



## Better Packages Case Study: How Does a Fulfillment Center Remain Competitive in a Highly Competitive Industry?

One Shelton, CT, fulfillment center improves efficiency, worker satisfaction, and package security by switching its hand-packing stations to electric water-activated tape dispensers

### The Challenge:

As the demand grows for third party vendors to perform fulfillment services, fulfillment operations, to remain competitive, need to find ways to increase production while maintaining efficiency. The approach must be proactive rather than reactive when implementing new methods and practices that will meet the increased demand.

At one Shelton, CT-based fulfillment center—a leading source of warehousing services for fulfillment and distribution—the objective has always been to employ cutting-edge technologies that offer customers the best possible service, not just keeping up with demand but having the foresight to stay a few steps ahead.

Until January 2005, the fulfillment center was exclusively using plastic tape with handheld dispensers, or guns, at hand-packing stations to close cartons in their busy fulfillment and distribution center. They knew they needed a more efficient method, particularly during peak holiday seasons, and were somewhat familiar with the advantages of water-activated tape and the Better Packages product line. But they thought that manual dispensers would adequately serve their purpose. The center's distribution manager contacted Better Packages to discuss their needs, at which point he learned about the increased efficiency of using electronic tape dispensers, particularly when interfaced with an automatic measuring device (AMD).

However, before making any decision, the Better Packages application team advised an evaluation of the packing process. During the evaluation, the following issues surfaced:

**Material usage.** Packers at the fulfillment center were using manual tape guns with plastic tape to close boxes. Because the plastic tape did not create a good, sturdy seal on the carton, several strips of plastic tape were often used, especially on boxes that contained heavier items. Not only did this create an



undesirable, unprofessional appearance, it was also wasteful from a materials standpoint.

**Production efficiency.** The fulfillment center processes a tremendous number of cartons of varying sizes in a given shift. During peak holiday seasons such as Christmas and Valentine's Day, the number increases dramatically. While the handheld tape guns were portable, they were awkward because packers needed to reach around large boxes, and turn the carton while maneuvering the gun when trying to close small boxes. It was obvious that this method of sealing wasn't as efficient as it could be.

**Workstation ergonomics.** After handling the guns for any length of time, workers' arms and hands became fatigued from gripping the guns and reaching back and forth around the boxes. The fulfillment center was concerned about potential injuries from muscle strain and repetitive motion. The process didn't provide the optimal ergonomic environment, especially during busy times.

**Package security.** Even though the fulfillment center was not having a significant problem with tampering or breakage, they recognized the potential problems they might face down the road if they continued using only plastic tape. Plastic pressure-sensitive tape can be easily damaged with rough handling of packages, while the water-activated adhesives in WAT actually bond with the carton, producing a sturdy, secure seal. Such a seal means there is no way to open the box, remove items from the carton and shut it again without leaving traces of damage. Plastic tape simply sits on the surface of the carton and is easily peeled back and resealed.

The fulfillment center recognized the need to be proactive and look for a better, more secure way of sealing packages and protecting their customers' valuable products. In addition to improving tamper resistance, better security would reduce returns from customers as a result of missing product or broken seals. But any solution needed to happen quickly with as little disruption to the operation as possible. Plus, there was one very big obstacle to the process: the company had to install electricity to incorporate any electronic solution into their packing stations.

### **The Solution:**

While the main goal of the assessment was to identify ways to improve production, along the way the fulfillment center determined that there were many other benefits associated with switching to water-activated tape and an automated dispensing system at the hand-packing stations, such as safety,



strength and security. The more they learned about reinforced water-activated tape, the easier the decision to switch became. As a result, in late January 2005, the company completely redesigned 20 packing stations and outfitted them with automatic water-activated tape dispensers from Better Packages, Inc.

The dispensing system they chose was the Better Pack 555e, a microprocessor-based system that improves overall reliability and interfaces with measuring devices and other tools to increase its functionality. Intelligently designed, ruggedly constructed and user friendly, the Better Pack 555e is the only electronic tape dispenser of this type to pass current UL requirements.

When interfaced with the AMD (Automatic Measuring Device), the system automatically measures a carton at the touch of a button and dispenses the perfect amount of tape every time, greatly increasing productivity and savings while decreasing tape waste and helping to ensure that packages maintain a professional image.

#### **The Results:**

Installation of the equipment was fast and easy, and operators were trained and brought on line without significantly interrupting production. Improvements occurred almost at once, in every area of the operation that had been identified during the evaluation process.

**Material usage.** With water-activated tape, packers no longer needed to use several strips of tape to seal boxes containing heavier items, as they previously had with plastic tape. This resulted in packages with a much cleaner, neater and more professional-looking appearance.

**Production efficiency.** Out of the 3,000 to 5,000 boxes the fulfillment center packs and ships per day (with many more during peak seasons), about one-third go to the hand-packing stations. After installation of the WAT systems, the fulfillment center realized a dramatic increase in the total number of cartons sealed at each packing station per shift and in their longer-term overall production rate.

**Workstation ergonomics.** When sealing large and random size boxes over a period of time, the bending, stretching and reaching necessary when using hand guns greatly increases the risk of repetitive motion injury, such as Carpal Tunnel Syndrome. The National Council of Compensation Insurance estimates that compensation for injuries such as CTS can average over \$30,000 per claim. The push-button dispensing achieved with the electric tape dispensers required fewer



repetitive motions and fewer awkward motions. Automating the packaging process eliminated all of the fatigue and strain associated with handling manual tape guns.

**Package security.** While the company still uses plastic tape as part of their packaging process, items that are breakable, fragile, or especially valuable now go to the hands-on packing stations for the added security of sealing with water-activated tape.

Initially, there was some concern about resistance to the change. But the reaction from packers was immediate and extremely positive. Some of their comments included: “I love this machine. I really do love it;” “I don’t know why they didn’t do it sooner;” “The boxes are secure, neater and more professional;” and “With the AMD, I just press a button and the tape I need comes out. It gives me the accurate size I need.”

They added that it was easy to learn to use the BP 555e, that it is easier to use than plastic tape with a hand gun, and that using the new system saves them time versus using plastic tape.

For this Shelton-based fulfillment center, the key to success was being proactive, which included proactive processes to improve efficiencies, proactive services to improve customer care, and a proactive environment to improve the work experience for employees. What seemed at first like a small component of the operation—the sealing method used on the packages at the packing stations—paid off significantly.

For more information on Better Pack<sup>®</sup> dispensers, BetterSeal Secure<sup>®</sup> Tape and the complete line of Better Packages products, visit [www.BetterPackages.com](http://www.BetterPackages.com).