



Pellets® Fuzzy Logic 2

group of automated boilers with innovative Pellets Fuzzy Logic 2nd generation method

and combustion process controlled by means of lambda probe module²
saves up to 40% fuel.



Broadband 6-wire lambda sensor



eco-combusting

Pellets Fuzzy Logic 2 boilers comply with PN-EN 303-5-2002 standard

Models [kW]

15 25 40 50 75 100



pellet



pellet / oats
50 / 50



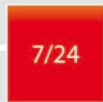
pea coal



wood



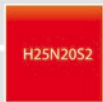
weather
adjustment



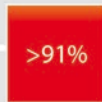
7/24
factory
service



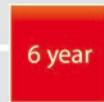
P265
GH
boiler
steel



H25N20S2
heat-resistant
steel



>91%
boiler
efficiency



6 year
warranty
+ 2 years
extension

Boiler description

Auto ignition boilers Pellets Fuzzy Logic 2, power range: 15, 25, 40, 50, 75, 100 kW, set a new trend for solid fuel boilers in Poland. They are adapted to combust: granulate of sawdust (pellet), pea coal, oats and wood on additional grid with which boiler is equipped. Fuel in form of granulate is poured into a tank of large capacity. Filling in such tank, depending on energy requirement of a building, will allow self-operated work of device for 7 to 30 days.

Advantages of Pellets Fuzzy Logic 2 boiler:

1. Very good and durable steel boiler heat exchanger was constructed according to 3x definition (time, turbulator, temperature).
2. Burner is adapted to combust pellets, oats and pea coal (three burner tips as standard equipment of boiler)
3. To increase operation comfort and reduce the amount of combusted fuel we applied Fuzzy Logic 2nd generation adjustment.
4. Amount of air needed for combustion is to be specified by lambda probe (automatically fed air - option).
5. Rich equipment offered as standard, including function of automatic lighting up of pea coal, pellet and oats¹.



- 1 **Exhaust turbulator** additional element in boiler exchanger, which reduces exhaust temperature at boiler outlet.
- 2 **Pellets Fuzzy Logic 2nd generation controller** built-in full weather automatics, all sensors are included in the device's set.
- 3 **Extract fan** besides enhancing stack effect, the extract fan may be coupled during cleaning or picking up ash from exchanger. It does not result in dusts and unpleasant smells escaping to the room, in which device is located (back of the boiler)
- 4 **Retort Fuzzy Logic burner** equipped with three burner tips as standard, as well as the device, which ignites the fuel by means of hot air.
- 5 **Fuzzy Logic 2nd generation adjustment system + broadband lambda probe**² fully automatically and more precisely regulates the amount of supplied air, it saves up to 20% fuel.
mixing valve actuator automatic control over mixing valve actuator, measurement of temperature of water returning to boiler.
- 6 **Peephole** allows viewing flame without necessity to open the door.
- 7 **Tank** with large capacity, single feeding is enough for 7 to 30 days of combustion of pellet, pea coal or oats.
- 8 **Loading chamber** large loading chamber allowing wood combustion on grids without extracting burner.
- 9 **Worm made of acid-resistant steel** high resistance to humid work environment, abrasion and corrosion resistance at least 4 years
- 10 **Pressure fan** separates air into primary and secondary (back of the boiler)
- 11 **Ignition fan** fan and igniter for automatic ignition of fuels: pellet, oats, pea coal.
- 12 **Gear motor** energy saving gear motor (back of the boiler).
- 13 **Large ash pit** removing ash once in 5 months.



Pellets® Fuzzy Logic 2

- delivery to your home or to construction site
- warranty and after-warranty service
- 6 year warranty with the option to extend it for another 2 years.
- network of authorized service companies all over Poland
- device and spare parts distribution network in the whole country.



- 1 Triple-pass, steel, vertical exchanger**
made of boiler steel from 4mm to 6 mm thick, triple-pass

Vertical, triple-pass Pellets Fuzzy Logic 2 exchanger made of boiler steel P265GH with a thickness ranging from 4mm to 6 mm, triple-pass. Suitable shape and length are the features characterizing this structure. Less sensitivity to ash gathering on exchanger walls is one of the major advantages of this solution. Ash pours itself into the ash-pit by gravitation. With the exchanger extended in such a way significant resistance of exhaust flow was predicted and exhaust extract fan was applied, placed on the flue, supporting natural stack effect.

Why did we choose steel?

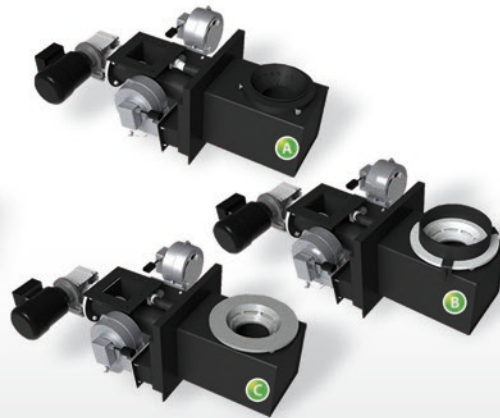
- reaching maximum efficiency;
- possibility to freely design highly efficient exchangers
- little sensitivity to lack of water
- little sensitivity to boiler scale
- little sensitivity to sudden temperature changes.

1. Pellets Fuzzy Logic 2 generation method saves up to 20 per cent fuel
2. Lambda probe saves up to 20 per cent fuel
3. Recommended mix pellet/oats in 50/50 proportion
4. Depending on building's heat requirements
5. While heating hot tap water



You may obtain detailed technical information from manufacturer or distributor
Manufacturer reserves the right to make construction changes of boiler improving functioning of the device.
Power selection for the device has been made for 4 climate zone of Poland (max. - 24°C)

TYPE	PFL 15	PFL 25	PFL 40	PFL 50	PFL 75	PFL 100
Building area [sqm]	50-200	100-200	200-530	370-660	550-1000	600-1300
Power range [kW]	5-15	8-25	12-40	15-50	23-75	30-100
Depth [mm]	1075	1145	1145	1355	1465	1535
Width [mm]	1030	1160	1300	1380	1410	1580
Height [mm]	1130	1210	1220	1220	1550	1565
Stack diameter [mm]	160	160	160	160	180	250



- 2 Fuzzy Logic 2 retort burner**
equipped with automatic igniter for three fuel types

- A) Steel tip for pellet combustion
B) Steel tip with overlay for oats combustion
C) Cast iron tip for coal combustion

Why the retort burner?

- extremely even and precise feeding – lets you control combustion process by means of lambda probe;
- possibility of combustion of pellets, oats and coal with high efficiency;
- automatic ignition of pellets, oats and coal.

Retort burner Fuzzy Logic 2 is equipped with automatic igniter for three fuel types – pellets, oats, coal.
Feeding worm made of stainless steel – resistant to humid work environment. Boiler efficiency does not depend only on the efficiency of heat transmission to the exchanger, but also on the efficiency of fuel combustion process itself. In the case of liquid or gas fuel combustion there are no major issues, whereas combustion of solid fuels is an extraordinarily problematic process. It depends on delivering suitable quantity of air for combustion and its precise mixing with fuel, as well as "getting rid" of redundant combustion products that is ash.
Applying of retort hearth solves these issues. Till recently pellets combustion was done by means of cast iron burners, which were applied for pea coal combustion. After a series of attempts steel burner was created, adapted to combustion of pellets and oats grains, which plays its role faultlessly.



- 3 Second generation Pellets Fuzzy Logic automatics with broadband lambda probe**
Pellets Fuzzy Logic 2 generation adjustment method in combination with lambda probe saves 40 percent fuel.

The heart of the boiler is boiler controller. Specialized electronic system, which is not only responsible for maintaining constant boiler temperature through correct dosing of fuel and air, but also for controlling the heating system of the building, including: heat buffer, solar system and 16 additional heating circuits.

Why Fuzzy Logic 2 generation method?

- saves up to 20 per cent fuel;
- significantly reduces gathering of impurities and soot in the boiler;
- high stabilization of boiler working temperature it eliminates water vapour condensation in the boiler;
- combustion chamber temperature is high and stable thus reducing emissivity of carbon oxides;
- burner power is calculated by means of advanced algorithm while applying Pellets Fuzzy Logic second generation method;
- Pellets Control M Fuzzy Logic regulator selects the power of burner according to energy requirements of building;
- burner works longer with heated combustion chamber, and only in this condition maximum efficiency is reached;
- large number of burner start ups cause the reduction of resultant device efficiency;
- algorithm of Fuzzy Logic 2 generation is more advanced than PID algorithm and than algorithm of Fuzzy Logic 1 generation used in other devices.

Distributor:

Edasimüüja:



Cerbos

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