AirCraft
Air Handling

PROJECT CASE STUDY

MEDICAL CLEAN ROOM - VERTICAL AHU

The majority of air handling units (AHUs) are manufactured and supplied in a horizontal airflow configuration, there are however some environments where this is not possible, and one option is to install a vertical AHU. This was exactly the case for a western-based medical technology company planning on upgrading their cleanroom ventilation system.

The initial request to AirCraft Air Handling was made by a specialist cleanroom solution contractor and required our design team to assist with the bespoke arrangement required for where the new AHU was to be installed.

One of the principal requirements of this AHU was that it had to function within an unclassified cleanroom that needed dust and other external pollutants to be filtered from the mixed incoming and return air whilst controlling the humidity and temperature of the supply air.

With the installation footprint sizes confirmed along with the dimensions of the inlet and outlet duct distribution system, our design team worked closely with the cleanroom contractor to finalise the specifications for an up-flow air AHU. Considerations also had to be made to ensure the clean room's air pressure was constantly maintained at the desired level for optimum performance.

The new AHU was configured with a direct drive centrifugal EC plug fan, a reverse cycle DX heating/cooling coil, high-efficiency rigid F9 / ISO ePM1 85% filter. A packaged control system was manufactured and fitted, which provided easy onsite commissioning.

As with all AHUs that AirCraft Air Handling design and manufacture, we fully inspect, and quality check the equipment prior to delivery. In this instance the AHU was delivered to site in a modular format, and the specialist cleanroom contractor undertook the full installation and commissioning of the plant bringing it into service.

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