



pellets

pellets / oats
50 / 50

wood

outdoor temp.
compensation

service

boiler
steelheat resistant
steelGSM
moduleboiler
classboiler
efficiency

Description

Compact Bio unique look will always be an inspiration. It is a compact device with smooth lines and structural light green powder coating. Silver galvanized components, i.e. pellet chamber provide lightness and character.

Kostrzewa design team have created a device for wood logs and pellets.

The aim was a low price, easy maintenance, low fuel consumption and compact design for small boiler rooms.

The device has four components:

1. Boiler body design following 3T guidelines (time, turbulator, temperature)
2. Reliable solution - Platinum Bio burner with automatic pellets and oats burning.
3. Platinum Bio Slim automatics for outdoor temperature compensation of a single heating circuit and domestic hot water. Innovative flame and temperature adjustment with second generation Fuzzy Logic controller¹.
4. Large fuel reservoir made of galvanized steel sheet for additional corrosion protection under heavy duty conditions.

Features

1. **Ecology - Emission** CO₂ = 0
2. **Multi-fuel** – automatic fuel supply for pellets and oats – manual feeding of wood and woodchips

1. Second generation Fuzzy Logic controller allow fuel consumption reduction by up to 20%

1 Platinum Bio burner controller

modern microprocessoric module, allowing to control boiler, central heating system and domestic hot water temperatures. Ventilator power is smoothly adjustable with second generation Fuzzy Logic controller.

2 Combustion chamber

large combustion chamber for longer combustion time of solid fuel upon a single fuel loading.

3 ceramic chamber

increases the temperature in the burnout process to over 900°C and burns incompletely burned gases with secondary air for improved efficiency.



4 Platinum Bio burner

self cleaning innovative and first burner with second generation Fuzzy Logic made in Poland.²

5 pellet reservoir

6 excellent boiler's heat insulation



front



rear

Compact Bio boilers meet the norm PN-EN 303 -5:2012 requirements.

3. Excellent comfort – entire heating system control. Automatics for controlling most of the boiler room equipment. The combustion process is fully automatic, and the fuel consumption and emission to the atmosphere are significantly reduced. Device parameters are controlled via a simple and clear menu.

4. Economy – second generation Fuzzy Logic automatic flame modulation saves up to 20% fuel.

The boiler room control system is based on soft controls of the temperatures, depending on each building floor heat demand and domestic hot water demand.

The device modulates the power automatically. It automatically supplies required air amount, thus saving up to 40% fuel.

5. Innovation - heat exchanger design following 3T guidelines. Following 3T guidelines (time, turbulator, and temperature) allowed very compact heat-exchanger design and high efficiency.

6. Versatility – exchanger's construction allows mounting of burner, tank and all doors on the left or right side of the device (16kW, 24kW)

6. Economy - Platinum Bio burner - energy efficient heart of the system. Mechanically and technically advanced component for generating heat energy from pellets. Durable, energy efficient, reliable and silent, made of heat resistant and acid resistant steel for continuous and reliable operation for years.

7. Multifunctional - control of several heating circuits, solar system and accumulation tank - optional.

8. Safety - two conveyor fuel feeding system prevents flashback

9. Convenience - fully automatic with automatic start and stop.

10. Durability - 5 year warranty

Technical specification

The design may change due to improvements.

PARAMETER	CB 10 kW	CB 16 kW	CB 24 kW
power range on pellet (kW)	3,3–10	5–16	7–24
Control method	Fuzzy Logic 2	Fuzzy Logic 2	Fuzzy Logic 2
Class as per PN-EN 303-5	5	5	5
Water capacity (l)	55	58	66
Max. operating pressure (bar)	2	2	2
Max. operating temperature (°C)	85	85	85
Test pressure (bar)	4	4	4
Chimney draught (mbar)	0.15–0.25	0.15–0.25	0.15–0.25
Exhaust gas temperature at nominal / minimum thermal power (°C)	140 / 90	140 / 90	140 / 90
Min. return water temperature (°C)	45	45	45
Average fuel consumption (pellets) at nominal / minimum thermal power (kg/h)	1.9 / 0,6	3 / 0,9	4,5 / 1,8
Flue diameter (mm)	135	160	160
Supply/return connector diameter (in.)	G1"	G1 1/2"	G1 1/2"
Power supply (V)	230	230	230
Max. power consumption (during ignition process) (W)	400	400	400
Weight (kg)	280	330	400
Fuel reservoir capacity (l)	208	208	208
Fuel loading doors dimensions (mm)	857 x 475	857 x 475	857 x 475

Fuel parameters

Sawdust pellets as per

EN 14961-2:2011 class A1:

- size 6 +/-1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Oats¹

- moisture content < 12%

1. recommended pellet/oat ratio - 50/50

Wood

For nominal boiler power use dry wood with 20% maximum moisture content (around 18 months period of drying woodlogs under cover). Use of larger logs increases burning time upon a single charge up to 8 hours.



description

technical data

automatics

dimensions

installation

accessories

Platinum Bio Slim

Smooth and intelligent
adjustment of fuel
and air supply

Compatible with pellets, oats
and wood burning boilers.

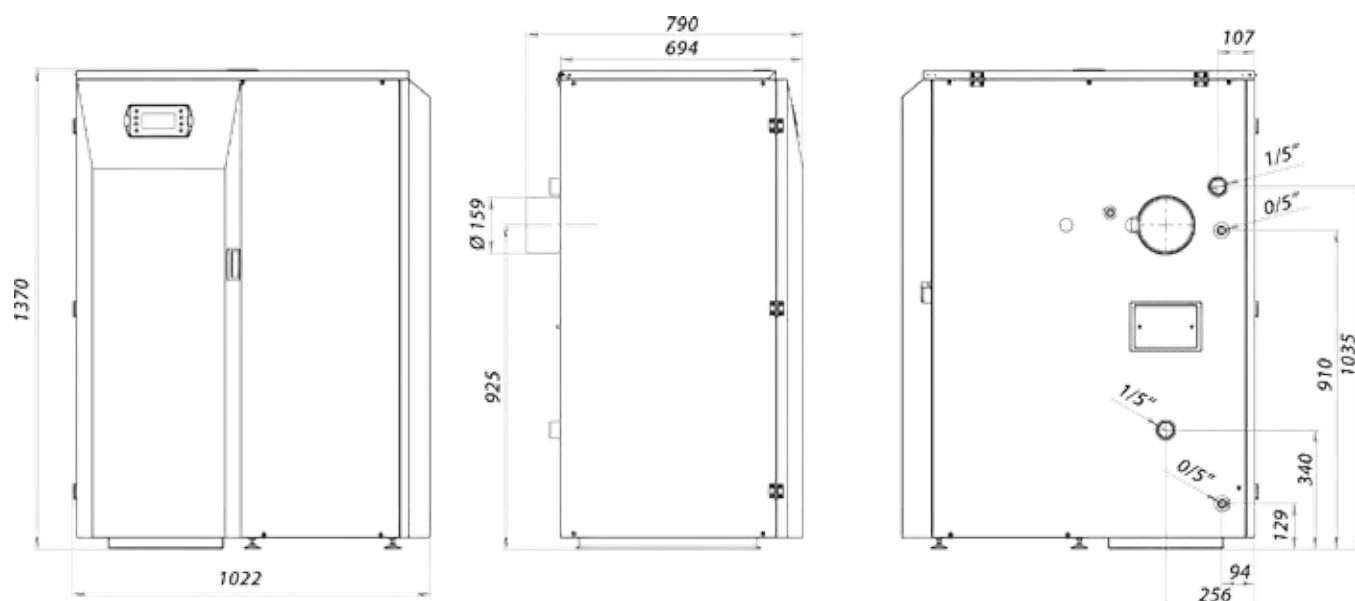


Control

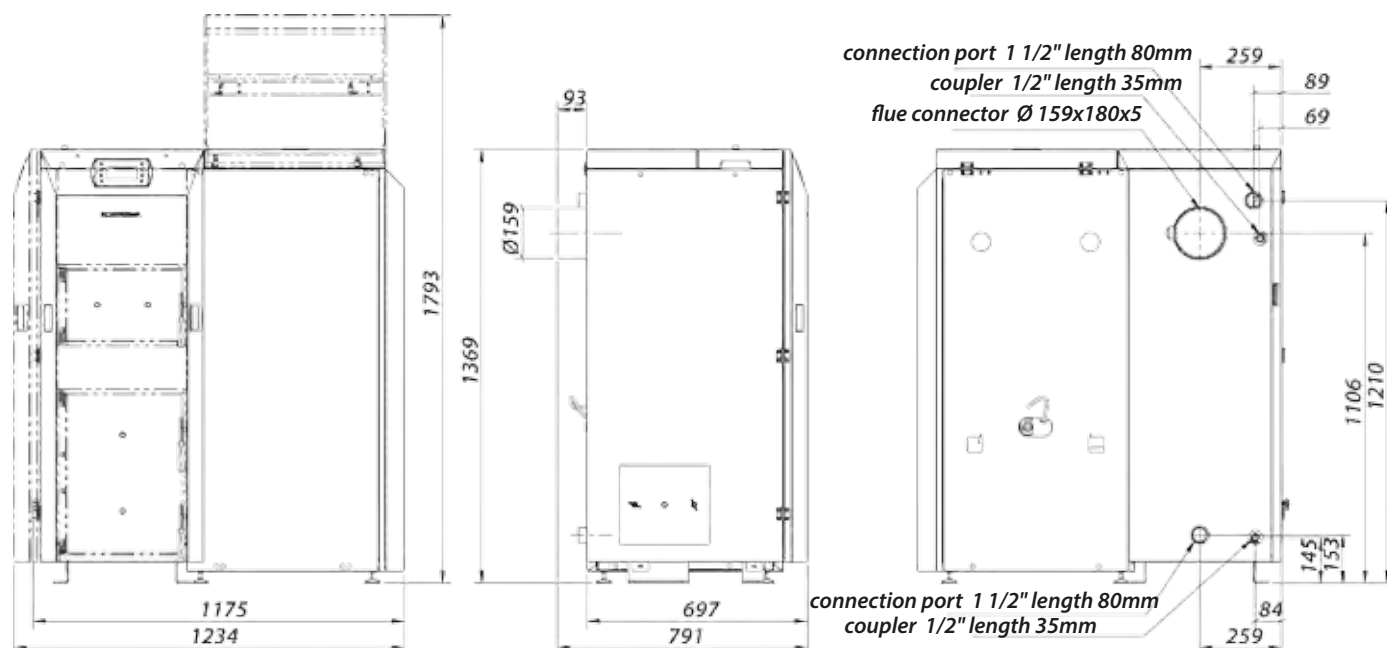
- fuel conveyor from the reservoir
- air supply ventilator
- fuel ignition mechanism
- central heating pump
- domestic hot water pump
- mixing valve (1 pc)

Dimensions

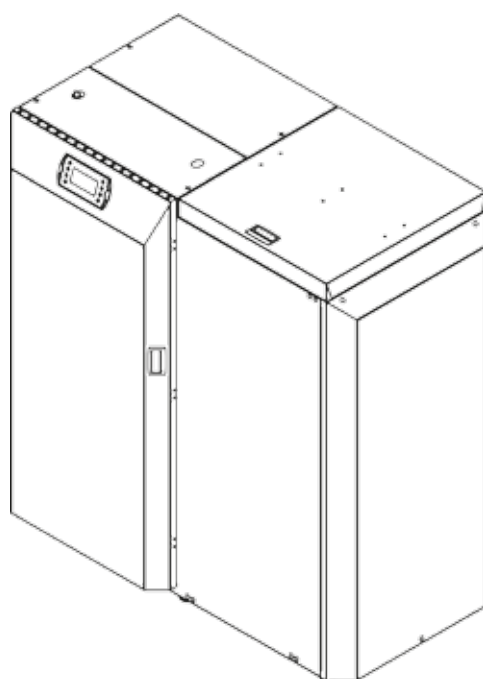
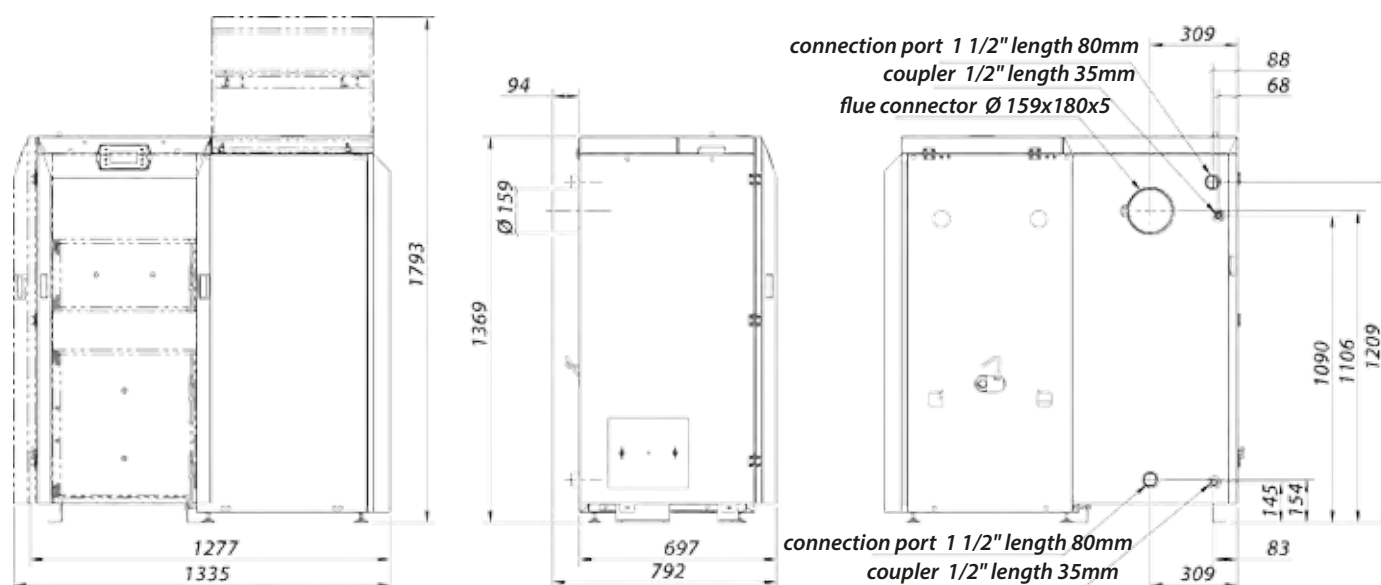
Compact Bio 10 kW



Compact Bio 16 kW



Compact Bio 24 kW



Installation diagram

Diagram 1 Caution! Additional modules may be required.

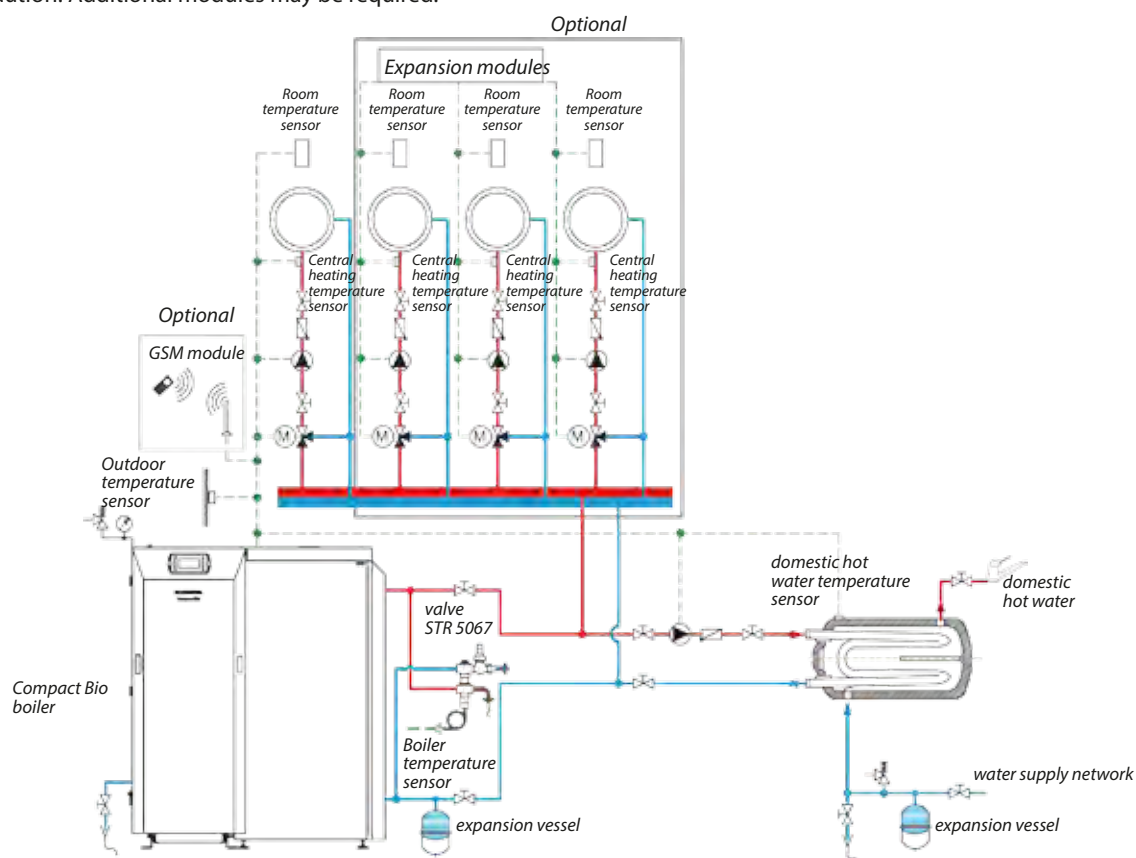


Diagram 2 Caution! Additional modules may be required.

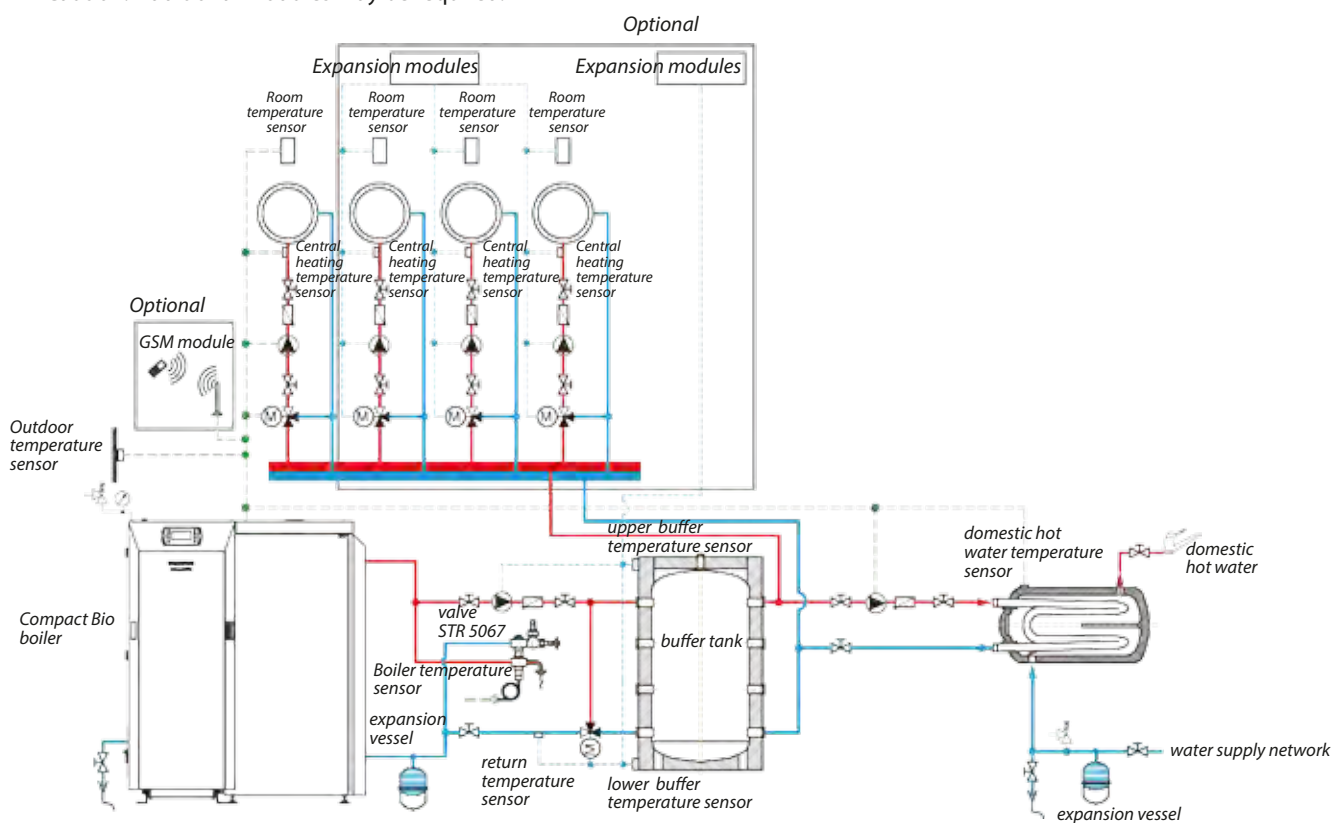
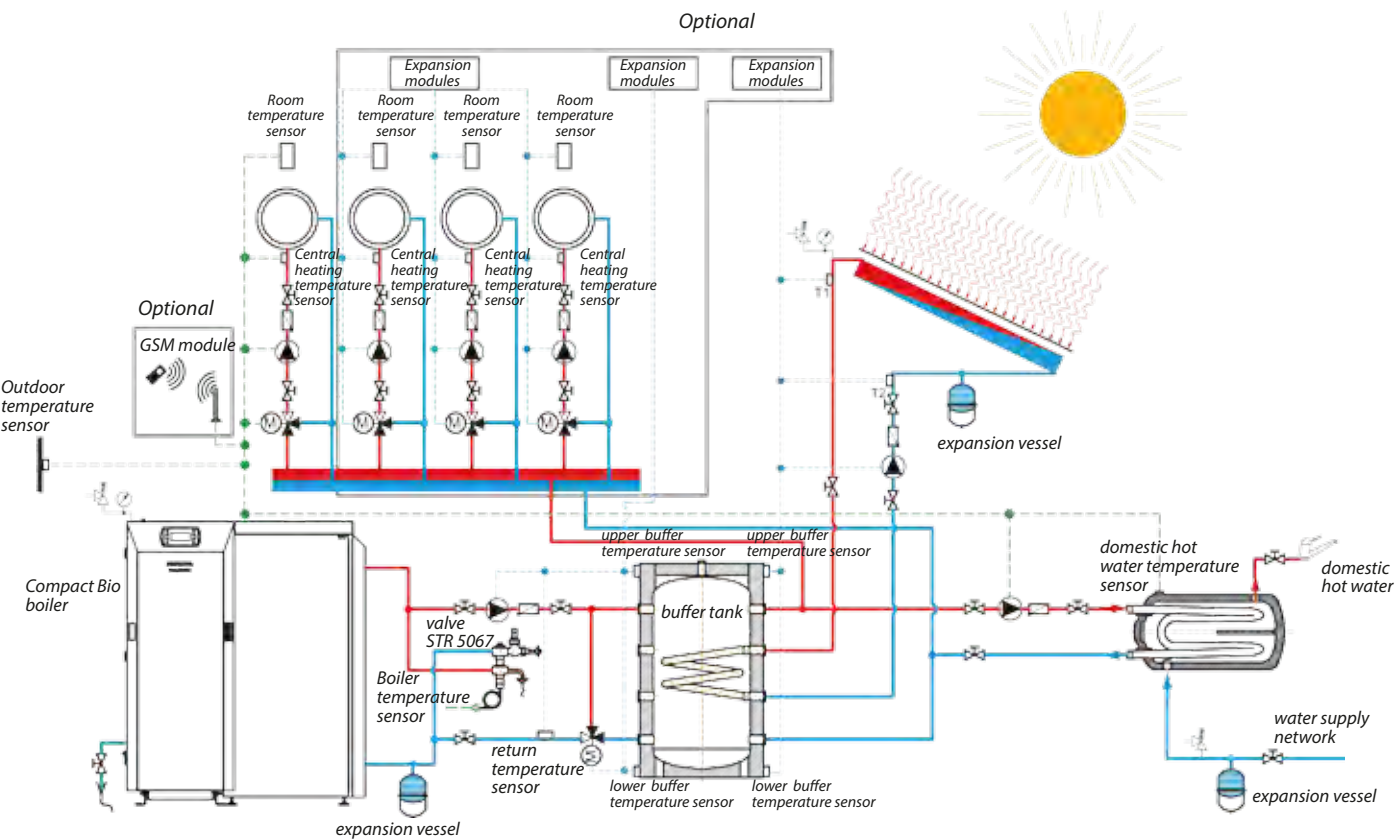


Diagram 3 Caution! Additional modules may be required.



Specification

Standard and optional boiler accessories

TYPE	CB 10 kW	CB 16 kW	CB 24 kW
power range on pellet (kW)	3–10	5–16	7–24
building area (m ²)	50–200	85–250	100–300
FUEL TYPES			
pellets	S	S	S
oats/pellets 50/50	S	S	S
MANUALLY FEEDED FUEL TYPES			
wood	S	S	S
VERTICAL HEAT EXCHANGER			
boiler steel P265GH	S	S	S
no. of heat-exchanger draughts	3	3	3
Heat-exchanger design 3t*	S	S	S
possibility of connection to closed system	S	S	S
left doors	O	S	S
built-in heat exchanger ceramics	-	O	O
RESERVOIR			
left/right	-	S	S
basic 210 (l)	S	S	S
external feeding	O	O	O
fuel feeding from the reservoir to the burner	S	S	S
BURNER			
heat resistant steel H25N20S2	S	S	S
gravitational burner	S	S	S
automatic ash removal	S	S	S
Fuel ignition element	S	S	S
air supply ventilator	S	S	S
gear motor	S	S	S
photo cell	S	S	S
built-in burner ceramics	O	O	O
Grates for burning pellets	S	S	S
Grates for burning oats/pellets	O	O	O
AUTOMATICS			
boiler temperature sensor	S	S	S
burner temperature sensor	S	S	S
room temperature sensor	O	O	O
domestic hot water sensor	O	O	O
lambda sensor	O	O	O
possibility to connect additional modules	S	S	S
GSM module	O	O	O
AUTOMATICS AND CONTROL FEATURES			
Fuel feeding mechanism from the reservoir control	S	S	S
Fuel feeding mechanism inside burner control	S	S	S
Air pressure ventilator control	S	S	S
igniter control	S	S	S
Heating system pump control	S	S	S
hot domestic water pump control	S	S	S
Electric mixing valve gear (1 pc) control	S	S	S
cooperation with GSM module	S	S	S

TYPE	CB 10 kW	CB 16 kW	CB 24 kW
AUTOMATIC SYSTEMS			
second generation Fuzzy Logic burner modulation	s	s	s
hwp - domestic hot water priority	s	s	s
communication	CAN	CAN	CAN
fuel selection	s	s	s
alternative "boiler operation" function	s	s	s
outputs testing	s	s	s
domestic hot water weekly program	s	s	s
weekly room temperature program	s	s	s
simple menu	s	s	s
advanced menu	s	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s	s
Alarms history	s	s	s
Help system	s	s	s
alarm codes	s	s	s
service mode	s	s	s
language - multilingual	s	s	s
ADDITIONAL MODULES			
Solar system and buffer control	o	o	o
3 additional mixing valves control (up to max. 16 pcs.)	o	o	o
DELIVERY			
delivery to the address indicated	s	s	s
24h delivery	s	s	s
WARRANTY/Years			
boiler body integrity	5	5	5
mechanics and automatics	2	2	2
warranty period extension	2	2	2

The price list for optional accessories is available at the manufacturer.

Key

s – standard accessories
o – optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)

Follow your dream, and we will
take care of the comfortable
temperature.





description

technical data

automatics

dimensions

installation

accessories

Compact Bio Luxury

This look will never lose its appeal.

Demonstration of power and independence



ecoCombustion

models [kW]

10 16 24

broadband 6-wire lambda sensor



5 years

5 years warranty + 2 years extended warranty

fuels



pellets



pellets / oats 50 / 50



wood



outdoor temp. compensation



service



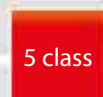
boiler steel



heat resistant steel



GSM module



boiler class



boiler efficiency

Description

The look of a Compact Bio Luxury will never lose its appeal and will always be an inspiration.

It is a compact device with smooth lines manufactured of steel sheets painted with structural powder coating.

Galvanized components, i.e. pellet chamber provide lightness and character.

Kostrzewa design team have created a device for wood and pellets.

The aim was excellent functionality, easy maintenance, low fuel consumption and compact design for small boiler rooms.

The device consists of four components:

1. Boiler body, designed following 3T guidelines (time, turbulator, temperature)
2. Reliable solution - Platinum Bio burner automatically combusting pellets and oats.
3. Platinum Bio Slim automatics with second generation broadband lambda sensor², possibility to control 4 heating circuits with mixing valves and domestic hot water system.

Innovative flame and temperature adjustment with second generation Fuzzy Logic 2 controller³.

4. Large fuel reservoir made of galvanized steel sheet for additional corrosion protection under heavy duty conditions.

Features

1. **Ecology - Emission** CO₂ = 0
2. **Multi-fuel** – automatic fuel supply for pellets and oats – manual feeding of wood and woodchips

1. recommended pellet/oat ratio - 50/50
2. the lambda sensor saves up to 20% of fuel.
3. second generation Fuzzy Logic control method allows to reduce fuel consumption by up to 20%



1 Platinum Bio burner controller
modern microprocessoric module, allowing to control boiler, central heating system and domestic hot water temperatures. Ventilator power is smoothly adjustable with second generation Fuzzy Logic controller.

2 Combustion chamber
large combustion chamber for longer combustion time of solid fuel upon a single fuel loading.

3 ceramic chamber
increases the temperature in the burnout process to over 900°C and burns incompletely burned gases with secondary air for improved efficiency (16kW, 24kW).



4 Platinum Bio burner
self cleaning innovative and first burner with second generation Fuzzy Logic made in Poland.²

5 pellet reservoir

6 excellent boiler's heat insulation

7 broadband lambda sensor



front



rear

Compact Bio Luxury boilers meet the norm PN-EN 303 -5 :2012 requirements.

3. Excellent comfort – entire heating system control. Automatics for controlling most of the boiler room equipment. The combustion process is fully automatic, and the fuel consumption and emission to the atmosphere are significantly reduced. Device parameters are controlled via a simple and clear menu.

4. Economy – second generation Fuzzy Logic automatic flame modulation saves up to 20% fuel. The boiler room control system is based on soft controls of the temperatures, depending on each building floor heat demand and domestic hot water demand. The device modulates the power automatically.

It automatically supplies required air amount, thus saving up to 40% fuel.

5. Innovation - heat exchanger design following 3T guidelines. Following 3T guidelines (time, turbulator, and temperature) allowed very compact heat-exchanger design and high efficiency.

6. Versatility – exchanger's construction allows mounting of burner, tank and all doors on the left or right side of the device (16kW, 24kW)

6. Economy - Platinum Bio burner - energy efficient heart of the system. Mechanically and technically advanced component for generating heat energy from pellets. Durable, energy efficient, reliable and silent, made of heat resistant and acid resistant steel for continuous and reliable operation for years.

7. Multifunctional - control of several heating circuits, solar system and accumulation tank - optional.

8. Safety - two conveyor fuel feeding system prevents flashback

9. Convenience - fully automatic with automatic start and stop.

10. Durability - 5 year warranty

Technical specification

The design may change due to improvements.

PARAMETER	CBL 10 kW	CBL 16 kW	CBL 24 kW
power range on pellet (kW)	3,3–10	5–16	7–24
Control method	Fuzzy Logic 2	Fuzzy Logic 2	Fuzzy Logic 2
Class as per PN-EN 303-5:2012	5	5	5
Water capacity (l)	55	58	66
Max. operating pressure (bar)	2	2	2
Max. operating temperature (°C)	85	85	85
Test pressure (bar)	4	4	4
Chimney draught (mbar)	0.15–0.25	0.15–0.25	0.15–0.25
Exhaust gas temperature at nominal / minimum thermal power (°C)	140 / 90	140 / 90	140 / 90
Min. return water temperature (°C)	45	45	45
Average fuel consumption (pellets) at nominal / minimum thermal power (kg/h)	1,9 / 0,6	3 / 0,9	4,5 / 0,8
Flue diameter (mm)	135	160	160
Supply/return connector diameter (in.)	G1"	G1 1/2"	G1 1/2"
Power supply (V)	230	230	230
Max. power consumption (during ignition process) (W)	400	400	400
Weight (kg)	280	330	400
Fuel reservoir capacity (l)	208	208	208
Fuel loading doors dimensions (mm)	857 x 475	857 x 475	857 x 475

Fuel parameters

Sawdust pellets as per EN 14961-2:2011 class A1:

- size 6 +/- 1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Oats¹

- moisture content < 12%

1. recommended pellet/oat ratio - 50/50

Wood

For nominal boiler power use dry wood with 20% maximum moisture content (around 18 months period of drying woodlogs under cover). Use of larger logs increases burning time upon a single charge up to 8 hours.



description

technical data

automatics

dimensions

installation

accessories

Platinum Bio Slim

Smooth
and intelligent
adjustment of fuel
and air supply

Compatible with pellets, oaks
and wood burning boilers.



Control

- fuel conveyor from the reservoir
- air supply ventilator
- fuel ignition mechanism
- central heating pump
- 4 pcs. central heating pumps
- domestic hot water pump
- 4 mixing valves

description

technical data

automatics

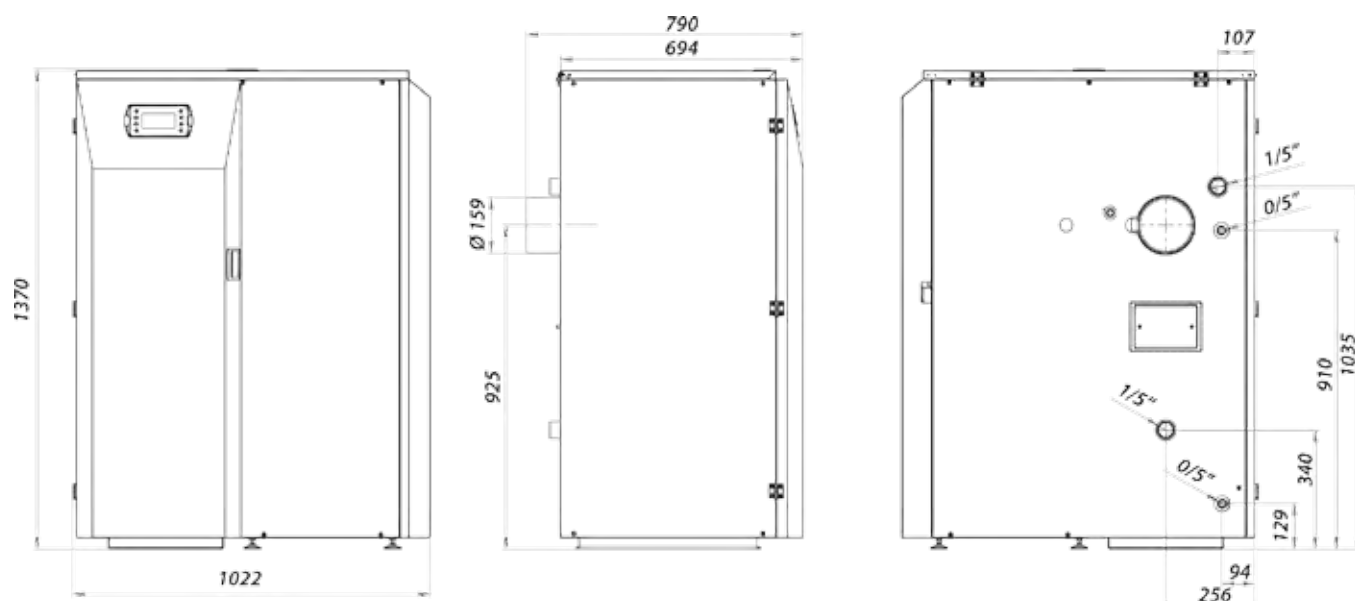
dimensions

installation

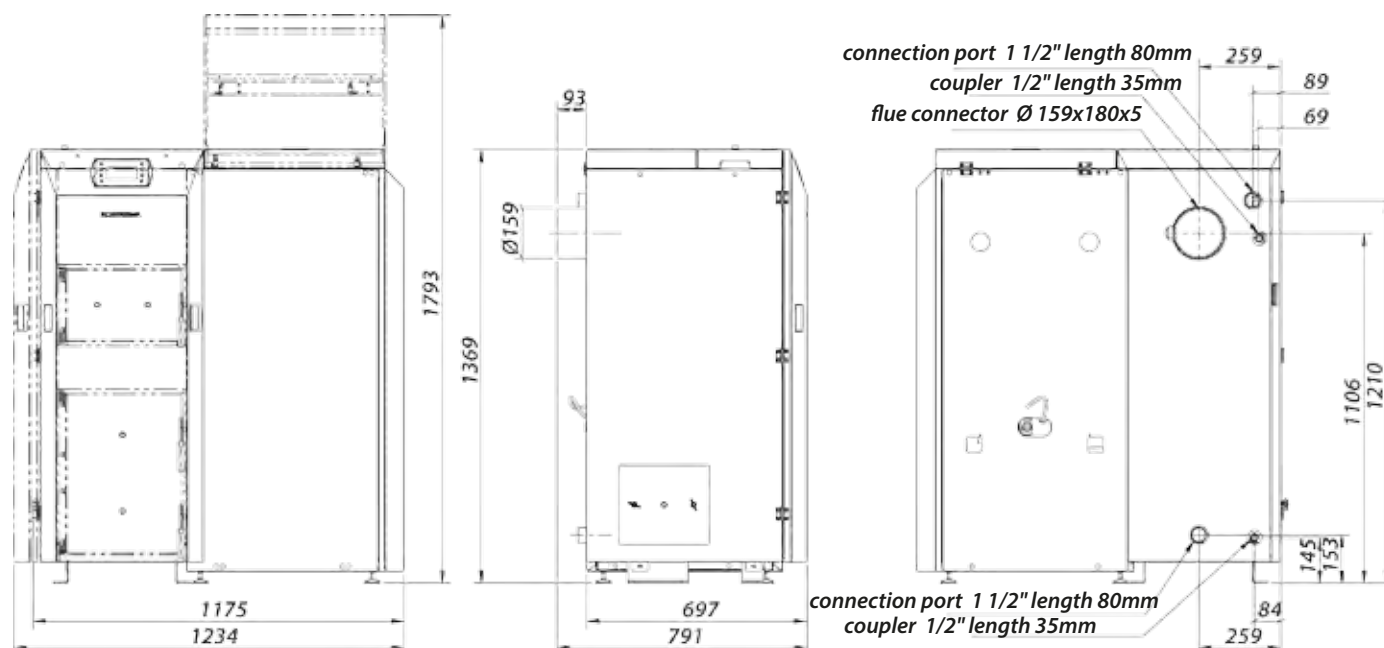
accessories

Dimensions

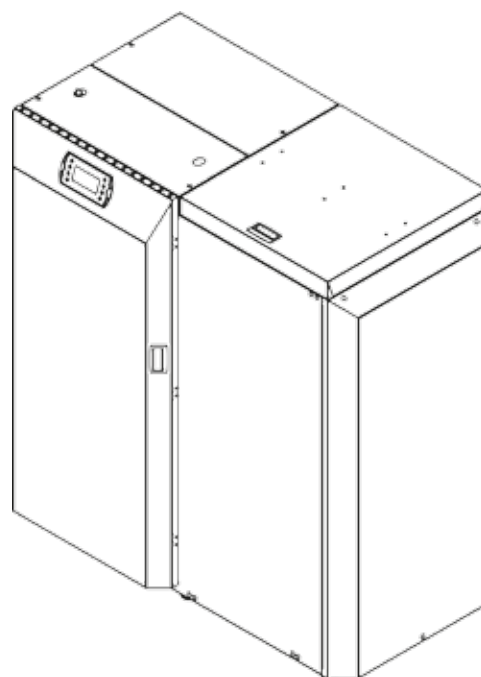
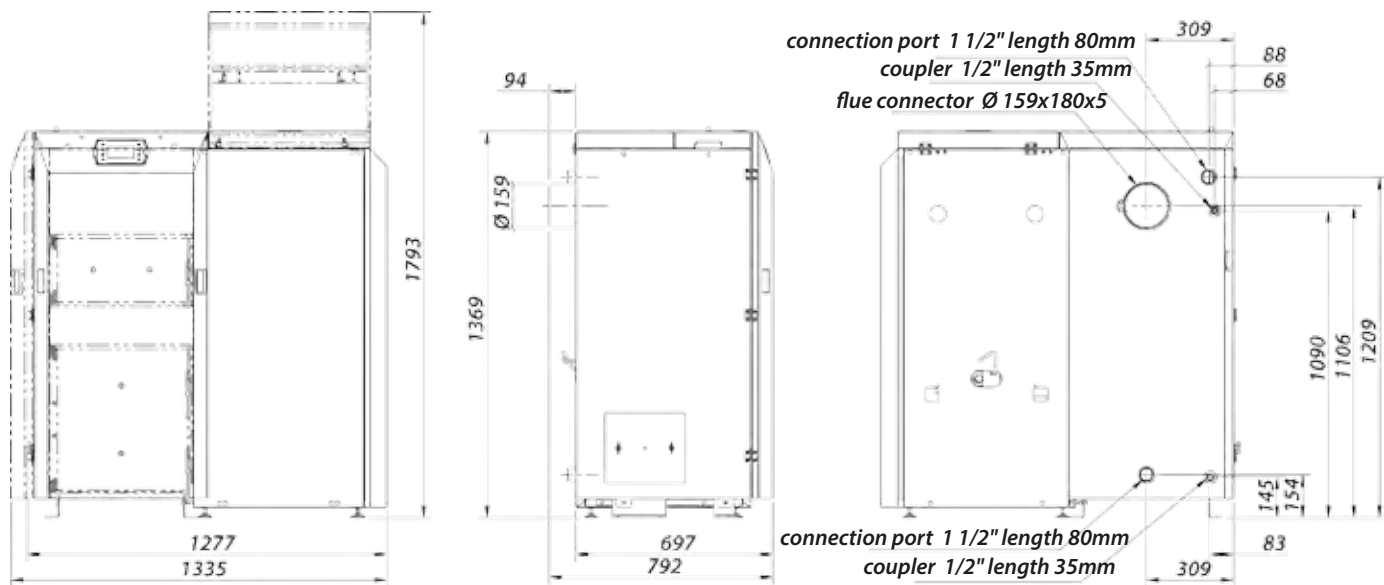
Compact Bio 10 kW



Compact Bio 16 kW



Compact Bio 24 kW



Installation diagram

Diagram 1 Caution! Additional modules may be required.

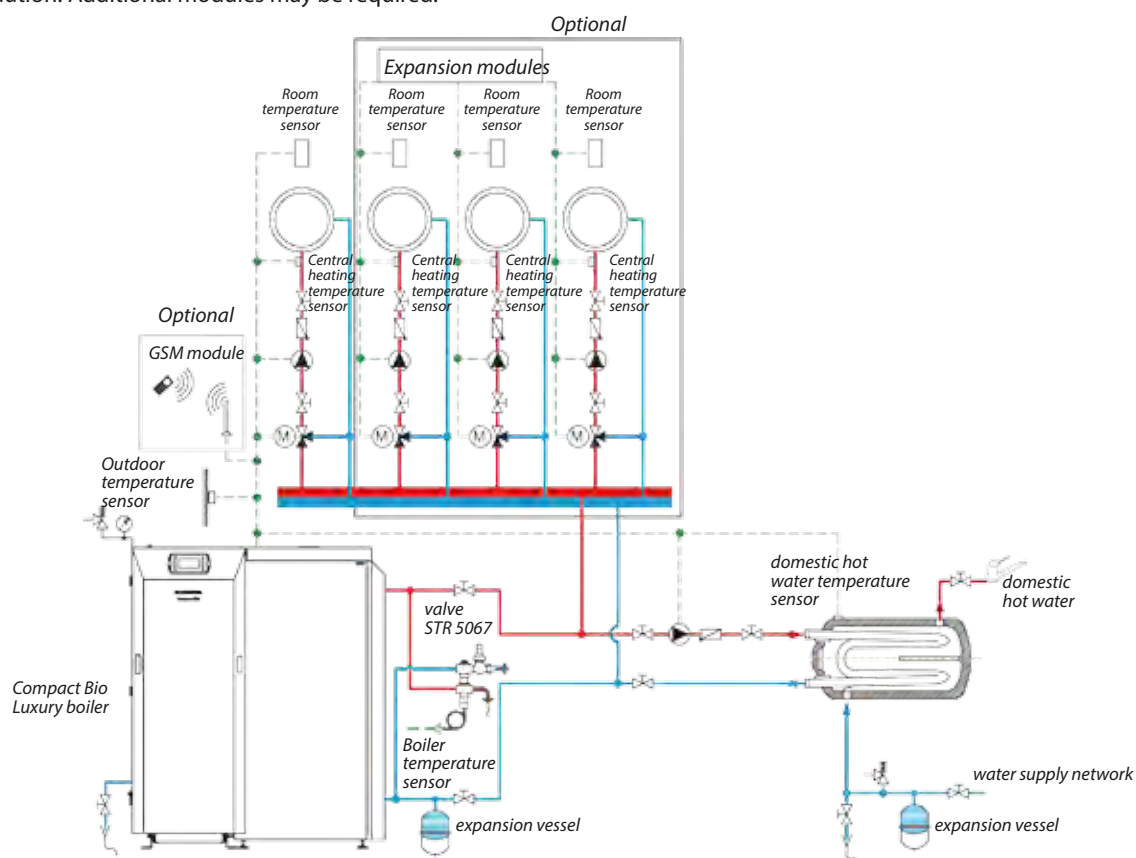


Diagram 2 Caution! Additional modules may be required.

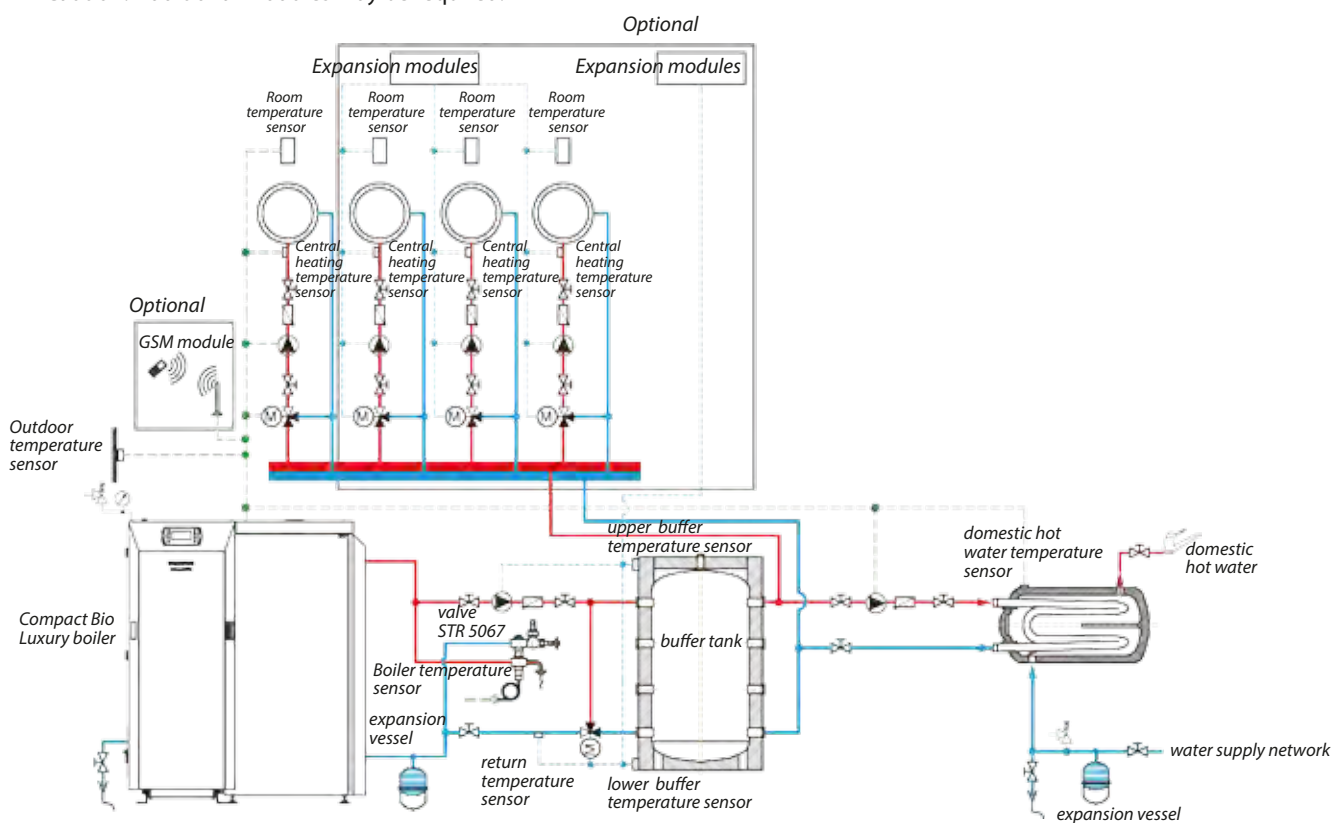
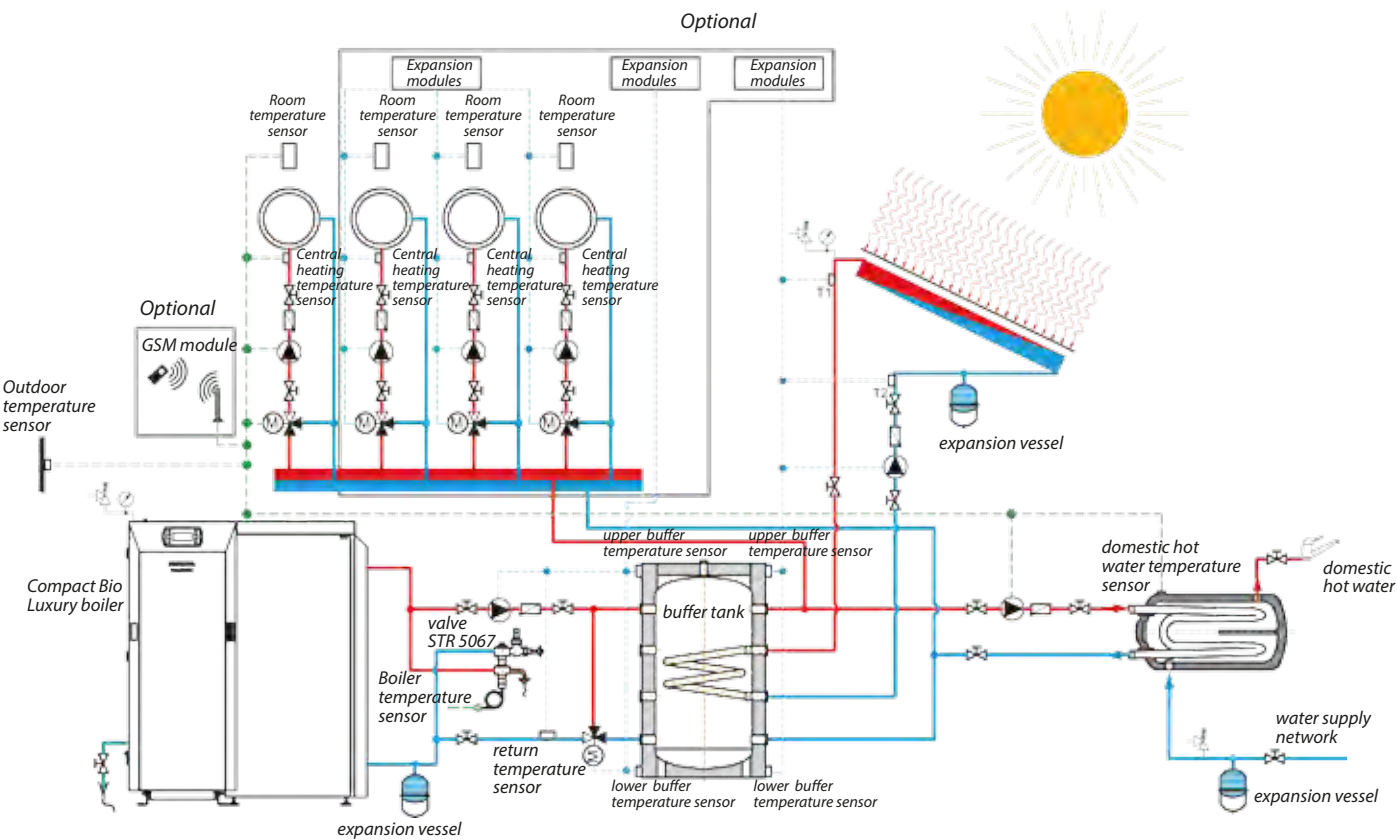


Diagram 3 Caution! Additional modules may be required.



Specification

Standard and optional accessories

TYPE	CBL 10 kW	CBL 16 kW	CBL 24 kW
power range on pellet (kW)	3–10	5–16	7–24
building area (m ²)	50–200	85–250	100–300
FUEL TYPES			
pellets	S	S	S
oats/pellets 50/50	S	S	S
MANUALLY FEEDED FUEL TYPES			
wood	S	S	S
VERTICAL HEAT EXCHANGER			
boiler steel P265GH	S	S	S
no. of heat-exchanger draughts	3	3	3
Heat-exchanger design 3t*	S	S	S
possibility of connection to closed system	S	S	S
left doors	O	S	S
built-in heat exchanger ceramics	-	S	S
RESERVOIR			
left/right	-	S	S
basic 210 (l)	S	S	S
external feeding	O	O	O
fuel feeding from the reservoir to the burner	S	S	S
BURNER			
heat resistant steel H25N20S2	S	S	S
gravitational burner	S	S	S
automatic ash removal	S	S	S
Fuel ignition element	S	S	S
air supply ventilator	S	S	S
gear motor	S	S	S
photo cell	S	S	S
built-in burner ceramics	S	S	S
Grates for burning pellets	S	S	S
Grates for burning oats/pellets	O	O	O
AUTOMATICS			
boiler temperature sensor	S	S	S
burner temperature sensor	S	S	S
room temperature sensors	O	O	O
domestic hot water sensor	O	O	O
lambda sensor	S	S	S
possibility to connect additional modules	S	S	S
GSM module	O	O	O
AUTOMATICS AND CONTROL FEATURES			
Fuel feeding mechanism from the reservoir control	S	S	S
Fuel feeding mechanism inside burner control	S	S	S
Air pressure ventilator control	S	S	S
igniter control	S	S	S
Heating systems pumps control	S	S	S
hot domestic hot water pump control	S	S	S
4 mixing valves control **	S	S	S
cooperation with GSM module	S	S	S

TYPE	CBL 10 kW	CBL 16 kW	CBL 24 kW
AUTOMATIC SYSTEMS			
second generation Fuzzy Logic burner modulation	s	s	s
Hwp - domestic hot water priority	s	s	s
communication	CAN	CAN	CAN
fuel selection	s	s	s
alternative "boiler operation" function	s	s	s
outputs testing	s	s	s
domestic hot water weekly program	s	s	s
weekly room temperature program	s	s	s
simple menu	s	s	s
advanced menu	s	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s	s
Alarms history	s	s	s
Help system	s	s	s
alarm codes	s	s	s
service mode	s	s	s
language - multilingual	s	s	s
ADDITIONAL MODULES			
Solar system and buffer control	o	o	o
3 additional mixing valves control (up to max. 16 pcs.)	o	o	o
DELIVERY			
delivery to the address indicated	s	s	s
24h delivery	s	s	s
WARRANTY/Years			
boiler body integrity	5	5	5
mechanics and automatics	2	2	2
warranty period extension	2	2	2

The price list for optional accessories is available at the manufacturer.

Key

s – standard accessories
o – optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)

A photograph of a garden path heavily covered with fallen yellow flowers, likely ranunculus, creating a thick carpet of small, bright yellow blossoms. The path is flanked by lush green foliage, including tall, dark green leaves in the foreground and background. The scene is captured in a slightly blurred, artistic style with soft lighting, suggesting a natural, untended garden environment.

clean, maintenance free
boiler room at home...



opis produktu

dane techniczne

automatyka

gabaryty

instalacja

wyposażenie

Twin Bio

Puryzm
w czystej postaci.

Połączenie
perfekcyjności
i niezawodności.

Automatyka Platinum Bio
z metodą Fuzzy Logic 2 generacji
oszczędza do 20% paliwa.



ecospalanie

modele [kW]

16

24



Bundesamt
für Wirtschaft
und Ausfuhrkontrolle

paliwa



pelet

pelet / owies
50 / 50

drewno

7/24

serwis
fabrycznyP265
GHstal
kotłowamoduł
GSM

5 klasa

klasa
urządzenia

> 90%

sprawność
kotła

5 lat

5 lat + 2 lata
przedłużenia
gwarancji

Opis kotła

Konstruktorzy firmy
KOSTRZEWA stworzyli
urządzenie będące
połączeniem niezawod-
ności
i perfekcyjności.

Kocioł przystosowany
jest do spalania
ekologicznej biomasy
w postaci pelet
i drewna oraz owsa.

Urządzenie składa się z czterech
połączonych ze sobą elementów :

1. Korpusu kotła – wykonanego zgodnie z technologią 3xT (time, turbulator, temperature)
2. Sprawdzonego rozwiązania - palnika Platinum Bio – pozwalającego na automatyczne spalanie pelet i owies¹.

3. Automatyki Platinum Bio – ma ona za zadanie regulację pogodową jednego obiegu grzewczego + ciepłą wodą użytkową. W automatyce została zastosowana innowacyjna regulacja płomieniem i temperaturą Fuzzy Logic 2 generacji².
4. Dużego zbiornika paliwa wykonanego z blachy ocynkowanej, aby dodatkowo zabezpieczyć zbiornik przed korozją podczas pracy w trudnych warunkach.

1. zalecana mieszanka pelet / owies w proporcji 50 / 50
2. metoda Fuzzy Logic 2 generacji zaoszczędza do 20% paliwa

Zaprojektowany
w technologii
3D CAD SolidWorks
Premium oraz
SolidWorks
Flow Simulation

1 palnik Platinum Bio
z wkładem ceramicznym

2 ceramika izolacyjna

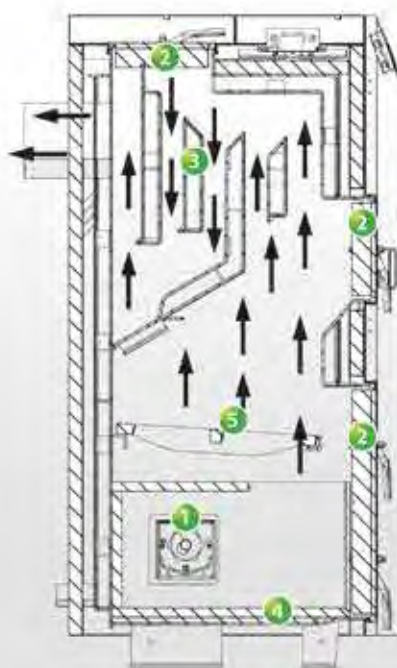
3 zawirowywacz spalin
– obniża temperaturę spalin wylotowych.

4 komora ceramiczna

5 ruszt do drewna

6 podajnik paliwa

7 zbiornik
wykonany z ocynkowanej blachy
o pojemności 286 l



Kotły Twin Bio spełniają wymagania normy PN-EN 303-5:2012

Zalety

1. **Ekologia** - Emisja $\text{CO}_2 = 0$
2. **Wielopaliwowość** – w trybie automatycznego podawania paliwa spala pelet i owies – w trybie ręcznego podawania paliwa drewno i zrębki
3. **Super komfort** – sterowanie całym systemem. Automatyka została zaprojektowana w taki sposób, aby sterować większością urządzeń w Twojej kotłowni. Dzięki temu proces spalania przebiega w pełni automatycznie, a zużycie paliwa i szkodliwe emisje do atmosfery zostały zmniejszone do minimum. Parametry pracy urządzenia możesz kontrolować poprzez proste i przejrzyste menu.
4. **Oszczędność** – metoda Fuzzy Logic 2 generacji oszczędza do 20% paliwa.

Cały system sterowania kotłownią jest oparty na miękkim sterowaniu w zależności od zapotrzebowania na energię poszczególnych pięter budynku lub zapotrzebowania na gorącą wodę użytkową. Urządzenie pracuje z większą lub mniejszą mocą.

5. **Innowacyjność** – konstrukcja wymiennika według definicji 3T. Dzięki zastosowaniu przy projektowaniu metody 3T (time, turbulator, temperature) uzyskaliśmy wymiennik o bardzo małych wymiarach i wysokiej wydajności.
6. **Uniwersalność** – konstrukcja wymiennika pozwala na zamontowanie palnika, zbiornika oraz wszystkich drzwiczek z lewej lub prawej strony urządzenia.

7. **Ekonomia** – Palnik Platinum Bio – energooszczędny silnik całego układu. Zaawansowany mechanicznie i technicznie element odpowiedzialny za wytwarzanie energii cieplnej z pelet. Trwały, energooszczędny, niezawodny, cichy – wykonany ze stali żaroodpornej oraz kwasoodpornej pozwala na ciągłą i niezawodną pracę przez wiele lat.
8. **Wielofunkcyjność** – potrafi sterować kilkoma obiegami grzewczymi, systemem solarnym oraz zbiornikiem buforowym – opcja
9. **Wygoda** – w pełni zautomatyzowane – sam się rozpala i sam się gasi
10. **Trwałość** – gwarancja 5 lat

Technical specification

The design may change due to improvements.

PARAMETER	TB 16 kW	TB 24 kW
power range on pellet (kW)	5–16	7–24
Control method	Fuzzy Logic 2	Fuzzy Logic 2
Class as per PN-EN 303-5:2012	5	5
Water capacity (l)	58	66
Max. operating pressure (bar)	2	2
Max. operating temperature (°C)	85	85
Test pressure (bar)	4	4
Chimney draught (mbar)	0.15–0.25	0.15–0.25
Exhaust gas temperature at nominal / minimum thermal power (°C)	140 / 90	140 / 90
Min. return water temperature (°C)	45	45
Average fuel consumption (pellets) at nominal / minimum thermal power (kg/h)	3 / 0,9	4,5 / 0,8
Flue diameter (mm)	160	160
Supply/return connector diameter (in.)	G1 1/2"	G1 1/2"
Power supply (V)	230	230
Max. power consumption (during ignition process) (W)	400	400
Weight (kg)	290	319
Fuel reservoir capacity (l)	286	286
Fuel loading doors dimensions (mm)	857 x 475	857 x 475

Fuel parameters

Sawdust pellets as per EN 14961-2:2011 class A1:

- size 6 +/-1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Oats¹

- moisture content < 12%

1. recommended pellet/oat ratio - 50/50

Wood

For nominal boiler power use dry wood with 20% maximum moisture content (around 18 months period of drying woodlogs under cover). Use of larger logs increases burning time upon a single charge up to 8 hours.



Platinum Bio

with second generation
Fuzzy Logic modulation

Large alphanumeric display
for easy communication and operation.



Control

- fuel conveyor from the reservoir
- air supply ventilator
- fuel ignition mechanism
- central heating pump
- domestic hot water pump
- mixing valve²

Functions

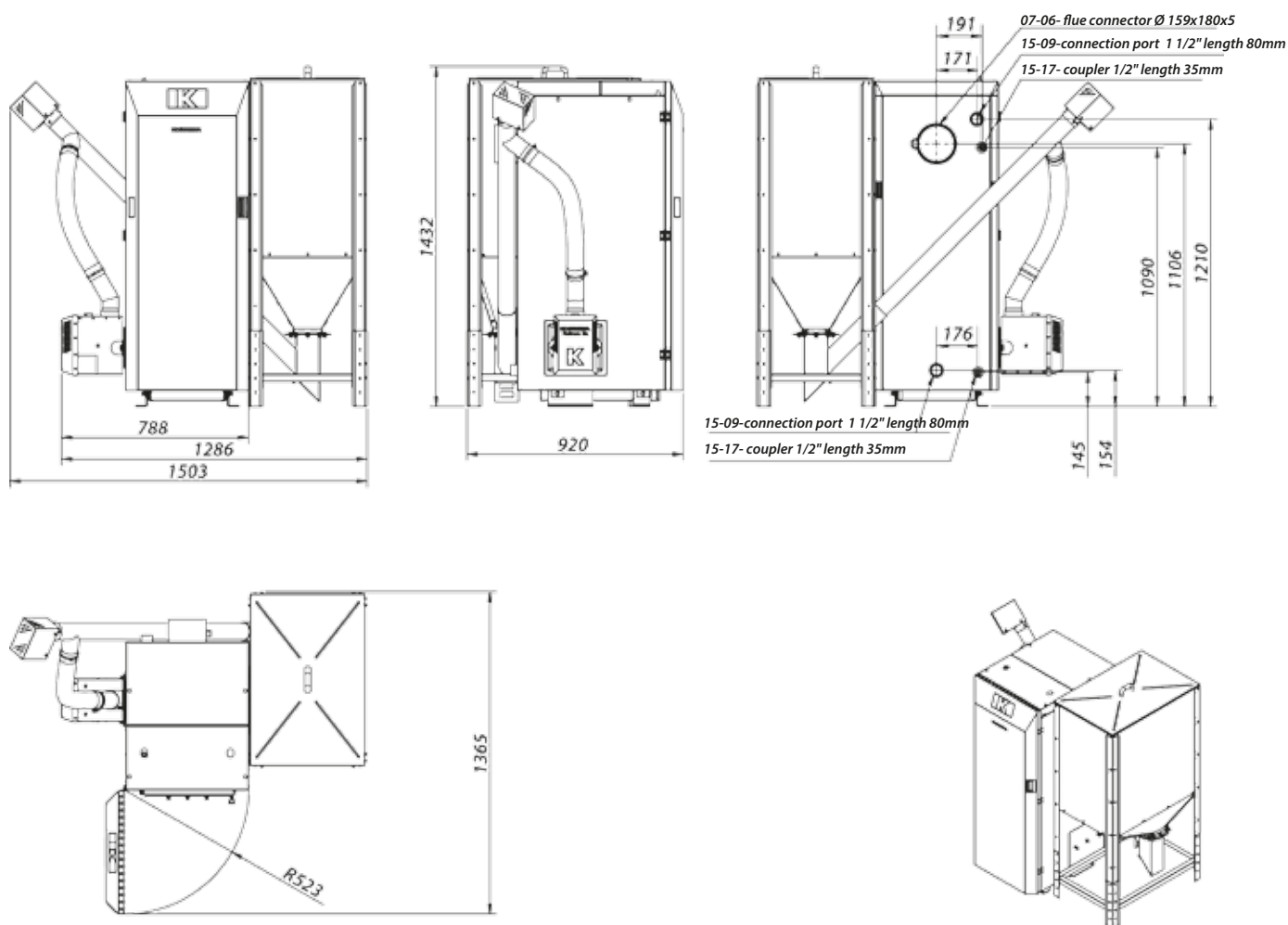
- Statistics preview
 - minimum, maximum and average burner power
 - minimum, maximum and average fuel consumption. Temperature parameters are presented as numbers and graphs on a large display along with many other functions
- Burner operation and comfort may be compared to the oil burner.

Second generation Fuzzy Logic controller and advanced menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignitions significantly reduces the amount of electric energy used).

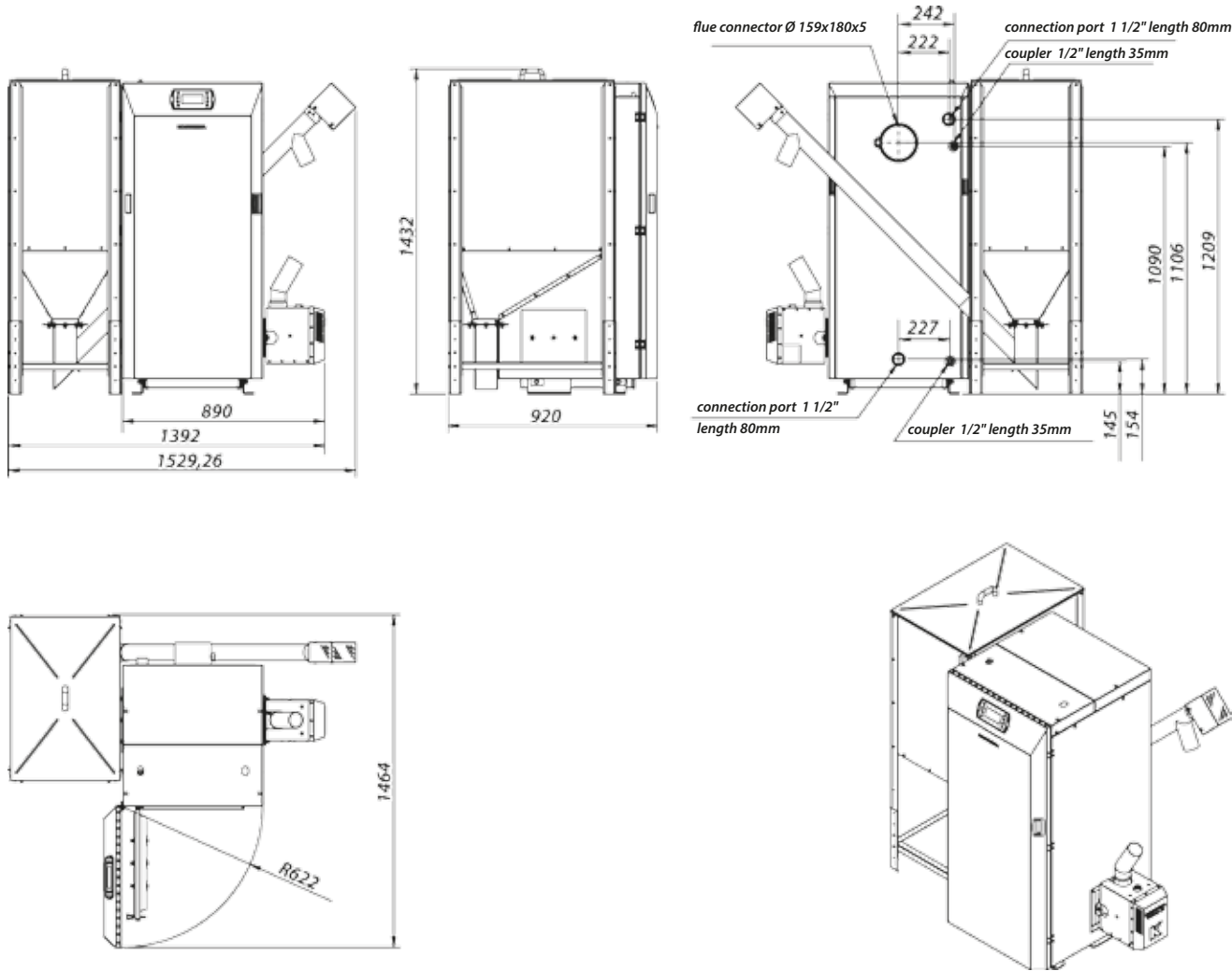
2. with additional module 1-16 heating circuits (heaters or floor heating)

Dimensions

Twin Bio 16 kW



Twin Bio 24 kW



Installation diagrams

Diagram 1 Caution! Additional modules may be required.

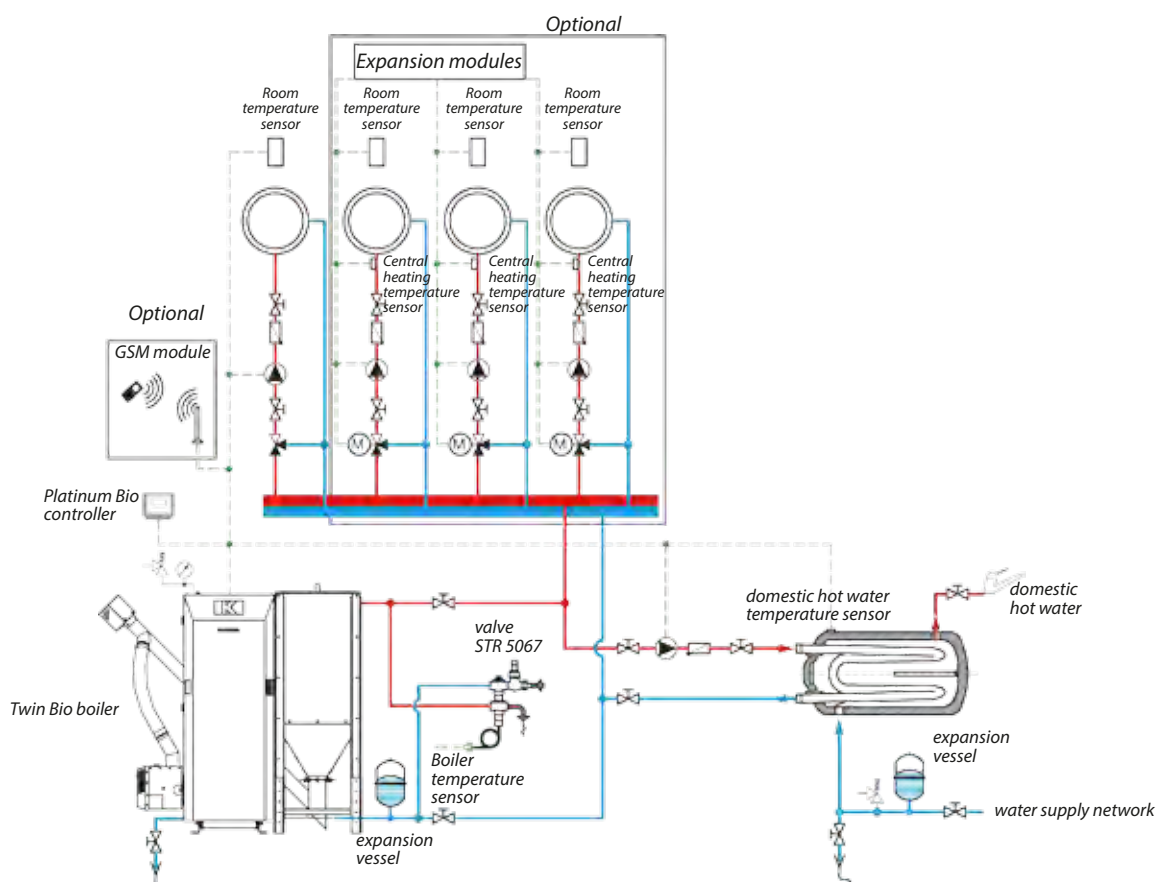


Diagram 2 Caution! Additional modules may be required.

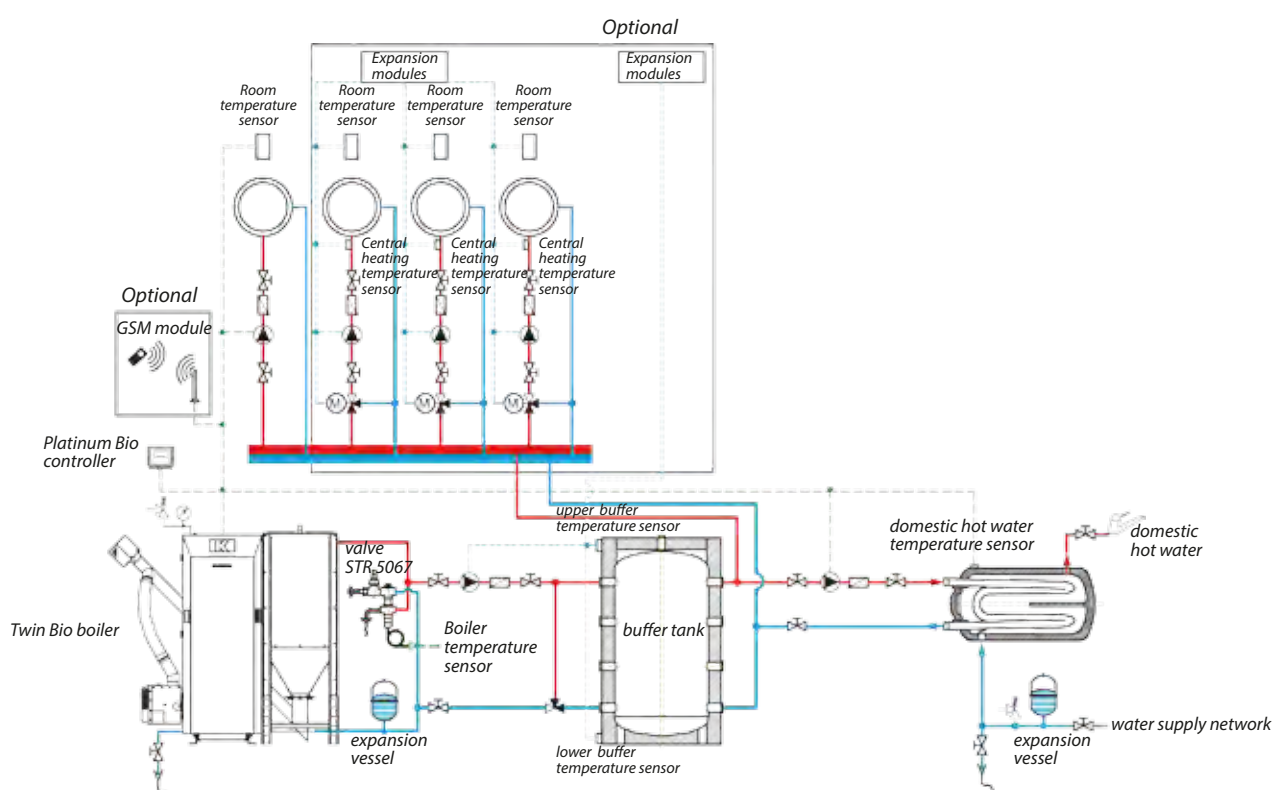
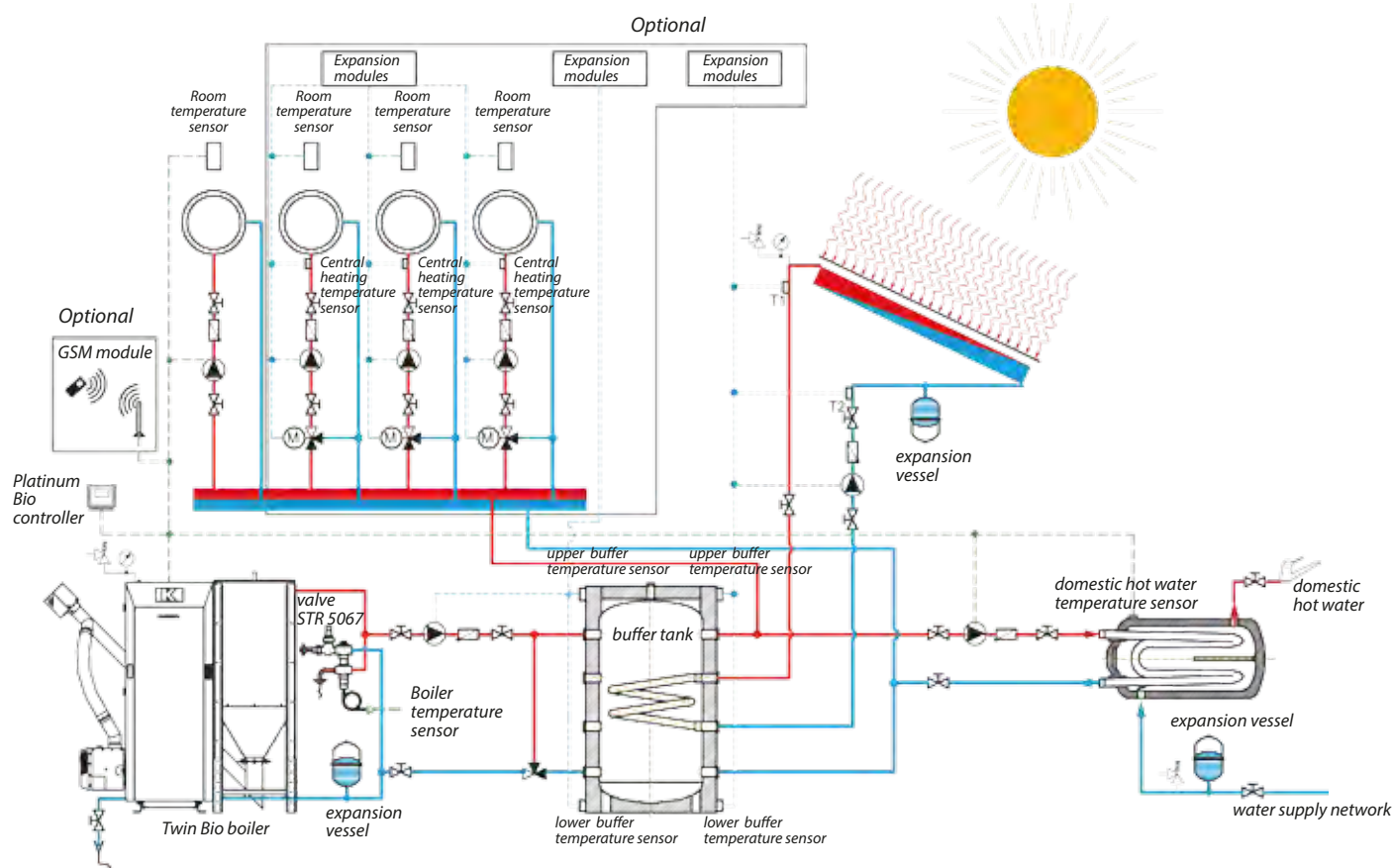


Diagram 3 Caution! Additional modules may be required.



Specification

Standard and optional accessories

TYPE	TB 16 kW	TB 24 kW
power range on pellet (kW)	5–16	7–24
building area (m²)	85–200	100–300
FUEL TYPES		
pellets	s	s
oats/pellets 50/50	s	s
MANUALLY FEEDED FUEL TYPES		
wood	s	s
VERTICAL HEAT EXCHANGER		
boiler steel P265GH	s	s
no. of heat-exchanger draughts	3	3
Heat-exchanger design 3t*	s	s
built-in heat exchanger ceramics	s	s
possibility of connection to closed system	s	s
left/right doors	s	s
insulating ceramics of doors	s	s
RESERVOIR		
left/right	s	s
basic 286 (l)	s	s
external feeding	o	o
fuel feeding from the reservoir to the burner	s	s
BURNER		
heat resistant steel H25N20S2	s	s
gravitational burner	s	s
automatic ash removal	s	s
Fuel ignition element	s	s
air supply ventilator	s	s
gear motor	s	s
photo cell	s	s
built-in burner ceramics	s	s
Grates for burning pellets	s	s
Grates for burning oats/pellets	o	o
AUTOMATICS		
boiler temperature sensor	s	s
burner temperature sensor	s	s
room temperature sensors	o	o
domestic hot water sensor	o	o
lambda probe	o	o
possibility to connect additional modules	s	s
GSM module	o	o
AUTOMATICS AND CONTROL FEATURES		
Fuel feeding mechanism from the reservoir control	s	s
Fuel feeding mechanism inside burner control	s	s
Air pressure ventilator control	s	s
igniter control	s	s
Heating systems pumps control	s	s
hot domestic hot water pump control	s	s
mixing valves control **	o	o
cooperation with GSM module	s	s

TYPE	TB 16 kW	TB 24 kW
AUTOMATIC SYSTEMS		
second generation Fuzzy Logic burner modulation	s	s
Hwp - domestic hot water priority	s	s
communication	CAN	CAN
fuel selection	s	s
alternative "boiler operation" function	s	s
outputs testing	s	s
domestic hot water weekly program	s	s
weekly room temperature program	s	s
simple menu	s	s
advanced menu	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s
Alarms history	s	s
Help system	s	s
alarm codes	s	s
service mode	s	s
language - multilingual	s	s
ADDITIONAL MODULES		
Solar system and buffer control	o	o
3 additional mixing valves control (up to max. 16 pcs.)	o	o
DELIVERY		
delivery to the address indicated	s	s
24h delivery	s	s
WARRANTY/Years		
boiler body integrity	5	5
mechanics and automatics	2	2
warranty period extension	2	2

The price list for optional accessories is available at the manufacturer.

Key

s – standard accessories
o – optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)

Reliability is a strong
advantage of our products.





description

technical data

automatics

dimensions

installation

accessories

Pellets 100

Automatic fuel ignition

Platinum Bio automatic controller with second generation¹ Pellets Fuzzy Logic regulation



ecoCombustion

models [kW]

16 24 32

5 class

boiler
class

> 91%

boiler
efficiency

5 years

5 years warranty
+ 2 years
extended warranty

fuels



pellets

pellets / oats
50 / 50

coal



wood



chips

7/24

service

P265

boiler steel

H25N2052

heat resistant
steelboiler
class

Description

Pellets® 100 boilers with 16, 24 and 32 kW power and automatic fuel ignition set new trends for granulated biomass devices.

The boilers are compatible to burn pellets as well as wood, coal, fine coal, wood chips, briquette in a large combustion chamber with burner removed.

The pellets are fed from the large reservoir (form 295 to 1386l) with auger to the Platinum Bio burner.

One fuel charge allows automatic operation for 7 to 30 days depending on the heat demand².

The fuel is automatically pushed to the combustion plate inside Platinum Bio burnerfed to the furnace and ignited with 370 W automatic fuel ignition element. The burned fuel is removed to the large ash pan, which needs to be cleaned even once a months.

The second and third chamber determines high boiler efficiency.

The gases are burned at over 900°C in the ceramic chamber with primary and secondary air, returning the heat to the third section (of heat exchanger).

The second section is divided into two parts with the mechanical lever allowing to use upper/ or lower- combustion technology of solid fuel. Two combustion modes are available: lower (wood, coal fines, pea coal) and upper (low calorific value fuels).

1. Second generation Fuzzy Logic control method allow to reduce fuel consumption by up to 20%

2. depending on building heat demand

Platinum Bio controller

modern microprocessor module, allowing to control boiler, central heating system and domestic hot water temperatures. Ventilator power is smoothly adjustable with second generation Fuzzy Logic controller



1 Combustion chamber

large combustion chamber for longer combustion time of solid fuel upon a single fuel loading

2 ceramic chamber

increases the temperature in the burnout process over 900°C and burns incompletely burned gases with secondary air to improve device efficiency

3 burner Platinum Bio hole

4 heat exchanger cleanout



5 reservoir

- 1) standard 295 l
- 2) large 470L, 770L, 1386L (optional)

6 large and convenient inclined solid fuel loading doors

facilitating solid fuel loading

7 large easy to use ash pan

8 double isolated boiler bottom

9 excellent heat insulation

10 Platinum Bio burner

self cleaning, innovative and first burner with second generation2 Fuzzy logic controller made in Poland.

water grates

moving grates - optional



front



rear

Pellets 100 boilers meet the norm PN-EN 303-5:2012 requirements.

Features

Heat exchanger design following 3T guidelines (time, turbulator, temperature). The combustion chamber design allow to burn only part of the solid fuel charge.

The entire system operation is regulated by Platinum Bio automatics with second generation Fuzzy Logic modulation system.

Why did we choose a steel?

- Possibility to obtain maximum efficiency
- flexible design of heavy duty heat exchangers
- low susceptibility to water level fluctuations
- low susceptibility to boiler scale
- high resistance to temperature fluctuations

The controller

is a heart of the boiler.

Special electronic system maintaining constant boiler temperature by adjusting fuel and air supply, and control of the entire heating system.



Technical specification

Manufacturer reserves the right to design changes due to improvements

PARAMETER	P100 16 kW	P100 24 kW	P100 32 kW
Power range on pellet (kW)	5–16	7–24	9.6–32
Control method	Fuzzy Logic 2	Fuzzy Logic 2	Fuzzy Logic 2
Class as per PN-EN 303-5:2012	5	5	5
Water capacity (l)	60	65	80
Max. operating pressure (bar)	2	2	2
Max. operating temperature (°C)	85	85	85
Test pressure (bar)	4	4	4
Chimney draught (mbar)	0.15–0.25	0.15–0.25	0.15–0.3
Exhaust gas temperature at nominal / minimum thermal power (°C)	160 / 90	160 / 90	160 / 90
Min. return water temperature (°C)	45	45	45
Average fuel consumption (pellets) at nominal / minimum thermal power (kg/h)	3.0 / 0.9	4.4 / 1.8	6 / 1.8
Flue diameter (mm)	160	160	160
Supply/return connector diameter (in.)	1 1/2	1 1/2	1 1/2
Power supply (V)	230	230	230
Max. power consumption (during ignition process) (W)	400	400	400
Weight (kg)	350	360	400
Fuel reservoir capacity standard / optional [l]	295 (470; 770; 1386)	295 (470; 770; 1386)	295 (470; 770; 1386)
Fuel loading doors dimensions (mm)	557 x 557	557 x 557	557 x 557

Fuel parameters

Sawdust pellets as per EN 14961-2:2011 class A1:

- size 6 +/- 1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0.7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Oats¹

- moisture content < 12%

Wood

For nominal boiler power use dry wood with 20% maximum moisture content (around 18 months period of drying woodlogs under cover). Use of larger logs increases burning time upon a single charge up to 8 hours.

Coal

- recommended calorific value > 15 000 kJ/kg
- ash content 12%
- moisture content 12%
- VOC 28–40%
- ash fusion temperature > 1150°C
- low caking
- low swelling

1. Recommended pellet/oat ratio - 50/50



description

technical data

automatics

dimensions

installation

accessories

Platinum Bio

with second generation
Fuzzy Logic modulation

Large alphanumeric display
for easy communication and operation.



Control

- fuel conveyor from the reservoir
- air supply ventilator
- fuel ignition mechanism
- central heating pump
- domestic hot water pump
- mixing valve²

Functions

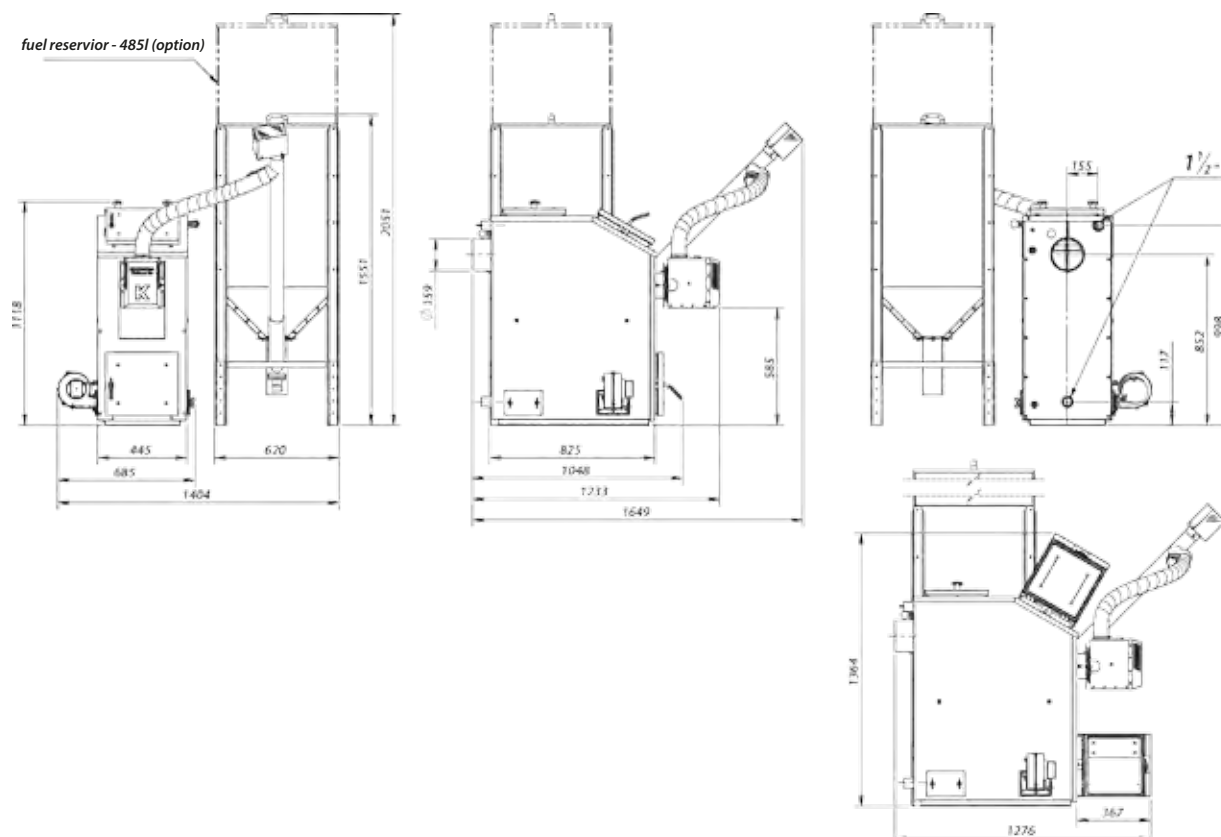
- Statistics preview
 - minimum, maximum and average burner power
 - minimum, maximum and average fuel consumption. Temperature parameters are presented as numbers and graphs on a large display along with many other functions
- Burner operation and comfort may be compared to the oil burner.

Second generation Fuzzy Logic controller and advanced menu allow fuel consumption reduction by up to 20% and component wear reduction compared to other burners (reduced number of ignitions significantly reduces the amount of electric energy used).

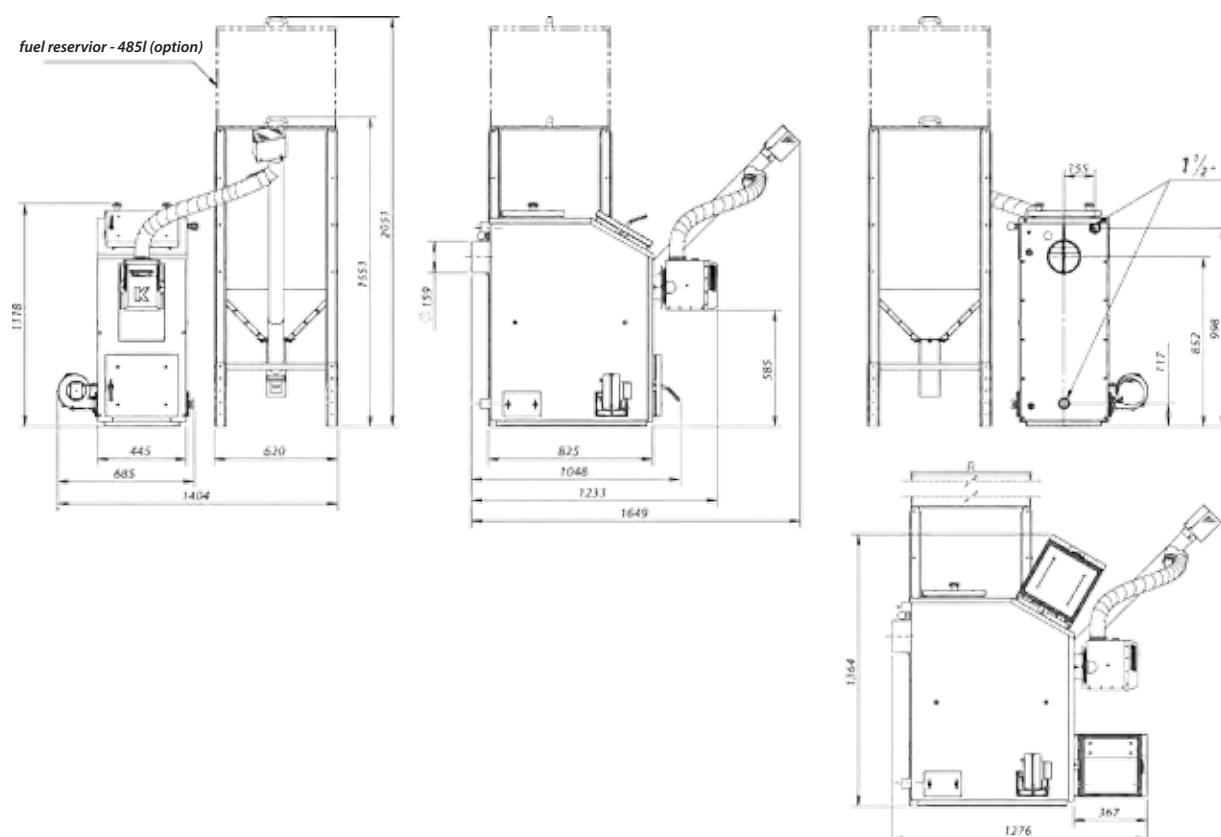
2. with additional module 1-16 heating circuits (heaters or floor heating)

Dimensions

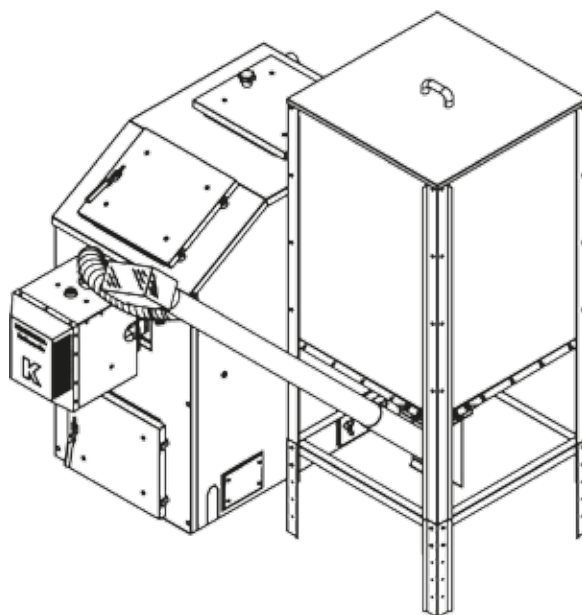
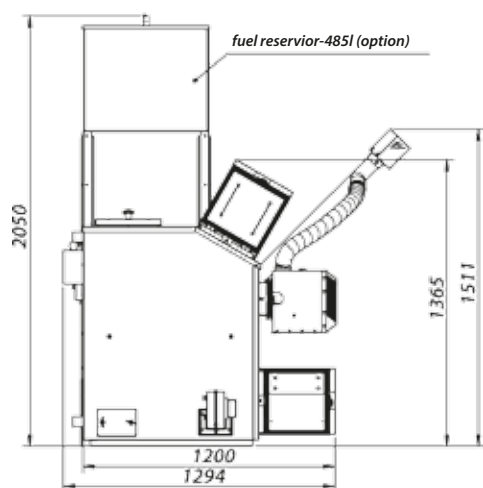
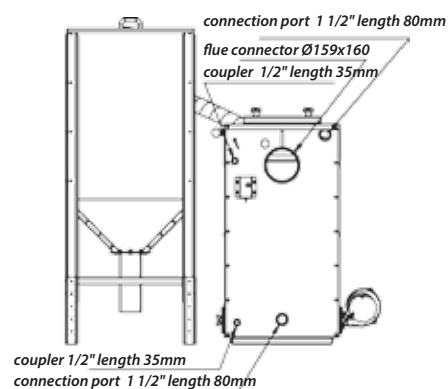
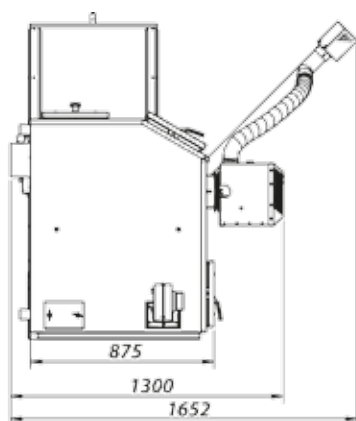
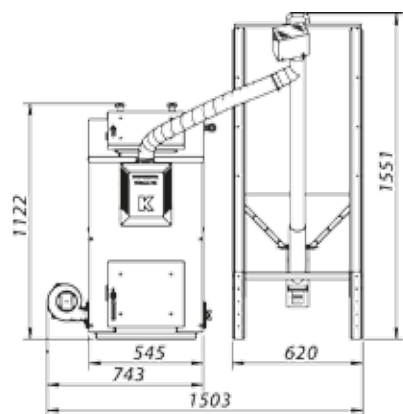
Pellets 100 16 kW



Pellets 100 24 kW



Pellets 100 32 kW



Installation diagrams

Diagram 1 Caution! Additional modules may be required.

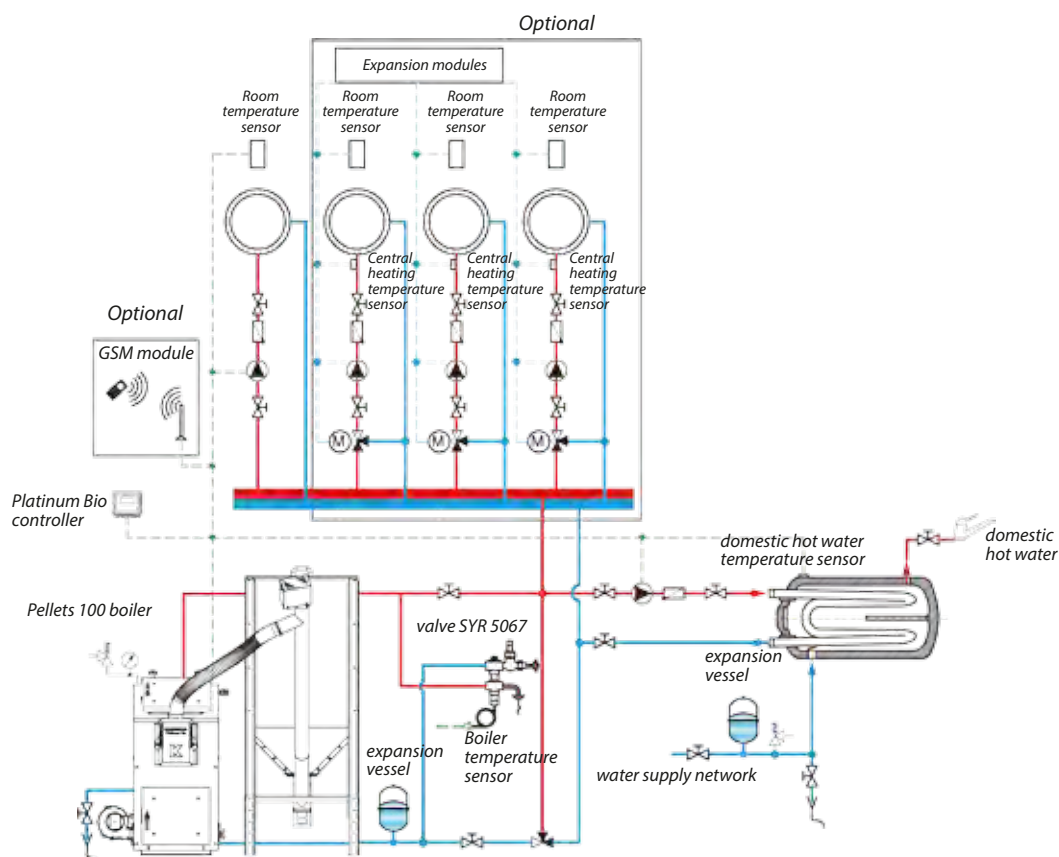


Diagram 2 Caution! Additional modules may be required.

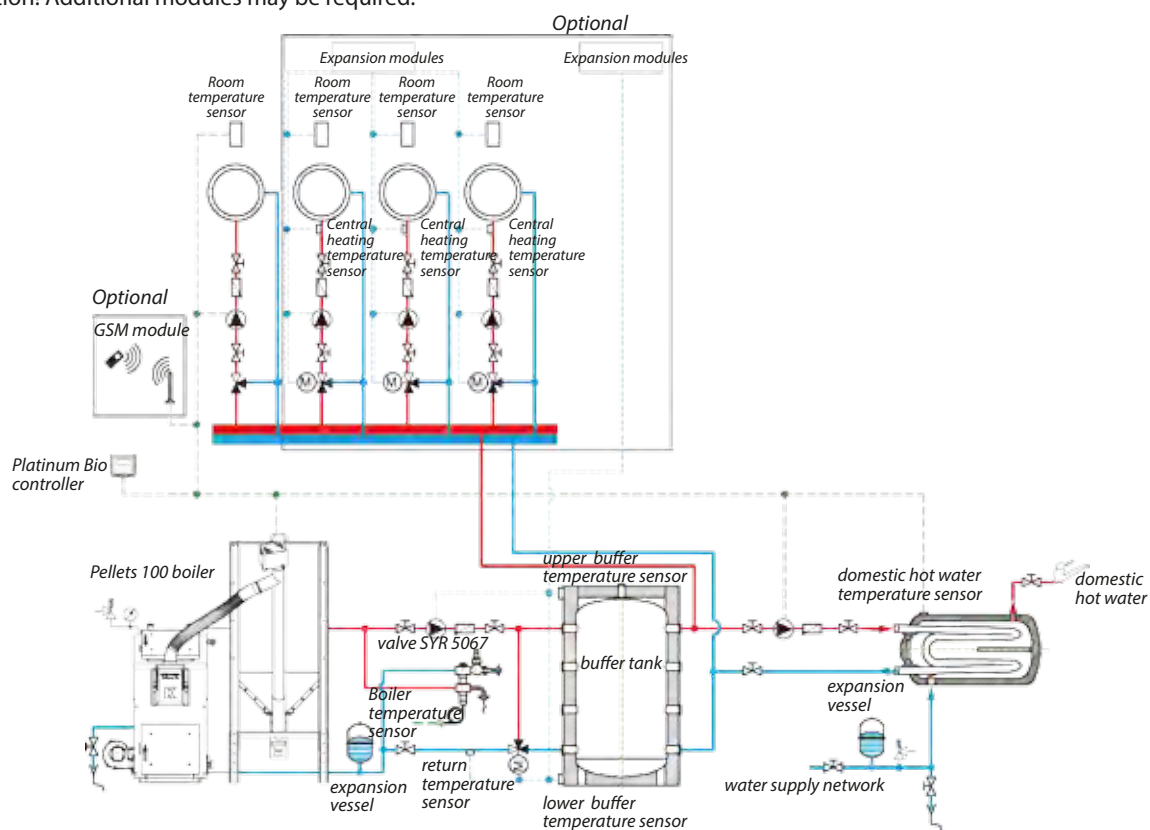
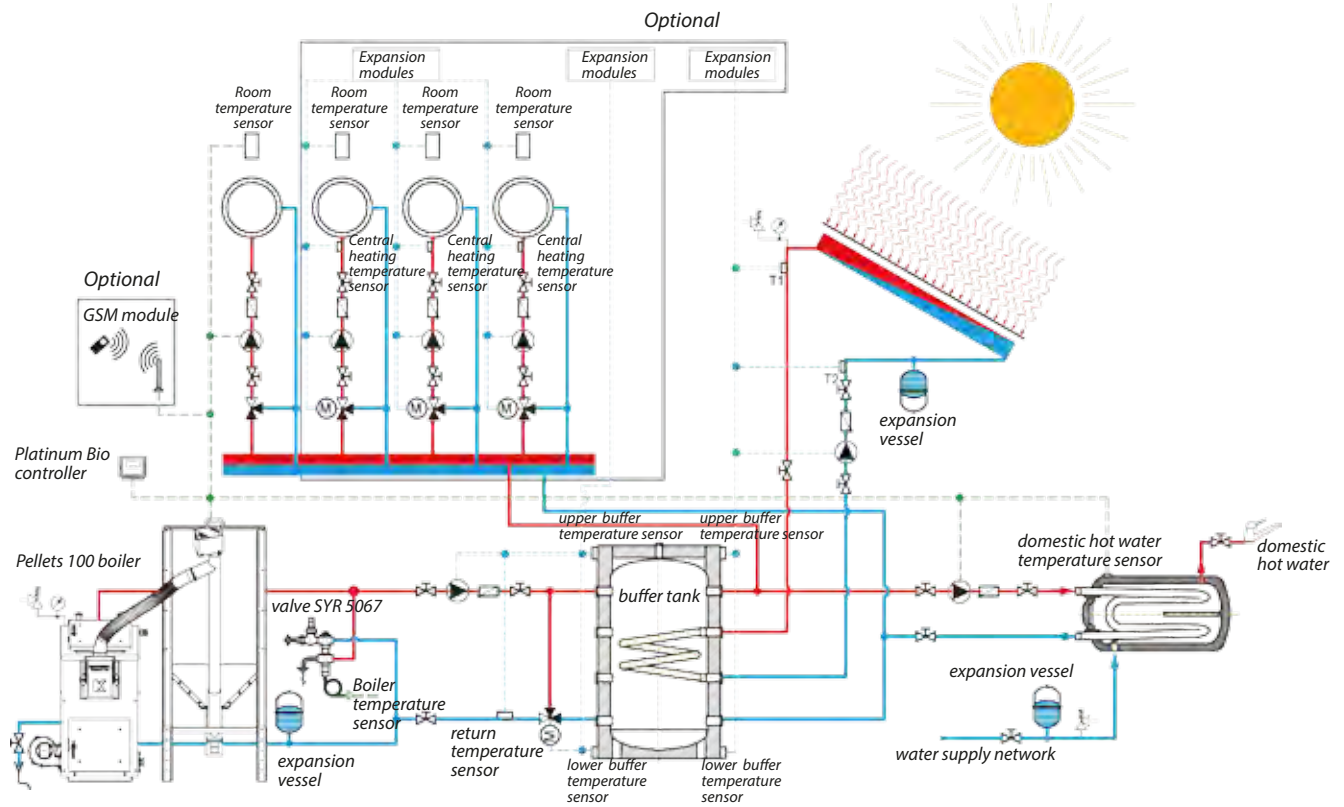


Diagram 3 Caution! Additional modules may be required.



Specification

Standard and optional accessories

TYPE	P100 16 kW	P100 24 kW	P100 32 kW
power range on pellet (kW)	5–16	7–24	9,6–32
building area (m²)	50–200	100–300	150–400
FUEL TYPES			
pellets	s	s	s
oats/pellets 50/50	s	s	s
MANUALLY FEEDED FUEL TYPES			
Pea coal	s	s	s
wood, briquette, sawdust, woodchips	s	s	s
Coal, coal fines	s	s	s
VERTICAL HEAT EXCHANGER			
boiler steel P265GH	s	s	s
no. of heat-exchanger draughts	3	3	3
ceramics – combustion improving catalyst	s	s	s
water grates	s	s	s
Heat-exchanger design*	3t	3t	3t
possibility of connection to closed system	s	s	s
left doors	o	o	o
RESERVOIR			
standard: 295 [L]	s	s	s
alternative: 203; 286; 470; 770; 1386 [L]	o	o	o
external feeding	o	o	o
fuel feeding from the reservoir to the burner	s	s	s
BURNER			
heat resistant steel H25N20S2	s	s	s
gravitational burner	s	s	s
automatic ash removal	s	s	s
Fuel ignition element	s	s	s
Air pressure ventilator	s	s	s
gear motor	s	s	s
photo cell	s	s	s
Grates for burning pellets	s	s	s
Grates for burning oats/pellets	o	o	o
AUTOMATICS			
boiler temperature sensor	s	s	s
burner temperature sensor	s	s	s
room temperature sensor	o	o	o
domestic hot water sensor	o	o	o
lambda sensor	o	o	o
possibility to connect additional modules	s	s	s
GSM module	o	o	o
AUTOMATICS AND CONTROL FEATURES			
Fuel feeding mechanism from the reservoir control	s	s	s
Fuel feeding mechanism inside burner control	s	s	s
Air pressure ventilator control	s	s	s
igniter control	s	s	s
Heating system pump control	s	s	s
domestic hot water pump control	s	s	s
mixing valve control **	o	o	o
cooperation with GSM module	s	s	s

TYPE	P100 16 kW	P100 24 kW	P100 32 kW
AUTOMATIC SYSTEMS			
second generation Fuzzy Logic burner modulation	s	s	s
Hwp - domestic hot water priority	s	s	s
communication	CAN	CAN	CAN
fuel selection	s	s	s
alternative "boiler operation" function	s	s	s
outputs testing	s	s	s
domestic hot water weekly program	s	s	s
weekly room temperature program	s	s	s
simple menu	s	s	s
advanced menu	s	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s	s
alarms history	s	s	s
Help system	s	s	s
alarm codes	s	s	s
service mode	s	s	s
language - multilingual	s	s	s
ADDITIONAL MODULES			
Solar system and buffer control	o	o	o
3 additional mixing valves control (up to max. 16)	o	o	o
DELIVERY			
delivery to the address indicated	s	s	s
24h delivery	s	s	s
WARRANTY/ Years			
boiler body integrity	5	5	5
mechanics and automatics	2	2	2
extended warranty - mechanics and automatics	2	2	2

The price list for optional accessories is available at the manufacturer.

Key

s - standard accessories
o - optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)





Many years' experience
gives us the certitude.

description

technical data

automatics

dimensions

installation

accessories

Pellets® Fuzzy Logic 2

automatic boilers
group with innovative
second generation
Fuzzy Logic power
modulation

and combustion process controlled
with lambda sensor module



ecoCombustion

models [kW]

15 25 40 50 75 100



broadband 6-wire
lambda sensor



outdoor temp.
compensation

7/24

service

P265
GH

boiler steel

H25N2052

heat resistant
steel

> 91%

boiler
efficiency

6 years

6 years warranty
+ 2 years
extended warranty

fuels



pellets



pellets / oats
50 / 50



industrial
pellets



sunflower
pellets



grape
seeds



hazelnut
shells



coconut
shell



olive seeds



coal



wood

Description

Pellets Fuzzy Logic 15, 25, 40, 50, 75, 100 kW boilers with automatic fuel ignition set the new trends for solid fuel boilers. Combusted fuels: sawdust (pellets), industrial pellets, sunflower pellets, biofuel⁵, pea coal, oats and wood (with optional grates, included at standard boiler equipment). The fuel is fed to the large capacity pellet reservoir.

Full charge allows automatic operation for 7 to 30 days depending on the building heat demand².

1. recommended pellets/oats ratio - 50/50

2. depending on building heat demand

3. Second generation Fuzzy Logic control method allows to reduce fuel consumption by up to 20%

4. during domestic hot water heating

5. biofuel: sunflower pellets, grape seeds, hazelnut shells, coconut shells, olive seeds

Features

- High quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temp.).
- Burner constructed to combust pellets, pelet przemysłowego (drzewnego), peletu ze słonecznika, biofuel⁵, oats, pea coal (three burner end-plates as standard boiler equipment).
- Second generation Fuzzy Logic modulation method for improved comfort and reduced fuel consumption³.
- The amount of air for proper combustion is determined by the lambda sensor (automatic air supply).
- Automatic pea coal, pellets, biofuel⁵ and oats ignition and plenty of other equipment in standard.

1. Three draught, steel boiler heat exchanger.

Pellets Fuzzy Logic 2 vertical steel heat-exchanger is made of 4 - 6 mm boiler steel P265GH, three draught system. It features optimal shape and length, and low susceptibility to ash settling on heat exchanger walls. The ash is removed to the ash pan by gravity. Longer heat exchanger means significant flue gas flow resistance and thus exhaust gas ventilator at the flue aiding the natural flue draught is used.

1 exhaust gases turbulator

additional heat exchanger component reducing exhaust gases temperature

2 second generation Fuzzy Logic controller

full weather automatic integrated at standard boiler equipment, all sensors included

3 exhaust ventilator

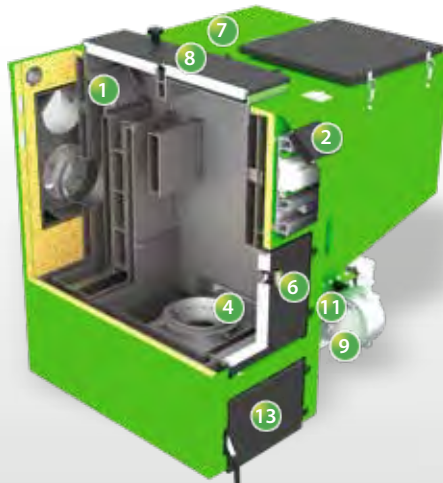
apart from improving chimney draught, the exhaust ventilator can be used during boiler cleaning or ash removal. It prevents unpleasant odours and dust access to the boiler room.

4 Fuzzy Logic retort burner

standard version with three burner end-plates, and hot air fuel ignition system.

5 Second generation Fuzzy Logic controller with broadband lambda sensor

fully automatic and even more precise air supply saves up to 20% fuel



7 reservoir

large capacity, 7 to 30 days operation upon a single pellets, pea coal or oats charge

8 fuel reservoir

large reservoir for burning wood at the grate without removing the burner

9 fuel feeding screw made of acid resistant steel

high resistance to humidity, abrasion and corrosion for at least 4 years

10 air pressure ventilator

distributes primary and secondary air (boiler rear end)

11 ignition ventilator

air ventilator and ignition mechanism for pellets, oats and pea coal

12 gear motor

energy efficient gear motor (boiler rear end)

13 large ash pan

emptied every 5 months



Burner end-plates:
A) steel for pellets, biofuel⁵
B) cast iron with steel additive for oats
C) cast iron for coal

Pellets Fuzzy Logic 2 boilers meet the norm PN-EN 303-5:2012 requirements

Features

Why did we choose a steel?

- Possibility to obtain maximum efficiency
- flexible design of heavy duty heat exchangers
- low susceptibility to water level fluctuations
- low susceptibility to boiler scale

Retort burner Fuzzy Logic

Why do we use retort burner?

- very stable and precise fuel feeding allows to control combustion process with lambda sensor;
- high efficiency pellets, oats and coal burning;
- automatic ignition of pellets, oats and coal.

Pellets Fuzzy Logic 2 retort burner assembly is equipped with automatic igniter for fuels: pellets, industrial pellets, biofuel⁵, oats and coal. Stainless steel auger fuel feeding screw - resistant to moisture. The boiler efficiency is determined not only by the efficiency of heat exchanger, but also by the efficiency of fuel combustion process.

There are no problems with burning liquid or gas fuels, although solid fuel burning is quite complicated process, which requires supply of proper amount of combustion air, mixing air with fuel and removal of combustion products, i.e. ash. These conditions are met by the retorted burner assembly.

Until recently, pellets were burned at cast iron burners, intended for pea coal combustion. The series of trials resulted in steel burner compatible with pellets and oats.



Technical specification

Manufacturer reserves the right to design changes due to improvements.

PARAMETER	PFL 15 kW	PFL 25 kW	PFL 40 kW	PFL 50 kW	PFL 75 kW	PFL 100 kW
Power modulation range	4.5–15	8–25	12–40	15–50	23–75	30–100
Control method	FL 2*, PID	FL 2*, PID	FL 2*, PID	FL 2*, PID	FL 2*, PID	FL 2*, PID
Water capacity (l)	65	80	100	120	150	200
Max. operating pressure (bar)	2	2	2	2	2	2
Test pressure (bar)	4	4	4	4	4	4
Flue draught (mbar)	0.15–0.25	0.15–0.25	0.15–0.25	0.2–0.3	0.2–0.3	0.4
Min. return water temperature (°C)	45	45	45	45	45	45
Flue gas temperature at nominal / minimum thermal power (°C)	140 / 90	140 / 90	160 / 100	160 / 100	180 / 110	180 / 110
Average fuel consumption at nominal / minimum power pellets (kg)	3.48 / 1.16	5.8 / 1.9	9.28 / 2.78	11.6 / 3.48	17.4 / 5.33	23.25 / 6.97
pea coal (kg)	2.34 / 0.78	3.9 / 1.2	6.24 / 1.87	7.8 / 2.34	11.7 / 3.58	16.4 / 3.58
Exhaust diameter (mm)	160	160	160	160	200	250
Supply/return connector diameter (in.)	1.5	1.5	1.5	1.5	2.0	2.5
Power supply (V)	230	230	230	230	230	230
Max. power consumption (ignition) (W)	1150	1150	1150	1150	1150	1150
Weight (kg)	370	430	510	700	810	1100
Fuel reservoir capacity (l)	250	310	310	450	570	570
Fuel loading doors dimensions (mm)	360 x 360	360 x 360	360 x 360	360 x 360	360 x 360	360 x 360

Fuel parameters

Sawdust pellets as per

EN 14961-2:2011 class A1:

- size 6 +/- 1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Biofuels:

- moisture content < 12%

Oats¹

- moisture content < 12%

Wood

For nominal boiler power use dry wood with 20% maximum moisture content (around 18 months period of drying woodlogs under cover). Use of larger logs increases burning time upon a single charge up to 8 hours.

Pea coal

- size 5–25 mm
- recommended calorific value > 23 000 kJ/kg
- ash content 12%
- moisture content < 12%
- VOC 28–40%
- ash fusion temperature > 1150°C
- low caking
- low swelling

1. recommended pellet/oat ratio - 50/50



second generation Pellets Fuzzy Logic controller

Smooth and
intelligent
adjustment of
fuel and air supply

Compatible with pellets,
industrial pellets,
biofuel, oats, pea coal
and wood burning boilers.



Control

- fuel conveyor from the reservoir
- 2 air supply ventilators
- exhaust ventilator
- fuel igniter ventilator
- fuel ignition mechanism
- boiler temperature
- central heating supply temperature
- domestic hot water temperature
- programmable room temperature
- wireless programmable room temperature
- additional room installed boiler control panel
- oxygen amount at exhaust gases.
- central heating pump
- domestic hot water pump
- mixing valve

Second generation Fuzzy Logic controller with broadband lambda sensor.

Special electronic system maintaining constant boiler temperature by adjusting proper fuel and air supply. Control of the entire heating system with all the necessary sensors included.

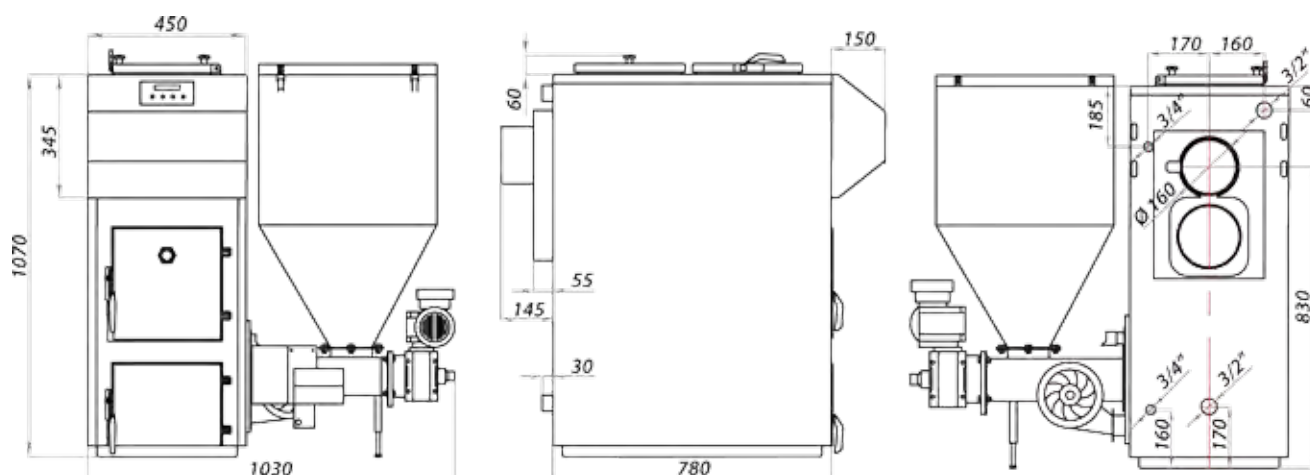
Why second generation Fuzzy Logic controller?

- saves up to 20% fuel;
- eliminates impurities and soot in the boiler;
- stable boiler temperature - eliminates water condensation in the boiler;

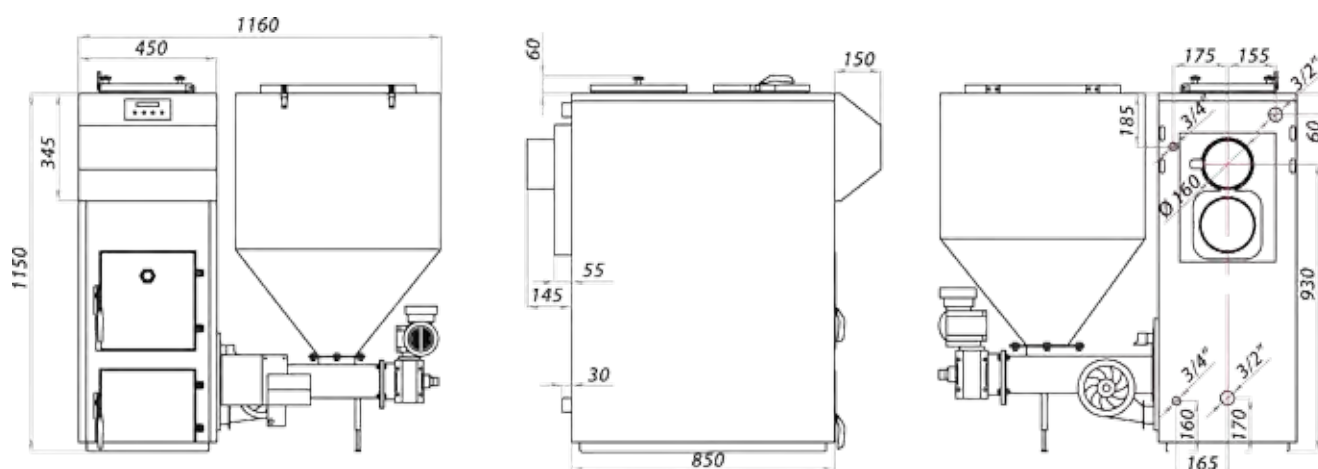
- high and stable combustion chamber temp. reducing carbon oxide emission;
- burner power calculated with advanced second generation Fuzzy Logic controller;
- Pellets Control M Fuzzy Logic controller adjusts burner power to the building heat demand;
- burner operates longer with heated combustion chamber at maximum efficiency;
- excessive burner ignitions reduces the device efficiency;
- second generation Fuzzy Logic algorithm is more advanced than PID and first generation Fuzzy Logic used in other devices.

Dimensions

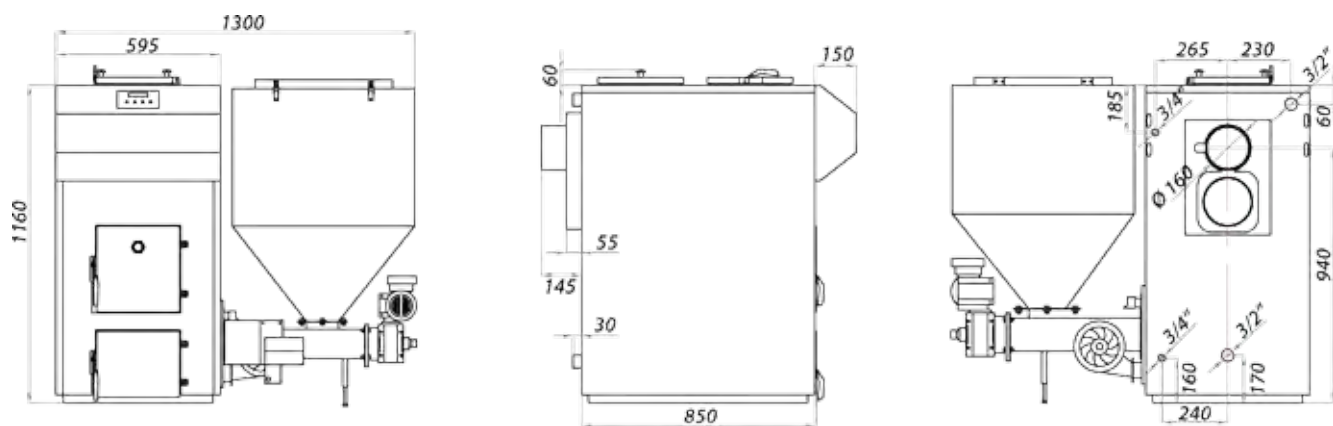
Pellets® Fuzzy Logic 2 15kW



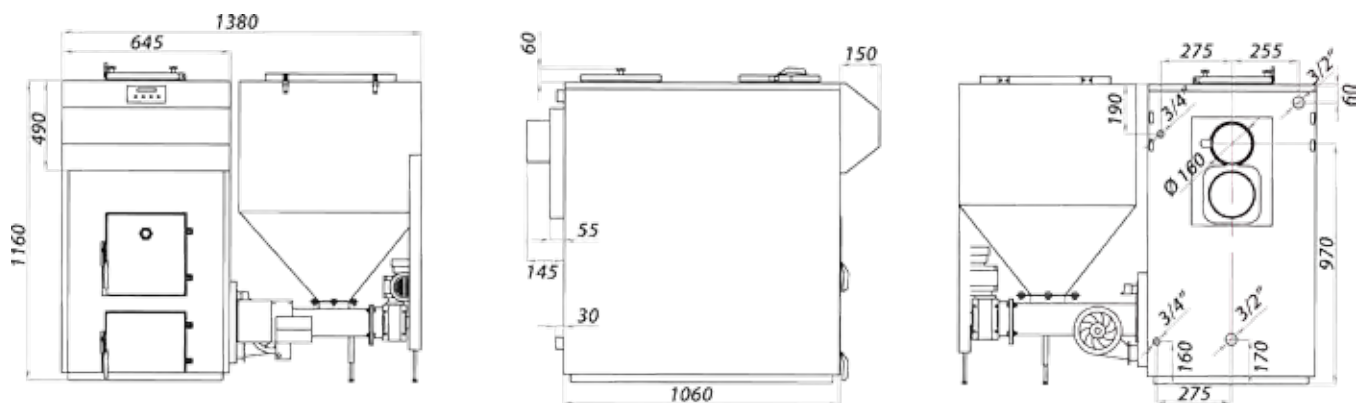
Pellets® Fuzzy Logic 2 25kW



Pellets® Fuzzy Logic 2 40kW



Pellets® Fuzzy Logic 2 50kW



description

technical data

automatics

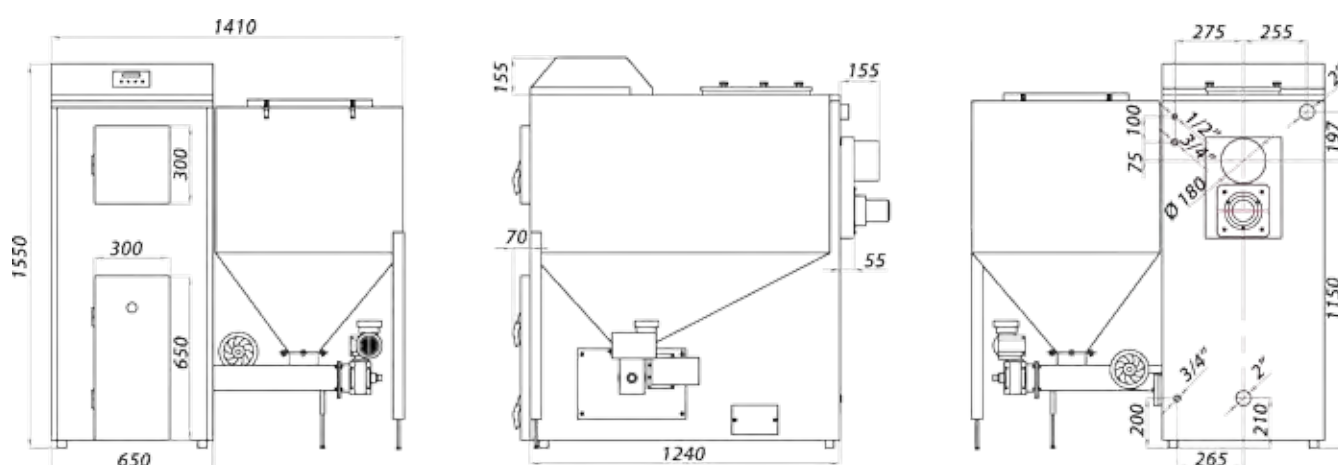
dimensions

installation

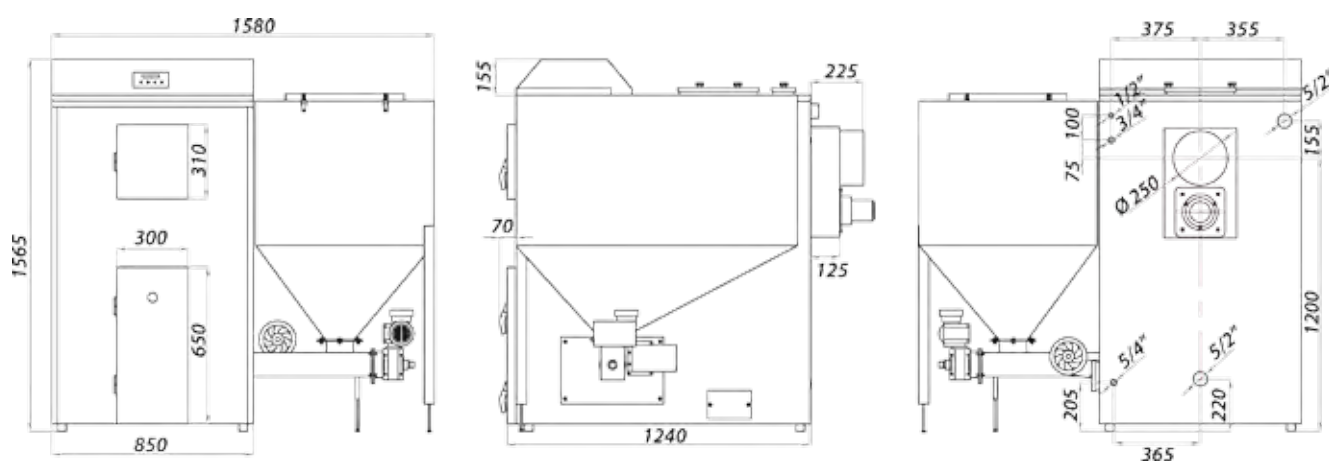
accessories

Dimensions

Pellets® Fuzzy Logic 2 75kW



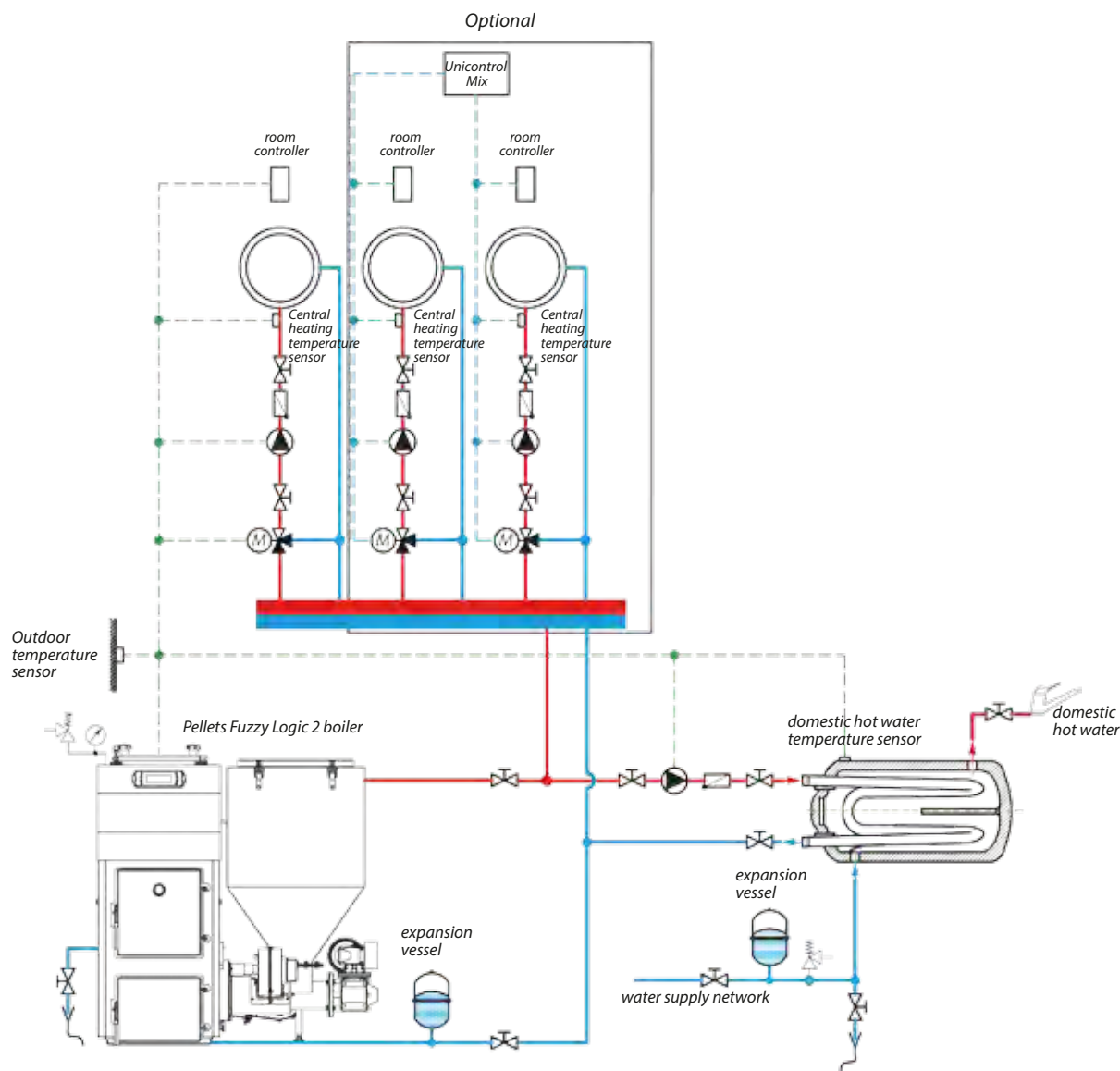
Pellets® Fuzzy Logic 2 100kW



description	technical data	automatics	dimensions	installation	accessories
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Installation diagram

Diagram 1 Caution! Additional modules may be required.



description

technical data

automatics

dimensions

installation

accessories

Specifications

Standard and optional accessories

TYPE	PFL 15 kW	PFL 25 kW	PFL 40 kW	PFL 50 kW	PFL 75 kW	PFL 100 kW
power range on pellet (kW)	5–15	8–25	12–40	15–50	23–75	30–100
building area (m ²)	50–200	100–300	300–530	350–660	500–1000	750–1300
FUEL TYPES						
pellets	s	s	s	s	s	s
oats/pellets 50/50	s	s	s	s	s	s
industrial pellets, sunflower pellets	s	s	s	s	s	s
grape seeds	s	s	s	s	s	s
hazelnut and coconut shells	s	s	s	s	s	s
olive seeds	s	s	s	s	s	s
pea coal	s	s	s	s	s	s
wood	s	s	s	s	s	s
VERTICAL HEAT EXCHANGER						
boiler steel P265GH	s	s	s	s	s	s
no. of exchanger draughts	3	3	3	4	4	4
exhaust gas turbulator	s	s	s	s	s	s
exhaust ventilator	s	s	s	s	s	s
wood burning grates	s	s	s	s	s	s
exchanger design*	3t	3t	3t	3t	3t	3t
possibility of connection to closed system	s	s	s	s	s	s
left doors	o	o	o	o	o	o
RESERVOIR						
basic (l)	s / 203 l	s / 352 l	s / 352 l	s / 457 l	s / 672 l	s / 672 l
large (l)	o / 363 l	o / 628 l	o / 628 l	o / 806 l	o / 1175 l	o / 1175 l
left/right	s	s	s	s	s	s
BURNER						
retort burner	s	s	s	s	s	s
ignition and heating element	s	s	s	s	s	s
Air pressure ventilator	s	s	s	s	s	s
fuel ignition ventilator	s	s	s	s	s	s
stainless steel fuel feeding screw	s	s	s	s	s	s
gear motor	s	s	s	s	s	s
steel end-plate for pellet and biofuel ¹	s	s	s	s	s	s
cast iron end-plate for coal	s	s	s	s	s	s
steel end-plate for oats	s	s	s	s	s	s
AUTOMATICS AND CONTROL FEATURES						
Fuel feeding mechanism from the reservoir control	s	s	s	s	s	s
Air pressure ventilator control	s	s	s	s	s	s
exhaust ventilator control	s	s	s	s	s	s
ignition mechanism ventilator control	s	s	s	s	s	s
ignition mechanism control	s	s	s	s	s	s
boiler temperature control	s	s	s	s	s	s
central heating supply temperature control	s	s	s	s	s	s
domestic hot water temperature control	s	s	s	s	s	s
programmable room temperature control	s	s	s	s	s	s
wireless programmable room temperature control	o	o	o	o	o	o
additional room installed	o	o	o	o	o	o
boiler control display	o	o	o	o	o	o
air amount at exhaust gases control	s	s	s	s	s	s

TYPE	PFL 15 kW	PFL 25 kW	PFL 40 kW	PFL 50 kW	PFL 75 kW	PFL 100 kW
heating pump control	s	s	s	s	s	s
hot domestic water pump control	s	s	s	s	s	s
mixing valve control	s	s	s	s	s	s
AUTOMATIC SYSTEMS						
lambda sensor	s	s	s	s	s	s
boiler temperature sensor	s	s	s	s	s	s
fuel feeding mechanism temperature sensor	s	s	s	s	s	s
central heating temp sensor	s	s	s	s	s	s
domestic hot water temp sensor	s	s	s	s	s	s
exhaust gas temp sensor	s	s	s	s	s	s
outside temp sensor	s	s	s	s	s	s
programmable room temperature regulator	s	s	s	s	s	s
wireless programmable room temperature sensor	o	o	o	o	o	o
additional room installed boiler display	o	o	o	o	o	o
AUTOMATIC SYSTEMS						
lambda sensor	s	s	s	s	s	s
outdoor temperature compensation	s	s	s	s	s	s
second generation Fuzzy Logic burner controller	s	s	s	s	s	s
Hwp - domestic hot water priority	s	s	s	s	s	s
sd - lower combustion system for wood	s	s	s	s	s	s
communication	s	s	s	s	s	s
fuel selection	s	s	s	s	s	s
outputs testing	s	s	s	s	s	s
service	s	s	s	s	s	s
language - multilingual	o	o	o	o	o	o
AUXILIARY MODULES						
2 heating circuits with mixing valves control	o	o	o	o	o	o
DELIVERY						
delivery to the address indicated	s	s	s	s	s	s
24h delivery	s	s	s	s	s	s
WARRANTY/Years						
boiler body integrity	6	6	6	6	6	6
mechanics and automatics	2	2	2	2	2	2
extended warranty - mechanics and automatics*	2	2	2	2	2	2

The price list for optional accessories is available at the manufacturer.

Key

s - standard accessories
o - optional accessories

1 - biofuel: sunflower pellets, grape seeds, hazelnut shells,coconut shells, olive seeds

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)





Seven free days just for you!
With a full reservoir charge.

description

technical data

automatics

dimensions

installation

accessories

Farmer Bio

It may surprise you by its functionality, usefulness and high quality of workmanship



broadband 6-wire lambda sensor



innovative rotational burner



ecoCombustion

models [kW]

16

24

7/24

service

P265 GH

boiler steel



GSM module



iron burner

5 years

5 years warranty
+ 2 years
extended warranty

fuels



pellets



pellets / oats
50 / 50



sunflower
pellets



grape
seeds



coconut
shell



hazelnut
shells



olive seeds



pea coal



coal fines



wood

Description

Farmer Bio boilers with a capacity of 16 and 24 kW determine new direction for solid fuel boilers in Poland.

Designed as fit for combustion of different types of fuel: pellet, oats, pellet of sunflower, grape seeds, hazelnut shells, olive seeds, pea coal, coal dust, wood (manual loading).

The device consists of four components:

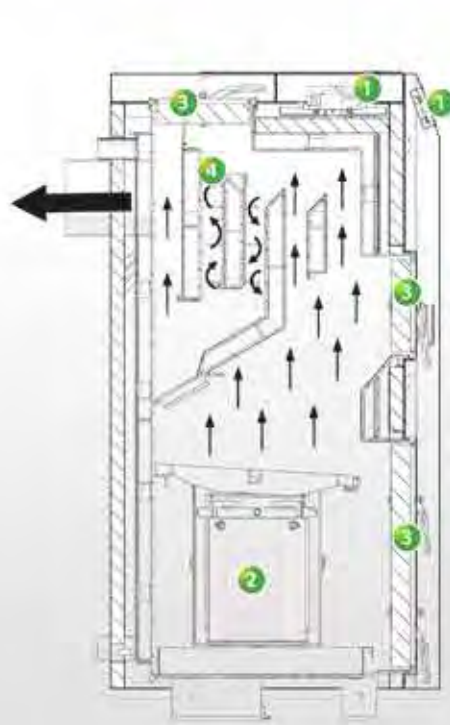
1. Boiler body, designed following 3T guidelines (time, turbulator, temperature).
2. Rotary burner – rotating tip of burner allows combustion of fuels with high ash content.

3. Generation automatics – compact disc with all modules on it.
4. Fuel tank made of galvanized steel.

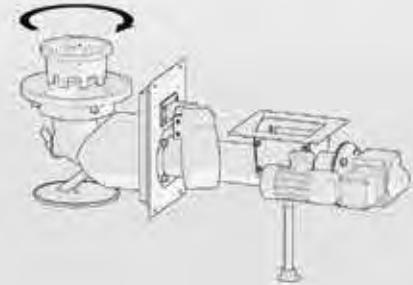


1. second generation Fuzzy Logic controll method allows to reduce fuel consumption by up to 20%

- 1 **3 generation automatics**
compact disc with all modules on it
- 2 **rotary burner**
rotating tip of burner allows combustion of fuels with high ash content
- 3 **insulation ceramics**
(vermiculite)
- 4 **exhaust gas whirler**
reduces temperature of exhaust gases
- 5 **broadband lambda probe²**
saves up to 20% fuel



rear



rotary burner

Farmer Bio boilers meet the norm PN-EN 303 -5 :2012 requirements.

Features

1. **Fuzzy Logic 2 generation method** - increases operation comfort and reduces amount of combusted fuel
2. **Lambda probe²** - automatically adjust the amount of air supplied to the combustion which results in less fuel being combusted
3. **Versatility** - exchanger's construction allows mounting of burner, tank and all doors on the left or right side of the device
4. **Low temperature** - all exchanger doors are surrounded by high quality insulation material, which limits the losses outside the exchanger - latest solution.
5. **Easy electric installation** - all additional devices and sensors are connected by means of clamps under the casing.
6. **Easy assembly and disassembly of fuel tank insulation.**
7. **Fuel tank** - very spacious tank (295 l) with gas actuators, which facilitate lifting tank's hatch.
8. **Worm of stainless steel** - very high resistance to corrosion and high temperature
9. **Large loading chamber** - allowing manual combustion of such fuel as wood and wood chips on additional grate.

2. the lambda sensor saves up to 20% of fuel.

Technical specification

The design may change due to improvements.

PARAMETER	FB 16 kW	FB 24 kW
power range on pellet (kW)	5–16	8–24
Control method	Fuzzy Logic 2	Fuzzy Logic2
Water capacity (l)	58	66
Max. operating pressure (bar)	2	2
Max. operating temperature (°C)	85	85
Test pressure (bar)	4	4
Chimney draught (mbar)	0.10–0.20	0.10–0.20
Exhaust gas temperature at nominal / minimum thermal power (°C)	190 / 110	190 / 110
Min. return water temperature (°C)	45	45
Average fuel consumption (pellets) at nominal / minimum thermal power (kg/h)	3.2 / 1.1	4.8/1.3
Average fuel consumption (pea coal) at nominal / minimum thermal power (kg/h)	2.4/0.6	3.6/1.2
Flue diameter (mm)	160	160
Supply/return connector diameter (in.)	G1 1/2"	G1 1/2"
Power supply (V)	230	230
Weight (kg)	365	395
Fuel reservoir capacity (l)	295	295
Fuel loading doors dimensions (mm)	210 x 340	210x340

Fuel parameters

Sawdust pellets as per

EN 14961-2:2011 class A1:

- size 6 +/-1 mm; 8 +/- 1 mm
- recommended calorific value 16 500 - 19 000 kJ/kg
- ash content < 0,7%
- length $3,15 \leq L \leq 40$
- moisture content < 10%
- specific weight (density) $\geq 600 \text{ kg/m}^3$

Biofuels:

- moisture content < 12%

Oats¹

- moisture content < 12%

Coal and coal fines

- recommended calorific value > 15 MJ/kg
- ash content 12%
- moisture content < 12%
- VOC 28-40%
- ash fusion temperature > 1150°C
- low caking
- low swelling

Pea coal

- size 5-25 mm
- recommended calorific value > 23,000 kJ/kg
- ash content 12%
- moisture content < 12%
- VOC 28-40%
- ash fusion temperature > 1150°C
- low caking
- low swelling

Wood

For nominal boiler power use dry wood with 20% maximum moisture content (around 18 months period of drying woodlogs under cover). Use of larger logs increases burning time upon a single charge up to 8 hours.

Platinum Bio Board

Smooth and intelligent
adjustment of fuel
and air supply



Control

- controlling retort burner with the application of Fuzzy Logic 2 algorithm
- combustion process control based on the oxygen content in exhaust gases (Lambda probe module built-in on mainboard)
- full weather control of two Central Heating circuits (two circuits with mixers and pumps with weekly programmer of set temperatures)
- controlling hot tap water preparation circuit (weekly programmer of set temperatures)
- providing boiler protection against too low return temperature (return mixer together with boiler pump)
- control of accumulation buffer loading (two buffer sensors)

description

technical data

automatics

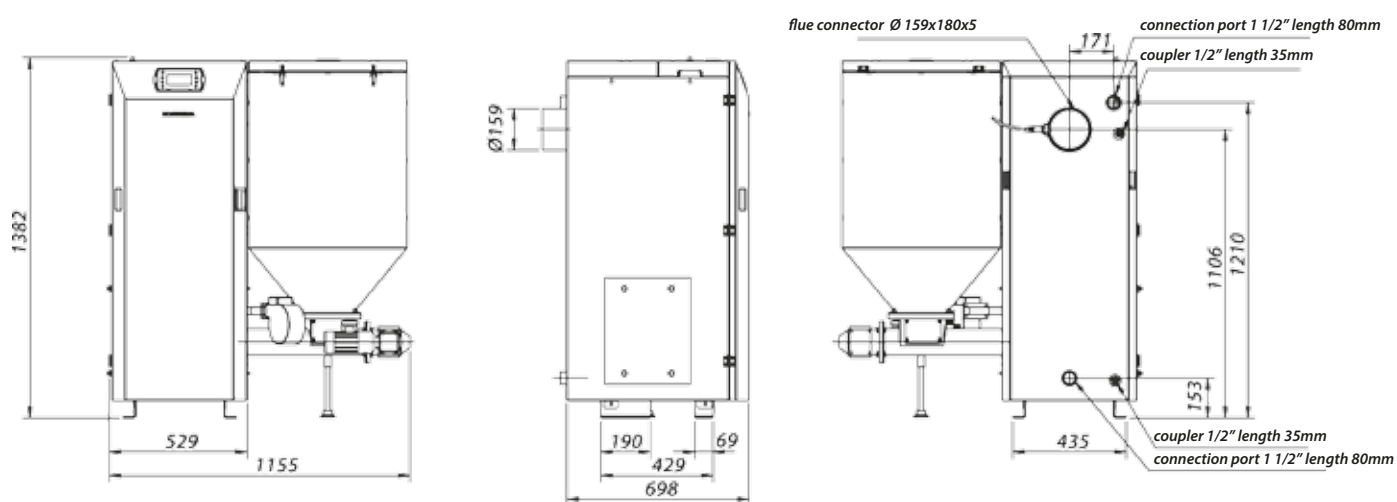
dimensions

installation

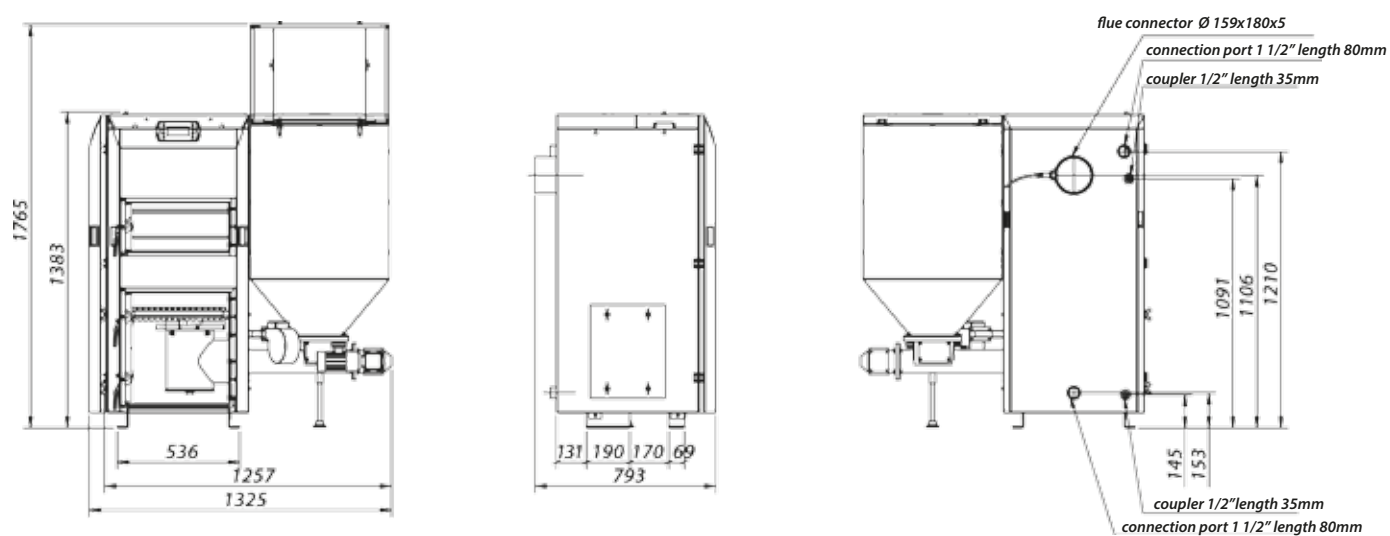
accessories

Dimensions

Farmer Bio 16 kW



Farmer Bio 24 kW



description	technical data	automatics	dimensions	installation	accessories
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Installation diagram

Diagram 1 Caution! Additional modules may be required.

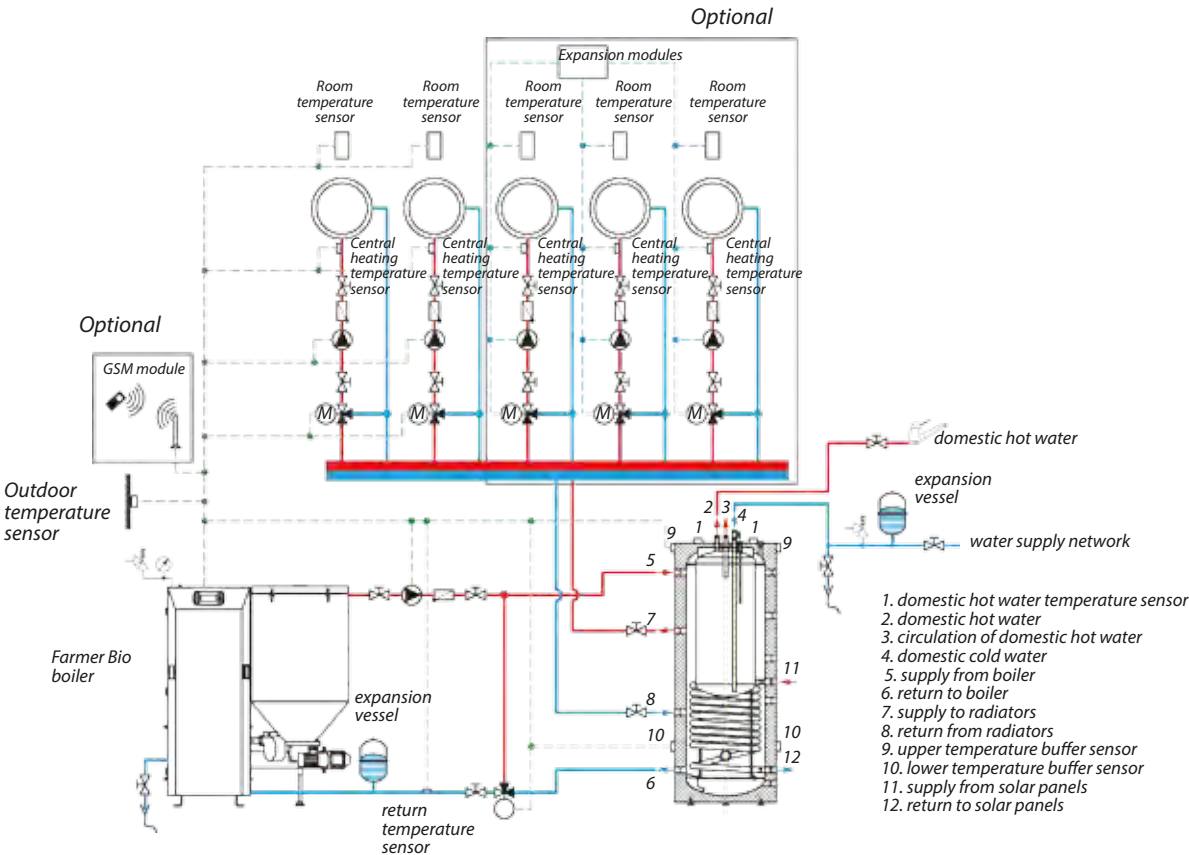
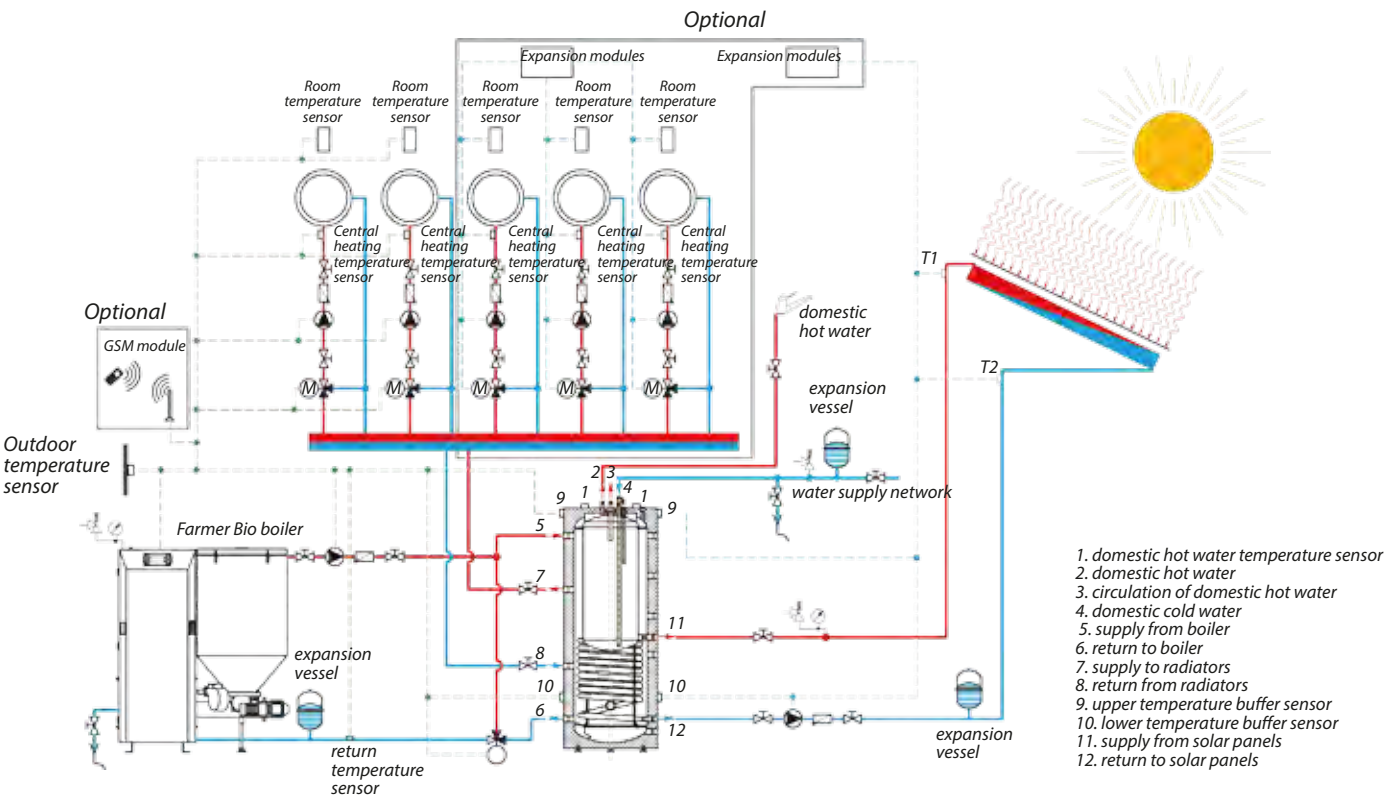


Diagram 2 Caution! Additional modules may be required.



Installation diagram

Diagram 3 Caution! Additional modules may be required.

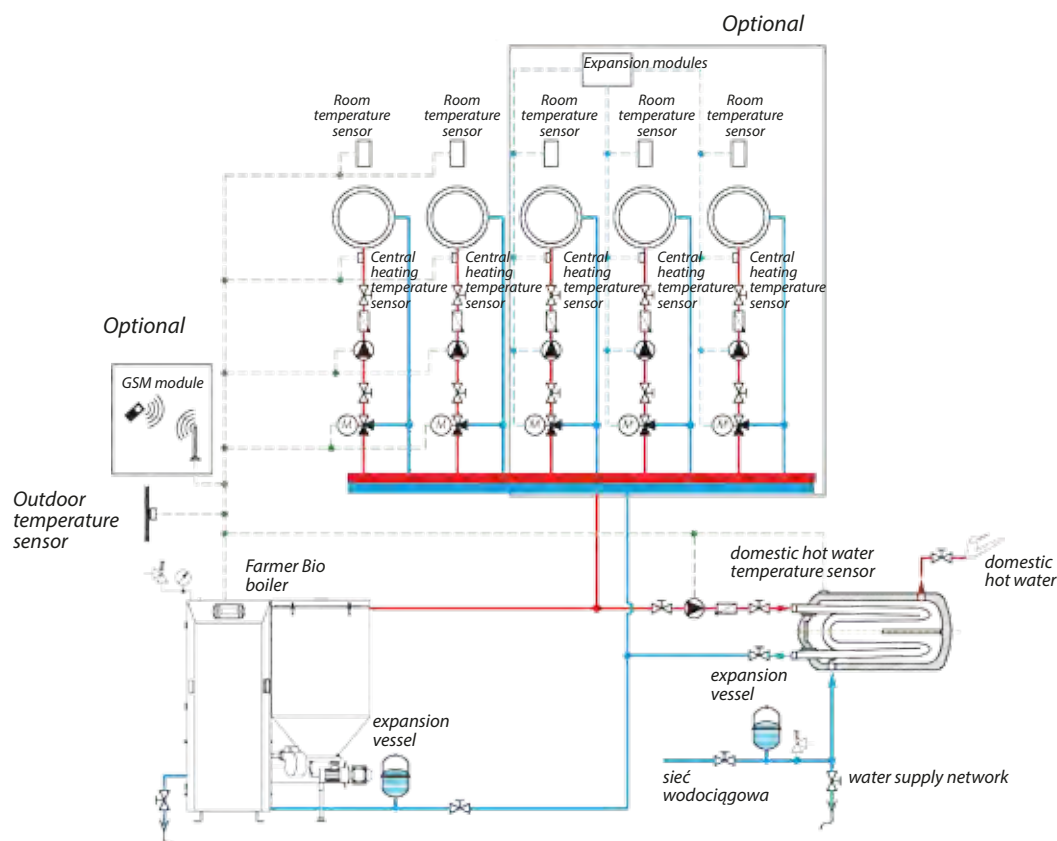


Diagram 4 Caution! Additional modules may be required.

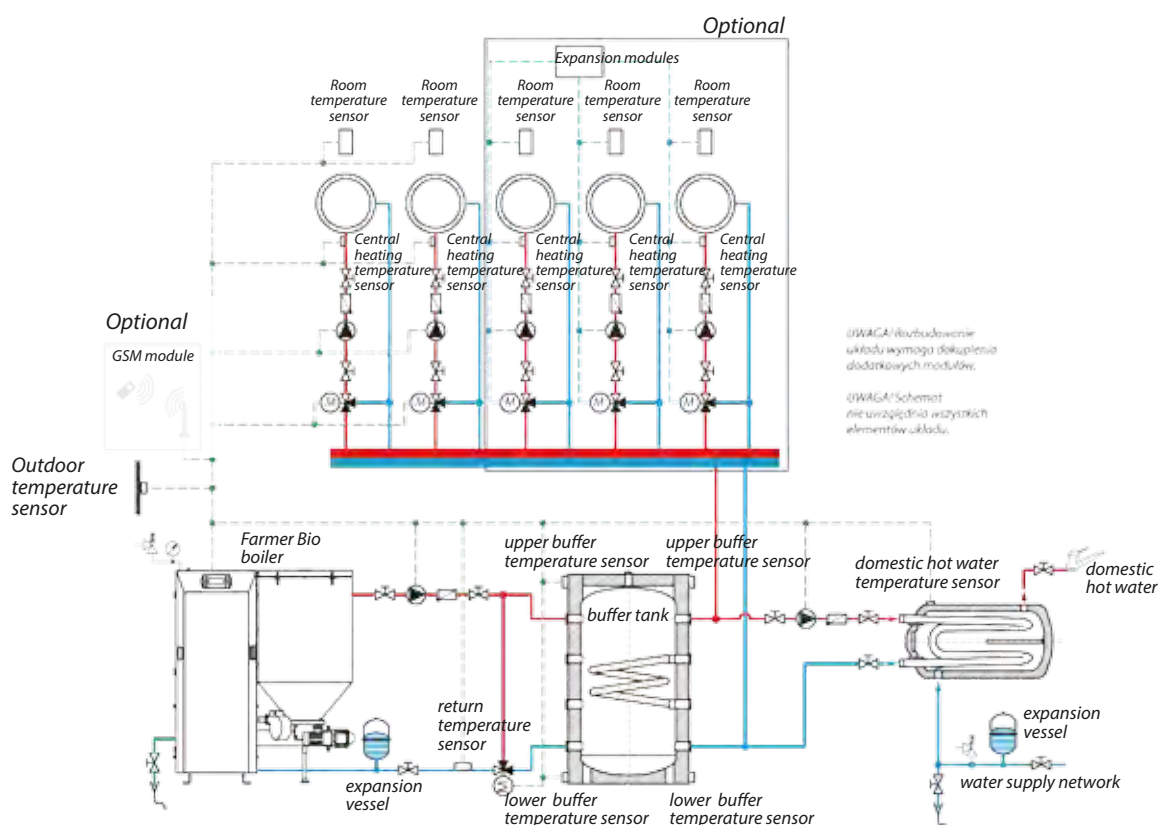
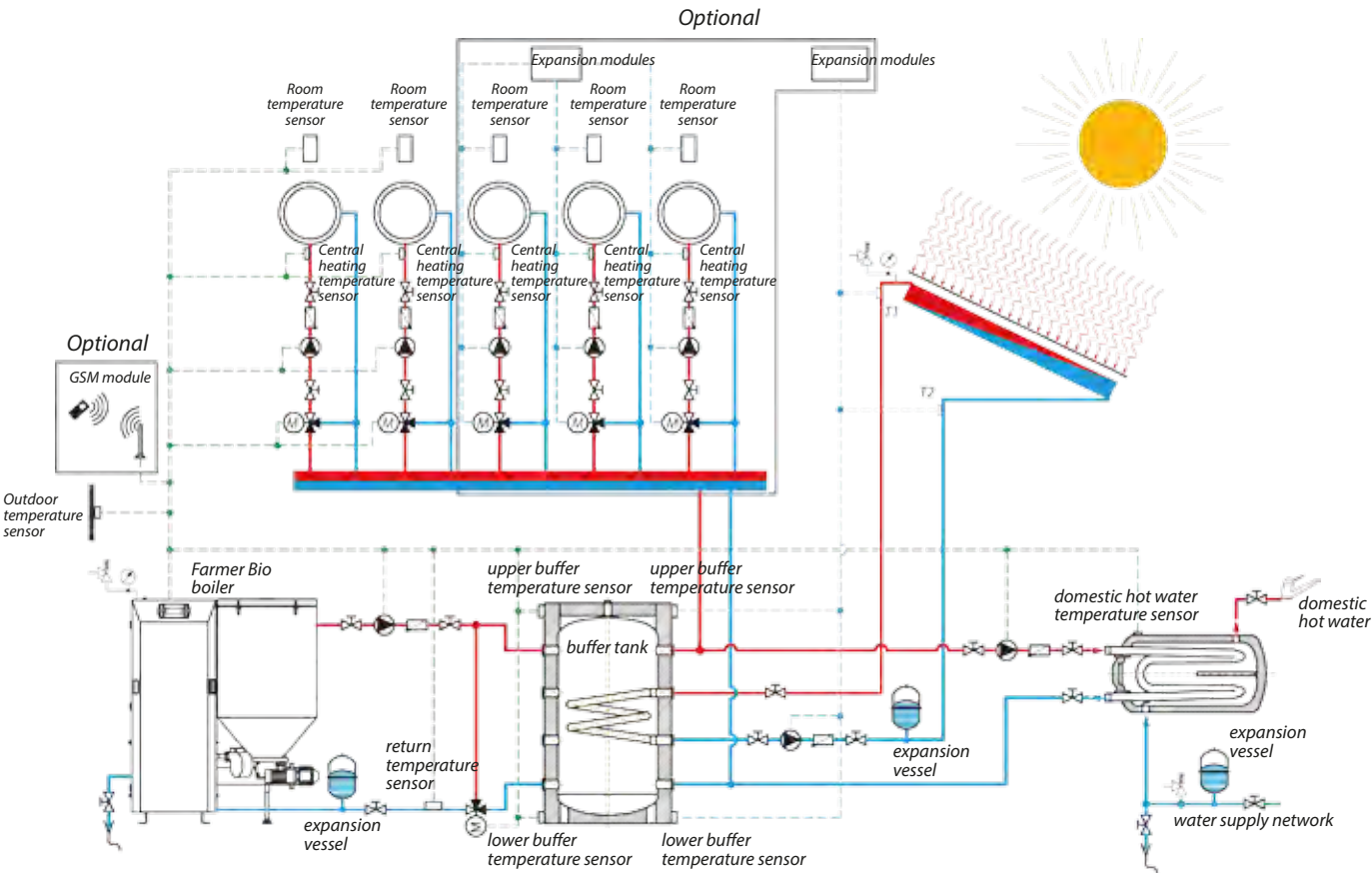


Diagram 5 Caution! Additional modules may be required.



Specification

Standard and optional accessories

TYPE	FB 16 kW	FB 24 kW
power range on pellet (kW)	5–16	7–24
building area (m ²)	50–200	100–300
FUEL TYPES		
pellets	S	S
oats/pellets 50/50	S	S
sunflower pellets	S	S
grape seeds	S	S
hazelnut and coconut shells	S	S
olive seeds	S	S
pea coal	S	S
coal fines	S	S
MANUALLY FEEDED FUEL TYPES		
wood	S	S
VERTICAL HEAT EXCHANGER		
boiler steel P265GH	S	S
no. of heat-exchanger draughts	3	3
Heat-exchanger design 3t*	S	S
possibility of connection to closed system	S	S
left / right doors	S	S
exhaust gas whirler	S	S
Door insulation 50 [mm]	S	S
Grates for wood	S	S
ash-pit drawer	S	S
RESERVOIR		
right / left	S	S
basic 295 [l]	S	S
external feeding	O	O
fuel feeding from the reservoir to the burner	S	S
tank lid closure sensor	S	S
Gas operated actuators	S	S
powder painting	S	S
BURNER		
cast iron burner	S	S
rotary retort burner	S	S
automatic ash removal	S	S
gear motor	S	S
burner tip for pellets	S	S
AUTOMATICS		
boiler temperature sensor	S	S
central heating temp sensor	O	O
return water temperature sensor	O	O
temperature sensor in the buffer	O	O
room temperature sensors	O	O
domestic hot water sensor	O	O
lambda sensor	S	S
possibility to connect additional modules	S	S
safety temperature limiter (STB)	S	S
GSM module	O	O

TYPE	FB 16 kW	FB 24 kW
AUTOMATICS AND CONTROL FEATURES		
Fuel feeding mechanism from the reservoir control	s	s
Air pressure ventilator control	s	s
Heating systems pumps control	s	s
hot domestic hot water pump control	s	s
2 mixing valves control **	s	s
accumulation buffer loading control	s	s
protection against too low return water temperature (return mixer and boiler pump)	s	s
cooperation with GSM module	s	s
AUTOMATIC SYSTEMS		
second generation Fuzzy Logic burner modulation	s	s
Hwp - domestic hot water priority	s	s
communication	CAN	CAN
fuel selection	s	s
alternative "boiler operation" function	s	s
outputs testing	s	s
domestic hot water weekly program	s	s
weekly room temperature program	s	s
simple menu	s	s
advanced menu	s	s
outdoor temperature compensation, solar module and accumulation tank control via controller menu	s	s
Alarms history	s	s
Help system	s	s
alarm codes	s	s
service mode	s	s
language - multilingual	s	s
ADDITIONAL MODULES		
Solar system control	o	o
3 additional mixing valves control (up to max. 16 pcs.)	o	o
DELIVERY		
delivery to the address indicated	s	s
24h delivery	s	s
WARRANTY/Years		
boiler body integrity	5	5
rotary burner	2	2
mechanics and automatics	2	2
warranty period extension	2	2

The price list for optional accessories is available at the manufacturer.

Key

s – standard accessories
o – optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)



The highest quality
is our priority.

description

technical data

automatics

dimensions

installation

accessories

Warmet 200 Ceramik

General purpose central heating device

multi fuel (wood, chips, straw, coal, coke, coal fines etc.) in upper or lower combustion mode.



models [kW]

18

25

32

fuels ▶



wood



briquette



chips



coal



pea coal



possibility to
install Platinum
Bio burner



service



P265
GH
boiler
steel



> 80%
boiler
efficiency



5 years
5 years warranty
+ 2 years
extended warranty

Description

Warmet 200 Ceramik is a line of multi fuel boilers with manual fuel feeding. It allows selection of upper or lower combustion mode depending on fuel used. 18, 25, and 32 kW power available.

Heat exchanger made of high quality steel from reliable Polish steel manufacturers with quality certificate. Heat exchanger is specially designed for solid fuels. Properly shaped exhaust canals with three draughts directions, improve energy receiving.

Boiler heat exchanger consists of three sections: fuel loading chamber, ceramic chamber with inner air distribution (primary and secondary) and third heat exchanger chamber. The second and third chamber determines high boiler efficiency. The gases are burned at over 900°C in the ceramic chamber with primary and secondary air, returning the heat to the third section (of heat exchanger). The second section is divided into two parts with the mechanical lever allowing to use a upper or lower combustion technology of solid fuel. Two combustion modes are available: lower (wood, fine coal, pea coal) and upper (low calorific value fuels). Heat exchanger design following 3T guidelines (time, turbulator, temperature).

The combustion chamber design allow to combust only part of loaded fuel charge at a time. Stable power, adjustable with electronic combustion control system.

Fuel combustion:

- 1) fuel is degassed at reduced air supply to remove volatile compounds.
- 2) gases are burned in the ceramic chamber (second heat exchanger section at high temperature with secondary air.
- 3) the energy is exchanged with the heating system in the third heat exchanger section.

Luxus 4 controller

Luxus 4 controller is compatible with three circulation pumps and with room thermostat ensuring convenient boiler operation. Fuzzy Logic and 3xPID regulation.

1 fuel loading chamber

large combustion chamber for longer combustion time of solid fuel upon a single fuel loading for 6 to 36 hours

2 ceramic chamber

increases the temperature in the burnout process over 900°C and burn incompletely burned gases with secondary air for improved efficiency

3 large easy

to use ash pan

4 double isolated

boiler bottom reduces heat losses

5 special design of steel heat exchanger



6 heat exchanger cleanout

7 large and convenient inclined

solid fuel loading doors facilitating solid fuel loading

8 excellent heat insulation

9 possibility to install Platinum Bio burner

water grates

moving grates - optional

intuitive

Depending on fuel used and heated area, Warmet 200 Ceramic can operate from 6 to 36 hours upon a single fuel charge.



front



rear

Warmet 200 Ceramic boilers meet the norm PN-EN 303 -5 requirements.

Features

- **Boiler regulator.** Controls air supply ventilator operation, central heating pump operation, floor heating and domestic hot water pumps to reduce fuel consumption, ensure convenient operation and maximize boiler life.

- **Central heating pump control**

The controller is compatible with room thermostat, activating central heating pump when necessary and reducing electric and heat energy consumption

- **Third pump control.** The controller is compatible with the third, additional pump (floor heating or additional room with room thermostat).

- **Air supply ventilator power adjustment.**

The exact ventilator power required for the Warmet 200 Ceramic boiler is determined by many different factors, e.g. chimney system type, fuel type and moisture content.

- **Soft start.** Extended ventilator motor life. Gradual increase in ventilator power.

- **Domestic hot water priority**

Advanced function for constant domestic hot water temperature and priority.

- **Boiler overheating.** When the water temperature exceeds 89°C, the controller switches to emergency mode and all the pumps are activated to reduce the temperature.



Technical specifications

Manufacturer reserves the right to design changes due to improvements

PARAMETER	W200 18 kW	W200 25 kW	W200 32 kW
Power range (kW)	5.6–18.5	7.7–25.5	9.6–32
Control method	Fuzzy Logic, PID	Fuzzy Logic, PID	Fuzzy Logic, PID
Water capacity (l)	60	65	75
Max. operating pressure (bar)	2	2	2
Test pressure (bar)	4	4	4
Chimney draught (mbar)	0.15–0.25	0.15–0.25	0.15–0.25
Min. return water temperature (°C)	50	50	50
Average fuel consumption at nominal / minimum heating power –			
coal (kg/h)	4.8 / 1.44	6.75 / 2	8.64 / 2.59
wood (kg/h)	7.3 / 2.19	10.1 / 3	12.96 / 3.88
Flue diameter (mm)	160	160	160
Supply/return connector diameter (in.)	1 1/4	1 1/4	1 1/4
Power supply (V)	230	230	230
Max. power consumption (W)	100	100	100
Weight (kg)	300	310	350
Fuel chamber capacity (l)	47	58	87
Fuel loading doors dimensions (mm)	290 x 280	290 x 280	290 x 280

Fuel parameters

Wood

For nominal boiler power use dry wood with 20% maximum moisture content (around 18 months period of drying woodlogs under cover). Use of larger logs increases burning time upon a single charge up to 8 hours.

Wood briquette

Briquette with moisture content similar to wood up to 18%.

Wood chips

Must be properly dried up to 20% moisture content.

Coal and coal fines

- recommended calorific value > 15 MJ/kg
- ash content 12%
- moisture content < 12%
- VOC 28-40%
- ash fusion temperature >1150°C
- low caking
- low swelling

Pea coal

- size 5-25 mm
- recommended calorific value > 23,000 kJ/kg
- ash content 12%
- moisture content < 12%
- VOC 28-40%
- ash fusion temperature >1150°C
- low caking
- low swelling



description

technical data

automatics

dimensions

installation

accessories

Luxus 4

Controller for the entire heating system

with floor heating and domestic hot water.



Control

- air pressure ventilator
- central heating pump
- domestic hot water pump
- floor heating pump
- mixing valve

1. with additional module 1-16 heating circuits (heaters or floor heating)

Functions

- **ZTK** – independent boiler temperature protection for improved safety as standard equipment.
- **Alarm states** Boiler overheating at boiler water temperature exceeding alarm threshold, the controller switches to alarm mode and all the pumps are activated to reduce the temperature.
- **Output test** – function allows verification of boiler equipment proper work before boiler start up.
- **Blow through** – cyclic blower activation at boiler operating temperature.
- **Ignition** – efficient fuel ignition process with multiple settings, i.e. blower power, ignition time, ignition temperature threshold.
- **Putting out** – easy and fast capture of no fuel condition for reduced energy losses.
- **3 pumps control.**
- **Alphanumeric display** –easy communication and operation.

Features

- **Safe ventilator operation**
allows smooth power adjustment and relay connected in parallel increases the control system reliability.
- **Ventilator power modulation**
allows adjustment of its power to the combustion conditions for economic and ecological combustion process.

description

technical data

automatics

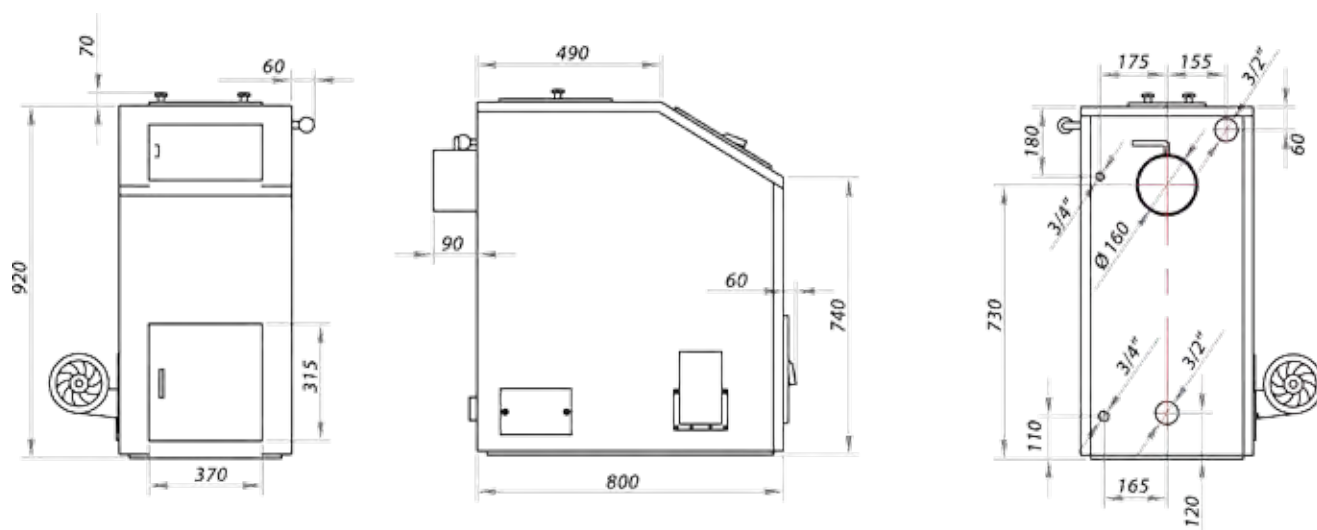
dimensions

installation

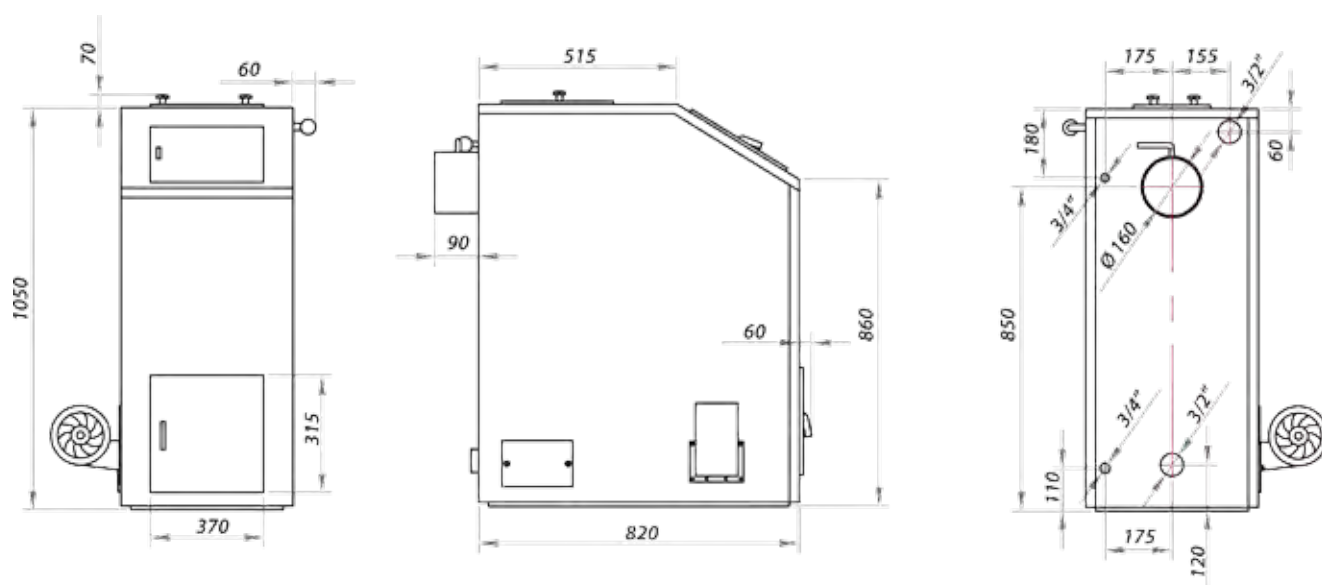
accessories

Dimensions

Warmet 200 Ceramik 18 kW

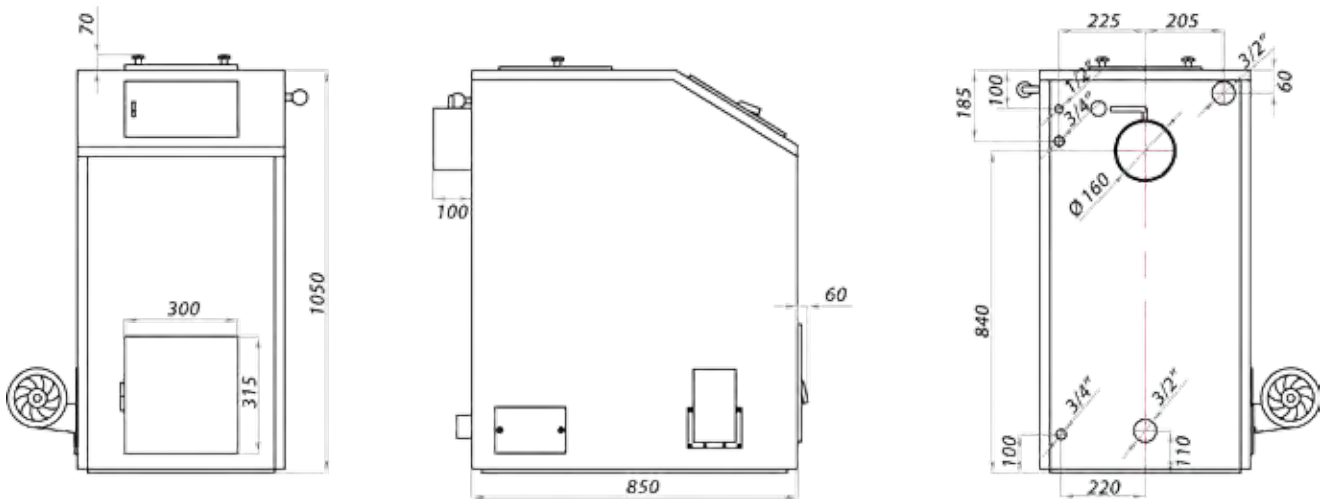


Warmet 200 Ceramik 25 kW



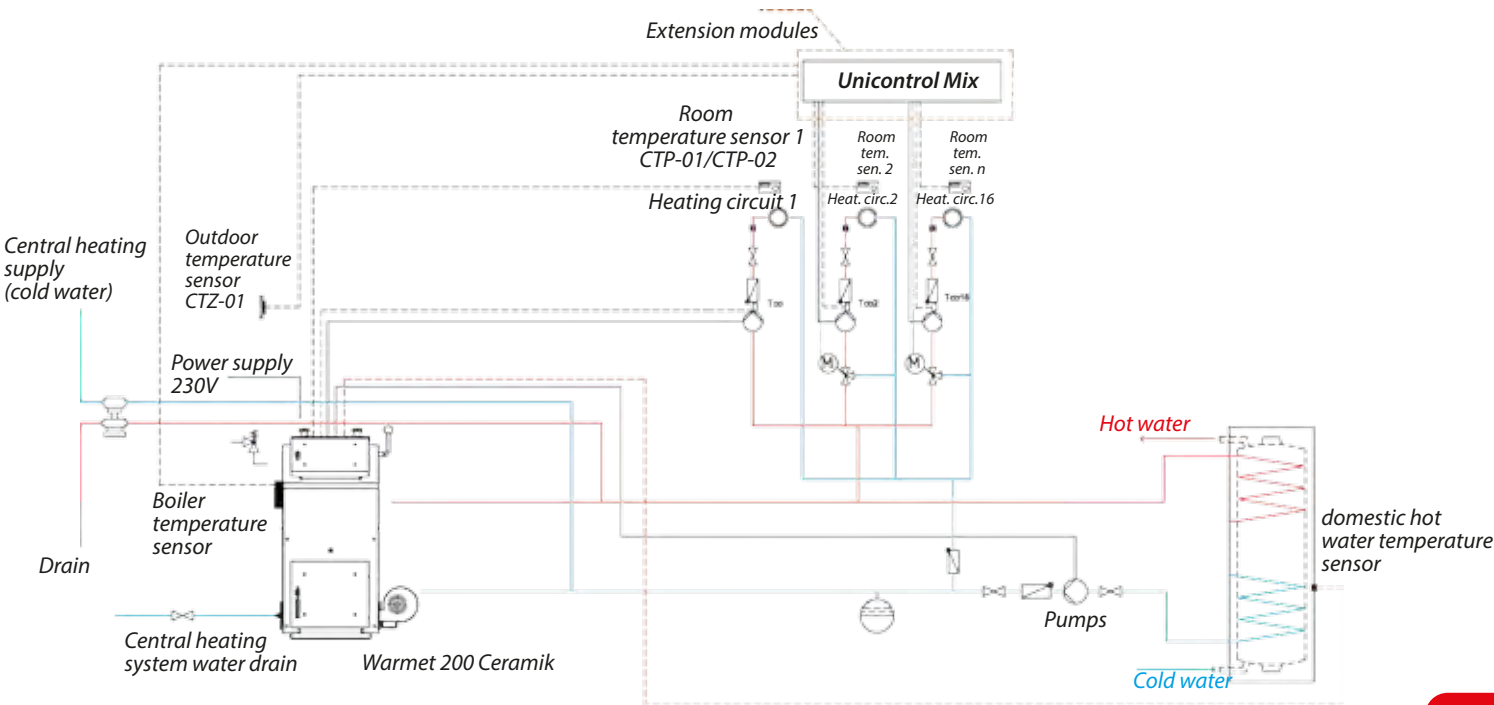
description	technical data	automatics	dimensions	installation	accessories
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Warmet 200 Ceramik 32 kW



Installation diagram

Diagram 1 Caution! Additional modules may be required.



description	technical data	automatics	dimensions	installation	accessories
-------------	----------------	------------	------------	--------------	-------------

Specification

Standard and optional accessories

TYPE	W200 18 kW	W200 25 kW	W200 32 kW
power range (kW)	5,6–18,5	7,7–25,5	9,6–32
building area (m²)	140–250	190–340	150–400
FUEL TYPES			
wood	s	s	s
woodchips	s	s	s
coal	s	s	s
coal fines	s	s	s
VERTICAL HEAT EXCHANGER			
boiler steel P265GH	s	s	s
inclined loading doors	s	s	s
vertical exchanger	s	s	s
no. of heat exchanger draughts	3	3	3
ceramic chamber	s	s	s
primary and secondary air distribution	s	s	s
water cooled grates	s	s	s
exchanger design*	3t	3t	3t
possibility of connection to system	s	s	s
left doors	o	o	o
air supply ventilator	s	s	s
left or right ventilator installation	s	s	s
left or right heat exchanger cleanout position	s	s	s
moving grates	o	o	o
adjustable upper/lower combustion technology	s	s	s
lever for easier ignition	s	s	s
double insulated bottom	s	s	s
large combustion chamber	s	s	s
large ash pan	s	s	s
AUTOMATICS			
boiler sensor	s	s	s
thermal safety sensor	s	s	s
programmable room thermostat	o	o	o
wireless programmable room thermostat	o	o	o
domestic hot water sensor	s	s	s

TYPE	W200 18 kW	W200 25 kW	W200 32 kW
AUTOMATICS AND CONTROL FEATURES			
Air pressure ventilator control	s	s	s
Central heating pump control	s	s	s
hot domestic water pump control	s	s	s
floor heating pump control	s	s	s
mixing valve control **	o	o	o
AUTOMATIC SYSTEMS			
air ventilator power modulation	s	s	s
domestic hot water priority	s	s	s
blow through	s	s	s
ignition	s	s	s
putting out	s	s	s
3 pumps control	s	s	s
alarm identification	s	s	s
output testing	s	s	s
language - multilingual	s	s	s
ADDITIONAL MODULES			
2 additional mixing valves control	o	o	o
DELIVERY			
delivery to the address indicated	s	s	s
24h delivery	s	s	s
WARRANTY/Years			
boiler body integrity	5	5	5
mechanics and automatics	2	2	2
extended warranty - mechanics and automatics	2	2	2


The price list for optional accessories is available at the manufacturer.

Key

s - standard accessories
o - optional accessories

* high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).

** with additional module 1-16 heating circuits (heaters or floor heating)

A photograph of a person's hand using a laptop in a library. The background is filled with wooden bookshelves packed with books of various colors. The text "The easiness of operation will enchant anyone..." is overlaid in the upper center of the image.

The easiness of operation
will enchant anyone...



description

technical data

automatics

dimensions

installation

accessories

Warmet SDS Ceramik

General purpose central heating

device for any fuel type (wood, chips, straw, coal, coke, coal fines etc.) with upper or lower combustion mode



models [kW]

A 14 40 50

B 70 100

fuels



wood



briquette



chips



coal



pea coal



service



boiler steel



boiler efficiency



5 years warranty + 2 years extended warranty

Description

Warmet SDS Ceramik is a line of multi fuel boilers with manual fuel feeding. It allows selection of upper or lower combustion mode depending on fuel used.

Heat exchanger made of high quality steel from reliable Polish steel manufacturers with quality certificate. Properly shaped exhaust canals with three draughts directions improve energy receiving.

Boiler heat exchanger consists of three sections: fuel loading chamber, ceramic chamber with inner air distribution (primary and secondary) and third heat exchanger chamber. The second and third chamber determines high boiler efficiency. The gases are burned at over 900°C in the ceramic chamber with primary and secondary air, returning the heat to the third section of heat exchanger. The second section is divided into two parts with the mechanical lever allowing to use upper or lower combustion technology of solid fuel. Two combustion modes are available: lower (wood, fine coal, pea coal) and upper (low calorific value fuels). Heat exchanger design following 3T guidelines (time, turbulator, temperature).

The combustion chamber design allow to combust only part of loaded fuel charge at a time. Stable power, adjustable with electronic combustion control system. The combustion chamber design allow to combust only part of loaded fuel charge at a time. Stable power, adjustable with electronic combustion air supply control system.

Fuel combustion:

- 1) fuel is degassed at reduced air supply to remove volatile compounds,
- 2) gases are burned in the ceramic chamber (second heat exchanger section at high temperature with secondary air),
- 3) the energy is exchanged with the heating system in the third heat exchanger section.



Luxus4 controller

controls three pumps, compatible with room thermostat ensuring convenient boiler operation. Fuzzy Logic and 3xPID regulation.

1 fuel loading chamber

large combustion chamber for longer combustion time of solid fuel upon a single fuel loading for 6 to 36 hours

2 ceramic chamber

increases the temperature in the burnout process over 900°C and burn incompletely burned gases with secondary air for improved efficiency

3 large easy to use ash pan



4 special design of steel heat exchanger

5 heat exchanger cleanout

6 large and convenient solid fuel loading doors facilitating solid fuel loading

7 excellent heat insulation

water grates

intuitive

Depending on fuel used and heated area, Warmet SDS Ceramic can operate from 6 to 36 hours upon a single fuel charge.



front



rear

Warmet SDS Ceramic boilers meet the norm PN-EN 303 -S requirements.

Features

- Boiler regulator.** Supply ventilator operation, central heating pump operation, floor heating and domestic hot water pumps to reduce fuel consumption, ensure convenient operation and maximize boiler life.
- Central heating pump control.** The controller is compatible with room thermostat, activating central heating pump when necessary and reducing electric and heat energy consumption.
- Third pump control.** The controller is compatible with the third, additional pump (floor heating or additional room with room thermostat).
- Air supply ventilator power adjustment.** The exact ventilator power required for the Warmet SDS Ceramic boiler is determined by many different factors. The exact blower power required for the Warmet SDS Ceramic boiler is determined by many different factors, e.g. chimney system type, fuel type and moisture content.
- Soft start.** Extended ventilator motor life. Gradual increase in ventilator power.
- Domestic hot water priority.** Advanced function for constant domestic hot water temperature and priority.
- Boiler overheating.** When the water temperature exceeds 89°C, the controller switches to emergency mode and all the pumps are activated to reduce the temperature.

Technical specification

Manufacturer reserves the right to design changes due to improvements

PARAMETER	WSDS 14 kW	WSDS 40 kW	WSDS 50 kW	WSDS 70 kW	WSDS 100 kW
Power range (kW)	PID	PID	PID	PID	PID
Max. operating pressure (bar)	2	2	2	2	2
Test pressure (bar)	4	4	4	4	4
Chimney draught (mbar)	0.15–0.25	0.15–0.25	0.15–0.25	0.15–0.4	0.15–0.4
Min. return water temperature (°C)	50	50	50	50	50
Power supply (V)	230	460	555	756	1100
Weight (kg)	230	200	260	200	405
Fuel chamber capacity (l)	47	186	209	213	399
Fuel loading doors dimensions (mm)	275 x 210	300 x 290	300 x 290	400 x 300	400 x 300

Fuel parameters

Wood

For nominal boiler power use dry wood with 20% maximum moisture content (around 18 months period of drying woodlogs under cover). Use of larger logs increases burning time upon a single charge up to 8 hours.

Wood briquette

Briquette with moisture content similar to wood up to 18%.

Wood chips

Must be properly dried up to 20% moisture content.

Coal and coal fines

- recommended calorific value > 15 MJ/kg
- ash content 12%
- moisture content < 12%
- VOC 28-40%
- ash fusion temperature >1150°C
- low caking
- low swelling

Pea coal

- size 5-25 mm
- recommended calorific value > 23,000 kJ/kg
- ash content 12%
- moisture content < 12%
- VOC 28-40%
- ash fusion temperature >1150°C
- low caking
- low swelling



Luxus 4

Controller for the entire heating system

with floor heating and domestic hot water.



Control

- Air pressure ventilator
- central heating pump
- domestic hot water pump
- floor heating pump
- mixing valve¹

1. with additional module 1-16 heating circuits (heaters or floor heating)

Functions

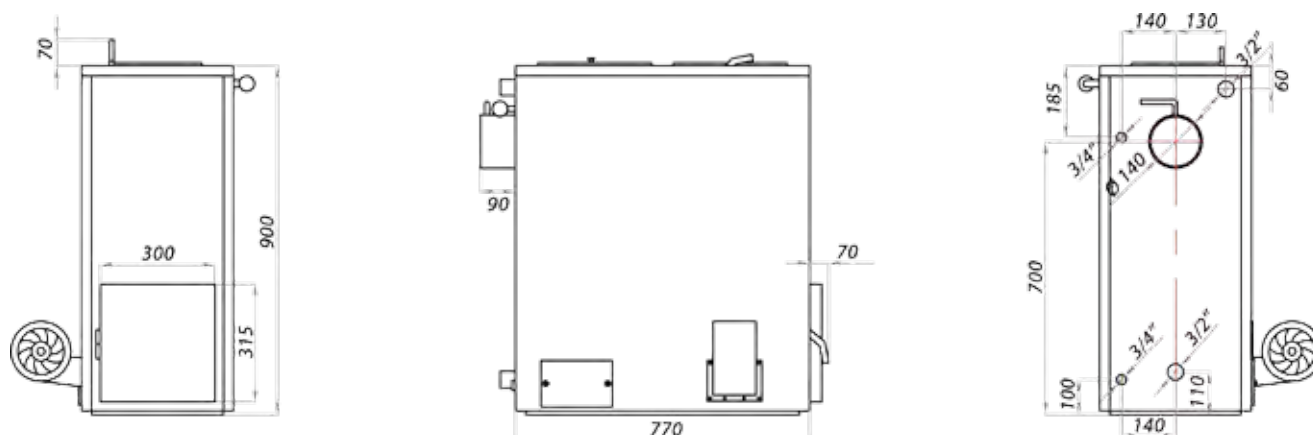
- **ZTK** – independent boiler temperature protection for improved safety as standard equipment.
- **Alarm states** - Boiler overheating at boiler water temperature exceeding alarm threshold, the controller switches to alarm mode and all the pumps are activated to reduce the temperature.
- **Output test** – function allows verification of boiler equipment proper work before boiler start up.
- **Blow through** – cyclic blower activation at boiler operating temperature.
- **Ignition** – efficient fuel ignition process with multiple settings, i.e. blower power, ignition time, ignition temperature threshold.
- **Putting out** – easy and fast capture of no fuel condition for reduced energy losses.
- **3 pumps control.**
- **Alphanumeric display** – easy communication and operation.

Features

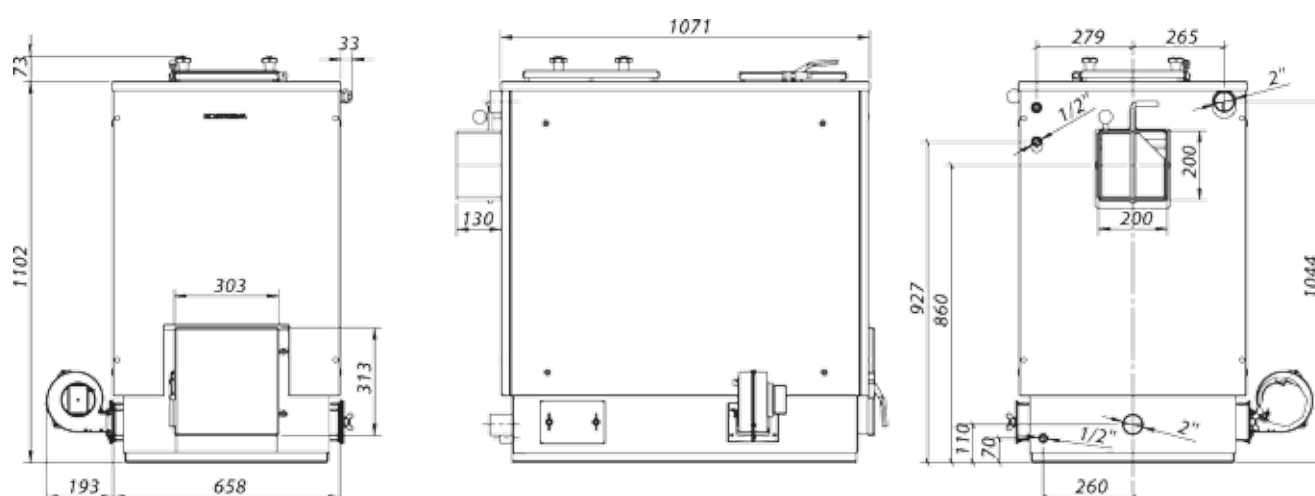
- **Safe ventilator operation**
allows smooth power adjustment and relay connected in parallel increases the control system reliability.
- **Ventilator power modulation**
allows adjustment of its power to the combustion conditions for economic and ecological combustion process.

Dimensions

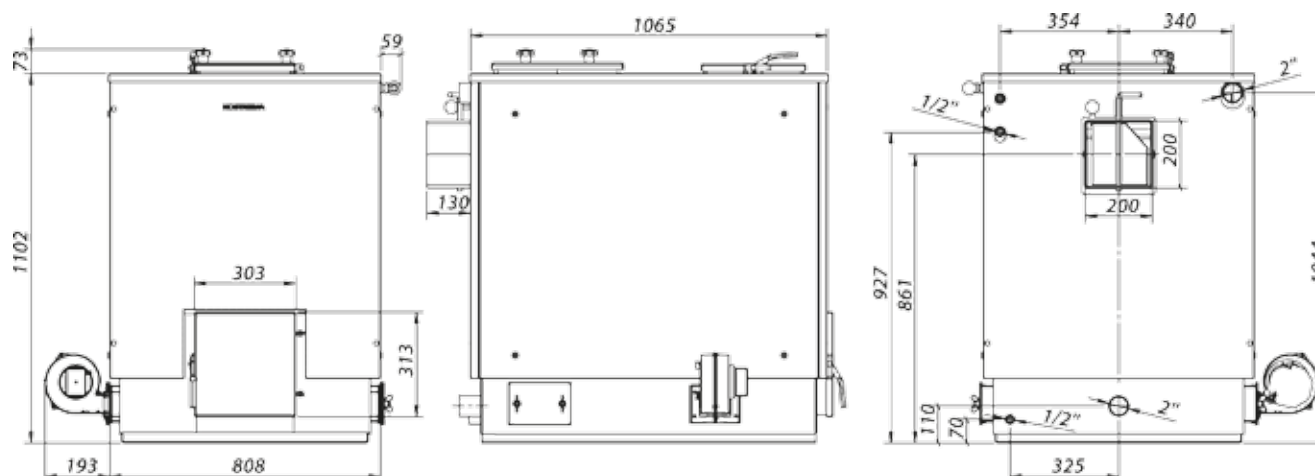
Warmet SDS Ceramik 14 kW



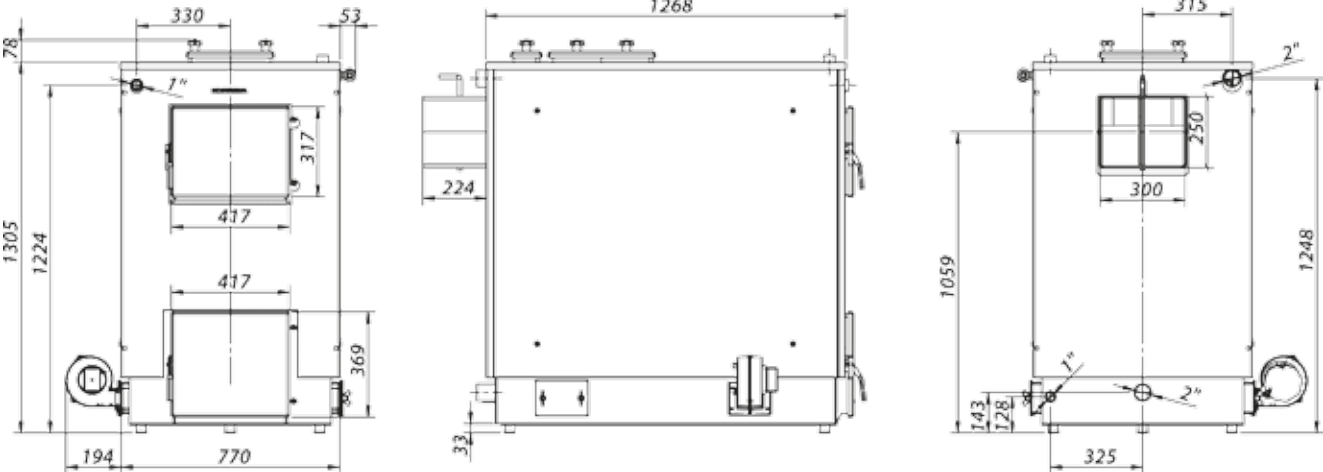
Warmet SDS Ceramik 40 kW



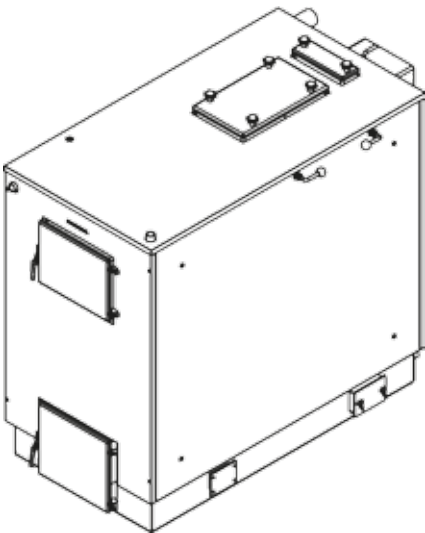
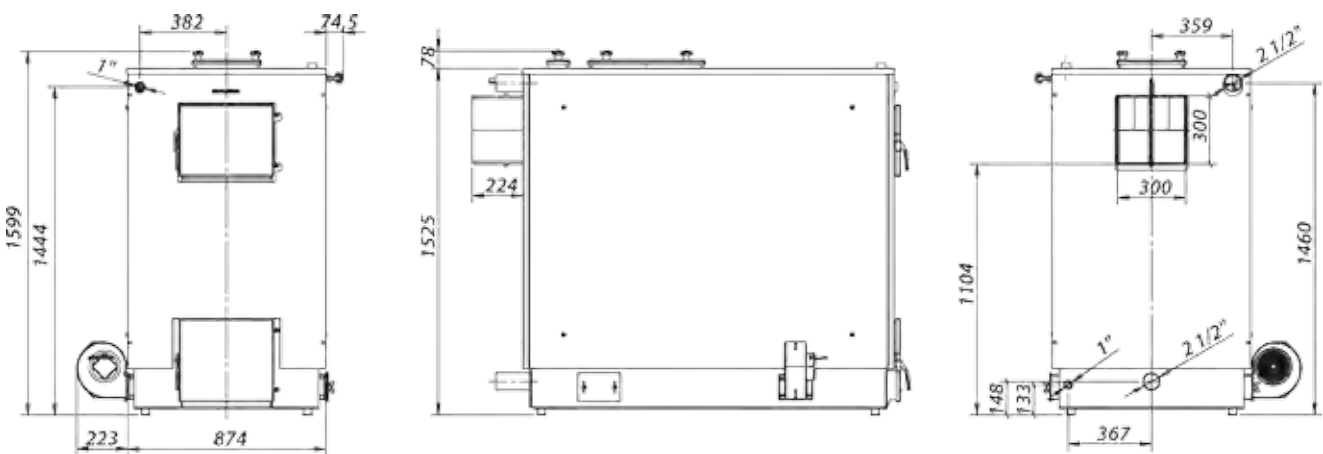
Warmet SDS Ceramik 50 kW



Warmet SDS Ceramik 70 kW



Warmet SDS Ceramik 100 kW



description	technical data	automatics	dimensions	installation	accessories
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Specification

Standard and optional boiler accessories

TYPE	WSDS 14 kW	WSDS 40 kW	WSDS 50 kW	WSDS 70 kW	WSDS 100 kW
Building heated area (m²)	60–190	300–550	390–690	510–920	760–1370
FUEL TYPES					
wood	S	S	S	S	S
chips	S	S	S	S	S
coal	S	S	S	S	S
coal fines	S	S	S	S	S
VERTICAL HEAT EXCHANGER					
boiler steel P265GH	S	S	S	S	S
top loading doors	S	S	-	-	-
front loading doors	-	-	S	S	S
vertical exchanger	S	S	S	S	S
no. of heat exchanger draughts	3	4	4	4	4
ceramic chamber	S	S	S	S	S
primary and secondary air distribution	S	S	S	S	S
water cooled grates	S	S	S	S	S
exchanger design*	3t	3t	3t	3t	3t
possibility of connection to closed system	S	S	S	S	S
left doors	O	O	O	O	O
air supply ventilator	S	S	S	S	S
left or right ventilator installation	S	S	S	S	S
left or right heat exchanger cleanout position	S	S	S	S	S
moving grates	O	-	-	-	-
adjustable upper/lower combustion technology	S	S	S	S	S
lever for easier ignition	S	S	S	S	S
double insulated bottom	S	-	-	-	-
large combustion chamber	S	S	S	S	S
large ash pan	S	S	S	S	S
AUTOMATICS					
boiler sensor	S	S	S	S	S
thermal safety sensor	S	S	S	S	S
programmable room thermostat	O	O	O	O	O
wireless programmable room thermostat	O	O	O	O	O
domestic hot water sensor	S	S	S	S	S

TYPE	WSDS 14 kW	WSDS 40 kW	WSDS 50 kW	WSDS 70 kW	WSDS 100 kW
AUTOMATICS AND CONTROL FEATURES					
Air pressure ventilator control	s	s	s	s	s
central heating pump control	s	s	s	s	s
hot domestic water pump control	s	s	s	s	s
floor heating pump control	s	s	s	s	s
mixing valve control **	o	o	o	o	o
AUTOMATIC SYSTEMS					
ventilator power modulation	s	s	s	s	s
domestic hot water priority	s	s	s	s	s
blow through	s	s	s	s	s
ignition	s	s	s	s	s
putting out	s	s	s	s	s
3 pumps control	s	s	s	s	s
alarm identification	s	s	s	s	s
output testing	s	s	s	s	s
language - multilingual	s	s	s	s	s
ADDITIONAL MODULES					
2 additional mixing valves control	o	o	o	o	o
DELIVERY					
delivery to the address indicated	s	s	s	s	s
24h delivery	s	s	s	s	s
WARRANTY/Years					
boiler body integrity	5	5	5	5	5
mechanics and automatics	2	2	2	2	2
extended warranty - mechanics and automatics	2	2	2	2	2

The price list for optional accessories is available at the manufacturer.

Key

- s - standard accessories
- o - optional accessories
- * high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).
- ** with additional module 1-16 heating circuits (heaters or floor heating)



A skydiver is shown in a full-body, inverted position, falling through a clear blue sky. The skydiver is wearing a red and blue jumpsuit, black gloves, and a black helmet with a red and white face mask. The background is a vast expanse of blue sky with scattered white clouds. The text "Technology, energy and logic combined." is overlaid in the upper right corner.

Technology,
energy and logic
combined.

description

technical data

dimensions

accessories

Warmet PK Ceramik

Boiler - stove

The boiler intended for central heating of residential houses, holiday homes etc.



models [kW]

13

fuels ▶



wood



coal

P265
GH

boiler steel

> 80%

boiler
efficiency

3 years

3 years
warranty

Description

Warmet PK Ceramik (boiler-stove) is intended for central heating of residential houses, holiday homes etc.

Main fuels:

- wood
- hard coal,
- brown coal,
- wood and peat briquette.

The inside of the boiler is lined with ceramic liner, improving combustion quality, reducing fuel consumption and maintaining the heat for cooking.

The boiler is adapted for heating a cast iron heating panel in the summer (summer and winter grate).

Flue gas outlet with a throttle for flue gas discharge draught control.



dimensions

technical data

dimensions

accessories

1 charging reservoir
large charging reservoir
extending combustion time
upon a single fuel charge
for 6 to 36 hours

2 ceramic chamber
increases the temperature
in the burnout process
over 900°C and burn waste
gases with secondary
air for improved efficiency

3 large ash
paneasy to use

4 regulated air input
for combustion in boiler without
the use of current (properly prepared
installation in a building) (optional)



**5 special design
of steel heat
exchanger**

**6 large and
convenient
charging opening**
facilitating fuel loading

**7 excellent heat
insulation**

**summer
heating function**
heating cast iron heating
panel in the summer



front



rear

Warmet PK Ceramic boilers meet PN-EN 303 -5 requirements.

Specification

The design may change due to improvements.

PARAMETER	PK 13 kW
Pellet output range (kW)	6–13
Class as per PN-EN 303-5	2
Water capacity (l)	50
Max. operating pressure (bar)	2
Test pressure (bar)	4
Flue draught (mbar)	0.15–0.25
Min. return water temperature (°C)	40
Weight (kg)	190
Reservoir converter capacity (l)	39
Charging opening dimensions (mm)	330 x 150

Fuel parameters

Wood

For nominal boiler power use dry wood with maximum moisture content of 20% (18 months drying under cover).

Use of larger logs increases burning time upon a single charge up to 8 hours.

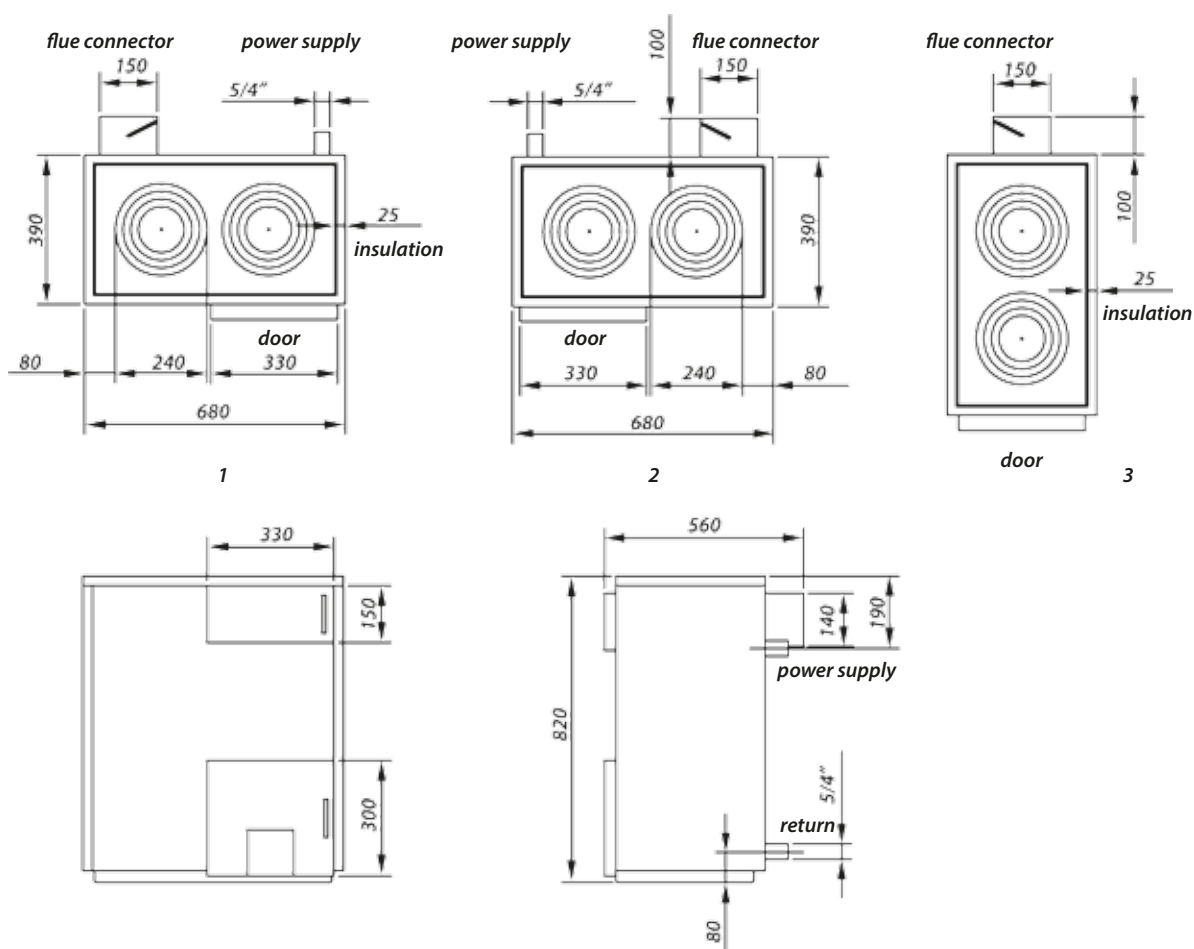
Coal and coal fines

- recommended calorific value > 15 MJ/kg
- ash content 12%
- moisture content < 12%
- VOC 28-40%
- ash fusion temperature > 1150°C
- low caking
- low swelling



Dimensions

Warmet PK Ceramik 13 kW



description	technical data	dimensions	accessories
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Specification

Standard and optional boiler accessories

TYPE	PK 13 kW
building area (m2)	40–150
FUEL TYPES	
Wood	s
Coal	s
VERTICAL HEAT EXCHANGER	
boiler steel P265GH	s
front reservoir	s
vertical exchanger	s
no. of exchanger draughts	3
primary and secondary air distribution	s
water wood grate	s
combustion chamber design *	s
optional closed system	s
left doors	s
large charging reservoir	s
large ash pan	s
doors	s
DELIVERY	
delivery to the address indicated	s
24h delivery	s
WARRANTY/Years	
boiler body integrity	3

The price list for optional accessories is available at the manufacturer.

Key

- s - standard accessories
o - optional accessories
- * high quality durable steel heat exchanger was designed following 3T guidelines (time, turbulator, temperature).



Have a nice,
warm life :)

description

Reservoirs



models [L]

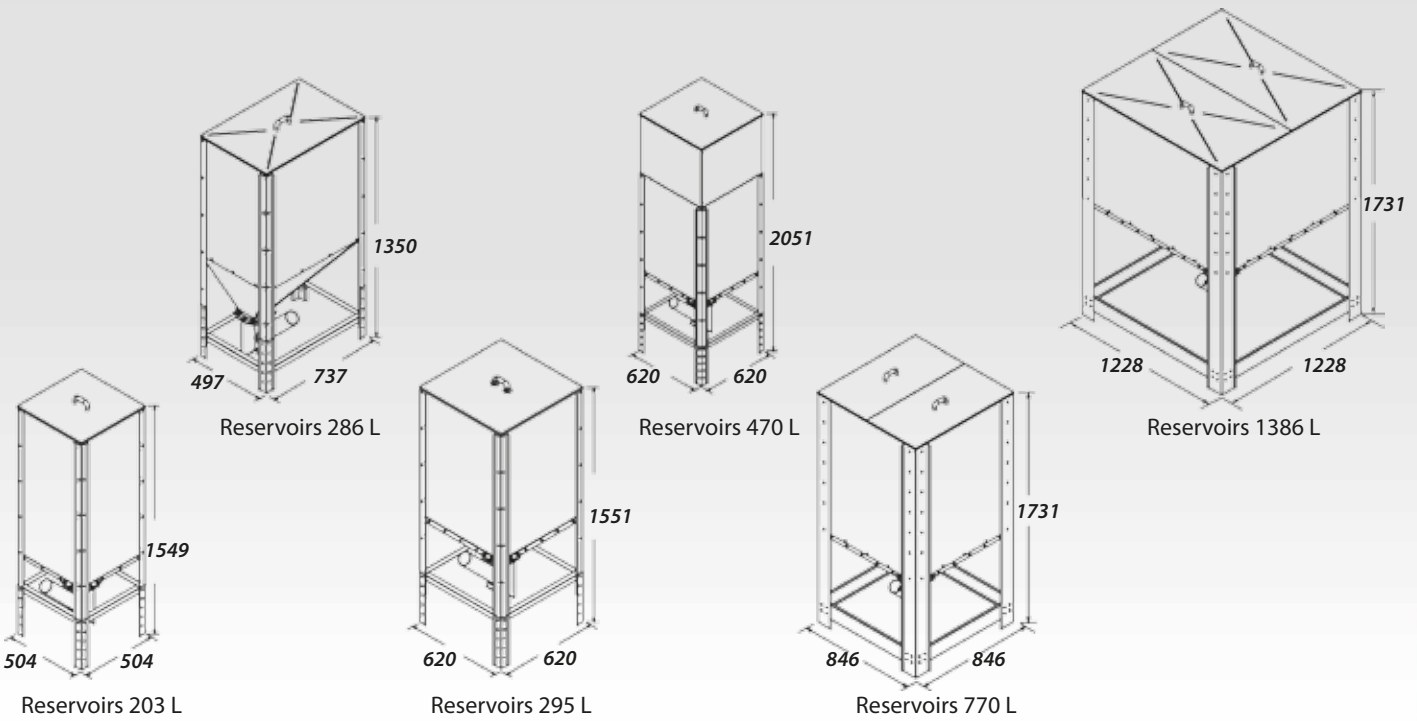
- 203
- 286
- 295
- 470
- 770
- 1386

description ▶

H25N20S2
galvanized steel

3 years
warranty

Dimensions



Awards

Platinum Bio burner



International Energy - Trade show in Szczecin 2009-12-14 March 2009



Pellets-Expo committee appreciated our Platinum Bio burner



Main prize, International Trade Show in Szczecin



Main prize, Trade Fair in Olsztyn, 2010



Special award for Mini Bio boiler and Platinum Bio burner, Trade Fair in Lublin



Special award, Trade Fair in Modrze

Pellets Fuzzy Logic 2



Special award XI ENEX - International Power Industry Fair in Kielce, 04-06 March 2008



Special award, TARBUD Trade Fair in Wrocław, 07-09 March 2008



Special award, International Energy - Trade show in Szczecin. 14 16 March 2008



MAIN PRIZE The Best Product - OLTARBUD International Trade Fair in Olsztyn 28-30 March 2008



MAIN PRICE Installation products MURATOR - EXPO Warsaw. 18-20 April 2008



Nomination for GOLD MEDAL International Fair of Installations and Equipment Poznań. 22-25 April 2008



GOLD MEDAL International AGROBUS 2008 Fair Trade Saint Petersburg, Russia. 22 - 27 August 2008



Special award



Special award by the committee LUBDOM Trade Fair



First prize • VII INTERNATIONAL PELLETS EXPO & BRYKIET - EXPO 2009

Mini Bio



International Fair of Installations and Equipment INSTALACJE 2010 "ACANTHUS AUREUS"



Nomination 2010 International Poznań Fair Trade "INSTALACJE 2010"



Special award, Trade Fair in Lublin



"Złota ciupaga" Main prize, Nowy Targ



Special award "OLTARBUD-E" Fair Trade

Maxi Bio



Second prize IX International Trade Fair PELLETS-EXPO & BRYKIET-EXPO" Bydgoszcz 03 June 2011

See more awards and prizes
at www.kostrzewa.com.pl
or www.boilersforpellets.com

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