

NEWS RELEASE

RELEASE DATE: 26 FEBRUARY 2008
RELEASE REF: BAXI 072



Baxi's range of renewable technologies

Interest in renewable energy has grown significantly over the last few years and UK domestic heating specialist Baxi recognises the increasingly important role that renewables will play in the future. To meet growing demand it offers a comprehensive range of products that can be retrofitted or incorporated into new buildings. It is important that the right solution is chosen for each application, so that the property can support the system and it can perform to its optimum capability.

Solarflo solar thermal water heating

The most abundant energy source we have is the sun. Baxi Solarflo harnesses and converts free solar energy to provide 50-60% of the annual hot water demand for domestic hot water, reducing carbon emissions by up to a tonne per year.

Solar flat plat collector panels or evacuated tubes, either fitted onto existing roofs or built into the roof structure of newbuild properties, absorb energy from the sun's ray. This heats a glycol mixture that is circulated through a dedicated coil in a Megatech solar hot water storage cylinder from Heatrae Sadia.

Geoflo ground source heat pumps

Baxi Geoflo ground source heat pumps take the latent heat from the earth via heat collectors called slinkies, which are buried in the ground. This technology is particularly suitable for use in the UK because the ground below a certain depth remains constant all year round.

The heat pump consists of four main components – the compressor, expansion valve and two heat exchangers (the evaporator and the condenser). It works by lowering the fluid temperature in the evaporator to slightly cooler than the source, enabling the source to transfer the heat drawn from the earth. The higher temperature fluid then vapourises and the resulting gas is compressed until it reaches 80 degrees

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Centigrade. This is then condensed and transferred into a low temperature heating system, where a temperature of around 40 degrees Centigrade can be maintained.

Ground source heat pumps are capable of producing four times more energy than they use during operation and can save around 30 per cent or two tonnes per year of carbon.

Ambiflo air source heat pumps

Ambiflo air source heat pumps work in a similar way. External air at ambient temperature is passed over a finned heat exchanger, which cools the air and extracts the heat into the evaporator of the heat pump. These heat pumps are particularly suitable where the ground space is limited.

Ground and air source heat pumps are easy to install and maintain, and are specially suited for well insulated homes with underfloor or low temperature heating in areas where mains gas is not available.

Biomass

Baxi Biomass boilers, already very popular in Europe, use carbon neutral fuel such as pellets or logs from local, regenerated sources to provide sustainable and environmentally friendly heat for the home. The carbon released during combustion is balanced by that absorbed during the fuel's production.

Combined heat and power (CHP)

The Baxi Dachs Mini CHP is a cogeneration unit that is most suitable for buildings such as sheltered accommodation, hospitals and schools in the UK. The unit produces 5.5kW of electricity and 12.5kW thermal output, and is connected directly into the building's electrical distribution panel. It uses 30% less fuel and produces up to 25% less NO_x (Nitrogen Oxides) and 10 tonnes less carbon than a conventional system.

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And the future?

For several years, Baxi has been looking beyond the current market requirements and has been developing innovative technologies for the future.

Micro CHP is a microgeneration unit that uses a Free Piston Stirling Engine to generate electricity. It has been developed for domestic applications to operate virtually noise and vibration free, in a casing that is no bigger than a standard domestic boiler.

The unit generates 1kW of electricity per hour for use in the home while it is providing space heating and hot water. At peak usage times, a top-up may be required from the National Grid.

A number of MicroCHP units have been installed in homes for over a year, successfully providing domestic heat and hot water as well as generating electricity. Any surplus electricity generated has been sold back to the National Grid. These field trials and our laboratory testing have indicated that the Micro CHP units can offer savings of one to two tonnes of carbon dioxide and £200 to £400 per annum in the average home. Micro-CHP units will be available for general domestic use in early 2009.

Baxi is also working on Proton Exchange Membrane (PEM) Fuel Cell technology, which uses the hydrogen and oxygen as a basic fuel source in an exothermic reaction to produce thermal and electrical energy, to make it suitable and cost effective for domestic use.

Whatever form our domestic heating and electrical generation takes in the future, the concerns about climate change are very much a current concern and Baxi is leading

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the way in tackling the issue and providing efficient, cost effective solutions for all domestic applications.

For further information please contact Baxi on 0844 871 1525 or visit www.baxi.co.uk

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Baxi in-roof solar panel.JPG



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