



Hospitals and Healthcare

# BESPOKE AHU SOLUTIONS

HOSPITALS AND HEALTHCARE  
HTM 03-01 VENTILATION SOLUTIONS



VORTICE

INDUSTRIAL



Established in 1954 Vortice Industrial is located in Verona, Italy. The production facility spans 12,000m<sup>2</sup> and produces over 1,000 units annually, serving clients worldwide.

Vortice Industrial specialises in the design and manufacture of bespoke air handling units. Our tailored solutions meet the most demanding application requirements, ensuring optimal performance and efficiency.







# Specialist Ventilation for Healthcare Environments

Ventilation plays a crucial role in healthcare facilities, with particular medical procedures mandating ventilation systems with additional features in order to maintain very specific conditions. Vortice Industrial offers HTM 03-01 compliant solutions, ensuring conditions are consistently achieved.



## Patient Focused Solutions

- Air quality optimised to ensure staff and patients are protected against contaminants.
- Temperature and humidity control, to consistently deliver optimum patient comfort.
- Reducing unit noise to maintain a harmonious environment for both patients and staff members.

## Guaranteeing the highest system efficiency for healthcare environments



### Infection Control

Unit configurations ensure extract and supply airflows are separate.



### Hazard Control

Units are equipped with multi-stage filtration systems to ensure air circulated within healthcare facilities is free from a wide range of contaminants.



### Climate Control

Heating and cooling options available.

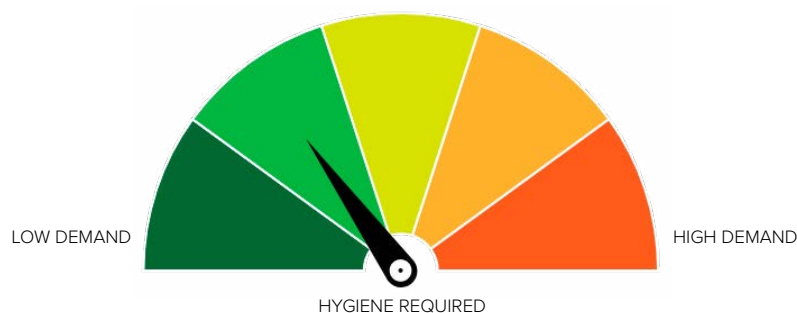


### Energy Control

High efficiency energy recovery and variable speed fans.

## Hygiene Demand Solutions

In healthcare facilities, activities may require specialised ventilation equipment to achieve particular conditions. This equipment is essential for aiding patient treatment and ensuring the health and safety of staff.



# Specialist Air Handling Solutions

To further ensure hygienic solutions for healthcare applications, Vortice Industrial offer the following key design features:

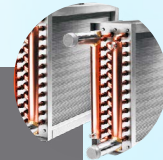
## Hygiene and Cleanliness

- **Smooth Interior Panels:** Internal panels are manufactured from a stainless steel or white laminate, ensuring a sterile environment, and minimising the risk of bacterial growth.
- **Fixed Cleanable Drain Pans:** Stainless steel construction promoting easy access for cleaning and preventing pooling and potential contamination.
- **Tailor-Made Base Frame:** Designed to suit each application and are compliant with HTM 03-01 standards for cleaning and drain trap installation.
- **Specialised Coils:** Vinyl coated or electro-tinned to provide a protective barrier against corrosion and bacterial build up.



## Efficiency

- **Run Around Coil:** Up to 68% efficient with no contamination risk between supply and extract. Twin run and standby pump available for system critical areas.
- **Thermal Wheel:** Up to 90% efficient with high corrosion resistance. Low air leakage, maintenance, and operating costs.
- **Plate Heat Exchanger:** Up to 80% efficiency with separate airstreams and no running costs. Low air leakage and high efficiency. Custom-built accessible stainless steel drain tray.





## Easy Maintenance

- **Access Panels and View Ports:** Hinged access sections fitted with plexi-glass for easy inspection and top tier viewports within easy access.
- **Easily Removable Coils:** Custom built slides and rails allowing easy withdrawal for cleaning and maintenance.
- **Custom Filter Frames:** Easy filter change for maintenance and minimise air leakage bypass.
- **Plug and Play Fan:** Commando plug allowing fan assemblies to be quickly changed to minimise unit downtime particularly in critical application.
- **Maintenance Corridor:** Suitable for adverse weather conditions during maintenance for external units.
- **Single Switch Lighting:** For ease of maintenance.
- **Double Lock System:** To always ensure security and safety on AHU.
- **Bird / Insect Screen:** Fitted to all external intakes and discharge cowls/louvres.



## Quality

- **Corrosion Resistant Frames:** With coastal protection (min C4 if required).
- **Stainless Steel Internals:** White laminate optional.
- **Excellent Acoustic Performance**
- **Thermal Qualities:** T2, TB2.
- **Optional Adjustable Feet:** Ensuring level installation of sections.



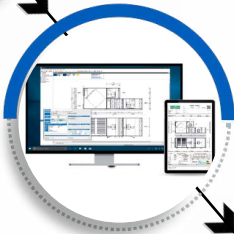
# The Vortice Service

Maximum configuration flexibility, high energy efficiency, easy and quick handling during transport and installation: these are all key characteristics required of a modern air handling unit. From order through to site delivery and installation Vortice Industrial offer a first-class service to ensure a compliant solution every time.



## SPECIFICATION

Specification of AHU selection and accessory requirements.



## FULL QUOTE / AHU SELECTION

Fully bespoke quotation, data sheet and accessory selection provided to customer.



## BESPOKE MANUFACTURE

Quality checked products, tested to meet the customer specification, before dispatch. A well-stocked warehouse of components and modern manufacturing technology allows quick production of units and supply of spare parts when required.



## DELIVERY

Flat-pack options for ease of installation and fully scheduled delivery service keeping installer up to date throughout the process.



## ON SITE SUPPORT

AHU installation, controls commissioning and leakage testing in accordance with BS EN 1886.



## AFTERSALES

Technical after sales team offering full support including installation service, commissioning advice and site visits to support set up.



# Certified and Compliant Products



Achieving HTM 03-01 (Health Technical Memorandum) is a critical guideline issued by the UK's Department of Health for the design and maintenance of heating, ventilation and air conditioning (HVAC).

| Result<br>SP63 TB PU     | Eurovent Classification according to EN1886                    |               |               |               |                 |
|--------------------------|--|---------------|---------------|---------------|-----------------|
| <b>D1</b>                | Casing strength class  | D1            | D2            | D3            |                 |
|                          | Max. relative deflection mm x m-1                              | 4.00          | 10.00         | EXCEEDING10   |                 |
| <b>L1</b>                | Casing air leakage class at -400 Pa                            | L1            | L2            | L3            |                 |
|                          | Max. leakage rate (f400) l x s-1 x m-2                         | 0.15          | 0.44          | 1.32          |                 |
| <b>L1</b>                | Casing air leakage class at +700 Pa                            | L1            | L2            | L3            |                 |
|                          | Max. leakage rate (f700) l x s-1 x m-2                         | 0.22          | 0.63          | 1.90          |                 |
| <b>ePM1 80%<br/>(F9)</b> | Filter bypass leakage class                                    | ePM1 80% (F9) | ePM1 70% (F8) | ePM1 55% (F7) | ePM10 70% (F6)  |
|                          | Max. filter bypass leakage rate k in % of the volume flow rate | 0.50          | 1             | 2             | 4               |
| <b>T2</b>                | Thermal transmittance  | T1            | T2            | T3            | T4              |
|                          | (U) W/m2 x K   | U <= 0.5      | 0.5 < U <= 1  | 1 < U <= 1.4  | 1.4 < U <= 2    |
|                          |  |               |               |               | T5              |
|                          |  |               |               |               | No requirements |

## Other Applications

As specialists in industrial air treatment, Vortice Industrial offers technical expertise when providing specific solutions for the most demanding industries and application needs:



Pharmaceutical



Manufacturing



Education



Food Preparation



Retail



Hospitality



Warehousing



Require assistance on air handling units for your specific project?

Visit

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