

WHY ARE YOU COOLING THE AIR AND NOT YOUR PRODUCT ?



Now with endoCube you can control your refrigeration based on product temperature.



OVERVIEW

Refrigeration units work in a series of cycles – starting and stopping to maintain the required temperature. They monitor air temperature in order to decide when to switch on and off. However, air temperature tends to rise faster than food temperature so refrigeration needs to work harder to maintain stored products at the 'right' temperature. This leads to excessive energy use and needless wear and tear on the refrigeration equipment. This is where the endoCube kicks in.

HOW IT WORKS

The endoCube consists of a food simulant contained in a double-skinned enclosure. This food simulant mimics the temperature of food at 10mm below the surface and is designed to be fitted around the refrigerator's thermostat sensor. The thermostat regulates when refrigeration is switched on or off.

Once in place, the endoCube transforms the fundamental operation of the refrigerator because it will now use food temperature as the signal to control its refrigeration cycle rather than fluctuating air temperature. The effect is a more efficient refrigeration cycle, where the individual cycle lasts longer but the frequency is reduced by up to 80%.

As the start-up of a refrigerator compressor uses more power than in the running cycle, considerable energy savings are achieved. In addition, the more efficient refrigeration cycle leads to a more efficient unit, which then leads to a colder storage area. Tests have shown that, you can turn up the thermostat and enjoy further energy savings without compromising food safety. It is simple more efficient refrigerant cycles equals energy savings.

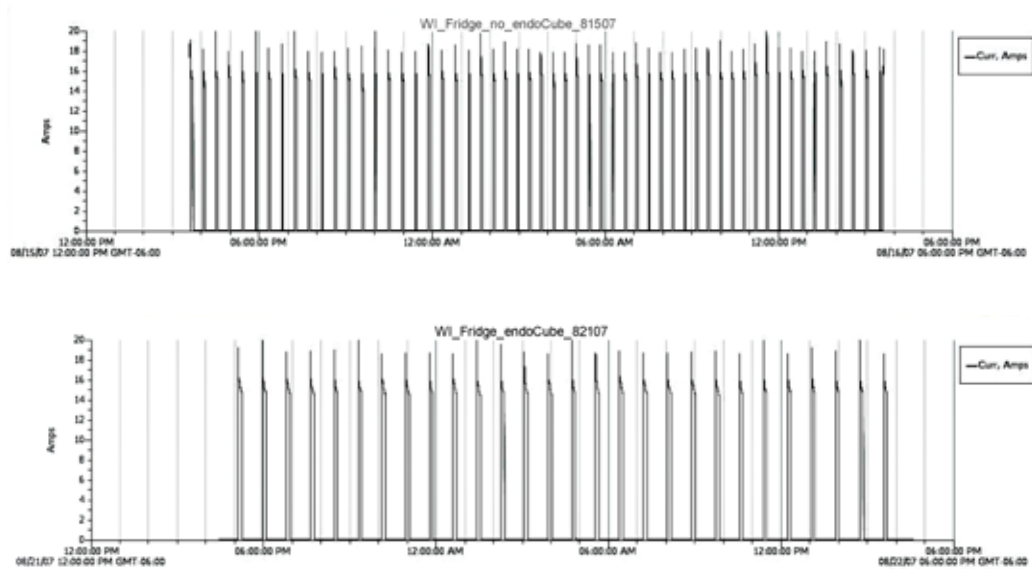
KEY BENEFITS

- Energy saving up to 30%
- Reduction of CO² emissions
- Accurate temperature mimicking
- Food temperature monitoring keeps your food safer
- Easy to install
- No electrical or mechanic parts
- Once fit, requires no maintenance
- Reduced wear and tear leading to extended life of equipment
- Return on investment between 6 to 24 months

DATA ANALYSIS

Compressor Cycling

These are graphs of 'Start-Stop' Cycles of 24 hour periods with and without the endoCube



Results

24 hour test without endoCube
 57 compressor starts = 47 kWh
 24 hour test with endoCube
 28 compressor starts = 36.9 kWh
 Energy Savings 22% kW/kWh
 Mechanical Savings 51% Less Starts
 Environmental Savings 1617.27 kgs CO2

TECHNICAL SPECIFICATIONS

Parts

endoCube and bayonet fixing (male)
 Two-part cable trap (termination)
 Bayonet fixing plate (female)
 Locking ring

Dimensions

Length 4.5 cm–7.5 cm
 (with bayonet and 2 part cable trap)
 Width 4.5 cm

Regulatory Certification

NSF protocol P235
 HACCP Australia

CONTACT US

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