

# Automation to Optimize High-Speed Packaging

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Sean Webb of Sparck explains the current challenges in the packaging industry and how companies can reduce their costs and footprint with an automated packaging solution for e-commerce.

**M**eant to protect products during shipping, packaging is a crucial aspect of e-commerce. With 96 percent of U.S. growth expected to come from ecommerce by 2023, it's no secret that every industry has been affected by unpredictability, shipping limitations because of carrier constraints, labor challenges, and adjustments in selling strategies as the world shifted to online shopping.

Most of those ecommerce goods are shipped to homes, where the "unboxing" experience (people opening boxes and narrating their actions on video) is so prevalent that it has become a YouTube phenomenon. But how many times have you received a huge box via UPS or FedEx and opened it up, only to find a tiny product huddled in the corner, surrounded by air or void fill? Not only is this a waste of space, packaging materials, and shipping fees, but it also puts your recycling bin or trash can on overload and eventually impacts the environment. At the other end of the spectrum are the packages that clearly weren't meant to hold their contents, including the flat-pack envelope that arrives at your doorstep bursting at the seams.

E-commerce shippers' packaging challenges don't end there. There's also DIM weight charges, inefficient picking and packing processes, and sustainability demands to contend with. In this Insider Q&A, Sparck's Director of Automated Packaging Solutions, Sean Webb, explores these challenges and shows how companies can reduce their costs and footprint with an automated packaging solution for e-commerce.



Sean Webb — Sparck  
Director of Automated Packaging Solutions, NA

*Why is packaging such a big issue for today's e-commerce shippers?*

**A:** Given the effects of the pandemic, e-commerce has developed faster than ever before, and peak periods aren't as predictable. In addition, social media is a big driver; you see a lot of these unboxing experiences posted online, either in video or via comments from customers or end users. Many people are very conscious about not only how much dunnage material is in their packages and the associated environmental effects, but they also complain about their overflowing recycle bins. This all stems from the fact that the companies they're purchasing from are not optimizing the packaging experience. This, coupled with more CEOs who are interested in helping our environment, are some of the many things driving sustainability measures within distribution centers.

*Are companies responding to these trends?*

**A:** Many shippers haven't concentrated on this area because there's a perception that a lot of work has to be done to "fix" the processes. For example, a lot of shippers think that they have to invest in a dimensional scanner to scan every single item, and then utilize software to determine how to put a box together and figure out what carton to use, and so forth. They simply do not have the time and resources for these projects. This is just one of the reasons why companies haven't taken the time to optimize this area of their fulfillment operations.

*Why can't shippers ignore this any longer?*

**A:** With the dramatic shifts to online fulfillment really impacting warehouses and DCs, labor constraints and rising shipping costs, it can't just be business as usual. Companies really have to start looking for new opportunities to automate and optimize their packaging operations.

What's the best solution for today's e-commerce shippers?

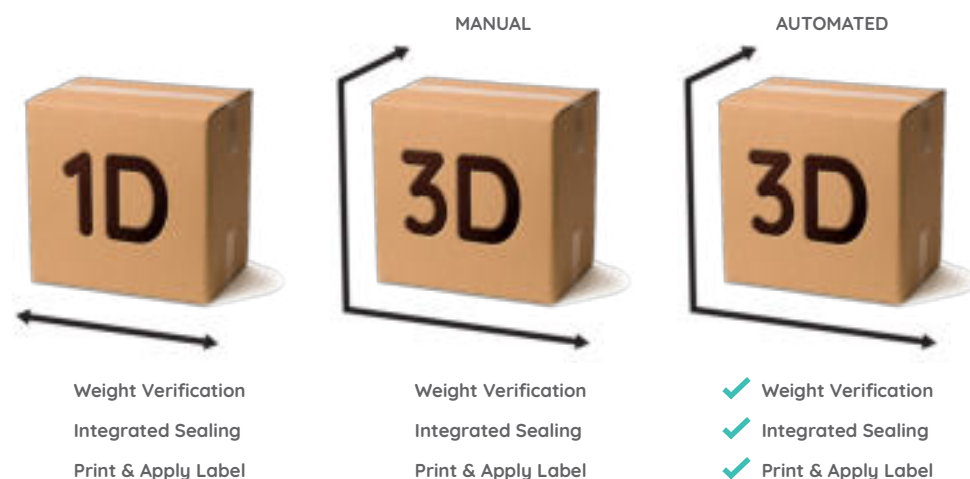
**A:** There are different solutions on the market today that automate the order-packing area of a warehouse or distribution center, with most of them falling into one of three categories: 1D manual, 3D manual, or 3D automation (with the "D" standing for dimensional).

The 1D category includes solutions that reduce box height, but not length, width, or material usage. As a result, the shipper using this solution would have to maintain more box SKUs in its inventory to meet the variety of order sizes. 1D solutions do help reduce companies' labor needs, so if your goal is to reduce labor, but not necessarily volume or material, or improve the customer unboxing experience, then it may be a good solution for you.

A 3D manual solution can effectively reduce the length, width, and height of a box, which offers savings in the area of DIM weight charges. They also ensure that you're using the least amount of corrugate and packing materials as required for that order. However, from a throughput or labor perspective, these 3D manual solutions are on par with a typical manual order-packing process.

Finally, 3D automated solutions tend to be most applicable in warehouses and DCs that are managing higher shipment volumes for the majority of order volume. 3D automated solutions auto-box each single-item or multi-item order to create the perfect, custom fit-to-size box around the specific order. It also incorporates the taping, weight verification, and print-and-apply shipping label process, all of which comes together for an optimized packaging solution.

The CVP Automated Packaging Solutions, for example, make fulfillment faster, more reliable, and more efficient than ever before. You are ensured optimal labor, shipping and material savings, especially during peak seasons. We also have many different certified fan-fold corrugate vendors to choose from, which means you get fair pricing and flexibility for commodity items. The most efficient, higher-volume companies typically apply a combination of these solutions, as well as auto-bagging technology, to meet their package fulfillment needs.



How do 3D automated solutions, like the CVP solutions, make companies and their shipments more environmentally friendly?

**A:** They decrease the amount of material used for each box. It's about creating only the box volume necessary for that specific order—nothing larger. Because it's a fit-to-size box, 3D auto-boxing eliminates dunnage required for that specific order. And then finally, because a box is created for each specific order, less material is used because the exact amount of corrugate needed is cut.

How does a company determine the appropriate level of packaging automation?

**A:** Each company must determine its own goals for the order-packing area to choose the right level of automation. Is it reducing costs? And if so, in what areas? Is it to provide more environmentally friendly packaging? Is it to increase throughput? Based on these goals, coupled with daily order packing volume, companies can quickly determine the technologies that they should explore.

What makes the CVP Automated Packaging Solutions different from other options on the market right now?

**A:** We're on our sixth generation of our CVP Impact, which translates into very high reliability within all our end users' installations. Reliability is critical when you automate the order packing area, just like a sorter within a DC. The CVP becomes the heart of the process and it must be able to run continuously. We've made investments with our nationwide support and parts infrastructure, which augments our reliability and uniquely positions us in the marketplace. Our CVP Impact Automated Packaging Solution has a machine throughput of 500 orders per hour using just one operator. Our newest Automated Packaging Solution, the CVP Everest, can auto-box even higher volumes of up to 1,100 orders per hour with two operators. They're also the only 3D automated solutions that can auto-box both single- or multi-item orders of variable dimensions, as well as hard and soft goods, with no additional equipment or operators needed.





Before Auto-boxing

After Auto-boxing

*What are the top benefits of implementing these solutions in a package fulfillment operation?*

**A:** We're amazed at the number of different industries and applications where our CVP Automated Packaging Solutions have been implemented—anywhere from general merchandise to e-commerce, to auto parts, to computer manufacturing, and everything in between. One of the three basic drivers for justifying a CVP is the labor savings and efficiencies when processing orders in the order packaging area. Number two would be the amount of volume reduction for each of the boxes that we produce, which translates into real shipping savings. And then finally, the amount of corrugate reduction usage is also a primary driving factor. On average across all of our installations, we help companies save 88% in labor costs, 32% in freight reductions, and 38% in material costs. Through these savings, one shipper that manages an average order volume of about 2,400 orders per day is able to experience a return on investment in as little as six months. In addition, our customers are not posting negative unboxing experiences. Corrugate is environmentally sound and a fit-to-size box experiences less damage (thus less returns due to damage) for our customers.

*How long does it take to implement a CVP?*

**A:** On-site installation time is less than five days. We fully manufacture, quality inspect and operate every CVP before it leaves our manufacturing plant. Each CVP is shipped in two separate units to the site which allows for plug and play installation once it arrives.

*How should logistics or warehouse managers go about assessing their needs for this level of package fulfillment automation?*

**A:** In most cases, you need to fulfill at least 1,000 boxed orders per day to get a strong justification of 24 months or less. However, there are other factors which will reduce this general rule. As an example, we've installed a CVP Impact for a customer that could only produce 50 orders with manual packing per day. Now, they are producing a volume of 500 orders per day with the CVP Impact, which ultimately justified their investment. Any volume above 1,000 orders per day will accelerate the ROI.

What I tell companies is this: If you're challenged by the labor constraints and struggling to package your daily order volume; if you haven't explored automating your order packaging area; if your carrier charges by DIM weight; if your customers are posting negative unboxing experiences on social media; if you want to use less material; if you want to provide your customers with an environmentally-friendly order experience; or if you're trying to reduce the overall box inventory that you carry, then an automated packaging solution by Sparck is definitely worth exploring.



## GOALS CHECKLIST

- Solve for Labor Shortage**
- Reduce DIM Weight Charges**
- Meet Pack Volume Needs**
- Environmentally-Friendly**
- Reduce Box Inventory**
- Save on Materials Waste**