



# Holiday Inn Express

## Auto-cleaning duct beats hotel dust, boosting comfort and economy

Less than six months into its trial installation in a new 96-bedroom hotel near London, an auto-cleaning duct fitted to a ducted fan coil unit from Daikin UK is showing clear benefits.

The new Daikin auto-cleaning duct accessory replaces the standard filter on the rear of FXDQ and FDXS slim ducted units, typically installed in hotel bedrooms.

Programmed to clean itself at regular intervals it avoids any build-up of dust and the need for manual cleaning of filters and grilles. This brings improved air quality, maintenance cost savings and better system performance.

Dust is collected in an internal box – and when it is nearly full a warning light alerts the housekeeping staff to empty it, via a normal vacuum cleaner hose. This is expected to be at intervals of approximately two to three months.

For the first trial in the United Kingdom, the auto-cleaning duct was installed on a bedroom fan coil

unit at the IHG group's new three-storey Holiday Inn Express at St Albans, as part of the hotel's Daikin VRV IV heat recovery system.

Michael Oats, IHG's Director of Engineering Design, Europe, says maintaining fan coil units in guest rooms is challenging for a hotel chain.

He says: "It's an ongoing process of cleaning filters – and with high occupancy hotel bedrooms, filters get dirty very quickly and the hotels can suffer poor temperature control, higher operating costs and increased failures.

"Clean filters mean fan coil units are more efficient and provide good comfort control – and this benefits our owners, operators and guests.

"We have been working with Daikin on the auto-cleaning duct from the start and have been considering how we can retrofit them in our existing estates as well as installing them in new-builds. We've been looking at how housekeeping staff, rather than maintenance teams, can clean the filters so that we reduce maintenance costs.

### Year of installation

› 2017

### Project requirements

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

### Installed systems

- › VRV Heat Recovery
- › Ducted Fan Coil Units
- › Wall mounted units



"We have many hundreds of fan coil units so any reduction in running costs could be vast. I see great benefits from the auto-cleaning duct for hotel operators– not just for IHG, but for all other brands."

Sylvester Mascarenhas, Managing Director of mechanical and electrical services consultancy Sabinus Building Services Ltd, says the trial duct has been monitored closely and is already making a major difference, compared with standard systems elsewhere in the hotel.

He says: "We now plan to test the accessory in more rooms at St Albans, and will be using them in more than 200 new bedrooms that this customer will be developing in the coming year.

Bethan Jones, deputy general manager at the hotel says: "It's really important for the guest to have a great experience in the hotel. The air conditioning in the room keeps it at a comfortable temperature to allow a good night's sleep.

Martin Passingham, Daikin UK product manager, says the concept of an auto-cleaning duct goes back a number of years.

He says: "Through discussions with hotel groups, we understood that there was a real problem with cleaning of ducted systems in guest rooms. The consequences of a ducted system that isn't cleaned are that energy consumption increases, system reliability decreases, and there's potential for dust within the room itself – which can affect guest comfort and the room's aesthetics.

"The quantifiable benefits of auto-cleaning are improved energy efficiency, maintenance saving, and an increase in

"One of the major considerations in designing systems for hotels is appearance. When a standard filter is not cleaned properly, dust can be seen on the grille. With the Daikin auto-cleaning duct this problem does not occur."

"With the Daikin auto-cleaning units we can already see more efficiency in our maintenance and housekeeping operations."

system reliability. In addition, the room itself will be kept cleaner because the duct removes airborne dust."

Nigel Isherwood, a member of Daikin UK's corporate clients team, says the auto-cleaning duct trial at St Albans has already aroused considerable interest from other hotel groups.

He says: "I think it's fair to say this could be a game changer in terms of how hotel bedrooms are maintained, particularly from an air conditioning perspective."

The St Albans Holiday Inn Express has five Daikin VRV IV heat recovery systems – one for the ground floor and two each for the two upper floors. In addition to the economic benefits of highly efficient heat recovery systems, the configuration provides flexibility to cut costs further through selective operation related to occupancy levels.

Code	Description	No of units
REYQ	VRV IV Heat Pump	6
RYYQ	VRV Heat Recovery	2
FXAQ	Wall mounted unit	3
FXDQ	Ducted fan coil unit low	100

