

BURNOIT

by **SUNSYSTEM**



BIOMASS HEATING

- AUTOMATED BOILERS
- PELLET STOVES
- PELLET BURNERS
- SOLID FUEL BOILERS



2018
CATALOGUE

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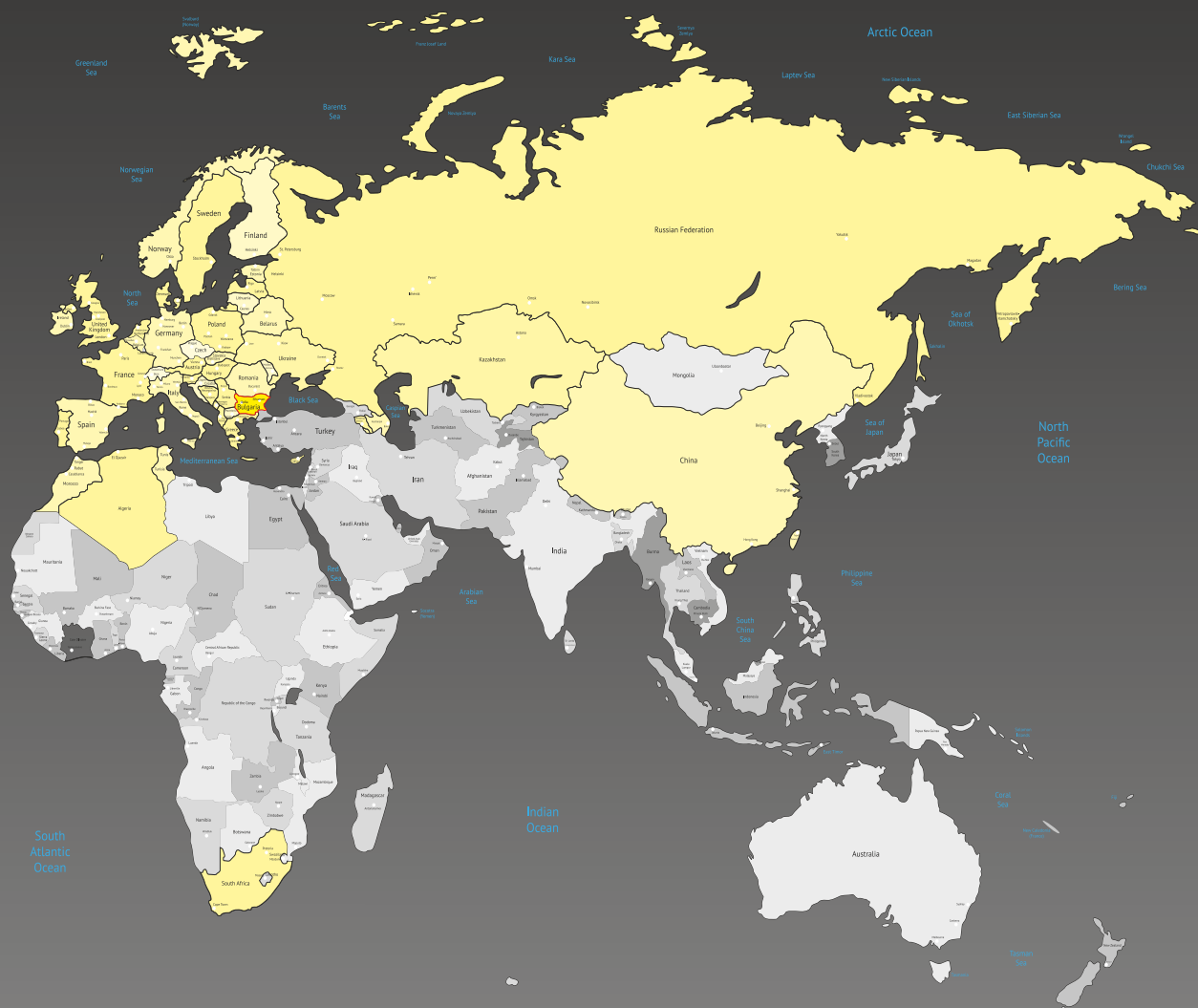


Our markets



Contact

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NES Ltd., Town of Shumen, Bulgaria

NES Ltd.



The Company

NES Ltd. is a manufacturer of appliances utilizing alternative energy sources.

The company was established in 2002 in town of Shumen, Bulgaria.

The company has its own manufacturing, warehousing and administrative facilities with an area of 30 000 sq. meters.

The staff amounts to 360 highly qualified specialists.



NES Ltd., Town of Sofia, Bulgaria

All company activities are governed by QMS ISO 9001:2008.

The production is marketed across Europe, Africa, North America, part of Asia and other marketplaces are in the scope of near-future activities.

Most products of NES Ltd. are designed to utilize alternative energy sources like solar thermal energy, biomass energy and aerothermal energy. These products contribute to sparing the energy reserves of the planet and minimizing the carbon emissions.



Our trademarks



- **SOLAR THERMAL**

- Solar collectors
- Domestic/ Storage / Combi tanks
- Buffer tanks
- Heat pump heaters / Heat pumps
- Non-standart storage tanks

- **PHOTOVOLTAIC**

- Photovoltaic modules, accessories
- Engineering, Procurement and Construction of photovoltaic plants

- **BIOMASS HEATING**

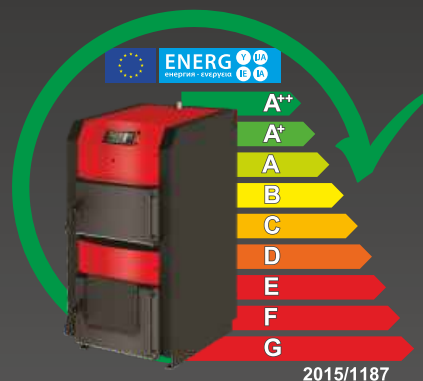
- Automated boilers
- Pellet stoves
- Pellet burners
- Solid Fuel Boilers
- Fuel Hoppers

- **BIOMASS HEATING INDUSTRIAL EQUIPMENT**

- Solid fuel boilers
- Combined boilers
- Pellet burners
- Set Pellet boilers



Contents



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Solid fuel boilers **BURiIT**

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Fuel hoppers **BURiIT**

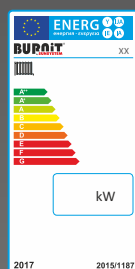
FH 300	p. 62
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Class 5

Ecological and highly-efficient pellet boiler for heating. Wood-pellets used for fueling the boiler are a renewable fuel with minimum carbon emissions and ultimate burning efficiency. Tested and approved according to EN 303-5.

Set includes:

Pellet boiler PLB, Pellet burner Pell, Auger and Pellet fuel hopper FH 500.



Energy efficiency. Directive 2010/30/EU, regulation 2015/1187:

Nominal heat output, kW

14.3 - 41.7

Class

A+



<p>Electronic control. Combustion process.</p>	<p>Microprocessor controller. Since the combustion is electronically controlled by modulating the operation of pellet burner in response to the energy needs of the system, the boiler is always operated in safety. Efficiency to 91%.</p>
<p>Boiler. Water mantle. Combustion chamber. Pellet burner.</p>	<p>The cylindrical boiler body is made of boiler grade steel with thickness of 4 mm at the combustion chamber and 3 mm at the water mantle. The water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently. Automatic cleaning system. Pellet Burner Pell. Pull-out system of the burner for convenient maintenance. Two fans assist the combustion process: Fume exhaust fan of the boiler; Air-feed fan of the burner. Eyepiece for viewing the combustion process.</p>
<p>Insulation.</p>	<p>100 mm high-temperature wool.</p>



<p>Safety devices.</p>	<p>STB thermostat would extinguish the boiler and stop fuel feeding in case of abnormal temperature increase. Elbow-shape feeder chute of burner prevents backfire entry from burner into the pellet hopper. Thermostatic protection (80°C) - into the burner, prevents backfire. Fuse 10A. In case of power interruption, all parameter settings are stored in controller memory.</p>
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For heating of medium to large sized spaces.
Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



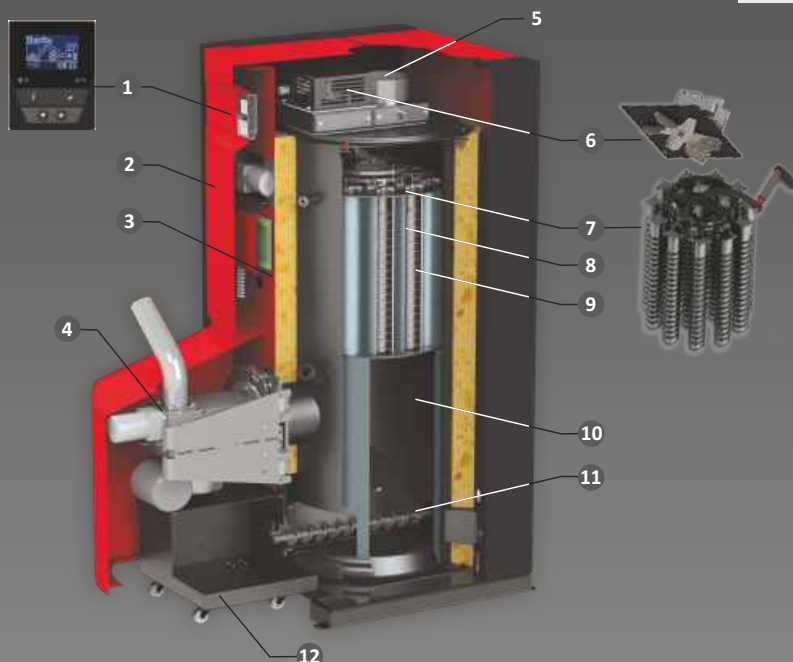
Recommended fuel:



wood pellets, \varnothing 6÷8 mm
EN ISO 17225-2:2014



kW	Model	Code
15	PLB 15	00081232000301
25	PLB 25	00081232000303
40	PLB 40	00081232000304



1. Controller
2. Housing
3. Double high efficiency thermal insulation
4. Pellet Burner Pell pull-out system for convenient maintenance.
5. Chimney
6. Fume exhaust fan
7. Automatic cleaning system
8. Fume exhaust tubes
9. Water mantle (jacket)
10. Combustion chamber
11. Built in discharge mechanism drives the ash and soot into a rolling container
12. Rolling ash and soot container
13. Pellet boiler PLB
14. Pellet fuel hopper FH 500



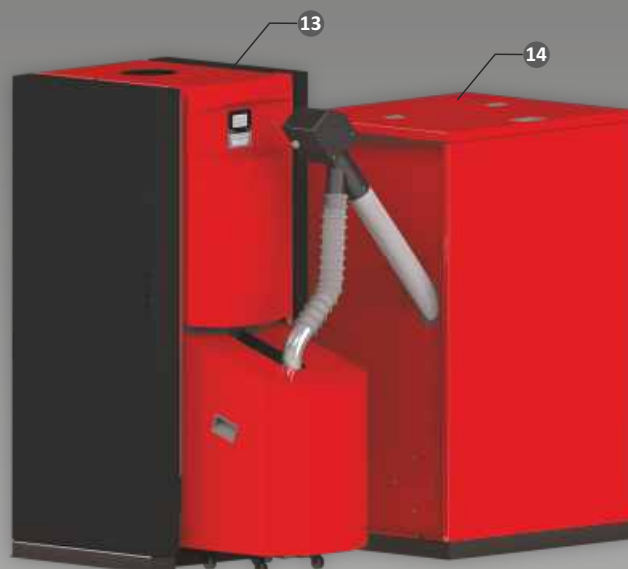
Microprocessor controller. Functions:

Automatic ignition and pellet feed.
Self-cleaning function of burner and fume exhaust pipes.
Controls the operation of central heating pump.
Controls the operation of domestic hot water (DHW) pump.
Controls by room thermostat.
Controls boiler operations by buffer tank temperature.
Exhaust gas sensor.



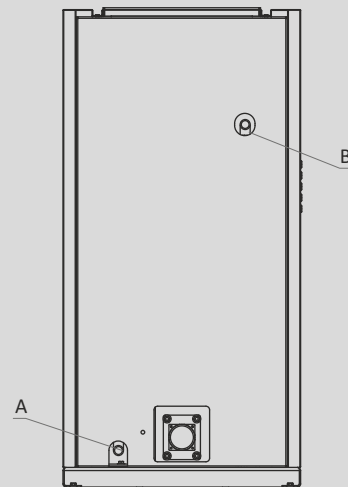
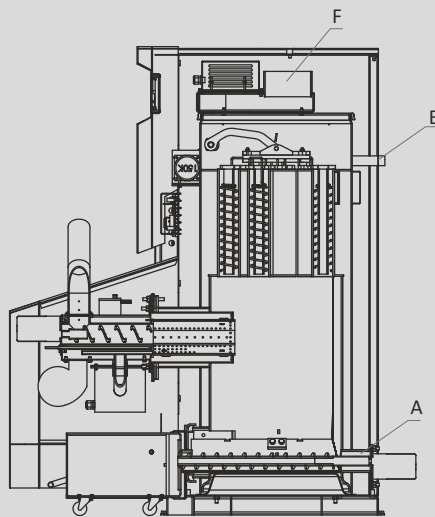
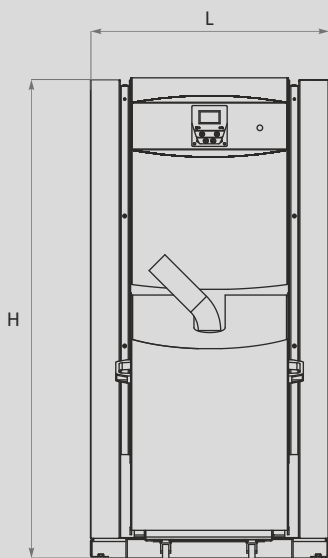
Fuel hopper.

Fuel hopper FH 500 with alternative mounting on boiler left- or right-side.

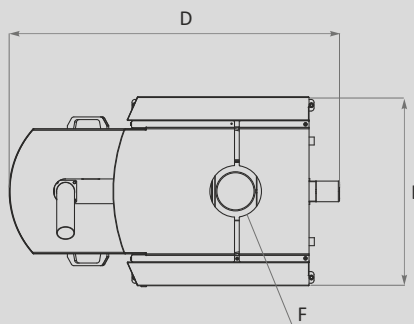




Technical parameters.



PLB 15-40





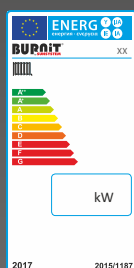
		PLB 15	PLB 25	PLB 40
Nominal heat output	kW	14.3	22.2	41.7
Minimum ÷ Maximum heat output	kW	5÷14.3	8÷22.2	10÷41.7
Height (H)	mm	1290	1430	1700
Width (L) x Depth (D)	mm	640x1120	7640x1120	700x1420
Water mantle volume	L	55	70	101
Combustion chamber volume	L	43	53	73
Required chimney draught	Pa/mbar	48/0.48	85/0.85	135/0.135
Operating pressure	bar	3	3	3
Cold water inlet	A, mm	R1"/100	R1"/100	R1"/100
Hot water outlet	B, mm	R1"/930	R1"/1070	R1"/1370
Chimney	F, ø/mm	133/1280	133/1480	150/1700
Operating pressure	°C	65-85	65-85	65-85
Electric power supply	V/Hz/A	230/50/10	230/50/10	230/50/10
Weight	kg	200	241	353





Class 5

Highly-efficient and compact pellet boiler. Provides ecological and economical heating. Wood-pellets used for fueling the boiler are a renewable fuel with minimum harmful emissions and ultimate burning efficiency. The boiler is equipped with integrated pellet burner, fuel hopper, circulating pump and expansion vessel. Tested and approved according to EN 303-5.



Energy efficiency. Directive 2010/30/EU, regulation 2015/1187:

Nominal heat output, kW

16.3

Class

A+



Electronic control. Combustion process

Microprocessor controller. The burning process is controlled electronically by modulating boiler operation in accordance with energy need. Controller ensure safe and efficient boiler operation. Efficiency to 92%.

Boiler. Water mantle. Combustion chamber. Pellet burner.

Boiler body is made of boiler grade steel with thickness of 5 mm at the combustion chamber and 3 mm at the water mantle.
The water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently. Manual cleaning system of fume exhaust pipes.
 Fume exhaust fan of the boiler.
Pellet burner.
Built-in fuel hopper for wood-pellets.
Expansion vessel and circulation pump for heating system.

Insulation

100 mm high-temperature wool.



Safety devices

STB thermostat would extinguish the boiler and stop fuel feeding in case of abnormal temperature increase.
 The design of fuel feed system prevents backfire entry from burner into the pellet hopper. Thermostatic protection (80°C) - into the fuel feed system, prevents backfire.
 Fuse 10A.
 In case of power interruption, all parameter settings are stored in controller memory.



Optional equipment

WiFi module. Managed by a mobile application for Android or iOS.



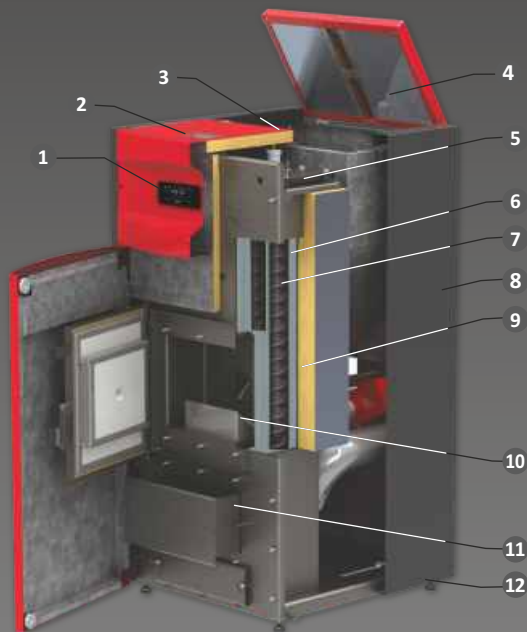
For heating of medium to large sized spaces. Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



Recommended fuel:



wood pellets, ϕ 6÷8 mm
EN ISO 17225-2:2014



 kW	Model	Code
20	PELL EASY 20	00091232009003
35	PELL EASY 35	00091232009015

1. Microprocessor controller
2. Inspection hatch
3. Fuel hopper hatch
4. Top loading hatch of fuel hopper
5. Manual cleaning system of fume exhaust pipes.
6. Water mantle (jacket)
7. Fume exhaust tubes with turbulators
8. Housing
9. High efficiency thermal insulation
10. Pellet burner
11. Ash-and-soot container
12. Levelling feet
13. Hot water outlet
14. Cold water inlet
15. Flue
16. Incoming air pipe

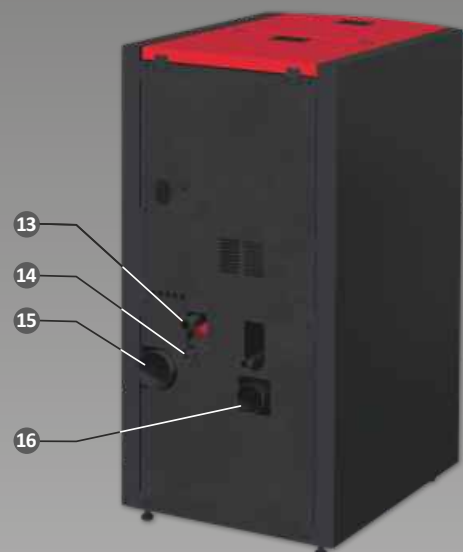


WiFi module



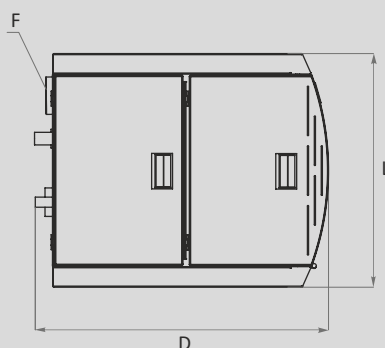
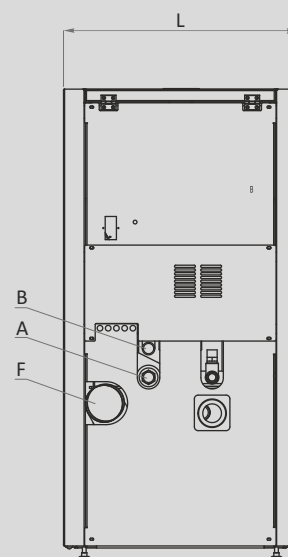
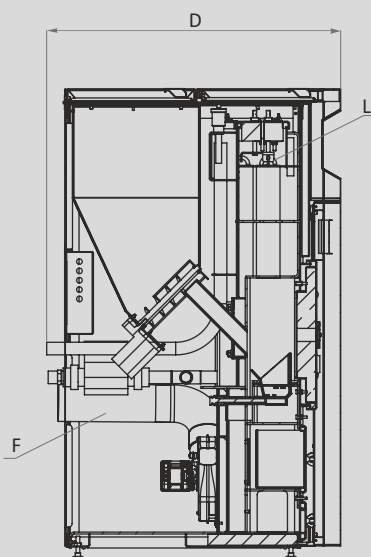
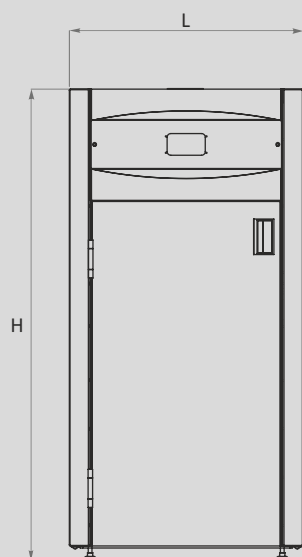
Microprocessor controller. Functions:

- Automatic ignition and pellet feed.
- Self-cleaning function of burner.
- Controls the integrated pump for heating system.
- Ability to control the pump for domestic hot water (DHW).
- Controls by room thermostat.
- Controls boiler operations by buffer tank temperature.
- Exhaust gas temperature sensor.





Technical parameters.



Pell Easy 20 - 35



		Pell Easy 20	Pell Easy 35
Max heat output	kW	18	33
Min. / Nominal heat output	kW	5.1/16.3	9.5/33
Height (H)	mm	1260 ± 15	1260 ± 15
Width (L) x Depth (D)	mm	625 x 790	770 x 870
Water mantle volume	L	35	52
Combustion chamber volume	kg	45	60
Required chimney draught	Pa/mbar	8/0.8	10/0.1
Operating pressure	bar	3	3
Cold water inlet	A, mm	R1"/485	R1"/485
Hot water outlet	B, mm	R1"/570	R1"/560
Chimney	F, ø/mm	100/370	100/420
Operating temperature range	°C	55-85	55-85
Electric power supply	V/Hz/A	230/50/2	230/50/2
Weight	kg	252	303



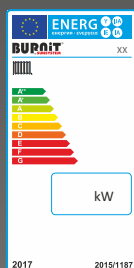
i Class 5

The high-efficiency dual chamber boiler CombiBurn DC-A is designated for central heating of premises. The boiler burning wood-pellets by using a high-efficiency burner integrated to its lower combustion chamber. Also in lower chamber can be burned wood-chips or fruit nuts as an alternative fuel. Boiler upper chamber is made to burns wood logs, wood briquettes and coal as a backup fuel (alternatively).

Tested and approved according to EN 303-5.

Set includes:

Dual-chamber boiler, burner, fuel hopper and rolling ash-and-soot container.



Energy efficiency.
Directive 2010/30/EU,
regulation 2015/1187:

Nominal heat
output, kW

29

Class

A+



Electronic control. Combustion process

Microprocessor controller. Combustion process is electronically regulated via step modulation of burner performance according to power needs, and also maintained in optimum working mode. Efficiency to 89%.

Boiler. Water mantle. Two combustion chambers. Pellet burner. Fuel hopper.

Boiler body is made of boiler grade steel with thickness of 6 mm at the combustion chamber and 3 mm at the water mantle.
Three-pass flue gas flow for improved heat exchange.
The water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently.
Dual chamber design. Metal grate divides upper and lower combustion chambers. Burner and hopper are connected laterally of boiler.
Two doors provide convenient access for cleaning the fume exhaust tubes and the combustion chambers.
Built in discharge mechanism drives the ash and soot into a rolling container.

Insulation.

100 mm high-temperature wool.



Safety devices

Boiler STB thermostat and bimetallic thermostat set at 105°C on the auger mechanism;
Valve between both screws of the burner to prevent backfire.
Fuse 10A.
Safety heat evacuator.
Temperature safety valve is connected to a water tank and in case of reverse flame in auger, release the water into the medial flange, located between auger and fuel hopper and prevent fuel firing. Convenient maintenance openings are provided on auger mechanism and on medial flange.
In case of power interruption, all parameter settings are stored in controller memory.



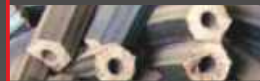
For heating of medium to large sized spaces.
Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



Recommended fuel:



woods, humidity 20%



wood briquettes



woods + coals



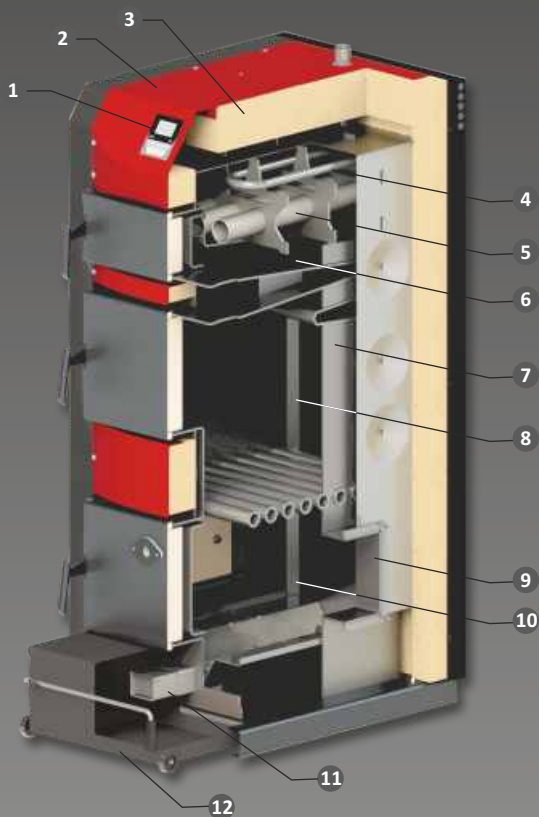
woods + fruit stones



wood chips,
EN 14961-1 P16A



wood pellets, \varnothing 6÷8 mm,
EN ISO 17225-2:2014



Model

Code

35

DC 35 A

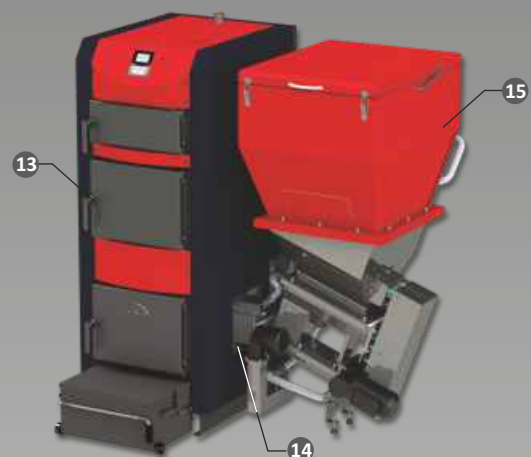
00081233002203

1. Microprocessor controller
2. Housing
3. High efficiency thermal insulation
4. Safety heat evacuator
5. Fume exhaust tube
6. Three-pass flue gas flow
7. Water mantle (jacket)
8. Back-up (wood logs, coals) fuel combustion chamber
9. Burner flange
10. Wood-pellets (wood-chips, fruit nuts) combustion chamber
11. Automatic ash-and-soot discharge system
12. Rolling ash-and-soot container
13. Dual chamber boiler CombiBurn DC-A
14. Burner
15. Auger



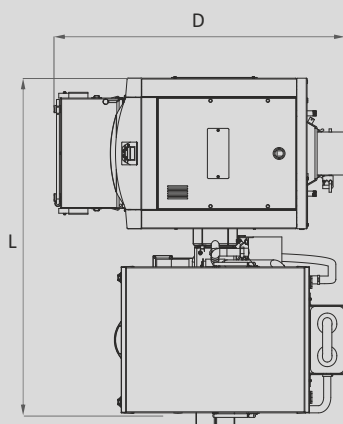
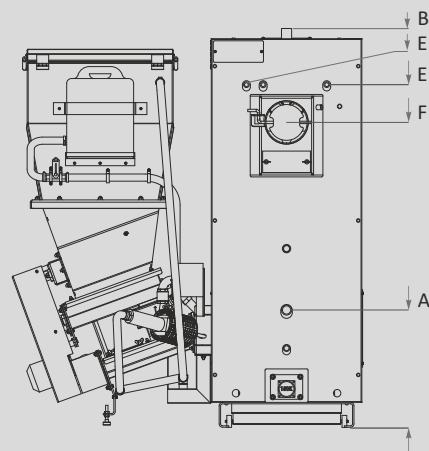
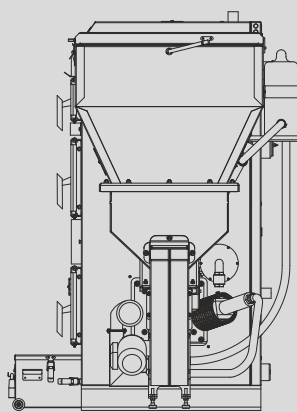
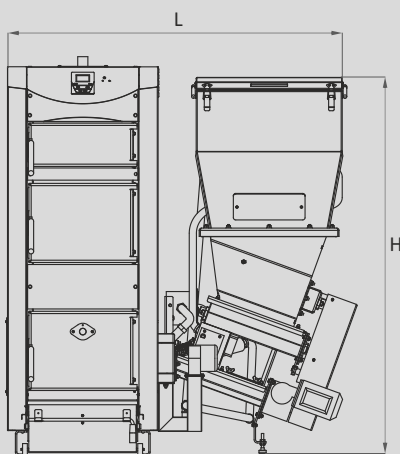
Microprocessor controller. Functions:

Automatic ignition and fuel feed;
Fan ensures stable operation of the burner;
Self-cleaning function, activation of 1 to 6 times;
Built in discharge mechanism drives the ash and soot into a rolling container;
Controls the operation of central heating pump;
Controls the operation of domestic hot water (DHW);
Controls boiler operations by buffer tank temperature;
Room thermostat;
Manual mode option - when use wood and /or coal at upper chamber.
Exhaust gas sensor..





Technical parameters.



CombiBurn DC-A 35



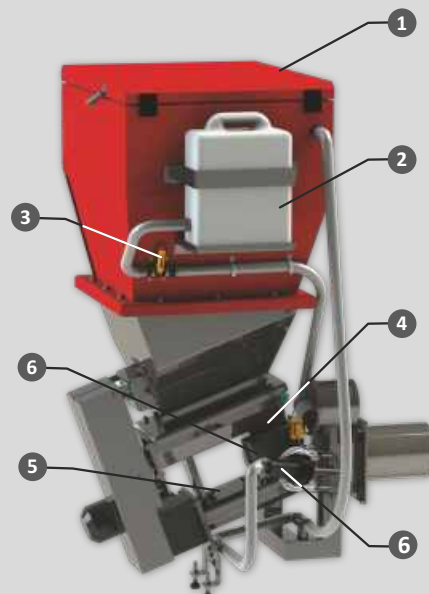
CombiBurn DC-A 35		
Nominal heat output	kW	29
Minimum ÷ Maximum heat output:		
wood-pellets	kW	8.5÷29
wood-chips		7.5÷28
Overall dimension /boiler, burner and hopper/		
Height	mm	1600
Width x Depth		1400 x 1070
Water mantle volume	L	113
Combustion chamber volume		
wood pellets, wood-chips	L	72
reserve fuel: woods, coals		96
Required chimney draught	Pa/mbar	20/0.20
Operating pressure	bar	3
Cold water inlet	A, mm	Rp 1¼"/460
Hot water outlet	B, mm	Rp 1¼"/1510
Safety heat evacuator inlet/outlet	E, mm	R½"/1400
Chimney	F, ø/mm	180/1260
Operating temperature range	°C	65-85
Electric power supply	V/Hz	230/50
Weight	kg	560

Design of auger mechanism and fuel hopper

It consists of a spiral conveyor mounted to the axle, driven by motor reducer, which is attached to the body of the auger. Auger and fuel hopper are connected by medial flange.

Temperature safety valve (3) is connected to a water tank (2) and in case of reverse flame in auger, release the water into the medial flange (4), located between auger (5) and fuel hopper (1) and prevent fuel firing.

- 1) Fuel hopper; 2) Water tank; 3) Safety valve;
- 4) Medial flange equipped with anti-backfire flap;
- 5) Auger mechanism;
- 6) Lighter;
- 7) Actuator of Anti-backfire flap



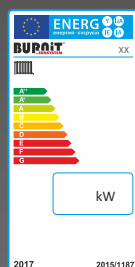


Combined boiler UB with universal retort burner. Thanks to its retort burner the boiler allows burning of different fuel types as coal, wood-pellets, agri-pellets (straw pellets and sunflower pellets) and dry fruit pits.

Developed under to EN-303-5.

Set includes:

Boiler, retort burner with auger, fuel hopper, two cast-iron details for coal (burner equipment) and one cast-iron detail for pellets (burner equipment).



Energy efficiency.
Directive 2010/30/EU,
regulation 2015/1187:

Nominal heat
output, kW

22.5 - 78.5

Class

A



**Electronic control.
Combustion process**

Microprocessor controller is designed to manages boiler equipped with auger. Electronically controlled burning process ensures the maximum safe combustion efficiency.

**Boiler.
Water mantle.
Combustion chamber.
Retort burner.
Fuel hopper.**

The body of the boiler is made of boiler grade steel with thickness of 5 mm at the combustion chamber and 3 mm at the water mantle.
Combustion chamber with **large heat exchanging surface** and low chamber resistance. Ribbed chamber surface and **three-pass flue gas flow** for improved heat exchange.
The water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently. The boiler is equipped with turbulators and ceramic plate for a better efficiency.
Air feed fan.
Retort burner and fuel hopper is mounted on the side of the boiler.

Insulation

50 mm high-temperature wool.



Safety devices

STB thermostat would extinguish the boiler and stop fuel feeding in case of abnormal temperature increase.
Sensor fitted in the screw to prevent backfire.
Safety heat evacuator. Fuse 6,3 A. Pressure relief valve 3 bar.
In case of power interruption, all parameter settings are stored in controller memory.
Option: Thermostatic protection to prevents backfire.

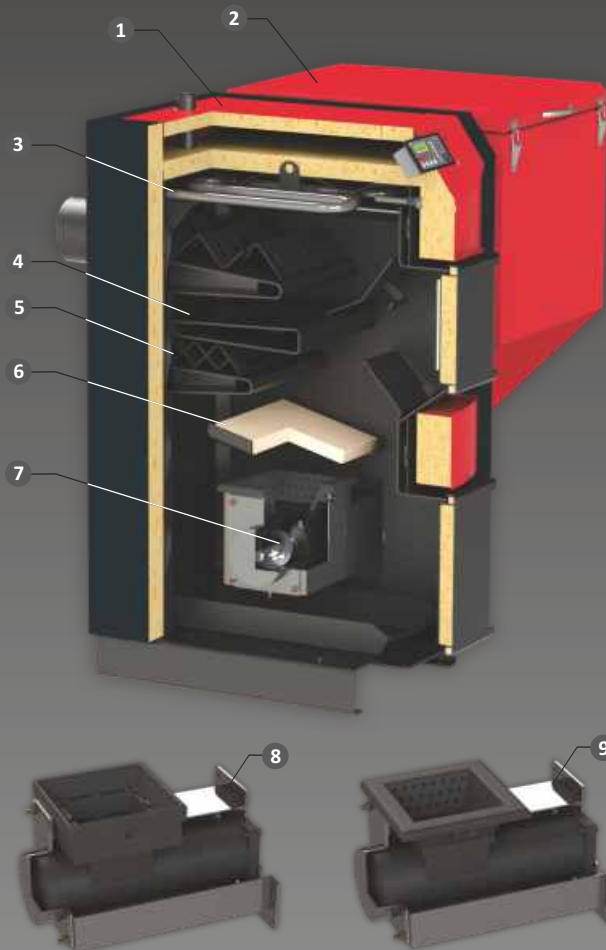


Optional equipment

Water tank. Flexible connection. Safety valve according to the temperature.



For heating of medium to large sized spaces.
Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



Recommended fuel:



coals



fruit stones



agri-pellets:
staw/sunflower
ø 6÷8 mm



wood - pellets, ø 6÷8 mm
EN ISO 17225-2:2014



	Model	Code
27	UB 27	00081230002152
35	UB 35	00081230002154
60	UB 60	00081230002157
90	UB 90	00081230002158

1. Combined boiler
2. Fuel Hopper
3. Safety heat evacuator
4. Three-pass flue gas flow
5. Turbulators
6. Ceramic plate
7. Retort burner
8. Cast Iron grate for coal
9. Cast Iron grate for wood-pellets / agri-pellets

Option:

- (a) Water tank (Extinguisher)
- (b) Water delivery hose
- (c) Temperature safety valve



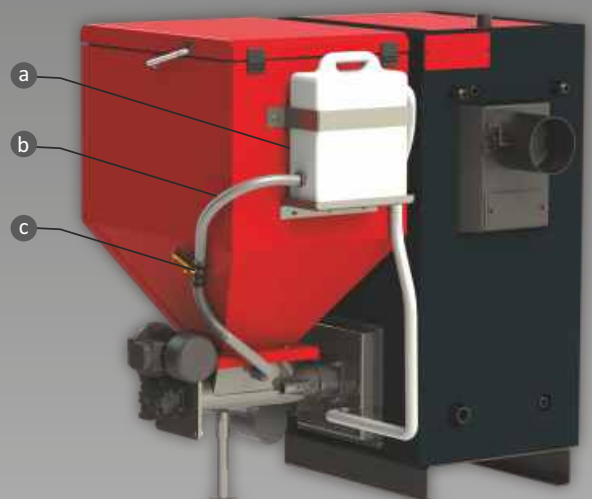
Built in controller. Functions:

Automatic combustion control.
Controls the operation of central heating pump.
Controls the operation of domestic hot water (DHW).



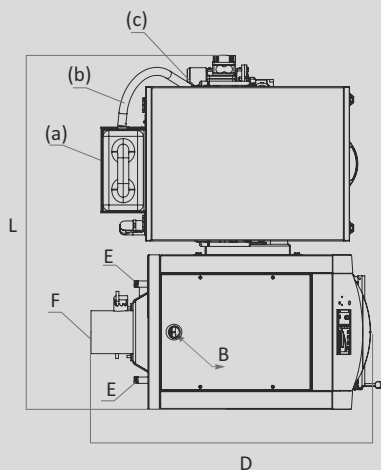
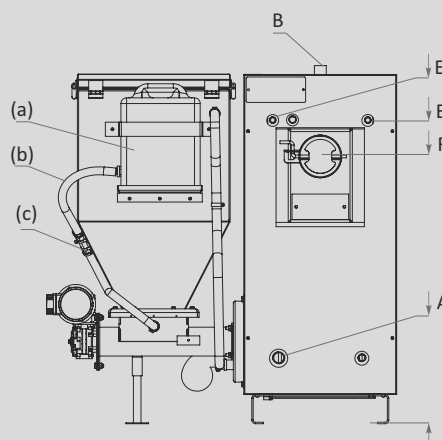
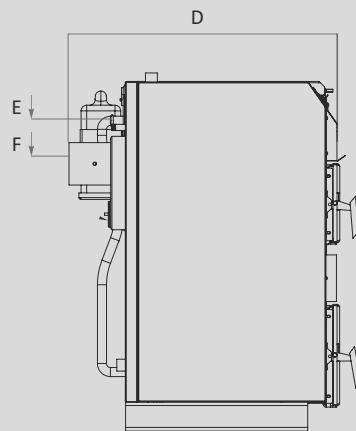
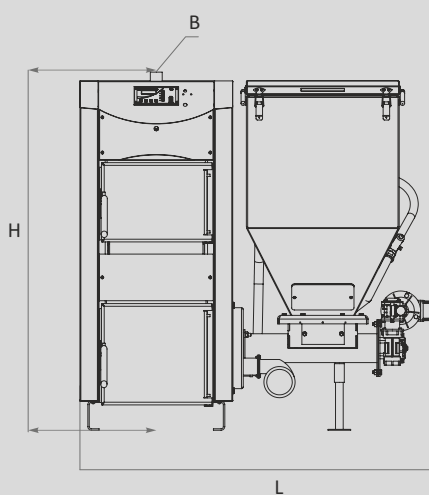
Retort burner:

Equipped for burning of different fuel types.
Two Cast Iron grates for coal and pellets.
Air feed fan.
Robust Cast Iron burner body.
Long service life and ease of maintenance.





Technical parameters.



UB 27-90

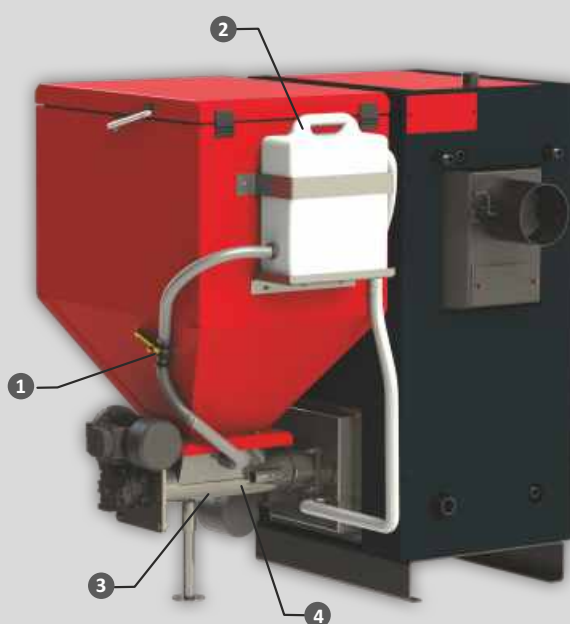


		UB 27	UB 35	UB 60	UB 90
Nominal heat output	kW	18.5	31.1	48.3	78.5
Minimum ÷ Maximum heat output	kW	8÷18.5	10÷31.1	18÷48.3	27÷78.5
Height (H)	mm	1305	1305	1442	1442
Width (L) x Depth (D)	mm	506 x 937	661 x 906	666 x 1085	786 x 1085
Water mantle volume	L	96	114	137	152
Combustion chamber volume	L	66	88	128	170
Volume fuel hopper	L	190	215	305	305
Required chimney draught	Pa/mbar	16/0.16	23/0.23	38/0.38	56/0.56
Operating pressure	mbar	3	3	3	3
Cold water inlet	A, mm	R¼"/212	R¼"/212	R½"/232	R½"/232
Hot water outlet	B, mm	R½"/1052	R½"/1052	R½"/1222	R½"/1222
Safety heat evacuator inlet/outlet	E, mm	R½"/1052	R½"/1052	R½"/1222	R½"/1222
Chimney	F, ø/mm	150/945	180/930	200/1065	200/1065
Operating temperature range	°C	55-85	55-85	55-85	55-85
Electric power supply	V/Hz	230/50	230/50	230/50	230/50
Weight	kg	388	475	594	670



Option:
Thermostatic protection to prevent backfire.

A temperature-controlled thermostatic valve (1) is connected to the water tank (2) of capacity 10L.
In the event of backfiring inside the auger mechanism (3), the valve is actuated and water flows into the feeding auger tube. The auger screw temperature is read by a thermostatic valve temperature probe mounted in the slot (4).
In this way is prevented the self-ignition of fuel.

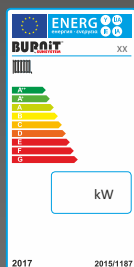




Class 5

Ready-to-use set.
Intended for burning wood pellets.
Tested and approved according to EN 303-5, class 5.

Set includes:
boiler WBS Active, turbulators,
mounted pellet burner Pell, auger
and fuel hopper FH 500.



Energy efficiency.
Directive 2010/30/EU,
regulation 2015/1187:

Nominal heat
output, kW

16.7 - 79.1

Class

A+



<p>Electronic control. Combustion process</p>	<p>Microprocessor controller. The burning process is controlled electronically for best efficiency and fuel economy.</p>
<p>Boiler. Water mantle. Combustion chamber Pellet burner.</p>	<p>Boiler body is made of boiler grade steel with thickness of 5 mm at the combustion chamber and 3 mm at the water mantle. The water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently. Three-pass flue gases. The high-efficiency pellet burner Pell. Boiler WBS Active is adapted to wood-pellets burning mode by pellet burner Pell and some additional elements: turbulators, upper protective door and mounting kit.</p>
<p>Insulation</p>	<p>50 mm high-temperature wool.</p>



<p>Safety devices</p>	<p>Elbow-shape feeder chute of burner prevents backfire entry from burner into the pellet hopper. Thermostatic protection (80°C) - into the burner, prevents backfire. Fuse 10 A. In case of power interruption, all parameter settings are stored in controller memory. Safety heat evacuator. Pressure relief valve 3 bar.</p>
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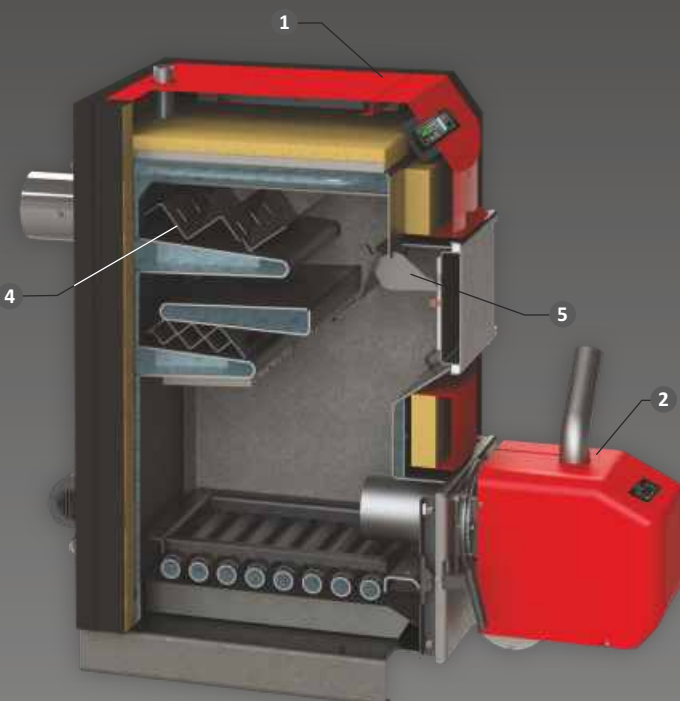
For heating of medium to large sized spaces.
Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



Recommended fuel:

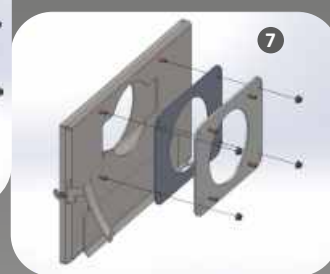
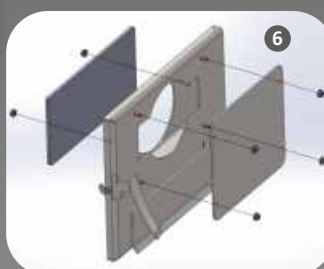


wood - pellets, \varnothing 6÷8 mm
EN ISO 17225-2:2014



kW	Model	Code
20	WBS AC 20-PELL 25	00081230002731
40	WBS AC 40-PELL 25	00081230002734
50	WBS AC 50-PELL 40	00081230002735
70	WBS AC 70-PELL 70	00081230002737
90	WBS AC 90-PELL 70	00081230002739
110	WBS AC 110-PELL 90	00081230002741

1. Boiler WBS Active
2. Pellet burner Pell
3. Pellet fuel hopper FH 500
4. Turbulators
5. Upper protective door
6. Detaching the burner flange cover on lower boiler door
7. Mounting kit - to connect burner Pell to the boiler



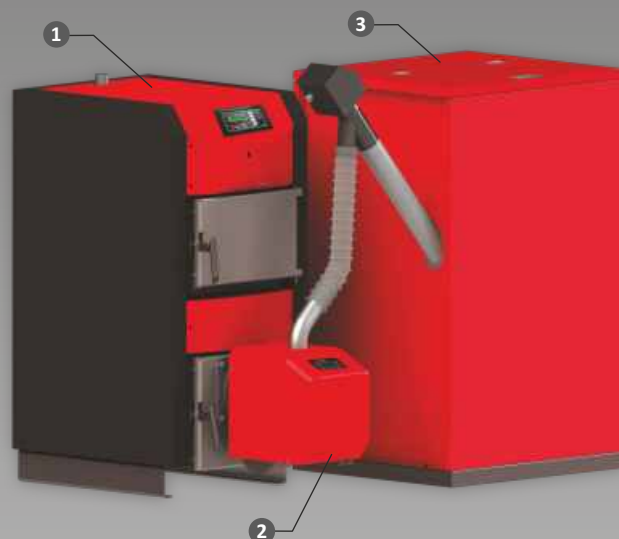
Microprocessor controller. Functions:

Automatic ignition and pellet feed.
Self-cleaning function of burner.
Controls the operation of central heating pump.
Controls the operation of domestic hot water (DHW).
Controls boiler operations by buffer tank temperature.



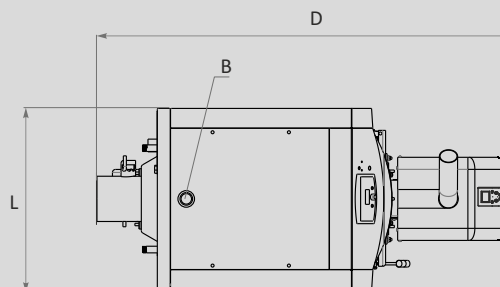
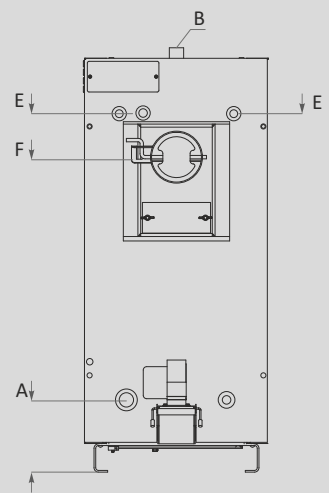
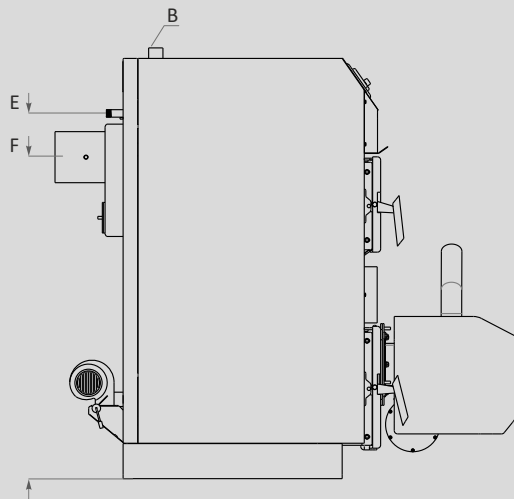
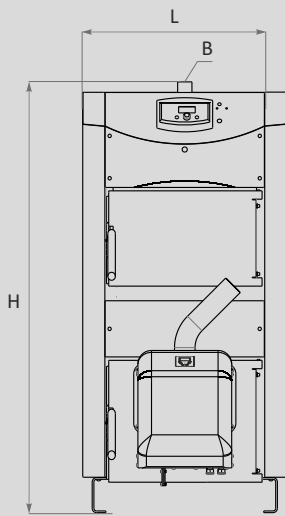
Fuel hopper.

Fuel hopper FH 500 with alternative mounting on boiler left- or right-side.





Technical parameters.



WBS AC 20-110
Pell 25-90



		WBS AC 20 - Pell 25	WBS AC 40 - Pell 25	WBS AC 50 - Pell 40	WBS AC 70 - Pell 70	WBS AC 90 - Pell 70	WBS AC 110 - Pell 90
Nominal heat output	kW	16.7	31.2	35.7	49.6	57.4	79.1
Minimum ÷ Maximum heat output	kW	5÷17	9÷30	10÷35	18÷52	18÷60	24÷80
Power burner: Firing-Up mode		400	400	400	400	400	400
Operating mode	W	60÷70	60÷70	60÷70	70÷110	70÷110	70÷110
Self-cleaning mode		1300	1300	1300	1300	1300	1300
Overall size of boiler and burner:							
Height (H)	mm	1235	1235	1235	1385	1385	1385
Width (L) x Depth (D)		540x1250	700x1315	700x1375	700x1495	760x1495	820x1495
Water mantle volume	L	60	96	106	134	145	162
Combustion chamber volume	L	58	84	97	120	133	160
Required chimney draught	Pa/mbar	10/0.10	12/0.12	14/0.14	26/0.26	30/0.30	36/0.36
Operating pressure	mbar	3	3	3	3	3	3
Cold water inlet	A, mm	R1¼" 232	R1¼" 232	R1¼" 232	R1½" 232	R1½" 232	R1½" 232
Hot water outlet	B, mm	R1¼" 1265	R1¼" 1265	R1¼" 1265	R1½" 1420	R1½" 1420	R1½" 1420
Safety heat evacuator inlet/outlet	E, mm	R½" 1072	R½" 1072	R½" 1072	R½" 1220	R½" 1220	R½" 1220
Chimney	F, ø/mm	150/945	180/930	180/930	200/1065	200/1065	200/1065
Operating temperature range	°C	65-80	65-80	65-80	65-80	65-80	65-80
Electric power supply	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50
Weight: boiler, burner, fuel bunker	kg	330	384	425	551	588	618
Volume fuel bunker FH 500	L	500	500	500	500	500	500





Pellet burner BURNIT Pell is designed to burn wood-pellets with diameter of 6-8 mm. Ensures efficient combustion with low carbon emission. Automatic cleaning system. Constructed under to EN-15270:2010.

Set includes:
pellet burner Pell, auger and flexible tube.



<p>Electronic control. Combustion process</p>	<p>Built-in microprocessor controller. Automated operations. Simple handling and fuel economy.</p>
<p>Burner body. Combustion chamber. Feeder chute. Auger.</p>	<p>Made of high-grade stainless steel, it withstands temperatures up to 1150°C. Ember resistant steel tube inside the burner with holes for air intake along its entire length, opening for the hot air from the fuel ignition heater.</p> <p>Automatic cleaning system Internal auger.</p> <p>Dry contactless resistance heater assuring ignition of fuel. Photosensor-monitors the power of the burner flame.</p> <p>Air feed fan with variable speed control (0% ÷100 %). The feeder chute of burner allows 360° rotation for its best convenient positioning when connecting the pellet auger to the hopper.</p>



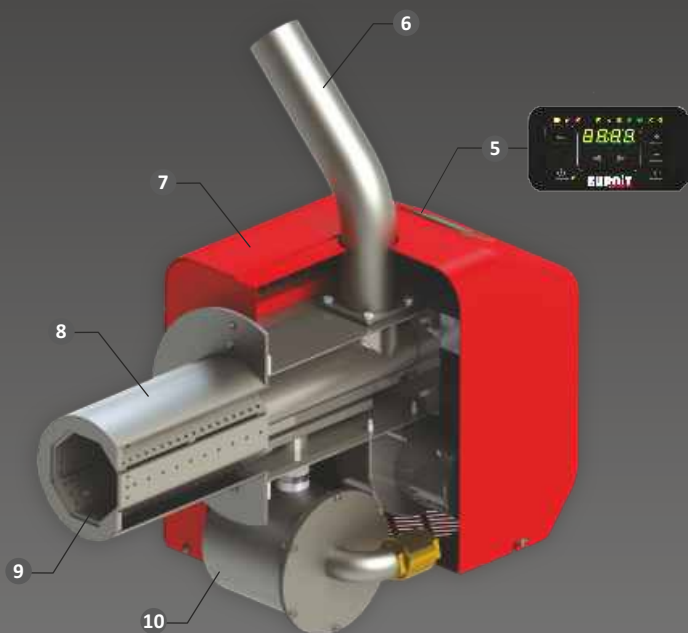
<p>Safety devices</p>	<p>Elbow-shape feeder chute of burner prevents backfire entry from burner into the pellet hopper. Thermostatic protection (80°C) - into the burner, prevents backfire. Fuse 10A. In case of power interruption, all parameter settings are stored in controller memory.</p>
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Recommended fuel:



wood pellets, \varnothing 6÷8 mm,
EN ISO 17225-2:2014



kW	Model	Code
25	PELL 25	22080000000102
40	PELL 40	22080000000104
70	PELL 70	22080000000106
90	PELL 90	22080000000109

1. Pellet burner Pell
2. Flexible connection, hose
3. Electric motor
4. Automatic pellet-feeding auger
5. Built-in controller
6. Feeding chute
7. Burner housing
8. Combustion chamber corps
9. Combustion chamber;
10. Automatic cleaning system

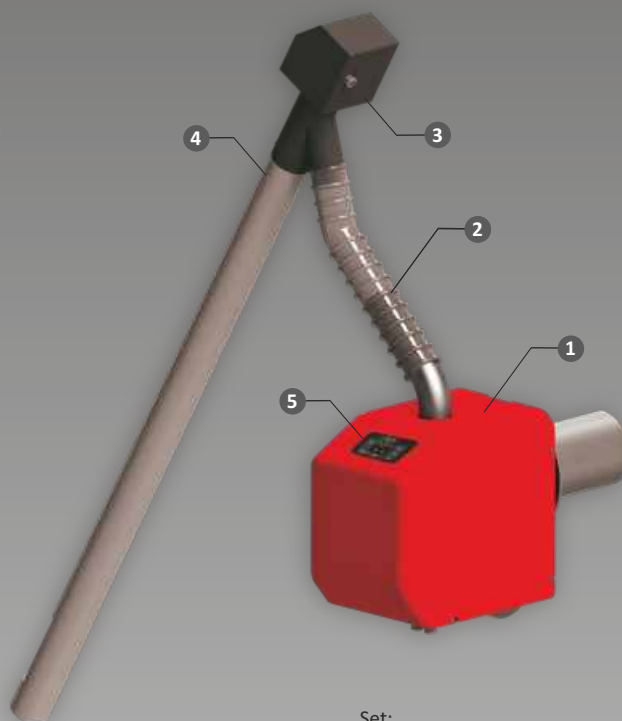


WiFi module



Built-in controller. Functions:

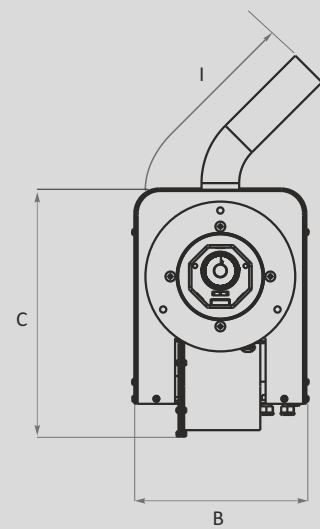
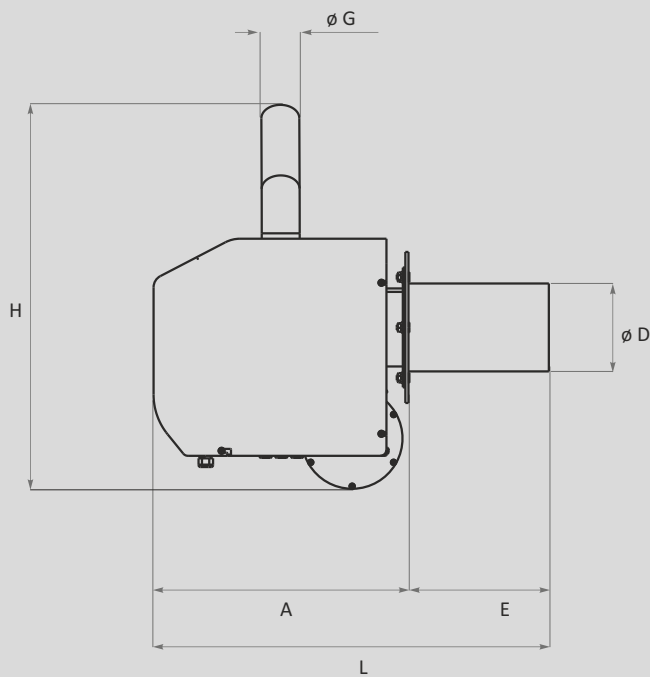
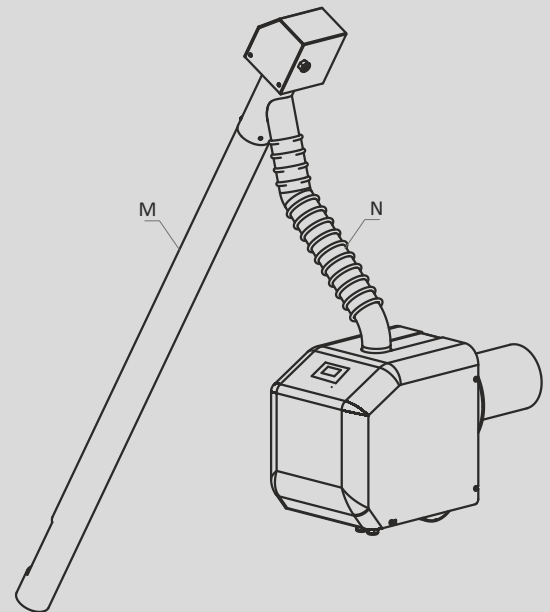
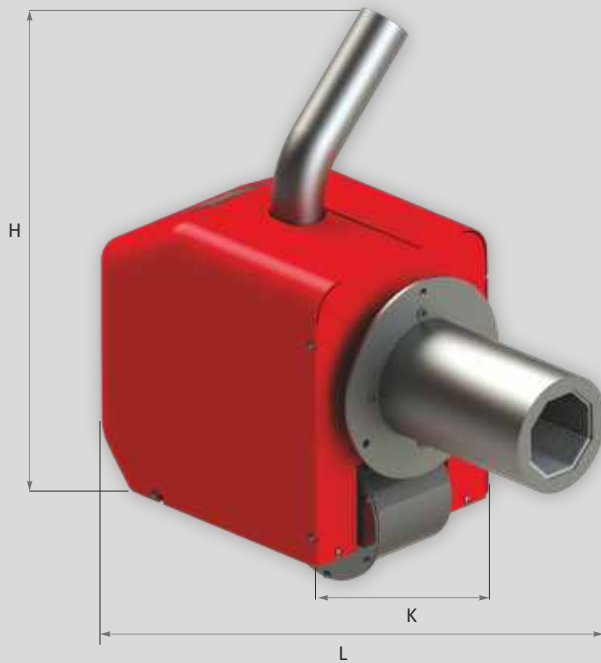
Automated ignition and pellet feed.
Self-cleaning function, activation of 1 to 6 times every 24 hours.
Controls the operation of central heating pump / buffer tank.
Controls the operation of domestic hot water pump (DHW).



Set:
burner Pell, auger and flexible connection



Technical parameters.



Pell 25-90



		Pell 25	Pell 40	Pell 70	Pell 90
Nominal heat output	kW	25	40	70	90
Minimum ÷ Maximum heat output	kW	5÷25	10÷40	15÷70	30÷90
Average power consumption: Firing-Up mode		400	400	400	400
Operate mode	W	60÷70	60÷70	70÷110	70÷110
Self-cleaning mode		1300	1300	1300	1300
Overall dimensions: Height	H, mm	610	640	640	640
Width	L, mm	625	700	735	735
Depth	K, mm	275	275	275	275
Burner body: Height	C, mm	390	390	390	390
Width	A, mm	405	405	405	405
Length	B, mm	265	265	265	265
Minimal recommended size of boiler combustion chamber: Height x Width x Length	mm	250x250x310	350x450x550	350x450x600	500x500x600
Combustion chamber housing: Diameter	D, mm	ø140	ø170	ø170	ø170
Length	E, mm	220	300	340	340
Feeder chute: Diameter	G, mm	ø60	ø60	ø60	ø60
Length	I, mm	250	250	250	250
Flexible connection: Diameter	N, mm	ø60	ø60	ø60	ø60
Length		700	700	700	700
Pellet auger: Diameter	M, mm	ø75	ø75	ø75	ø75
Length			1500/2000/3000		
Electric power supply	V/Hz	230/50	230/50	230/50	230/50
Weight burner	kg	26	30	48	49

Mounting options



WBS - Pell - FH 500

PLB

WBS Active - Pell - FH 500



Pellet burner BURNIT Pell is designed to burn wood-pellets with diameter of 6-8 mm. Ensures efficient combustion with low carbon emission. Designed for installation on boiler. Constructed under to EN-15270:2010.

Set includes:
pellet burner Pell Eco, auger and flexible tube.



<p>Electronic control. Combustion process.</p>	<p>Built-in microprocessor controller. Automated operations. Simple handling and fuel economy.</p>
<p>Burner body. Combustion chamber. Feeder chute. Auger.</p>	<p>Made of high-grade stainless steel, it withstands temperatures up to 1150°C. Ember resistant steel tube inside the burner with holes for air intake along its entire length, opening for the hot air from the fuel ignition heater. Automatic cleaning system Internal auger. Dry contactless resistance heater assuring ignition of fuel. Photosensor-monitors the power of the burner flame. Air feed fan with variable speed control (0% ÷100 %). The feeder chute of burner allows 360° rotation for its best convenient positioning when connecting the pellet auger to the hopper.</p>



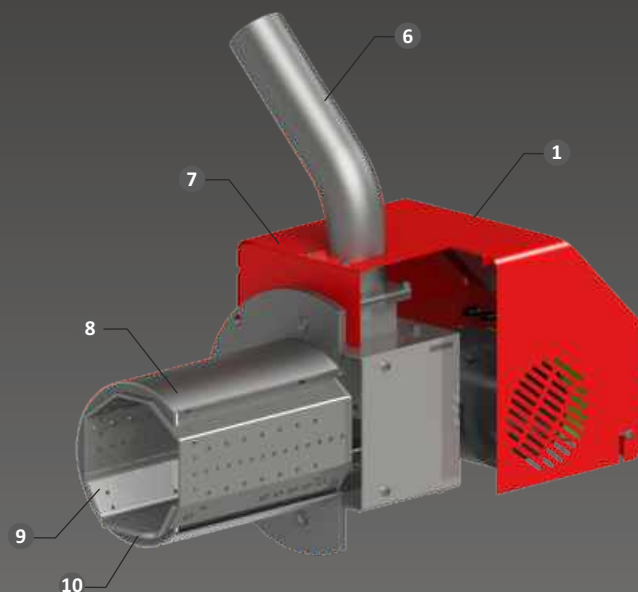
<p>Safety devices</p>	<p>Elbow-shape feeder chute of burner prevents backfire entry from burner into the pellet hopper. Thermostatic protection (80°C) - into the burner, prevents backfire. Fuse 10A. In case of power interruption, all parameter settings are stored in controller memory.</p>
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Recommended fuel:



wood - pellets, \varnothing 6-8 mm
EN ISO 17225-2:2014



 kW	Model	Code
35	PELL ECO 35	22080000000103
55	PELL ECO 55	22080000000110

1. Pellet burner Pell Eco
2. Flexible connection, hose
3. Electric motor;
4. Automatic pellet-feeding auger
5. Built-in controller
6. Feeding chute
7. Burner housing
8. Combustion chamber corps
9. Combustion chamber
10. Movable grate

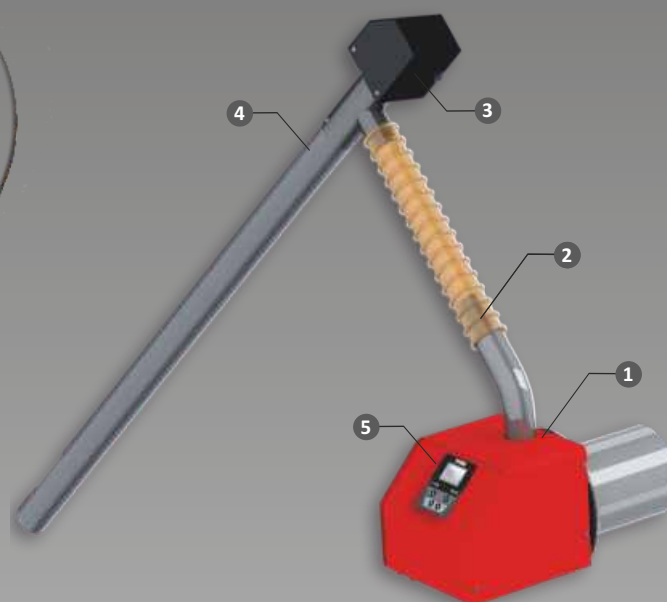


WiFi module



Built-in controller. Functions:

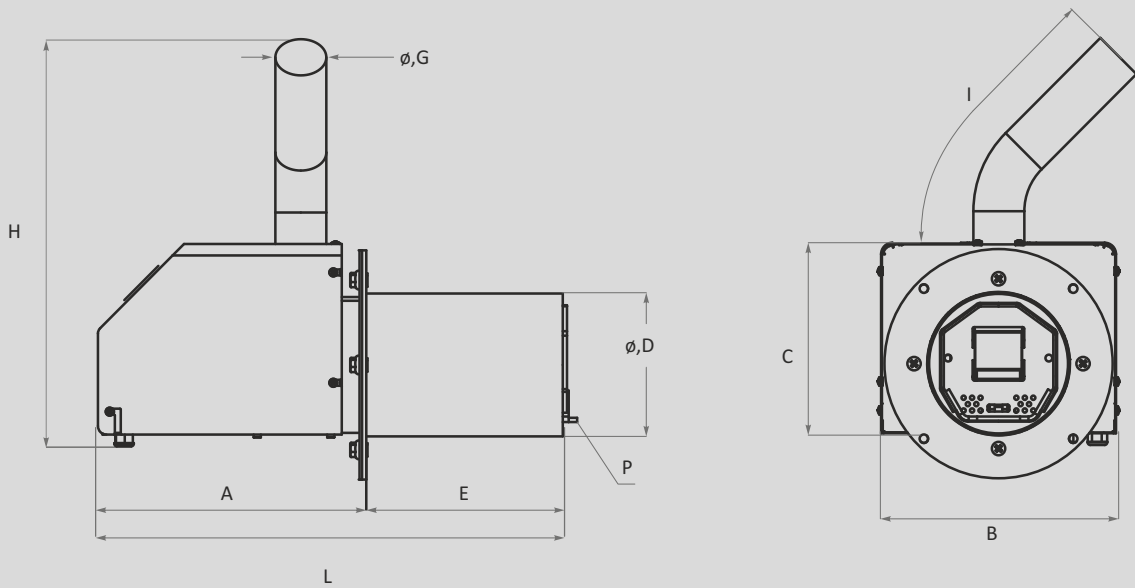
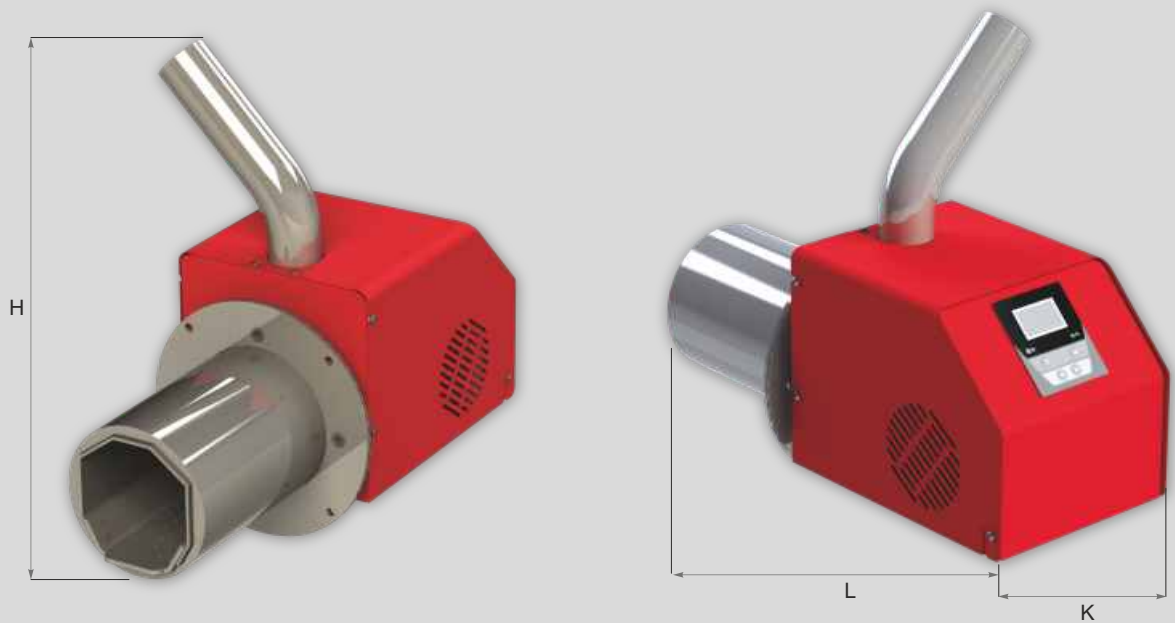
Automated ignition and pellet feed.
Self-cleaning function, activation of 1 to 6 times every 24 hours.
Controls the operation of central heating pump / buffer tank.
Controls the operation of domestic hot water pump (DHW).



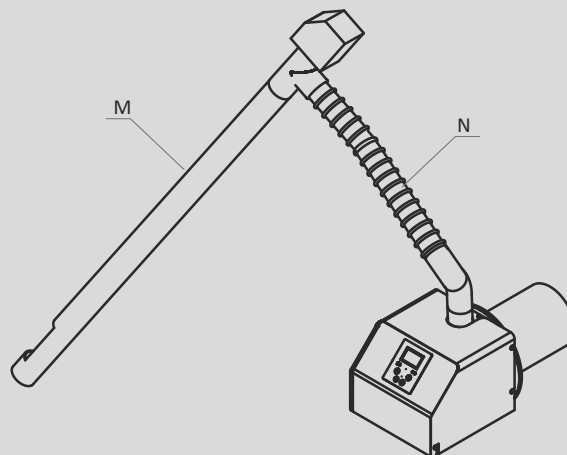
Set:
burner Pell Eco, auger and flexible connection



Technical parameters.



Pell Eco 35 - 55





		Pell Eco 35	Pell Eco 55
Nominal heat output	kW	35	55
Minimum ÷ Maximum heat output	kW	5÷35	15÷55
Average power consumption: Firing-Up mode	W	400	400
Operate mode / Self-cleaning mode		60÷70	60÷70
Overall dimensions: Height	H, mm	520	520
Width	L, mm	610	740
Depth	K, mm	240	274
Burner body: Height	C, mm	245	245
Width	A, mm	358	408
Length	B, mm	240	274
Minimal recommended size of boiler combustion chamber: Height x Width x Length	mm	350x450x450	350x550x450
Combustion chamber housing: Diameter	D, mm	ø170	ø170
Length	E, mm	233	320
Feeder chute: Diameter	G, mm	ø60	ø60
Length	I, mm	250	250
Flexible connection: Diameter	N, mm	ø60	ø60
Length		700	700
Pellet auger: Diameter	M, mm	ø75	ø75
Length		1500/2000/3000	
Electric power supply	V/Hz	230/50	230/50
Weight burner	kg	21	38

Mounting options



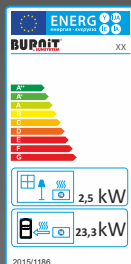
WBS - Pell Eco - FH 500



WBS - Pell Eco - FH 300



Pellet stoves **BURAIT Comfort Plus** are convenient heating solution. They are easy to install, space-saving, equipped with convenient electronic control and do not require a separate boiler room.



Energy efficiency.
Directive 2010/30/EU,
regulation 2015/1187:

Class
A+



Pellet stove PD Comfort Plus

For direct space heating of living premises

Built-in fan for forced air circulation for rapid and uniform heating.
Door with heat-resistant glass - temperature up to 700°C.
Intelligent controller. Remote control.
Clean and fuel-saving combustion.
Built-in pellet hopper and pellet burner.
Contemporary design. Colors: **Ivory, Bordeaux and Black**



Pellet stove PM Comfort Plus

For central space heating of living premises.

Water mantle (jacket). Operating pressure 2 bar.
Door with heat-resistant glass - temperature up to 700°C.
Intelligent controller. Remote control.
Clean and fuel-saving combustion.
Built-in pellet burner, fuel hopper, circulation pump and expansion vessel.
Contemporary design. Colors: **Ivory, Bordeaux and Black.**



Optional equipment

WiFi module. Managed by a mobile application for Android or iOS.

PD - with air circulation
PM - with water mantle (jacket)



Recommended fuel:



wood - pellets, \varnothing 6÷8 mm
EN ISO 17225-2:2014



Model

Code

8	PD COMFORT 8 PLUS	22091200008622
10	PD COMFORT 10 PLUS	22091200008623
13	PM COMFORT 13 PLUS	22091200009622
25	PM COMFORT 25 PLUS	22091200009629



Model

Code

8	PD COMFORT 8 PLUS	22091200008632
10	PD COMFORT 10 PLUS	22091200008633
13	PM COMFORT 13 PLUS	22091200009636
25	PM COMFORT 25 PLUS	22091200009639



Model

Code

8	PD COMFORT 8 PLUS	22091200008612
10	PD COMFORT 10 PLUS	22091200008613
13	PM COMFORT 13 PLUS	22091200009656
25	PM COMFORT 25 PLUS	22091200009659



Microprocessor controller. Functions:

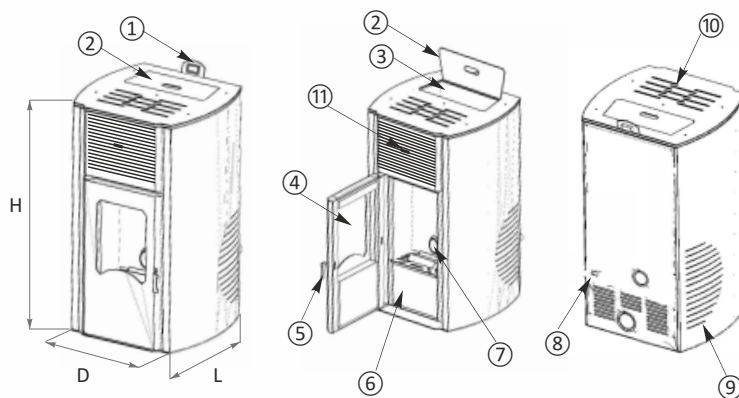
Automated ignition and pellet feed.
Controls built-in pump for heating system
(for models PM Comfort).
Controls by an external thermostat.





Technical parameters.

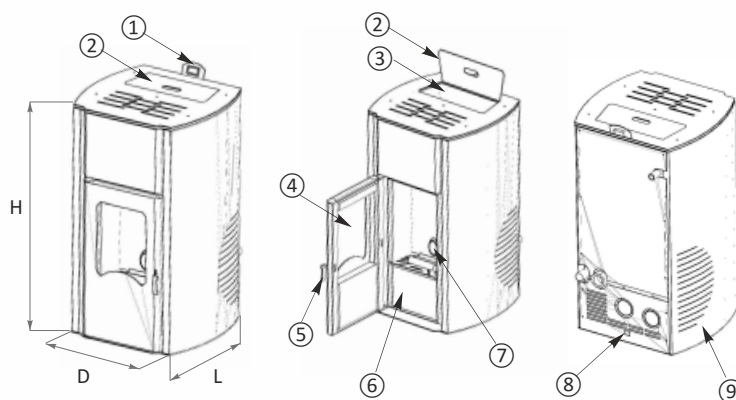
PD Comfort Plus 8-10



Components:

- ① Controller. ② Cover of the hopper for pellets. ③ Hopper for pellets.
- ④ Ceramic glass. ⑤ Door lock. ⑥ Ash container.
- ⑦ Pellet burner. ⑧ Power supply. ⑨ Decorative side panels.
- ⑩ A bowl for water for air humidifier. ⑪ Level for pipe cleaning.

PM Comfort Plus 13-25



Components:

- ① Controller. ② Cover of the hopper for pellets. ③ Hopper for pellets.
- ④ Ceramic glass. ⑤ Door lock. ⑥ Ash container.
- ⑦ Pellet burner. ⑧ Power supply. ⑨ Decorative side panels..

PD - with air circulation
PM - with water mantle (jacket)



		PD Comfort 8 Plus	PD Comfort 10 Plus	PM Comfort 13 Plus	PM Comfort 25 Plus
Nominal heat output	kW	8	10	13	25
Reduced heat output	kW	5	8	5.5	11
Heat power water mantle	kW			11	21.5
Height (H)	mm	970	1020	900	1100
Width (L) x Depth (D)	mm	430x580	510x610	530x520	580x680
Water mantle volume	L			13	24
Volume hopper pellets	kg	8	15	12	45
Burning time at maximum power of full pellet hopper	h	12	14	8	12
Average fuel consumption per hour	h/kg	0.7	1.1	1.5	3
Input / output mantle volume	ø			nipple 1"	nipple 1"
Pipe for incoming air	ø, mm	32	32	80	80
Pipe for exhaust gas -Flue connection	ø, mm	75	75	80	80
CO content calculated to 13% O ₂ in the flue gas at nominal heat output	h/kg	0.03%	0.03%	0.02%	0.02%
Exhaust gas temperature (operation mode)	°C	<180	<180	<180	<180
Electric power supply	V/Hz/W	230/50/120	230/50/120	230/50/150	230/50/150
Weight	kg	80	100	120	180



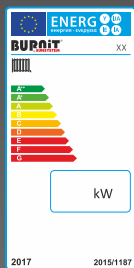
i Class 5

A highly-efficient wood gasifying boiler, designed for economical and ecological heating. Designed to burn solid fuel - wood, wood briquettes - Class B.

Thanks to the wood gasification principle the fuel is most efficiently consumed with minimum carbon emissions and ash.

Lambda sensor. Cleaning system.

Tested and approved according to EN 303-5.



Energy efficiency.
Directive 2010/30/EU,
regulation 2015/1187:

Nominal heat
output, kW

24 - 30

Class

A+



<p>Electronic control. Combustion process</p>	<p>Microprocessor controller. Controls the combustion process via permanent monitoring of oxygen levels in exhaust gases, their temperature as well as the boiler temperature. Efficiency over 92%.</p>
<p>Boiler. Water mantle. Combustion chamber.</p>	<p>Boiler body is made of boiler grade steel with thickness of 6 mm at the combustion chamber and 4 mm at the water mantle. The water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently. Lambda sensor for accurate combustion process management. Cleaning system (manual). Exhaust gas sensor. Fume exhaust fan. Actuator-driven flaps for air intake management - primary and secondary air. Built-in high temperature ceramic plates ensure uniform heat distribution and protection of the water mantle from the extreme heat produced by wood gasification (up to 1200°C). Eyepiece for viewing the combustion process. Large firebox door ensures easy loading even with bigger logs (length of logs up to 50 cm). Open door sensor and fume extraction opening chamber keeps smoke from polluting the boiler room during reloading.</p>
<p>Insulation</p>	<p>50 mm high-temperature wool</p>



<p>Safety devices</p>	<p>Upon reaching 90°C the controller turns the fan off and activates the pumps for domestic hot water and heating system. An independent STB thermostat shuts down the fan upon reaching 99°C. Safety heat evacuator a tap-water-filled line passes through the upmost part of the boiler body. Pressure relief valve 3 bar.</p>
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For heating of medium to large sized spaces.
Suitable for powering the heating system, the buffer vessel
and the production of domestic hot water (DHW).



Recommended fuel:



woods, humidity 15% - 20%



wood briquettes



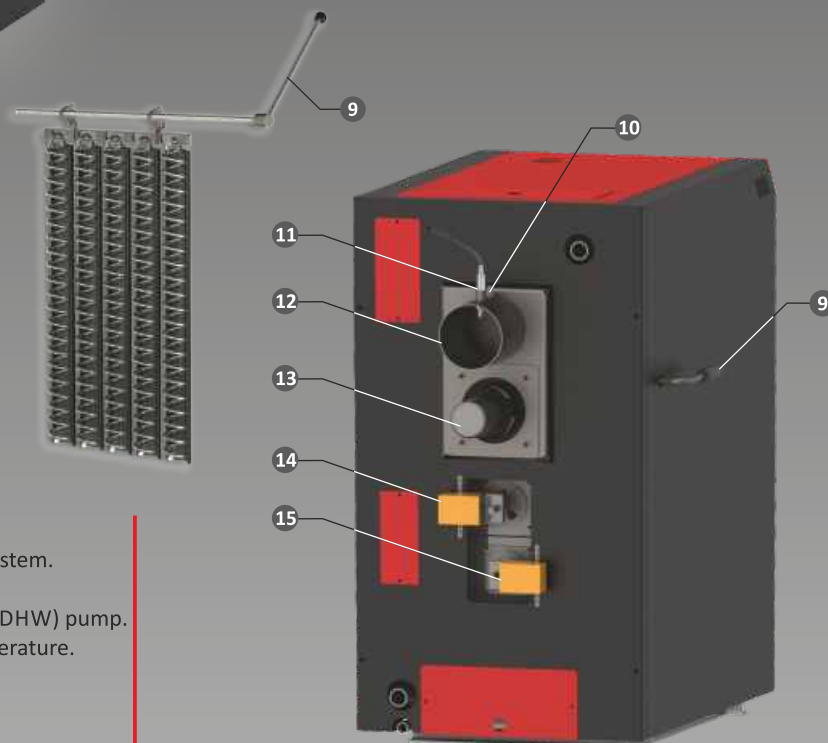
	Model	Code
25	PB LAMBDA 25	00081231002141
30	PB LAMBDA 30	00081231002142

1. Microprocessor controller
2. Housing
3. High efficiency thermal insulation
4. Safety heat evacuator
5. Water mantle (jacket)
6. Wood-loading chamber
7. Ceramic plates
8. Pyrolysis combustion chamber
9. Cleaning system (manual)
10. Exhaust gas sensor
11. Lambda sensor
12. Flue
13. Fume exhaust fan
14. Actuator-driven primary air flap
15. Actuator-driven secondary air flap



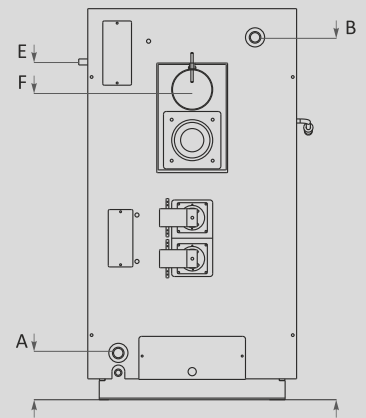
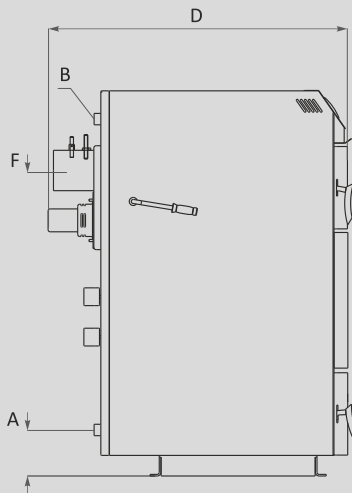
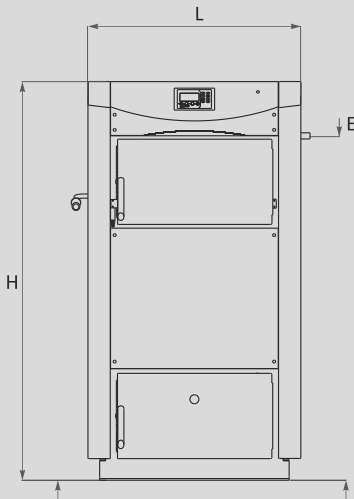
Microprocessor controller. Functions:

Ability to manage the most complex heating system.
Controls the operation of heating pump.
Controls the operation of domestic hot water (DHW) pump.
Controls boiler operations by buffer tank temperature.
Controls the operation of the mixing valve.
Controls the Lambda sensor.
Exhaust gas sensor.

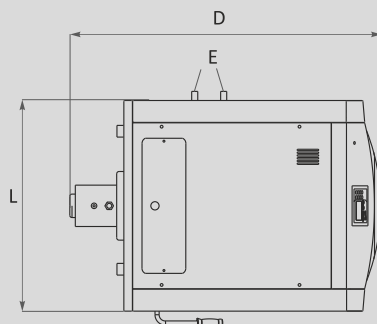




Technical parameters.



PB Lambda 25-30





		PB Lambda 25	PB Lambda 30
Nominal heat output	kW	24	30
Minimum ÷ Maximum heat output	kW	22÷27	7÷30
Height (H)	mm	1285	1435
Width (L) x Depth (D)	mm	675x1130	765x1130
Water mantle volume	L	75	85
Combustion chamber volume	L	98	143
Required chimney draught	Pa/mbar	12/0.12	11/0.11
Operating pressure	mbar	3	3
Cold water inlet	A, mm	Rp1¼"/160	Rp1¼"/170
Hot water outlet	B, mm	Rp1¼"/1180	Rp1¼"/1325
Safety heat evacuator inlet/outlet	E, mm	R½"/1090	R½"/1235
Chimney	F, ø/mm	150/1000	150/1135
Operating temperature range	°C	65-85	65-85
Electric power supply	V/Hz/W	230/50/200	230/50/200
Weight	kg	500	607



Wood gasification

The wood in the primary burning chamber is fired in a low-oxygen environment reaching about 580°C.

It starts degrading to a combustible gas of carbon compounds which is directed to the orifice of the secondary combustion chamber. There, the gas is enriched with secondary air and ignites to reach temperature of up to 1200°C. Before leaving the boiler body, the gas passes through a flue with built-in spiral turbulators where it gives away its heat to the water mantle and cools down to 150°C.

Thanks to the wood gasification principle the fuel is most efficiently consumed with minimum carbon emissions and ash.

Airflow scheme

- ① Incoming air. ② Primary air. ③ Secondary air.
④ Ignition. ⑤ Pyrolysis combustion. ⑥ Fume exhaust fan. ⑦ Flue



i Class 5

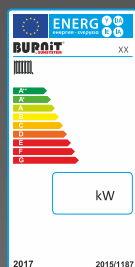
A highly-efficient wood gasifying boiler, designed for economical and ecological heating.

Designed to burn solid fuel - wood, wood briquettes - Class B.

Thanks to the wood gasification principle the fuel is most efficiently consumed with minimum carbon emissions and ash.

Cleaning system.

Tested and approved according to EN 303-5.



Energy efficiency.
Directive 2010/30/EU,
regulation 2015/1187:

Nominal heat
output, kW

19 - 38

Class

A+



<p>Electronic control. Combustion process</p>	<p>Microprocessor controller. Monitors the burning process and controls the fan speed to achieve optimal yield and economy of fuel. Efficiency over 90%.</p>
<p>Boiler. Water mantle. Combustion chamber.</p>	<p>Boiler body is made of boiler grade steel with thickness of 6 mm at the combustion chamber and 4 mm at the water mantle. The water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently. Cleaning system (manual). Exhaust gas sensor. Fume exhaust fan. Flaps for air intake management - primary and secondary air. Built-in high temperature ceramic plates ensure uniform heat distribution and protection of the water mantle from the extreme heat produced by wood gasification (up to 1200°C). Eyepiece for viewing the combustion process. Large firebox door ensures easy loading even with bigger logs (length of logs up to 50 cm). Fume extraction device on the upper combustion chamber keeps smoke from polluting the boiler room during reloading.</p>
<p>Insulation</p>	<p>50 mm high-temperature wool</p>



<p>Safety devices</p>	<p>Upon reaching 95°C the controller turns the fan off and activates the pumps for domestic hot water and heating system. An independent STB thermostat shuts down the fan upon reaching 99°C. Safety heat evacuator a tap-water-filled line passes through the upmost part of the boiler body. Pressure relief valve 3 bar.</p>
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For heating of medium to large sized spaces. Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



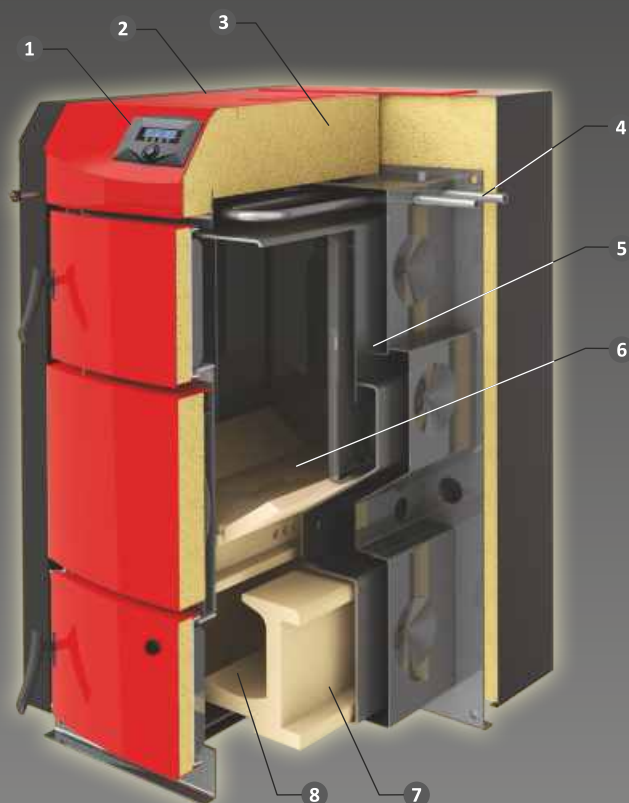
Recommended fuel:



woods, humidity 15% - 20%

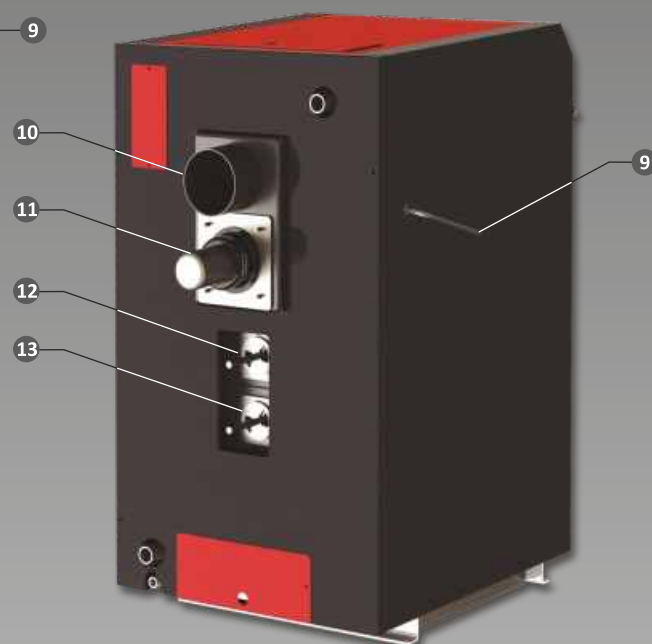
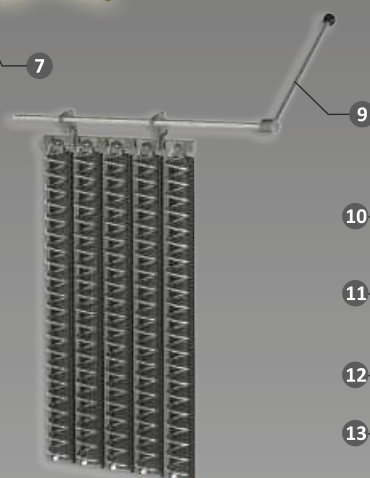


wood briquettes



kW	Model	Code
20	PB ALPHA PLUS 20	00081230002401
30	PB ALPHA PLUS 30	00081230002402
40	PB ALPHA PLUS 40	00081230002404

1. Microprocessor controller.
2. High efficiency thermal insulation
3. Housing
4. Safety heat evacuator
5. Water mantle (jacket)
6. Wood-loading chamber
7. Ceramic plates
8. Pyrolysis combustion chamber
9. Cleaning system (manual)
10. Flue
11. Fume exhaust fan
12. Primary air flap
13. Secondary air flap

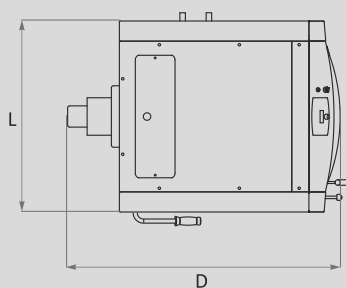
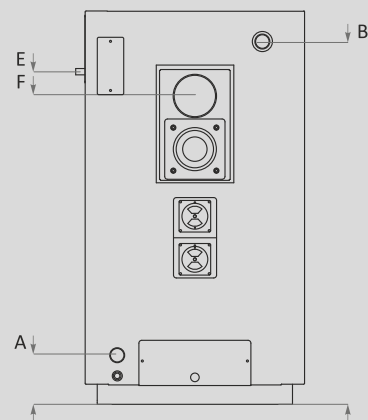
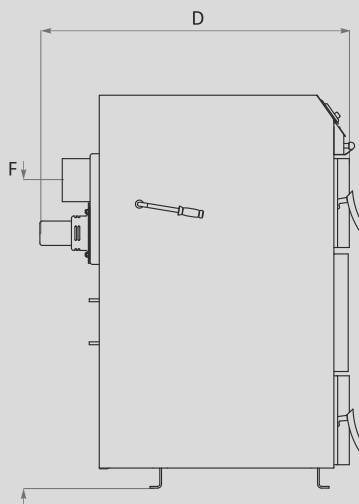
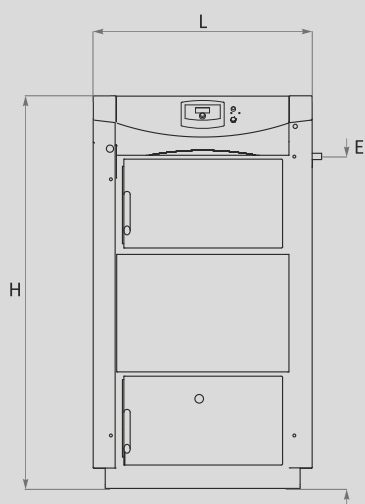


Microprocessor controller. Functions:

Controls the operation of heating pump.
Controls the operation of domestic hot water (DHW) pump.
Exhaust gas sensor.



Technical parameters.



PB Alpha Plus 20-40



		PB Alpha Plus 20	PB Alpha Plus 30	PB Alpha Plus 40
Nominal heat output	kW	19	29	38
Minimum ÷ Maximum heat output	kW	15÷20	27÷32	35÷42
Height (H)	mm	1255	1290	1430
Width (L) x Depth (D)	mm	675x930	765x1090	765x1160
Water mantle volume	L	62	89	115
Combustion chamber volume	L	76	132	162
Required chimney draught	Pa/mbar	10/0.10	11/0.11	12/0.12
Operating pressure	mbar	3	3	3
Cold water inlet	A, mm	Rp1¼"/130	Rp1¼"/170	Rp1¼"/170
Hot water outlet	B, mm	Rp1¼"/1150	Rp1¼"/1250	Rp1¼"/1325
Safety heat evacuator inlet/outlet	E, mm	R½"/1070	R½"/1160	R½"/1235
Chimney	F, ø/mm	150/970	150/1075	150/1150
Operating temperature range	°C	65-85	65-85	65-85
Electric power supply	V/Hz/W	230/50/100	230/50/100	230/50/100
Weight	kg	399	543	587



Wood gasification

The wood in the primary burning chamber is fired in a low-oxygen environment reaching about 580°C.

It starts degrading to a combustible gas of carbon compounds which is directed to the orifice of the secondary combustion chamber. There, the gas is enriched with secondary air and ignites to reach temperature of up to 1200°C. Before leaving the boiler body, the gas passes through a flue with built-in spiral turbulators where it gives away its heat to the water mantle and cools down to 150°C.

Thanks to the wood gasification principle the fuel is most efficiently consumed with minimum carbon emissions and ash.

Airflow scheme

- ① Incoming air. ② Primary air. ③ Secondary air.
④ Ignition. ⑤ Pyrolysis combustion. ⑥ Fume exhaust fan. ⑦ Flue

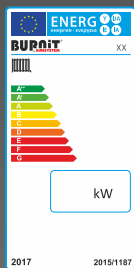




A highly-efficient wood gasifying boiler, designed for economical and ecological heating. Designed to burn solid fuel - wood, wood briquettes - Class B.

Thanks to the wood gasification principle the fuel is most efficiently consumed with minimum carbon emissions and ash.

Constructed under to EN-303-5..



Energy efficiency.
Directive 2010/30/EU,
regulation 2015/1187:

Nominal heat
output, kW

19 - 38

Class

A



<p>Electronic control. Combustion process</p>	<p>Microprocessor controller. Monitors the burning process and controls the fan speed to achieve optimal yield and economy of fuel. Efficiency to 90%.</p>
<p>Boiler. Water mantle. Combustion chamber.</p>	<p>Boiler body is made of boiler grade steel with thickness of 6 mm at the combustion chamber and 4 mm at the water mantle. The water mantle embraces the combustion chamber in full to utilize the emitted heat most efficiently. Exhaust gas sensor. Fume exhaust fan. Flaps for air intake management - primary and secondary air. Built-in high temperature ceramic plates ensure uniform heat distribution and protection of the water mantle from the extreme heat produced by wood gasification (up to 1200°C). Eyepiece for viewing the combustion process. Large firebox door ensures easy loading even with bigger logs (length of logs up to 50 cm). Fume extraction device on the upper combustion chamber keeps smoke from polluting the boiler room during reloading.</p>
<p>Insulation</p>	<p>50 mm high-temperature wool.</p>



<p>Safety devices</p>	<p>Upon reaching 95°C the controller turns the fan off and activates the pumps for domestic hot water and heating system. An independent STB thermostat shuts down the fan upon reaching 99°C. Safety heat evacuator a tap-water-filled line passes through the upmost part of the boiler body. Pressure relief valve 3 bar.</p>
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For heating of medium to large sized spaces. Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



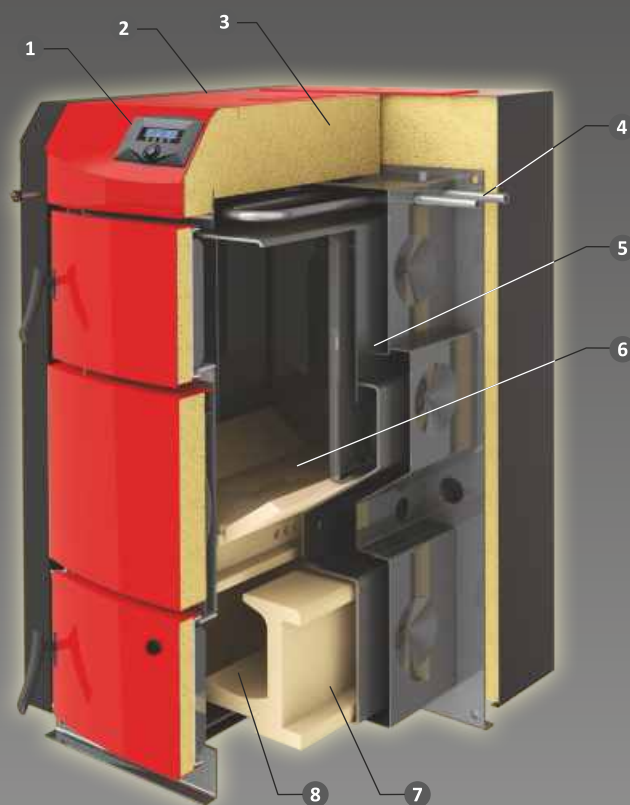
Recommended fuel:




woods, humidity 15% - 20%

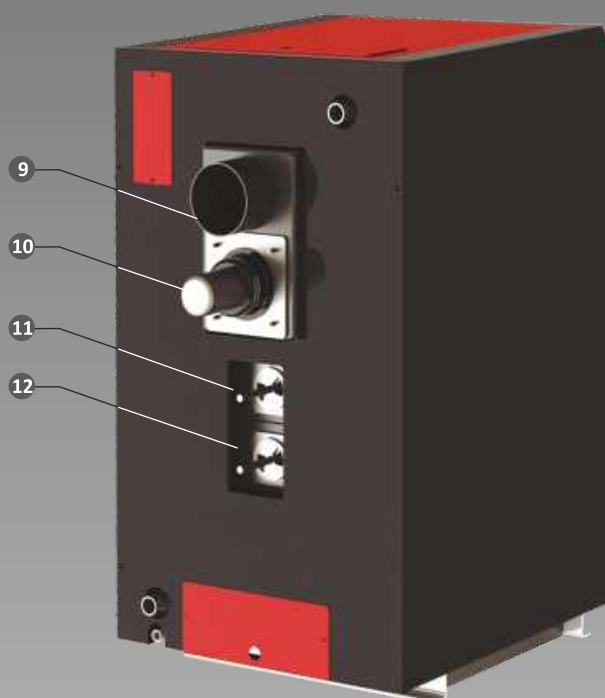


wood briquettes



 kW	Model	Code
20	PB ALPHA 20	00081230002351
30	PB ALPHA 30	00081230002352
40	PB ALPHA 40	00081230002354

1. Microprocessor controller.
2. High efficiency thermal insulation
3. Housing
4. Safety heat evacuator
5. Water mantle (jacket)
6. Wood-loading chamber
7. Ceramic plates
8. Pyrolysis combustion chamber
9. Flue
10. Fume exhaust fan
11. Primary air flap
12. Secondary air flap

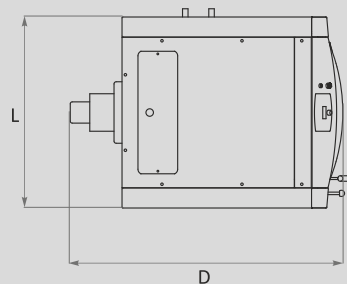
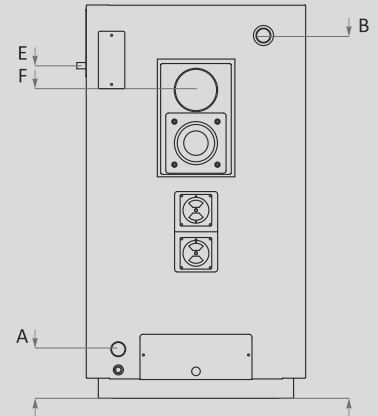
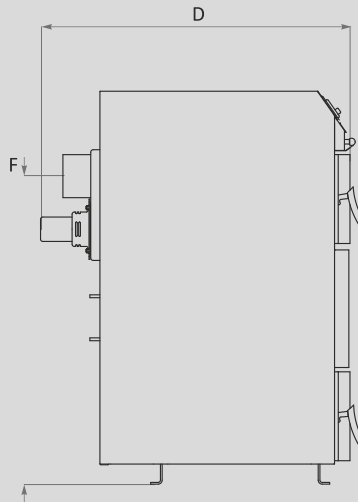
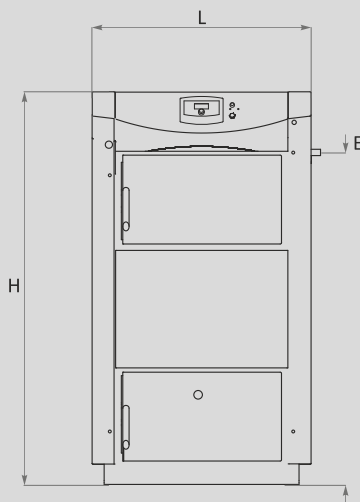


Microprocessor controller. Functions:

Controls the operation of heating pump.
Controls the operation of domestic hot water (DHW) pump.
Exhaust gas sensor.



Technical parameters.



PB Alpha 20-40



		PB Alpha 20	PB Alpha 30	PB Alpha 40
Nominal heat output	kW	19	29	38
Minimum ÷ Maximum heat output	kW	15÷20	27÷32	35÷40
Height (H)	mm	1255	1290	1430
Width (L) x Depth (D)	mm	675x930	765x1090	765x1160
Water mantle volume	L	62	89	115
Combustion chamber volume	L	76	132	162
Required chimney draught	Pa/mbar	10/0.10	11/0.11	12/0.12
Operating pressure	mbar	3	3	3
Cold water inlet	A, mm	Rp1¼"/130	Rp1¼"/170	Rp1¼"/170
Hot water outlet	B, mm	Rp1¼"/1150	Rp1¼"/1250	Rp1¼"/1325
Safety heat evacuator inlet/outlet	E, mm	R½"/1070	R½"/1160	R½"/1235
Chimney	F, ø/mm	150/970	150/1075	150/1150
Operating temperature range	°C	65-85	65-85	65-85
Electric power supply	V/Hz/W	230/50/100	230/50/100	230/50/100
Weight	kg	394	538	582



Wood gasification

The wood in the primary burning chamber is fired in a low-oxygen environment reaching about 580°C.

It starts degrading to a combustible gas of carbon compounds which is directed to the orifice of the secondary combustion chamber. There, the gas is enriched with secondary air and ignites to reach temperature of up to 1200°C. Before leaving the boiler body, the gas passes through a flue with built-in spiral turbulators where it gives away its heat to the water mantle and cools down to 150°C.

Thanks to the wood gasification principle the fuel is most efficiently consumed with minimum carbon emissions and ash.

Airflow scheme

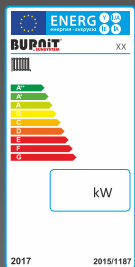
- ① Incoming air. ② Primary air. ③ Secondary air.
④ Ignition. ⑤ Pyrolysis combustion. ⑥ Fume exhaust fan. ⑦ Flue





An entry-level solid fuel boiler with basic operation and low operation cost. Designed to burn solid fuel - wood, Class B wood briquettes or coal.

Constructed under to EN-303-5.



Energy efficiency. Directive 2010/30/EU, regulation 2015/1187:

Nominal heat output, kW

20 - 110

Class

A



<p>Combustion process</p>	<p>The combustion is controlled by thermostatic draft regulator, which is a mechanical device boasting ultimate reliability. It controls the intensity of combustion by altering the flow of air intake.</p>
<p>Boiler. Water mantle. Combustion chamber.</p>	<p>Boiler body is made of boiler grade steel with thickness of 5 mm at the combustion chamber and 3 mm at the water mantle. Water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently. Combustion chamber with large heat exchanging surface and low chamber resistance. Ribbed chamber surface and three-pass flue gas flow for improved heat exchange. Large firebox door ensures easy loading even with bigger logs (length of wood-logs up to 50 cm). Exchangeable metallic ash grate protects the pipe grid from the flame.</p>
<p>Insulation</p>	<p>50 mm high-temperature wool.</p>



<p>Safety devices</p>	<p>Thermostatic draught regulator. Pressure relief valve 3 bar.</p>
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<p>Optional equipment</p>	<p>Lower boiler door with opening for burner mounting.</p>
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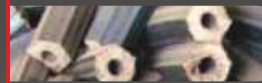
For heating of medium to large sized spaces. Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



Recommended fuel:



woods, humidity 20%




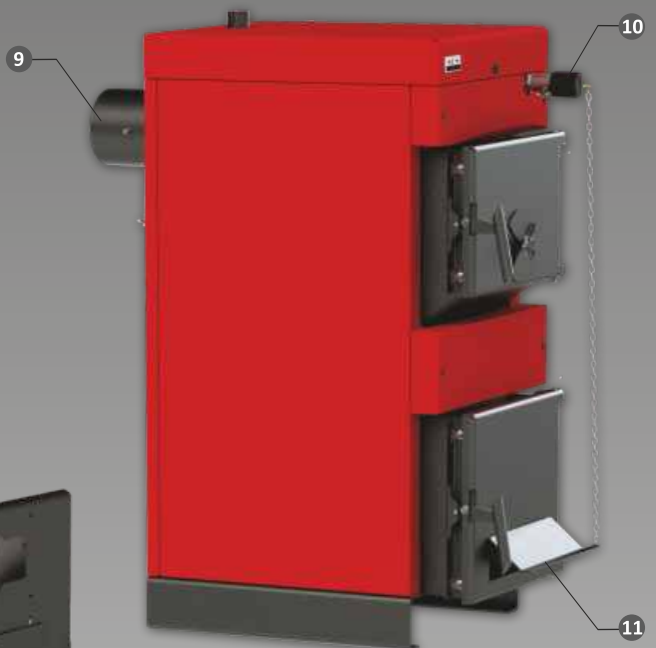
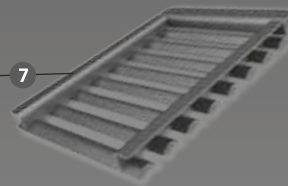
wood briquettes



woods + coals

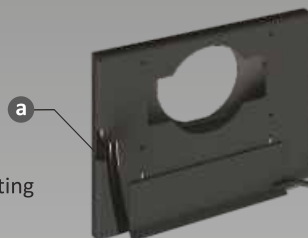


 kW	Model	Code
20	WB 20	00081230001021
25	WB 25	00081230001022
30	WB 30	00081230001023
40	WB 40	00081230001024
50	WB 50	00081230001025



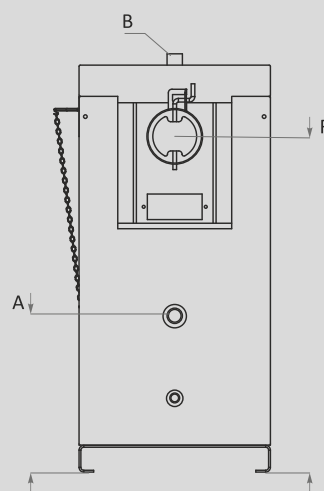
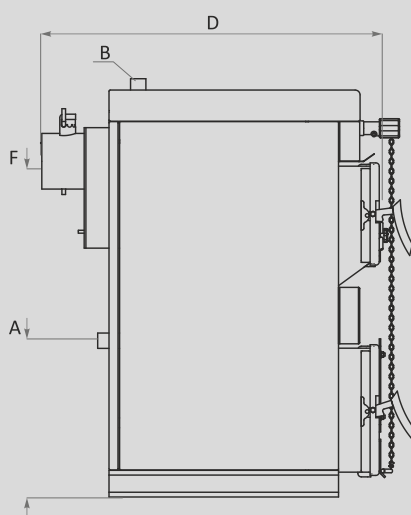
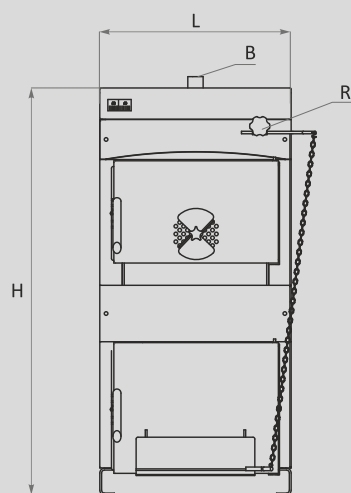
- 1. Temperature indicator
- 2. Housing
- 3. High efficiency thermal insulation
- 4. Water mantle (jacket)
- 5. Three-pass flue gas flow
- 6. Combustion chamber
- 7. Metal ash grate
- 8. Ash- and- soot container
- 9. Flue
- 10. Thermostatic draught regulator
- 11. Air intake flap

Optional equipment
 (a) Lower boiler door
 with opening for burner mounting

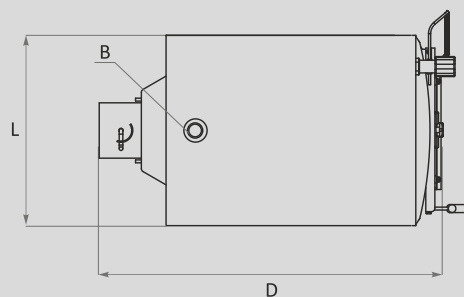




Technical parameters.

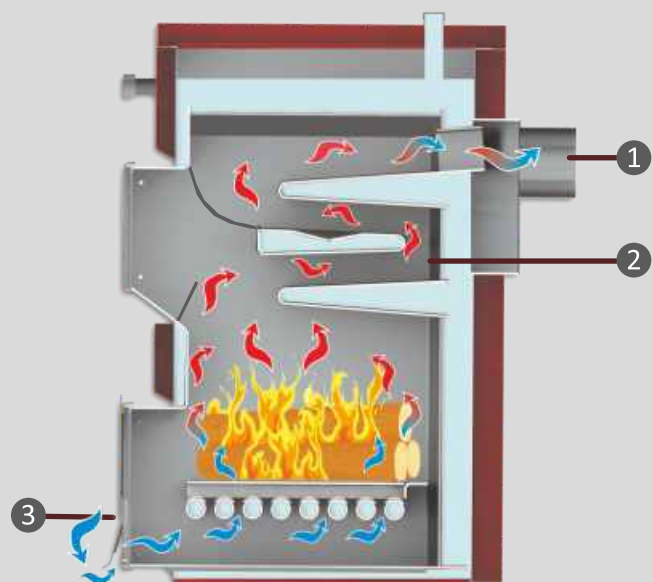


WB 20-50





		WB 20	WB 25	WB 30	WB 40	WB 50
Nominal heat output	kW	20	25	30	40	50
Minimum ÷ Maximum heat output	kW	15÷20	20÷25	25÷30	35÷40	40÷50
Height (H)	mm	1145	1145	1145	1145	1145
Width (L) x Depth (D)	mm	464x870	464x930	524x930	624x930	624x990
Water mantle volume	L	60	75	82	96	106
Combustion chamber volume	L	55	62	74	94	103
Required chimney draught	Pa/mbar	16/0.16	20/0.20	21/0.21	23/0.23	24/0.24
Operating pressure	mbar	3	3	3	3	3
Cold water inlet	A, mm	Rp1¼"/450	Rp1¼"/450	Rp1¼"/450	Rp1¼"/450	Rp1¼"/450
Hot water outlet	B, mm	Rp1¼"/1165	Rp1¼"/1165	Rp1¼"/1165	Rp1¼"/1165	Rp1¼"/1165
Chimney	F, ø/mm	150/940	150/940	150/940	180/925	180/925
Operating temperature range	°C	65-85	65-85	65-85	65-85	65-85
Weight	kg	220	238	264	310	327

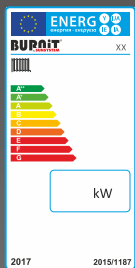


Airflow scheme

- ① Flue. ② Three-pass flue gas flow.
- ③ Air intake flap. Incoming air.



An entry-level solid fuel boiler with basic operation and low operation cost. Designed to burn solid fuel - wood, Class B wood briquettes or coal. Option for fitting pellet, oil or gas-fired burner. Constructed under to EN-303-5..



Energy efficiency. Directive 2010/30/EU, regulation 2015/1187:

Nominal heat output, kW

20 - 110

Class

A



<p>Combustion process</p>	<p>The combustion is controlled by thermostatic draught regulator, which is a mechanical device boasting ultimate reliability. It controls the intensity of combustion by altering the flow of air intake.</p>
<p>Boiler. Water mantle. Combustion chamber</p>	<p>Boiler body is made of boiler grade steel with thickness of 5 mm at the combustion chamber and 3 mm at the water mantle. Water mantle embraces the combustion chamber in full to utilize the emitted heat most efficiently. Combustion chamber with large heat exchanging surface and low chamber resistance. Ribbed chamber surface and three-pass flue gas flow for improved heat exchange. Large firebox door ensures easy loading even with bigger logs (length of wood-logs up to 60 cm). Lower boiler door with opening for burner mounting. Exchangeable metallic ash grate protects the pipe grid from the flame.</p>
<p>Insulation</p>	<p>50 mm high-temperature wool.</p>



<p>Safety devices</p>	<p>Thermostatic draught regulator. Pressure relief valve 3 bar. Safety heat evacuator a tap-water-filled line passes through the upmost part of the boiler body</p>
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For heating of medium to large sized spaces. Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



Recommended fuel:



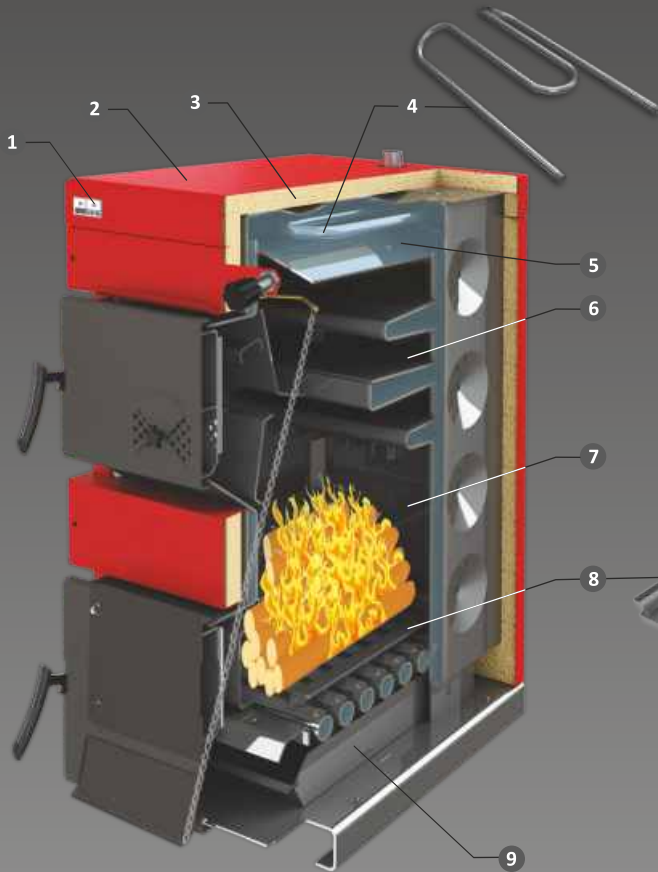
woods, humidity 20%




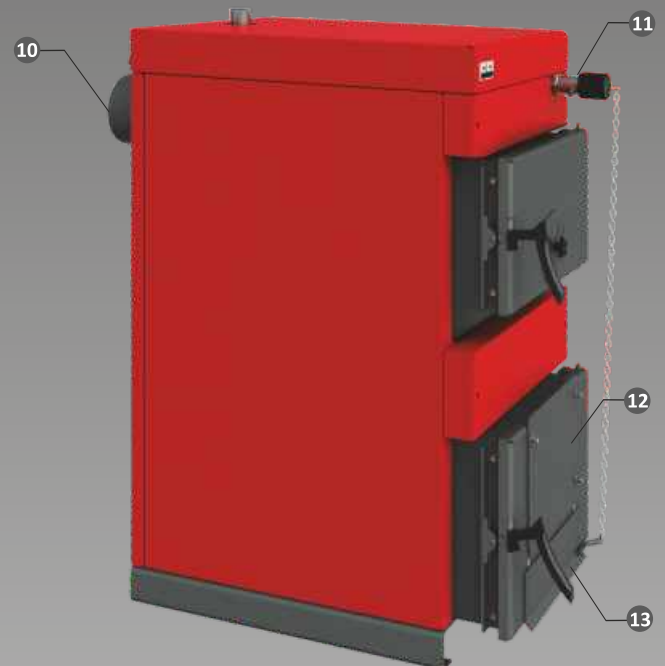
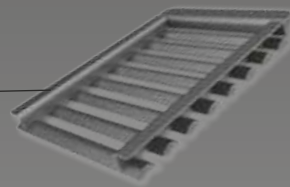
wood briquettes



woods + coals



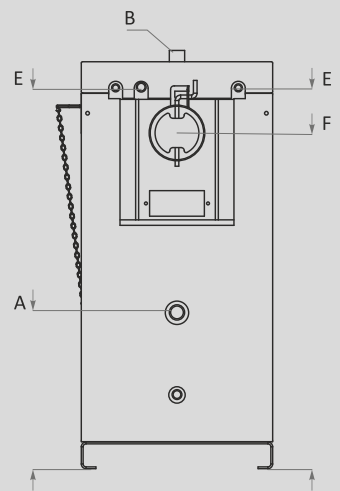
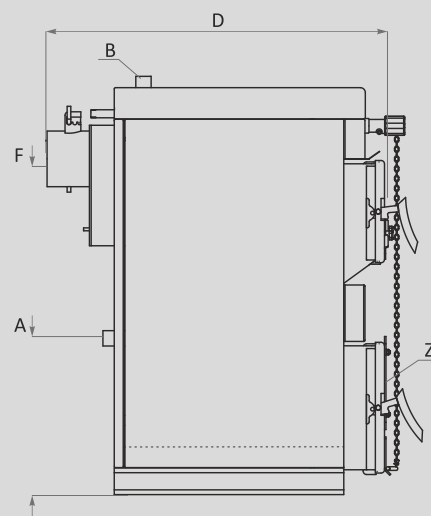
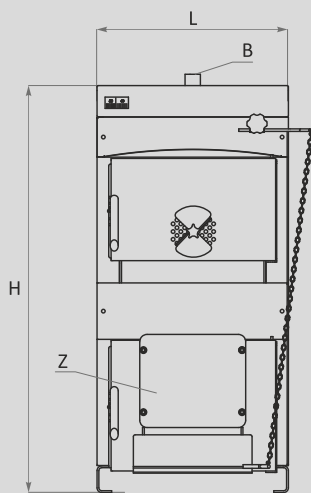
 kW	Model	Code
20	WBS 20	00081230002301
25	WBS 25	00081230002302
30	WBS 30	00081230002303
40	WBS 40	00081230002304
50	WBS 50	00081230002305
70	WBS 70	00081230002307
90	WBS 90	00081230002309
110	WBS 110	00081230002211



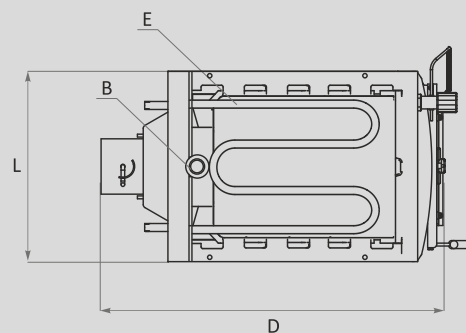
1. Temperature indicator
2. Housing
3. High efficiency thermal insulation
4. Safety heat evacuator
5. Water mantle (jacket)
6. Three-pass flue gas flow
7. Combustion chamber
8. Metal ash grate
9. Ash- and- soot container
10. Flue
11. Thermostatic draft regulator
12. Opening for mounting of a burner
13. Air intake flap



Technical parameters.



WBS 20-110

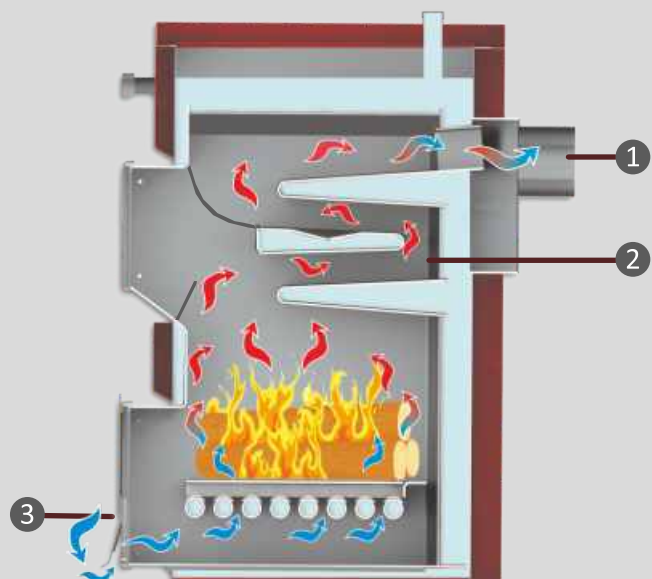




		WBS 20	WBS 25	WBS 30	WBS 40	WBS 50	WBS 70	WBS 90	WBS 110
Nominal heat output	kW	20	25	30	40	50	70	90	110
Minimum ÷ Maximum heat output	kW	15÷20	20÷25	25÷30	35÷40	40÷50	50÷70	70÷90	90÷110
Height (H)	mm	1145	1145	1145	1145	1145	1285	1285	1285
Width (L) x Depth (D)	mm	464x870	464x930	524x930	624x930	624x990	624x1110	684x1110	744x1110
Water mantle volume	L	60	75	82	96	106	134	145	162
Combustion chamber volume	L	55	62	74	94	103	170	191	212
Required chimney draught	Pa/mbar	16/0.16	20/0.20	21/0.21	23/0.23	24/0.24	38/0.38	47/0.47	56/0.56
Operating pressure	mbar	3	3	3	3	3	3	3	3
Cold water inlet	A, mm	Rp1¼" 450	Rp1¼" 450	Rp1¼" 450	Rp1¼" 450	Rp1¼" 450	Rp1½" 430	Rp1½" 430	Rp1½" 430
Hot water outlet	B, mm	Rp1¼" 1165	Rp1¼" 1165	Rp1¼" 1165	Rp1¼" 1165	Rp1¼" 1165	Rp1½" 1315	Rp1½" 1315	Rp1½" 1315
Safety heat evacuator inlet/outlet	E, mm	R½" 1072	R½" 1072	R½" 1072	R½" 1072	R½" 1072	R½" 1222	R½" 1222	R½" 1222
Chimney	F ø, mm	150 940	150 940	150 940	180 925	180 925	200 1050	200 1050	200 1050
Boiler door opening for burner mounting	Z, ø mm	176	176	176	176	176	215	215	215
Operating temperature range	°C	65-85	65-85	65-85	65-85	65-85	65-85	65-85	65-85
Weight	kg	231	265	278	320	340	420	459	486

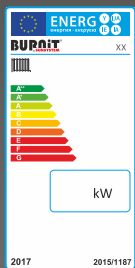
Airflow scheme

- ① Flue.
- ② Three-pass flue gas flow.
- ③ Air intake flap. Incoming air.





Steel boiler with intelligent controller and air feed fan.
Designed to burn solid fuel - wood,
Class B wood briquettes or coal.
Option for fitting pellet, oil or gas-fired burner.
Constructed under to EN-303-5.



Energy efficiency.
Directive 2010/30/EU,
regulation 2015/1187:

Nominal heat
output, kW

20 - 110

Class

A



<p>Electronic control. Combustion process</p>	<p>Microprocessor controller. The electronic control unit is used to operate the air-feed fan, the circulation pump of central heating and the pump of domestic hot water (DHW). Fan speed is regulated in relation to fuel consumption and momentary chimney draft.</p>
<p>Boiler. Water mantle. Combustion chamber.</p>	<p>Boiler body is made of boiler grade steel with thickness of 5 mm at the combustion chamber and 3 mm at the water mantle. Water mantle embraces the combustion chamber in full to utilize all emitted heat most efficiently. Combustion chamber with large heat exchanging surface and low chamber resistance. Ribbed chamber surface and three-pass flue gas flow for improved heat exchange. Large firebox door ensures easy loading even with bigger logs (length of wood-logs up to 60 cm). Exchangeable metallic ash grate protects the pipe grid from the flame. Lower boiler door with opening for burner mounting.</p>
<p>Insulation</p>	<p>50 mm high-temperature wool.</p>



<p>Safety devices</p>	<p>Pressure relief valve 3 bar; Safety heat evacuator a tap-water-filled line passes through the upmost part of the boiler body. STB - emergency thermostat - turn off the fan and stop the combustion process. Air intake flap for the fan</p>
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For heating of medium to large sized spaces.
Suitable for powering the heating system, the buffer vessel and the production of domestic hot water (DHW).



Recommended fuel:



woods, humidity 20%



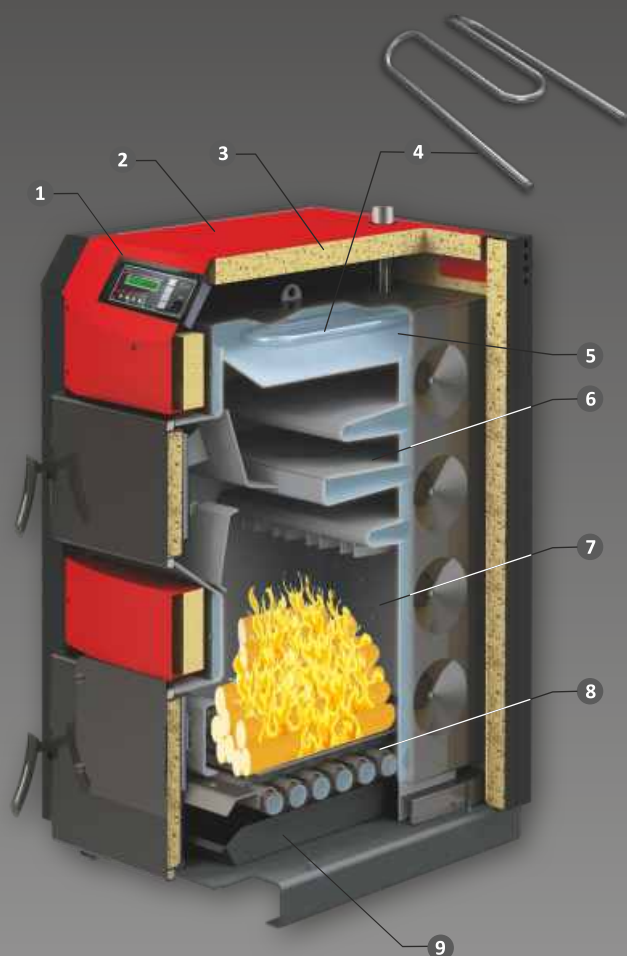
wood briquettes



wood + coal



	Model	Code
20	WBS AC 20	00081230002331
25	WBS AC 25	00081230002332
30	WBS AC 30	00081230002333
40	WBS AC 40	00081230002334
50	WBS AC 50	00081230002335
70	WBS AC 70	00081230002337
90	WBS AC 90	00081230002339
110	WBS AC 110	00081230002241

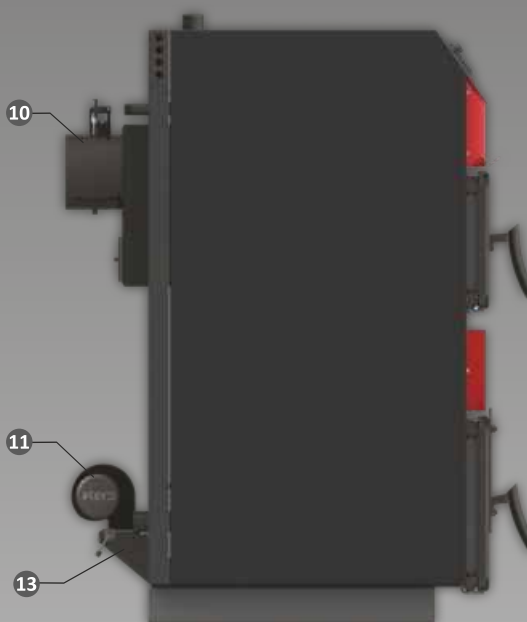


1. Controller
2. Housing
3. High efficiency thermal insulation
4. Safety heat evacuator
5. Water mantle (jacket)
6. Three-pass flue gas flow
7. Combustion chamber
8. Metal ash grate
9. Ash- and- soot container
10. Opening for mounting of a burner
11. Flue
12. Air feed fan
13. Air intake flap



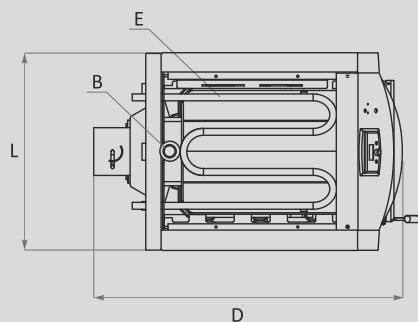
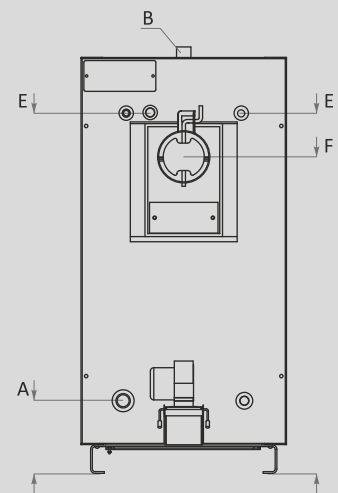
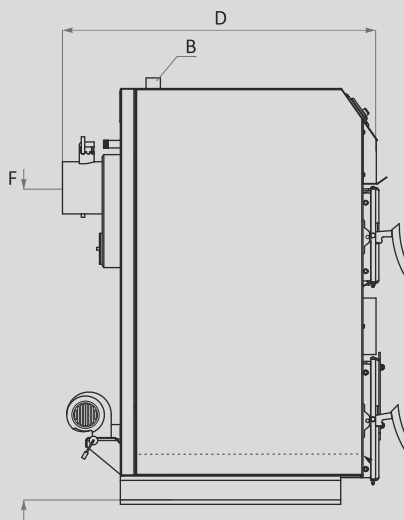
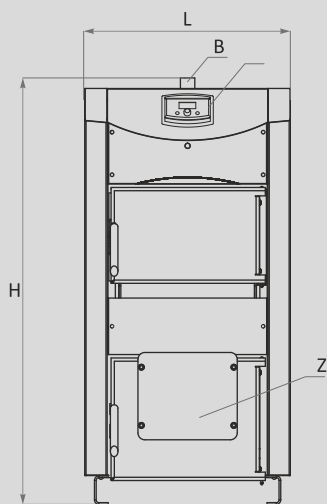
Microprocessor controller. Functions:

Controls the operation of heating pump.
Controls the operation of domestic hot water (DHW) pump.
Controls the operation of fan.





Technical parameters.



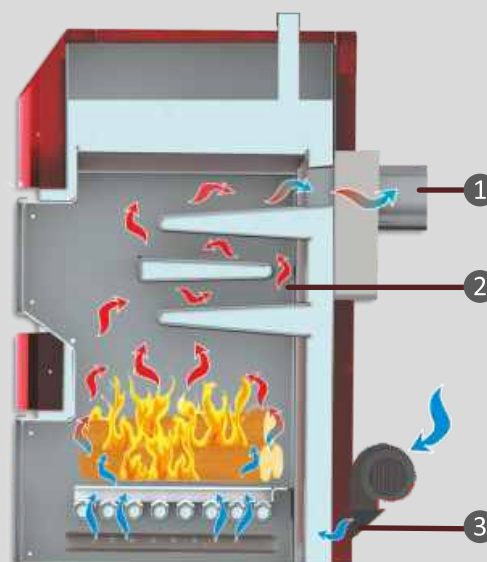
WBS Active 20-110



		WBS AC 20	WBS AC 25	WBS AC 30	WBS AC 40	WBS AC 50	WBS AC 70	WBS AC 90	WBS AC 110
Nominal heat output	kW	20	25	30	40	50	70	90	110
Minimum ÷ Maximum heat output	kW	15÷20	20÷25	25÷30	35÷40	40÷50	50÷70	70÷90	90÷110
Height (H)	mm	1235	1235	1235	1235	1235	1385	1385	1385
Width (L) x Depth (D)	mm	540x860	540x925	600x925	700x925	700x985	700x1105	760x1105	820x1105
Water mantle volume	L	60	75	82	96	106	134	145	162
Combustion chamber volume	L	58	62	73	84	97	120	133	160
Required chimney draught	Pa/mbar	16/0.16	20/0.20	21/0.21	23/0.23	24/0.24	38/0.38	47/0.47	56/0.56
Operating pressure	mbar	3	3	3	3	3	3	3	3
Cold water inlet	A, mm	Rp1¼" 232	Rp1¼" 232	Rp1¼" 232	Rp1¼" 232	Rp1¼" 232	Rp1½" 232	Rp1½" 232	Rp1½" 232
Hot water outlet	B, mm	Rp1¼" 1265	Rp1¼" 1265	Rp1¼" 1265	Rp1¼" 1265	Rp1¼" 1265	Rp1½" 1420	Rp1½" 1420	Rp1½" 1420
Safety heat evacuator inlet/outlet	E, mm	R½" 1072	R½" 1072	R½" 1072	R½" 1072	R½" 1072	R½" 1220	R½" 1220	R½" 1220
Chimney	ø, mm	150	150	150	180	180	200	200	200
	mm	945	945	945	930	930	1065	1065	1065
Boiler door opening for burner mounting	Z, ø mm	176	176	176	176	176	215	215	215
Operating temperature range	°C	65-85	65-85	65-85	65-85	65-85	65-85	65-85	65-85
Weight	kg	248	270	294	340	366	448	485	514

Airflow scheme

- ① Flue. ② Three-pass flue gas flow.
- ③ Air intake flap. Incoming air.





Fuel hopper is designed to serve the pellet-fired boiler. The hopper capacity is determined using as calculation base the daily or weekly fuel consumption rate of burner.


Model FH 300

Fuel hopper with usable capacity of 300 litres allows charging of 160 kg of pellets with diameter \varnothing 6-8mm.

**Fuel hopper for pellets
FH 300**

Pellet hopper is designed for installation on either side of the boiler - left or right side. Made of galvanized steel. Thanks to the inclined structure of the collecting plates is achieved targeting of the pellets to the screw. Rotating base for easy positioning of the auger. Opening for auger connection. Holder auger.



	Model	Code
300	FH 300	00081133000001
500	FH 500 V2	00081233000061

Model FH 500

Fuel hopper with usable capacity of 500 litres allows charging of 280-300 kg of pellets with diameter \varnothing 6-8mm. Refueling of the fuel hopper - once per week (for burner with rated power up to 40 kW).

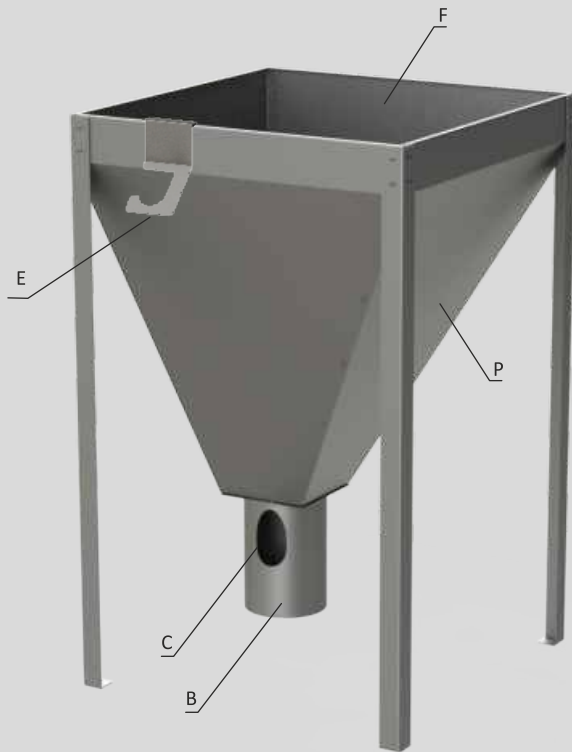


Fuel hopper for pellets FH 500

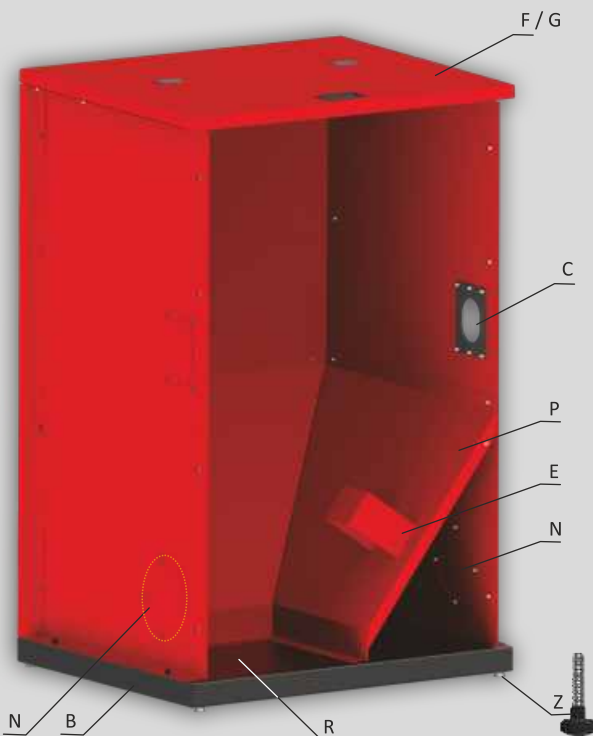
Pellet hopper is designed for installation on either side of the boiler - left or right side.
 Made of cold-rolled steel sheets, powder coating.
 Thanks to the inclined structure of the collecting plates is achieved targeting of the pellets to the screw.
 Convenient hatch for fuel loading.
 Side opening for easy cleaning.
 Opening for auger connection. Holder auger.
 Precise level the Fuel Hopper by bolt-in bolt-out each foot.



Technical parameters.



Installation option:
 Fuel hopper FH 300,
 Boiler WB,
 Pellet burner Pell Eco



Installation option:
 Fuel hopper FH 500,
 Boiler WBS Active,
 Pellet burner Pell





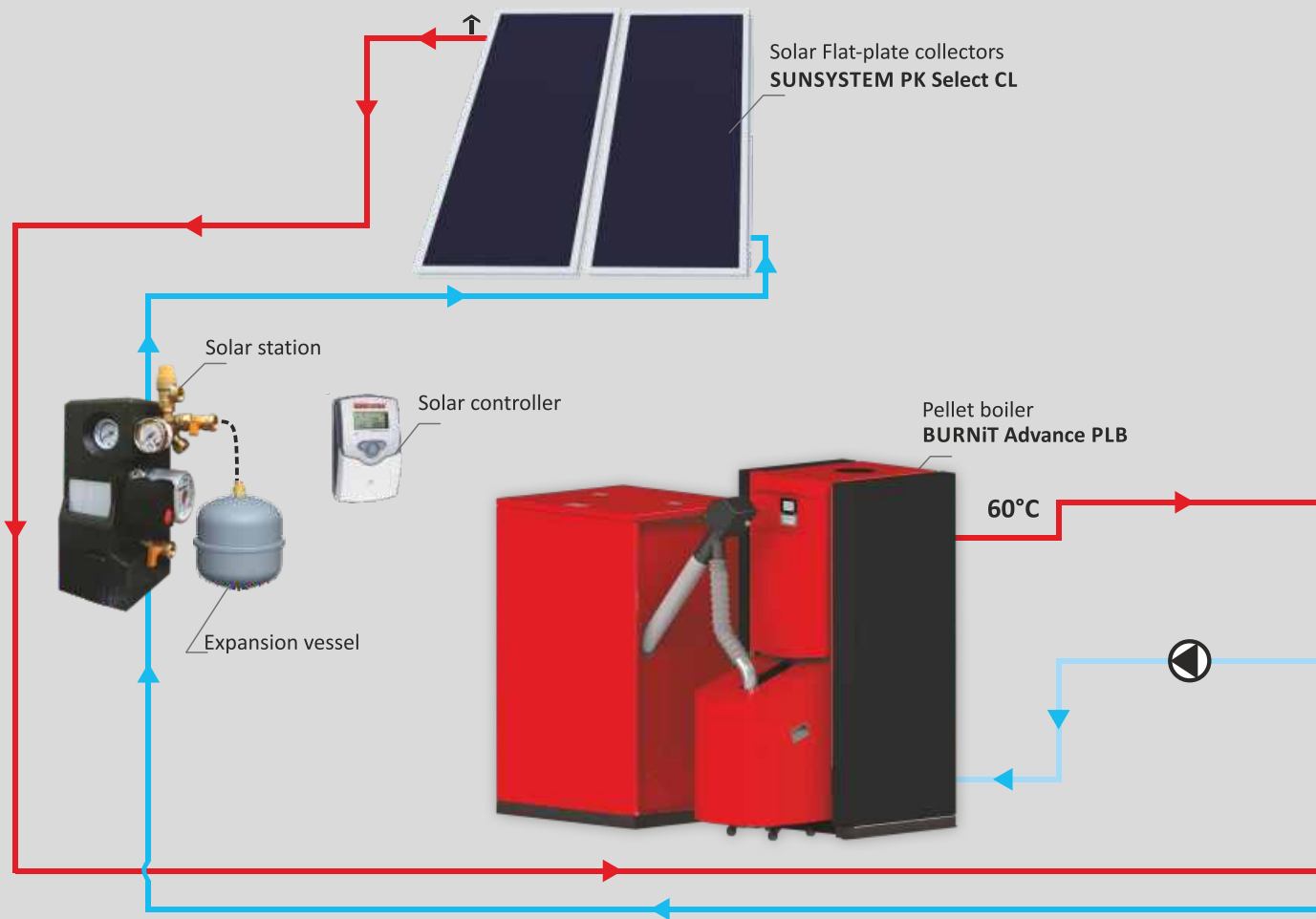
FH 300

Capacity of fuel hopper	L	300
Maximum load of wood-pellets \varnothing , 6÷8 mm	kg	160
Height	mm	1295
Width / Depth	mm	810 / 810
Base/ Pellet-collecting bottom	B, \varnothing mm	\varnothing 200
Opening for auger connection	C, \varnothing mm	\varnothing 76
Auger holder	E	✓
Loading opening	F, mm	805 x 805
Inclination angle of guide plates	P	60°
Weight	kg	28

FH 500

Capacity of fuel hopper	L	500
Maximum load of wood-pellets \varnothing , 6÷8 mm	kg	280÷300
Height	mm	1260
Width / Depth	mm	772 / 730
Base	B, mm	53
Opening for auger connection	C, \varnothing mm	\varnothing 76
Auger holder	E	✓
Loading opening	F, mm	400 x 772
Hatch cover	G	✓
Drainage holes	N	✓
Inclination angle of guide plates	P	45°
Pellet-collecting bottom	R, mm	300 / 300
Leveling feet	Z	✓
Weight	kg	71

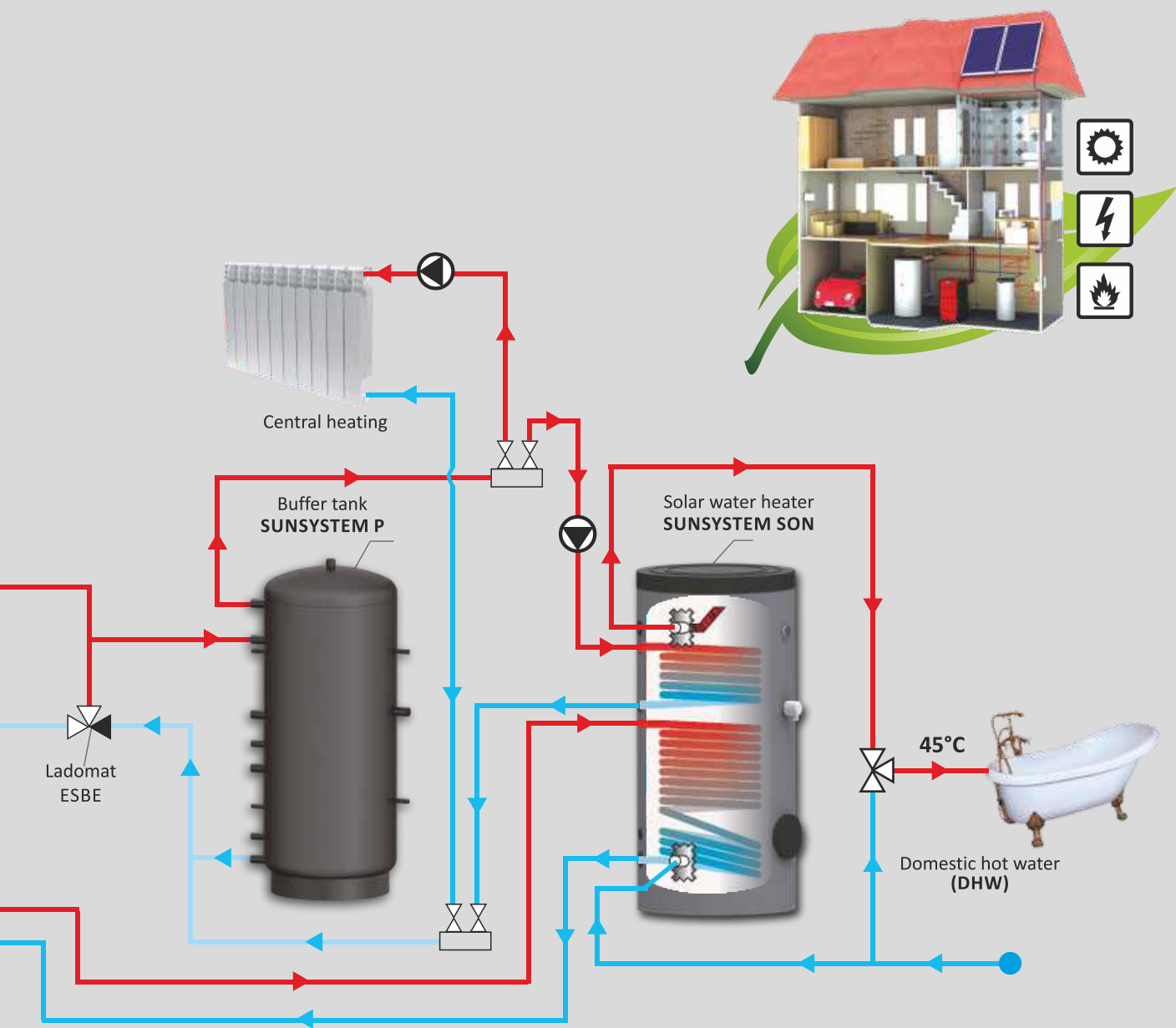
SUNSYSTEM BURNiT by SUNSYSTEM



Attention! All schemes are examples.
It is recommended that sizing and connection of your system be carried out by an authorized service professional/specialized service shop.



In order to ensure long term trouble free operation of your BURNiT appliance, please call an authorized BURNiT service partner to do the installation for you.




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