



MANSFIELD POLLARD
AIR MANAGEMENT EXPERTS



Barnsley Hospital NHS Foundation Trust

HTM 03-01 & Critical Care Air Handling

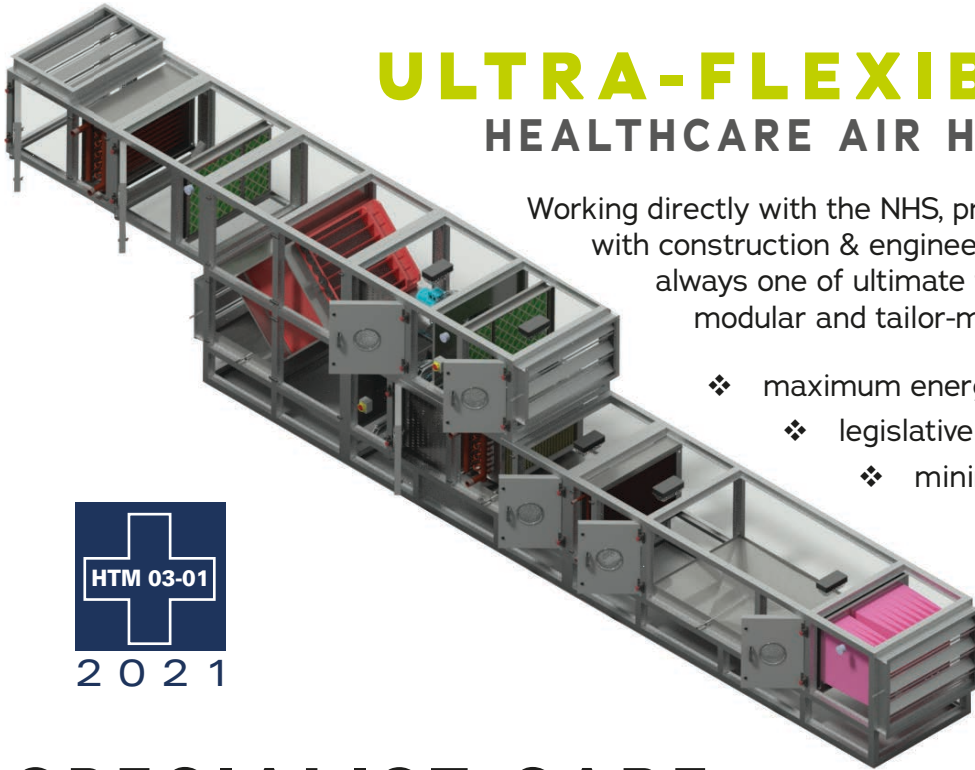
Specialist AHU Applications
by Mansfield Pollard

SPECIALISTS IN HEALTHCARE AHU's

ULTRA-FLEXIBLE HEALTHCARE AIR HANDLING

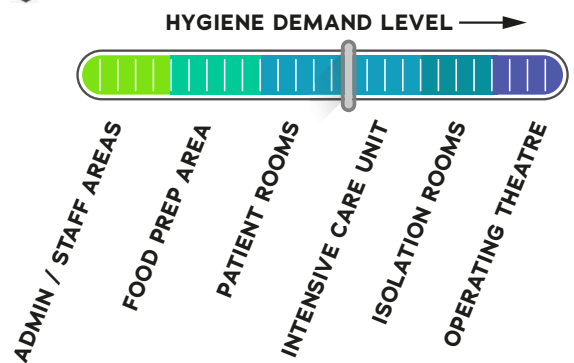
Working directly with the NHS, private healthcare organisations and with construction & engineering contractors, our approach is always one of ultimate flexibility to guarantee both our modular and tailor-made units achieve:

- ❖ maximum energy efficiency
- ❖ legislative compliance incl. HTM 03-01
- ❖ minimum unit footprint
- ❖ required performance levels



SPECIALIST CARE NEEDS SPECIALIST AIR

In healthcare premises, certain activities will necessitate the provision of ventilation equipment with additional special features in order to achieve and maintain specific conditions. These may be needed in order to assist with the treatment of patients or maintain the health and safety of staff.



Infection Control

Separate extract / supply airflows & room pressure management.



Hazard Control

Multi filtration stages & microbially inert design.



Climate Control

Heating / cooling and humidity control options.



Energy Control

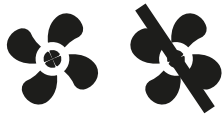
High efficiency energy recovery and variable speed fans.

PROJECT HIGHLIGHTS



HTM 03-01 COMPLIANT

Fully compliant with latest HTM 03-01 build standards



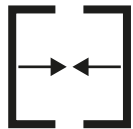
RUN & STANDBY EC FANS

Offering the ultimate in energy efficiency and redundancy levels



CLASS L2 AIR LEAKAGE

On-site leakage testing to exceed L2 levels



SPACE SAVING SOLUTION

Vertically split heating coil to minimise withdrawal space



Mansfield Pollard's specialist engineers were appointed to design, manufacture and install a complete air management solution for the latest development at Barnsley Hospital. The construction of a new, high-tech critical care unit (CCU) is part of a £7.3m project to double the capacity of intensive care beds to 32 in order to meet the current demand pressures and contribute to future proofing the hospital's CCU capacity.

Specialist care needs specialist air and as acknowledged industry leaders, we work directly with the NHS, private healthcare organisations and with construction & engineering contractors, to deliver energy efficient, legislative compliant, hospital and healthcare air handling solutions

AHU Supply & Extract Units



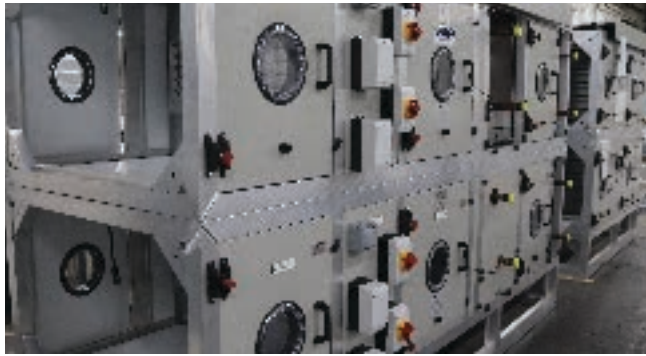
AHU Isolation Units



PROJECT HIGHLIGHTS



10 custom built air handling units were designed, manufactured and installed to provide a complete ventilation solution for the CCU. This included x2 large HTM 03-01 compliant supply and extract air handling units providing 5.1m³/s of ultra-clean air into the general bed bay areas of the critical care unit and also into the CCU ancillary accommodation area.



The 4 patient isolation units were each served by individual supply and extract units of 6.25m³/s, again built to HTM 03-01 specification including 300mm hospital bases.



The use of run/standby direct driven, high efficiency, EC plug fans in all units not only maximised energy efficiency levels but also provided redundancy measures, ensuring a minimum of 80% airflow in case of a fan failure. Built in redundancy also ensured the provision of safe ventilation for the potential introduction of 12 additional escalation beds in between the current open plan CCU bed provision.

Due to a lack of available space on the new single storey building roof, maintenance access requirements were limited by vertically splitting the heating coils to reduce unit withdrawal space by 50%. All AHU's were manufactured to the latest version of BS EN 1886 including a casing air leakage of L2 with all units being fully tested on-site.

AHU Isolation Units



AHU Isolation Units



Specialist AHU Applications
HOSPITAL & HEALTHCARE

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