

Aluminium & Magnesium Die Casting Market Forecasts to 2032 – Global Analysis By Product (Engine Components, Transmission Components, Chassis Components, Structural Components, Body Panels, Electronic Housings, Interior Trim Components, and Other Products), Process, Material, Die Casting Equipment, Application, End User and By Geography

<https://marketpublishers.com/r/A2F238A25798EN.html>

Date: September 2025

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: A2F238A25798EN

Abstracts

According to Statistics MRC, the Global Aluminium & Magnesium Die Casting Market is accounted for \$6.00 billion in 2025 and is expected to reach \$9.76 billion by 2032 growing at a CAGR of 7.2% during the forecast period. Aluminium and Magnesium Die Casting refers to a manufacturing process where molten aluminium or magnesium alloys are injected under high pressure into steel molds, known as dies, to create precise, complex, and lightweight metal components. This process ensures high strength, excellent dimensional accuracy, and superior surface finish, making it widely used across industries such as automotive, aerospace, electronics, and industrial machinery. The technique supports mass production, cost-efficiency, and the growing demand for lightweight materials.

Market Dynamics:

Driver:

Increasing adoption in consumer electronics

The rising integration of aluminium and magnesium die-cast components in consumer electronics is driven by demand for lightweight, durable, and thermally efficient materials. As devices become more compact and performance-intensive, manufacturers are turning to die casting for precision and scalability. Smartphones, laptops, and wearables increasingly rely on cast housings and structural parts to optimize form factor and heat dissipation. The proliferation of smart home devices and IoT-enabled gadgets further accelerates this trend. Additionally, the push for aesthetic finishes and ruggedized designs makes die casting a preferred choice. This growing reliance across electronics segments is expanding market penetration and driving innovation in alloy formulations.

Restraint:

Technical limitations in large component casting

Despite its advantages, die casting faces constraints when producing large or complex components, especially in automotive and industrial applications. Issues such as porosity, dimensional instability, and cooling inefficiencies limit scalability for oversized parts. These technical hurdles often require secondary machining or alternative processes, increasing production time and cost. Moreover, the need for high-pressure systems and specialized tooling adds complexity to large-scale casting operations. Manufacturers also struggle with alloy compatibility and structural integrity at larger volumes. As a result, adoption in heavy-duty sectors remains cautious, slowing broader market expansion.

Opportunity:

Growing demand for recyclable and sustainable materials

Environmental regulations and consumer awareness are pushing industries toward recyclable and low-carbon materials, positioning aluminium and magnesium die casting as a sustainable solution. Both metals offer excellent recyclability without significant degradation in mechanical properties, making them ideal for circular manufacturing models. Automotive and electronics sectors are increasingly adopting these alloys to meet emissions targets and eco-labeling standards. Innovations in green casting techniques, such as reduced energy furnaces and closed-loop recycling, are enhancing sustainability credentials. Additionally, lightweighting benefits contribute to fuel efficiency and lower carbon footprints in transport applications. This convergence of performance and sustainability is unlocking new growth avenues across regions.

Threat:

Competition from alternative manufacturing methods

Emerging technologies such as additive manufacturing, injection molding, and precision machining are challenging the dominance of die casting in certain applications. These methods offer greater design flexibility, faster prototyping, and reduced tooling costs, especially for low-volume or customized parts. As 3D printing advances in metal capabilities, it threatens traditional casting for intricate geometries and rapid iteration. Injection molding, particularly with high-performance polymers, is gaining traction in electronics and automotive interiors. Moreover, CNC machining provides superior surface finishes and tight tolerances for critical components. This competitive landscape is prompting die casters to innovate or risk displacement in niche segments.

Covid-19 Impact:

The COVID-19 pandemic disrupted global supply chains and manufacturing schedules, impacting die casting operations across sectors. Lockdowns and labor shortages led to delayed production cycles and reduced capacity utilization. Automotive and electronics demand initially declined, but rebounded as remote work and e-mobility trends accelerated. The crisis highlighted the need for resilient, localized supply chains and flexible manufacturing setups. In response, many firms invested in automation and digital monitoring to future-proof operations.

The engine components segment is expected to be the largest during the forecast period

The engine components segment is expected to account for the largest market share during the forecast period, due to its critical role in automotive manufacturing. Lightweight alloys are increasingly used in engine blocks, cylinder heads, and transmission housings to enhance fuel efficiency and thermal performance. Stringent emission norms and electrification trends are driving OEMs to replace heavier steel parts with cast aluminium and magnesium alternatives. These components require high dimensional accuracy and durability, making die casting a preferred method. Continuous innovation in alloy composition and casting techniques is expanding applicability across ICE and EV platforms. As a result, engine-related castings will maintain a stronghold in overall market share.

The contract manufacturers segment is expected to have the highest CAGR during the

forecast period

Over the forecast period, the contract manufacturers segment is predicted to witness the highest growth rate, driven by outsourcing trends and cost optimization strategies. OEMs across automotive, electronics, and industrial sectors are increasingly partnering with specialized casting firms to streamline operations. These manufacturers offer scalable production, advanced tooling capabilities, and rapid turnaround times, making them attractive for high-volume and precision parts. The rise of EVs and smart devices is fueling demand for agile suppliers who can adapt to evolving design requirements. Additionally, contract firms are investing in automation and quality control to meet global standards. This shift toward strategic outsourcing is propelling their market expansion at an accelerated pace.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, driven by robust manufacturing ecosystems and rising industrial output. Countries like China, India, and Japan are major hubs for automotive and electronics production, driving demand for cast components. Government initiatives promoting lightweight materials and energy-efficient technologies are further boosting adoption. The region benefits from cost-effective labor, abundant raw materials, and expanding infrastructure. Rapid urbanization and consumer electronics penetration also contribute to market growth.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, fuelled by technological advancements and sustainability mandates. The region's automotive sector is aggressively transitioning toward EVs, creating demand for lightweight, high-performance castings. Aerospace and defense industries are also adopting magnesium alloys for structural and weight-sensitive applications. Investments in automation, AI-driven quality control, and digital foundries are enhancing production efficiency. Additionally, regulatory pressures around recyclability and carbon emissions are accelerating material substitution. This innovation-led environment is positioning North America as a high-growth region for die casting solutions.

Key players in the market

Some of the key players in Aluminium & Magnesium Die Casting Market include Ryobi

Limited, Gibbs Die Casting, Nematik, Alteams Group, Dynacast International, Mino Industry USA, Endurance Technologies, Form Technologies, Shiloh Industries, Guangdong Hongtu Technology, GF Casting Solutions, Rane Group, Ahresty Corporation, Pace Industries, Sundaram Clayton, Alcoa Corporation, Castwel Auto Parts, and Sandhar Technologies.

Key Developments:

In July 2025, Nematik, S.A.B. de C.V. announced that it has entered into a definitive agreement to acquire the automotive business of GF Casting Solutions, a Swiss-based leader in lightweight casted components. This strategic acquisition will represent a key milestone in Nematik's efforts to accelerate its transformation beyond ICE powertrain components and broaden its global footprint.

In February 2025, Architect Equity a private equity group focused on the lower middle market, is pleased to announce the acquisition of Gibbs Die Casting Corporation ("Gibbs"), a leading manufacturer of precision die-casted, machined and assembled products for the automotive and industrial markets, from Koch Enterprises, Inc. Terms of the transaction were not disclosed.

Products Covered:

Engine Components

Transmission Components

Chassis Components

Structural Components

Body Panels

Electronic Housings

Interior Trim Components

Other Products

Processes Covered:

High?Pressure Die Casting

Low?Pressure Die Casting

Permanent Mold Casting

Gravity Die Casting

Materials Covered:

Aluminium Die Casting

Magnesium Die Casting

Die Casting Equipments Covered:

Hot Chamber Machines

Cold Chamber Machines

Applications Covered:

Automotive

Aerospace

Consumer Electronics

Industrial Equipment & Machinery

Renewable Energy

Other Applications

End Users Covered:

Contract Manufacturers

Aftermarket Distributors

Defense Contractors

Medical Device Manufacturers

Construction & Infrastructure

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

2 PREFACE

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
 - 2.4.1 Data Mining
 - 2.4.2 Data Analysis
 - 2.4.3 Data Validation
 - 2.4.4 Research Approach
- 2.5 Research Sources
 - 2.5.1 Primary Research Sources
 - 2.5.2 Secondary Research Sources
 - 2.5.3 Assumptions

3 MARKET TREND ANALYSIS

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Product Analysis
- 3.7 Application Analysis
- 3.8 End User Analysis
- 3.9 Emerging Markets
- 3.10 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

5 GLOBAL ALUMINIUM & MAGNESIUM DIE CASTING MARKET, BY PRODUCT

- 5.1 Introduction
- 5.2 Engine Components
- 5.3 Transmission Components
- 5.4 Chassis Components
- 5.5 Structural Components
- 5.6 Body Panels
- 5.7 Electronic Housings
- 5.8 Interior Trim Components
- 5.9 Other Products

6 GLOBAL ALUMINIUM & MAGNESIUM DIE CASTING MARKET, BY PROCESS

- 6.1 Introduction
- 6.2 High Pressure Die Casting
- 6.3 Low Pressure Die Casting
- 6.4 Permanent Mold Casting
- 6.5 Gravity Die Casting

7 GLOBAL ALUMINIUM & MAGNESIUM DIE CASTING MARKET, BY MATERIAL

- 7.1 Introduction
- 7.2 Aluminium Die Casting
- 7.3 Magnesium Die Casting

8 GLOBAL ALUMINIUM & MAGNESIUM DIE CASTING MARKET, BY DIE CASTING EQUIPMENT

- 8.1 Introduction
- 8.2 Hot Chamber Machines
- 8.3 Cold Chamber Machines

9 GLOBAL ALUMINIUM & MAGNESIUM DIE CASTING MARKET, BY APPLICATION

- 9.1 Introduction
- 9.2 Automotive
- 9.3 Aerospace

- 9.4 Consumer Electronics
- 9.5 Industrial Equipment & Machinery
- 9.6 Renewable Energy
- 9.7 Other Applications

10 GLOBAL ALUMINIUM & MAGNESIUM DIE CASTING MARKET, BY END USER

- 10.1 Introduction
- 10.2 Contract Manufacturers
- 10.3 Aftermarket Distributors
- 10.4 Defense Contractors
- 10.5 Medical Device Manufacturers
- 10.6 Construction & Infrastructure
- 10.7 Other End Users

11 GLOBAL ALUMINIUM & MAGNESIUM DIE CASTING MARKET, BY GEOGRAPHY

- 11.1 Introduction
- 11.2 North America
 - 11.2.1 US
 - 11.2.2 Canada
 - 11.2.3 Mexico
- 11.3 Europe
 - 11.3.1 Germany
 - 11.3.2 UK
 - 11.3.3 Italy
 - 11.3.4 France
 - 11.3.5 Spain
 - 11.3.6 Rest of Europe
- 11.4 Asia Pacific
 - 11.4.1 Japan
 - 11.4.2 China
 - 11.4.3 India
 - 11.4.4 Australia
 - 11.4.5 New Zealand
 - 11.4.6 South Korea
 - 11.4.7 Rest of Asia Pacific
- 11.5 South America

- 11.5.1 Argentina
- 11.5.2 Brazil
- 11.5.3 Chile
- 11.5.4 Rest of South America
- 11.6 Middle East & Africa
 - 11.6.1 Saudi Arabia
 - 11.6.2 UAE
 - 11.6.3 Qatar
 - 11.6.4 South Africa
 - 11.6.5 Rest of Middle East & Africa

12 KEY DEVELOPMENTS

- 12.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 12.2 Acquisitions & Mergers
- 12.3 New Product Launch
- 12.4 Expansions
- 12.5 Other Key Strategies

13 COMPANY PROFILING

- 13.1 Ryobi Limited
- 13.2 Gibbs Die Casting
- 13.3 Nematik
- 13.4 Alteams Group
- 13.5 Dynacast International
- 13.6 Mino Industry USA
- 13.7 Endurance Technologies
- 13.8 Form Technologies
- 13.9 Shiloh Industries
- 13.10 Guangdong Hongtu Technology
- 13.11 GF Casting Solutions
- 13.12 Rane Group
- 13.13 Ahresty Corporation
- 13.14 Pace Industries
- 13.15 Sundaram Clayton
- 13.16 Alcoa Corporation
- 13.17 Castwel Auto Parts
- 13.18 Sandhar Technologies

List Of Tables

LIST OF TABLES

Table 1 Global Aluminium & Magnesium Die Casting Market Outlook, By Region (2024-2032) (\$MN)

Table 2 Global Aluminium & Magnesium Die Casting Market Outlook, By Product (2024-2032) (\$MN)

Table 3 Global Aluminium & Magnesium Die Casting Market Outlook, By Engine Components (2024-2032) (\$MN)

Table 4 Global Aluminium & Magnesium Die Casting Market Outlook, By Transmission Components (2024-2032) (\$MN)

Table 5 Global Aluminium & Magnesium Die Casting Market Outlook, By Chassis Components (2024-2032) (\$MN)

Table 6 Global Aluminium & Magnesium Die Casting Market Outlook, By Structural Components (2024-2032) (\$MN)

Table 7 Global Aluminium & Magnesium Die Casting Market Outlook, By Body Panels (2024-2032) (\$MN)

Table 8 Global Aluminium & Magnesium Die Casting Market Outlook, By Electronic Housings (2024-2032) (\$MN)

Table 9 Global Aluminium & Magnesium Die Casting Market Outlook, By Interior Trim Components (2024-2032) (\$MN)

Table 10 Global Aluminium & Magnesium Die Casting Market Outlook, By Other Products (2024-2032) (\$MN)

Table 11 Global Aluminium & Magnesium Die Casting Market Outlook, By Process (2024-2032) (\$MN)

Table 12 Global Aluminium & Magnesium Die Casting Market Outlook, By High Pressure Die Casting (2024-2032) (\$MN)

Table 13 Global Aluminium & Magnesium Die Casting Market Outlook, By Low Pressure Die Casting (2024-2032) (\$MN)

Table 14 Global Aluminium & Magnesium Die Casting Market Outlook, By Permanent Mold Casting (2024-2032) (\$MN)

Table 15 Global Aluminium & Magnesium Die Casting Market Outlook, By Gravity Die Casting (2024-2032) (\$MN)

Table 16 Global Aluminium & Magnesium Die Casting Market Outlook, By Material (2024-2032) (\$MN)

Table 17 Global Aluminium & Magnesium Die Casting Market Outlook, By Aluminium Die Casting (2024-2032) (\$MN)

Table 18 Global Aluminium & Magnesium Die Casting Market Outlook, By Magnesium

Die Casting (2024-2032) (\$MN)

Table 19 Global Aluminium & Magnesium Die Casting Market Outlook, By Die Casting Equipment (2024-2032) (\$MN)

Table 20 Global Aluminium & Magnesium Die Casting Market Outlook, By Hot Chamber Machines (2024-2032) (\$MN)

Table 21 Global Aluminium & Magnesium Die Casting Market Outlook, By Cold Chamber Machines (2024-2032) (\$MN)

Table 22 Global Aluminium & Magnesium Die Casting Market Outlook, By Application (2024-2032) (\$MN)

Table 23 Global Aluminium & Magnesium Die Casting Market Outlook, By Automotive (2024-2032) (\$MN)

Table 24 Global Aluminium & Magnesium Die Casting Market Outlook, By Aerospace (2024-2032) (\$MN)

Table 25 Global Aluminium & Magnesium Die Casting Market Outlook, By Consumer Electronics (2024-2032) (\$MN)

Table 26 Global Aluminium & Magnesium Die Casting Market Outlook, By Industrial Equipment & Machinery (2024-2032) (\$MN)

Table 27 Global Aluminium & Magnesium Die Casting Market Outlook, By Renewable Energy (2024-2032) (\$MN)

Table 28 Global Aluminium & Magnesium Die Casting Market Outlook, By Other Applications (2024-2032) (\$MN)

Table 29 Global Aluminium & Magnesium Die Casting Market Outlook, By End User (2024-2032) (\$MN)

Table 30 Global Aluminium & Magnesium Die Casting Market Outlook, By Contract Manufacturers (2024-2032) (\$MN)

Table 31 Global Aluminium & Magnesium Die Casting Market Outlook, By Aftermarket Distributors (2024-2032) (\$MN)

Table 32 Global Aluminium & Magnesium Die Casting Market Outlook, By Defense Contractors (2024-2032) (\$MN)

Table 33 Global Aluminium & Magnesium Die Casting Market Outlook, By Medical Device Manufacturers (2024-2032) (\$MN)

Table 34 Global Aluminium & Magnesium Die Casting Market Outlook, By Construction & Infrastructure (2024-2032) (\$MN)

Table 35 Global Aluminium & Magnesium Die Casting Market Outlook, By Other End Users (2024-2032) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

I would like to order

Product name: Aluminium & Magnesium Die Casting Market Forecasts to 2032 – Global Analysis By Product (Engine Components, Transmission Components, Chassis Components, Structural Components, Body Panels, Electronic Housings, Interior Trim Components, and Other Products), Process, Material, Die Casting Equipment, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/A2F238A25798EN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/A2F238A25798EN.html>