



Leading hotel chain integrates optimum comfort with optimum control

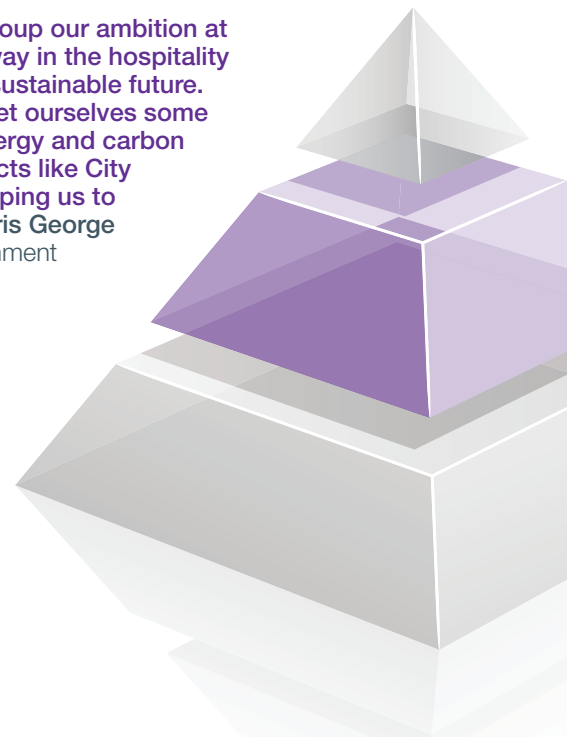
Whitbread, owners of the multiple award-winning Premier Inn hotel chain, has worked closely with Mitsubishi Electric to ensure that every guest visiting any of its 640 hotels throughout the UK will be able to enjoy the optimum room environment during their stay.

Whitbread wanted a control system for its Premier Inn hotels that would help to reduce energy requirements, costs and carbon emissions, whilst still offering guests the comfort levels they expect from the popular chain. The answer to this brief was the design and development of a sophisticated new controller for Whitbread, called Melcotel™.

“As a responsible hotel group our ambition at Whitbread is to lead the way in the hospitality industry towards a more sustainable future. To achieve this we have set ourselves some challenging targets on energy and carbon reduction installing products like City Multi and Melcotel are helping us to hit those targets” said **Chris George** Head of Energy and Environment for the Whitbread Group



Air Conditioning | Heating
Ventilation | Controls





Whitbread has a comprehensive Corporate Responsibility programme, ‘Good Together’ which aims to reduce the hotel chain’s impact on the environment and continually look to find ways to reduce its water usage, manage waste effectively and use less carbon.

At the Leicester Premier Inn hotel, a highly efficient heat recovery VRF (variable refrigerant flow) system was installed to heat and cool the 83 bedrooms, customer restaurant and staff office. The purpose-built Melcotel control interface was installed at the hotel as a test site.

The original centralised controller allows each room unit to be monitored and controlled from a central point. This means that the heating and cooling systems can be run in a highly efficient manner, thereby achieving reduced energy consumption, running costs and CO₂ emissions.

Melcotel can work with up to 250 indoor units and can be activated with or without a key card. When a guest enters a room the controller will switch to a temperature pre-set by the hotel which can be altered by staff according to seasonal requirements. If the system is triggered by a key card the unit will switch off again when the card is removed. The non-key card option requires the user to press an on/off button to activate the unit which will switch off again at a pre-defined time, reducing any energy wastage for the hotel.

The remote controller sensor monitors temperature in unoccupied rooms and should it fall outside a set range, the unit activates to cool or heat it. This keeps the temperature at a constant level and allows anyone checking in to the room to achieve their desired temperature in a much faster time.

Further energy saving features of Melcotel includes the ability to automatically slide the indoor temperature up on a very hot day. This is to prevent temperature shock to people wearing light summer clothing. Windows can also be connected to the system and when opened will automatically switch off the air conditioning system, in order to save energy.

Power consumption, outside temperature and occupancy levels were all logged and the data made available to the hotel facilities manager for viewing, monitoring and analysis using wireless Mitsubishi Electric interfaces. The collected data showed minimal energy consumption levels utilising the standard controls system. When combined with the Melcotel solution a substantial further drop in consumption levels occurred.

Premier Inn calculated a 30% decrease in the average monthly system running costs and CO₂ emissions vs. their original installation.



Installation Summary

Application Type

The Premier Inn Hotel, Leicester city centre has 83 bedrooms and occupies the first 9 floors of a 20 floor building. The hotel also has a bar, restaurant and back offices.

System

12 x PURY-EP200YHM-A Heat recovery air cooled condensing units connected with 83 x PEFY-P20VMS1-E ultra-thin ceiling concealed ducted indoor units to heat and cool 83 hotel bedrooms.

Controls

Simplified hotel controllers located in each hotel bedroom to provide customers with control over their own room.

Centralised controller linked to MELCOTEL™ Hotel specific controls Interface. Providing 30% average saving vs. non-Melcotel installed system.

Procon™ Mini M2M-A/16 Machine to Machine GPRS Remote Management Interface allowing data logging by hotel facilities management



“Since the installation of the new system, the information provided by the monitoring and analysis of data clearly shows a benefit to both our customers and our company alike” said **Chris George**, Head of Energy and Environment for the Whitbread Group.

Mitsubishi Electric monitored Melcotel's performance over a period of 18 months to determine what energy and cost savings the solution could provide. Based on the results of this monitoring Whitbread has since installed 52 Melcotel controllers, with plans for a further 45 installations. Mitsubishi Electric's Corporate Solutions team provide renewable heating, cooling, ventilation and control solutions to end users working in the following sectors:

Hotel | Leisure | Retail | Construction | Housing



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