SMARTCOOL™

Smartcool Performance Report

Hippocrates Health Institute
Florida, USA

Smartcool's energy efficiency solutions achieved the following results in an installation on the swimming pool heat pump of this health club:

Annual Energy Savings From Smartcool Project

Annual Financial Savings

Greenhouse Gas Emissions Reduction

The Project

The project was carried out by American Utility Bill Auditors, an independent Smartcool distributor active in Florida.

American Utility installed the ECO3 to optimize the single compressor in an 11.5 ton Acquacel Heat Wave unit.

This heat pump provides temperature control for the swimming pool at the Hippocrates Health Institute.

The ECO3 logs the number of hours the compressor runs as well as the number of hours the ECO3 prevents the compressor from running in order to save energy. This data is shown on the product display screen for easy savings verification.

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Project Results
The ECO3 reduced the energy consumption of the heat pump compressor by 26%.

This will save Hippocrates Health Institute approximately 45,888 kWh per year, and cuts their annual electricity bill by over $2,514. The energy efficiency improvement will also cut greenhouse gas emissions by 27,891 kg every year.

These energy efficiency gains were made with no discernible impact on the temperature performance of the swimming pool heat pump.

Smartcool's Energy Efficiency Solutions
Smartcool's green technology is specifically designed to reduce electricity usage (kWh) and demand (KW) of air conditioning compressors, while maintaining temperature and humidity performance.

Conventional controls, including the most sophisticated Building Management Systems (BMS), operate only on reaching pre-programmed fixed (static) values to switch compressors on, and off, or adjust capacity. Rather than replacing existing controls, Smartcool's ESM™ and ECO^{3}™ interface directly with controls to optimize the compressor run time and achieve greater energy efficiency.

The ESM™ and ECO^{3}™ use proprietary software to dynamically analyze compressor cycles, achieving an overall reduction in run time without causing over cycling. Energy efficiency gains are achieved without affecting cooling capacity, temperature requirements or manufacturer warranties.

Smartcool's products optimize the performance of the compressors which consume an estimated 70% of the energy utilized by the cooling system. By reducing the compressor run time through cycle optimization or load shedding, our products save energy both through lower electricity usage (kWh) and decreased demand (KW).