



Press Release
November 27th 2015

Space Air supplies Daikin systems for landmark building

Space Air was uniquely specified to supply Daikin's R22 replacement VRVQ systems throughout 330 Holborn Gate, London, possibly the largest installation of this innovative product in the UK.

330 Holborn Gate is a landmark building in central London within easy reach of the West End and the City of London. The impressive 9 storey, glass-fronted office building, is in a prime business location that has been associated with the legal profession since medieval times. Space Airconditioning, the Guildford based Daikin Distributor, was specified to supply what is probably the UK's largest installation of Daikin's R22 replacement VRVQ air conditioning systems as part of a major refurbishment.

The existing VRV equipment scheduled for decommissioning and removal in stages included:

- No R22 Heat Recovery Condensing Units serving 7 floors
- Floor mounted FXYL Indoor units each with a BS Box and remote controller
- No Centralised Controllers per floor.

Space Airconditioning had supplied and been closely involved with the building's original R22 based Daikin VRV systems and held comprehensive data on the original installation. This information greatly assisted M&E Consultants BWS of Epsom, acting on behalf of the client Land Securities, when it came to considering replacement air conditioning system designs.



Initially, the client favoured a complete replacement system including removing all existing pipework, however as the project progressed, Daikin's unique VRVQ system, specifically designed to enable existing interconnecting pipework to be retained, became an increasingly attractive proposition from operating efficiency, cost saving, expediency and minimising occupant disruption aspects. Space Air technicians carried out a detailed survey of the existing pipework and declared it suitable for VRVQ to be applied.

John Noad (Building Environment) Ltd was appointed as the main M&E Contractor and they in turn sub-contracted the installation of the Daikin VRVQ systems to a Space Air approved installation specialist. Space Air also provided full project management support throughout the installation and commissioned the systems as they were completed.

Mike Nankivell, Space Air's Marketing and Business Development Director, was in attendance when the 35 new VRVQ condensing units were lifted into position, early one Sunday morning; an operation, that had to be conducted with military precision due to restricted crane and vehicle access.

Land Securities let the building to various tenants on a leasehold basis, with floors 4, 5 & 6 being occupied by the same tenant, Chime. The 7th floor was unoccupied. The issue for Land Securities was that the leasehold agreement with Chime was due for renewal. The tenant was made aware that the existing VRV systems were operating with the regulated ODS refrigerant HCFC R22. The position regarding the phase-out and eventual ban on R22 was explained in detail and the tenants together with Land Securities were offered a number of options for renewal or replacement. In addition, Land Securities decided to completely refurbish the 7th floor with a new design and layout.



The unoccupied 7th floor was the first part of the project. This was completely refurbished which allowed the development of a new bulkhead design in the central core areas. This meant that Daikin's slim ducted units (FXDQ) could be selected and conditioned air distribution could be improved throughout the floor.

For the occupied floors, 4, 5 & 6, considerations for risk to business from disruption during the refurbishment works were paramount as well as cost.

VRVIII-Q was put forward as the best option because of the potential to re-use large amounts of the existing refrigeration pipework and thereby minimising disruption for the occupants of the offices. Space Air carried out comprehensive surveys of the existing systems to ensure feasibility of the VRVIII-Q product. Detailed survey reports submitted to the client included equipment costings, efficiency comparisons and run cost projections for VRVQ vs the original installation.

The design of the new layout based on Daikin VRVIII-Q systems meant that the consultant was able to increase the capacity delivered for the building. This overcame capacity shortfalls that had developed over the years. The overall increase in system capacity whilst still using the same pipework was in the region of 100kW. The work to replace the rooftop VRVQ condensing units was carried out during normal daytime hours, out of sight of the occupants.

The indoor work to replace the fan coil units, BS Boxes and completion of pipework changes was all conducted overnight to minimise disruption for the occupants. Work in each area of the floors was planned and phased with all activities being completed by 7.00am every day and all areas returned to normal so that the tenants were satisfied that their workspaces were not disturbed.

Details of the Daikin VRVIII-Q installed equipment:

- Outdoor units -20 No. RQEQ280P Daikin VRVIII-Q Heat Recovery Condensing Units (nom. Capacity = 28kW); 15 No. RQEQ360P Daikin VRVIII-Q Heat Recovery Condensing Units (nom. Capacity = 36kW).
- Indoor units - 225 No. Daikin Floor mounted models (FXLQ); 38 No. Daikin Wall mounted models (FXAQ); 28 No. Daikin Slim Ducted Chassis models (FXDQ); 8 No. Daikin Round flow Cassette models (FXFQ); 1 No. Daikin Ducted Chassis model (FXSQ); 1 No. Daikin 600x600 Cassette model (FXZQ); 301 No. Daikin BSV Boxes (BSVQ100P); 231 No. Additional Daikin Refnet Joints (fewer required than in normal VRV Installation due to reuse of existing); 7 No. Daikin I-Touch Controllers (c/w Space Air Control Panels, commissioning, client demonstration and training).

Space Air carried out weekly installation supervision visits to ensure correct procedures were followed at all stages.

Space Air carried out programmed Commissioning of each phase over 2 nights every 2 weeks with the Daikin I-Touch controls being commissioned on the final day of the phased works.

On completion of the project, the client took up the unique Space Airconditioning plc, extended (soft landings) warranty, which includes annual visits by Space Air technicians to evaluate and report on the overall condition and operation of the new systems.

Charlie Railton MEng, senior engineer for Land Securities commented 'From the client perspective, Space Air provided a complete service throughout the project, from attending design meetings through to closing out the final defects. The planning, delivery and commissioning were all seamless, Space Air clearly pride themselves in taking ownership from start to the absolute finish'.



The client has reported a £70,000 saving in energy consumption since the new Daikin systems were commissioned less than a year ago.

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