



Premier Inn puts comfort first

London Kings Cross St. Pancras Premier Inn is a busy hotel hosting an eclectic mix of tourists and business clients from all over the world. On site is a bar, six meeting rooms, a pub, a restaurant and 276 bedrooms, all of which need to offer guests a comfortable stay.

Comfort is top priority for any good hotel and one of the biggest reasons guests return, so getting it right is vital.



Air Conditioning | Heating
Ventilation | Controls

Air Conditioning

Case Study

Premier Inn
London Kings Cross

Making a
World of
Difference



Heating or cooling is automatically activated as the guest enters the room or when the room card is inserted. It switches off again as the card is removed or when the guest leaves.

Premier Inn goes one step further and offers a money back guarantee to guests who have a legitimate complaint about any aspect of their stay, so the company is focused on offering the best possible conditions and customer service.

A comfortable room temperature is an essential part of their customer care package, but when you host people from all over the globe one fixed temperature simply doesn't do the job. So to achieve the optimum comfort for every guest, whatever their usual climate, Premier Inn called in preferred contractor, Turn Key Air Conditioning Ltd to install a Mitsubishi Electric high efficiency heat recovery Variable Refrigerant Flow (VRF) air conditioning system.

Turn Key's brief was challenging: install a major cooling and heating system whilst the hotel remained open for business. This meant minimising disruption to guests or staff and reducing the time spent by installers on site.

"Normally we would assemble some kit on site, but given the restricted space on the roof and a brief that required us to keep any disruption to a minimum we needed to come up with an innovative solution to meet these requirements," said Mitch Swirles, Managing Director of Turn Key Air Conditioning Ltd. "We had to find a way to install all the equipment, including the skids on the roof, with the least possible inconvenience to staff and guests alike."

The solution took the form of a pioneering manufacturing process developed by Turn Key in which they installed the air conditioning outdoor units onto two pre-piped and cabled skids, at a facility off-site.

All electrical and piping requirements were assembled together and the completed units were transported to the site. The units were even fitted with their own in-built power supply.

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The temperature in unoccupied rooms is constantly monitored. Should it fall outside a pre-set range the unit automatically activates to cool or heat it.

This 'plug and play' approach to the job meant that once on-site the units could be simply and quickly connected to the hotel's system.

One quiet Sunday morning the road alongside the hotel was closed and a crane brought in to lift two skids onto the building's roof. Positioning the units required skill and precision, but in a short space of time the crew had located both skids perfectly, despite having a mere 3mm tolerance for the pipework connection.

"In order to do the job we had to disconnect the kitchen's extraction system, so the installation was planned around the kitchen's operating times," continued Mr Swirles. "Everything went according to plan and because the units already contained everything we needed to complete the job, in just six hours we achieved something that usual takes around three weeks."

Air handling units connect to a modular external condensing unit with an inverter. This allows the flow of the refrigerant to be varied in response to the changing requirements for cooling or heating within the air conditioned space thereby reducing energy use and running costs.

The system is operated by Mitsubishi Electric's centralised controller, Melcotel™, which has been specifically designed for use in the hotel sector.

The controller can be installed in new builds or retrofitted to existing buildings, and works with or without a key card, so whenever a room is activated the system switches to a temperature pre-set by the hotel which can be altered according to their requirements.

A sensor fitted to the controller monitors the temperature in unoccupied rooms and if it rises above or falls below a set range, the unit activates to either cool or heat the room. Keeping the room temperature at a constant level allows guests to achieve their desired temperature in a much faster time. Windows can also be connected to the system so if a guest opens a window in the bedroom the air cooling system automatically switches off in order to save energy.

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If the system is triggered by the use of a key card the unit automatically activates as the card is inserted and switches off again when the guest removes the card upon leaving.

A non-key card option requires the user to press an on/off button to activate the unit when entering the room which will switch off again at pre-defined times. This prevents the unit running when the guest has left the room, thereby reducing any energy wastage for the hotel.

“We trialled the Melcotel™ control system at some of our other locations and were very happy with the results,” said Mitesh Panikker, Property Supply Chain Manager for Whitbread Hotels & Restaurants, owners of the Premier Inn brand. “For us the system offers reduced energy usage, lower running costs, and a decrease in carbon emissions, without compromising a guest’s comfort.

“We were delighted with the way that Turn Key rose to the twin challenges we set and were impressed with how they minimised the disruption that is usually involved in undertaking such a big project, also the incredible reduction they achieved in the time they spent on site.”

For further information on the Premier Inn chain of hotels visit www.premierinn.com

For further information on Turn Key Air Conditioning Ltd visit www.tkac.co.uk or email office@tkac.co.uk

For further information on Mitsubishi Electric’s air conditioning product range simply visit <http://airconditioning.mitsubishielectric.co.uk> or call 01707 282880.

Installation Summary

City Multi R410A YJM

High efficiency heat recovery
VRF system

Increased energy efficiency
and corresponding EER/COP
ratings

Reduced CO₂ output



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