



oceania
SOLUTIONS GROUP

Composite Air Handling Units

For Swimming Pools



LIBERTY
Composite Air Handling Units



Your projects, challenges and requirements are our focus. We have a dedicated team that can engineer tailored solutions for your commercial HVAC application.

Oceania Solutions Group is an Australian owned business that focuses on providing engineered HVAC solutions. We value the importance of relationships with our clients and partners. Our team enjoy collaborating and solving complex 'design and construct' projects for your business with our product solutions.

Oceania Solutions Group are proud of our extensive portfolio and experience within HVAC industry. From industrial applications through to commercial air conditioning installations for tropical and high humidity environments.

Operating throughout Australia, New Zealand and the South Pacific Islands, we provide engineered technical data and commercial support for a wide range of HVAC solutions.

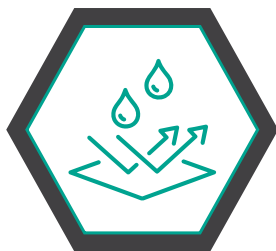
Our experienced team of HVAC professionals work hand-in-hand with market leading suppliers of HVAC solutions and equipment.

With international accreditation from Eurovent, CTI, AHRI, TÜV and AMCA, our products are rigorously tested and certified, meeting Australian and New Zealand standards and regulations.

Partnering with trusted international suppliers, we are available to provide an engineered solution for your next project.



Our strength, your benefit



Corrosion free

Long lifespan and low maintenance



Low weight

No heavy roof construction needed



Hygienic

Easy cleaning



Eurovent certified

Reliable specifications



Professional team

Quick and effective support



Outstanding EN1886 performance

Energy efficient

Thermal transmittance
Thermal bridging
Mechanical strength

T1
TB1
D1

Casing air leakage
Filter bypass leakage

L1
F9

Unique features

- Outstanding thermal performance which lie far beyond the minimum requirements
- Weather proof and UV resistant corrosion free casing construction, standard suitable for corrosive environment classified C5, according ISO 12944-2
- Hygienic design with completely smooth inner surface and double panel sealing
- Low weight construction, extremely appropriate for roof mounting

EN1886 Mechanical Performance

Thermal transmittance	T1
Thermal bridging	TB1
Mechanical strength	D1
Casing air leakage	L1
Filter bypass leakage	F9



Specific solutions in every sector



Pools

The composite Liberty Air Handling Unit is the superb solution to withstand exposure to chlorine compounds and excessive moisture in the extracted air of swimming pools.



Industry

The corrosion free casing construction with specifically selected high quality internal components provide a sustainable solution for nearly any industrial ventilation system.



Renovation

One piece delivery up to 12m length with factory mounted cabling and controls enable a short time frame for replacement during a scheduled maintenance stop of existing end-of-life units . Flat pack delivery optional in case of mounting locations with limited accessibility.



Health care

The corrosion free and hygienic design of the Liberty air handling units are the perfect match for the great variety of health care ventilation applications like operation rooms, hospitals, laboratories and pharmaceutical industry.

Future proof

The air handling unit supplies fresh outdoor air to the swimming pool in order to create a comfortable indoor climate. Evaporated moisture and contamination are removed with the extracted air.

Liberty composite air handling units are the solution to extract humid and corrosive air in pool environments.

Not only the internal and external casing construction, but also the base frame is made of high-quality reinforced composite material. Corrosion caused by exposure to chlorine compounds will definitely belong in the past.



Unique features

- Removable panels and inspection hatches with composite/ stainless steel latches
- Withdrawable components like heating coils, dampers and cross flow plate heat exchangers
- Outdoor units equipped with PVC roof covering and fitted with plastic intake and discharge grids with built-in polypropylene droplet eliminators
- Smooth inner walls with PET foil finishing, easy to clean and resistant to excessive corrosive environmental conditions
- PU hard foam thermal insulation 70mm for excellent thermal performance (T1-TB1)
- Composite corrosion free framework rigid base frame



Calculation tool

Our design department developed its own calculation tool to compute the required air volume flow and unit size; based on the pool surface, water temperature and design condition in the pool hall.

On request a comparative calculation of the energy consumption/ costs and payback time for the various ventilation systems can be submitted.

Plug and Play solutions

As an option, Liberty composite air handling units can be equipped with the required cabling and/or internal controls. Cabling, installed by Liberty has the advantage that components like cable trays, frequency inverters, etc. are fully integrated in the design for both indoor and outdoor units. The plug and play concept with a complete control system is incorporated into the Liberty composite air handling unit. All factory provided solutions ensure a neat and first class finish of the units.



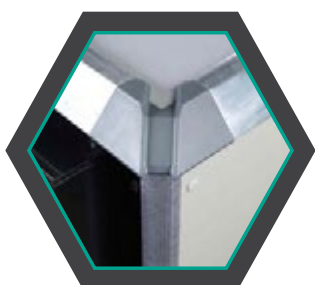
Benefits of composite air handling units

- Sustainable and maintenance free
- Over 30 years of experience in design, manufacturing and maintenance of units for pool applications
- Energy efficient thanks to optimum system solutions
- No deterioration by corrosion caused by exposure to chlorine compounds and humid air
- Maintenance friendly product thanks to resourceful design
- Up to 40% lower in weight compared to steel air handling units
- Highly hygienic thanks to smooth composite surfaces and double sealing

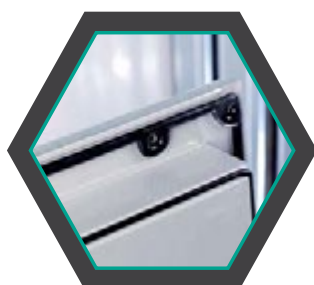


Construction

Liberty air handling units are manufactured and assembled in production facilities in the Netherlands, according to customer specific requirements.



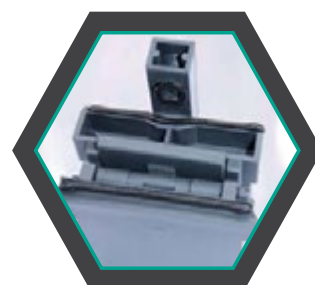
PVC roof covering and aluminium edge finishing with a minimum lifetime of 35 years



Fully closed vapour tight panel with durable double sealing, prevents penetration of moisture (VDI 6022 guideline)



Cold bridge free locks, concealed in the panel with overpressure protection and key operation (VDI 3803 guideline)



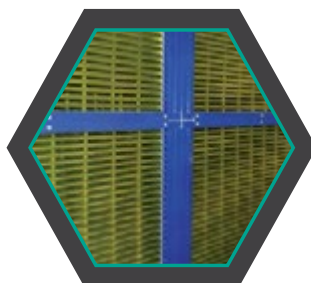
Casing air leakage class L1 (R) according to EN 1886 for all unit sizes is accomplished by accurate sealing and other improvements on all construction parts



Filter frames (stainless steel AISI 316 and galvanised) with durable, water repellent sealing (VDI 6022 & VDI 3803 guideline). Filter frames suitable for filter types up to filter class F9 (EN 1886)



The air handling unit can be delivered with a BaOpt™ control system to achieve a more homogeneous air condition in the swimming pool. With this control system, additional thermal and electrical energy savings will be attained



High efficiency, epoxy coated plate heat exchanger



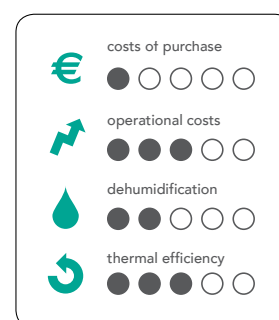
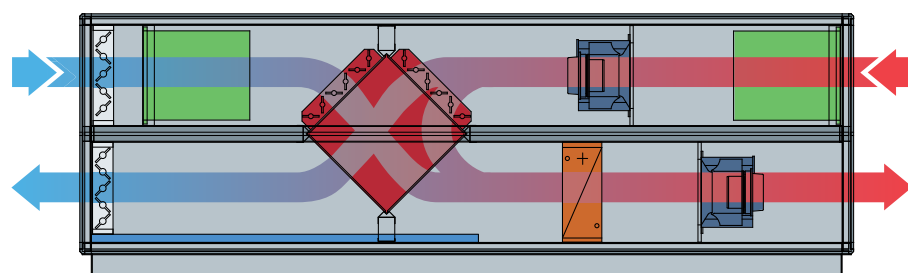
Smooth composite inner walls

Three appropriate pool ventilation systems

For ventilation and dehumidification of public pools, leisure pools and multi-purpose pools, three typical indoor swimming pool versions of the Liberty air handling unit have been developed.

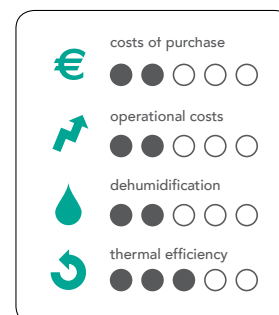
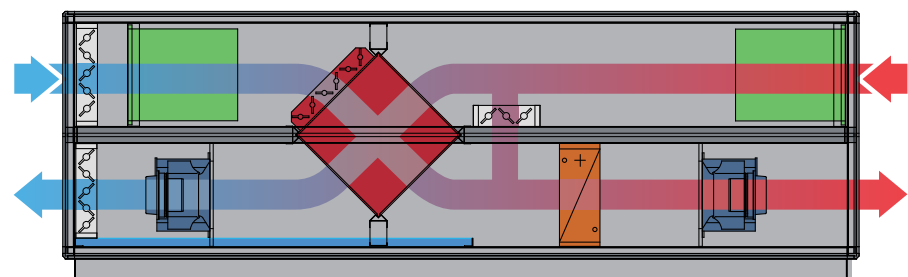
By combining heat recovery with (optional) additional dehumidification, the three basic systems below are suitable for all applications.

System 1: basic design with cross flow plate heat exchanger



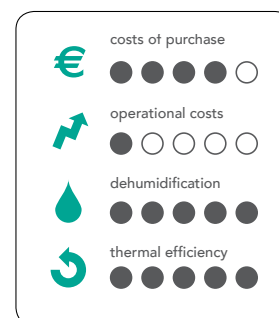
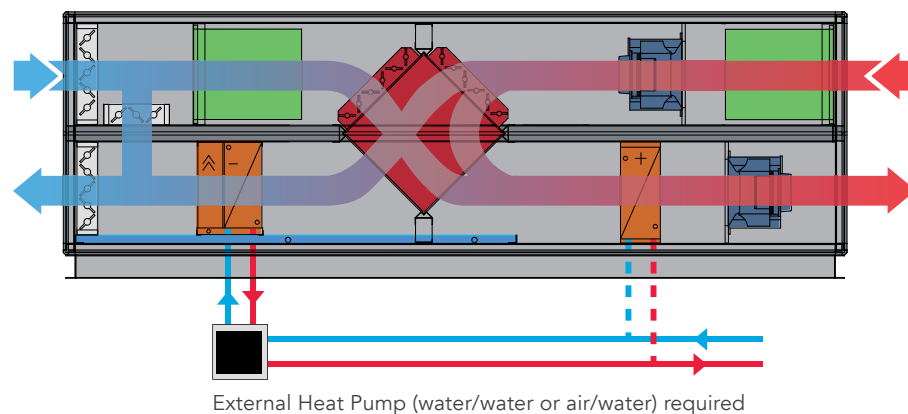
System parameters basic design with cross flow plate heat exchanger.

System 2: basic design with differential air pressure control for optimum, uniform room conditions (climotion / baopt)



System parameters basic design with differential air pressure control.

System 3: heat pump with dehumidifier



System parameters heat pump with dehumidifier.

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