



Specialised design removes the need for hotel leak detection

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.



Air Conditioning

Case Study

Crowne Plaza, Gerrards Cross

Making a
World of
Difference



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.



Telephone: 01707 282880

email: airconditioning@meuk.mee.com web: www.airconditioning.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environmental Systems Division
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880

IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland
Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

Country of origin: United Kingdom – Japan – Thailand – Malaysia. ©Mitsubishi Electric Europe 2012. Mitsubishi and Mitsubishi Electric are trademarks of Mitsubishi Electric Europe B.V. The company reserves the right to make any variation in technical specification to the equipment described, or to withdraw or replace products without prior notification or public announcement. Mitsubishi Electric is constantly developing and improving its products. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All goods are supplied subject to the Company's General Conditions of Sale, a copy of which is available on request. Third-party product and brand names may be trademarks or registered trademarks of their respective owners.



Air Conditioning

Case Study

Crowne Plaza, Gerrards Cross

Making a
World of
Difference



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.



Telephone: 01707 282880

email: airconditioning@meuk.mee.com web: www.airconditioning.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environmental Systems Division
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880

IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland
Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

Country of origin: United Kingdom – Japan – Thailand – Malaysia. ©Mitsubishi Electric Europe 2012. Mitsubishi and Mitsubishi Electric are trademarks of Mitsubishi Electric Europe B.V. The company reserves the right to make any variation in technical specification to the equipment described, or to withdraw or replace products without prior notification or public announcement. Mitsubishi Electric is constantly developing and improving its products. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All goods are supplied subject to the Company's General Conditions of Sale, a copy of which is available on request. Third-party product and brand names may be trademarks or registered trademarks of their respective owners.



Air Conditioning

Case Study

**Crowne Plaza,
Gerrards Cross**

Making a
World of
Difference



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



Telephone: 01707 282880

email: airconditioning@meuk.mee.com web: www.airconditioning.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environmental Systems Division
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England General Enquiries Telephone: 01707 282880

IRELAND Mitsubishi Electric Europe Westgate Business Park, Ballymount, Dublin 24, Ireland
Telephone: Dublin (01) 419 8800 Fax: Dublin (01) 419 8890 International code: (003531)

Country of origin: United Kingdom – Japan – Thailand – Malaysia. ©Mitsubishi Electric Europe 2012. Mitsubishi and Mitsubishi Electric are trademarks of Mitsubishi Electric Europe B.V. The company reserves the right to make any variation in technical specification to the equipment described, or to withdraw or replace products without prior notification or public announcement. Mitsubishi Electric is constantly developing and improving its products. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All goods are supplied subject to the Company's General Conditions of Sale, a copy of which is available on request. Third-party product and brand names may be trademarks or registered trademarks of their respective owners.

