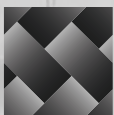




Composite  
Air Handling Units  
**SWIMMINGPOOL**



**LIBERTY**  
Composite Air Handling Units

# Our strength, your benefit

## ADVANTAGES

- **Corrosion free**  
long lifespan low maintenance
- **Low weight**  
no heavy roof construction needed
- **Hygienic**  
easy (chemical) cleaning
- **Eurovent certified**  
reliable specifications
- **Professional team**  
quick and effective support
- **Outstanding EN1886 performance**  
energy efficient

Thermal transmittance	<b>T1</b>
Thermal bridging	<b>TB1</b>
Mechanical strength	<b>D1</b>
Casing air leakage	<b>L1</b>
Filter bypass leakage	<b>F9</b>

## 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 70 mm**  
excellent thermal performance (T1-TB1).
- **Composite corrosion free framework**  
rigid base frame

## Future proof

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

The Liberty composite air handling unit is the superb solution to extract the humid and corrosive air in this environment.

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.



SWIMMINGPOOL



INDUSTRY



HEALTH CARE



RENOVATION



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**LIBERTY**

Composite Air Handling Units



## Benefits 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 surface and double sealing.



The air handling unit can be delivered with a so called -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.



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



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



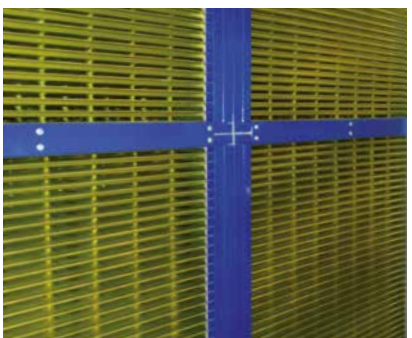
Filter frames (stainless steel -AISI 316- and galvanised) with durable, water-repellent sealing (VDI 6022 & VDI 3803 guideline). Filter frames suitable for filter types up to filter class F9 (EN 1886).



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



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



High efficiency, epoxy coated plate heat exchanger



Smooth composite inner walls



## Construction

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



We deliver for example to:

**PHILIPS**

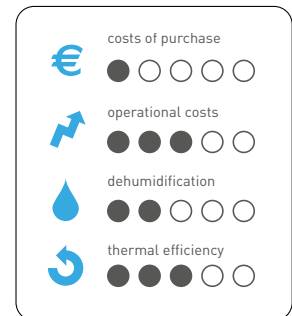
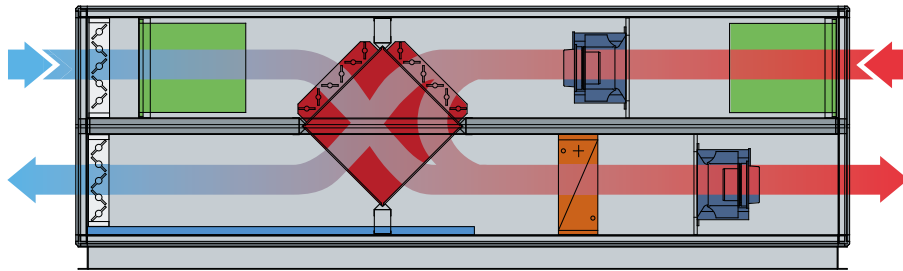


Current reference projects: [www.liberty-ahu.com/projects](http://www.liberty-ahu.com/projects)

# Three appropriate pool ventilation systems

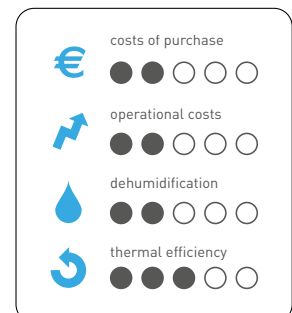
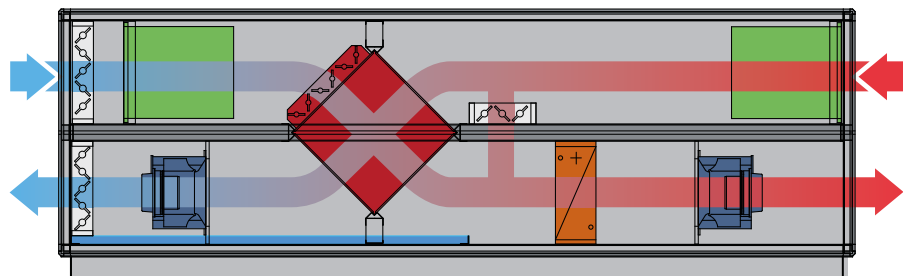
For ventilation and dehumidification of public pools, leisure pools and multipurpose pools, three typical indoor swimmingpool versions of the Liberty air handling unit have been developed. By combining heat recovery with (optional) additional dehumidification, the three basic systems below are suitable for all applications.

## SYSTEM 1: BASIC DESIGN WITH CROSS FLOW PLATE HEAT EXCHANGER



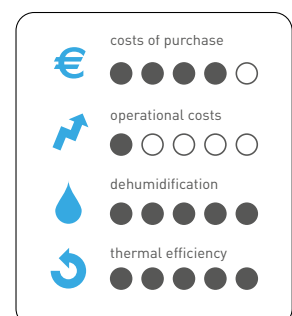
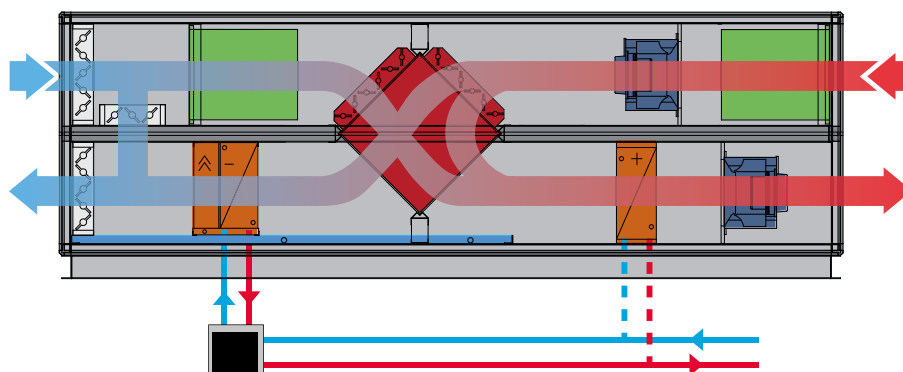
System parameters basic design with cross flow plate heat exchanger.

## 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.

# 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, the 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 is fully accomplished with a complete control system of one of the acknowledged brands, incorporated in the Liberty composite air handling unit. All factory provided solutions ensure a neat and first class finish of the units.