



## ECO<sup>3</sup>™

- Available as a Single Channel or Dual Channel unit, for installation on one or two compressors
- Optimizes efficiency of both cooling and heating cycles of compressor-driven heat pumps

- A digital display shows energy savings achieved by the device and LED lights show bypass or savings mode
- Installation in under two hours by a qualified technician, with minimal disruption of the cooling system
- The simple wall mount is rated for outdoor use, allowing the unit to be installed in any convenient location



## ECO<sup>3</sup>™ APPLICATIONS

The ECO<sup>3</sup>™ is a highly versatile device that has been installed in many types of facilities, including:

Supermarkets	Schools
Telecom Sub-Stations	Hospitals
Restaurants	Office Buildings
Convenience Stores	Residences

The ECO<sup>3</sup>™ is compatible with any cooling unit with one or two compressors, and is ideal for the following systems:

### REFRIGERATION

- Compatible with any refrigeration unit with one compressor

### AIR CONDITIONING

- Compatible with any air conditioning unit with one or two compressors
- Compatible with compressor driven heat pumps, saving energy on the heating AND cooling cycles of these units



## TECHNOLOGY OVERVIEW

**15%**  
AVERAGE ELECTRICITY USAGE (KWH) REDUCTION

**10%**  
AVERAGE DEMAND (KW) REDUCTION

**2-3 YEAR**  
RETURN ON INVESTMENT

### PROPRIETARY SOFTWARE

- Smartcool's unique software determines the most efficient operating cycles of the air conditioning or refrigeration compressors, reducing runtime, energy usage and costs

### PROVEN TECHNOLOGY

- Over 25,000 installations worldwide
- Independent third party testing by respected institutions such as Oak Ridge National Laboratory and Florida Power & Light

### CONTROL COMPATIBILITY

- Retrofit technology interfaces with existing control systems with no risk to current equipment, warranties or contents

### MAINTAINS TEMPERATURE PERFORMANCE

- Energy consumption is reduced while maintaining temperature performance

### QUICK INSTALLATION

- Minimal system downtime during installation by a qualified technician

### QUANTIFIABLE RESULTS

- Displays show the system status and level of savings achieved by the products
- Can qualify for government and utility rebates

## STANDARDS COMPLIANCE

Quality Assurance: ISO 9001  
 North American Standards: UL916 & ULC22.2 No 205-M1983  
 European Standards (CE): EN60730 (IEC 730) & EN60950: 2000  
 Australian Standards: AS2064, AS3100 & AS3260

## ENERGY SAVING MODULE™



- Each ESM™ is composed of a Network Controller (LNC) and either a System Interface Module (SIM) or an Intelligent Interface Module (IIM)
- Each ESM™ can have up to 8 channels

- Multiple ESM™ units can also be networked via the RS 485 Communication Port



- The LNC display allows for simple, continuous monitoring of the system including status and level of savings achieved
- A key pad is used to configure the local network access to data and the manual selection of bypass mode
- A laptop or modem can be connected via the RS 232 Communication Port on the LNC to allow for remote monitoring

## ESM™ APPLICATIONS

The ESM™ is a highly versatile device that has been installed in many types of facilities, including:

Cold Storage Warehouses	Shopping Malls
Food Processing Plants	Schools
Injection Moulding Factories	Hotels
Hospitals	Data Centers
Supermarkets	Office Buildings

The ESM™ is compatible with any type of compressor including scrolls, screws, reciprocating and centrifugals. With the IIM, the ESM™ has multiple inputs to interface with chiller capacity control cards and will maintain all safety features of the equipment. The ESM™ is ideally suited for the following systems:

### REFRIGERATION

- Compatible with any refrigeration unit including large racks

### AIR CONDITIONING

- Compatible with any A/C unit, including chillers



# ENERGY EFFICIENCY BY COMPRESSOR OPTIMIZATION

# SMARTCOOL™

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Smartcool's unique technology is designed to reduce the energy consumption of air conditioning and refrigeration systems by interfacing directly with existing controls and equipment. When a call for cooling comes from the primary controller, Smartcool's technology will determine when and for how long each compressor or unloader will run. This advanced control methodology causes the compressors to operate at a higher suction pressure more often than they otherwise would, where they are able to remove heat more efficiently. Since the compressors are operating more efficiently, pre-set controlled space temperature is maintained with fewer operating hours and less electricity used.



Smartcool has the solution to maximize efficiency in any cooling system with its Energy Saving Module™ (ESM™) and ECO<sup>3</sup>™. Smartcool's technology optimizes the existing properties of the compressor to reduce run time by up to 30% while maintaining temperature requirements.



By optimizing the compressors within a refrigeration or air conditioning system, Smartcool saves clients an average of 15% kWh consumption and an average of 10% KW demand. This not only brings substantial economic benefits by reducing a client's electricity bill, but also helps bring businesses closer to environmental sustainability by reducing their greenhouse gas emissions.



FOR MORE INFORMATION ON SMARTCOOL, ITS  
PRODUCTS AND SERVICES...

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[WWW.SMARTCOOL.NET](http://WWW.SMARTCOOL.NET)



# ENERGY EFFICIENCY PRODUCTS

IMPROVE YOUR BUSINESS BY E<sup>3</sup>



ENERGY EFFICIENCY

ECONOMIC BENEFITS - ENVIRONMENTAL SUSTAINABILITY

ENERGY EFFICIENCY

ECONOMIC BENEFITS - ENVIRONMENTAL SUSTAINABILITY