

Arterial Filter Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

<https://marketpublishers.com/r/AA69B7DF10F8EN.html>

Date: May 2025

Pages: 120

Price: US\$ 4,850.00 (Single User License)

ID: AA69B7DF10F8EN

Abstracts

The Global Arterial Filter Market was valued at USD 754.1 million in 2024 and is estimated to grow at a CAGR of 7.1% to reach USD 1.5 billion by 2034. This market expansion is primarily driven by the rising incidence of cardiovascular diseases, the increasing number of cardiothoracic surgeries, technological advancements in filter designs, and growing healthcare investments. The heightened focus on patient safety and the adoption of strict surgical protocols further contribute to the demand for arterial filters. These filters help reduce embolic complications during extracorporeal circulation, and their use is supported by regulatory bodies like the FDA and EMA, ensuring their integration into standard medical practices.

Arterial filters are essential medical devices used during cardiopulmonary bypass (CPB) and extracorporeal membrane oxygenation (ECMO) to remove air bubbles, blood clots, and microemboli from the blood before it is returned to the patient's arterial system. These filters help reduce the risk of embolism and organ damage, which is crucial during cardiac surgeries and other critical care procedures. As the industry grows, innovations in filter design, the shift towards minimally invasive surgeries, and advancements in biocompatible and hemocompatible materials are fueling the expansion of the arterial filter market. The demand for customization, along with the rise of disposable filter solutions, further strengthens the market's growth potential.

The polypropylene segment is anticipated to see significant growth, growing at a CAGR of 7% and reach USD 633.9 million by 2034. Polypropylene (PP) is highly valued for its resistance to chemicals and high temperatures, making it ideal for use in high-stress environments such as cardiopulmonary bypass. Its stability at varying temperatures, alongside its biocompatibility, ensures it does not interfere with the body's natural processes. This material's ability to reduce thrombosis and inflammation during

extracorporeal circulation is expected to drive the segment's growth.

The 100–200 mL segment is expected to grow at a CAGR of 6.9% to reach USD 869.2 million by 2034. These filters provide an optimal balance between filtration efficiency and hemodilution, making them suitable for adult surgeries. They are beneficial in preserving the patient's blood volume while reducing the need for donor blood transfusions. These filters have improved microbubble and air venting capabilities, which are essential for maintaining patient safety and ensuring high surgical standards. Their design minimizes blood flow resistance, further enhancing their demand in cardiac surgeries, particularly in adult cases, which dominate the global cardiac surgery market.

U.S. Arterial Filter Market accounted for USD 276.5 million in 2024. The country's advanced healthcare system and state-of-the-art surgical infrastructure have made it a key player in the arterial filter market. A highly trained medical workforce and a high volume of complex cardiac surgeries contribute to the ongoing demand for arterial filters in U.S. hospitals, driving the market's growth.

Prominent companies operating in the Global Arterial Filter Market include: Medtronic, GETINGE, SENKO Medical Instrument, Braile Biomédica, Pall Corporation, LivaNova, Lifeline Systems, EUROSETS, NIPRO, Gen World Medical Devices, TERUMO, and Beijing MEDOS AT Biotechnology. In the arterial filter market, companies are implementing several strategies to enhance their market position. They are focusing on the development of advanced, customized products that meet specific surgical needs, thereby differentiating their offerings. Additionally, many companies are investing in the research and development of materials that improve filter performance, such as biocompatible and hemocompatible options, to meet the growing demand for safer, more effective devices. Partnerships with hospitals and healthcare providers are also crucial, allowing manufacturers to integrate their filters into standard surgical practices.

Companies Mentioned

Beijing MEDOS AT Biotechnology, Braile Biomédica, EUROSETS, Gen World Medical Devices, GETINGE, Lifeline Systems, LivaNova, Medtronic, NIPRO, Pall Corporation, SENKO Medical Instrument, TERUMO

Contents

CHAPTER 1 METHODOLOGY AND SCOPE

- 1.1 Market scope and definitions
- 1.2 Market scope and definitions
- 1.3 Research design
 - 1.3.1 Research approach
 - 1.3.2 Data collection methods
- 1.4 Data mining sources
 - 1.4.1 Global
 - 1.4.2 Regional/Country
- 1.5 Base estimates and calculations
 - 1.5.1 Base year calculation
 - 1.5.2 Key trends for market estimation
- 1.6 Primary research and validation
 - 1.6.1 Primary sources
- 1.7 Forecast model
- 1.8 Research assumptions and limitations

CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Industry 360° synopsis
- 2.2 Key market trends
 - 2.2.1 Regional trends
 - 2.2.2 Filter material trends
 - 2.2.3 Priming volume trends
 - 2.2.4 Age group trends
 - 2.2.5 Application trends
 - 2.2.6 End use trends
- 2.3 CXO perspectives: Strategic imperatives
 - 2.3.1 Key decision points for industry executives
 - 2.3.2 Critical success factors for market players

CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem analysis
- 3.2 Industry impact forces
 - 3.2.1 Growth drivers

- 3.2.1.1 Increasing prevalence of cardiovascular diseases
- 3.2.1.2 Growth in cardiopulmonary bypass procedures
- 3.2.1.3 Technological advancements in filter design
- 3.2.1.4 Rising geriatric population
- 3.2.2 Industry pitfalls and challenges
 - 3.2.2.1 High cost of cardiac surgeries and devices
 - 3.2.2.2 Risk of complications from filters
- 3.2.3 Market opportunities
 - 3.2.3.1 Development of next-gen arterial filters
 - 3.2.3.2 Growth in pediatric and neonatal cardiac surgery
- 3.3 Growth potential analysis
- 3.4 Regulatory landscape
 - 3.4.1 U.S.
 - 3.4.2 Europe
- 3.5 Technology landscape
- 3.6 Future market trends
- 3.7 Gap analysis
- 3.8 Porter's analysis
- 3.9 PESTEL analysis
- 3.10 Future market trends
- 3.11 Value chain analysis

CHAPTER 4 COMPETITIVE LANDSCAPE, 2024

- 4.1 Introduction
- 4.2 Company matrix analysis
- 4.3 Company market share analysis
 - 4.3.1 By region
 - 4.3.1.1 North America
 - 4.3.1.2 Europe
 - 4.3.1.3 Asia Pacific
- 4.4 Competitive analysis of major market players
- 4.5 Competitive positioning matrix
- 4.6 Strategy dashboard
- 4.7 Key developments
 - 4.7.1 Mergers and acquisitions
 - 4.7.2 Partnerships and collaborations
 - 4.7.3 New product launches
 - 4.7.4 Expansion plans

CHAPTER 5 MARKET ESTIMATES AND FORECAST, BY FILTER MATERIAL, 2021 — 2034 (\$ MN)

- 5.1 Key trends
- 5.2 Polypropylene
- 5.3 Polyethylene
- 5.4 Polyvinyl chloride (PVC)
- 5.5 Other filter materials

CHAPTER 6 MARKET ESTIMATES AND FORECAST, BY PRIMING VOLUME, 2021 — 2034 (\$ MN)

- 6.1 Key trends
- 6.2 Less than 100 mL
- 6.3 100–200 mL
- 6.4 More than 200 mL

CHAPTER 7 MARKET ESTIMATES AND FORECAST, BY AGE GROUP, 2021 — 2034 (\$ MN)

- 7.1 Key trends
- 7.2 Adult
- 7.3 Neonatal/ pediatric

CHAPTER 8 MARKET ESTIMATES AND FORECAST, BY APPLICATION, 2021 — 2034 (\$ MN)

- 8.1 Key trends
- 8.2 Cardiopulmonary bypass (CPB)
- 8.3 Extracorporeal membrane oxygenation (ECMO)
- 8.4 Other applications

CHAPTER 9 MARKET ESTIMATES AND FORECAST, BY END USE, 2021 — 2034 (\$ MN)

- 9.1 Key trends
- 9.2 Hospitals
- 9.3 Ambulatory surgical centers

9.4 Other end use

CHAPTER 10 MARKET ESTIMATES AND FORECAST, BY REGION, 2021 — 2034 (\$ MN)

10.1 Key trends

10.2 North America

10.2.1 U.S.

10.2.2 Canada

10.3 Europe

10.3.1 Germany

10.3.2 UK

10.3.3 France

10.3.4 Spain

10.3.5 Italy

10.3.6 Netherlands

10.4 Asia Pacific

10.4.1 China

10.4.2 Japan

10.4.3 India

10.4.4 Australia

10.4.5 South Korea

10.5 Latin America

10.5.1 Brazil

10.5.2 Mexico

10.5.3 Argentina

10.6 Middle East and Africa

10.6.1 South Africa

10.6.2 Saudi Arabia

10.6.3 UAE

CHAPTER 11 COMPANY PROFILES

11.1 Beijing MEDOS AT Biotechnology

11.2 Braille Biomédica

11.3 EUROSETS

11.4 Gen World Medical Devices

11.5 GETINGE

11.6 Lifeline Systems

11.7 LivaNova

11.8 Medtronic

11.9 NIPRO

11.10 Pall Corporation

11.11 SENKO Medical Instrument

11.12 TERUMO

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