

SOLVING THE LABOR SHORTAGE CRISIS

The four benefits of an automated warehouse

CIMCORP

Passion for optimized material flow



Solving the labor shortage crisis

In practically every industry, companies are experiencing major labor shortages. These year-round shortages are felt especially hard during a business' peak period, those times of the year when sales spike, demand is through the roof and orders seem to be flooding in consistently.

BREWERS SEE a rise in sales during the summer months when consumption reaches annual highs around picnics, beach parties and family reunions. Meanwhile, wine producers get a boost during the colder, winter months for the fancier traditions like holiday parties and events. School supply and stationary companies will experience a jump during late summer when people are doing back-to-school shopping. And, nearly all consumer goods companies and food & beverage manufacturers see sales skyrocket in the fourth quarter as people across the world shop for gifts and host guests at holiday get-togethers.

STAFFING BECOMES a major obstacle as warehouse managers, operations supervisors and staff in distribution centers struggle with the influx of orders and consumer demands for more variety and quicker deliveries. This is especially true for companies that still rely on fully manual operations. The greatest challenges come with managing an increase in inventory quantity and variety, mobilizing staff, accurately fulfilling orders and ultimately keeping customers happy.



Did you know?

AUTOMATED SYSTEMS PROVIDE:

6X

MORE EFFICIENCY

50%

BETTER SPACE UTILIZATION
WITH HIGHER DENSITY

100%

ORDER ACCURACY

Challenges of keeping up

MANAGING MORE INVENTORY IN STOCK AND GREATER VARIETY

During a period of growth, many manufacturers will increase production output on popular products so that they have enough in stock to meet heightened demand. Plus, some companies, like fresh food producers in dairy and baked goods, will offer limited, seasonal products to customers, resulting in fluctuations in quantity and variety. Warehouse managers must figure out how to best store and manage this extra inventory in the same amount of space.

COORDINATING WAREHOUSE STAFF

Staffing may be a year-round challenge, but during peak periods, it's even tougher for facilities where warehouse staff have to manually pick and pack orders for shipment. Besides the added physical strain of scrambling up and down aisles

and bending and lifting boxes of goods, there are also difficulties maintaining enough personnel to keep up with the order volume. Thus, many companies will turn to hiring temporary, seasonal labor. But seasonal staff is expensive and creates additional challenges such as providing the proper training in a short span of time.

FULFILLING ORDERS ON TIME AND ACCURATELY

Consumer demands for more variety and quicker delivery times, especially during seasonal peaks, mean warehouses and distribution centers have to keep up with more frequent orders. Plus, they have to get them out the door on time, and with accuracy, to maximize shelf life. Further, with the rise of e-commerce, they must also handle direct-to-consumer orders with higher volumes but smaller order sizes. This is often new territory for operations teams used to fulfilling large quantities for retailers.

Given these challenges, it's no wonder that manual warehouses and dispatch departments get stretched thin, leaving warehouse staff and operations struggling to keep up. But, they don't need to rely solely on manual storage and order fulfillment anymore.

Today, automated technology is available to equip these facilities to better handle their toughest challenges and operate more efficiently and effectively both year round and during busy peak seasons.



ROBOT # 2

The four benefits of automation

1. DO MORE WITH YOUR SPACE

With companies manufacturing more products to keep up with consumer demands including seasonal offerings, warehouses are quickly running out of space to hold everything. And since some products move out the door faster than others, efficient storage and retrieval becomes a challenge.

Automated solutions create high-density storage areas so facilities can optimize space utilization and store more products while using up to 50 percent less space. Namely, warehouses can consider a system that allows for floor-based storage, where goods are stacked on the warehouse floor and retrieved from above. This eliminates the need for space-consuming aisles and massive conveyor sequencers. What's more, automation can inherently work faster and more accurately than manual pickers during peak times. An automated system can run 24/7 and all checks and balances are done through sophisticated software, which manages the storage and retrieval, and picking processes. This virtually eliminates picking errors and allows complete product traceability.

2. REDUCE AND IMPROVE SEASONAL LABOR

When faced with an impending peak period, the first instinct many warehouse and logistics managers have is to hire multiple temporary warehouse workers. In fact, manual warehouses often find that they need to double their workforce to keep up with the flood of orders. They'll put up hiring signs and place ads and take practically anyone who walks through the door because they're in dire need of help. With the pressures of the looming peak season building, there's often not enough effort placed on properly vetting and training the temporary staff. This creates complications and bottlenecks when it comes time to fill orders.

An automated system is designed to handle the future growth of a business, which means automation will inherently get you through your peaks. With a flexible, scalable solution, distribution centers and warehouses that relied on temporary labor can now look to automation to get through upticks in sales, new product launches and peak demand times for managing order fulfillment.



3. BETTER LEVERAGE EXISTING EMPLOYEES

One of the biggest fears and causes of dissidence among warehouse employees regarding automation – and understandably so – is the possible displacement of warehouse jobs. But, most facilities are running short staffed as it is throughout the rest of the year. As older members of the workforce are beginning to retire, jobs aren't being filled as quickly since the younger generation seems less enthusiastic about careers in warehousing. Thus, automation can actually be a benefit to warehouse employees by helping them to efficiently complete tasks with greater ease.

By letting automated systems do the order picking and fulfillment for products that can be easily handled with automation, companies can reorganize and reallocate their staff to handle other products that are not suitable for automation or have special handling requirements. Because these employees are no longer responsible for manually picking and moving everything in the warehouse, they have more time for other, more sophisticated tasks. It's also safer for employees since the alternate jobs are less strenuous – particularly in facilities with heavy loads. So rather than eliminating jobs, automation makes them easier, which can be appealing to the younger workforce.

4. LOWER LABOR COSTS

Managing an unstable workforce comes at a high cost as managers deal with high turnover rates, training costs and safety issues. The strain of hiring double the number of staff members during peak periods brings on even greater expenses, given the wages, benefits and financial obligations required for each additional employee. Just to keep operations flowing and meet deadlines, much of the staff must also work overtime, which means extra pay. Other facilities add a third shift overnight, so they're paying around the clock – though it may be difficult finding employees willing to work the night shifts. In addition, there is a great deal of competition for seasonal staffing. For example, during peak season you can get companies such as Amazon hiring upwards of 120,000 employees from the job market.

Since automation minimizes the number of seasonal staff needed, companies can save in staffing costs. Moreover, automated systems can keep warehouse operations running 24/7, without any extra investment. Therefore, employees don't need to work as many overtime hours or night shifts. These benefits add up to significant cost savings over time, enabling companies to realize a return on their investment while easily navigating their seasonal peaks.



What automated technology do you need?

Once a warehouse or distribution center decides to automate part or all of its order fulfillment operations, it must then figure out what systems to put in place. With an extensive variety of technologies on the market, it can be difficult to comb through and identify exactly which solutions will provide the greatest automation benefits and best meet the company's handling needs. To help streamline the process, below are three automated technologies to consider.

FULLY-AUTOMATED LAYER PICKING SOLUTION

A layer picking solution is ideal for large distribution centers, especially those handling consumer goods and food & beverage products. However, it can be applied to virtually any facility that ships goods in layered quantities. These systems combine fast gantry robots with a clamp gripper and vacuum picking head to pick from stacked pallets of products on the warehouse floor. Using varying force and vacuum strength based on the SKU to be handled, the system can pick up virtually any type of product, from standard corrugate cases to shrink wrap products, bottles, tubs and open trays.

With a single machine, a warehouse can effectively access a large portion of its inventory. The system stages every SKU that is picked in layer quantities within the gantry robot's cell and can create customer orders in any desired sequence. It can pick up one layer or multiple layers to create rainbow pallets or pick entire pallet loads of products. Facilities can also gain additional time savings by directly loading pallets into trailers so that they don't need to stage orders on the dock.

The speed and flexibility of a layer picking system make it a perfect solution for warehouses struggling to keep up with large volumes of frequent orders coming from retailers during peak periods. It can even enable just-in-time order fulfillment to optimize the flow of goods. Facilities can quickly fulfill incoming orders – no matter how complex they are – with 100-percent accuracy and keep store shelves well stocked even in the busiest times of the year.

Terms to know

GANTRY ROBOT – A robust system that travels overhead of inventory in a linear fashion. It moves to the required product for buffer storage, sorting, palletizing or order picking.

CRATE PICKING GRIPPER – The crate picking gripper is used for gripping a stack of plastic crates and is designed to handle a wide variety of crate sizes. The gripper is engineered for a fast and smooth gripping motion and is mounted to the vertical module of the robot. The gripping claws are designed to interact with the handle opening of the crate.

LAYER PICK CLAMP GRIPPER – When integrated with a gantry robot, it allows for the safe picking and handling of inventory as it will adapt the strength of its grip based on the shape and size of the SKU at hand. A vacuum head option can be combined with the clasper, which enables the gantry robots to pick up virtually any package type on the market.



AUTOMATED GOODS-TO-MAN PICKING SOLUTION

Warehouses in retail, food service and e-commerce that store products in plastic totes or bins can benefit from automatic goods-to-man picking solutions. These systems consist of an automated storage and retrieval system (AS/RS) that uses gantry robots integrated with a shuttle device, a high-speed conveyor system and manual order-picking stations.

THE SYSTEM creates stacks on entry to the storage area. These stacks are then collected by one of the gantry robots and placed within the robot's working area. When a particular SKU is required for an order, the nearest corresponding tote is retrieved and placed on the shuttle device. The shuttle travels along the gantry and transfers the tote to a series of conveyors that feed the product directly to a staff member at a picking station for fulfillment. Rapid handling, combined with ergonomic order picking, enables a greater number of orders to be fulfilled, making the system up to six times more efficient than any manual operation.

BEYOND THE BENEFIT of speed for peak handling, a goods-to-man solution uses floor-based storage of products, which allows for high-density storage to better meet expanding inventories and a wider range of SKUs. With a modular design, additional robots and storage modules can be added as inventory and volume increases. Since goods can be easily brought out when ordered, it is also ideal for handling an organization's slow-moving and seasonal products.



AUTOMATED CRATE AND TRAY PICKING SOLUTION

An automated case picking system can help warehouses and distribution centers rapidly handle large volumes of products in plastic crates or bins with robots handling, storing and picking products in stacks.

WITH A FLEXIBLE design, the system can accommodate a variety of verticals, including health and beauty, consumer goods and food & beverage, just to name a few. Capable of working with a variety of standard crates in a single solution, these robotic systems enable precise control over the entire material flow of a distribution center or dispatch area. They can handle a range of functions, including buffer storage of goods arriving from production or goods-in, sorting and sequencing of products for processing, order picking, delivery scheduling, load planning and order release.

WITH A MODULAR, overhead gantry design, these systems are capable of covering large working areas. Any number of robots – each equipped with grippers designed for handling a particular unit load – can be employed, according to the throughput demands of a warehouse. This allows warehouses to adapt their operations to meet daily, weekly, monthly and peak periods of operation. Since the system can be easily expanded, it effortlessly handles a growing number of SKUs.

GOODS WILL ARRIVE in the picking area by conveyor in stacks of crates. A robot collects a stack and stores it on the floor, before either collecting another stack or moving into order picking mode. For picking, the robot moves to the relevant stack for the first product in the order. After picking the required number of crates, it moves to the next product, and so on. If a large volume of one SKU is needed, the robot can pick a complete stack in one lift. When picking is complete, the robot either stores the order for dispatch later or deposits it on an outfeed conveyor.

AS SOON as the system receives orders and products, it can begin a pre-picking process that speeds up the final pick significantly. This can be critical for maintaining efficiency during peak periods. For food producers, like bakeries, products can get to retail stores earlier, maximizing shelf life and retaining freshness.

Notably, any of these solutions can integrate seamlessly into existing operations as an “island of automation,” so other products that require manual handling can continue moving without disruption.





Preparing for the future

Are you considering a change to your manual operations to manage future growth? Here are some questions to consider:

- Are you able to efficiently store and retrieve both fast and slow moving products?
- Do you rely too much on manual labor?
- Are you able to properly train temporary staff members?
- Are your labor costs too high?
- Will you be running out of inventory space?
- Will you be able to get orders out the door on time and with accuracy?
- Do you feel you have the right systems in place to handle future growth?

If these questions bring to mind current and future struggles, it may be time to look into automating – even part of the warehouse’s operations. A solution provider can help take a look at your facility, processes and products and determine if and where automation would help. They should also be able to tell you where it would be best to stay manual – both from a cost and operational perspective.

Armed with the best combination of automated and manual handling, your warehouse will be ready to take on the next peak period, be it spring, summer, fall, winter or the holidays.