

U.S. Aortic Valve Replacement Devices Market Size, Share & Trends Analysis Report By Product (Balloon-expandable, Self-expandable), By Leaflet Material, By Frame Material, By End Use (Inpatient Facilities, Outpatient Facilities), And Segment Forecasts, 2025 - 2033

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Abstracts

U.S. Aortic Valve Replacement Devices Market Summary

The U.S. aortic valve replacement devices market size was estimated at USD 4.08 billion in 2024 and is projected to reach USD 9.35 billion by 2033, growing at a CAGR of 9.4% from 2025 to 2033. The market is primarily driven by the increasing prevalence of aortic stenosis in an aging population and favorable clinical outcomes from surgical and transcatheter approaches.

With a growing number of patients over age 65, demand for surgical aortic valve replacement (SAVR) and transcatheter aortic valve replacement (TAVR) continues to rise. Clinical outcomes have improved significantly over the past decade, with TAVR gaining wider acceptance due to its less invasive nature and reduced recovery times. As per the article on the Southwestern Medical Center website, approximately 100,000 TAVR procedures are performed annually in the U.S and as of November 2024, the medical centre had performed more than 1,000 transcatheter aortic valve replacement (TAVR) procedures.

Innovation remains a critical driving force within this market, with a strong focus on enhancing device durability and improving delivery systems for less invasive procedures. Manufacturers are continuously investing in research and development to

extend the lifespan of prosthetic valves, which is crucial for younger patients who may live longer with their implanted devices.

Merger and acquisition is moderately high, driven by strategic efforts to gain technological advantages or market access. In July 2024, Edwards Lifesciences announced a strategic investment of around USD 1.2 billion to acquire JenaValve Technology and Endotronix, expanding its structural heart portfolio. Acquiring JenaValve Technology enhances Edward's position in the U.S. aortic valve replacement devices industry, targeting the underserved aortic regurgitation segment. The purchase of Endotronix, following an earlier investment, allows Edwards to enter heart failure management with its FDA-approved Cordella sensor. These strategic moves aim to address unmet patient needs and support long-term growth.

The FDA requires extensive clinical trials and post-market surveillance, which can delay product launches and ensure high safety standards. In May 2025, the FDA approved Edwards Lifesciences Sapien 3 Ultra Resilia TAVR valves for treating asymptomatic severe aortic stenosis (AS).

U.S. Aortic Valve Replacement Devices Market Report Segmentation

This report forecasts revenue growth at country levels and provides an analysis of the latest industry trends in each of the sub-segments from 2021 to 2033. For this study, Grand View Research has segmented the U.S. aortic valve replacement devices market report based on product, leaflet material, frame material, and end use.

Product Outlook (Revenue, USD Billion, 2021 - 2033)

Balloon-expandable

Self-expandable

Mechanically expandable

Aortic regurgitation

Leaflet Material Outlook (Revenue, USD Billion, 2021 - 2033)

Bovine pericardium

Porcine pericardium

Frame Material Outlook (Revenue, USD Billion, 2021 - 2033)

Cobalt-chromium

Nitinol

Others

End Use Outlook (Revenue, USD Billion, 2021 - 2033)

Inpatient Facilities

Outpatient Facilities

This report can be delivered to the clients within 2 Business Days

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