

**WE SET TRENDS AND  
INSPIRE OTHERS**

# **SKAWEN**

**DEHUMIDIFYING DEVICES  
FOR PRIVATE AND PUBLIC  
SWIMMING POOLS**



**SKAWEN**

# BASICS OF SKAWEN VENTILATION TECHNOLOGY

The ventilation and dehumidifying devices provided by Skawen are the result of decades of experience in the development and production of ventilation units.

The most important features are maximum economic efficiency in operation and sustainability in terms of long life-cycle and resource conservation.

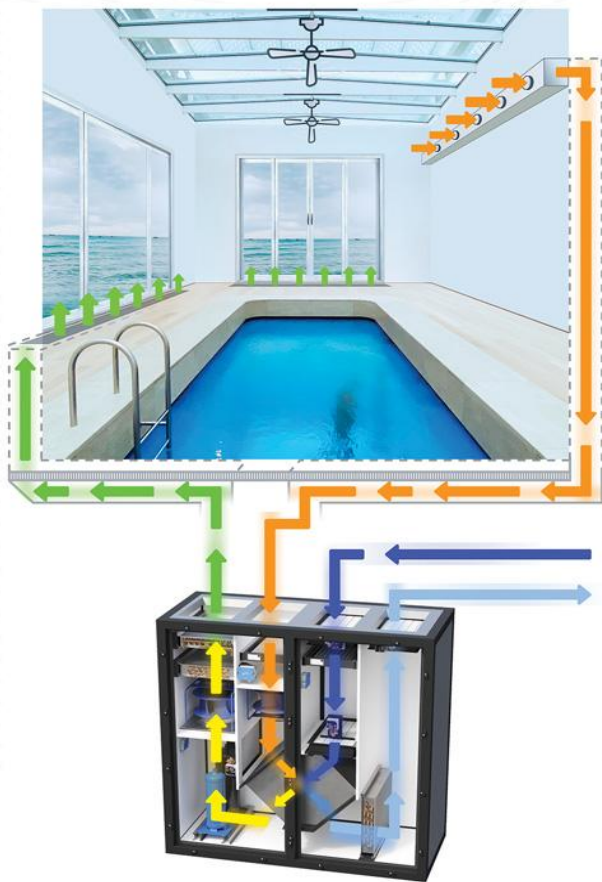
Compact systems with various functional features are used for comfort in swimming pools. These features enable simple and precise implementation when installing the systems in new buildings or at renovations.

Due to the possibility to configure the air connections the

devices are also space efficient.

The devices are usually set up in the technical room and connected to the swimming pool through air ducts (supply and exhaust air).

The air ducts for outside and exhaust air are led outside. It should be noted here that the exhaust air is led away from the house in order to avoid condensation on the building structure.



In the swimming pool, the supply air is brought in via air outlets in front of the windows.

The exhaust air should be extracted at several points in the room in accordance with VDI 2089.

Several levels of heat recovery can be used for use in swimming pools. During the project planning phase, the corresponding device concept can be selected by questioning the actual use. More complex technology is not always more economical!

With classic dehumidifiers, if the pool is covered for more than 22 hours a day, for example, a heat pump does not make sense, as evaporation is reduced to a fraction.

With devices from Skawen, the heat is recovered via a recuperator and an optional downstream heat pump. The heat pump is output-regulated and is used exclusively for heat recovery.

# The housing of the ventilation unit consists of anodized, self-supporting thermally separated aluminum profiles.

The double-walled panels (50mm) are filled with non-combustible mineral thermal insulation, at least class A (DIN4102). The 3 mm thick sheet is filled with a 2.8 mm thick sound-absorbing compound and is therefore already very quiet as standard.

The inner and outer sheets are thermally separated from each other.

For maintenance purposes, the devices are equipped with removable panels with handles or wing doors, depending on the unit size and type.

The energy recovery system of the plate heat exchanger is completely built into the air handling unit and has a condensate collecting tray as well as an integrated bypass flap system for temperature and demand-dependent frost protection control.

The filter system, which is so important for hygiene, is designed in accordance with the CEN EN 779 standard in order to be able to keep a constant maximum air quality in the room. This is continuously monitored by the control system integrated in the unit.







State-of-the-art eC fans of the latest generation regulate the required air output for supply and exhaust air as required.

### **Benefits**

- Heated, ventilated and dehumidified
- Energy-saving eC fans
- Corrosion-resistant design
- ERP compliant
- Continuous regulation for the removal of moisture
- Optionally with plastic heat exchanger
- Integrated control and regulation

The control and regulation of the device takes place via a DDC system with self-optimizing mode of operation for the removal of moisture from the swimming pool.

Optionally, the systems can be equipped with a highly efficient controllable heat pump for energy recovery and a pool water condenser.

When operating with a heat pump, energy is recovered from the exhaust air in a regulated manner that is adapted to the operation. Economical operation of the heat pump can only be guaranteed through this operating mode.

# SKW COMPACT UNITS FOR PRIVATE SWIMMING POOLS

SKW Compact Pool and SKW Compact Pool HP use an epoxy-coated aluminum heat exchanger.

The SKW Compact unit is intended for installation as a finished package. However, the unit can optionally be split to ease installation on site.

The unit is designed for high heat recovery efficiency of up to 90% with minimal pressure loss.

Compact units are available up to 5,000 m<sup>3</sup> / h. (Larger ones on request)



## **Key Features**

- Recirculation of exhaust air and supply air with simultaneous constant mixing of outdoor air
- Controllable heat pump for energy recovery from the exhaust air
- Variable outside air volume flow for dehumidification with constant exhaust air and supply air volume flow at the same time
- Heating register for reheating the supply air with low flow and return temperatures
- Temperature and humidity control
- The control cabinet can be mounted on the device or remotely on the wall

## **Options**

- With pool water condenser
- Plastic heat exchanger



## **High quality housing**

- Acoustically insulated panels for low acoustic levels
- TB2, T2, L1 [M], D1 [M]
- Robust design with 30% lighter weight
- Duct connections on the side or on top, adjustable on site



# SKW POOL HP FOR PUBLIC POOLS

SKW-Pool and SKW Pool HP use epoxy-coated aluminum heat exchangers.

A power-regulated heat pump is used to return the latent and sensitive energy from the exhaust air to the supply air in the most efficient way. Then the required outside air for dehumidification covered.

The efficient control principle supplies the swimming pool hall with the amount of air required for dehumidification at all times. Any disinfection by-products that may have arisen are transported out of the swimming pool with the exhaust air.

The completely unique composite housing ensures the safe operation of the dehumidifier in the technical room.





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## **SKAWEN contacts**



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