



Flexible fulfillment at its best

Pharmaceutical industry 3PL J. Knipper and Co. expands its material handling toolbox with a scalable, high-tech goods-to-person picking system that is speeding operations and providing room to grow.

AS ONE OF THE NATION'S LARGEST THIRD-PARTY logistics service providers (3PLs) for the pharmaceutical industry, New Jersey-based J. Knipper and Co. understands the power of flexible fulfillment. The firm manages the pharmaceutical-sample business for more than 100 of the world's top pharma companies, handling everything from quality and compliance issues to warehousing and distribution to strategy development—with the ultimate goal of making sure orders are delivered accurately and on time. Serving the varied needs of such clients requires J. Knipper and Co. to maintain a variety of fulfillment technologies across its three distribution centers, ranging from manual systems for less-complex orders to more advanced solutions that incorporate high-tech automation.

Such a tall order puts executives like Vic Ricci on the front lines when it comes to maintaining the company's "toolbox" of order-picking and fulfillment solutions.

"We do not force our clients into a specific distribution solution," explains Ricci, Knipper's vice president of operations. "We analyze the data of the respective client and come up with a solution that runs parallel to their business need. We want to provide a back end to our clients' supply chain that is both flexible and scalable to their future business needs."

With that in mind, when a new client with a high-velocity, high-SKU (stock-keeping unit) mix came on board last year, Ricci knew he'd need to augment Knipper's toolbox in order to meet its needs, keep labor costs in line, and accommodate future growth. He turned to New Jersey-based

material handling equipment manufacturer Opex Corp. and its Perfect Pick solution to solve the problem. Perfect Pick is a robotic goods-to-person picking system designed especially for high-volume businesses, such as those that handle fast-moving pharmaceuticals, food products, and e-commerce orders. Installed at Knipper's Charlestown, Indiana, distribution center earlier this year, Perfect Pick is in use serving the new client and as a model for capturing new business opportunities down the road.

"The way I look at it, Perfect Pick is another tool in our toolbox for helping solve clients' problems," Ricci says. "We brought this in to [handle] one client's business, but we will utilize it for other opportunities."

LAYING THE GROUNDWORK

Ricci says he knew from the start that a high-tech goods-to-person picking system was the best solution for the new customer, a medical-device manufacturer that delivers sample products to health-care facilities and directly to consumers. The high-velocity, high-SKU business would demand considerable labor, a challenge in today's tight employment market and a high cost for the 3PL. As Ricci explains, one of the primary goals was to reduce pickers' travel time throughout the facility as a way to boost productivity and efficiency.

"We were looking for a goods-to-person solution to eliminate travel distance in a normal picking environment," Ricci says. "The opportunity cost of time, combined with increased labor needed for expanded pick areas, would be



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greatly diminished in the Perfect Pick environment.”

Perfect Pick is a standalone point solution for picking, meaning that workers remain at a station and fill orders with products that are automatically delivered to them. The enclosed system features modular racking that stores custom totes on each side of a center aisle (the totes are 30 inches long, 20 inches wide, and either eight, 10, 12, or 14 inches high). Knipper uses Opex's Perfect Pick HD (high density) model, which offers twice the storage capacity of the “single” solution by doubling the modular racking on each side of the aisle, creating a two-deep storage solution on each side. Knipper has two such units that sit side by side in the Indiana DC, accommodating up to four pickers if needed, two at each end. The robotic system is based on a single automated component: an autonomous vehicle that communicates via wireless connection, called an iBot. The iBots travel vertically and horizontally throughout the Perfect Pick HD aisle, retrieving items in totes and delivering the totes to workstations situated at the end of the system. A Perfect Pick HD iBot can carry up to 80 pounds including the tote, which can be divided into as many as 12 cells.

The beauty of the system is its flexibility, says Opex's Joe McGinnis, director of integrator relations, who worked with Ricci and his team on the Perfect Pick HD implementation. The system is designed so that iBots can be added and removed quickly to scale up or down according to business needs, and pickers can be added as well. During slower times, for example, one picker can access products in all 10,400 of the system's storage totes. During busier times, Knipper can add pickers at the system's three other workstations as needed. When new pickers log in, the software that controls the system recognizes the new person and directs orders to the additional picking station.

Knipper built the system with room for even further expansion. McGinnis explains that the system can accommodate a surge in business from the existing client or the addition of new clients that could benefit from the same high-volume solution. Knipper can easily add more aisles to accommodate growth as well, he says.

As Ricci explains: “We built so we could scale.”

GAINING EFFICIENCY

Knipper has been using Perfect Pick HD to fill orders since this spring, and the benefits are already stacking up, according to Ricci. Concentrating picking in one location saves time and labor, allowing the 3PL to allocate resources to portions of the DC dedicated to serving other clients. The new system is also helping the company maintain high levels of accuracy across its DCs—a vital aspect of the pharmaceutical business, which involves heavy regulation, product shelf-life concerns, and often, time-sensitive delivery of life-saving products. Perfect Pick HD integrates with Knipper's warehouse management software (WMS), which “does the heavy lifting” of tracking inventory based on expiration dates, first-in/first-out guidelines, and other applicable rules, according to McGinnis.

“The Perfect Pick aisle is passive when it comes to that—we bring you the tote you ask for,” he explains. “That works well in the pharmaceutical and food and beverage [markets].”

Screen- and light-directed picking technology ensure that workers are picking the correct items. A touchscreen at each station displays the current order and indicates the quantity of items to be picked, while a pick-to-light system indicates where the items are located in the tote. Pickers may use a verification scanner to ensure they’ve picked the right item from the tote; they then load items directly into boxes or totes for packing and shipping.

The solution is also helping to save energy. Perfect Pick’s iBots are powered by ultra-capacitors, so they charge quickly and run on demand. Knipper’s 30 iBots (15 per aisle) can sense slow periods and will stop or hover when not in use, automatically returning to a charging rail if power is running low. The iBots can be powered by solar panels as well, helping users meet net-zero energy goals.



LEAVING ROOM TO GROW

Ricci describes Perfect Pick HD as a tool for business expansion, which was a driving force behind making the investment in the system. The 3PL put its logo on the outside of the Indiana system so that it could serve as a model for potential clients, emphasizing the company’s high-tech capabilities in an increasingly fast-paced business.

“You don’t employ technology for the sake of technology,” Ricci explains. “It needs to be practical and good for the user, and to run parallel to the business. [Perfect Pick HD] solved the client’s need and has allowed us to be efficient and keep our costs down.”

As of late summer, Ricci said Knipper was continuing to evaluate the existing customer’s use of the system to determine how it can use Perfect Pick HD to accommodate other business. The key word being *how*, not *if*, Knipper can apply it to other needs.

“As we prove this over the next six months, we will start using it with other business,” he explains. “We have the asset; we’ll use it.” □

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