

Grand Hotel, York



A grand air conditioning solution for extension of York's top hotel

York's only five star hotel – the Grand Hotel & Spa – has opened a 101-bedroom extension with Daikin VRV IV heat recovery air conditioning. It was also the first UK hotel development where Daikin's ground-breaking auto cleaning duct was specified for the fan coil units in every guest room.

This technology combination is set to maximise efficiency and economy:

- Apart from the ability to provide simultaneous cooling and heating, the three-pipe heat recovery system offers greater efficiencies than two-pipe systems.
- The auto cleaning duct prevents any build-up of dust that could otherwise inhibit efficiency of a ducted fan coil unit and increase operating costs of the overall system.
- And as the auto cleaning duct's dust storage container can be emptied when necessary by housekeeping staff with a vacuum cleaner, it avoids the cost of manual cleaning

of the filters. In most rooms, the vacuum access points are neatly concealed in a cupboard.

- Improves air quality by removing dust and particulates from circulation within the room.

Grand Hotel property manager Martin Jenkinson says the auto cleaning ducts bring a rapid payback with the savings on filter cleaning alone. He says: "It takes three or four days to clean the filters in the rest of the hotel, which has air conditioning systems from another manufacturer. And dust can start to accumulate again very quickly.

"The Daikin system indicates when an auto cleaning duct's dust container needs emptying. But that's such an easy task for housekeeping staff, we've made it part of the daily room-servicing routine. We'll still be checking the units in all the rooms at least twice a year, but it will need only a quick walk-round."

Year of installation

› 2018

Project requirements

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

Installed systems

- › VRV Heat Recovery
- › Slim ducted fan coils
- › Auto-cleaning accessory
- › Simplified controller
- › ITM



The hotel, close to the city's station and the National Railway Museum, was built between 1900 and 1906. It was originally the impressive headquarters of the North Eastern Railway, in its heyday one of the UK's richest companies. After a £25 million conversion it opened as the Grand Hotel in 2010, and the Grade II listed property was acquired by current owners, Splendid Hospitality Group (SHG), four years later.

Virtually doubling the award-winning hotel's capacity, the new extension has been created in a £15 million project involving the new 'Rise' restaurant and conversion of an adjacent office building, Roman House. When the office building was vacated by a major insurance company, it was earmarked for conversion into 47 luxury apartments but was acquired by SHG from the intending developer.

Daikin D1+ partner Maximum Climate Control, which had already installed Daikin systems for the new restaurant, was appointed to undertake the full mechanical installation in the extension.

The air conditioning element consists of 12 VRV IV heat recovery condensing units serving the ducted fan coil units. The three-pipe system includes multi-way Daikin branch selector boxes. Two Daikin ERQ condensing units serve the temperature coils in the third party air handling unit that provides a constant supply of fresh, tempered air to the guest rooms.



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Simplified room controllers are provided in each guest room, and each is fitted with a bespoke antique brass faceplate to match the décor. Leak detection monitors – in a bespoke purple colour – are fitted in every room.

The systems are centrally controlled by a Daikin iTouch Manager with expansion card for connection to the hotel's building management system.

A 7kW Daikin R32 split unit provides cooling for a communications room.

London-based SHG is billed as one of the UK's fastest-growing privately owned hotel groups. With more properties in the pipeline, its nationwide portfolio of 19 branded and independent hotels ranges from limited service to luxury. It has two other properties in York.

Kit list

Code	Description	No of units
REYQ-T	VRV IV Heat Recovery condensing unit	12
	ERQ condensing units	2
FXDQ	Slim ducted fan coil units	101
	Auto cleaning duct accessory	101
BRC1E52A	Simplified room controller (bespoke faceplate)	101
K.RDEM-WHT	Leak detector (bespoke colour)	101
BS1Q	Daikin branch selector boxes	
DCM601A51	Intelligent Touch Manager	1
	7kW Daikin Split system condensing unit	1
	Fan coil unit	1



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