

# **North America Transcritical CO2 Market Size and Forecast (2021 - 2031), Regional Share, Trend, and Growth Opportunity Analysis Report Coverage: By Application (Retail, Food Processing and Storage Facilities, Ice Skating Rinks, Heat Pumps, and Others), Function (Refrigeration, Air Conditioning, and Heating), and Country**

<https://marketpublishers.com/r/N1685F837A37EN.html>

Date: February 2025

Pages: 92

Price: US\$ 3,450.00 (Single User License)

ID: N1685F837A37EN

## **Abstracts**

North America Transcritical CO2 Market size was valued at US\$ 4.57 billion in 2023 and is expected to reach US\$ 28.45 billion by 2031. North America Transcritical CO2 Market is estimated to record a CAGR of 25.7% from 2023 to 2031.

The transcritical CO2 system is an environmental-friendly and reliable system under which CO2 is cooled but does not condense at the gas cooler outlet and operates above the critical point. These systems are mainly used for commercial purposes in supermarkets, convenience stores, and other commercial refrigeration applications. These systems are also used for industrial purposes such as food processing, cold storage warehouses, and breweries. These industries need reliable temperature control and energy efficiency, making transcritical CO2 systems a preferred choice. The increasing concerns regarding environmental sustainability and the phase-out of ozone-depleting substances have driven the demand for transcritical CO2 systems. These systems are known for their low global warming and zero depletion potential, making them an environmentally friendly alternative to traditional refrigerants.

The rise in demand for transcritical CO2 in the ice-making, beer-brewing, and margarine-production industries is one of the key factors anticipated to propel the expansion of the North America transcritical CO2 market in the coming years. Additionally, the growing

demand for air conditioning and refrigeration applications and the lower operating costs of systems will fuel the regional market growth.

Based on application, the transcritical CO<sub>2</sub> market is segmented into ice skating rinks, food processing and storage facilities, heat pumps, supermarkets and convenience stores, and others. Transcritical CO<sub>2</sub> systems chill milk, cream, and other dairy products. Transcritical CO<sub>2</sub> is also used to produce dry ice in the food industry for freezing and shipping food. Apart from dairy products, transcritical CO<sub>2</sub> systems are used to chill and freeze meat and poultry products. They are also used to produce CO<sub>2</sub> gas, which is used in the meat industry for packaging and preservation. Various vendors and manufacturers of transcritical CO<sub>2</sub> systems have developed cold storage and freezing transcritical CO<sub>2</sub> systems for the food processing industry. In March 2023, Innovative Refrigeration Systems, Inc. built transcritical CO<sub>2</sub> refrigeration systems for cold storage and food processing. Innovative Refrigeration Systems, Inc has also installed 60 ammonia (R717)/CO<sub>2</sub> (R744) cascade systems for industrial cold storage, blast freezing, and process cooling applications in the US. In June 2023, New York-based food retailer DeCicco & Sons installed a transcritical CO<sub>2</sub> system in its Larchmont store. The Larchmont store is the first food-processing store using CO<sub>2</sub> refrigeration. After using the CO<sub>2</sub> refrigerator system in the Larchmont stores, they have witnessed significant energy saving in their stores.

BITZER Kuhlmaschinenbau GmbH; Carrier Global Corp; Danfoss A/S; Emerson Electric Co.; Panasonic Holdings Corporation; EVAPCO LMP; MAYEKAWA MFG. CO., LTD; Dover Corporation; CoolSys; and Epta Group are among the prominent players profiled in North America Transcritical CO<sub>2</sub> Market report. Several other major players were also studied and analyzed in the North America Transcritical CO<sub>2</sub> Market report to get a holistic view of the market and its ecosystem.

The overall North America Transcritical CO<sub>2</sub> Market share has been derived using both primary and secondary sources. Exhaustive secondary research has been conducted using internal and external sources to obtain qualitative and quantitative information related to North America Transcritical CO<sub>2</sub> Market. The process also helps obtain an overview and forecast of the market with respect to all the market segments. Also, multiple primary interviews have been conducted with industry participants to validate the data and gain analytical insights. This process includes industry experts such as VPs, business development managers, market intelligence managers, and national sales managers, along with external consultants such as valuation experts, research analysts, and key opinion leaders, specializing in North America Transcritical CO<sub>2</sub> Market.

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