

Die Casting - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

Market Report | 2026-02-09 | 150 pages | Mordor Intelligence

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Report description:

Die Casting Market Analysis

The die casting market was valued at USD 86.52 billion in 2025 and estimated to grow from USD 92.61 billion in 2026 to reach USD 130.17 billion by 2031, at a CAGR of 7.04% during the forecast period (2026-2031). As electrification reshapes power-train needs, OEMs are replacing multi-piece stamp-and-weld assemblies with single, high-integrity castings that cut weight and part counts while preserving structural rigidity. This pivot keeps the die casting market resilient even as internal-combustion volumes plateau, because the content-per-vehicle in electric cars rises on the back of battery trays, motor housings, and under-body megacastings. Outside mobility, renewable-energy infrastructure, 5G rollouts, and automation programs sustain demand for complex, near-net-shape components. Competitive intensity tightens as tier-1 suppliers, pure-play foundries, and vertically integrating automakers race to master giga-press technology, deploy on-site renewables for cost control, and navigate looming PFAS bans in mold lubricants.

Global Die Casting Market Trends and Insights

ICE-to-EV Structural-Parts Lightweighting Push

Battery-electric vehicles streamline their design with fewer components, yet they demand larger, integrated castings for essential structures such as battery housings, motor frames, and unified chassis sections. A prime example is Tesla's rear underbody megacasting, which consolidates several stamped parts. This underscores the rising strategic significance and value of die casting

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in each vehicle, regardless of fluctuations in overall production volumes. Studies indicate structural megacasting can reduce curb weight by 10-15%, bringing critical range benefits while lowering assembly complexity .

Near-Net-Shape Pressure-Die-Casting for Giga-Press Body-in-White

Ultra-large giga-presses now create single-piece structures, a feat that once demanded multiple welded components. While traditional automakers are integrating these presses into their new electric vehicle platforms, smaller foundries grapple with challenges like high initial scrap rates and expensive die adjustments. Meanwhile, advanced equipment lines are achieving quicker cycle times, a move that mitigates hefty capital costs and pushes the die-casting industry towards consolidating into fewer, yet significantly larger, production cells.

Post-2026 Magnesium Supply Risk from China Export Controls

China continues to lead as the primary source of magnesium. However, recent export licensing measures from the country hint at tighter supply controls. Such moves could potentially disrupt downstream casting contracts. Western smelters, taking years to ramp up, are grappling with price volatility, complicating long-term vehicle platform planning. Programs in the automotive and aerospace sectors, which have relied on magnesium's lightweight benefits over aluminum, now confront difficult decisions: redesigning components or stockpiling the material.

Other drivers and restraints analyzed in the detailed report include:

In-Mold Sensors Enabling Zero-Defect "First-Shot" Quality
Circular-Economy Aluminum-Recycling Mandates Spur Secondary HPDC Demand
Tightening PFAS Emissions Norms on Lubricants

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Automotive applications contributed 61.73% of 2025 revenues and will deliver an 8.02% CAGR to 2031, illustrating how EV structural content offsets ICE decline. The die casting market size for battery enclosures, motor housings, and under-body castings will grow significantly by the end of the forecast period. Automakers are consolidating dozens of stamped components into just a few large castings, leading to a shift in sourcing strategies. They're now favoring suppliers adept at giga-press operations, especially those with flawless startup cycles. Beyond the automotive realm, sectors like renewable energy and telecom are witnessing a steady uptick in demand.

Meanwhile, the aerospace industry is showing heightened interest in titanium and high-strength aluminum, eyeing them for next-generation airframes. This industry-wide transition is spurring intensified R&D efforts into ductile alloys and vacuum-assisted filling, all in a bid to meet stringent crash safety standards. Tier-1 suppliers, previously centered on engine parts, are now pivoting. They're retrofitting furnaces and setting up massive casting cells, focusing on structural components and battery trays. Such trends are elevating entry barriers for smaller foundries and nudging the industry towards integrated hubs, seamlessly blending machining and assembly close to OEM body shops.

While pressure casting still owns 55.02% of 2025 billings, vacuum casting will clock a 8.93% CAGR as safety-critical EV structures require heat-treatable, weldable parts. When pore content falls 60-80%, automakers can T6-treat aluminum parts without blow-out risk and laser-weld them into multi-material frames. That capability lifts price realizations by up to 30% per kilogram, keeping margin potential high even where alloy cost rises. Consequently, the die casting market sees plants adding vacuum chambers or converting cold-chamber cells to hybrid configurations.

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Longer term, squeeze casting and semi-solid processes address niche aerospace and heavy-truck steering knuckles that need forged-like microstructures. Yet their cycle times remain slower, so high-volume industries still favor pressure or vacuum options supplemented by in-die cooling and intensified process monitoring.

The Die Casting Market Report is Segmented by Application (Automotive, Electrical and Electronics, and More), Process (Pressure Die Casting, Vacuum Die Casting, and More), Raw Material (Aluminum, Magnesium, and More), Casting-Machine Clamping Force (?4, 000 KN, 4, 001-10, 000 KN, and More), and Geography (North America, South America, and More). The Market Forecasts are Provided in Terms of Value (USD).

Geography Analysis

Asia-Pacific generated 56.21% of global sales in 2025, anchored by China's vast auto, appliance and electronics clusters. Decades of cumulative know-how, high scrap-aluminum availability, and vertically integrated tool-steel ecosystems keep cost positions sharp. Korea and Japan contribute control-system innovation, while India rides production-linked incentives that fund new lightweight-component lines. As OEMs diversify sourcing, Southeast Asia gains share for low-complexity parts and back-up capacity, broadening the die casting market footprint across ASEAN.

The Middle East & Africa region is the fastest riser at 8.42% CAGR. Gulf Cooperation Council states use Vision 2030 funds to manufacture solar inverters, wind housings, and EV chargers domestically. Megaprojects like NEOM draw demand for high-tonnage presses able to cast aluminum facade nodes and structural connectors. Turkey's auto exports and Egypt's industrial-park policies further energize regional orders, though upstream ingot supply relies on imports until smelters scale.

North America and Europe grow chiefly through technology shifts rather than plant count. United States tax credits favor domestic battery and drivetrain sourcing, causing OEMs to localize megacasting next to assembly plants in Ohio, Alabama, and Ontario. Europe's Carbon Border Adjustment Mechanism boosts competitive standing for regional shops running recycled aluminum furnaces on renewable power. Both regions further the die casting market by enforcing PFAS phase-outs and lifecycle carbon audits, spurring capital upgrades and digital traceability modules.

List of Companies Covered in this Report:

Form Technologies Inc. (Dynacast) Nematik S.A.B. de C.V. Endurance Technologies Limited Sundaram Clayton Ltd Shiloh Industries, inc. Georg Fischer Ltd Gibbs Die Casting Corporation Bocar Group Engtek Group Rheinmetall AG Rockman Industries Limited Ryobi Die Casting Linamar Corporation Meridian Lightweight Technologies Inc. Sandhar Group Alcoa Corporation Pace Industries Inc. CIE Automotive China Hongqiao Group Limited Consolidated Metco, Inc.

Additional Benefits:

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

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