

ROBOTS GET A GRIP ON FOOD AND DRINK

Ruggedness, versatility and dependability help robotics make inroads into the food and beverage industry. / by **THE ROBOTIC INDUSTRIES ASSOCIATION**

Robotic systems are used extensively for handling bags, flow packing and packaging multi-component products like meal kits. It is common to see robots in palletizing and depalletizing operations, and the ability to store many program variations allows users to have multiple mixed pallet specifications for their customers. In the food and beverage industry, those who most efficiently pack and ship specialty orders win.

Robot makers have responded with new products and approaches that are flexible and take the hassle out of specialty orders. The trend is so pronounced in food and beverage packaging that it is one of the top five growth areas for robotics according to industry statistics from the Robotic Industries Association (RIA). Orders in this sector, which includes consumer goods, increased 41% through the first three quarters of 2010. Full year statistics are available from RIA.



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Robots can be used for a wide range of food products, including products that require gentle handling.

“Retailers especially like to differentiate themselves by offering unique combinations of goods on their shelves,” said Brian Huse, the RIA’s director of marketing and public relations. “Volumes may rise and fall seasonally, further complicating matters. Robots are designed specifically to handle variations in product and volume.”

Robots are usually more affordable and use less space than fixed automation. Plus, their deployment helps eliminate repetitive motion injuries for tasks other automation can’t handle. Return on investment can often be measured in months, and unlike most dedicated machines, robots can adapt easily when the product changes.

“Now we see new tooling that allows a robot to change gripper size on the fly, and many innovations in man-machine interfaces to make the robots easier to program and operate,” Huse says.

Safety concerns have driven some of the advancements in robot design. Robot makers are now producing robots that have the control reliability needed to eliminate some physical barriers. This means work cell setup is less complicated and less expensive.

“A new national robot safety standard is in the pipeline, and some robot makers already have products that comply,” Huse says. “Customers will benefit from cost savings and more flexibility.”

Workplace safety is always important, but sometimes people worry more about the effect robots have on jobs. With an economy still tainted by high unemployment, why should the food industry invest in robotics?

When labor is cheap and there is no concern about staff turnover a robot may not make sense, but improvements in safety and sanitation often help offset those issues. For that matter, it is quite common to hear that employees are shifted to better jobs (running or maintaining robots, for instance). More importantly, better efficiency and quality (hallmarks of robot systems) create a competitive advantage that can be leveraged into more business. More customers can lead to steady or increased staffing.

“Food and beverage applications will continue to grow at a dramatic pace,” says Dean Elkins, RIA chairman and senior general manager of Motoman Robot-



Articulated-arm robots are often used in packaging applications.

ics. “Also, case packing and palletizing will shine.” He predicts China, India, Brazil and South America as hot spots for more robot sales—places not traditionally known for labor shortages or high wages.

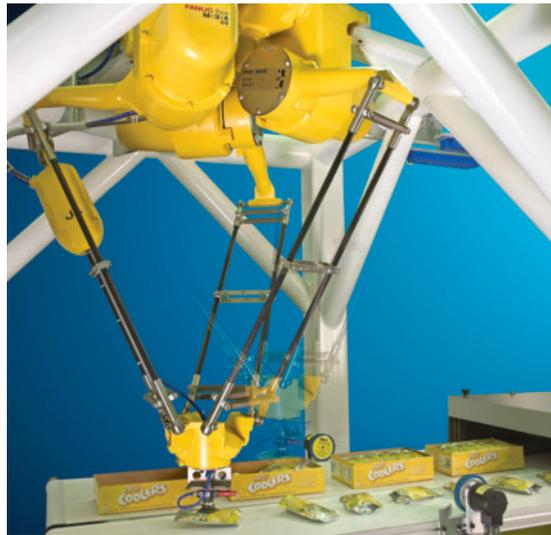
In any country, employee turnover is one factor that helps drive demand for robots. However, robots can handle large loads without physical injury; robots don’t tire or call in sick, and they are used often to increase production at the end of the line.

Furthermore, the cost of injured workers in America can be very high, and robots help minimize that by taking on the heavy lifting of pallets or large, heavy, awkward items. People don’t do so well in damp, cold environments like freezers, so that is another great place for robots.

Best of all, robots are good at handling custom orders and different pallet configurations, plus there are many choices in tooling that allow companies to respond quickly when a customer changes an order.

Fundamentals and more advanced concepts about robotics will be examined at the Automate Conference, March 21-24, 2011, at Chicago’s McCormick Place. Held biannually, Automate is co-located with ProMat, sponsored by the Material Handling Industry of America, which is North America’s premier material handling and logistics show.

Three associations sponsor Automate 2011: Robotic Industries Association, Automated Imaging Association and Motion Control Association. To learn more about the show, visit www.Automate2011.com. **F&BP**



Delta-style robots are suited to pick-and-place applications, especially with delicate items.

Automate to showcase the best of robots

Automate 2011, to be held March 21-24 at Chicago’s McCormick Place, is the premier trade show for robotics and automation in a range of industries, including packaging.

Formerly known as the International Robots, Vision & Motion Control Show, Automate 2011 will feature the latest in robotics, vision and automation technologies. It is expected to draw some 35,000 visitors.

The show is being sponsored by the Automation Technologies Council, an umbrella group for the Robotic Industries Association (RIA), the Automated Imaging Association (AIA) and the Motion Control Association (MCA).

“Right at the front of our show we’ll feature a pavilion of leading system integrators who will demonstrate solutions for a wide-range of industries. This is a major change in our show layout—we want visitors to see solutions first,” says Jeffrey Burnstein, president of



the Automation Technologies Council. “Then, once our visitors see how everything works together, they can search the show for leading companies, new products, and importantly, industry expertise to help them develop solutions that meet their specific needs.”

This year’s show represents a couple of firsts. It’s the first appearance at McCormick Place; it had been held in a smaller venue in Rosemont, Ill. And it will be the first time the show has been held in conjunction with ProMat, a show for the material handling industry and logistics industry sponsored by Material Handling Industry of America (MHIA).

For more information about Automate 2011, call 734-994-6088 or access www.automate2011.com.