

A swimmer is shown from behind, floating on their back in a pool of clear blue water. They are wearing a white, dome-shaped air-handling unit on their back, secured with a black strap. Their arms are extended forward, and their legs are slightly bent. The water is bright blue with some white foam from the swimmer's movement.

REMAK

AIR-HANDLING UNITS
FOR POOL HALLS

UNIQUE, CUSTOMER-CONFIGURABLE HVAC UNITS FOR POOL HALLS

MULTIFUNCTIONAL POOL AIR HANDLING UNITS ARE AVAILABLE IN 17 STANDARD SIZES, FOR INDOOR AND OUTDOOR INSTALLATION, WITH AN AIR FLOW FROM 1,500 TO 54,000 M³/H. IN ADDITION TO STANDARD SIZES, THE UNITS CAN BE ASSEMBLED TO MEET THE DEMANDING REQUIREMENTS OF SPECIFIC PROJECTS. ON REQUEST, WE CAN DESIGN A TAILOR-MADE ASSEMBLY WITH ALMOST UNLIMITED POSSIBILITIES. THE UNITS CAN BE SUPPLIED IN COMPACT FORM, PLUG AND PLAY OR ASSEMBLED.

THE MOST IMPORTANT FEATURES

- Fully integrated heat pump and control unit as one comprehensive system
- Integrated heat pump with On/Off, step or continuous power regulation
- Compressors with two or three power stages, or with continuous power modulation
- The heat pump can be in a reversible design and, in addition to dehumidification and heating, it can provide this and cooling of the pool hall
- Where legally possible, we supply the heat pump circuit filled with coolant
- High quality components with maximum protection against corrosion
- Stable construction with very easy assembly and maintenance
- High efficiency thanks to the heat recovery system (three-stage heat recovery provides an efficiency of more than 90%, the integrated circuit of the heat pump can be equipped with an exchanger for hot water heating).
- Highly efficient fans with asynchronous motors IE3 or EC motors in the highest efficiency class IE5
- A remote message is possible using the WEB interface, including traffic visualization, the control center can be equipped with a connection on BMS using e.g. Modbus TCP, Modbus RTU, LonWorks, BACnet/IP.
The unit can also be controlled using application via smartphone or tablet.
- Unit in a compact version in design plug and play for easy and quick startup
- Air flow regulation based on measurement and evaluation of static pressure changes in the system
- Precise humidity and temperature control with additional functions such as adaptive air flow control or night cooling..

LONG SERVICE LIFE AND HIGH RELIABILITY OF THE STRUCTURE

Swimming-pool technology has to combat high concentrations of chlorides and other chemicals, which in combination with high humidity results in highest **corrosive loading of the C5 – CX stage**. In reality, this means that a structure that would last for dozens of years in a normal environment will fail within two months when operated in a swimming pool environment. Therefore, we pay extraordinary attention to this area and prolong the equipment service life *as much as possible*..

We pay special attention to the surface treatment of individual surfaces, which is key to the long life of the device. The slats of the heat exchanger are painted with epoxy, the sheet metal parts of the shell and built-ins are provided with high-quality paint.

We paint the casing, condensate pans, etc. in our own automated paint shop, the most modern procedures are used during the painting process, including pre-treatment of the sheet metal using a nanotechnological procedure. In the case of a pool with non-standard corrosion conditions, we propose an individual solution in cooperation with the best experts in the field, e.g. SVÚOM Prague, so that the unit meets the customer's expectations in terms of durability.



KEY COMPONENTS



FAN

Highly efficient fans. Both AC and EC motors can be fitted with backward-curved blades. We use fans with increased corrosion resistance.



HEAT PUMPS

The heart of the heat pump system are maintenance-free, operationally reliable, energy-efficient Copeland Scroll compressors with continuous, step or On/Off regulation.



FILTERS

According to the customer's wishes, bag or frame filters can be used in filtration classes G3 (ISO Coarse 50%) to F9 (ISO ePM 1 85%).

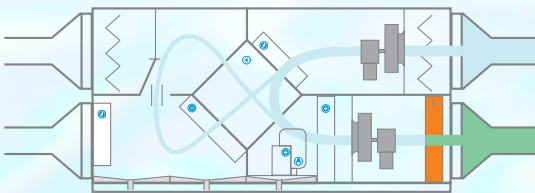


DAMPERS

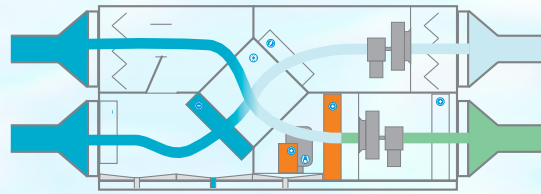
Corrosion resistance of dampers is ensured by high-quality powder coating, standard dampers are in tightness class 2 according to EN 1751.

ART OF CONTROL

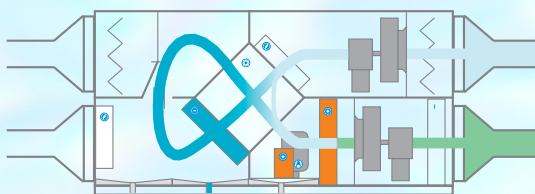
In full circulation mode, the unit ensures air heating in the swimming-pool hall using the water heater.



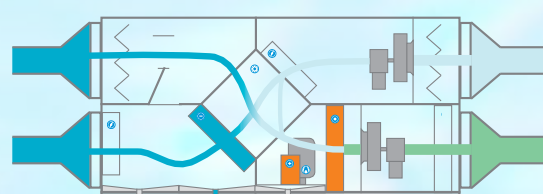
If humidity increases, the circulation damper is closed and the ventilation air volume is increased to the maximum. The heat pump is switched depending on the requirement for air or swimming-pool water heating.



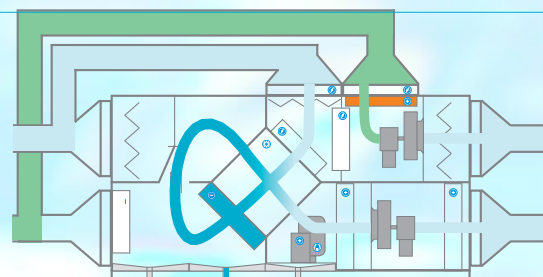
Dehumidification in the setback mode is ensured by the heat pump evaporator in combination with pre-cooling in a highly efficient heat recovery exchanger. After-heating of air to the required temperature is ensured by the heat-recovery exchanger and condenser while the heat surplus can be used to heat the swimming-pool water. Inlet/outlet dampers are closed.



During operating hours, the amount of fresh air supplied depends on the current state of the microclimate of the ventilated area and hygiene limits. Sensible and the bound heat is recovered in the heat recovery exchanger and heat pump evaporator. Surplus heat can be used to heat the swimming-pool water.

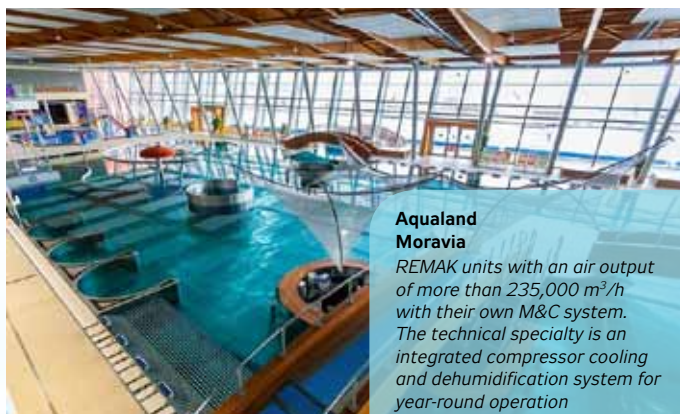


Optionally: On request, the unit configuration can be adapted for summer cooling/dehumidification in two versions.



Note: Diagrams illustrate some selected modes only. The unit operates automatically in comfort or setback mode.

SELECTED REALIZATIONS FOR POOL HALLS AND OPERATIONS



Aqualand Moravia

REMAK units with an air output of more than 235,000 m³/h with their own M&C system. The technical specialty is an integrated compressor cooling and dehumidification system for year-round operation



Aquacentrum Teplice

As part of the renovation of the Teplice Aquacenter with the addition of a new swimming pool, we supplied AeroMaster XP pool units with a total flow rate of almost 100,000 m³/h and VCS management.



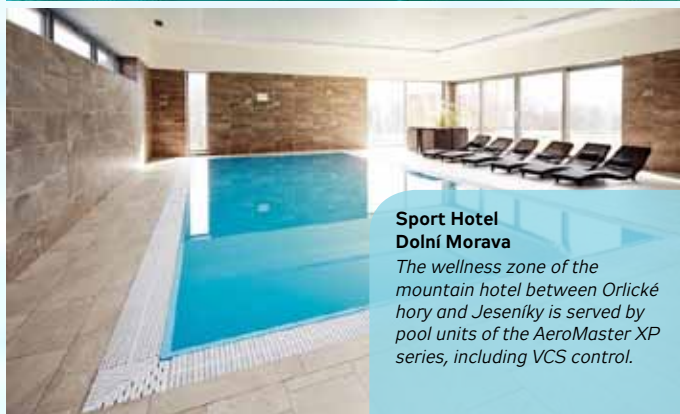
Střední škola prof. Zdeňka Matějčka

Pool reconstruction, supply of AeroMaster Cirrus unit in a pool design including regulation.



Cave healing spa Miskolctapolca

The wellness center is served by 7 pool units of the AeroMaster Cirrus series with a total air output of 175,000 m³/h.



Sport Hotel Dolní Morava

The wellness zone of the mountain hotel between Orlické hory and Jeseníky is served by pool units of the AeroMaster XP series, including VCS control.



Termály Losiny

We supplied several sets of pool units to the thermal park with nine pools and healing thermal water from natural mineral sources, including a VCS control with an air output of 114,800 m³/h.



Wellness hotel Peras Ludvíkov

Family hotel in the heart of Jeseníky, supply of AeroMaster XP series pool unit including control system.



Hotel Bauer Bílá

AeroMaster XP series pool units with VCS control in the wellness center of a historic hotel building in a mountain valley in Wallachia.

