



Grand Central Hotel, Northern Ireland

Grand, centralised air conditioning system for new Belfast hotel

Transformation of a 1970s Belfast office tower into Northern Ireland's largest and tallest hotel presented a clean slate for air conditioning design and the opportunity to showcase the benefits of a Daikin VRV IV heat recovery system.

With nothing more than some local air conditioning in the original configuration of the 23 storey building, it was effectively a newbuild installation for Mallusk-based Daikin D1+ partner, Titan Air Conditioning.

The Hastings Grand Central rises above Bedford Street, in the up-and-coming Linen Quarter, near Belfast City Hall. It is the newest member of Belfast-based Hastings Hotels' portfolio of seven four and five-star hotels.

The Grand Central is a contemporary reincarnation of a Victorian hotel with the same name that stood on Royal Avenue from 1893 to the 1970s.

For the new Grand Central, Hastings Hotels wanted an energy efficient air conditioning solution that put both the company and guests in complete control.

Howard Hastings, Managing Director of Hastings Hotels, says: "Guest comfort is a key concern for hotel management, so with the new Grand Central

it was essential that we chose an efficient air conditioning system to provide comfortable temperatures in guest rooms and throughout the public areas.

"Equally important from the management viewpoint was that the system would reliably deliver operating cost savings wherever possible. We are confident that the Daikin VRV IV heat recovery system installed by Titan Air Conditioning ticks all the boxes for us."

The hotel's Daikin system provides space heating and cooling as necessary for:

- 300 guest rooms, including 10 suites.
- Public areas such as reception, three restaurants, conference and meeting rooms, and the stunning Observatory cocktail bar – Ireland's highest – on the 23rd floor
- Management offices

Titan installed 25 Daikin VRV IV heat recovery condensing units, totalling 328hp. There are two outdoor plant areas:

- On the podium roof, serving the ground floor and floor 1-7
- On the tower roof, serving floors 8-23.

Year of installation

- › 2018

Project requirements

- Air conditioning
- Air curtain
- Air purification
- Control
- Heating
- Hot water
- Refrigeration
- Ventilation

Installed systems

- › VRV Heat Recovery
- › VRV Heat pumps
- › Wall mounted units
- › Ducted units
- › Concealed ceiling units
- › Fully Flat Cassettes
- › Remote controller
- › ITM



In addition to the heat recovery units, the podium plant area has three Daikin VRV IV heat pumps serving DX coils in the hotel's air handling units. It also has the outdoor units for Split and Sky Air systems that provide cooling for the laundry and communications room.

Guest rooms have ducted units with low external static pressure, mounted in the usual hotel style above entrance ceilings, with discharge directly into the bedroom area. A simplified remote controller is provided in each room for guest use.

Public areas mostly have concealed ceiling units (medium ESP) or Daikin's fully flat cassette, with white decoration panels. Offices have wall mounted fan coil units. Wired remote controllers are provided for the public areas and offices.

Three Daikin Total Heat Exchanger (VAM) units provide ventilation to the gym and two meeting rooms on the first floor. These units recover waste energy from the exhaust air stream to minimise running costs and reduce carbon footprint.

Overall control of the Daikin systems is via two Intelligent Touch Managers, with BACnet interfaces for connection to Hastings Hotels' building management system.

Titan Director Keith Hare said: "Daikin VRV IV heat recovery air conditioning system ensures energy isn't wasted, cutting one of the hotel's main operating costs. The ducted fan coil units and linear grilles are ideal for a hotel room

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environment and don't impose on the style of the hotel!"

Keith Hare and co-directors Mark Montgomery and Dessie O'Hara each have more than 30 years' experience in air conditioning. They formed Titan in 2013 and now employ more than 30.

Titan looks after other air conditioning installations across the Hastings Hotels group, which includes three other properties in Belfast – the Europa Hotel, the Culloden Estate and Spa and the Stormont Hotel. Beyond Belfast, it has the Slieve Donard Resort and Spa, the Everglades Hotel in Derry, and Ballygally Castle on the Antrim Coast.

Kit list

Code	Description	No of units
REYQ-T	Daikin VRV IV heat recovery condensing units	25
RYYQ-T	Daikin VRV IV heat pumps (continuous heating)	2
BS-Q-AV1B	Branch selector boxes	27
FXAQ-P	Wall mounted units	7
FXDQ-A	Ducted units – low ESP	304
FXSQ-A	Concealed ceiling units – medium ESP	51
FXZQ-A	Fully flat cassettes	5
VAM-J	VAM ventilation units	3
DCM601A51	Intelligent Touch Manager	2
DMS502A51	BACnet Interface	2
BRC1E53A	Remote controllers	109
BRC2E52C	Simplified remote controller for hotels	302



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