Waste not want not

Free energy is something that everyone would like. Ravenheat has now perfected a method of obtaining free heat and .ike many good ideas it makes you wonder why people haven't thought of it before. The heat comes from a boilers flue gas. Tim McManan-Smith met up with Louis Pickersgill, md, Ravenheat to find out more

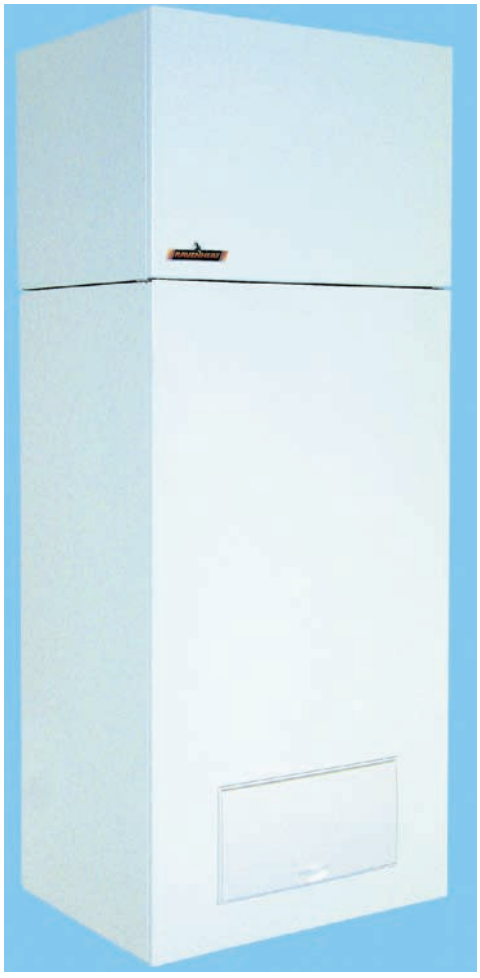
While modern domestic boilers are very efficient compared to those 20 years ago, one source of waste heat and pollution which has not far been addressed by boiler designers is the heat which escapes to atmosphere through the boiler's flue, or exhaust. With the boiler running, these flue gases can exceed 60°C, heat that is literally going up the chimney, and not into heat the water.

"The point is to take the energy when its there are save it for when its needed"

Energycatcher changes all that. A small but patented unit which requires no electrical connections and integrates on top of the domestic boiler. The boiler's flue gases, instead of going straight out through the wall at +60°C, are fed into the Energycatcher, where they flow over a heat exchanger. The otherwise wasted heat is transferred to the water in the heat exchanger, which moves under convection into a storage tank. The tank can be of any size to suit the need, and , as an example after the central heating has run for an hour a large tank will be fully heated, giving a good supply of hot water. "Now we need to go back to storing heat when its available," says Pickersgill. The exhaust gases, now considerably cooler, then vent to the atmosphere.

Ravenheat estimates that over a year a typical gas bill will be cut by 5% against a Band A condensing boiler (over 40% saving by replacing non-condensing appliances with a condensing boiler and Energycatcher). "The 5% saving is a minimum all year round and it can be as high as 15%", comments Pickersgill.

Hot water flows from the tap sooner than normal – less cold water is wasted waiting for the water to run hot – giving further savings.



Energycatcher is simple to install, uses no electricity, has no running costs and requires no maintenance.

With the Energycatcher the flue exhaust, or plume, is also considerably cooler. UK building regulations demand that this plume is exhausted from the building so as not to affect either the building's fabric or people. Tests by Ravenheat show that plume temperature is reduced by over 25°C, meaning that it is far safer. But, perhaps even more importantly, says Pickersgill "that much less heat is being pumped into the atmosphere". When Energycatcher is attached to a condensing boiler, the low temperature of this exhaust means that the polluting gases condense out into the the condensate drain, rather than going straight to atmosphere.

Any Band A SEDBUK gas-fuelled domestic boiler, of whatever type or make, can be fitted with a Ravenheat Energycatcher subject to all round consent. If the boiler is not Ravenheat's then permission needs to be obtained from the maker and Ravenheat. This allow the Energycatcher to have universal application.

Energycatcher can also be installed to work in conjunction with solar panels, the panels producing a boost to water temperatures when the sun shines, while Energycatcher comes into its own whenever the boiler is used to provide heat or DHW. Ravenheat believes that the Energycatcher can payback its acquisition costs in 2-3 years.

"The point is to take the energy when its there are save it for when its needed", says Pickersgill "I am really excited, it is the most innovative product I have been involved in my time in the industry."

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