PoolPAK International

PoolPak Indoor Pool Dehumidification

Efficient **Smart** **Green**

www.poolpak.com

PoolPak Indoor Pool Dehumidification Systems

Technology for a Changing World

Purchasing capital equipment today should take more into account than what is technologically advanced at this moment in time. When you consider a PoolPak dehumidifier can last 20 years and longer, you need to think about the needs of tomorrow and the impact it can have on sustainability and equipment performance!

PoolPak designs and builds its dehumidification equipment with an emphasis on the future. Our engineers explore every aspect from component location to control strategies to maximize performance and long unit life. We use components that measure up to our high standards for efficiency while delivering unfailing occupant comfort. Compare PoolPak's many enhanced features and you'll know why we are the dehumidification equipment of choice yesterday, today and for the future!

Heat Recovery and Pool Water Heating

The PoolPak refrigeration system includes a heat pump cycle, which adds heat back into the air and pool water. With a thermal COP of up to 5, the PoolPak can efficiently meet pool water set points while managing space humidity levels. Because it is effective year-round, fuel usage for auxiliary heaters is almost eliminated.

Airside Heat Recovery

PoolPak SE- and SEP-Series systems can be equipped with a passive air-side heat recovery module to capture heat energy normally exhausted during space ventilation. This is especially critical in colder climates where fossil fuels are needed to maintain high space temperatures.

Heating, Cooling and Dehumidification Economizer

The Model SR is equipped with a full economizer mode capable of using 100% outside air to maintain space conditions, including cooling, heating and dehumidification. The ECC control system can also modulate between economizer mode and mechanical refrigeration to take greater advantage of outside conditions during operating hours, further preserving natural resources and saving energy.

Smart Economizer Heating and Dehumidification

The SR-series PoolPak's unique Smart Economizer can utilize the outside air for heating and dehumidifying over a wider range of outside air conditions than any other economizer. This feature uses the simultaneous operation of the PoolPak's heat recovery and standard economizer modes. The Smart Economizer will add another 15% to 20% energy savings over dehumidifiers without an economizer.

Smart Design and High Efficiency

Modulating Refrigeration Capacity

All S-Series PoolPaks have modulating multi-stage refrigeration systems. This feature assures maintenance of the best quality space and pool water conditions. Modulating refrigeration systems also yield maximum system efficiency and life.

Backward Inclined Airfoil-Type Fans (BIAF)

BIAF fans are available. These fans move air more efficiently and results in reduced energy requirements.

NEMA Premium Efficiency Motors

PoolPak SWHP Series use NEMA/TEFC Premium Efficiency Motors on its blower systems. These motors require less energy for equal loads and have longer service life. NEMA Premium Efficiency Motors are superior to EPAC high-efficiency rated units.

Occupied/Unoccupied Mode

PoolPak S-Series systems can be programmed to operate in occupied and unoccupied modes to manage ventilation requirements. In the occupied mode, the PoolPak ventilates the space as needed to meet ASHRAE standards. In the unoccupied mode, the outside and exhaust air are shut off. This eliminates the costly conditioning of makeup air and exhaust blower operation in the SE and SEP models.

Smart Pool Water Pump Control

Smart Pool Water Pump Control turns off the supplementary pool water pump when the PoolPak is in a space heating or dehumidifying mode. It works in conjunction with PoolPak's air heating priority system, and can save over $3,000 per year by using the pump approximately 50% of the time.

R-410A Refrigerant

All PoolPak refrigeration systems are engineered to operate with environmentally-friendly R-410A refrigerant. Chlorine-free R-410A refrigerant also produces more cooling and dehumidifying capacity per kW thereby increasing system efficiency.

CO_2 Demand-Based Ventilation

The CO_2 demand-based ventilation system, working in conjunction with the Model SR controller, continually monitors room CO_2 levels and adjusts the volume of outside air to meet the space requirements. Overall operating costs can be reduced quite significantly by reducing heating and cooling loads.

Flywheel Air Conditioning

When in the cooling mode, excess heat must be rejected to an external condenser. Using flywheel air conditioning, PoolPak models SR and SEP eliminate the external condenser and uses the enormous thermal mass of the pool as a heat sink when mechanically conditioning the space. Energy savings are achieved by minimizing compressor operation and eliminating condenser motor operation while reducing the impact on global resources for the unnecessary equipment.

Continued Dehumidification Efficiency Improvements

In the past ten years, PoolPak units have increased in efficiency nearly 12% and the PoolComPak an additional 16% with efficiency measured as the moisture removal capacity per compressor kW input.

PoolPak is Environmentally Green

Other High-Efficiency Features Offered In PoolPak Dehumidification Systems

Wall Condensate Prevention

In every pool room environment there is one surface on which condensate will form before the other surfaces. That surface is usually a skylight, window, door, frame or north wall. The PoolPak controls monitor that surface temperature. When that surface temperature drops to within a few degrees of the space dew point, due to lowering outdoor temperatures, the PoolPak controls automatically lower the room relative humidity and dew point. This feature prevents condensation on the cold surface, unnecessary oversizing of the dehumidifier and excessive compressor operation.

Quality Construction

PoolPak equipment is built to withstand the corrosive indoor pool environment. High performance coatings, copper construction of critical parts and quality components ensures your PoolPak unit will operate long past industry standards. Longer life reduces the demand on natural resources and reduces the impact on disposal.

Critical Component Location

PoolPak locates compressors and other critical components outside of the corrosive air stream. This increases the life expectancy of these components, increases reliability and reduces waste from frequent part replacements.

Condensate Return

Mechanical dehumidifiers can remove an entire swimming pool worth of water from the pool room air in a year. The PoolPak can be configured to recycle this water back into the pool, saving water and reducing the load on utility infrastructures.

MERV 7-14 Rated Filters

High efficiency filters are available to help maintain a cleaner pool room environment. Clean air inside promotes a healthy environment, which is good for all pool room occupants.

Internet Monitoring and Service Support

Dehumidification units are complex systems requiring regular monitoring to assure efficient operation. PoolPak's internet monitoring allows fast, easy access to setpoints and critical system information by either factory personnel or pool managers from any location with an internet connection. Factory service personnel can quickly identify problems and maintain peak performance for the lowest cost of operation.

Even Our Corrosion Protection Paint is Green

The powder coating used on all PoolPak sheetmetal parts meets or exceeds the highest US and European standards for minimum VOC (Volatile Organic Compounds) air pollution emissions. Powder paint coating is the most environmentally friendly commercial painting technology in use today. In addition, this paint scored highest in protection against the corrosive effects of highly concentrated chemical and humidity laden air from the pool rooms.

PoolPAK International

The Leader in Indoor Pool Dehumidification

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