SCOTTS INTERNATIONAL

Investment Casting Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 90 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

The investment casting market was valued at USD 14.09 billion currently, and it is expected to reach USD 17.57 billion, registering a CAGR growth of 4.58% over the forecast period.

The COVID-19 outbreak has had a swift and severe impact on many industries globally. The pandemic placed intense pressure on industries with a downward shift in global demand. With declining demand, the companies are examining their strategies and operational plans for the post-pandemic period. As economies are recovering slowly, the investment casting market is expected to grow positively during the forecast period.

The demand for investment casting is majorly driven by the growing aerospace and military industry, as there are many different applications and parts of aircraft, helicopters, and jets that are produced through investment casting. These include flight critical and safety components, landing and braking components, and hydraulic fluid system components, all of which are vital to the safety of the aircraft.

A few factors are hindering the demand for investment castings, such as manufacturing cost and high energy consumption. However, foundries are trying to overcome these challenges by collaborating to innovate advanced casting technologies using simulations, which is likely to reduce the shop-floor time and increase the casting yield.

North America is currently leading the investment casting market. The factors attributable to the region's growth are the expansion of the manufacturing, medical, and aerospace and military sectors. Asia-Pacific is projected to be the fastest-growing region over the forecast period. China is likely to lead the region as it is one of the significant countries that majorly contribute to the growth of the investment casting industry.

Investment Casting Market Trends

Sodium Silicate Process To Exhibit The Highest Growth Rate

Silica sol casting gives the investment castings better dimensional accuracy and surface finish with minimal defects. Hence, the cost of the process is higher than that of the water glass casting. Silica sol zircon sand is very expensive, and the preparation required is also higher, which is a prime reason for the higher costs.

Due to its higher costs, the silica sol process has comparatively less adoption in foundries. The silica sol investment casting used in automotive or industrial components costs around 6.5 USD/kg on average.

Several companies have now identifed the sodium silicate casting as the economical cause over the ceramic casting. However, this process is preferred if the highest casting quality and the low repair rate are the main focus of the end user. Compared to the water glass process, the silica sol process can produce extra-large parts weighing 50-100 kg. Hence, this process is used for producing larger and heavier parts, like water pumps, impellers, diversion shells, pump bodies, ball valve bodies, and valve plates. At the same time, this process is widely used to produce extra small parts (2-1000 g) that require high dimensional accuracy.

The sodium silicate process is slowly becoming more popular in regions like Asia-Pacific, where Japan has showcased itself to lead the production demand from forefront. As a result of the ongoing efforts to improve the quality and dimensional accuracy of the components produced.

North America Leads the Investment Casting Market

North America is leading the investment casting market and is likely to hold the top position, followed by Asia-Pacific and Europe. The factors attributable to North America's growth are the expanding manufacturing industry, primarily industrial gas and aerospace and defense applications, and the presence of significant defense aircraft and component manufacturers in the region, including Lockheed Martin, Raytheon, and Northrop Grumman.

Aerospace manufacturing is one of the major sectors in the United States, with production plants for major aircraft programs, like Boeing 737, Boeing 777, Boeing 787, and Airbus A220 located in the region. The manufacturing of military aircraft programs, like the F-35, in the country is expected to generate demand for investment casting parts.

The United States is one of the major automotive industries in the world, which contributes at least 3% to the overall gross domestic product (GDP) of the country. In addition, the country is one of the largest manufacturers of the luxury car market with net revenue of USD 5 billion in 2021. Luxury car maker BMW in 2021, reported record-breaking sales of over 336,600 units vehicles.

However, the automotive industry in the United States witnessed a hit due to the COVID-19 pandemic, as the majority of the production sites were either closed or operating at reduced capacity. In April 2022, United States new vehicles sales were reported 1,256, 224 units with a 18% decline compared to April 2021 figures. In addition, during April, passenger car sales dropped down to 23.3% with reporting 278,827 units, while SUV and truck sales also decreased 16.3% with 977,397 units. Q1 2022, has been less favorable for United States automotive sector. These expanding auto sector evoke high utilization of investment casting application for automotive parts and compnents will would likely to elevate the demand for investment casting during long term period.

Further, according to the Aerospace Industries Association of Canada, Airbus, Boeing, De Havilland Canada, and Bombardier Inc.

are some of the major aerospace manufacturers in the countrywith 95% of companies running at partial capacity. De Havilland Canada plans to gradually begin the production of aircraft in phases. Key aersopace companies are seen expansing their business potential in order to elevate the demand for investment casting in the region. For instance, In November 2022, Aircraft engine manufacturer Pratt & Whitney announced the opening of their new turbine airfoil facility in United States. The fcility would be equipped with advance casting foundry with combined investment of USD 650 million.

Morover, key casting companies are also seeking oppotunities to expans their investment casting potnetial in North America to resonate elevated sales bars amid rising demand. For instance,In September 2022, Signicast Corporation which is form technology company announced the celebration of its new opening of latest investment casting facility.

Cosidering these factors and development demand for investment casting is anticipated to hold high potential for growth in North America owing to widely spread application.

Investment Casting Market Competitor Analysis

The investment casting market is fragmented due to the presence of international and regional investment casting manufacturers. The investment casting market is led by Alcoa Corporation, ThyssenKrupp AG, Zollern GmbH and Co. KG, Georg Fischer Ltd, Signicast, Milwaukee Precision Casting, and RLM Industries.

As the market is fragmented, companies are making investments, partnerships, joint ventures, acquisitions, etc., to stay ahead of the competition. For instance, In October 2021, Alcoa Corporation announced its plans to achieve net-zero greenhouse gas (GHG) emissions across its global operations by 2050. The aim to reach net-zero GHG emissions by 2050 for direct (scope 1) and indirect (scope 2) emissions aligns with the company's strategic priority to advance sustainably and complements its existing targets, which include reducing direct and indirect GHG emissions from aluminum smelting and alumina refining operations by 30% by 2025 and 50% by 2030.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

Table of Contents:

1 INTRODUCTION
1.1 Study Assumptions
1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET DYNAMICS
4.1 Market Drivers
4.2 Market Restraints
4.3 Porter's Five Forces Analysis
4.3.1 Threat of New Entrants
4.3.2 Bargaining Power of Buyers/Consumers
4.3.3 Bargaining Power of Suppliers

4.3.4 Threat of Substitute Products
4.3.5 Intensity of Competitive Rivalry

5 MARKET SEGMENTATION (Market Size in Value USD Billion)
5.1 By Type
5.1.1 Sodium Silicate Process
5.1.2 Tetraethyl Orthosilicate/Silica Sol Process
5.2 By End-user Type
5.2.1 Automotive
5.2.2 Aerospace and Military
5.2.3 General Industrial Machinery
5.2.4 Medical
5.2.5 Other End-user Types
5.3 By Geography
5.3.1 North America
5.3.1.1 United States
5.3.1.2 Canada
5.3.1.3 Rest of North America
5.3.2 Europe
5.3.2.1 Germany
5.3.2.2 United Kingdom
5.3.2.3 France
5.3.2.4 Spain
5.3.2.5 Rest of Europe
5.3.3 Asia-Pacific
5.3.3.1 India
5.3.3.2 China
5.3.3.3 Japan
5.3.3.4 South Korea
5.3.3.5 Rest of Asia-Pacific
5.3.4 Rest of the World
5.3.4.1 Brazil
5.3.4.2 Argentina
5.3.4.3 Mexico
5.3.4.4 United Arab Emirates
5.3.4.5 Other Countries

6 COMPETITIVE LANDSCAPE
6.1 Vendor Market Share
6.2 Company Profiles
6.2.1 Signicast
6.2.2 MetalTek International
6.2.3 Milwaukee Precision Casting Inc.
6.2.4 Impro Precision Industries Limited
6.2.5 Alcoa Corporation
6.2.6 Zollern GmbH and Co. KG
6.2.7 Precision Castparts Corp (Berkshire Hathaway)

6.2.8 Georg Fischer Ltd
6.2.9 Dongying Giayoung Precision Metal
6.2.10 Taizhou Xinyu Precision Manufacture Co. Ltd

7 MARKET OPPORTUNITIES AND FUTURE TRENDS

Scotts International. EU Vat number: PL 6772247784
tel. 0048 603 394 346 e-mail: support@scotts-international.com
www.scotts-international.com

Investment Casting Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 90 pages | Mordor Intelligence

To place an Order with Scotts International:
- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.
** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-03-02
		Signature	

Scotts International. EU Vat number: PL 6772247784
tel. 0048 603 394 346 e-mail: support@scotts-international.com
www.scotts-international.com