

Log Gasification Boilers



Wood is a renewable and carbon neutral energy source fuel. That is CO_2 emitted when wood is burned has been taken out of the atmosphere by the growing plant. Processing and transporting the fuel has some impact but typically net CO_2 emissions can be reduced by over 90%.

The three most commonly used wood fuels are logs, woodchips and wood pellets. Each has particular characteristics that need to be matched with the specific requirements such as Security of fuel supply, Storage requirements, Efficiency, Cost, Ease of use and handling.

Modern log burning boilers use a two-stage combustion process, with gasification in the first stage followed by high temperature combustion. In this respect they are reasonably efficient as long as the wood has been properly seasoned.

Something to weigh up when considering logs are their bulk in transportation, delivery and storage space. They also vary in combustion characteristics depending on the species of the tree and water content .

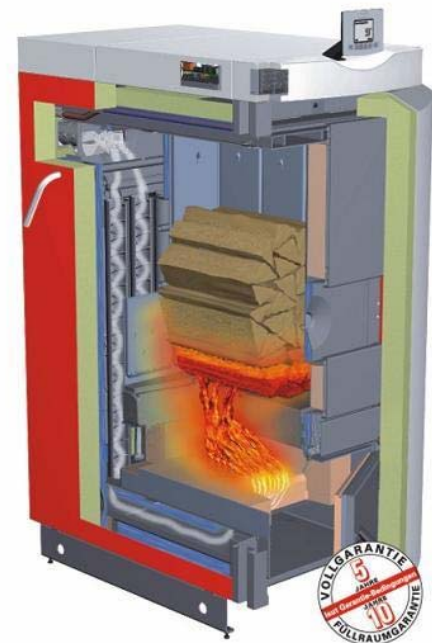
The unit illustrated offers a heating load of 13kW - 50kW, ideal for a large property or small commercial operation. Unlike pellet boilers automatic feed is clearly not an option for this type of boiler and so require regular manual attendance.

Early wood burning boilers only achieved efficiencies of around 50%, with high emissions of carbon monoxide (typically around 20,000 mg/m³) resulting from incomplete combustion.

Thanks to advances in wood burning technology and improvements in the preparation of wood fuels, efficiencies have now increased to 90%, while carbon monoxide emissions have plummeted to around 100 mg/m³.

The new combustion technology incorporated into some modern wood boilers produces a flame similar to that from a pressure jet burner and there is the additional advantage of no moving parts in the high temperature areas of the boiler so that maintenance requirements are relatively low.

Boiler response time is fast and modern technology provides fully automatic feed and ash handling systems, that are clean and easy to operate making them particularly suitable for where gas is not available and oil fired systems would be the only alternative.



We provide a full design and installation service using equipment of the highest quality installed by fully accredited teams that qualify for the proposed Renewable Heat Incentive (RHI), to be unveiled in April 2011. For commercial projects wood fuels are also exempt from the Climate Change Levy.

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