

Basic technical data of the boiler



Rated heat power	kW	22
Heating surface	m ²	2.0
Fuel consumption at maximum power	kg/h	3
Boiler weight (without automation)	kg	336
Water capacity	dm ³	100
Chimney draught	Pa	28
Approximate chimney height	m	6
Chimney cross-section	mm	160-250
Operating pressure	MPa	0,1
Container capacity	kg	80 (6 bags)
Thermal efficiency	%	89-93
Space heating capacity	m ²	150-250
Height x width x length	mm	1370x750x1520

The 5 year warranty is a confirmation of our competence and the quality of our products.

The Altereco boiler from the ECO-QUENTIN model also meets the following exhaust gas quality standards:

PN-EN 303-5: 2012 in the scope of class 5

Regulation of the EU Commission 2015/1189 of 28 April 2015, the so-called Ecodesign.

It is also a completely Polish product.

What is biomass?

We call biomass all kinds of waste from farms and households, remnants of garden or city greenery, residues from forestry and organic industrial waste. Broadly speaking, biomass is simply organic matter – therefore it comprises all substances of animal or vegetable origin, undergoing a process known as biodegradation. It belongs to the oldest and at the same time widely used natural and renewable energy sources.

Importantly, the use of biomass as a fuel is completely harmless to the environment. During its combustion, the amount of carbon dioxide emitted into the atmosphere is balanced by the amount of CO₂ absorbed by the plants. These in turn, thanks to the photosynthesis process, reproduces biomass. This way of heating becomes not only useful, but also profitable. In our solution Altereco ECO QUENTIN biomass boiler, we use hardwood chips as fuel, because this type of biomass has a high calorific value of 16 kJ/kg while maintaining a competitive price compared to, for example, pellets.

Thanks to such a solution, we obtain much lower operating costs, which in the long run translates into significantly lower costs of the user's financial expenses related to the boiler replacement. Altereco is also a producer of woodchips and one of the largest suppliers of this type of fuel in the region. That is why, for the convenience of our clients, we provide comprehensive services both by producing modern boilers and delivering fuel to them.

Heating costs with Biomass Boiler LD
The table below contains exemplary data from our customers

Building type	Area	Heating	Heating costs during winter season
Single-family house	110 m ²	Standard	~ 330 EURO
Single-family house	150 m ²	Standard	~ 400 EURO
Single-family house	200 m ²	Standard	~ 540 EURO

The above data refer to the boilers of our production powered by wood chips.



The pallet contains about 2 m³ of packed wood chips

Biomass boiler for solid fuels

Novelty on the Polish market of ecological heating systems

The replacement of existing stoves with modern ecological heating systems has already gotten underway, and you might be currently looking for a solution that meets the assumptions imposed by new regulations related to air purity.

This is the reason we want to present an innovative, but also proven boiler for thousands of our customers, who use woodchips for combustion.

The advantage of this fuel over solid fuel (coal) is shown by the results of exhaust gas purity tests. However, we decided to go one step further and beyond the obvious goal to achieve high efficiency and meet stringent exhaust emission standards in accordance with class 5 and the so-called "ecoproject", we also took care to increase the economic aspect of the exploitation by using fuel which is widely available, ecological and cheap.

In this newsletter, we will familiarize you with the subject of ecological biomass boilers, and also try to indicate the benefits of our solution.

It is good, because it is Polish

We all have our proven solutions and are convinced of them, we also tried to find a solution, which we can confidently say is our native. We have developed the technology of burning wood chips by inventing the method of its administration, which proved unfeasible for many world-renowned companies dealing with the manufacturing of such devices for many years. It took us over a dozen years, but the effect of our work was confirmed by a patent that we obtained in 2016. Thus, we can confidently say that we have entered the forefront of the boiler industry leaders ahead of many companies building ecological and economic boilers. Our solution is 100% Polish as a conception and as a product.



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Fuel	Price of fuel €/ton	Calorific value MJ/kg	Heating costs 150 L of water to 40 °C [€]
Coke	247	300	0.55
Beech wood dried few months	70	300	0.44
Coal	178	300	0.43
Beech wood dried for 3 years	94	300	0.39
Coal fines	87	300	0.28
ECO-QUENTIN Beech wood dried for 3 years	94	300	0.13
Single-family house	47	300	0.09
Single-family house	87	300	0.08



Patent for saving

In order to heat up 150 liters of water at 40°C it is needed to burn 2.4 kg of coal or 3.3 kg of coal fines (boiler efficiency 30%), or 2.2 kg of coke (boiler efficiency 45%).

The same amount of thermal energy we obtain using ECO QUENTIN system by burning 6.5 kg of wood in the form of woodchips.

The technology used in our ECO QUENTIN system allows for the complete combustion of volatile compounds, i.e. gases contained in the fuel, such as hydrogen, carbon monoxide and some methane. Traditional boilers do not burn these gases, which escape through the chimney causing a loss of energy and polluting the atmosphere.

Innovative and patented fuel feeding system for the gutter burner is the assurance of work continuity, elimination of biomass suspension and the highest efficiency.

Convenience above all

For many of the users of old traditional boilers, the heating season is often an organizational nightmare, heaps of coal, wood or other fuels, the use of which is often uncomfortable and often makes weaker people unable to maintain warmth in their home on a regular basis.

In our boiler we used an automatic fuel supply system that is able to protect its supply for up to 48 hours without the need to refill the fuel tank. An additional advantage is the method of packaging chips in bags weighing 14 kg, which significantly simplifies and facilitates the loading of the tray.

The electronics used to control the boiler is a very simple and at the same time intuitive system that will ensure a comfortable temperature at home and thanks to the automatic which fires up and turns off the boiler, minimizes its operation and increases the operation comfort.

High thermal efficiency

Over 80% of boilers in Poland work with very low efficiency, rarely exceeding 30% with only 30% of fuel being converted into heat. Basically, the rest of the fuel is wasted, causing an energy loss and higher environmental pollution.

The Altereco ECO QUENTIN boiler system achieves over 90% efficiency by burning the gases released from the fuel. Instead of discharging the off-gasses through the chimney, they can be burned, obtaining a lot of extra energy and clean flue gases comparable to those from a gas boiler. Our product meets **very high standards of the so-called Class 5 and, in addition, the European Commission's recommendations on flue gases emission Ecodesign** proves that the technology of burning woodchips is one of the cleanest. Woodchips are very easy to produce without involvement of specialized machinery and additional harmful substances. The fuel is widely available and most importantly, it is one of the cheapest on the market.

Such a solution raises not only the energy efficiency of our boilers, but what is essential, it brings measurable savings during operation over many years.

The simplicity of the solution and the availability of the fuel make our oven the leader on the market in terms of cleanest and most economical heating systems. The dissemination of our solution is like a return to old times, when the most important fuel used to produce heat was wood.

We do not doubt that this solution will be the closest to your heart and most environmental friendly.

Let us be responsible, respect the environment !!!



Make use of the funds

The system of financial support that is in force for the period 2014-2020, financed by the European Union, means that many municipalities of our province can offer additional financial resources in the form of subsidies for the purchase of boilers as part of the replacement of old heating equipment with modern standards that meet the most stringent standards.

We encourage you to contact primarily the local state administration centers, where properly trained people will be able to provide detailed information on local financial solutions implemented in individual municipalities.

You can also obtain such information in our company, in particular we will be happy to help all those who for various reasons cannot benefit from subsidies under EU funds and would like to apply a modern and economical solution. Our specialists will help in choosing the right equipment, and if necessary, also in finding convenient financial support.

Additionally, we encourage you to contact installation companies and designers to get acquainted with our solution, which is certainly unique on the market, but at the same time it is simple, economical and meets all standards. It is a modern product for a traditional fuel, which is wood, the cost of which will be returned in a very short time - wood chips pay off.

Do not wait till the end of the year

Usually, we delay the decision on expenditure as long as possible, unfortunately we often forget about the processes related to the time that the manufacturer needs to produce the right amount of equipment and installers who also have a predetermined installation capability.

Therefore, we encourage you not to wait until the coming heating season, but plan the entire operation related to the boiler replacement in a timely manner, we will certainly reduce costs and protect ourselves from "nervous fever" of ill-considered shopping.

