

South Korea 3D Printing Medical Devices Market Report and Forecast 2025-2034

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Report description:

The South Korea 3D printing medical devices market was valued at USD 173.19 Million in 2024, driven by the growing demand for personalized and patient-specific implants and the increasing integration of advanced materials in the region. The market is anticipated to grow at a CAGR of 16.20% during the forecast period of 2025-2034, with the values likely to reach USD 777.29 Million by 2034. The market benefits from rising healthcare digitization, supportive government initiatives for innovative tech adoption, and expanding R&D in custom implants. Local manufacturers are leveraging export potential amid Asia-Pacific market growth.

South Korea 3D Printing Medical Devices Market Overview

3D printing medical devices involves the use of additive manufacturing to create patient-specific implants, prosthetics, surgical instruments, and anatomical models. This technology enhances customization, reduces production time, and improves surgical outcomes by enabling precise replication of human anatomy. In South Korea, the 3D printing medical devices market is experiencing significant growth, supported by government initiatives, rising healthcare innovation, and increasing demand for personalized treatments. Collaborations between hospitals and tech companies further drive market adoption. The market is poised to reach USD 777.29 Million by 2034, reflecting strong investment in medical-grade 3D printing technologies and infrastructure.

South Korea 3D Printing Medical Devices Market Growth Drivers

Rising Osteoarthritis Prevalence to Drive Customized 3D Printed Medical Devices Market Demand

A major growth driver for the South Korean market for 3D printing medical devices is the escalating prevalence of knee osteoarthritis (OA), especially among elderly individuals and women. In March 2024, a comprehensive study revealed that 33.3% of the Korean population is affected by knee OA, with higher risks observed in women, the elderly, individuals with lower education levels, and those with obesity. This expanding patient population is significantly increasing the demand for personalized

3D printed orthopedic implants and medical devices, thereby propelling robust market growth.

South Korea 3D Printing Medical Devices Market Trends

Some of the notable trends in the market are increasing use of innovative technologies along with surge in investments to support healthcare R&D sector.

Adoption of Innovative 3D Printing Technology to Accelerate Market Growth in South Korea

The market is seeing a clear shift toward personalized bioprinting, especially for complex wound care. For instance, in August 2023, Rokit Healthcare's 3D-printed diabetic foot treatment was officially recognized as an innovative medical technology, marking a key milestone. This reflects the rising use of patient-specific regenerative solutions that speed up healing and improve treatment results. Such innovations are set to drive market growth and strengthen South Korea's position as a leader in medical 3D printing.

Advancing Standardization and R&D to Boost South Korea 3D Printing Medical Devices Market Demand

The market is experiencing significant growth, supported by the government's increased commitment to innovation. In 2023, Korea's Ministry of Science and ICT raised its R&D investment target to USD 70 million to accelerate 3D printing development. This enhanced funding, combined with active participation in international standardization efforts, is fostering technological advancements and is expected to substantially boost market expansion in the medical sector.

South Korea 3D Printing Medical Devices Market Segmentation

The market report offers a detailed analysis of the market based on the following segments:

Market Breakup by Component

- Equipment ??- 3D Printers ??- 3D Bioprinters

- Services and Software

- Material

??- Metals and Alloys Steel Titanium Others

??- Polymers Nylon Glass-filled Polyamide Epoxy Resins Photopolymers Plastics Biological Cells Others

- ??- Biological Cells
- ??- Others

Market Breakup by Technology

- Fused Deposition Modelling (FDM)
- Bioprinting
- Selective Laser Sintering (SLS)
- Electron Beam Manufacturing (EBM)
- Stereo-lithography

- Binder Jetting
- Others

Market Breakup by Application

- Medical Implants
- Prosthetics
- Wearable Devices
- Tissue Engineering
- Dental
- Others

Market Breakup by End User

- Hospitals
- Specialty Clinics
- Research and Academic Institutes
- Pharmaceutical and Biotechnology Companies
- Others

South Korea 3D Printing Medical Devices Market Share

Services and Software Segment to Lead the Market Share Based on Component

There are various components available in the market, such as are equipment, services and software, and materials. Among these, the services and software segment is expected to hold a significant share in the market, driven by the increasing demand for personalized medical solutions. For instance, in September 2024, South Korea's Rokit Healthcare partnered with United States-based Tides Medical to launch Aplicor 3D, a platform that utilizes artificial intelligence and 3D printing to create patient-specific skin grafts at the point of care. This collaboration underscores the critical role of software and services in delivering customized, efficient, and scalable medical solutions.

Leading Players in the South Korea 3D Printing Medical Devices Market

The key features of the market report comprise funding and investment analysis, and strategic initiatives by the leading players. The major companies in the market are as follows:

Koninklijke Philips N.V.

Koninklijke Philips N.V., established in 1891 in Eindhoven, Netherlands, is a global leader in health technology. Its Philips Additive division specializes in advanced 3D printing solutions, including metal and composite printing technologies, driving innovation and enhancing the development of complex medical devices worldwide.

GE Healthcare

Headquartered in Chicago, Illinois, GE Healthcare is actively involved in the 3D printing medical devices market through its GE Additive division. In 2022, GE Additive partnered with Orchid Orthopedic Solutions to develop scalable electron beam melting (EBM) technology for large joint orthopedic implants, advancing additive manufacturing capabilities in the medical implants

sector.

Stratasys

Stratasys Ltd., headquartered in Eden Prairie, Minnesota, is a leading provider of additive manufacturing technologies. Through its ISO 13485-certified Stratasys Direct service, the company plays a significant role in the 3D printing of medical devices market. Stratasys offers advanced solutions for producing customized anatomical models, surgical tools, and medical devices using over 50 industrial-grade materials. Their medical-grade offerings, such as ABS-M30i, ULTEM 1010, and biocompatible materials compliant with ISO 10993 and USP Class VI, support applications that require sterilization and patient-specific customization. Stratasys continues to transform medical manufacturing with precision, innovation, and regulatory compliance.

3D Systems, Inc.

Established in 1986, 3D Systems, Inc. is a key player in the 3D printing medical devices market. The company offers a broad portfolio, including 3D printers, biocompatible materials, and advanced software tailored for healthcare applications. Its NextDent material line addresses diverse patient-specific dental needs, highlighting its role in enhancing personalized medical care through additive manufacturing technologies.

Other key players in the market include Nikon SLM Solutions AG, CELLINK, and Johnson & Johnson MedTech.

Key Questions Answered in the South Korea 3D Printing Medical Devices Market Report

- What was the South Korea 3D printing medical devices market value in 2024?
- What is the South Korea 3D printing medical devices market forecast outlook for 2025-2034?
- What major factors aid the demand for the South Korea 3D printing medical devices market?
- How has the market performed so far, and how is it anticipated to perform in the coming years?
- What are the market's major drivers, opportunities, and restraints?
- What are the major South Korea 3D printing medical devices market trends?
- Which component is expected to dominate the market segment?
- Which technology is projected to lead the market segment?
- Which application is anticipated to drive the market segment?
- Which end user is likely to dominate the market segment?
- Who are the key players in the South Korea 3D printing medical devices market?
- What are the current unmet needs and challenges in the market?
- How are partnerships, collaborations, mergers, and acquisitions among the key market players shaping the market dynamics?

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