

# Oxford Brookes University



## Low-GWP technology helps busy university servers keep cool

Cutting edge R32-based air conditioning technology from Daikin was a no-brainer when a forward-thinking university was refurbishing a 1960s building to re-house its School of Business and provide a range of modern teaching and study spaces.

Daikin's R32 Split systems ensure year-round temperature control for the vital server rooms that enable staff and students to work online without fear of interruption because of overheating if the network is under load.

The 9,000m<sup>2</sup> Clerici Building on the main Headington campus of Oxford Brookes University has undergone a massive £34 million upgrade as part of the university's overall plan to modernise and rationalise facilities. The Clerici and Sinclair were Highly Commended in the Design through Innovation category at the RICS Awards 2018.

The School of Business has relocated to Headington from the Wheatley campus, which is to be sold for housing development.

Gavin Hodgson, Energy and Carbon Reduction Specialist in the Environmental Services Team, says the university is a keen early-adopter of technology

developed for advanced environmental performance and operating efficiency.

"With the R32 systems we are accelerating the swing to 'greener' refrigerants – which not only sets a good example in the community but also gives us the economic benefits of the new technology," he says. "The university was among the first users of condensing boilers for more efficient heating. That proved to be an excellent decision, and we are confident that this choice of air conditioning systems will be at least as good."

The Daikin Split systems consist of condensing units mounted on the roof of the four storey building to serve wall-mounted fan coil units with 7.1kW nominal cooling in the communications rooms below, two on each floor and one in the adjoining rebuilt Main Hall.

There is also a Daikin R32 Sky Air A-Series system with a 6.8kW Roundflow cassette serving the ground floor café area.

All the systems were installed by Manchester-based Daikin D1 Installers Building Environmental Solutions.

### Year of installation

› 2017

### Project requirements

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

### Installed systems

- › R32 Split outdoor unit
- › R32 Roundflow cassettes
- › R32 wall mounted fan coil unit
- › R32 Sky Air Outdoor unit



component of the widely used R410A refrigerant, but on its own has a significantly lower global warming potential – 675 against 2088 – making it an ideal choice for the next stage of the move towards low-GWP refrigerants.

With the improved design and efficiency of components in Daikin's R32 air conditioning systems, users can look forward to superior comfort and reliability – and acceptable operating costs, thanks to reduced energy consumption.

Lyndon Wilde, Small Projects and Maintenance Manager at BES, says:  
 "companies countrywide are benefiting from our expertise as installers of air conditioning equipment to ensure their server rooms, computer rooms and communication rooms are adequately cooled to protect very expensive and delicate equipment."

**Kit List**

Code	Description	No of units
RXM-M	R32 Split outdoor unit	9
FTXM-M	R32 Wall mounted fan coil unit	1
RZAG	Sky Air A-Series outdoor unit (R32)	1
FCAHG-F	Roundflow cassette (R32)	9



"Enormous amounts of data have to be held securely, and systems have to be robust. Computing and communication servers have advanced rapidly with blade servers now taking up far less space than ever. The downside to saving space is that these servers are very susceptible to temperature change. It is therefore essential that they are in properly air-conditioned rooms." Daikin was the first manufacturer to offer a full range of R32 Split systems up to 14kW in the UK. R32 is a

