

Refrigerant Compressors: A Key Component of Refrigeration Systems: Analysis and Industry Forecast, 2020 - 2032

Rise in the development of efficient and environment-friendly compressors is a major upcoming trend in the Refrigerant Compressors Market.

WILMINGTON, DE, UNITED STATES, August 19, 2025 /EINPresswire.com/ -- Market Size and Growth

The global [refrigerant compressors market](#), valued at \$35.1 billion in 2020, is projected to reach \$59.7 billion by 2032, growing at a compound annual growth rate (CAGR) of 4.5% from 2023 to 2032.

What are Refrigerant Compressors?

Refrigerant compressors are essential components of refrigeration systems, facilitating the circulation of refrigerant. They function by elevating the pressure and temperature of the refrigerant, enabling efficient cooling. The most common types of refrigerant compressors include reciprocating, rotary, and centrifugal compressors, each designed to meet specific application requirements in various industries.

Download PDF Sample Copy@ <https://www.alliedmarketresearch.com/request-sample/A09724>

A refrigerant compressor is a mechanical device that compresses and controls the flow of liquid refrigerant, which plays a crucial role in the refrigeration system. These compressors find their application across a wide range of industries such as food preservation, pharmaceuticals, HVAC, and data centers, as they help to maintain efficient temperature control. Condensing temperature, capacity, evaporative temperature, and input power are the four cooling parameters that are important for optimal functioning of a refrigerator, thereby determining the efficiency and performance of a refrigerant compressor. The capacity of the compressor is further determined on the basis of its ability to eliminate the heat from the refrigerant gas. Nominal capacity ratings are determined depending on standard parameters, including motor revolutions per minute, refrigerant, condensing temperature, and evaporative temperature.

Assessing Various Types of Refrigerant Compressors

Refrigerant compressors are gaining high traction due to rapid expansion of food logistics, pharmaceuticals, and e-commerce industries. Allied Market Research claimed that the refrigerant compressor market is estimated to garner a revenue of \$59.7 billion by 2032. The sector accounted for \$35.1 billion in 2020 and is anticipated to exhibit a CAGR of 4.5% from 2023 to 2032. A key factor supporting this revenue growth is the surge in demand for natural refrigerants such as ammonia, propane, butane, carbon dioxide, and propylene ethylene as well as freon-based refrigerants like R134a, 1234yf, and R32. Furthermore, implementation of stringent government regulations to develop low-energy-consuming compressors and reduce the use of high-global warming potential refrigerants significantly contributes toward the industry growth.

Enquire Before Buying@ <https://www.alliedmarketresearch.com/purchase-enquiry/A09724>

Various types of refrigerant compressors are reciprocating compressors, screw compressors, scroll compressors, rotary compressors, and centrifugal compressors. Reciprocating compressors, or piston compressors, are widely used in industrial and commercial applications. Reciprocating motion of the piston is used to compress the refrigerant. Compressing gases to high pressures can be easily achieved by these compressors, thereby supporting constant operation. On the other hand, screw compressors are equipped with two meshing screws, which facilitate the compression of refrigerant, producing high pressure for a small quantity of gas.

Scroll compressors use two interleaved scrolls to compress the refrigerant, one of which is fixed and the other orbits eccentrically without rotating. Their silent operation, high efficiency, and low vibration levels make them highly reliable and ideal for use in residential and light commercial HVAC systems. Furthermore, rotary compressors comprise two rotating elements, like gears, which compress the refrigerant, whereas centrifugal compressors feature impellers or blowers that compress large amounts of gas. Using an ideal compressor among these depends on application needs, energy efficiency, and long-term cost benefits.

Danfoss's BOCK CO2 Compressor Wins Refrigeration Award

Danfoss, a Danish provider of innovative technologies, won the refrigeration award in the 2025 AHR Expo Innovation Competition for its BOCK HGX56 CO2 (R744) T compressor. The award represented innovative products featured at the International Air-Conditioning, Heating, Refrigerating Exposition in Orlando, Florida, from February 10 to 12, 2025.

The six-cylinder semi-hermetic CO2 compressor decarbonizes heating and refrigeration processes, mitigating carbon emission and lowering energy consumption without hampering performance. It offers 135kW for cooling and 360kW for heating, facilitating faster adoption of large CO2 heat pumps and industrial refrigeration systems.

Update On Demand@ <https://www.alliedmarketresearch.com/request-for->

Final Thoughts

Refrigerant compressors serve as the major component of the refrigeration system, as they play an essential role in maintaining efficiency and improving performance. With increasing focus on sustainability and enforcement of strict guidelines to minimize the use of compressors that exhibit high global warming potential, manufacturers have focused on developing advanced compressors that decarbonize heating and refrigeration processes, thus balancing sustainability with operational costs.

About Us:

Allied Market Research (AMR) is a full-service market research and business-consulting wing of Allied Analytics LLP based in Portland, Oregon. Allied Market Research provides global enterprises as well as medium and small businesses with unmatched quality of "Market Research Reports" and "Business Intelligence Solutions." AMR has a targeted view to provide business insights and consulting to assist its clients to make strategic business decisions and achieve sustainable growth in their respective market domain.

We are in professional corporate relations with various companies and this helps us in digging out market data that helps us generate accurate research data tables and confirms utmost accuracy in our market forecasting. Allied Market Research CEO Pawan Kumar is instrumental in inspiring and encouraging everyone associated with the company to maintain high quality of data and help clients in every way possible to achieve success. Each and every data presented in the reports published by us is extracted through primary interviews with top officials from leading companies of domain concerned. Our secondary data procurement methodology includes deep online and offline research and discussion with knowledgeable professionals and analysts in the industry.

Contact us:

United States

1209 Orange Street,
Corporation Trust Center,
Wilmington, New Castle,
Delaware 19801 USA.

Int'l: +1-503-894-6022

Toll Free: +1-800-792-5285

Fax: +1-800-792-5285

help@alliedmarketresearch.com

Construction blog <https://vijayconma.medium.com/>

Construction News: <https://sites.google.com/view/conmavijay/home>

David Correa

Allied Market Research

+1 800-792-5285

[email us here](#)

Visit us on social media:

[LinkedIn](#)

[Facebook](#)

[YouTube](#)

[X](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/841158237>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.