Installing the NEXTAGE® dual-arm industrial robot will increase our productivity and lead to new business.

NIC Autotec, Inc.

Founded in 1927 in Toyama Prefecture as Nishikawa File Corporation, a file machining and manufacturing company. Developed their business around their FA (Factory Automation) equipment, launching into the field of aluminum frames in 1983 with their development of Japan's first aluminum profile system, the ALFA FRAME® SYSTEM. Currently support manufacturing in Japan with their two core business areas: FA equipment and aluminum frames.

NEXTAGE®

The dual-arm industrial robot made by Kawada Robotics Corporation. As a joint venture between the THK Group and Kawada Robotics Corporation, Kawada Robotics Corporation manufactures the robot body, while THK INTECHS handles sales and develops optional parts.

Technical & Development Dept.
Development Group, Development Team
Hironobu Nagai

Q Tell us how you began using NEXTAGE®.

We have a longstanding friendly relationship with THK. We purchase their LM Guides and other products indispensable to FA equipment, and THK INTECHS in turn uses our ALFA FRAME® SYSTEM.

Recognizing the problems with production capability and decreased quality that arise from the decline in the number of laborers due to the aging population, we had been investigating ways to maintain or possibly improve productivity for some time. It was then that THK INTECHS introduced us to NEXTAGE®, which can work alongside humans, and as we became more interested, we realized our ALFA FRAME® SYSTEM could also support NEXTAGE® peripherals. As we were thinking about how we wanted to stay ahead of demand by gathering expertise about humanoid robots, we were granted the opportunity to make use of the Ministry of Economy, Trade and Industry's Demonstration Project for the Introduction of Robots* and install a NEXTAGE®.

NEXTAGE® using the cameras on its left and right hands to identify the spatial relationships between objects as it works

Q Tell us your impression of NEXTAGE®.

The NEXTAGE® we use sets the square nuts and nut holders that go in the aluminum profiles. Currently, we are doing a production trial with the concept of creating a work environment where robots can step in for people at any time by having the NEXTAGE® use cameras to read the same drawings employees do. We deal with small components, but the NEXTAGE® is able to use its hand cameras to accurately recognize spatial relationships and operate without any issues. I was also pleased that you can use marking tape within the head cameras' detection range so that the robot can automatically adjust to wherever it is moved, so it really can work in place of a person.

When we consulted with THK INTECHS about having the robot assemble nuts and nut holders, they custom-made the hands specifically for that task, and we received a lot of advice about the robot's movements. They also responded quickly whenever there was an issue during the installation, so we were very grateful for their assistance.

Q What do you hope to see from NEXTAGE® in the future?

I am hoping that NEXTAGE® can work in place of or alongside an employee, so I think it would be very convenient if there were features like additional applications or packages so that the actual employee could easily set and change the program instead of having an engineer do the programming.

* *Project aimed at furthering robot utilization in society by promoting trials and verifications of robots introduced in manufacturing and service fields that have not yet embraced robotics*