

SECOM INDUSTRIES CO., LTD. 信頼される安心を、社会へ。



Shiroishi, Miyagi Prefecture

## Overall Productivity Quintupled with the Installation of NEXTAGE®



Chief Product Developer  
Isao Onoda

Product Developer  
Ryota Baba

President  
Toshiya Miura

### Improving production efficiency and increasing quality in anticipation of a smaller working population

As a Group company under SECOM CO., LTD. (Japan's first security assurance company and industry leader), we design and manufacture security equipment. The SECOM Group has created a system that takes responsibility for everything from research and development to the design, manufacture, installation, and maintenance of security equipment to achieve an even higher quality of service for our customers. As a part of this effort, the entire SECOM Group works together under the concept of "ALL SECOM," aiming to create a "pleasant and convenient society, where anyone can live without worry."

In recent years, greater focus on crime prevention has led to an increase in demand for security equipment. In anticipation of a smaller working population and efficiency improvements in manufacturing, we installed a robot in our work-intensive inspection process. In this process, every product is placed in a specialized fixture and must undergo a number of checks, which include different types of electrical signal measurements, displays, and operations. Because of this, the employee must maintain a high level of concentration. In an effort to lighten the burden on employees, we decided to install a robot with the dual aim of improving the working environment and improving quality by preventing mistakes.



NEXTAGE® performing the complex inspection process in place of people

### Benefits of installing NEXTAGE®

Our conditions for selecting a robot were as follows:

1. Dual-armed for better operation efficiency
2. Able to perform many intricate operations accurately
3. Able to fit in a single person's work area
4. Programming that we can edit for adjusting fine movements and image recognition

Our inspection process is very difficult, and we did not receive any encouraging responses from the system integrators we spoke with. We did, however, get a single optimistic reply from THK INTECHS: "Let's give it a shot!" As it turned out, NEXTAGE® met all of our conditions, and it can accurately manipulate switches on the scale of just a few millimeters while correcting positions, a task that is difficult even for people. Furthermore, the cameras in its head check the process instructions step-by-step on the monitor while performing each operation, so it never skips a check.

We purchased one NEXTAGE® robot in August 2016, and with assistance from THK INTECHS as necessary, we programmed it to work with our inspectors. In February 2017, we began making full use of automation in the inspection process. For a while after installation, we only had it operating alongside other employees during the day. Since September of that year, however, we began having the NEXTAGE® run at night—when no one else is around—and inspect the products made throughout the day to increase production output.

By thinking about the productivity of the overall process, we can now perform the inspection process both day and night with NEXTAGE®, so we have gone from being able to make 1.1 products per person each hour to 5.9, a five-fold increase in labor productivity. So that manpower will not affect our ability to consistently supply products, in the future we plan to automate our product transport and assembly processes, while at the same time installing more NEXTAGE® robots and dedicating them to the inspection process.