

SPORTS
FACILITIES

CO₂ CHILLER/ HEAT PUMP

*Efficiency, quality and reliability
built-in all our ecofriendly products*



CARNOT

A PERSONALISED AND COMPLETE OFFER

From Carnot's team, offering a superior quality service to our customers is the essence of all our decisions and actions.

What sets us apart is inspired by our commitment to our customers.

Our mission is to make sure you are confident that your project is in good hands.

A service that meets your expectations

A team of professionals and a tailored support

**An assistance program: always at your disposal
24/7.**

That's the Carnot commitment!

CO₂ solution by Carnot: a smart, ecofriendly and profitable choice

Made by the most experienced company in CO₂ transcritical solutions in North America, the CO₂ cooling system by Carnot is the smart choice.

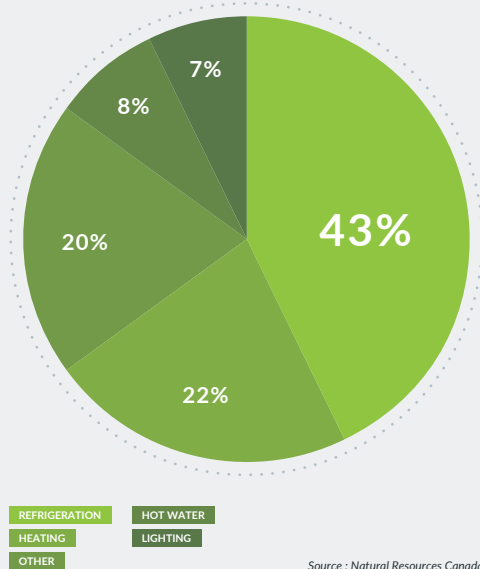
PROVEN EFFICIENCY FOR MAJOR SAVINGS

Superior quality, performance and energy stability;

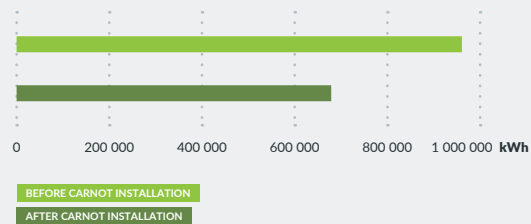
Flawless redesign to replace existing R-22 solutions;

Financial savings of up to 30% year after year due to the reduction of energy costs, maintenance and service costs and the elimination of refrigerant fees.

ENERGY CONSUMPTION PROFILE
OF AN AVERAGE ARENA



ANNUAL ENERGY CONSUMPTION
IN OUR ARENAS



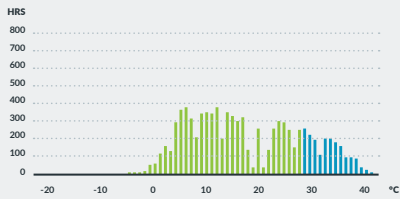
"THANKS TO THE TECHNOLOGY BY CARNOT REFRIGERATION. THE BOILERS INSTALLED TO HEAT OUR POOLS WERE NEVER USED".

ERICK LALIBERTÉ
City of Dollard-des-Ormeaux, Québec

SINGLE STAGE TRANSCRITICAL CO₂ CHILLER

| Compressor Stage | (1) Cooling Capacity | Glycol Return Temperature | Glycol Supply Temperature | Condensing Temperature | | | | | | | | | | Gas Cooling | |
|------------------|----------------------|---------------------------|---------------------------|------------------------|-------------|-------------|-------------|--------|-------|---------|---------|---------|---------|-------------|---------|
| | | | | [Tons] | [°F] / [°C] | [°F] / [°C] | [°F] / [°C] | 45/7.2 | 50/10 | 55/12.7 | 60/15.5 | 65/18.3 | 70/21.1 | | 75/23.8 |
| High Stage [HS] | 80 | 13 / -10.5 | 10 / -12.2 | Capacity [Tons] | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| | | | | kW | 53 | 60 | 67 | 75 | 84 | 195 | 109 | 125 | 150 | 146 | |
| | | | | THR [MBH] | 1142 | 1164 | 1188 | 1216 | 1248 | 1285 | 1331 | 1388 | 1472 | 1460 | |
| | | | | COP | 5.3 | 4.7 | 4.2 | 3.8 | 3.3 | 3.0 | 2.6 | 2.3 | 1.9 | 1.9 | |
| | | | | MBH | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | |
| Heat Reclaim | | | | COP w/ HR | 9.2 | 8.2 | 7.3 | 6.5 | 5.8 | 5.1 | 4.5 | 3.9 | 3.3 | 3.3 | |

(1) Large possibilities of capacities - Contact us for details.



LAS VEGAS



MONTREAL

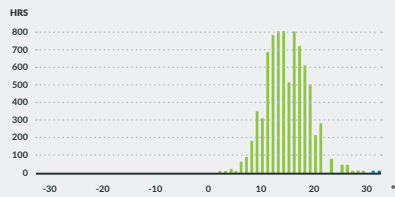


NEW YORK

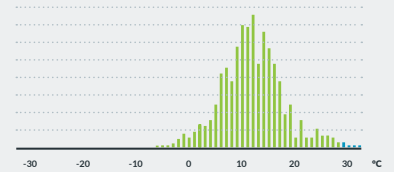
SUBCRITICAL OPERATION

TRANSCRITICAL OPERATION

- Kwref [kw]** Refrigeration capacity
- Thr [kw]** Rejected capacity
- KW [kw]** Energy consumption
- COPr** Refrigeration coefficient of performance
- COPc** Combined coefficient of performance including heating or rain cycle free cooling
- FC** Free cooling



SAN FRANCISCO



SEATTLE

CO₂ technology by Carnot: a powerful cooling system

POWERFUL TECHNOLOGY, QUITE SIMPLY

Modular solution designed by a qualified engineering team;

Process optimization for increased efficiency;

Simplified quick-plug installation;

On-site assistance for equipment start-up;

Complete training for technical staff;

Fully automated system.

A SMART SUSTAINABLE BUSINESS DECISION

Harmless refrigerant reduces or eliminates risk of facing environmental or health and safety restrictions in the future;

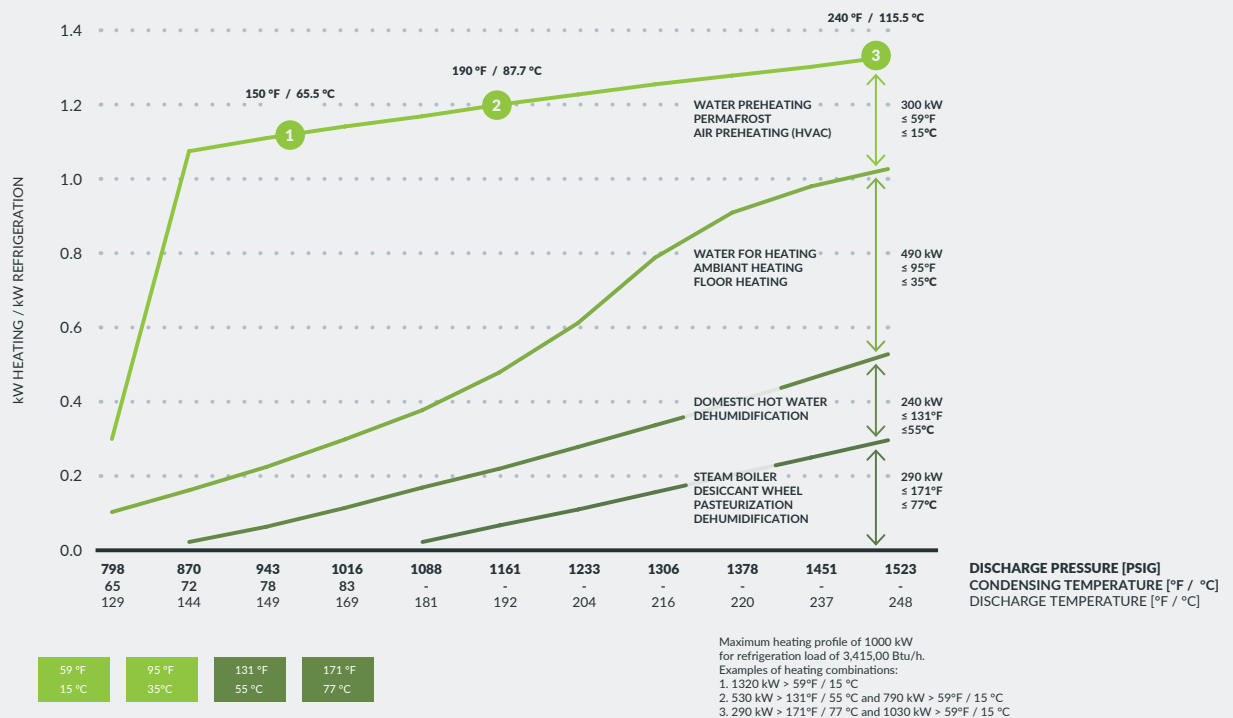
Equipment outlasts conventional installations;

Substantial financial savings are generated throughout equipment life;

Significant reduction in greenhouse gases (GHG);

Solution is eligible for current LEED programs.

HEAT RECOVERY AVAILABLE WITH CARNOT CO₂ TRANSCRITICAL SYSTEMS



RCIntelligent is a smarter way to use the rejected energy of your process: system is composed of various components that recover energy rejected by the process in a smart and strategic way.

« RCINTELLIGENT MAKES YOUR SYSTEM WORK AS HARD AS IT SHOULD, NOT MORE. »

DECISION-MAKING ALGORITHM

1. Is the refrigeration capacity sufficient?
2. Is the preheating of hot water sufficient and our heating needs are met?
3. Decision: reduce the head pressure to improve the overall Cop.

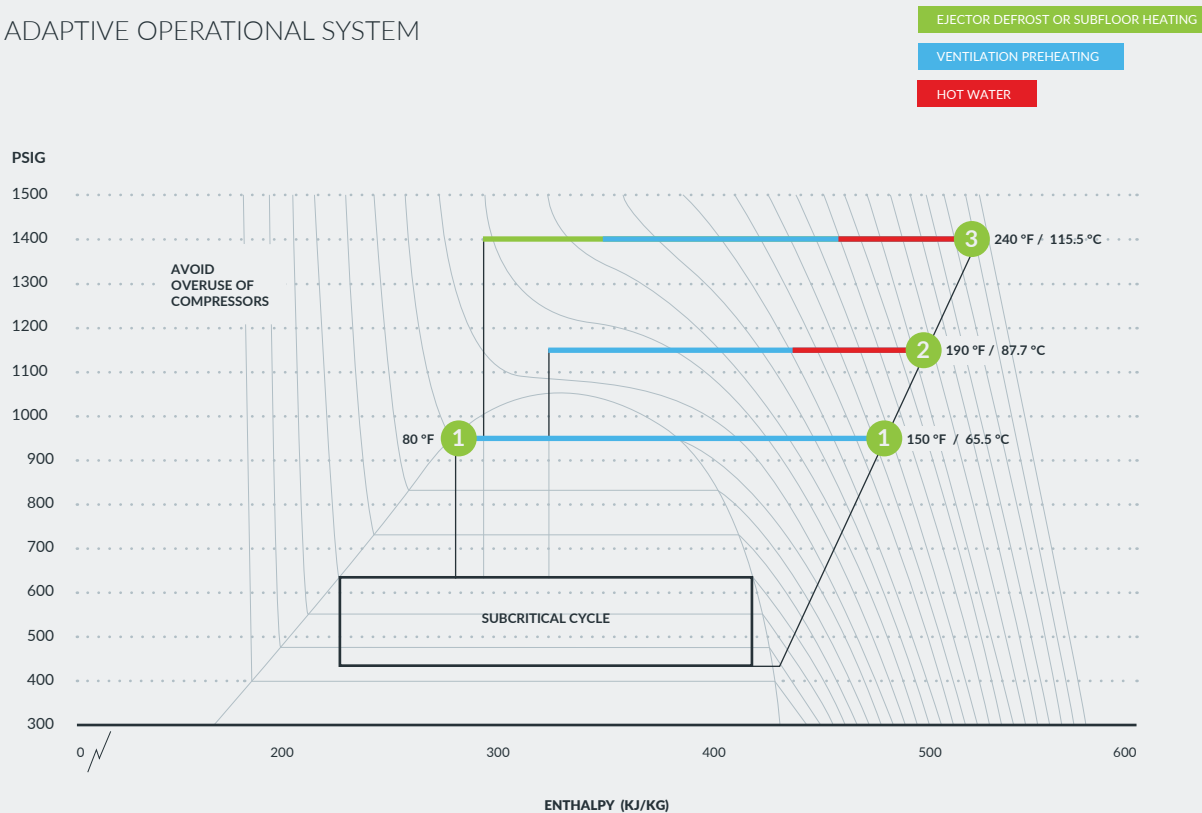
REAL-TIME ARTIFICIAL INTELLIGENCE TO ENSURE OPTIMAL PERFORMANCES

Reduction of energy consumption for heating process;

Elimination of boiler to produce heat;

Significant recurrent financial savings.

ADAPTIVE OPERATIONAL SYSTEM



LEADER IN HIGH PRESSURE **CO₂** COOLING
AND REFRIGERATION SYSTEMS

PASSION INNOVATION THOROUGHNESS

INNOVATIVE COOLING SOLUTIONS BUILT
FOR **ENVIRONMENTAL SUSTAINABILITY**

WE OFFER

- Design and engineering
- Manufacturing
- Project management
- Commissioning and help desk 24/7

WE SERVE

- Industrials
- Supermarkets
- Sports centers
- Data centers

WE ARE

- Working to make Eco-friendly refrigeration a global standard

EXCELLENT SERVICE, QUICK RESPONSE AND VERY COMPETENT STAFF.

OPTIMIZED TECHNOLOGY, SUPERIOR RELIABILITY AND SAFETY

Designed in compliance with the highest quality standards in the industry;

Strict quality control in a controlled environment;

Highly reliable processes tried and tested in the most extreme conditions;

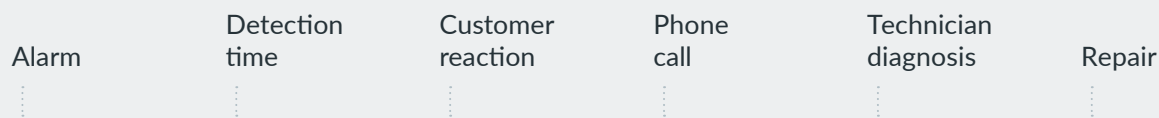
POWERFUL TECHNOLOGY, QUITE SIMPLY

Remote controlled equipment and alarm system;

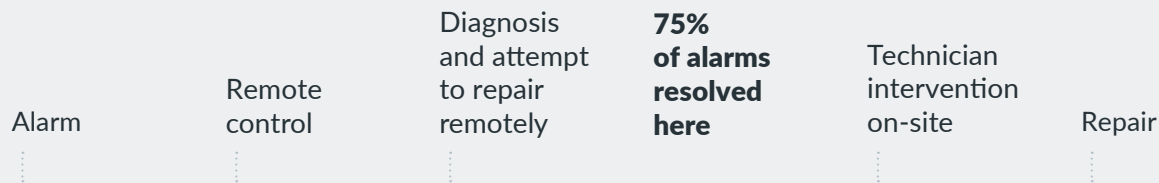
Real-time monitoring and performance reports by a highly qualified team;

24/7 technical support, quick and efficient interventions.

35% FASTER INTERVENTION



STANDARD INTERVENTION



CO₂ technology by Carnot: customize your system

○ HEAT RECOVERY / RCINTELLIGENT

Reuse the energy created by your process using a custom heat recovery strategy for major financial savings year after year.

○ ENERGY METER WITH DISPLAY

Real-time display of your refrigeration consumption.

○ GAS COOLER / CONDENSER

Different options available for optimal performance and durability.

○ REMOTE CONTROL

To closely monitor your process using your smartphone or computer.

○ STAINLESS STEEL

Stainless steel covering and piping.

○ TURNKEY INSTALLATION

For peace of mind, done by professionals to meet your needs, from design to start-up.

○ ENCLOSURE FOR OUTSIDE INSTALLATION

Weatherproof construction.

Carnot: a pioneer in transcritical CO₂ and cooling systems

Carnot has proven itself regarding the performance of its CO₂ transcritical refrigeration system. With the longest-lasting legacy of high quality demonstrations across North American and Europe since 2008, CO₂ refrigeration technology by Carnot has set standards with its efficiency, profitability, sustained performance in the most extreme conditions, simplicity and operational reliability.

NOTEWORTHY FACTS

Installations performed throughout North-America and Europe;

Daily savings for our clients;

Highly qualified engineers who are constantly trying to set higher standards for CO₂ refrigeration technology;

Standards and certifications including CSA and UL;

Awards and recognition from recognized organizations such as ASHRAE and EPA;

Competent customer service team focused on customer satisfaction.



**« CO₂ IS NOURISHMENT FOR TREES:
SYNTHETIC MOLECULES ARE NOT. »**

MARC-ANDRÉ LESMERISES
CEO of Carnot, United Nations conference

**SPORTS
FACILITIES**

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