



## Holiday Inn Express uses innovative hybrid air conditioning

A new 250-bedroom hotel has become the first in the UK to use an innovative hybrid air conditioning technology that removes the need to install leak detection equipment in occupied rooms.

The Holiday Inn Express Birmingham City Centre in central Birmingham is using Mitsubishi Electric's Hybrid VRF (Variable Refrigerant Flow) system to keep guests comfortable in a controllable, energy efficient way, whilst still offering the full flexibility of design and installation that VRF air conditioning is synonymous with.



# Air Conditioning

## Case Study

Making a  
World of  
Difference

### Holiday Inn Express



**“We were already aware of the Hybrid VRF system and had been looking for a suitable project to use it on, so this was an ideal solution for the client, especially as it does away with the annual costs of leak detection maintenance.”**

“We needed reliable and effective air conditioning that is easy to use from the guest’s perspective but which is also more cost effective for the hotel moving forward as it removes the annual maintenance costs associated with a leak detection system,” explained Mark Foster, Managing Director of Centre Island, which will manage the hotel.

“The added advantage of using Mitsubishi Electric equipment is that we can control the whole system centrally, which minimises energy use for the business whilst still allowing guests to have individual control within their rooms. This also ensures we can stop rooms being heated or cooled when they are empty.”

The design for the air conditioning system was put together by SISK Design and Build Contractors who worked with Building Services Consultancy DW Pointer. Together they committed to providing a VRF system that did not need the significant cost of adding leak detection units in all of the bedrooms.

“We proposed Hybrid VRF as it completely removes leak detection in occupied spaces whilst still offering the flexibility of a VRF system,” said Brian Inett of John Sisk & Son. “We were already aware of the Hybrid system and had been looking for a suitable project to use it on, so this was an ideal solution for the client, especially as it does away with the annual costs of leak detection maintenance.”

The 18-storey hotel in Holliday Street, Birmingham which was designed by Liverpool-based KKA Architecture, will use 16 outdoor condensing units to operate 250 slim ducted indoor units in a clever design that has one outdoor unit serving one wing on each of two floors to minimise the refrigerant pipework within the building.

“Hybrid VRF uses water to transfer heating and cooling around the building, which removes the need for refrigerant leak detection in occupied spaces,” said Dennis Winter of installer Dragon Air Conditioning Ltd. “But there are also other benefits to the project as the system is being installed in phases which matches the way the hotel is being built.”



Air Conditioning | Heating  
Ventilation | Controls



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#### Installation Summary

**16 x City Multi Hybrid VRF heat recovery outdoor units (PURY-P300)**

**32 x Hybrid Branch Controller units (CMB-WP108V-GA1)**

**250 x slimline ducted indoor units (PEFY-WP20)**

**250 x individual room controllers (PAC-YT52CRA-K)**

**The hotel also uses two standard City Multi VRF systems (P250YLM) for the ground floor areas, connected to 12 ducted indoor units, individual wall-mounted units (PKFY-P20VBM-EP) and two energy efficient, heat recovery air curtains (HP1000R DXE)**

**A separate City Multi VRF system (PURY-P800) provides heating and cooling to the first floor lounge and restaurant areas**

**Two Mr Slim units (PUHZ-ZRP100) are also installed on the roof to provide heating or cooling to Air Handling Units which provide energy efficient fresh air to the entire 18-storey building.**

**The whole system is controlled using seven AE200 centralised controllers and Mitsubishi Electric's unique hotel controller – Procon Melcotel**

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The hotel, which is to open in April 2017, will employ around 60 people when complete and forms part of the Arena Central redevelopment scheme in Birmingham City Centre which will also be home to the new HSBC headquarters.

“There are a lot of hotels that are now coming to terms with how to keep guests comfortable whilst complying with new legislation on refrigerants and leak detection,” explained Mitsubishi Electric’s Mark Grayston, Senior Product Manager for VRF & Hybrid VRF.

“This is why we have developed the Hybrid VRF system and this new development points the way to delivering the highest levels of guest comfort without adding significantly to install and maintenance costs.”

For further details on the full range of building and construction services available from John Sisk & Son, visit [johnsiskandson.com](http://johnsiskandson.com)

To discuss how Dragon Air Conditioning Ltd can advise on your installation, visit [dragonairconditioning.co.uk](http://dragonairconditioning.co.uk)



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