

NaturaLINE® – The world's first natural refrigerant unit for container refrigeration.

The NaturaLINE container refrigeration unit was purposefully designed for shipping lines seeking sustainable solutions for their operations. A high-performance, energy-efficient system, the NaturaLINE unit uses carbon dioxide, a nonflammable, natural refrigerant alternative to conventional synthetic refrigerants with high global warming potential (GWP). This can help shipping lines to mitigate procurement challenges and cost increases related to phasedowns of high-GWP refrigerants increasingly targeted by governments and environmental agencies.

Move to a sustainable future. Move to NaturaLINE.

CO₂ (R-744) Refrigerant Fundamentals

- Power consumption comparable to Carrier's best-selling unit
- Excellent efficiency, especially for part-load perishable cargo
- ASHRAE 34 and ISO 817 safety classification A1, nonflammable and nontoxic
- U.S. EPA-approved for transport applications and unaffected by phasedowns, F-gas Regulations and Kigali Amendment to the Montreal Protocol
- No refrigerant tax
- No intermediate refrigerant step needed
- Familiar controls and maintenance
- Global support from Carrier

A Natural Performer:

Today, environmental sustainability is essential for container shipping lines, intermodal carriers and others who need versatile refrigerated storage provided by containers. Likewise, high performance is crucial. The NaturaLINE unit delivers on both, by extending the operating envelope beyond the range of many conventional refrigeration units and doing so in a most sustainable way.

Its natural CO₂ refrigerant raises the bar by lowering temperatures – with cooling down to minus 40 degrees Celsius! High efficiency, industry-leading airflow, tight temperature control and quiet performance occur through a fusion of innovative technologies made possible by Carrier Transicold's engineers.

Multi-Stage Compressor

NaturaLINE's design makes use of an exclusive new multi-stage compressor that maximizes capacity while minimizing power consumption.

Variable-Speed Drive

The custom-designed VSD provides tighter temperature control by electronically adjusting compressor speed to precisely deliver needed cooling capacity.

Gas Cooler Coil

Compact and lightweight by design, the gas cooler coil wraps around the fan to maximize heat-transfer surface area for greater efficiency.

Flash Tank

For efficient cooling performance, the flash tank manages the refrigerant flow and phase change.

Two-Speed Fans

The NaturaLINE unit's evaporator and gas cooler use two-speed fans, further improving energy savings.

Advanced Operating Software

The operating software was refined to manage the NaturaLINE unit's unique mechanical system, yet uses the same easy-to-use Micro-Link® control found throughout our container lineup.

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PERFORMANCE SPECIFICATIONS

NaturaLINE®



Cooling Capacity: Ambient @ 38°C (100°F) and 60 Hz power with Purpose built R744 Compressor

| Temperature | Watts | Btu/hr |
|---------------|-------|--------|
| 2°C (35°F) | 9,400 | 32,000 |
| -18°C (0°F) | 6,000 | 20,500 |
| -29°C (-20°F) | 5,000 | 17,000 |

Specifications are subject to change without notice.

Standard Features:

Refrigeration System

- 40°C capable
- Multi-stage CO₂ compressor with aluminized coating
- 1 GWP/Zero ODP R744 (CO₂) refrigerant
- High-efficiency evaporator and gas cooler coils
- Electrostatically coated all-copper gas cooler coil
- High-efficiency vane-axial evaporator fans
- Three-phase dual-speed evaporator & gas cooler fan motors
- Electronic expansion valves
- Flash tank economizer with flow separator, Al coated for superior corrosion protection
- ATO (Sprengrer)-accepted adjustable fresh-air exchange

Electrical System

- Wired for 380/460-volt 3ph
- 50/60 Hz power
- Safe, 24-volt AC control circuit with fuse protection
- 18m (60 ft) power cable with attached CEE-17 plug
- Variable frequency drive
- Electric heat
- Main power circuit breaker

Control System

- Micro-Link® 3 modular controller with dual sensors
- DataCorder™ electronic data recorder
- Dual backlit LCD display
- Pressure-limiting feature
- Cool, Heat, Defrost, In-Range, Alarm indicator lights
- Selectable timed electric defrost (3-/6-/9-/12-/24-hour settings) or automatic defrost
- Manual defrost initiation
- Current-limiting feature
- Interrogator plug
- Suction and discharge temperature sensors
- Suction and discharge pressure transducers

Convenience Features

- Removable front service panels
- Forklift pockets
- TIR compliant

Accessories and Options

- USDA cold-treatment recording package
- Rechargeable power-up battery pack
- Electronic power line communication module (RMU)
- Remote monitoring receptacle (ISO 4-wire)
- Dehumidification control
- Fresh-air vent position sensor
- Thermometer insertion ports (supply/return air)
- LED display
- Convenience handles
 - Center
 - Left and right
- Rain gutters (bolted or riveted)
- Interrogator plug location inside control box
- Nitrogen insertion port
- Secure rechargeable battery
- Certification: ABS, BV, KRS, GL
- CE marking

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NaturaLINE[®]

The natural refrigerant performer for the shipping industry

Highly energy-efficient
CO₂ refrigerant with ultra-low GWP of 1
Minus -40 degrees Celsius capable
Industry-leading airflow and tight temperature control
Quiet operation