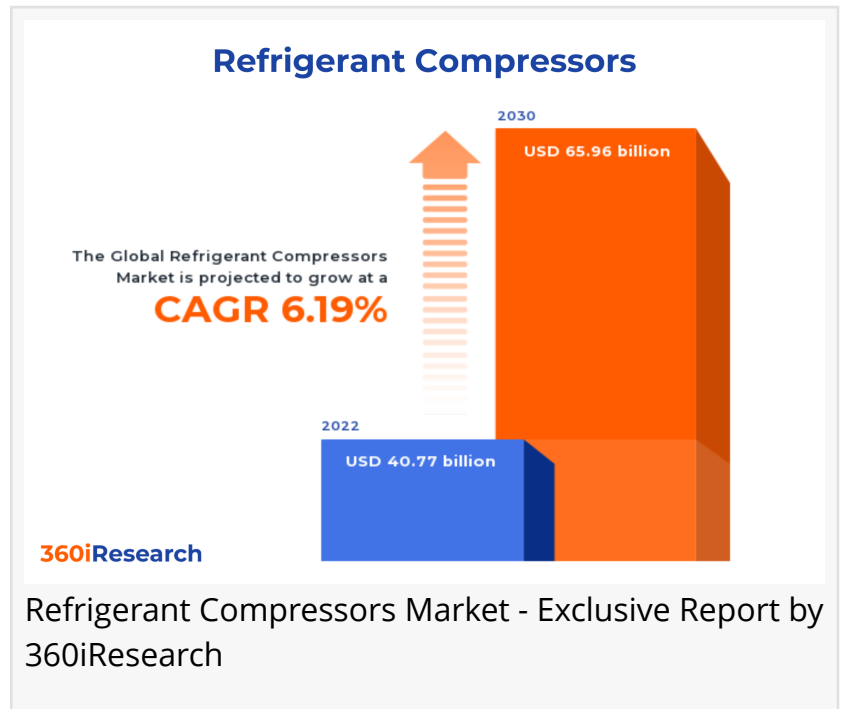


Refrigerant Compressors Market worth \$65.96 billion by 2030 - Exclusive Report by 360iResearch

The Global Refrigerant Compressors Market to grow from USD 40.77 billion in 2022 to USD 65.96 billion by 2030, at a CAGR of 6.19%.

PUNE, MAHARASHTRA, INDIA,
November 9, 2023 /EINPresswire.com/
-- The "[Refrigerant Compressors Market](#) by Compressor Type (Centrifugal Compressors, Reciprocating Compressors, Rotary Vane Compressors), Construction Type (Hermetic, Open, Semi-hermetic), Cooling Capacity, Refrigerant Used, Application - Global Forecast 2023-2030" report has been added to 360iResearch.com's offering.



The Global Refrigerant Compressors Market to grow from USD 40.77 billion in 2022 to USD 65.96 billion by 2030, at a CAGR of 6.19%.

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A refrigerant compressor is a crucial component of a refrigeration or air conditioning system designed to increase the pressure and temperature of the refrigerant gas. This system is an integral part of various industries, such as heating, ventilation, air conditioning (HVAC), automotive, commercial, and industrial refrigeration. In HVAC systems installed in residential and commercial buildings, the efficient operation of refrigerant compressors is essential for energy conservation and optimizing cooling capacities. Innovations in electric vehicle (EV) technology have propelled advancements in compressor systems designed specifically for EVs. However, the high initial cost of energy-efficient compressors may deter potential buyers from adopting these products. The stringent quality standards regarding compressors impact the development phase

of the products. Market players are working on understanding the changing quality regulations while introducing cost-efficient models to enable easy utilization of refrigerant compressors. Additionally, manufacturers are exploring the Internet of Things (IoT) enabled HVAC systems as more consumers demand smart appliances with remote monitoring capabilities and predictive maintenance features.

Refrigerant Used: Growing emphasis on an eco-friendly refrigerant alternative

Refrigerant compressors are crucial components in air-conditioning and refrigeration systems, with the choice of refrigerant significantly impacting efficiency and leading to environmental consequences. CO₂ (R744) has emerged as an eco-friendly alternative owing to low global warming potential (GWP) and zero ozone depletion potential (ODP). One significant advantage of using CO₂ as a refrigerant is its excellent heat transfer properties, contributing to higher energy efficiency. R290 (Propane) is another green option characterized by low GWP and zero ODP. Its thermodynamic properties suit commercial and residential air-conditioning systems and refrigeration applications such as walk-in coolers. Reduced discharge temperatures also improve compressor lifespan. R410A is commonly used in residential, commercial, and industrial air-conditioning systems despite its moderate GWP of 2088. It exhibits excellent thermodynamic performance characteristics, contributing to energy efficiency while being non-flammable for safer applications. CO₂ and R290 offer superior environmental performance, and R410A provides reliable operational performance but faces regulatory challenges. Ongoing innovation from major manufacturers enhances the efficiency and sustainability of compressors across applications.

Construction Type: Increasing demand for open compressors for larger-scale cold storage applications

Refrigerant compressors are vital components in cooling systems and are classified into hermetic, open, and semi-hermetic compressors based on construction types. Hermetic compressors, also known as sealed compressors, are designed with the motor and compressor elements enclosed within a single welded casing. This design increases reliability while reducing the potential for refrigerant leakage and makes it ideal for residential and small-scale commercial applications such as air conditioning systems and refrigerators. Open compressors comprise separate motor and compressor units connected by a shaft seal assembly, allowing easier maintenance and repair due to accessible individual components. These compressors are utilized in large-scale industrial settings such as supermarkets or cold storage facilities owing to their higher cooling capacities. Semi-hermetic compressors combine features of both hermetic and open designs, as the motor and compressor components are enclosed within a bolted casing that can be opened for maintenance or repair. They offer improved accessibility compared to hermetic compressors while maintaining a sealed environment to prevent refrigerant leakage. Semi-hermetic compressors are commonly used in medium-scale commercial applications such as supermarkets, hotels, and data centers.

Compressor Type: Centrifugal compressors to face exponential demand from large-scale industrial sectors

Centrifugal compressors are preferred for large-scale commercial and industrial cooling applications due to their increased efficiency at high flow rates and low noise levels. Reciprocating compressors are widely used in small to medium-sized residential and commercial cooling systems for their reliability, durability, and adaptability to varying loads. Rotary vane compressors are ideal for low-capacity refrigeration systems, such as small commercial and residential air conditioners, due to their compact size and quiet operation. Screw compressors are suitable for medium to large cooling capacities in industrial and commercial applications due to their energy efficiency and ability to handle high load fluctuations. Scroll compressors are highly preferred in residential and light commercial applications owing to their high efficiency at part-load conditions, low noise levels, and minimal maintenance requirements.

Application: Increasing utilization of eco-friendly refrigerant compressors for energy-efficient operations in industries and commercial activities

Refrigerant compressors are employed in various commercial sectors, including retail, hospitality, healthcare, and office spaces. In industrial applications, such as food processing plants or petrochemical factories, refrigerator compressors cater to large-scale cooling needs where extreme precision and high capacity are necessary requirements. In residential applications, refrigerant compressors are commonly found in household air conditioning systems or heat pumps that provide comfort and convenience for occupants. The primary concern in this sector is energy efficiency, low noise emissions, and affordability.

Cooling Capacity: Growing demand for less than 100 kW cooling capacity compressors
The refrigerant compressor market is segmented based on cooling capacity into three categories, including 100 - 400 kW, above 400 kW, and Less than 100 kW. Refrigerant compressors with 100 - 400 kW cooling capacity cater to medium-sized industrial facilities, large commercial buildings, data centers, and manufacturing plants. Compressors with a cooling capacity exceeding 400 kW are used in large-scale industrial processes such as chemical plants or steel mills needing heavy-duty cooling systems, district cooling networks, or mega infrastructure projects such as airports or sports stadiums. The less than 100 kW cooling capacity segment caters to small-scale commercial applications such as restaurants, supermarkets, or residential air conditioning systems.

Regional Insights:

In the Americas, demand for refrigerant compressors is driven predominantly by the heating, ventilation, air conditioning (HVAC), and refrigeration equipment utilization in residential and commercial sectors. Regulatory measures such as the U.S. Environmental Protection Agency's (EPA) SNAP program have encouraged manufacturers to develop more environmentally friendly refrigerant compressor technologies as energy efficiency becomes increasingly important in North America. Asia represents a rapidly growing market for refrigerant compressors due to ongoing industrialization activities. The Asian market is characterized by intense competition among local manufacturers and international players with established production facilities in countries such as Japan and China. The European refrigerant compressors market is characterized by its focus on energy efficiency, stringent regulatory policies, and demand for

technologically advanced compressor solutions. This region strongly emphasizes sustainable practices, with countries including Germany, France, Italy, and the United Kingdom leading the way in adopting green technologies for HVAC systems.

FPNV Positioning Matrix:

The FPNV Positioning Matrix is essential for assessing the Refrigerant Compressors Market. It provides a comprehensive evaluation of vendors by examining key metrics within Business Strategy and Product Satisfaction, allowing users to make informed decisions based on their specific needs. This advanced analysis then organizes these vendors into four distinct quadrants, which represent varying levels of success: Forefront (F), Pathfinder (P), Niche (N), or Vital(V).

Market Share Analysis:

The Market Share Analysis offers an insightful look at the current state of vendors in the Refrigerant Compressors Market. By comparing vendor contributions to overall revenue, customer base, and other key metrics, we can give companies a greater understanding of their performance and what they are up against when competing for market share. The analysis also sheds light on just how competitive any given sector is about accumulation, fragmentation dominance, and amalgamation traits over the base year period studied.

Key Company Profiles:

The report delves into recent significant developments in the Refrigerant Compressors Market, highlighting leading vendors and their innovative profiles. These include Atlas Copco AB, Baker Hughes Company, BITZER Kühlmaschinenbau GmbH, Burckhardt Compression AG, Carrier Global Corporation, Daikin Industries, Ltd., Danfoss A/S, Dunham-Bush Holding Bhd, Emerson Electric Co., GEA Group AG, Hanbell Precise Machinery Co. Ltd., Hangzhou Qianjiang Refrigeration Group Co.Ltd., Hitachi, Ltd., Huayi Compressor Co.,Ltd., Hubei Donper Electromechanical Group Co., Ltd, Ingersoll Rand Inc., Jiaxipera Compressor Co.Ltd., Johnson Controls International PLC, Kirloskar Pneumatic Company Limited, Kulthorn Kirby Company Limited, LG Corporation, Midea Group Co., Ltd., Mitsubishi Heavy Industries, Ltd., Mueller Industries, Nidec Corporation, Officine Mario Dorin S.p.A., Panasonic Holdings Corporation, Robert Bosch GmbH, Samsung Electronics Co., Ltd., Siemens AG, and Tecogen, Inc..

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Market Segmentation & Coverage:

This research report categorizes the Refrigerant Compressors Market in order to forecast the revenues and analyze trends in each of following sub-markets:

Based on Compressor Type, market is studied across Centrifugal Compressors, Reciprocating Compressors, Rotary Vane Compressors, Screw Compressors, and Scroll Compressors. The Centrifugal Compressors commanded largest market share of 25.21% in 2022, followed by Reciprocating Compressors.

Based on Construction Type, market is studied across Hermetic, Open, and Semi-hermetic. The Hermetic commanded largest market share of 44.09% in 2022, followed by Open.

Based on Cooling Capacity, market is studied across 100 - 400 kw, Above 400 kw, and Less than 100 kW. The 100 - 400 kw commanded largest market share of 43.54% in 2022, followed by Above 400 kw.

Based on Refrigerant Used, market is studied across CO2, R290, and R410A. The R290 commanded largest market share of 34.34% in 2022, followed by R410A.

Based on Application, market is studied across Commercial, Industrial, and Residential. The Industrial is further studied across Chemical, Food & Beverages, Logistics & Transportation, and Pharmaceuticals. The Industrial commanded largest market share of 43.23% in 2022, followed by Commercial.

Based on Region, market is studied across Americas, Asia-Pacific, and Europe, Middle East & Africa. The Americas is further studied across Argentina, Brazil, Canada, Mexico, and United States. The United States is further studied across California, Florida, Illinois, New York, Ohio, Pennsylvania, and Texas. The Asia-Pacific is further studied across Australia, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. The Europe, Middle East & Africa is further studied across Denmark, Egypt, Finland, France, Germany, Israel, Italy, Netherlands, Nigeria, Norway, Poland, Qatar, Russia, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, and United Kingdom. The Europe, Middle East & Africa commanded largest market share of 39.11% in 2022, followed by Asia-Pacific.

Key Topics Covered:

1. Preface
2. Research Methodology
3. Executive Summary
4. Market Overview
5. Market Insights
6. Refrigerant Compressors Market, by Compressor Type
7. Refrigerant Compressors Market, by Construction Type
8. Refrigerant Compressors Market, by Cooling Capacity
9. Refrigerant Compressors Market, by Refrigerant Used
10. Refrigerant Compressors Market, by Application

11. Americas Refrigerant Compressors Market
12. Asia-Pacific Refrigerant Compressors Market
13. Europe, Middle East & Africa Refrigerant Compressors Market
14. Competitive Landscape
15. Competitive Portfolio
16. Appendix

The report provides insights on the following pointers:

1. Market Penetration: Provides comprehensive information on the market offered by the key players
2. Market Development: Provides in-depth information about lucrative emerging markets and analyzes penetration across mature segments of the markets
3. Market Diversification: Provides detailed information about new product launches, untapped geographies, recent developments, and investments
4. Competitive Assessment & Intelligence: Provides an exhaustive assessment of market shares, strategies, products, certification, regulatory approvals, patent landscape, and manufacturing capabilities of the leading players
5. Product Development & Innovation: Provides intelligent insights on future technologies, R&D activities, and breakthrough product developments

The report answers questions such as:

1. What is the market size and forecast of the Refrigerant Compressors Market?
2. Which are the products/segments/applications/areas to invest in over the forecast period in the Refrigerant Compressors Market?
3. What is the competitive strategic window for opportunities in the Refrigerant Compressors Market?
4. What are the technology trends and regulatory frameworks in the Refrigerant Compressors Market?
5. What is the market share of the leading vendors in the Refrigerant Compressors Market?
6. What modes and strategic moves are considered suitable for entering the Refrigerant Compressors Market?

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