

Magnetic Refrigeration Market by Product ((Refrigeration Systems (Beverage Cooler, Cabinet Display, Refrigerator), Air Conditioning Systems)), Application (Domestic, Commercial, Transportation, and Industrial), and Geography - Global Forecast to 2027

<https://marketpublishers.com/r/M05BB8D9223EN.html>

Date: October 2020

Pages: 175

Price: US\$ 4,950.00 (Single User License)

ID: M05BB8D9223EN

Abstracts

The magnetic refrigeration market is expected to be commercialized by 2022 at USD 4 million, and it is expected to grow at a CAGR of 105.4 % from 2022 to 2027 to reach USD 165 million by 2027. One of the advantages of the magnetic refrigeration system is the compactness where solid substances are used as working materials and thus do not occupy a prominent place. This also reduces maintenance costs to a great extent and ensures smooth functioning. Secondly, magnetic refrigeration has higher energy efficiency than conventional refrigerators—the attainable efficiency of the former is in the range of 30–60% while that of the latter, according to a Carnot cycle, is only 5–10%.

High initial investment and limited field strength of permanent magnets are expected to restrain the growth of the magnetic refrigeration market. Moreover, the need for suitable magnetocaloric materials and lack of awareness of benefits of magnetic refrigeration technology acts as challenges to the market growth.

The magnetic refrigeration technology comes with several advantages in order to attain sustainable change, which is environmentally friendly. Despite its advantages, this technology is still mostly in the development phase and is yet to be commercialized. Once a clean energy technology is created and has been determined to have the potential of a strong market competitor, the focus shifts toward establishing the market by building product awareness and demand. Early adopters may already be eager to

purchase the technology once it hits the market, but considerable efforts will be needed to expand the market to the average consumer, who is naturally reluctant to change. Therefore, it is very important to raise public awareness regarding the technological, energy-saving, and environmental benefits of magnetic refrigeration.

“Refrigeration System: The largest shareholder of the product segment of magnetic refrigeration market.”

Refrigeration system is expected to be the major contributor to the magnetic refrigeration market since companies such as Ubiblu (France), BASF SE (Germany), Camfridge Ltd. (UK), VACUUMSCHMELZE GmbH & Co. KG (Germany), and Magnotherm Solutions (Germany) are expected to come up with products such as beverage coolers and cabinet displays in next few years. The demand is also likely to be driven by players focusing on entering the market with refrigeration systems. Magnetic refrigeration systems do not use compressors and refrigerants; therefore, they have reduced operational and maintenance expenses, along with increased energy efficiency. Many countries are focusing on phasing out environmentally harmful refrigerants such as HCFCs. Products for air conditioning systems are expected to be commercialized in 2023. Improved energy efficiency, environmental compatibility, and safety are the most important features of the magnetic refrigeration technology that are expected to drive the market and enable its adoption in a wide range of products.

“Commercial: The largest application segment of the magnetic refrigeration market.”

The commercial application includes places that are used for business, such as offices, malls, and shops. This sector is poised to grow significantly in the coming years with the commercialization of magnetic refrigeration technology. From a technological point of view, magnetic refrigeration is a clean technology that has revolutionized cooling systems, and it needs to be available in the market. There are various potential applications of magnetic refrigeration systems. Initial developments have been orientated toward the commercial and domestic refrigeration markets, and include display cases, beverage coolers, and commercial or domestic fridges.

“Europe: The largest-growing region in the global magnetic refrigeration market.”

Europe is expected to be the largest market for magnetic refrigeration technology due to the increased awareness about global warming and ozone-depleting refrigerants. The presence of major players in the region that are involved in the magnetic refrigeration technology, such as Ubiblu (France), BASF SE (Germany), and Camfridge Ltd. (UK),

is also one of the reasons behind the growth of the European market. These companies are initially focusing on local customers to sell their products and gradually create awareness among global customers. The growing market for packaged food and the rising concern for environmental issues are also expected to drive the European market.

The study contains insights from various industry experts, ranging from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type: Tier 1 – 40%, Tier 2 – 25%, and Tier 3 – 35%

By Designation: C-level Executives – 35%, Directors – 28%, and Others – 37%

By Region: Europe – 45%, North America – 40%, APAC – 10%, and RoW – 5%

Ubiblu (France), Haier Smart Home Co., Ltd (China), Camfridge Ltd (UK), Astronautics Corporation of America (US), VACUUMSCHMELZE GmbH & Co. KG (Germany), BASF SE (Germany), ERAMET (France), Samsung Electronics Co., Ltd (South Korea), Toshiba Corporation (Japan), Whirlpool Corporation (US), MagnoTherm Solutions (Germany), Millipore Sigma (US), General Engineering and Research (US), KIRSCH (Germany), CCS SA (Switzerland), TCS Micropumps Ltd (UK), Kiutra (Germany) and Cemafrid (France) are among a few of the key players in the magnetic refrigeration market.

Research Coverage:

The report segments the magnetic refrigeration market and forecasts its size, by value, based on Product (Refrigeration System and Air Conditioning System), and by Application (Commercial, Domestic, Transportation and Industrial) and region (Asia Pacific, Europe, North America, and RoW),.

The report also provides a comprehensive review of market drivers, restraints, opportunities, and challenges in the magnetic refrigeration market. The report also covers qualitative aspects in addition to the quantitative aspects of these markets.

Key Benefits of Buying the Report

The report will help the leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall market and the sub-

segments. This report will help stakeholders and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the fingerprint sensor market and provides them information on key market drivers, restraints, challenges, and opportunities. Report covers COVID-19 impact on overall refrigeration industry.

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(Business Overview, Products/Solutions/Services Offered, Recent Developments, SWOT Analysis, and MnM View)*

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12.2.3 CAMFRIDGE LTD

12.2.4 ASTRONAUTICS CORPORATION OF AMERICA

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FIGURE 50 SAMSUNG ELECTRONICS CO., LTD: COMPANY SNAPSHOT

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FIGURE 51 TOSHIBA CORPORATION: COMPANY SNAPSHOT

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FIGURE 52 WHIRLPOOL CORPORATION: COMPANY SNAPSHOT

*Business Overview, Products/Solutions/Services Offered, Recent Developments, SWOT Analysis, and MnM View might not be captured in case of unlisted companies.

12.3 RIGHT TO WIN

12.4 OTHER KEY PLAYERS

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