

Customising Bottling Machines at KWT

Rockwell Automation's Integrated Architecture enables Taiwanese packaging manufacturer to cut development costs by 50 percent.

Taiwan-based KWT Machine Systems Co. Ltd. supplies bottle fillers and cappers to leading food and beverage, pharmaceutical and chemical manufacturers in Asia, the Middle East, Africa, North America and Latin America. Like many companies, KWT is facing increasing competition as the number of suppliers in its industry increases. To gain a competitive edge, KWT has chosen to diversify its products.

Diversification typically includes shifting from long product runs to short runs of many product variants. This process requires manufacturers to change over production lines often and as quickly as possible. Automated bottle fillers and cappers from KWT, which require only about 20 minutes to re-set, are ideal candidates to reduce line switching time and related costs.

To meet the needs of customers, the company also decided to customise the packaging equipment based on individual project requirements. However, as KWT worked toward this goal, it encountered several challenges.

First, KWT discovered that the components it needed to meet specifications often were not available from general suppliers. Second, the company was often



The Compact Machine Solution from Rockwell Automation® enables KWT Machine Systems Co. Ltd. to deliver high-precision packaging machinery that meets the demands of a diversified product base.

expertise and an extensive product offering to assist them in developing a machine that could be easily customised. KWT found such a partner in Rockwell Automation.

Rockwell Automation recommended that KWT implement a Compact Machine Solution based on Rockwell Automation® Integrated Architecture™. A CompactLogix™ programmable automation controller (PAC) is at the heart of the solution, providing sequential control for the bottle filler and capper.

one time in the control environment are directly utilised by the HMI. This streamlines system design significantly.

On the bottling machine, the FactoryTalk View HMI application runs on PanelView™ Plus operator terminals. The HMI is completely integrated with the Logix controller and delivers a range of functions including production parameter input, alarms, status display and formula replacement.

A PowerFlex® 40 AC drive controls the machine's conveyor belt while an Ultra™ 3000 digital servo drive and MP low inertia motor run the filler nozzles. Safety relays are also included as needed throughout the machine. The system runs on a DeviceNet™ network.

With the Compact Machine Solution in place, KWT completed the project successfully and developed an easy-to-customise machine. In addition, the average output of all production lines has met customer targets. According to KWT estimates, the company has saved 50 percent in development costs alone. What's more, the Rockwell Automation solution installed on KWT machines helps the company establish a high-quality, high-technology image – and win praise from customers. **AT**

Programmed with RSLogix™ 5000 software, a Compact Machine Solution based on Rockwell Automation Integrated Architecture™ provides sequential control for KWT's bottle filler and capper machine.

required to complete customised machines within compressed time frames while remaining price-competitive. Third, KWT had to ensure that its products integrated with customers' production lines – and met UL and CE certifications as well as global safety standards.

What KWT needed was a trusted automation partner with industry

It's programmed with RSLogix™ 5000 software, which allows users to write structural programs easily.

The control platform links to the Human Machine Interface (HMI) software, FactoryTalk® View Machine Edition. Both the RSLogix programming software and the HMI application share the same FactoryTalk services so that tags created