

VERTICAL AIR TOWERS LONDON



PROJECT PROFILE



CHALLENGES:

To provide **vertical air towers** supplying filtered, heated and cooled air to a high profile building in the London area.

There were **numerous units per floor** positioned as handed pairs sited in plant-rooms around the perimeter of the designated floors. Each tower was to supply over **4m³/s** and **breakout noise** was to be kept to an absolute minimum due to unit location.

The units were to draw air from an underfloor void and discharge into the ceiling void above, thus requiring the **vertical configuration**. Design considerations has to be made for condensate removal and also for **critical maintenance** including coils and hot swap fans.

Energy efficiency was of paramount importance and the units were to be fully prototyped and performance tested at **BSRIA** prior to a true-to-life mock-up facility for additional analysis and witness testing.

OUR SOLUTION:

Our team of engineers selected the optimum AHU to meet the specified design condition including **twin fans** to allow for redundancy.

The horizontally mounted coils required manufacture of a **specialist chevron drain tray** to remove condensate without generating significant pressure drop & turbulence which would have affected fan performance and system efficiency.

For ease of maintenance, the coils were positioned to slide out unhindered & a **bespoke release mechanism** allowed fast fan replacement.

Custom built, integrated attenuation reduced noise levels to 60 dB(a)@1m and a temporary satellite factory was commissioned for production line assembly prior to batch delivery.

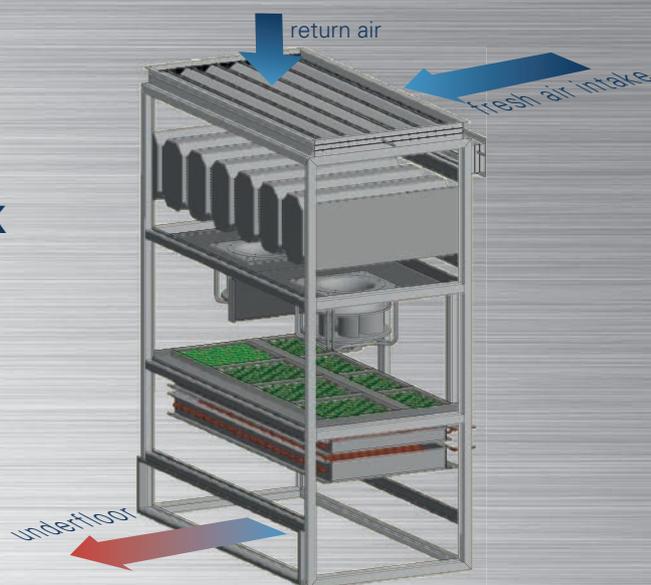
An **intuitive controls package** was designed to adjust flow-rates and maximise unit efficiency via a range of onboard sensors linked to the BMS.

3.3M HIGH VERTICAL UNITS WITH HORIZONTAL COMPONENT PARTS.

BESPOKE ATTENUATION AND QUICK RELEASE MAINTENANCE FACILITY.

BSRIA TESTED UNDER EXTREME ENVIRONMENTAL CONDITIONS.

ALL UNITS BATCH MANUFACTURED AND DELIVERED ON-TIME



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AIR HANDLING

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