

Centrifugal Air Compressor Market Size to Surpass USD 12.9 Billion by 2034, Expanding at 5.5% CAGR (2025–2034)

The global centrifugal air compressor market size was worth around USD 8.4 billion in 2024 and is predicted to grow to around USD 12.9 billion by 2034

PUNE, MAHARASHTRA, INDIA, September 5, 2025 /EINPresswire.com/
-- The global centrifugal air compressor market Size—a critical segment of industrial air management and process automation—was valued at ~USD 8.4 billion in 2024 and is projected to reach



~USD 12.9 billion by 2034, growing at a compound annual growth rate (CAGR) of about 5.5% between 2025 and 2034. Demand for high-efficiency, oil-free air solutions, process industry expansion, and energy optimization initiatives are propelling steady market growth worldwide.



The global centrifugal air compressor market size was worth around USD 8.4 billion in 2024 and is predicted to grow to around USD 12.9 billion by 2034, (CAGR) of roughly 5.5% between 2025 and 2034."

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Executive Summary

Market Size: USD 8.4 B (2024)

USD 12.9 B (2034)

Growth Rate: ~5.5% CAGR (2025–2034)

Primary Drivers: Industrial automation, rising process

industry demand, oil-free air requirements in food, pharma, and electronics Challenges: High capital costs, need for skilled maintenance, volatility in raw material prices Opportunities: Digital monitoring, smart compressors, energy-efficient retrofits, emerging markets industrialization

Key Insights

As per the analysis shared by our research analyst, the global centrifugal air compressor market is estimated to grow annually at a CAGR of around 5.5% over the forecast period (2025-2034).

In terms of revenue, the global centrifugal air compressor market size was valued at around USD 8.4 billion in 2024 and is projected to reach USD 12.9 billion by 2034.

The increasing trend towards automation is expected to drive the centrifugal air compressor industry over the forecast period.



Based on the lubrication, the oil-filled segment is expected to hold the largest market share over the forecast period.

Based on the application, the manufacturing segment is expected to dominate the market expansion over the projected period.

Based on region, the Asia Pacific is expected to dominate the market during the forecast period.

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Market Scope

Centrifugal air compressors use centrifugal force to compress and deliver large volumes of air for industries such as manufacturing, oil & gas, power, food & beverage, and electronics. They are preferred for:

Continuous duty, high-flow applications Oil-free air requirements Energy savings in large-scale plants

Market Segmentation By Stage Single-Stage Multi-Stage

By Lubrication Oil-Free Oil-Lubricated By End-Use Industry
Oil & Gas / Petrochemical
Power Generation
Manufacturing & Automotive
Food & Beverage
Pharmaceuticals & Healthcare
Electronics & Semiconductors
Others (Mining, Water Treatment)

By Power Capacity Below 300 kW 300–1000 kW Above 1000 kW

By Distribution Channel
Direct OEM Sales
Authorized Dealers & Integrators
Aftermarket / Service Providers

By Region
North America
Europe
Asia Pacific
Latin America
Middle East & Africa

Regional Highlights

North America

2024 Status: Advanced manufacturing, robust petrochemical and power sectors.

Outlook: Steady adoption of high-efficiency, oil-free systems; retrofitting for energy savings.

Europe

2024 Status: Mature market with strict energy efficiency directives.

Outlook: Shift toward smart compressors, predictive maintenance, and Industry 4.0 integration.

Asia Pacific

2024 Status: Largest and fastest-growing market; industrialization in China, India, and Southeast Asia.

Outlook: Strong growth from electronics, food processing, and expanding oil & gas projects.

Latin America

2024 Status: Brazil and Mexico drive demand in food processing and energy.

Outlook: Moderate growth with infrastructure and industrial modernization.

Middle East & Africa

2024 Status: Demand from oil & gas and desalination industries.

Outlook: Government investments in industrial diversification support adoption.

Market Drivers

Industrial Growth & Automation: Increased production and demand for continuous compressed air supply.

Energy Efficiency & Sustainability: Regulations push for low-energy compressors and lifecycle cost reduction.

Oil-Free Air Applications: Pharma, electronics, and food industries need contamination-free compressed air.

Technological Advancements: Variable-speed drives, remote monitoring, and smart analytics. Process Reliability: Centrifugal design supports high uptime and consistent air delivery.

Restraints & Challenges

High Initial Investment: May limit SME adoption.

Maintenance Expertise: Requires skilled technicians and scheduled upkeep.

Raw Material Cost Volatility: Impacts pricing and profitability.

Opportunities

Digital & Predictive Maintenance: IoT-enabled sensors for real-time monitoring. Emerging Markets Industrialization: Infrastructure and manufacturing growth in Asia, Africa. Retrofit & Upgrades: Energy savings programs incentivize older plant modernization. Green Manufacturing & ESG: Low-carbon processes fuel oil-free compressor demand.

Inquiry For Buying-<u>https://www.zionmarketresearch.com/inquiry/centrifugal-air-compressor-market</u>

Competitive Landscape — Key Players

Atlas Copco AB
Ingersoll Rand Inc.
Siemens Energy AG
FS-Elliott Co., LLC
Hitachi Industrial Equipment Systems
KAESER Kompressoren SE
MAN Energy Solutions
Elliott Group (Ebara Corporation)

Elliott Group (Ebara Corporation)

Boge Kompressoren

Others: Regional OEMs and specialized compressor integrators

Market moderately consolidated; OEMs compete on efficiency, lifecycle cost, smart features, and aftermarket service.

Strategic Recommendations

Focus on Oil-Free, Energy-Efficient Models: Meet rising hygiene and sustainability demands. Expand Aftermarket & Services: Lifecycle revenue streams via predictive maintenance. Adopt IoT & Analytics: Enable remote diagnostics and performance optimization. Strengthen Asia Pacific Presence: Leverage industrialization and infrastructure spending. Partnerships & Training: Build service networks and technician expertise in emerging regions.

Outlook to 2034

The centrifugal air compressor market will remain a cornerstone of industrial infrastructure, evolving toward digital, oil-free, and energy-optimized solutions. By 2034, revenues are expected to exceed USD 12.9 billion, with Asia Pacific spearheading volume growth and North America/Europe driving technological innovation.

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