

Cryogenic Market Growth Driven by LNG Demand & Industrial Applications | DataM Intelligence

The global cryogenic market is expanding with rising LNG trade, healthcare applications, and industrial gas demand. U.S. and Asia-Pacific lead adoption.

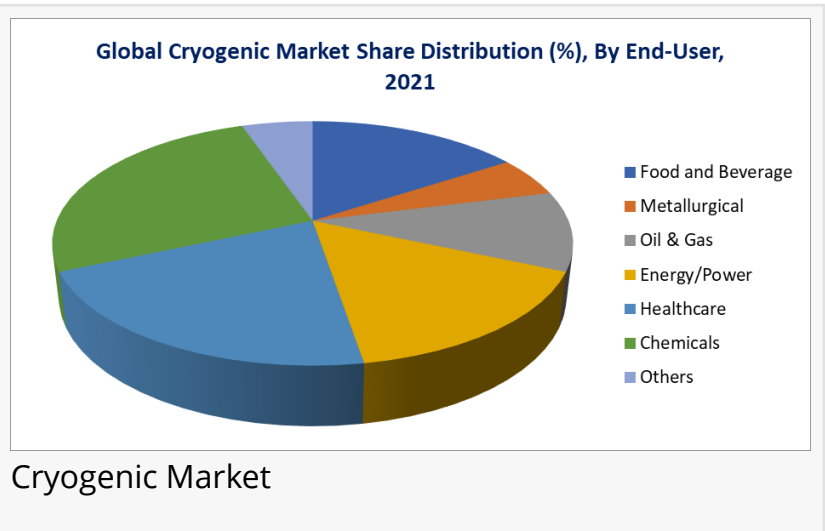
NEW YORK, NY, UNITED STATES,
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EINPresswire.com/ -- The global

[cryogenic market](#) is poised for significant expansion, fueled by

intensifying demand for clean energy, advanced industrial applications, and technological innovations that support

ultra-low-temperature storage and transportation. From liquefied natural gas (LNG) to hydrogen, medical, and manufacturing uses, cryogenic technologies are at the epicenter of the transition toward sustainability and high-performance materials management across major industries.



Global Market Outlook and Growth Projections

The cryogenic equipment market was valued at approximately USD 23.99 billion in 2024 and is projected to reach nearly USD 38.23 billion by 2032, reflecting a healthy CAGR of 5.7% from 2025 to 2032. This robust growth is driven by greater adoption in LNG storage and transportation, increased use of industrial gases, expanding energy needs, and rising investments in healthcare, electronics, and biotechnology sectors. Modern cryogenic systems enable efficient and reliable storage, distribution, and handling of gases and liquids at extremely low temperatures, supporting new energy solutions such as hydrogen fuel and renewable energy storage.

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<https://www.datamintelligence.com/download-sample/cryogenic-market>

Market Drivers and Industry Trends

- Sustainability and Energy Transition: The shift toward LNG and green hydrogen for clean energy

solutions is a primary growth catalyst. Cryogenic storage and safe transport are crucial for these gases, especially as governments worldwide enforce stricter emissions and sustainability regulations.

- **Technological Innovation:** Advances such as automation, improved insulation, specialized cryogenic valves, and smart process monitoring are driving the adoption of cryogenic systems in sectors ranging from aerospace (cryocoolers, rocket fuel) to medical (biobanking, cryotherapy) and semiconductor manufacturing.
- **Industrial Expansion:** Growing demand for industrial gases in energy, power, chemicals, shipping, food and beverage, and metallurgy boosts cryogenic equipment deployment.
- **Healthcare Investments:** Booming demand for medical-grade gases and cryogenic storage for biologics, vaccines, and stem cells is a significant contributor to market growth, particularly in North America and Europe.
- **Enhanced Operational Safety and Efficiency:** Industry standards for energy efficiency, emission reduction, and safety compliance are accelerating innovation and broadening application across end-user segments.

Regional Analysis: Asia-Pacific Leads, Europe and North America Follow

Asia-Pacific is the dominant region in the global cryogenic market, driven by its leadership in tire, chemical, energy, and manufacturing industries, as well as increased production and infrastructure buildouts in China, India, Japan, and South Korea. The region benefits from robust government support for clean energy and recycling initiatives, high urbanization, and growing LNG and hydrogen production capacity.

- **North America** commands a significant share, supported by established aerospace, healthcare, and LNG industries, along with rapid adoption of advanced cryogenic solutions for energy and medical applications.
- **Europe** emphasizes clean energy adoption, hydrogen infrastructure, and sustainable manufacturing, fostering innovation in cryogenic insulation and storage for LNG and renewables.

Market Challenges and Opportunities

- **Quality and Cost Concerns:** High capital costs, ongoing maintenance needs, and the necessity for specialized handling and operational expertise can hinder market uptake, especially among smaller enterprises.
- **Standardization and Regulatory Hurdles:** Achievement of uniform quality, performance, and emission standards remains essential for broader commercialization and export opportunities for cryogenic equipment.
- **Emerging Opportunities:** The development of green hydrogen projects, next-gen LNG storage systems, semiconductor manufacturing, and pharmaceutical cryopreservation opens new avenues for sustained growth and value creation.
- **Shift to Sustainable Solutions:** Innovations in lightweight, high-strength materials, improved insulation, automation, and digital monitoring are enhancing system performance and

operational cost-efficiency, paving the way for broader adoption.

Key Players Shaping the Cryogenic Market

Market dynamics are being driven by industry leaders such as Air Liquide, Linde plc, Chart Industries, Cryolor, Taylor-Wharton, and emerging regional players in Asia who are advancing the field with cutting-edge technologies and strategic partnerships. Chinese companies like CIMC Enric and Chengdu Qianjiang Cryogenic Equipment hold strong positions in global supply chains. Australian, European, and North American firms are focusing on LNG, green hydrogen, and specialized medical and transportation solutions.

United States: Recent Industry Developments

- In September 2025, Air Products expanded its cryogenic storage and processing facilities in Texas to support LNG exports and industrial gas applications.
- In August 2025, Chart Industries launched next-gen cryogenic storage tanks with enhanced insulation for energy and healthcare applications.
- In July 2025, Linde U.S. partnered with aerospace firms to develop cryogenic systems for space exploration and rocket fuel storage.
- In June 2025, Cryogenic Industries (Nikkiso Group) expanded its U.S. manufacturing facilities for cryogenic pumps and vaporizers.
- In May 2025, Praxair (Linde plc) deployed cryogenic technologies for hydrogen fueling stations, enabling clean mobility initiatives.

Europe: Recent Industry Developments

- In September 2025, Linde Europe commissioned a large-scale cryogenic air separation unit (ASU) in Germany to supply oxygen and nitrogen to industries.
- In August 2025, Air Liquide France expanded its cryogenic storage capacity to meet demand in pharmaceuticals and biobanking.
- In July 2025, Messer Group (Germany) launched advanced cryogenic freezing solutions for the European food industry.
- In June 2025, Cryostar France delivered cryogenic turbo-expanders for LNG liquefaction projects in Europe.
- In May 2025, the European Space Agency (ESA) tested cryogenic propulsion systems for next-generation space missions.

Asia-Pacific: Recent Industry Developments

- In September 2025, INOX India commissioned cryogenic storage tanks for LNG terminals to support clean energy adoption.
- In August 2025, China National Offshore Oil Corporation (CNOOC) expanded its cryogenic LNG infrastructure to strengthen natural gas supply.

- In July 2025, Mitsubishi Heavy Industries Japan advanced cryogenic systems for hydrogen liquefaction, supporting Japan's hydrogen economy.
- In June 2025, Kawasaki Heavy Industries developed cryogenic storage and transportation technologies for liquefied hydrogen carriers.
- In May 2025, Hyundai Heavy Industries South Korea delivered cryogenic storage solutions for LNG-powered vessels.

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Conclusion

The cryogenic market stands at a compelling intersection of sustainability, industrial innovation, and global energy transition. As technology advances and regulatory frameworks evolve, cryogenic systems will become increasingly vital to a wide array of sectors—from energy and chemicals to healthcare and food ensuring efficient, safe, and sustainable management of materials at ultra-low temperatures. With Asia-Pacific spearheading supply and demand, and global giants investing in advanced technologies, the market is positioned for robust, long-term growth as a critical enabler of the circular and clean economy.

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[Petrochemicals market size](#) is estimated to reach USD million by 2031, growing at a CAGR of 6% during the forecast period 2024-2031.

The Global [Small Scale LNG Market size](#) was worth US\$ 46.25 billion in 2023 and is estimated to reach US\$ 120.61 billion by 2031, growing at a CAGR of 13.77% during the forecast period (2024-2031).

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