

Integrated line makes Howell's ammo packaging bulletproof

Bulk feeder, vision inspection system, cartoner, and laser printer speeds throughput and addresses labor shortages in the company's hometown.

By adopting new state-of-the-art processes, Howell Munitions and Technology has grown from producing 400,000 rounds a day to more than two million in the past two years. The success of their brands, including Freedom Munitions and X-Treme Bullets, reflects their commitment to product quality and customer service that is said to be unmatched in the shooting industry.

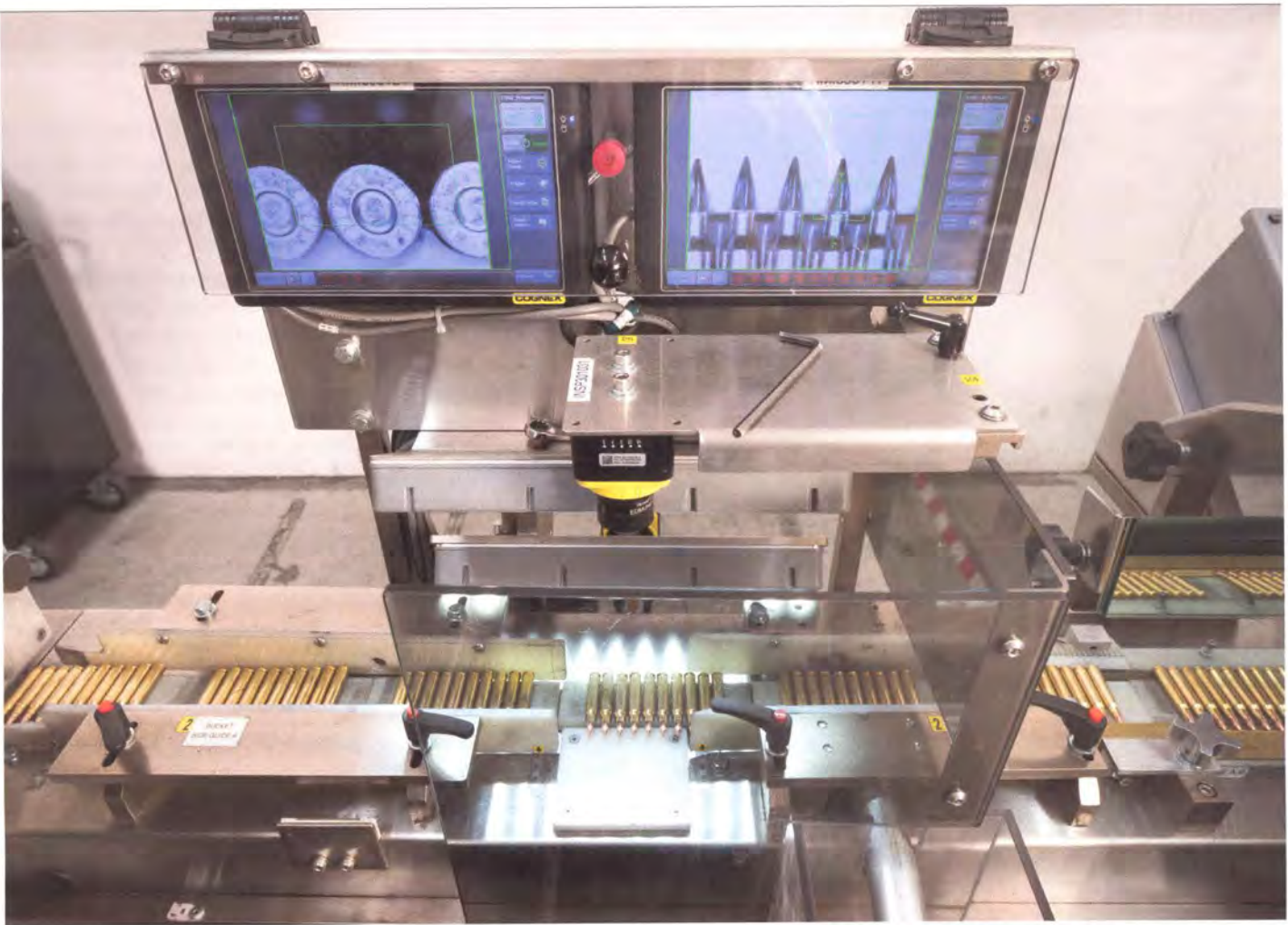
To support their extraordinary growth, Howell installed an integrated rifle ammunition packaging line from **MGS Machine** (www.mgsmachine.com). The result of the installation: Increased throughput and reduced labor costs.

"When I started working at Howell's Lewiston, Idaho facility, all packaging was done by hand. It was a very labor-intensive process with 45 people working each shift. I knew we could do better," recalls Jeff Hamrich, Maintenance Supervisor and Process Engineer at Howell Munitions and Technology.

"I had experience with MGS at my last job," he says. "They are the best, not just for ammo but for food, pharma, and other products. Although it's unusual for a munitions company our size to automate packaging, this line paid for itself in just four-and-a-half months by allowing us to redirect 34 people while doubling our output."



Howell's integrated packaging line increased throughput and reduced labor costs.



The VersaSort feeder organizes ammo for presentation to the vision inspection system, which looks for missing projectiles or primers.

Built to handle a variety of products, the line integrates a VersaSort™ bulk feeder, vision inspection system, **Adept** (www.adept.com) Cobra Robot, RCST™ cartoner, and laser printer. Howell's system packages up to 350 parts/min and produces both 20- and 50-count cartons.

"The MGS team really saw our vision and designed the perfect packaging line for us," says Hammrich. "We love that they take ownership of the entire system, including third-party components. They've been fantastic to work with, before, during, and after installation."

How the process works

First, the MGS VersaSort bulk feeder orients ammunition into a scalloped conveyor. Unlike vibratory or circular bowl feed systems, which can cause cosmetic scuffing, the VersaSort uses opposing belts to gently handle the product. This feeder also controls product surges to achieve a continuous, steady flow and accurately organizes products for presentation to the downstream vision inspection system, which looks for missing projectiles or primers.

"Previously, we were manually inspecting, but human abilities drop way off after three hours. A machine never gets bored or distracted," notes Hammrich.

Next, the Adept Cobra robot picks up the ammunition and positions it for insertion into the cartons. Programmed by MGS, this 4-axis robot was selected for its speed, accuracy, and repeatability. The vacuum sensing feature confirms no products are dropped during the transfer.

The cartons are erected and filled with the RCS cartoner, also from

MGS. This intermittent-motion machine is servo-driven, accommodates a variety of carton sizes and styles with fast and simple changeover, and is capable of producing up to 60 cartons/min. Howell's system features an optional bar stock frame so gunpowder doesn't build up in the tubing. The open design provides easy access for cleaning and maintenance, while the 8x4-ft footprint is reportedly among the smallest in the industry.



Howell's success reflects their commitment to product quality and customer service.

Howell Munitions and Technology



Jeff Hammrich, Maintenance Supervisor and Process Engineer at Howell, led their drive to automate packaging.

"We selected the RCS for our integrated line based on my past experience with this equipment," says Hammrich. "I've been in this industry for over 20 years, and I know this is one of the most dependable cartoners out there."

"One of the great things about this packaging line is its flexibility to handle all five of our rifle ammunition casing sizes. The entire line takes just half an hour to changeover. Everything is modular—just remove a part, drop a new one in, lock it down, and away you go. The first carton out is always perfect."

"Overall, this equipment is very easy to operate," Hammrich continues. "Everything is controlled from the 10-inch, color touchscreen HMI located on the cartoner. All the moving parts are well-guarded for safety when the line is running, yet we have great access for cleaning and maintenance. Its ease-of-use simplified training, too. We sent two of our operators to train with MGS, and then they came back and taught the rest of our team."

Hammrich adds, "Before we automated cartoning, we had some issues that we wanted to address. Hand packing demanded repetitive motion, which put workers at risk and increased our workers comp costs. Also, there's a labor shortage in our small town that makes it difficult to hire and retain good employees. Automating was the best option. These days, we have just four people operating this equipment during each shift, with no stress on their bodies at all."

"MGS has really helped us get to the next level and grow in the market. With this equipment, we've improved our bottom line, thanks to doubling our rifle ammo output while reducing labor. Our higher throughput enables us to get products out the door faster, which our customers appreciate," concludes Hammrich. "We love this automated packaging line." —**Jim Butschli**

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