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Composite Air Handling Units type Liberty

MEDICAL

LIBERTY
Composite Air Handling Units

Care

The air treatment system is an important part of the entire package of measures aimed at infection prevention. In an operating department where there is a certain pressure hierarchy to prevent post-operative wound infections and contamination by germs, the stability of the air management, filter class and airtightness of the air treatment system is crucial. A removable ePM1≥90% filter on the dirty side is the basic filter class and usually supplemented with a HEPA filter in the duct or above the inlet grille.

Also, in residential care institutions, where residents often have a lower resistance, there are strict criteria for air quality and room conditions in order to create a minimal chance of germs and micro-organisms.

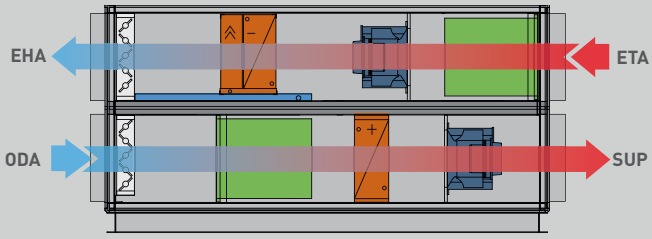
In addition to the high hygienic quality requirements, operating costs due to energy consumption and maintenance have a high priority in the selection of air treatment systems.

SPECIFIC ADVANTAGES OF MEDICAL USE

- **Completely flat PET inner surface** because of which germs such as MRSA have virtually no chance.
- **Double durable hygienic seal** on panels and access hatches, provided with a hygiene certificate and with a very low air leakage (L1)
- **Locks with overpressure protection** concealed in the inspection hatch and post, leaving a smooth hygienic inner wall (VDI 3803).
- **No chance of condensation and moisture formation** in unwanted places due to high insulation values (T1/TB1).
- **Attenuators provided with hygiene certificate** (Removable)
- **Filters removable** on the dirty side
- **High mechanical strength (D1),** resulting in minimal deformation/leakage at high system pressure.
- **Use of high-quality corrosion-resistant materials** (composite or SS316) and hygienic components.
- **Configurations with optimum accessibility or cleanability** on both sides of the components are possible.
- **Cleaning/disinfection** with chlorine or hydrogen peroxide is possible.

Bidirectional Ventilation Unit

Contamination Air can be safely exhausted to the outside in this configuration without coming into contact with clean supply air. Due to the twin coil heat recovery, the system becomes energy-efficient and in accordance with ERP requirements.



Controls

No matter how beautiful the air handling unit is, ultimately the control (Priva Blue ID) ensures that the product becomes part of a properly functioning system. Depending on the requirements of the room conditions, it is possible to regulate on air quantity, pressure, room temperature, outside air temperature, relative humidity, CO_2. The control is compatible with Modbus and BACnet.

Our expertise, your benefit

ADVANTAGES

- → **Corrosion free**
  long service life, low maintenance costs
- → **Light weight**
  no heavy support structure needed
- → **Hygienic**
  easy (chemical) cleaning
- → **Eurovent certified**
  reliable specifications

Thermal transmission	**T1**
Thermal Cold Bridges	**TB1**
Mechanical strength	**D1**
Air leakage of the casing	**L1**
Filter Bypass Leakage	**F9**

- → **Professional team and knowledge centre**
  personal and fast support for all your questions
- → **EN1886 highest achievable performances**
  energy-efficient

OUR UNIQUE FEATURES

- → **Removable panels and inspection panels** with composite/stainless steel closures.
- → **12-year warranty on the housing,** without costs and without conditions.
- → **For outdoor installation, composite PVC roof with a lifespan of 35 years,** composite inlet and outlet grilles with integrated drip trays
- → **Flat inner walls due to PET foil finish,** easy to clean and resistant to the most aggressive loads.
- → **Thermal 70mm PU hard foam insulation,** high insulation value (T1-TB1).
- → **Framework and foundation frame made of composite,** corrosion-free, strong and light.

Pharmaceutical

Safety first
Sustainable protection of people and the environment is the main focus point when designing air treatment systems for laboratories. In addition, the system has the task of creating a stable environment for the process. Last but not least, a comfortable and healthy working environment for employees.

Specific ventilation requirements apply to each type of laboratory. Depending on the BioSafety Levels (BSL) classified in NEN-EN 12 128, ventilation rates and filter classes are ranked.

Supply of sufficient fresh air and the correct pressure differences per room or facility ensure that polluted air is removed and does not flow into the rest of the building.

Our composite air handling units are extremely suitable for the removal of contaminated air without the risk of corrosion. Corrosion class C5i/C5m. The high airtightness (L1) of the air handling units ensures minimal leakage from and to the room.

Energy-efficient ventilation
To keep energy consumption as low as possible, the air supplied and extracted must be well coordinated with each other and with the process. We have the right operating systems available for this. These systems can communicate with the rest of the installation or the entire building management system.

Corrosion-resistance CX extreme
- Not only the casing, but also the internal partitions, support profile and even the foundation frame are made of corrosion-resistant and lightweight composite as standard. (CX replaces C5i and C5m according to ISO 12944-2)
- On request, components in the air handling unit can be supplied in composite, stainless steel 304, 316 or a protective epoxy coating.
- All fasteners are in stainless steel 304/316 (external/internal).
- Cleaning with chemical cleaning agents is possible.
- Corrosion-resistance of the casing reduces maintenance and downtime.
- 12-year warranty on the casing, without costs and without conditions.

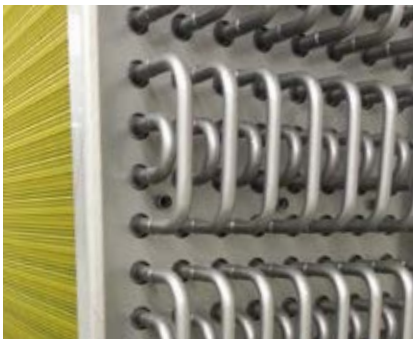
Hygienic
- Standard air leakage tightness class L1.
- Completely flat PET inner surface.
- Inside and outside walls are completely flat (VDI 6022).
- Double durable sealing on panels and inspection panels (VDI 6022).
- Locks with overpressure protection concealed in inspection panels (VDI 3803).
- High-quality filter systems according to ISO 16890.

Unit wall is weather and UV-resistant, consisting of a composite frame construction and composite panels with a gel-coat top layer.

Completely closed vapor-proof panel with a durable double seal, preventing the ingress of moisture (VDI 6022). Provided with a hygiene certificate.

Cold bridge-free locks concealed in the panel with overpressure protection and key operation (VDI 3803, EN 1886).

Stainless steel filter frames with durable water-repellent filter seal (VDI 6022, VDI 3803).



Available with special (corrosion-protected) batteries according to customer specification of any desired manufacturer.

Drip tray under the cooler is fully accessible and easy to clean.

Cleaning with a chemical solution is possible due to PET inner wall lining and sealant with a hygiene certificate

Installation of filter types on customer specification up to filter class H13. Removable on the dirty side.

Among others,
we are working
together with:

Havenpolikliniek ROTTERDAM

MC Slotervaart

Radboud Universiteit

UMC Utrecht

Kliniek Rijk van Nijmegen

umcg

mcl medisch centrum leeuwarden

TNO innovation for life

Sanquin Bloedvoorziening

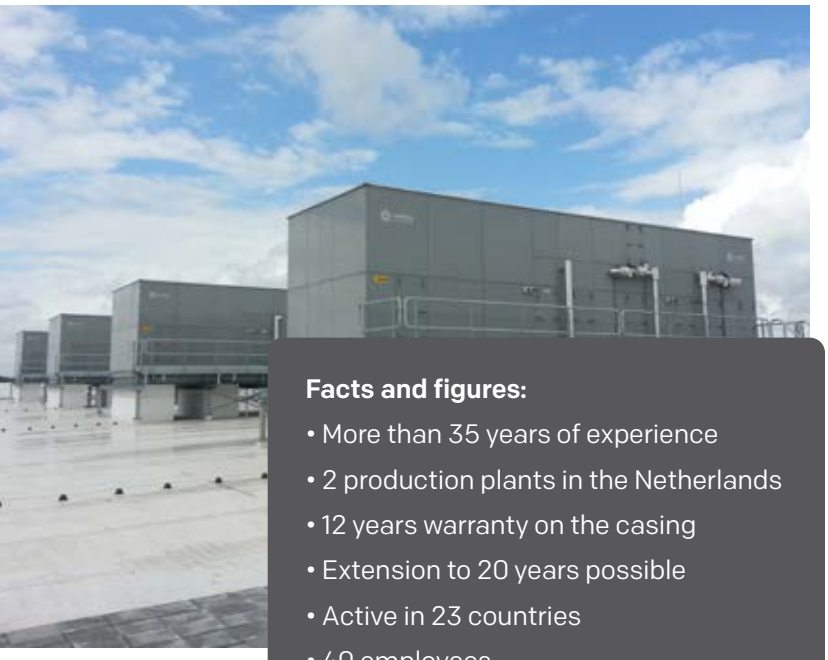
DUPONT

ORGANON

Corbion

avantium

Current projects: **www.liberty-ahu.com/index.php/work/**



Facts and figures:

- More than 35 years of experience
- 2 production plants in the Netherlands
- 12 years warranty on the casing
- Extension to 20 years possible
- Active in 23 countries
- 40 employees

About us

Established in 1983

It all started off with the dealership of the German fan manufacturer Rosenberg Ventilatoren. The company that started as a dealer, grew into a manufacturer. After the successful introduction of the composite roof fans, we proceeded to develop and produce a fully composite air handling unit ourselves. Due to the high demand from the market, the composite air handling unit has been Liberty's core business for years.

Mission

Developing a sustainable company where employees and business relations feel comfortable and share knowledge together in order to find the most suitable solution for the customer.

Vision

Our aim is to enable our customers to choose the air handling unit with the lowest weight, the best mechanical properties, the lowest carbon footprint, the lowest maintenance costs and the most energy-efficient configuration at market prices.

Corporate Social Responsibility

Liberty's Quality, Safety, Health and Environmental Policy is aimed at ensuring that its products and services meet the requirements of clients and are in accordance with applicable regulations, guidelines, specifications and applicable laws and regulations.

Knowledge centre

Our knowledge centre aims on the one hand to serve our internal organization and customers as well as possible. On the other hand, we also actively participate in sector organizations such as: TVVL, VLA and Eurovent in order to share our knowledge and strive for a healthier indoor climate.

Carbon footprint which is 54% lower

A study by the EuCIA shows that the Carbon Footprint of composites is 54% lower than that of aluminium and steel. This is due to advantages in the areas of production, transport, recycling, insulation value and sustainability.

SWIMMINGPOOL

INDUSTRY

MEDICAL

RETROFIT

location:

Elandlaan 8

NL-3734 CP Den Dolder

Nederland

telephone:

+31 (0)30 274 82 82

e-mail:

info@liberty-ahu.com

website:

www.liberty-ahu.com

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