

## Smartcool Performance Report

### Nylon Knitting Ltd. Malta

Smartcool's energy efficiency solutions achieved the following results during a project at a spinning plant for Nylon Knitting:



**"At first I was skeptical about the system. In fact, we made an agreement that if it didn't perform as expected 2M Energy would take it back! But when I saw the results I was convinced. Now we are in the process of adding the system to our other seven chillers. Highly recommended."**

- Ignio Calleja, Chief Engineer, Nylon Knitting Ltd.

### The Energy Efficiency Project



The project was managed by 2M Energy Solutions, the premier distributor of Smartcool solutions in Malta. 2M Energy installed the ESM™ in August 2011 to optimize the compressors in 2 Trane chilled water systems (200 KW screw compressors with slide valve unloading). These chillers provide air conditioning essential to the efficient operation of the spinning plant.

### Project Results

The ESM™ reduced the energy consumption of the screw compressors, saving an average of 236,736 kWh annually, and giving a return on investment in just 6 months. The energy efficiency improvement will also cut the facility's CO<sub>2</sub> emissions by 207,854 kg every year.

These energy efficiency gains were made with no discernible impact on temperature or humidity performance of the cooling units.



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## 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 ECO3™ interface directly with controls to optimize the compressor run time and achieve greater energy efficiency.



ECO3™

The ESM™ and ECO3™ 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).



ESM™