

Gain efficiency through warm air

Johnson & Starley has launched a new range of condensing warm air heaters with output options that are new to the market, writes **Jennie Ward**

A new range of condensing warm air heaters has been launched by manufacturer Johnson & Starley. The WarmCair range consists of 12 models in total – five downflow models, four upflow, and three downflow models with combined warm air heating and domestic hot water heating. Outputs range from 10kw to 46kw, depending on the model.

The WarmCair C Series offers condensing warm air heating, while the WarmCair CW Series uses Johnson & Starley's existing Quantec and Aquair products to offer combined condensing warm air and hot water technology, something the company says it is the first to market.

At the heart of the CW Series products is a Giannoni heat engine, along with an internal pump and diverter valve with hot water priority.

Johnson & Starley says the heaters have been designed to offer low running costs, reliability and "unrivalled efficiency", as well as low

carbon and Class 5 NOx emissions. The range has also been created to have low operational noise levels.

The heaters are suitable for use with both newbuild and replacement heating upgrade installations. A WarmCair heater can replace any existing warm air heater, with replacement installation times generally being less than one day. A quiet, integral condense pump is included with each model as standard, as an additional benefit to both installer and consumer.

The WarmCair range will also qualify for a £320 Green Deal Cashback for the homeowner, and is being included in the Energy Technology List (ETL) to be eligible for Enhanced Capital Allowances (ECA, Annual Investment Allowance) when installed in commercial enterprises. This allows

the business to apply for up to 100% first-year tax credit following installation.

WarmCair heaters incorporate sophisticated controls that enable the precise amount of heat output to match

the demand. These include an OpenTherm thermista-stat, and a fully-modulating air circulation fan and burner. The control panel features a summer air circulation button, LCD display read-out and reset button. For the installer, the panel also includes a comprehensive fault-finding mode, test mode and error history mode.

As a condensing appliance, WarmCair uses less energy to produce the required heat when compared with a similar-sized non-condensing heater.

This additional heat energy is produced by passing the exhaust flue gases through a secondary heat exchanger where the heat is transferred into the air stream. Because of this, latent heat, which would otherwise be lost to atmosphere, is recovered and used in the heat delivery process.

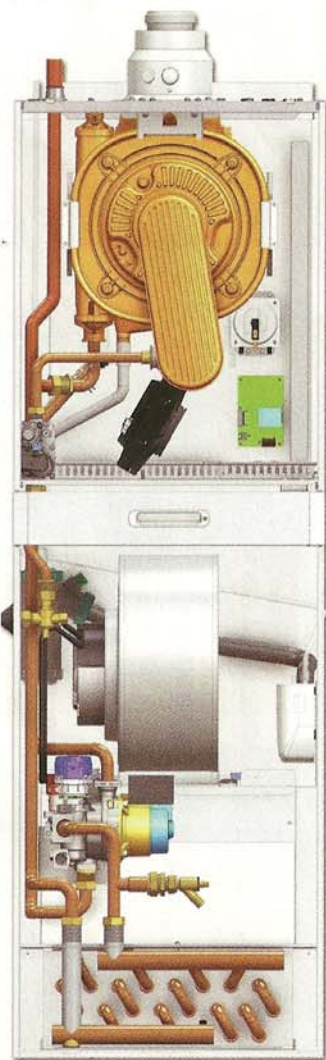
Flueing options include horizontal, rigid and vertical flexible flue variants.

This system means the range can achieve up to 98% thermal efficiency and, in field trials, energy consumption savings of up to 28% have been indicated, compared with non-condensing heaters.

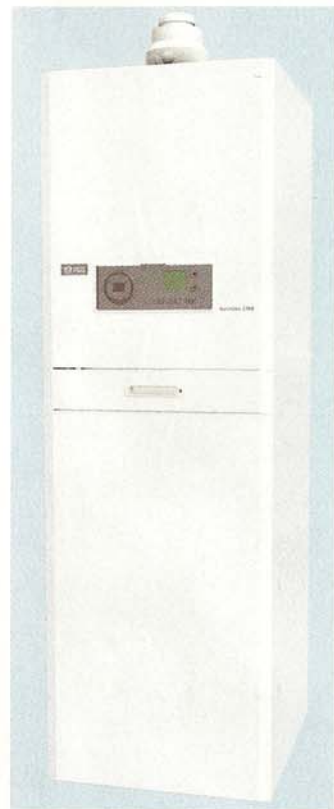
While savings are dependent on usage, lifestyle, property size, insulation values and fuel costs, the fuel cost estimator in SAP 2005 indicates that for a flat, savings of £150 a year are possible. A terraced house could save £300 per annum, a semi-detached house some £350 per annum, and a detached house up to £400.

Johnson & Starley says payback periods are around two years, in comparison with non-condensing units.

The range features a fully modulating burner and combustion controls, as well as long-life stainless steel heat exchangers.



Inside the C16DW WarmCair CW Series condensing warm air heater



Johnson & Starley's new WarmCair warm air and hot water heater

A major benefit of warm air heating systems is the rapid initial heat-up period, which the company says is substantially less than half that of wet systems.

Intelligent controls allow users to manage and control their use of the WarmCair unit. There is also the option of an electronic air cleaner if desired.

The WarmCair range is, according to the company, the first British-manufactured condensing warm air heater available with outputs exceeding 26kw.

The 36kw and 46kw versions are sufficient for use in certain commercial sector applications such as schools, nursing homes, small hotels, retail outlets, sports halls and community centres.