

BIODOM

BIOLOGIC

# BIODOM PELLET BOILERS AND STOVES

Advanced biologic technology  
for maximum efficiency







# **BIODOM PELLETS, BOILERS,**

**a smart boiler that  
takes care of you.**

For many years, Biodom has been guaranteeing low heating costs, reliability, and an always warm home, with no compromises in terms of comfort.

A modern design, new BiLogic technology, simple maintenance, reliability and annual heating cost savings are the arguments that will convince you that Biodom pellet boilers are the real heating solution for your home.



# PROPERTIES OF BIOMASS

## environmentally friendly heating

In the recent years we have been dealing with the issue how to achieve energy efficiency and reduce environment pollution and heating of the atmosphere due to greenhouse gases.

The main challenge we are facing is not only efficient energy consumption, but how to generate and use it.

Due to its numerous advantages, wood has been recognised as the fuel of the future.

It is a renewable energy source and an environmentally acceptable manner of heating that reduces CO2 emissions.



### Logs

Logs are the most ancient and simplest fuel for heating. Wood is cut into smaller pieces, ready for combustion, available in the sizes 250, 330 or 500 mm. Wood must be properly stored in order to dry out properly before use. Its humidity should not exceed 20 %. To meet this criterion, the wood must dry for at least two years. The calorific value depends on the type of wood.



### Wood chips

Wood chips are an environmentally friendly fuel. They are up to 100 mm long machine-cut particles of wood, made of small pieces of wood, poor quality wood and residual wood. They are an inexpensive wood-based fuel that requires no trees to be cut, because they are essentially logging residues. The quality and energy value depend on the wood used.



### Wood pellets

Pellets are a modern wood-based fuel that achieves a high calorific value with low levels of residue ash and humidity. Pellets are cylindrical compressed wood particles made of dry unprocessed wood residue, compressed under pressure. To improve their mechanical solidity, natural binding agents are added. They are 10 to 50 mm long and their diameter is 4 to 10 mm.



# WOOD PELLET HEATING



**an environmentally clean material  
with a high calorific value**

## Green and ecological heating

Pellets are an environmentally friendly fuel. When used in energy-efficient stoves, they reduce emissions of green- house gases and harmful substances.

The main ecological advantage of pellets compared to fossil fuels is that pellets do not generate additional CO<sub>2</sub>. Because they are made of pure sawdust and wood chip, their burning only releases the amount of carbon dioxide that the trees have absorbed during their growth and as much as they would generate if they rotted in the forest. When fossil fuels burn, carbon dioxide is released that would otherwise remain trapped underground, increasing the emissions of greenhouse gases.

## Always warm, no work

## High efficiency, low quantity of ashes

The energy value of pellets depends on the tree type, water content and level of preservation of the wood. If high-quality pellets are used (containing less than 10% of water) the energy utilization rate is 4.7 to 5.5 MWh/tonne.

The calorific value and humidity tell us how much energy we will get from the pellets. The higher the calorific value and the lower the humidity, the higher the heating value. It is important to use pellets with up to 1 % of ash content in order to optimise the use and achieve more heat with minimum ash residue.

With automatic feeding, the heating of your house will be carefree and simple. You can get daily, weekly or seasonal pellet storage containers. No need to worry about the fire going out and you getting cold.

Heating with pellets is completely automatized, as the fuel is added by means of a special feed system, with automatic pellet ignition.

## Inexpensive and available raw material

Wood is an abundant natural raw material, as the percentage of forests is on the rise. Thanks to the growing competition among the suppliers and the renewability of the source, the price of pellets remains relatively low and stable.

Relieve your family budget and save money! Compared to fuel oil, pellets reduce the cost of heating by 50 %. The prices of oil, natural gas and electricity are constantly rising, so heating with pellets is a smart and safe choice for the future.

# ADVANTAGES

## of Biodom boilers and stoves



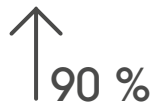
### Hermetically sealed fireplace

Airflow is only possible through a dedicated opening and nowhere else. This allows optimal control with Biologic technology.



### European quality

Sustainable development of the construction sector with primary concern for your health and clean environment.



### Highly efficient system

The economical concept of operation will provide constant efficiency regardless of the operating power.



### Silent operation

The stove's operation is almost completely silent and non-disruptive for the user.



### User-friendly controller

The simple display allows quick, clear and comfortable controlling of boilers and stove.



## STATE-OF-THE-ART BIOLOGIC TECHNOLOGY

technology of the future for maximum efficiency



## Automatic adjustment

BioLogic is a state-of-the-art technology for controlling pellet heating devices. Its innovative advantage is the automatic adjustment of parameters to the external factors (air density, draft of the chimney, quality of pellets ...) so the combustion always takes place in optimal and controlled conditions.

Contrary to the classical combustion devices that operate according to preset parameters, the heating devices with the state-of-the-art BioLogic integrated regulation detect changes and adapt to them automatically, allowing optimum efficiency.

### The BioLogic control system detects:



Thanks to constant automatic regulation, no anomalies can occur, so the operation and efficiency rate of the fuel are always optimal. The state-of-the-art technology enables very efficient combustion with the highest utilization rates and lowest emissions into the atmosphere.





Combustion with fixed parameters.



Combustion with the BioLogic technology.

Classical controlling devices operate with fixed parameters, while the BioLogic system automatically regulates the parameters and ensures optimal performance. This means that when the conditions such as quality and calorific value of pellets change or the draft of the chimney changes due to pressure fluctuations, the efficiency rates do not drop.

BioLogic allows adaptations, while in the classical controlling devices the efficiency rate can drop by over 10 %.

The BioLogic controlling system ensures the detection of input air for combustion, detection of air density, detection of chimney draft, detection of pellet quality with regard to the calorific value, humidity and length, detection of heat transfer from flue gases to water in the heating device and detection of the burner operation.

Thanks to constant automatic regulation, no anomalies can occur, so the operation and fuel efficiency are always optimal.

**The graphic demonstrates the consumption and savings with the help of BioLogic technology compared to the fixed parameter technology (FPT).**



The calculation is for informative purposes only, made for 10 heating seasons for a facility with an annual consumption of 2,250 l of heating oil or 20 MWh of heat with the average price of pellets being 250 €/tonne.

Boilers and stoves with the BioLogic technology don't require annual services and enable between **10 %** and **40 %** savings in the consumption of pellets for the same quantity of heating energy.

  
**2.100 €**  
in 10 seasons



# PELLET BOILERS

## the future of heating

Pellet boilers are economical, have a long service life, are low-maintenance and generate minimum emissions of harmful substances into the environment. Of all the wood biomass boilers, pellet boilers have the most sophisticated technology. By investing in pellet heating, you will not only **save space and relieve the family budget**, but also contribute to a **better and cleaner environment**.



### Less space, more warmth

For many years, Biodom has been guaranteeing low heating costs, reliability, and an always warm home, with no compromises in terms of comfort.



### Select a boiler to fit your needs

In determining the heating needs, the heating area and manner of construction are of key importance. Due to their wide range of power, pellet boilers are appropriate for a family or low-energy house as well as for urban settlements, because fuel supply is very similar to heating oil.



### More functionality

Modern software allows settings and regulation in accordance with your wishes and needs. Due to its automatic ignition and programmable clock settings for a full week, your home heating will always be comfortable.

# SELF-CLEANING PELLET BOILER

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## Biodom 54 A self-cleaning pellet boiler

Self-cleaning pellet boiler with Biologic technology. Pellet boiler **Biodom 54 A** has an automatic cleaning system for the burner, as well as an automatic system for cleaning the heat exchanger. After each extinguishing, the boiler cleans itself. It also has a touchscreen display, which provides easy access to the operation of the Biodom 54 A. Manual cleaning advised after 2-2,5 tons of pellets.



### ■ Technical properties

#### Hermetically sealed fireplace

Heating area: 50 - 900 m<sup>2</sup>  
Thermal power: 51,6 kW (13,4 - 51,6 kW)  
Utilization rate: above 90 %  
Flue gas extraction: Ø 100 mm  
Water volume: 156 l  
Power supply: 220-230 V/50 Hz

Pellet store: 200 kg  
Use of pellets per hour (min.): 3,0 kg/h  
Use of pellets per hour (max.): 11,7 kg/h  
Dimensions (H x W x D): 165 x 139 x 75 cm  
Weight: 570 kg  
Flue gas extraction fan  
Air intake fan

Low loss header  
Safety valve  
Circulation pump  
Boiler class: 5  
Max pellet length: 30 mm



### LCD touch screen display



# SELF-CLEANING PELLET BOILER

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## Biodom 27 A self-cleaning pellet boiler

Self-cleaning pellet boiler with Biologic technology. Pellet boiler **Biodom 27 A** has an automatic cleaning system for the burner, as well as an automatic system for cleaning the heat exchanger. After each extinguishing, the boiler cleans itself. It also has a touchscreen display, which provides easy access to the operation of the Biodom 27 A. Manual cleaning advised after 2-2,5 tons of pellets.



### ■ Technical properties

#### Hermetically sealed fireplace

Heating area: 80 - 350 m<sup>2</sup>  
Thermal power: 26,9 kW (7,8 - 26,9 kW)  
Utilization rate: above 90 %  
Flue gas extraction: Ø 80 mm  
Water volume: 72 l  
Power supply: 220-230 V/50 Hz

Pellet store: 180 kg  
Use of pellets per hour (min.): 1,8 kg/h  
Use of pellets per hour (max.): 6,2 kg/h  
Dimensions (H x W x D): 143 x 91 x 65 cm  
Weight: 271 kg  
Flue gas extraction fan  
Air intake fan

Low loss header  
Safety valve  
Circulation pump  
Boiler class: 5  
Max pellet length: 30 mm



### LCD touch screen display



## Biodom 27c5 pellet boiler

BIO LOGIC

Years of experience, development, testing and dedication in the field of biomass heating systems have led us to the creation of **Biodom 27c5** pellet boiler. It is a system of complete combustion of wood biomass, including an automatic ignition and pellet feed. With its Biologic technology, the boiler adjusts to the real time conditions and thereby ensures optimal combustion and maximum efficiency.

### ■ Technical properties

#### Hermetically sealed fireplace

Heating area: 80-450 m<sup>2</sup>

Thermal power:

30,8 (8,6-30,8) kW

Utilization rate: above 92 %

Flue gas extraction:

Ø 80 mm

Water volume: 74 l

Power supply:

220-230 V/50 Hz

Pellet store: 180 kg

Use of pellets per hour (min.): 1,9 kg/h

Use of pellets per hour (max.): 6,8 kg/h

Dimensions (H x W x D): 140 x 91 x 66 cm

Weight: 240 kg

Flue gas extraction fan

Air intake fan

Low loss header

Safety valve

Circulation pump

Boiler class: 5

Max pellet length: 30 mm



## Biodom 21 pellet boiler

BIO LOGIC

**Biodom 21** is a smaller version of the Biodom 27c5 boiler, adapted for the market of energyefficient houses, where there is no need for high heating output. Thanks to its thermal energy storage, the Biodom 21 boiler can heat even classic houses of up to 300 m<sup>2</sup> or buildings that in the past spent as much as 4000 l of fuel oil.

### ■ Technical properties

#### Hermetically sealed fireplace

Heating area: 60 – 300 m<sup>2</sup>

Thermal power:

23 (6,06-22,7) kW

Utilization rate: above 92 %

Flue gas extraction:

Ø 80 mm

Water volume: 61 l

Power supply:

220-230 V/50 Hz

Pellet store: 150 kg

Use of pellets per hour (min.): 1,0 kg/h

Use of pellets per hour (max.): 6,0 kg/h

Dimensions (H x W x D): 136 x 66 x 72 cm

Weight: 215 kg

Flue gas extraction fan

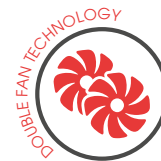
Air intake fan

Low loss header

Safety valve

Circulation pump

Boiler class: 5



## Biodom C 15 pellet boiler

**Biodom C15** is a system of complete combustion of wood biomass, including an automatic ignition and pellet feed. Biologic represents a step towards greater efficiency, savings on energy costs and it helps to protect the environment with low emissions. With its modern design, Biodom C15 is suitable for your boiler room as well as your living room.

### ■ Technical properties

#### Hermetically sealed fireplace

Heating area 50 - 200 m<sup>2</sup>

Thermal power:

17 kW (5 - 17 Kw)

Utilization rate: above 94 %

Flue gas extraction:

Ø 80 mm

Water volume: 42 l

Power supply:

220-230 V/50 Hz

Pellet store: 55 kg

Use of pellets per hour (min.): 1,4 kg/h

Use of pellets per hour (max.): 6,0 kg/h

Dimensions (H x W x D): 120 x 56 x 80 cm

Weight: 220 kg

Flue gas extraction fan

Air intake fan

Low loss header

**Safety valve**

**Circulation pump**

Boiler class: 5

Available also a model Biodom  
C15 + with a extra pellet reservoir  
of 75kg (total 140 kg).



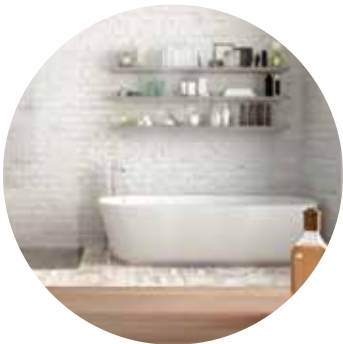
BIOLÓGIC



# HOT-WATER PELLET STOVE

## state-of-the-art source of heating of large premises

Hot water stoves are an important source of heating of your home and warm domestic water. It is a modern device bringing together the advantages of a stove and modern technology. They combine heat, practicality, cleanliness and a good price.



### Heat your whole home and domestic water

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A powerful stove will not only heat the room it stands in but also the entire apartment. The fire in a hot water stove heats the water collected in the collection tank that is later pumped through the heating system (radiators, floor heating, boiler...), heating your home.



### Auxiliary or main source of energy

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It can be an auxiliary source as an addition to the primary heating source or you can use its power as the main source of heating of all types of houses. For its operation it needs an appropriate chimney, air inlet and power supply.



### Controlling via the display

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Its modern software allows simple controlling of the hot water stove. You can make your selections via the display on the stove. With automatic ignition and weekly regime settings, the heating of your home will always be comfortable.



## Biodom H2O hot water stove

**Biodom H2O** is the first pellet water stove to use the innovative Biologic technology which offers numerous advantages to the user. Biologic represents a step towards greater efficiency, savings on energy costs and it helps to protect the environment with low emissions. Its modern design, great compatibility and low pellet consumption are just some of the reasons Biodom H2O is the right choice for your home.

### ■ Technical properties

#### **Hermetically sealed fireplace**

Heating area: 60-180 m<sup>2</sup>  
 Thermal power: 18,3 (5,6-18,3) kW  
 Utilization rate: 94 %  
 Flue gas extraction: Ø 80 mm  
 Air inlet: Ø 60 mm  
 Water volume: 36 l  
 Power supply: 220-230 V/50 Hz  
 Pellet store: 45 kg  
 Use of pellets per hour (min.): 1,2 kg/h  
 Use of pellets per hour (max.): 5,6 kg/h  
 Dimensions (H x W x D): 119 x 57 x 60 cm  
 Weight: 215 kg

#### **Circulation pump**

#### **Expansion tank**

Flue gas extraction fan  
 Air intake fan  
 Safety valve  
 Max pellet length: 30 mm

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# Pellet furnace hanuma 11

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Biodom Hanuma 11 is a system of complete combustion of wood biomass, including an automatic ignition and pellet feed.

Biologic represents a step towards greater efficiency, savings on energy costs and it helps to protect the environment with low emissions. Its modern design, great compatibility and low pellet consumption are just one of the reasons Biodom Hanuma 11 is the right choice for your home.

## ■ Technical properties

### Hermetically sealed fireplace

Heating area: 20-100 m<sup>2</sup>

Thermal power: 3,37 (3,37-9,52) kW

Utilization rate: 91 %

Flue gas extraction: Ø 80 mm

Air inlet: Ø 60 mm

Power supply: 220-230 V/50 Hz

Pellet store: 16 kg

Use of pellets per hour (min.): 0,76 kg/h

Use of pellets per hour (max.): 2,29kg/h

Dimensions (H x W x D): 100 x 53 x 54 cm

Weight: 98 kg







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# OUR HISTORY

## environmentally friendly heating.

We began developing pellet boilers in 1999 and started our own series production and sales in 2004. We started on the Slovenian market and began expanding successfully abroad in 2005.

Currently, we export about 90% of our production. With the right approach and orderly organisation, we can continually achieve excellent results despite changes in the market.

We view the future with optimism and a sense that we can achieve every last goal that we set for ourselves. Or, maybe, we can even surpass them.

We focus all our energy on the development of biomass combustion plants. Our mission is based on the value of human resources and the usability of green energy, thanks to which we reduce monthly heating bills. Our vision is to become one of the leading companies on the international market for heating solutions.

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