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# Blood Bank And Plasma Freezer Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Type (2° to 6° and -20° to -40°), By Application (Hospitals, Blood Bank, Others), By Region & Competition, 2021-2031F

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## Abstracts

The Global Blood Bank And Plasma Freezer Market is projected to expand from USD 99.41 Million in 2025 to USD 139.51 Million by 2031, reflecting a compound annual growth rate (CAGR) of 5.81%. These specialized refrigeration systems are essential for storing whole blood, plasma, and blood components at precisely controlled temperatures, ensuring biological viability and adherence to regulatory standards. The market's growth is primarily fueled by the increasing demand for blood products for complex surgeries, trauma cases, and the rising incidence of chronic hematological disorders. Furthermore, the expansion of healthcare services, particularly into emergency mobile settings, is driving the need for robust storage infrastructure, as evidenced by America's Blood Centers (2024) report of a near doubling in community blood center participation in prehospital blood programs. However, a significant obstacle to market growth is the substantial capital and operational costs associated with medical-grade refrigeration units. Smaller healthcare facilities often struggle with the financial burden of acquiring these energy-intensive systems while maintaining strict biological safety standards. This economic constraint, coupled with the technical demands of ensuring precise temperature uniformity to prevent spoilage, limits the wider adoption of these critical storage solutions, especially in resource-constrained environments.

### Market Driver

The escalating prevalence of chronic diseases acts as a primary catalyst, significantly boosting the demand for reliable cold storage solutions. As the incidence of

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hematological malignancies increases, there is a corresponding rise in the need for transfusion therapies, which necessitates the long-term preservation of whole blood and red blood cells in compliant refrigeration units. This trend compels hospitals to upgrade their storage capacities to manage higher inventory turnover and prevent the spoilage of crucial biological materials, with the American Cancer Society (January 2024) projecting new U.S. cancer cases to surpass 2 million for the first time, intensifying pressure on blood banking infrastructure. Concurrently, the rapidly expanding sector of plasma-derived biopharmaceuticals is broadening the utility of plasma freezers. Pharmaceutical companies are scaling operations to address therapeutic needs for immunodeficiencies, requiring the rapid freezing of source plasma at ultra-low temperatures to preserve protein integrity. This industrial expansion directly correlates with increased procurement orders for high-capacity, medical-grade freezers capable of maintaining stable thermal environments, a trend supported by Takeda's (May 2024) report of an approximately 14% year-on-year increase in plasma supply volume. The scarcity of these vital resources, underscored by the American Red Cross (2024) noting a 20-year low in blood donations, further amplifies the need for optimal preservation of every collected unit.

**Market Challenge**

The high capital and operational costs associated with medical-grade refrigeration systems present a substantial impediment to the expansion of the Global Blood Bank and Plasma Freezer Market. Unlike standard refrigeration, these specialized units require advanced engineering to ensure strict temperature uniformity and fail-safe reliability, which significantly inflates their initial procurement price. This poses a considerable barrier for budget-constrained healthcare institutions, particularly smaller community hospitals and rural clinics that frequently operate on tight financial margins. The ongoing expenses related to energy consumption and maintenance further compound this burden, often forcing facilities to prioritize immediate clinical supplies over essential infrastructure investments. Consequently, this financial strain directly curtails market volume as institutions are compelled to delay replacing aging equipment or forego necessary expansions. According to the American Hospital Association (2025), 94 percent of healthcare administrators anticipated delaying equipment upgrades to manage financial pressures. This widespread reluctance to invest in new technology decelerates the adoption rate of modern freezer systems, irrespective of the growing clinical requirement for increased storage capacity. As a direct result, the market experiences dampened growth momentum in regions where healthcare funding struggles to keep pace with the rising costs of crucial medical hardware.

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## Market Trends

The market is undergoing a significant transformation driven by the Transition to Sustainable Low-GWP Natural Refrigerants, as manufacturers increasingly prioritize environmental compliance and seek to reduce operational costs. This trend is a response to stringent regulations phasing out hydrofluorocarbons (HFCs) and the critical need for energy-efficient mechanisms within the power-intensive medical cold chain. Modern units are now incorporating hydrocarbon-based cooling systems and variable speed compressors, designed to minimize ecological footprints while consistently maintaining precise thermal stability for sensitive biological materials. For instance, Haier Biomedical (November 2025) highlighted that its UltraEco ULT Freezer achieved a daily energy consumption of merely 4.16 kWh, ranking it highest in U.S. ENERGY STAR and reducing annual carbon emissions by approximately 2,269 kg compared to conventional models. Concurrently, the Implementation of Automated Robotic Sample Retrieval Solutions is gaining traction to manage the complexities of massive biobank and plasma inventories more effectively. High-volume biorepositories are increasingly adopting automated, high-density storage systems to eliminate human error, minimize frost exposure during retrieval, and substantially boost operational throughput. This advanced technology ensures sample integrity by limiting ambient air exposure and streamlines the tracking of millions of distinct biological specimens. Azenta, Inc. (January 2025) announced that a UK Biocentre selected its BioArc Ultra Automated Storage System, which expands storage capacity by 16 million samples and supports a high-speed retrieval capability of up to 9 million picks per year.

## Key Market Players

Biobase Biodusty(Shandong), Co., Ltd.

Fiocchetti Scientific S.R.L.

Infitek Co., Ltd.

Zhongke Meiling Cryogenics Co.,Ltd

Newtronic Lifecare Equipment Pvt Ltd

NuAire, Inc

Thermo Fisher Scientific Inc.

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Synnovis Group LLP

F. Hoffmann-La Roche Ltd.

Beckman Coulter, Inc.

**Report Scope**

In this report, the Global Blood Bank And Plasma Freezer Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Blood Bank And Plasma Freezer Market, By Type

2° to 6°

-20° to -40°

Blood Bank And Plasma Freezer Market, By Application

Hospitals

Blood Bank

Others

Blood Bank And Plasma Freezer Market, By Region

North America

United States

Canada

Mexico

Europe

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France

United Kingdom

Italy

Germany

Spain

Asia Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

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## Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Blood Bank And Plasma Freezer Market.

## Available Customizations:

Global Blood Bank And Plasma Freezer Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

## Company Information

Detailed analysis and profiling of additional market players (up to five).

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