## Case Study

Crowne Plaza, Gerrards Cross Making a World of Difference



# Specialised design removes the need for hotel leak detection



Air Conditioning | Heating Ventilation | Controls

The installation of new air conditioning system into a Buckinghamshire hotel is demonstrating how the clever use of design and specification can remove the need for leak detection equipment in occupied spaces.

Current legislation restricts the use of refrigerants in buildings, with EN378 in particular, intended to minimise potential hazards to persons, property and the environment from refrigerants.

"We saw this as an ideal opportunity to design out the need for leak detection".

Mitch Swirles, Managing Director of Turn Key Air Conditioning Ltd.

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The hotel has undergone a complete refurbishment since being purchased by the Cairn Hotel Group



The Crowne Plaza, Gerrards Cross is a 147-bedroomed hotel and conference centre which has undergone a complete refurbishment having been bought by the Cairn Hotel Group.

Specialist air conditioning contractors, Turn Key Air Conditioning Ltd has installed a Mitsubishi Electric City Multi heat recovery system into the hotel, to offer guests the ultimate in modern complete comfort and style.

"We needed to provide a solution that met legislation, gave the hotel complete control and delivered the comfort levels guests expect" explains Mitch Swirles.

Under EN378 legislation, which is particularly applicable for hotels, leak detection equipment must normally be provided if, in the case of R410a, a concentration of 0.44 kg/m³ refrigerant could be exceeded, if all of the refrigerant from a system were to leak into a single room.

Turn Key has developed an on-going relationship with The Cairn Group since providing maintenance service and advice on the Newcastle International Hotel.

Swirles and his team have extensive hotel experience and this gave the Cairn Group the confidence to bring Turn Key in at an early part of the design process.



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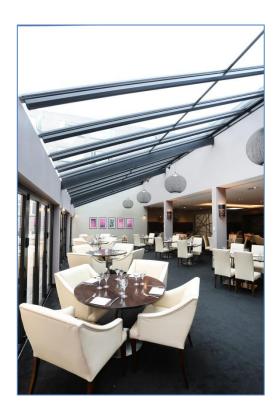




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It is vital that the hotel is able to offer its guests the highest levels of comfort whether they are there for a meal, staying overnight, or simply using the extensive leisure facilities. "We worked closely with The Cairn Group from day one to design a system that meets all requirements in terms of guest comfort, energy efficiency and legislation," added Swirles.

In close association with Mitsubishi Electric Value Added Reseller (VAR) PACAIR, Turn Key designed the system with the minimum amount of refrigerant in each bedroom to comply with EN378.

PACAIR also helped ensure that the equipment design was modular to allow the hotel to continue trading during the refurbishment and minimise the disruption to both the business and its guests.

This is where the unique two-pipe, heat recovery City Multi system comes into its own as it provides much more flexibility of design and installation.

"Each room is fairly unique so we also had to ensure that the design was flexible enough to cope with the different sizes and layouts". PACAIR Managing Director, Nigel Palmer.

PACAIR also used its specialist knowledge of the complete Mitsubishi Electric range to advise on the installation of a Melcotel hotel control system which links each individual room to the Ving cards, so that systems will not operate when unoccupied.



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Installation summary

Installation date: 2014 - 2015

Location:

Gerrards Cross, Buckinghamshire

New system:

13 PURY City Multi R2 Series heat recovery (High COP)

1 City Multi Y Series

2 Mr Slim Power Inverter systems

1 M Series Inverter driven unit

7 Lossnay fresh air MVHR heat recovery units

MELCotel AG150 Hotel Interface controller The hotel has been refurbished to the highest standards with the entire project expected to be completed in the spring of 2015.

Turn Key also fitted the infrastructure to the ground floor and designed the installation process to allow it to be completed in five distinct phases to minimise disruption.

In addition to ducted fancoil units in the rooms, City Multi ceiling cassettes are being installed in all public areas, whilst Lossnay mechanical ventilation with heat recovery units are being used to energy-efficiently maximise the amount of fresh air within the building.

"When we were asked to help with this project, we saw it as ideal opportunity to design out the need for leak detection," explained Swirles. "We are now looking at how we implement this in other situations with The Cairn Group."

For further information on the solutions available from Turn Key visit the website: www.tkac.co.uk

For more information on the added services available from PACAIR, visit: www.pacair.co.uk







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