

North America Pneumatic Components Market By Type (Air Treatment Components, Pneumatic Valves, Pneumatic Cylinders), By Application (Electronics, Chemical Industry, Machinery, Others), By Country, Competition, Forecast and Opportunities, 2020-2030F

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Abstracts

Market Overview

The North America Pneumatic Components Market was valued at USD 5.22 Billion in 2024 and is projected to reach USD 6.93 Billion by 2030, growing at a CAGR of 4.84% during the forecast period. The market is experiencing notable growth due to the increasing shift toward industrial automation and the widespread adoption of advanced equipment across sectors. Pneumatic components, which operate using compressed air to transmit energy, are fundamental in applications such as factory automation, material handling, and assembly operations. Industries including manufacturing, automotive, healthcare, and construction favor pneumatic systems for their cost-effectiveness, dependability, and efficiency compared to electric or hydraulic alternatives. Rising automation demands aimed at improving productivity and minimizing manual labor are fueling market growth. The automotive industry's need for precision tools, combined with the growing application of pneumatic systems in healthcare devices, particularly ventilators, is also accelerating market expansion. Advancements in smart pneumatic technologies and the incorporation of IoT for predictive maintenance further enhance market prospects. Additionally, the focus on sustainability and energy efficiency is driving the preference for pneumatic systems due to their relatively low energy usage. As industrial and infrastructure development progresses across North America, the demand for pneumatic tools and systems is expected to maintain a strong upward trajectory.

Key Market Drivers

Growing Demand for Automation Across Various Industries

The surge in automation adoption across key industries such as manufacturing, automotive, and healthcare is a primary driver for the North America Pneumatic Components Market. Pneumatic components, including actuators, valves, and cylinders, are crucial in automating production lines, reducing human error, and improving operational efficiency. In sectors traditionally reliant on manual labor, automation enables competitive scalability and consistent quality. For instance, in the automotive industry, pneumatic systems facilitate high-precision and high-speed operations on assembly lines, essential for handling heavy components and meeting production demands. In healthcare, pneumatic solutions are increasingly used in medical devices like ventilators and surgical tools, contributing to reliability and precision. The transition to Industry 4.0 has further accelerated the demand for smart pneumatic technologies capable of real-time monitoring and predictive diagnostics. As industries prioritize cost efficiency, speed, and quality, pneumatic components remain central to automation strategies across North America.

Key Market Challenges

Energy Inefficiency in Compressed Air Systems

Energy inefficiency remains a key obstacle in the North America Pneumatic Components Market. Despite their versatility, pneumatic systems often experience considerable energy loss during air compression, distribution, and usage. Heat dissipation during compression, pressure drops, and air leakage significantly reduce system efficiency, leading to increased energy costs. For industries focused on sustainability and reduced operational expenses, this inefficiency presents a notable drawback. In many facilities, the energy required to run air compressors constitutes a large portion of electricity costs, prompting reevaluation of pneumatic systems in favor of alternatives like electric actuators. Additionally, regulatory pressures and environmental considerations are encouraging manufacturers to adopt more energy-conscious solutions. While innovations such as efficient compressors and smart monitoring tools offer partial relief, the fundamental limitations of compressed air persist. For companies striving to meet strict energy efficiency targets, these challenges may limit the broader adoption of pneumatic technologies unless significant system-wide improvements are achieved.

Key Market Trends

Integration of Smart Sensors and Monitoring Technologies

A key trend transforming the North America Pneumatic Components Market is the integration of smart sensors and real-time monitoring technologies into pneumatic systems. Manufacturers are embedding components such as pressure sensors and flow meters to enhance system visibility and enable predictive maintenance. These intelligent technologies allow operators to detect inefficiencies—such as leaks, component wear, and abnormal pressure levels—before they cause downtime. The trend aligns with the broader goals of Industry 4.0, promoting the digitalization of industrial operations through interconnected systems and cloud-based platforms. Industries such as automotive, pharmaceuticals, and food processing are increasingly adopting these technologies to improve uptime, reduce costs, and maintain quality standards. By facilitating condition-based maintenance and offering data-driven insights, smart pneumatics are reinforcing the value proposition of pneumatic systems in a landscape increasingly focused on efficiency and digital transformation.

Key Market Players

SMC Corporation

Festo SE & Co. KG

Parker Hannifin Corporation

Emerson Electric Co.

Norgren Limited

Camozzi Automation S.p.A.

CKD Corporation

DornerWorks, Ltd.

Report Scope:

In this report, the North America Pneumatic Components Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

North America Pneumatic Components Market, By Type:

Air Treatment Components

Pneumatic Valves

Pneumatic Cylinders

North America Pneumatic Components Market, By Application:

Electronics

Chemical Industry

Machinery

Others

North America Pneumatic Components Market, By Country:

United States

Canada

Mexico

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the North America Pneumatic Components Market.

Available Customizations:

North America Pneumatic Components Market report with the given market data,

North America Pneumatic Components Market By Type (Air Treatment Components, Pneumatic Valves, Pneumatic Cylin...

TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

Contents

1. PRODUCT OVERVIEW

- 1.1. Market Definition
- 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
- 1.3. Key Market Segmentations

2. RESEARCH METHODOLOGY

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Formulation of the Scope
- 2.4. Assumptions and Limitations
- 2.5. Sources of Research
 - 2.5.1. Secondary Research
 - 2.5.2. Primary Research
- 2.6. Approach for the Market Study
 - 2.6.1. The Bottom-Up Approach
 - 2.6.2. The Top-Down Approach
- 2.7. Methodology Followed for Calculation of Market Size & Market Shares
- 2.8. Forecasting Methodology
 - 2.8.1. Data Triangulation & Validation

3. EXECUTIVE SUMMARY

- 3.1. Overview of the Market
- 3.2. Overview of Key Market Segmentations
- 3.3. Overview of Key Market Players
- 3.4. Overview of Key Regions/Countries
- 3.5. Overview of Market Drivers, Challenges, and Trends

4. VOICE OF CUSTOMER

5. NORTH AMERICA PNEUMATIC COMPONENTS MARKET OUTLOOK

- 5.1. Market Size & Forecast

5.1.1. By Value

5.2. Market Share & Forecast

5.2.1. By Type (Air Treatment Components, Pneumatic Valves, Pneumatic Cylinders)

5.2.2. By Application (Electronics, Chemical Industry, Machinery, Others)

5.2.3. By Country (United States, Canada, Mexico)

5.2.4. By Company (2024)

5.3. Market Map

6. UNITED STATES PNEUMATIC COMPONENTS MARKET OUTLOOK

6.1. Market Size & Forecast

6.1.1. By Value

6.2. Market Share & Forecast

6.2.1. By Type

6.2.2. By Application

7. CANADA PNEUMATIC COMPONENTS MARKET OUTLOOK

7.1. Market Size & Forecast

7.1.1. By Value

7.2. Market Share & Forecast

7.2.1. By Type

7.2.2. By Application

8. MEXICO PNEUMATIC COMPONENTS MARKET OUTLOOK

8.1. Market Size & Forecast

8.1.1. By Value

8.2. Market Share & Forecast

8.2.1. By Type

8.2.2. By Application

9. MARKET DYNAMICS

9.1. Drivers

9.2. Challenges

10. MARKET TRENDS & DEVELOPMENTS

- 10.1. Merger & Acquisition (If Any)
- 10.2. Product Launches (If Any)
- 10.3. Recent Developments

11. COMPANY PROFILES

- 11.1. SMC Corporation
 - 11.1.1. Business Overview
 - 11.1.2. Key Revenue and Financials
 - 11.1.3. Recent Developments
 - 11.1.4. Key Personnel/Key Contact Person
 - 11.1.5. Key Product/Services Offered
- 11.2. Festo SE & Co. KG
- 11.3. Parker Hannifin Corporation
- 11.4. Emerson Electric Co.
- 11.5. Norgren Limited
- 11.6. Camozzi Automation S.p.A.
- 11.7. CKD Corporation
- 11.8. DornerWorks, Ltd.

12. STRATEGIC RECOMMENDATIONS

13. ABOUT US & DISCLAIMER

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