

Industrial Gear Market to Reach USD 45.1 Billion by 2035, Growing at 3.8% CAGR from 2025 - Transparency Market Research

Global industrial gear market valued at US\$ 29.9 Bn in 2024, projected to grow at 3.8% CAGR and reach US\$ 45.1 Bn by 2035.

WILMINGTON, DE, UNITED STATES,
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EINPresswire.com/ -- Industrial gears are fundamental components that power the machinery driving modern economies—from automotive transmissions and robotics to renewable energy systems and heavy construction equipment. By converting torque, transmitting power, and ensuring mechanical efficiency, industrial gears enable industries to achieve precision, reliability, and scalability in operations.

INDUSTRIAL GEAR MARKET OUTLOOK 2035

The global industrial gear industry was valued at

US\$ 29.9 Bn
in 2024



The global industrial gear market is estimated to grow at a CAGR of

3.8%



from 2025 to 2035 and reach

US\$ 45.1 Bn

by the end of 2035

The global [industrial gear market](#), already deeply embedded in manufacturing and engineering supply chains, is entering a transformative phase. The global industrial gear industry was valued at US\$ 29.9 billion in 2024 and is projected to reach US\$ 45.1 billion by 2035, growing at a steady CAGR of 3.8% (2025–2035).

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Industrial modernization and smart gear adoption are driving steadiness in the global industrial gear market, enhancing efficiency, reliability, and lifecycle performance.”

*Transparency Market
Research*

While the industry is not marked by explosive growth, its steady expansion reflects resilience—fueled by modernization, automation, renewable energy integration, and electrified mobility. At the same time, challenges like raw material price volatility and substitution risks are reshaping strategies for both established leaders and emerging players.

Analysts' Viewpoint on Industrial Gear Market

The global industrial gear market reflects a unique balance of mature demand and innovative opportunities. Unlike high-growth renewable segments or volatile commodity markets, industrial gears benefit from diverse end-use applications across automotive, aerospace, robotics, mining, energy, and marine industries.

Key insights shaping the 2035 outlook include:

Automation and Industrial Modernization:

Gears designed for robotics, precision machinery, and smart factories are witnessing strong demand. Predictive maintenance, AI-driven monitoring, and smart gearboxes with embedded sensors are creating value-added opportunities.

Renewable Energy and Electrification:

Wind turbines, electric drivetrains, and e-axles are creating a new frontier for high-performance, lightweight, and energy-efficient gears.

Regional Differentiation:

Europe emphasizes efficiency-driven applications.

India and North America benefit from policy-driven industrial incentives.

Asia-Pacific dominates global demand as the center of mass manufacturing.

Resilient Aftermarket & Services:

Even during economic slowdowns, custom-engineered gears, retrofitting, and service contracts sustain revenues for gear manufacturers.

Overall, the industrial gear industry is less about volume surges and more about technological evolution, positioning gears as critical enablers of industrial reliability and efficiency.

Market Overview

Industrial gears are used to transfer torque and motion in mechanical systems. They play critical roles in:

Automotive: Transmissions, steering systems, e-axles.

Power Generation: Wind turbines, hydro systems, and traditional plants.

Construction & Mining: Heavy-duty torque for excavators, cranes, and drilling rigs.

Marine & Aerospace: Precision and high-strength applications.

Robotics & Automation: Lightweight, high-precision planetary gears.

New gear systems are increasingly designed for energy conservation, longer lifespans, and digital integration. Embedded sensors for condition-based monitoring and predictive maintenance are reshaping the lifecycle economics of gear systems, allowing industries to reduce downtime and optimize costs.

Key Market Drivers

Rising Automation and Industrial Modernization

Modern manufacturing relies heavily on robotics, AI-driven systems, and IoT integration. This shift is increasing the demand for high-precision gears capable of handling dynamic loads, improving torque density, and enabling integration with smart diagnostics.

According to the International Federation of Robotics (IFR), global operational stock of industrial robots grew by 9.7% to 4.28 million units in 2023.

Each robotic arm or precision conveyor relies on gears engineered for accuracy and durability.

Gear providers are now producing:

Precision-ground gearboxes for robotics.

High-torque assemblies for industrial automation.

Smart gears compatible with predictive maintenance platforms.

This integration of mechanical engineering with digital intelligence underscores the industrial gear market's central role in the smart factory ecosystem.

Renewable Energy and Electric Mobility

Industrial gears are vital to the energy transition and e-mobility revolution.

Wind Energy: Gearboxes for turbines must handle high torque and fluctuating loads. The U.S. DOE reported that by the end of 2023, the U.S. had 150,492 MW of installed onshore wind capacity, with 6,474 MW added in 2023 alone. Each turbine requires robust gear systems, presenting a major demand source.

Electric Vehicles (EVs): E-axles, powertrains, and lightweight gearboxes are redefining automotive engineering. As EV penetration grows globally, so will demand for compact, efficient, and durable gears.

This dual role in renewable energy and mobility ensures gears will remain indispensable in the sustainable transformation of global industries.

Market Segmentation Insights

By Gear Type

Helical Gears: Largest segment; valued for high load capacity and quieter operation, widely used in automotive and industrial equipment.

Spur Gears: Cost-effective, simple design, used in machinery with moderate loads.

Planetary Gears: High torque density, compact size, critical in robotics, aerospace, and renewable energy.

Bevel Gears: Enable angular motion transfer in automotive and machinery.

Worm Gears: Compact solutions for high torque reduction.

Rack and Pinion: Automotive steering and motion control.

Others (Screw & Miter Gears): Niche applications in specialized machinery.

Helical gears dominate, but planetary gears are the fastest-growing due to robotics and EV applications.

By Application

Automotive – Major demand driver; global motor vehicle production reached 93.5 million units in 2023, a 10% YoY increase (OICA).

Renewable Energy – Wind turbines and hydro gearboxes.

Mining & Construction – Heavy-duty gear systems.

Robotics & Automation – Fastest-growing application.

Aerospace & Defense – Precision gears for critical missions.

By Material

Metallic Gears – Steel and alloys dominate due to durability.

Non-Metallic Gears – Lightweight composites and polymers are gaining traction in EVs, aerospace, and robotics.

By Region

Asia-Pacific: Leads global demand (55% of GMVA in 2022). Manufacturing powerhouse with automotive, electronics, and heavy industries driving gear demand.

Europe: Efficiency-driven, with strong adoption in automation and renewable energy.

North America: Policy incentives for manufacturing and renewable investments sustain growth.

Latin America & Middle East/Africa: Emerging opportunities in mining, construction, and energy infrastructure.

Competitive Landscape

The industrial gear market is moderately fragmented with both global giants and specialized niche manufacturers.

Leading Players Include:

ABB Ltd.
Siemens AG
Gleason Corporation
Klingelnberg
Bonfiglioli Group
Emerson Electric Co.
Aero Gear Incorporated
Bharat Gears Ltd.
Elecon Engineering Co. Ltd.
Martin Sprocket & Gear, Inc.
Shanthi Gears Ltd.
Kohara Gear Industry Co. Ltd.
OKUBO Gear Co. Ltd.
DBSantasalo

Strategies Driving Competition:

Mergers & Acquisitions – Expanding capabilities and geographic footprint.

Technological Innovation – Smart gears, lightweight composites, and predictive maintenance integration.

Customization & Premium Efficiency Gears – Higher margins and long-term contracts with industrial clients.

Recent Market Developments

July 2025 – Gleason Corporation acquired the Intra Group of Companies, enhancing high-precision gear metrology and aerospace capabilities.

April 2025 – Mayr Power Transmission acquired EME Motor 2008 S.L. (Spain) to expand its robotics and automation presence in Europe.

March 2025 – B&D Industrial merged with American Gear & Engineering and Tech Tool Company, strengthening its rack, spur, and custom gear solutions.

These moves highlight a broader industry trend: vertical integration and specialization in advanced, high-precision gears for automation and aerospace.

Challenges in the Industrial Gear Market

Volatile Raw Material Costs – Steel and energy price fluctuations impact profitability.

Substitution Risk – Direct-drive systems in some wind turbines and EVs may reduce demand for traditional gearboxes.

Environmental Pressures – Need for eco-friendly materials and lower-noise systems.

Economic Slowdowns – Automotive and heavy engineering downturns directly affect gear demand.

Industrial Gear Market Outlook 2035

Looking ahead, the global industrial gear market will be defined by innovation, diversification, and digital integration.

Smart Gearboxes as Standard – Embedded sensors and predictive maintenance will become mainstream by 2035.

Planetary & Lightweight Gears in Robotics and EVs – Fastest-growing segments.

Renewable Energy Applications – Wind power gear systems will be critical to supporting clean energy goals.

Asia-Pacific's Dominance – Region will remain the manufacturing hub and growth engine of the global gear market.

Service and Aftermarket Revenue – Retrofits, replacements, and long-term contracts will ensure steady revenues for manufacturers.

The industrial gear market may not generate headlines with explosive growth, but its quiet, steady progress is vital to industrial transformation. By enabling automation, supporting renewable energy, and driving electrification, gears ensure that industries remain efficient, reliable, and competitive.

As the market grows from US\$ 29.9 billion in 2024 to US\$ 45.1 billion in 2035, it will increasingly reflect technological sophistication, digital integration, and sustainability. Whether in powering the next generation of electric vehicles, keeping wind turbines spinning, or driving robotic precision, industrial gears will remain the hidden force turning the wheels of the global economy.

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