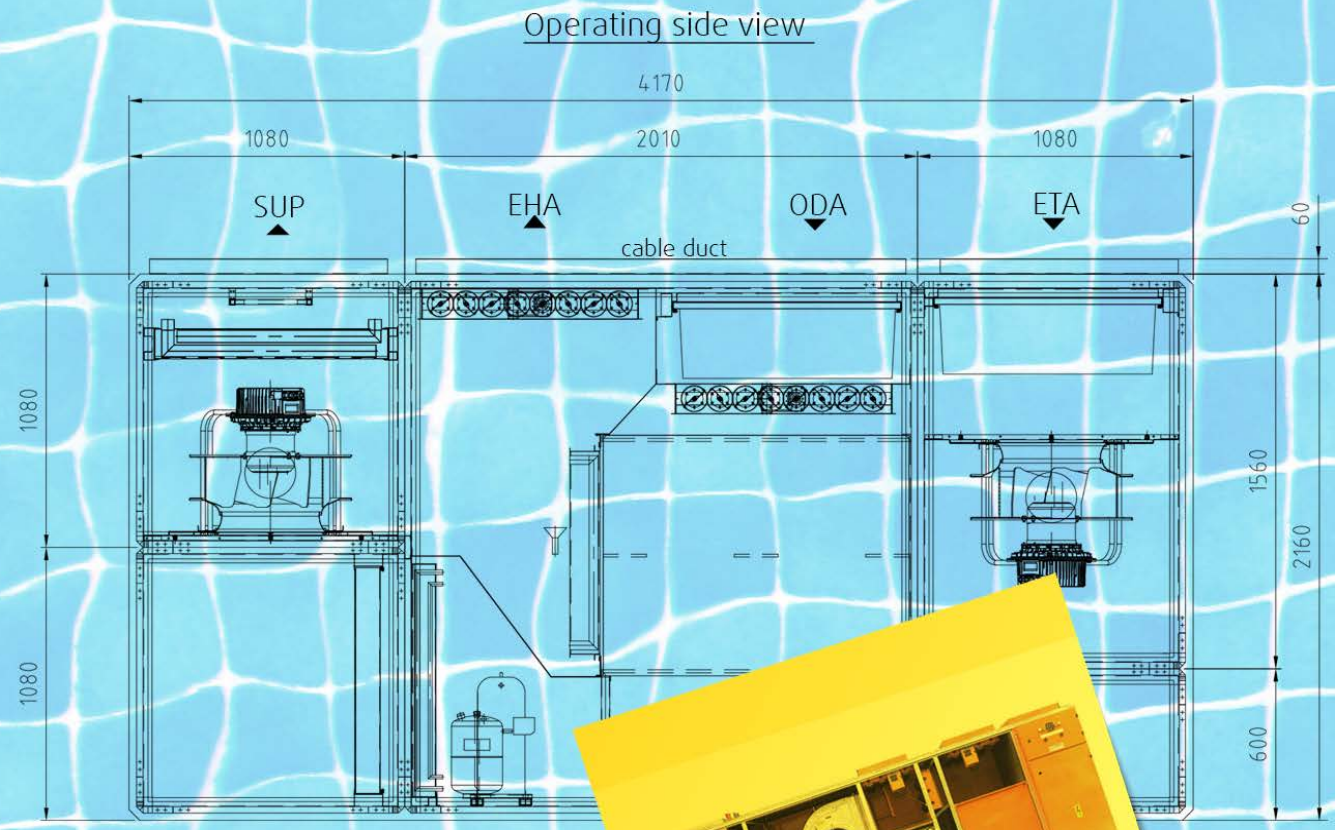
PUBLIC SWIMMING POOLS

Indoor pool dehumidification for efficient replacement units



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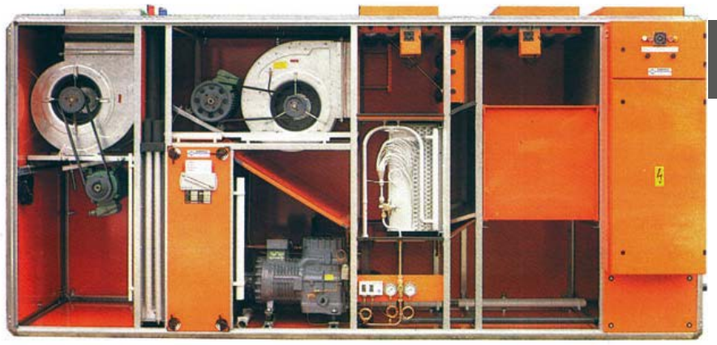


1980

ENERGY OPTIMIZATION MADE EASY. A REPLACEMENT THAT PAYS OFF

Reduction of operating costs

The dehumidification and heating of a swimming pool may represent a major share of the total cost of ownership.

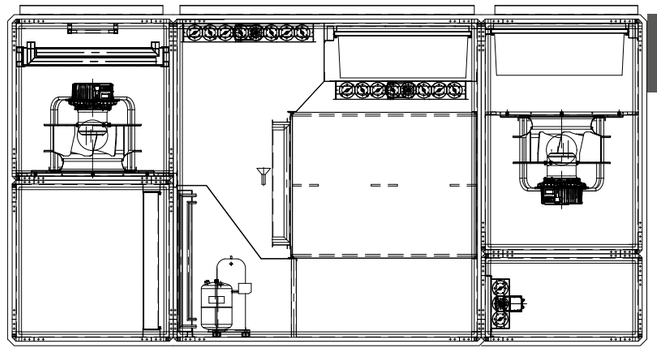
The application of new technologies and of intelligent control systems not only increases the reliability of operation: it also reduces the operating costs of the dehumidification system.

New legislation

Legislation has steadily changed over the years, and protection of the environment moves increasingly into focus. Today there are rules and regulations that limit the energy demand by indoor pool dehumidification units. These stipulations include the Energy Saving Ordinance (EnEV) and the Renewable Energy Law (EEG).

Legislation such as the European F-gas regulation contributes enormously to environmental protection. This regulation requires the reduction of climate-damaging gases and prohibits since 1 January 2015 the use of the refrigerant R22 which was used extensively in the 1980s and 1990s. As soon as an intervention into a refrigeration circuit using R22 becomes necessary, the circuit must be taken out of service.

We at Menerga have always been fully aware of this responsibility. We are dedicated to energy-efficient technologies and apply refrigerant R407C as allowed by the F-gas Regulation.



NOW

SETTING OUT WITH NEW DIMENSIONS! EIGHT SIZES FOR EFFICIENT REPLACEMENT

Filtration of the exhaust and outdoor air directly at the inlet of the casing, as required by VDI 6022, means that the connection-fitting positions and the unit dimensions are not 100 % identical to those of earlier units. In case of system exchange, adaptation of the duct system is required. In case of problems with bringing the units into the technical room due to narrow doors or corridors, we can disassemble the device into smaller functional units in advance and mount them onsite. Just ask us in such cases: we will be glad to advise and help you.

Model type		33 04 01	33 06 01	33 08 01	33 10 01	33 12 01	33 15 01	33 18 01	33 21 01
Max. air flow	m³/h	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000
Length *	mm	3,210/3,240	3,210/3,240	4,170/3,940	4,170/3,940	4,170/4,820	4,970/4,820	4,970/5,695	4,970/5,695
Width *	mm	1,110/965	1,110/965	1,110/1,140	1,430/1,140	1,430/1,315	1,430/1,315	1,750/1,665	2,070/1,665
Height * / **	mm	1,680/1,490	1,680/1,490	2,070/1,840	2,070/1,840	2,070/2,190	2,070/2,190	2,070/2,190	2,070/2,190

Abmessungen neu/alt

* Paneelstärke 50 mm (-60 mm bei alternativ 20 mm Deckelstärke) / ** ohne Sockel und Kanalanschlüsse

LATEST TECHNOLOGY THAT PERFECTLY FITS! SIMPLY UPDATE EQUIPMENT TECHNOLOGY NOW

The ThermoCond 33 series was one of the first equipment series with which Menerga fulfilled the dream of an energy-efficient swimming pool halll dehumidification. These units have been employed in large numbers since the 1980s, many of which have reliably served until today.

A new development based on the latest in technology allows us to simply replace these systems. The new unit types are in accordance with currently valid legislative requirements and are based with respect to their dimensions on the ThermoCond 33 series. The replacement unit for the series comply with our current and highly efficient ThermoCond heat recovery system in functionality and technology, including Eurovent-certified casing stipulations.

The heat recovery system is made of polypropylene (PP) and operates without any ozone-damaging refrigerants. The heat pump likewise operates with an energy-efficient compressor and an optimized evaporator and condenser unit.

This technology has made it possible to significantly reduce the refrigerant charge. All other components have proved effective and demonstrated their energy efficiency.

The eight model sizes with an air flow up to 21,000 m³/h have the same arrangement of connection fittings as the series ThermoCond 33.

GOOD REASONS FOR A REPLACEMENT:

- The latest in technology enables reduction in fan power consumption by 30 %
- Corrosion-free PP heat exchanger reduces the infiltration heat requirement by nearly 20 %, without using ozone-da maging refrigerants
- Latest MSR technology optimizes the mode of operation and reduces energy demand the entire year
- The optimized heat pump operates with approx. 50 % less energy demand for dehumidification and with an F-gas compliant refrigerant
- Extremely fast amortization
- Dehumidification of the indoor pool air only with outside air, which enables safe removal of disinfectant by-products
- Exhaust air and outdoor air filtration directly at air inlet of the housing

EXAMPLE CALCULATION

Terms and Conditions

Indoor pool surface area	312 m2
Water temperature	28 °C
Air temperature	30 °C
Relative humidity	54 %
Air flow	15,000 m3/
Average capacity utilization	60 %

Operation time

System operating time	24/7
Swimming/closed hours per day	12 h / 12 h

Energy costs

Electricity costs per kWh	0.22 €
Gas costs per kWh	0.08 €

Annual savings in operating costs: 30 – 40 %

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OUR FIELDS OF APPLICATION:

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