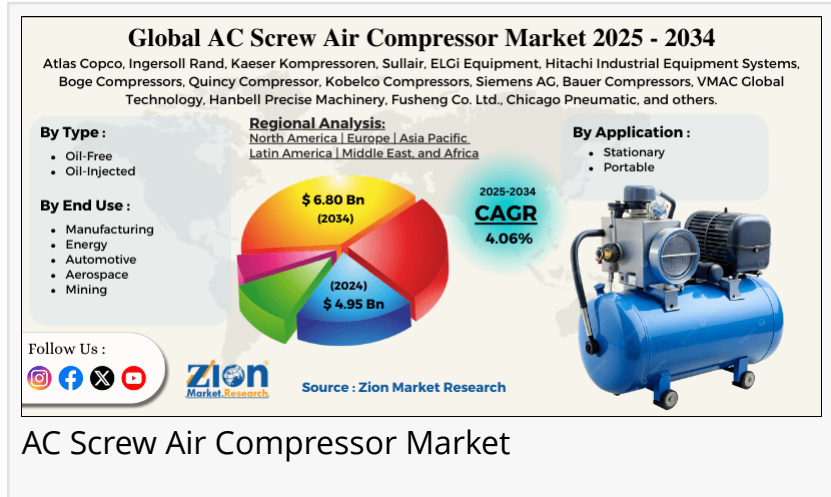


AC Screw Air Compressor Market Size to Reach USD 6.80 Billion by 2034, Growing at 4.06% CAGR

The global AC screw air compressor market size was worth around USD 4.95 billion in 2024 and is predicted to grow to around USD 6.80 billion by 2034

PUNE, MAHARASHTRA, INDIA,
September 15, 2025 /

EINPresswire.com/ -- The [global AC screw air compressor market size](#) was valued at USD 4.95 billion in 2024 and is projected to reach USD 6.80 billion by 2034, growing at a compound annual growth rate (CAGR) of approximately 4.06% between 2025 and 2034.



Elevate your business strategy with comprehensive market data. Request a free sample report now: <https://www.zionmarketresearch.com/sample/ac-screw-air-compressor-market>

“

The global AC screw air compressor market size was worth around USD 4.95 billion in 2024 and is predicted to grow to around USD 6.80 billion by 2034, (CAGR) of roughly 4.06% between 2025 and 2034.”

Deepak Rupnar

Rotary screw air compressors—particularly those powered by alternating current (AC)—have become an indispensable part of modern industry. Their ability to provide continuous, energy-efficient compressed air makes them a preferred choice over piston compressors in applications ranging from manufacturing plants to large infrastructure projects.

The growth trajectory reflects several trends: industrial automation, increasing demand for energy-efficient

systems, rising investments in manufacturing and processing industries, and the ongoing shift toward oil-free and variable-speed drive (VSD) compressors to meet environmental regulations.

Key Insights:

As per the analysis shared by our research analyst, the global AC screw air compressor market is

estimated to grow annually at a CAGR of around 4.06% over the forecast period (2025-2034)

In terms of revenue, the global AC screw air compressor market size was valued at around USD 4.95 billion in 2024 and is projected to reach USD 6.80 billion by 2034.

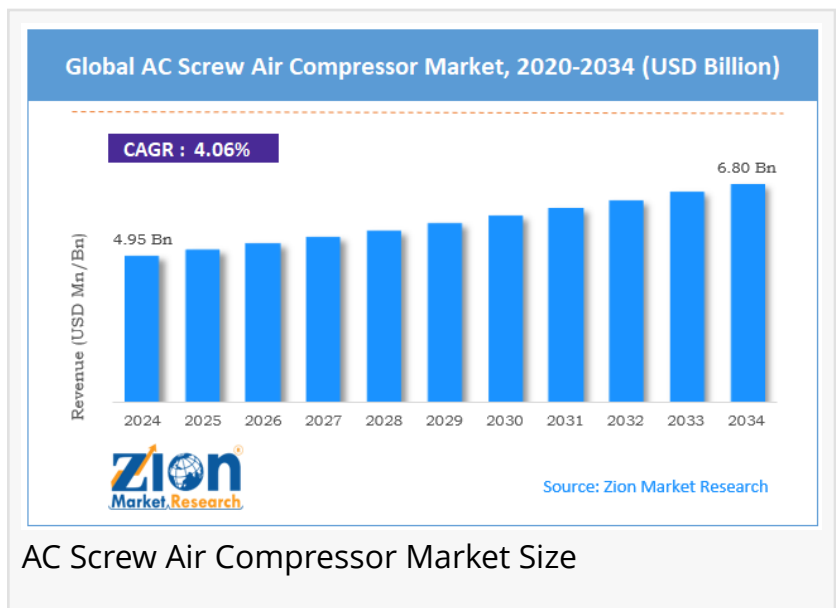
The AC screw air compressor market is projected to grow significantly owing to the growing demand from mining and oil & gas industries, growth in refrigeration and HVAC applications, and rising use in food and beverage processing.

Based on type, the oil-injected segment is expected to lead the market, while the oil-free segment is expected to grow considerably.

Based on application, the stationary segment is the dominating segment, while the portable segment is projected to witness sizeable revenue over the forecast period.

Based on end-use, the manufacturing segment is expected to lead the market compared to the automotive segment.

Based on region, the Asia Pacific is projected to dominate the global market during the estimated period, followed by Europe.



AC Screw Air Compressor Market Size

Market Dynamics

Key Growth Drivers

Industrialization and Infrastructure Expansion

Emerging economies, especially in Asia-Pacific, Latin America, and parts of Africa, are investing heavily in infrastructure and industrial plants. AC screw air compressors are integral to construction, mining, and manufacturing projects because of their reliability, low maintenance, and high duty cycle.

Energy Efficiency Focus

Governments and corporations worldwide are prioritizing energy conservation. Modern AC screw compressors are designed with variable-speed drives, advanced controls, and energy recovery systems, reducing energy costs by 30–50% compared to legacy systems.

Growth of Process Industries

Sectors such as food & beverage, pharmaceuticals, chemicals, and power generation require clean, stable compressed air for critical processes. The adoption of oil-free screw compressors is accelerating due to strict contamination standards in these industries.

Technological Advancements

Innovations in IoT, predictive maintenance, and digital twin technology enable real-time monitoring of compressor performance. This reduces unplanned downtime and optimizes energy consumption, creating a compelling value proposition for end users.

Stringent Environmental Regulations

Regulations regarding emissions, noise, and contamination levels push manufacturers toward cleaner, quieter, and more efficient screw compressors.

Market Challenges

High Initial Investment: Advanced AC screw compressors, particularly oil-free and VSD models, carry higher upfront costs compared to reciprocating or basic screw compressors.

Maintenance Costs: While screw compressors are more reliable, they still require skilled maintenance, especially in remote or harsh environments.

Competition from Alternative Technologies: Some industries are exploring hybrid or centrifugal compressors for high-volume applications.

Market Opportunities

Smart Compressors: Integrating sensors, analytics, and cloud-based monitoring to predict failures and schedule maintenance proactively.

Retrofit & Aftermarket Services: Upgrading older compressor systems with energy-efficient components.

Growth in Oil-Free Segment: Driven by stricter quality standards in food, beverage, and pharmaceutical manufacturing.

Customized Solutions: Offering industry-specific compressors tailored to customer needs, such as silent operation models for indoor use.

Do You Have Any Query Or Specific Requirement? Request Customization of Report:

<https://www.zionmarketresearch.com/custom/9741>

Market Segmentation

By Type

Oil-Injected AC Screw Air Compressors

Commonly used in general industrial applications, providing high performance and durability at relatively lower costs.

Oil-Free AC Screw Air Compressors

Preferred in industries where air purity is critical (pharmaceuticals, food & beverage, electronics).

Growing regulatory emphasis on contamination-free production is accelerating adoption.

By Stage

Single-Stage Compressors

Ideal for medium-duty applications with moderate pressure requirements.

Two-Stage / Multi-Stage Compressors

Suitable for heavy-duty or high-pressure applications, offering better energy efficiency over long-term operation.

By Capacity / Power Rating

Below 50 kW: Small workshops, light manufacturing, and commercial operations.

50–250 kW: Medium-to-large industrial plants needing continuous duty cycles.

Above 250 kW: Heavy industries such as mining, oil & gas, and large-scale manufacturing.

By Application

Manufacturing & Industrial Plants: Automotive, metal fabrication, textile, and plastics industries.

Food & Beverage Processing: Bottling, packaging, and pneumatic conveying systems requiring oil-free compressed air.

Pharmaceuticals & Chemicals: Clean-room operations, active ingredient production, and packaging lines.

Power Generation: Turbine operation, plant maintenance, and instrument air supply.

Mining & Metals: Drilling, blasting, and material handling.

Oil & Gas: Instrumentation, pipeline operations, and offshore platforms.

Automotive Industry: Painting, assembly lines, and pneumatic tools.

By Sales Channel

OEMs (Original Equipment Manufacturers): Direct sales to large industrial clients.

Aftermarket / Service Providers: Maintenance, spare parts, and retrofit solutions for existing compressors.

Regional Analysis

North America

North America remains a leading market for AC screw air compressors due to its strong industrial base, stringent environmental regulations, and technological innovation. The U.S. and Canada see high adoption in food, pharmaceutical, and electronics industries, where oil-free systems are mandatory. Additionally, the shift to smart factories and Industry 4.0 initiatives boosts demand for digitally enabled compressors.

Europe

Europe's market is shaped by the European Union's energy efficiency directives, pushing manufacturers to adopt eco-friendly compressors. Germany, Italy, and France are leading adopters, supported by advanced manufacturing and high automation rates. Oil-free screw compressors and VSD systems have seen notable growth due to EU environmental standards and the high cost of energy.

Asia-Pacific

Asia-Pacific is the fastest-growing region, led by China, India, Japan, and Southeast Asia. Rapid industrialization, infrastructure projects, and investments in electronics manufacturing create strong demand. China dominates production and consumption, while India is emerging as a hub for compressor manufacturing and export. The rise of "Make in India" and similar initiatives accelerates market growth.

Latin America

Countries like Brazil and Mexico are expanding their manufacturing and energy sectors. AC screw compressors are increasingly being adopted in mining, automotive, and oil & gas sectors. While the region is price-sensitive, opportunities exist for affordable, durable models.

Middle East & Africa

Oil-rich nations in the Middle East are key users of large-scale screw compressors for oil & gas, petrochemical, and construction projects. Africa, though still nascent, offers opportunities in mining and infrastructure development.

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

Competitive Landscape

The AC screw air compressor market is moderately consolidated, with a mix of multinational corporations and regional players. Companies compete on energy efficiency, service networks, technology integration, and aftersales support.

Major Key Players

Atlas Copco – A global leader known for high-quality industrial air compressors, vacuum solutions, and energy-efficient systems.

Ingersoll Rand – Offers a wide range of screw compressors focusing on reliability, performance, and low total cost of ownership.

Kaeser Kompressoren – German manufacturer specializing in rotary screw air compressors and compressed air system optimization.

Sullair – Provides durable compressors for demanding applications such as construction and heavy industry.

Hitachi Industrial Equipment Systems – Focuses on environmentally friendly, oil-free screw compressors.

Gardner Denver – Offers industrial compressors with advanced monitoring and control systems.

Elgi Equipments – India-based manufacturer with a strong global footprint, emphasizing cost-effective and efficient solutions.

Quincy Compressor, Fusheng, Boge Kompressoren – Regional players expanding in high-growth markets.

Competitive Strategies

Energy Efficiency & VSD Technology: Manufacturers are shifting toward compressors with variable-speed drives to optimize power usage.

IoT & Digital Monitoring: Incorporating predictive maintenance and real-time performance dashboards.

Expanded Service Offerings: Establishing local service centers and offering extended warranties and maintenance contracts.

Mergers & Acquisitions: Strengthening global footprint through strategic partnerships.

Sustainable Manufacturing: Using recycled materials and low-emission production processes.

Technology Trends

Variable Speed Drive (VSD) Compressors: Adjust motor speed to match air demand, reducing energy consumption significantly.

IoT-Enabled Monitoring: Real-time data collection, predictive maintenance, and automated alerts minimize downtime.

Oil-Free Compressors: Essential for contamination-sensitive industries; this segment is expected to outpace oil-injected growth.

Compact and Modular Designs: Easier installation and integration into existing plant systems.

Energy Recovery Systems: Capturing waste heat from compressors to reduce overall plant energy use.

Market Forecast and Future Outlook

The global AC screw air compressor market is forecast to grow steadily from USD 4.95 billion in 2024 to USD 6.80 billion by 2034 at a CAGR of 4.06%. This moderate but consistent growth reflects the compressor's essential role across industries combined with incremental technology improvements.

Baseline Scenario:

Steady growth driven by industrial expansion and gradual replacement of legacy systems with energy-efficient models.

Growing aftermarket services providing stable revenue streams for manufacturers.

Upside Scenario:

Rapid adoption of Industry 4.0 and IoT-enabled systems accelerates replacement cycles.

Increased demand for oil-free compressors in emerging markets boosts CAGR beyond 5%.

Downside Risks:

Prolonged economic slowdown affecting capital expenditures in manufacturing and infrastructure.

Raw material price volatility impacting production costs.

Strategic Recommendations

For Manufacturers:

Invest in R&D for oil-free, VSD-enabled compressors.

Offer integrated IoT monitoring and predictive maintenance solutions.

Expand service and spare parts availability in high-growth regions.

For End Users:

Evaluate total cost of ownership, not just purchase price, to maximize energy savings.

Adopt digital monitoring solutions to improve uptime and reduce maintenance costs.

For Policymakers:

Incentivize energy-efficient equipment adoption through tax breaks or subsidies.
Establish stricter contamination and emission standards to promote eco-friendly compressors.

Conclusion

The global AC screw air compressor market is poised for stable and sustainable growth over the next decade. Driven by industrialization, energy efficiency mandates, and technological advancements, the market will evolve from basic compressor units to smart, connected, and environmentally friendly systems.

With its projected rise from USD 4.95 billion in 2024 to USD 6.80 billion by 2034, the AC screw air compressor market offers significant opportunities for manufacturers, suppliers, and service providers. Those who innovate in energy efficiency, digital integration, and aftersales support will emerge as market leaders.

As industries worldwide strive to reduce operational costs and environmental impact, AC screw air compressors will remain at the heart of industrial productivity—quietly powering tools, processes, and production lines across the globe.

More Trending Reports by [Zion Market Research](#) -

Neurorehabilitation Devices Market by Product Type (Neuro-Robotic Devices, Non-Invasive Stimulators, Wearable Devices, and Brain-Computer Interface), by Application (Parkinson's Disease, Brain Trauma Injury, Spinal Cord Injury, Stroke, Schizophrenia, Cerebral Palsy, and Others), and by End-User (Hospitals/Clinics, Cognitive Care Centers, Research Institutes, and Others): Global Industry Perspective, Comprehensive Analysis, and Forecast, 2024 - 2032-
<https://www.zionmarketresearch.com/report/neurorehabilitation-devices-market>

Big Data Analytics in Healthcare Market by Component (Software [Electronic Health Record Software, Practice Management, and Workforce Management], Hardware [Data Storage, Routers, Firewalls, Virtual Private Networks, E-Mail Servers, and Others], and Services), By Deployment Type (On-Demand and On-Premise), By Analytics Type (Descriptive, Predictive, and Prescriptive), and By Application (Financial Analytics [Claim Processing, Revenue Cycle Management, Risk Adjustment & Assessment, and Others], Clinical Data Analytics [Quality Control, Population Health Management, Clinical Decision Support, Reporting and Compliance, and Precision Health], and Others): Global Industry Perspective, Comprehensive Analysis and Forecast, 2024 - 2032-
<https://www.zionmarketresearch.com/report/big-data-analytics-in-healthcare-market>

Veterinary Ultrasound Scanners Market by Scanning Technology (Analog Imaging Technology, Digital Imaging Technology, and Contrast Imaging Technology), by Product Type (Portable Ultrasound Scanners and Cart-Based Ultrasound Scanners), and by End-User (Veterinary Hospitals, Animal Breeding Farms, and Veterinary Clinics): Global Industry Perspective, Comprehensive Analysis, and Forecast 2024-2032-
<https://www.zionmarketresearch.com/report/veterinary-ultrasound-scanners-market>

Molecular Breeding Market by Marker (Simple Sequence Repeats (SSR), Single Nucleotide

Polymorphism (SNP), and Others), by Process (Marker-Assisted Selection (MAS), QTL Mapping, Genomic Selection, Marker-Assisted Backcrossing (MABC), and Others), and by Application (Livestock and Crop): Global Industry Perspective, Comprehensive Analysis, and Forecast, 2024 - 2032-<https://www.zionmarketresearch.com/report/molecular-breeding-market>

Diabetic Retinopathy Market by Type (Non-Proliferative Diabetic Retinopathy and Proliferative Diabetic Retinopathy) and by Management (Vitreectomy, Anti-VEGF Therapy, Laser Surgery, and Intraocular Steroid Injection): Global Industry Perspective, Comprehensive Analysis, and Forecast, 2024 - 2032-<https://www.zionmarketresearch.com/report/diabetic-retinopathy-market>

Urgent Care Apps Market By Clinical Area (Cardiac Conditions, Stroke, Trauma, and Others), By App Type (Post-Hospital Apps, In-Hospital Communication & Collaboration Apps, Pre-Hospital Emergency Care & Triaging Apps, and Others), and By Region - Global and Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, and Forecasts 2024 - 2032-<https://www.zionmarketresearch.com/report/urgent-care-apps-market-size>

Neonatal Intensive Care Market By Product Type (Infant Warmers, Incubators, Convertible Warmer & Incubators, Neonatal Monitoring Devices, Respiratory Devices, Phototherapy Equipment, Catheters, And Others), By End-User (Hospitals, Childcare Clinics, And Others), And By Region - Global And Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, And Forecasts 2024-2032-<https://www.zionmarketresearch.com/report/neonatal-intensive-care-market>

Blockchain Technology in Healthcare Market By Application (clinical data exchange & interoperability, supply chain management, and claims settlement & billing), By End user (healthcare payers, pharmaceutical companies, and healthcare providers), And By Region - Global And Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, And Forecasts 2024 - 2032-<https://www.zionmarketresearch.com/report/blockchain-technology-healthcare-market>

Healthcare IT Consulting Market by Type (Application Analysis, Design & Development, Strategy & Project Management, Change Management, Security & Risk Assessment, Integration & Migration, Production Live Support, Regulatory Compliance, Business Process Management, and Other Consulting Services) and by End User (Healthcare Providers, Healthcare Payers, and Others): Global Industry Perspective, Comprehensive Analysis and Forecast, 2024 - 2032-<https://www.zionmarketresearch.com/report/healthcare-it-consulting-market>

Oncology Nutrition Market by Cancer Type (Blood, Liver, Pancreatic, Breast, Lung, Head & Neck, Esophageal, Stomach & Gastrointestinal) : Global Industry Perspective, Comprehensive Analysis, And Forecast 2024-2032-<https://www.zionmarketresearch.com/report/oncology-nutrition-market-report>

Deepak Rupnar

Zion Market Research
+1 855-465-4651
richard@zionmarketresearch.com

Visit us on social media:

[LinkedIn](#)

[Instagram](#)

[Facebook](#)

[YouTube](#)

[X](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/849170469>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.