

Viessmann boilers and CHP specified for the world's tallest modular building

New, landmark residential development in Croydon gets Vitocrossal boilers for their high efficiency and low NOx emissions

Telford, UK – Viessmann boilers and a Viessmann CHP unit have been specified to provide space-heating and domestic hot water to 546 apartments at 101 George Street, the new residential development in Croydon, London, which has become the tallest modular building in the world. Mechanical and electrical design contractor Red Electric chose Vitocrossal gas-condensing boilers over other manufacturers' alternatives for their high efficiency and exceptionally low NOx emissions.

101 George Street is a high-quality development of private rental and build-to-rent units comprised of two towers, one 38 storeys tall and the other reaching 44 storeys. The apartments in this new south London landmark are connected to a district heating system which integrates the six Vitocrossal 200 CM2 620 kW gas-condensing boilers and a single Viessmann Vitobloc EM70 CHP (combined heat and power) unit.

Each apartment draws what it needs from the district heating system via a heat interface unit (HIU). The main plantroom is located two floors below ground-level, but to accurately regulate heating-provision at the upper levels, some equipment is also located in a mini-plantroom on the roof.

101 George Street's developer specified that the boilers should be capable of providing double the forecast peak heat demand, so that if one set of equipment should ever have to go offline to fix a fault, an identical set can immediately take over. This high-level specification is typical of the entire development. All

homes share amenities including a podium garden, roof-top gardens on top of each tower, a panoramic viewing walkway, gyms, and a residents' lounge.

“The highlight of the heating system is the integration of the two technologies,” said Viessmann technical director, Christian Engelke. “Installing almost 4 MW of heat generators and 'only' 115 kW of thermal heat output from the CHP involves careful planning. The boilers are sequenced by Viessmann's Vitotronic 300 cascade controller, which ensures the system meets its target temperature. The CHP is designed as the lead generator providing the base load heat; the boilers are then enabled appropriately when the building requires it.

“It is envisaged that the CHP will contribute to a further carbon reduction of up to 30% by providing efficiently locally-generated electricity without losses,” concluded Engelke.

All levels above the first floor at 101 George Street have been formed from modules, more than 1,400 in all. These were manufactured in Bedford, where they were also fitted with electrics, plumbing and windows. This construction method produces 80% less waste than conventional building processes, requires fewer workers on site, and takes less time on site. From the start of construction to the first residents moving in took just 30 months.

Images



Landmark residential development in Croydon gets Vitocrossal boilers for their high efficiency and low NOx emissions.



About Viessmann Ltd.

Viessmann Limited is part of the Viessmann Group of companies, which is one of the leading international manufacturers of heating, industrial and refrigeration systems. Founded in 1917, the family business, headquartered in Allendorf, Germany, is overseen by president of the executive board, Prof. Martin Viessmann. The Group has annual turnover of EUR 2.25 billion and employs a staff of approximately 12,000. With 22 production companies in 11 countries, distribution companies and representative offices in 74 countries

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and 120 sales offices throughout the world, 54 percent of turnover is generated internationally.

Viessmann's comprehensive product range of domestic and commercial heating systems has an output range of 1.5 to 120,000 kW. It offers oil and gas-fired boilers, solar thermal and photovoltaics, combined heat and power modules (CHP), ground, air and water sourced heat pumps, biomass boilers and fuel cell heating systems.

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