

Biomass Warm-Air Space Heating



As a fuel wood (or biomass) is regarded as 'carbon neutral'. That is the CO_2 emitted when wood is burned has been removed from the atmosphere by the growing plant and will be again as the replacement fuel grows.

Increasingly, wood fired boilers are becoming the preferred choice for low carbon heating applications, particularly for sites where it is abundant, a waste product and transportation costs are minimal or not relevant.

Typically wood boilers, whether log, chips, sawdust or pellets, produce hot water which is circulated in pipes to heat exchangers such as radiators and warm air ducted heating systems or to tanks for hot water processes.

Installations of bio-mass heated systems in the UK have been steadily increasing since the turn of the millennium and as this market expands new products are beginning developed and are now available here.

Until recently direct heating of air with wood was confined to small domestic sized units and gas or oil fired space heaters, commonly seen at garden centres, horticultural growing houses and warehouses. But there is now a wood fuelled option which enables any type of bio-mass fuel product, (log, chips, pellets, etc.), to be burned with the resulting heat passing straight into a contra-flowing air stream for rapid and effective space heating.

If free flowing pellets or chips are the intended fuel, automatic feeding systems can be added to deliver the wood fuel via vacuum tubes from a storage hopper in a nearby building directly to the burner.

Manual feed options for pellets and chips are available and if logs are to be used, these can only be loaded manually of course. The 'batch' firing method of operation when using logs will result in heating output being interrupted whilst the boiler is emptied of ash and reloaded so for a continuous heating output twin heaters may be the preferred solution.



Targeted at the larger volume commercial space heating and industrial heating & drying applications this unit is available in a range of sizes up to 200kW. Not requiring the usual buffer tanks, pipework, pumps or controls associated with traditional water heating boilers means it is a much simpler install that can be carried out by an experienced heating engineer and would result in a much lower capital outlay.

The heaters response time is fast, a 50kW unit can handle 2600m³/hr of air throughput with an efficiency of 95% and air off temperatures of <80°C for effective and rapid drying applications. Automatic ignition as standard and sensitive controls provide a low cost space heating solution that is a more environmentally friendly solution to gas or oil heaters of the same type.

For larger projects where an automatically fed hopper is required a containerized solution is available.

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.

Planet Energy Solutions

Renewable Energy Systems

16 Carleton Rise, Welwyn, Hertfordshire, AL6 9RF

Tel. 01438 712398 ~ e-mail planetenergy@btinternet.com ~ www.planetenergy.co.uk

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