PRIVATE HEATING AND SMALL BUSINESS SOLUTIONS FROM BIO MOBITEK

BIO MOBITEK
BIO HEATING TECHNOLOGY

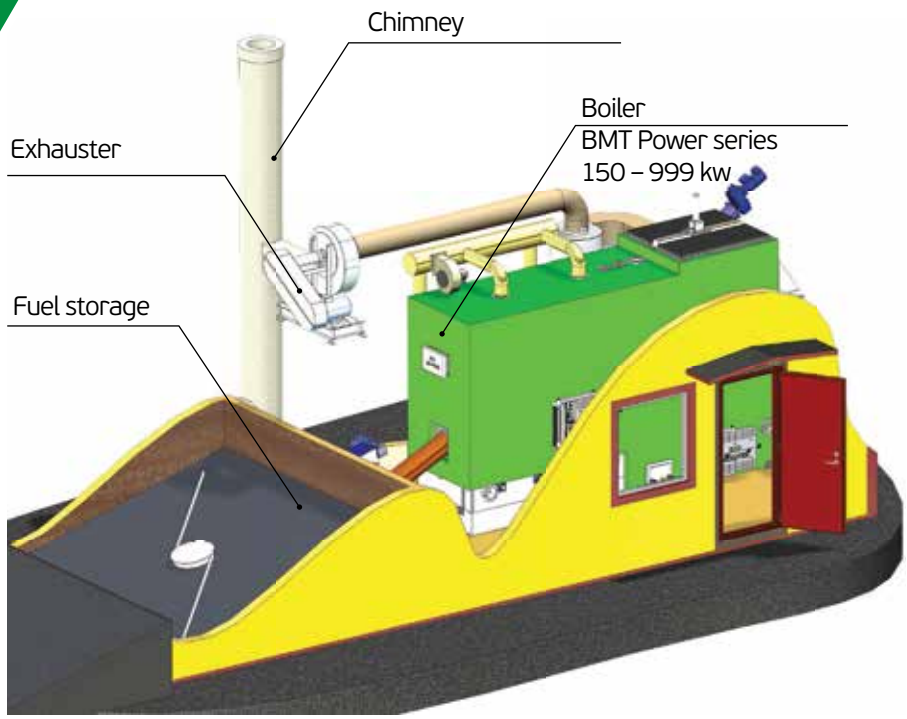
BMT PowerCont

150–999 KW

www.biomobitek.com

BMT PowerCont

COMPONENTS OF THE SYSTEM



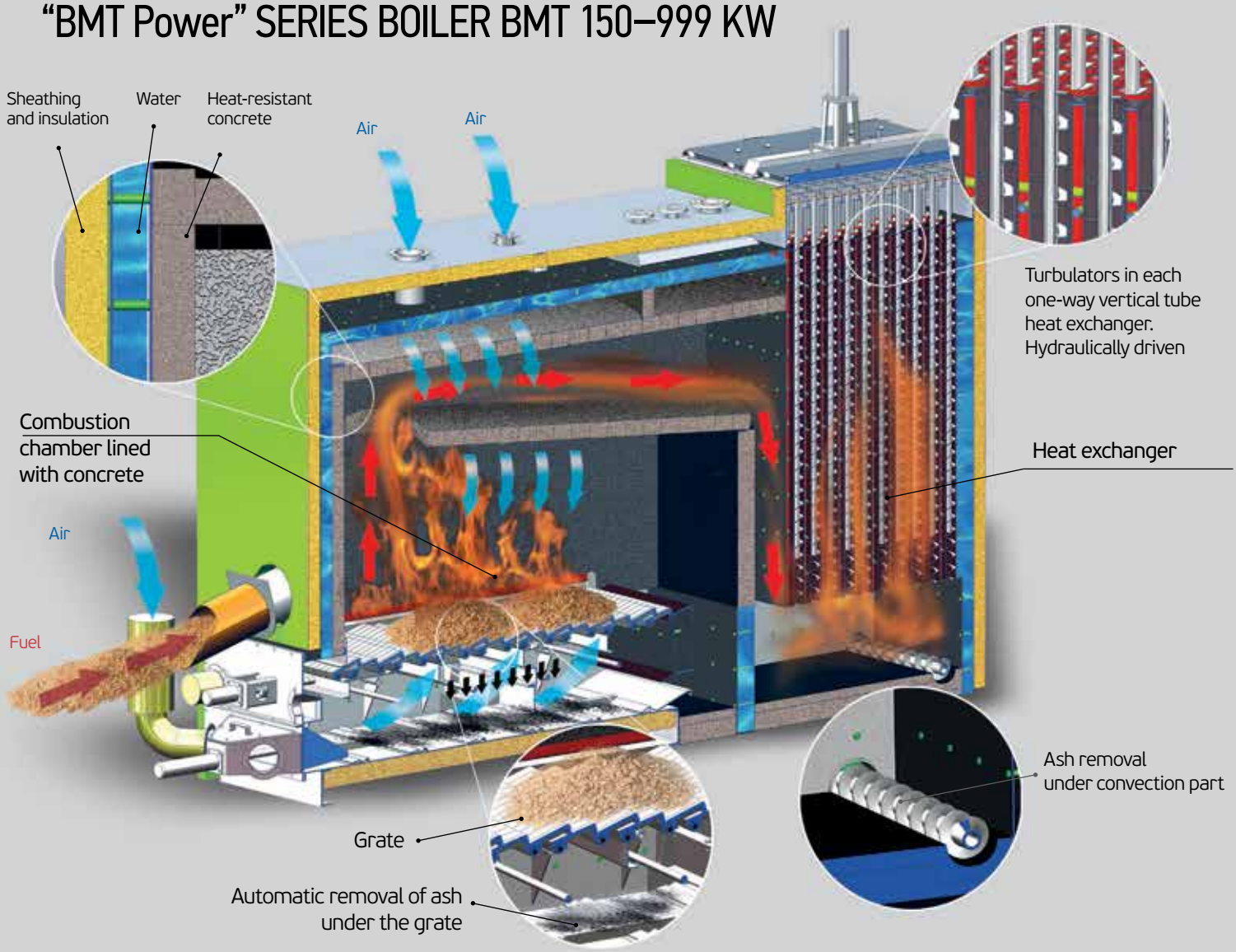
BOILER MODULE INCLUDES:

- Boiler BMT Power 150 ... 999 kW
- Automatic air supply system into the combustion zone
- Cyclone with rotary valve
- Automatic ash removal system of the burner and the cyclone
- Exhauster
- Water piping with all necessary circulation pumps and valves
- Boiler control system — computer hardware, software
- GSM module, and the ability to control the system via the Internet
- Automatic combustion system
- Automatic pressure relief in the boiler
- Ventilation system
- Electrical and automation locker
- Hydrostation
- Lighting of module
- Window in the boiler room
- Sink in the boiler room
- Outdoor lighting with motion sensor
- Rain collection system and water drainage
- Drainage system within a module
- All the required decorative finish inside and outside

MODULE MAY BE EQUIPPED WITH ADDITIONAL NODES:

- The increased volume of fuel storage
- Setting the multi-cyclone (standart cyclone replacement)
- Heat exchanger — connection to the client's network through a heat exchanger
- Heatmeter
- Tool locker with tools and a gas burner for ignition
- Installation of gates in the warehouse (height 1500 mm)
- Sheathing tree outside
- Increasing the height of the chimney
- Installation of surveillance cameras
- Ash container with sizes/m^3 — 0,25/0,5/0,8/2,2/6,0/10,0
- The rotary valve to the boiler feed screw (required when using the fuel moisture content of 10–30%)
- Remote control via mobile phone or computer
- Fuel automatic ignition

“BMT Power” SERIES BOILER BMT 150–999 KW



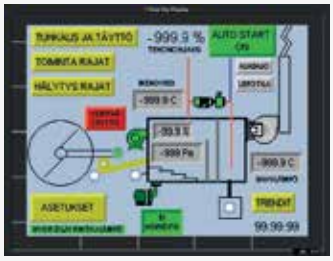
BASIC PARAMETERS OF THE BOILER:

- Rated power 150 ... 999 kW
- The power range of 10–110% of the nominal
- Boiler efficiency — up to 97%, efficiency of the system — up to 93%
- The ability to use the fuel humidity of 10 to 30% and from 30 to 55%
- Moving grate with hydraulic or mechanical drive
- Grate with a chromium content of 20% Cr
- Automatic air flow under the grate and through the concrete arches of the ceiling and walls of the burner
- Vertical one-pass heat exchanger, equipped with a system of cleaning and ash removal
- The combustion chamber is lined with a water-cooled heat-resistant concrete
- The flue gas temperature is not more than 160° C
- Lifetime at least 10 years

In modular boiler Bio Mobitek established computer hardware and software for controlling and monitoring combustion.

The system is equipped with the following sensors

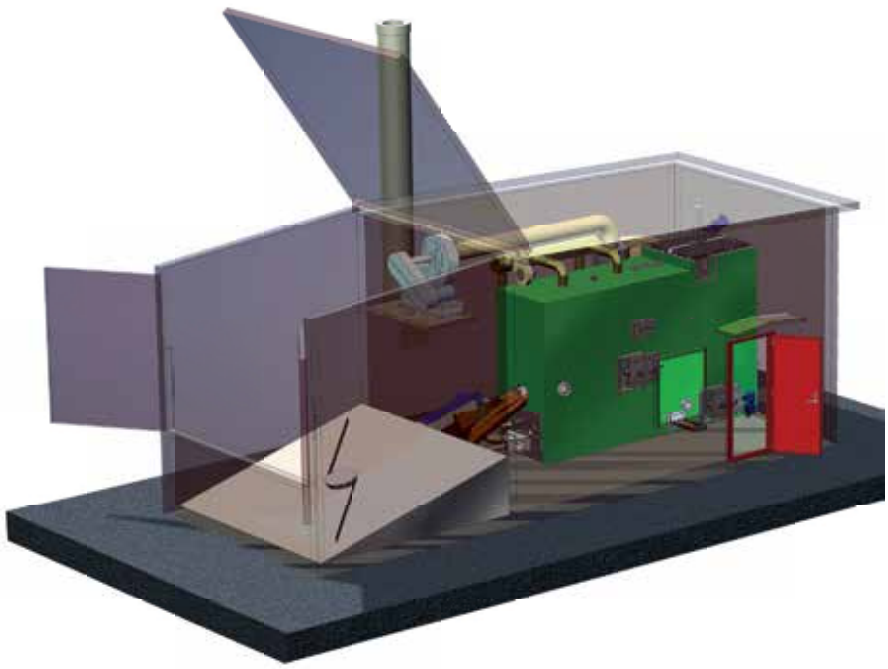
- THE SENSOR IN THE BURNING AREA
- LAMBDA SENSOR
- THE TEMPERATURE SENSOR IN THE BOILER
- SENSOR FILLING WITH WATER
- LIMITING WATER TEMPERATURE SENSOR
- RETURN FIRE THERMOSTAT
- FLUE GAS TEMPERATURE SENSOR



BMT PowerCont 150–999 KW

Plants power:	**kW**	**150 kW**	**150 kW**	**250 kW**	**250 kW**	**350 kW**	**350 kW**	**499 kW**	**499 kW**	**750 kW**	**750 kW**	**999 kW**	**999 kW**
Fuel storage capacity:	m^3	25	43	25	43	25	43	25	43	25	43	25	43
CONTAINER:													
Overall dimensions													
The length, l	mm	8000	9000	8000	9000	8000	9000	9300	10000	9300	10250	10200	11100
Width, b	mm	3320	4320	3320	4320	3320	4320	3320	4320	3320	4320	3320	4320
The height, h	mm	3660	3660	3660	3660	3660	3660	3660	3660	3660	3660	4660	4660
Foundation Area	m^2	26,56	38,88	26,56	38,88	26,56	38,88	30,876	43,2	30,876	44,28	33,864	47,952
Walls	EI	EI60	EI60	EI60	EI60	EI60	EI60	EI60	EI60	EI60	EI60	EI60	EI60
Lifting roof	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Storage mechanism	type, size m	spring unloader, 3x3	spring unloader, 4x4	spring unloader, 3x3	spring unloader, 4x4	spring unloader, 3x3	spring unloader, 4x4	spring unloader, 3x3	spring unloader, 4x4	spring unloader, 3x3	spring unloader, 4x4	spring unloader, 3x3	spring unloader, 4x4
The increase of storage	m^3	25+14--->39	43+24--->67	25+14--->39	43+24--->67	25+14--->39	43+24--->67	25+14--->39	43+24--->67	25+14--->39	43+24--->67	34+14--->47	57+24--->82
BOILER AND SYSTEM:													
Operating pressure	Bar	4	4	4	4	4	4	4	4	4	4	4	4
Combustion zone with fuel humidity 30-50%		Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults	Walls lined with concrete + concrete vaults
Combustion zone with fuel humidity 10-30%		Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete	Concrete vaults, walls without concrete
Grate area	m^2	0,3	0,3	0,5	0,5	0,8	0,8	1,2	1,2	1,7	1,7	2,3	2,3
The volume of combustion chamber	m^3	0,45	0,45	0,95	0,95	1,3	1,3	2,1	2,1	3	3	4,8	4,8
The movement of the grate	Yes/No	every second row, gearmotor	every second row, gearmotor	every second row, gearmotor	every second row, gearmotor	every second row, gearmotor	every second row, gearmotor	every second row, hydraulics	every second row, hydraulics	every second row, hydraulics	every second row, hydraulics	every second row, hydraulics	every second row, hydraulics
Turbulators	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Automatic movement of turbulators	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Connecting the boiler	DN	50	50	65	65	65	65	80	80	100	100	100	100
The fuel supply screw	D mm	140	140	140	140	140	140	160	160	160	160	200	200
Rotator	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flue gas cleaning cyclone	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exhauster	kW	0,75	0,75	1,5	1,5	3	3	4	4	5,5	5,5	7,5	7,5
Automatic ash removal under the grate	Screw/D	Screw D140	Screw D140	Screw D140	Screw D140	Screw D140	Screw D140	Moving floor	Moving floor	Moving floor	Moving floor	Moving floor	Moving floor
Automatic ash removal after grate and outside output	Screw/D	Screw D140	Screw D140	Screw D140	Screw D140	Screw D140	Screw D140	Moving floor	Moving floor	Moving floor	Moving floor	Moving floor	Moving floor
Automatic ash removal under convection	No/screw D	No	No	No	No	No	No	Screw D140	Screw D140	Screw D140	Screw D140	Screw D140	Screw D140
Automatic ash removal into ash container	Screw/D	D140	D140	D140	D140	D140	D140	D140	D140	D140	D140	D140	D140
Stainless steel module chimney	D mm/H mm	D200/H6000	D200/H6000	D200/H6000	D200/H6000	D200/H6000	D200/H6000	D200/H6000	D200/H6000	D300/H6000	D300/H6000	D350/H6000	D350/H6000

FUEL STORAGE BMT PowerCont WITH SPRING UNLOADER SYSTEM WITH VOLUME 25-67 m³



DIMENSIONS OF THE FUEL STORAGE:

- Width — 3000 or 4000 mm
- The height of the low wall — regarding project mm
- The height of a high wall — regarding project mm
- Length — 3000 or 4000 mm
- Permissible loading height of 5.5 m
- The floor angle 120
- Wood chips with standards in accordance to SFS-EN 14961-4

THE FUEL STORAGE IS EQUIPPED WITH:

- The fuel supply by spring unloader
- Screw conveyor
- Hydraulic lifting roof, which allows discharge fuel with all kinds of vehicles.

THE INCREASE OF FUEL STORAGE

With the increase of the walls, the volume changes as follows:

BMT PowerCont 150–350–499–750 kW

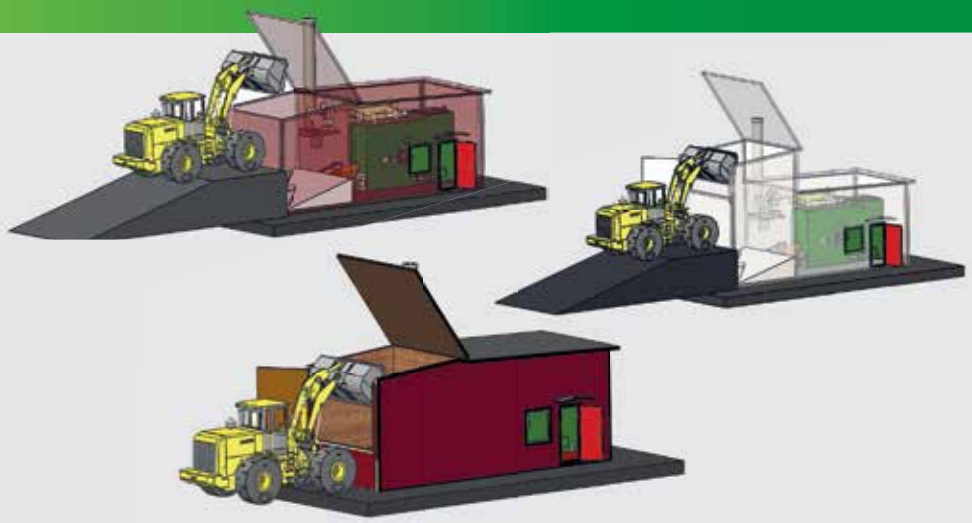
34 м³ ➔ 47 м³

57 м³ ➔ 82 м³

BMT PowerCont 999 kW

25 м³ ➔ 39 м³

43 м³ ➔ 67 м³



All these starage volumes are gross, i.e. the total volume of the fuel storage.

BMT PowerCont OVERALL PERFORMANCE OF THE SYSTEM:

O_2	3–9 %
CO_2	14,0–17,5 %
CH_4	0 ppm
HCl	<100 mg/m³
NOx	75–150 ppm
SO	3–90 ppm
Ash in the flue gas	<200mg / m³ using multi-cyclone
Filtering the flue gases	<5 mg / m³, with bag filter
Combustion efficiency	92–97%
Thermal power	88–93%
Functionality	> 95%
Power control, automatic ignition	0–110%
Power consumption	<1.5% of the heat energy

ELECTRIC POWER OF BMT POWERCONT PLANTS

150 kW	250 kW	350 kW	499 kW	750 kW	999 kW
3x16A	3x25A	3x25A	3x32A	3x40A	3x50A

5 REASONS WHY SHOULD CHOOSE PowerCont from BIO MOBITEK

1. System efficiency up to 97%
2. Installation at the client takes 24 hours. Boiler systems are manufactured as the plant modules
3. PowerCont system work without human presence at the expense of highly automated system
4. Low noise level, modern technology and minimal emissions into the environment
5. Reliability and durability

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