

Packaging Machine Solutions

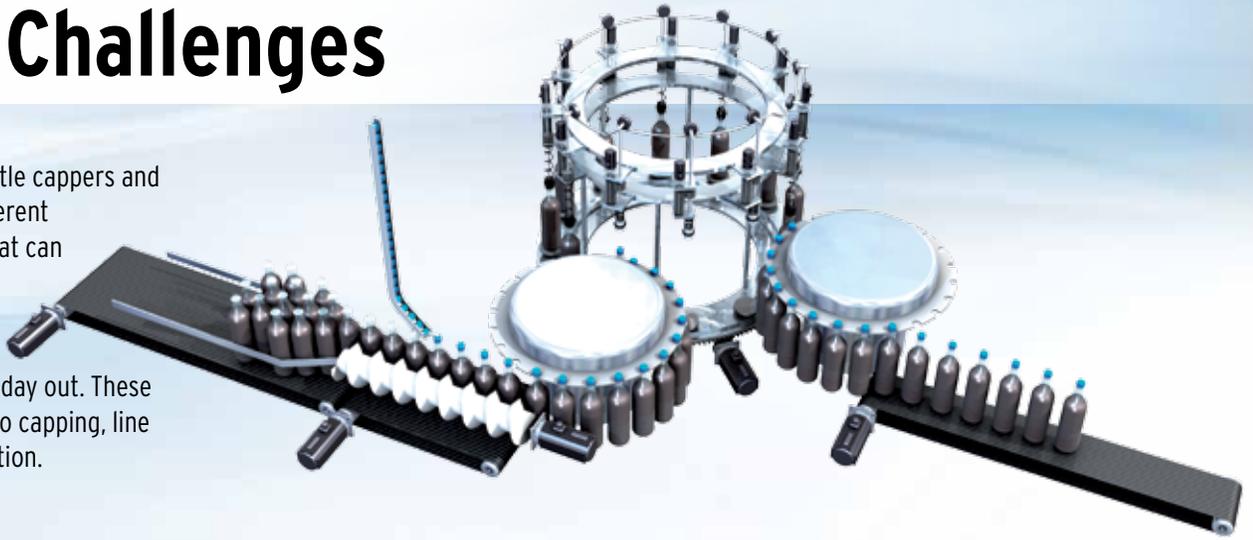
For Bottle Cappers & Labelers



*Build faster, more efficient
machinery through
innovative automation*

Costly Challenges

The highest quality bottle cappers and labelers face many inherent technical challenges that can weigh down operating efficiency, and cut into the end user's profitability day in and day out. These include issues related to capping, line ramp-ups, and registration.



Precise Capping

The Problem:

In fast moving lines, occasional glitches in the capping process are a common problem, with inadequately capped bottles leading to contamination, impaired product quality, and/or messy spillage on the line, and excessive torque leading to product or machine damage. Capping equipment must ensure proper position of the cap on the threads of the bottle and apply the precise amount of torque needed to achieve the exact closed position.

Your New Solution:

The Sysmac system delivers outstanding monitoring of cap placement, ensuring optimum position before initiating torque. In addition, the Sysmac system quickly and accurately reads the torque value of the rotating motor to ensure optimum placement in locked position. Further, the Sysmac system can enable the change between cap placement and cap turning modes in as little as 1 ms, an order of magnitude faster than standard controllers, driving even faster line speeds and higher product throughput.

Exact Label Application

The Problem:

The ability to hit registration marks, cut, and place a label accurately is one of the key "bottlenecks" on the bottling line. Proper label placement is vital to brand aesthetics, and manufacturers often reluctantly run machines slower to compensate for the limitation of current labeling technology.

Your New Solution:

To ensure precise labeling at high speeds the Sysmac system uses two registration inputs. The input in Omron's G5 servo is 5 μ s, and the update rate for the NJ controller and G5 servo is 500 μ s, continually confirming proper reading of the registration marks and accurate positioning of the label, even at high speed.

Easy Data Logging

The Problem:

The archiving of manufacturing data is becoming vital for legal, regulatory and quality assurance reasons. Manual methods of data logging are labor intensive and prone to error, and most automated methods require additional PCs with custom-programmed middleware which can be costly and slow down production.

Your New Solution:

The Omron Sysmac NJ controller can feed line data directly to an enterprise's existing SQL database using barcode and matrix codes, without the need for additional computers or software programming. What's more, while middleware solutions typically take 1-2 s to transmit a data log entry, the Sysmac system can send the same data in about 20 μ s,* so impact on line speed is negligible.

*Notice: Database Type: SQL Server 2012
Server Spec: CPU - Intel Xeon® E31220 @3.10GHz
3.09GHz / Memory: 8.00GB / OS Windows 2008
Standard SP2 64bit
Data Size: 100-column record *NJ percentage of
task execution time in the task period: 50%

Innovative Omron Solutions

The difference that can help you quickly develop better machines

ONE Controller

The Sysmac NJ controller tightly controls every aspect of machine performance, including motion, logic, sequencing, vision, safety, data logging and more, all in a single, highly robust unit.

ONE Software

Develop, commission, operate and maintain the machine with Sysmac Studio, a single software program that makes it easy to add functionality at any time, and offers unique tools designed to drive speed and accuracy at every stage.

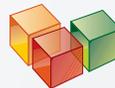
FAST Communication

The Sysmac system communicates with the line via high speed EtherCAT, a high performance, open protocol that delivers the highest throughput speeds possible on the factory floor.



Greater Throughput

The Sysmac NJ controller, advanced software and EtherCAT communication links delivers performance gains and flexibility that allow the end-user to strategically increase operating speed while maintaining accuracy and quality up and down the line. Greater accuracy means less chance for costly rejects which can reduce yield and damage brand equity. Changeovers are fast and easy too, with spreadsheet-based "recipes" readable at a glance.



Increased Modularity/Scalability

The highly flexible Sysmac system allows nearly unlimited room for growth and adaptation. You can scale your machines with different feature sets using the same controller, saving you time and money, increasing profitably and further speeding your time to market. Sophisticated new functions can be added any time with simple changes to the existing program configuration.



Faster Time To Market

Sysmac Studio significantly reduces project time by letting you get a jump on machine program testing, debugging, and simulation, starting the process well before there is final hardware in place. And Omron delivers the widest selection of automation and safety parts available from a single supplier, for fast and easy integration.



More Uptime, Less Scrap

Production problems can be anticipated and automatically stopped before they happen through faster feedback cycles and the superior accuracy of the Sysmac system. The result is less threat of downtime and less chance of wasted products or packaging materials. When there is an issue requiring human intervention the built-in troubleshooting interface provides hardware error codes that are easy to understand and act upon.

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