MITSUBISHI HEAVY INDUSTRIES, LTD.

High performance air conditioning

Case study: Hotel and Leisure

# Riverlights gets energy-efficient climate control from MHI


## Fact file

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| Project | Riverlights Centre, Derby |
| Project outline | Air conditioning system for 2 hotels and an airport-style bus station |
| Installer | Pro-Temp, Liverpool |
| Products | MHI KXR6 3-pipe heat recovery system |

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Mitsubishi Heavy Industries (MHI) is providing the latest air conditioning technology for the first phase of the multi-million pound Riverlights development in Derby city centre, being built by Shepherd Construction. VRF heat recovery systems from MHIE's KX range are part of the exacting specification for two luxury hotels and an airport-style bus station completed in Autumn 2010. A total of 18 outdoor condensers and over 275 indoor units of different types and sizes, with a total capacity of 1MW, have been installed at Hampton Hilton Hotel, The Holiday Inn and the bus station.

Liverpool-based air conditioning contractor, Pro-Temp, is installing 17 KXRE4 outdoor units from MHI ranging in size from 22.4kW to 96kW to serve the two hotels. MHI's VRF systems feature advanced inverter technology which adjusts compressor output to match the cooling or heating demands of the indoor units to save energy and eliminate temperature fluctuations. The three-pipe heat recovery solution will ensure sophisticated – and energy-saving climate control. Simultaneous heating or cooling can be provided in different areas as required, with heat gain in sunnier, south facing rooms providing useful energy for rooms on the cooler, shadier side of the buildings.

A total of 132 ceiling ducted indoor units from MHI's KX6 range are being installed throughout the Hampton Hilton Hotel in a range of capacities. The majority of guest rooms have FDUM22KXE6 low-noise units with 2.2kW cooling and 2.5kW heating capacities, while the open plan breakfast area, for example, has a larger unit offering 9.0kW cooling and 10.0kW heating.

At the Holiday Inn, Pro-Temp is installing 125 indoor units, which are mostly FDUM22KXE6 ceiling ducted models in guest rooms. Larger units from the same range have been specified for public areas, ranging from 9.0kW cooling (10.0kW heating) for the bar and up to 14.0kW cooling (16.0kW heating) in the restaurant.

Controls for the hotels' air conditioning systems include MHI's RCH-E3 hotel room controllers and centralised SLA-3 controllers. Developed specifically for the hotel sector, the RCH-E3 includes an easy-to-read control panel with adjustment of cooling and heating by guests restricted to a range of 16 to 30 degrees. Programmable timer functionality and other advanced functions will be controlled by the hotel management through the centralised SLA-3.

Energy efficient climate control in the new bus station at Riverlights will be supplied by a 50kW MHIE KXRE4 heat recovery outdoor unit, connected to 16 FDUM ceiling ducted indoor units and three slimline wall-mounted versions with cooling/heating capacities from 2.2kW / 2.5kW up to 5.6kW / 6.3kW.