

# Ventricular Assist Devices (VAD) - Market Insight, Competitive Landscape and Market Forecast - 2027

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#### Report description:

Ventricular Assist Devices Market By Product Type (Left Ventricular Assist Devices, Right Ventricular Assist Devices, And Biventricular Assist Devices), By Application Type (Bridge-To-Transplant [Btt], Destination Therapy, And Others), By Design Type (Transcutaneous Ventricular Assist Devices And Implantable Ventricular Assist Devices), By Type Of Flow (Pulsatile Flow And Continous Flow), By End User (Hospital And Clinics, Ambulatory Surgical Centers, And Others), by geography is expected to grow at a steady CAGR forecast till 2027 owing to the increasing prevalence of heart failure and cardiovascular diseases due to obesity, age, & unhealthy lifestyles and rising demand for organ transplants due to increasing prevalence of chronic ailments such as hypertension, diabetes, and others

Global ventricular assist devices market was valued at USD 1,956.30 million in 2021, growing at a CAGR of 8.12% during the forecast period from 2022 to 2027 to reach USD 3,105.18 million by 2027. The increase in demand for ventricular assist devices is primarily attributed to the increase in the prevalence of heart failure and other cardiovascular diseases and increasing prevalence of chronic disorders like diabetes, neurological disorders, and hypertension which may leads to cardiovascular diseases. Moreover, the increasing number of geriatric population susceptible to chronic ailments will propel the market growth of ventricular assist devices. Additionally, as the prevalence of chronic ailments like cardiovascular disorders are increasing. This will increase the demand for organ transplants but, the organs are not available easily, to compensate this demand of organ transplants there will be a need of the assisting devices like ventricular assisting devices will increase. Thus, increasing the demand of ventricular assist devices in the market. Moreover, the technological advancements in devices like infection control property and incorporation of artificial technology across the world are anticipated to bolster the market, thereby contributing to the growth of the ventricular assist devices market during the forecast period from 2022-2027.

Ventricular Assist Devices Market Dynamics:

The ventricular assist devices market is witnessing a growth in product demand owing to various reasons. The increasing prevalence of cardiovascular disorders such as, heart failure and stroke worldwide due to various factors such as, genetic, age, obesity, and unhealthy lifestyle and increasing number of geriatric patients prone to chronic disorders across the world are anticipated to bolster the market.

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According to World Health Organization (WHO) 2021, in 2019, cardiovascular diseases (CVDs) was one of the leading cause of death globally. It was estimated that around 17.9 million people died from CVDs in 2019, representing 32% of all global deaths. It was also estimated that out of 17.9 million deaths 85% were due to heart attack and stroke. Additionally, as per the same source, it was concluded that over three quarters of CVD deaths take place in low- and middle-income countries. WHO concluded that most of the cardiovascular diseases can be prevented by addressing behavioral risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol.

Additionally, the prevalence of heart failure is also rising. According to Global Health Data Exchange 2019, it was estimated that globally 64.37 million people were suffering from heart failure. In heart failure the cardiac muscles gets weak owing to which ventricles are not able to pump the blood into the body. This ailment can be only cured by transplanting the heart. But, the organ is not certainly available for the transplant. Thus, to cure and to support the heart various devices such as, implantable cardiac defibrillator, cardiac resynchronization therapy, and ventricular assisting devices are used. Ventricular assist devices are used in patients with advanced heart failure as a final treatment or as a bridge to transplant, which acts as a device placed until the heart transplant. Ventricular devices produces stimulations that assist the ventricular muscle to pump the blood out of it. Therefore, as the prevalence of heart failure and cardio vascular diseases is increasing, thereby increasing the market growth of ventricular assisting devices in the forecast period.

Additionally, according to World Obesity 2021, it is estimated that 2.7 billion adults will be overweight, over 1 billion affected by obesity, and 177 million adults severely affected by obesity by the year 2025 globally. Obesity is one the major risk factor for cardiovascular disorders and heart failure. Obesity causes a spike in bad cholesterol and triglyceride levels, causes high blood pressure, and may even lead to diabetes. As the prevalence of obesity and overweight is increasing, this may increase the prevalence of cardiovascular disorders and heart failure owing to increase in demand of ventricular assist devices in the market. Moreover, according to WHO 2021, by 2030, one in six people in the world will be aged 60 years or over. The share of the population aged 60 years and over will increase from 1 billion in 2020 to 1.4 billion globally. By 2050, the world's population of people aged 60 years and older will double (2.1 billion). The number of people aged 80 years or older is expected to triple between 2020 and 2050 to reach 426 million. Thus, the number of geriatric population is increasing which will in turn affect the prevalence of cardiovascular and heart failure patients as age is one of the major risk factor for these disorders. The increased prevalence of cardiovascular disorder will bolster the market of ventricular assist devices in the forecast period.

Moreover, the product launches in local market, and continuous government support, in turn, will drive the product demand in the market. For instance, in February 2020, Abbott has received Breakthrough Device designation from the U.S. Food and Drug Administration (FDA) for its in-development Fully Implantable Left Ventricular Assist System (FILVAS).

Thus, due to the increasing prevalence of cardiovascular disorder globally and product launches, will pay way to a rising demand for ventricular assist devices, in turn increasing the ventricular assist devices market growth.

However, the high cost of the device and side effects associated with the device such as bleeding complications and ischemic & hemorrhagic stroke may pose a challenge to the ventricular assist devices market growth.

The ongoing COVID-19 pandemic has negatively impacted the market for ventricular assist devices as elective surgeries were not performed for some time. The admission and treatment of COVID-19 patients were at utmost priority as compared to other disorders. Moreover, there were disruption in the supply chain leading to the unavailability of raw materials halting the manufacturing process. This lead to an increase in the shortage of devices in the market hampering the overall market growth. But, with return of normalcy and masses being vaccinated, the market has again picked up the momentum.

## Ventricular Assist Devices Market Segment Analysis:

Ventricular assist devices Market by Product Type (Left Ventricular Assist Devices, Right Ventricular Assist Devices, and Biventricular Assist Devices), By Application Type (Bridge-To-Transplant [BTT], Destination Therapy, and Others), By Design Type (Transcutaneous Ventricular Assist Devices and Implantable Ventricular Assist Devices), By Type Of Flow (Pulsatile Flow and Continuous Flow), By End User (Hospital and Clinics, Ambulatory Surgical Centers, and Others), and By Geography (North America, Europe, Asia-Pacific, and Rest of the World)

In the product type segment of the ventricular assist devices market, the left ventricular assist devices are estimated to hold a significant share in the ventricular assist devices market during the forecast period (2022-2027). This can be ascribed to the

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various advantages that are associated with the device.

The most important benefit of left ventricular assist devices is that they can be implanted in a patient who have reached end-stage heart failure. The implant is a battery-operated, mechanical pump, which then helps the left ventricle, the main pumping chamber of the heart which pumps the blood to the rest of the body.

Moreover, the left ventricular assist devices are one of the latest advancements in the diagnosis and treatment of heart failure. These latest devices causes less bleeding complications and ischemic & hemorrhagic stroke.

Additionally, the left ventricular assist devices can now be implanted by minimally invasive approach avoiding the splitting of breast bone. This will even reduce the infection complication and may reduce the hospital stay.

Moreover, the product launches, and support from government, in turn, drive the product demand in the market. For instance, in December 2020, Abbott, a global healthcare leader that helps people live more fully at all stages of life, announced that the U.S. Food and Drug Administration (FDA) has approved updated labeling for the company's HeartMate 3? heart pump to be used in pediatric patients with advanced refractory left ventricular heart failure. With the updated labeling, the device now can be used for treating this underserved population awaiting a heart transplant or for those not eligible to receive a transplant as a result of potential complications or risk related to the procedure.

Thus, owing to the various advantages in the area of left ventricular assist devices, product launch, and government support, there will be an increase in the demand for left ventricular assist devices, which in turn will drive the ventricular assist devices market growth.

North America is expected to dominate the overall Ventricular Assist Devices Market:

Among all the regions, North America is expected to account for the significant share in the global ventricular assist devices market. Growing incidence of heart failure and other cardiovascular diseases due to high consumption of processed food & lifestyle changes, growing incidence of obesity, increasing number of geriatric population susceptible to chronic medical ailments such as diabetes, neurological disorders, and cardiovascular diseases, and advancements in medical device like infection control property and incorporation of artificial technology in the device will increase the demand for ventricular assist devices in North America, leading to a rise in the overall ventricular assist devices market growth.

For instance, as per the data published by Centers of Disease Control and Prevention (CDC) 2022, it was concluded that heart disease is one of the leading cause of death for men, women, and people of most racial and ethnic groups in the United States, also one person dies every 36 seconds in the United States from cardiovascular disease. As per the same source, it was estimated that in the year 2021 about 659,000 people in the United States died from heart disease each year, that's 1 in every 4 deaths. Additionally, as per the above source, coronary heart disease is the most common type of heart disease in US nearly killing 360,900 people in the year 2019, ultimately concluding that the prevalence and mortality from cardiovascular ailments is increasing in the United States. This mortality rate from cardiovascular diseases can be controlled by providing proper treatment through devices like ventricular assisting devices. The device is implanted in the patient's body and provide a mechanical support to the failing heart. The devices are used in patients with advanced heart failure as a final treatment or as a bridge to transplant, which act as a device placed until the heart transplant. As the prevalence of cardiovascular disorders are increasing ultimately leading to the demand of ventricular assisting devices. Thus, increasing the overall growth of the devices in the forecast period. Moreover, various chronic disorders like diabetes, hypertension, increase in cholesterol and other may act as a risk factor for cardiovascular disorders. For instance, according to the International Diabetes Federation (IDF), Diabetes Atlas Tenth edition 2021, in the year 2021, approximately 51 million adults (20-79 years) were living with diabetes in North America and the total number of people living with diabetes is projected to rise to 7 million by 2030 and 63 million by 2045. As per the same source, it is estimated that almost 1 in 4 (240 million) adults living in North America with diabetes are undiagnosed.

Moreover, as per the IDF, Diabetes Atlas Tenth edition 2021, in the year 2021, more than 1.2 million children and adolescents (0-19 years) were living with type 1 diabetes and one in six live births (21 million) were affected by diabetes during pregnancy. Over time, high blood sugar can damage blood vessels, the nerves that control the heart, and can weaken the heart muscle. People with diabetes are also more likely to have other conditions like hypertension, high triglycerides, and others that may raise the risk for heart disease. Diabetes is acting as one of the major risk factor for cardiovascular ailments. As per above statistics, it can be concluded that the prevalence of diabetes mellitus in North America is increasing, this may increase the prevalence of cardiovascular disease ultimately increasing the demand of ventricular assisting devices. Thus, increasing the overall market

growth of ventricular assist devices in the forecast period.

Furthermore, unhealthy life is contributing for increase in the prevalence of chronic disease like cardiovascular disease and hypertension. Adults who eat a healthy diet live longer, have a lower risk of obesity, heart disease, type 2 diabetes, and certain cancers. Most Americans, however, do not follow a healthy lifestyle. As per Centers for Disease Control and Prevention (CDC), 2021, fewer than 1 in 10 adults and adolescents eat enough fruits and vegetables, and 9 in 10 Americans aged 20 years or older consume more than the recommended amount of sodium. The unhealthy lifestyle will increase the prevalence of chronic disorders in the forecast period owing to increase the demand of ventricular assist devices in the North America market.

Another factor responsible for increasing the product demand are the technological advancements in the medical device. Various features like infection control property, and incorporation of artificial intelligence in the device will increase the demand of the ventricular assist devices in the North America. All the features are making the devices more and more convent and easy to use, thereby bolstering the market.

Thus, all the above-mentioned factors are anticipated to propel the market for ventricular assist devices in the North America. Ventricular Assist Devices Market Key Players:

Some of the key market players operating in the ventricular assist devices market include Abiomed, Inc., Asahi Kasei Corporation (Evaheart Medical U.S.A., Inc.), Abbott Laboratories (St. Jude Medical, Inc.), Berlin Heart GmbH, Jarvik Heart, Inc., Medtronic Plc., Terumo Corporation, Evaheart, Inc., Calon Cardio, SynCardia Systems LLC, Cardiobridge Gmbhand, LivaNova, Inc., Cirtec, CorWave SA, FineHeart, ReliantHeart Inc., among others.

Recent Developmental Activities in the Ventricular Assist Devices Market:

? In January 2022, the School of Medical Research and Technology (SMRT) of IIT Kanpur has launched Hridyantra, a challenge-based program to develop an advanced artificial heart also called Left Ventricular Assist device (LVAD) for patients with end-stage heart failure.

? In June 2021, Abbott, a global healthcare leader, announced that the company has the capacity and supply to effectively support the growing demand for mechanical circulatory support (MCS) devices for the effective treatment of advanced heart failure. ? In February 2020, Abbott, a global healthcare leader that helps people live more fully at all stages of life, announced that the company has received Breakthrough Device designation from the U.S. Food and Drug Administration (FDA) for its in-development Fully Implantable Left Ventricular Assist System (FILVAS).

Key Takeaways from the Ventricular Assist Devices Market Report Study

- ? Market size analysis for current ventricular assist devices market size (2021), and market forecast for 5 years (2022-2027)
- ? The effect of the COVID-19 pandemic on this market is significant. To capture and analyze suitable indicators, our experts are closely watching the ventricular assist devices market.
- ? Top key product/services/technology developments, merger, acquisition, partnership, joint venture happened for last 3 years
- ? Key companies dominating the global ventricular assist devices market.
- ? Various opportunities available for the other competitor in the ventricular assist devices market space.
- ? What are the top performing segments in 2021? How these segments will perform in 2027.
- ? Which is the top-performing regions and countries in the current ventricular assist devices market scenario?
- ? Which are the regions and countries where companies should have concentrated on opportunities for ventricular assist devices market growth in the coming future?

Target Audience who can be benefited from this Ventricular Assist Devices Market Report Study

- ? Ventricular assist devices products providers
- ? Research organizations and consulting companies
- ? Ventricular assist devices-related organizations, associations, forums, and other alliances
- ? Government and corporate offices
- ? Start-up companies, venture capitalists, and private equity firms
- ? Distributors and Traders dealing in ventricular assist devices
- ? Various End-users who want to know more about the ventricular assist devices market and latest technological developments in the ventricular assist devices market.

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Frequently Asked Questions for Ventricular Assist Devices Market:

1. What are ventricular assist devices?

A ventricular assist devices also known as mechanical circulatory support device, is a medical device that helps pump blood from the lower chambers of your heart (ventricles) to the rest of the body. It is an electromechanical device used for assisting cardiac circulation, which is used either to partially or to completely replace the function of a failing heart

2. What is the market for Global ventricular assist devices?

Global ventricular assist devices market was valued at USD 1,956.30 million in 2021, growing at a CAGR of 8.12% during the forecast period from 2022 to 2027 to reach USD 3,105.18 million by 2027.

3. What are the drivers for the Global ventricular assist devices market?

The ventricular assist devices market is witnessing a positive market growth owing to increasing prevalence of heart failure and other cardiovascular diseases, increasing number of geriatric population susceptible to chronic medical ailments such as diabetes, neurological disorders, and cardiovascular diseases will propel the ventricular assist devices in the market. Moreover, the rising demand for organ transplants due to chronic ailments and the technological advancements like infection control property and incorporation of artificial technology the world are anticipated to bolster the market.

4. Who are the key players operating in the Global ventricular assist devices market?

Some of the key market players operating in the ventricular assist devices market include Abiomed, Inc., Asahi Kasei Corporation (Evaheart Medical U.S.A., Inc.), Abbott Laboratories (St. Jude Medical, Inc.), Berlin Heart GmbH, Jarvik Heart, Inc., Medtronic Plc., Terumo Corporation, Evaheart, Inc., Calon Cardio, SynCardia Systems LLC, Cardiobridge Gmbhand, LivaNova, Inc., Cirtec, CorWave SA, FineHeart, ReliantHeart Inc., and others.

5. Which region has the highest share in ventricular assist devices market?

North America is expected to hold the highest share in the revenue in the Ventricular assist devices market during the forecast period. Increasing prevalence of heart failure and other cardiovascular diseases, increasing number of geriatric population susceptible to chronic medical ailments such as diabetes, neurological disorders, and cardiovascular diseases will propel the ventricular assist devices in the North America, leading to a rise in the overall ventricular assist devices market growth in this region.

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