

A photograph of a modern, multi-story office building with a large glass facade. The building is surrounded by greenery and a paved area. The Askoll Holding logo is visible on the building's facade.

Smarter motors harness data-driven manufacturing

Askoll Group Customer Story

Askoll Group manufactures innovative, energy-efficient motors that power everything from aquarium water pumps to e-scooters. To help ensure maximum availability for mission-critical quality-control systems on the factory floor, Askoll Group deployed Lenovo ThinkCentre M90n Nano IoT mini PCs with Lenovo ThinkVision T22i-20 22" displays, boosting performance and reliability while reducing operational costs.

Founded in 1978 and headquartered in Vicenza, Italy, Askoll Group manufactures and markets electric motors that are up to 50 percent more energy-efficient than conventional designs. Serving a wide range of use cases including household appliances, heating systems, and urban mobility, Askoll Group consists of 11 companies operating in Italy, Brazil, China, Mexico, Romania, and Slovakia.

Pursuing eco-friendly innovation

Askoll Group creates electric motors that are smaller, lighter, and more energy-efficient than

many other designs on the market today. Initially developed for use in aquariums, the company's technology is now at the heart of washers produced by well-known white goods brands and a new generation of mobility products such as motorized scooters and e-bikes.

To engineer and build these ultra-compact motors depends on intricate manufacturing processes. On the factory floor, Askoll Group harnesses programmable logic controllers to monitor each stage of the workflow. Using images from cameras attached to the production line, the company's custom-developed software analyzes components for defects and allows employees to verify that each product meets its rigorous quality standards.

"Our production lines run day and night, which means high availability is crucial for our digital systems on the factory floor," explains Moreno Panetto, IT Systems Manager at Askoll Group. "Our previous IT environment was based on legacy PCs running an older operating system, and had begun

Askoll



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**Smarter
technology
for all**

Lenovo

to suffer from reliability issues and software vulnerabilities. As well as increasing the risk of downtime, the machines offered limited performance, which reduced our ability to enhance our monitoring processes—for example, by adding higher-resolution cameras.

“To solve the challenges, we looked for robust desktop infrastructure that would enable us to gain the security protections of the latest version of Windows, the availability for round-the-clock operations, and the headroom to augment our monitoring systems.”

Rugged solutions for the factory floor

After evaluating offerings from leading infrastructure providers, Askoll Group selected solutions powered by Lenovo OEM to deliver the new PCs for its primary manufacturing site in Italy. Based on Lenovo ThinkCentre M90n Nano IoT PCs connected to Lenovo ThinkVision T22i-20 22” displays, the new solution is certified for operation in harsh environments. With Ingress Protection Rating IP66, the Lenovo solution can accommodate the 30°C heat, moisture, and dust of a factory setting while maintaining high levels of performance and reliability.

“One aspect of the Lenovo ThinkCentre solution that really stands out to us is its versatility,” says Moreno Panetto. “The solution offers many of the capabilities of an industrial computer but with the cost-effectiveness of a PC—not to mention an extremely compact

physical footprint. Combined with three-year on-site support from Lenovo, the solution was head and shoulders above the other offerings we considered.”

Equipped with low-latency SSD storage and running Microsoft Windows 10, the Lenovo ThinkCentre M90n Nano IoT PCs boot within seconds, and are simple to deploy.

“Installing the Lenovo ThinkCentre M90n Nano IoT systems was very straightforward,” explains Moreno Panetto. “Our IT team deployed Microsoft Access on each machine—a core component of our quality-control application—and then connected them to our programmable logic controllers on the factory floor.”

He adds: “The most challenging thing about the deployment was finding a space for our new Lenovo ThinkVision 22” displays, as they were replacing far smaller 12” monitors. The new displays make it much easier for our factory teams to see important information, and we’re very satisfied with the solution.”

During the deployment, the COVID-19 pandemic struck. Despite the significant disruption, Lenovo helped Askoll Group keep its project on track.

“We were delighted with how well Lenovo continued to support us, even during the pandemic,” confirms Moreno Panetto. “In fact, the Lenovo ThinkCentre and ThinkVision solutions are so cost-effective

that we decided to purchase additional Lenovo ThinkPad L13 laptops for our sales teams.”

Boosting quality and cutting costs

Since deploying Lenovo ThinkCentre solutions and Windows 10, Askoll Group has successfully boosted availability, reduced its exposure to cyber risks, and enabled major enhancements to its quality-control systems. The company can now process high-resolution camera images in real time, enabling it to drive up the accuracy of its defect detection process, improve quality, and cut costs.

“The superior performance of Lenovo ThinkCentre M90n Nano IoT machines allowed us to replace standard-definition cameras on the production line with high-definition cameras,” explains Moreno Panetto. “The enhanced resolution helps our software detect potential defects more accurately, and the sooner we identify defects in the manufacturing process, the lower the cost to the business—so we’re very pleased with what the Lenovo solution has helped us to achieve.”

Askoll Group is also highly satisfied with the reliability of the Lenovo solutions. Moreno Panetto adds: “In the past, we handled multiple technical support calls every week because of an issue with a PC on one of our production lines. After more than a month since going live with Lenovo ThinkCentre and ThinkVision solutions, we have not received a single support request from the business—everyone is very happy with their robustness.”



Since deploying Lenovo laptops for its sales team, the company is now reaping the benefits of improved reliability, as Moreno Panetto confirms: “In the past, our employees in Italy would typically request a new laptop every couple of years. Since we switched to Lenovo ThinkPad L13 laptops, we’ve seen replacement requests fall dramatically—the systems just run and run. We’re so happy with the high quality of the solutions that we’re considering rolling out Lenovo laptops across the entire global business.”

Looking to the future, Askoll Group believes it has found the optimal partner to support its growing business.

“Askoll Group is an innovative company, so we seek out partners who share our vision—and Lenovo is just such a company,” concludes Moreno Panetto. “In the long term, we plan to use ThinkCentre M90n Nano IoT solutions to boost the efficiency of all our production lines around the world, and we look forward to deepening our partnership with Lenovo in the years ahead.”



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The Smarter Solution



ThinkCentre with Windows 10

Boosted availability, reduced exposure to cyber risks, and enabled major enhancements to its quality-control systems



Lenovo Premier Support

Three-year on-site support put the solution head and shoulders above other offerings



Lenovo Accidental Damage Protection

Ensures systems on the floor and in the field continue to function seamlessly, no matter what