

# **3D Printing Metals Market: By Form (Powder and Filament); By Technology (PBF, DED, Binder Jetting, Metal Extrusion and others); By Metal Type (Titanium, Nickel, Stainless Steel, Aluminum and Others); By End User (Automotive, Aerospace & Defense, Medical & Dental and others) and Region – Global Analysis of Market Size, Share & Trends for 2019 – 2020 and Forecasts to 2030**

<https://marketpublishers.com/r/3751326009AFEN.html>

Date: May 2022

Pages: 168

Price: US\$ 4,950.00 (Single User License)

ID: 3751326009AFEN

## **Abstracts**

### Product Overview

3D printing is a novel method of creating a 3-dimensional object by depositing layers of printing material and also known as additive manufacturing. This tool-less method assists in producing fully dense metallic parts in less time with high precision. Metals used for 3D printing includes titanium alloys, aluminum, nickel, stainless steel, and copper. The use of metals for 3D printing provides several benefits including resistance to corrosion, strength, and light-weighting which makes it suitable for applications such as aerospace, Defense, automobile, and oil and gas. Introduction of 3D metal printing technology has enabled the manufacturers to manufacture complex structures with design flexibility which could not be obtained with the help of old and conventional technique.

### Market Highlights

Global 3D Printing Metals Market is expected to project a notable CAGR of 30.13% in 2030.

Global 3D Printing Metals market to surpass USD 10.72 billion by 2030 from USD 0.76 billion million in 2020 at a CAGR of 30.13% in the coming years, i.e., 2021-30. The

Global 3D printing metals are expected to grow due to the rising demand from aerospace & defense and automotive end-use industries, low production cost, and reduction in lead times. Additionally, increasing usage of metal 3D printing owing to better design flexibility, less waste, and cost-effectiveness in the overall manufacturing landscape is anticipated to drive the market.

#### Recent Highlights in Global 3D Printing Metals Market

In November 2019, Renishaw plc collaborated with Sandvik Additive Manufacturing to qualify new additive manufacturing (AM) materials for production applications. These materials include an array of metal powders and new alloy compositions that can be optimized for the laser powder bed fusion (LPBF) process and superior material properties. With this collaboration, Renishaw plc developed new metal materials for 3D printing.

In March 2019, Stratasys Direct Manufacturing, a subsidiary of Stratasys, Ltd. expanded its Metal 3D printing production with VELO3D's Sapphire 3D print system and Flow software. The expansion was done to fulfill the rising demand for 3D metal products for various applications. This expansion helped the company meet the customer demand for 3D metal printed products in North America.

#### Global 3D Printing Metals Market: Market Segments

Powder segment to grow with the highest CAGR during 2021-30

Global 3D Printing Metals market is segmented by form into powder and filament. The powder segment held the largest market share of XX.X% in the year 2019. Powders used in 3D printing have high packing density and spherical morphology, which allows good flow properties. These can produce high-density products with complicated geometrics, that are used to manufacture engine parts and components.

Titanium Segment to grow with the highest CAGR during 2021-30

Global 3D Printing Metals market is distributed by metal type into Titanium, Nickel, Stainless Steel, Aluminum and Others. Titanium Segment held the largest market share of XX.X% in the year 2019. The demand for titanium is increasing due to its rising application in the aerospace and defense industry. Titanium holds properties such as high impact and high-temperature resistance which is anticipated to lead to the sustainable growth of the market.

Aerospace & Defense Segment to grow with the highest CAGR during 2021-30

Global 3D Printing Metals market is distributed by the end-user into Automotive, Aerospace & Defense, Medical & Dental and others. The Aerospace & Defense

segment held the largest market share of XX.X% in the year 2019. 3D printing reduces the overall mass of an aircraft thereby decreasing the fuel waste. Metal 3D printing is applied to print fuel nozzles and other critical engine parts that need high precision and accuracy in the aerospace & defense industry.

## Market Dynamics

### Drivers

#### Increasing Application of 3d Printing Metal in the Aerospace Industry

Growing adoption of 3D printing metals in the aerospace & defense sectors due to the ability to reduce the weight of aerospace components is projected to witness the growth of the 3D printing metals market. The components utilized during the manufacturing of aircraft require advanced engineering substances and complex geometries. 3D printing in the manufacturing of aircraft enables the fabrication of highly complex and lightweight structures. Moreover, 3d printing enhances the performance of the aircraft.

### Wide array of raw materials

Introduction of 3D printing metals has set a new standard in the metal manufacturing industry. 3D printing metals are gaining popularity owing to their potential to make materials with complex geometries and a unique set of physical and chemical features. They offer excellent ductility, heat resistance, and low weight. In addition, the adoption of promising raw materials in 3D printing has prompted the demand for 3D printing metals in numerous applications.

### Restraint

#### High Cost

High cost linked with metals is expected to hinder the global 3D printing metal market. The extraction process of metals is complex and requires high energy consumption, which leads to a rise in prices.

## Global 3D Printing Metals Market: Key Players

### 3D Systems Corporation

#### Company Overview

#### Business Strategy

#### Key Product Offerings

#### Financial Performance

#### Key Performance Indicators

#### Risk Analysis

#### Recent Development

#### Regional Presence

## SWOT Analysis

Arcam AB,  
Materialise NV,  
ExOne GmbH,  
Hoganas AB,  
Renishaw Plc,  
Equispheres,  
Carpenter Technology Corporation,  
Sandvik AB.  
Stratasys Ltd.  
Voxeljet AG

## Other Prominent Players

### Global 3D Printing Metals Market: Regions

Global 3D Printing Metals market is segmented based on regional analysis into five major regions. These include North America, Latin America, Europe, Asia-Pacific (APAC) and Middle-East & Africa (MEA).

Global 3D Printing Metals market in Asia Pacific held the largest market share of XX.X% in the year 2019. Asia Pacific will continue to dominate the Global 3D Printing Metals market due to rising investments in the construction, automotive, aerospace and defense sectors. The rapidly growing manufacturing industry in the region coupled with the presence of significant market players and adoption of innovative techniques is estimated to fuel the demand for the 3D printing metals market.

Global 3D Printing Metals market is further segmented by region into:

North America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United States and Canada

Latin America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – Mexico, Argentina, Brazil and Rest of Latin America

Europe Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United Kingdom, France, Germany, Italy, Spain, Belgium, Hungary, Luxembourg, Netherlands, Poland, NORDIC, Russia, Turkey, and Rest of Europe

Asia-Pacific Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – India, China, South Korea, Japan, Malaysia, Indonesia, New Zealand, Australia and Rest of APAC

Middle East & Africa Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – North Africa, Israel, GCC, South Africa and Rest of MEA

Global 3D Printing Metals market report also contains analysis on:

3D Printing Metals market Segments:

By Form  
Powder  
Filament  
By Technology  
Powder bed fusion (PBF)  
Directed energy deposition (DED)  
Binder Jetting  
Metal Extrusion  
Others  
By Metal  
Titanium  
Nickel  
Stainless Steel  
Aluminum  
Others  
By End User  
Automotive  
Aerospace & Defense  
Medical & Dental  
Others  
Global 3D Printing Metals Market Dynamics  
Global 3D Printing Metals market size  
Supply & Demand  
Current Trends/Issues/Challenges  
Competition & Companies Involved in the Market  
Value Chain of the Market  
Market Drivers and Restraints

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Consultant Recommendation

\*\*The above-given segmentations and companies could be subjected to further modification based on in-depth feasibility studies conducted for the final deliverable.

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