

Linear Motion System Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The linear motion system market (henceforth referred to as the market studied) was valued at USD 9.38 billion in 2021, and it is expected to reach USD 14.42 billion by 2027, registering a CAGR of 7.3% over the period of 2022-2027 (henceforth, referred to as the forecast period). Linear motion systems are witnessing increasing demand as more systems are getting automated. Furthermore, their easy implementation in various applications is helping industries achieve seamless and agile processing, which further reduces the requirement for maintenance and decreases downtime.

Key Highlights

The market is driven by many factors, including the shift in technology from hydraulic and pneumatic systems toward electromechanical systems to achieve higher precision, flexibility, reliability, and efficiency with less energy usage. The rapid industrialization, combined with the demand for digital transformation and the adoption of automated systems in various industries, is the major factor driving the market's growth. Moreover, these systems are in high demand due to their superior performance in extreme environmental conditions in industries.

With particular reference to some industrial fields, such as packaging and automatic machines, the current trend is the transition from using hydraulic or pneumatic cylinders to electric linear actuators. The primary purpose is to have better control and greater versatility in automation and detailed customization of the machine or system in which the electric linear actuator is mounted. The cost of installation is a major challenge for the market growth. High cost is mainly due to other components that need to be considered while designing a linear motion system, including structural support, guides, drives, seals, lubrication, and accessories between two points.

The COVID-19 pandemic and the probable occurrence of future pandemic waves are fostering the adoption of automation technologies. These technologies, such as automation, robotics, and information and communication technologies, enabled the organizations to continue to operate by facilitating social distancing in the workplace and enabling remote work-from-home. The

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COVID-19 pandemic is expected to accelerate the implementation and development of automation technologies because of greater incentives to substitute capital for labor.

Linear Motion System Market Trends

Digital Transformation in Industries and Growing Focus on Quality Inspection and Safety to Drive the Market Growth

The industrial revolution is shaping machine components, such as linear motion products, with integrated technologies, such as IIoT and IoT implications, for data collection. Capturing machine data allows the monitoring and analysis of system performance and helps in the early detection of problems, if any.

Additionally, vendors focus on providing linear motion e-tools that enhance product selection and sizing, automating processes to streamline customers' orders and delivery. In addition, the machine data is picked up by sensors and passed on to the cloud during operations. The collected data allows users to improve service and ensure timely maintenance of processes.

For instance, in June 2020, Thomson Industries announced linear motion control solutions to help customers select and purchase stepper motor linear actuators. The tool also allows customers to download a 3D model into their CAD program or access PDF-containing products, features, benefits, and technical specifications. This reduces the time taken to choose a stepper motor and yields results in less than five minutes.

Moreover, in November 2021, Celera Motion announced the latest addition to its IncOder and Ultra IncOder Series of Multiturn IncOder inductive angle encoder. Using an inductive technique, the non-contact Multiturn IncOder allows precise absolute angle measurement over multiple revolutions, even in harsh environments. It is applicable in a wide spectrum of applications, including servo motors, linear stages, robot joints, cartesian robots, cranes, wind turbines, and antenna masts.

Many large automation companies introduce digital solutions to help the digital transformation of industries. For instance, in September 2021, Siemens launched Xcelerator as a service (XaaS). Xcelerator is an integrated portfolio of engineering services software. It is an application development platform that combines technologies available in the industry to make industrial customers' digital transformation goals a reality.

Asia-Pacific is Expected to Dominate the Market

Asia-Pacific is anticipated to witness significant growth in the linear motion system market due to an increase in industrial activities, technological advancements, the rise in government investments in industrial automation systems, and the presence of well-established players providing these systems.

The region is home to several industries, including automotive, pharmaceutical, food and beverages, and machine manufacturing. Apart from these, the region is also home to a large semiconductor industry. Further, the increasing degree of miniaturization in various fields of applications leads to a rise in the production of different linear motion systems.

The significant adoption of linear actuators and other systems is also expected to drive the market. China dominates the region due to the increased adoption of motion systems from the huge deployment of the massive electronic and automotive manufacturing sectors. As the market also develops at high speed in other economies in the region, such as India, there is vast potential for growth of the market studied.

According to Schaeffler Gruppe, 110 million vehicles will be produced by 2025 (the forecast is before COVID-19). The region became an emerging market for passenger vehicle production. Besides, in the automotive sector, Japan, India, and South Korea completed the list of the world's largest car producers. Most of these countries are home to major manufacturers of passenger vehicles. As the linear motion system market has customers from the automotive sector, the market is expected to witness growth in the region.

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Asia-Pacific is one of the significant markets for semiconductor and electronic parts manufacturing globally due to its strong position in the consumer electronics, semiconductor, and other telecommunications devices and equipment manufacturing industries.

Linear Motion System Market Competitor Analysis

The linear motion system market is moderately competitive in nature due to the presence of various players across the world. Key manufacturers of linear motion systems are involved in bringing technological innovations to their products to enhance their market presence. The market is concentrated, with the presence of a few linear motion system manufacturers focusing on developing smart variations of the products to cater to the evolving end-user requirements.

January 2022 - NSK acquired the reconditioning business operated by Alliance Bearing Repair and Reclaim LLC to expand NSK's technical service offering for steel, pulp and paper, and other sectors. Combining both companies' strengths, condition monitoring, and analysis with reconditioning capabilities enables new proposals throughout the entire bearing lifecycle.

October 2021 - Ewellix launched a smart electro-mechanical actuator with extended fun and agricultural functionality for use in demanding applications such as construction machinery.

June 2021 - Timken Company introduced newly revamped SC actuators through the Rollon brand. The products are revamped in terms of aesthetics and functionality in the direction of the designer's needs to increase performance, simplify the project, and adhere to the different application requirements. It introduced new vertical models of the SC series of actuators.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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