

# Nordic Refrigeration Economizer

Introducing our proprietary, eco-friendly refrigeration system for commercial and industrial walk-in coolers. The Nordic Economizer is designed to supplement the mechanical system of walk-in coolers to provide efficient and consistent refrigeration with a fraction of the energy consumption. Our patent pending design can **cut annual energy consumption by 20%+** and **save customers hundreds or potentially thousands of dollars** on their annual utility bill\*.



## Key Benefits

- Energy efficiency
- Increased mechanical life
- Decreased refrigeration repair costs
- Consistent supply air temperature maintains food integrity
- Superior air quality
- Added system safeguards

## Key Functions

- Uses ambient outside air to cool walk-in
- Computer controlled supply air temp
- Proprietary controller integrates with existing refrigeration system
- High level air filtration
- Cooling without greenhouse gases

## The Problem: Energy consumption of commercial refrigeration

While some people may not realize it, typical commercial refrigeration systems consume a vast amount of energy each year. The US Dept. of Energy estimates that refrigeration accounts for nearly 40% of energy used by supermarkets and grocery stores each year, contributing a large portion to their utility bills.

## The Solution: Nordic Economizer

Our patent-pending refrigeration system is an eco-friendly supplement for commercial and industrial walk-in coolers, providing efficient and consistent refrigeration with a fraction of the energy consumption.

## 20%+ annual energy savings\*

While an average 16k Btu walk-in cooler could cost roughly \$3,200/yr to run, the integration of our economizer could cut the operating cost by 20%+ depending on your climate. That's not to mention the amount you will save from less wear and tear on your refrigeration compressor, leading to fewer repairs and a longer useful life.

Below are annual energy savings estimates for a common 16k Btu walk-in cooler in various Colorado locations based on average daily temperatures since 2000:

Location	Days ≤30 ° F	Energy cost w/ Economizer	Annual % Savings
Aspen	96	\$2,433	25%
Dillon	141	\$2,064	36%
Glenwood Springs	78	\$2,586	20%
Rifle	77	\$2,590	20%
Steamboat Springs	128	\$2,171	33%
Vail	135	\$2,109	35%

\*All energy usage and savings figures are estimates. Actual results may vary.

## How it works

At its most basic level, you can think of our system as a smart window that automatically turns off the existing mechanical system and opens a vent to outside air when it's cold, saving you energy and money. However, our state of the art air handling box does much more!

### Utilizing cold outside air to save energy:

By design, the Nordic Economizer completely turns off your compressor system whenever the outside air temperature drops below a predetermined set-point, and uses only a few low-amp, EC motors and dampers to refrigerate your cooler entirely with outside air.

### Computerized to maintain consistent temp:

Our computer controlled system mimics your pre-existing mechanical equipment. It delivers perfectly conditioned air at the right temp and humidity to maintain food product quality... irrelevant of how cold it gets outside.

### High level air filtration:

All systems are equipped with Merv13 filters to keep 90% of pollutants out of the cooler. Additional filtration available upon request.

### System safeguards:

At a glance, indicator lights mounted in the walk-in will let you know the system is operating properly, remind you to change the filter, and alert you to any potential problems.

## Proven success at a CO ski resort

A prototype was installed at a ski resort lodge two years ago. Over the winter test period, our economizer reduced the run-time of their compressor system by 96%, while still maintaining a temperature consistently between 34-41°F. During that time, our product effectively cooled the walk-in with 92% less energy. The customer was so satisfied they ordered 6 more!