

## Biomass boiler

*Heat my home and water with the biomass heating technology*

*If your heating system is older than 15 years, it might be inefficient and highly energy consuming. Replacing your heating system with a more efficient will help you reduce your energy bill and additionally keep your home more comfortable, improve air quality, increase your home's market value and contribute to reducing global CO<sub>2</sub> emissions.*

60% of the heating appliances installed in the EU are old and inefficient (energy class C or lower)

**60%**

A biomass boiler can completely cover the needs for space heating and hot water provision

**100%**

Efficiency on primary energy reaches 75 to 105 % using woodchip or pellets

**75-105%**

### ✓ CHECKLIST

#### Biomass boiler fits my home because

- ✓ I need a water and/or space heating system
- ✓ I want to use a renewable energy resource
- ✓ I want to reduce my energy bill by using wood or wood derivatives
- ✓ I have space for the installation
- ✓ I want to reduce my environmental footprint

### HOW DOES BIOMASS BOILER WORK?

Biomass is any material of organic origin. Biomass can be used in heating, and wood is the form that is most widely used for that purpose. Biomass boilers are the latest and most efficient technology to produce heat in the most ancient way: firing wood. Each year, 40% of the wood sustainably produced in Europe is used for heating in European buildings, both residential and commercial. Sustainably sourced wood is a carbon neutral renewable resource: when burnt, the same amount of CO<sub>2</sub> that was absorbed by the tree during its growth is released. Therefore, central heating biomass boilers can provide high thermal comfort while reducing greenhouse gas emissions. Moreover, the overall sustainability of biomass heating is further increased in areas where wood is locally available, which shortens transport routes and helps the local economy. Modern heating systems use biomass in the form of pellets, wood chips or split logs. They can also be easily combined with solar thermal systems and reach even higher efficiency levels.



Photos: ©EHI



## BENEFITS

- ✓ Efficient use of renewable resources
- ✓ Can be combined with solar heating
- ✓ Carbon neutral fuel
- ✓ Using locally available resources
- ✓ Heating technology adapts to all output levels

## DISADVANTAGES

- ✓ Biomass boilers need space for installation but also require a (wood/pellet/logs) storage room
- ✓ Biomass boilers require some maintenance, even if most of the modern boilers includes self-cleaning systems, regular maintenance is recommended
- ✓ Biomass boilers emit particles (wood chips and pellets emit in different levels) and can cause air pollution, that can be mitigated using filters

## DID YOU KNOW?



Wood-based central heating systems use a sustainable and flexible energy. They can supply an entire house with heat throughout the year. Moreover, they can easily be combined with solar thermal systems.

Pellet boilers central heating systems, which are operated with wood pellets, are particularly convenient: pellets are kept in a storage room or tank and supplied to the boiler by means of either a suction or screw conveyor system. The systems are fully automated and can be modulated in a power range from 30 to 100 %.

Biomass is carbon neutral as a renewable resource: when burned, the same amount of CO<sub>2</sub> that was absorbed by the tree during its growth is released.

Most biomass boilers currently available on the market are labelled with energy efficiency class of A+, on a D to A+++ scale.

### ...and if biomass boiler is not the best option for me?

Check up on numerous efficient heating technologies options (such as solar thermal, heat pump, hybrid heating, among others)!



Do not hesitate to consult a professional to find the most suitable heating option for your home.

Where can I find more information about the functioning, installation, national situation, financial help, and other heating systems?

Visit:

[www.heating-retrofit.eu](http://www.heating-retrofit.eu)

HARP (Heating Appliances Retrofit Planning) project gathers 18 partners from six European countries. The goal is to motivate consumer to plan the replacement of their old and inefficient heating system, with more efficient and renewable heating solutions.

The HARP online tool will help you check the energy efficiency of your current heating system and find a suitable replacement solution based on the most efficient alternatives available on the market. Furthermore, the HARP will straiten your contact with professionals that can support you on the replacement process, as well as provide more information on available incentives. Learn more about energy efficient heating in: [www.heating-retrofit.eu](http://www.heating-retrofit.eu)



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