

LESS COST, MORE CONVENIENCE

Yan Evans, Technical Director for Andrews Water Heaters and Potterton Commercial, looks at the benefits of the modular prefabricated heating system as a means of reducing cost and carbon emissions in the industrial and commercial sector.

As businesses are forced to ride the waves of the current economic challenges and respond to concerns about climate change, the heating and ventilating industry must continue to deliver efficient and sustainable solutions that meet requirements. Since reducing the amount of energy used by heating systems in buildings automatically lowers operating costs as well, these two concerns can be resolved simultaneously. The aim, then, is to find a solution with low installation costs for the present that will reduce running costs well into the future. Preferably, this would offer easy integration with Low and Zero Carbon (LZC) technologies, facilitating further significant savings and reduction in carbon footprint. In this way, the energy performance of buildings can meet current and upcoming legislation with minimum inconvenience.

Three Ways to Cut Costs

Commercial heating systems have changed dramatically within the last decade or so, with space heating and hot water load being separated and decentralised utilising direct fired water heaters and smaller modulating boilers to more closely match output to demand. The introduction of condensing technology has also done much to improve operating efficiency. However, it is generally acknowledged that boilers and water heaters have reached the optimum efficiency physically possible with current technology. More recent boiler developments have focused on installation adaptability and space-saving benefits, with a much wider range of outputs available and the boilers themselves becoming significantly smaller, lighter and more compact.

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Wall-hung condensing boilers are being manufactured in much higher outputs of up to around 115kW, offering a larger range of solutions that free up valuable floor space for commercial refurbishment and new build projects. Another expensive commodity for businesses is time, and some manufacturers have been looking to incorporate energy and space saving features with much quicker and more convenient installation options, minimising downtime and reducing costs still further.

A Change of Focus

Modular prefabricated heating systems have a great many advantages to offer that cater for a number of different requirements. Boilers are mounted on a skid along with pumps, a pressurisation system and heating controls, with all hydraulic and electrical connections, ready for 'plug and play' installation.

Delivering Solutions

The industry's focus has necessarily expanded to examine those aspects of the manufacture, distribution and installation process that may also be improved in order to reduce energy usage and expense. One of the many benefits of the modular prefabricated heating system is its sustainable credentials. For example, the components are delivered as a complete system to one location, avoiding the need for each part to be delivered to site individually and thereby reducing packaging, transport emissions and overall costs. In addition, this approach avoids the possibility of individual parts being lost either during the delivery process or whilst the system is being constructed, eliminating waste, additional expense and the environmental impact of re-ordering missing parts.

Reducing Downtime

All businesses want to minimise downtime during installations, a further major advantage of the modular prefabricated heating system. For some applications, the importance of a quick installation is not merely due to financial reasons.

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For instance, commercial boiler specialist Potterton Commercial recently supplied a fully condensing packaged boiler plant for a sheltered housing facility and, as most of the residents are elderly, it was important that the heating was not turned off for too long. Thanks to the nature of the pre-packaged system, however, inconvenience and disruption were kept to an absolute minimum and the heating was up and running again within half a day. Enhanced flexibility adds to speed and ease of installation, as individual modules allow the system to be connected in a number of configurations, minimising the site space required and making the system adaptable to a range of boiler rooms.

Easy LZC

The efficiency of these systems can be further increased with the integration of LZC technologies, although the initial capital outlay is an important consideration for businesses. However, as this is outweighed by an immediate reduction in energy consumption, carbon emissions and a shorter payback period due to volatile fuel prices, many are choosing to upgrade their systems. Expanding on the convenience of the modular prefabricated approach, whereby the system is supplied complete from one manufacturer, industry leaders like Baxi Commercial Division now offer a 'one stop shop' solution for complete boiler house facilities including full technical support for LZC technology, such as solar thermal and ground source heat pumps, that can be easily integrated with the heating system.

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**POTTERTON PACKAGED BOILER PLANT IN PERCY COURT,
A HOUSING 21 SHELTERED HOUSING FACILITY IN ALNWICK**