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Heating and Dehumidifier System Guide

Open-air accommodation

EXTEND SWIMMING TIME, ATTRACT CLIENTS!



Swimming pools: an investment opportunity waiting to be seized

45% of open-air premises in France have a swimming pool, and this number has continued to rise for the last 25 years. For families (30% of our customer base), swimming in a pool is what helps them bond. It's the holiday bonus for kids and grown-ups alike.

So it's in the best interest of open-air resorts to let their guests use the pool as much as possible.

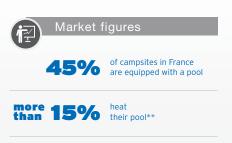
Water heating: a single solution to combat climate change. A heat pump is the best option for heating large pools. Comfort and energy savings are combined as it uses 80% less energy!

If we add to that the increased appeal of your resort to guests, they easily pay for themselves.

Really stand out with an indoor pool.

An indoor pool means you can enjoy a pleasant swim at a nice temperature all year round, whatever the weather! More and more campsites and hotels are making the investment, which often makes the difference for guests when it comes to choosing somewhere to stay.

A nice indoor pool means water at a pleasant temperature, a healthy pool room without excessive humidity. So as soon as you start designing your project, you need to think about getting a suitable dehumidifier.





RELAX, OUR EXPERTISE HAS IT COVERED.

Zodiac® PoolCare Europe: 35 years in the business

We have been offering pool heating and dehumidification solutions for private, public or campsite pools and pools for open-air accommodation, etc. for over 35 years. We strive to best meet our clients' needs through the products and solutions that we develop.

So our range of heat pumps and dehumidifiers are now fit for all kinds of projects.

(3 questions for...))

Christian Blanckaert, engineer at the Zodiac[®] design studio and Fabrice Busson, manager of the Océan campsite in Brem-sur-Mer

Pool heating: luxury or a real bonus?

C. Blanckaert - I'd say it's more of a real comfort. Our client feedback tells us that comfortable pool temperature starts at about 28°C. So for pools that are open from April-May onwards, heating is a real must, even on the Côte d'Azur!

F. Busson - It's more about customer satisfaction. And in Vendée, heating is a real necessity, even in the middle of summer.

What are people looking for from Zodiac®?

C. Blanckaert - Customers with outdoor pools come to us for our quality heat pumps, our reliable NF heat pump label and the reputation of the Zodiac[®]. When installing a dehumidification system, people expect a real level of support, i.e. a turnkey solution to combine quality, comfort and aesthetics. F. Busson - Reliability is key. Before I became a campsite manager, I was a heat pump installer and I wouldn't settle for less than the Zodiac® brand!

What makes a good dehumidification system?

C. Blanckaert - A system that is properly thought out at the planning stages, making sure that the equipment is the right size and can be installed to fit your needs. In other words, a high performance device that is as discreet and quiet as possible.

F. Busson - There are a lot of factors to take into consideration and the original design is of the utmost importance. You need to find good solutions to make sure you get healthy air and a comfortable temperature difference between the air and the water.

The Zodiac[®] design office: expert support

The Zodiac® design office is made up of a team of technicians who will help you select products, from sizing right up to installation.

As part of this team, heating and dehumidification experts are here to help with all kinds of indoor or outdoor pool projects.

The design office lets you keep track of "turnkey" projects: quotes, plans and installation advice.



* Source: French Federation of Camper-Caravaners ** Estimation based on Internet offers

HEAT PUMPS, HEATING THAT SAVES YOU MONEY.

Heat pumps are the most eco-friendly pool heating option. Your energy savings will go hand-in-hand with financial savings, as the cost of using this system is one of the most competitive. Heat pumps can be installed easily on pools under construction and on existing pools, by a simple electrical or hydraulic connection.

It works very simply: the device captures heat from the air outside and transfers it directly to the pool water. Thanks to this system, 80% of the energy used to heat your pool comes from the air, and only 20% from your electricity supplier.



Economical and silent power

With its variable-speed Inverter fan, the POWER FORCE heat pump is silent and economical.

It is extremely highly performing and comes with the added bonus of a reversible function, meaning it can also defrost and cool the pool.



Z900



Energy efficiency and silence for public pools

The Z900 is ideal for large pools that want discretion without sacrificing performance. The Z900 range's vertical air outlets mean they fits perfectly into any type of space, and its ultra-silent operation means you almost forget it's even there. The Z900 works perfectly with both indoor and outdoor large pools.

SOOD TO KNOW

How is the performance of heat pumps compared?

Two main values characterise the performance of heat pumps: their power (in kW) and their coefficient of performance (COP). These indicators can be compared between one heat pump and another, by making sure calculations are based on the same temperature (air and water) and humidity conditions.

Power

This indicates the amount of heat supplied to the water and varies depending on three conditions: outdoor air temperature, humidity and pool water temperature.

COP (Coefficient Of Performance)

This is the ratio between the power supplied to the water in the pool and the electricity consumption of the heat pump. Therefore, the higher the COP, the more efficient and economical the system.

As an example, a coefficient of performance of 5 means that for 1 kWh consumed at the electricity meter, the heat pump supplies 5 times more energy to the water in the pool, or 5 kWh.





comes from your electricity supplier

COMPARATIVE TABLE

Model	25TD	35TD	TD20
Power returned*	28.7 kW	37 kW	46.2 kV
Energy efficiency* (COP)	5.1	4.9	4.4
Acoustic pressure at 10 m (dB(A))	42.3	42.3	47
Footprint (LxWxH in mm)	1440 x 450 x 1535	1440 x 450 x 1535	1990 x 950 x
Minimum operating T°	-8° C	-8° C	-12° C
Reversible operation to cool the pool	Yes	Yes	Yes



* Performances for air at 15°C / water at 26°C / 70% humidity

INDOOR POOL: CHOOSING THE RIGHT DEHUMIDIFICATION SYSTEM.



For premises that are open to the public, regulations require air to be renewed at a rate of 22 m3/h per person in the pool room. This means pollutants are removed from inside and fresh air is introduced. Indoor pool rooms are very humid environments. Steam that rises from the pool can be inconvenient (suffocating atmosphere, condensation on the windows, mould, etc.). So it is essential to install a dehumidifier.

Zodiac $^{\circ}$ engineers developed a complete range to meet the needs of all kinds of indoor pool projects.

Ducted models

Ducted dehumidifiers are adapted to larger sized and professionalquality pools.

As these pools are used more intensively and their water temperature is higher, evaporation from the pool is considerably higher and requires performance to match.

A ducted system is the only solution for effectively dealing with condensation on windows. The apparatus, which is installed in a technical room, cannot be seen from the pool.

Ducted models with air renewal

SET[®] dehumidification systems also come with an air renewal system: all or some of the air sucked out by the system is released outside and replaced with fresh air. The result is a healthy environment, with no unpleasant odours or toxic substances.

This solution is designed for all pools with large glazed surfaces and for professional swimming pools.

A RANGE OF PREMIUM PRODUCTS

SET dehumidification[®]: High guality, made in Germany



SET® dehumidification systems are robust, cutting-edge solutions, designed to dehumidify the air in indoor pools. As a 2-in-1 system, they heat the pool room and renew the air while ensuring performance and energy savings.

The equipment is made-to-order, "made in Germany" and built to last.

Details that make the difference

Hygro Control: simple dehumidification!

The Hygro Control remote control unit is a Zodiac[®] exclusive that lets you **remotely operate dehumidification with ease.** Thanks to this digital control unit, you can **easily and accurately set the desired humidity level** (air humidity level). If the dehumidifier is fitted with the "heating" option, **Hygro Control can also set the room air temperature!**

Designer and discreet air outlets

Specially adapted for installations with bay windows, air outlets can be installed underfloor.

The rails blow along the length of the windows and distribution is ideal for effectively treating condensation. They are designed to work perfectly with underfloor heating.



Air condenser option: heating and dehumidification combined

The hot, dry air released by the dehumidifier helps to heat the pool room but can, in some cases, lead to over heating of the air. To limit this overheating, the water condenser option helps to transfer this excess heat into the pool and helps heat the pool for free. For complete installation

ventilation accessoriesinlet and outlet grilles

ducts and diffusers

COMPARATIVE TABLE

Model	DF ducts	CAE system	OMEGA system	SA1 system	SA2 system	SA3 system
			· · ·			
Type of pool	Private (large)	Public (medi- um)	Public (medi- um/large)	Public (medi- um/large)	Public (medi- um/large)	Public (large)
Dehumidification capacity	3.5 to 12 L/ hr	3.5 to 13.5 L/hr	10 to 28 L/hr	6 to 38 L/ hr ⁽¹⁾	7 to 38 L/ hr ⁽¹⁾	44 to 159 L/ hr ⁽¹⁾
Air renewal (integrated introduction of fresh air)	NO	NO	NO	YES	YES with heat recovery	YES with heat recovery
Control	Hygro Con- trol	Hygro Con- trol	Hygro Con- trol	SETLog3.0	SETLog3.0	SETLog3.0
Air heating option (Hot water radiator)	YES	YES	YES	NO	NO	NO
Air heating option (Electric)	YES	YES	YES	YES ⁽²⁾	YES (2)	YES (2)
Water heating option (water condenser)	YES (3)	YES	YES	YES	YES	YES

(1) According to VDI 2089 (2) Built-in as standard (3) For certain models