CONTINUOUS COOLING

Innovative temperature control algorithm for up to 70% energy efficiency in refrigeration equipment!

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CONTINUOUS COOLING TECHNOLOGY

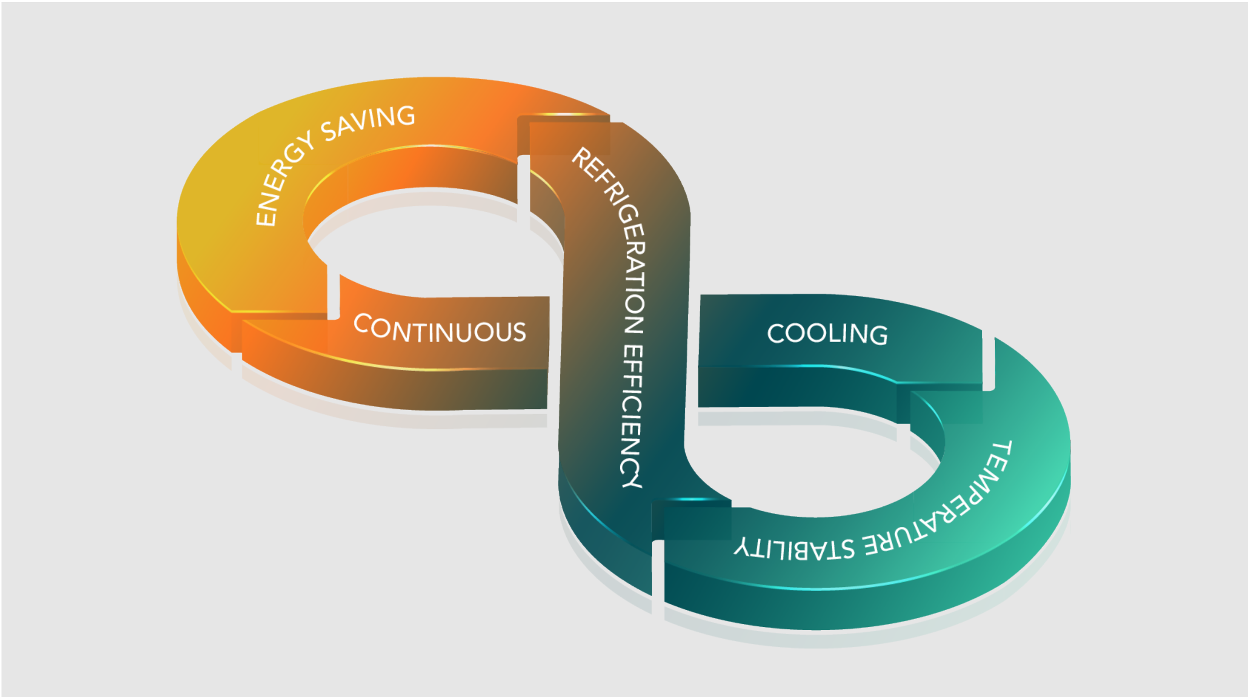
Continuous Cooling technology enhances commercial refrigeration efficiency by replacing traditional on-off compressors—prone to large temperature fluctuations and energy losses—with an inverter compressor and advanced controller.

A controller with an innovative stability control algorithm effectively adjusts the compressor's speed based on the temperature inside the refrigeration equipment, keeping it steady. Unlike the traditional system, with Continuous Cooling technology, evaporation happens continuously, and only the capacity varies. The advanced algorithm in the controller defines the compressor parameters and operating modes for the inverter compressor and other components, allowing the controller to optimize temperature control and minimize temperature fluctuations.

ENERGY EFFICIENCY RESULTS FROM THE FREOR LABORATORY

Continuous Cooling technology has been tested in FREOR's laboratory, which complies with the global standard for refrigerated display cabinets – ISO 23953. The tests were performed on commercial refrigeration equipment operating at different temperature ranges, including equipment with and without glass doors.

The tests, conducted in an environment with 25°C temperature and 60% humidity, indicated that the technology can save approximately 50% of energy. The results showed that the temperature fluctuations in the equipment were not more than 0.5°C, demonstrating excellent food preservation due to the temperature stability. Keep in mind that the outcomes may vary depending on the environmental conditions.



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BENEFITS

Temperature stability

An advanced algorithm controls the inverter compressor and electronic expansion valve to maintain a consistent temperature in refrigeration equipment, with a maximum variation of 0.5°C.

Reduced Wear and Tear

Unlike traditional compressors that frequently switch on and off, the inverter compressor operates more smoothly, leading to a longer lifespan and lower maintenance costs.

High energy efficiency

Up to 50% more energy savings than with traditional control systems. Up to 70% paired together with a Hydroloop cooling system.

Optimal Performance

Unlike traditional systems, which turn on and off, the inverter compressor allows for continuous evaporation, ensuring consistent cooling performance.

Adaptability

Available for all refrigeration equipment operating in autonomous plug-in or any Hydroloop systems that use natural propane (R290) gas as a refrigerant.

Lower Operating Costs

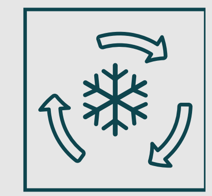
By optimizing energy use and reducing maintenance needs, businesses can save on electricity bills and repair expenses.

Environment friendliness

Natural R290 refrigerant with GWP of 3.

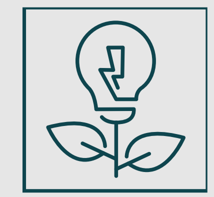
Food freshness

Stable temperature and humidity levels inside equipment maximize the preservation of food quality and freshness.



Continuous Cooling

Environment Friendly



Energy Effinciency

Temperature Stability

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