

# CASE STUDY

## ENERGY CONSCIOUS APPROACH TO HOTEL ROOM REFURBISHMENT

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The Thistle Hotels group has invested heavily in room refurbishment and other upgrading work in its chain of UK hotels. A high standard of guest comfort has been a central objective of the programme, though this has not been achieved at the expense of energy efficiency. To help it keep a tight rein on energy consumption, Thistle has put in Trend building controls at an increasing number of its properties. Recent examples include the air conditioning control systems installed by Powell Systems Engineering at two of the group's London hotels.

Thistle has a total of 56 four-star hotels in the UK. In London, where the company ranks as the largest hotel group, there are 23. Among these are the Thistle Piccadilly and Cannizaro House, an elegant Georgian mansion on the edge of Wimbledon Common. It is at these two sites that the PSE-supplied Trend systems were commissioned earlier this year.

As part of the refurbishment programme, Versatemp reverse cycle heat pumps have been fitted at both locations. This type of plant was chosen because it offered a cost-effective and efficient means of providing heating and cooling in the guestrooms. At the Piccadilly the units have gone into all 91 bedrooms, plus the restaurant and offices. At Cannizaro House, they are in 17 rooms and the front office.

Every Versatemp is fitted with a Trend IQ211 controller, which regulates its operation to achieve the desired room temperature and air flow rate. Each of the bedrooms has a wall-mounted panel via which the guest can adjust both the temperature level and fan speed.

At both hotels the Trend controls are to be linked to the Micros-Fidelio front office system. This will allow the bedroom air conditioning to be controlled on the basis of room occupancy, thus preventing energy wastage. When a guest checks in a signal will automatically be sent to the IQ211 in the room, which will then enable the Versatemp unit. The latter will be disabled when the guest checks out.

The Versatemps are fed with water at 35°C, which ensures efficient operation. Heat is supplied to the

Versatemp circuit by a plate heat exchanger (connected to the hotel boilers) and dissipated by a dry cooler. By modulating 3-port valves on the heat exchanger and cooler, IQ controllers maintain the flow temperature at its optimum level. One of the IQs also provides automatic changeover of the circuit's duty/standby pumps. In the event of pump failure, it would transmit a message to the Versatemps' IQ211s and all the units would be shut down.

At Cannizaro House the IQ controllers connect to a single local area network; at the Piccadilly they are distributed across three. In both cases, a Trend '962' supervisor serves as the system's main operator interface. Through this, the hotel's operations manager can check the temperature and plant status in any of the rooms. It is intended that this and



other monitored data will be available to Thistle's area engineering manager over the company's IT network. He, or other authorised personnel, will be able to remotely access the 962 supervisors from any PC with Internet Explorer. The supervisors may also be set up to e-mail plant alarm messages direct to Thistle's maintenance contractors. It is via the 962s that the Fidelio system will be interfaced with the Trend controls.

Powell Systems have also installed Trend controls at the Thistle Brighton and the Thistle Kings Cross. The Brighton system controls and monitors all the main HVAC plant and there are now plans to extend it to the bedroom air conditioning.

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