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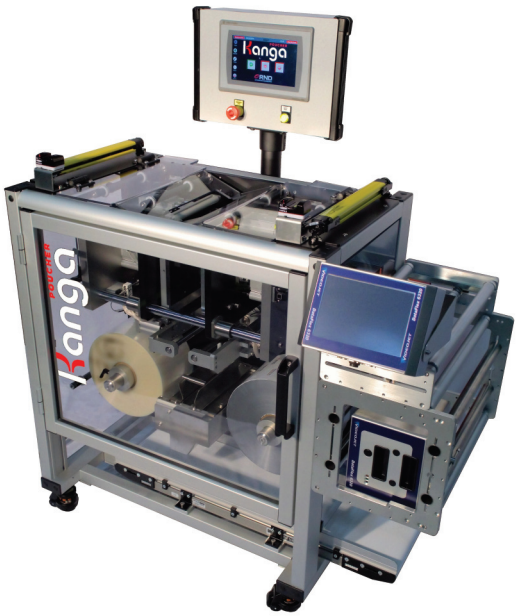

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Allen-Bradley CompactLogix
Programmable Automation Controller

Allen-Bradley SensaGuard
Non-contact Interlock Switches

Allen-Bradley Kinetix Servo Drives

Across many sectors of the packaging industry, a better machine is oftentimes a faster machine. That's certainly the case for the high-volume vertical pouch equipment found in many food and beverage plants. But when pouch packaging is used for low-volume applications such as surgical devices and kits, machine versatility and ease-of-use are more important than speed.

"In these scenarios, several different items are packaged in a single pouch," said Sean Dotson, president and CEO, RND Automation & Engineering. "This includes medical kits as well as applications that impact other industries and everyday consumers – like electrical component or furniture assembly kits."

Pouch equipment used for these high-mix/low-volume applications typically runs at 10 to 15 cycles per minute (CPM). Some kits are hand-assembled, then loaded. Others are assembled and loaded automatically. Frequently, the machines must accommodate variations in pouch size and package mix.

"To meet unique application characteristics, packagers usually choose custom equipment," Dotson explained. "And while we typically build custom machines, our KANGA poucher is designed to provide customers with the options they need in a more cost-effective, standard platform."

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The KANGA poucher is the latest offering from Florida-based RND Automation & Engineering, a company with more than 25 years of experience in industrial machinery design.

Similar in theory to many vertical form-fill-seal (VFSS) machines, the KANGA poucher is designed to run a variety of web materials including foil, film and polymers used for healthcare applications. The machine can achieve speeds of 20 CPM, run pouches up to 8 x 11 inches, and accommodate automatic or semi-automatic loading.

Engineered from the bottom up, the KANGA poucher was designed to meet the tough standards set by the medical device sector. But its flexibility allows it to be used across all market segments.

The KANGA poucher features a compact footprint about 30 to 50 percent smaller than comparable equipment on the market – plus impressive application flexibility and built-in safety features.

"Many pouchers for the kitting niche don't easily integrate with other equipment," Dotson said. "And safety is an increasing concern as well."

To address these issues, RND designed their KANGA poucher based on a Rockwell Automation control and information solution featuring an Allen-Bradley® CompactLogix™ controller. Depending on system complexity, Allen-Bradley Kinetix® 350 or Kinetix 5500 servo drives control the web.

For machine guarding, the equipment includes Allen-Bradley SensaGuard™ non-contact interlock switches. The machine also features a NEMA 12 electrical enclosure and safety light curtains.

The KANGA poucher is monitored on an Allen-Bradley PanelView™ Plus 7 graphic terminal and integrated on an EtherNet/IP™ network.

"From a programming and wiring standpoint, it helped tremendously to use a system where the controller, drives and HMI can all talk to each other on the network," said Daren Nickell, controls manager, RND. "And programming tools like Add-On Instructions and HMI templates also streamlined machine development."

As part of the project, RND designed a sequenced-based program and diagnostic screens to ease troubleshooting. In addition, intuitive color-coded screens step operators through machine start-up – and help quickly pinpoint and resolve common issues.

And thanks to the flexible control system and Ethernet connectivity, RND can easily incorporate ancillary loading equipment including automatic robotic, automatic feeder bowl and semi-automatic rotary table options. The KANGA poucher can be used as a standalone and portable machine – or built to integrate with upstream or downstream equipment.

"With the Rockwell Automation platform and Ethernet, we can also tie into a customer's manufacturing platform to obtain web material sourcing information, such as lot and serial numbers," Dotson explained. "Really, the sky is the limit in terms of connectivity. Whatever the customer wants to do, we can do."

RND has relied on Rockwell Automation technology for decades and will continue to depend on the company's global supply and support network.

"Rockwell Automation has a great support structure, not only for us but for our end customers down the line," said Claire Felix-Davies, sales and business development manager, RND. "Eventually, our machines could be shipped all over the world. We know our customers will have the support they need wherever they are located."

For more information:

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Publication OEM-AP502A-EN-P – October 2016