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Smart Pneumatics Market Research Report – Global Forecast till 2027

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Description:

Smart Pneumatics Market Overview

The global smart pneumatics market was valued at USD 3.14 billion during the historic forecast period and is expected to reach USD 4.76 billion by the end of the Smart Pneumatics Market Forecast forecast period at a CAGR of 7.5%. Smart pneumatics are modern pneumatic devices that can generate real-time data while in use. This real-time data collection has aided engineers and device operators in understanding how each piece of equipment performs under various conditions. Smart pneumatics are progressively replacing traditional pneumatic devices due to their capacity to record and maintain data simultaneously. It's also helped operators/engineers discover the exact problem, saving time and money on maintenance. Even though smart pneumatic systems are pricey, some tier-1 manufacturers have already embraced them and are reaping the benefits.

COVID-19 Analysis

The COVID-19 epidemic has forced the closure of numerous building sites, power stations, chemical storage facilities, technology advancement firms, and other businesses. This has slowed the smart pneumatics market demand in recent months, and it is expected to continue during the forecast period. COVID-19 has already had an impact on smart pneumatics market size and sales. It is expected to harm market growth throughout the year. The largest smart pneumatics demand was previously observed in giant manufacturing countries such as the United States, Germany, Italy, the United Kingdom, and China, which have been negatively affected by the spread of the coronavirus, resulting in a decline in demand for smart pneumatics market trends and Smart Pneumatics Market Share.

Furthermore, the lockdown's potential impact is now unknown, and organizations' financial recovery is entirely dependent on their cash reserves. Key companies in the smart pneumatics industry are projected to be able to afford a full lockdown for only a few months before having to change their investment plans. Various market players, for example, have put a stop to their service activity for a few weeks to save money. Employee layoffs were employed by a few COVID-19 participants to stay afloat during the health crisis.

Market Dynamics

Drivers

The rising adoption of the Internet of Things (IoT) across sectors is one of the major factors driving the growth of the smart pneumatics market. By integrating smart technologies into traditional industrial components, the industrial internet of things (IIoT) has taken control. Pneumatic systems were historically popular in industry because of their speed and dependability. The IIoT, on the other hand, has expanded its capabilities by allowing pneumatic equipment to generate data for analytical processes during the Smart Pneumatics Market Analysis. The said information has aided in energy efficiency maintenance, resulting in cheaper costs for producers. Furthermore, greater awareness of predictive maintenance among industrial producers is fuelling the Smart Pneumatics Market Trends and Smart Pneumatics Market Share.

Restraints

The high cost of industrial valve projects and the lack of global standardization for smart pneumatic devices, however, are constraining Smart Pneumatics Market Size. Lack of a common platform for ethernet, Zigbee, and Profibus is limiting market growth, as these devices can easily be integrated into wireless systems across the IoT industry via these gateways, and the market for smart pneumatics is challenging to grow due to a lack of integration in the industrial and manufacturing sectors during the Smart Pneumatics Market Analysis.

Technology Analysis

The Industrial Internet of Things (IIoT) plays a role, in which electric actuators with powerful electronics serve as information hubs, enabling direct access to a wide range of process and diagnostics data for preventative maintenance. Control valves with modulating actuators have improved positioning accuracy, allowing them to precisely modulate flow through pipes. This is for the flow of crude oil and natural gas in the upstream section, and the storage and transit of resources in the midstream segment. This is for the crude oil refining process in the downstream section.

Segment Overview

The Smart Pneumatics Market has been bifurcated into various segments that will help the market to achieve the highest CAGR during the Smart Pneumatics Market Forecast. The Smart Pneumatics Market key players have also helped in the segmentation which is as follows:

Based on the type, the smart pneumatic market has been segmented as follows:

- Smart Pneumatic Valve
- Smart Pneumatic Actuator
- Smart Pneumatic Module

Based on the component, the smart pneumatic market is segmented as follows:

- Hardware
- Sensor
- Communication Equipment
- Software
- Data Integration Software
- Diagnostic Reporting
- Parameter Calculation

Based on the end-user, the smart pneumatic market has been segmented as follows:

- Automotive
- Oil & Gas
- Food & Beverage
- Energy & Power
- Others

Based on the region, the smart pneumatics market has been segmented as follows:

- North America
- Europe
- Asia-Pacific
- The Rest of the World (RoW)
- The Middle East
- Africa
- Latin America

Regional Classification

In the global smart pneumatics market, Asia-Pacific has the greatest market share. The rising number of smart factories and manufacturers establishing their bases in India, China, and Indonesia are driving this region's growth. Furthermore, the reduced cost of resources encourages manufacturers to invest in these regions. This has prompted businesses to invest in the development of intelligent pneumatic devices. Increased investments in new plants in industries such as oil and gas, steel, electricity, and petrochemicals, as well as increased acceptance of worldwide safety standards and procedures, are expected to keep the market growing. This is the only region that has seen an increase in oil and gas capacity in recent years, with four new refineries added to the region's crude oil production, bringing the total to around 750,000 barrels per day.

APAC's demand for smart pneumatic systems is also being driven by factors such as an increasing focus on optimum asset utilization, severe government rules for the workplace and personal safety, and tight quality control in the automotive, semiconductor, chemicals, and food & beverage industries. Furthermore, the industrial automation market in North America is mature. In terms of innovative automation technologies and advanced manufacturing procedures, the region is on top. These elements all contribute to the market's expansion in this area.

Competitive landscape

Due to the existence of major players in the smart pneumatics market and numerous other firms spending heavily in supplying a wide range of technologies to consumers for application across sectors, the market for smart pneumatics is currently fragmented and consolidated. Furthermore, these businesses are continually investing in breakthrough technology for the development of valves and actuators. These players make a substantial contribution to market expansion. Apart from the top major players, other companies account for roughly 30%–35% of the smart pneumatics market. The major key players in the smart pneumatics market are as follows:

- Parker Hannifin Corporation (US)
- Emerson Electric Co. (US)
- Bimba Manufacturing Co. (US)
- Rotex Automation Limited (India)

- Rotork PLC (UK)
- Festo Corporation (US)
- Thomson Industries Inc. (US)
- Cypress EnviroSystems Corp (US)
- Ningbo Smart Pneumatic Co. Ltd (China)
- Aventics GmbH (Germany)

Smart Pneumatics Market Recent Developments

- Aventics GmbH (Germany), a global leader in smart pneumatics technology that power machines and factory automation applications, was bought by Emerson Electric.
- Norgren Ltd.'s IMI Precision Engineering business unit purchased Bimba Manufacturing (US). This presented a big opportunity for IMI Precision Engineering to strengthen its position in the US Industrial Automation sector while also expanding the Bimba brand abroad.
- To satisfy the demand for improved connection, application flexibility, and cost efficiency, Thomson Industries introduced smart actuators with integrated electronics, such as sensors and communications technologies, as well as developing smart machines for industrial automation applications.

Smart Pneumatics Market Report Overview

To discover possible investment opportunities, this research provides an analytical portrayal of the global smart pneumatics market, as well as current trends and future estimates. The study contains a thorough examination of the global market for smart pneumatics, as well as data on major drivers, restraints, and opportunities. The report looks at the competitive intensity of the global market for smart pneumatics and how it will change in the coming years. The market segment and sub-segments are thoroughly examined. There is also a detailed analysis of the market in North America, Asia-Pacific, Europe, the Middle East and Africa, and Latin America, as well as key countries in each area. Technology Trends and the Regulatory Landscape are mentioned in the report. The Competitive Intelligence section covers market share data, financial analyses, product benchmarking, and strategic maneuvers such as joint ventures, product launches, and mergers and acquisitions. The region's appeal and associated growth potential are also explored.

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