

WINERIES
BREWERIES

CO₂ CHILLER

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



CARNOT
REFRIGERATION



“CARNOT’S SYSTEM ALLOWED US TO PRODUCE
MORE WINE AT A HIGHER QUALITY AND AT A
LOWER ENERGY COST.”

GORDON ROBERTS *winemaker, Marynissen Estates*

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 for winery and brewery owners.

Our commitment is to offer you an accurate cooling system to maintain critical temperature set points during your process.

PROVEN EFFICIENCY FOR MAJOR SAVINGS

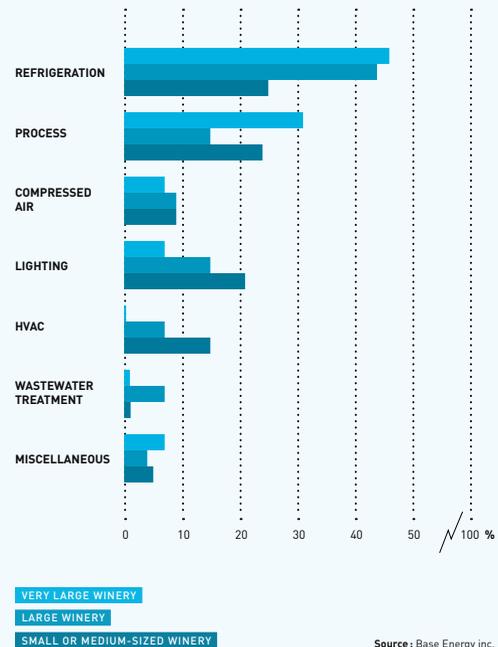
Superior quality, performance and energy stability;

Flawless redesign to replace existing R-22 solutions;

Smart use of CO₂ cycle (rain cycle) to avoid use of compressors most of the year;

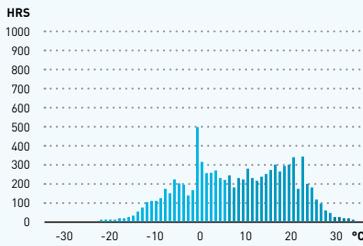
Financial savings of up to 30% year after year due to the reduction of energy costs, maintenance and service costs and the elimination of refrigerant fees.

ELECTRICAL CONSUMPTION
DISTRIBUTION IN A WINERY



CARNOT 25 TR
(88kW)
MODEL

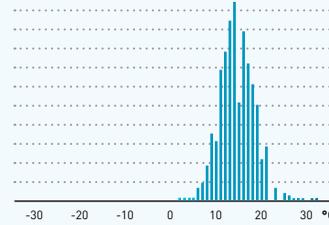
COOLING CAPACITY		FLUID TEMPERATURE		OUTDOOR TEMPERATURE										
TR	kW	°F	°C	(°C)	-5	0	5	10	15	20	25	30	35	
25	88	41	5	kWref	88	88	88	88	88	88	88	88	88	88
				THR	FC	FC	100	100	102	107	113	122	132	
				kW	2	3	13	14	16	21	28	37	47	
				COPr	36.6	33.8	6.7	6.2	5.4	4.2	3.2	2.4	1.9	
				COPc	36.6	33.8	14.2	13.3	11.6	9.3	7.3	5.7	4.7	
20	71	32	0	kWref	71	71	71	71	71	71	71	71	71	
				THR	FC	81	82	83	86	90	96	103	112	
				kW	2	11	12	13	16	20	26	34	43	
				COPr	30.5	6.5	6.1	5.6	4.4	3.5	2.7	2.1	1.7	
				COPc	30.5	13.9	13.1	12.0	9.7	7.9	6.3	5.1	4.3	
17	60	23	-5	kWref	60	60	60	60	60	60	60	60	60	
				THR	69	69	70	72	75	79	84	92	100	
				kW	11	10	11	13	16	20	26	34	42	
				COPr	5.7	6.2	5.7	4.6	3.7	3.0	2.3	1.8	1.4	
				COPc	12.3	13.2	12.3	10.1	8.3	6.9	5.5	4.5	3.8	



MONTRÉAL



NEW YORK

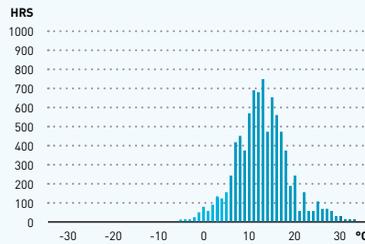


SAN FRANCISCO

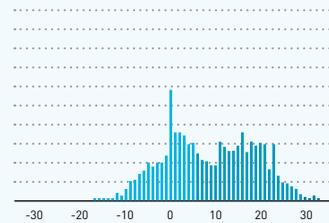
- FREE COOLING MODE
- SUBCRITICAL OPERATION
- TRANSCRITICAL OPERATION

- 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
- FC FREE COOLING

Note : Chiller power = compressor power + fan power



SEATTLE



TORONTO

CO₂ TECHNOLOGY BY CARNOT: A POWERFUL COOLING SYSTEM

POWERFUL TECHNOLOGY, QUITE SIMPLY

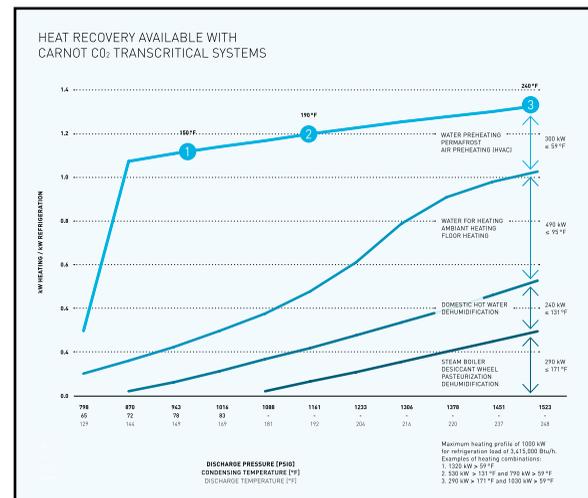
- Modular solution designed by a highly qualified engineering team;
- Process optimization for increased efficiency;
- Simplified quick-plug installation;
- On-site assistance for equipment start-up;
- Complete training for technical staff;
- Fully automated system.

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;
- Precise temperature control.

“VERY HIGH QUALITY
AND RELIABLE
REFRIGERATION
SYSTEM AT A LOW
MAINTENANCE COST.”

JOCELYN FORGUES IGA Brompton owner



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.

“EXCELLENT SERVICE, QUICK RESPONSE AND VERY COMPETENT STAFF.”

OPTIMIZED TECHNOLOGY, SUPERIOR RELIABILITY AND SAFETY

Elimination of ignition and toxicological hazards that occur with other refrigerants;

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;

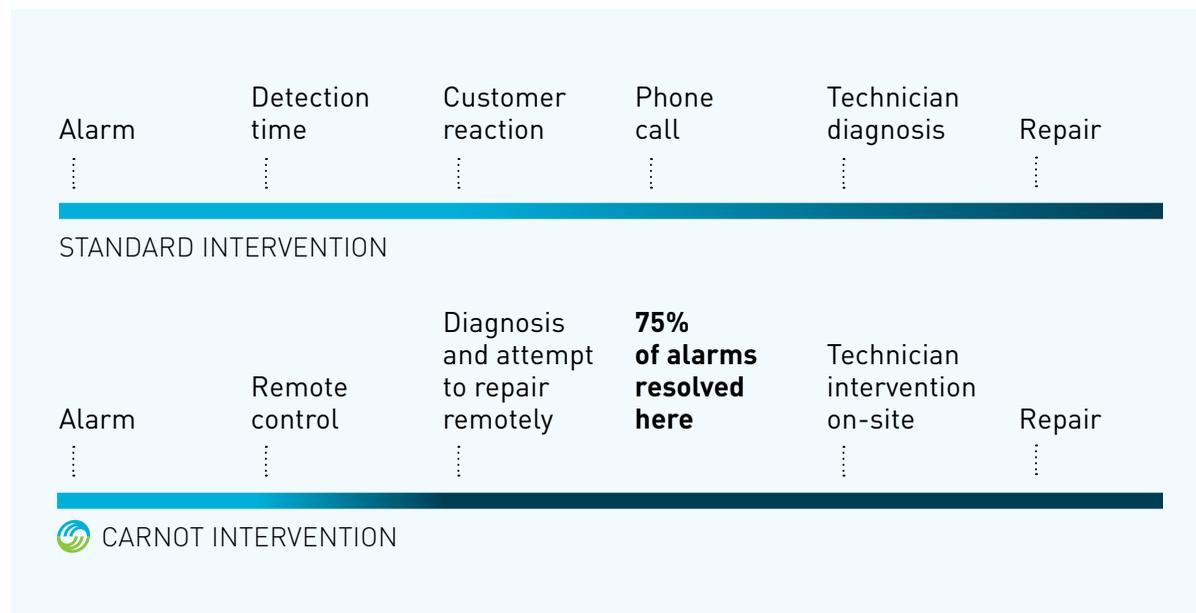
REAL-TIME REMOTE ASSISTANCE

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



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.

□ CO₂ RAIN CYCLE

Use the natural cycle of evaporation and condensation of CO₂ to avoid overusing compressors for major savings on operating costs.

□ GAS COOLER /CONDENSER

Different options available for optimal performance and durability.

□ STAINLESS STEEL

Stainless steel covering and piping.

□ ENCLOSURE FOR OUTSIDE INSTALLATION

Weatherproof construction.

□ ENERGY METER WITH DISPLAY

Real-time display of your refrigeration consumption.

□ INTERNET MODULE

To closely monitor your process using your smartphone or computer.

□ TURNKEY INSTALLATION

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

CARNOT: A PIONEER IN TRANSCRITICAL CO₂ REFRIGERATION AND COOLING SYSTEMS

Carnot Refrigeration 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 Refrigeration 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, UL and CE;

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*

WINERIES
BREWERIES

QUESTIONS INFORMATION

Carnot Refrigeration

3368 Bellefeuille
Trois-Rivières, Québec
Canada G9A 3Z3
+ 1 819 376 5958

sales@carnotrefrigeration.com
www.carnotrefrigeration.com

