

Engineering a New Era of Robotics

Nachi-Fujikoshi is redefining how humans and machines work together on the factory floor.

The factories of the future will not be filled with isolated machines. Rather, intelligent robots are being designed to move, think and work alongside people. One key barrier so far has been safety. Robots moving at high speed, especially those with the capability to do meaningful work with heavy, large objects, are inherently dangerous if they come into contact with each other, or humans. Nachi-Fujikoshi is aiming to overcome that challenge with a new generation of intelligent, collaborative robots designed not just to work for people, but to work safely alongside them.

Founded in 1928 as a cutting tool manufacturer, Nachi has grown into a leading supplier of hydraulics, machine tools and bearings for demanding applications. Approaching its 100th anniversary, the company is now doubling down on robotics as a key part of its future business, aiming to support the next generation of manufacturing. Inside Nachi's futuristic test facility, robots work together seamlessly to perform complex tasks, from sorting to intricate assembly, all while avoiding collisions.

Thanks to advanced machine vision systems developed in-house, Nachi's latest robotics arms, developed under the "COPARO" (Collaborative Partner Robot) series, are suited to teamwork. "Demand is now driven by lightweight robots, particularly



in the electronics sector. For example, we supply compact robots for smartphone production lines, and have steadily increased our market share," said Naritoshi Nakamura, president of Nachi-Fujikoshi. "Compared to conventional robots, these models maintain high speed and precision, while significantly enhancing safety."

Recently taking the helm of the company, Nakamura previously served as head of the Nachi's global robotics business, making him well-placed for the transition as the firm pivots towards smarter, autonomous tools. "At the core of our robotics growth strategy is physical AI. We aim to develop robots that can think autonomously like humans, respond flexibly to a wide range of challenges and solve

problems effectively. By promoting global sales of these advanced robots, we seek to further strengthen our presence in international markets."

Through strategically planned expansion over the years, today Nachi is a truly global enterprise, with a production network spread across North America, Europe and Asia. To successfully transform into a future-focused robotics firm, Nachi has emphasized recruiting the best global talent in these target regions, alongside strengthening its existing workforce with the latest AI tools. "As well as continued education programs to further cultivate our AI talent, we have been strengthening our development efforts with universities and startups," said Nakamura.

The COPARO system sets a new standard for collaborative robot safety, combining real-time sensor tracking with LED indicators ▼

