

Festo AI-Powered Pneumatic Cylinder Monitoring Cuts Machine Downtime

Festo's AX Platform delivers continuous monitoring of pneumatic motion, transforming maintenance from reactive to predictive

Festo introduces its AI-enabled monitoring and predictive maintenance system [Festo AX Motion Insights Pneumatic](#). AX Motion Insights Pneumatics is a cost-effective, easy-to-use solution for preventing costly unscheduled machine downtime through its monitoring of pneumatic cylinders for wear and anomalies. This AI-based industrial app ensures operations are more reliable, efficient, and ultimately more profitable.

The system uses AI to detect anomalies in the behavior of pneumatic drives and cylinders without the need for additional sensors. It provides a "health score" as a "risk of failure" indicator for each cylinder. Connectivity is achieved via a PLC function block. The system is compatible with actuators from different manufacturers and has specific connectivity details for Siemens, Rockwell, and Beckhoff controllers.

Motion Insights Pneumatic enables maintenance teams to schedule tasks in advance, significantly reducing the risk of unexpected downtime. The platform offers the flexibility of on-premises computing, giving end users full control over their data and deployment. This is an open system and works with both Festo and third-party components. The AX platform features ease of use and seamless integration, opening the door for customers to embrace without worry today's AI, data-driven solutions, and digital transformation.

A critical element of Motion Insights Pneumatic is its integration with Festo's Smartenance maintenance management system. Motion Insights Pneumatic works in tandem with Smartenance; the insights app identifies when maintenance is needed, and Smartenance manages the resulting tasks. The integration of the two creates a cohesive, end-to-end workflow that ensures predictive insights are not just seen but also efficiently acted upon.

Motion Insights Pneumatic is easy to set up and use. The "plug-and-play" aspect of this app, combined with its user-friendly interface and standardized AI models, makes the technology more accessible than otherwise possible. This is beneficial for original equipment manufacturers (OEMs) and end-use companies that are just beginning their digital journey, as it lowers the barrier to entry and brings the benefits of AI without requiring deep data-science expertise. OEMs and end users simply download the app, install it, and integrate it themselves. It's that easy.

Festo AX Motion Insights Pneumatic joins the [Festo AX Motion Insights Electric](#) app, which focuses on electric components, and [Festo AX Data Access](#), which makes operation technology (OT) data available for information technology (IT) analysis. These apps can be used singly or in combination. [CODI Manufacturing](#), Littleton, Colorado, recently installed all three on its new, compact gantry palletizer to give customers the ultimate in uptime and insights into operational efficiency.

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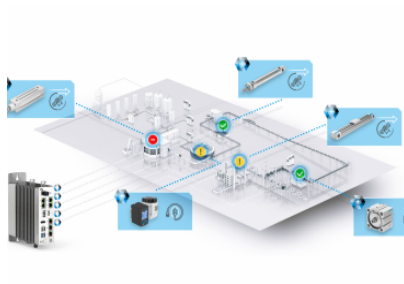
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The apps can be deployed on-premises using standard hardware and container technology such as Docker. Containerization allows the apps to be deployed flexibly on various computing environments, including industrial PCs, virtual machines, servers, and edge devices. Insights Electric and Pneumatic are purchased on a subscription basis, while “time-limited” options (3 and 5 years) will be released at the end of 2025. Data Access is purchased under a perpetual license.

Through [Festo App World](#), customers can select a license package based on the number of cylinders they want to monitor. Unlike competitors that might offer a single software tool, Festo AX apps are a seamless part of a complete one-stop-shop automation solution, including its electrical and pneumatic components. This simplifies integration and offers a single point of contact for support.

Contact a Festo sales representative or Festo distribution partner to learn more about Festo AX Motion Insights Pneumatic and other AX apps. For more information on the advantages of working within the Festo ecosystem to leverage less engineering overhead, faster time to market, seamless connectivity, and high-quality components, visit www.festo.com.

Press Images



Festo AX Motion Insights Pneumatic

AX Motion Insights Pneumatic is a cost-effective, easy-to-use solution for preventing costly unscheduled machine downtime through its monitoring of pneumatic cylinders and drives.

About Festo US

Festo is a leading manufacturer of pneumatic and electromechanical systems, components, and controls for process and industrial automation. For 100 years with more than 50 in the U.S., Festo Corporation has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Through advanced technical and industrial education, Festo Didactic Learning Systems and its partners prepare workers for current and future manufacturing technologies.