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First UK installation of SANYO's gas-powered VRF co-generation heat pump air conditioning

The first UK installation of SANYO's ground-breaking gas-powered VRF air conditioning system, which generates its own electricity, is taking place at Suffolk One, a state-of-the-art 16-19 centre of learning in Ipswich.

The landmark £65m building, now under construction by main contractor ISG Jackson, is one of the largest building projects ever undertaken in Suffolk. It is designed to provide an inspirational learning environment and will accommodate 2000 students when it opens in September 2010.

In addition to being the first building in the country to use SANYO's G-Power co-generation technology, Suffolk One also becomes the largest site in the UK employing the company's gas-powered heat pump VRF air conditioning.

The £11m M&E installation on the project is being managed by leading building services provider, Inviron. All air conditioning equipment for the project, with a combined cooling capacity of 1.2MW, was supplied by specialist SANYO distributor ESS. It is being installed by Adcock Refrigeration and Air Conditioning.

Given the scale and distributed nature of the building, it requires 19 GHP VRF air conditioning systems and 16 high efficiency split systems. The units are mounted primarily on the roof, in groups serving five "clusters" which connect and surround the core of the building.

The building uses a total of 310 fan coils, mainly ducted units for concealed mounting in ceiling voids. These are augmented by a small number of ceiling cassettes. All equipment operates on high efficiency R410A refrigerant.

The VRF systems include both two- and three-pipe technology, the latter used to harness significant quantities of waste heat generated within glass-clad parts of the building and transfer it to areas requiring heating.

ESS worked closely with the building services consultant on a design that delivers an exceptionally high quality indoor environment for staff and students, using the latest technology and sustainable approaches.

Leon Sunkin, Director of ESS, said: “It is a superb project and a first class showcase for the latest SANYO technology. There is no doubt that in terms of sustainability, efficiency, cost-effectiveness and quality indoor environment – it delivers in all areas.”

He added: “Given the educational purpose of the building, a key design issue was low sound levels. The libraries and classrooms require a very low level of background noise, which was comfortably met by the advanced SANYO equipment selected.”

ESS provided expert technical back-up to installer Adcock Refrigeration and Air Conditioning throughout the installation of the project. This included the provision of colour-coded drawings to help speed up work and avoid potential problems on site.

Adrian Bonfield, branch manager at Adcock’s in Norwich, who managed the installation, said: “It was the first GHP installation we had undertaken, so to some extent we were on a learning curve. However, the back-up and support from ESS has been excellent - the project is going without a hitch. It is top-notch equipment with completely professional support. There is total trust on all sides.”

Bob Cowlard, sales & marketing general manager for SANYO Air Conditioners, said: “This is a landmark project. The ESS team has done a great job in delivering a solution perfectly matched to the need. We see this as an exemplary forerunner for the wider roll-out of the new GHP and co-generation technology across the UK and Europe.”

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