



Euroheat
Natural Energy Company



**Euroheat
Biomass boilers**
For larger country homes & hotels

www.euroheat.co.uk



Comfortable
heating. With wood!





Euroheat are the leading specialists of biomass boilers and stoves in the country. This brochure will demonstrate to you our commitment, passion and total belief that we provide not only the best in biomass heating, but also in regard to design, planning, logistics, installation and the commissioning of each boiler. We ensure that the whole process is handled with consummate professionalism at all stages. Even long after we have left, we will be on hand to help, no matter what the question or where you are. As well as demonstrating the range of HDG boilers, this document aims to help you choose the right system and find out if you are eligible for the Renewable Heat Incentive.

What is wood biomass?

Wood biomass is essentially wood taken from felled trees. Every part of a tree can be utilised in some way, typically wood log, wood chip and wood pellet. These are the main fuel source for Euroheat's range of HDG boilers.

Wood log is the simplest form of biomass, produced from felled trees and branches. The important thing with all wood biomass is moisture control. Wood log in particular must be stored until the moisture content is suitable for your boiler, normally around 20%. This essential, but natural process takes approximately one year and requires the wood logs to be shielded from rain and air allowed to circulate.



Wood pellets are small, usually no more than 15mm long. They are made from processed sawdust and wood chips that have been dried and formed into pellets. When heated and exposed to high pressure, lignin, the binding component in wood, softens and allows the wood product to be shaped and pressed easily.





Wood chip is again completely natural and are made from both waste wood and sustainable virgin timber. Many customers utilize a local source or their own wood supply to make wood chip. For high efficiency, wood chip needs to be consistent in size and stored in a covered area that allows air to circulate and naturally dry the chip.



All three fuels are an environmentally friendly way of heating your home or business. The biomass cycle has taken carbon from the atmosphere when it grew, and releases it when it's burned. If the trees used for biomass are replanted, the system stays in balance. Using locally sourced biomass is also important to keep this a low carbon way to heat.

What is a biomass boiler?



What is a biomass boiler from HDG? A boiler, fired by wood biomass is the simple definition. But HDG biomass boilers from Euroheat are far more than this. They are the complete package encompassing the very best boilers, the best industry knowledge, and a proven pedigree of delivering biomass solutions that are easy to live with and built to last. Our range of biomass boilers will provide a low cost, low carbon solution for both space heating and hot

water, whether for a single property, or a large number of estate properties linked by a district heating system.

Our range of biomass boilers come in three different fuel types, wood log, wood pellet and wood chip, and can service requirements of up to 1 Megawatt. So whatever the heating needs of your house or estate, we have the perfect biomass boiler to suit your requirements.

Is a biomass boiler suitable for my home?



HDG biomass boilers from Euroheat can be installed in virtually any home or business. Old, historic, new, modern, country, town or hamlet, the key elements of any biomass boiler installation remains the same.

- Sufficient space and access for delivery of the fuel
- Sufficient space for fuel storage
- A suitably sized, biomass boiler unit

- Auxiliary equipment: flue (chimney), mechanism for the ash extraction, connecting pipe work, heat storage, expansion tank, control systems, and the possibility of integrating an existing boiler system as well as other micro generation schemes such as solar thermal.

What is the Renewable Heat Incentive?



What is the Renewable Heat Incentive?

The Renewable Heat Incentive (RHI) is a Government funded scheme to encourage the take up of renewable technologies. It is the first scheme of its kind in the world. The UK Government expects the RHI to make a significant contribution towards their 2020 target of having 12 per cent of heating coming from renewable sources.

The RHI pays owners of biomass heating systems based upon the eligible heat they produce over a 20 year period. The tariff is payable at three different rates according to the installation size as follows:

<200kW	8.6p/kWhr
200-1000	5.0p/kWhr
1000>	1.0p/kWhr

How much RHI will I receive?

Year	Boiler Size									
	999kW	800kW	600kW	400kW	199kW	150kW	100kW	80kW	65kW	50kW
1	£65,634	£52,560	£39,420	£26,280	£21,965	£16,556	£11,038	£8,830	£7,174	£5,519
2	£66,947	£53,611	£40,208	£26,806	£22,404	£16,888	£11,258	£9,007	£7,318	£5,629
3	£68,286	£54,683	£41,013	£27,342	£22,852	£17,225	£11,484	£9,187	£7,464	£5,742
4	£69,652	£55,777	£41,833	£27,889	£23,309	£17,570	£11,713	£9,371	£7,614	£5,857
5	£71,045	£56,893	£42,669	£28,446	£23,775	£17,921	£11,947	£9,558	£7,766	£5,974
5 Year total	£341,564	£273,524	205,143	£136,762	£114,306	£86,160	£57,440	£45,952	£37,336	£28,720
6	£72,466	£58,030	£43,523	£29,015	£24,251	£18,280	£12,186	£9,749	£7,921	£6,093
7	£73,915	£59,191	£44,393	£29,596	£24,736	£18,645	£12,430	£9,944	£8,080	£6,215
8	£75,393	£60,375	£45,281	£30,187	£25,231	£19,018	£12,679	£10,143	£8,241	£6,339
9	£76,901	£61,582	£46,187	£30,791	£25,735	£19,398	£12,932	£10,346	£8,406	£6,466
10	£78,439	£62,814	£47,111	£31,407	£26,250	£19,786	£13,191	£10,553	£8,574	£6,595
10 Year total	718,677	£575,517	£431,638	287,759	£240,509	£181,288	120,859	£96,687	£78,558	£60,429
11	£80,008	£64,070	£48,053	£32,035	£26,775	£20,182	£13,455	£10,764	£8,746	£6,727
12	£81,608	£65,352	£49,014	£32,676	£27,310	£20,586	£13,724	£10,979	£8,921	£6,862
13	£83,240	£66,659	£49,994	£33,329	£27,857	£20,998	£13,998	£11,199	£9,099	£6,999
14	£84,905	£67,992	£50,994	£33,996	£28,414	£21,417	£14,278	£11,423	£9,281	£7,139
15	£86,603	£69,352	£52,014	£34,676	£28,982	£21,846	£14,564	£11,651	£9,467	£7,282
15 Year total	1,135,041	£908,942	£681,706	£454,471	£379,847	£286,317	£190,878	£152,702	£124,071	£95,439
16	£88,335	£70,739	£53,054	£35,369	£29,562	£22,283	£14,855	£11,884	£9,656	£7,428
17	£90,102	£72,154	£54,115	£36,077	£30,153	£22,728	£15,152	£12,122	£9,849	£7,576
18	£91,904	£73,597	£55,198	£36,798	£30,756	£23,183	£15,455	£12,364	£10,046	£7,728
19	£93,742	£75,069	£56,301	£37,534	£31,371	£23,647	£15,764	£12,612	£10,247	£7,882
20	£95,617	£76,570	£57,427	£38,285	£31,999	£24,120	£16,080	£12,864	£10,452	£8,040
Total	1,594,741	1,277,070	£957,802	£638,535	£533,687	£402,277	£268,185	£214,548	£174,320	£134,092

Commercial RHI returns year by year. Inflation has been included at the UK historical 20 year average of 2%. Figures based on 1,314 running hours per year. For clarity, fuel savings have not been included.

Figures above are correct at time of print and may be subject to change. **Check latest figures go to www.euroheat.co.uk/RHI**

The table above shows what these tariffs mean in typical RHI payments.

A house of 20,000 sq ft will require something around 280,000 kW's per year of energy. A 199kW HDG chip boiler could provide this heat, giving a annual payment of £22,487, as shown above year one, and a further fuel saving of £11,500 a year compared with oil. Payback on the installation would be in the order of 3 years.



How much will I save in fuel?

A HDG Biomass boiler installation not only provides an environmentally friendly heating solution, but it is also an excellent investment. In addition to the RHI income, significant fuel savings can be made from switching from a fossil fuel such as oil or lpg, to a wood biomass fuel. Combining fuel savings with RHI income means large biomass projects are often paid back in under 5 years, with an investment rate of return in excess of 20%. With the almost certain rise in fossil fuel prices in the near future, a biomass installation becomes a very attractive proposition. Biomass fuels are more cost effective than fossil fuels, especially if you source your biomass fuel from a local supplier, or if you have access to your



own supply. HDG wood log and wood chip boilers offer the cheapest form of heating, whilst HDG wood pellet boilers offer the most convenient of the biomass fuels to utilise. The table below shows just how much can be saved on fuel with a HDG biomass boiler from Euroheat compared to a fossil fuel alternative.



Carbon Savings

Compared to oil, biomass boilers emit 90-98% less carbon dioxide. Reducing emissions of this harmful green house gas will help turn your home or business green whilst avoiding dependency on dwindling, evermore expensive imported fuel.

Annual fuel savings vs heating oil

Installation Size ▶ Fuel type ▼	999kW	800kW	600kW	400kW	199kW	150kW	100kW	80kW
Wood Log	N/A	N/A	N/A	N/A	N/A	N/A	£7,227	£5,782
Wood Chip	£65,634	£52,560	£39,420	£26,280	£13,074	£9,855	£6,570	£5,256
Wood Pellet	£32,817	£26,280	£19,710	£13,140	£6,537	£4,928	£3,285	£2,628

Wood log has been marked n/a where it is not suitable for installations of this size.

Fuel savings have been based upon a heating oil cost of 65p/litre.

Wood log and wood chip fuel costs have been based upon self supply (ie. wood from the Estate) and therefore only include processing costs.

Benefits of a biomass boiler.

Sustainable fuel. Using locally sourced fuel from sustainable sources will ensure a continued supply for generations to come.

Reduce your carbon footprint By simply installing a biomass boiler you can help reduce your carbon footprint.

Integration. They can be integrated with an existing central heating and/or hot water system, in addition to other micro generation systems such as solar.

Peak demand. Several boilers can be grouped together for redundancy and peak heat demands.

How much room do you need?



There are several considerations when determining if a biomass boiler is financially viable and practical for you. Space, size of boiler, heat requirements and delivery access all play parts.

Do you have the space? In order to have a biomass boiler you need more space for the boiler and fuel store than the equivalent sized fossil fuel alternative.

Depending on your heat requirements this space could be in a basement, garage or in a purpose made outbuilding. Where current buildings don't allow, Euroheat offer Energy Cabins which provide a complete biomass solution in a modular building.

Storage of biomass fuel is also space critical. Having a large storage area enables bulk buying and/or processing, and allows the boiler to run for longer periods without refilling. Wood pellets, due to their low moisture content and dense composition, require the least space, whilst wood chip requires the most. An important point to remember is that easy access for the delivery is also required - whether it be wood chip or wood pellet.

Renewable Heat Incentive (RHI). The Government's RHI will pay you over 20 years for installing and running a biomass boiler.

Remote control. Remote boiler control over network or internet can be provided.

Lower fuel cost. A biomass boiler using wood is the lowest cost fuel to heat with. Even without any of the Government incentives, it's a very cost effective heating solution.

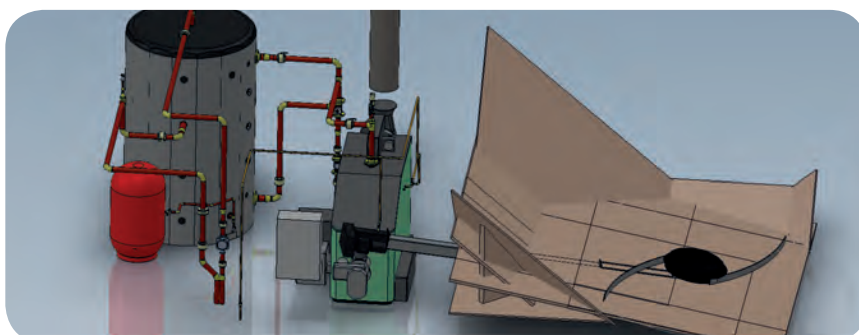
Why heat your home with wood biomass?



The green credentials on offer with wood biomass heating need little introduction. They are an ecologically sound investment for the future, providing energy from a sustainable source without impacting on the environment. Today's biomass boilers however, need a little more introduction. Euroheat's range of HDG boilers bare little resemblance to boilers from even a few years ago. They are advanced, highly engineered pieces of equipment, built to work with the utmost reliability and last the test of time. But, within this strength lies a wealth of innovation. Filled with the latest technology and tuned to provide the highest possible efficiencies, these boilers contain state of the art electronics that constantly monitor the system

to ensure a plentiful supply of energy is readily available. HDG boilers are genuine workhorses providing heat, efficiently and cheaply. More surprisingly, they require little in the way of intervention or maintenance. Automation is the key. HDG boilers are designed to be used with the minimum of human input.

As an investment, the Governments Renewable Heat Incentive, combined with significant fuel savings mean the financial return of a biomass system stack up all to well. Factor in the German manufactured HDG boilers from Euroheat, and you have a heating solution designed to last for the next 25 years.



Euroheat provide full 3D schematics of each proposed installation.

Why choose Euroheat?



The Euroheat brand has been the corner stone in wood heating for over 20 years.

Our expertise, attention to detail, customer service and a never ending enthusiasm to heating with wood has seen the company rise to the pinnacle of wood biomass heating in the United Kingdom.

Euroheat have been responsible for more than a third of all successful applications for the renewable heat incentive. We believe this is because we have the best equipment and right team to successfully follow through any brief.

HDG Boilers, made in Bavaria Germany, are one of Europe's best selling boilers for good reason. Their expertise and build quality are exceptional. High quality materials are used at every stage giving these boilers a 25 year plus life-span even under the harshest of conditions. We also firmly believe that we have put together a

biomass team that has no equal. The team which includes design experts, biomass engineers, commissioning engineers and training lecturers, all play their part. They ensure that the complicated processes involved in designing and delivering a first class solution involves as little inconvenience and disruption to you as possible. Euroheat, and our approved installation specialists in hydraulics, electric's and biomass undergo rigorous training at our headquarters in Herefordshire. All their work is commissioned by ourselves to ensure that our extremely high standards are always maintained. Our expertise in this area cannot be understated with over 1000 successful installations up and down the UK, many in large country homes, estates and hotels. To this end Euroheat have become synonymous for supplying the finest homes with the finest boilers and of course with absolute discretion assured at all times.



Warwick Hall case study



Warwick Hall is an English sporting estate idyllically situated on the banks of the river Eden. A new heating system was required to replace the ageing and expensive oil fired system. A HDG wood chip boiler from Euroheat was chosen by the estate due to its reputation for quality, efficiency, and reliability. The HDG Compact 200 boiler complete with a 4000 litre accumulator and wood chip store was designed by Euroheat, and has been installed by the local specialist. Complete with district heating the boiler now provides heat and hot water for both the main house and several estate cottages.

Boiler only cost	£120,000*
Boiler	HDG Compact 200
Fuel	Locally sourced chip
Fuel storage	Purpose built chip store
Heat exchangers	1
District Heating	2 cottages
Carbon Saving	93 tonnes per annum
Fuel saving per annum	£13,074
RHI per annum	£21,700
Total benefit per annum	£34,774

* Price estimated

Landmark Clock House case study



With the rising costs of oil as a source of heating the owners of this landmark clock house in the Mawddach Estuary, Barmouth chose to do away with fossil fuels and use a more sustainable and environmentally friendly source of fuel. After consultation with both Euroheat, the most suitable biomass boiler was the HDG Turbotec 60kW wood log boiler. The boiler was installed in a building opposite the clock house and connected through a district mains.



Boiler only cost	£23,000*
Boiler	HDG Turbotec
Fuel	Wood log boiler
Fuel storage	340 litres
Carbon Saving	25 - 30 tonnes per annum**
Fuel saving per annum	£3,720
RHI per annum	£7,345
Total benefit per annum	£11,065

* Price estimated. ** Estimated.

For
more case
studies go to
www.euroheat.co.uk



For those who need heat quickly or have space limitations, the Euroheat Biomass Energy Cabin is the ideal solution. It comes complete ready to use with boiler, accumulator and feed system already installed. Heat with sustainable, natural energy from the Euroheat range of exceptional, eco friendly, wood biomass boilers.



- HDG split log boilers
- HDG wood chip, pellet and split wood systems
- HDG pellet heating systems
- TDA Thermodual wood and pellet boiler
- PNA Thermocomfort pellet boiler
- Buffer tank, accumulators and thermal stores
- System components
- Euroheat Biomass Energy Cabins

Speak to one of our friendly Euroheat biomass team on

01885 491100

Inspiration and information

www.euroheat.co.uk



Euroheat
Natural Energy Company

Bishops Frome Worcestershire WR6 5AY

Reception **01885 491100**

Email **info@euroheat.co.uk**



*Comfortable
heating. With wood!*



Euroheat operate a continuous development policy and specifications may have changed since the production of this brochure. Please check with your Euroheat retailer for latest updates.

© Copyright Euroheat (HBS) Ltd 2014 June 2014 E&OA Part Number LI079